



# Push Controls

## Module:

# Blustream Amplifier

Version 1.0

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## Version History

Version No.	Date	Description
1.0	01/12/2016	Initial release of documentation

## Products Compatibility

Blustream Amplifier Models Supported
RX70AMP

Tested On:  
RX70AMP (Firmware 1.4)

## Step 1: Importing the Blustream Amplifier Module

Import the Blustream Amplifier module by completing the following actions:

- Right click on 'PROJECT' at the top of the tree and select 'Import Module'. Refer to Figure 1
- Locate and select 'Blustream Amplifier X.pemod' (where X is the current version number)
- Select **Open**
- The selected module will now appear in the **Module Browser** window, where you can view all **Imported Modules**, expand to see the contents of these modules.

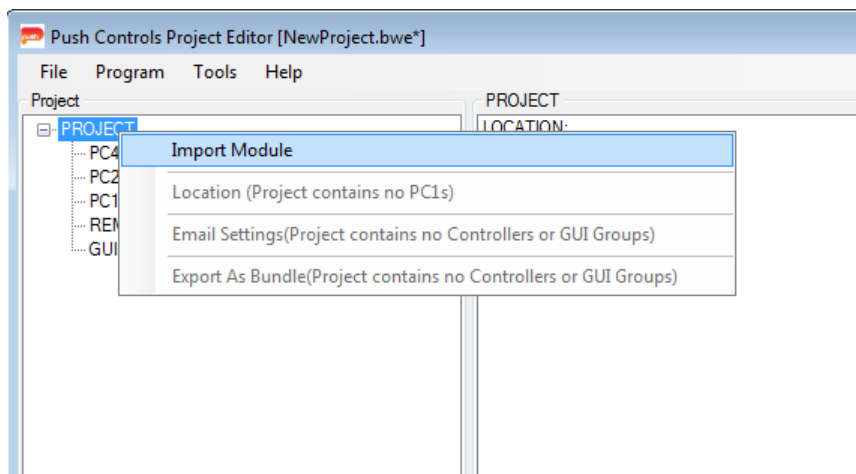


Figure 1 – Right click on PROJECT, inside the project tree, to import a module.

The selected module will now appear in the module browser window (Refer to Figure 2), where you can see everything that is included in the module.

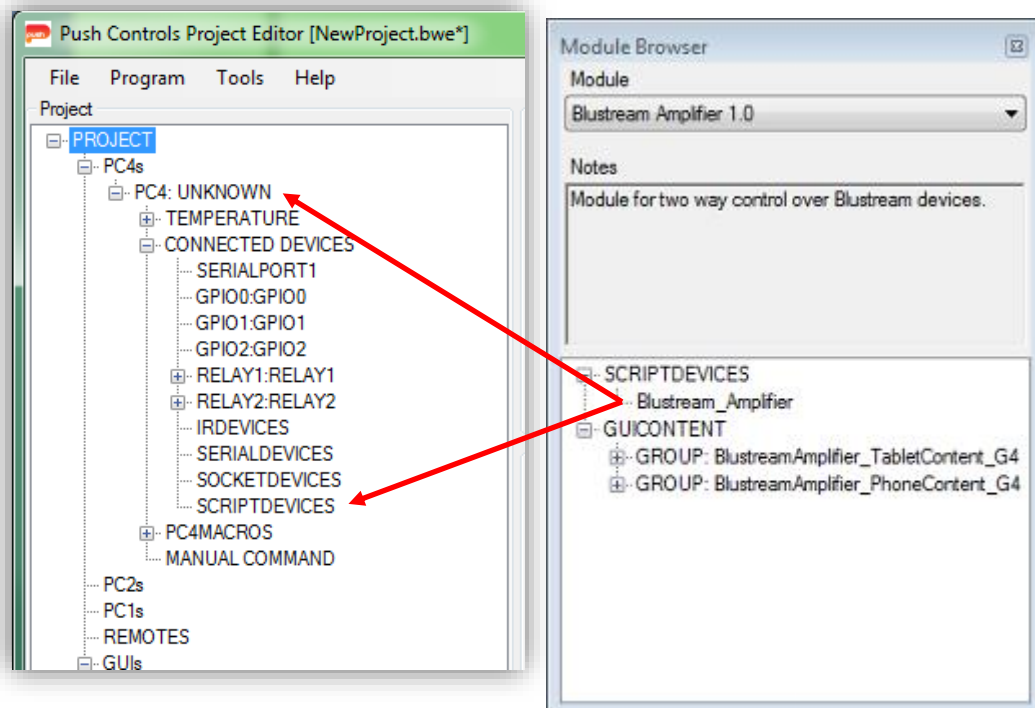


Figure 2 – Dragging and dropping the script from the Module Browser window

## Step 2: Configuring the Blustream Amplifier Module

The Blustream Amplifier device support communication via RS232, configure the module according to the steps below.

### Configuring the RS232 Port (for PC4)

Follow the steps below:

- Select the PC4 controller. *Refer to Figure 3*
- Expand the 'Connected Devices'
- Select a Serial Port (for example 'SERIALPORT1'), right click, and select 'Properties'
- Select the GUI Two-Way (RS232) option
- Ensure the Baud rate is set to '57600'
- Select 'Apply' then Select 'OK'

