

Use A GoPro in RightBooth - Camera Controller Option

IMPORTANT: This solution applies to GoPro Hero 8, 10, 11 and Mini cameras only

Overview

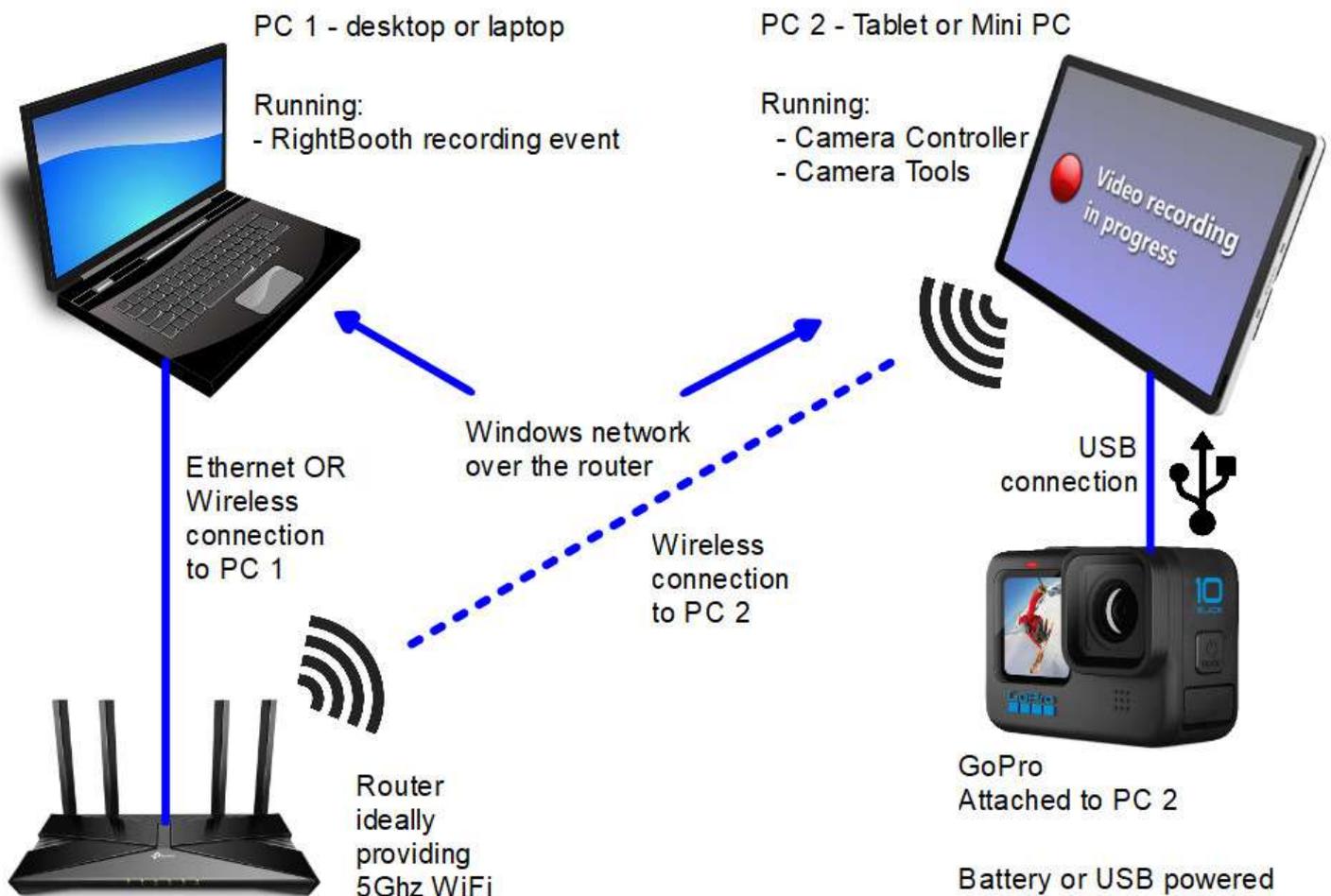
This document explains how to configure a system that uses two computers (PC 1 and PC 2) that are networked together over a private WiFi router.

PC 1 runs a RightBooth recording event to send video recording and photo capture commands to PC 2 across the Windows network.

PC 2 runs the RightBooth Camera Controller app and the Camera Tools app. It also has a GoPro connected to it by a USB lead. The Camera Controller app receives the commands sent from RightBooth on PC 1. The Camera Controller app then controls the local GoPro to record videos and take photos, which are then downloaded onto PC 2. These files are then transferred wirelessly over the network back to PC 1 for further processing by RightBooth.

In this configuration, PC 2 can be a small, lightweight, low spec, battery powered device, such as a mini pc, a stick pc or a tablet.

This solution avoids the requirement to use the GoPro WiFi, which can prove to be unreliable in some environments.



Suitable For

- 360 spinner booth equipment
- Roaming video and photo capture scenarios

Supported Cameras

RightBooth can operate the following GoPro cameras over a USB connection (via the Camera Tools app):

Hero 8, 10, 11, Mini

Preparing Your GoPro

- Make sure your GoPro is running with the latest firmware. Full instructions on how to do this can be found here: <https://gopro.com/en/us/update/>
- Make sure you are using an SD card that is fully compatible with your GoPro. See here for recommended cards: https://community.gopro.com/s/article/microSD-Card-Considerations?language=en_US
- Remove all files from your GoPro SD card. You can do this by formatting SD card on your GoPro, using the built in SD Format option available on your GoPro Menu. Then power off your GoPro, remove the battery for around 10 seconds, re-insert the battery and power it back on again.
- Set the correct Date and Time on your GoPro.

