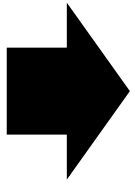
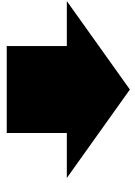


This document is intended to aid users working with Opus-Two ARM controllers who need to install, troubleshoot, or perform program updates. Familiarity with our Original Series JAL controllers will be quite helpful moving forward, but is not necessary.

Windows and Mac terminal operations are very similar, but configuration still must be completed in a Windows environment. The biggest difference between the two operating systems is the initial setup process, which is defined separately in this document. Config file upload procedures are also be defined separately. The terminal itself operates the same regardless of the user's platform. iOS, android, windows, and mac all will work the same. Please note that current serial speeds exceed the speeds supported by most iOS and android devices. Telnet will be supported in the near future for those devices.



This document is now intended for all users. We still (always) welcome bug reports at <https://www.opustwoics.com/oberon-bug-report>



The file upload procedure can be performed on either Windows or Macintosh computers. Please note that there are two separate sections in this document, one for each operating system.

TABLE OF CONTENTS

Preparing Mac OSX for Connection	3
Preamble	3
Downloads	3
Plug Mac Into CVA/CVE	3
Configuring Serial App	4
Uploading a Configuration File	9
Preparing Windows for Connection	12
Downloads	12
Plug Computer Into CVA/CVE	12
Configuring Serial App	13
Uploading a Configuration File	16
Configuration	18
BEGIN	18
Folders And Levels	19
Setup Items	20
Basic Mapping (GIO)	22
Basic C/A Controls	24
Buttons and Debounces	25
Bit Ops	28
Hall Effect KeyStrips	29
Moving Data To Output Cards	30
Processing Combination Action	31
Port Speed Control	32
TurboMIDI	32
Pipe Processing	33
Directory Of VARIABLES (CA)	36
Directory Of VARIABLES (GIO)	37
Revision history	39

PREPARING MAC OSX FOR CONNECTION

PREAMBLE

The Opus-Two terminal interface is a serial terminal – it is compatible with all modern operating systems. These instructions are the current Mac OS instructions, instructions for Windows are also in this document. If you are using a windows computer, skip this section.

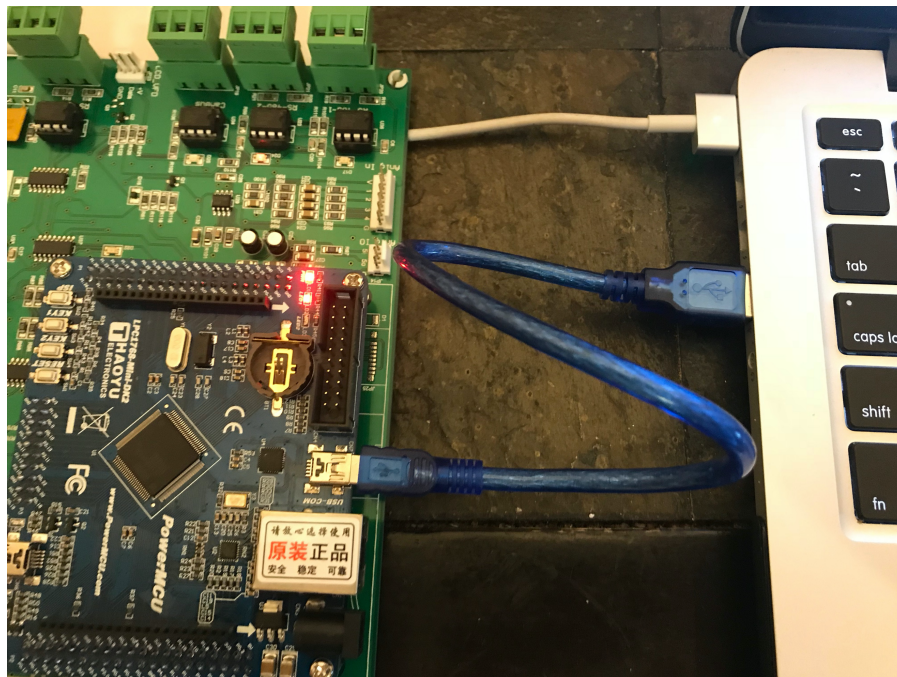
DOWNLOADS

Install the terminal program and the CP driver prior to connecting the CVA to your computer. It is not necessary to install CP210x drivers as modern MacOS (10.13+) have the foundational USB support and the Serial app has the individual drivers needed for the CP interfaces built in.

Purchase, download, register and launch Serial

<https://www.decisivetactics.com/products/serial/>

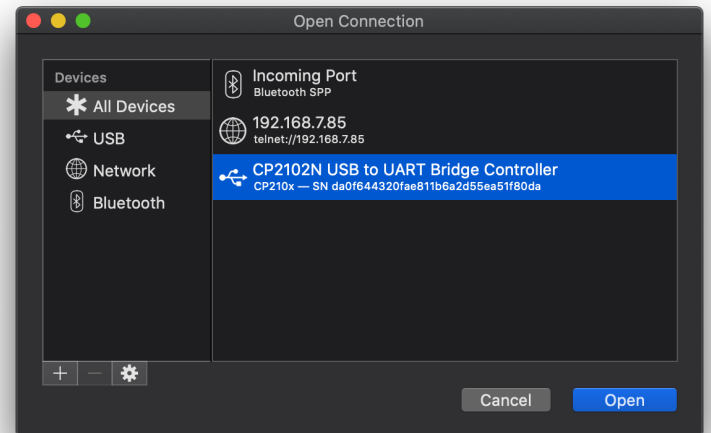
PLUG MAC INTO CVA/CVE



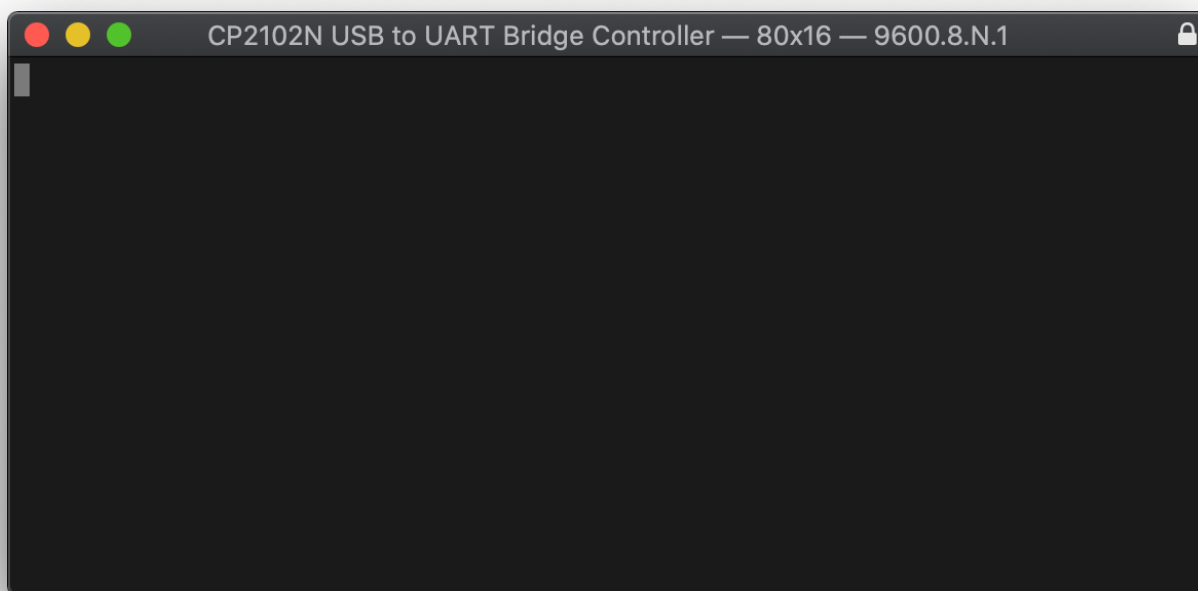
Some controllers have multiple USB ports on them. If the controller doesn't look like the one above (and hopefully, it shouldn't), look for the port marked "Term."

