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1 Introduction

Breeze Booth is a highly customizable, fully featured photo booth app for the iPad and iPhone. It can create photos, slideshow GIFs, burst GIFs and videos and share them by email or text. Photos can be printed directly from the iPad using an AirPrint compatible printer or on other printers including professional dyesub printers using Breeze Hub.

Please note: References to iPad also apply to the iPhone unless otherwise noted in the rest of this help file

An online web based application provides tools for managing accounts, users, devices and subscriptions.

The Windows based event editor is used to create or edit events which are transferred to the iPad or iPhone via Dropbox or a web site.

Running Breeze Booth

Please see Running Breeze Booth for information on running the app including:

- Getting started
- App settings
- Logging in and out
- Updating events
- Printing
- Camera settings
- Locking Down the iPad

Using the Web App

Please see Web App for information on managing accounts, users, devices and subscriptions:

- Creating an Account and Logging into the Web App
- Users
- Devices
- Subscriptions and Vouchers

Creating and Editing Events

Please see Event Editor for detailed information on setting up events including:

- Getting started
- Creating Events
- Editing events
- General Settings
- Virtual Prop Editor
- Touchscreen Editor
- Photo Settings
- Print Layout Editor
- Slideshow GIF Settings
- Burst GIF Settings
- GIF Layout Editor
- Video Settings

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- Sharing Settings
- Gallery and Slideshow Settings

Printing photos using Breeze Hub

Please see Breeze Hub for information about printing photos using an Windows compatible printer.

Customizing the App and Events

The following sections provide more detail about how the app can be customized:

- White Label Options
- Tokens
- Screens Displayed to the User
- Keyboards and Surveys
- Info Screens
- Menus
- Virtual Props
- Keyboard shortcuts
- Filters
- QR Codes and Contactless Operation
- AI Background Removal
- Using Bluetooth

Downloads

Breeze Booth can be downloaded from the App Store:

Sample events, the Event Editor and Breeze Hub can be downloaded from the Breeze Systems website.

2 Running Breeze Booth

This section provides a quick overview of setting up and running Breeze Booth:

- Getting started
- App settings
- Logging in and out
- Updating events
- Printing
- Camera settings

Please see the Event Editor for detailed information on setting up events and Breeze Hub for information on using printers that don't support AirPrint and for sending texts and fully formatted HTML emails.

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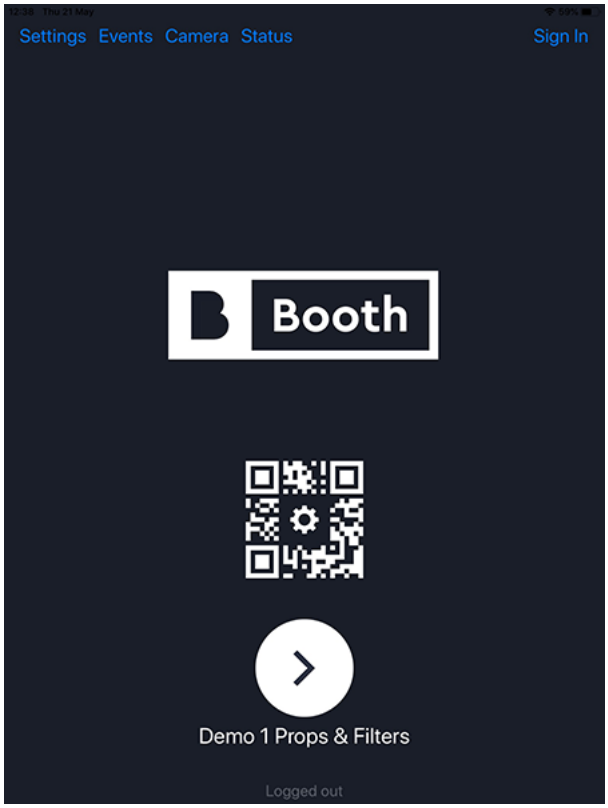
Download on the App Store

2.1 Getting Started

When the Breeze Booth is run on the iPad it displays the startup screen:



Menu buttons for "Settings", "Events", "Camera", "Status" and "Sign In" are displayed along the top. The "Quick Setup" button below the Booth logo provides a quick way to setup an iPad by scanning a QR code. You can download the sample events by tapping on the "Quick Setup" button and scanning the QR code below with the iPad's camera:

Please see the "Quick Setup" section for more information on setting up an iPad using QR codes.

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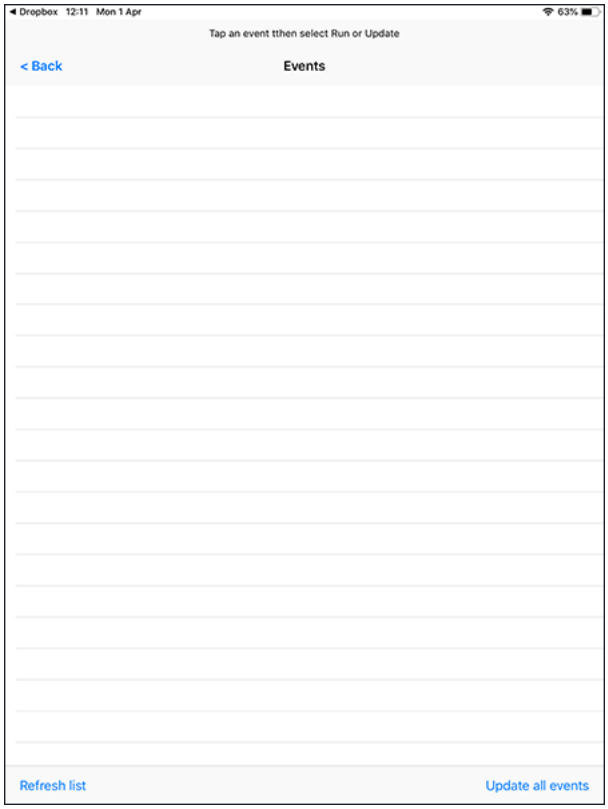
A start button is displayed near the bottom of the screen with the name of the most recently run event displayed below. The current login status is displayed at the bottom of the screen.
The startup screen can be customized if required (see "White Label Options")

If you have already signed up for an account tap the"Sign In" menu button to sign in and obtain a license for the iPad. Please see "Logging In and Out" for details.

Tap the "Events" menu button to update the events on the iPad. This will display the "Events" screen showing a list of available events that can be run on the iPad:



Tap "Update all events" in the bottom right hand corner of the screen to update all the events available to this iPad. Please note that it may take several minutes to download all the files to the iPad the first time this is run.
Alternatively tap "Refresh list" to download a lst of events without downloading the files needed for each event.

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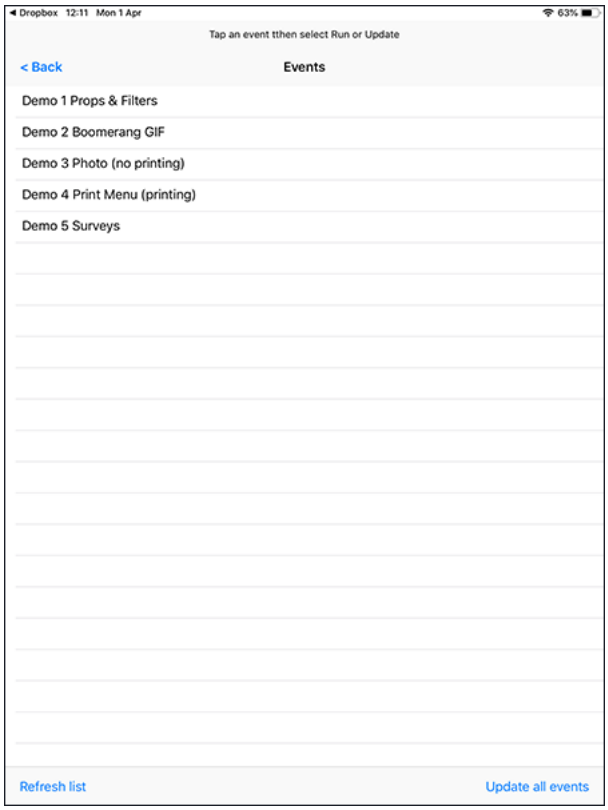

Tap on an event and then tap on "Run" to run the event or "Update" to update the event and download the files required for the event to the iPad.

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Tap "< Back" to return to the startup screen.

By default the iPad's camera will use auto exposure and white balance and will be zoomed out. Tap on the "Camera" menu button in the startup screen to adjust the camera settings:

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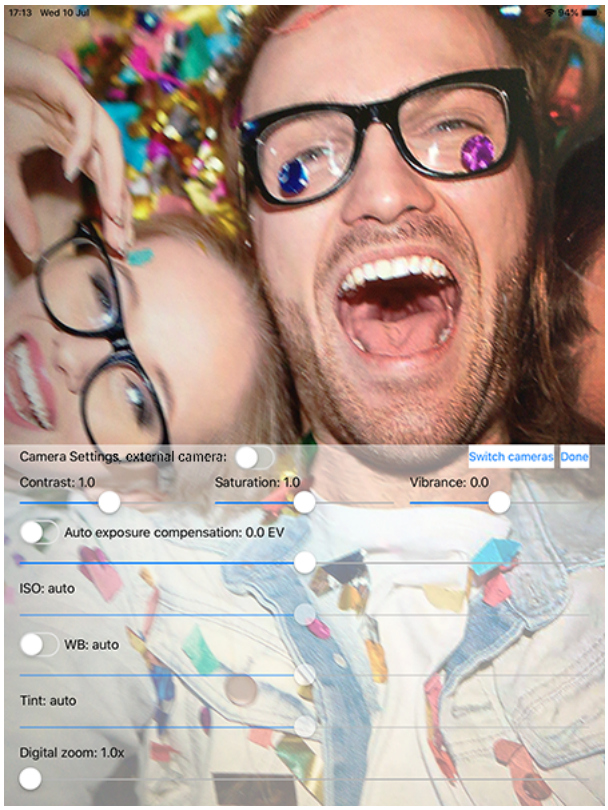

Please see "Camera Settings" for details.

Tap the "Settings" menu button to edit the app settings:

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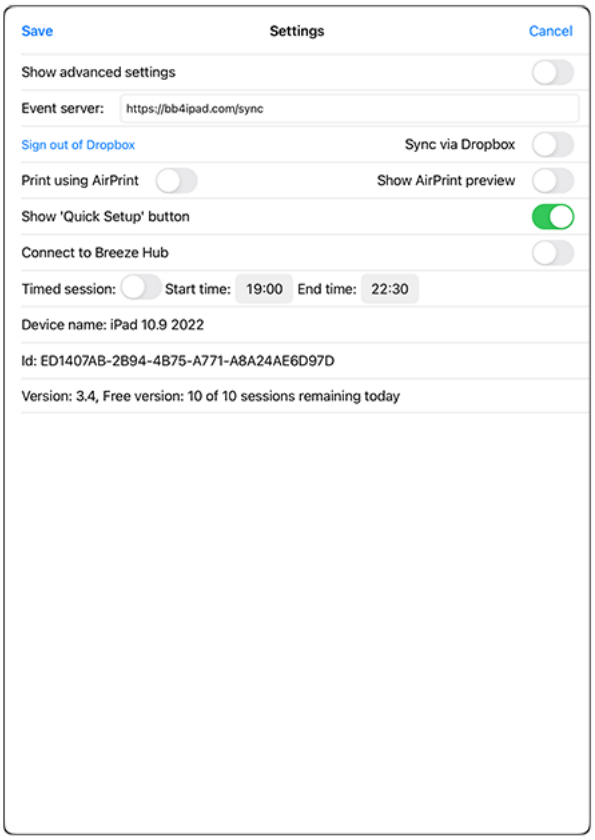

Please see "App Settings" for details

You can create your own events using the Event Editor.

Tap the "Status" menu button to display a status window showing the number of sessions and shares and the state of the email and upload queues:

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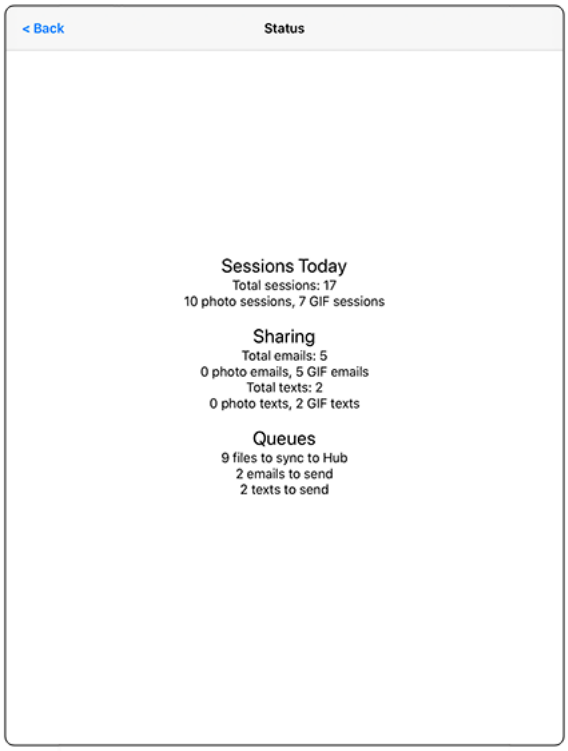

Please see "Status Screen" for details

2.2 App Settings

Tap on the "Settings" menu button in the startup screen to display the app settings screen:

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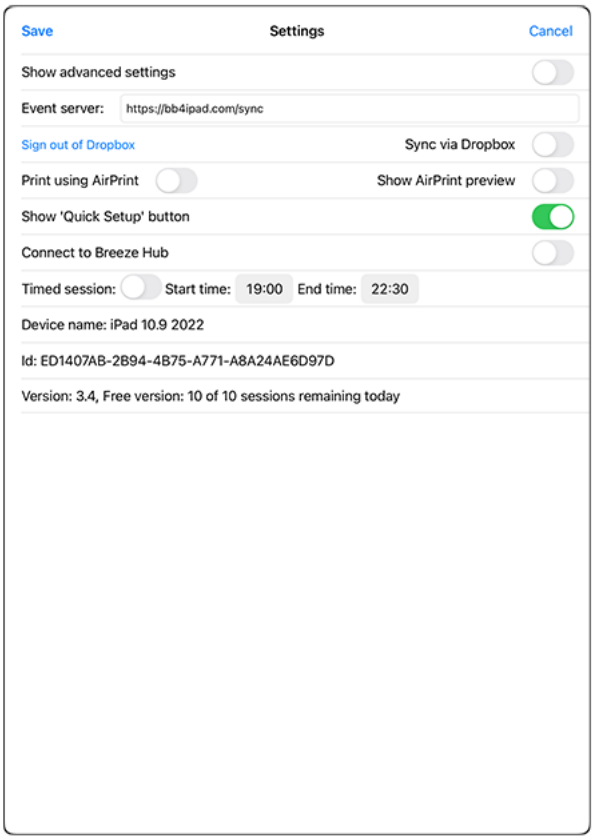

By default the Settings screen only shows the essential settings. To show all the settings select "Show advanced settings".

Please note that the app settings screen is only used to define the way the app works. The "Event Editor" is used to edit events that are run on the iPad.

Updating Events from a Web Server or Dropbox

The default method of updating events is by downloading them from a web site. To do this set the "Events sync server" to the URL of the web site hosting the events. Please note that the web server must be a secure site (i.e. starting with https:// not http://). The default URL is https://bb4ipad.com/sync which hosts the example events.

Select "Show advanced settings" to see more detailed settings for updating events.

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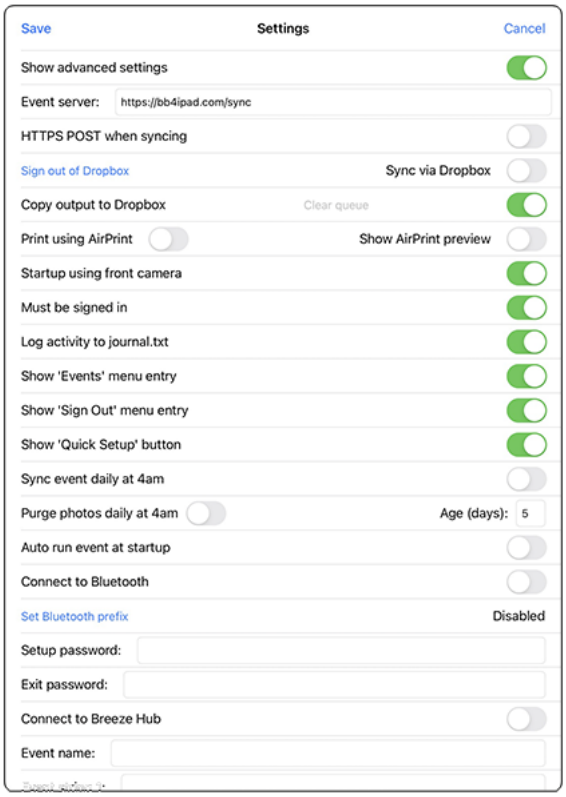

The default method of updating events is not very secure because anybody is able to download your events if they know the URL. For more secure hosting of events set the "Use HTTPS POST when syncing" option and set a password. For this to work you will need a suitable server side script to accept the request and check the password before returning the file. Please see "Updating Events" for details of updating events using the Event Editor's local sync server.

If the iPad is connected to the same network as the PC running the Event Editor you can use the local syncing option to run a simple web server and sync files to the iPad very quickly. This very useful when editing an event because you can make a few changes in the Event Editor and sync then to the iPad for testing very quickly.

An alternative way to host events is to use Dropbox. This method can be very secure because only devices that have access to your Dropbox account will be able to access the event files. To use this method first log into Dropbox by tapping "Sign in to Dropbox" then select the "Sync via Dropbox". The official Dropbox app needs to be installed on the iPad when you tap on "Sign in to Dropbox" and will open and ask whether to allow Breeze Booth permission to access your Dropbox account. Once the app is signed into Dropbox you can uninstall the Dropbox app if you are concerned about unauthorized people being able to access your Dropbox files.

Please see "Updating Events" for details of updating events from a web site or via Dropbox.

The photos and animated GIFs captured by the photo booth are stored on the iPad and can also be saved to Dropbox by selecting the "Copy output to Dropbox" option. If the iPad is not connected to the internet it will keep a list of files and will copy them to Dropbox when an internet connection is available. The list of files waiting to be copied to Dropbox can be cleared by tapping on "Clear queue".

Printing Photos

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There are two options for printing photos from the app: AirPrint or via Breeze Hub. AirPrint has the advantage that all you need is an iPad connected to the same network as an AirPrint enabled printer. The disadvantages of using AirPrint are that there aren't many photo booth quality printers that support AirPrint and it can be slow and is not very configurable.
To use AirPrint for printing first enable "Print using AirPrint" then tap "Choose printer" to connect to the printer.

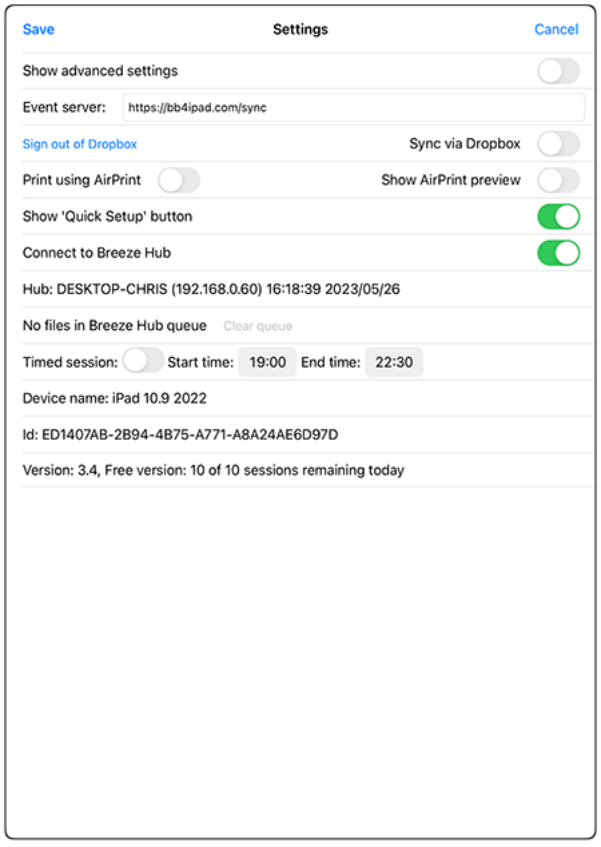
The alternative option for printing is to use Breeze Hub which is software that runs on a Windows PC and can print to any Windows compatible printer. Please see "Breeze Hub" for details.

Timed Sessions

Breeze Booth for iPad can be set up to automatically run a photo booth timed sessions with a start time and an end time. Please see the section on Timed Sessions for details.

Breeze Hub Settings

Breeze Hub is Windows based software which can be used to print photos and to send emails or texts. It also provides a way to automatically download the output from the photo booth to a Windows PC. Select "Connect to Breeze Hub" use this option.



When the app is connected to Breeze Hub the name of the server and the time and date will be displayed in the "Breeze Hub" status line.

If Breeze Hub is not available any files waiting to be downloaded to Breeze Hub will be held in a queue until it becomes available. The Breeze Hub file queue status line shows the number of files in the queue and can be cleared by tapping on "Clear queue".

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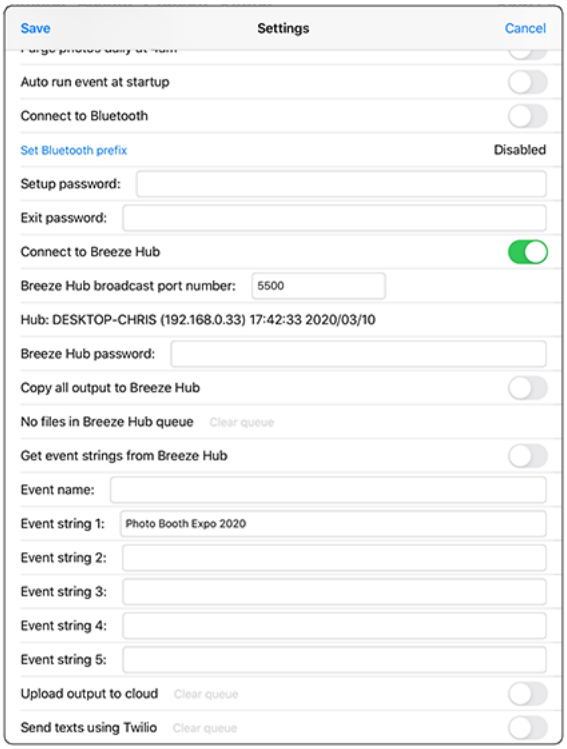
Select "Show advanced settings" to display advanced settings for Breeze Hub:



Additional security when connecting to Breeze Hub can be provided by using a password. The password must match the password set up in Breeze Hub in order for the app to be able to send files to it.

The "Breeze Hub broadcast port number" doesn't normally need to be changed, but if Breeze Hub is set up to use a different broadcast port this setting on the app also needs to be changed.

By default only print layouts, animated GIFs, MP4 files and printing, email and text information is sent to Breeze Hub. Select the "Copy all output to Breeze Hub" to send all output from the photo booth to Breeze Hub.

Advanced Settings

Select "Show advanced settings" to display the advanced settings:

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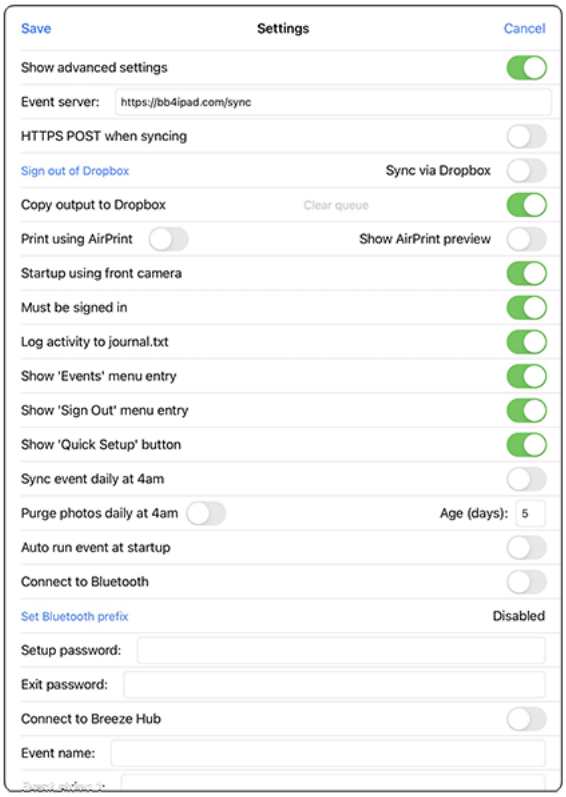

Use the "Startup using front camera" option to specify which camera the app should use when it starts up.

The "Must be signed in" option only allows photo booth mode to be selected if the iPad is signed in. This is useful for unattended photo booths as it prevents users from running the photo booth in free mode when it is not signed in and having watermarks applied to photos after the 10 free sessions available each day.

Select "Log activity to journal.txt" to log information about the usage of the app and error messages. The journal files are saved on the iPad and can be accessed using the iOS Files app by selecting "On My iPad" then "Breeze Booth". A new journal file is created each day and is given the filename journal_YYYYMMDD.txt where YYYYMMDD is the date in the form year, month, day.

Disable the "Show 'Events' menu entry" option to hide the "Events" menu button on the start screen. This can be useful for unattended booths if you do not want users to be able to access the event screens.

Disable the "Show Sign Out menu entry" option to hide the "Sign Out" menu button on the start screen when the iPad is logged in (the "Sign In" button will be visible if the iPad is not logged in). This can be useful for unattended booths if you do not want users to be able to logout.

Disable the "Show 'Quick Setup' button" option to hide the "Quick Setup" button on the start screen.

The following two options are useful for fixed installations:
Select "Sync event daily at 4am" to automatically sync the current event at 4am each day. The current event will only be synced if the app is running in photo booth mode. It won't be synced if the app is displaying the startup screen.
Select "Purge photos daily at 4am" to automatically delete the Photos folder at 4am each day. This will

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avoid problems with the iPad running out of storage if it is use for a long time without manually clearing out old photos. The "Age (days)" setting specifies how long to keep files e.g. setting it to 5 days will only purge files which are more then 5 days old.
Please use this option with care as it isn't possible to recover the contents of the Photos folder once it has been deleted.

Select "Connect to Bluetooth" to use a compatible Bluetooth peripheral. The app will start scanning for compatible Bluetooth peripherals and will automatically connect to the first one it finds that has a name matching the Bluetooth prefix defined in settings. Tap "Set Bluetooth prefix" to change the prefix.
Please see the section on Using Bluetooth for more information.

Enter a password for the "Setup password" to protect the settings screen. This can be useful for unattended booths if you do not want users to be able to change the app's settings
If you forget the password it can be reset by exiting the app and replacing the settings.xml file in the "Breeze Booth" folder which can be accessed using the iOS Files app. Alternatively use the device_settings.xml update option to download a new settings file when updating events (see "Updating Events" for details).

Enter a password for the "Exit password" to prevent users from exiting out of photo booth mode. This is useful if a touchscreen action has been defined to exit photo booth mode and you want to prevent guests from using it.
The exit password is also used to protect the deleting of images in the slideshow displayed in standby mode.

Event Name and Event Strings

The event name and event strings provide a way of customizing an event by using tokens which are replaced with the actual values when the event is run. For example the text for emails sent when sharing photos could be set to "Your photos from {eventName}". If the event name is set to the name of the event, e.g. Jack and Jill's Wedding, the {eventName} token will be replaced with this text to give "Your photos from Jack and Jill's Wedding". Please see "Tokens" for more information.

Event names and strings can be defined locally on each iPad or they can be defined in Breeze Hub and sent to each connected iPad. Select the "Get event strings from Breeze Hub" if you want the iPad to receive the event name and strings from Breeze Hub.

Upload Option

Output from the iPad can be automatically uploaded to a website by selecting the "Upload to cloud" option. The files are sent as an HTTPS POST with an optional password for additional security. For this to work the URL must point to a suitable script running on the web server to receive the uploaded files. If the iPad is not connected to the internet it will keep a list of files and will upload them when an internet connection is available. The list of files waiting to be uploaded can be cleared by tapping on "Clear queue".

A PHP script on a web server can access the uploaded file using the $_FILES variable. The optional password is hashed with the iPad vendor id, filename and the file's MD5 checksum and can be verified using the following PHP code:

```
$password = "My secret password";

$id = $_POST["id"];
$filename = $_POST["filename"];
$chksum = $_POST["md5"];
$key = $_POST["key"];

// check client authentication string is correct
if (sha1("breeze" . $id . $password . $filename . $chksum) != $key) {
```

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```
    fatalError(401,  "Not  authorized");
}
```

The upload URL can also include tokens which are replaced with the actual values when files are uploaded e.g. https://yoursite.com/upload.php?event={urlencode,{eventName}}

Sharing Options

Emails sent directly from the iPad are sent using SMTP email. By default the iPad will send emails using the SMTP service provided with the Breeze Booth for iPad subscription. You can also choose to send emails using your own SMTP server by selecting the "Custom SMTP" option and entering the SMTP server details.

The SMTP service provided with the Breeze Booth for iPad subscription is subject to a fair use policy of up to 1000 emails per month. Emails sent using this service will have a "from" address of noreply@breezesys.com or noreply@mail.breezesys.com. The "reply to" email address can be set using the "From email address" setting which can be specified in the sharing settings for each event. If you wish to provide your own "from" email address you will need to use the custom SMTP option and provide your own SMTP server details.

Please see the section on Sharing Settings for more information on formatting messages, adding attachments etc.

To setup a custom SMTP server you need to specify the host name and port number of your email server and enter your username and password. If the port number is set to 0 the app will attempt to send secure emails and automatically detect the port number. You may need to specify the port number if the auto option doesn't work or the SMTP server uses an unusual port number.

GMail: To send emails using GMail you need to generate a 16 character app password in your Google Account (see https://support.google.com/accounts/answer/185833) and then enter the following custom SMTP settings:

SMTP server: smtp.gmail.com
Port: 0
SMTP username: yourname@gmail.com
SMTP password: your Google 16 digit app password

To send SMS text messages you need an account with Twilio. Please note that Twilio charge for each SMS message sent using their service. Pricing information can be found on Twilio's website: www.twilio.com.
Enter your Twilio message phone number, AccountSID and AuthToken in the Twilio settings. You can find your Twilio message phone number, AccountSID and AuthToken by logging into your Twilio account.

Set the country prefix to your country prefix e.g. +1 for the US and Canada, +44 for the UK, +49 for Germany etc. When users enter their cellphone numbers they can either enter the number with their country prefix e.g. +1234567890 or without it e.g. 23456789 and the country prefix will be added automatically before sending the text.

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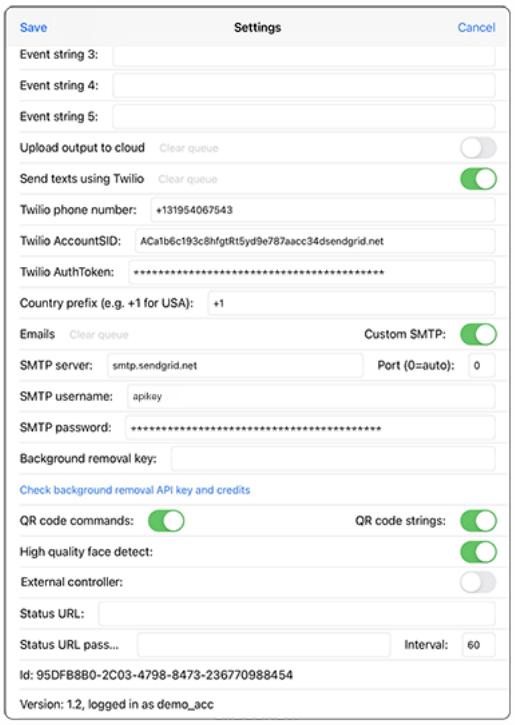

SMTP emails and text messages sent via Twilio are queued and sent in the background allowing the photo booth to continue without having to wait for the messages to be sent. If there is a problem with the internet connection the app will keep trying to send the email or text. If there is an error sending an email or text (e.g. incorrect user name or password) the app will only try to send the emal or text once and will record the status in the email or text XML file. Failed emails and text can be sent later by copying the files to a PC and running Breeze Hub.

Other Settings

Enter the API key for the background removal service you wish to use for AI background removal (aka green screen without the green screen). Click on "Check background removal API key and credits" to verify that the key has been entered correctly and to check the number of credits available. Please see the section headed "AI Background Removal" for more information about AI background removal.

Enable "QR code commands" and "QR code strings" to allow the scanning of QR codes to control the photo booth. Please see the section headed "QR Codes and Contactless Operation" for more information about using QR codes to control the photo booth.

The "High quality face detect" option selects higher quality face detection when using virtual props. This gives more stable placement of virtual props but is only suitable for more powerful iPads such as iPad Pro models and iPads with an A12 processor or better (e.g. iPad Air 10.5" or iPad Mini 5).

The "External controller" option allows a Windows PC to connect to the iPad to allow monitoring and remote control of the app (e.g. logging in/out, syncing events, taking screenshots and sending commands) or when using a payment system. Please see the section headed "Remote control and monitoring of the iPad" for details.

The status URL allows the app to send regular status updates to a web server and to receive commands from the web server. Set the "Status URL" to the URL which is to receive the status updates and set "Interval" to the interval in seconds between updates. An optional password can be provided for extra security. The sending of status updates can be disabled by setting the interval to 0.

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Please see the section headed "Status URL" for more information.

Id and Version Information

The id (also known as the vendor id) shown at the bottom of the settings table is a unique id that identifies this installation of the app on this iPad. If the app is uninstalled from the iPad and reinstalled it will be given a new id.

The version information shown at the bottom of the settings table shows the version and build number of the app followed by the login status. If the iPad is logged in this will show the name of the user. If the iPad is not logged in this will display "Free version:" followed by the number of photo and GIF sessions remaining before a watermark is added to all output.

2.3 Logging In and Out

The iPad needs to be logged in to run an event and to access cloud based services. If the iPad is not logged in it will only be able to take ten sets of photos or GIFs each day before a watermark is added to the output. This allows an iPad to be used for testing purposes without requiring a license.

Logging In

An iPad can be logged in by tapping the "Sign In" button in the startup screen and entering the username and password. If the login is successful the startup screen will updated to show the login status. If the login is not successful a status message will be displayed showing the reason.
The iPad will only be logged in if it is able to obtain a license from the web app.
Please note: The iPad needs to be connected to the internet when logging in.

Logging Out

There are several ways to logout an iPad:
1. Tapping the "Sign Out" button in the startup screen
2. By logging into the web app and releasing the license from the iPad. The next time the iPad checks its login status it will be logged out
3. The iPad will be logged out automatically if it is unable to verify its login status with the web app for an extended period

When logging out by tapping the "Sign Out" button on the iPad it will attempt to contact the web app to update its status and to release its license so that the license may be used by another device. If it is unable to contact the web app an error message will be displayed and it will be logged out locally but the web app will not be notified and the license won't be released. If this happens the license can be released by logging into the web app and releasing the license manually or by logging in with the iPad and logging out again.

The iPad can be protected from accidentally logging out by selecting the "Hide Sign Out menu entry" option in the App Settings. If this option is selected the user will need go to the settings screen and disable the "Hide Sign Out menu button" option before signing out from the startup screen. Additional protection can be provided by adding a password for the App Settings screen.

If the iPad is logged out because its license has been released in the web app or because it is unable to contact the web app for an extended period it will exit any event it is running and return to the startup screen.
WARNING: If the iPad is not logged in it will only be able to take ten sets of photos or GIFs per day before a watermark is added to the output.

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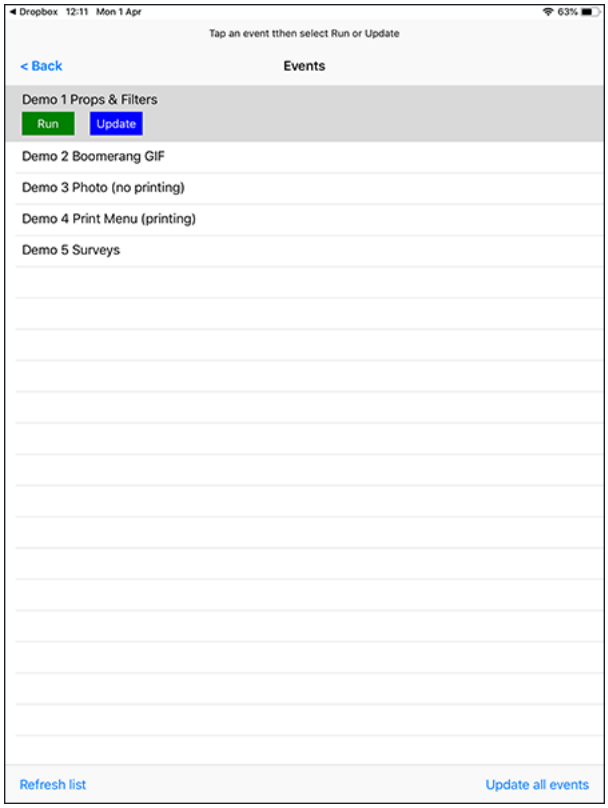
2.4 Updating Events

Events can be edited using the Event Editor and then copied to the iPad via Dropbox, direct from a PC or from a web site. The same interface for updating events is presented to the user for both options:



Tap on "Refresh list" to update the list of events available to the iPad. This will download the events.xml file containing a list of events and an event_info.xml for each event containing more detailed information about each event. Tapping "Refresh list" does not update any events: it only updates the list of available events.

Tap on "Update all events" to refresh the list of events and update each event. Alternatively left swipe on an event in the list and select "Update" to update just that event.

Other ways to update events:
1. An event can be updated while it is running by creating a "Sync event" touchscreen action
2. The app can automatically update events every day at 4am in the morning by selecting "Sync event daily at 4am" in the App Settings screen
3. Using a QR code for quick setup
4. Using an external controller running on a Windows PC

Updating Events using the Event Editor's local sync server

The Event Editor can run a simple web server allowing iPads connected to the same network to be updated quickly and easily simply by scanning a QR code. To run the local sync server click on the "Local sync..." button in the Event Editor's main window and then either select the event from the "Sync" drop down list or select "All events". Then simply open the camera app on the iPad and scan the QR code using the front camera and tap "Open in Breeze Booth". This will automatically run Breeze

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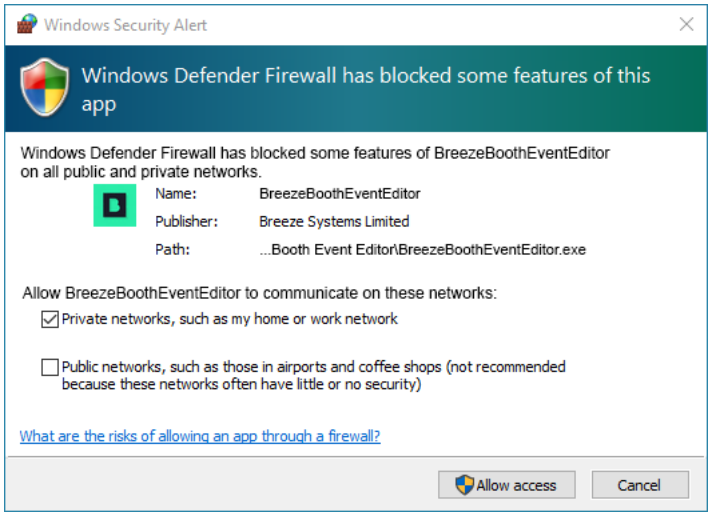
Booth and sync the event (or events) to your iPad.

When you open the "Local Syncing" windows for the first time the firewall software running on the computer may ask whether the Event Editor is allowed to access the network. If this happens select "Private networks, such as my home or work network" and click on "Allow access".



Local syncing works by running a simple web server on the PC. Select "Sync events via local network while Event Editor is running" to continue running the local sync server while the Event Editor is running. Once the settings have been copied to the iPad by scanning the QR code you can sync events from the Events screen.

Local syncing provides a fast an convenient way to edit events on a PC and sync them quickly to an iPad. If you need to sync events to iPads located elsewhere you can use Dropbox or host them on your own web server.

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Please note: When syncing events over a local area network using the Event Editor's local sync server the server does not need to be secure or have an SSL certificate because it can only be accessed on the local network and is not visible on the internet. URLs used for local syncing start with http:// followed by the computer's IP address and the port number (which defaults to 8080) e.g. http://129.168.0.23:8080

Updating via Dropbox

Events can be updated via Dropbox. This provides a convenient and secure way to update events without requiring a website. It can also save time when editing events because the event information is available to downloaded to the iPad as soon as it is saved on the apps' Dropbox folder on the PC.

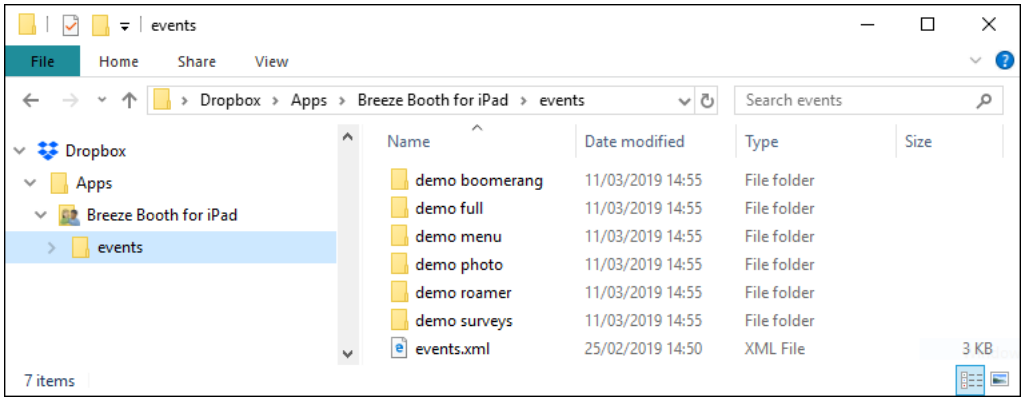
For a simple introduction see this blog post.

In order to use Dropbox to hold events you need to sign into DropBox from the app settings screen. When you tap "Sign in to Dropbox" the official Dropbox app will open on the iPad and ask you whether you want to allow Breeze Booth to access the folder Apps/Breeze Booth in your Dropbox account. Tap "Allow" to allow Breeze Booth to access this folder.
Please note: Breeze Booth will only be allowed to access files within the Apps/Breeze Booth folder in your Dropbox account. It will not be able to access any other files in your Dropbox account.

An error message will be displayed ff the official Dropbox app is not installed on the iPad when you tap "Sign in to Dropbox".
Tap "Sign out of Dropbox" to sign out of Dropbox if access is no longer required.

Security
Once signed in to Dropbox Breeze Booth will be able to access the Apps/Breeze Booth folder in your Dropbox account until you sign out of Dropbox from the app settings screen or you revoke the app's access from your Dropbox account.
Please either sign out of Dropbox from the Dropbox app or uninstall the Dropbox app after signing in from Breeze Booth. This will ensure that unauthorized people will not be able to access your Dropbox account if they get hold of the iPad. Breeze Booth will still be able to access the Apps/Breeze Booth folder even you have signed out from the official Dropbox app or it has been uninstalled.

After signing in to Dropbox from Breeze Booth a folder named Apps/Breeze Booth will be created in your Dropbox account. Create a subfolder named 'events' in this folder and then copy the events.xml file and the event subfolders into the events folder. It should look something like this:



By default the app will download events from the Apps/Breeze Booth for iPad/events folder in your Dropbox account.
You can specify a different folder by entering its name in the "Dropdox sync prefix" setting in the App

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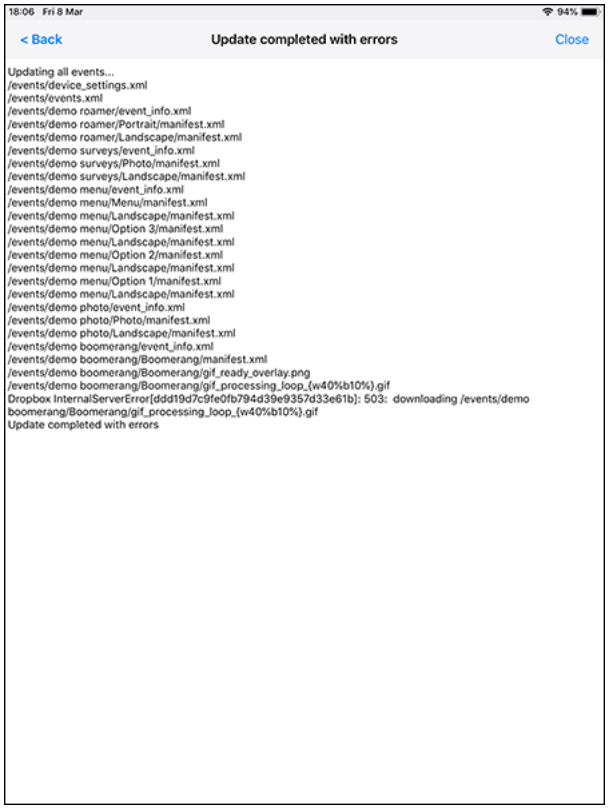
Settings screen e.g. setting the Dropbox sync prefix to "weddings" will tell the app to look for events in the Apps/Breeze Booth for iPad/events/weddings folder in your Dropbox account. You can also use tokens in the Dropbox sync prefix e.g. set the prefix to {user_name} to download events based on the username used to log the iPad in.

WARNING: Do not delete the Apps/Breeze Booth folder in Dropbox. If you do delete this Dropbox will assume that you have revoked Breeze Booth's permission to access Dropbox and none of your iPad's will be able to access it. If you do accidentally delete the Apps/Breeze Booth folder you need to sign out of Dropbox by tapping on "Sign out of Dropbox" in the app settings screen in Breeze Booth and then sign back in again. Dropbox will ask you again whether you want to allow Breeze Booth to access the folder Apps/Breeze Booth in your Dropbox account. Tap "Allow" and Dropbox will create the Apps/Breeze Booth folder and you can copy the files back into it.

IMPORTANT NOTE: Free Dropbox accounts impose rate limits on the number of files that can be synced in a given time and may not be suitable for hosting iPad events. If you get errors like the one below you may need to switch to a paid Dropbox account.



Updating Events from a Website

There are two methods of updating events from a website:

1. The default option which is to simply get each file directly from the website using an HTTPS GET. All you need to do to use this option is to upload the event files to a folder on your website and then enter the URL of the folder in the "Events sync server" field of the app settings.

2. For more secure hosting of events select the "Use HTTPS POST when syncing" option in the app settings and set a password. For this to work you will need a suitable server side script to accept the request and check the password before returning the file. The POST request is sent with the following JSON encoded parameters:

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```
{
    "request": "download",
    "password": "<password>",
    "id": "<ipad_id>",
    "name": "<ipad_name>",
    "model": "<ipad_model>",
    "Filename": "<relative_pathname>"
}
```

Where:
<ipad_id> is the ID of the iPad which is displayed at the bottom of the app settings screen
<ipad_name> is the name of the iPad as defined in the iPad's settings under General->About
<ipad_model> is information about the iPad model
<relative_pathname>" is the relative pathname of the file to be downloaded

Please note: When accessing a website via the internet only secure websites with SSL certificates can be used i.e. websites with URLs starting with https:// not http://

Shortened URLs

You can also use shortened URLs from https://bit.ly or https://tinyurl.com to specify the URL for the events server. bit.ly allows custom backends to URLs so that you can use meaningful names for URLs. The app will treat the URL as a bit.ly URL if it starts with https://bit.ly, bit.ly or the bit.ly backend. It will treat the URL as a tinyurl it it starts with https://tinyurl.com or tinyurl.com.
e.g. the URL for the demo events is https://bb4ipad.com/sync which can be replaced with https://bit.ly/bb4ipad or https://tinyurl.com/ybql8rn9. The following values will all work:
https://bit.ly/bb4ipad
bit.ly/bb4ipad
bb4ipad
https://tinyurl.com/ybql8rn9
tinyurl.com/ybql8rn9

Event Files

A set of events consists of an events.xml file and one or more subfolders containing the files for each event. The events.xml file contains a list of events with their title, a short description and a link to the events' event_info.xml file. When the event list is refreshed the events.xml file is downloaded to the iPad and any old events that are on the iPad but not in the events.xml file are deleted.

An event's event_info.xml file includes a list of profiles for that event and a list of manifest files. The profile files contain details of the settings for different options for an event (e.g. the number of photos, print layout, email text etc.). Please see Editing Events for more information on using profiles.

A manifest.xml file is simply a list of files required for that event together with a checksum. When an event is updated the event_info.xml file for that event is downloaded to obtain a list of the manifest.xml files for that event. Each manifest.xml is then downloaded and the listed files are compared with the files already on the iPad. If a file is not on the iPad or has a different checksum from the one in the manifest the file is downloaded to the iPad. Any files that are on the iPad but are not in the manifest will be deleted.

The event related files on the iPad can be viewed using the iOS Files app by browsing "On my iPad" and selecting "Breeze Booth" then the "assets" folder.

Advanced Usage

Tokens can be used to automatically modify the events that are updated on an iPad. For example you

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may wish to make different sets of events available to different users. This can be done using the {user_name} or {user_id} tokens. The {user_name} token returns the username when the user the iPad is logged in and {user_id} returns the user Id.

When updating events from a website add the token to the URL e.g. change https://acmephotobooth.com/sync to https://acmephotobooth.com/sync/{user_name}
Then create a subfolder of the sync folder on your website, give it the same name as the user name and copy the events.xml file and event folders into it.

When updating events via Dropbox set the Dropbox prefix in the app settings screen to {user_name}. Then create a subfolder of the Apps/Breeze Booth/events folder in your Dropbox account, give it the same name as the user name and copy the events.xml file and event folders into it.

For example suppose you run corporate events and social events and wish to keep them separate. You could do this by creating two users e.g. breeze_corporate and breeze_social. Then append {user_name} to the events sync server URL in the app settings screen (e.g. https://acmephotobooth.com/sync/{user_name}) or set the Dropbox prefix to {user_name}. Now when the iPad is logged in as the user "breeze_corporate" it will update the events from https://acmephotobooth.com/sync/breeze_corporate when updating from a website or from the Apps/Breeze Booth/events/breeze_corporate folder when using Dropbox. If the iPad is logged out and then logs back in again as "breeze_social" it will update the events from https://acmephotobooth.com/sync/breeze_social when updating from a website or from the Apps/Breeze Booth/events/breeze_social folder when using Dropbox.

Updating the App Settings

The settings in the app settings screen are saved in a file named settings.xml in the Breeze Booth folder on the iPad. Some or all of these settings can be updated when "Update all events" is tapped in the events screen by placing a file named device_settings.xml in the same folder as the events.xml on the update website or in the Dropbox events folder. When "Update all events" is tapped the iPad will update its app settings using the information in the device_settings.xml file if it is available.

The device_settings.xml file can be edited so that only a few settings are changed on the iPad. For example suppose you want to update the event name on the iPad and leave all the other settings the same. This could be done by editing the device_settings.xml file so that it is something like this:

```
<?xml version="1.0" encoding="utf-8" standalone="no"?>
<breeze_booth version="1.0" build="23">
    <device_settings>
        <getEventStringsFromBreezeHub>false</getEventStringsFromBreezeHub>
        <localEventName>New Event Name</localEventName>
    </device_settings>
</breeze_booth>
```

Please use this feature with care otherwise updating all events may result in unexpected changes to the app settings.

The simplest way create a device_settings.xml file is to setup the app as required on an iPad and then copy the settings.xml file to a PC where they can be edited in a text editor. To do this run the Files app on the iPad, in the "Locations" list select "On my iPad" and tap on "Breeze Booth" and you should see a list of files similar to the screenshot below:

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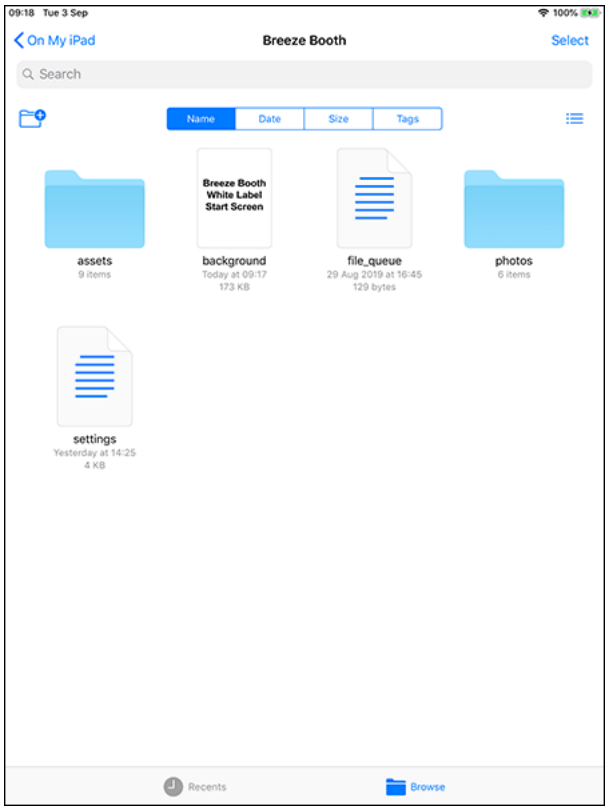

If you have email setup on your iPad you can email the settings.xml file by tapping and holding on the "settings" file until a menu is displayed. Select share from the menu and then select Mail to email the file.
After emailing the settings.xml file to your PC save with the filename device_settings.xml and then edit it using a text editor.

Summary of useful XML tags in the settings.xml file

XML tag	Description
<showAdvancedSettings>true</showAdvancedSettings>	Show advanced settings in Settings screen
<syncServer>https://bb4ipad.com/sync</syncServer>	URL of sync server when syncing using HTTPS GET or POST
<syncServerPost>false</syncServerPost>	Selects HTTPS GET or POST when syncing
<syncServerPostPassword></syncServerPostPassword>	Optional password when syncing using HTTPS POST
<syncViaDropbox>false</syncViaDropbox>	Sync events using Dropbox
<dropboxPrefix></dropboxPrefix>	Optional prefix when syncing using Dropbox
<lastEvent>1</lastEvent>	Index of the event that is displayed in the start screen
<copyOutputToDropbox>false</copyOutputToDropbox>	Sync output to Dropbox
<hideEventsMenu>false</hideEventsMenu> <hideSignOutMenu>false</hideSignOutMenu> <showQuickSetupButton>true</showQuickSetupButton>	These tags control the appearance of the start screen. Please see Customizing the Start Screen and Removing Branding for details

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<startupScreenAssetsFolder>.</startupScreenAssetsFolder> <startupScreenTitle></startupScreenTitle> <startupScreenSubTitle></startupScreenSubTitle> <startupScreenBackgroundImage></startupScreenBackgroundImage> <startupScreenBackgroundImageLoggedIn></startupScreenBackgroundImageLoggedIn> <startupScreenBackgroundImageLoggedOut></startupScreenBackgroundImageLoggedOut> <startButtonImage></startButtonImage> <qrSetupButtonImage></qrSetupButtonImage> <menuLabelColor blue="1.0" green="0.478431" red="0.0" alpha="1.0" /> <eventLabelColor red="1.0" blue="1.0" alpha="1.0" green="1.0" /> <loginStatusLabelColor red="1.0" alpha="0.3" blue="1.0" green="1.0" />	
<airPrint>false</airPrint>	Enable printing via AirPrint
<exitPassword></exitPassword>	Password to protect exiting from from photo booth mode
<setupPassword></setupPassword>	Password to protect access to the App Settings screen
<logActivityToFile>false</logActivityToFile>	Log photo booth activity to a journal file
<autoRunEventWhenAppStarts>false</autoRunEventWhenAppStarts>	Automatically switch to photo booth mode when the app starts
<syncEventDailyAt4am>false</syncEventDailyAt4am>	Automatically sync the event every day at 4am
<purgePhotosDailyAt4am>false</purgePhotosDailyAt4am>	Automatically purge photos every day at 4am
<frontCamera>true</frontCamera>	Controls where to use the front or rear camera in photo booth mode
<mustBeSignedIn>false</mustBeSignedIn>	iPad must be signed in to run in photo booth mode
<connectToPrintServer>false</connectToPrintServer> <getEventStringsFromBreezeHub>false</getEventStringsFromBreezeHub> <syncServerBroadcastPort>5500</syncServerBroadcastPort> <syncServerPassword></syncServerPassword> <copyAllOutputToPrintServer>false</copyAllOutputToPrintServer>	Settings for using Breeze Hub. Please see App Settings for details.
<bluetoothConnect>false</bluetoothConnect> <bluetoothPrefix>Breeze</bluetoothPrefix>	Bluetooth settings. Please see Using Bluetooth for details.
<uploadToCloud>false</uploadToCloud> <onlyUploadProcessedPhotosToCloud>false</onlyUploadProcessedPhotosToCloud> <uploadToCloudURL></uploadToCloudURL> <uploadToCloudPassword></uploadToCloudPassword> <uploadToCloudRetries>10</uploadToCloudRetries>	Settings for uploading files to a web server. Please see Upload Option for details.
<textUsingTwilio>false</textUsingTwilio>	Settings for sending texts and emails from the

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<twilioPhoneNumber></twilioPhoneNumber> <twilioCountryPrefix>+1</twilioCountryPrefix> <twilioAccountSID></twilioAccountSID> <twilioAuthToken></twilioAuthToken> <smtpEmail>false</smtpEmail> <smtpServer></smtpServer> <smtpUsername></smtpUsername> <smtpPassword></smtpPassword> <smtpPort>0</smtpPort>	iPad. Please see App Settings for details.
<removeBgAPIKey></removeBgAPIKey>	The API key used for AI background removal services. Please see AI Background Removal for details.
<qrCodeCommands>true</qrCodeCommands> <qrCodeStrings>true</qrCodeStrings>	Enable the scanning of QR code strings and commands when running in photo booth mode

2.5 Printing

There are two options for printing photos from the app: AirPrint or via Breeze Hub. AirPrint has the advantage that all you need is an iPad connected to the same network as an AirPrint enabled printer. The disadvantages of using AirPrint are that there aren't many photo booth quality printers that support AirPrint and it can be slow and is not very configurable.

Printing via Breeze Hub has the advantage that any Windows compatible printer may be used including professional dyesub printers.

When printing the print layout is rotated to match the page orientation of the printer and the output is resized to fit the page.

Using AirPrint

Printing using AirPrint requires a photo quality AirPrint compatible printer to be connected to the same network as the iPad.
Select "Print using AirPrint" in the app settings then tap on "Choose printer" to select an AirPrint printer from the list. The printer name will be displayed in the app settings screen:

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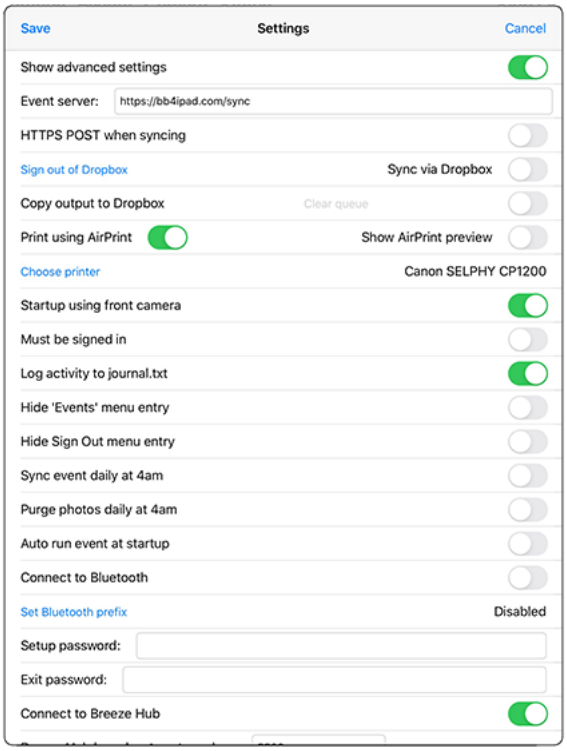

When photos are printed in photo booth mode they will be sent to the AirPrint printer for printing.

Troubleshooting
If you have problems printing using AirPrint try enabling "Show AirPrint preview". This will display the standard iOS AirPrint preview each time a photo is printed. The AirPrint preview allows the user to select the required printer (if it isn't already selected) and to confirm or cancel printing.
Some AirPrint devices (e.g. Raspberry Pi AirPrint servers) may only work with the "Show AirPrint preview" option selected.

Printing via Breeze Hub

Printing via Breeze Hub requires a Windows computer running Breeze Hub to connected to the same network as the iPad.
Select "Connect to Breeze Hub" in the app settings screen and unselect "Print using AirPrint". Then check that the iPad is connected to Breeze Hub:

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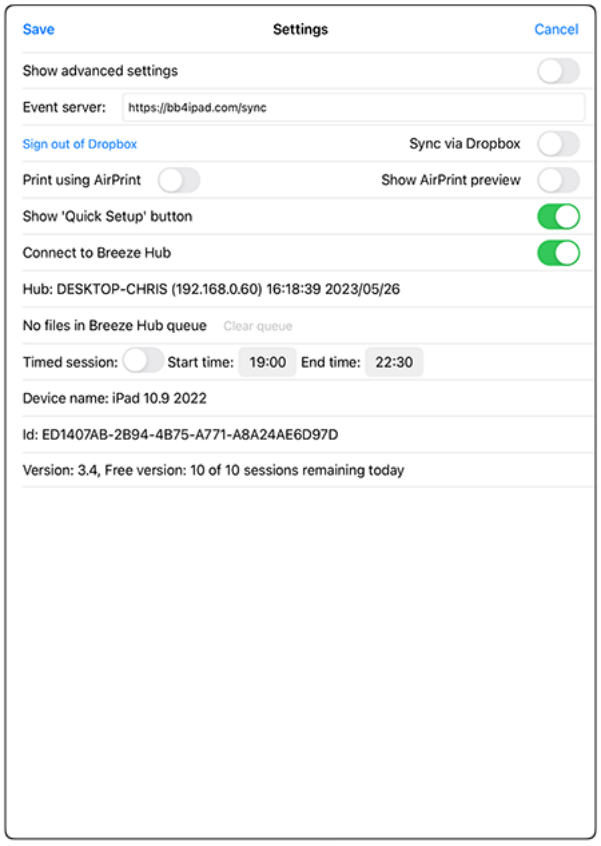

When photos are printed in photo booth mode they are sent to the Windows computer running Breeze Hub which will print them using the connected printer.

2.6 Camera Settings

The camera settings can be changed by tapping on the "Camera" menu button in the startup screen or by tapping the "Adjust camera settings" touchscreen action, if defined, when running an event.
The camera settings screen will be displayed showing the live view from the currently selected camera with controls for adjusting the settings at the bottom:

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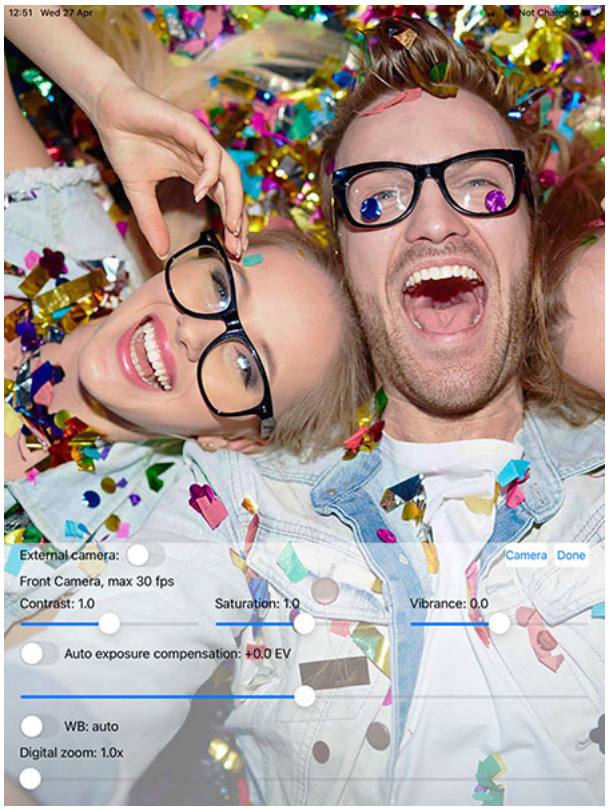

Breeze Booth can use the rear facing or front facing cameras. Tap "Camera" to cycle through the various cameras. The name of the current selected camera and its maximum available frame rate when capturing video is displayed below the "Camera" button. The range of available cameras will depend upon the device. Most iPads apart from Pro models from 2021 onwards and basic iPhones have a single front camera and a single back camera. Recent iPad Pros and iPhones have two or three back cameras which can be treated as separate cameras (e.g. "Back Ultra Wide Camera", "Back Camera", "Back Telephoto Camera") or as a single virtual camera (e.g. "Back Dual Wide Camera"). The individual cameras have faster maximum frame rates when capturing video than the virtual camera and should be used if you are capturing slow motion videos. The virtual camera is useful if you want to be able to zoom seemlessly from the widest camera through to the most telephoto camera.
The maximum available frame rate for video capture depends upon the device and the selected camera. Recent devices support video capture at up to 240 fps with the back cameras and 60 fps with the front camera. Older devices only support 30 fps with the front camera and 120 fps with the back camera.

Alternatively you can use a Canon camera connected to an external controller by selecting "external camera". Please see the "Using an external camera" section for details.

The contrast, saturation and vibrance sliders can be used to adjust the appearance of the camera images. The saturation slider adjusts the strength of the colors in the image and ranges from 0, which has no color and gives grayscale images, through 2 which gives highly saturated images. The vibrance setting adjusts the saturation of an image while keeping pleasing skin tones. The default settings are contrast=1.0, saturation=1.0 and vibrance=0.0.

Normally the camera uses auto exposure and this can be adjusted using the auto exposure compensation slider. For manual control of the exposure tap the switch to the left of "Auto exposure compensation" and it will change to "Shutter speed" and the ISO slider will be displayed. Adjust exposure by moving the shutter speed and ISO sliders.

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Note: It's best to avoid slow shutter speeds (e.g. less than 1/15 sec) otherwise the live view refresh rate may be slow.

Normally the camera selects the white balance automatically. For manual control tap the switch to the left of the "WB: auto" caption and adjust the white balance using the WB and Tint sliders.

The camera can be digitally zoomed in using the "Digital zoom" slider. Please note that this works by cropping the photos and will reduce the resolution and the amount of detail available. If the photos are zoomed in too far it may affect the quality and the photos may appear pixellated.

Tap the "Done" button or anywhere in top half of the screen to close the camera settings screen.

Touchscreen Actions
The exposure compensation and digital zoom settings can also be adjusted by defining touchscreen actions in the ready or menu screens. This makes it possible to give users control over basic camera settings without needing to give access to the full set of camera settings which may cause confusion or lead to less than optimal settings being selected.

2.7 Using an external camera

Breeze Booth for iPad can use a Canon camera instead of the iPad's built-in camera. This gives better image quality when taking photos and allows the use of flash for better lighting. The external camera can be used to take photos and to capture boomerang GIFs and videos. Please note that the camera needs a memory card if it is to be used for video capture.

The external camera can be any recent Canon EOS camera or PowerShot camera (full list of supported cameras).
The Canon EOS M50 and Canon EOS R10 are good options because they are compact and have Canon's excellent dual pixel AF with face detect in live view.

How it works

Breeze Booth for iPad connects directly to a Canon camera via a USB connection.

If you are using an iPad which has a USB C connection you can use a USB C hub and connect the camera using a USB cable plugged into the USB hub. It's best to use a USB C hub that has a USB C charging port so that you can charge the iPad when using an external camera.

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If you are using a recent Canon camera with USB C you can connect it directly to an iPad with a USB C connection. This is convenient when testing but isn't recommended for prolonged use because it isn't possible to charge the iPad when a camera is connected directly to its USB C connection.

If you are using an iPad which has a lightning connector you will need a lightning to USB adapter. It's best to use a lightning to USB adapter that also has a lightning charging port so that you can charge the iPad when using an external camera.

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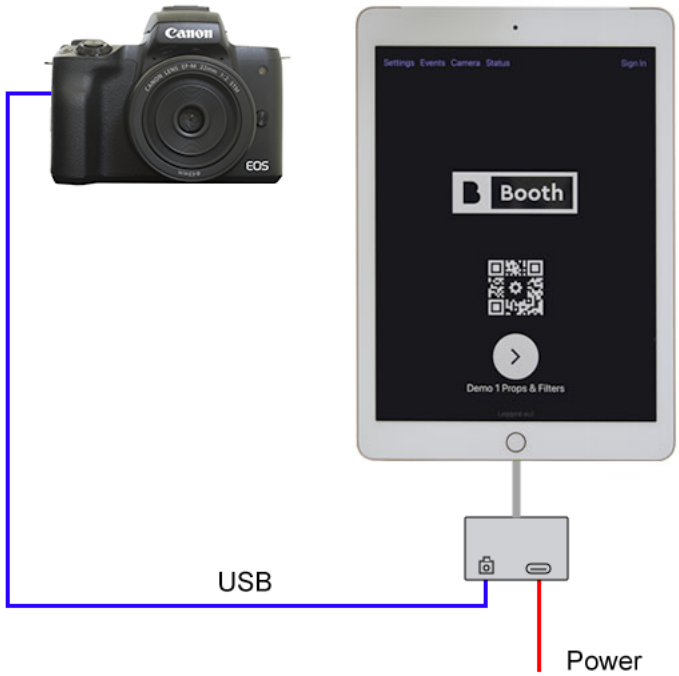
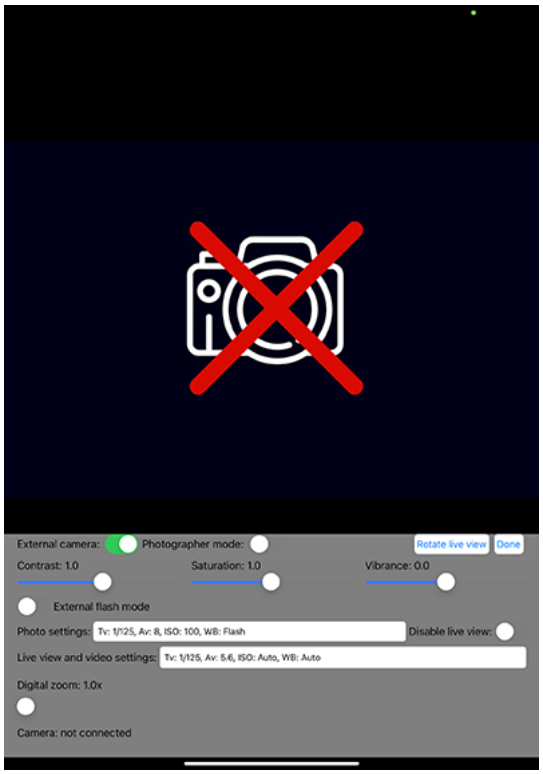


To enable a connection to an external camera click on "Camera Settings" at the top of the start screen in Breeze Booth for iPad and then select external camera:



The camera settings screen will display a graphic showing a camera with a red X if it is not connected to a camera.

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Connect the camera to the iPad and turn the camera on. After a few seconds the graphic showing a camera with a red X will be replaced with live view images from the camera. Please note that it may take several seconds to connect to the camera if it has a memory card full of images.
The screenshot below shows the iPad connected to a Canon EOS M50 camera with live view images being displayed from the connected camera:

The status line at the bottom of the window shows the camera model.

Camera Settings

Tap the "Rotate live view" button to rotate the live view images from the external camera if they are not the right way up. The live view is rotated 90 degrees each time the "Rotate live view" button is pressed. The camera orientation does not need to be the same as the iPad e.g. the camera can be in landscape orientation with the iPad in portrait orientation or any other combination.

Select "Photographer mode" for roaming photography where a photographer takes the photos and adjusts the exposure settings using the camera's controls. For a fixed photo booth disable photographer mode so that the app can adjust the camera settings.

The optimum camera settings depend upon the type of lighting and the camera model. Set the exposure mode dial to M and the image quality to JPEG not raw or HDR/HEIF. The medium/fine JPEG setting should give good results and will be slightly faster than the large JPEG settings due to smaller file sizes.

The "Photo settings" displays the camera settings that are used when taking photos. Tap on these settings to adjust them and tap the "Test" button to take a test photo:

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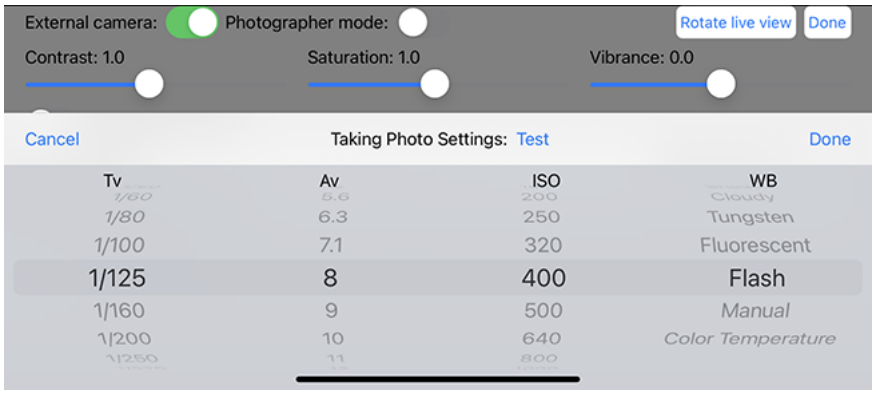
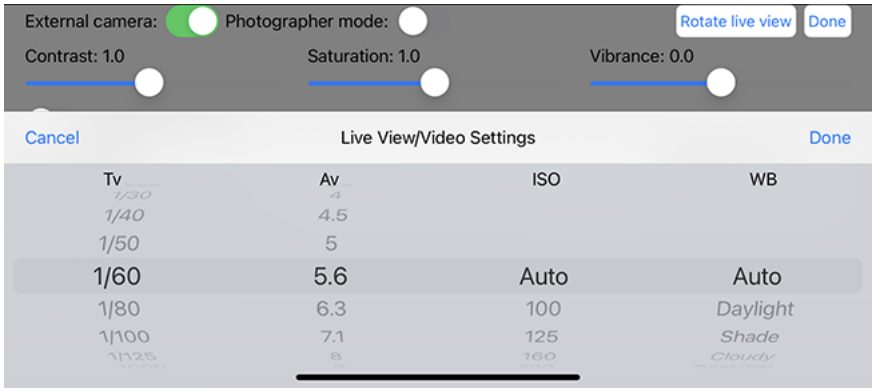


The "Live view and video settings" displays the settings that are used when displaying live view images and when capturing videos. Tap on these settings to adjust them:



The suggested settings for a number common set ups are listed below:

1) Mirrorless cameras (e.g. Canon EOS M50 or Canon EOS R10)

Taking photos with a studio strobe/flash connected via the camera's hotshoe:
Tap on the photo settings and set the shutter speed (Tv) to 1/125 sec, aperture (Av) to 8, ISO to 400 and white balance (WB) to flash. Tap the test button to take a test photo to check the exposure settings. If the exposure is too light or too dark adjust the power of the flash or the camera's ISO setting.
Tap on the live view and video settings and set the shutter speed to 1/60 sec, aperture to 5.6, ISO to auto and white balance to auto. If the live view display is too dark select a faster shutter speed or smaller aperture. If the live view is too bright select a faster shutter speed or a smaller aperture. Alternatively disable exposure simulation in the camera settings (this setting is not recommended if you are also capturing videos).