Note: You should consider reformatting your GoPro SD card each time prior to host an event.

Connect your GoPro to PC 2

- Turn on your GoPro.
- Select '**Preferences**', then choose '**Connections**'
- On the GoPro Connections menu, scroll down to the option '**USB Connection**'
- Set the USB Connection to: '**GoPro Connect**'
- Turn on PC 2
- Connect your GoPro to PC 2 using the USB lead provided with your GoPro. Ideally, you should connect your GoPro to a USB 3 port on your PC.
- The GoPro will then show the message:

USB Connected

Setting Up and Using Camera Tools on PC 2

The RightBooth Camera Controller is used in this configuration to record videos and take photos using a GoPro camera connected to PC 2 using the USB lead provided with your camera. To achieve this, the Camera Controller app also requires the following app that can be purchased and installed separately:

Camera Tools for Heros: <https://www.toolsforgopro.com/cameratools> - In this document it is named **Camera Tools**. Cost: 10 Euros (approx).

Note: If you experience problems with Camera Tools you can contact the app developer at: <https://www.toolsforgopro.com/contact>

For all other technical enquiries, contact support@rightbooth.com

IMPORTANT: Make sure you are running the latest version of the Camera Tools App (version 1.5.0 or later). You can get the latest version here: <https://toolsforgopro.com/dl/herocameratoolswin.exe>

Make sure you install the full product, including the GoPro webcam utility.

The latest release notes for Camera Tools is available here: https://www.toolsforgopro.com/dl/changelog_cameratools.txt

Camera Tools (see link above) lets the RightBooth Camera Controller app control your GoPro directly in order to record videos and take photos on the GoPro's SD card. The Camera Controller app can then download the video and photo files onto PC 2.

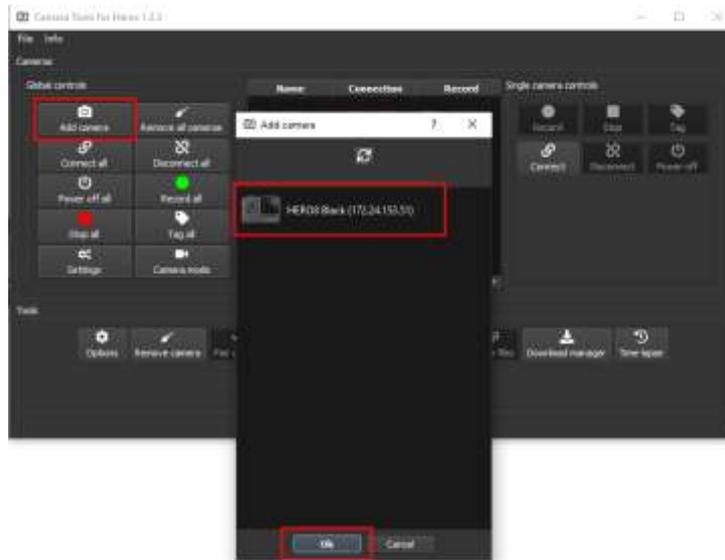
We will now explain how you can set up everything. Note: In this document we are using a GoPro Hero 8.

Note: Before continuing with the rest of this document we recommend that you perform a one time reset of any previously used GoPro connections on your camera. This is available in your GoPro '**Preferences**' on the **Connections** menu, and (on the Hero 8) it is entitled '**Reset connections**'. It may be slightly different on other models.

Add Your GoPro Into The Camera Tools App

Note: This step is usually a **one time set up process** and will only need to be repeated if you reset your GoPro connections or reset it to factory defaults.

- 1) Run Camera Tools on PC 2. Make sure you are running version 1.5 or newer.
- 2) Select the '**Add camera**' button.
- 3) On the 'Add camera' panel, choose the '**USB**' option and click the OK button.
- 4) You should now see your camera listed for selection. Choose your camera and click the **OK button**.
- 5) In our example we are adding **Hero 8 Black**...



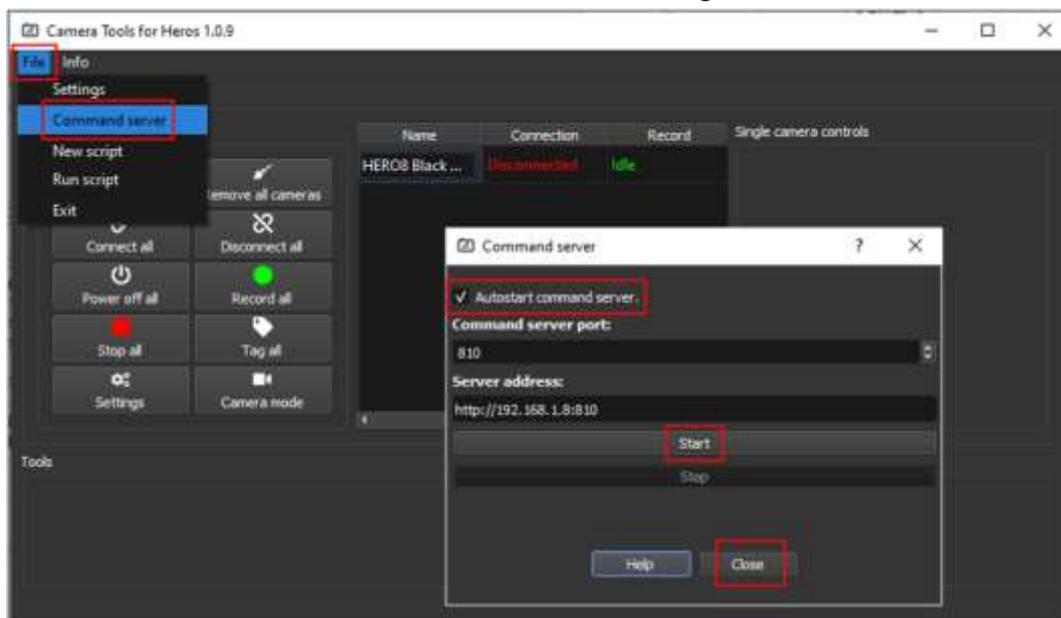
Your GoPro will now be added to the camera list. Camera Tools will now remember your camera between sessions so you should not need to repeat this step.

