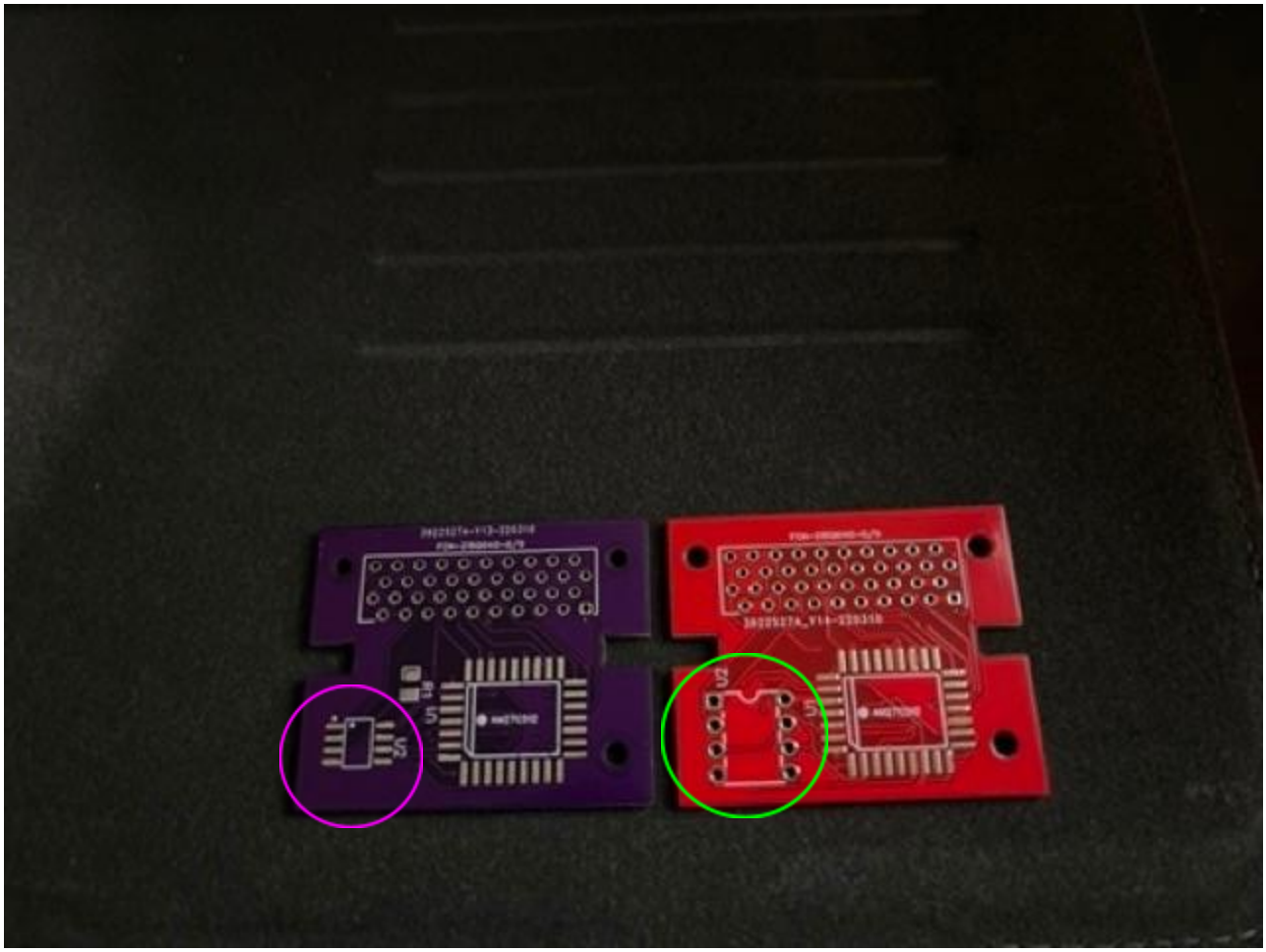
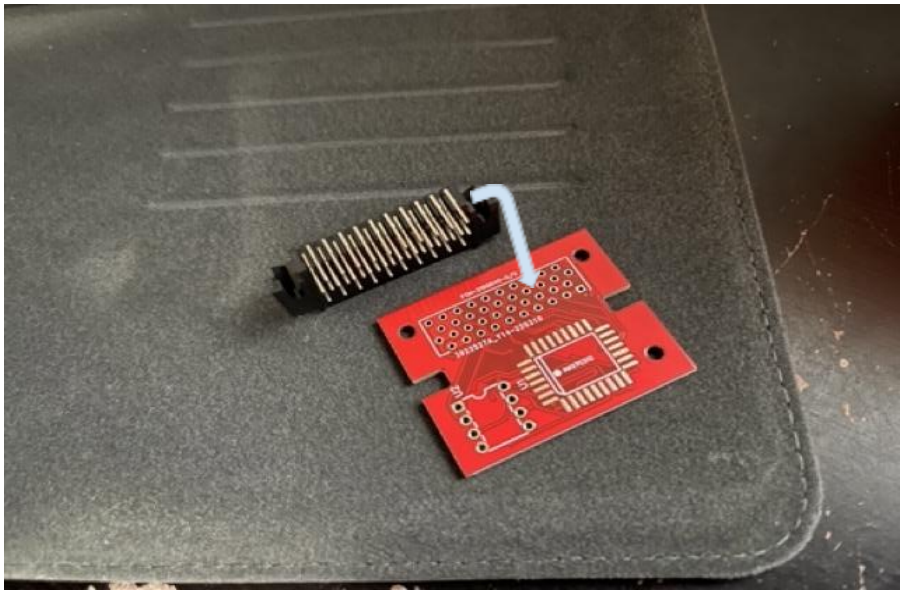
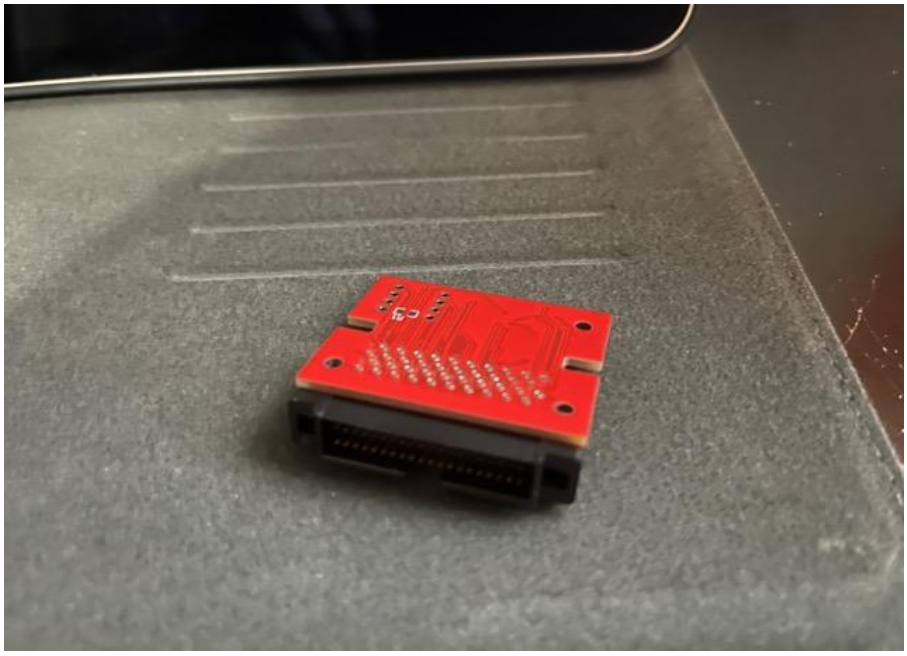


