

5 Piece

RS232 Programming quick reference

Supplemental Guide for Programming the 5 Piece controller from a serial port

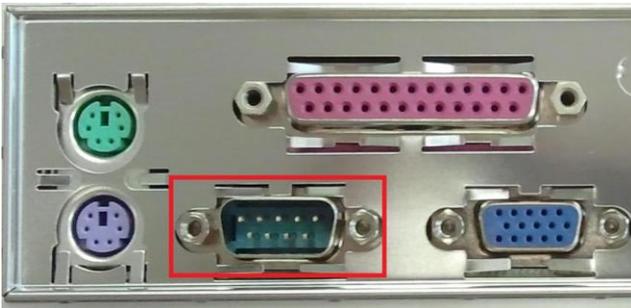
The 5 Piece controller is an advanced controller that was designed to have its channel settings programmed via RDM commands over the DMX bus. However, it can also be programmed via the serial port if you are not using an advanced DMX system or just want to use an iPad over Bluetooth for lighting control.

In order to program via the serial port you will need:

1. Desktop Computer/Laptop/or iPad Pro with a RS232 serial port adapter.
2. DB-9 to 1/8" TRS serial adapter cable supplied with the controller.
3. Terminal software like PuTTY to connect.

Notes on serial ports:

Most computers now do not have a serial port. You can check to see if it has one by looking for a DB-9 connector as shown in the image below:

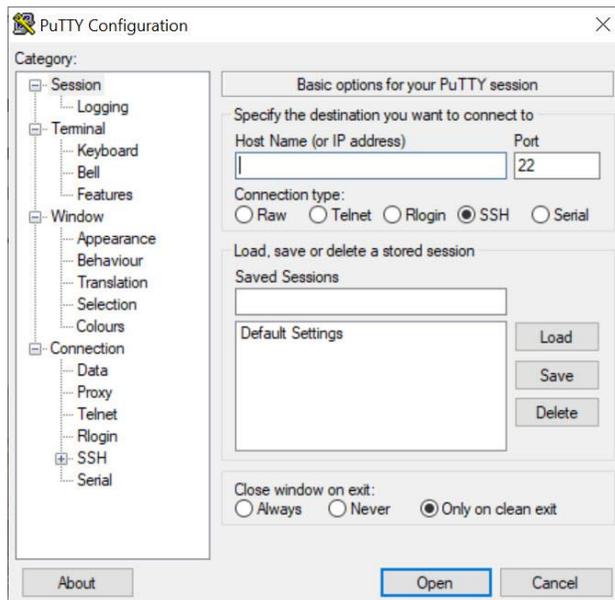


If you do not have a serial port there are many readily available USB to RS232 serial adapters on the market. The only exception to this is the iPad. At the time of this writing only the iPad Pro supports a serial adapter.

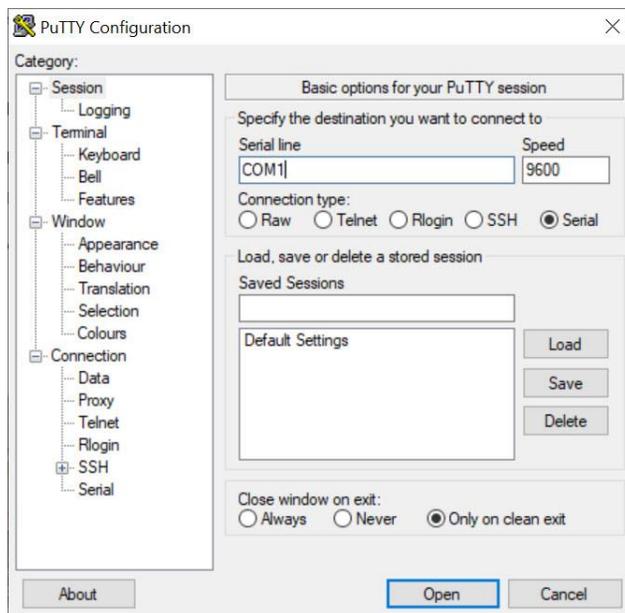
Once you have your serial port identified you need to obtain a terminal emulation app.