Set the Camera Tools 'Command Server' to Run Automatically

The Command Server is part of the Camera Tools App and it is the feature that the RB Camera Controller App will use to control your GoPro.

Note: This step is usually a one time setup process.

- 1) In the Camera Tools app, click the **File** menu option.
- 2) Click the '**Command Server**' menu option.
- 3) On the Command server panel, tick '**Autostart command server**'. Doing this will ensure that the Command Server will be automatically started each time you run the Camera Tools App, so you won't need to perform this step again.
- 4) Click the **Start** button to start the Command Server running...

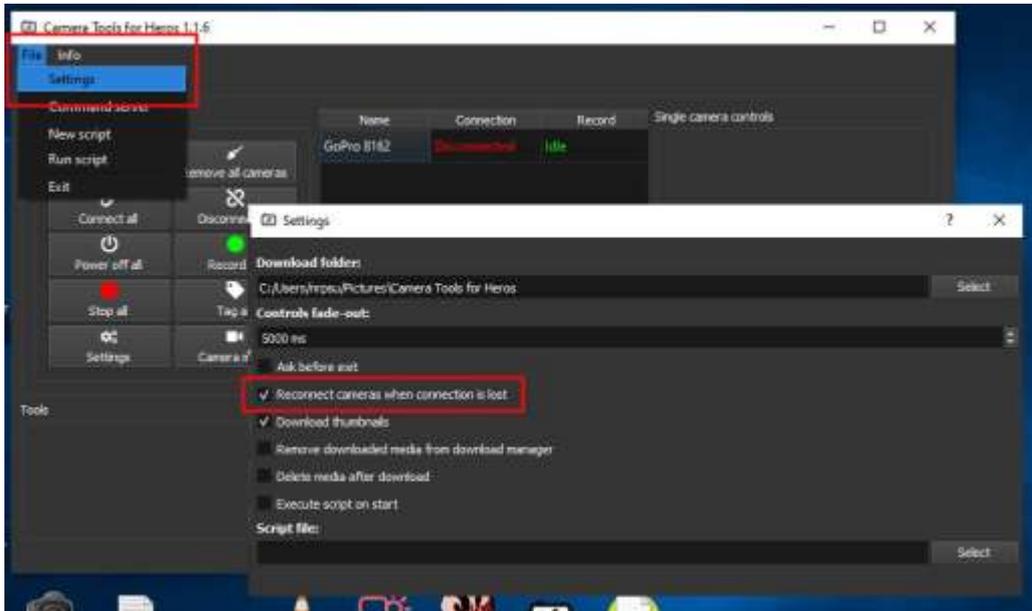


- 5) On the Command server panel, make a note of the **Command server port** number and **Server address**. This information will be required when setting up the RB Camera Controller App (see later).
- 6) Click the **Close** button on the Command Server window.

Remember, you have configured the Command Server to start automatically each time you run Camera Tools, so you will not need to repeat this step.

Set the Camera Tools App To Reconnect When Connection is Lost

- 1) Click the **File** menu option.
- 2) Click the **'Settings'** menu option.
- 3) In Settings, tick, **Reconnect cameras when connection is lost** and save your changes...

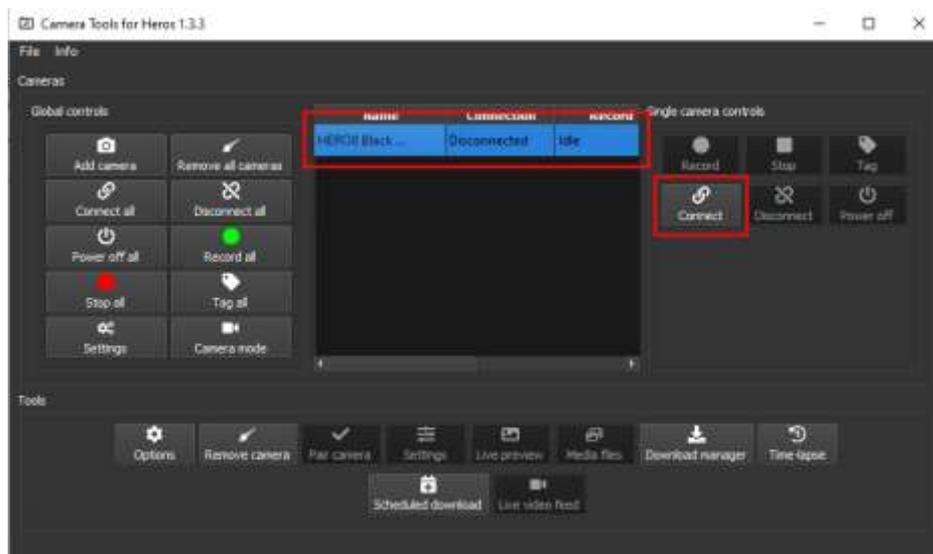


You will not need to repeat this step.

Connect your GoPro to the Camera Tools App

Note: You MUST repeat this Step every time you turn on your camera and BEFORE starting to use the RB Camera Controller App.