Step 1 Locate Your Board Type

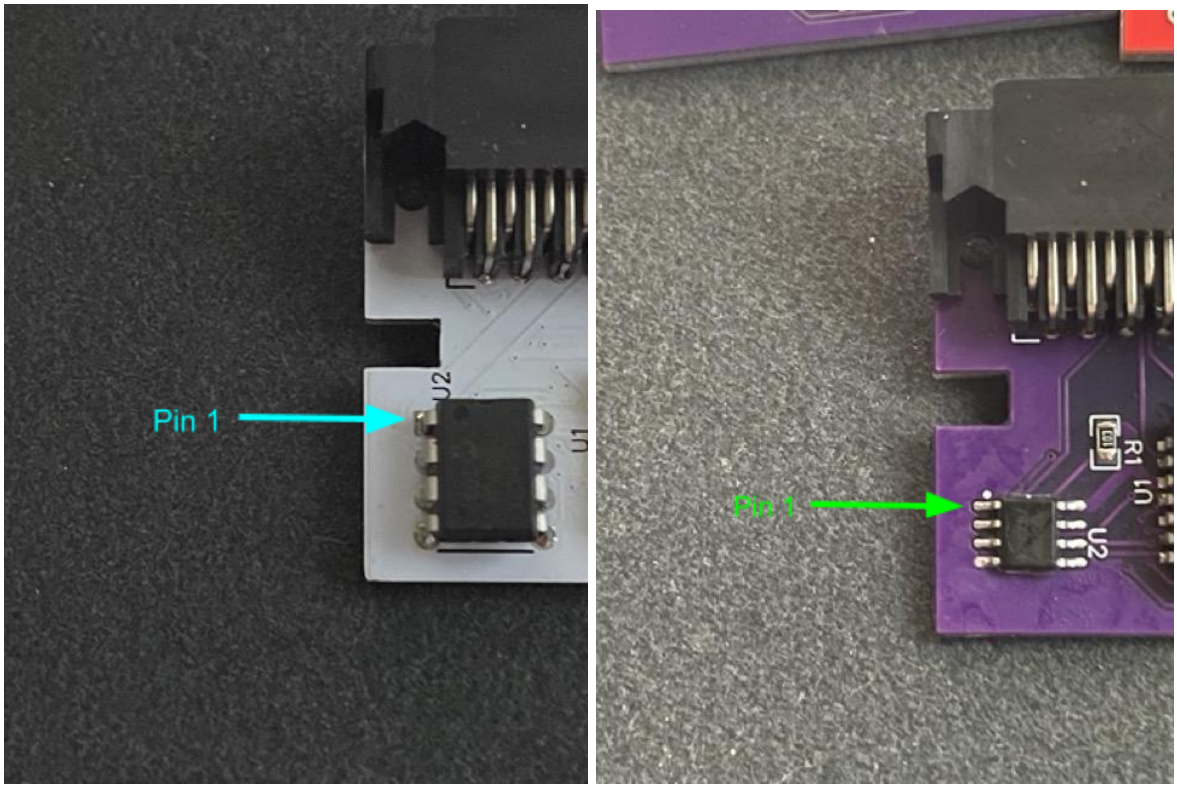
There are two board types on the left is the SMD Board with a smaller SMD IC. On the right is the TH Board with holes for a through hole smaller IC.