Capturing videos:
Tap on the live view and video settings and set the shutter speed to 1/60 sec, aperture to 5.6, ISO to auto and white balance to auto. Adjust the shutter speed and aperture to get the correct exposure. Check that exposure simulation is enabled in the camera so that the live view images show the current exposure settings.
Note: When capturing videos at standard frame rates (between 24fps and 30fps) the shutter speed should be 1/30 sec or faster. When capturing slow motion video using the camera's 120fps high frame rate setting set the shutter speed to 1/125 or faster.

2) Canon Rebel series DSLR cameras (e.g. Rebel T6/EOS 1300D or Rebel T7/EOS 2000D)

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These settings apply to any camera which does not have a B setting on the exposure mode dial. This includes most Rebel series DSLR cameras.

Taking photos with a studio strobe/flash connected via the camera's hotshoe:
Select the "External flash mode" setting. When "External flash mode" is selected the only settings you can change are the aperture and the ISO. The shutter speed does not affect exposure when using flash and is set to 1/125 sec. The white balance is set to "Flash" to give good colors with flash. When live view is active the app automatically sets the shutter speed to bulb and the white balance to auto. Setting the shutter speed to bulb cause the camera to use auto exposure for the live view to give bright live view images. Setting the white balance to auto should give good colors in live view as the lighting will be different from when the photo is taken using flash.

Take some test shots with flash by tapping the "Test" button and adjust the flash power and the camera aperture and ISO to get the correct exposure.

Capturing videos:
Disable the "External flash mode" setting and tap on the live view and video settings and set the shutter speed to 1/60 sec, aperture to 5.6, ISO to auto and white balance to auto. Adjust the shutter speed and aperture to get the correct exposure.
Check that exposure simulation is enabled in the camera so that the live view images show the current exposure settings.
Note: When capturing videos at standard frame rates (between 24fps and 30fps) the shutter speed should be 1/30 sec or faster. When capturing slow motion video using the camera's 120fps high frame rate setting set the shutter speed to 1/125 or faster.

Taking photos and capturing videos in the same event:
If you have an event which gives guests the choice of taking photos or capturing videos you need to disable "External flash mode" and select "Disable live view". Then adjust the photo settings and live view/video settings manually. The "Disable live view" setting disables live view just before taking each photo. This is required because the camera won't trigger the flash when taking a photo with live view active.
Tap on the photo settings and set the shutter speed (Tv) to 1/125 sec, aperture (Av) to 8, ISO to 400 and white balance (WB) to flash. Tap the test button to take a test photo to check the exposure settings. If the exposure is too light or too dark adjust the power of the flash or the camera's ISO setting.
Tap on the live view and video settings and set the shutter speed to 1/60 sec, aperture to 5.6, ISO to auto and white balance to auto. If the live view display is too dark select a faster shutter speed or smaller aperture. If the live view is too bright select a faster shutter speed or a smaller aperture. Alternatively disable exposure simulation in the camera settings (this setting is not recommended if you are also capturing videos).
Note: When capturing videos at standard frame rates (between 24fps and 30fps) the shutter speed should be 1/30 sec or faster. When capturing slow motion video using the camera's 120fps high frame rate setting set the shutter speed to 1/125 or faster.

3) Mid range and high end Canon DSLRs (e.g. Canon EOS 90D)

Mid range and higher end Canon DSLRs have a B setting on the exposure mode dial to select bulb exposure. This means that the "External flash mode" setting can't be used and separate camera settings need to be selected for taking photos and for live view display.
Set the camera exposure mode dial to M and switch off "External flash mode" in the camera settings screen.
For easy setup it is suggested that live view exposure mode simulation is disabled in the camera's settings. When this is disabled the camera will use auto exposure for live view and you don't need to set the shutter speed, aperture and ISO for the live view settings.

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You also need to disable live view silent shooting mode in the camera settings when using a Canon DSLR otherwise the flash won't fire when taking photos. Alternatively you can select the "Disable live view" in the camera settings screen. The "Disable live view" will disable live view immediately before taking a photo.

Tap on the photo settings to adjust the camera settings when taking photos. If you are using flash you need to set the shutter speed fast enough to cut out the ambient lighting and no faster than the camera's flash sync speed. Setting it to 1/125 sec should work with any camera and flash. Set the white balance to match the color of the flash (normally the "Flash" setting will give good results).
Take some test shots with flash and adjust the flash power and the camera aperture and ISO to get the correct exposure. You can do this by tapping on the photo settings to display the camera settings for taking photos and then tap on the "Test" button.

The "Disable live view" setting to the right of the photo settings controls whether live view is disabled before taking a photo. This can be useful when using low end Canon DSLRs which don't have dual pixel AF in live view. When live is disabled before taking the photo the DSLRs normal AF system can be used to focus before taking the photo. You don't need to select the "Disable live view" setting if you are using a mirrorless camera or a DSLR camera that supports dual pixel continuous face detect AF in live view.

Tap on the live view settings to adjust the camera settings used when live view is displayed. You don't need to adjust the shutter speed, aperture and ISO settings if live view exposure simulation is disabled in the camera. All you need to adjust is the white balance setting to match the color temperature of the ambient lighting. In most cases setting the white balance to Auto will give good results.
If live view exposure simulation is enabled in the camera you need to adjust the shutter speed, aperture and ISO settings to get correctly exposed live view images. Setting the ISO to Auto will give auto exposure of the live view images.

4) Continuous lighting with any camera

If you are using continuous lighting (e.g. LED lighting) you need to use the same settings for taking photos and for live view. To do this make sure "External flash mode" is not selected in the camera settings screen.
For complete control over the exposure the camera should be set to manual exposure by setting the exposure mode dial to M. Then tap on the "Live view settings" and adjust the shutter speed, aperture and ISO to give the correct exposure. Then set the white balance to match the color temperature of the lighting.
Then set the "Photo settings" to the same settings as the "Live view settings" because the same lighting is used for both live view and for taking the photos.

If you prefer you can use one of the camera's auto exposure settings by setting the exposure mode dial on the camera to Auto, P, Tv or Av. When the exposure mode is set to Auto or P the camera selects the shutter speed and the aperture to give the correct exposure. Only the ISO and white balance settings in the camera settings will have any effect. Similarly when the exposure mode is set to Av *aperture priority) the camera selects a shutter speed to match the aperture and the shutter speed setting in the camera settings is ignored.

Please note: If the camera is set to autofocus and is unable to lock focus it will not be able to take a photo. The iPad will display the "AF error" screen for 10 seconds and then try again by restarting the countdown. It will try to take the photo up to three times before displaying an error message and returning to the ready screen. The "AF error" screens and animations are named af_error.jpg, af_error.png, af_error.gif, af_error.mov/mp4. If AF fails three times it will display the "AF abort" error using screens and animations named af_abort.jpg, af_abort.png, af_abort.gif, af_abort.mov/mp4
Please see the Screens displayed to the user section for details.

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Supported Cameras

Canon EOS R3
Canon EOS R5
Canon EOS R6 Mark II
Canon EOS R6
Canon EOS R7
Canon EOS R8
Canon EOS R10
Canon EOS R50
Canon EOS R100
Canon EOS R
Canon EOS RP
Canon EOS-1DX Mark II
Canon EOS-1DC
Canon EOS-1DX
Canon EOS-1Ds Mark III
Canon EOS-1Ds Mark II
Canon EOS-1D Mark IV
Canon EOS-1D Mark III
Canon EOS 5DS R
Canon EOS 5DS
Canon EOS 5D Mark IV
Canon EOS 5D Mark III
Canon EOS 5D Mark II
Canon EOS 6D Mark II
Canon EOS 6D
Canon EOS 7D Mark II
Canon EOS 7D
Canon EOS 90D
Canon EOS 80D
Canon EOS 77D/EOS 9000D
Canon EOS 70D
Canon EOS 60D
Canon EOS 50D
Canon EOS 40D
Canon EOS 30D
Canon EOS 4000D/EOS 3000D/Rebel T100
Canon EOS 2000D/EOS 1500D/Rebel T7/Kiss X90
Canon EOS 1300D/Rebel T6/Kiss X80
Canon EOS 1200D/Rebel T5/Kiss X70
Canon EOS 1100D/Rebel T3/Kiss X50
Canon EOS 1000D/Rebel XS/Kiss F
Canon EOS 250D/Rebel SL3/Kiss X10/200D Mark II
Canon EOS 200D/Rebel SL2/Kiss X9
Canon EOS 100D/Rebel SL1/Kiss X7
Canon EOS 850D/Rebel T8i/Kiss X10i
Canon EOS 800D/Rebel T7i/Kiss X9i
Canon EOS 760D/Rebel T6s/EOS 8000D
Canon EOS 750D/Rebel T6i/Kiss X8i
Canon EOS 700D/Rebel T5i/Kiss X7i
Canon EOS 650D/Rebel T4i/Kiss X6i
Canon EOS 600D/Rebel T3i/Kiss X5

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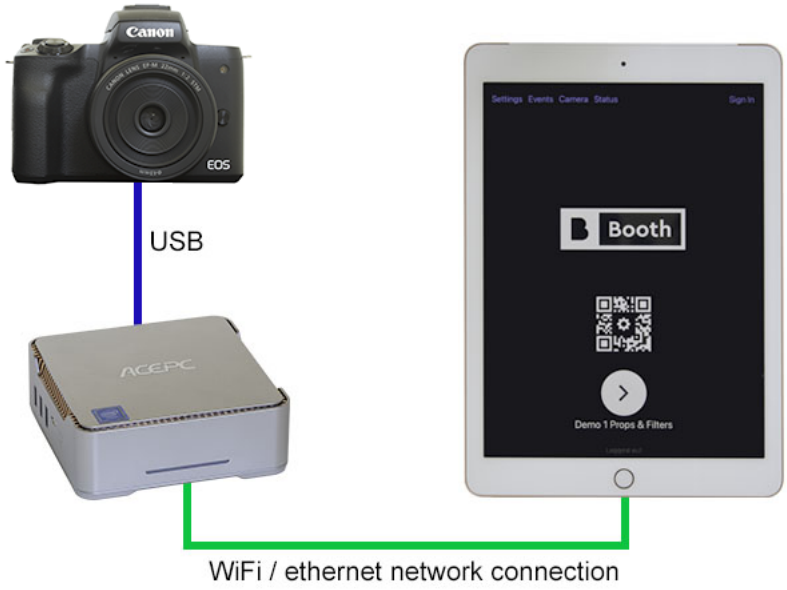
Canon EOS 550D/Rebel T2i/Kiss X4
Canon EOS 500D/Rebel T1i/Kiss X3
Canon EOS 450D/Rebel XSi/Kiss X2
Canon EOS 400D/Rebel XTi/Kiss X
Canon EOS M6 Mark II
Canon EOS M200
Canon EOS M50 Mark II/Kiss M2
Canon EOS M50/Kiss M
Canon PowerShot SX70 HS
Canon PowerShot G5 X Mark II
Canon PowerShot G7 X Mark III

2.7.1 Legacy support

Please note: Breeze Booth for iPad v3.2 onwards supports a direct USB connection between a Canon camera and the iPad (see Using an external camera). You can still use the old method of connecting the camera to a Windows PC running the CameraController utility described on this page, but it is not recommended.

You need to use an external camera controller which is connected to the camera via USB and to the iPad via a wired or wireless network.

The external controller can be a Windows PC (e.g. an Intel ComputeStick or a mini PC) or a Raspberry Pi single board computer. A Windows PC is easier to set up than a Raspberry Pi and has the advantage that it can also be used to control the iPad. The Raspberry Pi has the advantage that it is compact, low cost and requires little or no maintenance once set up.



Mini Windows PC running the camera controller

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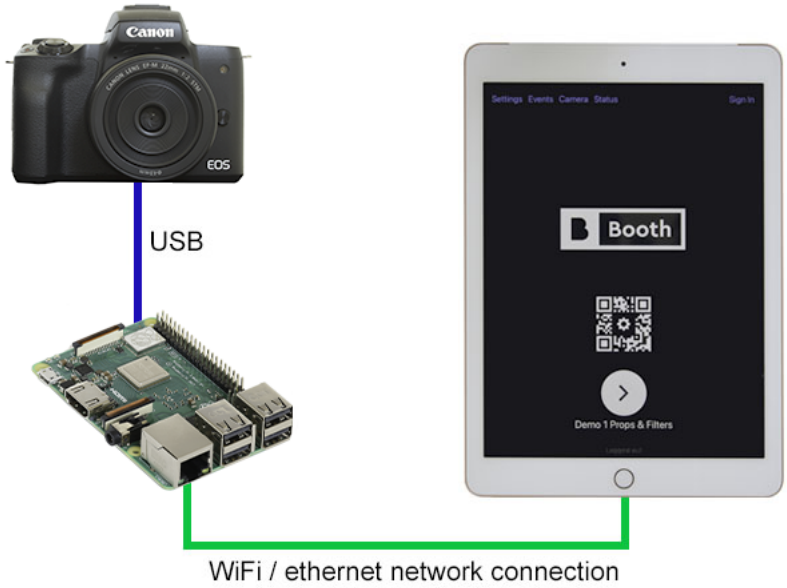
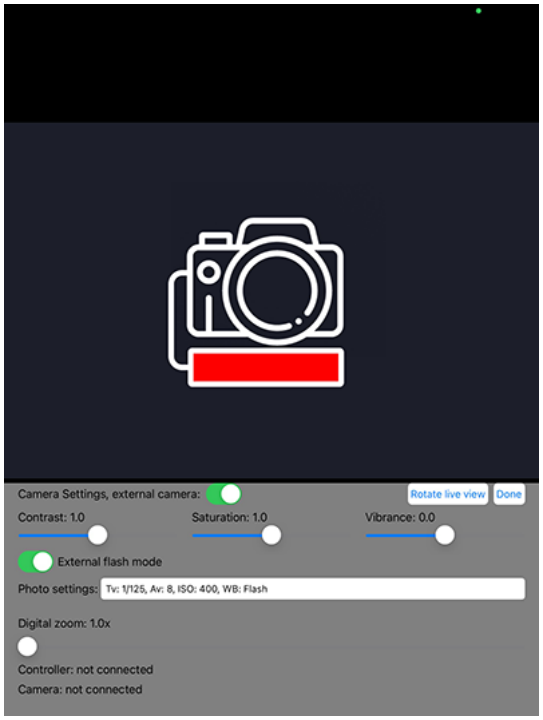


Raspberry Pi running the camera controller

To enable a connection to an external camera click on "Camera Settings" at the top of the start screen in Breeze Booth for iPad and then select external camera:



The camera settings screen will display a graphic showing a camera with a red box underneath if it is not connected to the camera controller.

Connect the Windows PC or Raspberry Pi controlling the camera to the same network as the iPad using a wifi or wired connection and run the camera controller app. The iPad should connect to the camera controller after 5 to 10 seconds. The connection status is shown at the bottom of the camera settings screen. In the screenshot above the status is shown as "Controller: not connected" and

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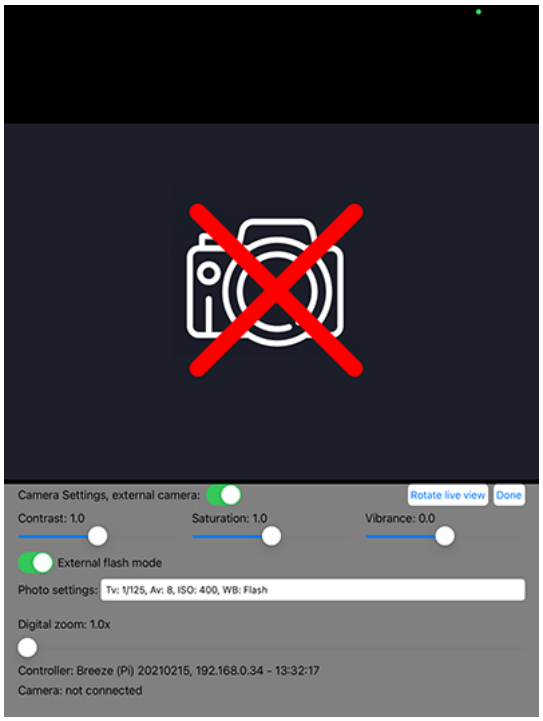
"Camera: not connected".

The screenshot below shows the iPad connected to the camera controller with no camera connected. The status at the bottom of the screen shows "Controller:" followed by the version of the camera controller software and the iPad of the Windows PC or Raspberry Pi it is running on:



Connect the camera to the Windows PC or Raspberry Pi running the camera controller software using a USB cable and turn the camera on. After a few seconds the graphic showing a camera with a red X will be replaced with live view images from the camera.
The screenshot below shows the iPad connected to the camera controller with live view images being displayed from the connected camera:

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The status line at the bottom of the window will show the camera model.

Windows PC Camera Controller

The Windows version of the camera controller will run on any desktop version of Windows. It does not require a powerful PC and will run on low cost Intel Atom based or Intel Celeron based computers such as ComputeSticks or mini PCs.
To install the camera controller simply download and install the Event Editor (this can be downloaded here).

When you run the camera controller for the first time you may receive a warning message from the firewall software running on the computer e.g.

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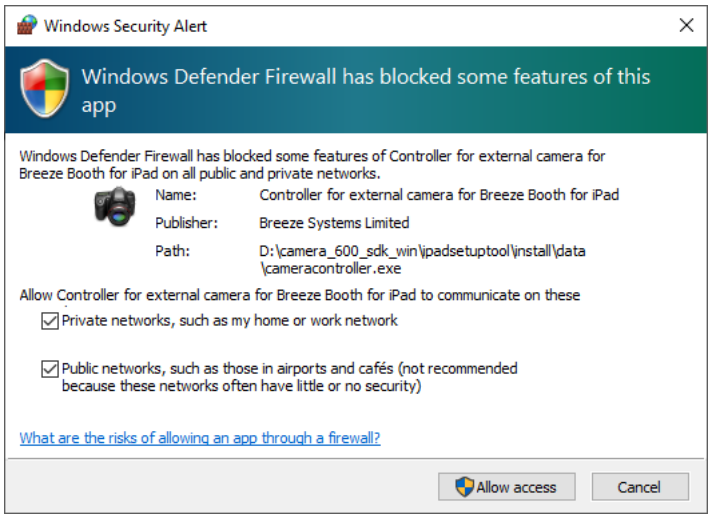
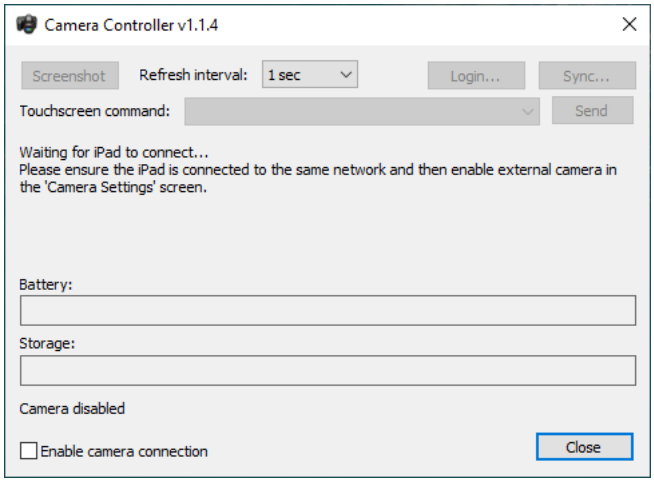


This is normal because the camera controller needs to access the network in order to communicate with the iPad. Please allow the camera controller access to the network.

The screenshot below shows the camera controller running without a network connection to an iPad or a USB connection to a camera:



Run Breeze Booth for iPad on the iPad, tap on "Camera Settings" in the start screen and then select "External camera". After a few seconds the iPad should connect and the camera controller screen will look something like this:

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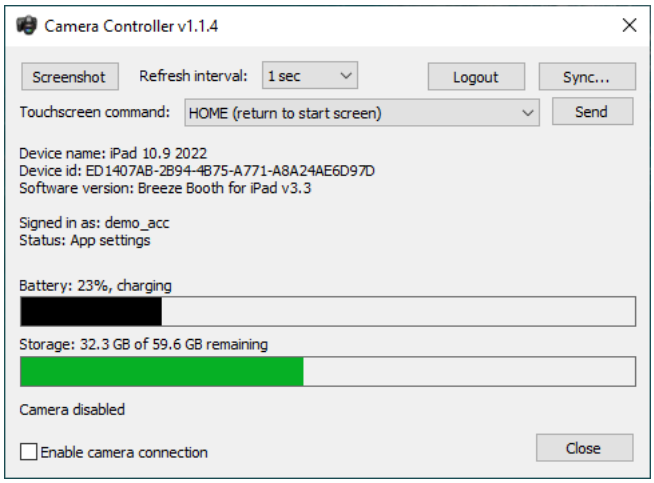
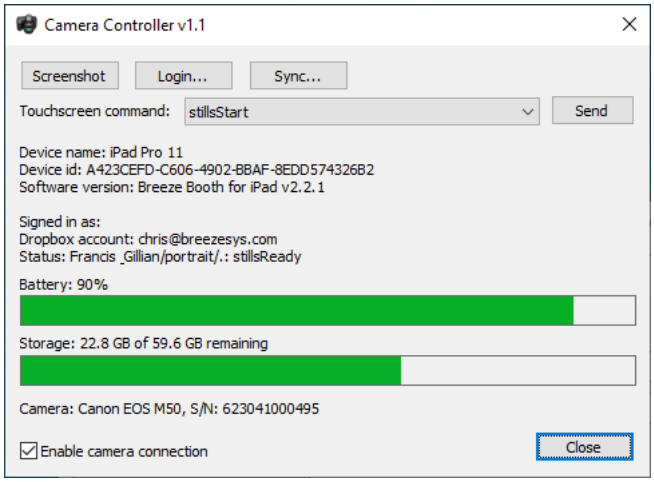


The controls at the top of the window are for monitoring and controlling the app and are described in the next section: Remote control and monitoring of the iPad
The rest of the windows displays status information about the iPad that's connected to the camera controller e.g. its name, battery state and amount of free storage.
The final line shows the camera status. In the screenshot above this displays "Detecting camera" because the camera was not connected at this point.

Connect the camera to the Windows PC using a USB cable and turn the camera on. The camera controller should automatically detect the camera and connect to it and then the iPad should start displaying live view images after a few seconds. When the camera is connected the camera controller window will look something like this:



Notes for setting up a dedicated Windows based camera controller

1. Set up the PC to auto run when the power is turned on. This is normally a setting in the computer's BIOS
2. Create a new user account which does not have administrator rights and set this up to automatically login when Windows starts up
3. Create a shortcut in the Windows startup folder to run the camera controller automatically when Windows starts up. You can do this by typing Windows+R to display the "Run" window and then enter shell:startup
4. Go to Settings->Updates & Security and click on Advanced options to pause Windows updates. This

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allows Windows updates to be paused for up to 35 days and to prevent automatic updates from disrupting the PC during an event
Alternatively you can disable automatic Windows updates by disabling the update service. An internet search for "disable windows 10 updates permanently" should provide details on how to do this.

Raspberry Pi Camera Controller

You can also use a Raspberry Pi single board computer to control the camera. To do this you need a Raspberry Pi 4 Model B with 2GB or more of memory and a 8GB micro SD card.

First install Raspberry Pi OS 32-bit on the micro SD card by running the Raspberry Pi Imager: https://www.raspberrypi.org/software/

Next connect HDMI, keyboard and mouse to Raspberry Pi and power up. Follow the on screen instructions to change the password and update the operating system.
Reboot and run the Raspberry Pi Configuration tool (Pi->Preferences->Raspberry Pi Configuration) to select the following settings:

- Boot to desktop
- Boot as current user
- Enable ssh and VNC interfaces

Open a terminal window and rename or delete the following file: /usr/lib/gvfs/gvfs-gphoto2-volume-monitor
e.g. run the command:
sudo rm /usr/lib/gvfs/gvfs-gphoto2-volume-monitor

Next download and install Breeze Camera by running the following commands:
wget https://bb4ipad.com/breeze_camera.tgz
tar xvzf breeze_camera.tgz
./run_breeze_camera.bash install
sudo reboot

Connect the Raspberry Pi to the same network as the iPad using a wired connection or by wifi. Then connect the camera to the Raspberry Pi using a USB cable and turn the camera on. Open the camera settings screen in Breeze Booth for iPad and select "external camera". After a few seconds the iPad should connect to the camera controller and start displaying live view images from the camera.

The Raspberry Pi can also be used as an AirPrint print server by enabling CUPS. Details of how to set this up are beyond the scope of this help file. Please search the internet for "Raspberry Pi AirPrint" for information on how to set up a Raspberry Pi as an AirPrint server.

Troubleshooting
If the iPad displays the camera icon with a red rectangle underneath it means that the app hasn't connected to the camera controller. Check that the Raspberry Pi and the iPad are connected to the same network.
If the iPad displays the camera icon with a red cross it means that the app has connected to the camera controller but the camera controller is not connected to the camera. Check that the camera is connected to a USB port on the Raspberry Pi and is turned on. Then try turning the camera off for a few seconds and then turn it on again.

Network set up

For best results you need a fast reliable network connection between the iPad and the camera controller to give a smooth live view display. Both the iPad and the camera controller need to be

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connected to the same network to work.

One option is to use a cellular iPad and set it up as a personal hotspot and then connect the camera controller via wifi. This will allow the iPad to connect to the internet for sharing photos and to the camera controller to control the camera.

Another option is to use a mobile hotspot (or "MiFi") to provide the internet connection and to connect iPad and the camera controller to the hotspot using wifi.
Some mobile hotspots have an ethernet connection which allows the camera controller to use a wired network connection to the hotspot. This configuration should give better performance than using wifi for both the iPad and the camera controller.

Another option is to use a router which takes a data SIM to provide the internet connection. These usually support multiple wired connections allowing both the camera controller and the iPad to be connected using a wired connection. To do this you will need a suitable lightning to ethernet adapter (or USB C to ethernet adapter if you are using an iPad Pro). This should provide the fastest and most reliable set up of the options outlined above.

If you are running firewall software on the Windows PC or Raspberry Pi you may need to configure it manually to allow the camera controller software to access the network and communicate with the iPad. The camera controller requires the following network access:

- Port 5010: UDP out
- Port 5011: TCP in/out

Supported Cameras

Canon EOS R5
Canon EOS R6
Canon EOS R6 Mark II
Canon EOS R7
Canon EOS R10
Canon EOS R
Canon EOS RP
Canon EOS-1DX Mark II
Canon EOS-1DC
Canon EOS-1DX
Canon EOS-1Ds Mark III
Canon EOS-1Ds Mark II
Canon EOS-1D Mark IV
Canon EOS-1D Mark III
Canon EOS 5DS R
Canon EOS 5DS
Canon EOS 5D Mark IV
Canon EOS 5D Mark III
Canon EOS 5D Mark II
Canon EOS 6D Mark II
Canon EOS 6D
Canon EOS 7D Mark II
Canon EOS 7D
Canon EOS 90D
Canon EOS 80D
Canon EOS 77D/EOS 9000D
Canon EOS 70D

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Canon EOS 60D
Canon EOS 50D
Canon EOS 40D
Canon EOS 30D
Canon EOS 4000D/EOS 3000D/Rebel T100
Canon EOS 2000D/EOS 1500D/Rebel T7/Kiss X90
Canon EOS 1300D/Rebel T6/Kiss X80
Canon EOS 1200D/Rebel T5/Kiss X70
Canon EOS 1100D/Rebel T3/Kiss X50
Canon EOS 1000D/Rebel XS/Kiss F
Canon EOS 250D/Rebel SL3/Kiss X10/200D Mark II
Canon EOS 200D/Rebel SL2/Kiss X9
Canon EOS 100D/Rebel SL1/Kiss X7
Canon EOS 850D/Rebel T8i/Kiss X10i
Canon EOS 800D/Rebel T7i/Kiss X9i
Canon EOS 760D/Rebel T6s/EOS 8000D
Canon EOS 750D/Rebel T6i/Kiss X8i
Canon EOS 700D/Rebel T5i/Kiss X7i
Canon EOS 650D/Rebel T4i/Kiss X6i
Canon EOS 600D/Rebel T3i/Kiss X5
Canon EOS 550D/Rebel T2i/Kiss X4
Canon EOS 500D/Rebel T1i/Kiss X3
Canon EOS 450D/Rebel XSi/Kiss X2
Canon EOS 400D/Rebel XTi/Kiss X
Canon EOS M6 Mark II
Canon EOS M200
Canon EOS M50 Mark II/Kiss M2
Canon EOS M50/Kiss M
Canon PowerShot SX70 HS
Canon PowerShot G5 X Mark II
Canon PowerShot G7 X Mark III

2.8 Remote control and monitoring of the iPad

The Windows version of the camera controller can be used to monitor and control the iPad. This is very useful when running an unattended photo booth because you can use remote desktop software such as TeamViewer, Logmein or Windows Remote Desktop to login to the Windows computer and control and monitor the iPad app. It is also needed when using a payment system with the app.

To enable the camera controller go to App Settings and select the "External controller" option. To enable the camera controller and use an external camera go to the Camera Settings screen and select "External camera".
The monitoring and remote control capabilities described in this section are available in the camera controller with or without an external camera.

When you run the camera controller for the first time you may receive a warning message from the firewall software running on the computer e.g.

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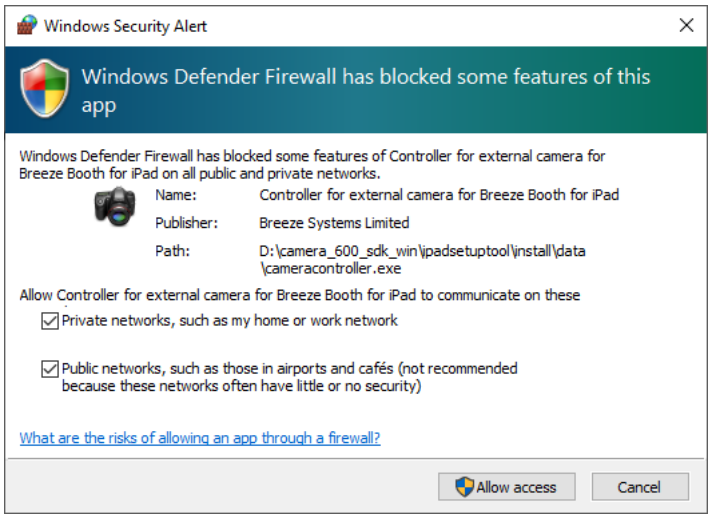
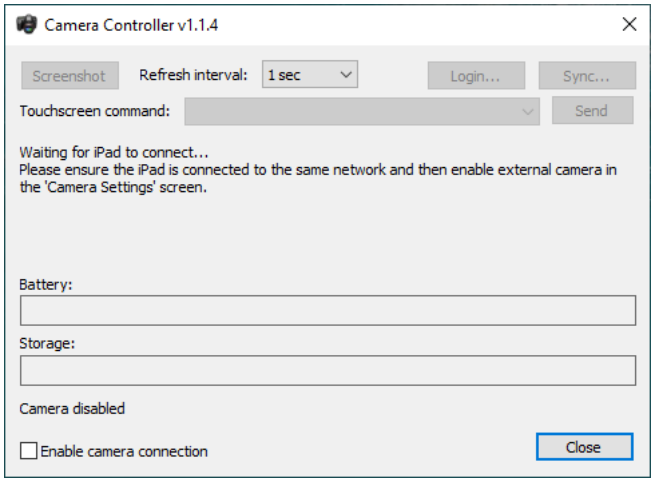


This is normal because the camera controller needs to access the network in order to communicate with the iPad. Please allow the camera controller access to the network.

The screenshot below shows the camera controller running without a network connection to an iPad:



Run Breeze Booth for iPad on the iPad, and either enable "External controller" in the App Settings. After a few seconds the iPad should connect and the camera controller screen will look something like this:

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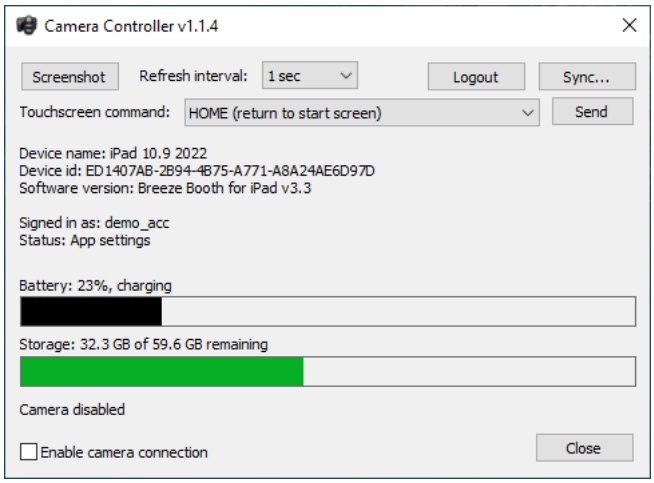


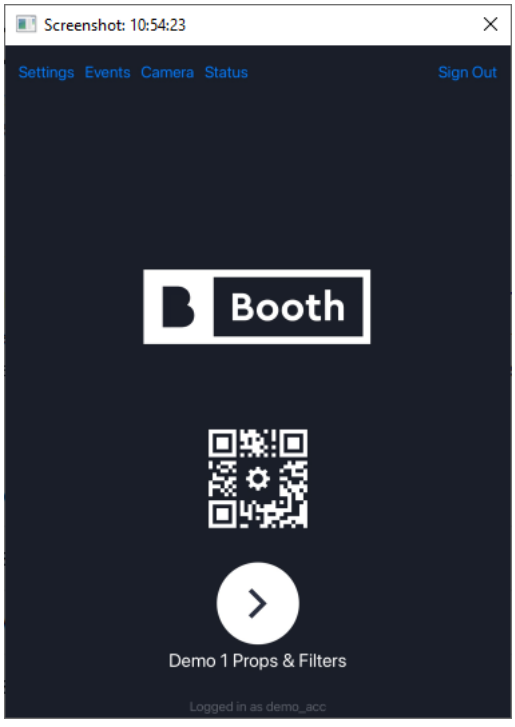
Monitoring the iPad

The camera controller displays the iPad's status and shows the iPad's name, the vendor id and the software version of Breeze Booth for iPad.
It also shows whether the iPad is signed in or not. If the app is signed into Dropbox the name of the Dropbox account will be displayed underneath the "Signed in as" line.
"Status:" shows the name of the screen currently being display in the app e.g. Startup.

The two status bars show the iPad's battery state and memory usage.

Screenshot

You can take a screenshot of the iPad app by clicking on the "Screenshot" button. This sends a command to the iPad requesting a screenshot and displays it in a separate window on the PC:



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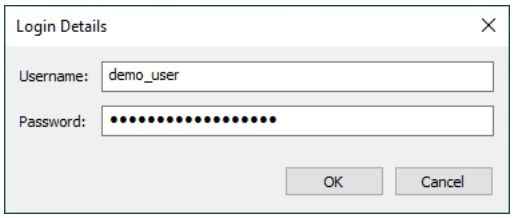
The screenshot can be refreshed regularly by setting the refresh interval. If this is set to "never" the screenshot will not update automatically but can be updated manually by pressing the screenshot button.
Warning: Setting the refresh interval to 1 sec puts a load on the iPad and may interfere with the running of an event and could cause the app to become unstable. Please select a longer refresh interval if this is a problem.

Controlling the iPad

The login/log out button can be used to log the iPad in or log it out:



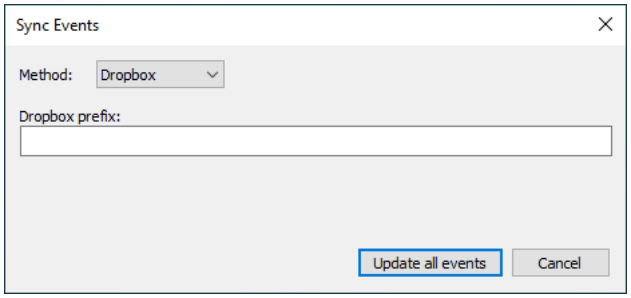
The "Touchscreen command" dropdown list allows a touchscreen command to be sent to the iPad. Select the touchscreen command from the dropdown list and then click on "Send" button to send the command to the iPad app.
The list of commands is updated according to the screen currently being displayed by the app. When the start screen is displayed (the status is shown as "Startup") the dropdown list contains a list of events to run and an "Update all" option. Selecting one of the events will run the event on the iPad. Sending "Update all" will update all events using the sync method currently selected in App Settings.

When an event is running the touchscreen commands dropdown list will contain a list of touchscreen commands defined for the screen being displayed in the app. Sending a touchscreen command will have the same effect as tapping the touchscreen area on the iPad. The "HOME (return to start screen)" will exit the event and return to the start screen.
Please note that the camera controller can't send key press commands to the app when a keyboard or a survey screen is displayed (e.g. the sharing keyboards for entering email addresses or text numbers).

When the iPad app executes the command you should see the screen information in the status line change. You can also take screenshots to see what the app is doing.

The "Sync..." button can be used to sync/update events on the iPad. You only need to use this option too sync if you need to override the sync method currently set in the App Settings screen. If you don't need to change the sync method you can use the "Update all" touchscreen command when the start screen is displayed.

Pressing the "Sync..." button opens the "Sync Events" dialog:



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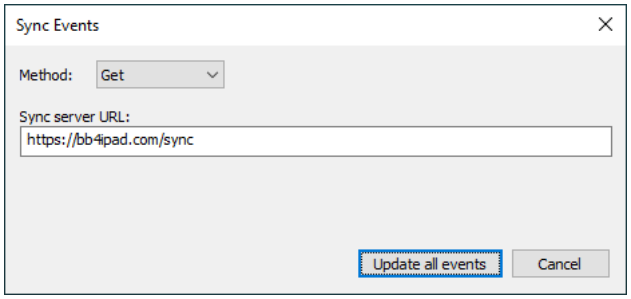
When you press the "Update all events" button the camera controller sends a command to the iPad instructing it to update all events using the specified sync method. This may take a while if there are a lot of events to sync. You can monitor the sync progress by taking screenshots or looking at the status line in the camera controller. The status line will display "Updating all events..." while it is updating the events and then it will show "Startup" when the events have been synced.

The "Method" dropdown list lets you select the sync method: Dropbox, Get or Post. Please see the section on Updating Events for more information about the different ways to sync events.

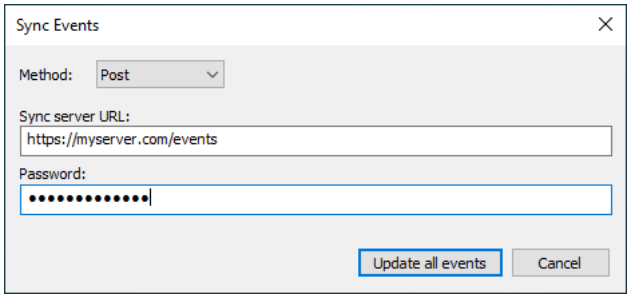
Set the method to Dropbox to update the events using Dropbox and then enter the optional prefix to specify the Dropbox folder containing the events.
Please note that it is only possible to sync via Dropbox if the app is logged into Dropbox. It isn't possible to remotely log the app into Dropbox.

Set the method to Get to update the events from a web server using HTTP GET:



Enter the URL of the sync server to use for updating the events e.g. to download the sample events set this to https://bb4ipad.com/sync
Leave the sync server URL field blank to sync using the sync server currently defined in the App Settings screen.

Set the method to POST to update the events from a web server using HTTP POST:



Enter the URL of the sync server to use for updating the events and the optional password.
Leave the sync server URL field blank to sync using the sync server currently defined in the App Settings screen.

2.9 Status Screen

The status screen provides an overview of the number of sessions and shares today and whether any files are queued for emailing, syncing to Dropbox or uploading to the cloud:

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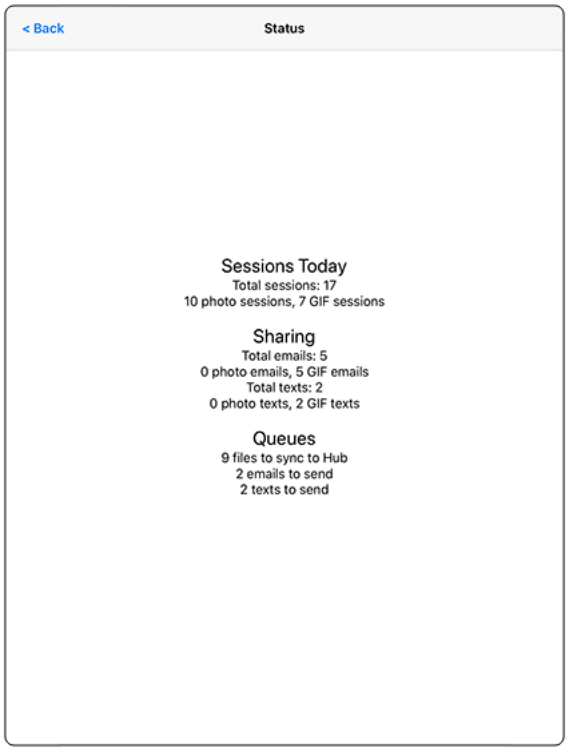

The status screen display is divided up into three sections:

1. The number of sessions today.
   This section displays the total number of sessions today together with a breakdown of the number of photo, GIF and video sessions.

2. The number of shares today.
   This section shows the total number of emails and texts sent today together with a breakdown of the number of photo, GIF and video shares by email and text.

3. The number of queued files
   This section shows the number of files waiting to be emailed, texted, synced to Dropbox, synced to Breeze Hub or uploaded to the cloud.
   If the iPad has an internet connection the app will continue to send the files (provided the app is running in the foreground on the iPad) and the status screen will update queue display.

The status screen can be displayed by tapping on "Status" in the start screen. It can also be displayed from the ready or standby screens in photo booth mode using the touchscreen actions statusScreen, menu1StatusScreen or menu2StatusScreen.

Note: The start screen can also be used to display whether there are files in the queue by displaying a background image with a '_syncing' suffix. Please see Customizing the Start Screen and Removing Branding for details.

2.10 Locking Down the iPad

To prevent users from breaking out of the photo booth screens the iPad can be locked down using iOS guided access. This will prevent users from returning to the iPad's home screen by pressing the home button or by swiping up from the bottom of the screen. It will also prevent users from accessing the

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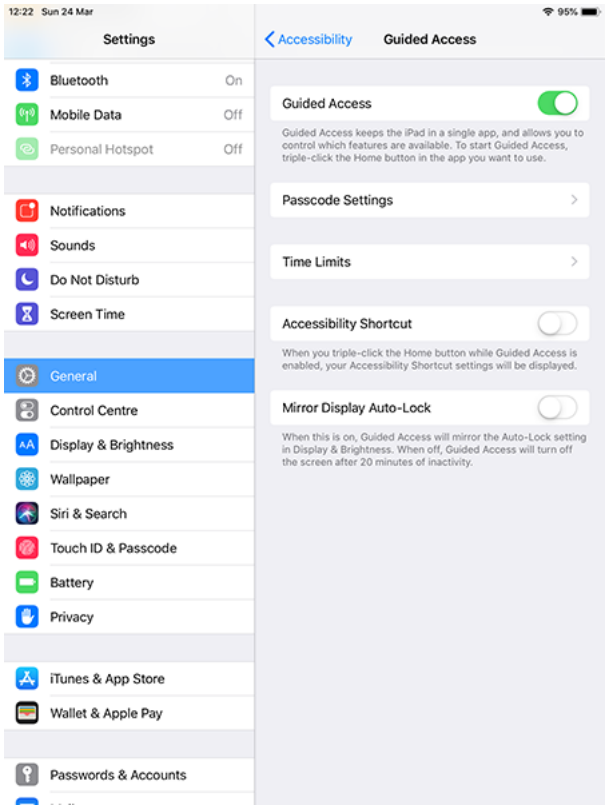
camera and other settings by swiping down in the right corner or using the sleep/wake button to put the iPad to sleep.

Setting Up Guided Access

Tap on the iPad settings and select Accessibility, scroll down to the bottom of the screen and tap Guided Access:



Select **Guided Access** and then tap **Passcode Settings** to define a passcode to end Guided Access and to specify whether Touch ID (or Face ID on devices without a physical home button) can be used to end Guided Access:

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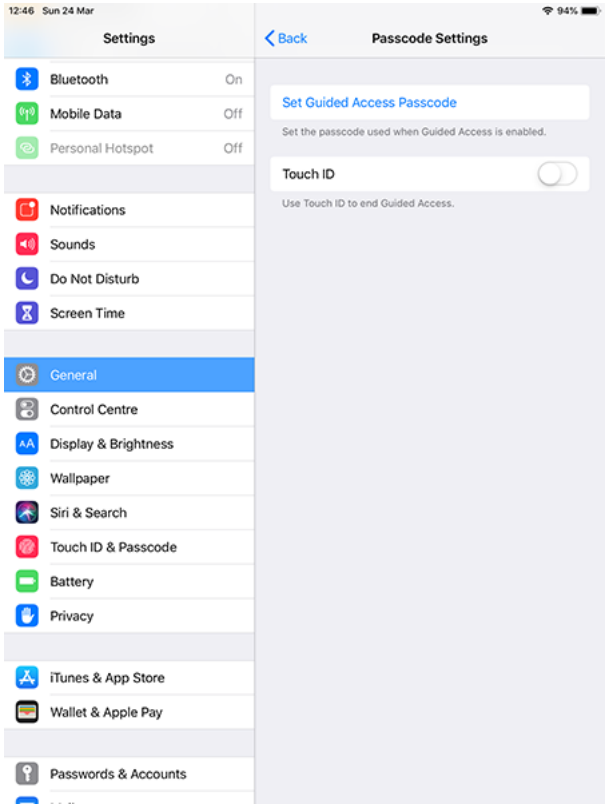

Enabling Guided Access

Run Breeze Booth then triple click the Home button (or the Sleep/Wake button on devices that do not have a Home button) to enable Guided Access. If a passcode to end Guided Access has already been defined the device will switch to Guided Access mode. If a passcode hasn't been defined you will be prompted to enter one.

When Guided Access is on screen swipes from the bootm of the screen or the top right corner of the screen will be ignored and the Home and Sleep/Wake buttons will have no effect unless they have been enabled in the Guided Access options.

Ending Guided Access

Triple click the Home button (or double click the Sleep/Wake button on devices that don't have a physical Home button) to end Guided Access. You will be prompted to enter the passcode or to use Touch ID/Face ID, if enabled, to end Guided Access.
The app's screen will shrink and "End", "Resume" and "Options" will be displayed in the corners of the display. Tap "End" to end Guided Access, "Resume" to resume Guided Access or "Options" to display options for enabling the iPad's buttons and other options for Guided Access.

3 Web App

The Web App provides an online tool for managing accounts, users, devices, subscriptions and vouchers.

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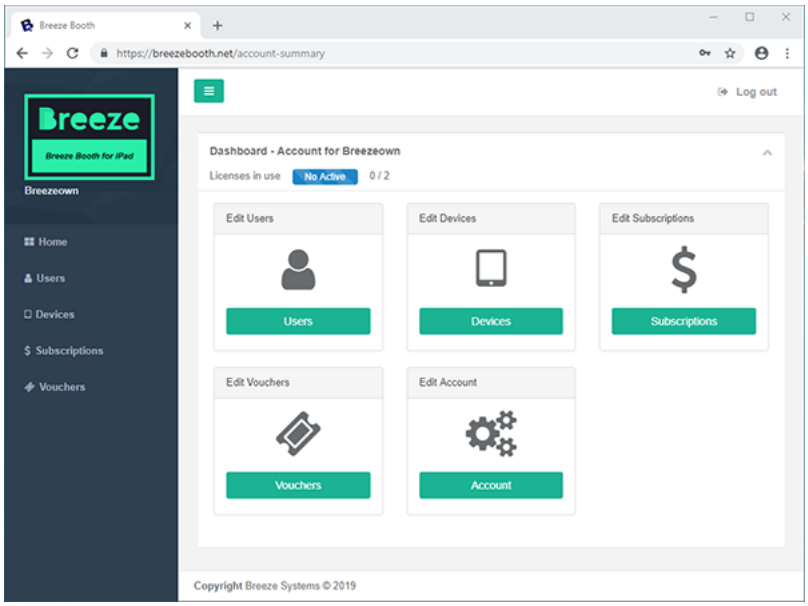
You can sign into the web app by opening https://breezebooth.net in a web browser. After signing in a dashboard screen will be displayed:



The left pane shows the username you've signed in with under the Breeze logo and a menu of the options available. The main pane on the right shows the name of the account you have signed in to with a summary of the licenses in use. The rest of the main pane provides access to administering Users, Devices, Subscriptions, Vouchers and the Account.

Licenses

When you sign in with an iPad it contacts the web app to obtain a license. If a license is available from the pool of licenses it is assigned to that iPad. When you sign out from an iPad the license is returned to the pool so that it can be used by other devices. Licenses are created using subscriptions or vouchers.

Accounts

An account with at least one active subscription or voucher is required to use Breeze Booth for unlimited photos. The app can be used without signing in to an account but it will be limited to ten photos or GIFs per day before a watermark is added to the output. It is free to sign up for an account and once created this can be used to purchase subscriptions or to redeem vouchers to add licenses to the pool so that iPads can sign in.

Please see Creating an Account and Logging into the Web App for more information.

Users

An account has one or more users. Users are able to sign in from an iPad or into the web app. A user can be trusted and may be given one or more roles when logged in to the web app (e.g. iPad admin and subscription admin).
A trusted user is able to log in with any iPad and obtain a license if one is available in the license pool.
A user who is not trusted can only log in using an iPad that is already registered with the account and is

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enabled.
You can also limit the maximum number of devices a user can sign in with.

Please see Users for more information.

Devices

When an iPad signs in it is added to the list of active devices that have a license. The license can be released either by signing out from the iPad or by deactivating it in the web app. If the iPad is deactivated by the web app it will be logged out automatically. Devices can be disabled which will prevent them from being able to sign in even if there are spare licenses available in the pool.

Please see Devices for more information

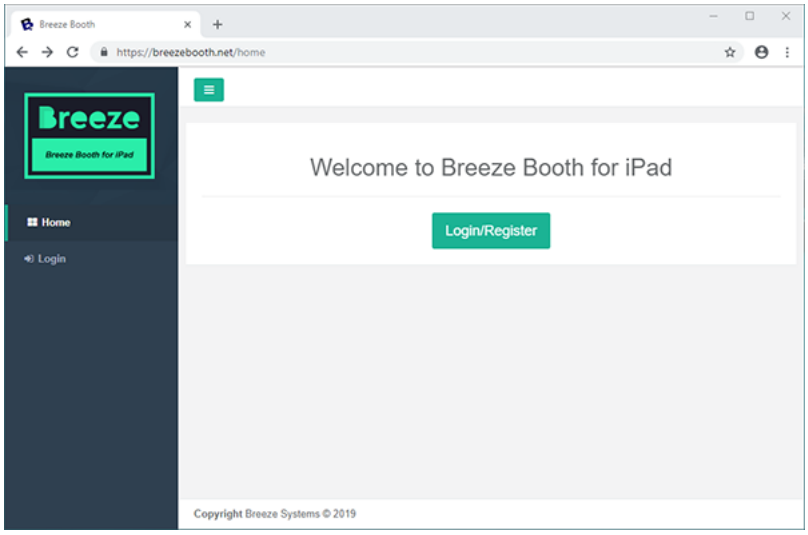
Subscriptions and Vouchers

Licenses can be purchased using subscriptions or by redeeming vouchers.

Please see Subscriptions and Vouchers for more information.

3.1 Creating an Account and Logging into the Web App

Click on breezebooth.net then click on "Login/Register" to create a new account:



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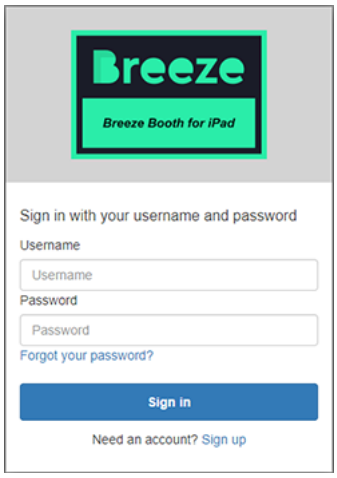
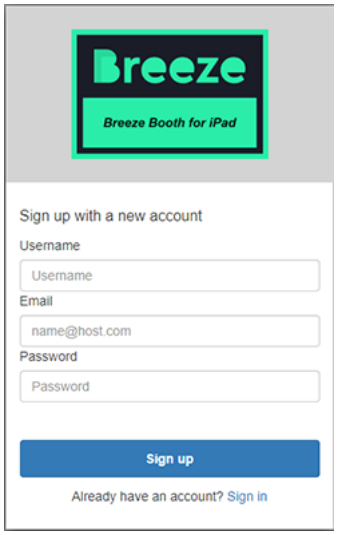


Click on "Sign up" to create a new account:



Enter the username, email address and password for the new account and then press "Sign up".
Please note: usernames can contain any characters except for spaces.

A verification email will be sent to the email address entered in the sign up screen. Click on the link in the verification email to confirm your email address.
After confirming your email address you will be able to log into your new account using the login page and the main dashboard screen will be displayed:

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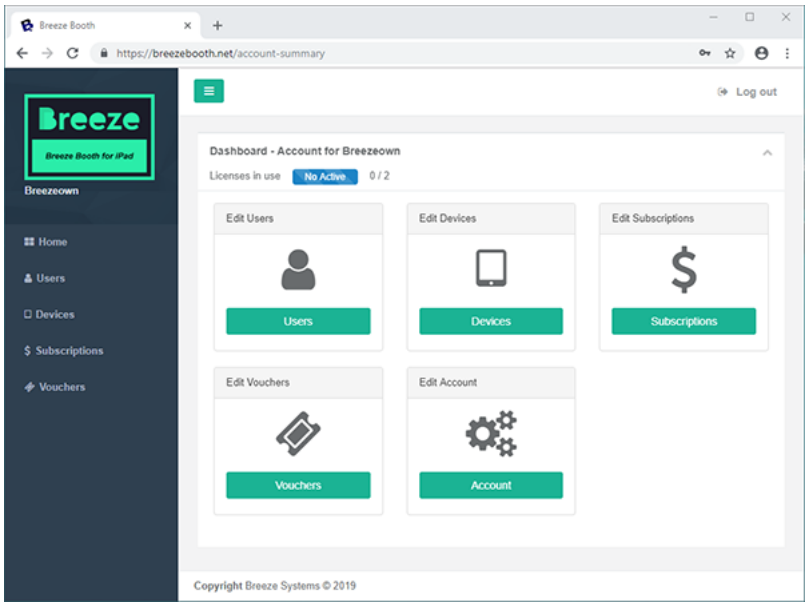
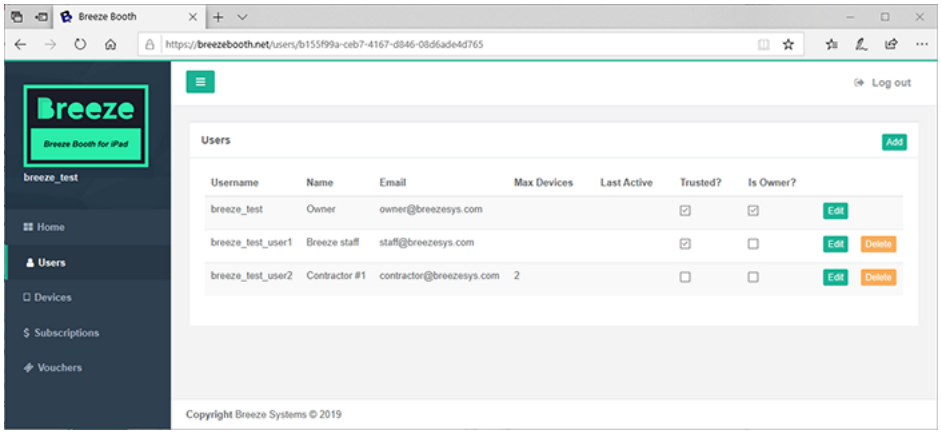


The account name is shown at the top of the main pane with the number of licenses that are in use and the total number of licenses available displayed underneath. The username of the logged in user is displayed in the left hand pane underneath the Breeze logo.

Click "Account" in the main pane to edit the name of the account or click on the other menu items to administer users, devices, subscriptions and vouchers.

3.2 Users

Click on **Users** in the main dashboard of the web app or in the menu on the left to administer users:



Each account has a user that is the owner and may have one or more additional users who can be assigned different roles and have different privileges.

Click on the "Add" button on the right new the top to add a new user. This will display the "Add User" form:

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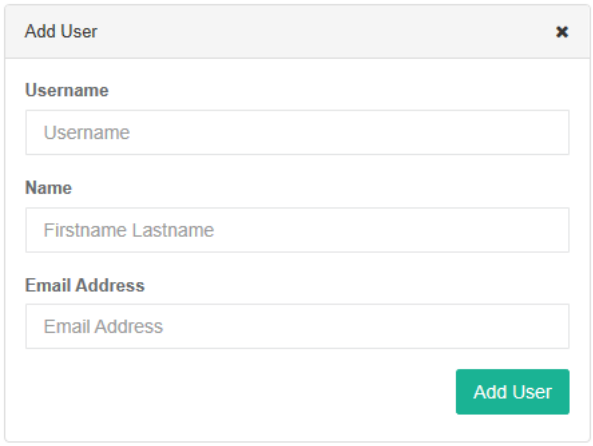
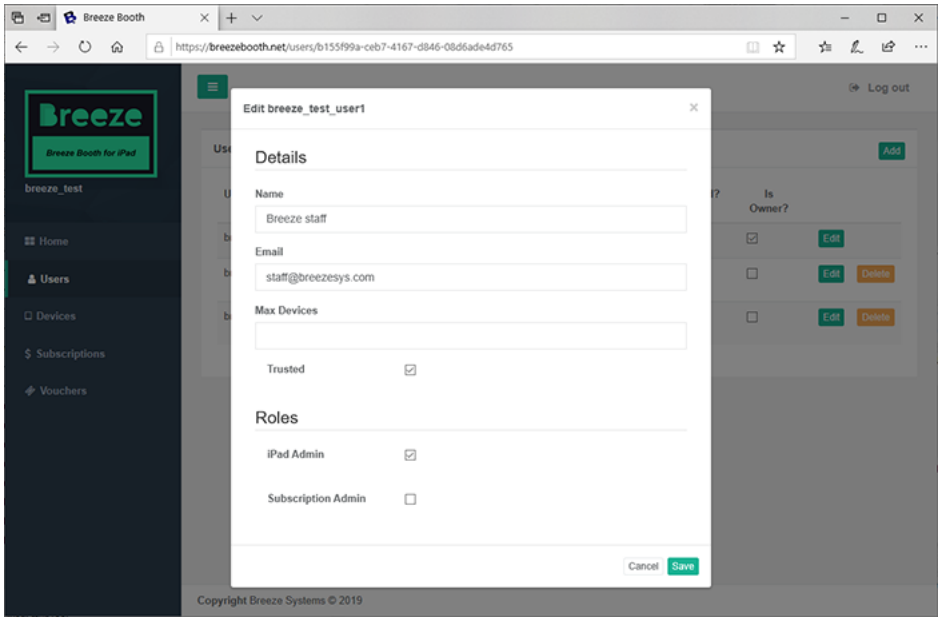


Enter the username for the new user. The username may contain any characters except for spaces. Then enter the name - this can contain any characters including spaces and is only used to help identify the user.
Then enter the email address. The username identifies the user and must be unique whereas the email address does not need to be unique. Several users can have the same email address.
When you click "Add User" an invitation email is sent to the email address with a temporary password. The new user needs to log in using the temporary password and enter a new password before they can log into the web app or sign in from an iPad.

After adding a new user click on "Edit" to edit their details and roles:



The Name field can contain any text you like to help identify the user. The name is displayed in the **Name** column of the **Users** screen.

The Email field is used to specify the email address associated with the user. The email address does not need to be unique and many users may have the same email address if required. The only time emails are sent to the user's email address is when they request a new password.

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The Maximum Devices field specifies the maximum number of iPads the user is allowed to sign in with at any given time. This is useful if an event is being white labeled for you by another photo booth company and you wish to limit the number of iPads they can use. It is also useful for unattended or postal photo booths where you may wish to limit each user to a single device. If you don't limit the number of devices available to a user they could download the app onto as many many iPads as they like and sign in using up all your available licenses.

Select "Trusted" if you trust the user. A trusted user is able to sign in with any iPad and obtain a license from the pool whereas a user who is not trusted can only sign in with an iPad that is already registered to the account and has been enabled. Not trusting the User for unattended or postal booths is another way to protect your account from unauthorized use. If an untrusted user tries ti sign in with a new iPad the iPad will be added to the list of registered devices but it will not be enabled and they won't be given a license. If they do need to sign in with a new device they have to ask an iPad admin user to log into the web app and enable the device first.

Users can also be assigned the role of "iPad Admin" or "Subscription Admin".
If a user has the "iPad Admin" role they will be able to log into the web app and administer devices.
If a user has the "Subscription Admin" role they will be able to log into the web app and administer subscriptions.

If a user is no longer needed it can be deleted by pressing "Delete" in the Users screen.

Changing a User's Password

Go to the web app login screen and click on "Forgot your password?" if you have forgotten your password or wish to change it. Then enter your username and click on "Reset my password" to send a time limited password reset code to the user's email address. Enter the reset code in the login screen and then enter the new password.

3.3 Devices

Click on **Devices** in the main dashboard of the web app or in the menu on the left to administer devices:

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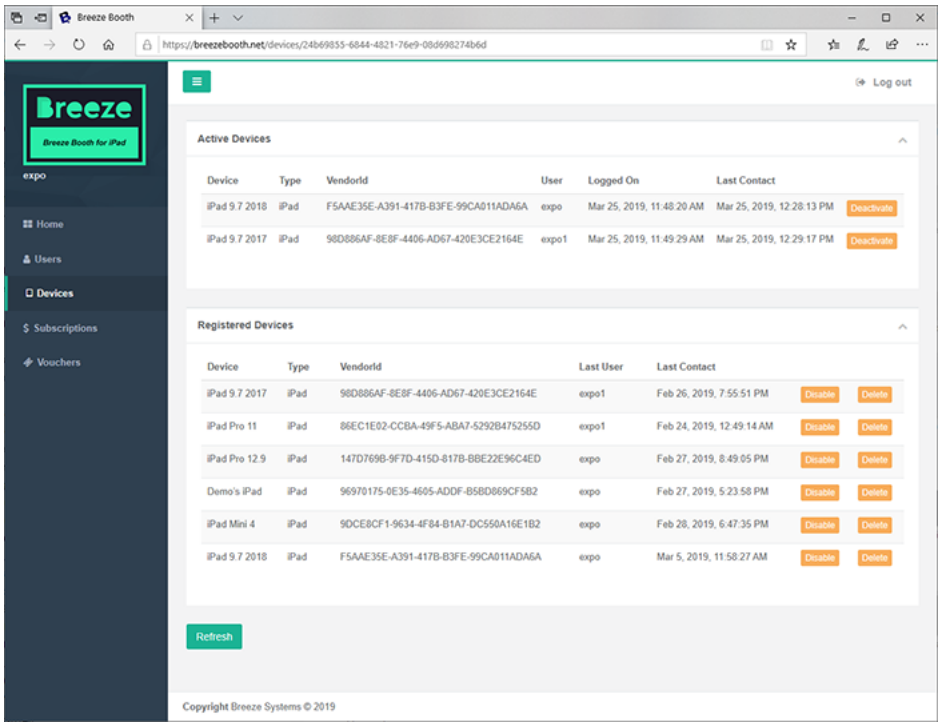

The Devices page shows a list of active devices at the top with a list of registered devices below. The list of active devices shows the iPads that are currently signed in whereas the list of registered devices shows all iPads that are known to the account.

The "Device" column shows the name of the iPad as defined in the iPad's General Settings -> About -> Name.
The "Type" column shows the device type and is currently always set to iPad. Additional device types may be added in the future.

The "VendorId" column displays the unique vendor id which identifies a particular iPad running Breeze Booth. The vendor id can be displayed in the Settings screen when running Breeze Booth on the iPad. **Important:** The vendor id is unique to a given installation on a given iPad. It is only visible to the Breeze Booth app and cannot be used by other apps running on the iPad to track its usage. If you delete Breeze Booth and then re-install it the vendor id will change. Updating the app to a newer version will not affect the vendor id.

The "Logged On" column shows the time and date when the user signed in on the iPad. The "Last contact" column shows the time and date when the iPad last contacted the web app. This won't be updated if the iPad is not connected to the internet.

The "Last User" column in the list of registered devices shows the username of the last user to sign in on that device.

An iPad holds a license from the pool of licenses when it is signed in (and appears in the list of active devices). When the iPad signs out it releases the license and is removed from the list of active devices. If you do not have access to an iPad that is signed in (e.g. because it is lost, damaged or stolen) you can sign it out from the web app by clicking on the "Deactivate" button. This will release the license and remove the iPad from the list of active devices. The next time the iPad contacts the web app it will be signed out automatically if it has been deactivated.

An iPad in the list of registered devices can be disabled by clicking on the "Disable" button. When an

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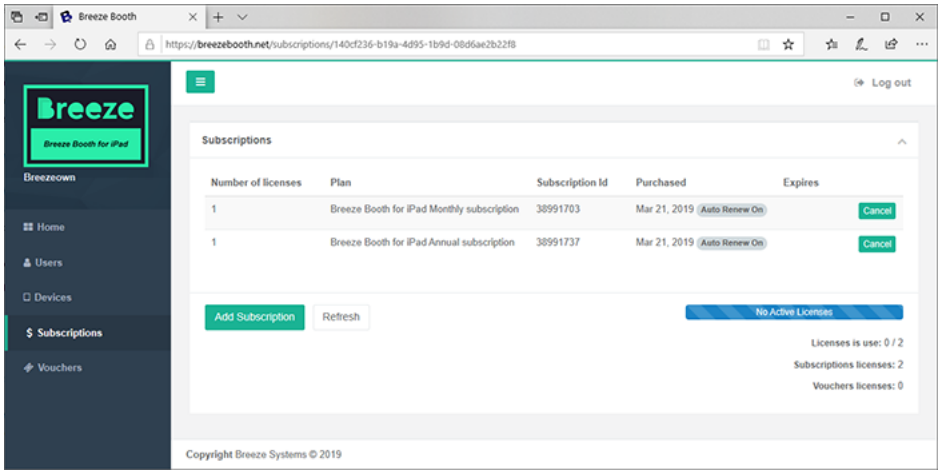
iPad is disabled it won't be able to sign in and obtain a license until an iPad administrator enables it again. When a user who is not trusted logs in with a new iPad that is not in the list of registered devices it will be added to the list as a disabled device. The user will need to ask an iPad administrator to enable the iPad before they will be able to sign in.

iPads can be deleted from the list of registered devices by pressing the "Delete" button. An iPad that has been deleted will be treated as a new device the next time a user signs in (and will be given a license if the user is trusted and a license is available).

3.4 Subscriptions and Vouchers

Click on **Subscriptions** in the main dashboard of the web app or in the menu on the left to administer subscriptions:



The Subscriptions page shows a list of the active subscriptions with a summary of the number of licenses currently in use and the number of licenses provided by subscriptions and vouchers.

The "Number of licenses" column in the table shows the number of licenses for the subscription.
The "Plan" column shows the name of the subscription plan e.g. "Breeze Booth Monthly subscription".
The "Subscription Id" column shows a number identifying the subscription. Please include the Subscription Id if you need to email sales@breezesys.com with a query about a subscription.
The "Purchased" column shows when the subscription was purchased and whether it is set to auto renew.
The "Expires" column shows when subscription will expire after it has been cancelled.

Click on "Add Subscription" to purchase a new subscription:

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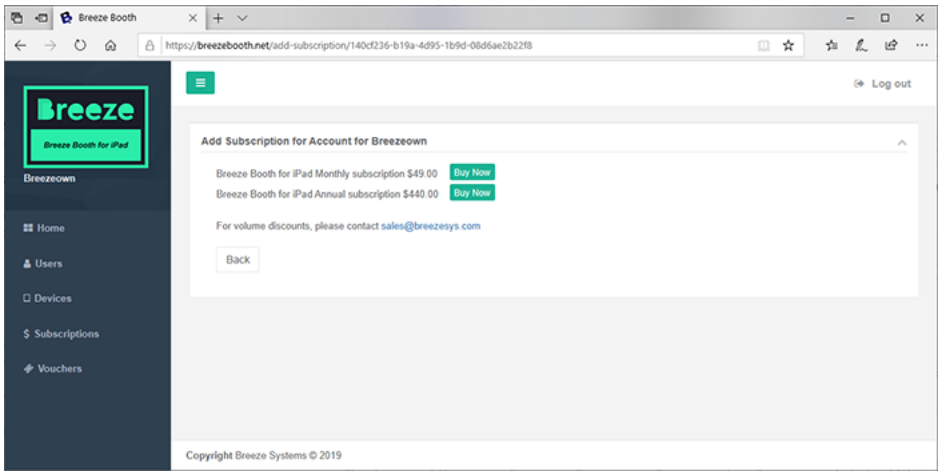
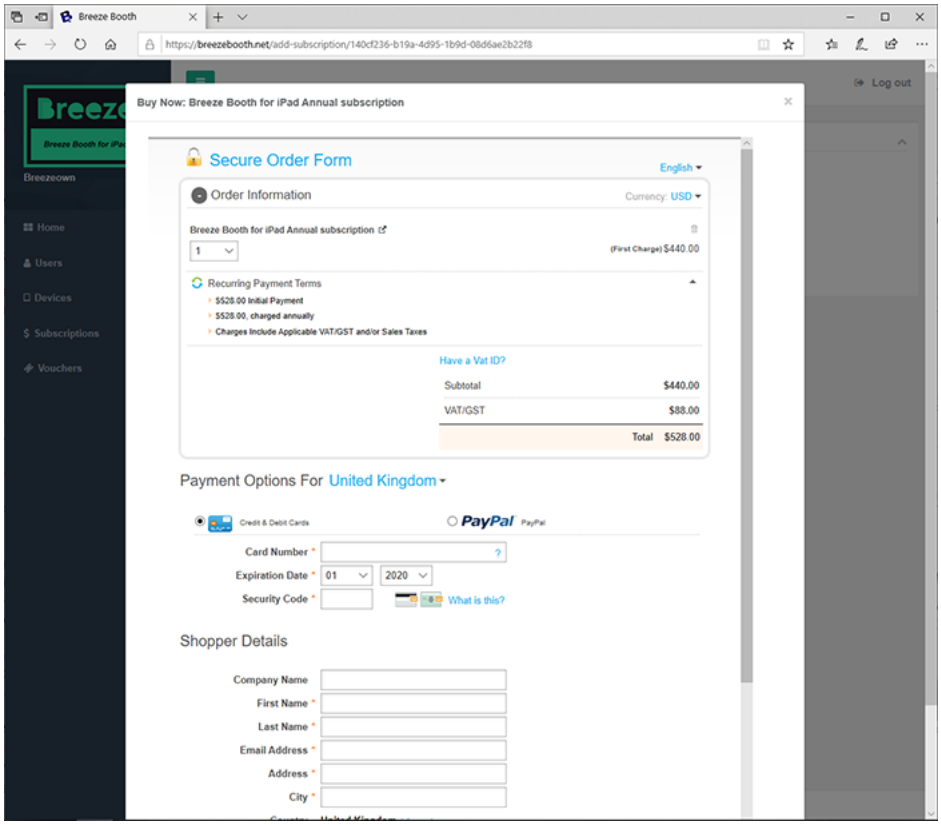


Click on the "Buy Now" button for the subscription you wish to purchase to display the payments page:



In the "Order Information" section you can choose the currency you wish to use and the quantity of license you wish to purchase. If you can't see this section click on the '+' beside the **Total** heading to expand it.
VAT/GST: If you live in a country which charges VAT or GST you will be charged VAT or GST at the current rate unless this is a company purchase and your company is registered for VAT or GST. The screenshot above shows the payment page for a purchase being made in the United Kingdom and has VAT added to the total. Click on "Have a VAT ID?" and enter your company's VAT ID to purchase without being charged VAT.

Choose your preferred payment type and complete the payment details to complete the purchase.

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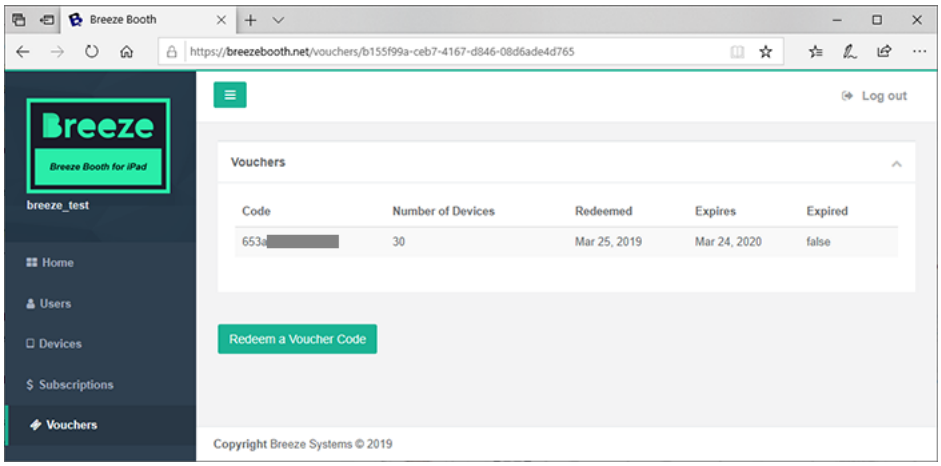
Canceling a Subscription

A subscription can be cancelled by clicking on the "Cancel" button in the **Subscriptions** screen. When a subscription is cancelled the it will not be renewed automatically and its expiry date will be shown in the "Expires" column. You will be able to continue using the subscription until the expiry date.
Please note: It isn't possible to reinstate a subscription after it has been cancelled. If you cancel a subscription you will need to purchase a new subscription if you wish it to continue after the expiry date.