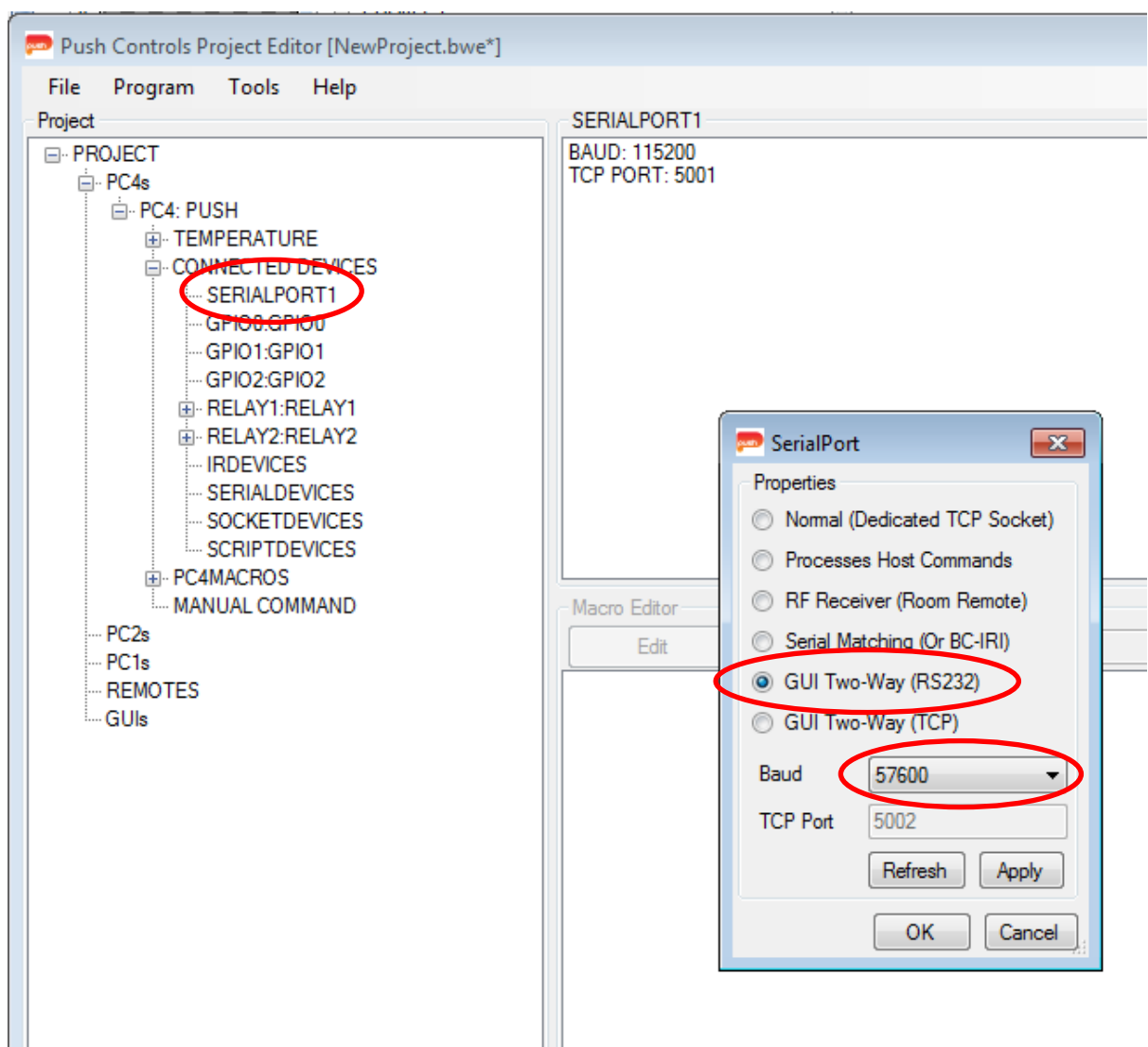


Figure 3 – Configuring the RS232 port on a PC4

### Configuring the RS232 Port (for PC1 or PC2)

Follow the steps below:

- Select the PC1 or PC2 controller. *Refer to Figure 4.*

- Expand the 'Connected Devices'
- Select a Serial Port (for example 'SERIALPORT1'), right click, and select 'Properties'
- Select the Normal (Supports Two-Way) option
- Enter the following settings:
  - Baud: 57600
  - Data Bits: 8
  - Parity: None
  - Stop Bits: 1
- Select 'Apply' then Select 'OK'