For the PC, we use PuTTY. It can be downloaded from here: <https://www.putty.org/>

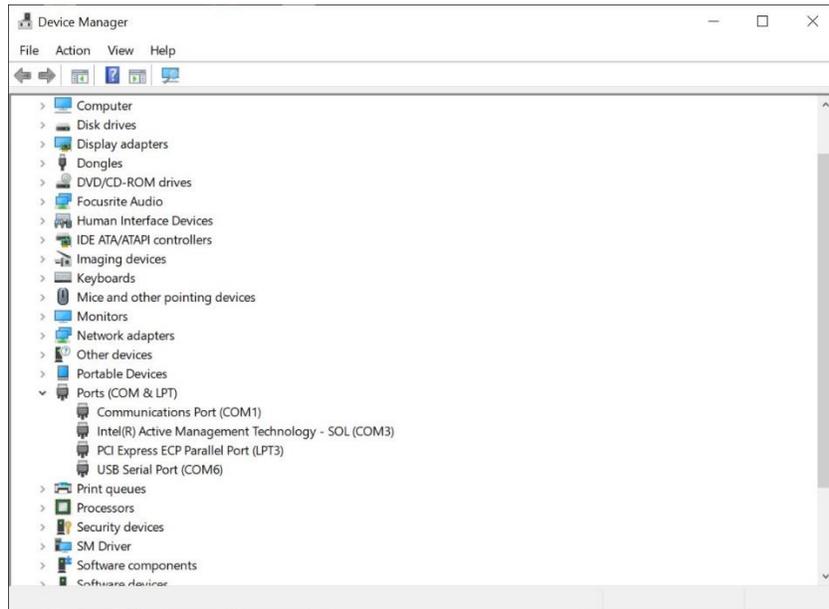
After the software is downloaded and installed, open the app (see screenshot below).



Now click the radio button on the right for “Serial” (see screenshot below).



Next, you need to change the serial port to the correct COM port. In the screenshot above we have typed **COM1**. The speed is **9600** (No Parity, 8 data bits, 1 Stop bit). Generally, if there is only one COM port on a PC it will be COM1. However, there are times when other devices use a COM port such as a motherboard management controller. If you are using a PC and have a USB serial adapter, you can identify what the COM number is by typing “**Device Manager**” in the Windows 10 search box. Open the Device Manager and scroll down to “**Ports (COM & LPT)**” (see screenshot below). Expand this and look for any COM ports. If you are unsure which one is the USB adapter, unplug the adapter and see which one disappears.



Now that you have everything set up, connect the supplied cable to your serial port and plug the other end into the **5 Piece** controller serial port located next to the power connector (see image below).



Next, in the terminal program, press “**Enter**”, and the menu (see screenshot below) will appear.

```
*****BrightBeats Five Piece*****
1 CH1 Input Gain: 870
2 CH2 Input Gain: 870
3 CH3 Input Gain: 870
4 CH4 Input Gain: 870
5 CH5 Input Gain: 870
6 CH1 Fade Speed: 80
7 CH2 Fade Speed: 80
8 CH3 Fade Speed: 80
9 CH4 Fade Speed: 80
10 CH5 Fade Speed: 80
11 CH1 Hold Time: 10
12 CH2 Hold Time: 10
13 CH3 Hold Time: 10
14 CH4 Hold Time: 10
15 CH5 Hold Time: 10
16 LED PWM Rate: 30
17 DMX Address: 1
18 Factory Reset
Enter Line Number to change: █
```

From this menu, you can change any of the 5 Piece settings. They will be saved to flash after you hit Enter.

Settings Guide:

Input Gain Range: 0-1023 (0 is off)

Fade Speed: 0-100

Hold Time: 10-1280

PWM Rate: 3-100

DMX Channel: 1-473

Additional Information

Serial cable pinouts are as follows:

DB9 connector	TRS connector
Pin-2	Tip
Pin-3	Ring
Pin-5	Shield (GND)

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