CONFIGURING SERIAL APP

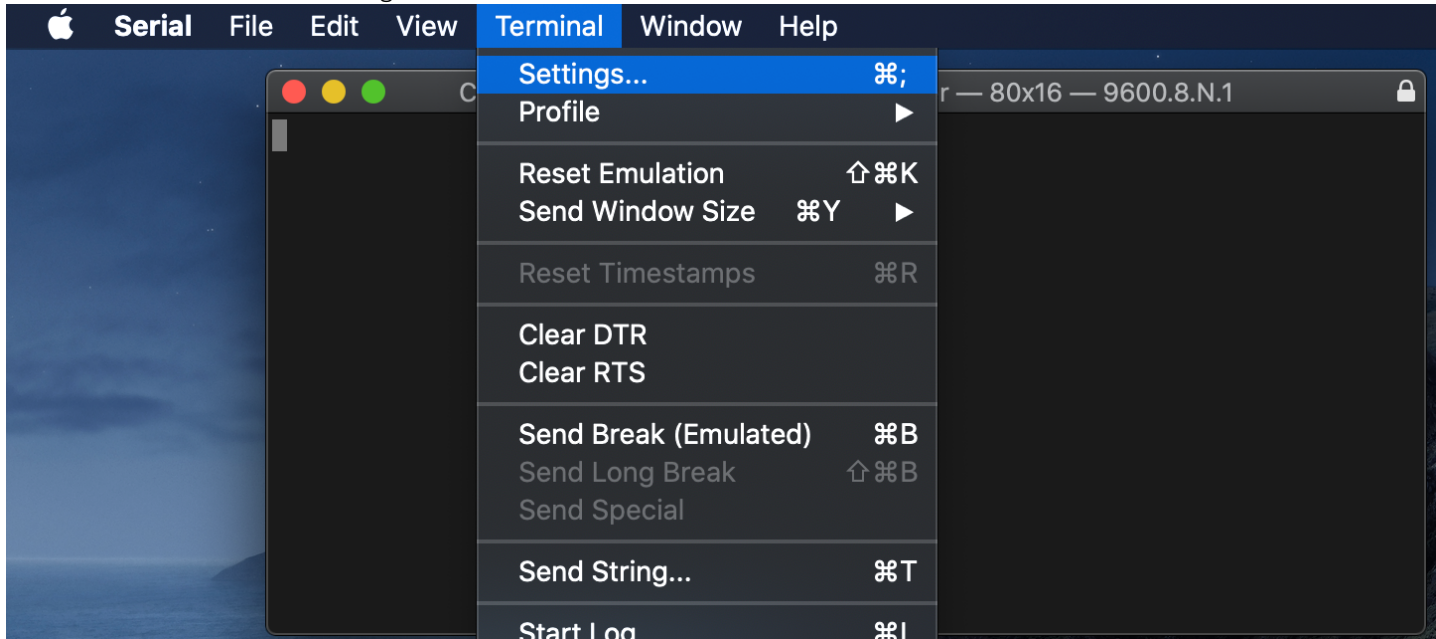
Open application, it will ask which port you wish to open. If the controller is plugged into the mac, CP2102 will be an option in the list. Make sure it's highlighted and click "Open"



The screen will probably look like this:

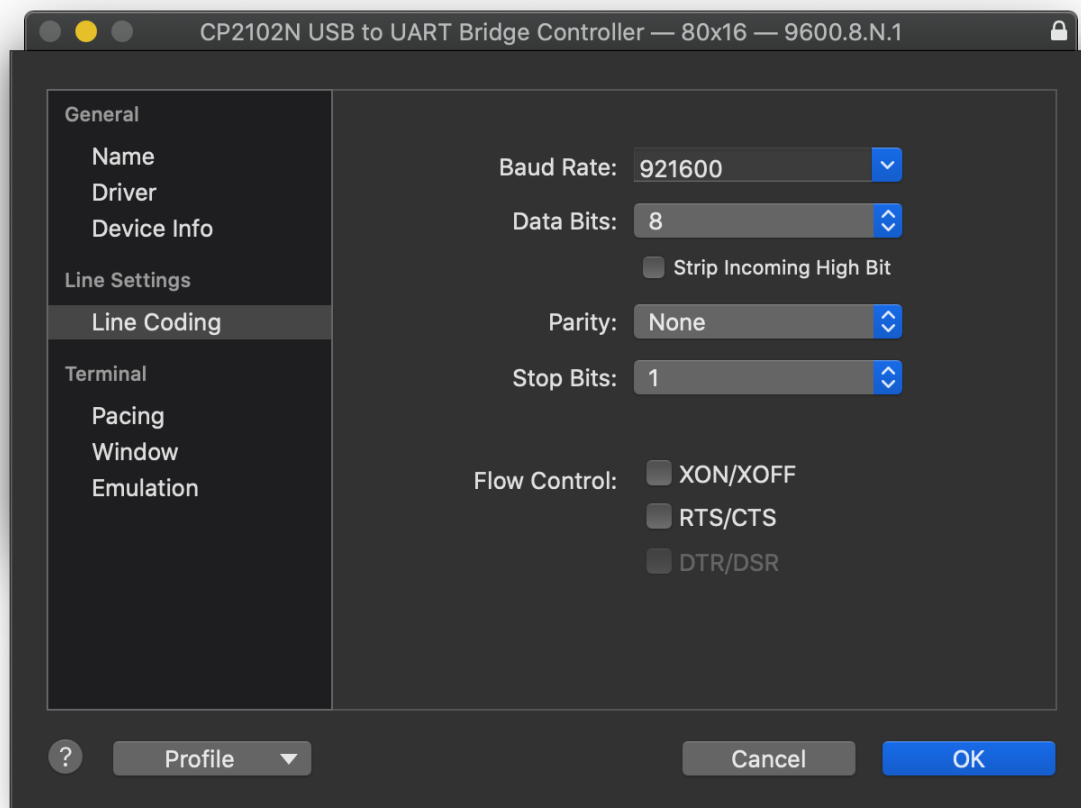


Go to the menu to access settings:

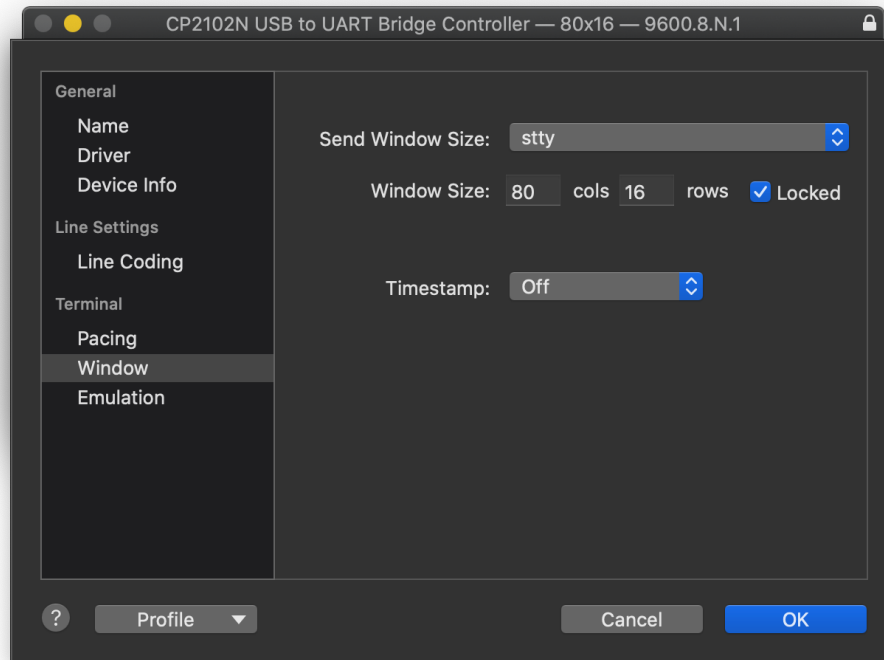


Three of the sub panes inside settings may require adjustment:

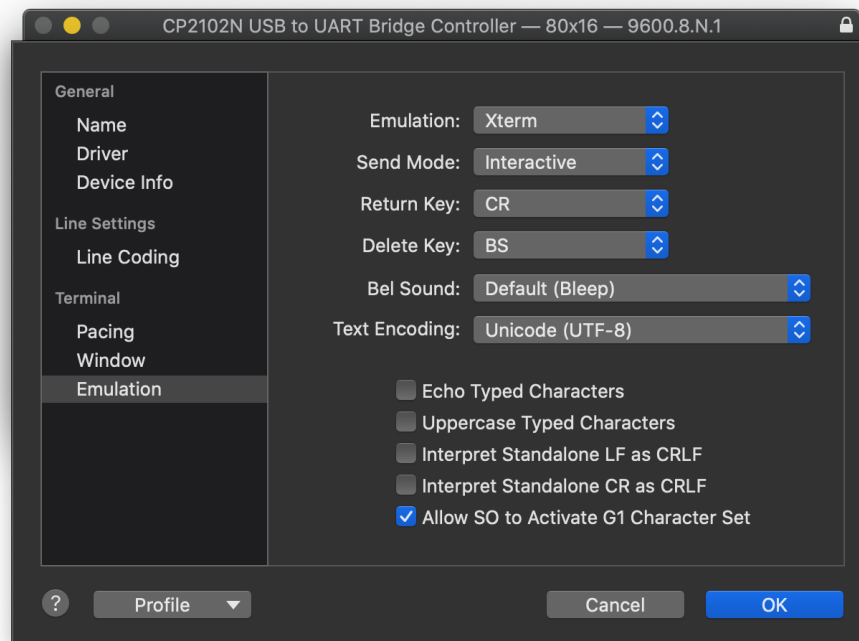
In the line coding screen, change the baud rate to 921600 (match your screen to the image below).



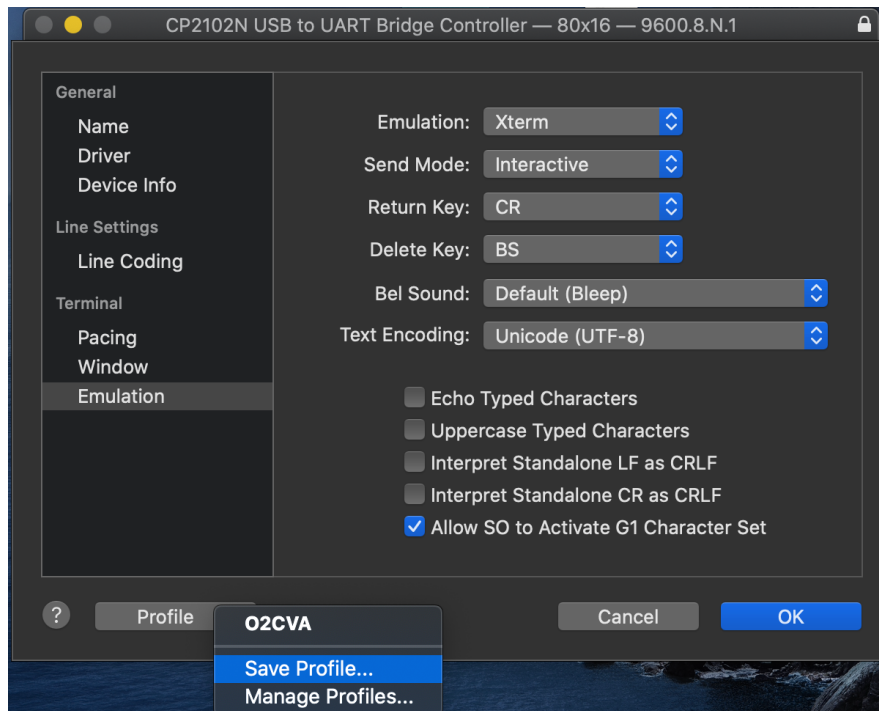
Adjust the window size send type and window size values to match this screen:



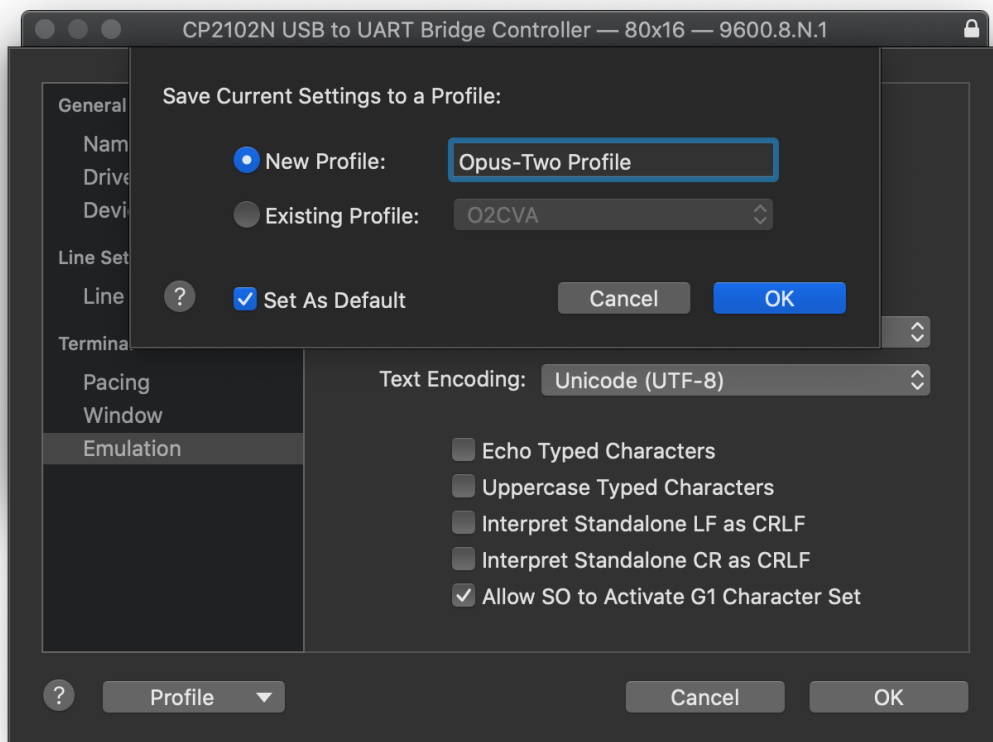
And finally, make sure your settings in “Emulation” match these:



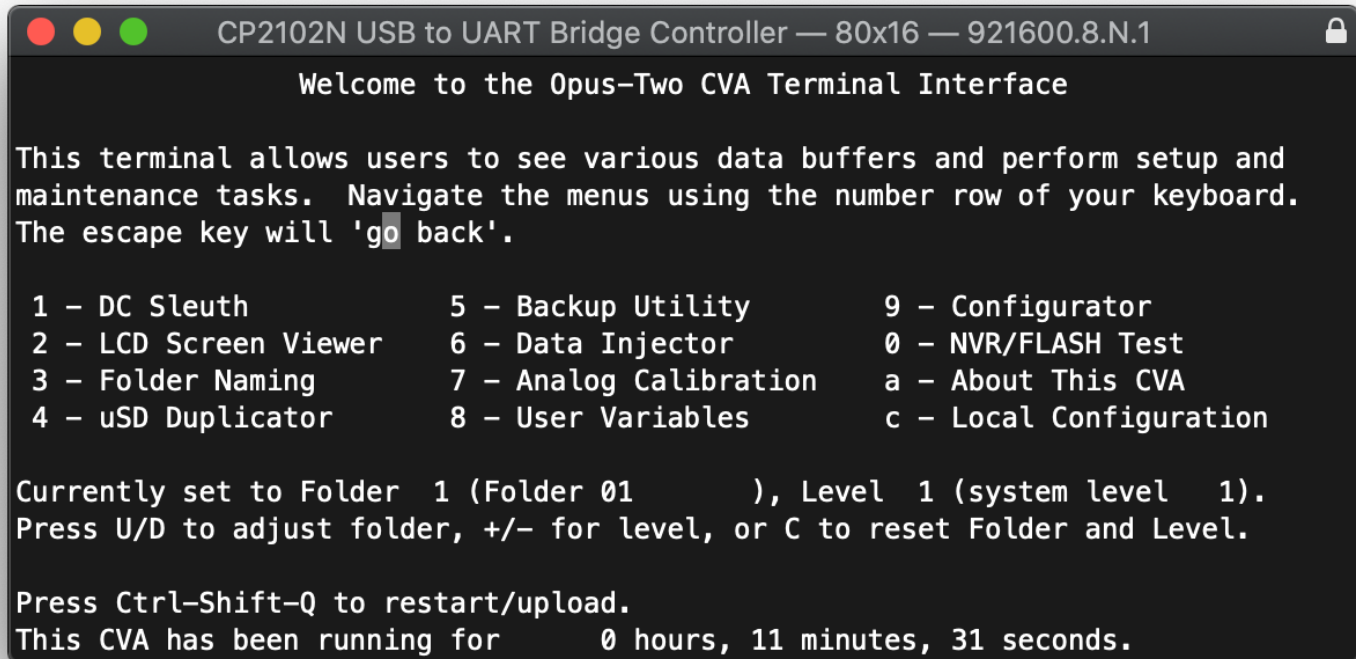
You may choose to save these settings into a default profile, ensuring you will never have to enter them again. We have found the Serial application to be pretty good about remembering settings, but we have profiles saved on our computers in case the settings are somehow lost (whether it be human or technical error).



To save the profile, select “Save Profile...” from the profile window. Then name the profile, make it default, and save it:



Click Ok (and then Ok if you saved a profile). The terminal window should now be active:



```
CP2102N USB to UART Bridge Controller — 80x16 — 921600.8.N.1
Welcome to the Opus-Two CVA Terminal Interface

This terminal allows users to see various data buffers and perform setup and
maintenance tasks. Navigate the menus using the number row of your keyboard.
The escape key will 'go back'.

1 - DC Sleuth           5 - Backup Utility     9 - Configurator
2 - LCD Screen Viewer  6 - Data Injector     0 - NVR/FLASH Test
3 - Folder Naming      7 - Analog Calibration a - About This CVA
4 - uSD Duplicator     8 - User Variables    c - Local Configuration

Currently set to Folder 1 (Folder 01      ), Level 1 (system level 1).
Press U/D to adjust folder, +/- for level, or C to reset Folder and Level.

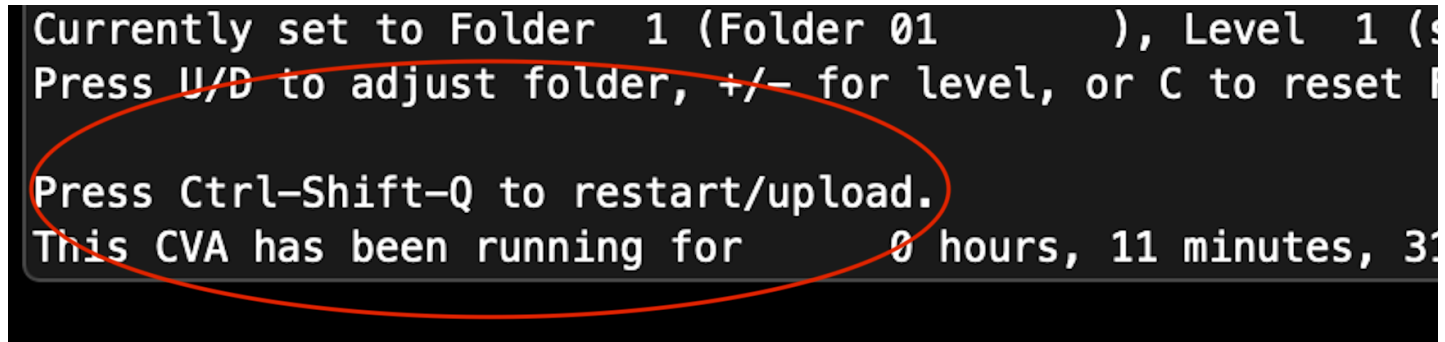
Press Ctrl-Shift-Q to restart/upload.
This CVA has been running for      0 hours, 11 minutes, 31 seconds.
```

If the screen is “jittering”, simply press the “z” key to stabilize the screen.

The options within the menus are rather self-explanatory, but if any prove to be confusing, put in a bug report and explain the confusion and the menu will either be revised or a documentation set created for it.

UPLOADING A CONFIGURATION FILE

If you are at the home screen as shown above, hold down Control and Shift while typing the letter “Q” and the controller will immediately reset. If you are the type of person to forget the key combination, don’t worry. It’s printed on the screen:



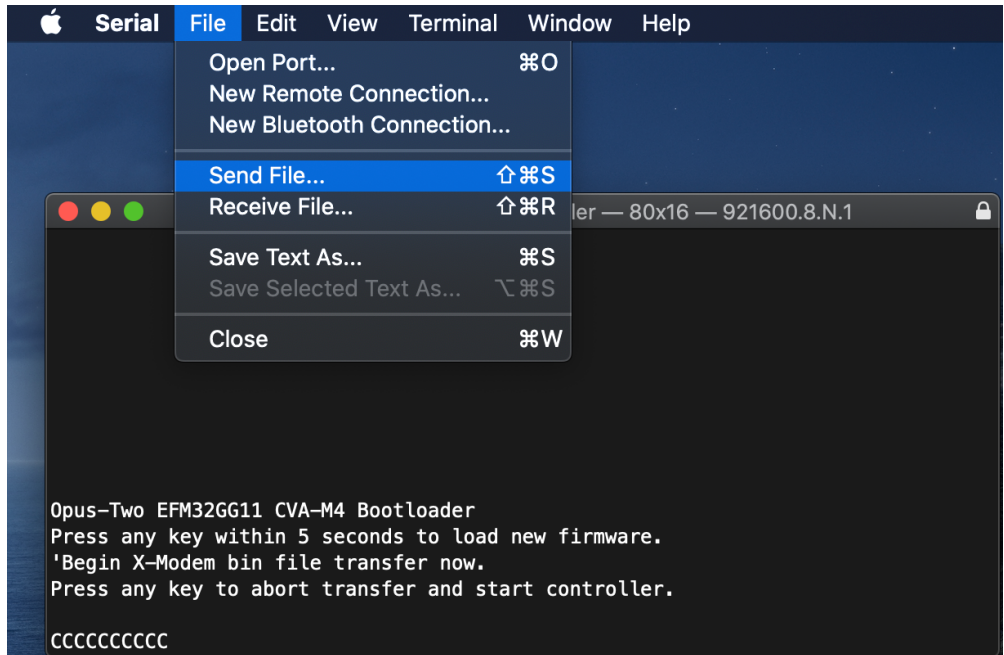
Once you enter the key combination, the controller will restart:

During this restart, you have 5 seconds to press any key to “interrupt” the startup sequence. Once it’s interrupted, it will assume you are intending to upload a file.