Vouchers

Vouchers are another way to add licenses to an account. They are available for purchase direct from Breeze Systems (please email sales@breezesys.com).
A voucher is identified by a unique id and can hold one or more licenses valid for a given period and must be redeemed before their expiry date.
Each voucher has a unique id and can only be redeemed once.

To view a list of vouchers or to redeem a voucher log into the web app as the account owner and click on vouchers:



Click on "Redeem a Voucher Code" to redeem a new voucher.
Please note: each voucher code can only be redeemed once.

4 Event Editor

The event editor is used to create and edit events and runs on a Windows PC. It will also run on an Apple PC running suitable Windows emulation software such as CrossOver.
Events can be transferred to iPads via Dropbox, direct from a PC or by uploading to a web site. Please see Updating Events for more information on transferring events to an iPad.

Getting Started

When the event editor is run it will load the last set of events (or the sample events from your Documents folder the first time it is run). Double click on an event to edit its settings.
To create a new set of events in a different folder select File->New event..., navigate to the folder where the events will be stored and set the filename to events.xml.
Detailed information on using the event editor provided in the following sections:

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Creating Events

Click on "Create event..." to create an event using one of the event editor's themes. This will create all settings and screens needed for an event which can then be fined tuned by editing the screen images in Photoshop or adjusting the settings using the event editor.
Please see the section on creating events for more information.

Importing, Editing and Deleting Events

Click "Import event..." to copy an event from a different location. This is similar to cloning an existing event and will copy all the event files to the new folder and update the list of events.

Edit an event by double clicking on an event in the list or by right clicking on the event and selecting "Edit events..." or by selecting an event in the list and then clicking on the "Edit event..." button.
Please see the section on editing events for information on editing an event.

Remove an event by right clicking on the event and selecting "Remove event". Removing an event removes it from the list of events held in the events.xml file but does not delete the actual event files. An event that has been removed can be reinstated by pressing "Import event..." and selecting its event_info.xml file.

Delete an event and all its associated files by right clicking on the event and selecting "Delete event".

4.1 Getting Started

The simplest way to create new events is either to run the event creator or to copy and modify an existing event.

When you install the Event Editor it copies the sample events into your documents folder. An event can be copied by right clicking on the event and selecting "Clone event..."

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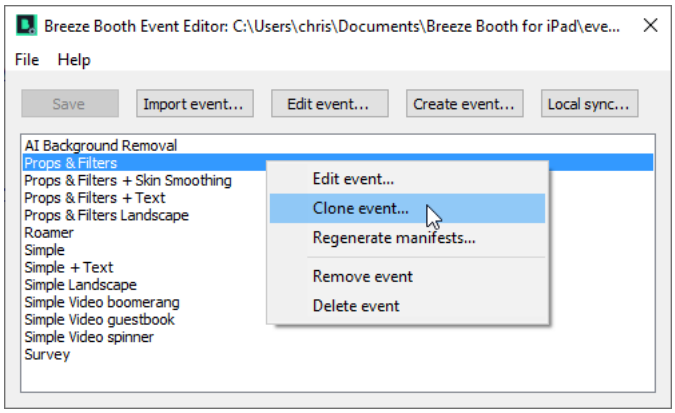
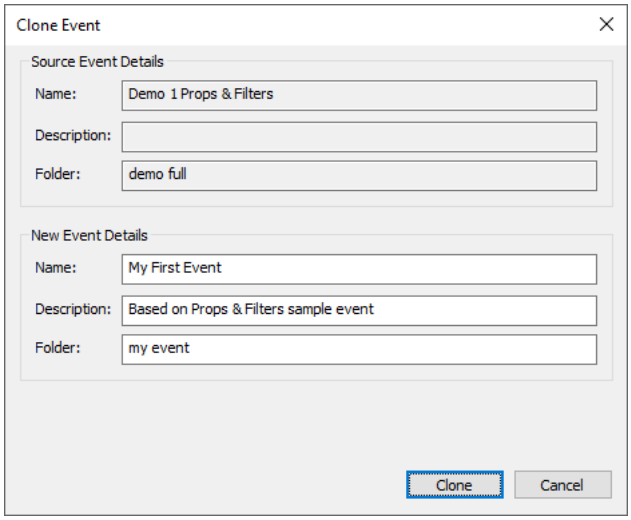


Enter the name of the cloned event, the optional description and name of the folder where the files should be saved:



The selected event is cloned by copying all the files into the new folder and the list of events is updated:

Syncing Events to the iPad

If the iPad is connected to the same network as your PC you can use the Event Editor's local sync server to quickly sync the events to your iPad. To do this click on the "Local sync..." button, then either select the event from the "Sync" drop down list or select "All events". Then simply open the camera app on the iPad and scan the QR code using the front camera and tap "Open in Breeze Booth". This will automatically run Breeze Booth and sync the event (or events) to your iPad.

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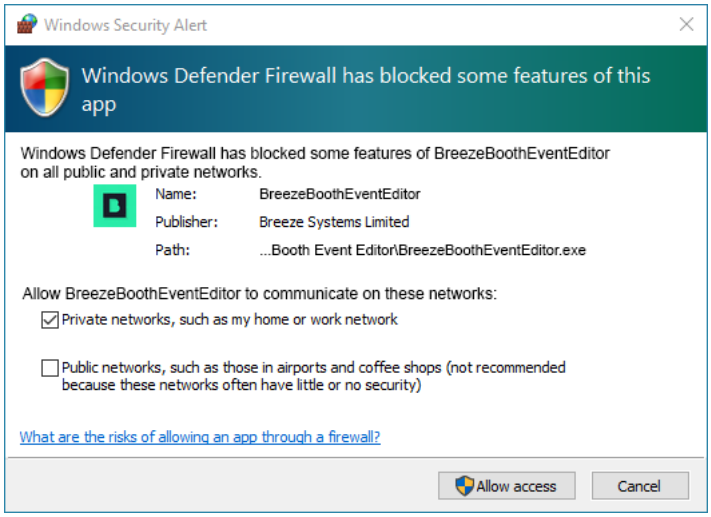
When you open the "Local Syncing" windows for the first time the firewall software running on the computer may ask whether the Event Editor is allowed to access the network. If this happens select "Private networks, such as my home or work network" and click on "Allow access".



Local syncing works by running a simple web server on the PC. Select "Sync events via local network while Event Editor is running" to continue running the local sync server while the Event Editor is running. Once the settings have been copied to the iPad by scanning the QR code you can sync events from the Events screen.

Local syncing provides a fast an convenient way to edit events on a PC and sync them quickly to an iPad. If you need to sync events to iPads located elsewhere you can use Dropbox or host them on your own web server.

Double click on an event in the list in the main Event Editor window to edit it.

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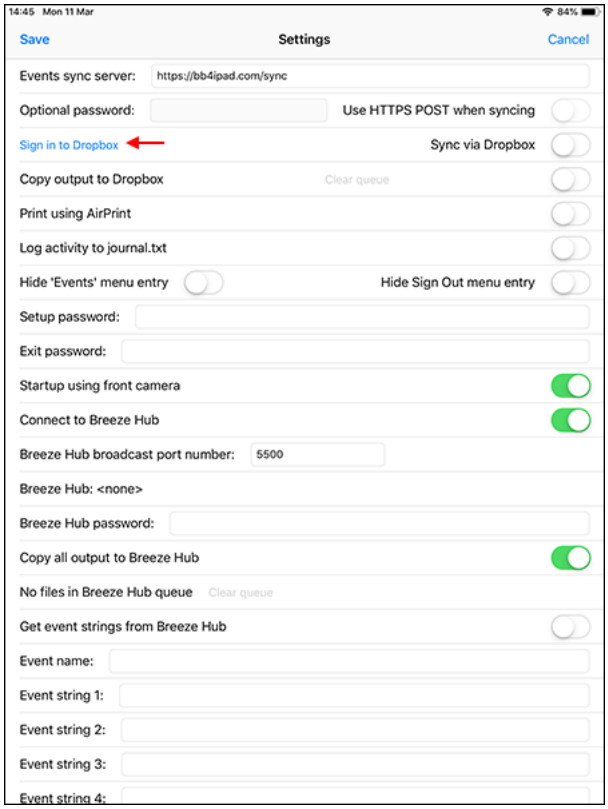
Set up for updating events via Dropbox

Dropbox provides a convenient way to sync events to an iPad which is not connected to the same local area network as the PC running the Event Editor. Events can be edited on a PC back at base and then synced via Dropbox to iPads connected to the internet anywhere in the world.

To use Dropbox to sync events you need a paid Dropbox account as the free account has restrictions which make it unsuitable. Install the Dropbox app onto your iPad and then sign in to your Dropbox account from Breeze Booth by tapping on "Sign into Dropbox" in the app settings screen:



This will open the Dropbox app and ask whether to allow Breeze Booth access to the Apps/Breeze Booth folder:

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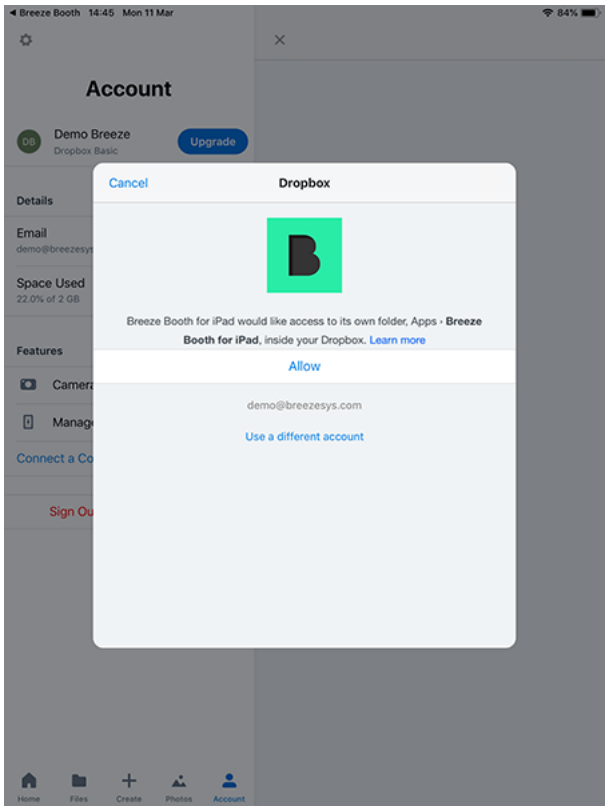

Tap "Allow" to allow Breeze Booth access to the Dropbox folder.
Please note: The official Dropbox app needs to be installed on the iPad. This can be downloaded from the Apple App Store.

After signing into Dropbox from Breeze Booth you can sign out of Dropbox from the official Dropbox app to prevent unauthorised users from accessing your Dropbox account.

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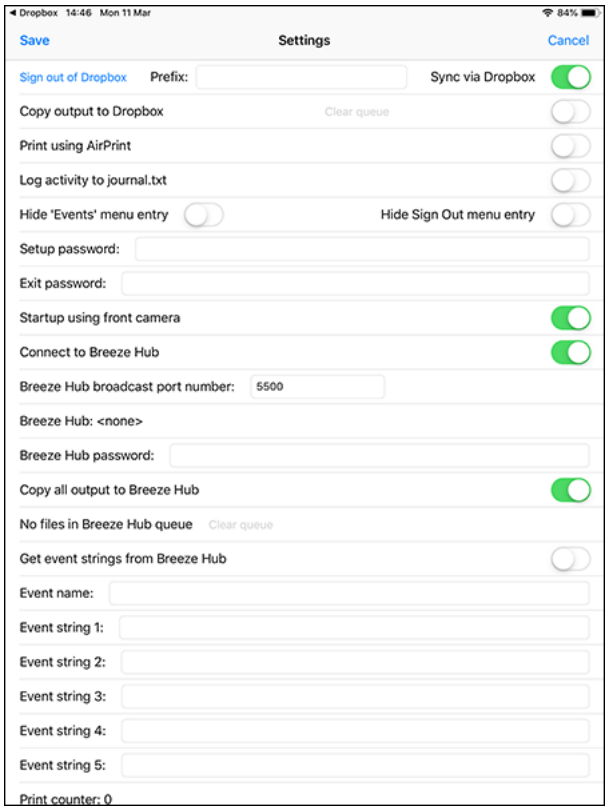
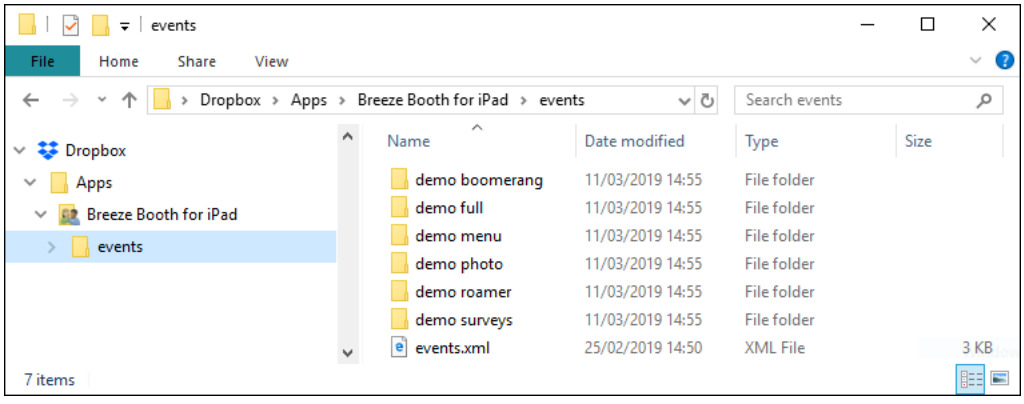


After logging into Dropbox from Breeze Booth Dropbox creates a special folder named Apps with a subfolder named Breeze Booth for iPad. Copy the events folder containing the sample events from your documents folder to the Breeze Booth for iPad folder in Dropbox:



Note: Breeze Booth for iPad only requests "app" access to Dropbox. This means it can only read and write to files within the Breeze Booth for iPad folder in the Dropbox Apps folder. Breeze Booth for iPad cannot read or write any files elsewhere in your Dropbox account.

4.2 Creating Events

Click on "Create Event..." to create an event using one of the preset themes:

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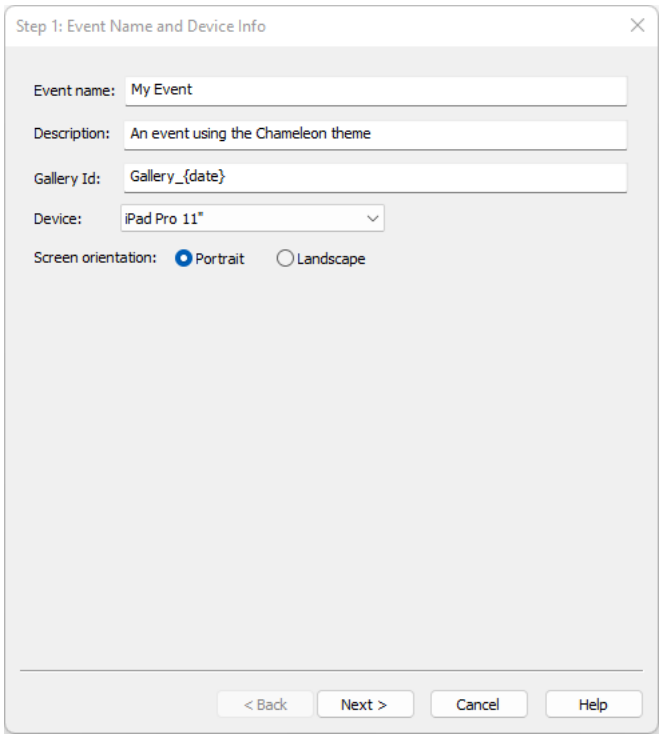

Enter the name of the new event and an optional description.

Enter an optional gallery id to identify the gallery when using Event Kite online galleries and micro-sites. The value can be accessed in print captions, emails and QR codes using the {eventKiteGalleryId} token.
This field can be left empty if you are not using Event Kite and can be edited using the edit event dialog.

Next select the device it should run on and the orientation. The following devices are supported:
iPad 9.7"/iPad Mini - Creates 2048x1536 screens with a 4:3 aspect ratio which are suitable for older iPads and iPad Minis
iPad 10.2" - Creates 2160x1536 screens for the current range of standard iPads
iPad 10.5" - Creates 2224x1668 screens with a 4:3 aspect ratio which are suitable for 10.2" iPads such as the second generation iPad Pro
iPad Air 10.9" - Creates 2360x1640 screens for the current iPad Air
iPad Pro 11" - Creates 2388x1668 screens for the current iPad Pro 11" and the previous generation iPad Pro 11"
iPad Pro 12.9" - Creates 2732x2048 screens with a 4:3 aspect ratio for the higher resolution 12.9" iPads
iPhone X series - This creates 2436x1125 screens designed to fit X series iPhones which have an aspect ratio of approximately 2:1. Use this setting to get the best results from a X series iPhone, iPhone 11 or iPhone 12.
Other iPhone - This creates 1920x1080 screens with a 16:9 aspect ratio designed for other iPhones e.g. iPhone 8, iPhone 8 Plus, iPhone 7.

Breeze Booth for iPad will display resize screens to fit a particular iPad's display resolution if the screen size doesn't match. This means that you can use an event with screens created for an iPad Pro 12.9" on a iPad 10.5" without having to modify the screens. A thin black border will be displayed top and bottom or at the sides if the iPad's display aspect ratio doesn't match the screens e.g. a thin black border will be displayed when displaying screens designed for an iPad Pro 12.9" on an iPad Pro 11".
For best results please select the device type that best matches the iPads that will be used to run the

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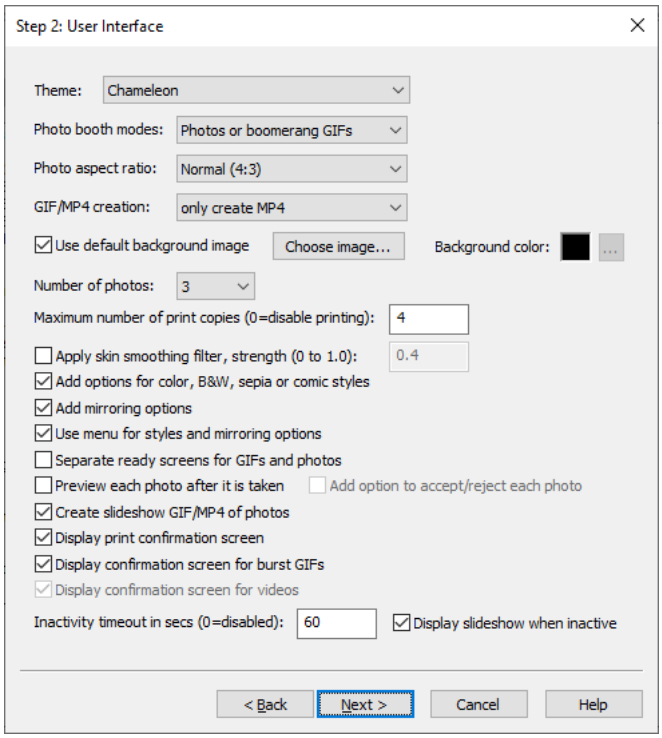
event.

Click on "Next >" to go to the next screen:



Select the theme to use from the "Theme" dropdown list. Currently only one theme is available, Chameleon. Additional themes may be added in future releases.

Select whether the have photos only, boomerang GIFs only, videos only or a choice of photos or boomerang GIFs using the "Photo booth mode" dropdown list.

Select the "Photo aspect ratio". The "Normal (4:3)" option will fill the screen on most iPads and uses the full resolution of the iPad's camera. The "Square (1:1)" option will crop the live view and photos to make them square. The "DSLR (3:2)" option will crop the photos to the same aspect ratio as a DSLR camera and is useful if you wish to use print layouts designed for a DSLR photo booth.

Use the "GIF/MP4 creation" dropdown list to choose whether to create GIFs only, MP4s only or both when creating boomerang GIFs or slideshow GIFs.

Select "Use default background image" to use a single default_background.jpg image as the background for each screen. You can use the default background provided by the theme or choose your own image by clicking on the "Choose image..." button.
Alternatively you can select a solid color for the default background image by unselecting "Use default background image" and then clicking on the "..." button to the right of the background color preview.

Use the "Number of photos" dropdown list to specify the number of photos to take when using the photo option.

Select "Apply skin smoothing filter" to apply skin smoothing to photos and burst GIFs. Please see General Settings for more information about skin smoothing.

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The "Maximum number of print copies" setting controls the maximum number of copies the user can select in the print confirmation screen. Set this to 0 to disable printing when using Breeze Hub.

Select "Add options for color, B&W, sepia or comic" if you would like users to be able to select one of these options from the ready screen.

Select "Add mirroring options" if you would like users to be able to select one of these options from the ready screen.

Select "Use menus for styles and mirroring options" if you would like to display the options to users in a menu rather than as separate buttons on the ready screen.

Select "Separate ready screens for GIFs and photos" to create separate ready screens for photo mode and GIF mode. When this option is selected the photos ready screen will have a start button and a button to switch to GIF mode and the GIF ready screen will have a start button and a button to switch to photo mode. When this option is not selected a single ready screen will be displayed with a "start photos" and a "start GIF" button.

Select "Preview each photo after it is taken" to display a preview of each photo after it is taken. Give users the option to accept or reject (i.e. re-take that photo) each photo by selecting "Add option to accpet/reject each photo".

Select the "Create slideshow GIF/MP4 of photos" to create a slideshow GIF/MP4 of the photos taken in photo mode.

Select "Display print confirmation screen" giving users the option to accept or reject the photos before printing or sharing them. This will also allow users to select the number of copies to print.

Select "Display GIF confirmation screen" to display a playback screen showing the boomerang GIF giving guests the option to reject it before going to the sharing screen.

Select "Display video confirmation screen" to display a playback screen showing the video giving guests the option to reject it before going to the sharing screen.

Set the "Inactivity timeout in secs" to switch to the standby screen after a timeout when the booth is not in use. Select "Display slideshow when inactive" to display a slideshow of photos and GIFs from previous sessions when the booth is inactive.
Set "Inactivity timeout in secs" to 0 to disable the inactivity timeout (and the slideshow).

Click on "Next >" to go to the next screen:

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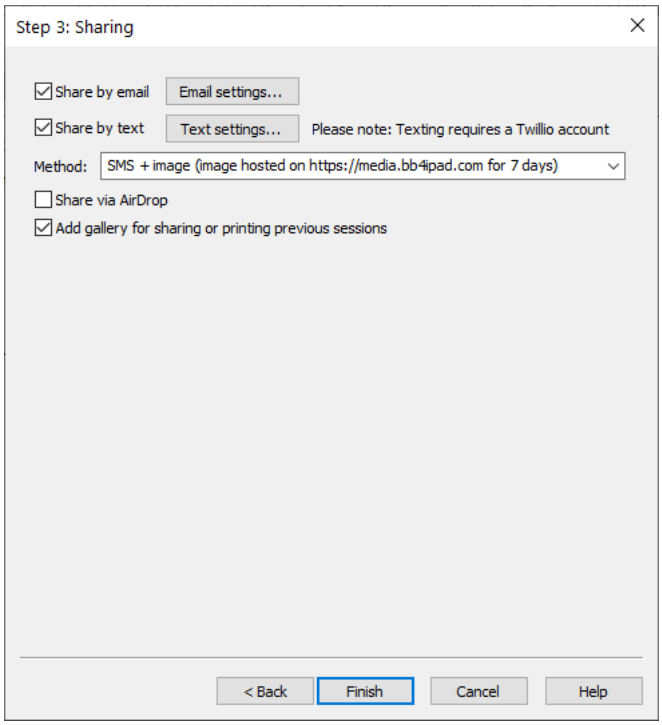

Select the "Share by email" to give guests the option to share photos, videos and GIFs by email. The event creator will use the simple email settings to generate an email with an optional logo, an image preview, message text and optional links to social media sites. Click on the "Email settings..." button to adjust the email settings. If you need full control over the appearance of emails you can edit the event and select the advanced sharing settings. Please see the Sharing Settings section for more information.

Select "Share by text" to give guests the option to share photos, videos and GIFs by text. Click on the "Text settings...." button to edit the text message. The select the method to specify how the photos and GIFs are shared. The default option is to host the photo or GIF on our media sharing website for 7 days and include a link to it in the SMS message sent to guests. Users in the USA or Canada can also send the photos or GIFs as MMS messages.
Please note that the sending of text messages (SMS or MMS) requires a Twillio account. Twillio charge for each text sent (the cost of sending texts is not included in your Breeze Booth for iPad subscription). Please visit Twilio's website for more information.

Select "Share via AirDrop" to give guests the option to share photos, videos and GIFs by AirDrop.

Select "Add gallery for sharing and printing previous session" to add a gallery of photos, videos and GIFs from previous sessions with the option for guests to reprint photos or share photos, videos and GIFs via email, text or AirDrop.
Please see the Gallery and Slideshow Settings section for more information.

Click on the "Finish" button to create the event using the selected theme and settings. This will create all the settings and screens needed for the event. Click on the "Save" button in the main "Breeze Booth Event Editor" window to save the newly created event to the list of events.

Customizing Events and Themes

After creating an event using the event creator it can be modified by editing the screens using an image editor such as Photoshop or editing the settings using the event editor (double click on the event or

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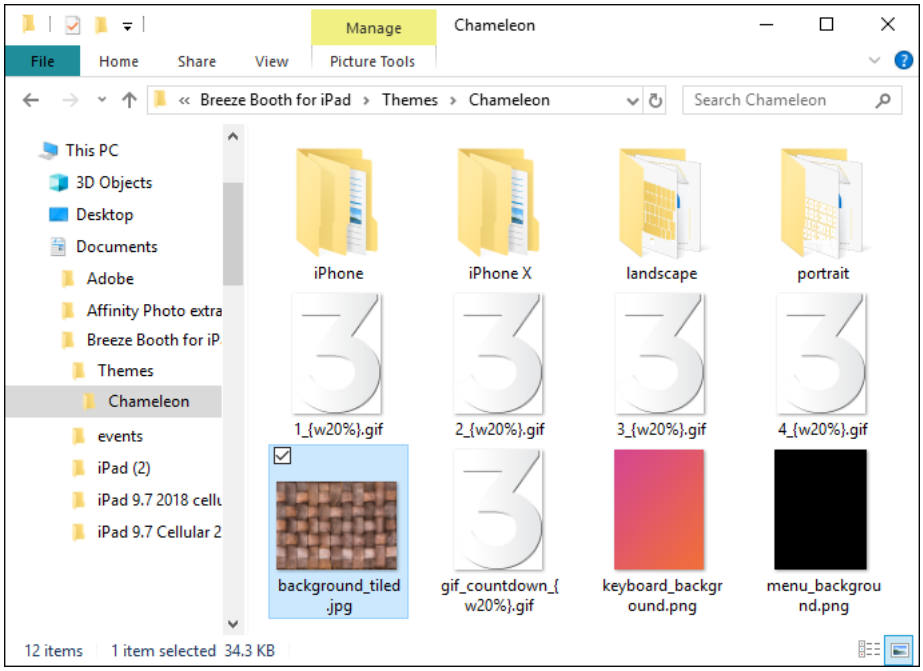
select the event and then click on "Edit event...".

Creating new theme designs is beyond the scope of this help file, but there are some simple changes that can be made e.g. changing the screen background image, the keyboard designs or the appearance of the icons.

Changing the screen background
The screens can have a colored background or a background JPEG image. The Chameleon theme uses a background JPEG image to create a magenta/orange graduated background. The Chameleon theme folder can be found in your Documents folder in the subfolder Breeze Booth for iPad\Themes. The JPEG image used for this theme is named background.jpg. Edit or replace the background.jpg image to use a different background when creating events.

The naming of the background image defines how it is applied:
background_stretched.jpg - stretches the background image to fill the screen
background_tiled.jpg - tiles the background to fill the screen
background_cropped.jpg - uses the background without resizing and crops it to fit if it is larger than the screen
background.jpg - is the same as background_stretched.jpg

Example: to create a background with a weave pattern find a suitable image for tiling and copy it to the Chameleon theme's folder and name it background_tiled.jpg:



Which will create screens like this:

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Changing the keyboard background
Keyboards are defined using png images to define their appearance when upper or lower case is slected or the keys are pressed (see Keyboards and Surveys for more info). If the keyboard images have transparent backgrounds (as is the case with the Cameleon theme) you can provide a background image for the keyboards. Keyboards appear on top of other screens and can have transparent, semi-transparent or opaque backgrounds to control whether the screen beneath is visible. For this reason the the background images are PNG files which can contain an alpha channel to control transparency.

The Chameleon theme folder can be found in your Documents folder in the subfolder Breeze Booth for iPad\Themes. The PNG image used for this theme is named keyboard_background.png. Edit or replace the keyboard_background.png image to use a different background for keyboards when creating events.

The naming of the background image defines how it is applied:
keyboard_background_stretched.png - stretches the background image to fill the screen
keyboard_background_tiled.pmg - tiles the background to fill the screen
keyboard_background_cropped.png - uses the background without resizing and crops it to fit if it is larger than the screen
keyboard_background.png - is the same as keyboard_background_stretched.png

Changing the icons
The icons used for the buttons in each screen are defined by PNG images that have filenames that define their purpose and their size and position e.g. photo_start_{lx50%bx16%W20%}.png is used for the start button in photo booth mode. The last part of the filename enclosed in curly brackets is used to define its size and position. e.g. W20% means it should be resized to 20% the width of the screen. Edit the PNG file in an image editor such as Photoshop to change its appearance.

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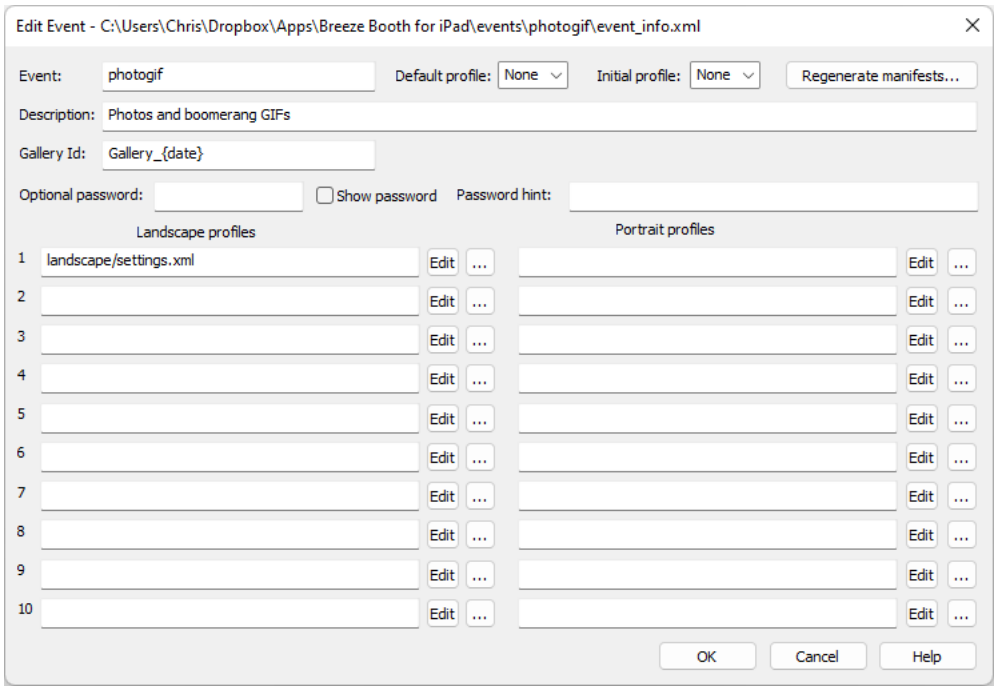
4.3 Editing Events

Double click on an event in the the main Event Editor window to edit the event. Alternatively right click on the event and select "Edit event..." or select the event and click the "Edit event..." button.
This will open the "Edit Event" dialog:



The current event name and optional description are displayed in the "Event:" and "Description:" fields and can be changed if required.

The gallery id is used to help identify which gallery photos should be added to when using online gallery systems such as Event Kite. The gallery id token, {eventKiteGalleryId}, can added to email messages or used to define QR codes. You can also use the Event Kite session id token, {eventKiteSessionId}, to identify a set of photos.

Events are made up of profiles which consist of the settings to use plus the screen images and other assets. Simple events only need one profile. More complex events can use profiles to offer users choices such as choosing different print layouts.

Click the "Edit" button to the right of the profile path to edit the settings for that profile. This will display the "Photo Booth Settings" dialog:

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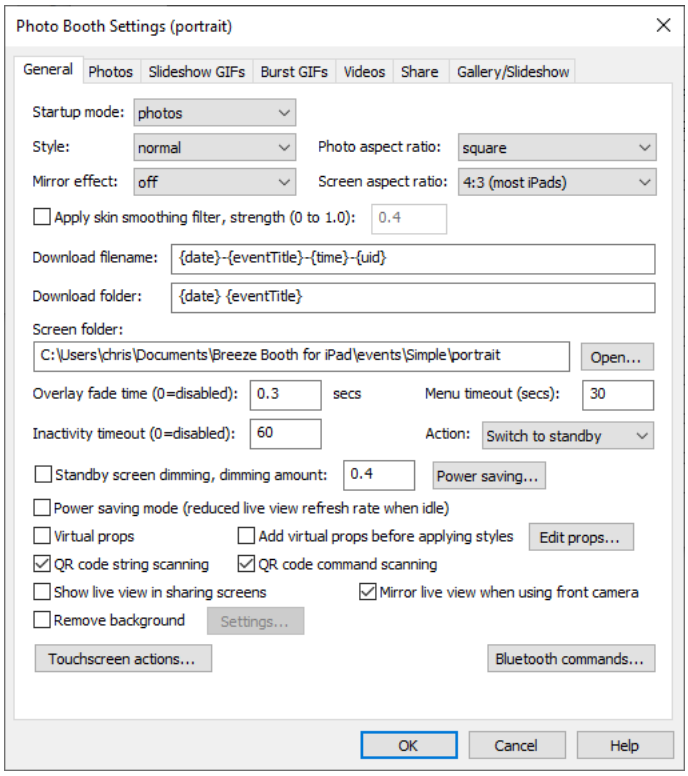

The "Photo Booth Settings" dialog has seven tabs for defining the event settings:

1. General - general settings that specify how the event starts up and behaves, the use of virtual props and the touchscreen actions used to control it
2. Photos - settings controlling photo mode e.g. the number of prints and the print layout
3. Slideshow GIFs - settings for optional slideshow GIFs and/or MP4 files created in photo mode
4. Burst GIFs - settings for burst and boomerang GIFs
5. Videos - settings for capturing videos
6. Share - settings for sharing photos, GIFs and movies via email or text
7. Gallery/Slideshow - settings for the sharing gallery and slideshow

Screen Folder

The visual assets (e.g. screen images, virtual props, overlays, backgrounds etc.) for an event are stored screen folders:

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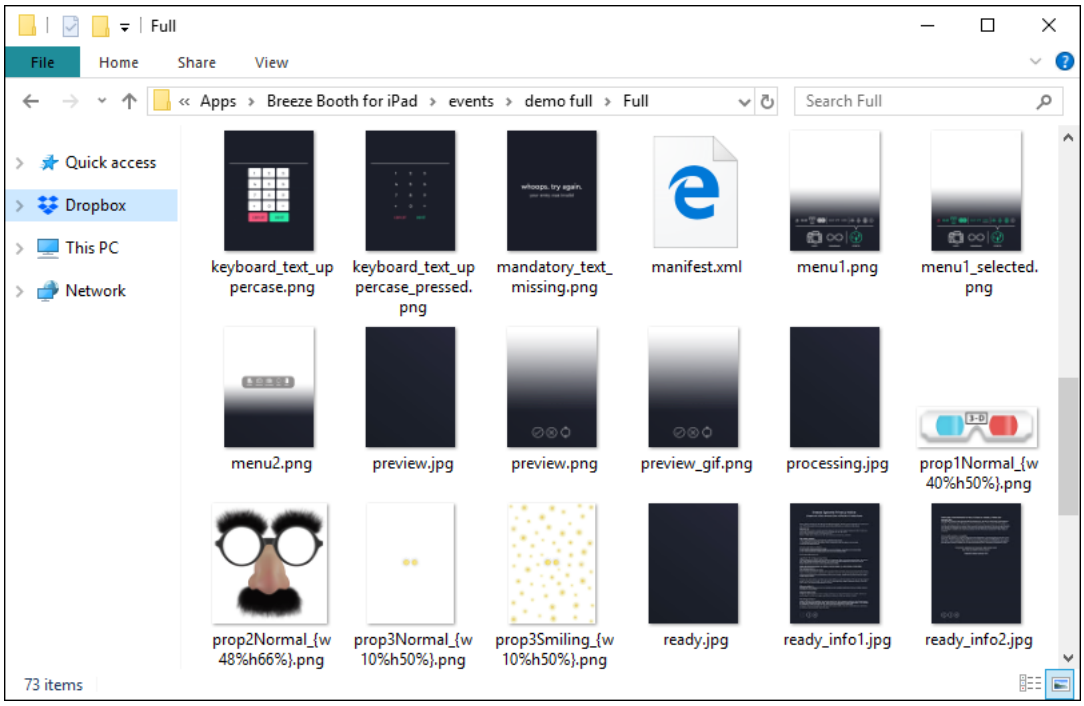

The location of the screen folder is specified in the "General Settings" screen.

Profiles and Manifest Files
An event comprises of one or more profiles which define the settings and the folder where the various screen images and other assets are stored. Profiles are useful for events where you want to give guests a choice of options. A typical setup consists of a default profile which shows a menu of options linking to a profile for each option e.g.

- Supporting multiple languages by having a main menu screen to select the language and a separate profile for each language
- Offering a choice of normal photos or AI background removal
- Offering a choice of square photos or traditional rectangular photos
- Offering a choice of different print layouts e.g. one single photo or a passport booth style strip of three photos

Separate profiles can be defined for landscape and portrait orientations of the iPad. This is useful if the iPad is mounted so that it can be rotated between portrait and landscape orientations because it allows different settings and screen layouts to be defined for each orientation.

Each profile is stored in a separate subfolder of the current event's folder and contains a settings.xml file, one or more screen files and an associated manifest file. The manifest file is simply a list of files and their checksums in that folder and is used when updating events on an iPad. If you edit a profile's settings and save them the associated manifest file is updated automatically. Sometimes it is necessary to update the manifest files manually (e.g. when editing a screen image using Photoshop or adding files) and this can be done by right clicking on the event and selecting "Regenerate manifests...". If you make some changes to an event but the updated files aren't copied to the iPad try regenerating the manifests and updating the iPad again.
Please see Updating Events for more information.

When multiple profiles are defined you can specify a default profile that is loaded after taking each set of photos. This is useful if you have a main menu defined using one profile and want to return to the menu screen after each session.

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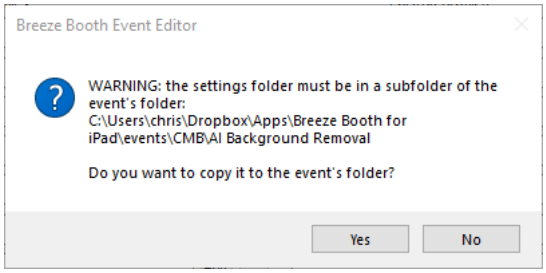
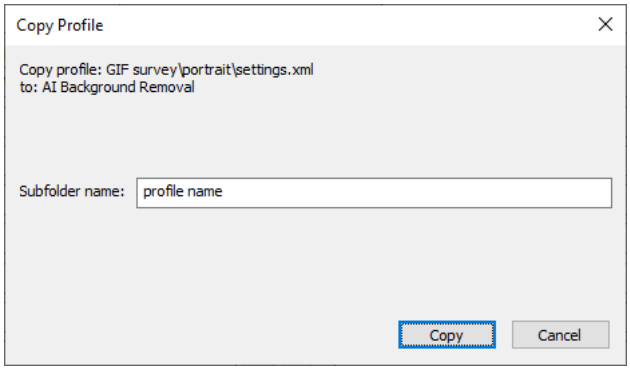
You can also define an initial profile to use at startup. When the event is run it will load the initial profile, but after each set of photos it will load the default profile. The initial profile is useful if you want to display information to the user when starting an event e.g. giving help information about setting everything up and the option to sync the event in case it has been updated.
If the initial profile is set to "none" the default profile will be loaded when the event is run. If the default profile is also set to "none" the first profile in the list of profiles will be loaded.

Touchscreen actions can be used to load a profile when running the photo booth e.g. the action "profile1" will load profile 1. A touchscreen action can also be used to load a profile and start the countdown e.g. "profile1AndStart". A randomly selected profile can be loaded using one of the random profile touchscreen actions e.g. "profileRandom1To5" to load a randomly selected profile in the range 1 to 5 or "profileRandom6To10" to load a randomly selected profile in the range 6 to 10.

Copying a profile from another event
To copy a profile from another event click on "..." button to the right of the profile it is to be assigned to in the Edit Event dialog. This will open a file dialog. Navigate to the folder containing the profile to be copied and select the settings.xml file. A warning message like the one below will be displayed asking whether to copy the profile folder to the current event folder:



Click "Yes" to display the "Copy profile" dialog:



Enter the name of the subfolder where the copied profile should be stored and then press the "Copy" button to copy the profile.

4.4 General Settings

The "General" settings tab of the event editor contains general settings that specify how the event starts up and behaves, the use of virtual props and the touchscreen actions used to control it:

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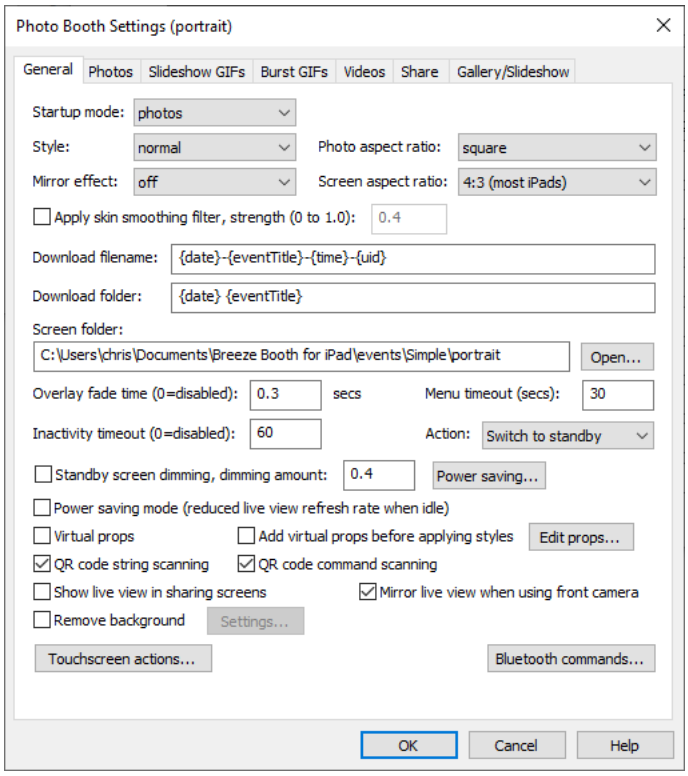

The "Startup mode" setting specifies whether to start in photo mode (individual photos which can be printed or shared with an optional slideshow GIF or MP4 movie), burst GIF mode (records a short silent movie which can be played in a loop with optional "boomerang" forward/backward play back) or video mode (records a short video with or without sound which can be processed to add effects such as jump cuts, forwards/reverse playback and speed ramping).

Use the "Style" setting to specify one of the following styles for the photos and GIFs:

- normal - normal color images
- monochrome - black and white images
- sepia - monochrome images with a sepia tint
- comic - half-tone image with a limited set of exaggerated colors reminiscent of comic books
- filter1 to filter6 - user definable filters which apply a look up table to create effects such as low or high contrast images or false color effects. Please see Filters for more information.

Use the "Mirror effect" to specify mirroring effects (only available in photo and burst GIF modes):

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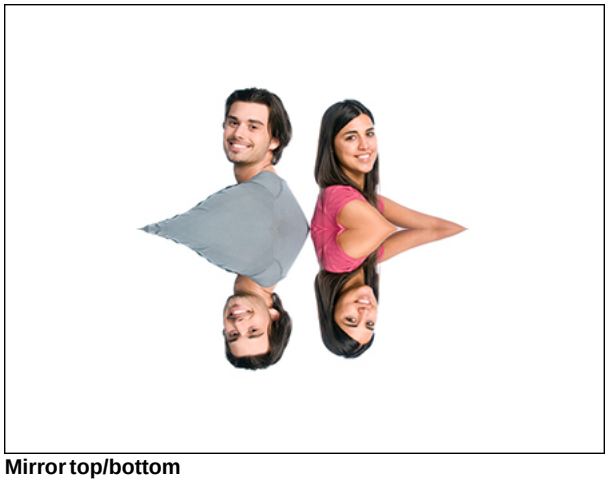
Mirror off

Mirror left/right



Mirror top/bottom

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Mirror swap top halves

Mirror 2x2 mosaic

The photo aspect ratio option allows the photos to be normal (4:3 aspect ratio), square, DSLR 3 to 2 aspect ratio or video 16 to 9 aspect ratio. This setting affects the cropping of images in the live view display as well as photos added to prints, slideshow GIFs, burst GIFs and video capture.

The screen aspect ratio setting can be set to **4:3 (most iPads), iPad Air 10.9"**, i**Pad Pro 11", "16:9 (most iPhones)"** or **"19.5:9 (iPhone X series)"**.
All iPads apart from the iPad Air 10.9" and iPad Pro 11" have a screen aspect ratio of 4:3 whereas the iPad Air 10.9 and iPad Pro 11" each have a screen aspect ratio which is slightly taller and narrower. iPhone screens have a higher aspect ratio (i.e. their screens are taller and narrower in portrait orientation) than iPads with most iPhons having a screen aspect ratio of 16:9 and the X series iPhones an aspect ratio of 19.5:9.
If you are running an event designed for a different aspect ratio than the device it is running on it will display black borders on the unused areas of the screen
e.g. If the screen aspect ratio is set to "4:3 (most iPads)" it will fill the screen on all iPads except the iPad Pro which will display a small black border at the top and bottom of the screen in portrait orientation or the sides in landscape orientation.On most iPhones there will be a larger black border top and bottom in portrait orientation or at the sides in landscape orientation. On an iPhone X series the borders will be even larger when displaying screens designed for 4:3 aspect ratio iPads.

Select "Apply skin smoothing filter" and set the filter strength to apply skin smoothing to photos. The skin smoothing filter uses advanced image processing techniques to smooth skin tones and remove blemishes without losing detail in the rest of the photo.

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The strength of the skin smoothing filter can be adjusted from 0 (no smoothing applied) to 1.0 (maximum smoothing applied). The default setting is 0.4. There are some examples shown below using different settings but we recommend you try different setting to find what works best for your setup.

Please note that the skin smoothing filter is applied to both photos and burst GIFs but is not applied in real time to the live view images. Skin smoothing is only available in photo and burst GIF modes and is not available in video mode.

Use the "Download filename" setting to specify the filenames used for photos, GIFs and MP4s saved by the app. This setting can use tokens to include information that is evaluated at run time e.g. the time

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and date.

Use the "Download folder" setting to specify the folder in which to save photos, GIFs and MP4s saved by the app. This setting can also use tokens to include information that is evaluated at run time e.g. the time and date. The {dateLess8h} tokens is useful for events which may run after midnight because it ensures all the photos are saved in the same folder by returning the date less 8 hours.

The screen folder setting is normally set to the period/fullstop character to tell the app to look for screen and other images in the same folder as the profile settings.xml file. Advanced users creating complex set ups involving multiple profiles can use this setting to switch to a different folder for the screen images.

The "Overlay fade time" specifies the time in seconds when fading from one overlay screen image to another and can be used to provide more fluid screen transitions. This works best if each screen uses an overlay for the icons or button images e.g. use the ready_overlay.png image for the start button and the background.jpg image for the screen background. An overlay fade time of between 0.5 seconds and 1 second is a good starting point.
Set the "Overlay fade time" to 0 to disable fading between overlays.

Set the "Inactivity timeout" to the timeout in seconds before the inactivity action is applied. The inactivity timeout action can switch to the standby screen or load a profile.
The inactivity timeout can be disabled by setting it to 0.

The "Menu timeout (secs)" setting defines how long a menu screen is displayed before timing out and being closed automatically.

The power saving mode setting saves power by reducing the live view refresh rate when the ready screen is displayed. When the countdown starts the live view refresh rate reverts to full speed to give a smoother live view display.

The standby screen dimming setting saves power by dimming the screen when in standby mode. Set the amount to dim the screen from 1 (full brightness) to 0 (completely dark). When the user taps the screen the ready screen will be displayed using the normal brightness setting.
Note: Live view is also disabled when in standby mode to further reduce power usage.

Click on the "Power saving..." button for additional settings to save power. Please see Power Saving Settings for details.

Select the "Virtual props" option to enable virtual props at startup. Virtual props can also be selected using touchscreen actions in the ready screens even if the "Virtual props" setting is not selected in the "General" settings.
Normally virtual props are added after applying styles such as monochrome, sepia or comic, but they can be applied before the styles by selecting the "Add virtual props before applying styles option".
Click on the "Edit props..." button to display the virtual prop editor to size and position the props relative to people's faces. Please see Virtual Prop Editor for more information.

The scanning of QR codes containing strings or commands can be enabled using the QR code string scanning and QR code command scanning checkboxes.
Select the "Show live view in sharing screens" checkbox to display live view in the sharing screens to allow users to scan QR codes for automatically sending emails.
Please see the section on QR Codes for more information.

The "Remove background" setting is used to select the AI background removal options (aka "green screen without the green screen"). Breeze Booth for iPad v3.1 and later offers built-in background removal for live view images, photos, burst GIFs and videos. It also offers web based AI background

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removal for higher quality results when taking photos (this requires a separate subscription with the service providing the AI background removal). Please see the section on AI background removal for details.
A fast iPad (e.g. a 2022 iPad Pro with M2 processor or a 2021 iPad Pro or 2022 iPad Air with M1 processor or a 2022 iPad 10.9" 10th Generation with A14 processor) is recommended when applying background removal to live view images or videos. Any iPad model released in the last 4 or 5 years should be fast enough for applying background removal to photos.

Click on the "Touchscreen actions..." button to display the Touchscreen Editor to edit touchscreen actions for each of the screens and for surveys and keyboards.

Click on the "Bluetooth commands..." to define commands that are sent to a connected Bluetooth device. Please see the Using Bluetooth for more information.

4.5 Power Saving Settings

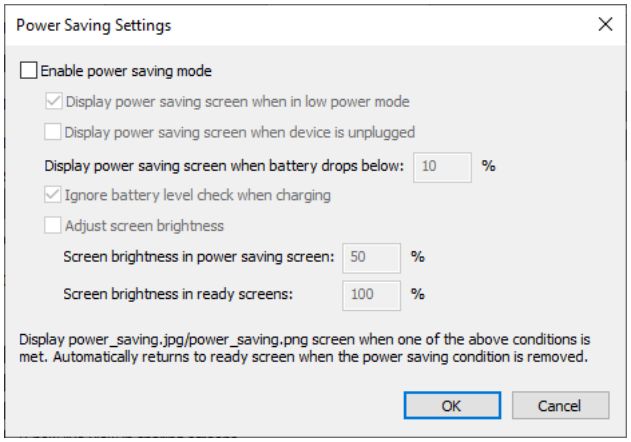
The power savings settings provide a way to display a power saving screen when certain power conditions are met e.g. display the power saving screen when the battery level drops below 20% or low power mode is active or the charging cable is unplugged.

When one or more of the power conditions is met the power saving screen is displayed and the iPad's camera is disabled to save power. The screen brightness can also be reduced to save power.
The power saving screens are:
power_saving.jpg (background screen)
power_saving.png (PNG overlay image)
power_saving.gif (animated GIF overlay)
power_saving.mp4 or power_saving.mov (video overlay)
power_saving.mp3 (audio file)

Please see Screens displayed to the user for more information.

Touchscreen settings can be defined in the power saving screen to exit photo booth mode or to select a different profile.
Please note: When using the power saving options it is a good idea to add a touchscreen action such as exit photo booth mode (powerSavingExit) to the power_saving.jpg or power_saving.png screens using the touchscreen editor. Otherwise if no touchscreen actions are defined the app will display the power saving screen with no way to out other than to wait for the battery to be charged or the power to be reconnected.

Click on the "Power saving..." button in the General Settings to edit the power saving settings:



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Select "Enable power saving mode" to enable the power saving options. When one or more power saving conditions are met when the app is displaying a ready screen or is in standby mode the power saving screen will be displayed. When none of the power saving conditions are met the app returns to the screen it was displaying before power saving was activated.

When "Display power saving screen when in low power mode" is selected the app will display the power saving screen when the device switches to low power mode. Low power mode was added to iPad OS 15 and automatically reduces power usage when the battery level drops to 10%.

The app can detect whether the device is plugged into a charging cable. Select the "Display power saving screen when device is unplugged" if you only want guests to use the photo booth when it is plugged in e.g. you might have additional lighting that requires mains power.

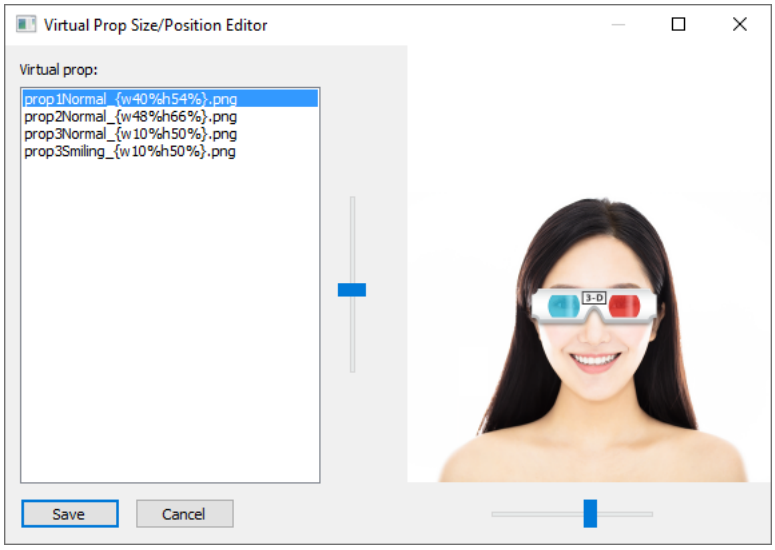
Set the "Display power saving screen when battery level drops below" setting to the battery level below which you want to warn users to connect the iPad to power. Set this to 0% to disable.
Select "Ignore battery level check when charging" to disable the power saving screen when the iPad is charging.

Select "Adjust screen brightness" to specify the screen brightness when the power saving screen is displayed. Normally you want the screen at full brightness when the photo booth is running and may wish to dim the screen to save power when the power saving screen is displayed.

4.6 Virtual Prop Editor

Virtual props are created using PNG images that are placed using face recognition. The size and positioning of the virtual props is defined relative to the guests' eyes detected using face detection and is specified using the name of the virtual prop PNG file. Please see Virtual Props for more information.

The virtual prop editor provides an interactive method of adjusting the placement and size of virtual props and updating their filenames accordingly:



First select the virtual prop to be edited from the list on the left side of the window and then use the two sliders to adjust its size and position relative to the face in the preview.

Moving the vertical slider up and down moves the virtual prop up and down relative to the guest's eyes. When the slider is in the fully down position the top of the virtual prop image will line up with the guest's

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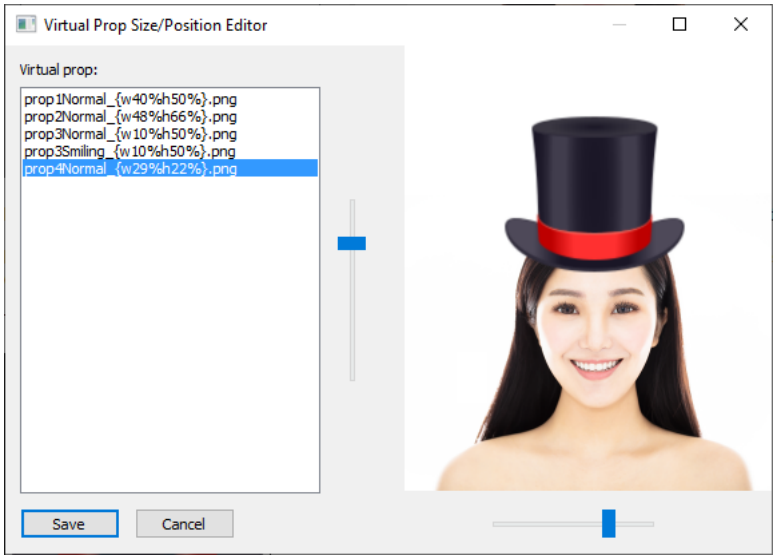
eyes. When it is in the fully up position the bottom of the virtual prop image will line up with the guest's eyes.

Moving the horizontal slider from left to right adjusts the size of the virtual prop relative to the spacing between the guest's eyes.

The virtual prop doesn't have to cover the guest's eyes. For example to add a hat you need to create a PNG image of the hat with a transparent area below it so that it can be positioned on the top of the guest's head:

Give the virtual prop image an initial name such as prop4Normal_{w50%h50%}.png and then use the virtual prop editor to adjust its size and position:



The filename of the virtual prop image is updated in the list automatically as the sliders are adjusted. Click on "Save" to save the changes and rename the virtual prop images that have been edited. If you make changes and hit "Cancel" you will be asked whether to save the changes.

4.7 Touchscreen Editor

The touchscreen editor provides an interactive way to add touchscreen actions to control the photo booth. It also provides a way to edit touchscreen keyboards and survey screens.
Click on "Touchscreen actions..." in the "General" tab of the "Photo Booth Settings" dialog to open the

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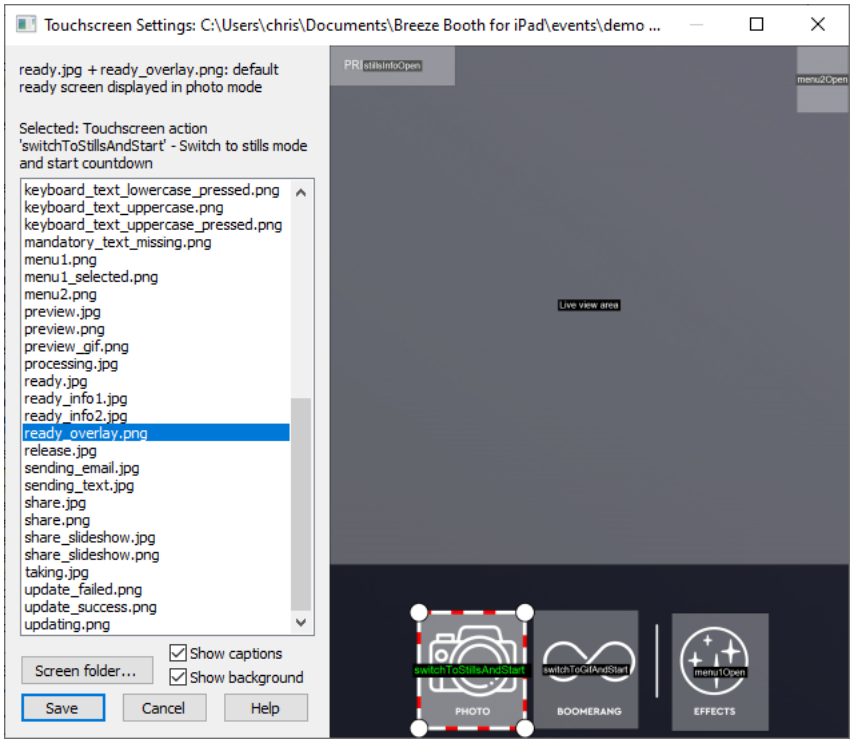
touchscreen editor:



Touchscreen actions control what happens when different parts of a screen are touched. Different actions can be defined for specific areas of each screen.

There is a list of screen and keyboard images on the left of the window and on the right there is a preview showing the screen and any touchscreen actions that have been defined for that screen. Click on any screen image in the list to select that screen. A brief description of the selected screen is displayed on the left above the list of screens. Please see Screens Displayed to the User for more information about the different screens.
The folder containing the screen images can be opened in a Windows File Explorer window by pressing the "Screen folder..." button.

If the selected screen is a PNG overlay the associated JPEG background image will be displayed with the overlay. The background image can be hidden by unchecking "Show background" and transparent areas in the overlay will be shown using a checkerboard pattern:

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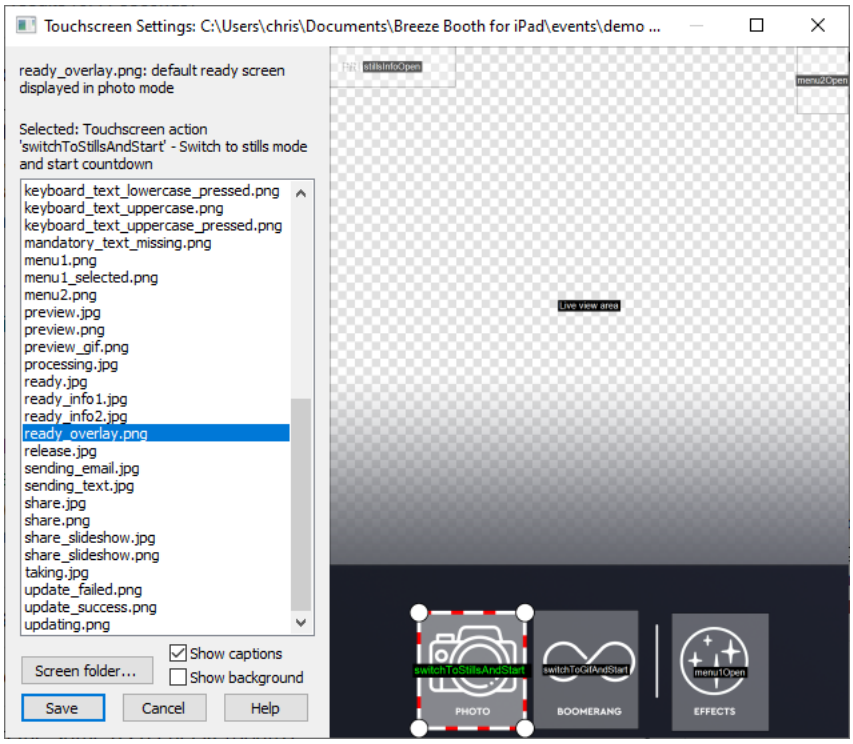
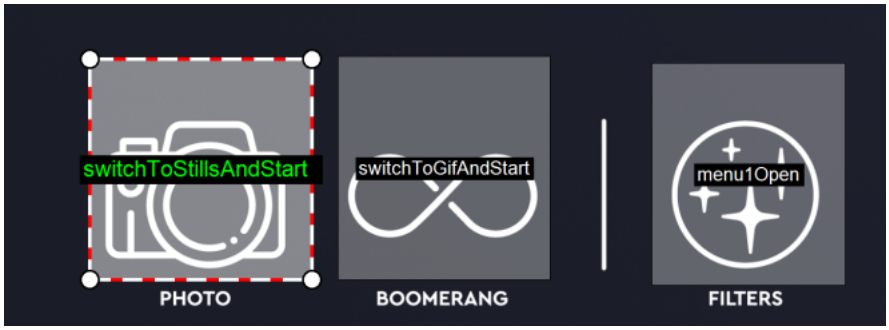


Touchscreen actions are shown in the preview as gray boxes with a caption in the center indicating their action. Click on touchscreen action to select it. The box defining the active area of the touchscreen action will be highlighted to indicate that it has been selected (as shown below) and a brief description of the action will be displayed on the left above the list of screen images. If the screen display becomes too crowded due to the captions they can be turned off by unchecking "Show captions".



The touchscreen area can be moved by left clicking the mouse and dragging it to the new position. The size of the touchscreen area can be adjusted by clicking on one of the corner handles and dragging it. Right click on the touchscreen action to display an option menu:

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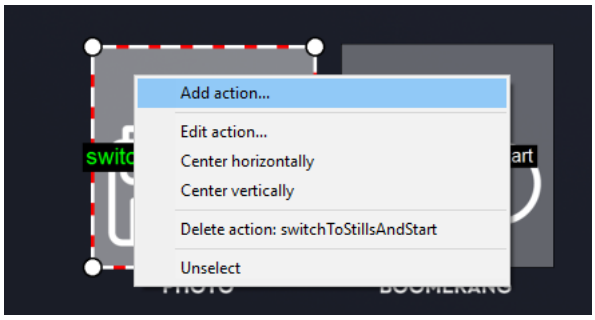
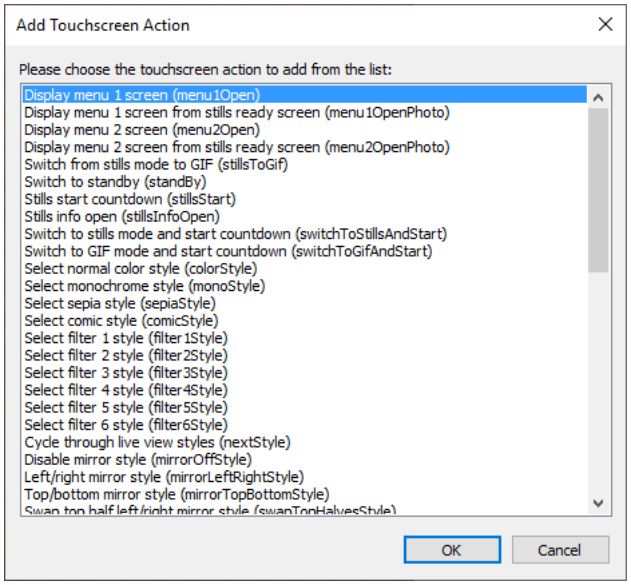
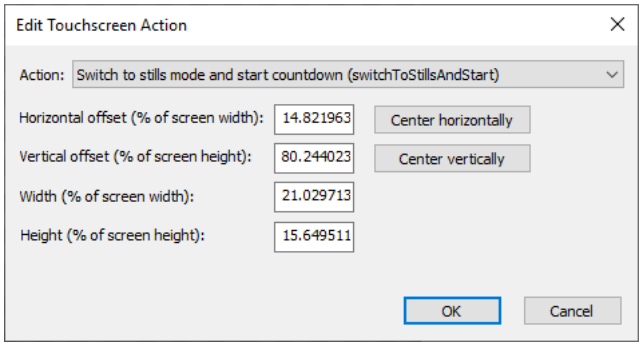


Select "Add action..." to add a new touchscreen action (you can also right click anywhere on the screen preview to display a menu to add a new action). This will display a list of the touchscreen actions that can be added to the screen:



Select an action from the list and click "OK" to add it or "Cancel" to dismiss the dialog.

Select "Edit action..." from the right click menu to edit an existing action:



The action can be changed to a different action by selecting the new action from the dropdown list. The position and size of the the active area is defined as percentages of the screen width and height. This ensures that the touchscreen actions appear in the same relative position on the screens of iPads with different screen resolutions.

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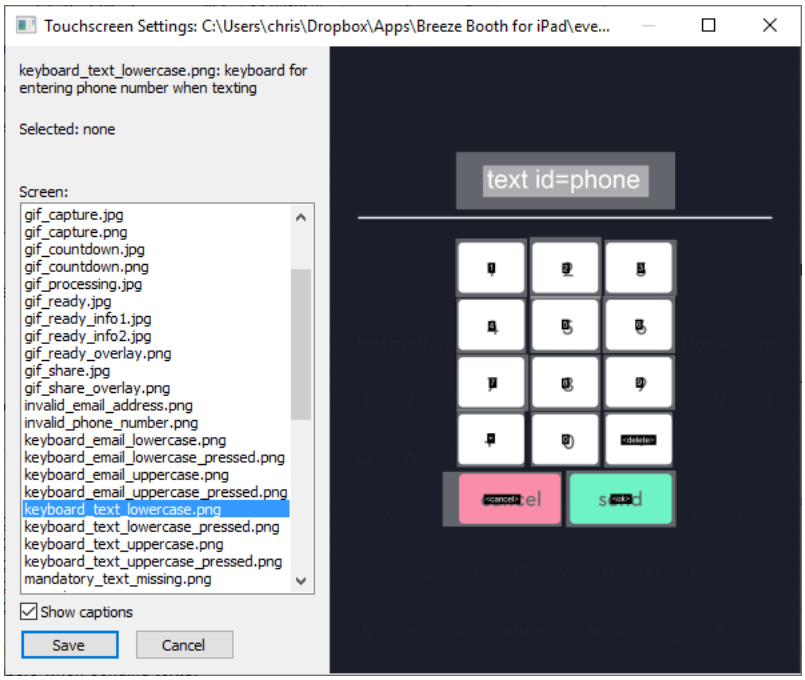
Live View Area

The live view area defines the size and position of the live view display on the screen and is only shown when one of the ready screens is selected in the touchscreen editor. There can only be one live view area in the ready screen. It can be moved and resized in the same way as touchscreen actions but it cannot be deleted.

Keyboards and Survey Screens

The touchscreen editor can also be used to edit keys, text inputs, checkboxes and radio buttons for keyboards and survey screens. Keyboards and survey screens work in a similar way. Their visual appearance is defined by two or four PNG images e.g.
keyboard_text_lowercase.png - keyboard appearance when no keys are pressed and shift is not pressed
keyboard_text_lowercase_pressed.png - defines the appearance of a key when it is pressed and shift is not pressed
keyboard_text_uppercase.png - keyboard appearance of a key when it is not pressed but shift is pressed
keyboard_text_uppercase_pressed.png - defines the appearance of a key when it is pressed and shift is pressed

Their behavior is defined by the key, text area, checkbox and radio button actions defined using the touchscreen editor. Select the keyboard_text_lowercase.png screen image from the list to display the keyboard used for entering phone numbers when sending texts:



The keyboards for sharing by email or text can be created automatically by selecting the sharing options when running the event creator.
Simple survey screens can be added by right clicking on any screen in the touchscreen editor's preview area and selecting "Add survey screen..." Please see the section on Keyboards and Surveys for details.

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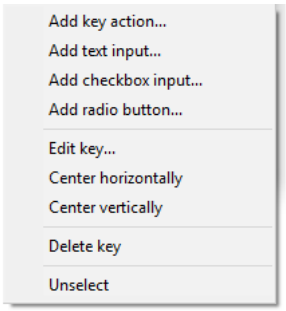
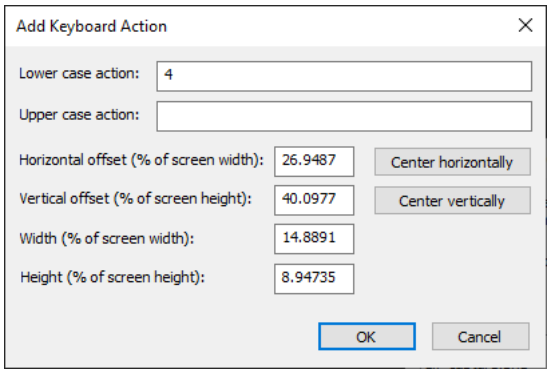
Adding/Editing Keyboard Actions

Right click on a key to edit it (or right click on the screen image and select "Add key action..." to add one):





Each key can have a lower case action (which is applied when it is tapped and shift is not pressed) and an upper case action (which is applied when it is tapped and shift is pressed). The action can be a single character (e.g. the number 4 for entering a phone number), a string of characters (.e.g. "gmail.com" to provide shortcuts for entering common email addresses) or one of the following special actions enclosed in angle brackets:

<ok> - validate the input and close the keyboard if all the input fields are valid else display an error screen if available
<cancel> - cancel keyboard input and close the keyboard screen without validating the inputs
<delete> - delete the last character from the currently selected text input area
<clear> - clear the currently selected text input area
<shift> - toggle keyboard shift: all the keys on the keyboard will be updated by copying areas from the lower case image if shift is not selected or the upper case image if shift is selected
<space> - add a space to the currently selected text input area

Adding/Editing Text Inputs

Right click on a text input to edit it (or right click on the screen image and select "Add text input..." to add one):

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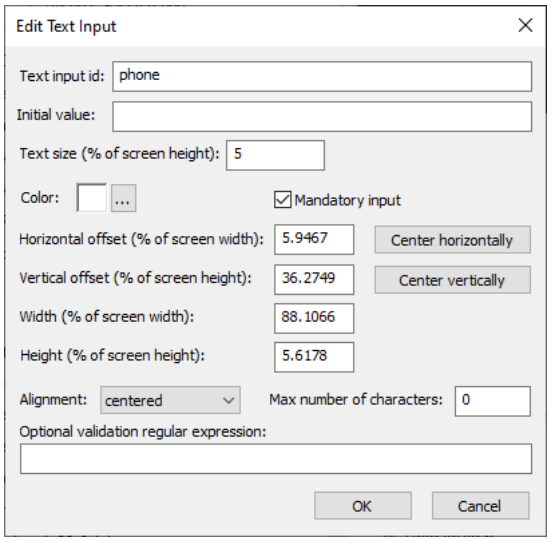

The text input id is used to identify the text input when it is saved in the XML summary file. The following special ids perform extra validation when closing the keyboard:
phone - checks that the phone number starts with an optional + (for international numbers) followed by a series of digits
email - checks whether the text is an email address in the form name@domain.com
cc - checks whether the text is an email address in the form name@domain.com

Text keyboards can only contain a single text input with id "phone". Any additional text inputs with id "phone" are ignored.

Email keyboards can have 1 or more text inputs with id "email" and zero or more text inputs with id "cc". The "email" fields are used as the "to" addresses when sending emails and the "cc" fields are set to the CC email addresses.

The initial value can be used to initialize the text field with pre-defined text. This field can use tokens e. g. if the user entered their email address in survey screen 1 the token {survey1_text_email} could be used to initialize the text field with their email address so that they don't have to enter it again.

The size of the text displayed in the text input is defined as a percentage of the screen height to ensure screens appear the same on different iPads with different screen sizes and resolutions.
The color setting specifies the color of the text in the text input.
The background appearance of the text input area is copied from the lower case keyboard image if the text area is not selected or the upper case keyboard image if it is selected. The area defined in the touchscreen editor specifies the area that is copied from the lower case or upper case keyboard image.
Please see Keyboards and Surveys for more information.

If the "Mandatory input" checkbox is selected the text input must contain one or more characters and must be a valid phone number (if the id is set to "phone") or a valid email address (if the id is set to "email" or "cc").
An error screen can be displayed if a mandatory text field is empty when tapping <ok> to close the keyboard by creating a PNG screen image with the name mandatory_text_missing followed by the text input id e.g. if there is a mandatory text input to enter your first name with the id "firstName" the error screen should be named mandatory_text_missing_firstName.png.