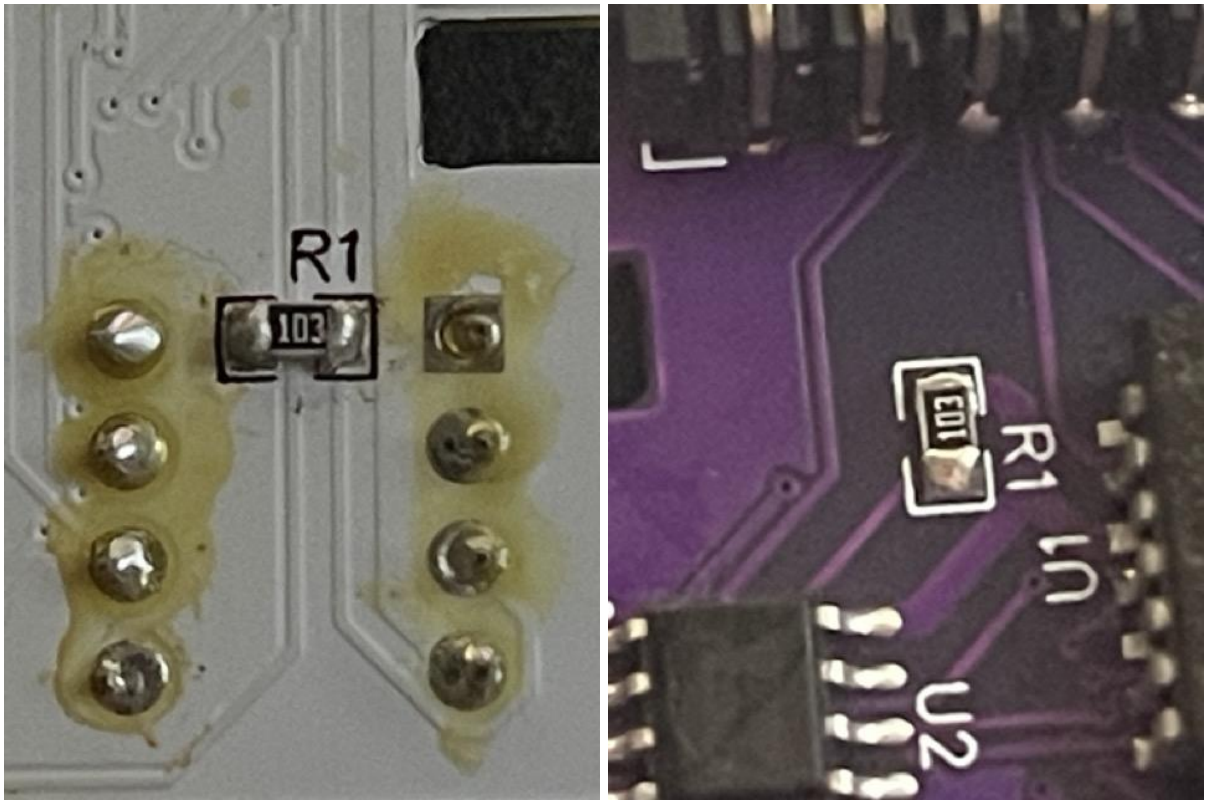
Step 2 Solder on the Connector

Locate and solder on the Fujitsu FCN-215Q040-G/0 Connector.



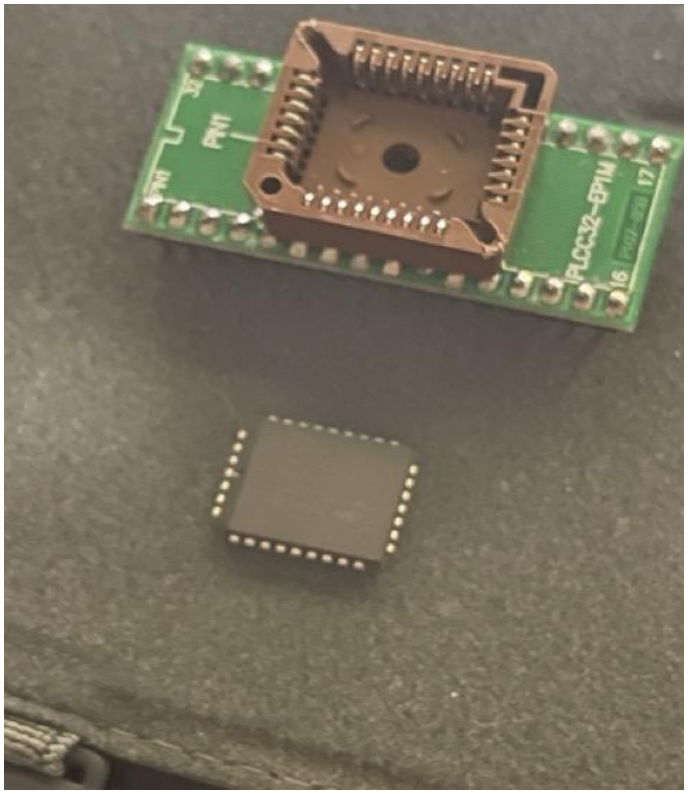
Step 3 Solder on Small IC

On the left is a TH board (Pin 1 is closest to the U2 marking above top left, there is also a circle showing pin 1's location) on this board you can solder either a X25C02P or a 25LC640A. On the right is the SMD board on this board you can only solder on the M95020-WMN6TP (To find pin 1 turn the SMD board so that the connector faces left, from here the IC text should read right side up Pin 1 is the bottom left-most chip in this case)