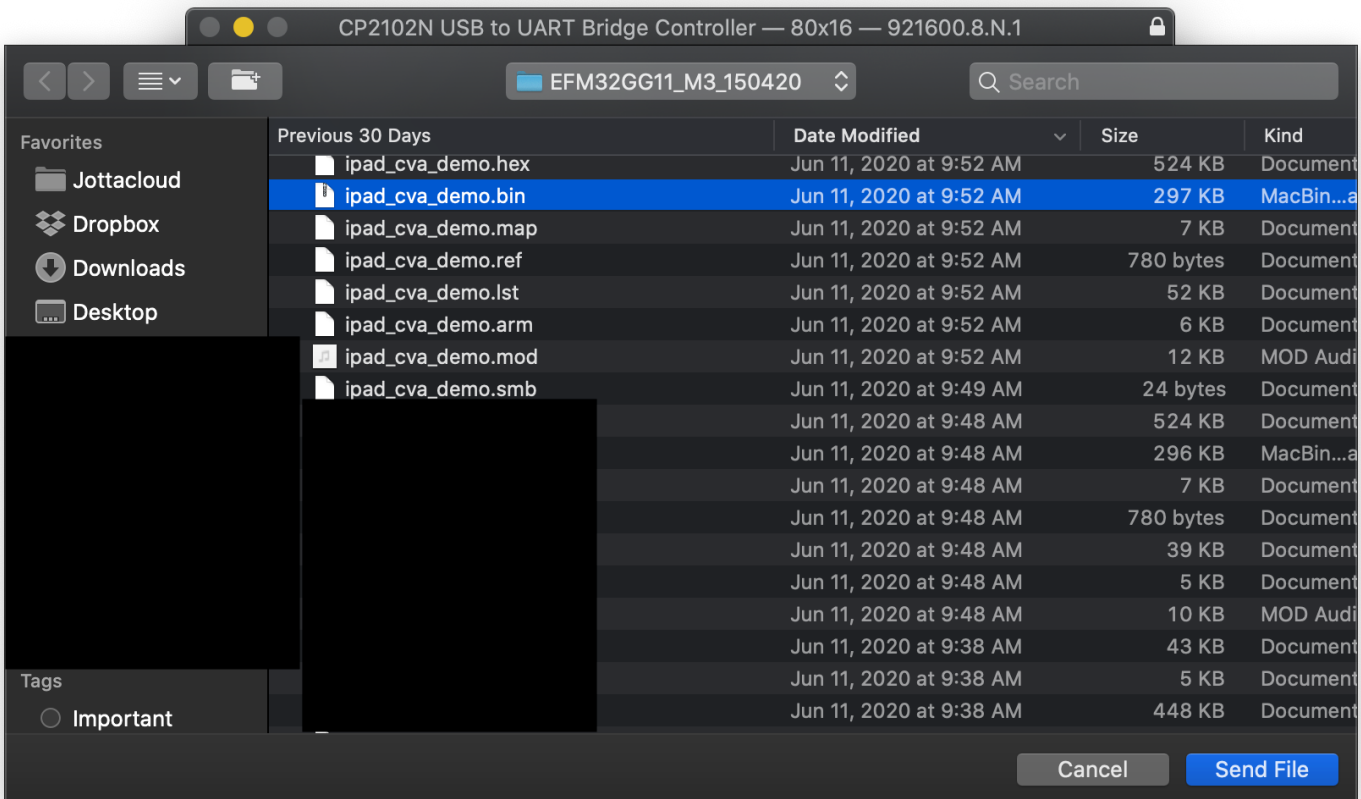


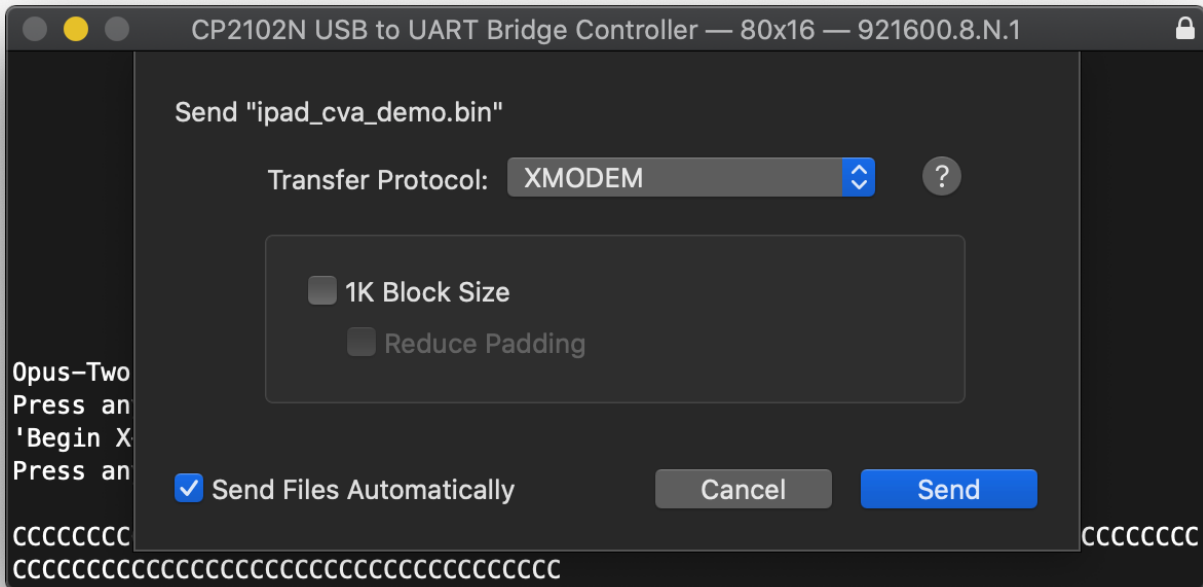
Once you enter the file upload mode, the rush is over. The controller will instruct you on screen (as shown) to begin the file transfer now. Pressing a keyboard key will abort the file transfer process and revert to the previous configuration file. The controller will occasionally print the letter “C” to indicate that it is still alive and waiting for a file.

On the mac, select “Send File” from the File menu as shown below:

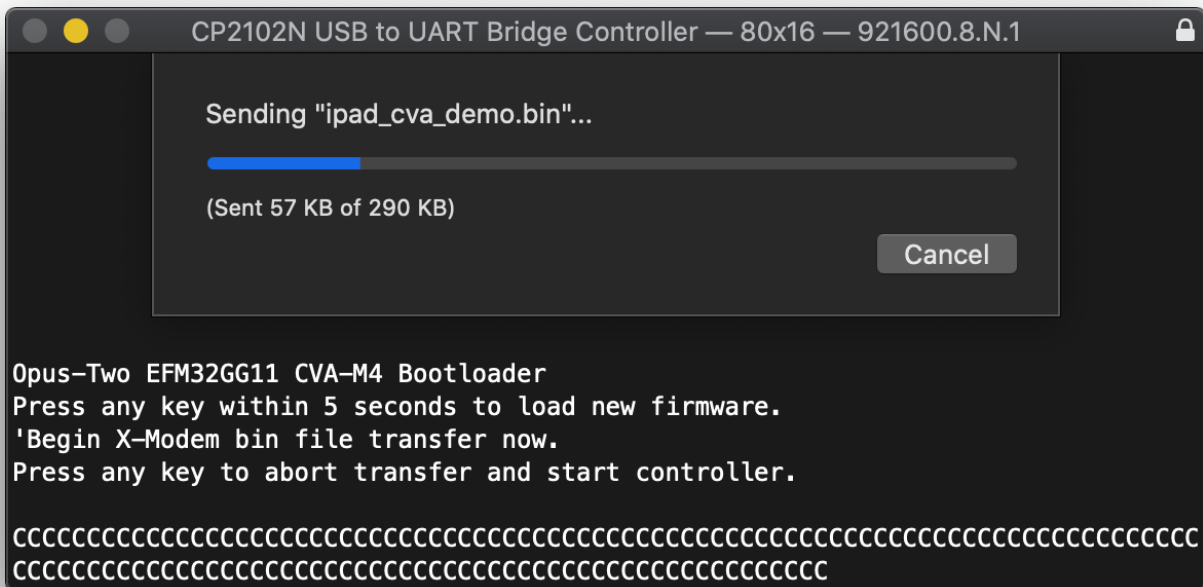


Ensure that the XMODEM transfer method is selected, browse to the file (ends in .bin), and click “Send File”:





Make sure your settings match the ones above (XMODEM and Send Files Automatically). Click Send and the file will begin uploading. When the file has successfully uploaded (should only take a few seconds), the controller will reboot and be running the new config file.