- 1) Run Camera Tools.
- 2) Click on your camera name in the list to select and highlight it, then click the **Connect** button:



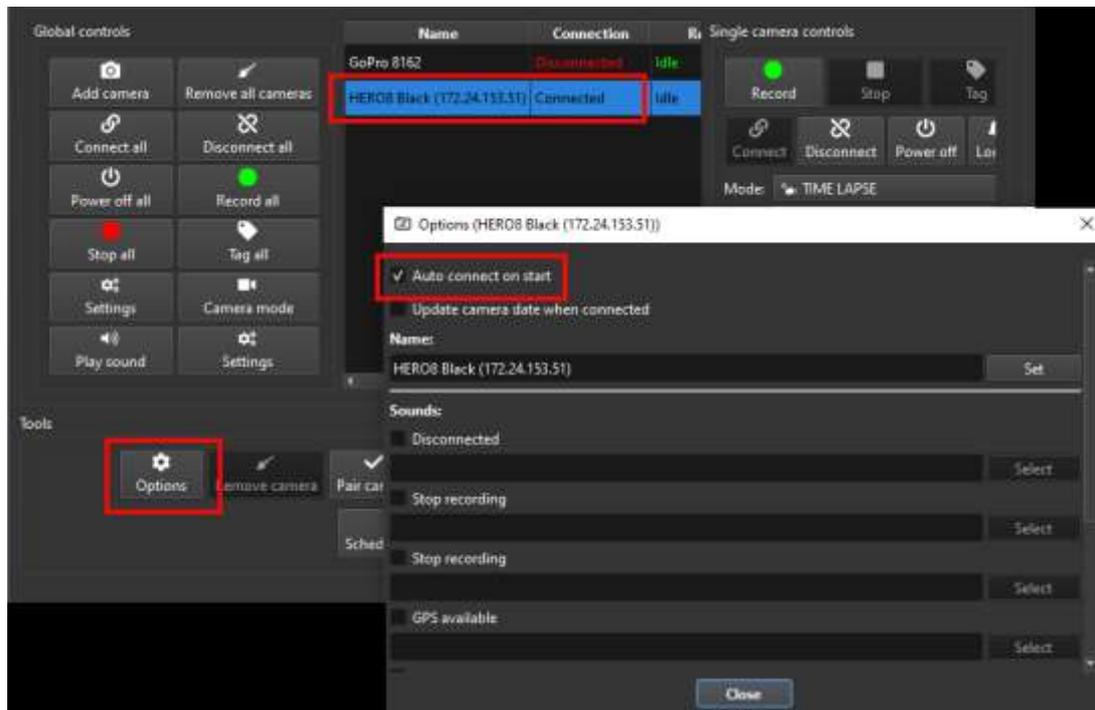
- 3) The camera will then be shown as **'Connected'**.

- 4) You must now keep the Camera Tools app running to allow the RB Camera Controller App to control your GoPro, so we suggest you minimise the app to the Windows Task Bar.

Automatically connecting to the camera

If you would prefer Camera Tools to automatically connect to your GoPro when it starts running:

- Select your camera in the Camera list
- Click the '**Options**' button
- Tick the option: '**Auto connect on start**'...



If Camera Tools fails to connect to your camera, try turning your camera off, take the battery out, wait a while, reinsert the battery, turn the camera back on, then close and restart Camera Tools and repeat earlier steps.

IMPORTANT

If the GoPro continues to show the 'USB Connected' screen, in the Camera Tools app:

- select your camera from the list,
- make sure the **Video** option is selected in Camera Tools.
- click the '**Record**' button, followed by the '**Stop**' button to record a very short video.

Performing these actions should remove the 'USB Connected' screen from the camera and will allow all subsequent commands to be sent to the camera.

Set Up the RB Camera Controller App on PC 2

Download and install the RB Camera Controller onto PC 2. Available here:

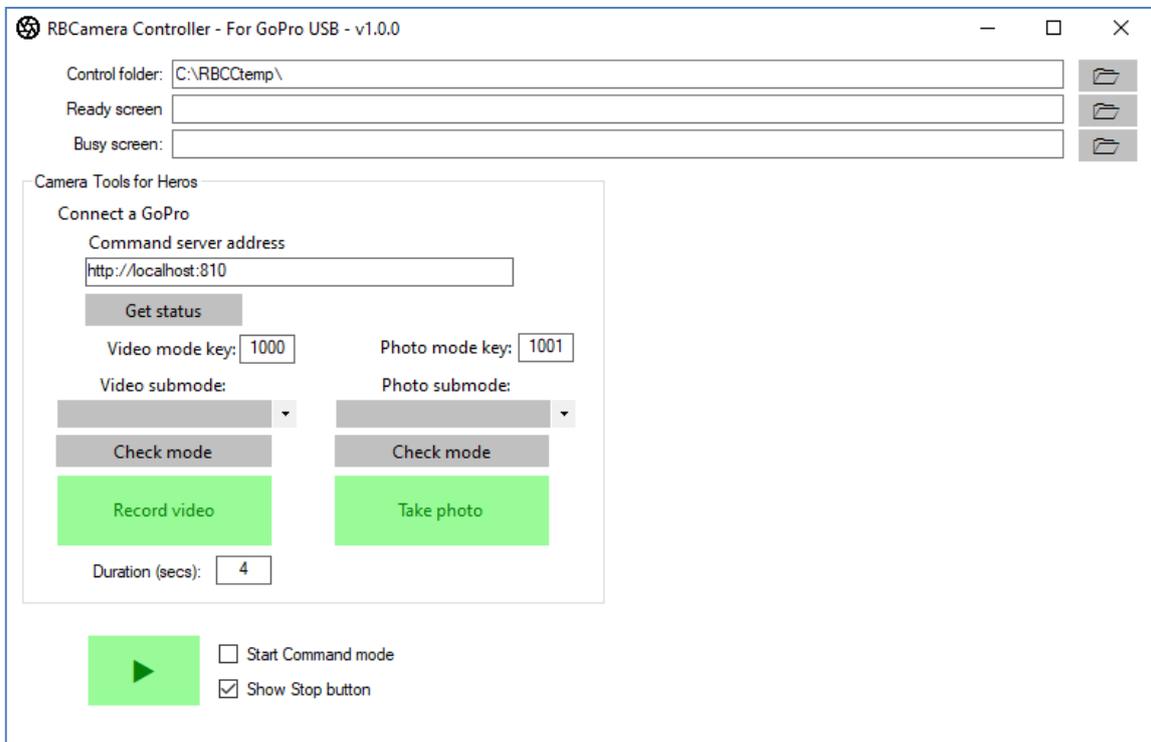
<https://www.airevalleysoftware.com/apps/RBCCSetup.exe>