The alignment setting controls whether the text displayed in the text input is left, center or right justified.

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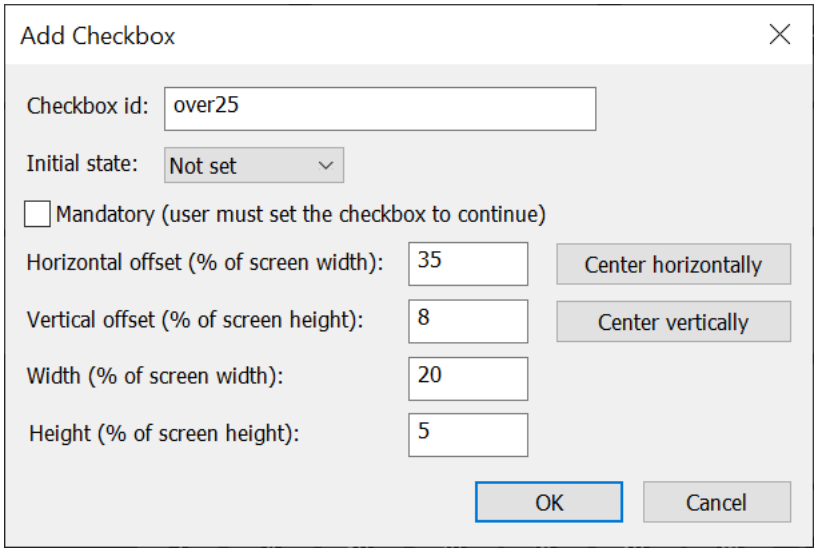
Set the "Max number of characters" to the maximum number of characters that can be entered or set this to 0 if there isn't a limit. When the user has entered the maximum number of characters any new characters will be ignored.

An optional regular expression can be used to validate the text entered by the user. For example if you want people to always prefix phone numbers with + followed by the country code the regular expression could be set to \+\d+
Leave this entry blank if you do not need to validate the input.
An error screen can be displayed if the text fails to match the regular expression when tapping <ok> to close the keyboard by creating a PNG screen image with the name regex_failed followed by the text input id e.g. if the input field has the id "phone" the error screen should be named regex_failed_phone.png.

Adding/Editing Checkboxes

Right click on a checkbox to edit it (or right click on the screen image and select "Add checkbox input..." to add one):



The checkbox id is used to identify the checkbox input when it is saved in the XML summary file.

The appearance of the checkbox is copied from the lower case keyboard image if the checkbox is not selected or the upper case keyboard image if it is selected. The area defined in the touchscreen editor specifies the area that is copied from the lower case or upper case keyboard image.
Please see Keyboards and Surveys for more information.

The "Initial state" dropdown list specifies whether the checkbox should be set when the keyboard or survey screen is displayed. The dropdown list has three options: "Set" which checks the checkbox, "Not set" which unchecks the checkbox and "Expression" which allows an expression containing tokens to set the initial state of the checkbox. If the expression evaluates to 0 or an empty string the checkbox will be unchecked otherwise it will be checked.
Example of using an expression to set the initial state of the checkbox: Suppose the photo booth has a survey at the start of the sequence which has a checkbox asking whether the user would like to receive special offers and you want to show display a similar checkbox in the email keyboard in case the user has changed their mind. If the checkbox has an id of "special" and in survey screen 1 the token {survey1_checkbox_special} can be used for the initial value expression to copy the user's response to the checkbox in the email keyboard.

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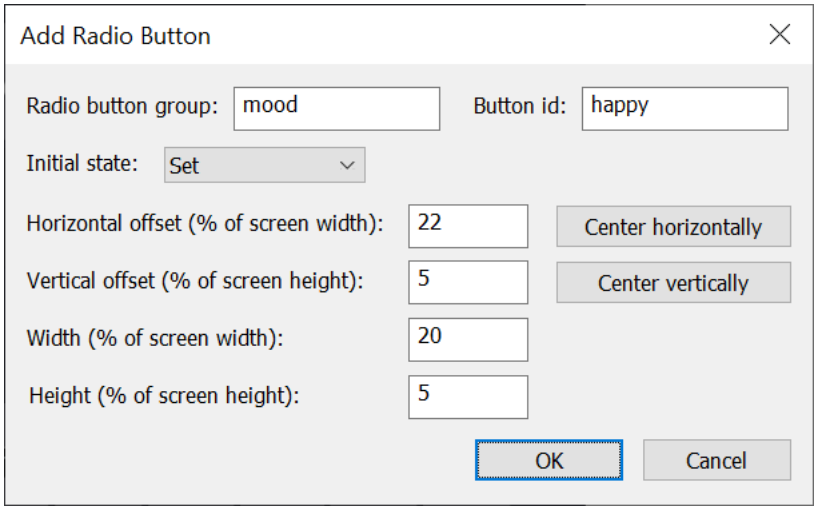
If the "Mandatory" checkbox is selected the checkbox must be selected before the keyboard is closed using the "<ok>" action. If the user taps the "<ok>" touchscreen action without selecting a mandatory checkbox an optional error screen will be displayed. The error screen is a PNG overlay image named mandatory_checkbox_<id>.png where <id> is the id of the checkbox.

Adding/Editing Radio Buttons

Right click on a radio button to edit it (or right click on the screen image and select "Add radio button..." to add one):



Radio buttons are similar to checkboxes but allow multiple choice type questions where one and only one button can be selected. The "Radio button group" setting is used to define groups of radio buttons. One and only one button can ever be selected within a given group of radio buttons.

The button id is used to identify the selected button when it is saved in the XML summary file.

The appearance of the each radio button is copied from the lower case keyboard image if the button is not selected or the upper case keyboard image if it is selected. The area defined in the touchscreen editor specifies the area that is copied from the lower case or upper case keyboard image.
Please see Keyboards and Surveys for more information.

The "Initial state" dropdown list specifies whether the radio button should be set when the keyboard or survey screen is displayed. The dropdown list has three options: "Set" which sets the radio button, "Not set" which unsets the radio button and "Expression" which allows an expression containing tokens to set the initial state of the radio button. If the expression evaluates to 0 or an empty string the radio button will not be set otherwise it will be set.
Please note that one and only one radio button in a group can be set. If multiple radio buttons in a group have their initial value set only the first one will be set. If none of the radio buttons is set initially the user must select one of them before they are able to continue.

An optional error screen will be displayed if the user taps the "<ok>" touchscreen action without selecting one of the buttons in the radio button group. The error screen is a PNG overlay image named mandatory_radiobtn_<id>.png where <id> is the id of the radio button group.

Menus

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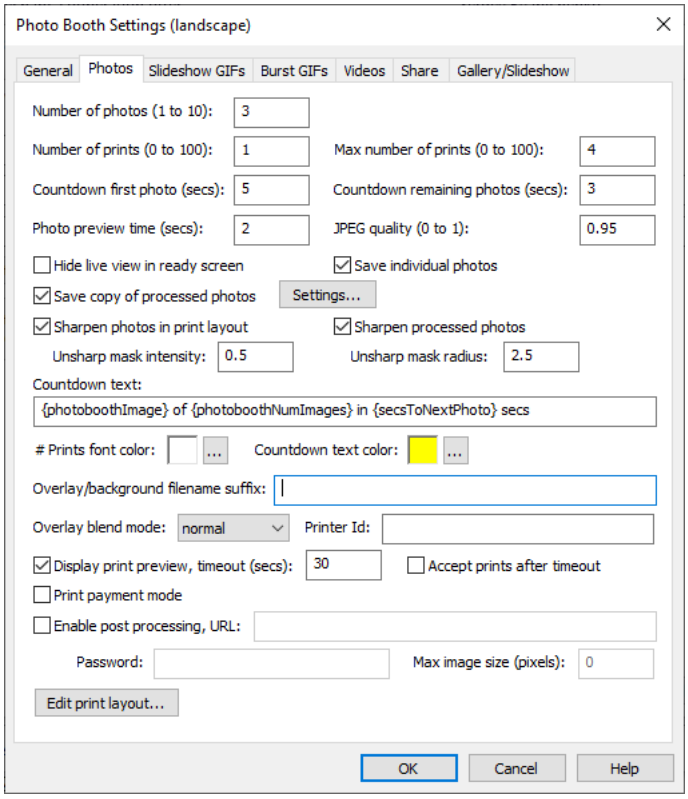
Menus are displayed in a similar way to keyboards and survey screens but only need two screens to define them e.g. menu1.png and menu1_selected.png. Menus can only contain touchscreen actions. Actions that represent a state (e.g. colorStyle) are displayed using the main image (e.g. menu1.png) with the touchscreen area being copied from the "selected" image (e.g. menu1_selected.png). Please see Menus for more information.

4.8 Photo Settings

Tap on the "Photos" tab in the "Photo Booth Settings" dialog to edit the settings used when capturing still images in photo booth mode:



First set the number of photos to be taken in the sequence to between 1 and 10.

The "Number of prints" setting sets the number of copies to be printed unless it is overridden in the confirm printing screen. The "Max number of prints" setting specifies the maximum number of copies that the user can select in the confirm printing screen.

Set the "Countdown first photo" to the duration in seconds to use for the countdown before taking the first photo. Set the "Countdown remaining photo" to the duration in seconds to use for the countdown before taking the remaining photos.
Please note: These settings are ignored if an animated GIF or video animation is used for the countdown. When an animation is used for the countdown the duration of the countdown will be determined by the length of the animation.

An optional preview photo can be displayed after taking each photo. The "Photo preview time" specifies how long the preview should be displayed in seconds. Set this to 0 to disable the preview photo.

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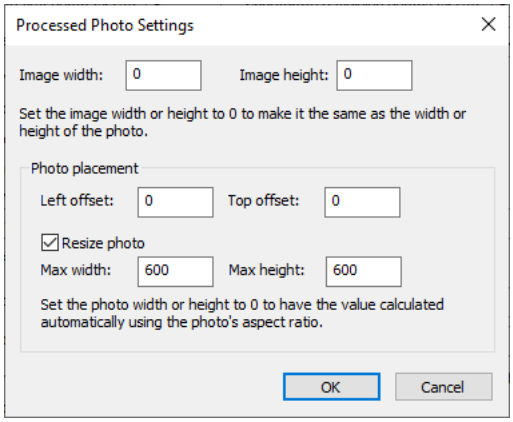
Use the "JPEG quality" setting to specify the JPEG image quality when saving photos. A setting of 1 will give the maximum quality and largest file size. Setting it to a smaller value will use more compression and result in smaller file sizes but with some loss in quality.

Normally live view images are displayed in the stills ready screen but this can be disabled (e.g. for a menu screen) by selecting "Hide live view in ready screen.

Select "Save individual photos" to save a JPEG copy of each photo taken during the shooting sequence.

Select "Save copy of processed photos" to save a JPEG copy of each photo taken by the camera after applying any effects such as styles or virtual props. The processed photos can be adjusted by clicking on the "Settings..." button:



Set the image width and height to the size of the processed image to be saved. Alternatively set the image width and height to 0 to make them the same as the resized photo.

Select resize photo and specify the maximum width and height for the photo. The photo will be resized so that it is no larger than the maximum width and height settings e.g. if the photo is 800x600 pixels in size and the maximum width is set to 400 and the maximum height is set to 400 the photo will be resized to 400x300 pixels.
If the maximum width or height is set to 0 the value will be calculated automatically using the photo's aspect ratio e.g. if the photo is 800x600 pixels in size and the maximum width is set to 200 and the maximum height is set to 0 the photo will be resized to 200x150 pixels. Or if the maximum width is set to 0 and the maximum height is set to 450 the photo will be resized to 600x450 pixels.

Use the photo placement settings to resize the photo and specify where it is placed in the image.

A background image can be applied by adding a JPEG image named processed_photo_background.jpg. When placing the processed photo within a larger image or when using AI background removal . The background will be visible behind the photo in the areas that have been removed when using AI background removal or when the image area is larger than the photo.
An overlay for branding can be applied to the processed photo by adding a PNG image named processed_photo_overlay.png to the screen folder.
Different background and overlay images can be used for each photo by naming them processed_photo_background<n>.jpg and processed_photo_overlay<n>.png respectively, where <n> is 1 for the first photo, 2 for the second etc.
If the background or overlay images are larger than the processed image size they will be resized to fit. If they are smaller than the processed image size they will be centered within the processed image.

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Select "Sharpen photos in print layout" to sharpen each photo before adding it to the print layout. The "Unsharp mask intensity" and "Unsharp mask radius" settings control the type and amount of sharpening. (More information about sharpening can be found by searching the internet for "Unsharp mask").

The "Countdown text" specifies how the countdown text should be formatted during the countdown before taking each photo. It can use the following tokens:
{photoboothImage} - the number of the photo in the sequence e.g. 1 for the first, 2 for the second etc.
{photoboothNumImages} - the total number of photos in the shooting sequence
{secsToNextPhoto} - the number of seconds remaining in the countdown before taking the next photo
Use the "Countdown text color" setting to specify the color of the countdown text.
Please note: This setting is ignored if an animated GIF or video animation is used for the countdown.

The "Overlay/background filename suffix" provides a way of dynamically selecting different overlays and backgrounds for prints. Normally the filename for the background image used for prints is background.jpg and the overlay is overlay.png but this can be modified to dynamically select different overlay and background images using information such as the time, user responses to surveys or random numbers. The suffix is also applied to backgrounds and overlays added to slideshow GIFs.
Please see Print Layout Editor and GIF Layout Editor for information on how to use this setting.
The overlay/background suffix can also be used to select the countdown and preview screens. One use for this is when using a survey to select different backgrounds when using AI background removal.

The overlay blend mode can be selected using the overlay blend mode dropdown list. This controls how the optional print overlay image, overlay.png, is blended with the print layout.
The following blend modes are available:
normal, lighten,darken, overlay, screen, hard light,soft light, multiply, difference, exclusion, color dodge, color burn, hue, saturation, color, luminosity:
A detailed description of each blend mode is beyond the scope of this help file. Please see this wikipedia article for more information about blend modes: https://en.wikipedia.org/wiki/Blend_modes.
Alternatively use an image editor such as Photoshop that supports levels and blend modes to see the effect of different blend modes on overlays applied to photos.

The "Printer Id" setting is used to provide additional information about printing in the photo booth XML summary file written at the end of the sequence. This information can be used by printing utilities such as Breeze Hub to select different printers or printer settings e.g. the printer id could be set to 6x4 to indicate printing on 6" x 4" paper and 6x20 for printing on panoramic 6" x 20" paper.

Select "Display print preview" to display the print layout in the confirm printing screen after taking the photos. The confirm printing screen gives the user the option to accept or reject the photos or to select the number of copies to print.
Set the timeout to the number of seconds the confirm printing screen should be displayed before it is closed automatically. Set "Accept prints after timeout" to automatically accept the prints if the timeout occurs otherwise they will be cancelled and the photo booth will return to the ready screen.
Us the "# Prints font color" to specify the color of the number of print copies indicator displayed in the confirm printing screen. Please note that the size and position of the text is determined by the size and position of the increase/decrease copies touchscreen actions. The size is set to the height of the touchscreen actions and the position is set to be mid way between the two actions.

Select "Print payment mode" to enable payment mode when printing from the print confirmation screen or the gallery. When print payment mode is selected and the user taps the "stillsPrintsAccept" touchscreen action the print payment screen will be displayed until a payment is made or the payment is cancelled or the payment timeout occurs. Define a "stillsPrintsAcceptWithoutPrinting" touchscreen action if you want the user to be able to accept the photos without printing them.
Please see "Payment Systems" section for more information about accepting payments.

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Select "Enable post processing" to allow photos to be post processed by web based services such as Breeze Fx to modify photos before they are added to the print layout. The post processing can be used to add AI image processing or to perform other actions such as running a Photoshop droplet on the photo.

Enter the URL to post process the photo e.g. https://yoursite.com/postprocess.php. The image is sent to the URL together with the any survey inputs and other data as a multi-part form using an HTTP POST. The image will be sent as JPEG data unless AI background removal with a transparent background is selected in which case it will be sent as a PNG image. The image data returned from the web server can be accepted as either and JPEG image or a PNG image.
The image data sent to server can be resized before sending by setting the "Max image size (pixels)". The image will be resized to fit within a square bounding box specified by the max image size. Set the max image size to 0 to disable the resizing.

Here are some examples of AI face swapping using Breeze Fx:

Click on "Edit print layout..." to display the print layout editor.

4.9 Print Layout Editor

The print layout editor provides an interactive way to edit the placement of photos, QR codes and logos on the print layout and to add captions.
Prints have a user definable background color on which is placed an optional background.jpg image followed by the photos with an optional overlay.png image and optional QR codes and captions.

Click on "Edit print layout..." in the "Photos" tab of the "Photo Booth Settings" dialog to open the print layout editor:

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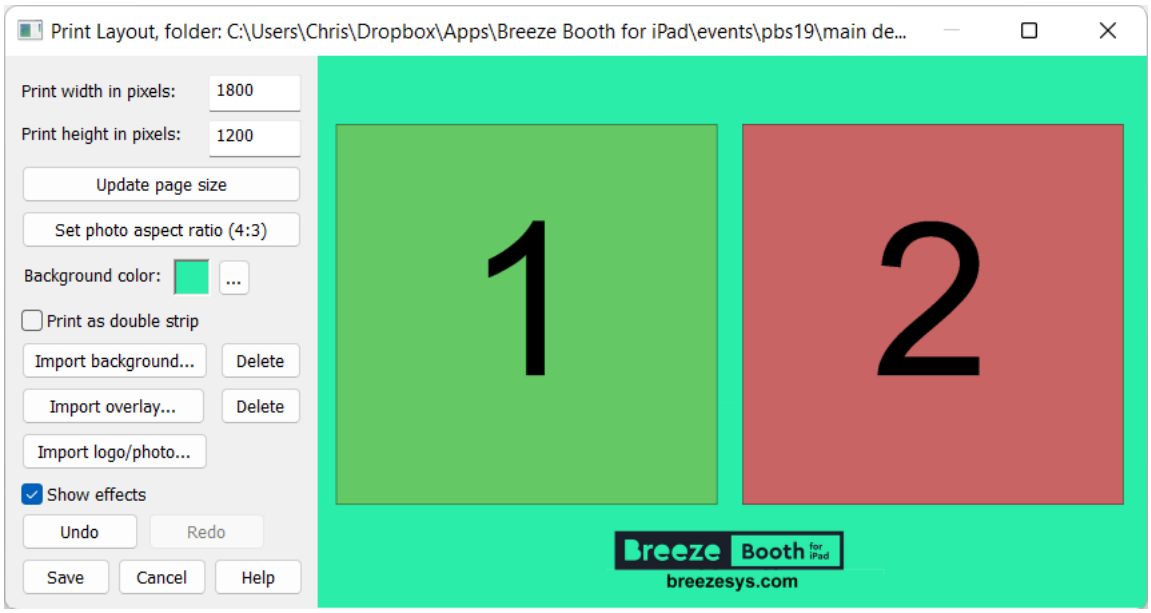

First set the print width and height in pixels e.g. fset the width to 1800 and the height to 1200 when printing 6" x 4" prints on a dyesub printer printing at 300 DPI.
Click on "Update page size" after making any changes to the width and height.

The "Set photo aspect ratio" button resets the photos to the same aspect ratio as the live view display. This can be useful if the photos have been resized and their aspect ration changed causing them to be cropped when printing.

Click on the "..." button next to the background color to change the background color of the prints.

The "Print as double strip" option is useful when creating a traditional 6x2 photo booth strip which is to be printed on a dyesub printer that can only print 6x2 strips by printing a 6x4 double strip and cutting it into two 6x2 strips. This setting tells printing software such as Breeze Hub to print the output as a double strip. To use this option create the print layout as a single strip (e.g. 600x1800 pixels) and setup the printer in Breeze Hub to print a 6x4 page with 6x2 cutting enabled. Breeze Hub will double the output from 600x1800 to 1200x1800 before printing.

Click on "Import background..." to copy a JPEG image into the screen folder and name it background.jpg. If there is an existing background.jpg image in the screen folder it will be replaced by the new background image.
Click on the "Delete" button to the right of "Import background..." to delete the background.jpg image.
The print layout in the screenshot above has a white background covered by a background.jpg image that is the same size as the print and has a green background plus the "Breeze Booth" logo and URL.

Click on "Import overlay..." to copy a PNG image into the screen folder and name it overlay.png. If there is an existing overlay.png image in the screen folder it will be replaced by the new overlay image.
Click on the "Delete" button to the right of "Import overlay..." to delete the overlay.png image.
The overlay is placed over the background and photos and should be the same size as the print and contain transparent areas so that the photos can be seen. The opacity of the overlay can be controlled from fully opaque to full transparent using the PNG image's alpha channel. The overlay is useful for adding fancy borders to the photos or logos which overlay the photos. The overlay can also be used to apply a texture or other effects to the print layout by selecting one of the overlay blend modes. Please note that the preview shown in the print layout editor does not display the effects of different blend modes.

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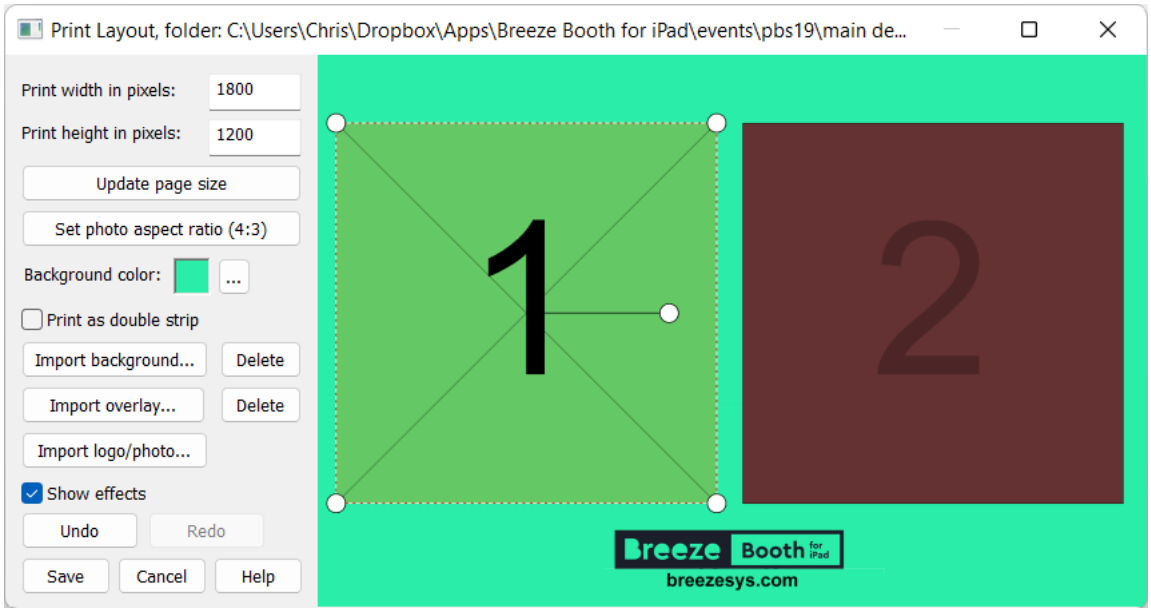
Click on "Import logo/photo..." to copy a PNG logo or photo and add it to the print layout.
Click on the logo/photo to edit its size and position or right click on it and select "Delete photo" to delete it.
The logo/photo is placed over the background, photos and overlay and can be resized, moved or rotated as required. The opacity of the PNG logo/photo can be controlled from fully opaque to full transparent using the PNG image's alpha channel.

If an effect has been applied to the photo (see print compositing) a summary will be displayed in the top left corner of the photo. This display can be disabled by unchecking "Show effects".

Click on a photo or logo to select it:



Move the photo, QR code or logo by holding down the left mouse button and dragging it to a new position.
Resize the photo, QR code or logo by dragging one of the four resize handles in the corners.
Rotate the photo, QR code or logo by dragging the rotation handle which is to the right of the center of the photo with a line joining it to the center. Hold the shift key down when rotating to snap the rotation to 15 degree intervals.

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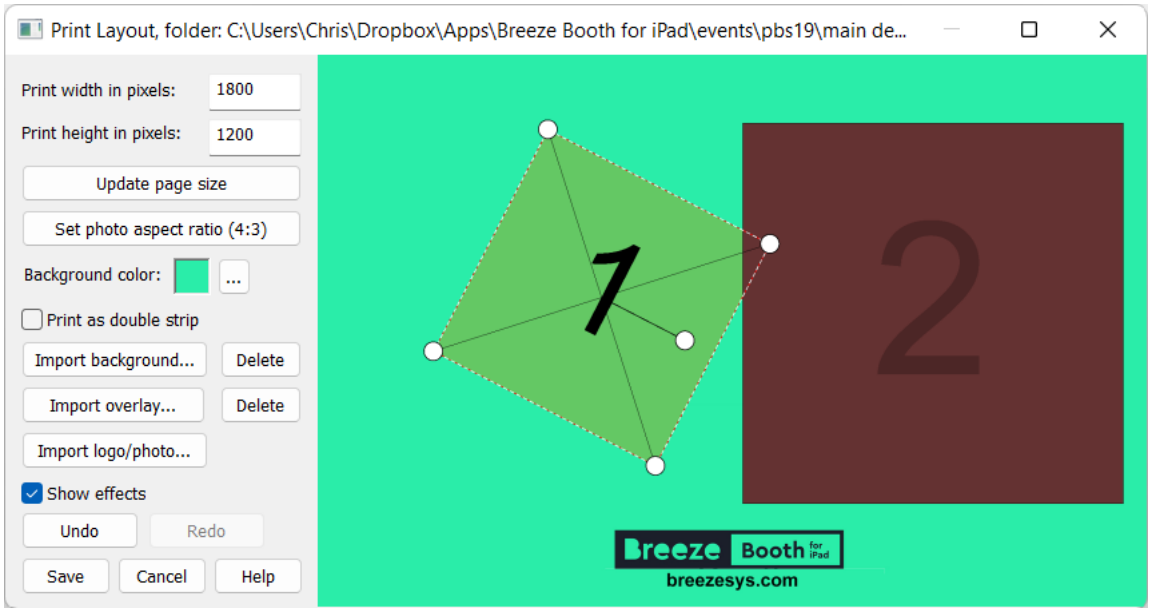
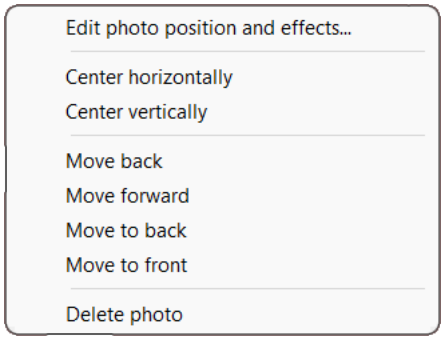


Right click on a photo, logo or QR code to display a menu of options:



Select "Edit photo position and effects..." to display the "Photo Position and Effects" dialog:

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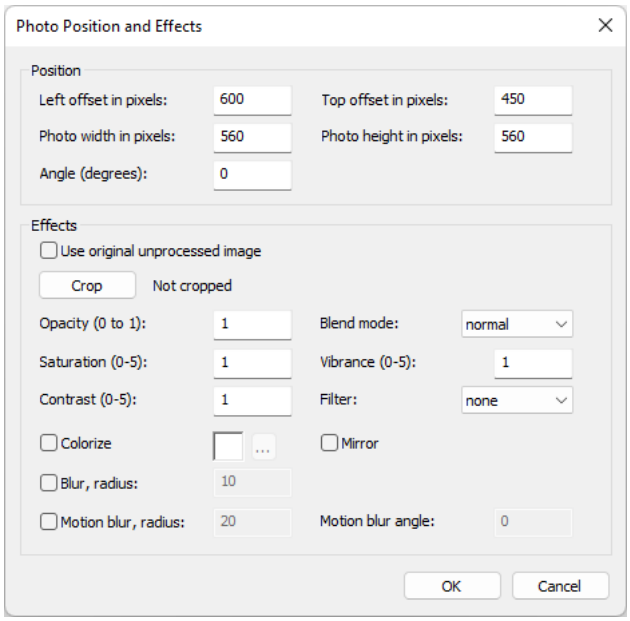


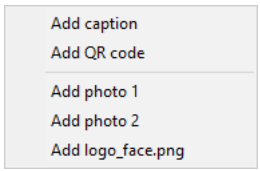
The position section at the top gives precise control of the size, angle and position of the photo. The effects section what effects are applied when the photo is added to the print layout. Please see print compositing for details of the effects that can be applied.

The photo can be centered horizontally or vertically within the print layout by selecting the "Center horizontally" or "Center vertically" menu options.

Use the "Move back", "Move forward", "Move to back" and "Move to front" menu options to change the order in which the photos are added to the print layout. In the screenshot above photo 1 has been rotated and moved so that part of it is behind photo 2. Photo 1 can be placed over photo 2 by right clicking on photo 1 and selecting "Move to front".

Select "Delete photo" to remove it from the print layout.

Right click on the print background to display a menu showing a list of elements that can be added to the print layout:



This will have an option to add a caption, an option to add a QR code, options to add the photos and options for logo images if there are PNG images with filenames starting with "logo_" in the screen folder.

Captions

Right click on the print background and select "Add caption" to add a caption to the print layout. This will add a caption showing "Caption 1" to the print layout. The caption can be dragged to a new position and edited by right clicking on it and selecting "Edit caption...":

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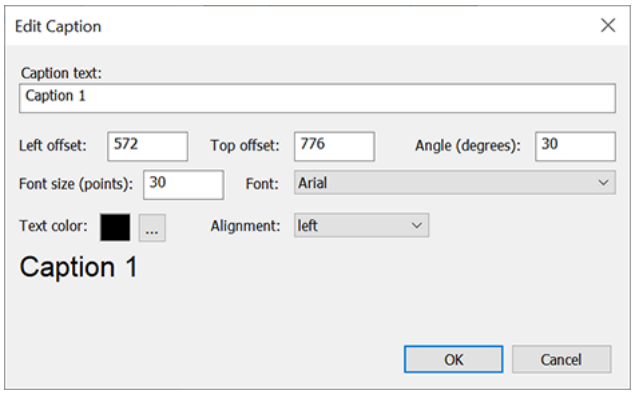

Use the "Caption" text area to change the caption text. The caption can contain tokens such as {time} for the current time, {uid} for the photo's unique id or {eventName} for the event name. The tokens will be replaced with their actual values when the photos are printed.

The position of the caption can be entered manually using the "Left offset" and "Top offset" settings. These specify the offset in pixels from the left and top of the print layout respectively.
The text can be rotated by specifying the angle of rotation in degrees.
The text alignment can be set to left justified, centered or right justified using the alignment dropdown list.

Edit the "Font size (points):" setting to adjust the size of the font and use the "Font:" dropdown list to choose a font.
Please note: The Event Editor lists the fonts available on the PC it is running on and these may not be available on the iPad and so you may need to install them. iPadOS does not come with any tools for adding new fonts but there are a number of third party apps available on the App Store e.g. Fontcase for installing new fonts and FontManager for displaying the available fonts. These third party apps can take a TrueType font copied from a PC and install it on an iPad so that it available to other apps. Windows stores fonts in the folder C:\Windows\Fonts and you can either copy the file for a TrueType font to your iPad and install it. If you wish to use a font that isn't available on Windows as standard you need to download the TrueType font file and install it on Windows to make it available to the Event Editor and on your iPad to make it available to Breeze Booth for iPad.
If the app cannot find a font matching the font name it will default to using the Arial font.

Click on the "...." button to the right of the text color to change the text color.

Please note: If more control is required over the appearance of the caption text, e.g. the use of different fonts or fancy effects, they can be added to the background.jpg or overlay.png images using an image editor such as Photoshop. You only need to use the captions in the print layout editor if you want to use tokens to create captions whose values are determined when the photos are printed.

QR Codes
Right click on the print background and select "Add QR code" to add a QR code to the print layout. This will add a QR code to the print layout. The QR can be dragged to a new position, resized and rotated using the mouse.
Right click on the QR code and select "Edit QR code..." for more precise control over the size and position of the QR code or to edit the QR code text:

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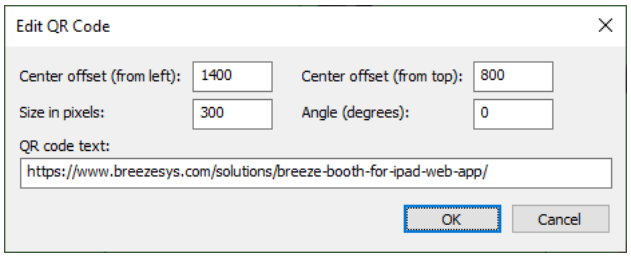

The QR code text can be dynamically generated when the photos are printed by using tokens such as {time} for the current time, {uid} for the photo's unique id or {eventName} for the event name. Tokens in the QR code text will be replaced with their actual values when the photos are printed.

More than one QR code can be added to the print layout if required. Each QR code has its own independently defined text.

Overlay, background and logo images are stored in the screen folder which is specified on the General Settings screen.

Dynamically Selecting Different Background and Overlay Images

Normally the filename for the background image used for prints is background.jpg and the overlay is overlay.png but this can be modified using the "Overlay/background filename suffix" setting in the Photo Settings screen. For example, if the suffix is set to 'test' the app will look for a background image named background_test.jpg and an overlay image named overlay_test.png first. If it can't find image files with the suffix it will fallback to background.jpg and overlay.png. The suffix can include tokens to dynamically select different overlay and background images using information such as the time, user responses to surveys or random numbers.

Example 1: use the time to select different backgrounds by setting the suffix to hour{hour}. This will tell the app to look for a background named background_hour20.jpg between 8pm and 9pm, background_hour21.jpg between 9pm and 10 pm etc.

Example 2: randomly select one of three backgrounds by setting the suffix to random{random,1,3}. This will tell the app to randomly select a background named background_random1.jpg, background_random2.jpg or background_random3.jpg.

Example 3: select a background using the response to a survey question asking them about their mood using a radio button with 'happy' and 'sad' options. Define radio buttons in the group “mood” with ids set to "happy" and "sad" and set the overlay/background filename suffix to {survey1_radio_mood}. This will set the suffix to "happy" or "sad" depending on the guest's response and will select a background named background_happy.jpg or background_sad.jpg.
Please see the section on Keyboards and Surveys for information on adding surveys.

The examples above also apply to overlay images e.g. example 1 also tells the app to look for an overlay named overlay_hour20.png between 8pm and 9pm, overlay_hour21.png between 9pm and 10 pm etc.

4.10 Print Compositing

Print compositing is applying different effects when adding photos to a print layout. Breeze Booth for iPad has a wide range of compositing tools available ranging from transparency and blurring to filters and blend modes. This gives huge creative control over the output without the need for Photoshop.

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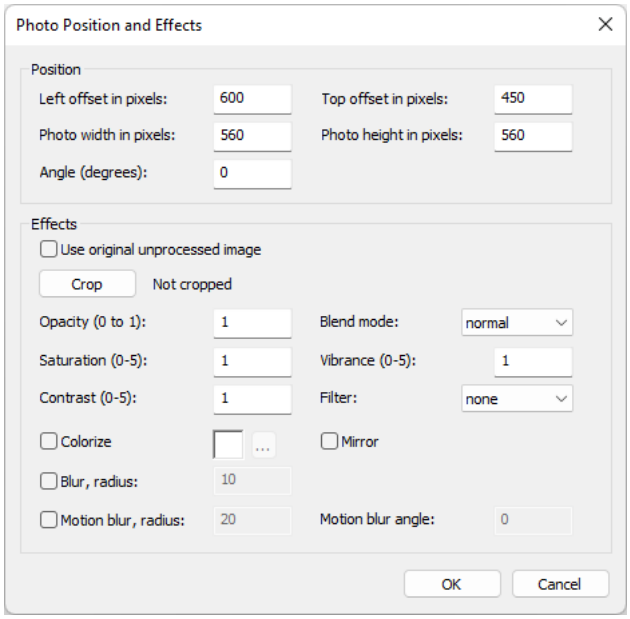
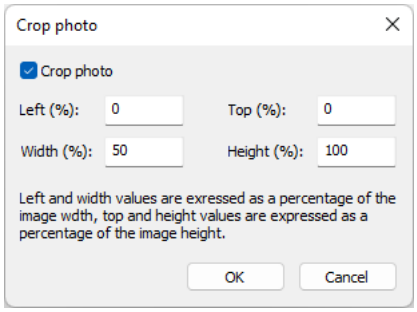
Right click on a photo in the print layout and select "Edit photo position and effects" to edit the effects applied to photos in the print layout. The "Photo Position and Effects" dialog will be displayed:



The "Effects" section controls the effects applied to each photo.

The "Use original unprocessed image" setting to use the original image taken by the camera before any processing such as green screen, AI background removal and AI special effects. This is useful if you want to show "before" and "after" images.

Click on the "Crop" button to crop the photo:



The left and width cropping values are expressed as a percentage of the image width e.g. to crop the image to display the left half set left to 0 and width to 50. Or to crop the image to display the right half set left to 50 and width to 50.
The top and height cropping values work in a similar way and are expressed as a percentage of the image height.
When an image is cropped its placement in the print layout editor does not change. Instead, the areas of the image that are cropped out are made fully transparent.

The opacity setting controls the transparency of the photo. Set this to a value between 0 (fully transparent) to 1 (fully opaque).

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Single photo taken with AI background removal added to the print layout multiple times with different opacities

The blend mode controls how the photo is blended with the print layout.
The following blend modes are available:
normal, lighten,darken, overlay, screen, hard light,soft light, multiply, difference, exclusion, color dodge, color burn, hue, saturation, color, luminosity:
A detailed description of each blend mode is beyond the scope of this help file. Please see this wikipedia article for more information about blend modes: https://en.wikipedia.org/wiki/Blend_modes.
Alternatively use an image editor such as Photoshop that supports levels and blend modes to see the effect of different blend modes on overlays applied to photos.

Print layout with trees as the background and one photo taken with AI background removal which is added to the print layout with darken blend mode.

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Photo taken with AI background removal then added to the print layout with contrast set to 0 and colorized to create a gray silhouette. Then added the "hey" overlay using a blend mode.

The saturation, contrast and vibrance settings adjust the appearance of the photo. The saturation setting adjusts the strength of the colors in the photo and ranges from 0, which has no color and gives grayscale images, through 5 which gives highly saturated images. The vibrance setting adjusts the saturation of an image while keeping pleasing skin tones. The contrast setting adjusts the contrast with values below 1 decreasing the contrast and values above increasing it. Set the saturation, contrast and vibrance to 1 to leave the photo unmodified.

The colorize option provide a simple way to convert a photo into shades of a single color. Enable the colorize checkbox then click on the "..." button to the right of the color swatch to change the color used to colorize the photo.

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4 photos taken with AI background removal then added to the print layout with contrast set to 0 to produce a silhouette and colorized to magenta, green, cyan and orange

The filter dropdown list allows a color lookup table (or LUT) to be applied the the photo. Please see the section on filters for information on how to create filters.

The mirror option simply mirrors the image by flipping it horizontally.

The blur option applies gaussian blur to the photo. Select this option then edit the blur radius to control the amount the phot is blurred.

The motion blur option blurs the photo in a linear direction to give the impression of motion. Select this option and then edit the radius to control the length of the motion blur. Edit the motion blur angle to adjust the angle of the blur (the angle is in degrees).

Multiple effects can be applied to a photo e.g. applying motion blur to a photo and reducing its opacity to 0.5 to make it semi-transparent.

Placing a copy of a photo on top of the original photo can produce interesting effects e.g. the first photo is normal and the copy is semi-transparent with motion blur.

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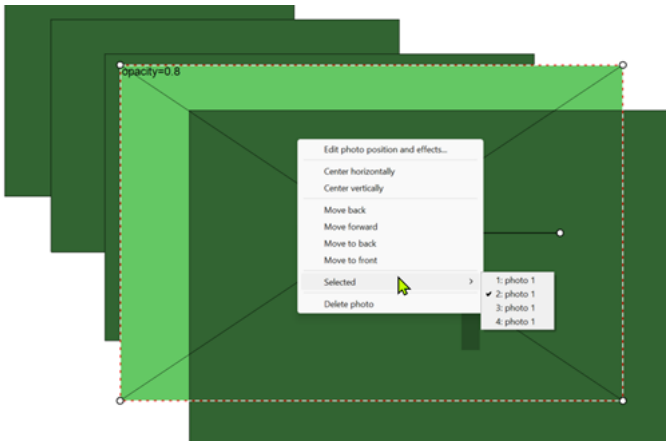
1 photo taken with a AI background removal added to the print layout twice: once as a normal photo and then using motion blur

Many of the effects work best when used with AI background removal so that they only apply to people in the photo and don't apply to the background.

Tip: When several photos are placed on top of one another it can be difficult to select the right one. When this happens right click on the stack of images and move the mouse over the "Selected" menu entry to display a submenu listing the photos under the mouse pointer when you right clicked. The list will show the photos in descending order from the top most photo first in the list to the one at the bottom of the pile last in the list. The currently selected photo will have a checkmark against it. Left click the mouse on a different photo in the list to select it.



4.11 Swapping print backgrounds and overlays

This section describes how to allow users to choose different backgrounds and overlays in the print confirmation screen displayed after taking the photos. This is useful when using AI background removal because it allows users to choose different virtual backgrounds after taking the photos. It is also useful for normal photos because it allows users to choose different print styles by switching backgrounds and overlays.

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Different backgrounds and overlays can be chosen in the print preview screen (confirm_printing.jpg or confirm_printing.png) using touchscreen actions. The "Stills prints next background" and "Stills prints previous background" touchscreen actions can be used to cycle through the available backgrounds or guests can select a background directly using the "Stills prints background #1" through "Stills prints background #6" touchscreen actions. When the user chooses a different background the print preview displayed in the print confirmation screen is updated automatically to show the new background and overlay.

Example print preview screen showing background 1

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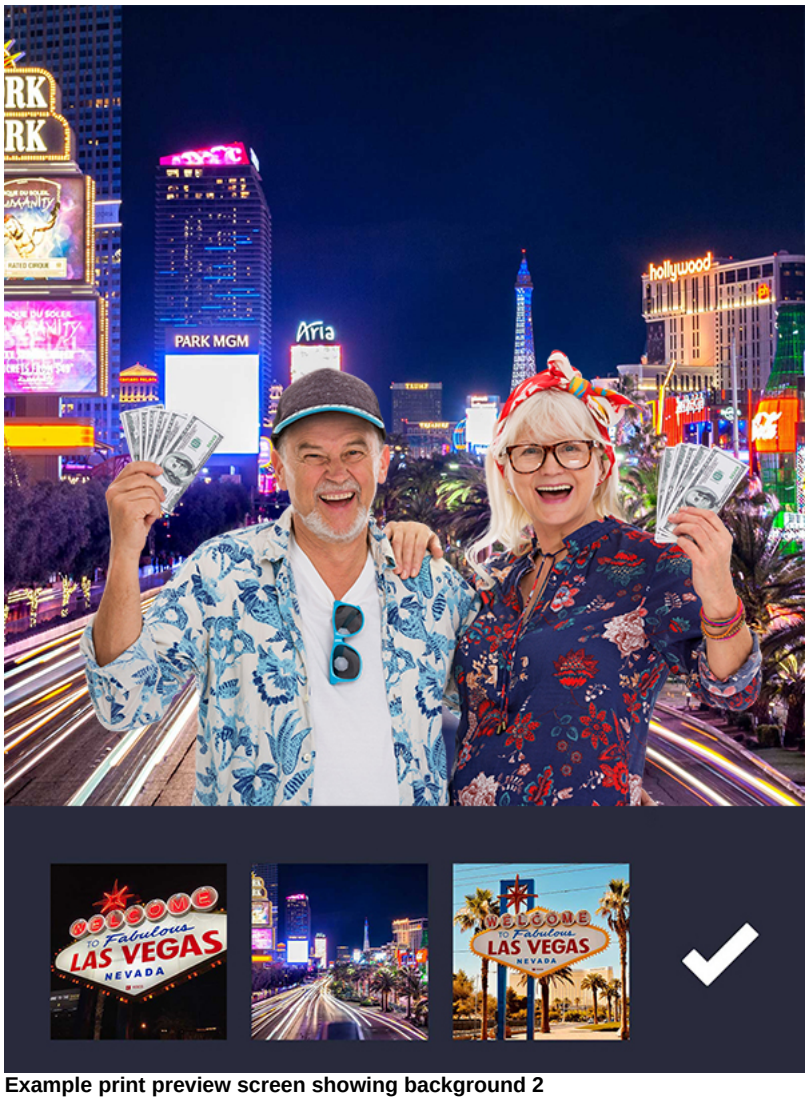

Example print preview screen showing background 2

Setup

Print background and overlay swapping is performed in theprint preview screen and so the first step is to enable "Display print preview" in the Photo Settings. Next edit the confirm printing screen in an image editor to add the graphics for the buttons used to select different backgrounds (e.g. next background, previous background, background 1 etc.). Then add the touchscreen actions for selecting the backgrounds using the touchscreen editor.

Next add the background images and optional overlay images to the photo booth images folder. The background images should be JPEG images named background1.jpg, background2.jpg, background3.jpg etc. The optional overlay images should be PNG images with transparency information in the alpha channel and named overlay1.png, overlay2.png, overlay3.png etc. For the best results please ensure the background and overlay images are the same size in pixels as the print layouts e.g. a 4" x 6" print at 300 dpi is 1200 x 1800 pixels in size and so the background JPEG should also be 1200 x 1800 pixels in size.

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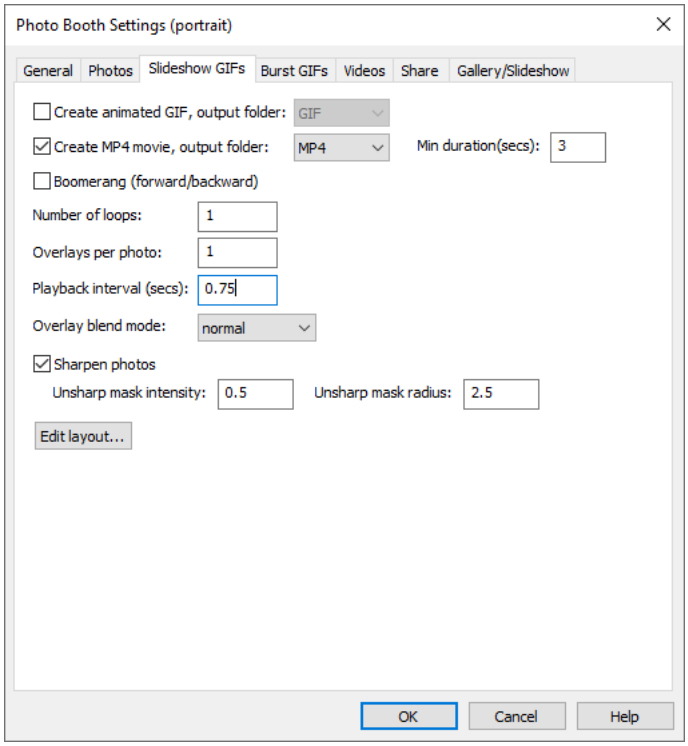
4.12 Slideshow GIF Settings

Slideshow GIFs are optional animated GIFs and/or MP4 movie files which can be created from the photos taken in stills photo booth mode. Click on the "Slideshow GIFs" tab of the "Photo Booth Settings" dialog to edit the settings:



Select "Create animated GIF" to create a slideshow GIF and use the output folder setting to specify where it should be saved.

Select "Create MP4 movie" to create a slideshow movie and use the output folder setting to specify where it should be saved. MP4 movies don't play in a continuous loop like animated GIFs and so you also need to specify their minimum duration. When the app creates the MP4 movie it will repeat it as many times is as necessary to make sure it as at least as long a the minimum duration setting. The minimum recommended setting for the duration is 3 seconds because this is the minimum duration that is accepted by Instagram. If you select a shorter duration users won't be able to share their movies on Instagram.

Animated GIFs have the advantage that they automatically play back in a continuous loop and can be embedded in an HTML formatted email in the same way as JPEG images. They have the disadvantage that they can only display 256 colors per frame out of the 16 million colors that could be in a photo. They also have the disadvantage that they use lossless compression which can result in large file sizes.

MP4 movies have the advantage that they can represent the same number of colors as normal JPEG photos and they use similar compression to JPEGs to reduce the file size. The main disadvantages of MP4 movies is that they don't automatically play in a continuous loop and they can't be embedded into HTML formatted emails. Instead they need to be included as a file attachment to the email.

Select the "Boomerang (forward/backward)" setting to create a boomerang GIF. This will display the photos in forwards order followed by reverse order e.g. if there are 4 photos in the slideshow it will

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display them in the order 1, 2, 3, 4, 3, 2 and then repeat. When the boomerang option is not selected the photos will be displayed in the order 1, 2, 3, 4 then repeat.

The "Number of loops" setting specifies how many times the the photos should be added to the animated GIF. This can be useful when using overlays to add animations which last longer than a single pass of the slideshow e.g. falling confetti.

The "Overlays per photo" setting specifies how many overlay frames are created per photo. This can create an animated frame that updates at a faster rate than the photos e.g. if overlays per photo is set to 2 the sequence would be:
photo 1 + overlay 1, photo 1 + overlay 2, photo 2 + overlay 3, photo 2 + overlay 4, photo 3 + overlay 5, photo 3 + overlay 6, etc.

The "Playback interval (secs)" specifies how long each frame in the animation should be displayed.

The overlay blend mode can be selected using the overlay blend mode dropdown list. This controls how the optional overlay images (e.g. slideshow_gif_overlay.png or slideshow_gif_overlay_1.png, slideshow_gif_overlay_2.png etc.) are blended with the GIF layout.
The following blend modes are available:
normal, lighten,darken, overlay, screen, hard light,soft light, multiply, difference, exclusion, color dodge, color burn, hue, saturation, color, luminosity:
A detailed description of each blend mode is beyond the scope of this help file. Please see this wikipedia article for more information about blend modes: https://en.wikipedia.org/wiki/Blend_modes.
Alternatively use an image editor such as Photoshop that supports levels and blend modes to see the effect of different blend modes on overlays applied to photos.

Select "Sharpen photos" to sharpen each photo before adding it to the slideshow GIF. The "Unsharp mask intensity" and "Unsharp mask radius" settings control the type and amount of sharpening. (More information about sharpening can be found by searching the internet for "Unsharp mask").

Click on "Edit layout..." to display the GIF Layout Editor.

4.13 Burst GIF Settings

Burst GIFs are short silent movies that play in a continuous loop. They sometimes referred to as boomerang GIFs when they play a sequence forwards and then backwards,
Click on the "Burst GIFs" tab of the "Photo Booth Settings" dialog to edit the settings:

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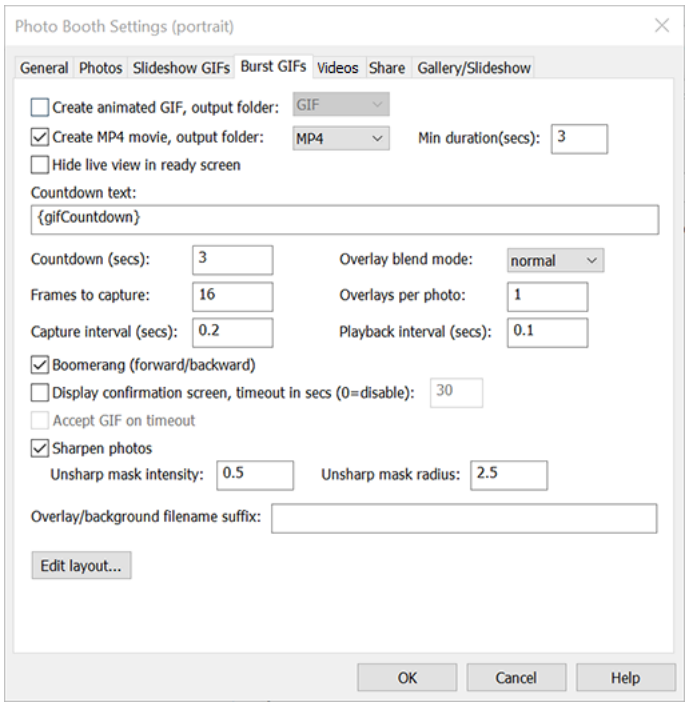

Select "Create animated GIF" to create a burst GIF and use the output folder setting to specify where it should be saved.

Select "Create MP4 movie" to create an MP4 copy of the burst GIF and use the output folder setting to specify where it should be saved. MP4 movies don't play in a continuous loop like animated GIFs and so you also need to specify their minimum duration. When the app creates the MP4 movie it will repeat it as many times is as necessary to make sure it as at least as long a the minimum duration setting. The minimum recommended setting for the duration is 3 seconds because this is the minimum duration that is accepted by Instagram. If you select a shorter duration users won't be able to share their movies on Instagram.

Animated GIFs have the advantage that they automatically play back in a continuous loop and can be embedded in an HTML formatted email in the same way as JPEG images. They have the disadvantage that they can only display 256 colors per frame out of the 16 million colors that could be in a photo. They also have the disadvantage that they use lossless compression which can result in large file sizes and cannot include an audio soundtrack.

MP4 movies have the advantage that they can represent the same number of colors as normal JPEG photos and they use similar compression to JPEGs to reduce the file size. The main disadvantages of MP4 movies is that they don't automatically play in a continuous loop and they can't be embedded into HTML formatted emails. Instead they need to be included as a file attachment to the email.

Normally live view images are displayed in the GIF ready screen but this can be disabled (e.g. for a menu screen) by selecting "Hide live view in ready screen".

The "Countdown text" specifies how the countdown text should be formatted during the countdown before taking each photo. It can use the following token:
{gifCountdown} - the number of seconds remaining in the countdown before capturing the GIF
Use the "Countdown (secs)" setting to specify duration of the countdown.
Please note: These settings are ignored if an animated GIF or video animation is used for the countdown. When an animation is used for the countdown the duration of the animation determines the

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duration of the countdown.

The overlay blend mode can be selected using the overlay blend mode dropdown list. This controls how the optional overlay images (e.g. gif_overlay.png or gif_overlay_1.png, gif_overlay_2.png etc.) are blended with the GIF layout.
The following blend modes are available:
normal, lighten,darken, overlay, screen, hard light,soft light, multiply, difference, exclusion, color dodge, color burn, hue, saturation, color, luminosity:
A detailed description of each blend mode is beyond the scope of this help file. Please see this wikipedia article for more information about blend modes: https://en.wikipedia.org/wiki/Blend_modes.
Alternatively use an image editor such as Photoshop that supports levels and blend modes to see the effect of different blend modes on overlays applied to photos.

The "Frames to capture" setting specifies how many frames to capture from the live view display when creating the GIF, Normally this is set to at least 10 frames to create a good animation.

The "Overlays per photo" setting specifies how many overlay frames are created per photo. This can create an animated frame that updates at a faster rate than the photos e.g. if overlays per photo is set to 2 the sequence would be:
photo 1 + overlay 1, photo 1 + overlay 2, photo 2 + overlay 3, photo 2 + overlay 4, photo 3 + overlay 5, photo 3 + overlay 6, etc.

The "Capture interval (secs)" setting determines how long it takes to capture the sequence i.e. duration = capture interval x number of frames. The minimum usable setting for the capture interval is around 0.05 secs but this will depend on the model of the iPad and the exposure settings.

The "Playback interval (secs)" setting specifies how long to display each frame of the GIF. Set this to a longer setting than the capture interval to create slow motion GIFs or to a shorter setting to display the GIF at faster than normal speed.

Select the "Boomerang (forward/backward)" setting to create a boomerang GIF. This will display the photos in forwards order followed by reverse order e.g. if there are 10 frames in the GIF it will display them in the order 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 9, 8,, 7, 6, 5, 4, 3, 2 and then repeat. When the boomerang option is not selected the frames will be displayed in the order 1, 2, 3, 4, 5, 6, 7, 8, 9, 10 then repeat.

Select "Display confirmation screen" to display the GIF in the confirm printing screen after capture. The confirmation screen gives the user the chance to review the GIF and to accept or reject it.
Set the timeout to the number of seconds the confirmation screen should be displayed before it is closed automatically. Set "Accept GIF on timeout" to automatically accept the GIF if the timeout occurs otherwise it will be cancelled and the photo booth will return to the ready screen.

Select "Sharpen photos" to sharpen each photo before adding it to the GIF. The "Unsharp mask intensity" and "Unsharp mask radius" settings control the type and amount of sharpening. (More information about sharpening can be found by searching the internet for "Unsharp mask").

The "Overlay/background filename suffix" provides a way of dynamically selecting different overlays and backgrounds for the GIFs. Normally the filename for the background images used for GIFs is gif_background.jpg or gif_background_<n>.jpg and the overlay is gif_overlay.png or gif_overlay_<n>.png but this can be modified to dynamically select different overlay and background images using information such as the time, user responses to surveys or random numbers.
Please see GIF Layout Editor for information on how to use this setting.
The overlay/background suffix can also be used to select the countdown, capture and share screens. One use for this is when using a survey to select different backgrounds when using AI background removal.

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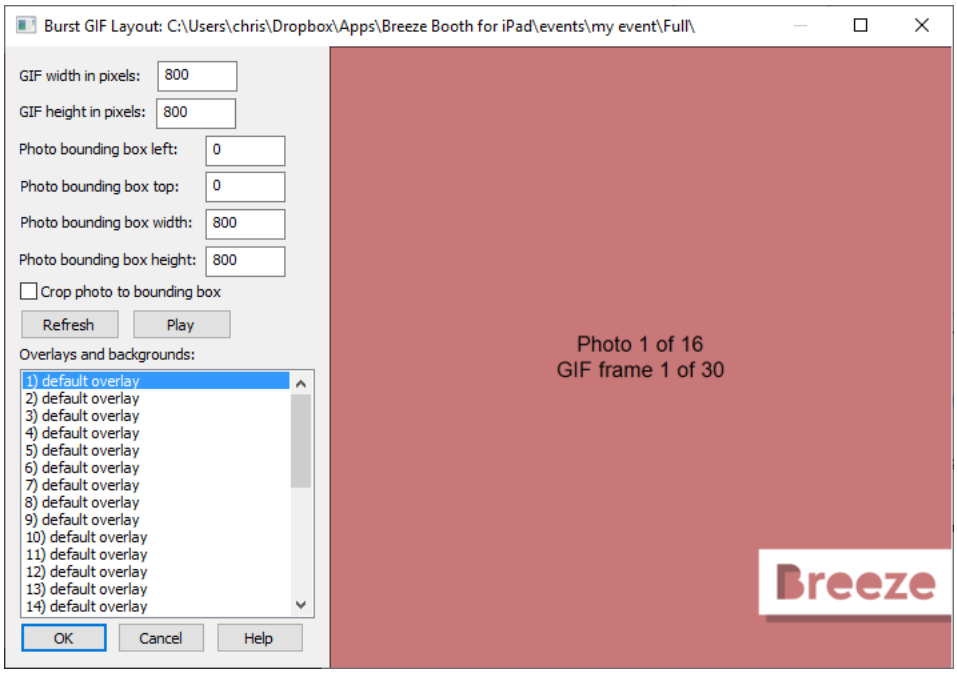
Click on "Edit layout..." to display the GIF Layout Editor.

4.14 GIF Layout Editor

The GIF layout editor provides an interactive way to edit slideshow and burst GIFs. Please note that animated GIFs can be saved as GIFs or MP4 movies or both.
GIFs can have optional background and overlay images and can use a single background or overlay for the whole sequence or different backgrounds or overlays for each frame of the GIF to create animated effects.

Click on "Edit layout..." in the "Slideshow GIFs" or "Burst GIFs" tabs of the "Photo Booth Settings" dialog to open the GIF layout editor:



A preview of the animated GIF layout is displayed on the right. On the left there are a series of settings for defining the size of the animated GIF and the placement of photos within the frame. The list in the bottom left displays the filenames of the background and/or overlay file added to each frame of the GIF.

Use the "GIF width in pixels" and "GIF height in pixels" settings to specify the size of the animated GIF.
Use the "Photo bounding box left" to specify the position in pixels of the left of the photos from the left of the GIF frame.
Use the "Photo bounding box top" to specify the position in pixels of the top of the photos from the top of the GIF frame.
Use the "Photo bounding box width" and "Photo bounding box height" settings to specify the size in pixels of the left of the photos.

The "Crop photo to bounding box" setting controls how the photo is resized to fit the bounding box.
If "Crop photo to bounding box" is set the photo is resized so that it fills the bounding box horizontally and vertically and cropped to fit. Example: if the photo is 900x600 pixels and the bounding box is 300x300 pixels the photo will be resized to 450x300 and 75 pixels will be cropped from the left and

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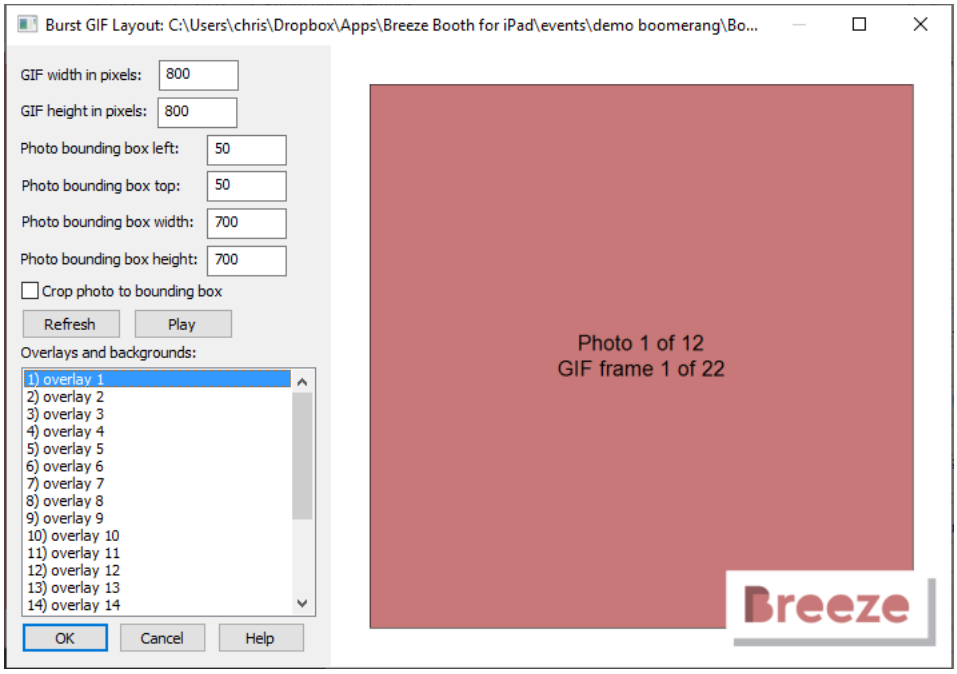
right of the photo so that it fills the bounding box.
If "Crop photo to bounding box" is not set the photo is resized so that it fits inside the bounding box. Example: if the photo is 900x600 pixels and the bounding box is 300x300 pixels the photo will be resized to 300x200 and centered within the bounding box.

Press the "Refresh" button after making any changes to update the preview display.



The screenshot above shows the photos inset by 50 pixels within the GIF frame. The GIF frame is 800 x 800 pixels and the photos are positioned to be inset 50 pixels from the left edge and 50 pixels of the top. The width and height of the photos are set to 700 pixels to give a 50 pixel border to the right and bottom. The example animated GIF doesn't have any background images and so the border around the photos is plain white.

Click on "Play" to display an animated preview of the GIF. The preview on the right will display the photo number and the GIF frame number and add the background and/or overlay defined for that frame of the animation.

The JPEG background and PNG overlay images have the following names:

Slideshow GIFs
default background image: slideshow_gif_background.jpg
background image for frame <n> of the animation: slideshow_gif_background_<n>.jpg e.g. slideshow_gif_background_1.jpg, slideshow_gif_background_2.jpg, slideshow_gif_background_3.jpg etc.
default overlay image: slideshow_gif_overlay.png
overlay image for frame <n> of the animation: slideshow_gif_overlay_<n>.png e.g. slideshow_gif_overlay_1.png, slideshow_gif_overlay_2.png, slideshow_gif_overlay_3.png etc.
The overlays can also be used to apply textures or other effects to the GIF layout by selecting one of the overlay blend modes. Please note that the preview shown in the GIF layout editor does not display the effects of different blend modes.
Optional overlay that is added to every frame: slideshow_gif_logo_overlay.png

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Burst GIFs
default background image: gif_background.jpg
background image for frame <n> of the animation: gif_background_<n>.jpg e.g. gif_background_1.jpg, gif_background_2.jpg, gif_background_3.jpg etc.
default overlay image: gif_overlay.png
overlay image for frame <n> of the animation: gif_overlay_<n>.png e.g. gif_overlay_1.png, gif_overlay_2.png, gif_overlay_3.png etc.
The overlays can also be used to apply textures or other effects to the GIF layout by selecting one of the overlay blend modes. Please note that the preview shown in the GIF layout editor does not display the effects of different blend modes.
Optional overlay that is added to every frame: gif_logo_overlay.png

Optional Soundtrack
An optional soundtrack can be added to the MP4 video copies of slideshow GIFs and burst GIFs by placing a MP3 audio file in the screen folder. Please note that animated GIFs don't support sound.
MP3 audio file for burst GIFs: gif_soundtrack.mp3
MP3 audio file for slideshow GIFs: slideshow_gif_soundtrack.mp3

Optional Titles and Credits
Optional title frames can be added to the start of slideshow GIFs and burst GIFs by adding JPEG images in the screen folder.
The images should be named slideshow_gif_title_1.jpg, slideshow_gif_title_2.jpg etc. for slideshow GIFs and gif_title_1.jpg, gif_title_2.jpg etc. for burst GIFs.

Optional title frames can be added to the end of slideshow GIFs and burst GIFs by adding JPEG images in the screen folder.
The images should be named slideshow_gif_credits_1.jpg, slideshow_gif_credits_2.jpg etc. for slideshow GIFs and gif_credits_1.jpg, gif_credits_2.jpg etc. for burst GIFs.

The overlay, background, title and credits images and soundtrack MP3 files are stored in the screen folder which is specified on the General Settings screen.

Dynamically Selecting Different Background and Overlay Images

Normally the filenames for the background images used for GIFs are gif_background.jpg or gif_background_<n>.jpg and the overlays are gif_overlay.png or gif_overlay_<n>.png (slideshow_gif_background.jpg or slideshow_gif_background_<n>.jpg and slideshow_gif_overlay.png or slideshow_gif_overlay_<n>.png for slideshow GIFs). This can be modified using the "Overlay/background filename suffix" setting in the Burst GIF Settings screen for burst GIFs or the Photo Settings screen for slideshow GIFs.

For example, if the suffix for burst GIFs is set to 'test' the app will look for background images named gif_background_test.jpg or gif_background_test_<n>.jpg and overlay images named gif_overlay_test.png or gif_overlay_test_<n>.png first. If it can't find image files with the suffix it will fallback to gif_background.jpg or gif_background_<n>.jpg and gif_overlay.png or gif_overlay_<n>.png. The suffix can include tokens to dynamically select different overlay and background images using information such as the time, user responses to surveys or random numbers.

Example 1: use the time to select different backgrounds by setting the suffix to hour{hour}. This will tell the app to look for background images named gif_background_hour20.jpg or gif_background_hour20_<n>.jpg between 8pm and 9pm, gif_background_hour21.jpg or gif_background_hour21_<n>.jpg between 9pm and 10 pm etc.

Example 2: randomly select one of three backgrounds by setting the suffix to random{random,1,3}. This will tell the app to randomly select a background named gif_background_random1.jpg/

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gif_background_random1_<n>.jpg, gif_background_random2.jpg/gif_background_random2_<n>.jpg or gif_background_random3.jpg/gif_background_random3_<n>.jpg.

Example 3: select a background using the response to a survey question asking them about their mood using a radio button with 'happy' and 'sad' options. Define radio buttons in the group “mood” with ids set to "happy" and "sad" and set the overlay/background filename suffix to {survey1_radio_mood}. This will set the suffix to "happy" or "sad" depending on the guest's response and will select background images named gif_background_happy.jpg/gif_background_happy_<n>.jpg or gif_background_sad.jpg/gif_background_sad_<n>.jpg.
Please see the section on Keyboards and Surveys for information on adding surveys.

The examples above also apply to overlay images e.g. example 1 also tells the app to look for overlay images named gif_overlay_hour20.png or gif_overlay_hour20_<n>.png between 8pm and 9pm, gif_overlay_hour21.png or gif_overlay_hour21_<n>.png between 9pm and 10 pm etc.
The examples also apply to slideshow GIFs created from a series of photos using the "Overlay/ background filename suffix" defined in the Photo Settings screen. e.g. for slideshow GIFs in example 1 the app will look for background images named sliedshow_gif_background_hour20.jpg or slideshow_gif_background_hour20_<n>.jpg between 8pm and 9pm, slideshow_gif_background_hour21.jpg or slideshow_gif_background_hour21_<n>.jpg between 9pm and 10 pm etc.

4.15 Video Settings

Videos can be captured with with sound (e.g. for a video guestbook) or without sound with effects such as boomerang (forward then backward playback) or custom edits such as jump cuts or speed ramping. These are ideal for 360 degree spinners or as an alternative to burst GIFs to give smoother playback or more creative editing with jump cuts and speed ramping.

Transformations such as panning, zooming and rotating can be applied to videos.

You can also apply effects such as AI background removal (aka green screen without the green screen) to videos and play them with a background video and an overlay video.
A static PNG overlay can be added to the video or an alpha video in HEVC format can be added to give an animated overlay. A background video can also be played behind the captured video clip.
Please note: To use video post processing you need a device with an A11 processor or better e.g. a 2019 iPad or better. A fast device such as a 2022 or 2021 iPad Pro, 2022 iPad Air, 2022 iPad 10.9" or 2022 iPhone SE is recommended when applying AI background removal to videos.

Videos are captured at a resolution of 1280x720 pixels (aka 720p) and default frame rate of 30fps.

Please note that not all of the effects available when taking photos or capturing burst GIFs are available when capturing videos. Videos do not support virtual props or skin smoothing. If you need these effects please consider using burst GIFs instead.

Click on the "Video" tab of the "Photo Booth Settings" dialog to edit the settings:

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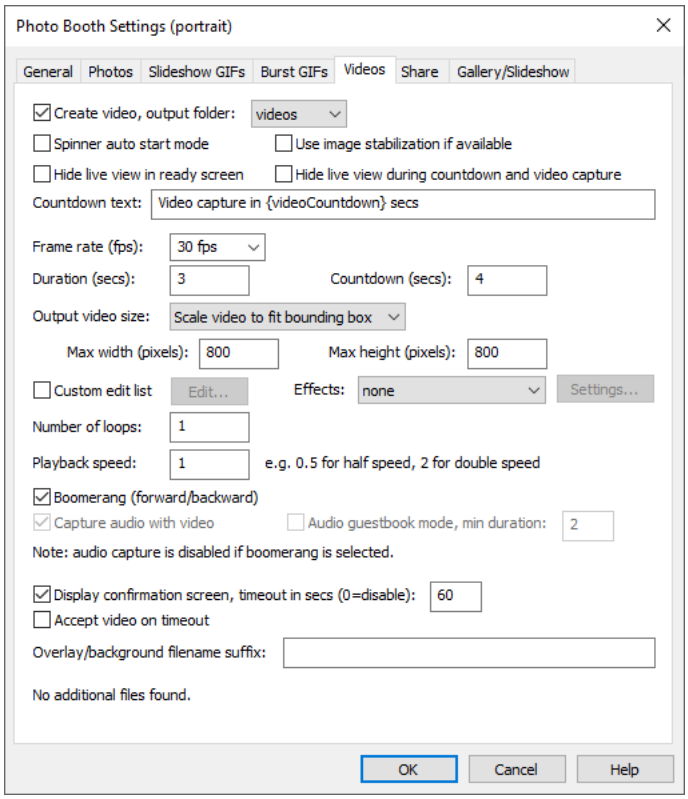

Select "Create video" to enable video capture and use the output folder setting to specify where it should be saved.

When "Spinner auto start mode" is selected the iPad or iPhone detects when a 360 degree spinner starts spinning and automatically starts the countdown and captures the video. This works when the iPad or iPhone is in portrait or landscape orientation.
Please note: Spinner auto start mode is only active when the video ready screen is displayed.

Normally live view images are displayed in the video ready screen and during video capture but this can be disabled by selecting "Hide live view in ready screen" and "Hide live view during countdown and video capture".

The "Countdown text" specifies how the countdown text should be formatted during the countdown before taking each photo. It can use the following token:
{videoCountdown} - the number of seconds remaining in the countdown before capturing the video
Use the "Countdown (secs)" setting to specify duration of the countdown.
Please note: These settings are ignored if an animated GIF or video animation is used for the countdown. When an animation is used for the countdown the duration of the animation determines the duration of the countdown.

The "Frame rate (fps)" setting selects the frame rate of the captured video. The standard frame rate for normal playback is 30 fps. Higher frame rates are available for slow motion capture. The maximum available frame rate depends upon the device and whether the front or back camera is being used. Recent iPads and iPhones support a maximum frame rate of 60 fps using the front camera and 240 fps using the back camera. If a higher frame rate is specified than is supported by the camera the highest frame rate supported by the camera will be used e.g. if a frame rate of 240 fps is specified when using the front camera the video will be captured at 60 fps.
Use the back camera for the best results when capturing slow motion videos. This can be done by

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unchecking "Startup using front camera" in the iPad's App Settings screen. If the device has multiple back cameras you can select the preferred camera in the Camera Settings screen.
Warning: Using high frame rates such as 240 fps produces large amounts of data and may result in significant processing times. To minimize this choose the slowest frame rate necessary to get the desired results and keep the capture duration short. A 10 second capture @ 240 fps generates 2400 video frames whereas a 3 sec capture @ 120 fps only generates 360 frames. A fast device such as a 2022 or 2021 iPad Pro, 2022 iPad Air, 2022 iPad 10.9" or 2022 iPhone SE is recommended when capturing slow motion video.

The "Duration (secs)" setting specifies the duration of the captured video.
Please note: If you are running a video guestbook you may want to set the duration to 30 secs or 60 secs and then add a button for guests to press when they've finished recording their message. You can do this by adding a video_capture.png screen image with the button graphics and then add a "videoEnd" touchscreen action using the Touchscreen Editor.