PREPARING WINDOWS FOR CONNECTION

DOWNLOADS

Install the terminal program and the CP driver prior to connecting the controller to your computer.

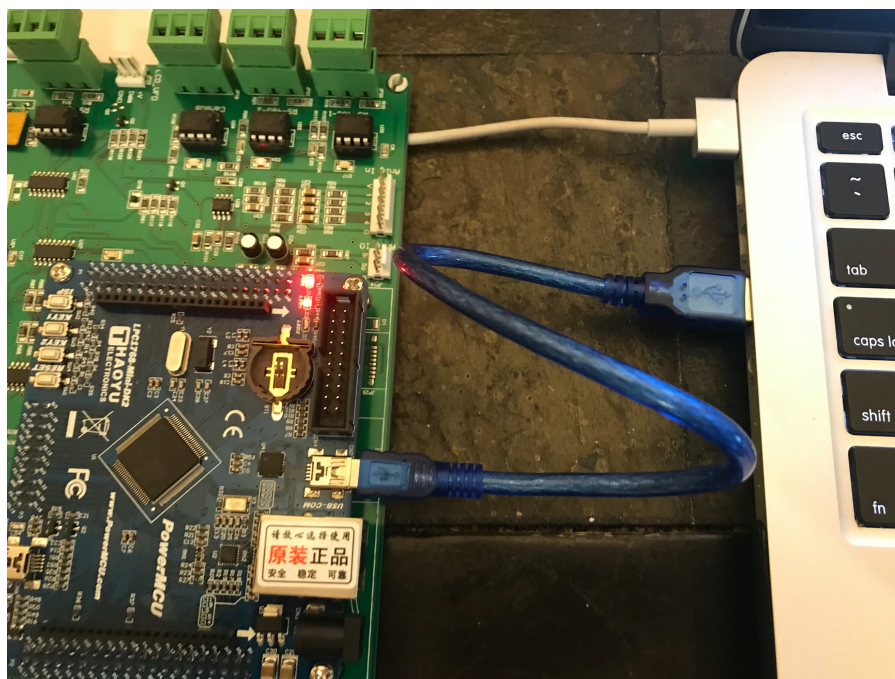
Terra Term Program

<https://osdn.net/projects/ttssh2/releases/>

CP210x Driver

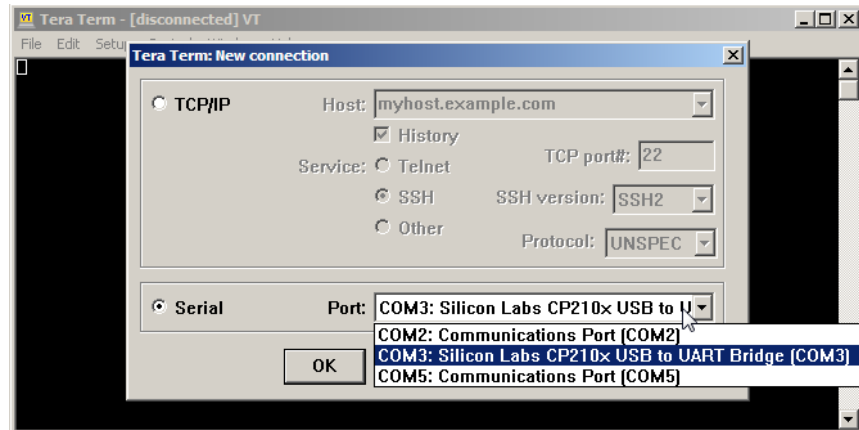
<https://www.silabs.com/products/development-tools/software/usb-to-uart-bridge-vcp-drivers>