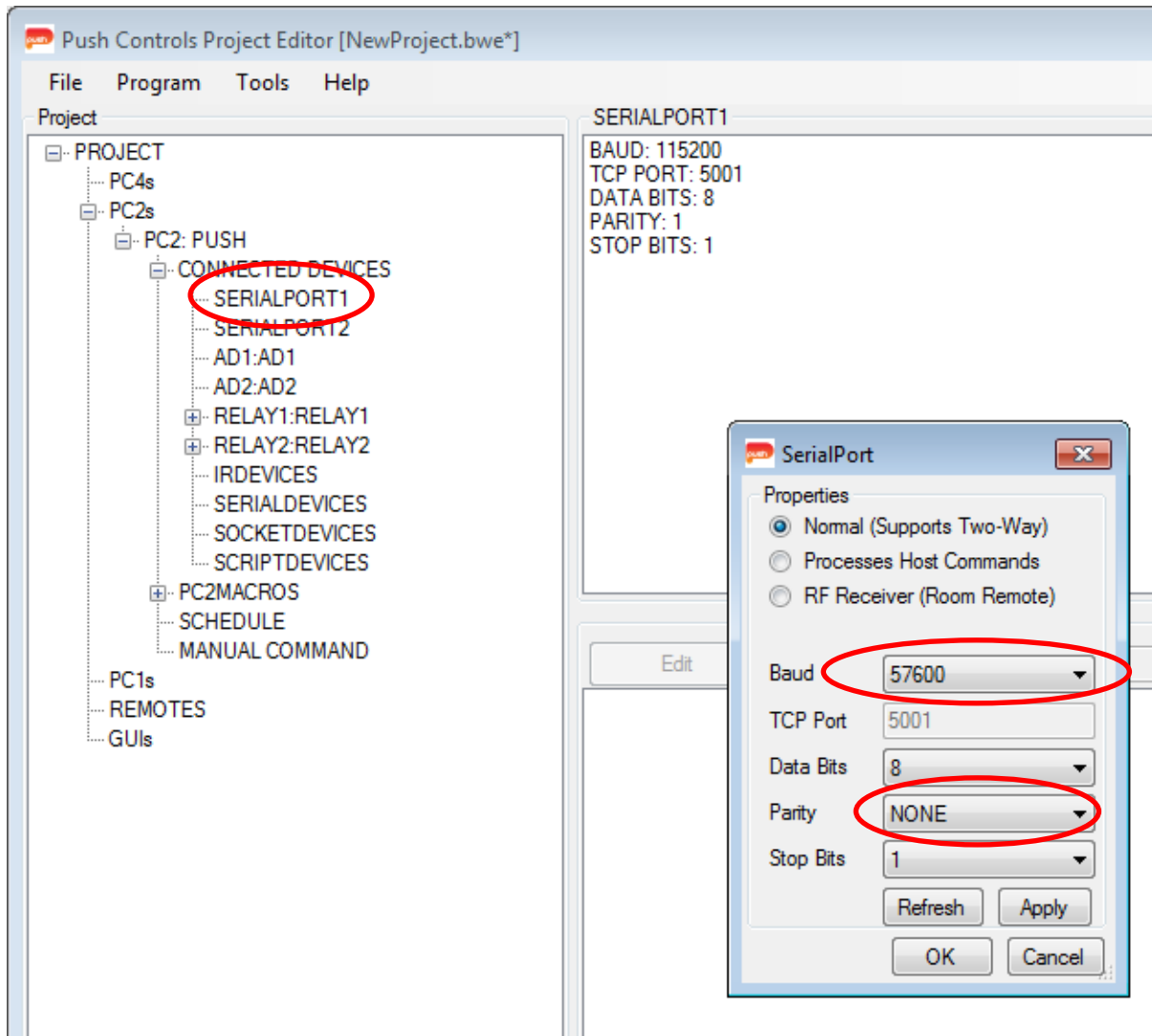


Figure 4 – Configuring the RS232 port on a PC2 or a PC1

## Step 3: Using Blustream Amplifier Module

### Triggering a Control Command from a Macro

To trigger a control command from a macro inside a controller, follow the following steps:

1. Select the controller
2. Expand the 'PC4MACROS'
3. Right click on 'MACROS'
4. Click on 'Add New Macro'

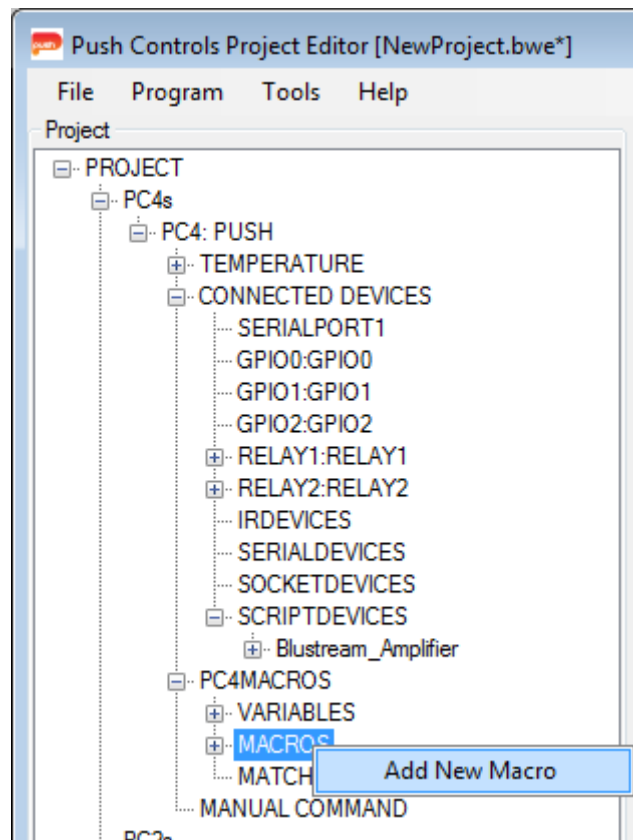


Figure 5 – Adding a new macro

After the new macro is successfully created, we can add the control command by editing the macro. The following steps will trigger a command to Set Output 001 from Input 002:

1. Right click on the newly created macro
2. Click on 'Edit'
3. Rename the macro from 'New Macro 3' to a meaningful macro name (optional)
4. Find the Blustream\_Matrix script device under the controller
5. Expand the Blustream\_Matrix script device node
6. Expand the FUNCTIONS node
7. Find the function that you would like to add into the macro
8. Drag and drop the function to the macro panel on the right side
9. If the function requires parameter(s), then you will be prompted to enter the required parameter(s).
10. For example, if you are using the setDSPMode function then you will be prompted to enter a parameter:
  - o modeld: fill in the output number eg. 2 (for POP mode)