The "Output video size" dropdown list controls the size of the final output video. It has two options:

1. "Scale video to fit bounding box". The source video is resized, maintaining its aspect ration, to fit the bounding box defined by the the max width and max height sizes and this is the size used for the output video. Use this option if you want the source video to fill the output video.
   Examples:
   source video 1280x720 pixels in size, aspect ratio set to video16to9, max width=1280 and max height=720 the output video will be 1280x720 pixels in size
   source video 1280x720 pixels in size, aspect ratio set to video16to9, max width=640 and max height=640 the output video will be 640x360 pixels in size
   source video 1280x720 pixels in size, aspect ratio set to square, max width=600 and max height=600 the output video will be 600x600 pixels in size

2. "Actual size". The actual width and height sizes define the actual size of the output video in pixels. The source video is added to the output video area without resizing. Use this option if you want the output video to have a different aspect raito to the source video.
   Examples:
   source video 1280x720 pixels in size, aspect ratio set to video16to9, max width=1280 and max height=720 the output video will be 1280x720 pixels in size
   source video 1280x720 pixels in size, aspect ratio set to video16to9, max width=640 and max height=640 the output video will be 640x640 pixels in size and the source video will be 1280x720 pixels in size and will be too large to fit unless it is scaled using the custom edit list transformations.
   source video 1280x720 pixels in size, aspect ratio set to square, max width=640 and max height=640 the output video will be 640x640 pixels in size and the source video will be 720x720 pixels in size and will be too large to fit unless it is scaled using the custom edit list transformations.

The video can be cropped using the "Photo aspect ratio" setting in the General Settings.Set the "Photo aspect ratio" to video16to9 and use the "Scale to fit bounding box" setting o output the video without cropping.

The size of the source video is affected by the "Photo aspect ratio" setting in the General Settings, the device orientation and whether the live view area defined in the ready screen in the Touchscreen Editor is landscape or portrait:

	Device Orientation			
	Landscape		Portrait	
	Live view area orientation		Live view area orientation	
Photo aspect ratio	**Landscape**	**Portrait**	**Landscape**	**Portrait**
Normal (4:3)	960x720	540x720	720x540	720x960

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DSLR (3:2)	1080x720	480x720	720x480	720x1080
Square (1:1)	720x720	720x720	720x720	720x720
Video (16:9)	1280x720	405x720	720x405	720x1280

Select "Custom edit list" to apply custom edits such as jump cuts, speed ramping, panning, zooming and rotating to the processed video. Click on the "Edit..." button to edit the custom edit list.
Please note: The custom edit list overrides the loop, boomerang and playback speed settings and these options will be disabled when custom edit list is enabled. The custom edit list can apply the same effects as the boomerang, loops and playback settings and can also apply more creative effects such as jump cuts, speed ramping, panning, zooming and rotating.

Set the number of loops to the number of times the video is repeated between the optional intro and outro videos. This setting is useful because many devices play a video from start to end and then stop instead of playing it in a continuous loop.

The playback speed specifies how fast the processed video is played back. If this is set to 1 the video will be played back at normal speed. If the speed is set to a value higher than 1, e.g. 2.5, the video be played back faster and if it is set to a value lower than 1 it will be played back slower to give a slow motion effect. Videos are captured at 30 fps and can be slowed down to 0.25 (quarter speed) to give a frame rate of 7.5 fps before the reduced frame rate becomes too apparent. Future releases of the app will allow higher capture rates to give smoother slow motion effects.

Select the "Boomerang (forward/backward)" setting to create a boomerang video. This will display the video forwards first and then play it backwards.

Select "Capture audio with video" to capture audio using the iPad or iPhone's microphone or an external microphone e.g. for a video guest book.
Please note: audio capture is disabled when using a custom edit list, creating a boomerang video, changing the playback speed or specifying more than one loop. A explanation as to why audio is disabled is displayed under the capture audio checkbox.

Select the audio guestbook mode option to create an audio recording with a simple video (as opposed to recording a video of the guest). To use this mode create a simple video file named video_audio_guestbook.mp4 or video_audio_guestbook.mov and place it in the screen folder. When video clip is captured the audio from the captured clip is combined with the video from the video_audio_guestbook.mp4 file to create the output video. The video captured from the iPad's camera is discarded.

Select "Display confirmation screen" to display the processed video in the confirm printing screen after capture. The confirmation screen gives the user the chance to review the video and to accept or reject it.
Set the timeout to the number of seconds the confirmation screen should be displayed before it is closed automatically. Set "Accept video on timeout" to automatically accept the video if the timeout occurs otherwise it will be cancelled and the photo booth will return to the ready screen.

The "Overlay/background filename suffix" provides a way of dynamically selecting different overlays and backgrounds for the videos. Normally the filename for the background video is video_background.mp4 or video_background.mov and the overlay video is video_overlay.mov but this can be modified to dynamically select different overlay and background images using information such as the time, user responses to surveys or random numbers.
The overlay/background suffix can also be used to select the countdown and capture screens. One use for this is when using a survey to select different backgrounds when using AI background removal.

The status message displayed at the bottom of the video settings dialog shows if there any additional

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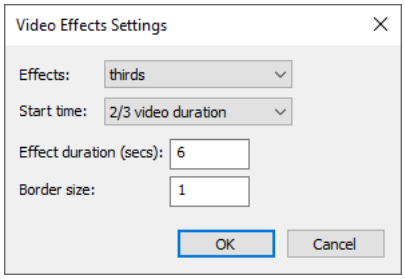
files in the current screen folder that will affect the output video e.g. video intro and outro, soundtrack or overlays.

Use the "Effects" drop down list to select an effect to apply to the video. The following effects are available:

- thirds: displays three vertical strips side by side showing he center of portion of the video. The left and right strips slide in from the sides at the start and slide out up and down at the end
- thirds+fade out: similar to "thirds" but the left and right strips fade out at the end
- 2x2: displays 4 smaller copies of the video in a 2x2 arrangement. Each copy slides in from the corners at the start and slide out again at the end
- 2x2+fade out: similar to "2x2" but the 4 copies of the video fade out at the end
- 3x3: displays 9 smaller copies of the video in a 3x3 arrangement. Each copy slides in from the corners and sides at the start and slide out again at the end
- 3x3+fade out: similar to "3x3" but the 9 copies of the video fade out at the end

By default each effect consists of a 1 second start transition, 4 secs playback and a 1 second end transition and is applied 2/3 of the way into the final video (or sooner if the video is shorter). Click on the "Settings..." button to adjust the video effect settings:



The effect can be selected using the "Effects" dropdown list.
The "Start time" dropdown list controls when the effect is applied. This can be set to:

- "start of video"
- "1/3 video duration" e.g. 6 secs after the start of a 18 sec video
- "1/2 video duration" e.g. 9 secs after the start of a 18 sec video
- "2/3 video duration" e.g. 12 secs after the start of a 18 sec video
- "end of video" e.g. e.g. if the effect lasts 5 secs it starts 5 secs before the end of the video
- "time from start (secs)": allows the start time to be specified in seconds after the start of the video

The "Effect duration (secs)" setting specifies the duration of the effect including 1 sec for the start transition and 1 sec for the end transition. If this is set to more than 2 secs the effect is held for that number of seconds e.g. if the duration is set to 6 secs for the thirds effect this will display the 1 sec start transition followed by 4 secs with the 3 vertical strips and then the 1 sec end transition.

The "Border size" setting specifies the size of the border between the video elements. The background is visible in border areas and is black unless there is a background video playing (video_background.mp4 or video_background.mov).

Video intro and outro, overlay, background and soundtrack

An optional video can be added before the captured video by placing a video file named video_intro.mov or video_intro.mp4 in the screens folder.

An optional video can be added after the captured video by placing a video file named video_outro.mov

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or video_outro.mp4 in the screens folder.

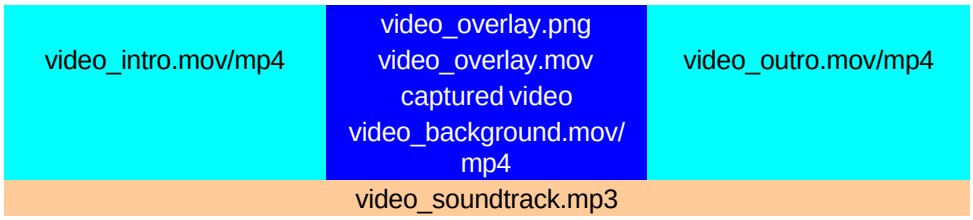
An optional audio soundtrack can be added to the video by placing an MP3 audio file named video_soundtrack.mp3 in the screens folder.

An optional overlay can be added to the video by placing a PNG file named video_overlay.png in the screens folder. The alpha channel of the PNG can be used to control the transparency of the different areas of the overlay from fully transparent to fully opaque.

An optional overlay video can be added by placing a alpha video file in HEVC format named video_overlay.mov in the screens folder. The alpha channel can be used to control the transparency of the different areas of the overlay video from fully transparent to fully opaque.

An optional background video can be added by placing a video file named video_background.mov or video_background.mp4 in the screens folder.

The output video is composited as follows:



The optional intro video is added first.

After the optional intro video the captured video section is added. If there is a background video this is added first and the captured video is placed on top followed by the overlay video and the overlay PNG image. If either the background video or the overlay video has a longer duration than the captured video they will be cut to the length of the captured video.

The optional outro video is added after the captured video section.

The optional video soundtrack is played from the start of the output video and plays for the whole duration. If the soundtrack is longer in duration than the output video it is cut to the length of the captured video.

Custom edit list

Click on the "Edit..." button to edit the custom edit list to apply effects such as jump cuts and speed ramping and transformations such as panning, zooming and rotating:

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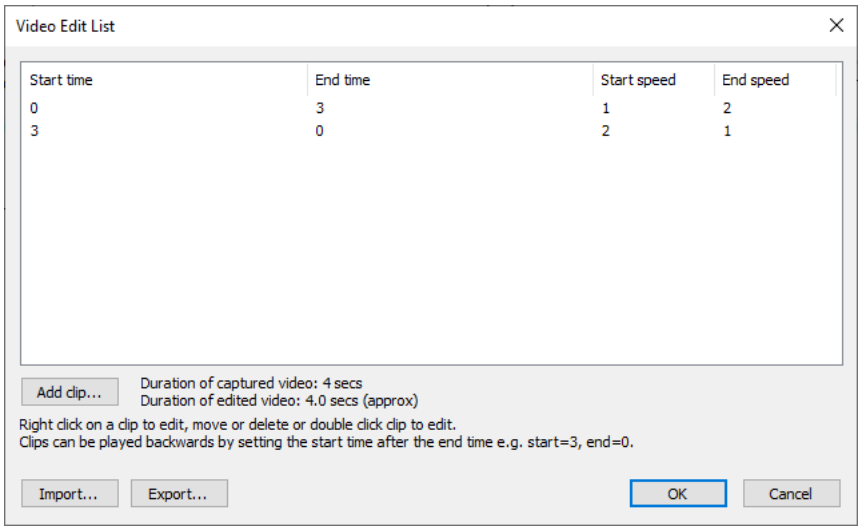

Each entry in the video edit list has a start time, end time, start speed and end speed. Each entry can also have an optional start transformation and end transformation.
The start and end times specify the start and end times of the clip taken from the original video, If the start time is less than the end time the video will be played forward. If the start time is after the end time the video will be played backward (from the end time to the start time). In the screenshot above the first edit plays the video forwards from the start to 3 seconds into the video and then plays the video backwards from 3 seconds back to the start.

The start and end speeds specify the speed of playback of the clip. If the start and end speeds are set to the same value the clip will be played at a constant speed. If the start and speeds are set to different values the playback speed will change smoothly from the start speed to the end speed. In the screenshot above the first clip will start at normal speed and will gradually speed up to 2x normal speed by the end of the clip. The second clip will start a 2x speed and gradually ramp down to normal speed at the end of the clip.

Jump cuts can be added by adding clips with different start and end times e.g. to play the first two seconds of the video twice: once at normal speed and then again at double speed you could add two clips:
1. start time=0, end time= 2, start speed=1, end speed=1
2. start time=0, end time= 2, start speed=2, end speed=2

The "Export..." and "Import..." buttons can be used to save the custom edit list to a file for future reference or to load a previously saved custom edit list. When you import a custom edit list from file it will overwrite any clips that have already been defined.

Right click on a clip in the edit list to edit, delete or change its position in the list or to insert a clip before or after it. You can also double click on a clip to edit it.
New clips can be added to the edit list by clicking on the "Add clip..." button:

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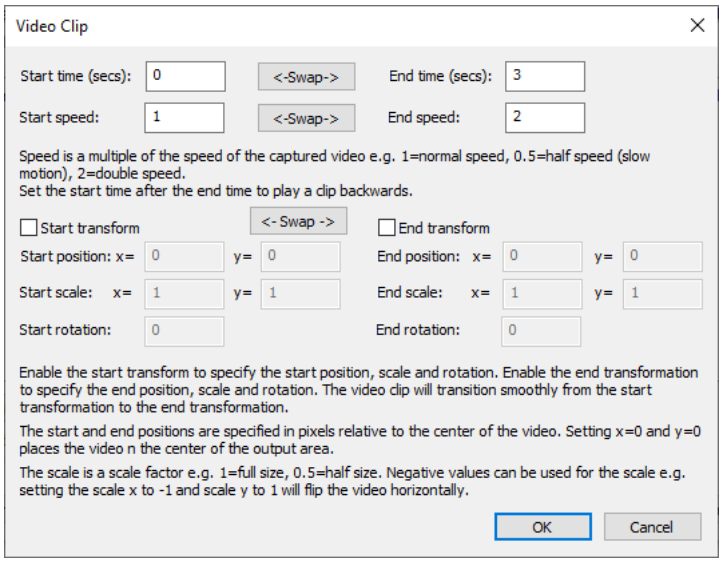

The optional start transform specifies the size, position and rotation of the video clip at its start. If an end transformation is defined with different size, position and rotation settings from the start transform the video will smoothly transition from the start transform to the end transform as it is played e.g. to zoom in 2x as the clip plays set the start transform scale to x=1 and y=1 and the end transform scale to x=2 and y=2.
If the end transformation is disabled the clip will play using the size, position and rotation specified by the start transform. If the start transform is disabled and the end transformation is enabled the clip will start from its current size, position and rotation and smoothly transition to the size, position and scale defined by the end transform.

Panning the video: set the x and y values of the start position where the video should appear at the start of the clip and the x and y values of the end position where the video should appear at the end of the clip. As the clip plays the video will move smoothly from the start position to the end position. The x and y values specify the position of the center of the captured video relative to the origin which is in the center of the output video. x values control the horizontal position and y values control the vertical position.
Examples:
To move the video down 100 pixels set the start position to x=0, y=0 and the end position to x=0, y=100
To move the video left 400 pixels set the start position to x=0, y=0 and the end position to x=-400, y=0

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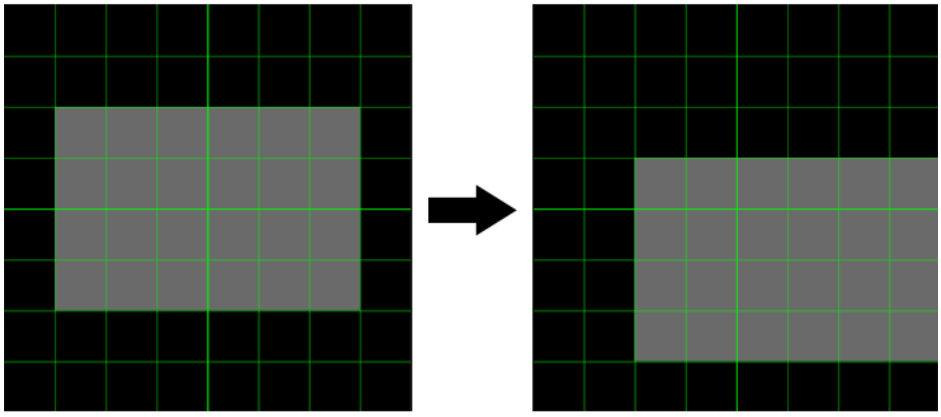
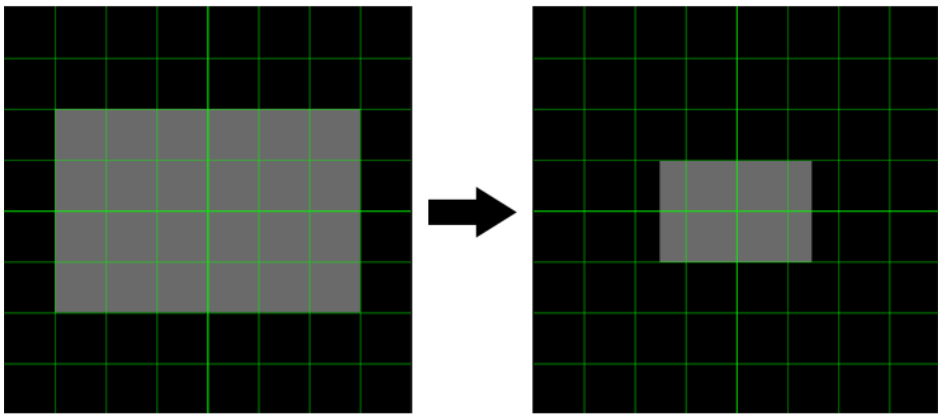
Panning



Start position x=0, y=0 End position x=50, y=50

Zooming the video: set the x and y values of the start scale to the scale of the video at the start of the clip and the x and y values to the scale at the end of the clip. As the clip plays the video will scale smoothly from the start scale to the scale position. The video is scaled relative to its center. The video can be flipped by setting the x or y scale values to a negative number e.g. to mirror a video set the x scale to -1 and the y scale to 1.
Examples:
To zoom into the video from 1x to 2x set the start scale to x=1, y=1 and the end scale to x=2, y=2
To stretch the image horizontally set the start scale to x=1, y=1 and the end scale to x=-1, y=4 (this will distort the video).
Please note: it is best to avoid setting the x or y scale settings to 0 as this can cause glitches in the final video. Also avoid setting the start and end scales so that the transition passes through 0 e.g. to flip a video on the screen it is better to break it down into two clips: one to transition the scale from x=1, y=1 to x=0.01, y=1 and then one to transition the scale from x=-0.01, y=1 to x=-1, y=11. You may get unsightly glitches if you try to do this in one step by setting the start scale to x=1, y=1 and the end scale to x=-1, y=1.

Zooming



Start scale x=1, y=1 End scale x=0.5, y=0.5

Rotating the video: set the start rotation to the angle that the video should start at and the end rotation to the angle at the end of the clip. The video will smoothly rotate about its center point from the start rotation to the end rotation. Angles are specified in degrees and specify a clockwise rotation.
Examples:

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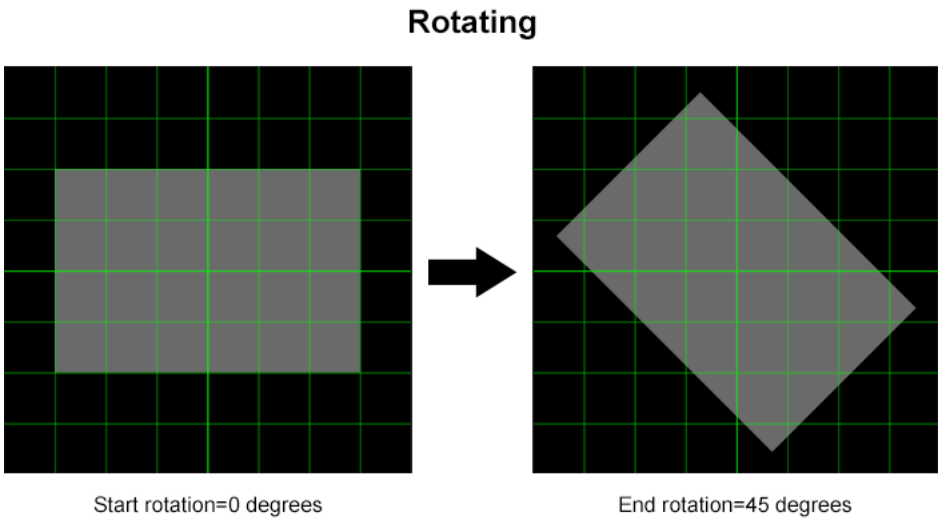
To rotate the video a quarter turn clockwise set the start rotation to 0 and the end rotation to 90
To rotate the video a full turn anti-clockwise set the start rotation to 0 and the end rotation to -360 (or set the start rotation to 360 and the end rotation to 0).



Different transforms can be combined e.g. to shrink the video to a tiny dot in the bottom left corner of the output video set the start transformation to position x=0, y=0, scale x=1, y=1, rotation=0. Then use the size of the output video to work out the end position e.g. if the output video is 600x900 pixels in size set the end transformation to position x=-450, y=300, scale x=0.01, y=0.01, rotation=0. (Remember the the origin is in the center of the output video and left is negative and down is positive)).

Testing using a previously recorded sample video

You can test the video processing using a previously recorded video by naming the video sample_video.mov or sample_video.mp4 and placing it in the same folder as the screen images and syncing it to the iPad. When the event is run it will capture video normally and then process the sample video instead.
Important: Don't forget to remove the sample video after testing.

4.16 Sharing Settings

Breeze Booth supports the sharing of photos, animated GIFs and MP4 movie files by email either directly from the iPad using SMTP email or by using a separate utility, such as Breeze Hub, running on a PC.
It also supports SMS text messages which can be sent directly from the iPad via Twilio or by using a separate utility, such as Breeze Hub, running on a PC.

By default emails will be sent using the email server provided with your Breeze Booth for iPad subscription. If you wish to use a different email server you can do this by selecting the custom SMTP option in App Settings.

Tap on the "Share" tab in the "Photo Booth Settings" dialog to edit the sharing settings:

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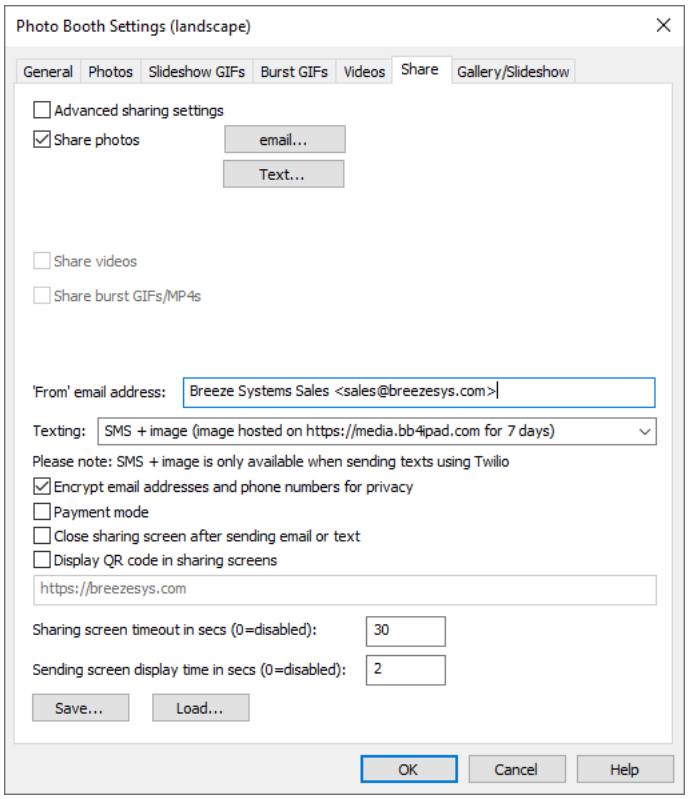

Select "Share photos" to share print layouts and/or slideshow GIFs and "Share burst GIFs/MP4s" to share burst GIFs or MP4 copies of burst GIFs.

The standard sharing settings provide a single pre-formatted message when sharing photos, GIFs or MP4 movies by email and a single text message when texting. An advanced option is also available if you require complete control over the email message appearance or the way files are attached to email messages.

Set the "From email address" to the "From" or "Reply to" email address of sent emails. If this field is left empty the from email address will default to the email address associated with the account used to send the emails.
This field can be set to an email address e.g. "sales@breezesys.com", or a name and email address e.g. "Breeze Systems Sales <sales@breezesys.com>".
Please note:

1. Some free email providers ignore this setting and set the from email address to the email address associated with the email account used to send the emails
2. When using the default SMTP email server included with the Breeze Booth for iPad subscription the from address will be set to noreply@breezesys.com and the "reply to" address will be set to the email address entered in the "from address field".
   You can provide name for the from address by adding it first and then enclosing the email address in angle brackets e.g. Acme Photo Booth <sales@acme.com>. This display the email as from "Acme Photo Booth" and hide the noreply@breezesys.com on most devices.

Tokens

Tokens can be used in the email subject and email message and in texts to include dynamically generated information such as the date and time the photos were taken or the event name. They can also be used to provide a link to the image in an online gallery or microsite e.g.

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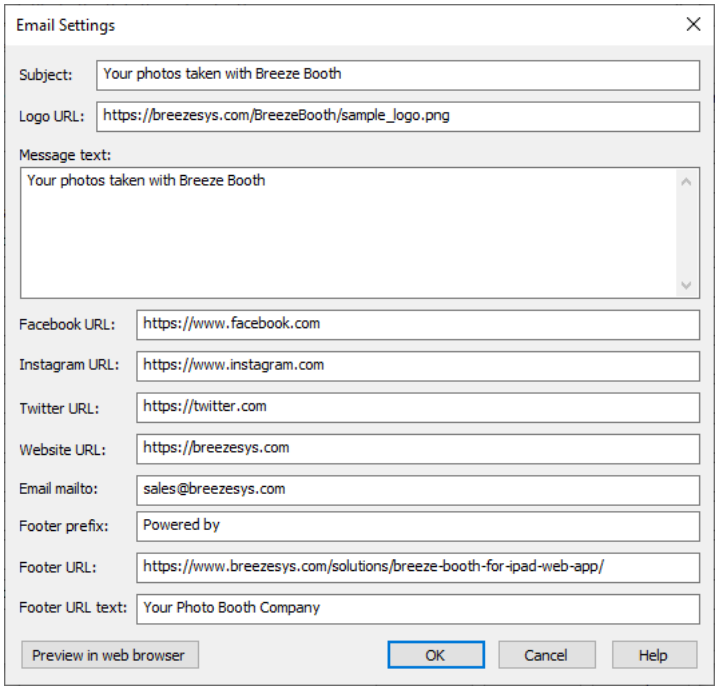
Your photos from {eventName}: {tinyUrl,https://mysite.com/gallery?id={uid}}

The {tinyUrl,str} token is useful for shortening URLs when sending text messages.
The {uid} token is useful for enhancing privacy when using microsites by giving each photo or GIF a unique, hard to guess id.

Emails - standard sharing settings

Click on the "email..." button to edit the email message:



The "Subject:" is used to specify the subject line of the email.

The email message uses a responsive design to create attractive looking emails that display correctly in a wide range of devices from phones to tablets and computers. The message is divided up into the following sections:

- Logo:URL - link to an optional logo displayed at the top of the message. The logo can be a JPEG or PNG image or an animated GIF and needs to be hosted on a website. Empty the logo URL text to suppress the logo display.
- Message text - a message displayed under the logo. The text is centered and can contain HTML markup to format the text, add new lines etc. Add <br> at the end of each line to add line breaks e.g. First line
Second line.
- Social media links - displayed as a row of icons under the message text:
  - Facebook URL - optional link to your client's or your own Facebook page. Leave this blank to hide the icon and link
  - Instagram URL - optional link to your client's or your own Instagram page. Leave this blank to hide the icon and link
  - Twitter URL - optional link to your client's or your own Twitter feed. Leave this blank to hide the icon and link
  - Website URL - optional link to your client's or your own website. Leave this blank to hide the icon and link

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  - Email mailto - optional link to your client's or your own email address. Leave this blank to hide the icon and link
- Footer prefix - optional text prefixing the URL below the social media links
- Footer URL - URL for optional URL below the social media links
- Footer text - text displayed for the hypertext link for the optional URL below the social media links

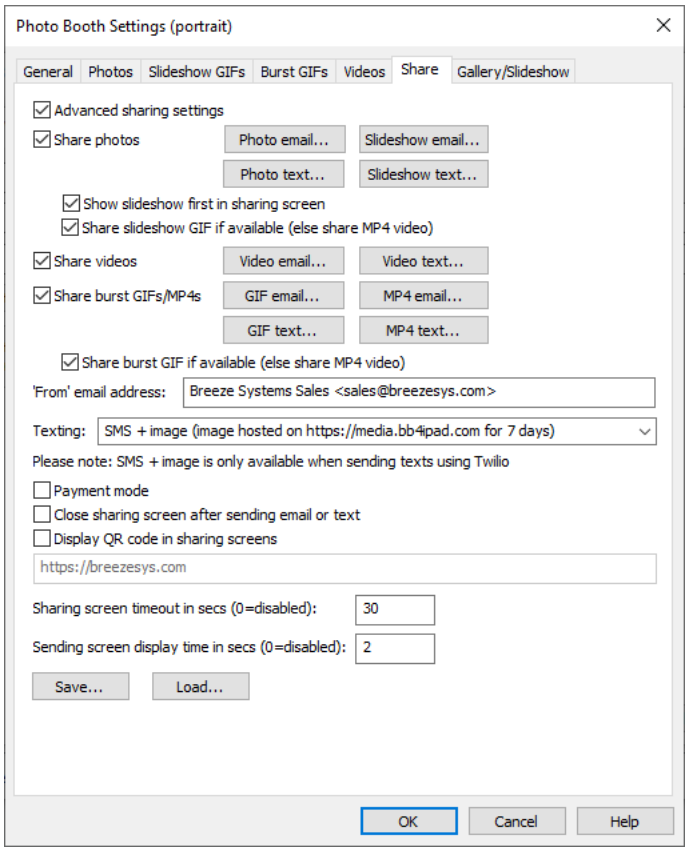
Click on the "Preview in web browser" to display a preview of the email using the currently entered settings.
Leave a section empty if you don't want it to be included in the email e.g. if you don't require the footer text and website link leave the footer prefix, footer URL and footer URL text fields empty.

The standard sharing settings only support a single attachment when sending emails.
Photo or GIF sessions that generate MP4 videos will a JPEG preview from the MP4 file in the email and add the actual MP4 as a file attachment.
Photo or GIF sessions that generate animated GIFs will embed the animated GIF in the email.
Photo only sessions which don't generate slideshow GIFs/MP4s will embed the JPEG print layout in the email.

You can use the advanced sharing option if you need more control over the email appearance and attachments e.g. sending an animated GIF and the individual photos when capturing slideshows.

Emails - advanced sharing settings

Select "Advanced sharing settings" to display the advanced sharing options. These allow complete control over the appearance of emails and image attachments. They also provide separate emails and texts for photo, slideshow and burst GIF sessions.



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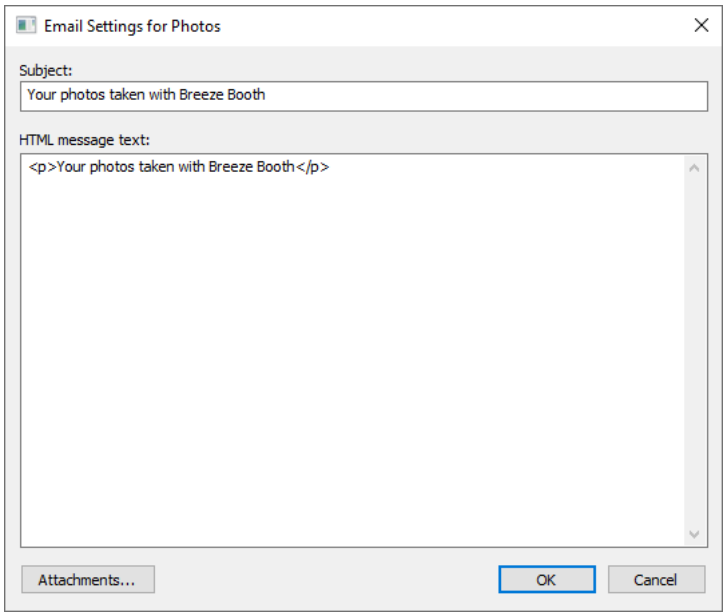
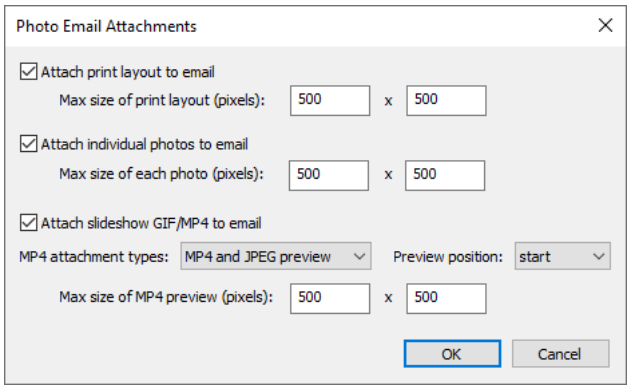
Click on "Photo email..." or "Slideshow email..." to edit the message text and set up email attachments:



Enter the email subject line in the "Subject" box and the HTML formatted email in the "HTML message text area". Both the subject and the HTML message text can contain tokens to include information that is evaluated at run time such as the time, event name or information obtained from the survey screens.

Click on "Attachments..." to specify the attachments that should be added to the email:



Select "Attach print layout to email" to attach a JPEG copy of the print layout to the email. Use the "Max size of print layout (pixels)" setting to specify the maximum size of the image e.g. a 6" x 4" print created for a 600 DPI printer is 3600 x 2400 pixels in size. By setting the maximum photo size to 500 x 500 pixels it will be resized so that it fits within a box 500 x 500 pixels i.e. it will be resized to 500 x 333 pixels before being attached to the email.

Copies of the individual photos taken can also be attached to the email by selecting "Attach individual photos to email". Use the "Max size of each photo (pixels)" setting to specify the maximum size of the photo e.g. a photo from a 2018 iPad 9.7" is 960 x 1280 pixels in size. By setting the maximum size to 500 x 500 pixels it will be resized so that it fits within a box 500 x 500 pixels i.e. it will be resized to 375 x 500 pixels before before being attached to the email.
Note: If "Save copy of processed photos" is selected in the Photo Settings tab the processed photo

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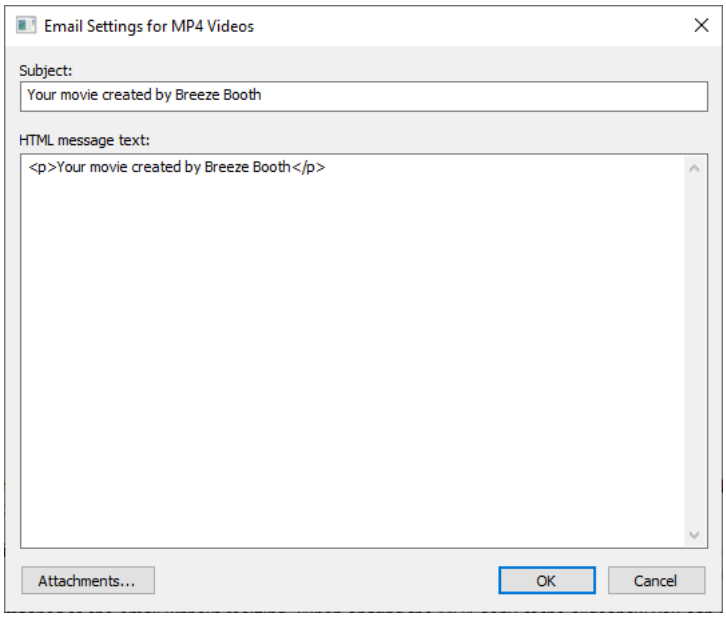
will be attached to the email instead of the original photo. The processed photo can be branded by adding a PNG overlay named processed_photo_overlay.png.

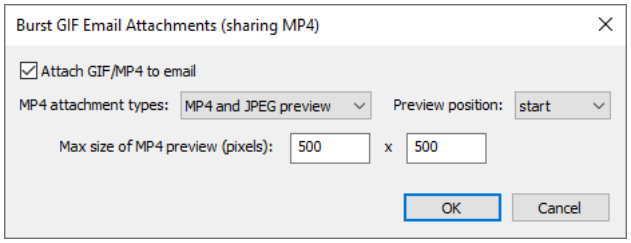
If the slideshow option is selected you can also attach a copy of the slideshow to the email. Slideshow GIFs will be attached to the email without resizing. When sharing the MP4 copy of the slideshow you can use the "MP4 attachment types" dropdown list to select "MP4 only", "JPEG preview only" or "Mp4 and JPEG preview". MP4 files can't be embedded in HTML emails and will be sent as a file attachment. The JPEG preview options allow a JPEG preview extracted from the slideshow to be embedded in the email to provide a preview showing a frame from the start, middle or end of the video (selected using the "Preview position" dropdown list). Use the "Max size of MP4 preview (pixels)" setting to specify the maximum size of the JPEG preview image.

Click on "GIF email..." or "MP4 email..." to edit the email sent when sharing burst GIFs or MP4s:



Enter the email subject line in the "Subject" box and the HTML formatted email in the "HTML message text area". Both the subject and the HTML message text can contain tokens to include information that is evaluated at run time such as the time, event name or information obtained from the survey screens.

Click on "Attachments..." to specify the attachments that should be added to the email:



When emailing MP4 copies of burst GIFs you can also attach a JPEG preview copy of the MP4 to the email. When sharing the MP4 copy of the burst GIF you can use the "MP4 attachment types" dropdown list to select "MP4 only", "JPEG preview only" or "Mp4 and JPEG preview". MP4 files can't be embedded in HTML emails and will be sent as a file attachment. The JPEG preview options allow a JPEG preview extracted from the MP4 file to be embedded in the email to provide a preview showing a frame from the start, middle or end of the video (selected using the "Preview position" dropdown list).

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Use the "Max size of MP4 preview (pixels)" setting to specify the maximum size of the JPEG preview image.

HTML emails when using advanced sharing settings

The advanced sharing option gives complete control over the formatting of HTML emails. JPEG photos and GIF images can be embedded within the email using the HTML <img> tag and the {image} tokens e.g.

Here are your photos taken with Breeze Booth at {eventName}
<img src="{image}">
We hope you had a great time!

MP4 movie files can't be embedded within emails and are sent as file attachments but JPEG previews from the MP4 movie can be embedded.

The email can contain zero or more attachments depending on the type of capture (e.g. photos only, photos + slideshow, burst GIF) and the attachment settings. When multiple attachments are available the tokens used to embed them in the HTML email are numbered e.g. {image} or {image1} for the first attachment, {image2} for the second attachment, {image3} for the third attachment etc.
You can also use the following tokens:
{print_layout} - the JPEG copy of the print layout
{photo<n>} - individual photos e.g. {photo1}, {photo2} etc.
{thumbnail<n>} - individual thumbnails e.g. {thumbnail1}, {thumbnail2} etc.
{gif} - slideshow GIF or boomerang GIF
{video_preview} - JPEG preview of the video

The examples below show simple examples of HTML emails from a photo session with 3 photos and a slideshow saved as an MP4 movie. If the print layout, individual photos and MP4 preview attachment options are all selected the tokens for embedding the images would be:
{print_layout} or {image} or {image1} - the JPEG print layout
{photo1} or {image2} - copy of photo #1
{photo2} or {image3} - copy of photo #2
{photo3} or {image4} - copy of photo #3
{video_preview} or {image5} - JPEG preview of MP4 slideshow

Example 1: HTML email with no attachments and a link to a microsite (no attachments selected in the attachments dialog)

Your photos taken with Breeze Booth at {eventName}
View your photos...

Example 2: HTML email attaching the print layout (only the print layout attachment selected in the attachments dialog)

Your photos taken with Breeze Booth at {eventName}
<img src="{print_layout}" border="1">

or

Your photos taken with Breeze Booth at {eventName}
<img src="{image}" border="1">

Example 3: HTML email attaching the print layout and copies of the individual photos (print layout and individual photo attachments selected in the attachments dialog)

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```
<p><strong>Your photos taken with Breeze Booth at {eventName}</strong></p>
<p>Print layout:<br><img src="{print_layout}" border="1"></p>
<p>Individual photos:<br><img src="{photo1}"> <img src="{photo2}"> <img
src="{photo3}"></p>
```

or

```
<p><strong>Your photos taken with Breeze Booth at {eventName}</strong></p>
<p>Print layout:<br><img src="{image}" border="1"></p>
<p>Individual photos:<br><img src="{image2}"> <img src="{image3}"> <img
src="{image4}"></p>
```

Example 4: HTML email attaching the print layout, a preview of the MP4 slideshow and the MP4 slideshow (print layout and "MP4 + JPEG preview" attachments selected in the attachments dialog)