Make sure all the previous steps have been completed and make sure the Camera Tools App is running.

IMPORTANT: The RB Camera Controller will be controlling the GoPro by sending commands to the Command Server in the Camera Tools App. By default, these commands are sent through Port 810 on your computer. These commands might get blocked by your Windows Defender Firewall or Virus Protection software. If you find that the Camera Controller is not controlling your GoPro, try turning off your Windows Defender Firewall and/or stopping your Virus Protection software or making Port 810 available for use within these packages OR add RBCameraController.exe to the exemptions list in your firewall app. For details on how to do this, refer to your Windows Firewall/Virus Protection documentation.

Note: This is usually a 'one time' set up process, as follows:

- Run RB Camera Controller.
- If the app has successfully connected to your GoPro you will see the Camera name, Battery level and file count showing in the panel (See screenshot below).
- Ensure the Command Server address is set to: **http://localhost:810**
- Click the **Get status** button to check that RightBooth has correctly set some values into the **Video mode key** and **Photo mode key** text boxes. You should not modify these values.
- Select a **video sub mode** and a **photo sub mode** option from the combo boxes provided. GoPro cameras provide a number of operating submodes for both the video recording and the photo capture modes, and these sub modes vary from model to model. We recommend you choose the standard **video submode** and **photo submode** options, as this will reduce the amount of recording that the GoPro will be required to perform. When you have chosen your submodes you can use both '**Check mode**' buttons to verify that the app correctly switches your GoPro between your chosen submodes.
- Select a **Control folder** for transferring files from the camera. This must be a folder that exists on your computer, one that is empty of files and one that you have permission to write to. If you are an Admin user I would suggest you create a new folder off the route of Drive C: such as '**c:\RBCctemp**' and then choose that folder in the app (as shown in the screenshot). If you have restricted login rights, you may need to create a sub folder in somewhere like My Pictures. Whichever folder you choose, make sure it is empty of files and note that files may be regularly deleted from it.
- Use the **Record video** button and **Take photo** button to check that the Camera Controller correctly controls your GoPro and also receives the recorded files from the camera...



Command Mode

The Camera Controller App is now correctly configured to control your GoPro.

Click the large green 'Play' button. The Camera Controller app will now be placed in **Command mode** and it will wait for commands from RightBooth (see later).

While waiting for commands, the Controller will display a default green 'Ready' status screen.

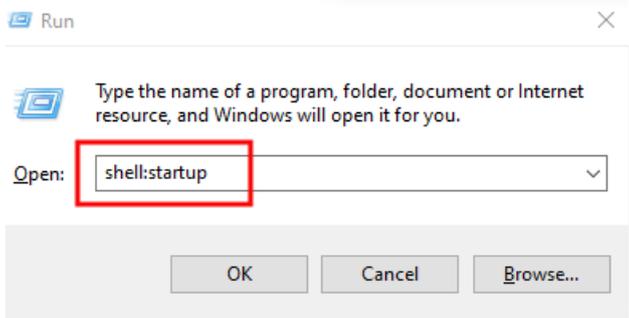
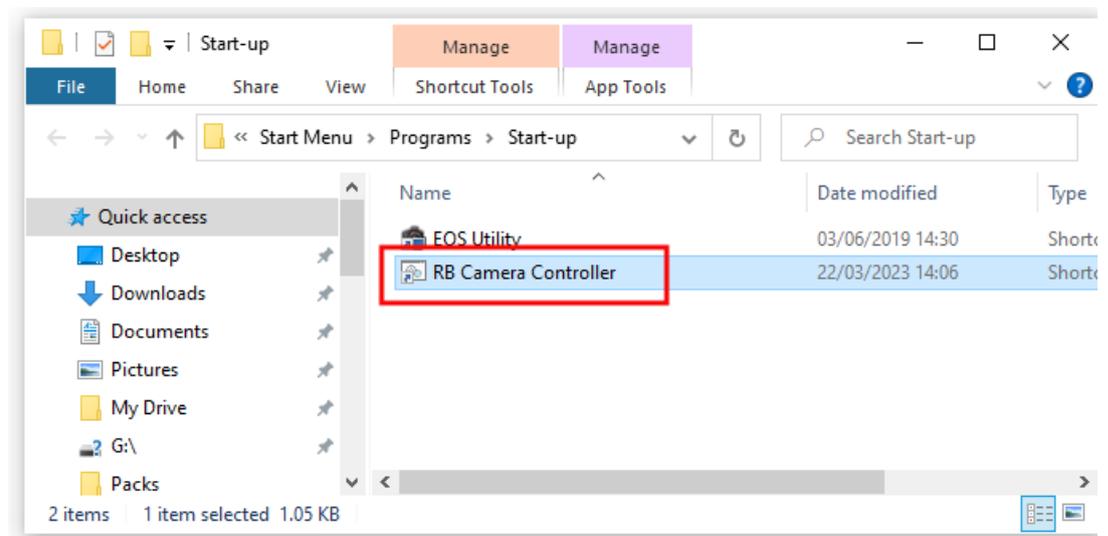
When the Controller receives a command from RightBooth, a default red 'Busy' status screen will be shown. This screen will remain showing until the command has completed. Commands can be Start recording, Stop recording and Take photo

You can replace the default status screens with your own images by choosing image files for the '**Ready screen**' and '**Busy screen**' text boxes on the main panel.