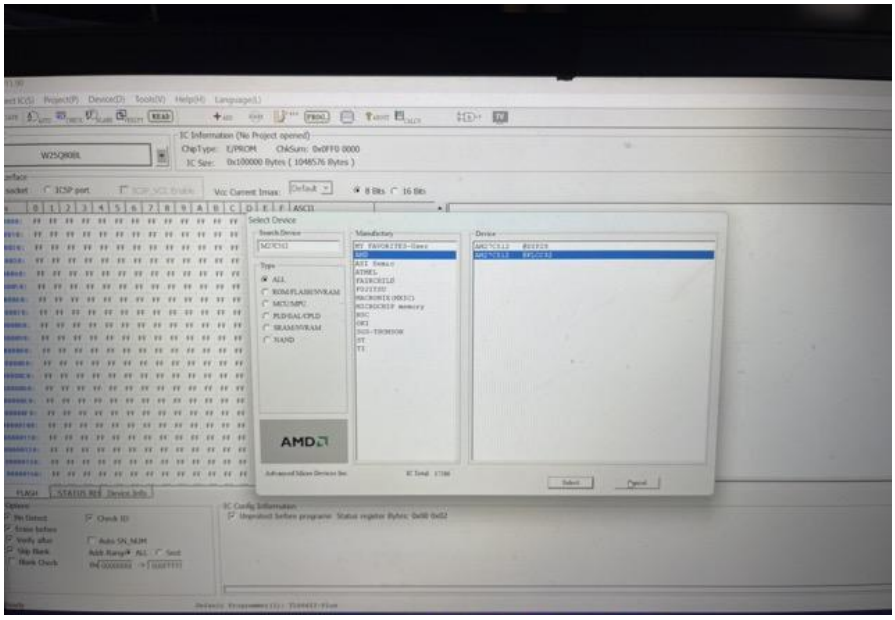
Step 4 Solder on the Resistor

Locate the 0805 size 10kOhms Resistor needed. On the left is the TH board; the pads to solder the resistor are located on the bottom of these boards. On the right is the SMD board, the pads for the resistor are on the top of the board top right to the IC.