```
<p><strong>Your photos taken with Breeze Booth at {eventName}</strong></p>
<p>Print layout:<br><img src="{print_layout}" border="1"></p>
<p>Slideshow thumbnail:<br><img src="{video_preview}"><br>Click on the attached video to view a
slideshow</p>
```

or

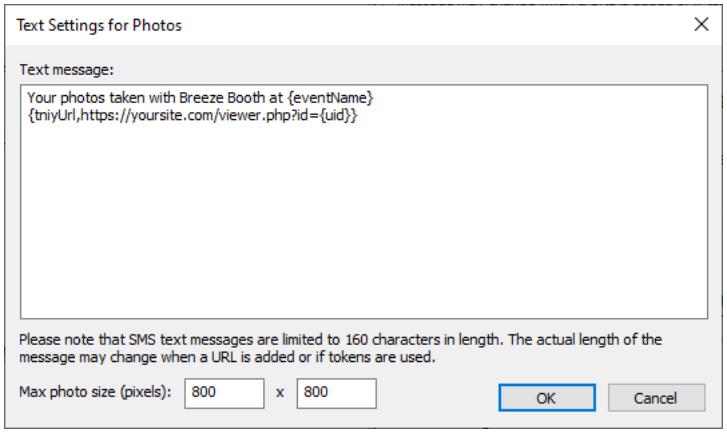
```
<p><strong>Your photos taken with Breeze Booth at {eventName}</strong></p>
<p>Print layout:<br><img src="{image}" border="1"></p>
<p>Slideshow thumbnail:<br><img src="{image2}"><br>Click on the attached video to view a
slideshow</p>
```

You can also design responsive HTML emails using online tools such as Bee or MailChimp. Simply paste the HTML into the HTML message text and replace the URLs for the image preview links with the {image} tokens.

Texts

A single text message is used for photo and burst GIF sessions when using the standard sharing settings. When using the advanced sharing settings a different message can be used for photo only, slideshow and burst GIF sessions.

Click on "Text..." to edit the text message when using the standard sharing settings or one of the text buttons when using the advanced sharing option:



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Enter the message text in the "Text message" area. The message text can contain tokens to include information that is evaluated at run time such as the time, event name or information obtained from the survey screens.

Use the "Texting" dropdown list to select the texting method:

1) SMS text message
Sending an SMS text message only sends the message text and does not include the JPEG image, animated GIF or MP4 movie file. The most effective way to use text messages is to send a link to an online gallery or microsite where users can view their photos, animated GIF or MP4 movie using their phone.

2) SMS + image
Send the message as an SMS text message with a link to the JPEG image, animated GIF or MP4 movie file. The JPEG image, animated GIF or MP4 movie file is uploaded from the iPad to Breeze Systems' website where it given an anonymised name to protect guests' privacy. The image will only be available for viewing for 7 days after which it is deleted automatically. Use the {url} token to include the URL to the image in the text message. Use {tinyUrl,{url}} to shorten the URL in the text message.
If the {url} token is not included in the message the URL will be appended to the end of the message.

3) MMS
MMS messages can be sent in the US and Canada using Twilio (www.twilio.com). In other countries the message can be sent as an SMS message with a link to the photo. Most cellphones should recognize the link as a link to a web server and open a web browser on the user's cellphone to view the photo. Please note that the image link in an SMS will only be valid for 7 days.

The {uid} token provides a convenient way of linking to a a microsite while maintaining privacy by using an 8 character id to identify the photos. This can be done by adding the {uid} token to the download filenames in the General Settings so that the filenames of the photos, GIFs and MP4 movies contain the id. The id can then be included in a URL in the message text so that the microsite can display the correct image e.g. the when the photos are taken a unique id is generated such as DEGUQ964 which is added to the filename and the {uid} token in the message text, https::://yoursite.com/viewer.php?id={uid}, is replaced with https::://yoursite.com/viewer.php?id=DEGUQ964

The token {tinyUrl,**URL**} can be used to shorten long URLs using the free http://tinyurl.com service.

AirDrop

AirDrop is available for sharing photos, animated GIFs or MP4 movie files directly with a user's iPhone or iPad. To enable AirDrop simply add a touchscreen action for "stillsShareAirDrop" or "gifShareAirDrop" to the sharing screens. When the user taps on the AirDrop touchscreen action in the sharing screen the app will display the standard iOS sharing screen with all the standard sharing options apart from AirDrop hidden. iOS allows applications to define sharing extensions and these may also appear in the sharing screen. Apple do not allow an application to hide these sharing extensions and the only way to remove them is to delete the associated apps from the iPad.

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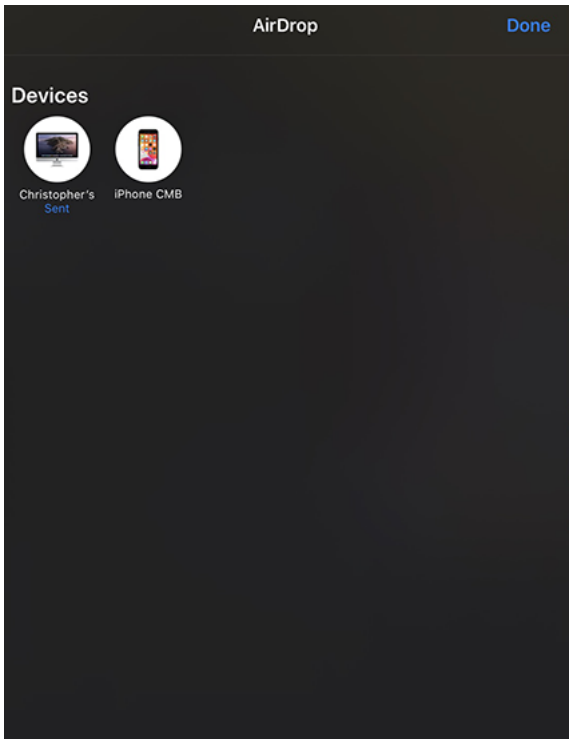
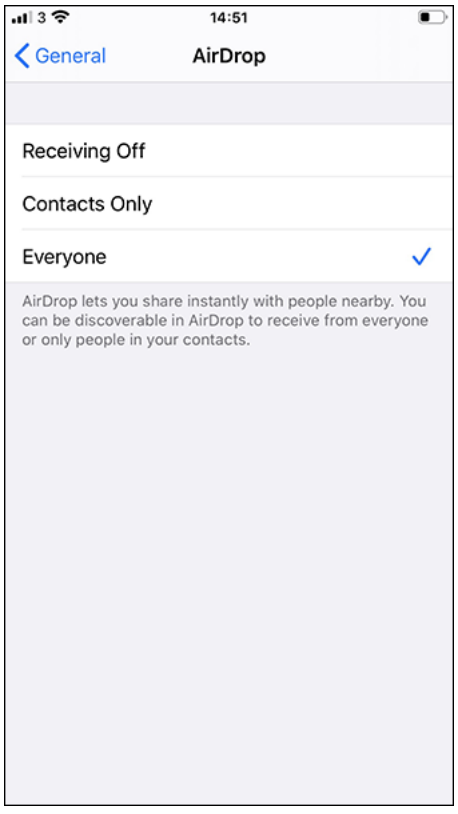


Users need to enable AirDrop for everyone on their iPhone or iPad in order to receive files from the photo booth via AirDrop. To do this they need to tap the Settings app and then select General->AirDrop:



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Other Options

Photos taken in stills photo booth mode can be used to create a JPEG print layout with an optional slideshow GIF or MP4 movie. Use the "Show slideshow first in sharing screen" if you wish to share the slideshow GIF. The touchscreen actions "stillsShareShowSlideshow" and "stillsShareShowPrintLayout" can be used to switch between sharing the print layout or the slideshow.

Use the "Share slideshow GIF if available (else share MP4 video)" if you would like the animated GIF to be emailed when both an animated GIF and a MP4 movie have been created.

Select "Share videos" to share videos. Then click on "Video email..." to edit the email message text or click on "Video text" to edit the text message text. The email and text message text works in the same way as the email and text message text for photos and slideshow GIFs described above.

Select "Share GIFs/MP4 movies" to share burst GIFs or the MP4 movies. Then click on "GIF email..." or "MP4 email..." to edit the email message text or click on "GIF text" or "MP4 text" to edit the text message text. The email and text message text works in the same way as the email and text message text for photos and slideshow GIFs described above.

Use the "From email address" to specify the "From" email address when sending emails. This can be a simple email address such as "sales@breezesys.com" or it can also include a name such as "Breeze Systems Sales <sales@breezesys.com>".

For additional privacy select the "Encrypt email addresses and phone numbers for privacy" option. This will encrypt email addresses and phone numbers when they are stored in the XML email and text files and the journal files so that they can't be read. An encrypted address or phone number is decrypted when sending the email or text but is always encrypted when it is saved to file. There is no option to display the decrypted email address or phone number in the Breeze Booth for iPad app or in the Event Editor or in Breeze Hub's reporting tools.

Select "Payment mode" to enable payment mode when sharing photos by email or text from the sharing screens and the gallery. When payment mode is selected and the user selects email or text and has entered their email address or phone number using the touchscreen keyboard the payment screen will be displayed until a payment is made or the payment is cancelled or the payment timeout occurs. Please see the "Payment Systems" section for more information about accepting payments.

Select "Close sharing screen after sending email or text" if you want the photo booth to return to the ready screen ready for the next session after sending an email or text. If "Close sharing screen after sending email or text" is not selected the sharing screen is displayed after sending an email or text allowing users to send another email or text.

Select "Display QR code in sharing screens" to display optional QR code in the sharing screens. Enter the text that is stored in the QR code in the text edit area. The QR code text can include tokens for dynamically created QR codes e.g. if you have an online gallery or microsite which can display the guest's photos using a UID the QR text could be set to something like https://mygallery.com/view.php?id={uid}

Set the "Sharing screen timeout" to the timeout in seconds before the sharing screen is closed automatically if there is no input from the guests.

The "Sending screen display time" specifies how long the sending_email.jpg or sending_text.jpg screens are displayed when sending emails or texts using a separate PC based utility such as Breeze Hub or when using the SMTP email or Twilio texting options. This provides visual confirmation to the

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user that the message is being sent.

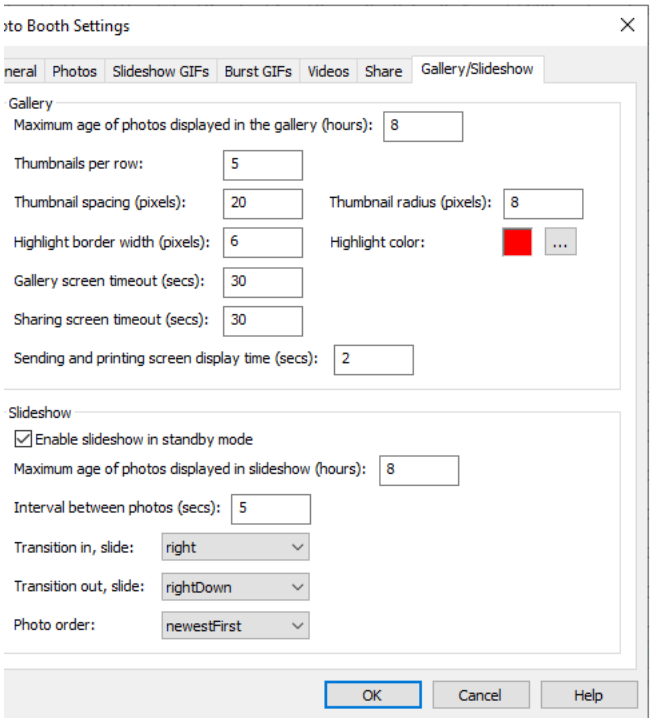
Saving and Loading Settings

Click on the "Save..." button to save all the sharing settings to file so that they can be copied into other events.

Click on the "Load..." button to load sharing settings from file. The sharing settings can be loaded from a previously saved sharing settings file (saved by pressing the "Save..." button or from the settings.xml file from another event.

4.17 Gallery and Slideshow Settings

Tap on the "Gallery/Slideshow" tab in the "Photo Booth Settings" dialog to edit the gallery and slideshow settings:



The dialog is split into two halves:
1. Gallery settings for displaying a gallery to allow users to select images from previous sessions and share or reprint them
2. Slideshow settings for displaying a slideshow when the photo booth is idle

Gallery

The gallery provides a way for users to view photos, animated GIFs and MP4 videos from previous sessions and to share them by email or text or to reprint photos. The gallery can be displayed from the ready screens using the showGallery touchscreen action. This can be added using the touchscreen editor.

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What is displayed in the gallery
Set the "Maximum age of photos displayed in the gallery (hours)" to specify which photos are displayed in the gallery. For example, for an event running on a single day or evening, this could be set to 8 hours. The app will scan the photos folder for XML summary files which are less than the maximum age setting.
If the XML file represents a photo session with a slideshow GIF or video the gallery will display a thumbnail showing the first frame of the animated GIF or video with a play icon.
If the XML file represents a photo session only the gallery will display a JPEG copy of the print output
If the XML file represents a burst GIF session the gallery will display a thumbnail showing the first frame of the animated GIF or video with a play icon.

The thumbnails will be displayed in date order with the newest photos shown first.
The default play icon displayed over thumbnails for animated GIFs and MP4 videos can be replaced by creating a PNG image named gallery_play.png in the screen images folder.

Adjusting the appearance of the gallery
The gallery is displayed as thumbnails on a transparent background placed over a background screen named gallery.jpg. The size and position of the gallery thumbnail display area can be edited using the touchscreen editor and selecting the gallery.jpg screen.
Set the "thumbnails per row" setting to specify the number of thumbnails displayed in each row of the gallery and the "thumbnail spacing (pixels)" to specify the spacing between each thumbnail.
Use the "thumbnail radius (pixels)" setting to display the thumbnails with rounded corners. Set this to 0 to have square corners.
When a thumbnail is tapped it is highlighted and a sharing screen is displayed. The width of the highlight border can be specified using the "highlight border width (pixels)" setting. Set this to 0 if you do not want the selected thumbnail to be highlighted. The color of the highlight can be edited by clicking the "..." button to the right of the "highlight color" preview.

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In operation
When a thumbnail is tapped in the gallery it is highlighted and the relevant gallery share screen is displayed:
gallery_share.jpg - for photos without a slideshow GIF or MP4
gallery_slideshow_share.jpg - for photos with a slideshow GIF or MP4
gallery_gif_share.jpg - for burst GIFs/MP4s
gallery_video_share.jpg - for videos

Each gallery share screen has a preview area and touchscreen actions which can be edited in the touchscreen editor.
You can define an exit touchscreen action for each gallery screen which returns the user to the gallery screen showing the thumbnails. You can also set a timeout using the "Sharing screen timeout (secs)" setting which will automatically return to the thumbnail screen if the screen is not tapped before the timeout occurs. Set this timeout to 0 to disable it.
You can also define touchscreen actions to share the animated GIFs, videos and photos by email or text or to print photos.
When an email share touchscreen action is tapped the email keyboard is displayed to prompt the guest to enter their email address. A sending screen is displayed when sending the email and this is dismissed after the interval defined in the "Sending and printing screen display time (secs) setting.
When a text share touchscreen action is tapped the text keyboard is displayed to prompt the guest to enter their phone number. A sending screen is displayed when sending the text and this is dismissed after the interval defined in the "Sending and printing screen display time (secs) setting.
When the print touchscreen action is tapped the photo is printed and printing screen is displayed. This is dismissed after the interval defined in the "Sending and printing screen display time (secs) setting.
After sharing or printing a photo the app will return to the gallery thumbnail display with the thumbnail of the shred photo highlighted.

The galleryDelete and galleryDeletePermanently touchscreen actions allow guests or the photo booth operator to remove unwanted or inappropriate images from the gallery. These options can be protected using a password if required. To do this set the exit password in the iPad's App Settings screen.
galleryDelete does not delete any files, instead it marks the image as deleted by setting the deleted attribute in the photo booth summary XML file to 1.
galleryDeletePermanently deletes the photo booth summary file and all associated photos, GIFs and MP4 files.

The "galleryExit" touchscreen action (defined in the gallery.jpg using the touchscreen editor) can be used to close the gallery thumbnail screen and return to the photo booth ready screen. You can also set a timeout using the "Gallery screen timeout (secs)" setting which will automatically exit the thumbnail screen if the screen is not tapped before the timeout occurs. Set this timeout to 0 to disable it.

Slideshow

A slideshow of photos, animated GIFs and MP4 videos from previous sessions can be displayed in the standby screen by selecting "Enable slideshow in standby mode". The size and position of the slideshow display area can be edited using the touchscreen editor and selecting the standby screen.

The following touchscreen actions can be used to control the slideshow display:
- slideshowFirst - displays the first image in the slideshow and pauses the slideshow for 5 minutes
- slideshowPrevious - displays the previous image in the slideshow and pauses the slideshow for 5 minutes
- slideshowNext - displays the next image in the slideshow and pauses the slideshow for 5 minutes
- slideshowLast - displays the last image in the slideshow and pauses the slideshow for 5 minutes

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- slideshowPause - pauses the slideshow for 5 minutes
- slideshowPlay - resumes the slideshow after it has been paused
- slideshowDelete - marks the currently displayed slideshow image as deleted
- slideshowDeletePermanently - deletes the currently displayed slideshow image files

The slideshowDelete and slideshowDeletePermanently touchscreen actions allow guests or the photo booth operator to remove unwanted or inappropriate images from the slideshow. These options can be protected using a password if required. To do this set the exit password in the iPad's App Settings screen.
slideshowDelete does not delete any files, instead it marks the image as deleted by setting the deleted attribute in the photo booth summary XML file to 1.
slideshowDeletePermanently deletes the photo booth summary file and all associated photos, GIFs and MP4 files.

Select "Enable slideshow in standby mode" to enable a slideshow in the standby screen.
Next, set the "Maximum age of photos displayed in slideshow (hours)" to specify which photos are displayed in the slideshow. For example, for an event running on a single day or evening, this could be set to 8 hours.
Then set the interval in seconds between each photo in the slideshow.

The "Transition in, slide" option specifies how the photos appear in the slideshow and the "Transition out, slide" option specifies how they are removed from the display. The following settings are available:
none: fade from black for the "in" transition/fade to black for the "out" transition
right: slide in from the left/slide out to the right
rightUp: slide in from the bottom left/slide out to the top right
rightDown: slide in from the top left/slide out to the bottom right
left: slide in from the right/slide out to the left
leftUp: slide in from bottom right/slide out to the top left
leftDown: slide in from the top right/slide out to the bottom right
down: slide in from the top/slide out to the top
up: slide in from the bottom/slide out to the top

The "photo order" setting defines the order in which the photos are displayed in the slideshow.
The "newestFirst" setting will sort the photos into date order and display the most recent photos first.
The "oldestFirst" setting will sort the photos into reverse date order and display the oldest photos first.
The "random" setting will sort the photos into random order and display them in sequence. When it reaches the end of the sequence it will sort them into a different random order and display them in sequence. This is like shuffling a deck of cards and then dealing them one at a time then picking them up and shuffling them again.

What's displayed in the slideshow:
The app will scan the photos folder for XML summary files which are less than the maximum age setting.
If the XML file represents a photo session with a slideshow GIF or video it will display the video in the slideshow if it is available otherwise it will display the animated GIF.
If the XML file represents a photo session only it will display the JPEG copy of the output in the slideshow.
If the XML file represents a burst GIF session it will display the video in the slideshow if it is available otherwise it will display the animated GIF.

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5 Breeze Hub

Introduction

Breeze Hub is free Windows based software that can be used with both Breeze Booth for iPad and with Windows based photo booth apps by Breeze Systems.
When used with Breeze Booth for iPad Breeze Hub allows photos to be automatically printed and shared by email and text. The output from the iPad can be automatically downloaded to a Windows PC where it can be printed, emailed or shared using applications such as Breeze Kiosk or uploaded to an online gallery or microsite using FTP software.

Breeze Hub can also be used to send fully formatted HTML emails with multiple attachments from our DSLR Remote Pro and Breeze Kiosk applications. One copy of Breeze Hub can process the output from multiple iPads and multiple copies of DSLR Remote Pro and Breeze Kiosk.

Breeze Hub can also be generate statistics such as the number of sessions and shares per hour or to extract survey responses from users. These tools work with both Breeze Booth for iPad and DSLR Remote Pro.

Setup

There are two methods for transferring the output from the iPad to a folder where it can be processed by Breeze Hub:
1. Directly via a local wifi network
2. Indirectly via Dropbox by saving the output to Dropbox and monitoring the Dropbox folder on a PC running Breeze Hub

The first option does not require an internet connection and provides a way of quickly syncing the output from one or more iPads to a Windows PC connected to the same local network. Use this option to print from the iPad app to any Windows compatible printer. Note: the app can also print directly to an AirPrint compatible printer without using Breeze Hub.

The Dropbox option allows the Windows PC running Breeze Hub to be located anywhere there is an internet connection. A single Windows PC could be located back at base and used to send emails and texts from multiple iPad and Windows photo booths located at different venues. This option doesn't support printing from iPads.

The main window displays a list of connected iPads, their IP address, the screen they are currently displaying, the storage space, the vendor id and the username if the iPad is signed in. The log area in the main window shows a list of files downloaded from connected iPads together with printing and other status information.

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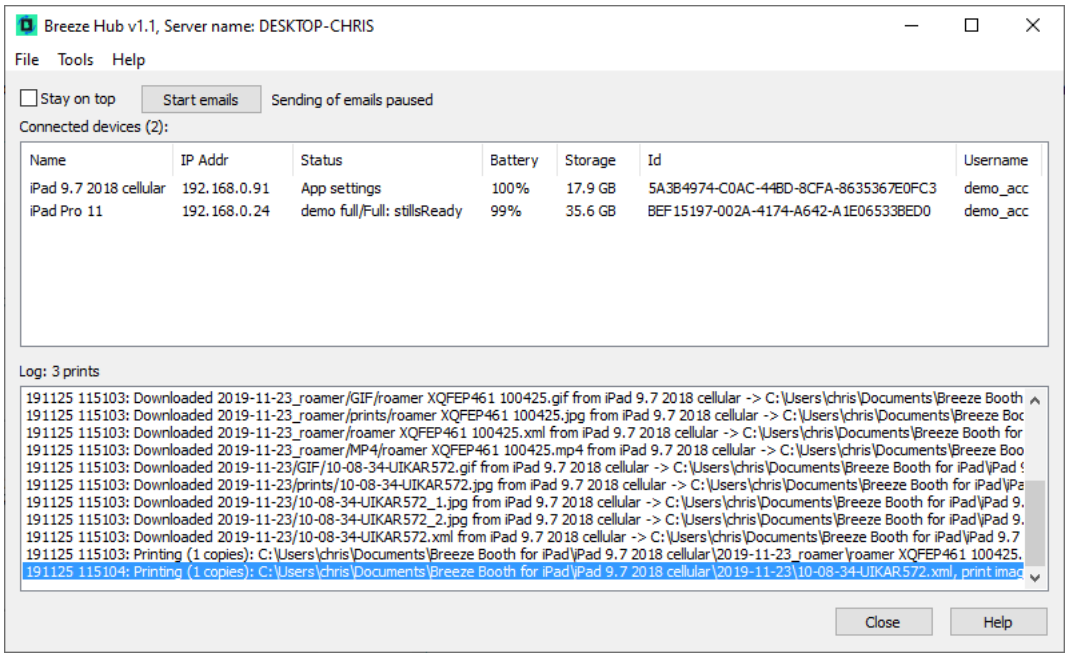
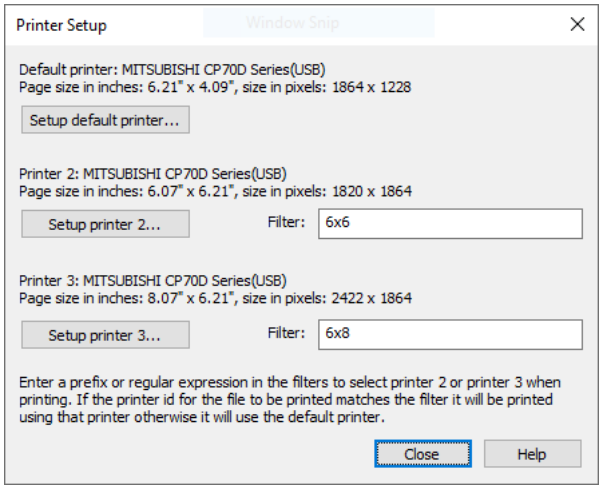


If you want to print photos from an iPad using Breeze Hub select "Printer setup..." from the "File" menu:



Up to three different sets of printer settings can be defined to allow the photo booth to offer guests a choice of print formats e.g. 6x2 strips, 6x4 photos and square 6x6 photos. When an event is created in the event editor a printer id can be defined in the photo settings and Breeze Hub uses this to load the appropriate printer settings by comparing it with the filter values in the "Printer setup" dialog. The filters can be a simple text prefix (e.g. 6x2 or 6x4) or a regular expression (e.g. 6x2.*DNP). When printing photos Breeze Hub will compare the printer id against the filter for printer 2 and will use those printer settings if the filter matches the printer id and the printer is defined. If printer 2 doesn't match it compares the printer id against the filter for printer 3. If this doesn't match it will print using the default printer settings.
Example: Breeze Booth is set up to offer guests three different print options: traditional 6x2 strips, 6x6 square prints or 6x8 large prints. The printer ids for these settings could be set to 6x2, 6x6 and 6x8 respectively and Breeze Hub would be set up so that the default printer prints 6x2 strips, printer 2 is set up for 6x6 printers has the filter "6x6", printer 3 is set up for 6x8 printers has the filter "6x8"

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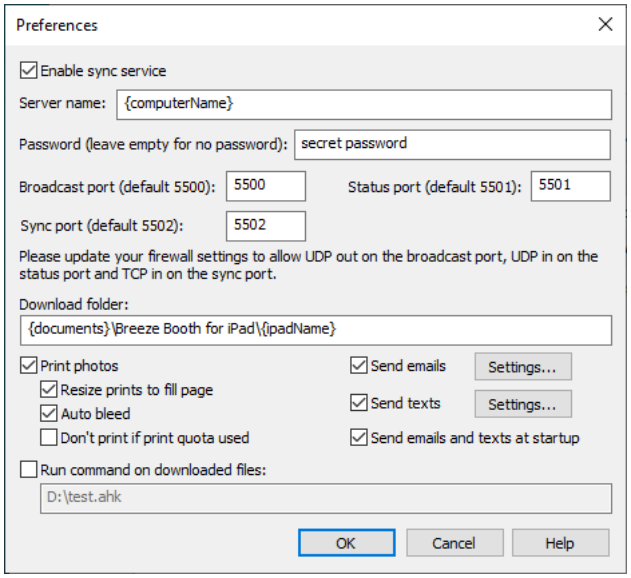
Please note: You can print photos from an iPad using Breeze Hub with any printer that is compatible with Windows or you can use AirPrint to print directly from the iPad to an AirPrint compatible printer (see Printing).

Next select "Preferences" from the "File" menu to setup the sync server, printing and sharing preferences:



Syncing files from an iPad

Select "Enable sync service" to automatically transfer files from an iPad running Breeze Booth for iPad to a Windows PC for printing or sharing.
Leave this option unselected if you are only using Breeze Hub to send emails and texts from our Windows based photo booth software.

Set the server name to identify the server. This will be displayed in the App Settings screen on the iPad. The default is the token {computerName} which is the name of the computer it is running on.

Set an optional password if you require additional security for files being downloaded from iPads. If a password is set the same password has to be entered on each iPad in the "App Settings". The password is used to sign each file that is sent by Breeze Booth and Breeze Hub will refuse to accept the file if the password is incorrect. Please note the actual password is not sent with the files. Instead the iles are signed using the password. This means that the password cannot be stolen if the system is running on an insecure network. Breeze Hub will only accept JPEG photos, GIF files, MP4 movie files, XML files or journal text files. All other file types are rejected.

Breeze Hub uses three internet ports for communicating with connected iPads:

1. Broadcast port: this is used to send UDP broadcast messages to tell iPads about the server. The default port number is 5500. You may need to configure the firewall software on the computer to allow UPD outward messages on this port
2. Status port: this is used to receive UDP status messages from iPads connected to the server. The default port number is 5501. You may need to configure the firewall software on the computer to allow UPD inward messages on this port
3. Sync port: this is used to receive files from iPads connected to the server. The default port number is 5502. You may need to configure the firewall software on the computer to allow TCP inwards messages on this port

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The download folder specifies where the downloaded files should be saved. The default setting is {documents}\Breeze Booth\{iPadName}. The tokens enclosed on curly brackets are replaced with the actual values when the files are downloaded. {documents} is replaced with the path of the Documents folder for the current login e.g. C:\Users\Chris\Documents. {iPadName} is replaced with the name of the iPad sending the file. Please take care to only use characters that are allowed in Windows filenames when naming the iPads if you use the {ipadName} token i.e. avoid using < > ? * / \ : | "

The token {path} can also be used in the download folder. This expands to the relative pathname of the file being downloaded and is useful if you want to download files to different folders based on their filenames.
e.g. the following download path can be used to download files ending in _1.jpg to the folder named Hotfolder and all other files to the folder named with the iPad's name:
{documents}\Breeze Booth\{if,{compare,{right,5,{path}},_1.jpg},Hotfolder,{iPadName}}

Tip: If you are running an event with multiple iPads and want to share the photos using sharing software running on the PC you may wish to remove the {ipadName} from the download folder path and replace it with the event name so that the photos from all iPads are downloaded to the same folder.

Automatically printing photos from an iPad

Select "Print photos" to automatically print photos when they are received. The number of copies to be printed is read from the XML summary file received from the iPad. The summary file has a similar format to the summary files from our Windows based photo booth applications.
The print layout is automatically rotated to match the printer's page orientation before printing. Select the "Resize prints to fill page" option if the prints are smaller than the page size. Select the "Auto bleed" option if the prints have colored borders. This will extend the borders of the print to fill the printable area when printing to avoid possible white margins caused by the printer heads not being perfectly aligned.

Select "Don't print if print quota used" to only print the number of prints set up in the event info. Each time Breeze Hub prints a photo it decrements the print counter and when this reaches zero Breeze Hub won't print any more photos if "Don't print if print quota used" is selected. The print counter is the same print counter that can be shared with Breeze Booth for Windows and other apps from Breeze Systems. Breeze Hub broadcasts the current value of the print counter to connected iPads and they can access it using the {printCounter} token.

Automatically Emailing and Texting

Breeze Hub can automatically send emails and SMS text messages using the email addresses and phone numbers entered in the iPad app's sharing screens. The iPad saves the email and text messages in XML files (with email_ or text_ prefixes) and Breeze Hub can send them automatically when they are downloaded to the PC.

Breeze Hub can also send emails and texts from our Windows based photo booth applications. Using Breeze Hub to send emails from our Windows based photo booth applications gives more flexibility over email attachments and allows the emails to be sent in the background without the photo booth app having to wait.

Select "Send emails" to automatically send emails and "Send texts" to automatically send SMS text messages.

Setting up emails
Select "Send emails" and then click on "Settings..." to set up your email settings:

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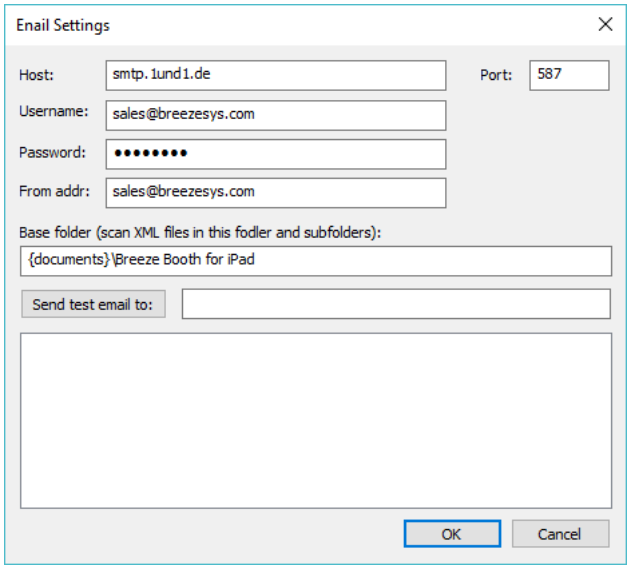

To send an email you need to specify the host name and port number of your email server. Most email servers also require a username and a password to prevent unauthorized users from sending spam emails. The port number should normally be set to 587 when using SSL secure email or 25 otherwise (please check the port numbers used by your ISP). Set the "Email addr:" to the sender's email address. To include the name of the sender with the email address enter it as the name followed by the email address enclosed in angle brackets e.g. "Acme Photo Booth <photobooth@acme.com>". Most free email services require the sender's email address to the be the same as that of the email account specified by the username and password.

Check the email settings by entering an email address and pressing the "Send test email to:" button.

Please note: If you are using Google GMail to send emails you need to go to your Google account settings and set the "Access for less secure apps" option to "Turn on" otherwise GMail will refuse to send the email. Google limit the number of emails that can be sent from a GMail account to 100-150 emails in a 24 hour period which may not be enough for photo booth usage. If this is a problem please consider using a dedicated email service such as Postmark or SendGrid.

Finally, set the "Base folder (Scan XML files in this folder and subfolders)" to the location where the files are downloaded from the iPads. Normally this is the same as the "Download folder" specified in the "Preferences" dialog.

Setting up texts

Breeze Hub can send SMS text messages using using a web-based service called Twilio (www.twilio.com). To make the most of this you need to upload the files to a web site and include the URL in the SMS message.

To use this service you need an account with Twilio and enter your Twilio account details in the "Text Message Settings" dialog. Twilio charge for each MMS or SMS message sent using their service. Please see their website for pricing information.

The SMS settings need to be setup so that the program can send the texts via Twilio. The "Text Message Settings" dialog can be opened by selecting "Send texts" and clicking on the "Settings...":

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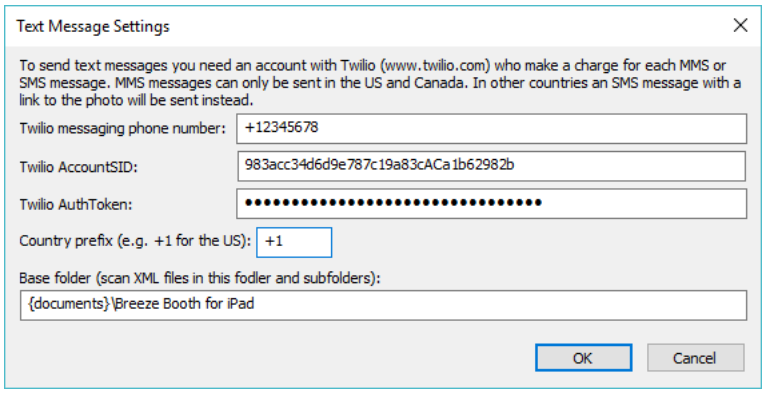


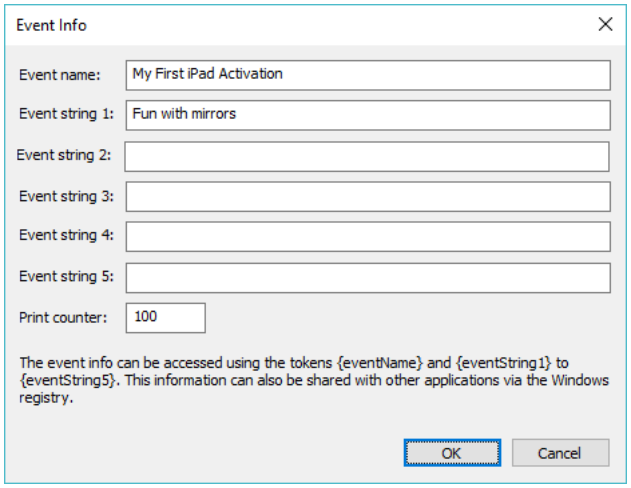
Enter your Twilio message phone number, AccountSID and AuthToken in the "Text Message Settings" dialog. You can find your Twilio message phone number, AccountSID and AuthToken by logging into your Twilio account.

Set the country prefix to your country prefix e.g. +1 for the US and Canada, +44 for the UK, +49 for Germany etc. When users enter their cellphone numbers they can either enter the number with their country prefix e.g. +1234567890 or without it e.g. 023456789 and the country prefix will be added automatically before sending the text.

Finally, set the "Base folder (Scan XML files in this folder and subfolders)" to the location where the files are downloaded from the iPads. Normally this is the same as the "Download folder" specified in the "Preferences" dialog.

Sending Event Info

Breeze Hub allows Breeze Booth for iPad to use the same event info as other apps from Breeze Systems. Event information can be defined and used in filenames, captions and the messages used when sharing photos. The information is saved in the Windows registry so that it may be shared with other applications and is read from the Windows registry before it is used so that it can use information supplied by other applications. The "Photo Booth Event Info" dialog can be displayed by selecting "Event info..." from the File menu:



The event info can be used in filenames, caption text in print layouts or in the message text used when sharing photos by using the tokens below. The information is also saved in the Windows registry using the registry key so that it can be shared with other applications:

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HKEY_CURRENT_USER\Software\BreezeSystems\EventInfo

Please note: Do not use the characters \ / : * ? " | < > in the event info if it is going to be used to define filenames. Windows does not allow these characters to be used in filenames and this may prevent the files from being saved.

Item	Token	Registry value
Event Name	{eventName}	HKEY_CURRENT_USER\Software\BreezeSystems\EventInfo\EventName
Event String 1	{eventString1}	HKEY_CURRENT_USER\Software\BreezeSystems\EventInfo\EventString1
Event String 2	{eventString2}	HKEY_CURRENT_USER\Software\BreezeSystems\EventInfo\EventString2
Event String 3	{eventString3}	HKEY_CURRENT_USER\Software\BreezeSystems\EventInfo\EventString3
Event String 4	{eventString4}	HKEY_CURRENT_USER\Software\BreezeSystems\EventInfo\EventString4
Event String 5	{eventString5}	HKEY_CURRENT_USER\Software\BreezeSystems\EventInfo\EventString5
Print counter	{printCounter}	HKEY_CURRENT_USER\Software\BreezeSystems\EventInfo\PrintCounter

The values of the event name, event strings and printer can be displayed in the iPad app by tapping on "App Settings".
The print counter is decremented each time Breeze Hub prints a photo. Print quotas can be used by setting the print counter to the number of prints allowed for an event and then selecting "Don't print if print quota is used" in Breeze Hub's preferences.

iPad Settings

Tap on "App Settings" in Breeze Booth's start screen to set it up to send files to Breeze Hub for printing or sharing:

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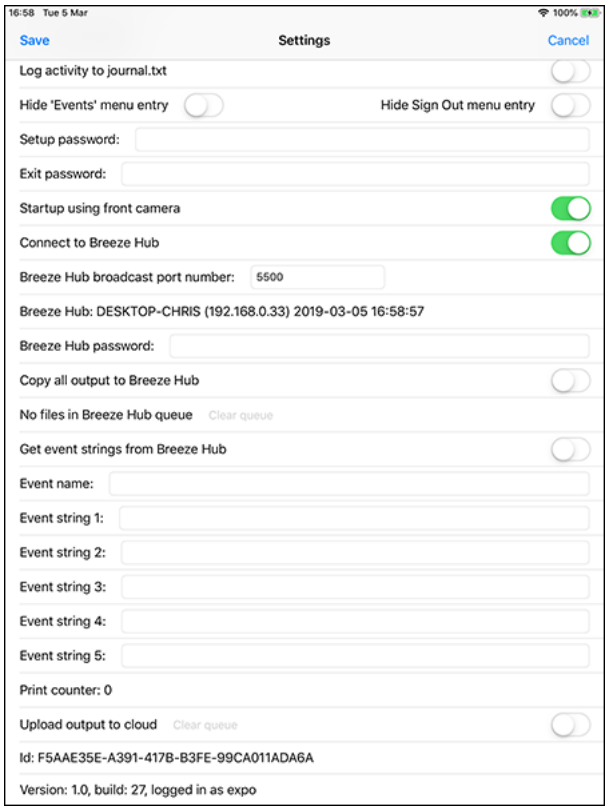

Select "Connect to Breeze Hub" and check that the "Breeze Hub broadcast port number" is the same as the sync port setup in Breeze Hub. The default port number is 5500. If Breeze Hub is running on a computer on the same network you should see appear on the Breeze Hub line. If it shows <none> please check that the iPad and computer running the server are connected to the same network and check the firewall settings on the server computer.

If a password has been set in Breeze Hub the same password needs to be entered in the "Server password" field on the iPad otherwise the server will refuse to accept the files.

Select "Copy all output to Breeze Hub" if you want all output including animated GIFs and MP4 files to be sent to Breeze Hub. This is useful if you wish to upload the photos to a website using FTP syncing tools such as GoodSync or to use sharing software such as Breeze Kiosk to share the output from the iPad via email, text or Twitter on the Windows computer. When the "Copy all output to Breeze Hub" option is not selected only the photos, print layout and XML summary file will be sent to the sync server.

Updating firewall settings on the Windows computer

In order to use Breeze Hub to sync files from Breeze Booth for iPad you may need to edit the firewall settings on your computer:

1. If you don't see Breeze Hub in Breeze Booth's "App Settings" you may need to enable outgoing UDP packets on the sync port (default setting: 5500)
2. If you don't see the iPad listed in the "Connected iPads" display in Breeze Hub on the Windows PC you may need to enable incoming UDP packets on the status port (default setting: 5501)
3. If files are not transferred to Breeze Hub you may need to enable incoming TCP packets on the sync port (default setting: 5502)

When you run Breeze Hub for the first time you may see a warning dialog like the one below:

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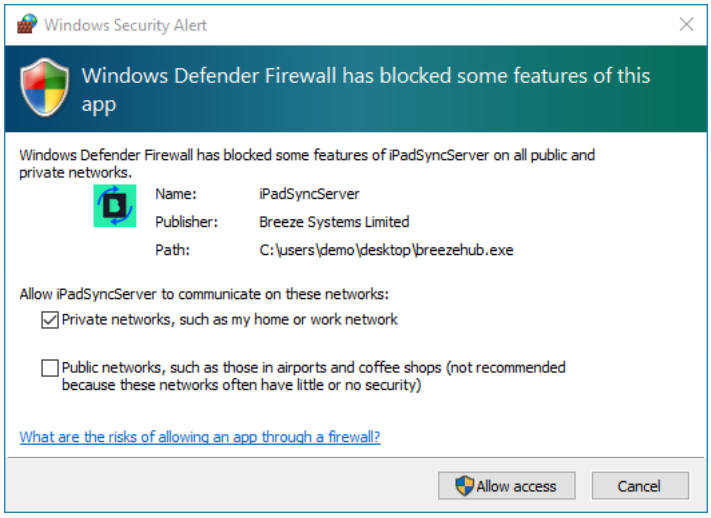


This is normal and shows that Breeze Hub is attempting to communicate with iPads running Breeze Booth for iPad on your network. To continue select "Private networks, such as my home or work network" and click "Allow access". After allowing network access Breeze Hub should work without requiring any other changes to your firewall settings.

Some firewall software (e.g. AVG) will work if you set the network connection type to "private" not "public".

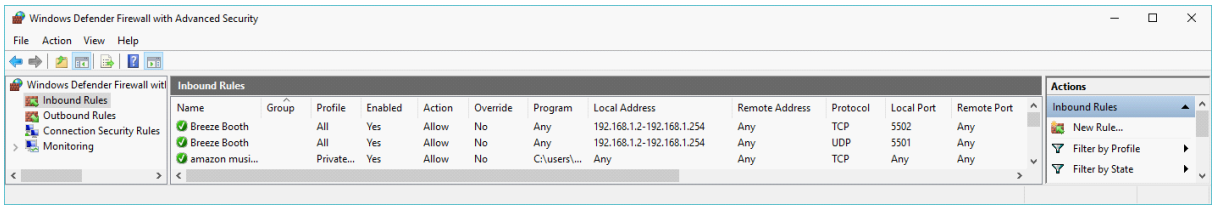
If the above settings don't work you may need to set the firewall settings manually. The actual settings will depend on the firewall software that is running on the PC.
Please see the help files for your firewall for information on how to configure the settings.

Sample settings for Windows Firewall and AVG are shown below.

The address range "Local Address" values will depend on your network. Open a Windows PowerShell window and enter the command ipconfig to display information about your network. The first three numbers in the IPv4 Address should be used for the first three numbers for addresses when setting the firewall rules.

Sample firewall settings for Windows Defender firewall

To open Windows Defender Firewall click on the Windows Start button in the taskbar at the bottom left corner of the screen, type "Defender" and then click on the "Windows Defender Firewall" icon. Next, click on "Advanced settings" to open the "Windows Defender Firewall with Advanced Security" window and then click on "Inbound Rules". Click on "New Rule..." on the right to add new inbound rules if required:



Sample firewall settings for AVG firewall

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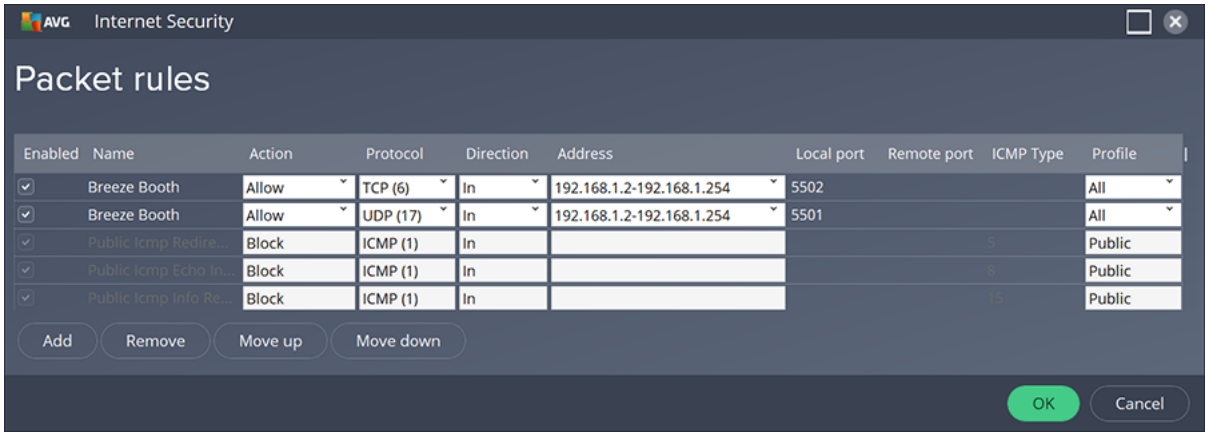
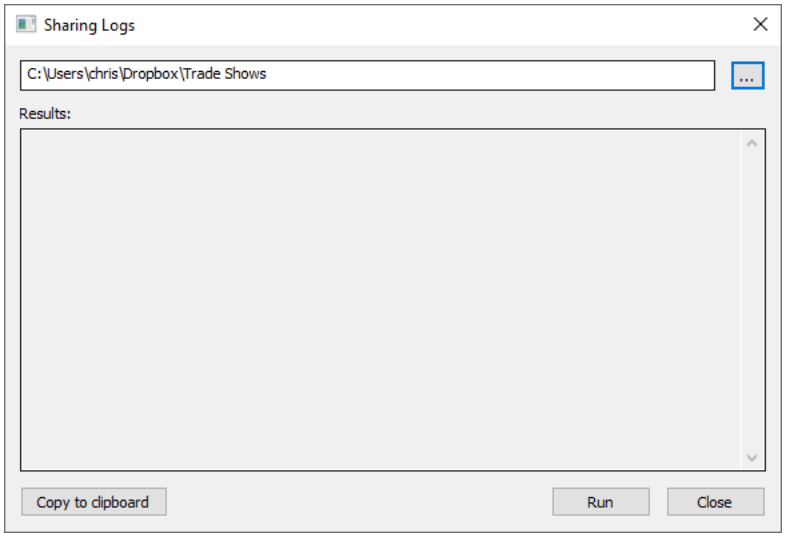
Double click on the AVG desktop icon to open the main AVG Internet Security dashboard. The select "Settings" from "Menu" in the top right of the window. Click on "Full protection" and then click on "Packet Rules" in the "Enhanced Firewall" tab to display the "Packet rules" window. Click on the "Add" button to add new rules if required:



Email and Texting Reporting Tool

The email and texting reporting tool can be used to create a report showing the number of emails and texts sent using the output from Breeze Booth for iPad or from our Windows based photo booth apps. Select Emails and Texts... from the Tools menu to run the email and texting reporting tool:



The email and text reporting tool works by scanning folder where the photo booth photos are saved looking for XML email and text files and reading this information to create a summary of the emails and texts. Enter the base folder in the edit box or press the "..." button to open a browser to select the folder. Then press the "Run" button to scan the folder and all its subfolders:

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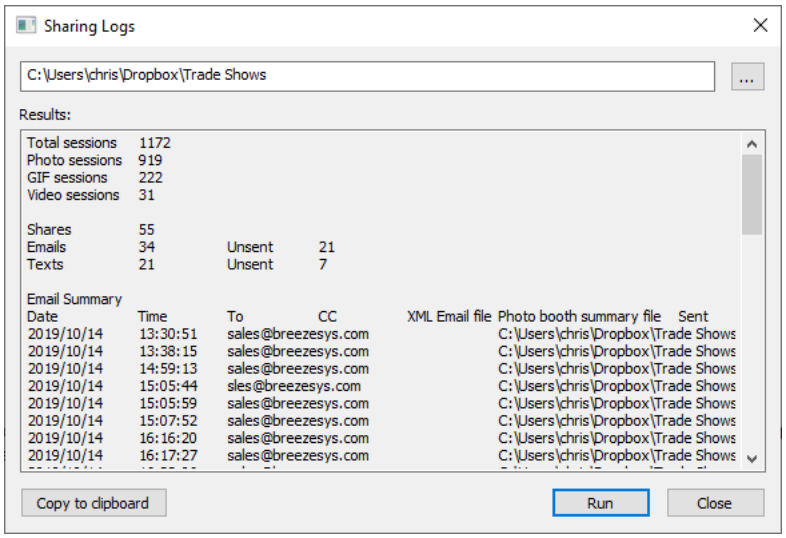
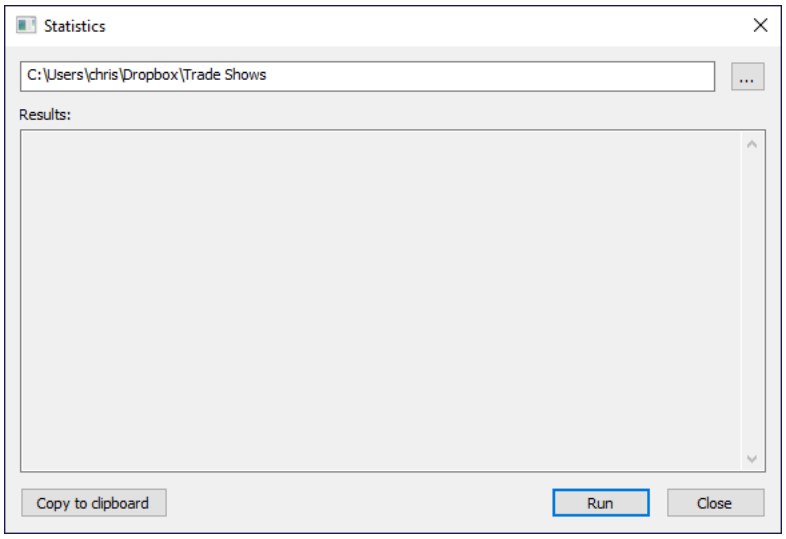


The results will show a summary of the total number of sessions and the breakdown between photos, GIFs and video sessions. It also shows the number of shares by email and by text.

This is followed by two tables: one showing email shares and one showing text shares. These tables use tab delimited fields which can be copied and pasted into a spreadsheet such as Microsoft Excel where the data can be displayed as a graph. A portion of the results can be selected by holding the left mouse button down and selected the required text or the whole report can be selected by clicking on the "Copy to clipboard" button. Then copy and paste the data into a spreadsheet for analysis.

Statistics Tool

The statistics tool can be used to create a report using the output from Breeze Booth for iPad or from our Windows based photo booth apps.
Select Stats... from the Tools menu to run the statistics tool:



The statistics tool works by scanning folder where the photo booth photos are saved for XML summary files and reading this information to create a summary of the number of sessions and shares. Enter the base folder in the edit box or press the "..." button to open a browser to select the folder. Then press the "Run" button to scan the folder and all its subfolders:

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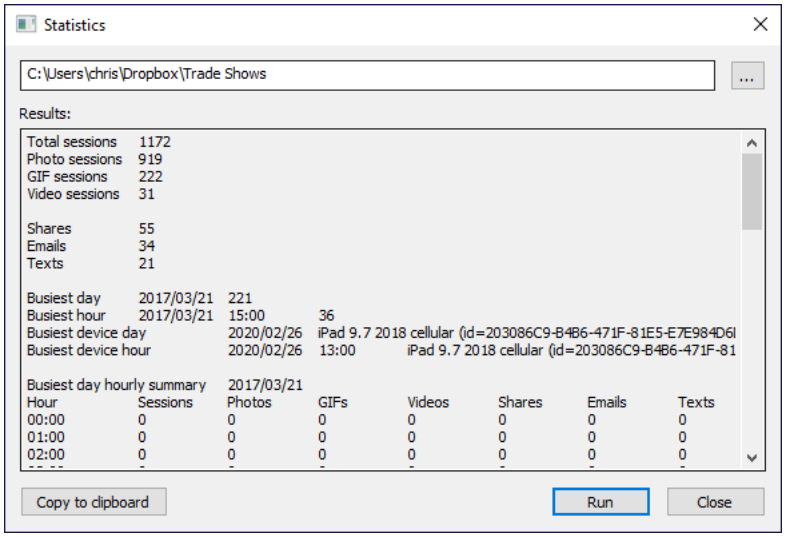

The results will show a summary of the total number of sessions and the breakdown between photos, GIFs and video sessions. It also shows the number of shares by email and by text.

The next session shows the busiest day and busiest hour for the period for all devices together with the busiest day and hour for a single device.

The busiest day is then shown as a table giving a hour by hour summary of the number and type of sessions and the shares.

Lastly, a table giving a day by day summary for the last 30 days is displayed showing the number and type of sessions and the shares.

These tables use tab delimited fields which can be copied and pasted into a spreadsheet such as Microsoft Excel where the data can be displayed as a graph. A portion of the results can be selected by holding the left mouse button down and selected the required text or the whole report can be selected by clicking the "Copy to clipboard" button. Then copy and paste the data into a spreadsheet for analysis.

Survey Data

The survey data tool can be used to create a report showinf survey responses using the output from Breeze Booth for iPad or from our Windows based photo booth apps.
Select "Survey data..." from the Tools menu to run the survey data tool:

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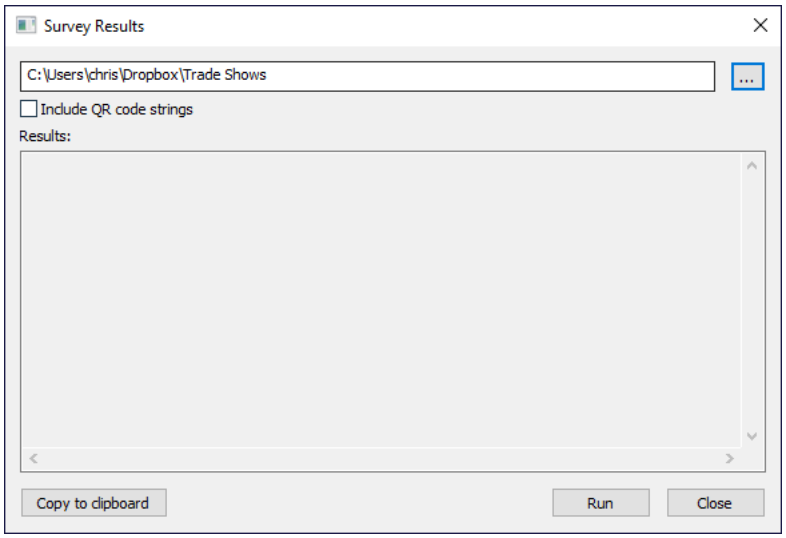
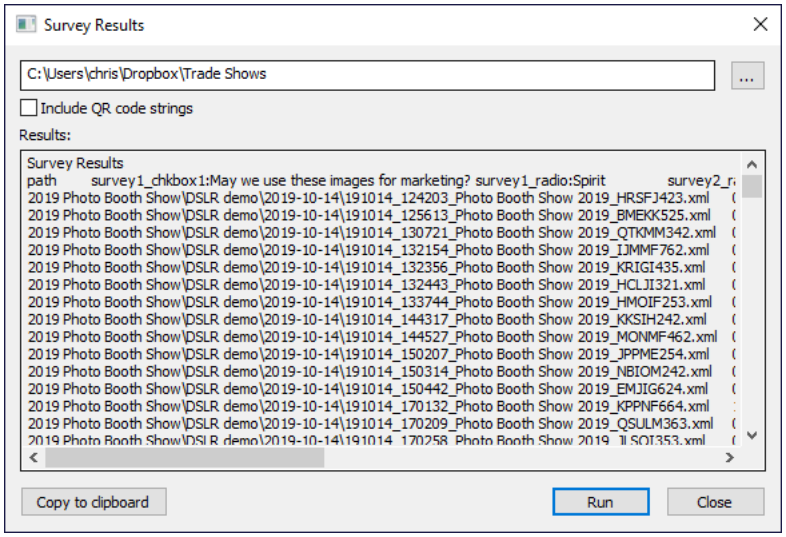


The survey data tool works by scanning folder where the photo booth photos are saved for XML summary files and reading this information to create a report showing responses to surveys. Enter the base folder in the edit box or press the "..." button to open a browser to select the folder. Select "Include QR code strings" to include data such as users' email addresses when using QR codes to run a contactless photo booth.
Then press the "Run" button to scan the folder and all its subfolders:



The results a table of each session that gathered survey data.

The first row of the table gives the headings for each column: 'path' for the path of the XML summary file followed by one or more headings for each of the survey results in the form: survey screen number (e.g. survey1), response type (e.g. chkbox, text or radio), response identifier.

The remaining rows show the responses to each session and start with the path of the XML summary file followed by a list of responses to each question in the survey.

The table uses tab delimited fields which can be copied and pasted into a spreadsheet such as Microsoft Excel where the data can be displayed as a graph or analysed. A portion of the results can be selected by holding the left mouse button down and selected the required text or the whole report

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can be selected by clicking the "Copy to clipboard" button. Then copy and paste the data into a spreadsheet for analysis.

6 Quick Setup

The "Quick Setup" button displayed on the start screen provides a quick way to setup an iPad simply by scanning a QR code.

The QR code can be used to log the iPad in, to download a set of events to the iPad and to automatically run the first event.

The QR codes are encrypted and can be setup so that they will only work on one particular iPad. This means that a QR code contain login information can be safely used by operators or sent to clients without them being able to see information such as the password. Secure, encrypted QR codes can only be generated using the Event Editor - either using the "Admin QR Code Generator" dialog or the command line interface.
Less secure plain text QR codes which can be generated on a website or as part of a CRM system can also be used.

The appearance of the quick setup page can be customized by creating background and/or overlay screen images. Please see Customizing the Start Screen and Removing Branding for details.

Generating QR Codes for Quick Setup

The QR codes used for quick setup are generated using the "Admin QR Code Generator" tool in the Event Editor. Select "QR code generator..." from the File menu in the Event Editor to open the "Admin QR Code Generator" tool:

The QR code quality can be set using the "QR Code quality" dropdown list. The low or medium setting should be fine for most applications but you may need to increase the quality if you add an overlay

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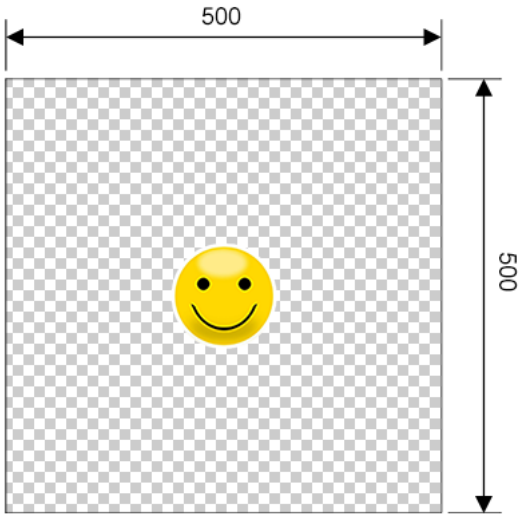
image to the QR code.

The generated QR code can be saved as a PNG image by clicking in the "Save as PNG..." button. This will save the QR code as a PNG file which is 500 x 500 pixels in size.

An optional overlay can be added to the QR code to provide branding by entering the filename in the "Overlay:" edit box or by clicking on the "..." button to open a file browser. The overlay should be a PNG image which is 500 x 500 pixels in size with a transparent background and the logo placed in the center e.g.



PNG overlay dimensions

QR code with logo image added

The overlay should not cover too much of the QR code otherwise it may not work. More of the QR code can be covered by the overlay image if the QR code quality is set to a higher setting.

The base URL is URL that would be loaded into a web browser if a user scanned the QR code with their phone. Set this to a suitable location, e.g. your website's home page, in case a user scans the QR code with their phone.

The admin QR code can be used to automatically sync the iPad using HTTP GET, HTTP POST or Dropbox.

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The HTTP GET method provides the quickest and simplest way to download the events from you web server but it doesn't protect your events from being downloaded by unauthorized users. More security can be provided by using the HTTP POST or Dropbox options. Please see the section on updating events for more information.

Select "Run event after syncing" to automatically run the first event after syncing the events.

The Admin QR code can also be used to automatically log the iPad in by entering the username and password. The username and password should correspond to a user defined in the Web App
The QR code is encrypted and so you can safely give the QR code to a user to allow them to login with their iPad without having to reveal the password to them.
Additional security can be added by entering the vendor Iid of the iPad in the QR code generator. The vendor id is a unique id for each iPad running the app and is displayed at the bottom of the App Settings. The vendor Id entered in the QR code generator can be the full vendor id of the iPad to guarantee it can only be used on a particular iPad or you could enter just a portion of the vendor id which would mean it would be unlikely to match a different iPad.

An admin QR code can also be given an expiry time after which it cannot be used. Select the "Expiry" checkbox and click on the "Date/time..." button to define an expiry date and time for the QR code.
If the the admin QR code contains login information and an expiry date the iPad will be automatically logged out when the expiry time has passed provided the app is running in the foreground. The automatic logging out will not work if the iPad is turned off or if the app is not running in the foreground.

Generating Admin QR Codes using a Script

An admin QR code can created by calling the Event Editor from a script and passing the following command line arguments:

-qr_path <pathname>	Where to save the PNG image of the QR code
-qr_base_url <URL>	The base URL
-qr_username <username> -qr_password <password>	The username and password for logging in the iPad
-qr_sync_method <method>	The sync method: GET, POST or Dropbox (defaults to GET)
-qr_sync_url <URL>	The sync URL when using the GET or POST sync methods
-qr_post_password <password>	Optional POST password when using the POST sync method
-qr_dropbox_prefix <prefix>	Dropbox prefix when using the Dropbox sync method
-qr_auto_run	Auto run the first event after updating the events
-qr_expiry <t>	Expiry time for the QR code in seconds since the Unix epoch
-qr_vendor_id <id>	Optional vendor id used to secure the QR code
-qr_logo_path <pathname>	Pathname of optional logo PNG image to add to the QR code

Example: Generate an admin QR code that logs the iPad in with username test_user and password test_user_password:

BreezeBoothEventEditor.exe -qr_username "test_user" -qr_password "test_user_password" -qr_path "D:\qr_code.png"

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Please note: the command line can also be used to generate single user QR codes. It will generate a single use QR code if the -qr_cmd argument is provided otherwise it will generate an admin QR code.

Less secure plain text QR codes

By default most of the commands available using secure QR codes can also be used with plain text QR codes. Plain text QR codes can be generated on a web site or as part of a CRM system whereas secure QR codes can only be generated using the Event Editor.
The processing of plain text QR codes can be disabled on an iPad by editing the settings.xml file and setting the tag <enablePlainTextAdminQRCodes> to false e.g. <enablePlainTextAdminQRCodes>false</enablePlainTextAdminQRCodes>. It can be re-enabled by setting the tag to true.

The QR text for plain text QR codes should be in the form of a URL with a parameter named "admin" containing a JSON string with the commands e.g.
https://breezesys.com?admin=<JSON_commands>
Note: The JSON commands must be URL encoded

Syncing via GET
Add a JSON string with name "sync" and the value set to the URL to sync from e.g. { "sync": "https://bb4ipad.com/sync" }

Syncing via POST
Add a JSON string with name "post" and the value set to the URL to sync from e.g. { "post": "https://mysite.com/sync_script.php" }
An optional password can be added by adding a JSON string named "post_pw" { "post": "https://mysite.com/sync_script.php", "post_pw": "secret password" }
WARNING: the password is sent in plain text and could be read if the QR code falls into the wrong hands. Please either omit the password (in which case the app will use the password defined in the App Settings) or take additional measures to secure downloads e.g. by checking the Vendor Id of the iPad to see whether it is trusted or by checking the login name of the iPad.

Syncing via Dropbox
Add a JSON string with name "dropbox" and the value set an optional prefix e.g. { "dropbox": "prefix" }

Autorun after Syncing
Add a JSON string with name "autorun" and the value 1 e.g. { "autorun": 1 }

Adding an Expiry Date
Add a JSON integer with name "expiry" and the value set to the number of seconds since the epoch (00:00:00 UTC on 1 January 1970) e.g. { "expires": 1594913923 }
If a QR code is scanned into the app after the expiry time has passed the QR code will be ignored and the iPad will be logged out.

Setting the Status URL
Add a JSON string with name "statusUrl" and the value set to the status URL. Optionally add the status URL password and update interval in seconds e.g.
{ "statusUrl": "https://mysite.com/webhook.php", "statusUrlPassword": "password", "statusUrlInterval": 600 }

Setting the Event Name and Event Strings
Add a JSON string with name "en" for the event name and strings with names "es1" through "es5" for the event strings e.g.

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{ "en": "The Event Name", "es1": "Event string 1", "es2": "Event string 2" }

Limiting the QR code to a particular iPad
Add a JSON string with name "id" and the value set to the vendor id of the iPad it is intended for e.g.
{ "id": "ABCDEF123456QWERTY123" }
The QR code will only be processed if the vendor id matches the vendor id of the iPad. The vendor id is unique to each installation of the app on each iPad and is displayed at the bottom of the App Settings screen.

Example: Syncing via GET from https://bb4ipad.com/sync and then running the first event automatically.
The JSON command string is { "sync": "https://bb4ipad.com/sync", "autorun": 1 }
This needs to be URL encoded before it can be added to the as a parameter to the URL e.g. %7B%20%22sync%22%3A%20%22https%3A%2F%2Fbb4ipad.com%2Fsync%22%2C%20%22autorun%22%3A%201%20%7D
Then it can be added as a parameter named "admin to the URL e.g. https://breezesys.com?admin=%7B%20%22sync%22%3A%20%22https%3A%2F%2Fbb4ipad.com%2Fsync%22%2C%20%22autorun%22%3A%201%20%7D

Logging in an iPad
Logging in an iPad is not available using plain text QR codes because the login password is sensitive information which shouldn't be encoded in a QR code as plain text. If you need a QR code to log in an iPad (e.g. for a drop off or unattended photo booth) you can create a secure QR code using the Event Editor and optionally protect it by adding expiry information or locking it to a particular iPad using the vendor id. Then use a second plain text QR code for loading the event.

7 Customizing the Start Screen and Removing Branding

The main startup screen can be replaced with a background image and start button image of your choice. You can also change the colors of the menu items at the top of the screen, the event caption and the login status displayed at the bottom of the screen.

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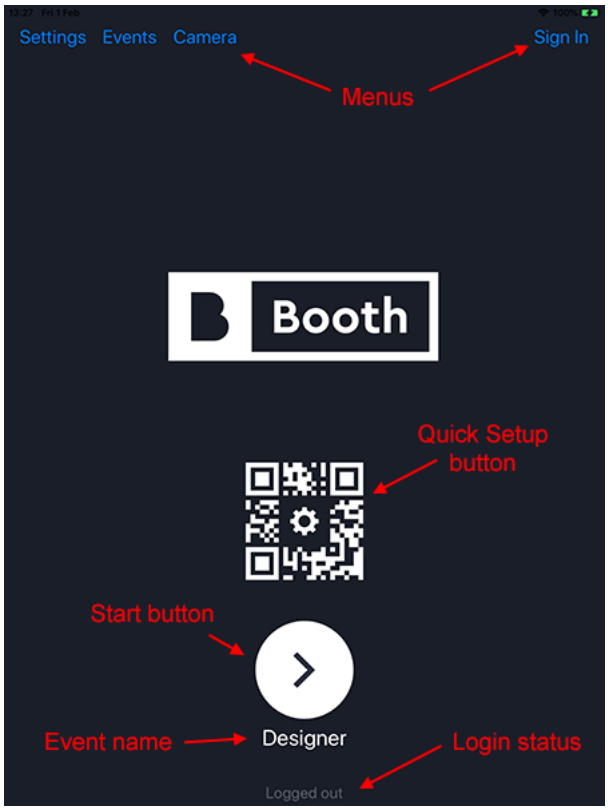

Background Image

The startup screen background image can be replaced by placing a JPEG image named background.jpg, a HEIC photo named background.heic or a PNG image named background.png in the Breeze Booth folder on the iPad. Different screens can be displayed when the iPad is logged in or logged out:
Logged in background screen: background_logged_in.jpg, background_logged_in.heic or background_logged_in.png
Logged out screen: background_logged_out.jpg, background_logged_out.heic or background_logged_out.png

If the iPad is only going to be used in portrait orientation the background image can be 1536 x 2048 pixels in size (or 2048 x 1536 if the iPad is only going to be used in landscape orientation). If the iPad is going to be used in both portrait and landscape orientation the image should be square (2048 x 2048 pixels in size) and will be displayed with the sides cropped when in portrait orientation or the top and bottom cropped when in landscape orientation. If the background image is larger than the screen (e.g. a photo taken with the iPad's camera) it will be resized to fit the screen.

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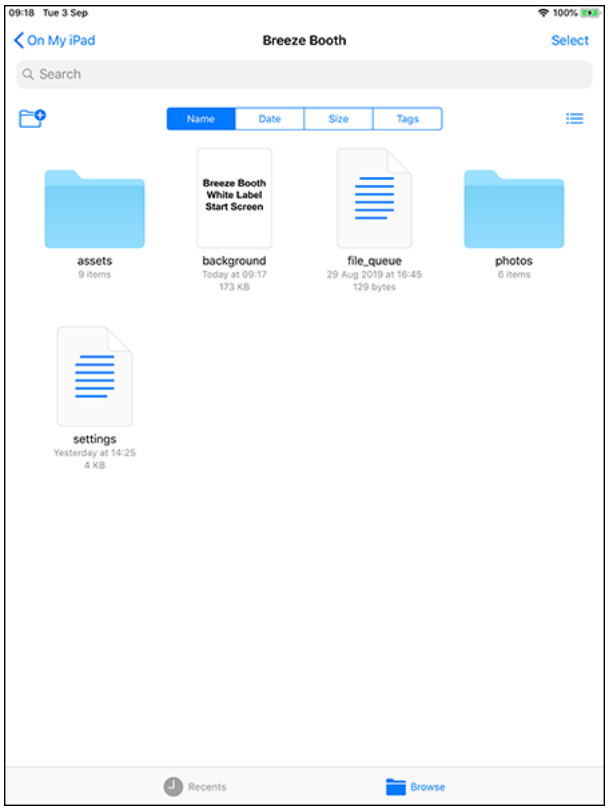

Screenshot of the iOS Files app showing a white label background image for the startup screen

The path of the startup screen background image can also be defined in the settings.xml file using the <startupScreenBackgroundImageLoggedIn>, <startupScreenBackgroundImageLoggedOut> and <startupScreenBackgroundImage> tags. These should specify the path of the background image relative to the iPad's root folder e.g. to use a PNG image stored in an event it could be set to something like assets/event_name/startup_background.png:

```
<?xml  version="1.0"  encoding="utf-8"  standalone="no"?>
<breeze_booth  version="1.0"  build="21">
     <device_settings>
          <startupScreenBackgroundImage>assets/event_name/startup_background.png</startupScreenBackgrou
          ...
     </device_settings>
</breeze_booth>
```

Quick Setup Button

The quick setup button image is placed above the start button. It can be replaced by placing a PNG image named qrsetup.png in the Breeze Booth folder on the iPad.

The path of the quick setup button image can also be defined in the settings.xml file using the <qrSetupButtonImage> tag. This should specify the path of the start button relative to the iPad's root folder e.g. to use a PNG image stored in an event it could be set to something like assets/event_name/qrsetup_button.png:

```
<?xml  version="1.0"  encoding="utf-8"  standalone="no"?>
<breeze_booth  version="1.0"  build="21">
     <device_settings>
          <qrSetupButtonImage>assets/event_name/qrsetup_image.png</qrSetupButtonImage>
          ...
```

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```
    </device_settings>
</breeze_booth>
```

Start Button

The start button image is placed directly above the event caption. It can be replaced by placing a PNG image named start.png in the Breeze Booth folder on the iPad.

The path of the start button image can also be defined in the settings.xml file using the <startButtonImage> tag. This should specify the path of the start button relative to the iPad's root folder e.g. to use a PNG image stored in an event it could be set to something like assets/event_name/start_button.png:

```
<?xml  version="1.0"  encoding="utf-8"  standalone="no"?>
<breeze_booth  version="1.0"  build="21">
    <device_settings>
        <startButtonImage>assets/event_name/start_button.png</startButtonImage>
        ...
    </device_settings>
</breeze_booth>
```

Customizing the Quick Setup Screen

The appearance of the quick setup screen can customized by placing a background screen image and/or an overlay image in the Breeze Booth folder on the iPad.
Separate screen images can be defined for when the iPad is in landscape or portrait orientation.
Landscape orientation: the background image is a JPEG image named landscape_quickstart_background.jpg and the overlay image is a PNG image named landscape_quickstart_overlay.png. Both images should be 2048x1536 pixels in size.
Portrait orientation: the background image is a JPEG image named portrait_quickstart_background.jpg and the overlay image is a PNG image named portrait_quickstart_overlay.png. Both images should be 1536x2048 pixels in size.

Specifying a Different Folder for the Start Screen Assets

The default folder for storing customized screens and buttons for the start and quick setup screens is the main Breeze Booth folder. This can be changed by specifying a different folder using the <startupScreenAssetsFolder> tag in the settings.xml file e.g.

```
<?xml  version="1.0"  encoding="utf-8"  standalone="no"?>
<breeze_booth  version="1.0"  build="21">
    <device_settings>
        <startupScreenAssetsFolder>assets/startup</startupScreenAssetsFolder>
        ...
    </device_settings>
</breeze_booth>
```

If the <startupScreenAssetsFolder> tag is defined in the settings.xml file the app will look for button and screen images for the startup screen in the specified subfolder of the Breeze Booth folder.

Menu and Caption Colors

Change the colors of the menu, event and login status text by modifying the contents of the <menuLabelColor>, <eventLabelColor> and <loginStatusLabelColor> tags in the settings.xml file in the Breeze Booth folder on the iPad.
Each color is defined by four attributes:
1. red - the red component in the range 0.0 to 1.0
2. green - the green component in the range 0.0 to 1.0

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3. blue - the blue component in the range 0.0 to 1.0
4. alpha - the opacity range 0.0 to 1.0 where 0.0 is fully transparent and 1.0 is fully opaque

The captions can be made invisible by setting alpha to 0.0. Please note that the menu buttons will still be active even if they are not visible. The "Events" and "Sign Out" menu buttons can be hidden (and disabled) in the App Settings.

Example settings.xml file showing the default colors:

```
<?xml  version="1.0"  encoding="ISO-8859-1"?>
<breeze_booth  build="23"  version="1.0">
     <device_settings>
          <menuLabelColor  red="0.0"  blue="1.0"  alpha="1.0"  green="0.478431"/>
          <eventLabelColor  red="1.0"  blue="1.0"  alpha="1.0"  green="1.0"/>
          <loginStatusLabelColor  red="1.0"  blue="1.0"  alpha="0.3"  green="1.0"/>
          ...
     </device_settings>
</breeze_booth>
```

Removing Branding from the Sample Events

You have complete control over the appearance of print layouts and burst GIFs created using Breeze Booth and of the content of the emails and texts it sends. The sample events have some Breeze branding to illustrate how branding can be applied. This can be easily removed and replaced with branding suitable for your events.

Print layouts - either edit or delete the background and overlay images (background.jpg and overlay.png) and use the Print Layout Editor to import a new background, overlay or logo.

Slideshow GIFs/MP4s - either edit or delete the background and overlay images (slideshow_gif_background.jpg and slideshow_gif_overlay.png) then use the GIF Layout Editor to preview the GIF.

Burst GIFs/MP4s - either edit or delete the background and overlay images (gif_background.jpg and gif_overlay.png) then use the GIF Layout Editor to preview the GIF.

Emails and texts - edit the email and text message text in the Sharing Settings to replace the sample event message text with your own text.

8 Tokens

Tokens are placeholders for text that is generated at run time e.g. the current date and time, unique ids or random numbers. They can be used in many different settings that use text e.g. captions in prints, filenames, message text, URLs
A variety of tokens for modifying or extracting elements from strings provide a way of creating dynamic or conditional behavior.

Date and time tokens

{hour}	Hours (00 to 23)	e.g. 17
{hourNow}	Same as {hour}	
{min}	Minutes (0 to 59)	e.g. 45
{minNow}	Same as {min}	

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{sec}	Seconds (0 to 59)	e.g. 23
{secNow}	Same as {sec}	
{time}	Time in the form HHMMSS	e.g. 174523
{timeNow}	Same as {time}	
{year}	Year in the form YYYY	e.g. 2020
{yearNow}	Same as {year}	
{month}	Month (01 to 12)	e.g. 06
{monthNow}	Same as {month}	
{day}	Day (01 to 31)	e.g. 20
{dayNow}	Same as {day}	
{date}	Date in the form YYYY-MM-DD	e.g. 2020-03-04
{dateNow}	Same as {date}	
{yearLess8h}	Year with century 8 hours ago - useful when shooting events which continue after midnight	e.g. 2020
{monthLess8h}	Month (01 to 12) 8 hours ago - useful when shooting events which continue after midnight	e.g. 01
{dayLess8h}	Day of the month (01 to 31) 8 hours ago - useful when shooting events which continue after midnight	e.g. 21
{dateLess8h}	Year, month, day less 8 hours in the form YYYY-MM-DD	e.g. 2020-01-21

General tokens

{uid}	Unique id in the form ABCDE123. The id is guaranteed not to repeat within 776 days and two photo booths running at exactly the same time have a 1 in 216,000,000 chance of generating the same id.	e.g. APZRT965
{random,n,m}	Returns a random number in the range n to m. A new random number is generated each time the ready screen is displayed	e.g. {random,1,10} returns a random number between 1 and 10
{iPadId}	Vendor Id of this iPad (same as the Id displayed in the settings screen)	
{iPadName}	Name of this iPad as defined in the iPad's Settings->General->About	e.g. Demo's iPad
{user_name}	name of user when logged in else empty	
{user_id}	user Id when logged in else empty	
{user_email}	user's email address when logged in else empty	
{photoboothDir}	Path of the current photo booth images folder	
{photoboothSubDir}	name of the current photo booth images folder	
{photoboothParentDir}	name of the parent folder of the current photo booth images folder	
{filename}	Filename of the saved print layout in photo booth mode (only available for captions used in photo	

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	booth prints and in message text)	
{filenameNoExt}	Same as {filename} but returns the filename without a file extension	
{readyScreenString}	Returns the ready screen string which can set using touchscreen actions and used to select which ready screen is displayed. It can also be used to select backgrounds and overlays when using built-in AI background removal	e.g. rdy1
{eventTitle}	Event title (see Creating Events)	
{eventDescription}	Event description (see Creating Events)	
{eventId}	Id identifying the event. This is the MD5 hash of the event title and event description and is stored in the summary XML file saved after each session	
{eventName}	Event name (defined locally or supplied by Breeze Hub)	
{eventString1} to {eventString5}	Event strings 1 through 5 (defined locally or supplied by Breeze Hub)	
{eventKiteGalleryId}	Id identifying a gallery when using Event Kite for online galleries and micro-sites	
{eventKiteSessionId}	A unique id when using Event Kite in the form ABC123DEF. This is updated at the start of each photo booth shooting sequence and be used in captions, QR codes and the filename prefix.	
{printCounter}	Print counter supplied by Breeze Hub	
{printQuotaUsed}	Returns 1 if {printCounter} reaches 0 else returns 1	
{syncCode}	The text entered in the sync keyboard displayed before updating an event	
{qr1}, {qr2}, {qr3}... {qr10}	The values of strings scanned from a QR code	
{bt1}, {bt2}, {bt3}... {bt10}	The values of strings received from a Bluetooth device	
{to}	The 'to' email address when sending an email or the phone number when sending a text. This token can only be used in the message text.	
{startTime}	Photo booth start time when using timed sessions	e.g. 19:00
{endTime}	Photo booth end time when using timed sessions	e.g. 22:30
{timeToStart}	Time until photo booth starts when using timed sessions	e.g. 2:35:12

Tokens for modifying strings

The tokens below can be used to modify tokens or strings:

Token	Description	Example
{left,n,str}	Extracts the first n characters from str (which can be a string or token).	{left,4,{filename}} for D:\Photos\image1.jpg will give: image
{mid,n,m,str	Extracts m characters starting from the n'th	{mid,1,3,{filename}} for D:\Photos\image1.jpg

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}	character from str (which can be a string or token).	will give: mag {mid,3,,{filename}} for D:\Photos\image1.jpg will give: ge1
{right,n,str}	Extracts the last n characters from str (which can be a string or token).	{right,2,{filename}} for D:\Photos\image1.jpg will give: e1
{field,n,str}	Extracts the nth field from str. Fields are separated by space, period, hyphen, slash, backslash or underscore characters	{field,2,{filename}} for D:\Photos\IMG_0001.jpg will give: IMG
{first,str}	Extracts the first word from str (which can be a string or token).	{first,%L} for an image taken Monday, January 17, 2015 will give: Monday
{last,str}	Extracts the last word from str (which can be a string or token).	{last,%L} for an image taken Monday, January 17, 2015 will give: 2015
{upper,str}	Converts str to upper case	{upper,%B} for a photo taken in June gives: JUNE
{lower,str}	Converts str to lower case	{lower,%B} for a photo taken in June gives: june
{capitalize,str}	Converts str to lower case and capitalizes the first letter	{capitalize,john} gives John
{default,str1,str2}	Returns str1 unless it is an empty string in which case it returns str2 (str1 and str2 can be strings or tokens	{default,1,2} returns 1 {default,,2} returns 2
{if,test,str1,str2}	Returns str1 if test contains any text except 0 else returns str2 (test, str1 and str2 can be strings or tokens)	{if,1,2,3} returns 2 {if,0,2,3} returns 3 {if,,2,3} returns 3
{compare,str1,str2}	Returns 1 if str1 is the same as str2 else returns an empty string	{compare,photo,photo} returns 1, {compare,photo,image} returns empty string
{urlencode,str}	Encodes str so that it can be used as a parameter in a URL e.g. when providing a URL for a microsite	https://yoursite.com/viewer.php?id={urlencode,my name} gives https://yoursite.com/viewer.php?id=my%20name
{tinyUrl,str}	Converts a URL to a shortened version using tinyurl.com	https://breezesys.com/BreezeBooth/betatest.htm is shortened to https://tinyurl.com/ycnmcn8n
{encrypt,str}	Encrypts a string. This token is intended for use with QR codes on prints which can be scanned in by the app and decoded using the {decrypt,str} token.	
{decrypt,str}	Decrypt a string that has been encrypted using {encrypt,str}	

Tokens for accessing survey data

Surveys are displayed at the start of the session and are used to capture information from users. There are three types on survey input: text, check boxes and radio buttons. The values entered in these inputs can be accessed using tokens in the form {<keyboard>_<input_type>_<id>}.
<keyboard> is the name of the survey keyboard e.g. "survey1" for the first survey keyboard, "survey2" for the second etc.
<input_type> is the input type which is "text" for a text input, "chkbox" for a check box or "radio" for a radio button
<id> is the id identifying the input

Examples:

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{survey1_text_name} - returns the value entered in the text input with id "name" in survey1 keyboard
{survey1_chkbox_promo} - returns 1 if the check box with id "promo" is checked in survey1 keyboard else returns 0
{survey1_radio_mood} - returns the id of the radio button selected in the radio button group "mood" in survey1 keyboard

These tokens can be used in captions for prints e.g. adding the guest's name to the print by setting the caption text to "Name: {survey1_text_name}"
The tokens can also be used in the email and text message text e.g. "Hi {survey1_text_name}, here are your photos from the wedding".
Tokens can also be used to define the background/overlay suffix for prints, burst GIFs and videos.

Additional tokens used by Breeze Hub

The tokens below are only available in Breeze Hub:

Token	Description	Example
{computerName}	The name of the PC running Breeze Hub	DESKTOP-61QGHDE
{path}	The filename of the file being downloaded from the iPad. This token can only be used when specifying the download folder.	2023-04-11 103532_1.jpg

9 Screens Displayed to the User

Each screen consists of an optional JPEG background image overlaid by the live images from the camera which in turn are overlaid by an optional animated GIF an optional PNG overlay image and optional video with alpha channel. The various image files should have the same filename as the main screen image e.g. ready.jpg, ready.gif and ready_overlay.png.

To get the best quality, screen images should match the size and aspect ratio of the iPad's screen.The table below shows the screen resolutions and aspect ratios of recent iPad models:

Standard iPads and iPad Pro 9.7"	2048 x 1536 pixels (4:3 aspect ratio)
iPad 10.2"	2160 x 1620 pixels (4:3 aspect ratio)
iPad Pro 10.5"	2224 x 1668 pixels (4:3 aspect ratio)
iPad Air 10.9"	2360 x 1640 pixels (aspect ratio slightly narrower than 4:3)
iPad Pro 11"	2388 x 1668 pixels (aspect ratio slightly narrower than 4:3)
iPad Pro 12.9"	2732 x 2048 pixels (4:3 aspect ratio)

If the screen image is not the same size as the screen it will be resized to fit. This may cause the image to be stretched if its aspect ratio does not match that of the screen.

Please note: The Event Editor has several settings for the screen aspect ratio: 4:3 (most iPads), iPad Air 10.9", iPad Pro 11", "16:9 (most iPhones)" or "19.5:9 (iPhone X series)". When this is set to 4:3 the screens will fill the screen of most iPads but the iPad Air 10.9" and iPad Pro 11" will display the screens with a small black border at the top and bottom. When this is set to iPad Pro 11" the screens

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will fill the iPad Pro 11"'s screen and will be displayed with a small black border on the sides of other iPads. iPhones have a narrower aspect ratio than iPads (either 16:9 or 19.5:9) and will display an event designed for a 4:3 aspect ratio iPad with a large black border at the top and bottom of the screen.

Animated GIFs are displayed over JPEG background images and the live feed from the camera and can contain transparent areas. Please note that the GIF format only supports fully opaque or fully transparent areas.

PNG overlays are displayed over the JPEG background, live feed from the camera and animated GIF and can contain transparent and semi-transparent areas. The alpha channel of the PNG image can be used to give full control over the transparency of the overlay from fully transparent through semi-transparent to fully opaque.

Videos are displayed over the JPEG background, live feed from the camera, animated GIF and PNG overlays. Videos can be in MP4 format (with a .mp4 file extension) or Apple QuickTime format (with a MOV file extension). QuickTime videos saved in HEVC format can contain an alpha channel to give full control over the transparency of the video from fully transparent through semi-transparent to fully opaque.

Screens

default_background.jpg - default background image for any screen that does not explicitly define a JPEG background
ready.jpg, ready.gif, ready.mov/mp4, ready_overlay.png - ready screens displayed in photo mode
ready_overlay_qr.png - optional screen to provide visual feedback when a QR code is scanned in the ready screen
ready_info<n>.jpg, ready_info<n>.gif, ready_info<n>.mov/mp4, ready_info<n>.png - info screens available from the photo ready screen (<n> is the page number starting from 1)
menu1.jpg, menu1.gif, menu1.png, menu1_selected.png - screens for displaying menu 1 (only available from the ready screens)
menu2.jpg, menu2.gif, menu2.png, menu2_selected.png - screens for displaying menu 2 (only available from the ready screens)
menu3.jpg, menu3.gif, menu3.png, menu3_selected.png - screens for displaying menu 3 (only available from the ready screens)
menu4.jpg, menu4.gif, menu4.png, menu4_selected.png - screens for displaying menu 4 (only available from the ready screens)
<n>.jpg, <n>.png, <n>.gif, <n>.mov/mp4 - countdown screen in photo mode (<n> is the photo number starting from 1)
countdown.jpg, countdown.png, countdown.gif, countdown.mov/mp4 - default countdown screen used if the numbered countdown screens aren't found
taking.jpg, taking.gif, taking.mov/mp4, taking.png - displayed after the countdown when the photo is being taken in photo mode
af_error.jpg, af_error.gif, af_error.mov/mp4, af_error.png - displayed if an AF error occurs when using an external camera
af_abort.jpg, af_abort.gif, af_abort.mov/mp4, af_abort.png - displayed before returning to the ready screen if AF fails three times when using an external camera
preview.jpg, preview.gif, preview.mov/mp4, preview.png - displayed with the optional preview after taking each photo in photo mode
processing.jpg, processing.gif, processing.mov/mp4, processing.png - displayed while preparing the print layout after taking all the photos in photo mode
confirm_printing.jpg, confirm_printing.gif, confirm_printing.mov/mp4, confirm_printing.png - displayed when the option print confirmation screen is shown after preparing the print layout in photo mode
printing.jpg, printing.gif, printing.mov/mp4, printing.png - displayed when printing using AirPrint or printing from the sharing gallery
share.jpg, share.gif, share.mov/mp4, share.png - displayed while sharing the print layout in photo mode

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share_slideshow.jpg, share_slideshow.png - displayed while sharing an animated GIF or MP4 slideshow in photo mode
share_info<n>.jpg, share_info<n>.gif, share_info<n>.mov/mp4, share_info<n>.png - info screens available from the sharing screens screen (<n> is the page number starting from 1)
before_session.jpg, before_session.gif, before_session.mov/mp4, before_session.png - screen shown before photo booth starts when using timed sessions.
after_session.jpg, after_session.gif, after_session.mov/mp4, after_session.png - screen shown after photo booth ends when using timed sessions.
power_saving.jpg, power_saving.gif, power_saving.mov/mp4, power_saving.png - power saving screens displayed when power saving is active

Different "taking" screens can be displayed for each photo in the sequence by appending the photo number to the filename e.g. taking1.png for the first photo, taking2.png for the second photo etc.
Different "preview" screens can be displayed for each photo in the sequence by appending the photo number to the filename e.g. preview1.png for the first photo, preview2.png for the second photo etc.

video_ready.jpg, video_ready.gif, video_ready.mov/mp4, video_ready.png - ready screens displayed in video mode
video_ready_info<n>.jpg, video_ready_info<n>.gif, video_ready_info<n>.mov/mp4, video_ready_info<n>.png - info screens available from the video ready screen (<n> is the page number starting from 1)
video_ready_overlay_qr.png - optional screen to provide visual feedback when a QR code is scanned in the video ready screen
video_countdown.jpg, video_countdown.gif, video_countdown.mov/mp4, video_countdown.png - displayed during the countdown in video mode
countdown.jpg, countdown.png, countdown.gif, countdown.mov/mp4 - default countdown screen used if the video_countdown countdown screen isn't found
video_capture.jpg, video_capture.gif, video_capture.mov/mp4, video_capture.png - displayed when the video is being captured after the countdown in video mode
video_processing.jpg, video_processing.gif, video_processing.mov/mp4, video_processing.png - displayed while the video after capture in video mode
video_playback.jpg, video_playback.png - displayed when playing back a video captured in video mode
video_share.jpg, video_share.png - displayed while sharing videos in video mode

gif_ready.jpg, gif_ready.gif, gif_ready.mov/mp4, gif_ready.png - ready screens displayed in burst GIF mode
gif_ready_info<n>.jpg, gif_ready_info<n>.gif, gif_ready_info<n>.mov/mp4, gif_ready_info<n>.png - info screens available from the burst GIF ready screen (<n> is the page number starting from 1)
gif_ready_overlay_qr.png - optional screen to provide visual feedback when a QR code is scanned in the GIF ready screen
gif_countdown.jpg, gif_countdown.gif, gif_countdown.mov/mp4, gif_countdown.png - displayed during the countdown in burst GIF mode
countdown.jpg, countdown.png, countdown.gif, countdown.mov/mp4 - default countdown screen used if the gif_countdown countdown screen isn't found
gif_capture.jpg, gif_capture.gif, gif_capture.mov/mp4, gif_capture.png - displayed when the GIF is being recorded after the countdown in burst GIF mode
gif_processing.jpg, gif_processing.gif, gif_processing.mov/mp4, gif_processing.png - displayed while creating GIF and/or MP4 video after capture in burst GIF mode
gif_playback.jpg, gif_playback.png - displayed when playing back an animated GIF or MP4 video captured in burst GIF mode
gif_share.jpg, gif_share.png - displayed while sharing GIFs or MP4 videos in burst GIF mode

sending_email.jpg, sending_email.gif, sending_email.mov/mp4, sending_email.png - displayed when sending an email
sending_text.jpg, sending_text.gif, sending_text.mov/mp4, sending_text.png - displayed when sending a

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text
sending.jpg, sending.gif, sending.mov/mp4, sending.png - default sending screen used if the sending_email or sending_text screens aren't found
standby.jpg, standby.gif, standby.mov/mp4, standby.png - displayed while in standby mode (the camera live feed is disabled to save power in standby mode)

gallery.jpg - background for the gallery thumbnail screen
gallery_share.jpg, gallery_share.png - displayed when sharing photos from the gallery
gallery_slideshow_share.jpg, gallery_slideshow_share.png - displayed when sharing slideshow animated GIFs or MP4s from the gallery
gallery_gif_share.jpg, gallery_gif_share.png - displayed when sharing burst GIFs or MP4s from the gallery
gallery_video_share.jpg, gallery_video_share.png - displayed when sharing videos from the gallery
gallery_share_info<n>.jpg, gallery_share_info<n>.gif, gallery_share_info<n>.png - info screens available from the gallery sharing screens screen (<n> is the page number starting from 1)

Countdowns

The countdown displayed when capturing photos, burst GIFs or videos can be simple text or an animation. If there is a countdown animation file (GIF or video) the animation will be used for the countdown and the length of the animation will determine the duration of the countdown. If there is no countdown animation the countdown text will be displayed instead (photo settings, burst GIF settings or video settings).

In photo mode you can have separate countdowns for each photo e.g. 1.mov for the first photo, 2.mov for the second photo, 2.mov for the third photo etc.
Alternatively you can use the default countdown for each photo in the sequence e.g. countdown.mov.

When capturing burst GIFs you can have countdown animation specific to burst GIFs, e.g. gif_countdown.mov, or use the default countdown e.g. countdown.mov.

When capturing videos you can have countdown animation specific to videos, e.g. video_countdown.mov, or use the default countdown e.g. countdown.mov.

Ready Screens

Different ready screens can be displayed to show the currently selected filter style, mirroring options, whether face smoothing is enabled and the current value of the ready screen string. This is done by adding the style name, mirroring option etc. to the filename. When the photo booth is running the ready screen will automatically be updated if the user selects an option that changes the filter style, mirroring style, selects face smoothing or changes the ready screen string.

The filter style can be used to select the ready screen:
ready.jpg, ready_overlay.png - default name for the ready background and overlay screens
ready_monochrome.jpg, ready_monochrome_overlay.png - ready background and overlay screens displayed when the filter style is set to monochrome
ready_sepia.jpg, ready_sepia_overlay.png - ready background and overlay screens displayed when the filter style is set to sepia

The available filter styles are: normal, monochrome, sepia, comic, filter1, filter2, filter3, filter4, filter5, filter6

The mirror style can also be used to select the ready screen:
ready.jpg, ready_overlay.png - default name for the ready background and overlay screens
ready_mirrorLeftRight.jpg, ready_mirrorLeftRight_overlay.png - ready background and overlay screens

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displayed when the mirror style is set to mirrorLeftRight
ready_mirrorTopBottom.jpg, ready_mirrorTopBottom_overlay.png - ready background and overlay screens displayed when the mirror style is set to mirrorTopBottom

The available mirror styles are: off, mirrorLeftRight, mirrorTopBottom, swapTopHalves, mosaic2x2

Enabling the face smoothing filter can also be used to select the ready screen:
ready.jpg, ready_overlay.png - default name for the ready background and overlay screens
ready_smoothing.jpg, ready_smoothing_overlay.png - ready background and overlay screens displayed when the face smoothing filter is enabled

The ready screen string is a special string that can be set using touchscreen actions. It defaults to the value "rdy1" and can be set to any value between "rdy1" and "rdy10" using touchscreen actions defined in the ready screens. If the ready screen string changes the ready screen is updated allowing the value of the ready screen string to select which ready screen is displayed:
ready.jpg, ready_overlay.png - default name for the ready background and overlay screens
ready_rdy<n>.jpg, ready_rdy<n>_overlay.png - ready background when different ready screen strings are selected
The ready screen string can also be used to select different backgrounds when using AI background removal. The {readyScreenString} token can also be used to read the value of the ready screen string

Multiple options can be added to the filename by separating them with +. The options must be added to the filename in order with the filter option first followed by the mirroring option followed by the face smoothing e.g.
ready_sepia+mirrorLeftRight+smoothing.jpg - ready screen displayed when the filter style is set to sepia and the mirror style is set to mirrorLeftRight and face smoothing is enabled
ready_sepia+mirrorLeftRight.jpg - ready screen displayed when the filter style is set to sepia and the mirror style is set to mirrorLeftRight
ready_sepia_rdy2.jpg - ready screen displayed when the filter style is set to sepia and the ready screen string is rdy2
ready_sepia+smoothing.jpg - ready screen displayed when the filter style is set to sepia and face smoothing is enabled
ready_mirrorLeftRight+smoothing.jpg - ready screen displayed when the mirror style is set to mirrorLeftRight and face smoothing is enabled

Notes:

1. The number of print copies selected can be displayed either as text using the confirm_printing screens or as separate screen images for each number of copies by appending the number of copies to the filename e.g. confirm_printing_1.jpg, confirm_printing_2.jpg, confirm_printing_3.jpg etc.
2. Countdown text is displayed in the countdown screens unless there is an animated GIF or movie file for the countdown in which case the countdown ends after the GIF or movie has been played once
3. The sending_email and sending_text screens are displayed briefly to provide the user with visual feedback but don't mean that the email or text has actually been sent. Emails and text messages sent directly from the iPad are sent in the background when the iPad is connected to the internet. If there is no internet connection the emails and text messages will be queued until the internet connection is restored.

The sequence of screens displayed during a typical two photo shooting sequence in photo mode is:
ready.jpg/ready.gif/ready_overlay.png - ready screen
1.jpg/1.gif/1.mov/1.png - countdown for the first photo
taking.jpg/taking.gif/taking.mov/taking.png - taking the first photo
preview.jpg/preview.gif/preview.mov/preview.png - preview of the first photo
2.jpg/2.gif/2.mov/2.png - countdown for the second photo
taking.jpg/taking.gif/taking.mov/taking.png - taking the second photo
preview.jpg/preview.gif/preview.mov/preview.png - preview of the second photo

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processing.jpg/processing.gif/processing.mov/processing.png - preparing the print layout
confirm_printing.jpg/confirm_printing.gif/confirm_printing.mov/confirm_printing.png - displaying the print layout asking for confirmation
printing.jpg/printing.gif/printing.mov/printing.png - displayed when printing using AirPrint
share.jpg/share.gif/share.mov/share.png - sharing the print layout
sending_email.jpg/sending_email.gif/sending_email.mov/sending_email.png - emailing the print layout
share.jpg/share.gif/share.mov/share.png - sharing the print layout
ready.jpg/ready.gif/ready.mov/ready_overlay.png - return to the ready screen ready for the next session

The sequence of screens displayed capturing a video in video mode is:
video_ready.jpg/video_ready.gif/video_read.mov/video_ready_overlay.png - ready screen
video_countdown.jpg/video_countdown.gif/video_countdown.mov/video_countdown.png - countdown before starting capture
video_capture.jpg/video_capture.gif/video_capture.mov/video_capture.png - capturing the burst GIF
video_processing.jpg/video_processing.gif/video_processing.mov/video_processing.png - creating the animated GIF and/or MP4 video
video_playback.jpg/video_playback.gif/video_playback.mov/video_playback.png - displaying GIF or MP4 and asking for confirmation
video_share.jpg/video_share.gif/video_share.mov/video_share.png - sharing the GIF or MP4
sending_email.jpg/sending_email.gif/sending_email.mov/sending_email.png - emailing the print layout
video_share.jpg/video_share.gif/video_share.mov/video_share.png - sharing the GIF or MP4
video_ready.jpg/video_ready.gif/video_ready.mov/video_ready_overlay.png - return to the ready screen ready for the next session

The sequence of screens displayed capturing a typical GIF in burst GIF mode is:
gif_ready.jpg/gif_ready.gif/gif_read.mov/gif_ready_overlay.png - ready screen
gif_countdown.jpg/gif_countdown.gif/gif_countdown.mov/gif_countdown.png - countdown before starting capture
gif_capture.jpg/gif_capture.gif/gif_capture.mov/gif_capture.png - capturing the burst GIF
gif_processing.jpg/gif_processing.gif/gif_processing.mov/gif_processing.png - creating the animated GIF and/or MP4 video
gif_playback.jpg/gif_playback.gif/gif_playback.mov/gif_playback.png - displaying GIF or MP4 and asking for confirmation
gif_share.jpg/gif_share.gif/gif_share.mov/gif_share.png - sharing the GIF or MP4
sending_email.jpg/sending_email.gif/sending_email.mov/sending_email.png - emailing the print layout
gif_share.jpg/gif_share.gif/gif_share.mov/gif_share.png - sharing the GIF or MP4
gif_ready.jpg/gif_ready.gif/gif_ready.mov/gif_ready_overlay.png - return to the ready screen ready for the next session

Payment Screens
When the print payment option is selected the following screens are displayed before printing photos:
print_payment.jpg/print_payment.gif/print_payment.mov/print_payment.png - screen displayed when waiting for a payment
print_payment_accepted.jpg/print_payment_accepted.gif/print_payment_accepted.mov/
print_payment_accepted.png - screen displayed for 2 secs after a payment has been accepted
print_payment_cancelled.jpg/print_payment_cancelled.gif/print_payment_cancelled.mov/
print_payment_cancelled.png - screen displayed for 2 secs after a payment has failed or has been cancelled

When the share payment option is selected the following screens are displayed after the user has entered their email address or phone number before the message is sent:
email_payment.jpg/email_payment.gif/email_payment.mov/email_payment.png - screen displayed when waiting for a payment before sending an email
email_payment_accepted.jpg/email_payment_accepted.gif/email_payment_accepted.mov/

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email_payment_accepted.png - screen displayed for 2 secs after a payment has been accepted
email_payment_cancelled.jpg/email_payment_cancelled.gif/email_payment_cancelled.mov/ email_payment_cancelled.png - screen displayed for 2 secs after a payment has failed or has been cancelled
text_payment.jpg/text_payment.gif/text_payment.mov/text_payment.png - screen displayed when waiting for a payment before sending a text
text_payment_accepted.jpg/text_payment_accepted.gif/text_payment_accepted.mov/ text_payment_accepted.png - screen displayed for 2 secs after a payment has been accepted
text_payment_cancelled.jpg/text_payment_cancelled.gif/text_payment_cancelled.mov/ text_payment_cancelled.png - screen displayed for 2 secs after a payment has failed or has been cancelled

Please see Payment System for more information on the print and sharing payment modes.

Keyboards, Surveys and Menus
Please see Keyboards and Surveys for information about the touchscreen keyboards that are displayed for optional surveys at the start of the shooting sequence and for entering email addresses and phone numbers when sharing.
Please see Menus for information about displaying menus

Tips for using the default_background.jpg screen image
The default_background.jpg screen image provides a default background image for any screen that does not explicitly define a JPEG background. If you define all buttons and menus using PNG overlays you can use the default_background.jpg image to provide the screen backgrounds. This reduces the number of screen images required for an event and also makes it easier to change the appearance of an event because there is only one background image to edit.
You can also create more fluid screen transitions by using a constant background image with buttons and menus provide as overlays by setting the overlay fade time in the general settings.

The easiest way to see how the screens work is to take a look at the sample events that come with the event editor or to use the event creator to create an event and its screens.

Overlay/Background Filename Suffix

The overlay/background suffix for photos, burst GIFs or videos provides a way to dynamically select overlays and backgrounds and can also be used to dynamically select the screen that is displayed. The overlay/background suffix can use tokens to extract data from the survey screens and other sources.

The overlay/background filename suffix can be used to select the following screens in photo, burst GIF and video modes:
Photo mode: the countdown, preview and sharing screens e.g. 1_bg1.jpg, preview_bg1.jpg and share_bg1.jpg
Burst GIF mode: the countdown, capture and sharing screens e.g. gif_countdown_bg1.jpg, gif_capture_bg1.jpg and gif_share_bg1.jpg
Video mode: the countdown, capture and sharing screens e.g. video_countdown_bg1.jpg, video_capture_bg1.jpg and video_share_bg1.jpg

Example: Using a survey to select different backgrounds for photos when using AI background removal
1) Enable AI background removal and select the options to remove the background in live view and have a transparent background
2) Create a survey using survey 1 and add a radio box group named "bg" to allow users to select a background. Give each radio button an id identifying the background e.g. bg1, bg2, bg3.
3) The results from the survey can be accessed using the token {survey1_radio_bg} and will return bg1, bg2, bg3 depending upon the background selected by the user. This token can be placed in the overlay/background filename suffix to select the screens displayed to the user as well as the overlays

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and backgrounds applied to the output e.g. if the token overlay/background filename suffix evaluates to bg1 the countdown screen for the first photo would be 1_bg1.jpg. Edit this screen in an image editor to add the background for bg1.
An example event showing how this works can be downloaded from the AI background removal page.
Note: there are alternative methods for allowing users to select different background when using AI background removal. Please see AI background removal for details.

Animated GIFs

Each screen can be animated using an optional animated GIF by creating a GIF with the same name as the main screen image e.g. ready.gif for the ready.jpg screen.
If the GIF should play in a continuous loop the suffix _loop should be added to the filename e.g. ready_loop.gif.

By default the animated GIF will be centered on the screen. The position can be specified by appending the following modifiers enclosed in curly brackets to the end of the filename:
T - place the center of the animated GIF at the top of the screen
B - place the center of the animated GIF at the bottom of the screen
L - place the center of the animated GIF at the left of the screen
R - place the center of the animated GIF at the right of the screen
W - width of the animated GIF
H - height of the animated GIF
Each modifier can be followed by a number followed by % (to specify the percentage offset wrt the screen size).

Examples:
ready.gif - place a GIF that plays once in the ready screen and place it in the center of the screen
ready_loop.gif - place a GIF that plays in a continuous loop in the ready screen and place it in the center of the screen
ready_loop_{T0%}.gif - place a GIF that plays in a continuous loop in the ready screen and place its center at the top of the screen (the top half will be off the screen), centered horizontally
ready_loop_{T10%}.gif - place a GIF that plays in a continuous loop in the ready screen and place its center 10% of the screen height from the top of the screen, centered horizontally
ready_loop_{B10%R20%}.gif - place a GIF that plays in a continuous loop in the ready screen and place its center 10% of the screen height from the bottom of the screen and 20% of the screen width from the right of the screen
ready_loop_{T10%W10%}.gif - place a GIF that plays in a continuous loop in the ready screen and place its center 10% of the screen height from the top of the screen, centered horizontally and resize to 10% of the screen width

Video Animations

Most screens can be animated using an optional video by creating a MP4 or MOV file with the same name as the main screen image e.g. ready.mov for the ready.jpg screen.

If the video should play in a continuous loop the suffix _loop should be added to the filename e.g. ready_loop.mov. By default the video will be centered on the screen. The size and position can be specified by appending the modifiers enclosed in curly brackets to the end of the filename. This works in exactly the same way as animated GIFs and is explained in the previous section.

Videos with alpha channels allow the transparency of the video to be controlled on a frame by frame and pixel by pixel basis. This makes it possible to create a video which has some areas that are fully transparent and other areas with varying transparency from semi-transparent to fully opaque.

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Videos with alpha channels used animate screens in Breeze Booth for iPad need to be saved as QuickTime files in HEVC format. The HEVC video format with alpha channels is relatively new and does not yet have widespread support. Many high end video editing tools can create videos with alpha channels in Apple ProRes 4444 format which can then be converted to HEVC format. This can be done using Apple's QuickTime Player that comes free with MacOS. QuickTime Player also has the ability to load a series of PNG images with alpha channels and then export them as an HEVC video.