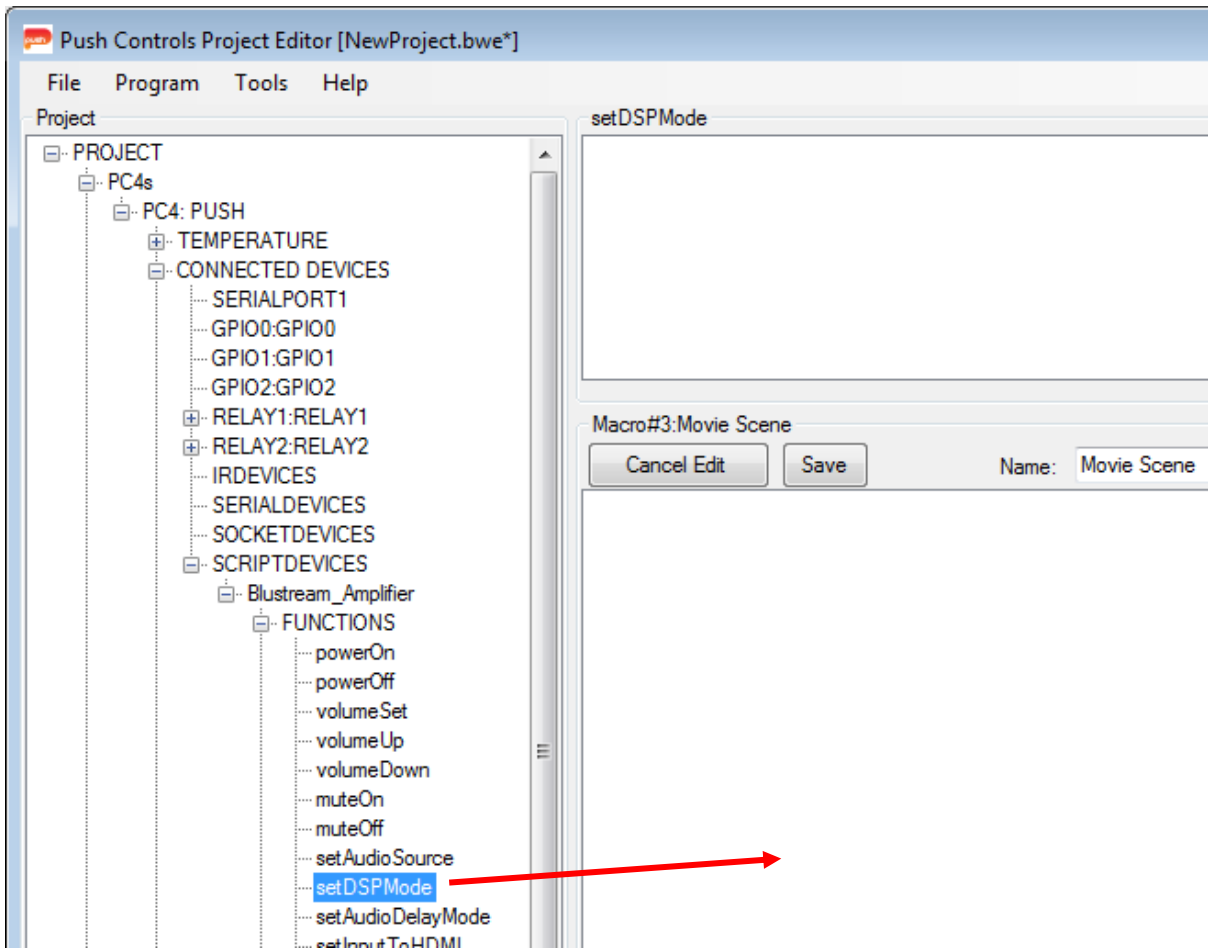


Figure 6 – Drag and Drop a new command to a macro

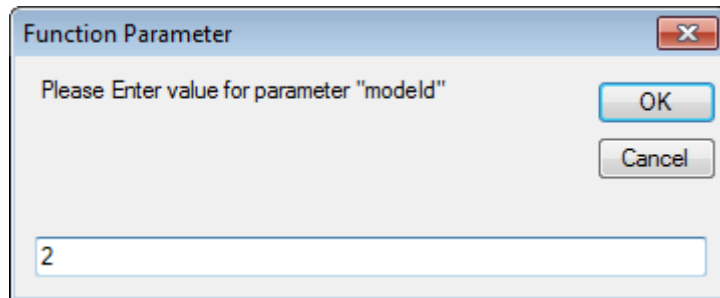


Figure 7 – Fill in the required parameter

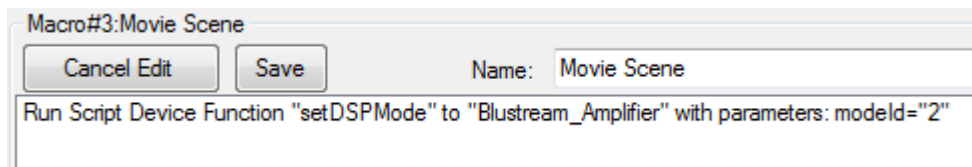


Figure 8 – Macro which uses the setDSPMode function

## Using GUI Component on a GUI Project

### GUI Components Available

The Blustream Amplifier module contains the following GUI components:

- BlustreamAmplifier\_TabletContent\_G4/VolumeUpDown\_L or VolumeUpDown\_P: volume control component for iPad/tablet GUI; designed for landscape and portrait layout.



- BlustreamAmplifier\_PhoneContent\_G4/VolumeUpDown\_Button: volume control component for iPhone/phone GUI.

### Adding VolumeUpDown Component to a GUI Project

To add the VolumeUpDown\_L button in a GUI page, follow the following steps:

1. Open the module browser (Tools->Module Browser) and select the Blustream Amplifier module
2. Expand GUICONTENT->GROUP: BlustreamAmplifier\_TabletContent\_G4
3. Open the page you wish to import the volume slider into by right clicking and selecting 'Edit' or double clicking on the page name
4. With both the open GUI page and Module Browser in view drag and drop one of the 'VolumeUpDown\_L' into the open GUI page and you will see a grey box with a black cross through the middle, hold down shift to reposition this placeholder to the location you wish to add the thermostat and release your mouse button.
  - a. NOTE: the volume control component will be automatically positioned according to the target device (eg. iPad / iPhone), to place the component on a custom position you can hold the SHIFT key while dragging the volume control component to the GUI page.