Automatically Starting the Apps on PC 2

After both apps are correctly configured on PC 2 you may want to have them both start automatically when you turn on PC 2. To do this:

- In Camera Tools, ensure the option: '**Auto connect on start**' is ticked for your GoPro camera (see earlier).
- In the RB Camera Controller app, tick the option: '**Start Command mode**'
- Add a shortcut to the batch file: **C:\Program Files (x86)\RightBooth\StartRBCC.bat** in your Windows Start-up folder. This can be achieved by:
 - o running **shell:startup**
 - o right clicking in the Start-up folder
 - o choose to create a new short cut
 - o browse to the StartRBCC batch file and add it as a new short cut in the Start-up folder:



Create A Windows Network Over A Private Router

This complete solution requires you to connect PC 1 and PC 2 by a Windows network across a private router.

This section provides a list of tasks for creating a network. For more details, please search the Internet to find complete information about this topic.

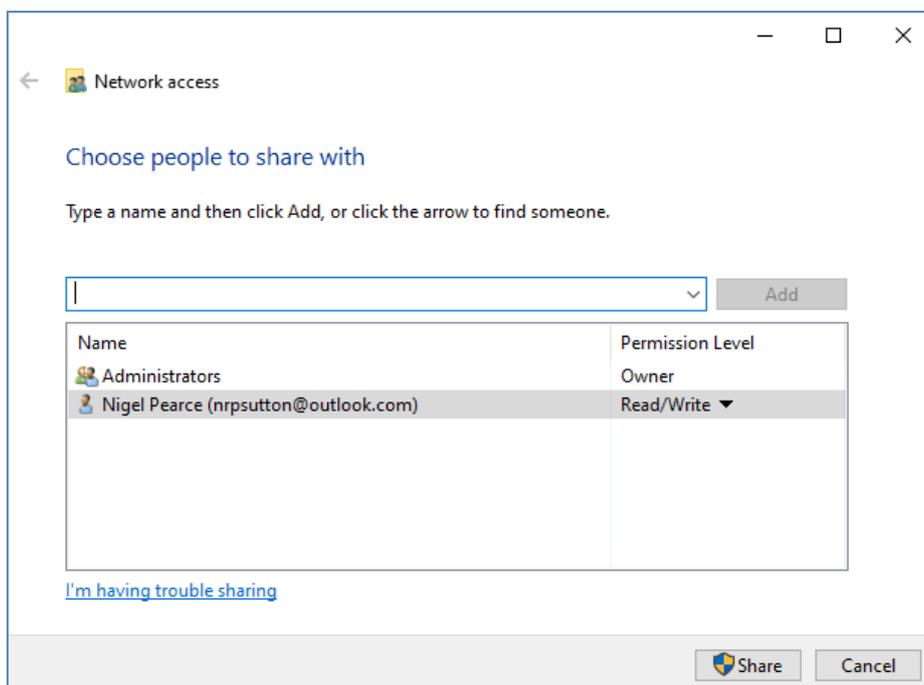
- Obtain a router.
- Configure the router to provide a private WiFi network (ideally a 5GHz signal). Note: the router does not need to provide any Internet connectivity.
- Connect PC 1 to the router by Ethernet cable (or by WiFi if you prefer).
- Connect PC 2 to the router by its WiFi connection.
- Configure a shared, private Windows network on the two PCs, working across the router.

Share the PC 2 Control Folder

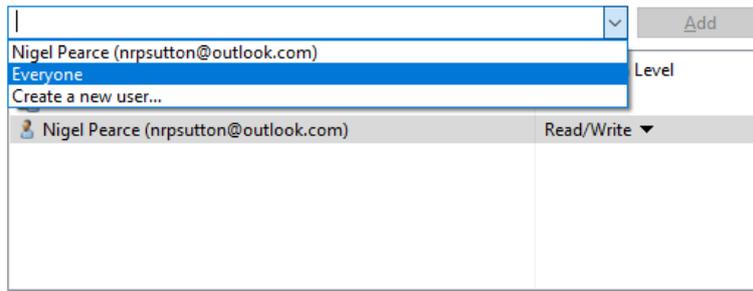
Note: The screen shots in this section are taken from the Windows 10 User Interface, but the principle is the same on Windows 11.

Once you have your PCs configured to use a Windows network across your private router, on PC 2, share the **Control folder** (as selected in the RB Camera Controller app) on the Windows network, so that it can be accessed for Read and Write directly from PC 1. To do this:

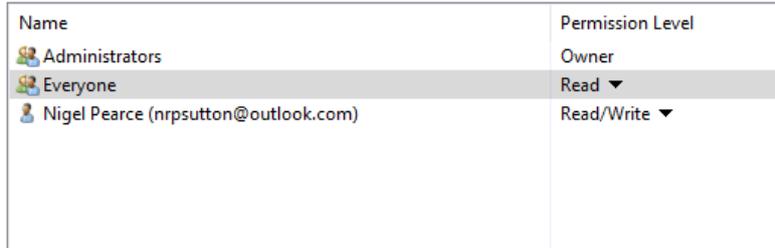
- On PC 2, run **File Explorer** and browse to your chosen Control folder, in our example this is: **c:\RBCctemp**
- Right click on the Control folder name and from the pop up menu select the menu option: **'Give access to'**, then select the sub-menu option: **'Specific people...'** :
- You will then see the **'Choose people to share with'** panel:



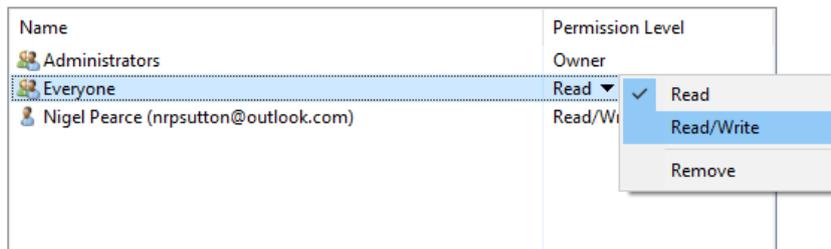
- Click the **Down arrow** and choose **'Everyone'**, then click the **'Add'** button:



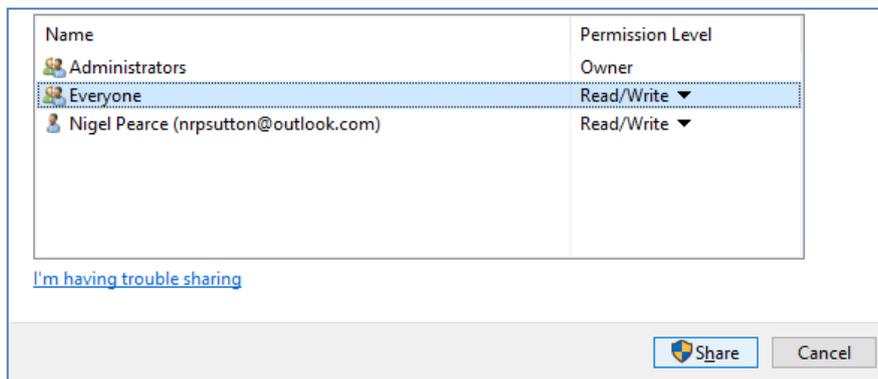
- 'Everyone'** will now be added to the Permissions list with the Permission Level **'Read'**:



- Click the **Down arrow** next to **'Read'** and choose: **'Read/Write'**:



- Everyone will now be set to **'Read/Write'**:



Click the **'Share'** button to share your Control folder on your network.

Make a note of the Control folder's share name because you will be using this when setting up RightBooth on PC 1.

Click **Done** to complete the process.