Music Files

Sound can be added to the screens by adding a MP3 file with the same name as the screen being displayed e.g. name the file ready.mp3 to play a sound when the ready.jpg screen is displayed. The MP3 file will play for its full duration unless another MP3 file replaces it. If you want to cancel a long MP3 file when the next screen is displayed you can use a short silent file with the name of the next screen.

Watermarks

When the iPad is not signed in it runs in free mode which allows up to 10 sets of photos, videos or GIFs to be captured each day before a watermark is applied to the live view images and all output. The watermark that is applied to videos, GIFs and print layouts is fixed but the watermark that is displayed over live view images can be replaced with a PNG image named live_view_watermark.png.

10 Keyboards and Surveys

Touchscreen keyboards are used to capture user input such as email addresses and phone numbers for sharing photos or for responses to survey questions. A touchscreen keyboard can contain one or more keys, text entry areas, checkboxes or radio buttons.

The appearance of the touchscreen is defined by PNG screen images e.g.

The appearance of the keyboard is defined by up to four PNG screen images e.g.
keyboard_email_lowercase.png - lower case keys
keyboard_email_lowercase_pressed.png - lower case keys that have been pressed
keyboard_email_uppercase.png - upper case keys
keyboard_email_uppercase_pressed.png - upper case keys that have been pressed

The background for the keyboard is defined by an optional PNG image e.g. keyboard_email_background.png. If the PNG background image is not found the keyboard background will use the default_background.jpg background image instead.

The keyboard_email_uppercase.png and keyboard_email_uppercase_pressed.png can be omitted if you don't need shifted characters e.g. for a keyboard used to enter phone numbers.

The behavior is defined by actions added using the Touchscreen Editor in the Event Editor and is saved in an XML file e.g.
keyboard_email.xml

The alpha channel of the PNG images can be used to control their transparency allowing areas of the keyboard to fully or semi-transparent so that the screens beneath them are visible.

When the keyboard is displayed initially it uses the lower case image e.g. keyboard_email_lowercase.

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png.

If the touchscreen action for a normal key is pressed (e.g. 'a') the area corresponding to the touchscreen action is copied from the "lower case pressed" image to provide a visual indication that it has been pressed and then it reverts to the "lower case" image. The letter (or word) in the touchscreen action is added to the text area that has focus.
If a touchscreen action set to <shift> is pressed the keyboard is updated to use touchscreen areas copied from the "upper case" image and the next normal key pressed will perform the upper case action. A visual indication that the key has been pressed is provided by copying the touchscreen action area from the "upper case pressed" image. The keyboard then reverts to the lower case state.

If keyboard has one or more text fields the currently selected one (aka the text field having input focus) is highlighted by copying the area assigned to the text field from the "lower case pressed" image. All other text fields will display the area copied from the "lower case" image. This provides a way of giving the user a visual indication of which text field will receive input.

Checkboxes can be selected or not selected. When the user taps on the touchscreen area for a checkbox it toggles its state i.e. switches from selected to not selected or vice versa. The checkbox's state is indicated by copying the touchscreen area from the "lower case" image when it is not selected or from the "lower case pressed" image if it is selected.

Radio buttons are similar to checkboxes except that they can be defined in groups and one and only one radio button can be selected within a group. If you tap on a radio The radio button's state is indicated by copying the touchscreen area from the "lower case" image when it is not selected or from the "lower case pressed" image if it is selected.

The different types of keyboard have different prefixes:
keyboard_email_ for the touchscreen keyboard displayed when sharing by email e.g. keyboard_email_lowercase.png
keyboard_text_ for the touchscreen keyboard displayed when sharing by text e.g. keyboard_text_lowercase.png
survey<n>_keyboard_ for the touchscreen keyboard for survey screen <n> e.g. survey1_keyboard_lowercase.png
keyboard_sync - keyboard displayed in response to the "enter code then sync" touchscreen actions

An MP3 audio file can be played when the keyboard is displayed by naming it the same as the keyboard e.g. to play an audio file when the email keyboard is displayed name the MP3 file keyboard_email.mp3.
For survey screens the MP3 audio file can be named survey<n>.mp3 or survey<n>_keyboard.mp3.

Tip: Create the keyboard images with a transparent background and use the keyboard background image to provide the background. This will make it easier to re-use keyboard layouts in other events because you can change the background simply by replacing the background image.

Survey Keyboard Example Images

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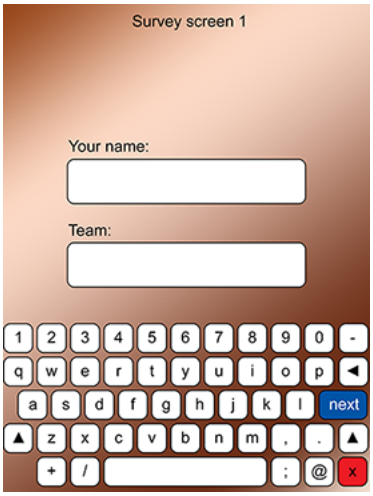
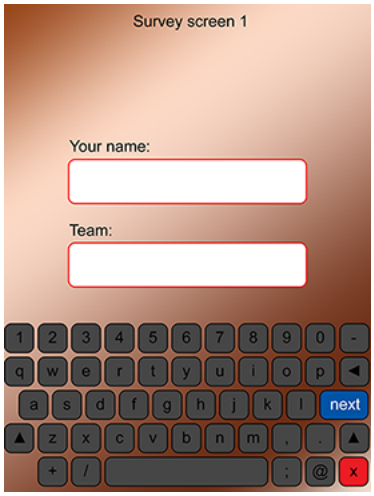
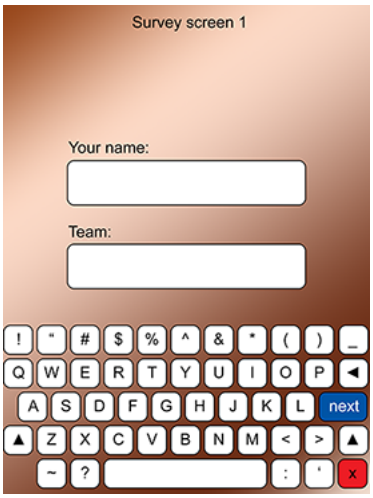


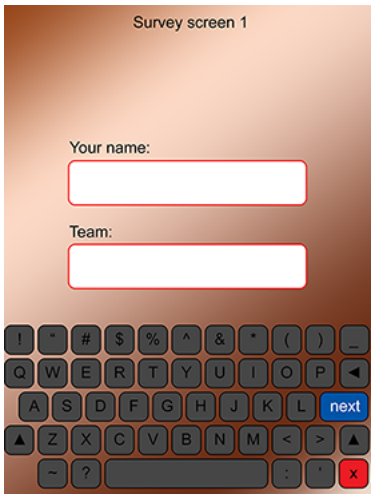
survey1_keyboard_lowercase.png



survey1_keyboard_lowercase_pressed.png



survey1_keyboard_uppercase.png



survey1_keyboard_uppercase_pressed.png

When the survey keyboard is first displayed it will show the lower case image with the area for the first text field highlighted by copying the area from the survey1_keyboard_lowercase_pressed.png image:

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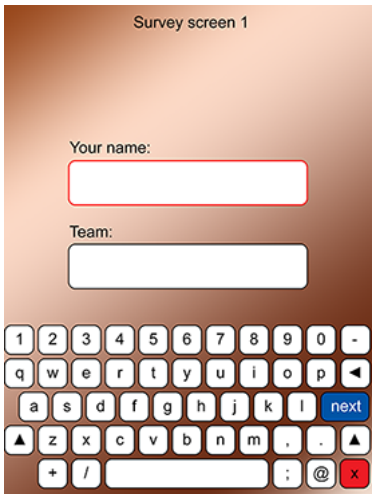
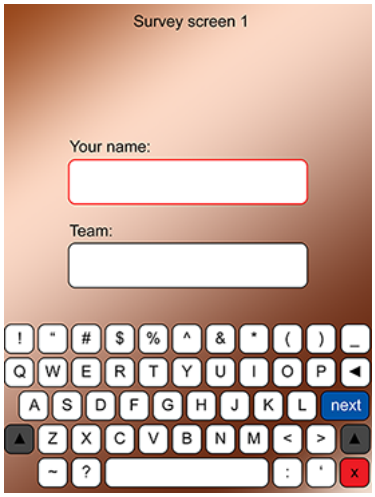


When tapping the normal keys the key will be briefly highlighted using an area copies from the survey1_keyboard_lowercase_pressed.png image and the text added to the highlighted text field. Tap on the shift (up arrow) key and all the keys will copied from the survey1_keyboard_uppercase.png image except the two shift keys which are copied from the survey1_keyboard_uppercase_pressed.png image because they are pressed:



Keyboard Images for checkboxes and radio buttons

Checkboxes and radio buttons only require the lowercase and lowercase_pressed keyboard images. They display an area copied from the lowercase keyboard image when not selected and from the lowercase_pressed image when selected.
Here are some example keyboard images for a survey2 screen with checkboxes and radio buttons:

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survey2_keyboard_lowercase.png

survey2_keyboard_lowercase_pressed.png

The keyboard was setup so that the "free bar of chocolate" checkbox was initially set and the two radio button groups defaulted to the first radio button in each group. What is initially displayed is the survey2_keyboard_lowercase.png image with areas copied from the survey2_keyboard_lowercase_pressed.png for the "chocolate" checkbox and the "every day" and "16 or over" radio buttons:

Displaying error screens

Text Fields

Text fields can be mandatory or optional and can be used to enter free text, email addresses or telephone numbers. They can also have an optional regular expression to validate the input. If the user taps the area with the "<ok>" touchscreen action and a text field contains an error an optional error screen will be displayed, the text area will be highlighted by giving it input focus and the keyboard screen won't close.

The type of text field is defined by the "id" entered using the touchscreen action editor in the Event Editor.

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If the id is set to "email" or "cc" the text field will only accept an email address e.g. name@site.com. If the user enters an invalid email address or enters nothing in a mandatory email or cc text field the optional error screen named invalid_email_address.png is displayed for a few seconds.

If the id is set to "phone" the text field will only accept a phone number in the form of 0 followed by a series of numbers or + followed by a series of numbers (for international dialing codes).
If the user enters an invalid phone number or enters nothing in a mandatory phone text field the optional error screen named invalid_phone_number.png is displayed for a few seconds.

If the id is set to anything else the text field will accept any text. If the user fails to enter anything in a mandatory text field an optional error screen can be displayed for a few seconds. The default name for the error screen is mandatory_text_missing.png but a specific error screen can be displayed by adding the id to the end of the filename e.g. if the text field id is "age" the error screen would be named mandatory_text_missing_age.png.

If the text field is defined with a regular expression to valid the input the error screen that is displayed should be named regex_failed_<id>.png where <id> is the id of the text field e.g. if the input field has the id "phone" the error screen should be named regex_failed_phone.png.

Checkboxes
Checkboxes can mandatory which means that they have to be set when the "<ok>" touchsreen action is tapped. If the user taps the "<ok>" touchscreen action without selecting a mandatory checkbox an optional error screen will be displayed. The error screen is a PNG overlay image named mandatory_checkbox_<id>.png where <id> is the id of the checkbox.

Radio Buttons
If a group of radio buttons is defined with none of the buttons being set the keyboard will be displayed with none of the radio buttons selected. An optional error screen will be displayed if the user taps the "<ok>" touchscreen action without selecting one of the buttons in the radio button group. The error screen is a PNG overlay image named mandatory_radiobtn_<id>.png where <id> is the id of the radio button group.

Surveys

Survey keyboards are displayed after the starting the shooting sequence before the initial countdown commences. The first survey screen should have the prefix survey1_keyboard_ e.g. survey1_keyboard_lowercase.png. You can define as many survey screens as you like by naming them in sequence e.g. survey1_keyboard_, survey2_keyboard_, survey3_keyboard_ etc.

If the user taps a touchscreen area with the action "<cancel>" the shooting sequence is aborted and the ready screen is displayed.

The survey data is included in the XML summary file that is saved after each session e.g.

```
<?xml  version="1.0"  encoding="ISO-8859-1"?>
<breeze_systems_photobooth  id="86EC1E02-CCBA-49F5-ABA7-5292B475255D"  app="Breeze  Booth"  build="26"  name=
     <photo_information>
          <date>2019/02/14</date>
          <time>17:35:57</time>
          <photobooth_images_folder>Portrait  with  survey  and  sharing/portrait</photobooth_images_folder
          <prints>1</prints>
          <survey_data>
               <survey1_text   id="name">Chris</survey1_text>
               <survey1_text   id="team">Breeze</survey1_text>
               <survey2_chkbox   id="emails">0</survey2_chkbox>
               <survey2_chkbox   id="chocolate">1</survey2_chkbox>
               <survey2_radio   id="run">2</survey2_radio>
```

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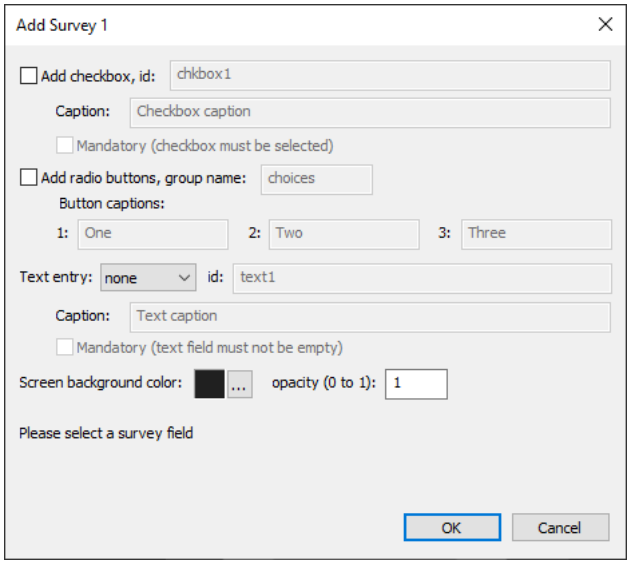
```
            <survey2_radio   id="age">1</survey2_radio>
        </survey_data>
        <photos>
            <photo   md5="ab18e7101d89e13dc00de241e2533651"   image="1">17-35-57.jpg</photo>
            <processed/>
            <output    md5="e55acfce5c8314afe46061ad1f895a8a">prints/17-35-57.jpg</output>
        </photos>
    </photo_information>
</breeze_systems_photobooth>
```

The survey data can also be added to print captions or included in message text using tokens. These have the form {<survey#>_<type>_<id>}
e.g.
The token for the results from a text field with id “name” on survey screen 1 would be: {survey1_text_name}
A checkbox with id “chocolate” on survey screen 2 would be: {survey2_chkbox_chocolate} – returns 1 if checked else 0
A radio button in group “run” on survey screen 2 would be: {survey2_radio_run} – returns the id of selected radio button

Creating Survey Screens

A simple survey screen can be added to an event by right clicking on any screen in the touchscreen editor and selecting "Add survey screen..." to display the add survey dialog:



Select "Add checkbox" to add a checkbox to the survey screen and enter its id and caption. Select "Mandatory (checkbox must be selected)" to make the checkbox mandatory.

A set of up to three radio buttons can be added by selecting "Add radio buttons". Enter the group name used to identify and group the radio buttons together and add captions for two or three buttons.

A text entry field and keyboard can be added by setting the "Text entry:" dropdown list to normal, autoemail or email, enter the id used to identify it and a caption to be displayed above the text entry field. Select "Mandatory (text field must not be empty)" to make the text entry field mandatory.
The normal keyboard option creates a keyboard suitable for free text input complete with upper and lower case characters, spaces and punctuation.
The autoemail and email keyboard options create a keyboard with lower case characters and the punctuation characters allowed in email addresses. The autoemail option is the same as the email

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option except that the photos, GIF or video is automatically emailed after capture.

Click on the "..." button to the right of the screen background color preview to change the background color f the survey screen. The "opacity" setting can be used to set the opacity of the survey screen background from fully transparent (opacity=0) to fully opaque (opacity=1).

Click on "OK" to create the survey screen images and the XML file defining the inputs and actions. The appearance of the survey screens can be changed by editing them in an image editor such as Photoshop. The settings for the checkbox and radio buttons and the keyboard actions can be edited using the touchscreen editor.

Extracting Survey Data

The survey data is stored in the XML summary file that is saved after each set of photos. It can be extracted using the Survey Data tool in Breeze Hub.

Survey data can also be accessed using tokens to allow it to be used in email messages or to define the background/overlay suffix for prints, burst GIFs or videos.

Example: Using a survey screen to chose a background for AI background removal
Create a survey1 keyboard which has a radio button group named background and radio buttons with ids bg1, bg2, bg3 etc. for each of the backgrounds the user can choose. The token to read the user input is the keyboard name, "survey1", followed by the input type, "radio", and the group id, "background", giving {survey1_radio_background}.
If we set the print background/overlay suffix to {survey1_radio_background} it will set the suffix to bg1, bg2, bg3 etc. depending on the background chosen by the user in the survey. This can be used to select the correct screens for the countdown and the correct background and overlay for the print:
1_bg1.jpg - countdown screen background
1_bg1.png - countdown screen overlay
background_bg1.jpg - print background
overlay_bg1.png - print overlay

Entering Event Codes

For some applications such as unattended rental photo booths it is useful to be able to enter a code to select a particular event. To do this define a sync keyboard (keyboard_sync.xml) and use the syncCodeFromReady, menu1SyncCode or menu2SyncCode touchscreen actions. The sync code touchscreen actions will display the keyboard_sync keyboard to allow the user to enter a code and then update the current event. The code entered by the user can be accessed using the {syncCode} token and this can be used in the event server URL (e.g. https://bb4ipad.com/sync/code/{syncCode}) to select a different download URL or in the Dropbox prefix if syncing via Dropbox to select a different download path.

The easiest way to see how this works is to run the demo example. This can be loaded by setting the event server URL to https://bb4ipad.com/sync/code:

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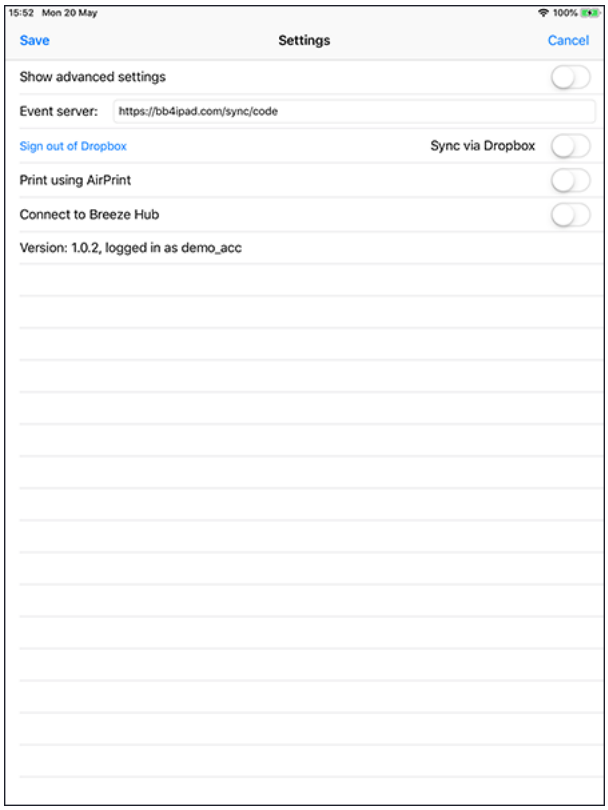

The go to the events screen and tap "Update all events" in the bottom right hand corner. This will download an event which has a sync keyboard for the user to enter an event code. It also downloads a device_settings.xml file which sets everything up for using event codes by changing a few settings on the iPad:

```
<?xml version="1.0" encoding="ISO-8859-1"?>
<breeze_booth build="1" version="1.0.2">
	<device_settings>
		<syncServer>https://bb4ipad.com/sync/code/{syncCode}</syncServer>
		<syncServerPost>false</syncServerPost>
		<syncViaDropbox>false</syncViaDropbox>
		<syncCode>000000</syncCode>
	</device_settings>
</breeze_booth>
```

The device_settings.xml file sets the sync server URL to https://bb4ipad.com/sync/code/{syncCode}. This will download events from a subfolder of https://bb4ipad.com/sync/code using the sync code entered by the user.
The device_settings.xml file also disables sync via HTTPS POST or Dropbox and sets the initial sync code to 000000 which is the event code used for entering sync codes in the example.

The example defines three folders of events:
https://bb4ipad.com/sync/code/000000 - this event displays a start screen with no live view and a single button to enter an event code
https://bb4ipad.com/sync/code/123456 - this event is a simple single photo setup with the print showing the event name as 123456
https://bb4ipad.com/sync/code/654321 - this event is a simple single photo setup with the print showing the event name as 654321

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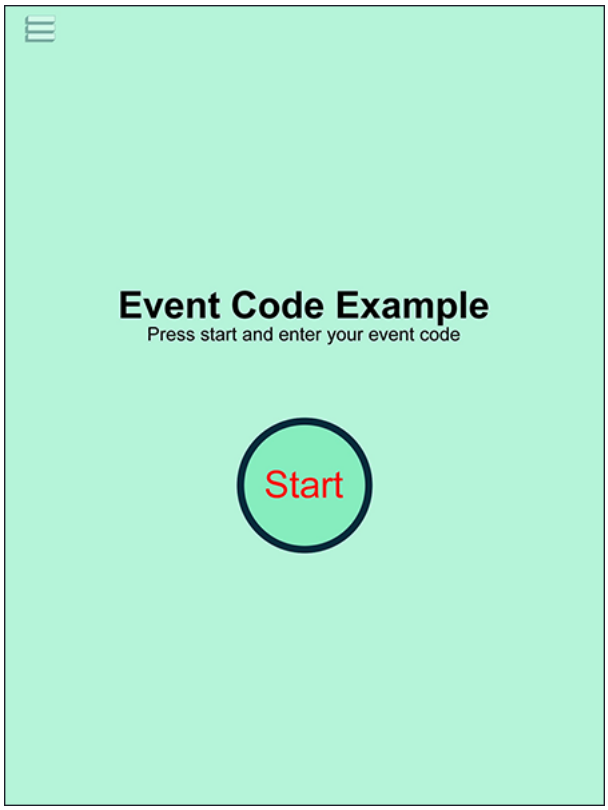
Run the event and enter 123456 for the event code and it will load event #123456. Tap the gear icon in the top right hand corner to enter a new event code and either enter 000000 to go back to the initial event or 654321 to load event 654321. An error message is displayed if an invalid event code is entered.



The example files can be downloaded from https://bb4ipad.com/sync/code/sync_code_example.zip

11 Info Screens

Info screens provide a way of displaying information such as privacy statements or help to the user. Info screens can display one or more pages of information and are available in the ready screens and the sharing screen. Each info screen can have a JPEG background, an animated GIF overlay and a PNG overlay. The ready info screens also display the camera live feed on top of the background JPEG image (the live feed can be hidden by covering it with an opaque PNG overlay).

Info screens in photo ready screen
To display one or more info screens from the photo ready screen use the touchscreen editor to add a touchscreen action for "stillsInfoOpen" and add the screen images to the screens folder using the following filenames:
ready_info<n>.jpg, ready_info<n>.gif, ready_info<n>.png - info screens available from the photo ready screen (<n> is the page number starting from 1)
e.g. ready_info1.png, ready_info2.png

The next or previous info screen can be displayed using the "stillsInfoNext" and "stillsInfoPrev"

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touchscreen actions and the info screen can be closed using the "stillsInfoClose" or "stillsInfoStart" touchscreen actions.

Info screens in GIF ready screen
To display one or more info screens from the GIF ready screen use the touchscreen editor to add a touchscreen action for "gifInfoOpen" and add the screen images to the screens folder using the following filenames:
gif_ready_info<n>.jpg, gif_ready_info<n>.gif, gif_ready_info<n>.png - info screens available from the burst GIF ready screen (<n> is the page number starting from 1)
e.g. gif_ready_info1.png, gif_ready_info2.png

The next or previous info screen can be displayed using the "gifInfoNext" and "gifInfoPrev" touchscreen actions and the info screen can be closed using the "gifInfoClose" or "gifInfoStart" touchscreen actions.

Info screens in the share screen
To display one or more info screens from the share screen use the touchscreen editor to add a touchscreen action for "shareInfoOpen" and add the screen images to the screens folder using the following filenames:
share_info<n>.jpg, share_info<n>.gif, share_info<n>.png - info screens available from the sharing screens screen (<n> is the page number starting from 1)
e.g. share_ready_info1.png, share_ready_info2.png

The next or previous info screen can be displayed using the "shareInfoNext" and "shareInfoPrev" touchscreen actions and the info screen can be closed using the "shareInfoClose" touchscreen action.

12 Menus

Menu provide a way of offering choices to the user and to show currently selected options such as the filter style, mirror style or virtual prop. Up to four menus are available in the ready screens: menu1, menu2, menu3 and menu4 and can be displayed using the "menu1Open", "menu2Open", "menu2Open" and "menu4Open" touchscreen actions.

Each menu has an optional JPEG background image with an optional animated GIF overlay and two PNG overlays:

menu1.jpg - optional JPEG background for menu 1
menu1.gif - optional animated GIF for menu 1
menu1.png - PNG overlay for menu 1 items that are not selected
menu1_selected.png - PNG overlay for menu 1 items that are selected

menu2.jpg - optional JPEG background for menu 2
menu2.gif - optional animated GIF for menu 2
menu2.png - PNG overlay for menu 2 items that are not selected
menu2_selected.png - PNG overlay for menu 2 items that are selected

menu3.jpg - optional JPEG background for menu 3
menu3.gif - optional animated GIF for menu 3
menu3.png - PNG overlay for menu 3 items that are not selected
menu3_selected.png - PNG overlay for menu 3 items that are selected

menu4.jpg - optional JPEG background for menu 4
menu4.gif - optional animated GIF for menu 4
menu4.png - PNG overlay for menu 4 items that are not selected
menu4_selected.png - PNG overlay for menu 4 items that are selected

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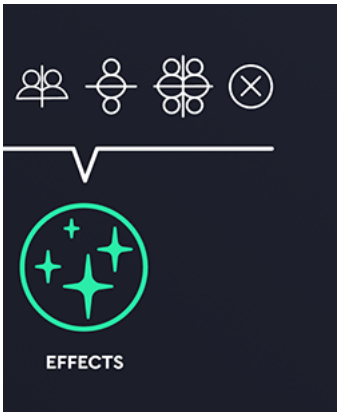
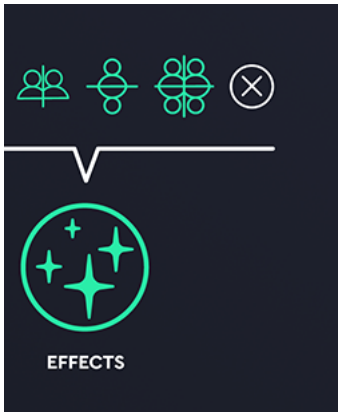
When menu 1 is displayed the menu1.jpg, menu1.gif and menu1.png screen images are displayed together with areas copied from menu1_selected.png for items that are selectable. Selectable items are defined by the area of touchscreen actions used to select the filter style, mirror style or virtual prop. Menus 2, 3 and 4 work in a similar way to menu 1.

For example to add a menu to let the user select the mirror style the following screen images could be used:



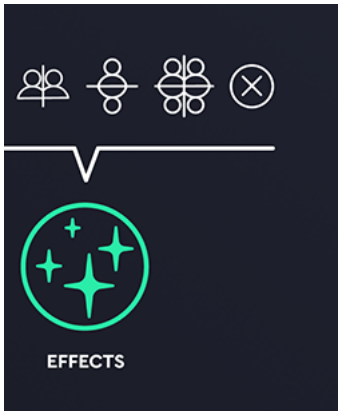
menu1.png



menu1_selected.png

The menu1.png screen image shows the buttons for selecting different mirror styles in their unselected state and menu1_selected.png shows the buttons when a mirror style is selected. The touchscreen editor is used to add touchscreen actions for "menu1MirrorLeftRight", "menu1MirrorTopBottom", "menu1Mosaic2x2" and "menu1MirrorOff" over the buttons at the top an a touchscreen action for "menu1Open" and "menu1Close" over the effects button to open and close the menu.

When menu 1 is selected with mirroring off the menu1.png overlay will be displayed:



If the user taps on the touchscreen action for "menu1TopBottom" the menu1.png overlay will be displayed with the area under the touchscreen action for "menu1TopBottom" copied from the menu1_overlay.png overlay:

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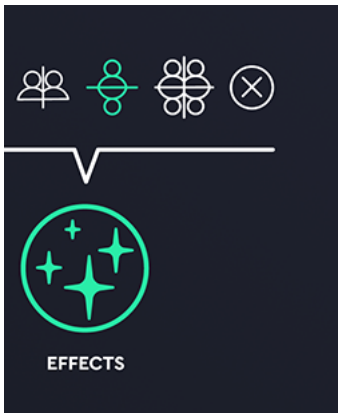
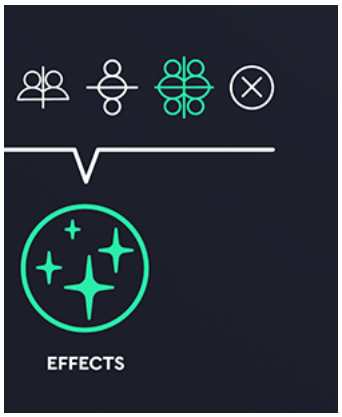


Then if the user taps on the touchscreen action for "menu1Mosaic2x2" the menu1.png overlay will be displayed with the area under the touchscreen action for "menu1Mosaic2x2" copied from the menu1_overlay.png overlay:



The following touchscreen actions can be used with menu 1 (similar touchscreen actions are available for menus 2, 3 and 4):

menu1Open - Display menu 1 screen
menu1OpenPhoto - Display menu 1 screen from stills ready screen
menu1OpenGif - Display menu 1 screen from GIF ready screen
menu1SwitchToStillsAndStart - Menu 1: Switch to stills mode and start countdown
menu1SwitchToGifAndStart - Menu 1: Switch to GIF mode and start countdown
menu1ColorStyle - Menu 1: normal color style
menu1MonoStyle - Menu 1: monochrome style
menu1SepiaStyle - Menu 1: sepia style
menu1ComicStyle - Menu 1: comic style
menu1Filter1Style - Menu 1: filter 1 style
menu1Filter2Style - Menu 1: filter 2 style
menu1Filter3Style - Menu 1: filter 3 style
menu1Filter4Style - Menu 1: filter 4 style
menu1Filter5Style - Menu 1: filter 5 style
menu1Filter6Style - Menu 1: filter 6 style
menu1MirrorOff - Menu 1: disable mirror style
menu1MirrorLeftRight - Menu 1: Left/right mirror style
menu1MirrorTopBottom - Menu 1: Top/bottom mirror style
menu1SwapTopHalves - Menu 1: Swap top half left/right mirror style
menu1Mosaic2x2 - Menu 1: Mosaic 2x2 mirror style

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menu1VirtualPropOff - Menu 1: Disable virtual props
menu1VirtualProp1 - Menu 1: Select virtual prop 1
menu1VirtualProp2 - Menu 1: Select virtual prop 2
menu1VirtualProp3 - Menu 1: Select virtual prop 3
menu1VirtualProp4 - Menu 1: Select virtual prop 4
menu1VirtualProp5 - Menu 1: Select virtual prop 5
menu1VirtualProp6 - Menu 1: Select virtual prop 6
menu1VirtualProp7 - "Menu 1: Select virtual prop 7
menu1VirtualProp8 - Menu 1: Select virtual prop 8
menu1VirtualProp9 - Menu 1: Select virtual prop 9
menu1VirtualProp10 - Menu 1: Select virtual prop 10
menu1Profile1 - Menu 1: Load profile 1
menu1Profile2 - Menu 1: Load profile 2
menu1Profile3 - Menu 1: Load profile 3
menu1Profile4 - Menu 1: Load profile 4
menu1Profile5 - Menu 1: Load profile 5
menu1Profile6 - Menu 1: Load profile 6
menu1Profile7 - Menu 1: Load profile 7
menu1Profile8 - Menu 1: Load profile 8
menu1Profile9 - Menu 1: Load profile 9
menu1Profile10 - Menu 1: Load profile 10
menu1Sync - Menu 1: Sync event
menu1CameraSettings - Menu 1: Adjust camera settings
menu1FrontCamera - Menu 1: Select front facing camera
menu1RearCamera - Menu 1: Select rear facing camera
menu1SwitchCamera - Menu 1: Switch between front and rear facing cameras
menu1IncreaseExpComp - Menu 1: Increase exposure compensation
menu1DecreaseExpComp - Menu 1: Decrease exposure compensation
menu1ResetExpComp" - Menu 1: Reset exposure compensation
menu1ZoomIn - Menu 1: Camera digital zoom in
menu1ZoomOut - Menu 1: Camera digital zoom out
menu1ZoomReset - Menu 1: Reset camera digital zoom to 1x
menu1Exit - Menu 1: Exit photo booth mode
menu1Menu2Open - Menu 1: Display menu 2 screen
menu1Menu3Open - Menu 1: Display menu 3 screen
menu1Menu4Open - Menu 1: Display menu 4 screen
menu1Close - Close menu 1 screen

13 Virtual Props

Virtual props work by detecting faces and overlaying them with an image such as glasses, hats, bunny ears, beards etc. The face detection can detect whether someone is smiling and display a different virtual prop when they are "happy" or "sad".

Virtual props work in both photo mode and burst GIF mode.

The app has a "High quality face detect" option which can be selected in the App Settings. This gives more stable placement of virtual props but is only suitable for more powerful iPads such as iPad Pro models and iPads with an A12 processor or better (e.g. iPad Air 10.5" or iPad Mini 5). On less powerful iPads the high quality face detect setting may cause the live view refresh rate to be reduced.

Up to 10 different virtual props can be defined and selected using touchscreen actions in the ready or menu screens. A virtual prop is defined by a PNG overlay for "normal" faces and an optional PNG overlay for "smiling" faces. The filename defines the prop number, whether it is for "normal" or "smiling" faces and its placement relative to the person's eyes. The alpha channel of the PNG image is used to

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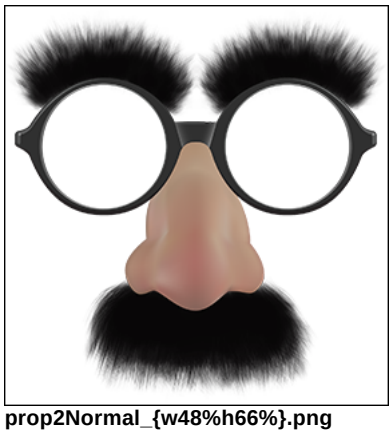
specify the opacity of the overlay allowing areas to range from being fully transparent to opaque.

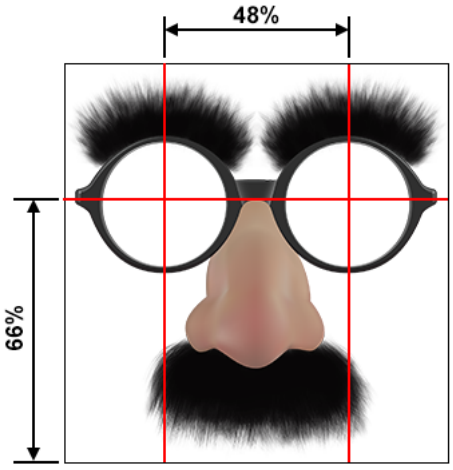
Example:



prop2Normal_{w48%h66%}.png

The filename starts with prop2Normal_ which indicates it is the overlay for virtual prop number two to be added to "normal" faces. An optional virtual prop for "smiling" faces would start with prop2Smiling_ The rest of the filename, {w48%h66%}, provides information about where the centers of the prop's eyes are defined within the overlay image. The prop image is resized and rotated so that the centers of the eyes in the prop are placed over the centers of the person's eyes in the photo.

The w48% value indicates that the width between the centers of the eyes is not quite half the width of the overlay image. The h66% value indicates that the centers of the eyes are about 2/3 of the height of the overlay measured from the bottom:



The overlay can be moved up relative to the person's eyes by reducing the h value e.g. h0% would place the bottom of the overlay at the person's eye level.
The overlay can be made larger relative to the person's face by reducing the w setting or smaller by increasing the w setting.

The size and position of the virtual props can also be edited interactively using the virtual prop editor to automatically update the filenames.

Multiple Props

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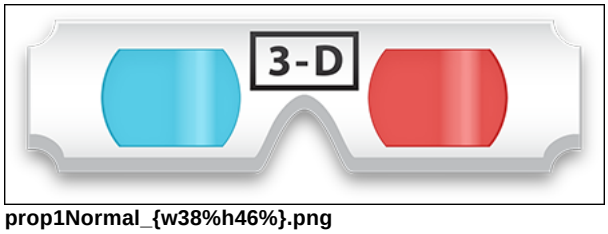
Different virtual props can be added to each guest in a photo by defining multiple props. The filenames should have the guest number appended to the filenames. The props will be applied to the guests from left to right e.g.
prop1Normal1_{w48%h66%}.png - virtual prop applied to the first guest in the photo when prop #1 is selected
prop1Normal2_{w48%h66%}.png - virtual prop applied to the second guest in the photo when prop #1 is selected
prop1Normal3_{w48%h66%}.png - virtual prop applied to the third guest in the photo when prop #1 is selected
prop2Normal1_{w48%h66%}.png - virtual prop applied to the first guest in the photo when prop #2 is selected

If only one virtual prop is defined it will be applied to all the faces detected in the photos. If multiple virtual props are defined the first prop will be added to the first face detected in the photo, the second prop to the second face etc. If more faces are detected than there are props defined it wraps around again e.g. if three faces are detected and only two props are defined the first face will have prop 1, the second face will have prop 2 and the third face will have prop 1.

Virtual Props Containing Text

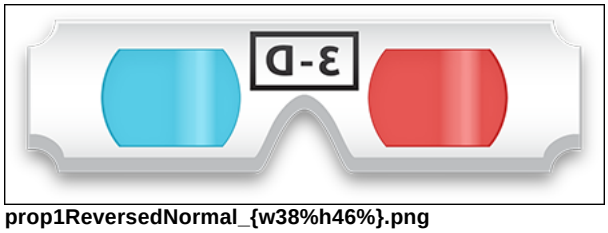
The live view on photo booths is normally mirrored because this is how people are used to seeing themselves but this can cause problems with virtual props that contain text because the text will be mirrored in the live view display. Breeze Booth solves this problem by allowing a reversed copy of the virtual prop to be used for live view. The reversed copy of the virtual prop should be identical to the normal prop except for the text which should be reversed. The filename of the reversed copy of the virtual prop should have the same filename as the normal copy but with "Reversed" added before "Normal" or "Smiling" e.g prop1ReversedNormal_{w38%h46%}.png.

The props and filters sample event has an example of a virtual prop containing text for the 3-D glasses prop:



prop1Normal_{w38%h46%}.png

It also includes a reversed copy of the prop so that the word "3-D" appears the correct way round when displayed in the mirrored live view display:



prop1ReversedNormal_{w38%h46%}.png

Creating Your Own Virtual Props

You can create your own virtual props by simply creating a suitable PNG image file and saving it in the screen folder with a filename indicating the number of the virtual prop with initial settings for its size and

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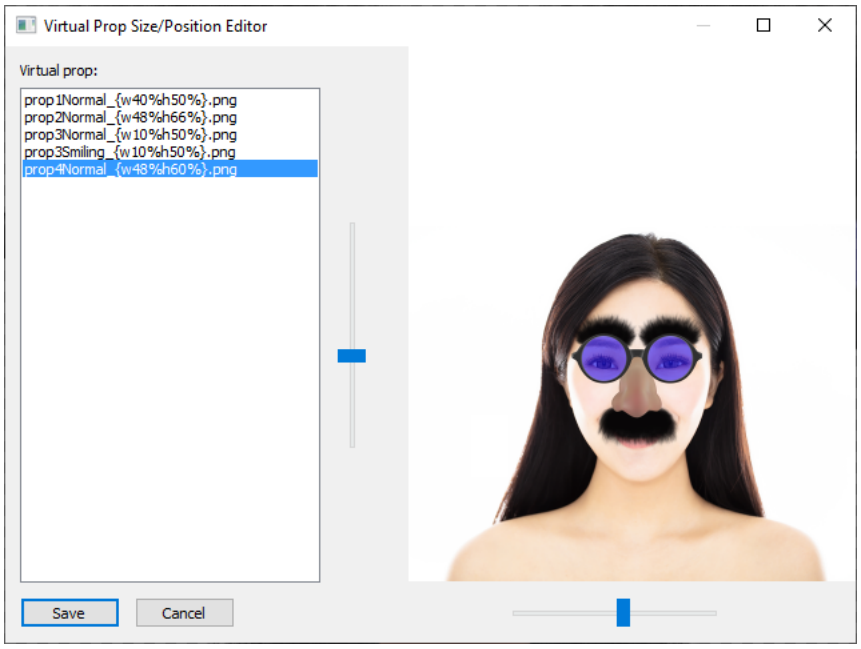
position e.g. prop4Normal_{w50%h50%}.png to define virtual prop #4. Then use the virtual prop editor to adjust its size and position.

Example: create a new virtual prop based on the one shown above and darken the glasses.
First copy the PNG image file for prop #2, prop2Normal_{w48%h66%}.png, and name it prop4Normal_{w48%h66%}.png for prop #4.
Then edit it in an image editor such as Photoshop to add a semi-transparent blue layer in the glasses:

Next use the virtual prop editor to adjust its size and position:



If a virtual prop has a reversed copy the virtual prop editor will automatically update the size and position of both the normal and reversed copy when the sliders are adjusted.

Finally use the Touchscreen Editor to add the touchscreen action "virtualProp4" in the ready screen to select the new prop.

There is also an example of creating a new virtual prop for a hat on the Virtual Prop Editor page.

Selecting Virtual Props

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Virtual props can be displayed initially by selecting the virtual props option in the General Settings page in the event editor. You can give the user the option to select a different virtual prop or to disable virtual props by adding touchscreen actions to the ready or menu screens using the Touchscreen Editor.

Touchscreen actions affecting virtual props in the stills ready screen:

virtualPropOff - disable virtual props
virtualProp1 - select virtual prop #1
virtualProp2 - select virtual prop #2
virtualProp3 - select virtual prop #3
virtualProp4 - select virtual prop #4
virtualProp5 - select virtual prop #5
virtualProp6 - select virtual prop #6
virtualProp7 - select virtual prop #7
virtualProp8 - select virtual prop #8
virtualProp9 - select virtual prop #9
virtualProp10 - select virtual prop #10

If virtual props are not selected in the General Settings page they won't be displayed initially but can still be selected using touchscreen actions.

14 Timed Session

Timed sessions have a start time and an end time. A "before session" screen is displayed before the start time. When the start time is reached the app automatically switches to the normal ready screen. When the end time is reached the app displays the "after session" screen.

To enable a timed session open the settings screen in the app and select "Timed session" and then set the times by tapping on the start time and end time:

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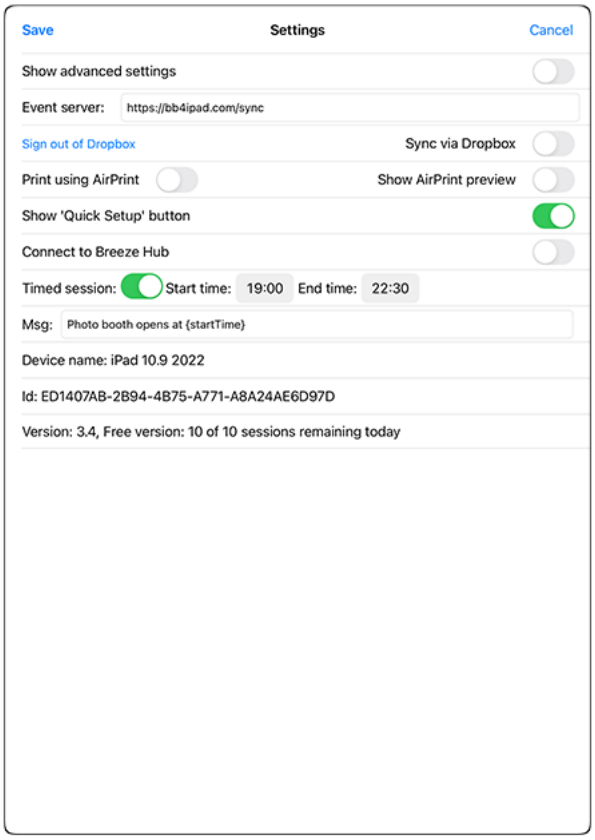

An optional video can be displayed in the before_session.jpg and after_session.jpg screens. The video should be given the same name as the screen e.g. before_session.mp4 or before_session.mov. Add _loop to the end of the filename to play the video in a continuous loop e.g. before_session_loop.mp4. An optional overlay can be displayed in the before_session.jpg and after_session.jpg screens. The overlay should be iven the same name as the screen e.g. before_session.png.
Please see the section on screens displayed to the user for more information.

An optional message can be displayed in the before_session.jpg screen by entering the text in the "Msg" field. This can be used to display information such as when the photo booth opens or a countdown timer showing when it opens. The message is centered on the screen and uses the same color as the photo countdown text (see Photo Settings).

The message can be made up of more than one line of text by adding \n to start a new line. The following tokens can be used in the message:
{startTime} - this is replaced with the start time e.g. 19:00
{endTime} - this is replaced with the end time e.g. 22:30
{timeToStart} - this is replaced with the time until the photo booth opens e.g. 2:34:52
Example: to display the photo booth opening time with a countdown in you could set the message to:
Photo booth is open from {startTime} to {endTime}\nOpens in {timeToStart}...

The optional message in the before_session.jpg screen will appear in front of the before session video and overlay.

Touchscreen actions can be defined to start a session early when the before_session.jpg screen is displayed or to open the photo booth for another 10 minutes when the after_session.jpg screen is displayed. The exit or exitFromBeforeAfterSession touchscreen actions can also be used to exit photo booth mode. All of these touchscreen actions can be password protected using the exit password

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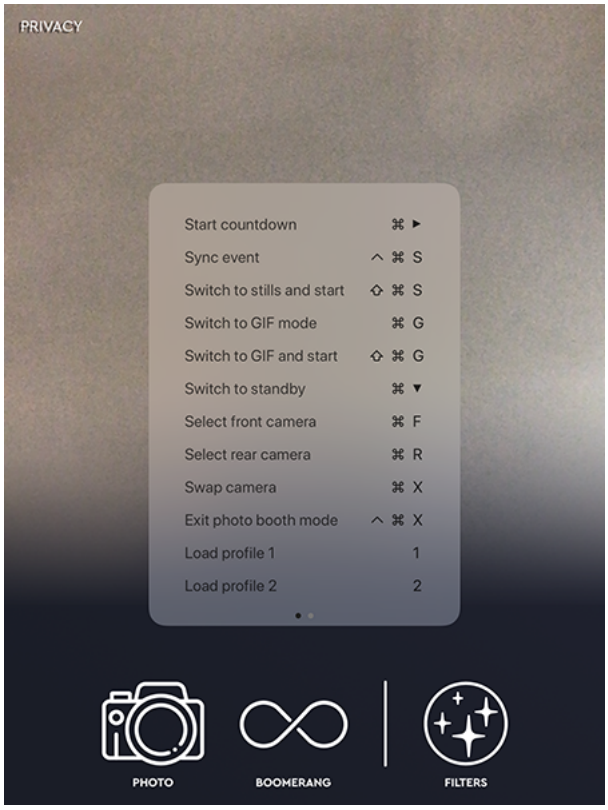
which can be set in the app's settings screen.

15 Keyboard shortcuts

The photo booth can be controlled using touchscreen actions (see Touchscreen Editor) or by connecting a keyboard and using keyboard shortcuts. Advanced users and system integrators can use use a microcontroller that can act as a USB keyboard (e.g. an Arduino) to control the operation of the photo booth via keyboard shortcuts.

The keyboard shortcuts available in each screen will depend on which screen is being displayed. A list of available keyboard shortcuts in a given screen can be displayed on the iPad by pressing and holding the Cmd key:



The following keyboard shortcuts are available in the stills ready, GIF ready and video ready screens:

Shortcut	Action
Cmd+cursor right	Start countdown
Cmd+Ctrl+S	Sync event
Cmd+S	Switch to stills mode
Cmd+Shift+S	Switch to stills and start countdown
Cmd+G	Switch to burst GIF mode
Cmd+Shift+G	Switch to burst GIF mode and start countdown
Cmd+V	Switch to video mode
Cmd+Shift+V	Switch to video mode and start countdown
Cmd+cursor down	Switch to standby mode

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Cmd+F	Select front camera
Cmd+R	Select rear camera
Cmd+X	Swap cameras
Cmd+Ctrl+X	Exit photo booth mode
numberpad 1	Load profile 1
numberpad 2	Load profile 2
numberpad 3	Load profile 3
numberpad 4	Load profile 4
numberpad 5	Load profile 5
numberpad 6	Load profile 6
numberpad 7	Load profile 7
numberpad 8	Load profile 8
numberpad 9	Load profile 9
numberpad 0	Load profile 10

The following keyboard shortcuts are available in the stills confirm printing screen:

Shortcut	Action
Cmd+A	Accept prints
Cmd+Shift+X	Reject prints
numberpad 1	Set print copies to 1
numberpad 2	Set print copies to 2
numberpad 3	Set print copies to 3
numberpad 4	Set print copies to 4
numberpad 5	Set print copies to 5

The following keyboard shortcuts are available in the standby screen:

Shortcut	Action
Cmd+Ctrl+S	Sync event
Cmd+S	Switch to stills mode
Ctrl+G	Switch to burst GIF mode
Cmd+Ctrl+X	Exit photo booth mode

The following keyboard shortcuts are available in the video capture screen:

Shortcut	Action
Cmd+E	Run current event

The following keyboard shortcuts are available in the main startup screen:

Shortcut	Action
Cmd+R	Run current event

16 Filters

The filters use a color lookup table to map each color in the photo to a new color to produce effects such as high contrast monochrome photos, sepia or antique coloration, false color photos etc,

The lookup table is read from a JPEG image 2048x1024 pixels in size with the same name as the filter e.g. filter1.jpg, filter2.jpg, filter3.jpg etc.
Breeze Booth uses the same filter files as Breeze Booth for Windows but does not support vignetting.

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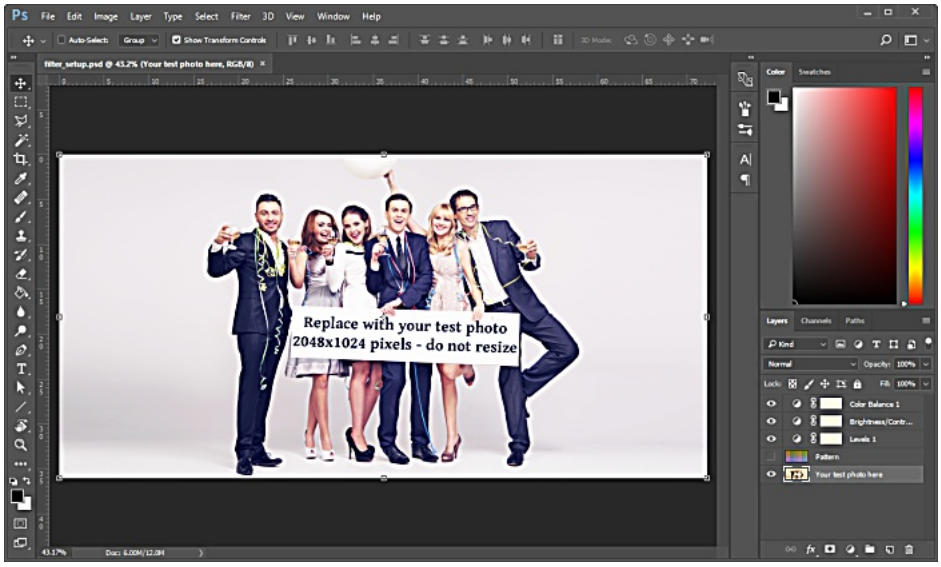
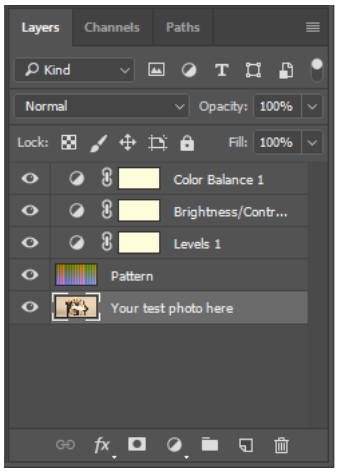
The simplest way to create a new JPEG color lookup file is to download the following Photoshop PSD file and edit it in Photoshop: https://breezesys.com/downloads/filter_setup.psd



Then either use the test image in the "Your test photo here" layer or replace it with your own test photo. Add adjustment layers to modify the output as required. The adjustment layers can apply any adjustment that is applied to single pixels (e.g. level, curves, contrast, brightness, color fill, color balance etc.). Adjustments that apply to groups of pixels (e.g. sharpening, masking, blur, noise filters etc.) can't be used.
When you are happy with the changes, turn the visibility of the "Pattern" layer on:



Then save the file as a JPEG named filter1.jpg, filter2.jpg, filter3.jpg, filter4.jpg, filter5.jpg or filter1.jpg and save it in the current photo booth images folder.
Do not resize the filter_setup.psd image as this will prevent the filter from working.

The JPEG filter file should be 2048x1024 pixels in size and look something like this:

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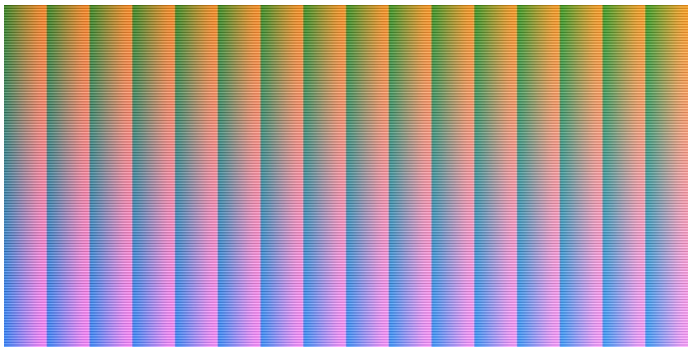

Using filters

You can select a filter to use at the start by setting the "Style" in the "General" settings to the filter name (filter1, filter2, filter3, filter4, filter5 or filter6). You can also define touchscreen actions in the ready screen to allow users to select different filters e.g. filter1Style, filter2Style, filter3Style, filter4Style, filter5Style or filter6Style.

Filters can also be applied to photos when they are added to the print layout.

17 QR Codes and Contactless Operation

QR codes can scanned by the app to run a contactless photo booth or to provide a way to quickly set up a photo booth. QR codes can also be added to prints so that they can be scanned by users to view their photos in an online gallery or microsite.

The scanning of strings from QR codes is enabled using the "QR code string" switch in the App Settings screen and the scanning of commands is enabled using the "QR code command" switch. It also needs to be enabled in the General Settings.

Contactless Operation

QR codes can be generated on a user's phone and used to run the photo booth and send emails and texts without the user having to touch the photo booth. Please see this video for a summary of what's possible: https://vimeo.com/414822646 (note: this video describes contactless operation of a DSLR based photo booth using our DSLR Remote Pro software but the same techniques also apply to the iPad app).

The QR codes can be created using the QR code generator on the website contactlessbooth.com. Please see this page for information customizing the QR code generator.
Alternatively you can create a QR code generator on your own website using Wordpress plug-ins or scripts such as this sample PHP script.

Quickstart Guide

1. **Enable QR code scanning**
   Tap "Settings" in the app to display the App Settings screen, select advanced settings and then enable the "QR code commands" and "QR code strings" settings which can be found at the bottom of the App Settings screen.

2. **Setup the event**
   Either download the demo events from https://bb4ipad.com/sync or edit you event and enable "QR

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code string scanning" and "QR code command scanning" in the General Settings.
Please also make sure your event has touchscreen actions defined for "switchToStillsAndStart" and "switchToGifAndStart" in the ready screens (see Touchscreen Editor).

3. **Setup email and/or texting**
   Then check that emailing and/or texting of photos has been setup (see 'Sharing Options' in the App Settings).

4. **Run the photo booth and start scanning QR codes**
   Visit contactlessbooth.com using the web browser on your phone (or scan the QR code below using your phone's camera), enter your email address and choose the session type and then hold your phone in front of the photo booth's camera so that it can scan the QR code. If everything is setup correctly the photo booth will start the countdown, take the photos and then automatically email them to you when it displays the sharing screen.

https://contactlessbooth.com

Resources

- For more information please see the section on Scanning QR Codes below
- For notes on customizing the QR code generator, hosting your own QR code generator etc. please visit https://contactlessbooth.com/qr

Scanning QR Codes

Breeze Booth for iPad is able to scan QR codes in photo booth mode when the camera is enabled. QR codes can be used to scan in information such as names, unique ids or email addresses. QR codes can also be used to scan in commands to control the photo booth e.g. select a profile and start the countdown.

QR codes should be defined as URLs with the commands and strings defined as percent encoded parameters. The URL parameters can be made up of strings only, commands only or a mixture of both.

Scanning strings

Up to 10 strings can be defined in the URL by naming the parameters s1, s2, s3 etc. The URL below gives and example with s1 set to "John" and s2 set to "Doe":
https://example.com?s1=John&s2=Doe
These strings can be accessed using tokens e.g. {qr1} for s1, {qr2} for s2 etc. One way to use these tokens is in captions added to print layouts e.g. to print the name scanned from QR code on the print the caption text could be set to "Name: {qr1} {qr2}".
The parameters should be percent encoded e.g. to define a single parameter that includes two words separated by a space the space is encoded as %20 e.g.
https://example.com?s1=John%20Doe

If you are using an iPad as a data capture device which prints a QR code you can use the {urlencode,str} token to percent encode the responses e.g. if the user enters their name in survey screen 1 in a text field with id "name" this can be percent encoded and included in the QR code text as:

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https://example.com?s1={urlencode,{survey1_text_name}}

The {encrypt,str} token can be used encrypt a string before it is added to a QR code and decrypted with the {decrypt,str} token when it is scanned in. This is useful for privacy when sensitive information such as the guest's email address or cell phone number is stored in a QR code. If the information wasn't encrypted it could be accessed by anyone who has a QR code reader or a cell phone that can scan QR codes.
Example of storing an encrypted email address in a QR code:
https://example.com?s1={encrypt,{survey1_text_email}}
This can be decoded when the QR is scanned using {decrypt,{qr1}}.

The QR tokens are cleared after each shooting session.

Scanning commands
Up to 5 commands can be defined in the URL by naming the parameters c1, c2, c3 etc. The values of the commands should be the same as the names of the touchscreen commands e.g. switchToStillsAndStart or profile1. The URL below gives and example with c1 set to "profile1" and c2 set to "switchToStillsAndStart". This will tell the app to select profile 1 and then switch to stills mode and start the countdown:
https://example.com?c1=profile1&c2=switchToStillsAndStart
Please note: a command scanned in from a QR code will only be executed by the app if there is a corresponding touchscreen keyboard action defined e.g. the command c1=profile1 will only be executed if there is a touchscreen action for profile1.

Scanning email addresses
Email addresses can be defined by adding parameters named, email, autoemail or cc to the QR code. The QR code can only contain a single email or autoemail parameter which defines the primary "to" email address and zero or more cc parameters to define CC email addresses.
A QR code with an autoemail or an email parameter can be scanned when the sharing screen is displayed to automatically send an email to that email address.
Use the autoemail parameter and a start command to scan in a QR code in the ready screen to start the shooting sequence and automatically send an email when the sharing screen is displayed e.g. to start a photo session and automatically email the results to sales@breezesys.com the URL for the QR code would be something like this:
https://breezesys.com?c1=switchToStillsAndStart&autoemail=sales@breezesys.com

Scanning phone numbers for texting
Phone numbers for texting can be defined by adding parameters named, text or autotext to the QR code. The QR code can only contain a single text or autotext parameter.
A QR code with an autotext or a text parameter can be scanned when the sharing screen is displayed to automatically send a text to that phone number.
Use the autoetext parameter and a start command to scan in a QR code in the ready screen to start the shooting sequence and automatically send a text when the sharing screen is displayed e.g. to start a photo session and automatically text the results to the phone number 0123456789 the URL for the QR code would be something like this:
https://breezesys.com?c1=switchToStillsAndStart&autotext=0123456789

Setting the number of copies to print
The number of copies to print in stills photo booth mode can be specified using the prints parameter e. g. https://example.com?c1=switchToStillsAndStart&prints=3

Visual Confirmation
When a QR code that doesn't contain commands is scanned in the ready screen visual confirmation can be provided by displaying the optional ready_overlay_qr.png screen.
In the video ready screen use the video_ready_qr.png screen to provide feedback and in the gif ready

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screen use gif_ready_overlay_qr.png.

Scanning QR codes in the sharing screen
An optional live view feed can be displayed in the sharing screen to help people scan QR codes by enabling "Show live view in sharing screens" in the General Settings for an event. The size and position of the live view area in the sharing screens can be defined using the Touchscreen Editor.

Example Usage: ID cards and photo stations

Breeze Booth for iPad can add QR codes to print layouts and also read QR code data. This provides the basis for a fully functional registration system which could be used for trade shows, conferences and large events. The registration iPads use survey data to capture user data such as their name and email address and this can be printed as an ID card complete with a QR code. A unique ID can be allocated to each registration and used to identify the photos taken by the user at each photo station by including it in the QR code.
The photo station iPads can scan the QR codes from the ID cards to read in the user's name, email address and unique id and to activate the photo booth. The user's name can be added to the print layout and their email address can be pre-populated in the email sharing screen so that they don't need to enter it each time. The unique ID can be used to name the photos so that the user can view their photos by scanning the QR code at a kiosk (e.g. Breeze Kiosk).

Breeze Systems demonstrated a fully featured registration system using Breeze Booth for iPad at Photo Booth Expo 2020.

Example of the output from the QR code registration demo

Registration
One or more iPads or iPhones running Breeze Booth for iPad can be used to register guests. Survey screens can be used to capture information such as the user's name and email address and then a

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photo can be taken which is printed on an ID card printer or a label printer to create a badge for the user. AI background removal can be used to remove distracting backgrounds from the ID photos and replace them with a plain background or a background image appropriate for the event.

A unique ID can be allocated to each registration using the {uid} token. The user's name, email address and unique ID can be included in the QR code printed on the ID badge so that it can be scanned by the photo stations. For additional security the email address can be encrypted to prevent people scanning the QR code on a user's badge to obtain their email address without the user's permission.

This is the QR text we used for the demo at Photo Booth Expo 2020:
https://bb4ipad.com/pbx.php?s1={uid}&s2={encrypt,{survey5_text_email}}&s3={urlencode,{survey4_text_name}}&c1=profile1

The first part contains a URL to view the photos on a microsite using the user's unique ID: https://bb4ipad.com/pbx.php?s1={uid}. With a suitable microsite the QR code can also be scanned by people's phones to view their photos using their unique ID. For the demo at Photo Booth Expo the PHP script https://bb4ipad.com/pbx.php was used to read the user's unique ID from the s1 parameter of the QR code URL and redirect the user's web browser to the microsite page showing their photos.

The second part contains the user's email address which was entered in survey screen 5: &s2={encrypt,{survey5_text_email}}. It is encrypted using the {encrypt,str} token to prevent unauthorized people obtaining it by scanning the QR code using their phone.

The third part contains the user's name which was entered in survey screen 4: {urlencode,{survey4_text_name}}. It is encoded using the {urlencode,str} token to encode characters such as spaces to ensure the QR code is a valid URL.

The fourth part contains the command to load profile 1 when the QR code is scanned at one of the photo stations: c1=profile1

Photo Stations
One or more iPads or iPhones running Breeze Booth for iPad can be used as photo stations which scan the QR code from badges.

When the QR code is scanned by the iPad the strings s1, s2 etc. are read in and made available using the tokens {qr1}, {qr2} etc. In the demo for Photo Booth Expo 2020 the user's unique ID was read from parameter s1 and used to define the filenames of the photos taken by the booth by setting the download filename to {time}_{uid}. The user's name was read from parameter s3 and displayed in the print output by placing the token {qr3} in the caption text. To speed up sharing by email the user's email address, read from parameter s2, was used to pre-populate the email address field in the email keyboard using the token {decrypt,{qr2}}.

Optional commands are also scanned in from QR code using the parameters c1, c2 etc. In the demo for Photo Booth Expo 2020 the default profile for the photo station event was set to profile 2 which displayed a QR scanning screen with a ready_loop.mp4 movie displaying an animated prompt inviting users to scan the QR codes on their badges. When the QR code is scanned the parameter c1 runs the command profile1 which displays a ready screen and plays a ready.mp4 video to provide audio and visual feedback that the QR has been scanned successfully. The inactivity timeout (defined in the General Settings) was set to "profile 2" so that the booth automatically returns to the QR scanning screen if the user who has scanned in their QR code decides not to use the photo booth.

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18 Secure Single Use QR Codes

Secure single use QR codes provide an extension of the QR codes used for contactless operation. The QR code is signed using a password to make it secure and difficult to forge and can only be used once on an iPad. This means that it can be used for theme parks and attractions or for photo booths where users can be issued with a QR code "coupon" to use the photo booth. It can also be used to run a paid photo booth where the user makes a payment using an online payment service such as PayPal and is sent an email or a text linking to a single use QR code that can be scanned by the photo booth.

The QR Code Text

The QR code is in the form of a URL which has two parameters: a JSON string containing the commands and a SHA1 signature.

The JSON string can contain up to 10 strings (s1 to s10) and up to 10 commands which correspond to touchscreen actions (c1 to c10). It can also contain an email command (autoemail or email) and an expiry date and time. Please see QR codes used for contactless operation for information about the strings, commands and email options.
The expiry date/time is in the form of the number of seconds since the Unix epoch (00:00:00 UTC on 1 January 1970) stored in the JSON "expiry" value.
For additional security an optional id field can be added to the JSON string to specify the Vendor Id of the iPad. The app will only process the QR code if the id in the JSON string matches the Vendor Id of the iPad.

The signature is the SHA1 hash of the JSON string plus the password.

Example:
To create a QR code that starts a photo session with the touchscreen command "switchToStillsAndStart"and automatically emails the output to sales@breezesys.com and is valid until 12:57 on Tuesday, May 19th, 2020 the JSON string would be:
{"c1":"switchToStillsAndStart","expiry":1589885824,"autoemail":"sales@breezesys.com"}

The default password for the app is: <auth_password>
The string to sign is the JSON string + the password:
{"c1":"switchToStillsAndStart","expiry":1589885824,"autoemail":"sales@breezesys.com"}
<auth_password>
The SHA1 hash of the string to sign is:4717b76e279cd2dd8435e0c46d95ccd4c9392da8

The text for the QR code needs to be in the form of a URL with a base URL which can be anything you like e.g. https://contactlessbooth.com
The signature is then added as the 'auth' parameter e.g. https://contactlessbooth.com?auth=4717b76e279cd2dd8435e0c46d95ccd4c9392da8
Then URL encode the JSON string and add it to the URL as the "j" parameter e.g. https://contactlessbooth.com?auth=4717b76e279cd2dd8435e0c46d95ccd4c9392da8&j=%7B%22c1%22%3A%22switchToStillsAndStart%22%2C%22expiry%22%3A1589885824%2C%22autoemail%22%3A%22sales%40breezesys.com%22%7D

Additional parameters can also be added to the base URL if required. One use for this would be to provide a link to the photos on an online gallery e.g. https://yoursite.com/gallery.php?id=1234&auth=...

Enabling Secure Single Use QR Codes

Secure single use QR codes need to be enabled by setting two values in the settings.xml file on the

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iPad:
<qrCodeAuthRequired>true</qrCodeAuthRequired>
<qrCodeAuthPassword>d315a84c6b10a1184550bdd47c1210</qrCodeAuthPassword>

The <qrCodeAuthRequired> tag needs to be set to true. This will disable normal QR codes in the app and only allow secure QR codes that have the correct signature. The encrypted signature is stored in the <qrCodeAuthPassword>
tag and defaults to <auth_password>. An encrypted password can be created by setting one of the other passwords in the iPad's App Settings, e.g. the upload URL password, and copying its value.

In addition QR commands and strings should be enabled in the iPad's App Settings screen and in the settings for each event.

Providing Feedback When Scanning QR Codes

If a QR code is scanned and accepted the app will execute the commands (e.g. starting the countdown) without displaying any additional information. If there is an error a simple error message screen will be displayed for a few seconds. This can be customized by providing an optional JPEG background image, overlay image and GIF or movie animation. The GIF and movie animations can be sized and positioned on screen in the same way as animations on the other photo booth screens. The error message will be displayed in English unless a PNG overlay image is provided

The following error screens filenames can be used:

qr_missing_parameters - the QR code is missing the auth or j parameters
qr_not_authorized - the auth parameter does not match the SHA1 hash of the JSON string plus password or the optional id in the JSON string does not match the iPad's Vendor Id
qr_invalid - the JSON string cannot be decoded
qr_used - the QR code has already been used on this iPad
qr_expired - the QR code has expired

For example to display a screen with a background, text showing the error "QR code has expired" and a GIF animation centered on the screen when a QR code has expired the files would be:
qr_expired.jpg
qr_expired_{l%50t%50}.gif

Or to display a screen with a background but without the "QR code has expired" text add a JPEG background screen and a PNG overlay screen:
qr_expired.jpg
qr_expired.png

Reusing Single Use QR codes

The used QR codes are stored in a file called qr_auth.xml in the Breeze Booth folder on the iPad. You can delete this file using the iPad's Files app by going to "On My iPad" and then selecting "Breeze Booth".