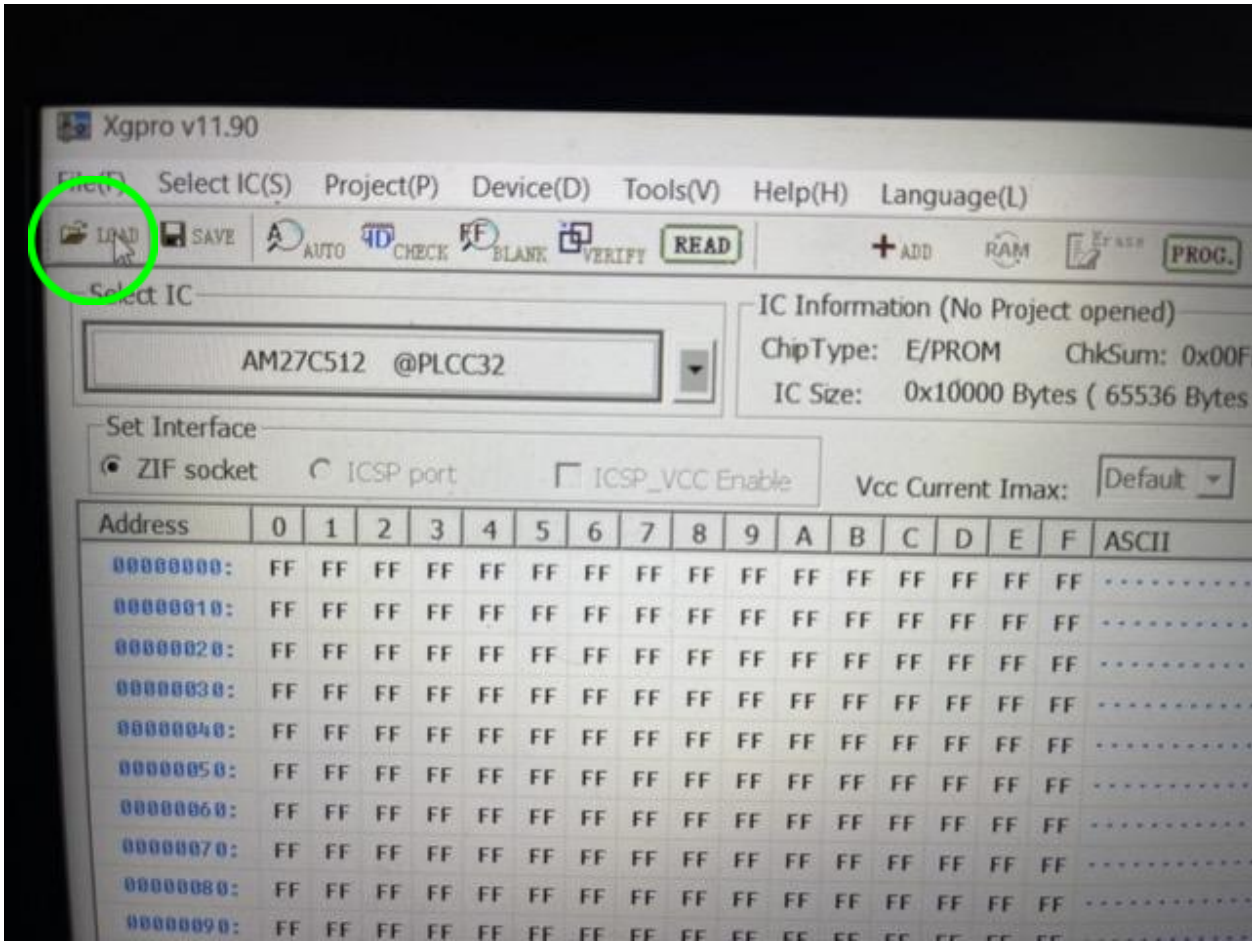


Step 5 Program the 32 Pin PLCC EEPROM

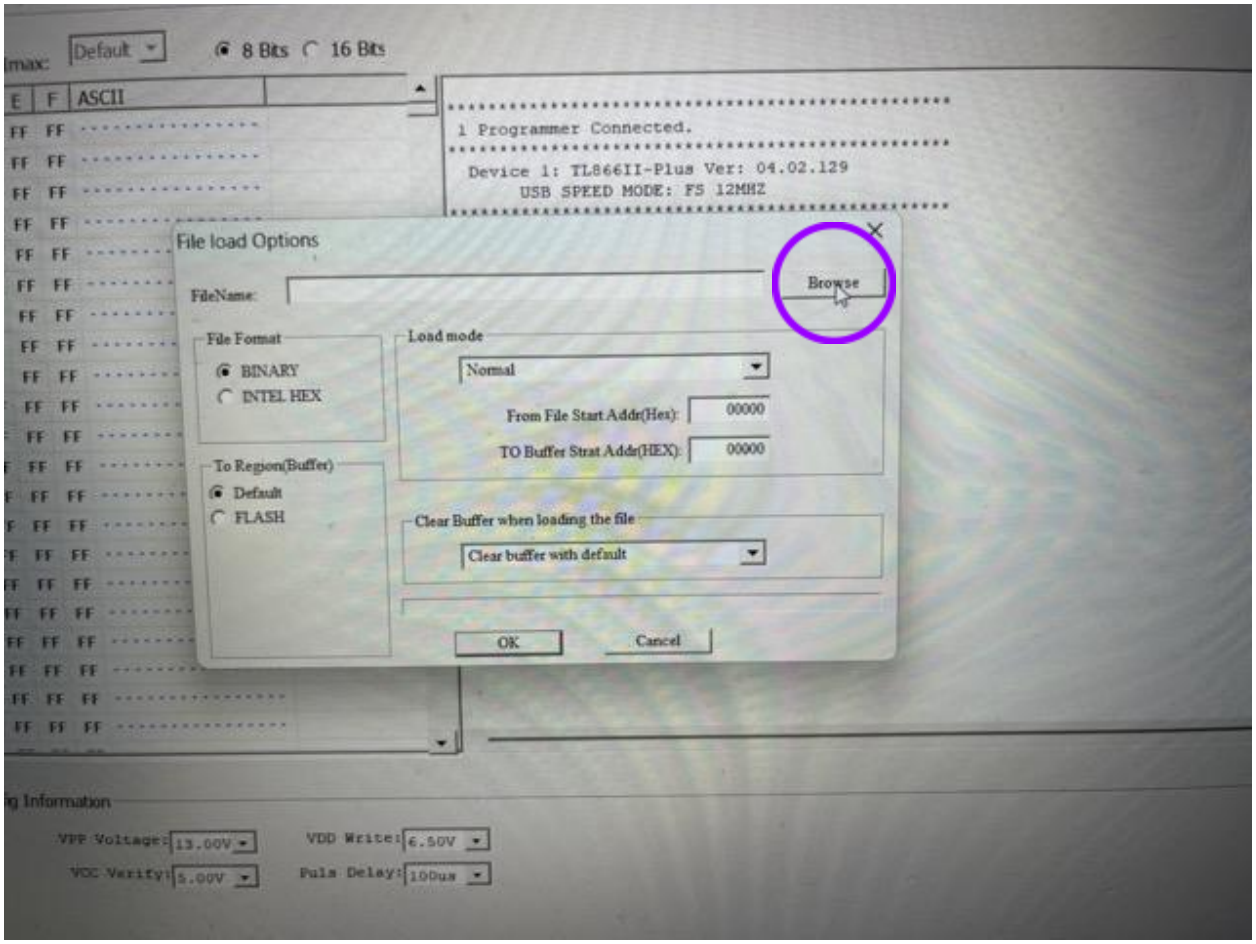
To begin you will need a TL866ii, TL866ii Plus, T48, T56, or any compatible EEPROM Programmer (I will be using the TL866ii Plus). You will also need a 32 Pin PLCC to DIP 32 Adapter for the programmer you are using. Place the EEPROM in the 32 Pin PLCC Adapter. Next place the adapter in your Programmer. From here launch your Programmers Application.



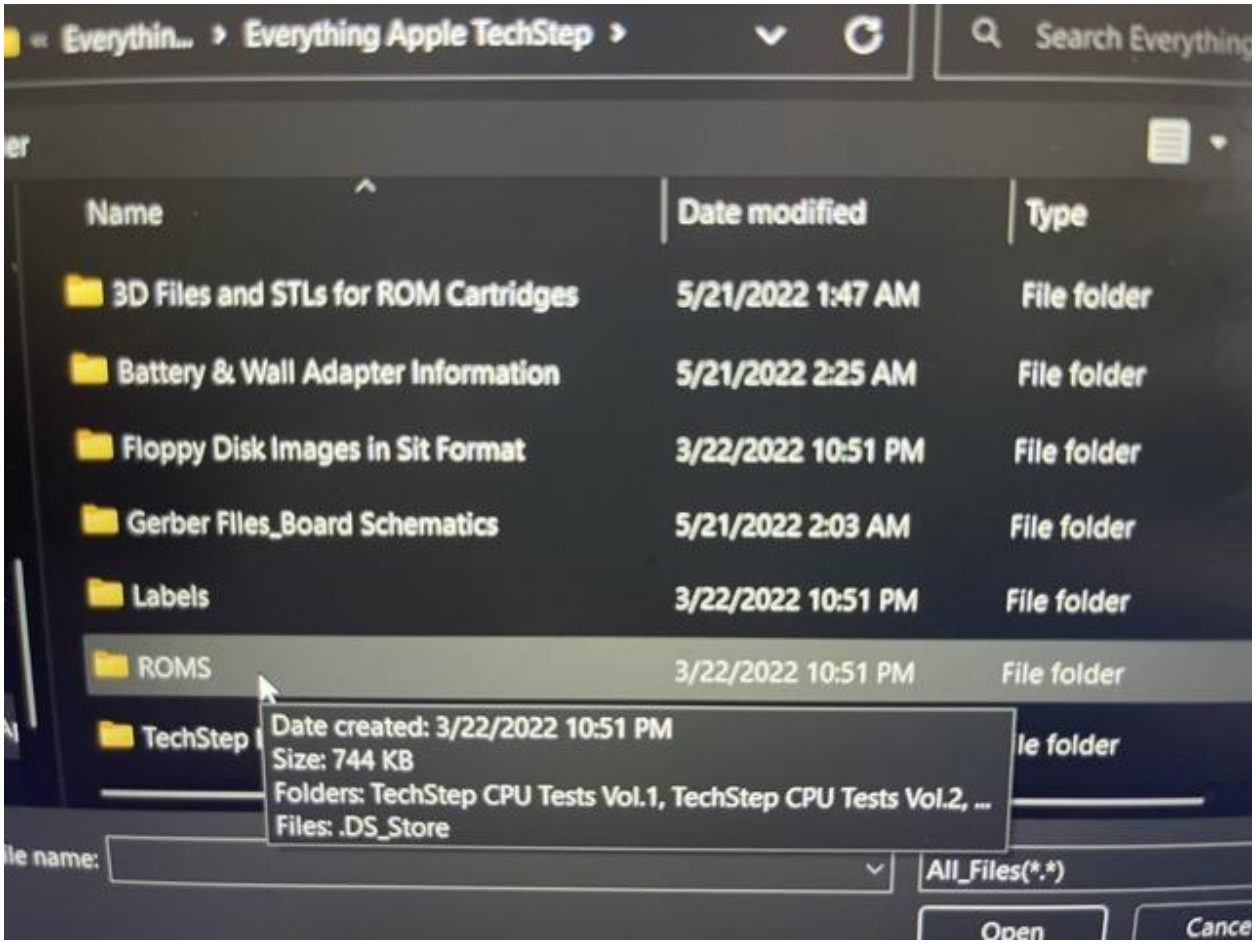
Select the search button and search for the EEPROM you are using this can either be an AM27C512 32 Pin PLCC, MX1000QC 32 Pin PLCC, SST39SF010A 32 Pin PLCC, or an AM27C010 32 Pin PLCC (I would recommend using except for the AM27C512 32 Pin PLCC because the others support all image types where as the AM27C512 32 Pin PLCC only supports early ROMs CPU Tests 1, CPU Tests 2, and SCSI Tests).