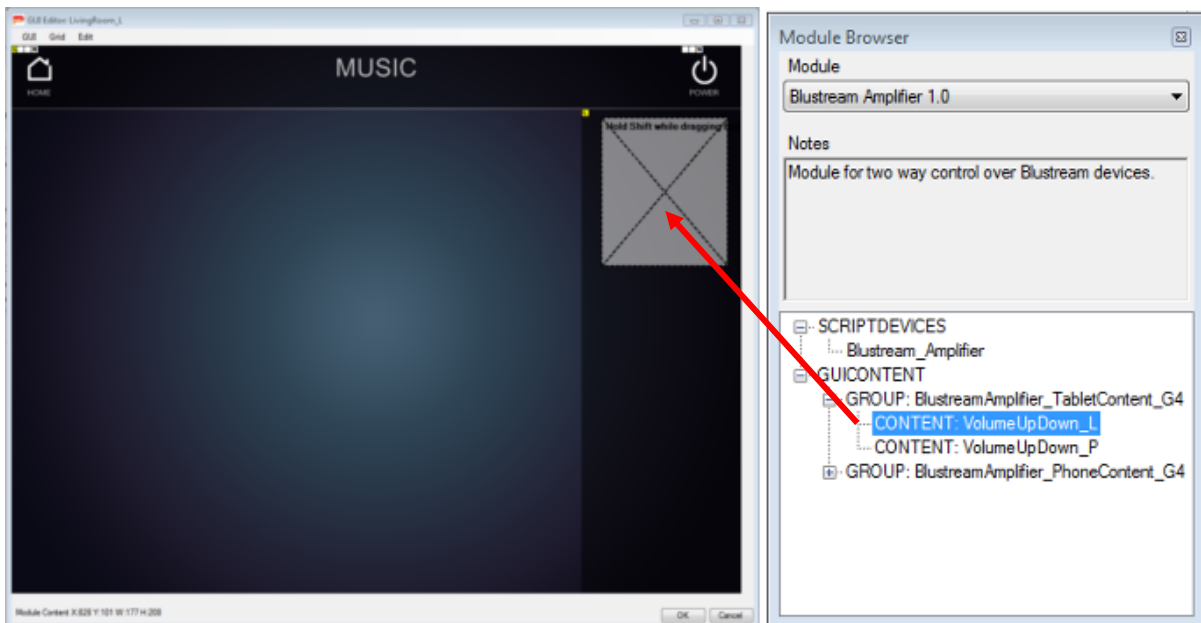


Figure 9 – Adding a button to set an Output from an Input

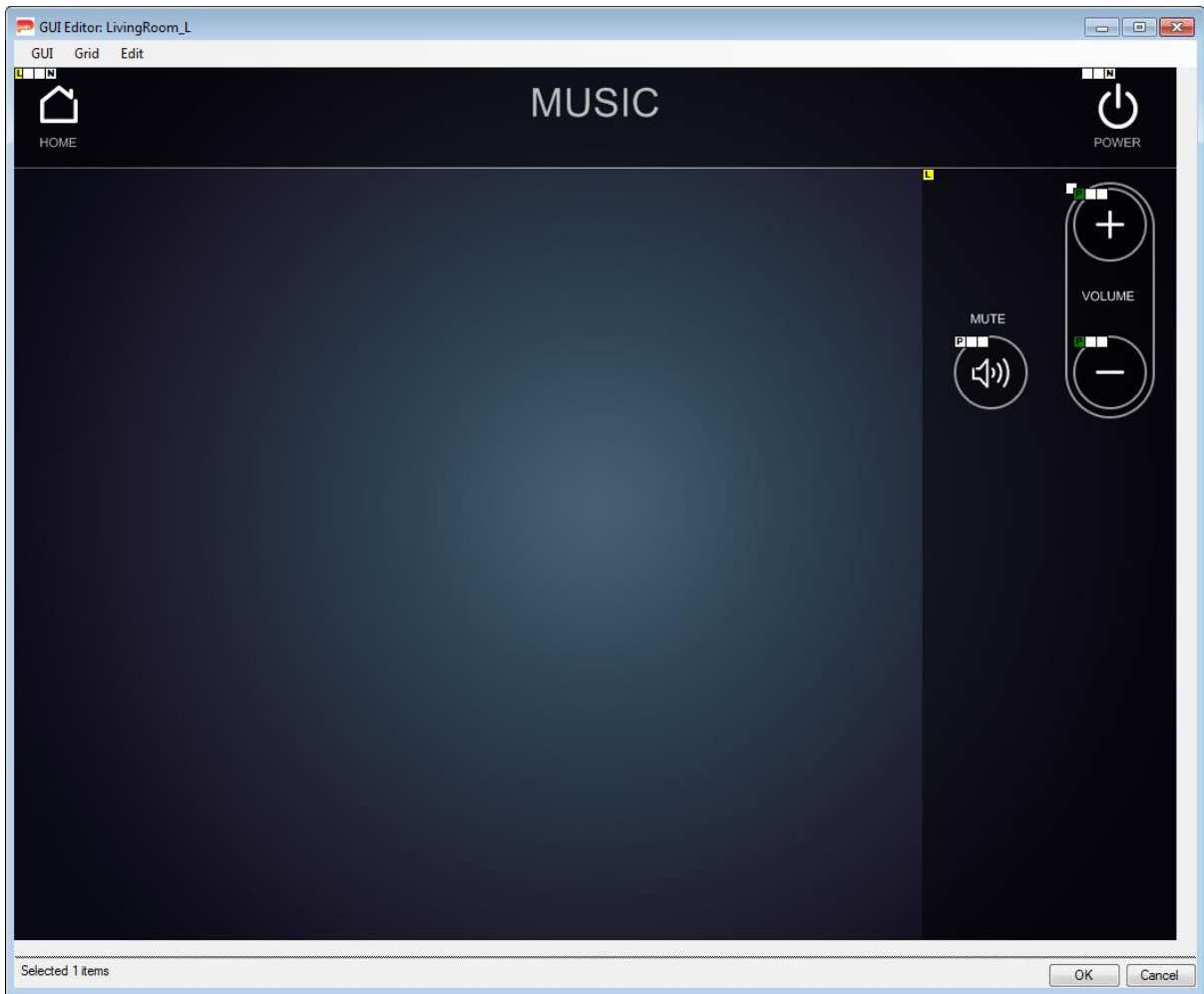


Figure 10 – VolumeUpDown GUI component

## Uploading Project to Your Controller

To upload the project programming (eg. RS232 configuration, Macro, etc) to your controller, follow the following steps:

1. Right click on the controller to be uploaded.
2. Click on 'Upload this controller' and you will be prompted with the upload progress.
3. Pay attention and follow the on-screen instruction, if there is any warning or error.

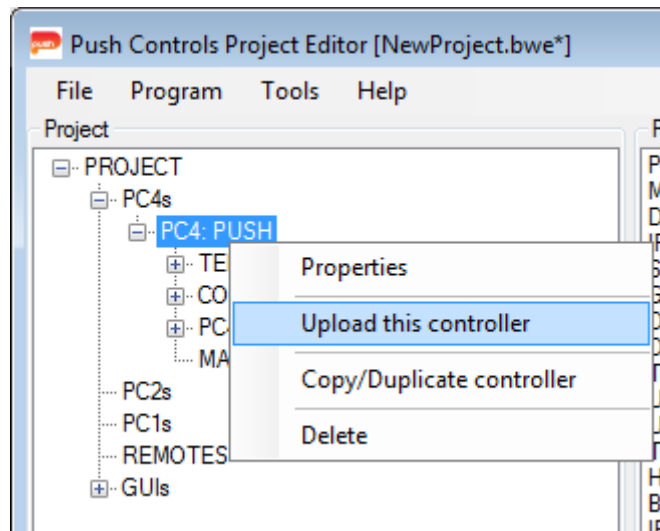


Figure 11 – Uploading the programming to the Controller

## Uploading GUI Group to Your Smart Device

The last step is to upload the GUI group to your smart device. Right click on the GUI Group (eg. 'GROUP: TestBlustream') and click on Upload GUI Group to App

- Before completing this step ensure you are connected to the same network your smart devices are connected to as you will be uploading from your PC to these devices

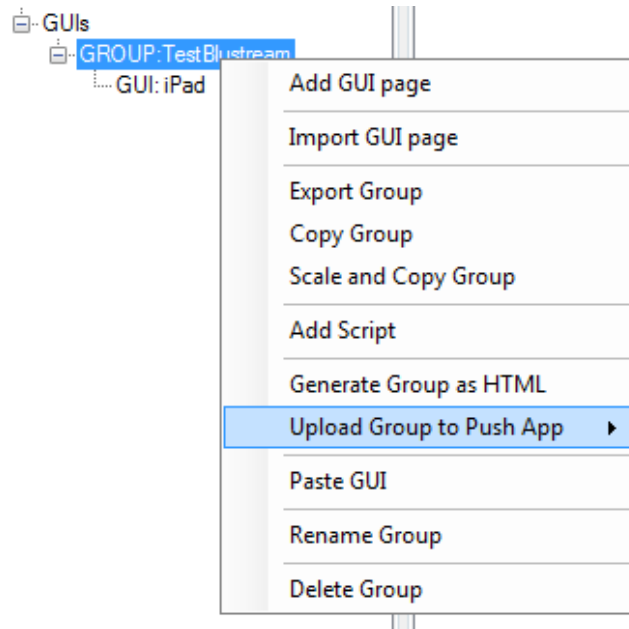


Figure 12 – Start to Upload GUI Group to a Smart Device

The GUI files will be generated and compressed, when this process is complete a server will start and you will see the following dialog box:

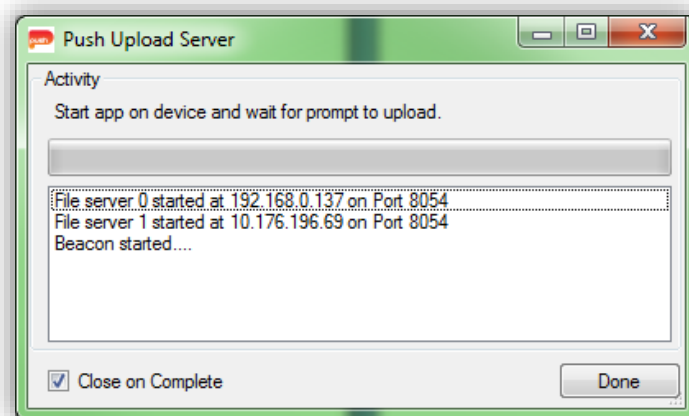


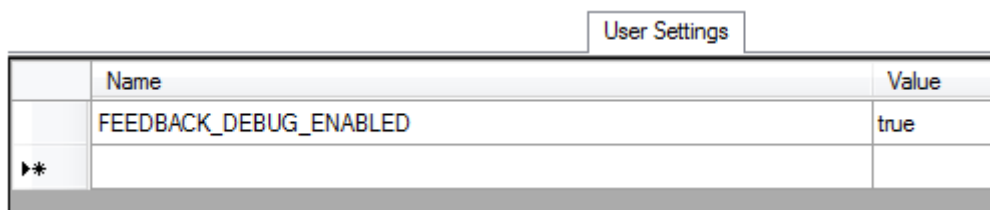
Figure 13 – Uploading GUI Group to a Smart Device

Open the Push Controls app from your smart device and you will be prompted to receive the GUI Group files. Click on 'Yes' and select a GUI page as your homepage.