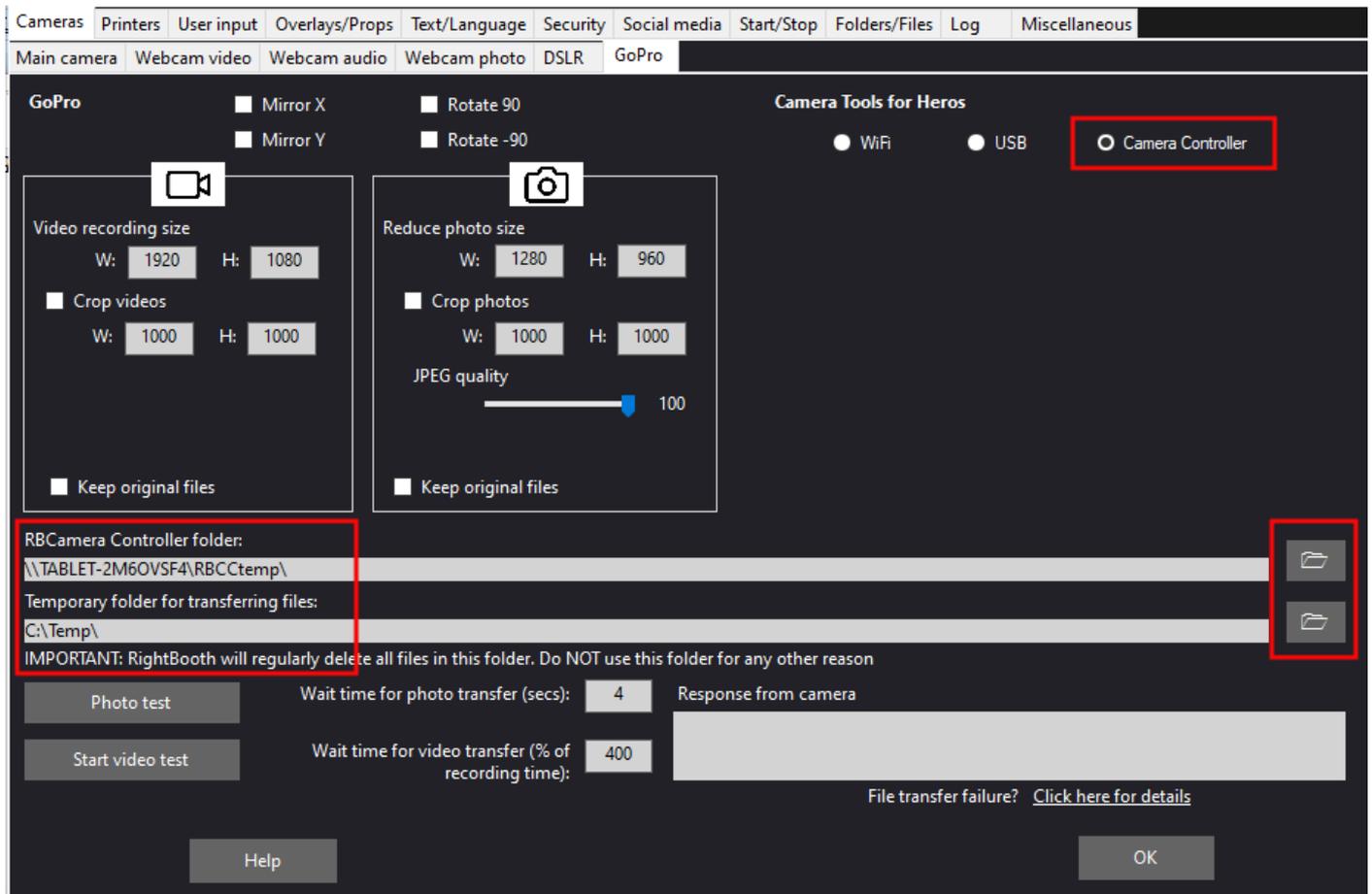
Set Up RightBooth on PC 1

We now turn our attention to PC 1. Make sure both computers are switched on and are connected to the router.

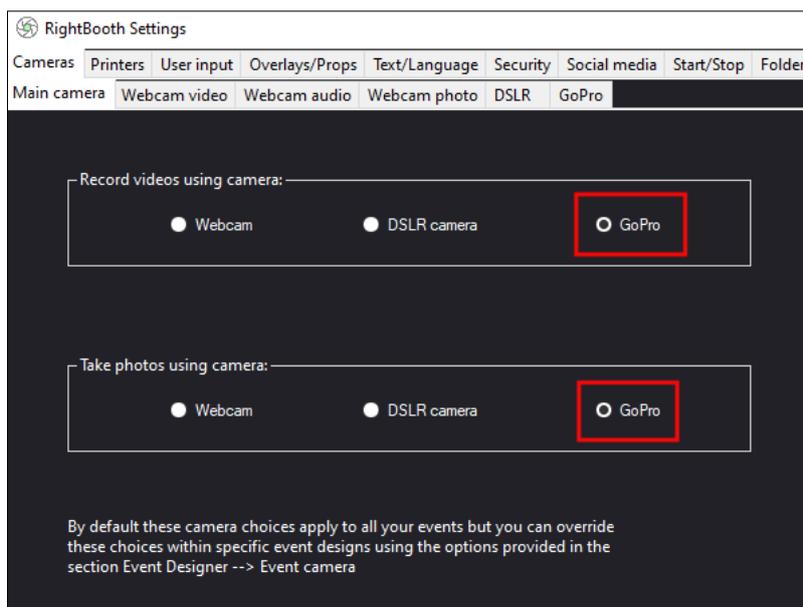
- Install and run RightBooth on PC 1. You must be running version 7.11.0 or later.
- In RightBooth Settings → Cameras → GoPro, in the section Camera Tools for Heros, choose the option: **Camera Controller**
- Browse and select the shared **RBCamera Controller folder** from PC 2.
- Browse and select a local temporary folder for transferring files from the Shared folder on PC 2 to PC 1. This must be a folder that exists on your computer, one that is empty of files and one that you have permission to write to. If you are an Admin user I would suggest you create a new folder off the route of Drive C: such as 'c:\Temp' and select that folder in RightBooth. If you have restricted login rights, you may need to create a sub folder in My Pictures. Whichever folder you choose, make sure it is empty of files and note that RightBooth will regularly delete files from it when transferring files from PC 2.

In our example screenshot you can see the shared **RBCctemp** folder has been chosen from PC 2.

In our example this is: \\TABLET-2\M6OVSF4 and the local temporary folder is C:\Temp ...



Go to the RightBooth Settings section: **Cameras -> Main camera** and select the **GoPro** option for both video recording and photo capture:



RightBooth is now configured to control your GoPro by sending commands to the RB Camera Controller App on PC 2.

Job done !

Now when you play RightBooth video recording events and photo capture events on PC 1, RightBooth will receive the videos and photos directly from PC 2 (via the GoPro).

Quick Start at Your Event Locations

How to start everything at your venue:

- Turn on your GoPro.
- Ensure your GoPro Voice control option is turned OFF. Leaving this on can cause unexpected camera behaviour.
- Ideally, reformat the SD card, then Power the GoPro Off
- Ensure the GoPro is connected to PC 2 with the USB lead.
- Turn on your router. Wait for it to initialise.
- Turn on PC 2.
- Run the Camera Tools App on PC 2 then run the RB Camera Controller app on PC 2. Note: you will not have to do this if you are using the StartRBCC batch file.
- Turn on PC 1. Wait for it to connect to the router.
- Run RightBooth on PC 1 and play your event.

Problems Connecting to the GoPro or Transferring Files from the GoPro to RightBooth?

Try the following:

- Make sure your GoPro is running with the latest firmware. See Preparing your GoPro (see earlier).
- Make sure you are using a compatible SD card in the GoPro.
- Reformat the GoPro SD card so that it does not contain any files. Power the camera down, remove the battery, wait a while, re-insert the battery and power it back on.
- Set the correct Date and Time on your GoPro.
- Make sure your GoPro, PC, laptop or tablet is **NOT** set to power down or go into Sleep mode, as this will cause connections to be dropped.
- Check the USB connection and cable between the PC 2 and the GoPro.
- Make sure the **Firewall on your PC 2 is not enabled** OR alternatively add the HeroCameraTools.exe and the RB Camera Controller exe into your Firewall app's exemption list.
- Make sure **Camera Tools is running** and that you have connected the GoPro.
- In Camera Tools, make sure you have ticked '**Autostart command server**'
- In RightBooth GoPro Settings, make sure it is possible to write files to the 'Temporary folder for transferring files from camera'
- In RightBooth GoPro Settings, increase the **Wait time for photos to 8 seconds** and increase the **Wait time for videos to 400**.