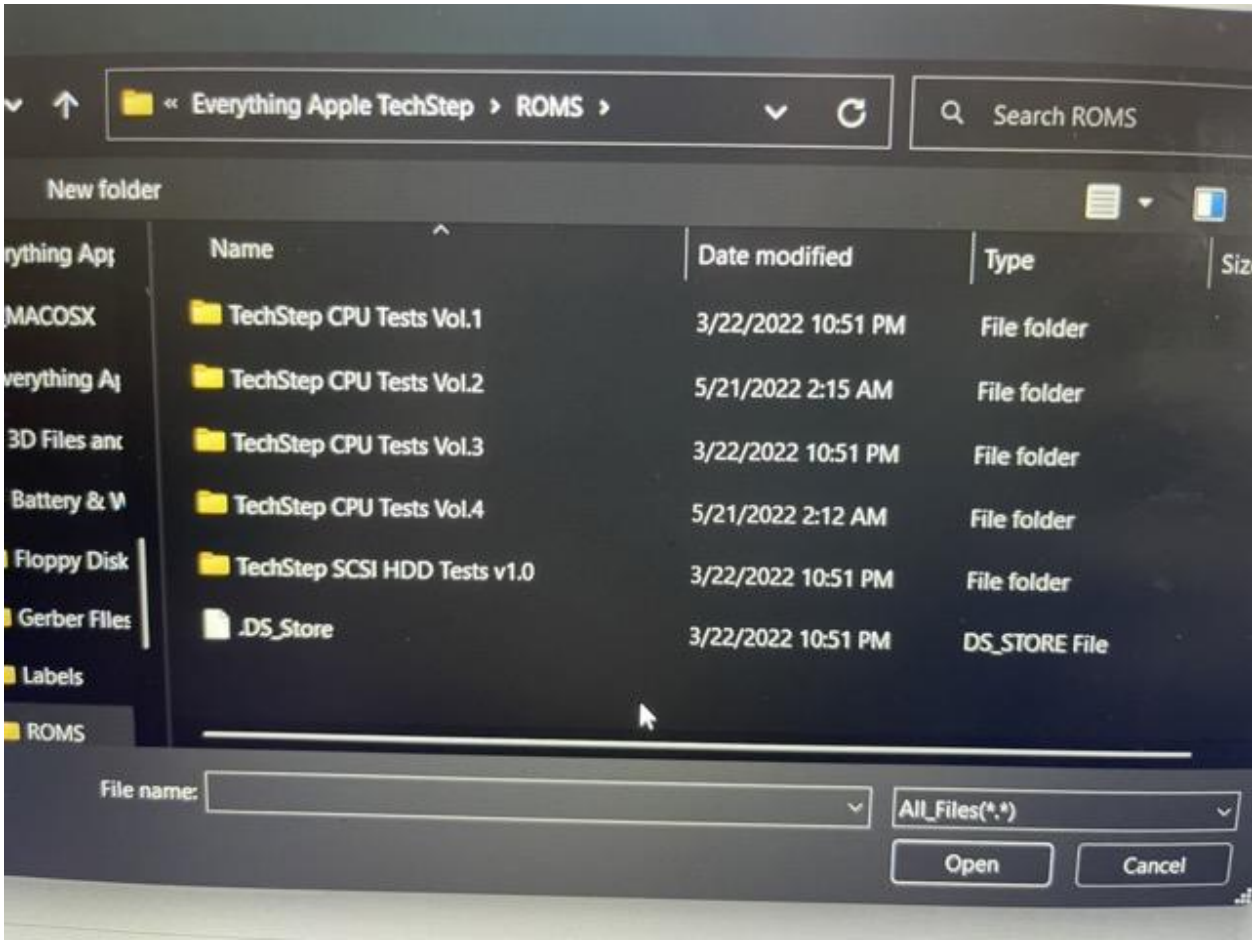
With your chip selected click the “LOAD” button.