## Troubleshooting Your Project

To make it easier to troubleshoot your project, you can check the feedback response from the Blustream Amplifier device itself after a command has been sent. To do this you will need to enable a flag from the module's user settings by following the following steps:

1. From the Script Device window, go to the 'User Settings' tab.
2. Find the flag 'FEEDBACK\_DEBUG\_ENABLED' and change the value to `true`.
3. Click on 'OK' to save the changes that you have just made.
4. From the Project Editor's toolbar, click on 'Tools' then 'Debug Monitor'. This will bring up the Debug Monitor window where you can see the feedback from the Blustream Amplifier device.
5. Upload the project to your controller or your smart device.
6. Now each time you send a command to the Blustream device, you will be able to see the response from the device itself.



User Settings	
Name	Value
FEEDBACK_DEBUG_ENABLED	true
▶*	

Figure 14 – Change the User Settings flag

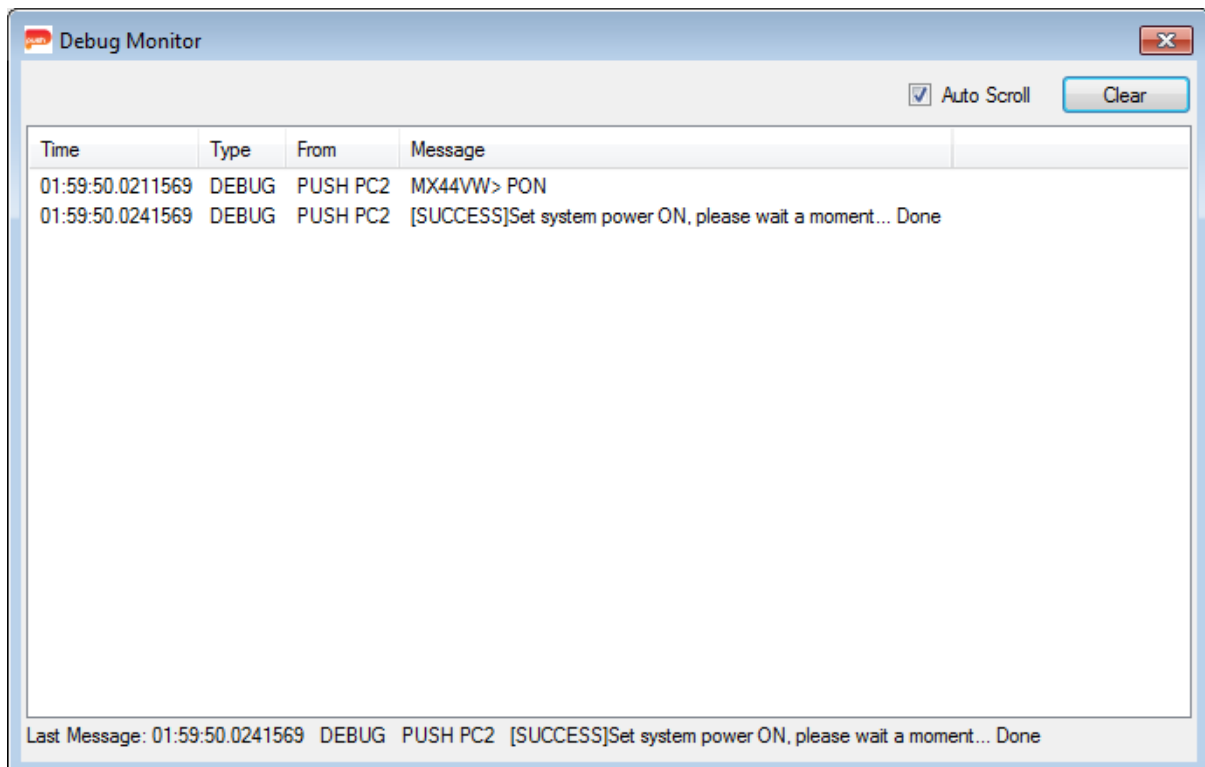


Figure 15 – A Sample Feedback from the Blustream Device

## Step 4: Creating Multiple Instances

Some projects may require you to install multiple Blustream Amplifier units, if you require more than one unit you can create as many instances of the Blustream Amplifier module as you require. To create a new instance, follow the steps below.

1. Open the module browser by clicking Tools -> Module Browser

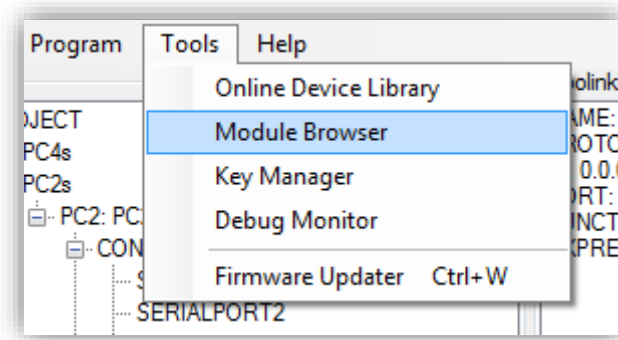


Figure 16 – Opening the Module Browser

2. With the Blustream Amplifier module selected in the dropdown box, right click on the dropdown box and select 'Create a new instance of 'Blustream Amplifier...'