Example PHP Script

The PHP code below will generate the QR code text to start a photo booth session using the touchscreen command "switchToStillsAndStart" and automatically email the photos to sales@breezesys.com. The QR code will be valid for 5 minutes (300 seconds) from when it was generated:

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```
// add touchscreen command to switch to stills mode and start the countdown
$json['c1']  =  "switchToStillsAndStart";

// add a command to automatically email the photos to sales@breezesys.com
$json['autoemail']  =  "sales@breezesys.com";

// set the expiry time to 300 seconds from now
$expires = time() + 300;
$json['expiry']  =  $expires;

// generate the JSON string and SHA1 signature
$jsonStr  =  json_encode($json);
$authStr  =  $jsonStr  .  "<auth_password>";
$auth  =  sha1($authStr);

// construct the URL for the QR code text
$url  =  "https://contactlessbooth.com?auth=$auth&j="  .  urlencode($jsonStr);
```

Generating Single Use QR Codes using a Script

A single use QR code can created by calling the Event Editor from a script and passing the following command line arguments:

-qr_path <pathname>	Where to save the PNG image of the QR code
-qr_base_url <URL>	Optional base URL (defaults to https://contactlessbooth.com/qs)
-qr_password <password>	Optional password used to authenticate the QR code (defaults to <auth_password>)
-qr_auto_email <email_address>	Optional email address used to email the photos
-qr_auto_text <phone_number>	Optional phone number used to text the photos
-qr_cmd <touchscreen_command>	Touchscreen command to execute
-qr_expiry <t>	Optional expiry time for the QR code in seconds since the Unix epoch (defaults to 24 hours if omitted). Tip: To generate a sequence of similar single use QR codes increment the expiry time by one second for each
-qr_vendor_id <id>	Optional vendor id used to secure the QR code
-qr_logo_path <pathname>	Pathname of optional logo PNG image to add to the QR code

Example: Generate a single user QR code that switches to stills photo mode and starts the countdown. Protect the QR code using the password test_user_password. The QR code will expire 24 hours after it was generated.

BreezeBoothEventEditor.exe -qr_cmd "switchToStillsAndStart" -qr_password "test_user_password" -qr_path "D:\qr_code.png"

Please note that the command line can also be used to generate admin QR codes. It will generate a single use QR code if the -qr_cmd argument is provided otherwise it will generate an admin QR code.

19 AI Background Removal

AI background removal uses AI (artificial intelligence) to automatically remove the background from a photo or video (aka "green screen without the green screen").

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The example photo shown below was taken during Photo Booth Expo 2020 and shows how effective AI background removal can be at removing a distracting background:

Booth for iPad v3.1 onwards supports built-in AI background removal or the use of web based subscription services for AI background removal.

There is no additional cost to use built-in background removal and it can be applied to live view images, photos, burst GIFs and videos. The web services for AI background removal require a separate subscription and background removal can only be applied to individual photos. Currently two such services are available in Breeze Booth for iPad: remove.bg and AI Background Remove.

You can enable web based AI background removal for an event in the General Settings screen:

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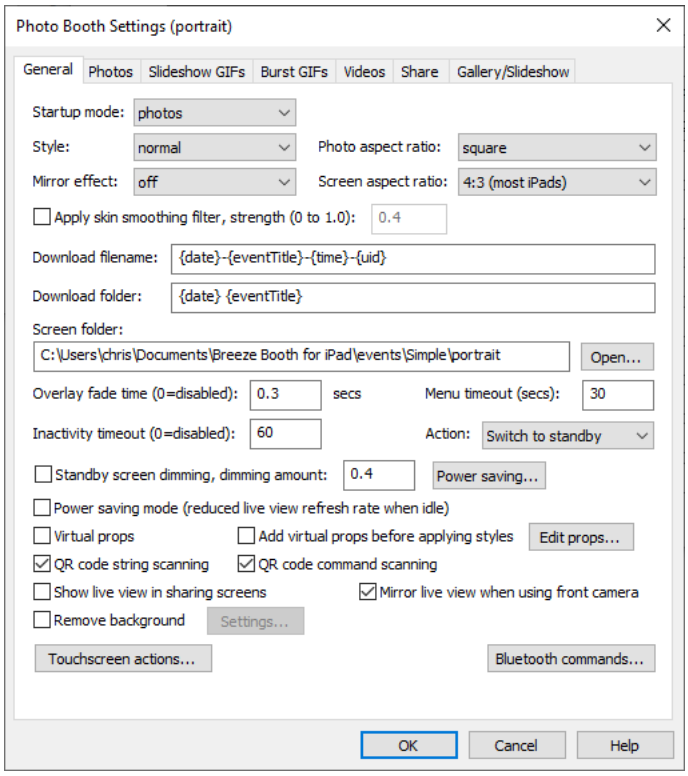
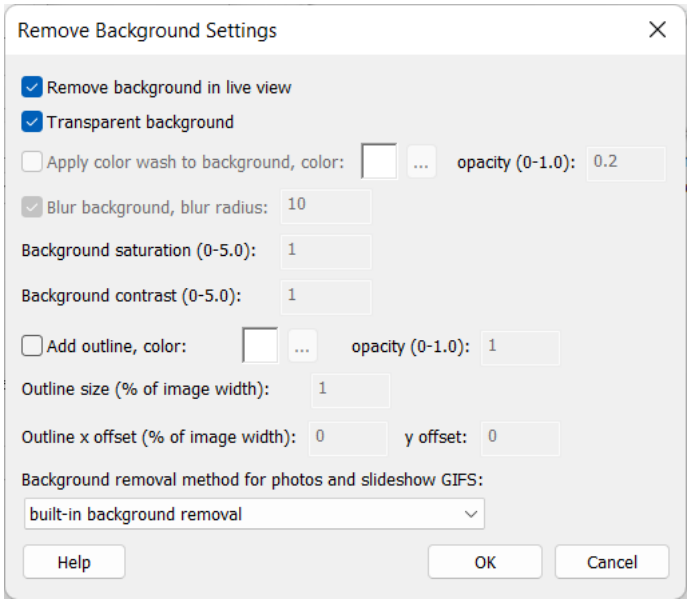


Select "Remove background" and then click on the "Settings..." button to adjust the settings:



Select "Remove background in live view" to apply AI background removal to live view images. This uses the built-in AI background removal to remove the background in real time.
Please note: a fast recent device such as the 2022 iPad Pro M2, 2021 iPad Pro M1, 2022 iPad Air M1, 2022 iPad 10.9" or 2022 iPhone SE is recommended otherwise the live view refresh rate may be slow.

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Transparent Background

Select "Transparent background" to make the removed background transparent.
When this option is selected a background image can be added to the print layout, one or more background images added to slideshow GIFs and burst GIFs or a background video added to videos.

When taking photos the background is removed the photo is added to the print layout with transparent areas from where the background has been removed. The guests can be placed within a scene by adding the scene in the print background image (background.jpg). Please see Print Layout Editor for details. The background image will be visible in the transparent areas of the photo.

When creating slideshow GIFs the photo is added to the GIF with transparent areas where the background has been removed. The guests can be placed within a scene by adding the scene in the GIF background image or images (slideshow_gif_background.jpg or slideshow_gif_background_1.jpg, slideshow_gif_background_2.jpg etc.). Please see GIF Layout Editor for details. The background image will be visible in the transparent areas of the photo.

In photo mode a background image can be added to live view images and to the photos in the print layout and slideshow GIFs. To do this place a JPEG image named aibg_background.jpg or aibg_background<n>.jpg in the screens folder. To add a different background image to each photo in the print layout name the files aibg_background1.jpg for the first photo, aibg_background2.jpg for the second photo etc. An overlay can also be added by placing a PNG image named aibg_overlay.png or aibg_overlay<n>.png in the screens folder.

When creating burst GIFs each frame is added to the GIF with transparent areas where the background has been removed. The guests can be placed within a scene by adding the scene in the GIF background image or images (gif_background.jpg or gif_background_1.jpg, gif_background_2.jpg etc.). Please see GIF Layout Editor for details. The background images will be visible in the transparent areas of each frame.
A single background image can be added to live view images and to the animated GIF by placing a JPEG image named gif_aibg_background.jpg in the screens folder. A single overlay image can also be added by placing a PNG image named gif_aibg_overlay.png in the screens folder.
Important: To use AI background removal with burst GIFs you need to select "Remove background in live view" and "built-in background removal" in the remove background settings dialog.

When capturing videos a video can be played in the background which will be visible in the transparent areas where the background has been removed from each frame. Please see Video Settings for details.
A single background image can be added to live view images when capturing videos by placing a JPEG image named video_aibg_background.jpg in the screens folder. This background image is added to the live view display but not to the final video.
Please note: removing the background from a video requires a lot of processing power and a fast recent device such as the 2022 iPad Pro M2, 2021 iPad Pro M1, 2022 iPad Air M1, 2022 iPad 10.9" or 2022 iPhone SE is recommended.

Modifying the Background

When the "Transparent background" option is not selected the background is kept and can be modified e.g. blurred, tinted or desaturated to B&W.
Please note: This option is only available when using built-in background removal.

Select "Apply color wash to background" to apply a color layer to the background areas. Choose the color by clicking on the "..." button to the right of the color preview and then select the opacity. The opacity setting controls the opacity of the color layer that is placed over the background. Set the opacity to 1 (fully opaque) to replace the background with a solid color. Set the opacity to a lower value, e.g. 0.2, to make the color layer semi-transparent to apply a color tint to the background.

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The color wash effect works best if the background is desaturated to B&W by setting the background saturation to 0.

Original image

Light blue color wash opacity=0.2

Light blue color wash opacity=0.2
saturation=0

The background can be blurred by selecting "Blur background". The amount of blurring is controlled using the "blur radius" setting. The default setting for the blur radius is 10. Increase the blur radius to increase the amount of blurring or reduce it to reduce the amount of blurring.

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Blur radius=10

The "Background saturation" setting can be used to change the saturation of the background areas. Setting this to 0 will desaturate the colors completely and make the background B&W. Setting the saturation to 1 will leave the colors unchanged. Setting the saturation to more than 1 will increase the saturation of the background colors and make them more vivid.

Saturation=0

The "Background contrast" setting can be used to change the contrast of the background areas. Setting this to values less than 1 will reduce the contrast of the background. Setting the contrast to 1 will leave the contrast unchanged.

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Contrast=0.1

Adding an outline or dropshadow

A scrapbooking style outline or a dropshadow effect can be added by selecting "Add outline" in the "Remove Background Settings". The color, size and opacity of the outline is configurable. The outline size is specified as a percentage of the width of the photo (this is so it has the same proportions for different sized images). A good starting point is use the default settings of a white outline with a size of 1% and opacity of 1 (fully opaque).

Adding a white outline (photo shot against a plain backdrop)

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Orange outline with a virtual background which is half blue and half orange

A dropshadow effect can be obtained by setting the color to black, the size to 0.1% and the opacity to 0.5 (semi-transparent). Then apply an x offset of 2% and a y offset of 2%. This effect looks best when used with a flat backdrop or background image.

Adding an optional overlay or background

In photo mode an optional overlay image can be added to live view images and to the photos in the print layout. To do this place a PNG image named aibg_overlay.png or aibg_overlay<n>.png in the screens folder. To add a different overlay image to each photo in the print layout name the files aibg_overlay1.png for the first photo, aibg_overlay.png for the second photo etc.
When the transparent background option is selected an optional background image can be added to live view images and to the photos in the print layout. To do this place a JPEG image named aibg_background.jpg or aibg_background<n>.jpg in the screens folder. To add a different background image to each photo in the print layout name the files aibg_background1.jpg for the first photo, aibg_background.jpg for the second photo etc.

In burst GIF mode a single overlay image can be added to live view images and the animated GIF by placing a JPEG image named gif_aibg_overlay.png in the screens folder.

An optional overlay image can be added to live view images when capturing videos by placing a PNG image named video_aibg_overlay.png in the screens folder. This overlay image is added to the live view display but not to the final video.

Allowing Guests to choose different backgrounds

Method 1: Using the ready screen string
The ready screen string can be set using touchscreen actions in the ready screens. Its value can be used to select which ready screen is displayed and which background is used with AI background removal. The ready screen string defaults to "rdy1" and can be set to a value between "rdy1" and "rdy10" using touchscreen actions.

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Start by creating a different ready screen overlay for each selected background e.g. ready_rdy1_overlay.png, ready_rdy2_overlay.png, ready_rdy3_overlay.png. In each ready overlay add graphics to show the available backgrounds with background 1 highlighted in ready_rdy1_overlay.png, background 2 highlighted in ready_rdy2_overlay.png and background 3 highlighted in ready_rdy3_overlay.png. Use the touchscreen editor to add the touchscreen action "readyString1" over the graphics for background 1, "readyString2" over the graphics for background 2 and "readyString3" over the graphics for background 3. When the user taps the graphics for one of the backgrounds the touchscreen action for that background will set the ready screen string and cause the appropriate ready screen overlay to be displayed e.g. tapping the graphics for background 2 will apply the touchscreen action "readyScreen2" which will set the ready screen string to "rdy2" and update the screen to display ready_rdy2_overlay.png.
Create a JPEG image for each selected background using the value in the ready screen string:

For photos name the backgrounds aibg_background_rdy1.jpg for background 1, aibg_background_rdy2.jpg for background 2, aibg_background_rdy3.jpg for background 3 etc. The corresponding ready overlay screens are named ready_rdy1_overlay.png for background 1, ready_rdy2_overlay.png for background 2, ready_rdy3_overlay.png for background 3 etc.

For burst GIFs name the backgrounds gif_aibg_background_rdy1.jpg for background 1, gif_aibg_background_rdy2.jpg for background 2, gif_aibg_background_rdy3.jpg for background 3 etc. The corresponding ready overlay screens are named gif_ready_rdy1_overlay.png for background 1, gif_ready_rdy2_overlay.png for background 2, gif_ready_rdy3_overlay.png for background 3 etc.

For videos name the backgrounds video_aibg_background_rdy1.jpg for background 1, video_aibg_background_rdy2.jpg for background 2, video_aibg_background_rdy3.jpg for background 3 etc. The corresponding ready overlay screens are named video_ready_rdy1_overlay.png for background 1, video_ready_rdy2_overlay.png for background 2, video_ready_rdy3_overlay.png for background 3 etc.

Method 2: Using a survey
A survey screen can be displayed when the users taps the start button and the output from the survey can be accessed using tokens in the filename overlay/prefix for photos, burst GIFs and videos. The survey can be used select different countdown and capture screens to display different backgrounds behind the live view images and applied to the print layout in photo mode, the backgrounds in burst GIF mode and the background image or video in video mode. Please see the Overlay/Background Filename Suffix section for more details.

Method 3: Using profiles
Profiles provide a way to switch to a different folder for the screen images and can be used to select different screen images and backgrounds. e.g. to use profiles to select backgrounds in photo mode start by creating a simple event with AI background removal enabled. Edit the ready_background.jpg background image and the 1.jpg countdown image to show background 1. Edit the print layout background image, background.jpg, to show background 1. Then clone the profile to profile 2 and edit the ready and countdown screens to show background 2 and change the print background image to show background 2. In the ready screen for profile 1 add a touchscreen action to select profile 2 and in the ready screen for profile 2 add a touchscreen action to select profile 1. The user will then be able to select background 2 by tapping the profile 2 touchscreen action when profile 1 is displayed or select background 1 by tapping the profile 1 touchscreen action when profile 2 is displayed.

These examples can be downloaded to Breeze Booth for iPad by scanning the QR code below using the iPad's camera:

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A zip file containing these examples can be downloaded to your PC and loaded into the event editor from: https://bb4ipad.com/sync/aibg_choices.zip

Web based AI Background Removal Services

Web based AI background removal services provide the highest quality when removing the background from photos and slideshow GIFs but require an internet connection and a subscription to one of the services listed below. To select web based AI background removal first select "Transparent background" then set the "Background removal method" to "web service - preview size (< 0.25M pixels)" or "web service - full size".

If the "Remove background in live view" option is selected with web based background removal the live view images will use the built-in background removal and the web based background removal will be applied to the individual photos.

Please note: The web based AI background removal services are provided by other companies who charge for their services. These companies have no connection with Breeze Systems and Breeze Systems is not responsible for the content of their websites. In order to these services you need set up an account with them and log into your account to obtain an API key which should be copied to the "Background removal key" in Breeze Booth for iPad's App Settings screen.
remove.bg and AI Background Remove are web based service and so you will need a reliable internet connection in order to use them at an event.

remove.bg

At the time of writing remove.bg provides 50 free preview credits per month and options for buying "Pay as you go" or subscription based credits. You can use the 50 free preview credits for testing without having to enter any payment details.

Once you have created an account with remove.bg you need to copy the API key into the app settings screen.
You can check that the API key has been entered correctly and check the number of credits you have remaining by tapping "Check background removal API key and credits" in the app settings screen.

The preview option limits the size of the image to no more than 250,000 pixels e.g. 600x416 pixels. This option is available using the 50 free credits each month or using paid for credits: each preview uses up 1/4 of a paid credit. It has the advantage that it is faster than full size option because a smaller image needs to be uploaded to remove.bg and a smaller image is returned.

The full size option allows images of up to 25 megapixels and is only available using credits purchased by "Pay as you go" or a subscription. Each full size background removal uses up one credit.

AI Background Remove

AI Background Remove provides a subscription service which may be less expensive for small to

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medium operators than remove.bg.

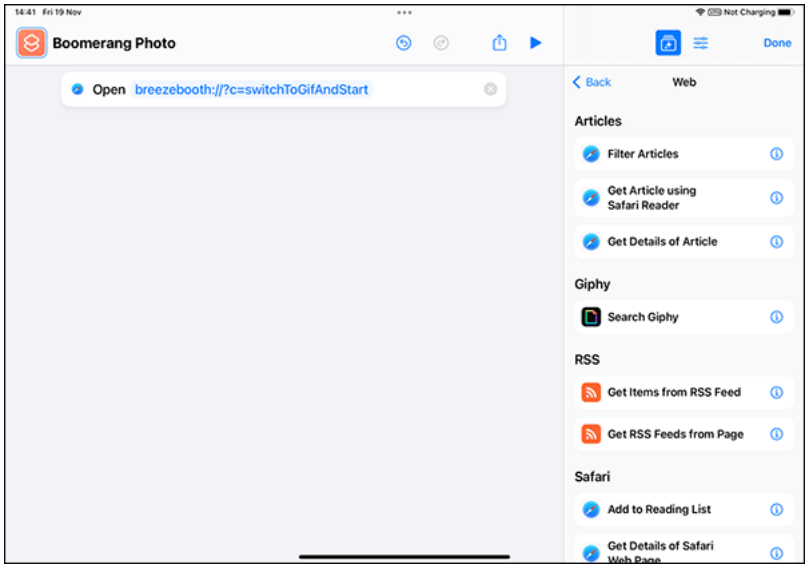
Once you have created an account for AI Background Remove you need to copy your purchase Id and license key into the app settings screen separated by : and with a prefix of aibg:
e.g. if your purchase Id is ABC1234 and your license key is XYZ987654321 you need to enter aibg: ABC1234:XYZ987654321 in the "Background removal key:2 in the App Settings.
You can check that the API key has been entered correctly and check the number of credits you have remaining by tapping "Check background removal API key and credits" in the app settings screen.

Please note: AI Background Remove charge a flat fee of 1 credit per photo and so there is little benefit in selecting the preview option.

20 Automating using Shortcuts

Breeze Booth for iPad can be automated using the iOS Shortcuts app using the breezebooth URL schema. This makes it possible to do things like create a voice activated photo booth by saying "Hey Siri, boomerang GIF" or turn the photo booth on and off at certain times or when the battery level drops below a certain level.

To automate Breeze Booth for iPad create a shortcut in the iOS Shortcuts app and set the action to "Open URLs". Set the URL to breezebooth:// followed by one or more URL parameters to activate touchscreen commands in Breeze Booth for iPad or to set the event name or event strings. Give the shortcut a suitable name (e.g. "Boomerang GIF") so that Siri can run the shortcut when you say its name e.g. "Hey Siri, boomerang GIF".



The screenshot above shows how to define a simple shortcut in the iOS Shortcuts app to start a boomerang GIF session in Breeze Booth for iPad. Please see Apple's online documentation for information on how to use the Shortcuts app to create shortcuts and automations: https://support.apple.com/en-gb/guide/shortcuts/welcome/ios

The following URL parameters are available:

c - activate a touchscreen command e.g. breezebooth://?c=switchToGifAndStart
en - set the event name string e.g. breezebooth://?en=name
es1 - set event string 1 e.g. breezebooth://?es1=one

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es2 - set event string 2 e.g. breezebooth://?es2=one
es3 - set event string 3 e.g. breezebooth://?es3=one
es4 - set event string 4 e.g. breezebooth://?es4=one
es5 - set event string 5 e.g. breezebooth://?es5=one
es6 - set event string 6 e.g. breezebooth://?es6=one

More than one parameter can be added to a URL by separating them by & e.g. to set the event name to Birthday and start a photo session set the URL to breezebooth://?en=Birthday&c=switchToStillsAndStart
Please note that touchscreen commands will only be activated if Breeze Booth for iPad is running an event and the touchscreen action is defined.

21 Roaming Photography

Roaming photography is where a photographer engages with guests at an event and takes their photos and shares them on the spot. Breeze Booth for iPad is ideal for this type of event photography because it provides a compact all-in-one solution when run on an iPhone and paired with a high quality Canon camera. The photographer retains full control over the camera and when they take a photo it is instantly displayed on the phone ready for sharing. The photographer is free to take horizontal or vertical photos, whichever gives the best composition, and the photos presented for sharing can be branded using overlays and logos and use all the tools available in print layouts.

Setup

Firstly you need a Canon camera with a suitable lens. If the lighting at the venue is poor you may also need a flashgun and diffuser. The choice of camera, lens and lighting is beyond the scope of this help file. Please see this section for a list of supported camera models.

Next you need an iPhone or iPad on which to run Breeze Booth for iPad. Ideally you want a compact device that can be mounted with the camera such as an iPhone SE.

You also need a cable to connect the camera to the iPhone or iPad. If you're using an iPhone you need a lightning to USB C cable (if using a recent Canon camera) or a lightning to USB mini B cable (if using a Canon DSLR).

A simple setup using a Canon EOS R6 with 50mm f1.8 lens and an iPhone SE is shown below. This setup can produce professional quality photos using a compact and lightweight rig.

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Please see the section on using an external camera for information on how to connect the camera. Make sure "Photographer mode" is selected in the camera settings window. This will allow the photographer to adjust the exposure settings using the camera controls instead of the app. If the live view display from the camera is not the right way up tap the "Rotate live view" button to rotate it.

How it works

Normally a photo booth works by having a start button and a 3, 2, 1... style countdown before taking the photo. When an external camera is used with Breeze Booth for iPad the photographer can take a photo instantly by pressing the shutter button on the camera. The normal countdown is skipped and the photo is downloaded and displayed in the app ready for sharing almost instantly.

The event can be set up in a number of different ways to suit the shooting style for the event:

1. For taking one or more photos and then viewing them in a gallery for sharing. To do this disable the preview after each photo, disable the print confirmation, disable sharing by text or email and enable the gallery.
2. For sharing on the spot you want it to go straight to the sharing screen. To do this disable the preview after each photo, disable the print confirmation screen and enable sharing by text or email.
3. For sharing on the spot with the option to accept or reject the photos. To do this use similar settings to #1 but enable the preview after each photo or the print confirmation screen to give guests or the photographer the option to accept or reject the photo.
4. For photos to be displayed in an online gallery. To do this disable the preview after each photo, disable the print confirmation screen and disable the sharing options so that the app quickly returns to the ready screen ready for the next shot. Use Breeze Hub, syncing to Dropbox or the uploader to transfer the photos to the gallery.
5. For photos to be displayed in a gallery with the option to accept or reject the photos. To do this use similar settings to #3 but enable the preview after each photo or the print confirmation screen to give guests or the photographer the option to accept or reject the photo.

You can also add a gallery to the event so that guests can look through previous photos and share them by email or text.

Shooting Landscape and Portrait Images

Photos can be taken in either landscape or portrait orientation and different print layout can be used for each. This allows a roaming photographer to frame a photo vertically (e.g. for individual guests or

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couples) or horizontally (e.g. for headshots or larger groups).

To enable the automatic selection of the print layout using the camera orientation create an event with profiles for both landscape and portrait orientations. Design the print layout for the landscape profile to print landscape orientation photos and the print layout for the portrait layout to print portrait photos. Then in the camera settings select "Photographer mode" and enable the orientation lock on the iPad or iPhone.

When a photo is to be printed the app will use the orientation information stored in the EXIF shooting data to determine whether it was shot in landscape or portrait orientation. If it was shot in landscape orientation it will use the print layout from the landscape profile. If the photo was shot in portrait orientation it will use the print layout from the portrait profile.

Adapting existing events

Any normal photo event can be used for roaming photography with little or no modification. The easiest events to use are ones with a single photo where the iPhone/iPad orientation is the same as the camera e.g. landscape orientation iPhone or iPad and camera in landscape orientation. If the iPhone/iPad orientation differs from the camera, e.g. portrait orientation iPhone or iPad and camera in landscape orientation, the print layout will need to be edited to display the photos without cropping.

Supporting multiple photos in one print layout

Taking a photo when the ready screen is displayed automatically skips the countdown. When an event has more than one photo it will display the countdown for the second photo after the first was has been taken. With roaming photography we want to disable the countdown and have the app wait until the photographer takes the next photo or they choose to abandon the set of photos.

The countdown can be disabled be doing the following:
1. Check the screens folder and remove any GIF, MP4 or MOV animations for countdowns e.g. countdown.mov or GIF or video files starting with 1, 2, 3 or 4.
2. In the Photo Settings tab set the "Countdown remaining photos (secs)" to 600 seconds so that the app waits up to 5 minutes for the photographer to take the next photo.
3. Either set the countdown text to an empty string or edit it to provide a message to the photographer e.g. "Take photo {photoboothImage} of {photoboothNumImages}"

To allow the photographer to abandon a set of images create an overlay screen for the countdown e.g. 2.png and edit this to include the graphics for a cancel button. Then use the touchscreen editor to add a "cancelCountdown" touchscreen action.

Sample event

The roaming sample events are designed for taking photos in landscape or portrait orientation and are designed to run on a small iPhone (e.g. iPhone SE) connected directly to a Canon camera. The phone can be fixed to the camera in either portrait or landscape orientation. For best results enable the orientation lock on the phone.
There are two versions of the roaming event:
- roaming (mirrorless) - use this event if you have a mirrorless camera such as the Canon EOS R6, Canon EOS R100 or Canon EOS M50 Mark II
- roaming (DSLR) - use this event if you have DSLR camera such as the Canon Rebel T8i/EOS 850D, Canon Rebel T7/EOS 2000D or Canon Rebel T6/EOS 1300D

The only difference between the two events is live view is enabled for the mirrorless version and

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disabled for the DSLR version. This is because a mirrorless camera can display live view images and use the viewfinder for composing images whereas the viewfinder is blanked when live view is enabled on a DSLR camera.

The sample roaming events can be downloaded to your iPhone or iPad by scanning this QR code:

A zip file containing these example events can be downloaded to your PC and loaded into the event editor from: https://bb4ipad.com/sync/roaming.zip

22 Using Bluetooth

The Bluetooth option in Breeze Booth makes it possible to connect to compatible Bluetooth peripherals and interface with hardware such as lights, LED strips and payment systems.

To connect Breeze Booth to a compatible Bluetooth LE device go to the settings screen, select "Show advanced settings" and select "Connect to Bluetooth":

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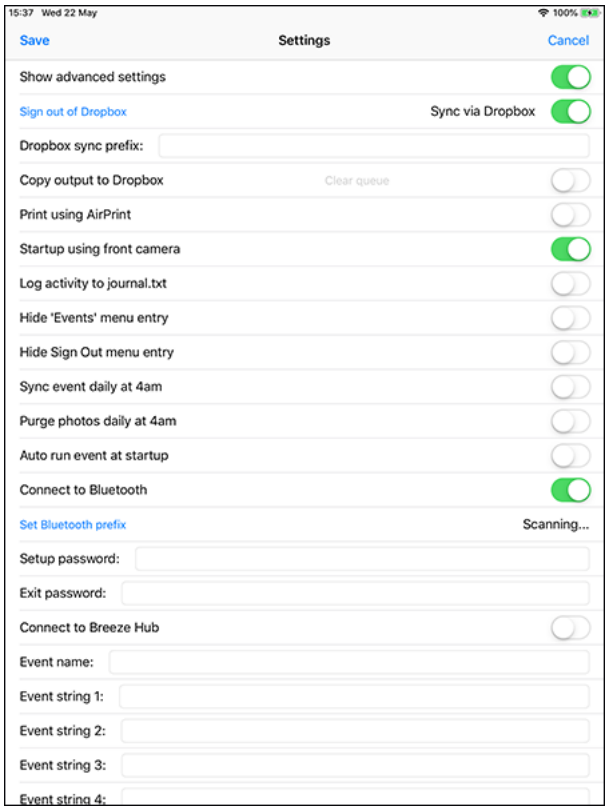

The line below "Connect to Bluetooth" will show the connection status:
"Scanning..." - if it can't find any compatible Bluetooth peripherals
"Connected to: <id>" - if it is connected the a Bluetooth peripherla with id "<id>"
or a display of the ids of compatible Bluetooth devices which don't match the prefix defined in Breeze Booth

Tap "Set Bluetooth prefix" to define which Bluetooth ids the app will connect to. For example, if you have a compatible Bluetooth peripheral to control LED lights which has an id of "Breeze_LED_3c03056712" you could set the Bluetooth prefix to "Breeze_LED". If you have multiple iPad photo booths each with an LED light controller you need to enter the full id as the prefix to ensure that each booth connects to the correct LED controller e.g. set the prefix to "Breeze_LED_3c03056712".

Sending Commands to a Connected Bluetooth Device

When an event is running the app sends information to a connected Bluetooth device each time a screen is displayed e.g. when the ready screen is displayed it sends a string similar to:
s:cameleon/portrait/.: stillsReady

The app can also send a command string which can be defined for each screen for an event. This option is for advanced users and system integrators who are developing their own Bluetooth devices to connect to the iPad app.
Click on the "Bluetooth commands..." button in the "General" tab of the event editor to display the "Bluetooth Commands" dialog:

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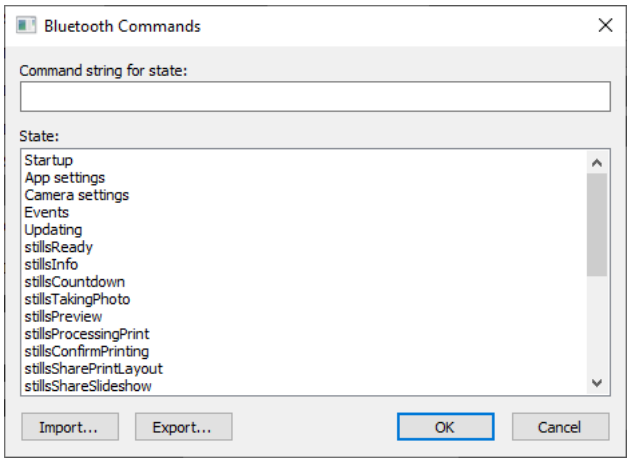

To enter a string to be sent first select the iPad state, e.g. stillsReady, and then enter the command string for that state. When the event is run the command string will be sent to a connected Bluetooth device when the photo booth switches to the given state.

Technical Details

Breeze Booth can connect to Bluetooth peripherals that provide the Nordic UART service. This allows the app to send messages to the peripheral and the peripheral to send commands to the app. Each time the screen changes in the app it sends a status message to the Bluetooth peripheral with details of the screen being displayed. The peripheral can send commands to the app to query its status (e.g. battery level, memory usage, screen info) as well as commands to control the app e.g. stillsStart to start the shooting sequence when the app is displaying the stills ready screen.

The commands the peripheral can send to the app are:
?d - query the model name, example response: d:iPad 9.7" 2018
?i - device name, example response: i:My iPad
?s - status, returns the current screen, example response: s:cameleon/portrait/.: stillsReady
?v - vendor id, returns the vendor id (as displayed at the bottom of the settings screen). Example response: v:5A3B4974-C0AC-44BD-8CFA-8635367E0FC3
?m - memory usage, returns the number of MB free and total memory in MB, example response m:21742/30507
?b - battery percentage, returns the percentage charge remaining in the battery and the charging state (unplugged, charging, full or unknown), example response b:98,unplugged
?t - device date and time in the format YYYYMMDD_hhmmss
?<token> - query the value of one or more tokens. Example response to ?{date} is ?{date}=2022-06-30
start - enter photo booth mode from the startup screen
!msg - display msg in the start screen in the login status area located below the start button. Messages can be displayed in two lines by using the sequence \n e.g. !first line of message\nsecond line
<touchscreen action> - the name of any touchscreen action when in photo booth mode

Sending commands to the iPad
Commands can be sent to the iPad to control its operation by sending the name of the touchscreen action e.g. to switch to stills mode and start the countdown send "switchToStillsAndStart" followed by a new line character.

Sending text strings to the iPad
Up to 10 strings can be sent to the iPad app app using the @bt<n>: command. This is useful if the

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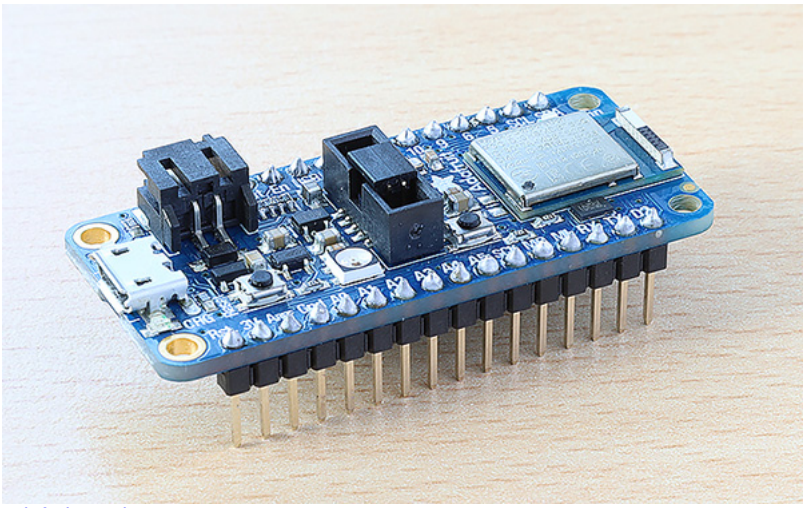
Bluetooth device is connected to a scanner (e.g. an RFID reader) that reads information that needs to be passed to the iPad. The strings can be accessed using the tokens {bt1}, {bt2}, {bt3} etc.
Examples:
@bt1:My name - sets Bluetooth string #1 to "My name". This can be accessed by the app using the token {bt1}
@bt2:sales@breezesys.com - sets Bluetooth string #2 to "sales@breezesys.com". This can be accessed by the app using the token {bt2}
@bt3:more info - sets Bluetooth string #3 to "more info". This can be accessed by the app using the token {bt3}
...
@bt10:string 10 - sets Bluetooth string #10 to "string 10". This can be accessed by the app using the token {bt10}

Bluetooth Devices

It is relatively easy to program a microcontroller to control LED strips or read sensors and communicate with Breeze Booth for iPad via Bluetooth. The simplest way to do this is to program a microcontroller board using CircuitPython (a version of the Python programming language that has been designed to run on low cost microcontroller boards). Suitable microcontrollers are the Adafruit Feather nRF52840 Express or the Adafruit ItsyBitsy nRF52840 Express - Bluetooth LE. The Adafruit ItsyBitsy nRF52840 Express - Bluetooth LE is a low cost option which has the advantage that it is easier to interface to LED strips (e.g. NeoPixels) because it has a 5V logic output.



Adafruit Feather nRF52840 Express

Programming Bluetooth microcontroller boards using CircuitPython

We recommend using the Adafruit ItsyBitsy nRF52840 Express - Bluetooth LE as this is a low cost microcontroller with Bluetooth LE support and a 5V digital output pin suitable for interfacing to LED strips such as NeoPixels.
First set up the board for running CircuitPython and install the Mu editor by following this guide by Adafruit: CircuitPython for ItsyBitsy nRF52840 Express

After setting up the board to run CircuitPython it will appear as a drive called "CircuitPython" when connected to a computer via USB. CircuitPython programs can be run on the board simply by editing the code.py file on the drive directly or by dragging and dropping a code.py file onto the drive.

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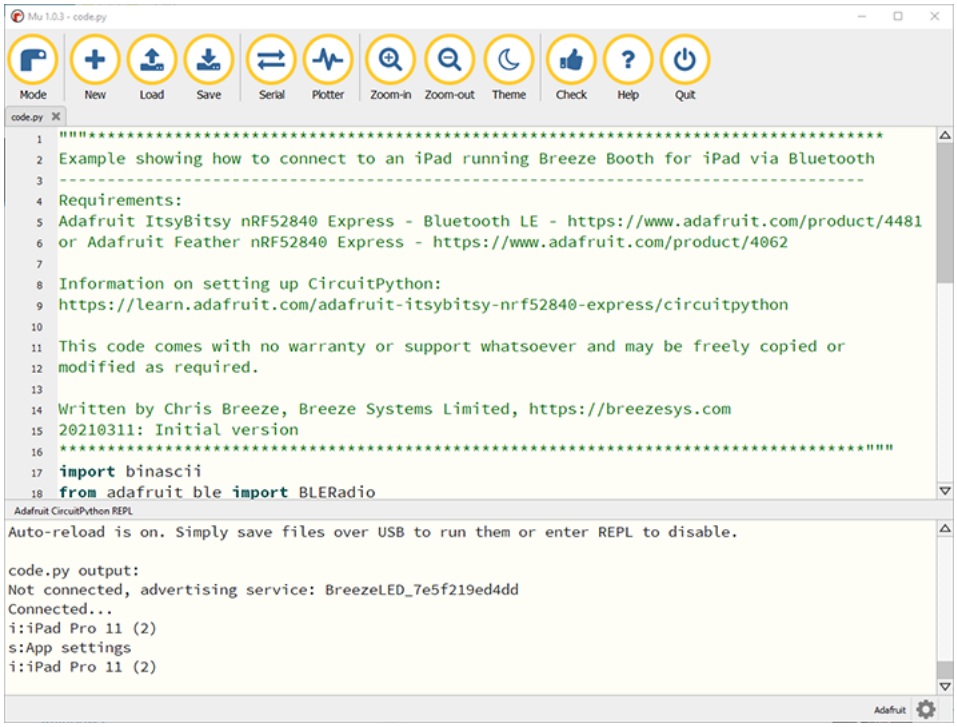
Example 1: Simple Bluetooth connection
This example shows how to set up the microcontroller as a Bluetooth peripheral which can connect to an iPad running Breeze Booth for iPad.
Hardware requirements: Adafruit ItsyBitsy nRF52840 Express - Bluetooth LE
The example can be downloaded from https://breezesys.com/downloads/CircuitPython_BLE.zip
Unzip the file after downloading and copy its contents to the CircuitPython drive. Run the Mu editor and click on the load button to load code.py then click on the serial button to display the output from the board. Connect the iPad by going to Breeze Booth for iPad's App Settings screen and setting the Bluetooth prefix to Breeze and enabling "Connect to Bluetooth". After establishing the Bluetooth connection status messages sent by the iPad will be displayed in the MU editor:



Example 2: Controlling NeoPixel LED strips
This example shows how to set up the microcontroller as a Bluetooth peripheral which can connect to an iPad running Breeze Booth for iPad and can control LED NeoPixel strips.
Hardware requirements: Adafruit ItsyBitsy nRF52840 Express - Bluetooth LE and RGB+W NeoPixel strip or SK6812 RGB+W LED strip

Important: IPlease see Adafruit's tutorials for information on powering LED strips before connecting the LEDs to the microcontroller otherwise you risk damaging the microcontroller board: https://learn.adafruit.com/adafruit-neopixel-uberguide
The example code is set up for 144 pixels at low power and should be able to power the NeoPixels directly from the USB pin on the microcontroller without damaging it. You will need to use an additional power connection to provide enough current to drive the LEDs at full power.

Connect the NeoPixels to the Adafruit ItsyBitsy nRF52840 Express - Bluetooth LE (see this guide for details: https://learn.adafruit.com/adafruit-itsybitsy-nrf52840-express/circuitpython-neopixel).

The example can be downloaded from https://breezesys.com/downloads/CircuitPython_NeoPixel_BLE.zip
Unzip the file after downloading and copy its contents to the CircuitPython drive. Run the Mu editor and

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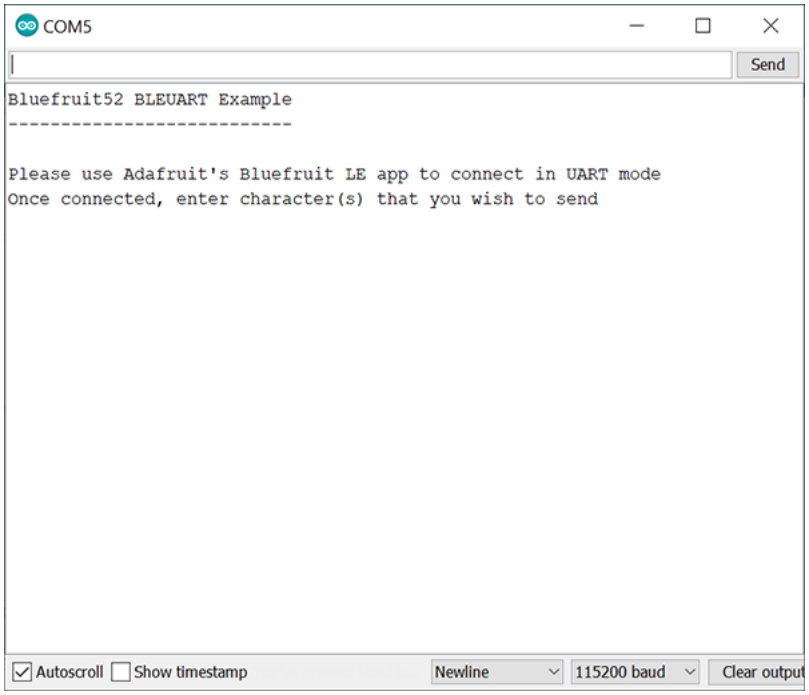
click on the load button to load code.py.
Connect the iPad by going to Breeze Booth for iPad's App Settings screen and setting the Bluetooth prefix to Breeze and enabling "Connect to Bluetooth". After establishing the Bluetooth connection the LEDs should change to a different color or animation for each screen displayed on the iPad.
Use the Mu editor to edit the code.py file to change the number of pixels, the brightness and the animations for each screen (these are set in a series of if...elif... statements towards the end of the file).

Programming Arduino based Bluetooth microcontroller boards

First setup the Arduino development environment by following the steps in Adafruit's tutorial
Then load the bleart example by selecting File->Examples->Adafruit Bluefruit nRF52 Libraries->Peripheral->bleuart in the Arduino IDE. Upload the example to the Adafruit Feather board and open the serial monitor in the Arduino IDE (Tools->Serial monitor) and you should see something like this:



In the Breeze Booth settings screen the "Set Bluetooth prefix" line should show "Scanning: Bluefruit52". This shows that it has found a compatible Bluetooth peripheral but isn't connecting to it because its id doesn't match the prefix defined in Breeze Booth. Tap on "Set Bluetooth prefix" and set the prefix to "Bluefruit52", tap OK and it should connect to the peripheral and display "Connected to: Bluefruit52" in the settings screen. The serial monitor in the Arduino IDE should now show some information from the app:

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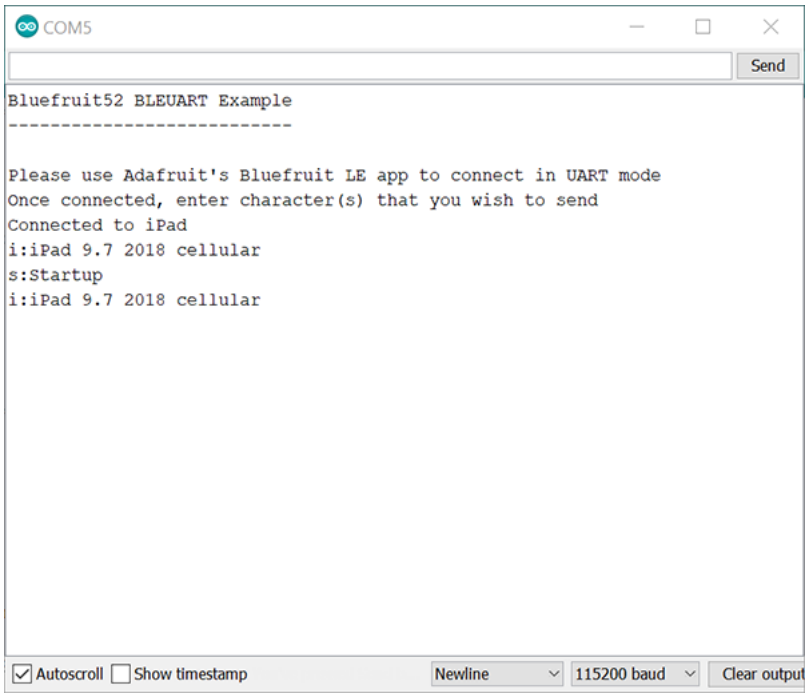
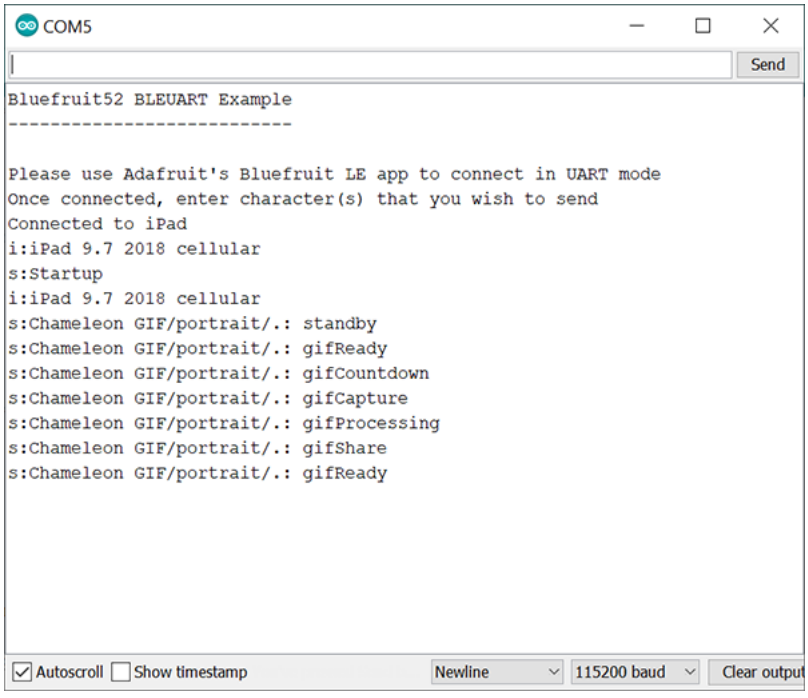


Run an event in Breeze Booth and each time the screen changes a screen status message is sent to the Bluetooth peripheral and is displayed in the Arduino IDE's serial monitor e.g.



If you are familiar with controlling LED strips from an Arduino (e.g. Adafruit NeoPixel) you could modify the bleuart example to read the screen status messages from the iPad and display different LED light patterns depending on the screen being displayed. If you are not familiar with LED strips there are some excellent tutorials on the Adafruit website

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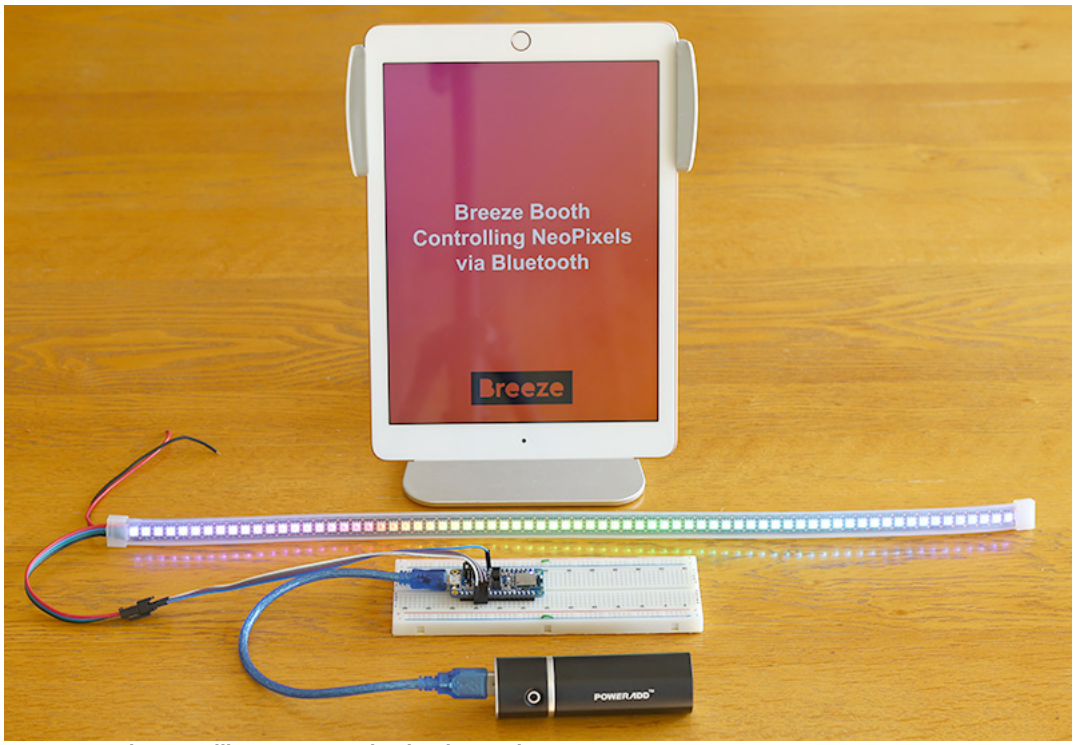
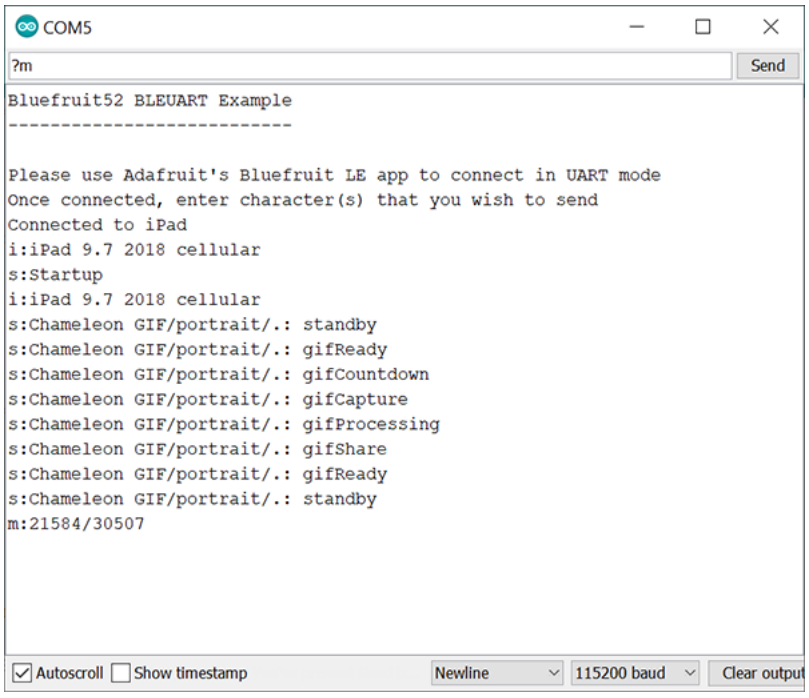


Breeze Booth controlling an LED strip via Bluetooth

Commands can be sent to the iPad by typing into the text field at the top of the serial monitor window and pressing send e.g. to query the iPad's memory usage enter ?m



It is also possible to control the iPad in photo booth mode by sending the name of the touchscreen action to be performed e.g. enter "stillsStart" to start the photo booth shooting sequence when the stills ready screen is displayed.

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The bleuart example can be modified to control the booth e.g.
- detect a button press to start the shooting sequence
- use a proximity sensor to detect guests standing close to the booth and send a command to switch from the standby screen to the ready screen
- interface to a payment system and switch to the ready screen when a payment has been accepted.

A sample Arduino sketch for an Adafruit Feather nRF52840 Express or Adafruit Feather nRF52 Bluefruit LE can be download from here: Breeze_Booth_LED_strips.zip
Please note: This sample Arduino sketch comes with no warranty or support and requires some working knowledge of programming Arduino microcontrollers.

23 Status URL

The status URL provides a way of sending status information about the app's status to a web site and for the web site to send commands back to the iPad. It can be used as a webhook to send information to your website or to online tools such as Integromat or Zapier.

When enabled the app will send an HTTPS POST request containing information about the app to the status URL at regular intervals. The web site receiving the HTTPS POST request can send a JSON response containing commands for the iPad to execute such as login details or sync information.

The status URL can be enabled in the App Settings screen by setting the URL to call, the update interval and an optional password.

Status Information Sent by the iPad

Below is an example of the status information sent by the app:

```
auth:   "cc1c52665267d4972d0cc30fedeeb5eb8ed68d06"
hash:   "2a47d388355b9f26412d89d1c996880e68f99f60"
time:  "1589893063"
request:  "ipad  status"
username:  "demo_ipad"
name:  "Demo  iPad"
model:  "iPad  Pro  11""
user_id:   "d8cc7d4d-a2a8-4466-acc0-64ddf74df9bb",
"id":   "95DFB8B0-2C03-4798-8473-236770988454"
status:  "Startup"
info:
{
     "version":"1.1.2",
     "timeZoneOffset":3600,
     "battery\":100,
     "dropboxAccount":"",
     "signedInAs":"demo_acc",
     "time":1589893063,
     "totalInMB":122060,
     "model":"iPad8,9",
     "status":"Startup",
     "eventSyncServer":"https://bb4ipad.com/sync",
     "date":"20200804",
     "availableInMB":98418,
     "queues":{
          "dropboxQueue":0,
          "textQueue":0,
          "hubQueue":0,
          "uploadQueue":0,
          "emailQueue":0
     },
     "total":  {
```

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```
          "emailErrors":0,
          "photoTexts":45,
          "gifTexts":142,
          "gifEmails":283,
          "textErrors":0,
          "gifSessions":734,
          "photoSessions":350,
          "photosTaken":700,
          "photoEmails":384
     },
     "today":{
          "emailErrors":0,
          "photoTexts":21,
          "gifTexts":34,
          "gifEmails":56,
          "textErrors":0,
          "gifSessions":97,
          "photoSessions":56,
          "photosTaken":99,
          "photoEmails":36
     }
}
events:
[
     {"title":"Demo 1 Props & Filters","description":"","folder":"demo full","currentEvent":true},
     {"title":"Demo 2 Boomerang GIF","description":"","folder":"demo boomerang"},
     {"title":"Demo 3 Photo (no printing)","description":"","folder":"demo photo"},
     {"title":"Demo 4 Print Menu (printing)","description":"","folder":"demo menu"},
     {"title":"Demo 5 Surveys","description":"","folder":"demo surveys"},
     {"title":"Demo 6: AI Background Removal","description":"","folder":"AI Background Removal"}
]
```


The POST parameters are:

auth: SHA1 hash of the vendor id + time + password
hash: reserved for future use
time: the time since the Unix epoch - also used to calculate the SHA1 hash for the auth parameter
request: the HTTP POST request type. Currently this will always be "ipad status"
username: the user name if the iPad is logged in
name: the name of the iPad
model: the model of the iPad
user_id: a unique string identifying the username
id: the vendor id of the iPad - also used to calculate the SHA1 hash for the auth parameter
status: the status of the iPad or the screen currently being displayed when in photo booth mode
info: a JSON string providing more detailed information about the status of the app

Sending Commands to the iPad in the Response String

The web server can send a JSON string containing commands in the body of the response to the POST request.
WARNING: Please take care to validate the POST request (e.g. by only responding to known verndor ids and checking the auth parameter) before returning sensitive information such as the username and password

The following commands are currently supported:

JSON command	Description
{"cmd":"login","user":"<username>", "pw":"<password>"}	Login using the given username and password
{"cmd":"logout"}	Logout
{"cmd":"sync","method":"get","eventSyncServer":"<	Sync using GET and the given sync server URL

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URL>"}	
{"cmd":"sync","method":"post","eventSyncServer":"<URL>","eventSyncServerPostPassword":"<password>"}	Sync using POST and the given sync server URL and password
{"cmd":"sync","method":"dropbox","dropboxPrefix":"<prefix>"}	Sync using Dropbox and the given Dropbox prefix
{"cmd":"start","event":<event_number>}	Start photo booth by running the given event. Set <event_number> to 0 to run the first event in the list of events, 1 to run the second event etc.
{"cmd":"exit"}	Exit photo booth mode and return to the start screen
{"cmd":"update"}	Sync the current event using the current sync settings
{"cmd":"updateAll"}	Exit photo booth mode and update all events using the current sync settings
{"cmd":"email", "to":"<email_addr>"}	Email the iPad's status together with a copy of the journal.txt file and the settings.xml file to the given email address. A screenshot can be included by adding "screenshot":true to the JSON response e.g. {"cmd":"email", "to":"<email_addr>", "screenshot":true} The email server can be specified by adding the SMTP server, username, port number and password to the JSON response e.g. {"cmd":"email", "to":"<email_addr>", "server":"<smtp_server>", "port":<port_number>, "user":"<username>", "pw":"<password>"}

An optional "next" value can be added to the command to specify the interval in seconds before the next status update from the iPad (this overrides the <statusUpdateInterval> setting).
e.g. login and send next status update in 60 secs: {"cmd":"login","user":"<username>", "pw":"<password>", "next": 60}

Sample PHP Script for responding to status updates

The sample PHP script below shows how the status URL can be used to log information about the app status, log iPads in and send commands to iPads.

```
<?php
//  ipad_status.php
//
// PHP script to log status information sent by iPads running Breeze Booth for iPad
// and to return commands to the iPad.
// To enable iPad status messages set the following tags in the settings.xml file on the iPad:
//    <statusUrl>https://yoursite.com/ipad_status.php</statusUrl>
//   <statusUpdateInterval>600<statusUpdateInterval>
//
// statusUpdateInterval is the update interval in seconds. Set this to 0 to disable updates.
// In version 1.1.2 of Breeze Booth for iPad the update interval can be overridden by adding
// a "next" value to the JSON response.
//
// Sample JSON data sent in the info argument:
// {
//   "version":"1.0.5",
//   "totalInMB":61035,
//   "availableInMB":36142,
//   "model":"iPad  Pro  11\"",
//   "status":"Camera  settings",
```

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```
//   "battery":35,
//   "dropboxAccount":"me@mydomain.com",
//   "signedInAs":"username",
//   "date":"20191203",
//   "time":1575456854,
//   "timeZoneOffset":0,
//   "queues": {
//        "dropboxQueue":0,
//        "textQueue":0,
//        "hubQueue":18,
//        "uploadQueue":0,
//        "emailQueue":0
//   },
//   "total": {
//        "emailErrors":0,
//        "photoTexts":1,
//        "gifTexts":7,
//        "gifEmails":118,
//        "textErrors":0,
//        "gifSessions":123,
//        "photoSessions":653,
//        "photosTaken":1596,
//        "photoEmails":21
//   },
//   "today": {
//        "emailErrors":0,
//        "photoTexts":0,
//        "gifTexts":0,
//        "gifEmails":0,
//        "textErrors":0,
//        "gifSessions":2,
//        "photoSessions":0,
//        "photosTaken":0,
//        "photoEmails":0
//   }
// }

// read arguments sent by iPad
$args  =  json_decode(file_get_contents('php://input'),  TRUE);
$id = $args["id"];
$name = $args["name"];
$model = $args["model"];
$username = $args["username"];
$userId = $args["user_id"];
$request = $args["request"];
$time = $args["time"];
$hash = $args["hash"];
$status = $args["status"];
$info = $args["info"];

// list of iPad vendor ids and descriptions
$ipads = array(
     '95DFB8B0-2C03-4798-8473-2367709123454' => 'iPad Pro (2)',
     'E1234C79-8C00-4613-94A7-527C88CE7DD4' => 'iPhone 8 Plus',
     '45F4E97F-B4AB-1234-9664-AD105EF0AF94' => 'iPad 9.7 2018 cellular'
);

// append $msg to log file
function  logMsg($msg)
{
     file_put_contents('../ipad_status_log.txt', gmdate('Y/m/d H:i:s: ') . $msg . PHP_EOL, FILE_APPEND
}

// check the iPad's vendor id is one of your iPads
// return true if it is ok, false if not
function  checkVendorId($id)
{
     // TODO: add extra code here to verify that the vendor id is one of your iPads not
     // someone else's which is trying to login to your account. A basic implementation
     // is shown below:
     global $ipads;
```

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```
    if (array_key_exists($id, $ipads)) {
        return true;
    }
    return false;
}

// verify vendor id and password before sending login info back to the iPad
if  (!checkVendorId($id))
{
    logMsg("Id: $id, Unknown vendor id");
    http_response_code(401);
}
else if ($time < time() - 60 || $time > time() + 60)
{
    // refuse the command if the time sent by the iPad isn't the time now +/- 60 secs
    logMsg("Id: $id, time error");
    http_response_code(401);
}
else if (sha1($id . " Breeze Systems " . $time . " [fudge] " . $userId) == $hash)
{
    // log JSON info to text file
    logMsg("Id: $id, info: $info");

    // decode JSON info and send login command to auto-login the iPad if it isn't currently logged in
    $json = json_decode($info, TRUE);
    if ($json["signedInAs"] == "")
    {
        // log the iPad in
        // change "username" and "password" to a username and password for your account
        $cmd = array('cmd' => 'login', 'user' => 'username', 'pw' => 'password', 'next' => 30);
        logMsg("Id: $id, logging in as " . $cmd['user'] . "...");
        echo json_encode($cmd);
    }
/*
    else if ($json["status"] == "Startup")
    {
        // you can also send other commands similar to the BlueTooth commands e.g.
        logMsg("Id: $id, sending start command...");
        $cmd = array('cmd' => 'start', 'next' => 30);
        echo json_encode($cmd);
    }
*/
    else
    {
        // everything is fine, request next update in 600 secs
        $cmd = array('next' => 600);
        echo json_encode($cmd);
    }
}
else
{
    logMsg("Id: $id, AuthFail");
    http_response_code(401);
}
?>
```

24 Payment System

Breeze Booth for iPad v2.3 onwards supports payments using standard payment systems such as the Nayak VPOS Touch contactless credit card reader (shown below). To use this you need to run our free MDB Payment utility software and to buy the necessary hardware (a Qibixx MDB-USB Interface, PSU and cables and a suitable MDB payment system such as the Nayax VPOS Touch).

The MDB Payment utility runs on a Windows PC and communicates with the payment system via USB and the iPad via the Camera Controller. The MDB Payment utility monitors the state of the photo booth by reading the status line displayed in the Camera Controller window. It communicates with any

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suitable MDB payment system via the Qibixx MDB-USB interface.

MDB is a standard interface used by the vending machine industry to connect a wide range of payment systems to vending machines (or in this case a photo booth).

A typical payment system for an iPad based photo booth is shown below:

For more information please see the help file for the MDB Payment Utility.

Pay per print, per email or per text

Payments for prints or for sending emails and texts work in a similar way. When the photo booth is about to print or send an email or text it displays a payment screen and waits for the payment to be made or the payment to be cancelled or a time out to occur. If the payment is successful a "payment accepted" screen is displayed for 2 seconds and then the print is printed or the email or text is sent. If the payment fails, is cancelled or timesout a "payment cancelled" screen is displayed for 2 seconds and then the booth returns to the print confirmation screen or the sharing screen.

The MDB Payment Utility should monitor the screen being displayed by the photo booth and request a

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payment when the state is one of the following:
print_payment - waiting for payment for a print from the confirm printing screen or the sharing screens
email_payment - waiting for payment to send an email from the share screens
text_payment - waiting for payment to send an text from the share screens

When the payment has been made the MDB Payment Utility should send "paymentAccepted" to the photo booth which will then display the "payment accepted" screen for 2 seconds before printing the photo or sending the email or text.
When the "payment accepted" screen is displayed the state will be set to one of the following:
print_payment_accepted - payment accepted for a print from the confirm printing screen or the sharing screens
email_payment_accepted - payment accepted to send an email from the share screens
text_payment_accepted - payment accepted to send an text from the share screens

If the payment fails or is cancelled by the user the MDB Payment Utility should send "paymentCancelled" to the photo booth which will then display the "payment cancelled" screen for 2 seconds before returning to the confirm printing or sharing screen.
When the "payment cancelled" screen is displayed the state will be set to one of the following:
print_payment_cancelled - payment cancelled for a print from the confirm printing screen or the sharing screens
email_payment_cancelled - payment to send an email from the share screens cancelled
text_payment_cancelled - payment to send an text from the share screens cancelled

Important: Do not add a "paymentAccepted" touchscreen action to the payment screens except for testing purposes otherwise users can tap the touchscreen action to print or share the photos without paying.
You can add a "paymentCancelled" touchscreen action to the payment screens if you want users to be able to cancel a payment from the photo booth screen.
When a payment is cancelled the "payment cancelled" screen is displayed for 2 seconds. The MDB Payment Utility should look for a screen name starting with paymentCancelled and cancel payment on the payment device.

Example workflow for paying to send an email from the gallery sharing screen:
1. When the user selects email from the sharing screen the email keyboard is displayed as normal
2. After entering their email address the user taps send and the email_payment.jpg screen is displayed and the status set to payment_gallery_email.
3. When the MDB Payment Utility detects the payment_gallery_email status it requests a payment.
4. If the payment is accepted the MDB Payment Utility sends "paymentAccepted" to the photo booth which displays the "payment accepted" screen for 2 seconds before sending the email and returning to the gallery share screen.
5. If the payment fails or the user cancels it from the payment device the MDB Payment Utility sends "paymentCancelled" to the photo booth which displays the "payment cancelled" screen for 2 seconds before returning to the gallery share screen without sending the email.
6. If a payment isn't received within 60 seconds or user cancels it from the payment screen the photo booth displays the "payment cancelled" screen for 2 seconds before returning to the gallery share screen without sending the email. The MDB Payment Utility should look for the paymentCancelled_gallery_email state and send a cancel command to the payment device.

Payments for prints can be enabled in the Event Editor in the Photo Settings and payments for emails or texts can be enabled in the Sharing Settings.

25 Release History

20 February 2024 - Breeze Booth v3.5, Breeze Booth Event Editor v3.5, Breeze Hub v1.2.6.9, Camera Controller v1.1.5

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- Print compositing now supports the cropping of images and the option to display the original unmodified photo
- Added an optional ready_overlay_qr.png screen to provide visual feedback when scanning a QR code
- Added Event Kite gallery and session ids to make it easier to integrate with Event Kite online galleries and micro-sites
- Fixed an issue with MP3 audio files not playing in the video ready and countdown screens

21 November 2023 - Breeze Booth v3.4.1, Breeze Booth Event Editor v3.4.1, Breeze Hub v1.2.6.9, Camera Controller v1.1.5

- Fixed a scaling issue printing with Breeze Hub when running the app on iPadOS 17

13 October 2023 - Breeze Booth v3.4.1, Breeze Booth Event Editor v3.4.1, Breeze Hub v1.2.6.7, Camera Controller v1.1.5

- Added the option to postprocess photos by sending an HTTP POST to a web server
- Added an option to the event editor to add simple survey screens
- Fixed an issue capturing audio guestbook videos when using an external camera

5 June 2023 - Breeze Booth v3.4, Breeze Booth Event Editor v3.4, Breeze Hub v1.2.6.7, Camera Controller v1.1.5

- Added support for landscape and portrait orientation print layouts for roaming photography
- Now supports fast shooting rates for roaming photography
- Added touchscreen actions to mark images as deleted or to delete them permanently when viewing them in a gallery
- Added a privacy option which encrypts email addresses and phone numbers
- Added support for timed sessions
- Processed photos can now be placed within a larger canvas to allow space for borders etc.
- Added support for the Canon EOS R6 Mark II, Canon EOS R8, Canon EOS R50 and Canon EOS R100
- EXIF shooting data is now included when saving the individual photos when using an external camera

22 March 2023 - Breeze Booth v3.3, Breeze Booth Event Editor v3.3, Breeze Hub v1.2.6.6, Camera Controller v1.1.5

- Added scrapbooking style outline option to AI background removal
- Added print compositing with blur, blend modes, filters and opacity effects when adding photos to the print layout
- Added initial support for roaming photography

18 January 2023 - Breeze Booth v3.2, Breeze Booth Event Editor v3.2, Breeze Hub v1.2.6.5, Camera Controller v1.1.4

- Added support for direct USB connection to Canon cameras including live view, taking photos and capturing videos
- Added the option to specify the age of photos to purge when using the auto purge at 4am option
- Fixed issues with switching between built-in cameras when using the new iPad 10th Generation
- Fixed an issue saving printer filters in Breeze Hub
- Improved the reliability of network connection for Breeze Hub and the Camera Controller when the PC is connected to multiple networks

8 November 2022 - Breeze Booth v3.1.2, Breeze Booth Event Editor v3.1.2, Breeze Hub v1.2.6.4, Camera Controller v1.1.3

- Added optional payment screens for printing and sharing by email and text
- Improved the reliability of Breeze Hub and Camera Controller connections
- Fixed an issue with the gif_capture and video_capture_loop animations not looping

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- Fixed an issue with the video_overlay.png being applied to the outro section of processed videos which don't have an intro video

10 August 2022 - Breeze Booth v3.1.1, Breeze Booth Event Editor v3.1.1, Breeze Hub v1.2.6.3, Camera Controller v1.1.1

- Added audio guestbook support to video capture
- The overlay/background filename suffixes for photo, burst GIFs and videos can now be used to select which screens are displayed during the countdown and capture (details)
- Added the ability to set a ready screen string using touchscreen actions and use it to select which ready screen is displayed and to choose a background when using AI background removal
- Built-in AI background removal now supports background and overlay images that can be applied to live view and prints
- Added the option to copy a profile from another event when using the Event Editor
- Added support for the Canon EOS R3, Canon EOS R7 and Canon EOS R10 to the Camera Controller
- Improved reliability and performance when syncing files to Breeze Hub
- Fixed an issue sending emails with CC addresses via Breeze Hub

9 May 2022 - Breeze Booth v3.1, Breeze Booth Event Editor v3.1, Breeze Hub v1.2.6.2, Camera Controller v1.1.1

- Added support for built-in AI background removal that can be applied to live view images, photos, burst GIFs and videos
- Added support for panning, scaling and rotating videos
- Added support for capturing slow motion video at up to 240 fps (depending upon the device)
- Added special effects that can be applied to videos
- An optional background video can be played behind videos (e.g. when using AI background removal) and an optional alpha video can played over the video
- Added local syncing of events from the Event Editor to the iPad for fast, simple updates

22 February 2022 - Breeze Booth v3.0, Breeze Booth Event Editor v3.0, Breeze Hub v1.2.6.2, Camera Controller v1.1.1

- Added support for capturing videos and apply creative effects including jump cuts, speed ramping, overlay and adding and intro and outro video
- Added power saving screen
- Added the ability to swap backgrounds and overlays in the confirm printing screen
- Added charging status and low power mode indicator to Camera Controller battery info display
- Added a "Crop photo to bounding box" option in the GIF layout editor
- Minor changes to the naming of temporary files for attachments when sending emails in Breeze Hub

12 January 2022 - Breeze Booth v2.3, Breeze Booth Event Editor v2.3, Breeze Hub v1.2.6.1, Camera Controller v1.1

- Fixed an issue in Breeze Hub when sending emails with file attachments

15 December 2021 - Breeze Booth v2.3, Breeze Booth Event Editor v2.3, Breeze Hub v1.2.6, Camera Controller v1.1

- Added support for breezebooth URL schema allowing automation using Apple Shortcuts
- Added support for payments from contactless credit card payment systems
- Added the option to specify the number of loops for a slideshow GIF

2 August 2021 - Breeze Booth v2.2, Breeze Booth Event Editor v2.2, Breeze Hub v1.2.5, Camera Controller v1.0

- Added new blend modes for GIF overlays and support for blend modes for print overlays
- Fixed an issue which could cause the app to crash when displaying a gallery

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- Fixed an issue with Breeze Hub not cropping photos when sending emails

25 June 2021 - Breeze Booth v2.1, Breeze Booth Event Editor v2.1, Breeze Hub v1.2.4, Camera Controller v1.0

- Added skin smoothing filter
- Added lighten, darken and overlay blend modes to overlays added to burst GIFs and slideshow GIFs
- Added left, center and right alignment options for captions added to prints
- Added gallerySlideshowPrint touchscreen action which prints the print layout from the gallery slideshow share screen
- Added qrRepeat touchscreen action which repeats the last scanned QR code
- Fixed an issue with Breeze Hub which could result in texts being sent multiple times
- Fixed an image quality issue when sending B&W photos by email using Breeze Hub
- Fixed an issue with attaching processed photos to emails sent from the gallery

15 April 2021 - Breeze Booth v2.0, Breeze Booth Event Editor v2.0, Breeze Hub v1.2.2, Camera Controller v1.0

- Added support for using an external camera
- Added support for an external controller to monitor and control the iPad app
- Improved sharing by email using an attractive email template and email service provided with the iPad subscription
- Updated sample events making it easier to get started quicker
- Added sharing gallery for sharing and printing photos from previous sessions
- Added optional slideshow that runs in standby mode
- Added optional background images for keyboards and surveys to make it easier to re-use and rebrand keyboard layouts
- Fixed an issue in Breeze Hub which caused emails to be sent repeatedly when sending via GMail

- **7 October 2020 - Breeze Booth v1.1.3, Breeze Booth Event Editor v1.4.4, Breeze Hub v1.2.1**
- Added support for different fonts in captions for print layouts
- Added the ability to set event names and event strings using the quick setup QR code
- Added the ability to set the status URL using the quick setup QR code
- Added the option to include QR code strings in the survey results tool in Breeze Hub
- Fixed an issue connecting to Breeze Hub on iPadOS 14 and iOS 14

18 August 2020 - Breeze Booth v1.1.2, Breeze Booth Event Editor v1.4.3, Breeze Hub v1.2

- Added the option to specify the number of prints when using QR codes for contactless operation
- Now supports plain text QR codes in the quick setup screen
- QR code strings, {qr1} to {qr10}, are now saved in the XML summary file
- Checkboxes and radio buttons can now be initialized using tokens e.g. from information read from the QR code strings or from survey questions
- Added the token {to} which allows the 'to' email address to be included in email messages or the user's telephone number to be included in text messages
- Added secure single use QR codes
- Added a status URL webhook for monitoring the app's status remotely and for receiving commands

3 July 2020 - Breeze Booth v1.1.1, Breeze Booth Event Editor v1.4.2, Breeze Hub v1.2

- Texting now supports MMS (USA and Canada only) and SMS+image
- Added support for contactless operation with texting
- Added high quality face detect option for more accurate face tracking when using virtual props

- **22 May 2020 - Breeze Booth v1.1, Breeze Booth Event Editor v1.4.1, Breeze Hub v1.1.3**
- Added support for contactless operation by allowing emails to be sent automatically by scanning a QR code

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- Added a "Quick Setup" button which allows an iPad to be setup simply by scanning a QR code
- Added support for the AI Background Remove service from Photobooth deluxe to the AI background removal (aka "green screen without the green screen")
- Added a tool to Breeze Hub for listing email addresses of images shared by email and telephone numbers of images shared by text
- Added support for shortened URLs from bit.ly and tinyurl.com when syncing events
- The demo events have been updated to support contactless operation

18 March 2020 - Breeze Booth v1.0.9, Breeze Booth Event Editor v1.4, Breeze Hub v1.1.2

- Added AI background removal (aka "green screen without the green screen") for photos and slideshow GIFs
- Added the ability to scan QR codes to control and load data into the photo booth
- Added support for sharing photos, animated GIFs and MP4 movie files directly to a user's device via AirDrop
- The Event Editor has been updated to support the latest features in the iPad app and to fix an issue handling reversed props in the virtual prop editor

22 January 2020 - Breeze Booth v1.0.8, Breeze Booth Event Editor v1.3.4, Breeze Hub v1.1.2

- Added the ability to add one or more QR codes to print layouts. Each QR code can include tokens to create dynamically generated text.
- Increased the number of menus that can be defined from 2 to 4
- Fixed an issue with displaying upper case keys in touchscreen keyboards
- Fixed an issue with the survey data tool in Breeze Hub which could cause it to crash

8 January 2020 - Breeze Booth v1.0.7, Breeze Booth Event Editor v1.3.3, Breeze Hub v1.1.1

- Improved customization of the start button
- Fixed issues with the camera orientation and occasional freezing of the live view display

10 December 2019: Breeze Booth v1.0.6, Breeze Booth Event Editor v1.3.3, Breeze Hub v1.1.1

- Added a default background image for screens to make it easier to rebrand an event
- Added an option in the touchscreen editor to also display the JPEG background screen image when an overlay is selected
- Updated the event creator to create screens with default_background.jpg screen and overlays instead of separate backgrounds for each screen
- Improved support for printing using AirPrint including fixing an issue where only the first session was printed
- Breeze Hub now auto rotates JPEG images using the EXIF orientation data when sending emails
- Fixed an issue with selecting manual exposure in the camera settings.
- Fixed an issue with the default gif_background.jpg image not being added to animated GIFs

25 November 2019: Breeze Booth v1.0.5, Breeze Booth Event Editor v1.3.2, Breeze Hub v1.1

- Added support for video animations with alpha channels
- Added optional fading between overlays to provide more fluid screen transitions
- Added the ability to dynamically select print and GIF backgrounds and overlays e.g. in response to survey data
- Added statistics and survey data tools to Breeze Hub
- Improved handling of SMTP email errors when using a poor quality internet connection
- Fixed an issue with cropping JPEG attachments when emailing photos using Breeze Hub

30 September 2019: Breeze Booth v1.0.4, Breeze Booth Event Editor v1.3.1, Breeze Hub v1.0

- Added the ability to add an MP3 soundtrack to MP4 slideshows and boomerangs
- Adds support for multiple virtual props in photos and GIFs
- Adds the ability to display virtual props containing text the right way round in live view

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- Improved support for AirPrint
- Updated to support iPadOS and iOS 13

17 July 2019: Breeze Booth v1.0.3, Breeze Booth Event Editor v1.3

- Added support for sending SMTP emails directly from the iPad with the option of multiple attachments
- Added support for sending SMS text messages directly from the iPad via Twilio
- Added camera settings to adjust contrast, saturation and vibrance
- Added touchscreen actions for adjusting camera exposure and zoom
- Added optional logo overlays for slideshow GIFs and burst GIFs

24 May 2019: Breeze Booth v1.0.2, Breeze Booth Event Editor v1.2

- Added new event creator with themes to the event editor
- Added support for MP3 music files
- Added support for Bluetooth
- Added the ability to enter an event code when syncing events
- Breeze Hub now able to select different printers using the printer id read from the event and double up 6x2 strips for printers that can only print 6x2 strips as a 6x4 page cut into two 6x2 strips
- Text fields in keyboards can now be validated using a regular expression and the text can be left, center or right justified
- Fixed issues with the camera on the iPad Pro 9.7"

2 April 2019: Breeze Booth v1.0.1, Breeze Booth Event Editor v1.1

- Added support for iPhone
- Fixed issues with using AirPrint
- Fixed issues with entering cellphone numbers which don't start with + or 0

25 March 2019: Breeze Booth v1.0

- First public release

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