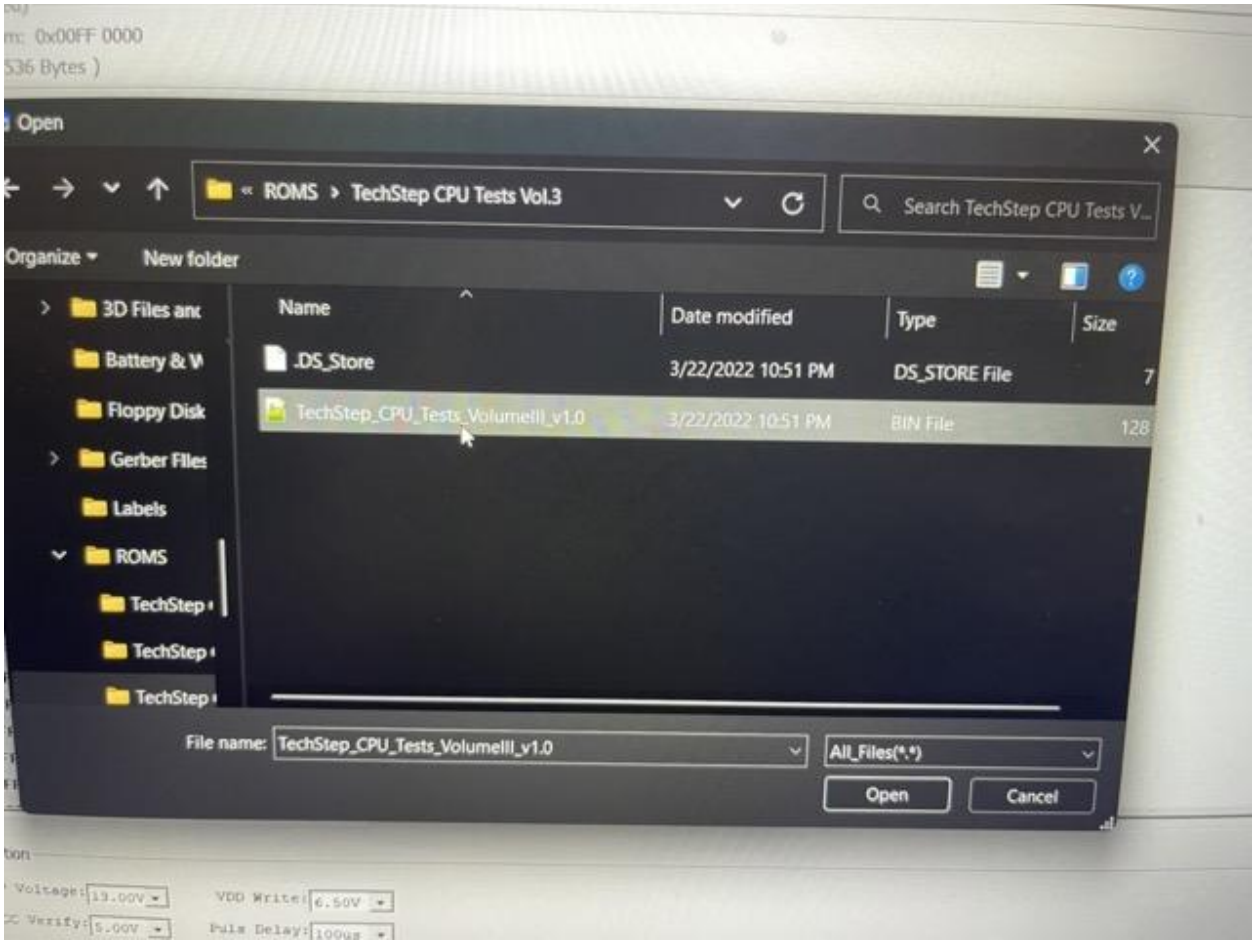
From here click the “Browse” button.



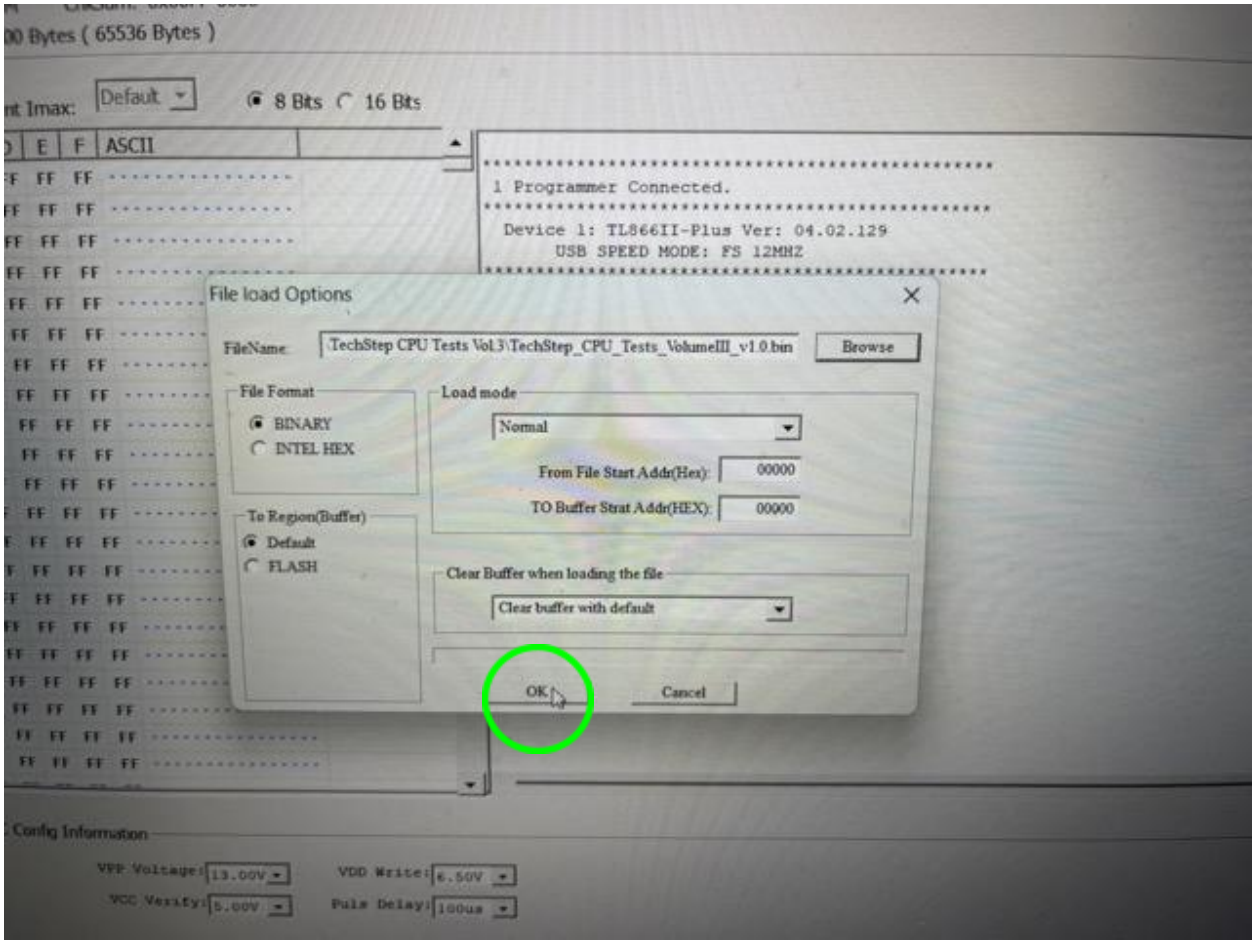
Locate and find the “Everything Apple TechStep” folder and Select the “ROMS” folder.