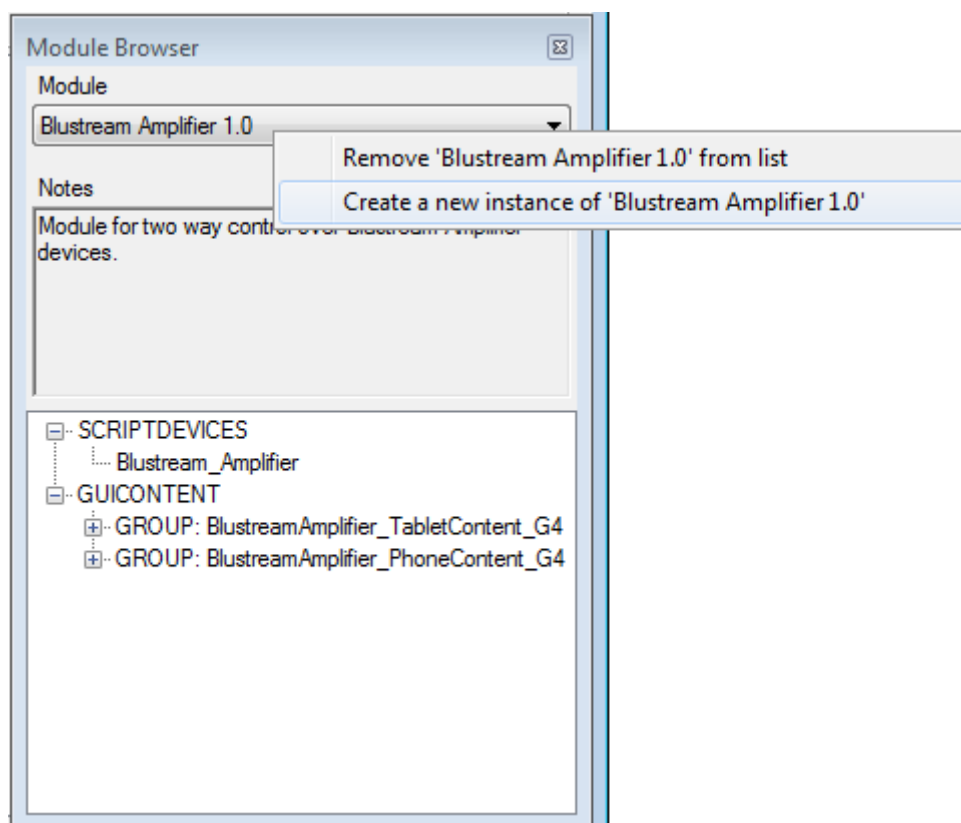


Figure 17 – Creating a new instance

3. In the dialog box presented provide a number corresponding to the number of instances you currently have of the Blustream Amplifier module

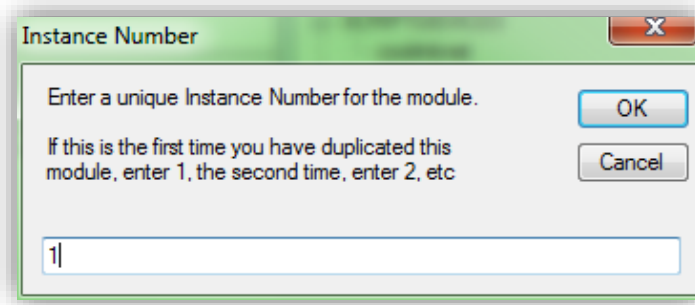


Figure 18 – Entering a unique instance number

4. You will now see a new instance has been added to the module browser window.

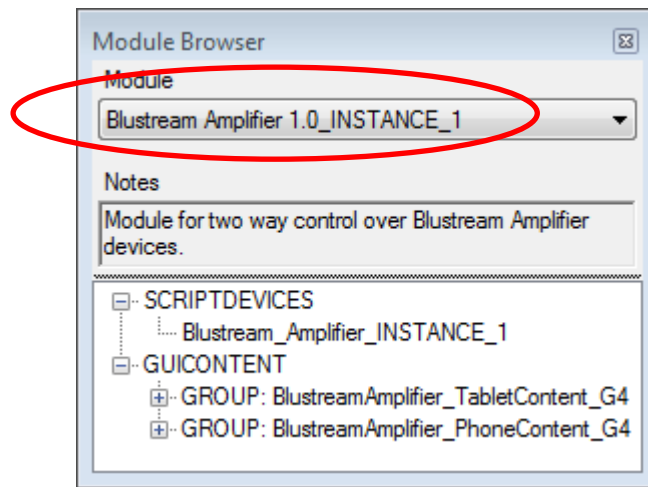


Figure 19 – The new instance

5. For the second Blustream Amplifier that you are controlling:
  - Ensure that the controller and script device is configured correctly by following [Step 2](#) from this document.
  - Ensure that you are using GUI components from the GUICONTENT group within the new instance, **not** the original instance

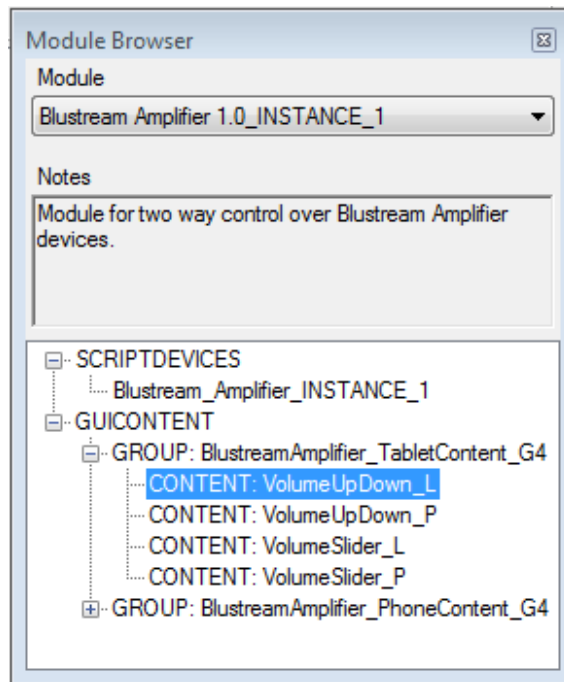


Figure 20 – Adding GUI component from the new instance