PLUG COMPUTER INTO CVA/CVE

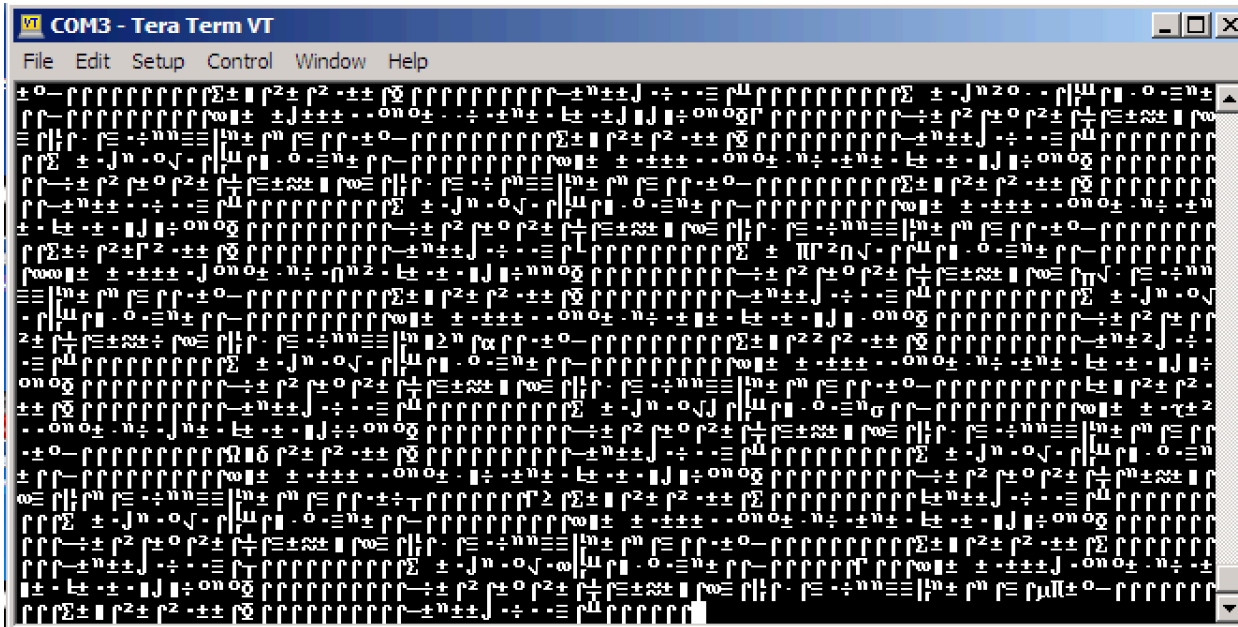


CONFIGURING SERIAL APP

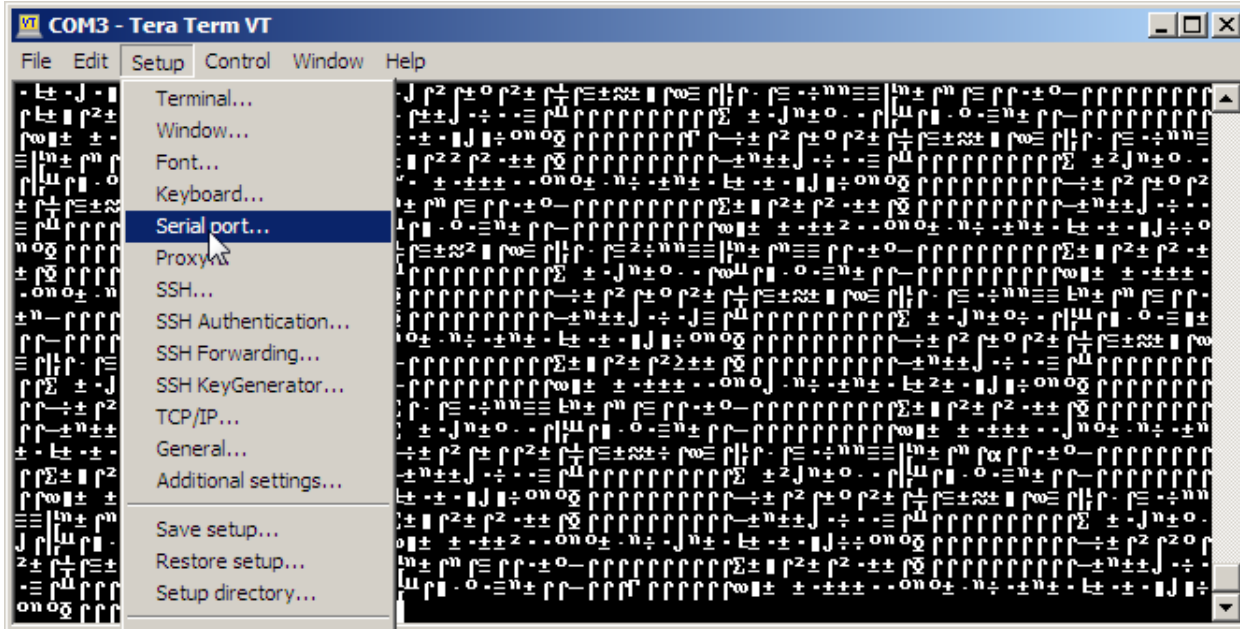
Open application, it will ask which port you wish to open. If the drivers have been installed and the CVA is plugged into the PC, CP2102 will be an option in the Serial list. It may offer a port A and port B or a Port 1 or Port 2. You want the A or 1. Make sure it's selected and click "OK"



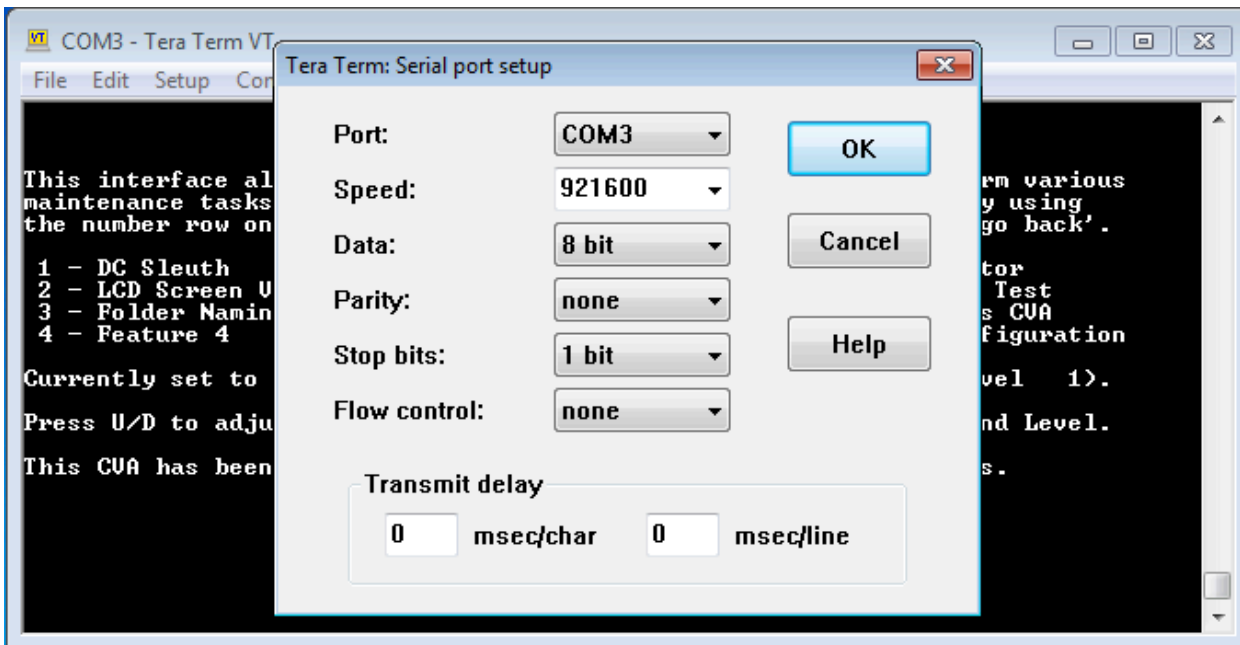
The screen will probably look like this:

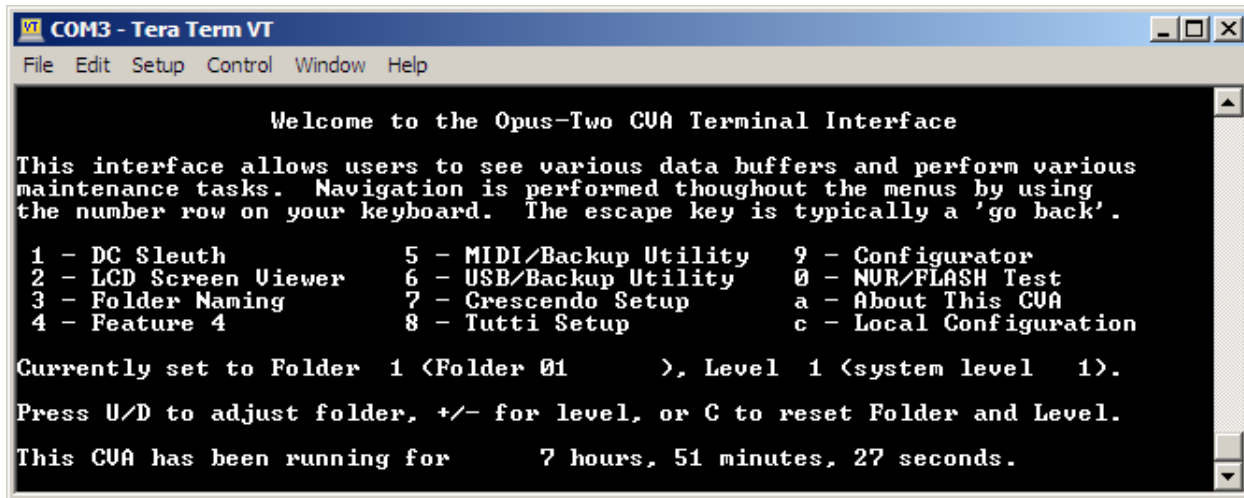


Go to the Setup menu and choose “Serial port” to access settings:



Then change the baud rate to 921600 like this:





```
COM3 - Tera Term VT
File Edit Setup Control Window Help

Welcome to the Opus-Two CVA Terminal Interface
This interface allows users to see various data buffers and perform various
maintenance tasks. Navigation is performed throughout the menus by using
the number row on your keyboard. The escape key is typically a 'go back'.

1 - DC Sleuth          5 - MIDI/Backup Utility  9 - Configurator
2 - LCD Screen Viewer  6 - USB/Backup Utility  0 - NUR/FLASH Test
3 - Folder Naming      7 - Crescendo Setup    a - About This CVA
4 - Feature 4          8 - Tutti Setup        c - Local Configuration

Currently set to Folder 1 (Folder 01), Level 1 (system level 1).
Press U/D to adjust folder, +/- for level, or C to reset Folder and Level.
This CVA has been running for 7 hours, 51 minutes, 27 seconds.
```

The options within the menus are rather self-explanatory, but if any prove to be confusing, put in a bug report and explain the confusion and the menu will either be revised or a documentation set created for it.

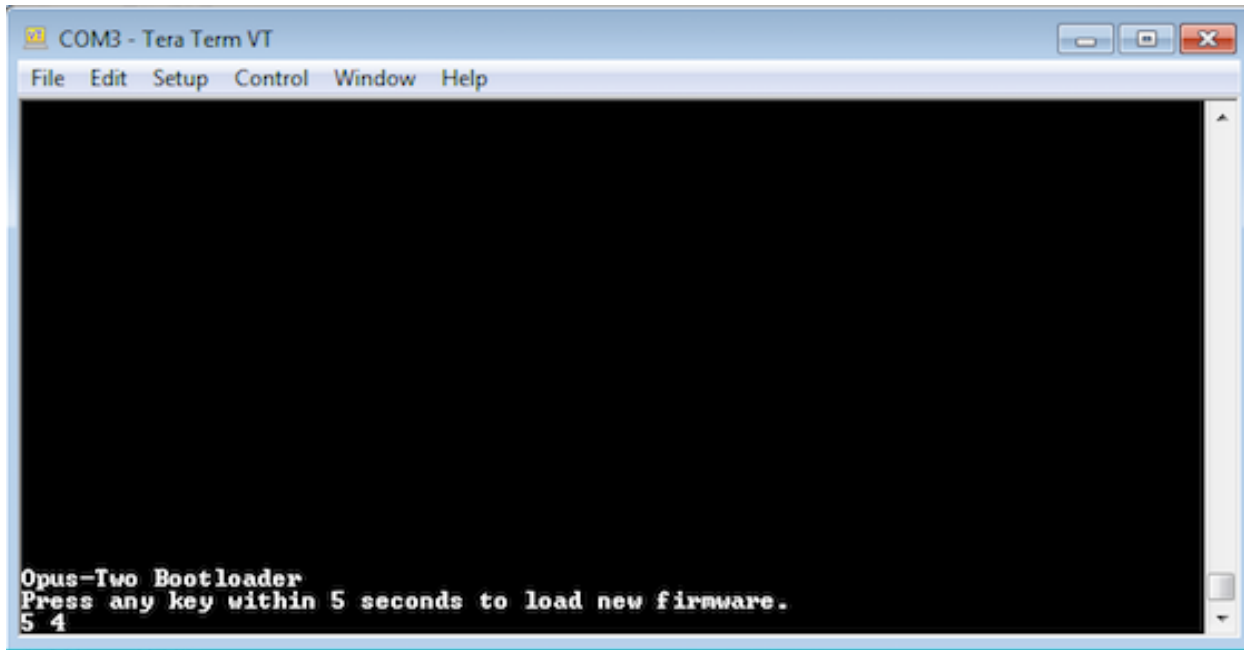
Please be aware that the menu system is undergoing regular updates, so your menus may not look the same as the ones above.

TIP: If the screen is “jittering”, simply press the “z” key to stabilize the screen.

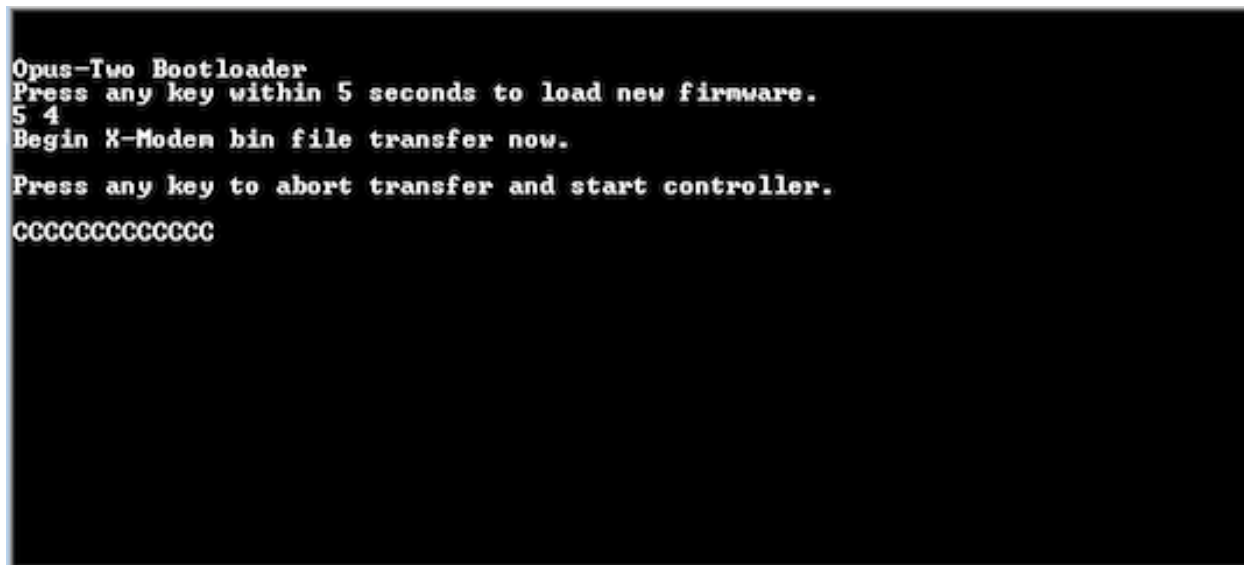
TIP: Setting the Font to “Courier” and size to 12 point makes the terminal easily read.

UPLOADING A CONFIGURATION FILE

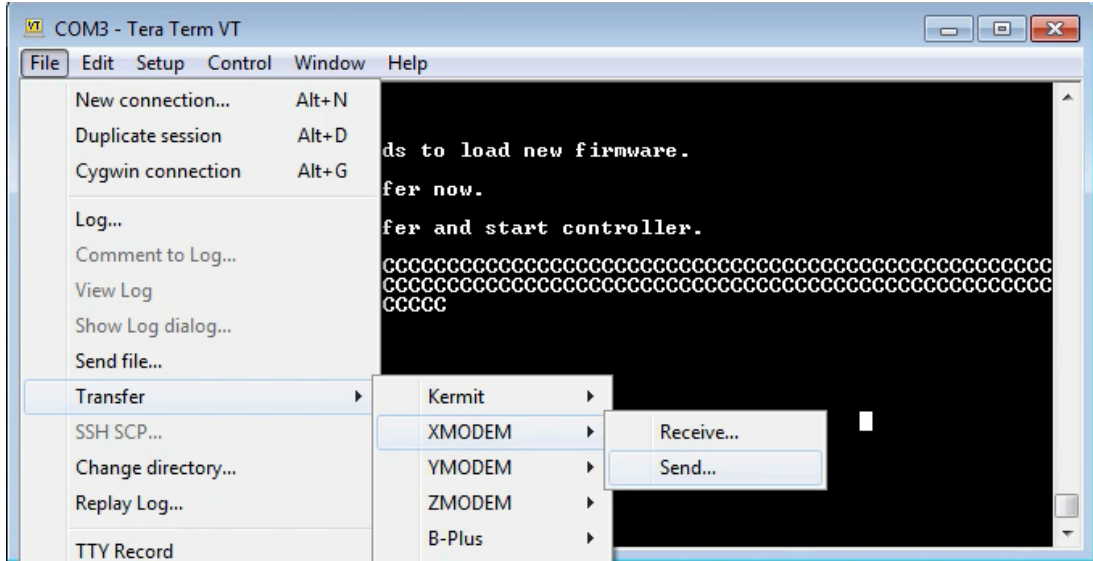
If you are at the home screen as shown above, hold down Control and Shift while typing the letter “Q” and the controller will immediately reset. You will see a message appear announcing the startup delay:



Press any key to enter file transfer mode:



While in the transfer screen, navigate in Tera Term to send an XMODEM file as shown:



The file will upload and the new configuration will automatically run.