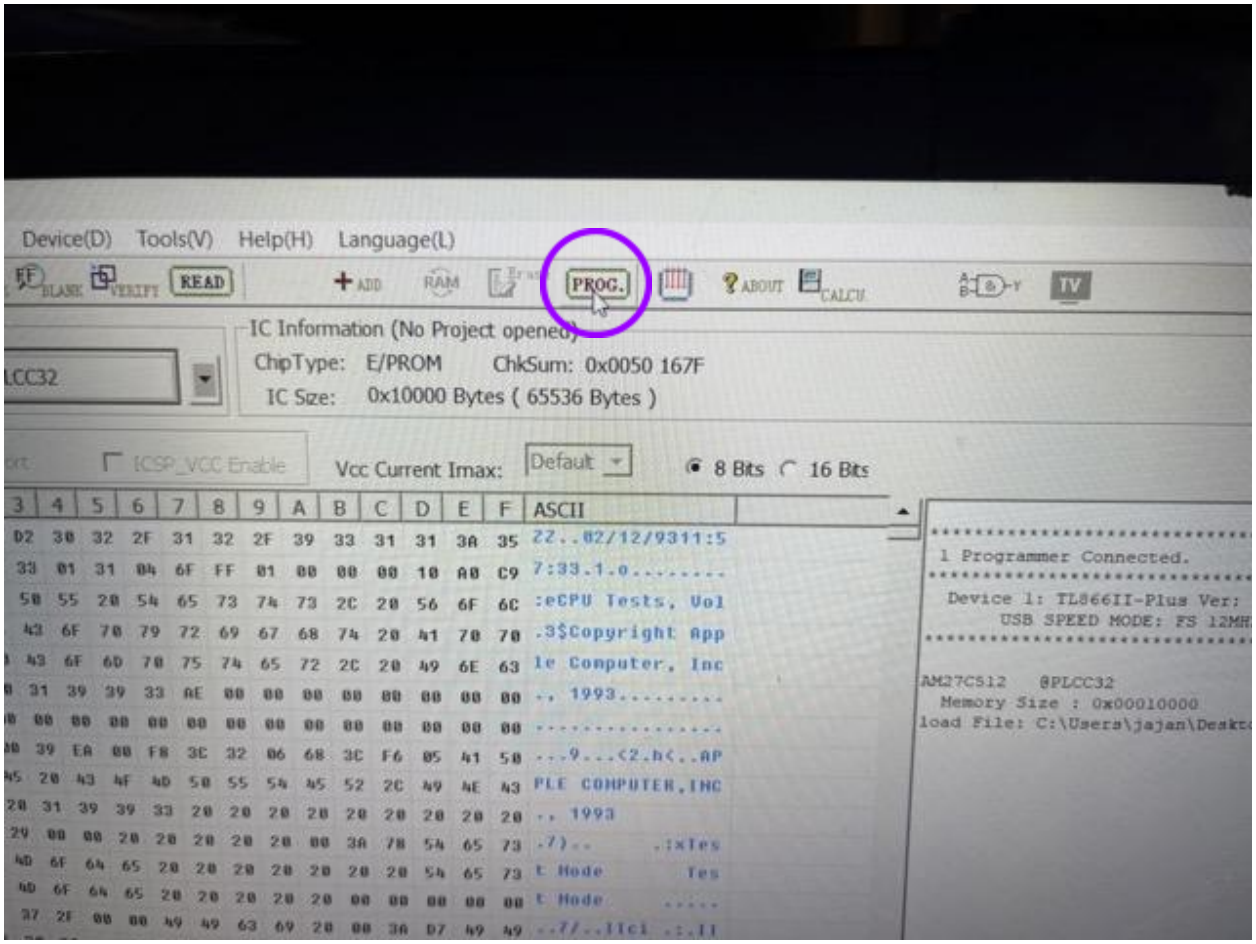
From here select which ROM you would like to program to your EEPROM. For example if I wanted to program “TechStep CPU Tests Vol.3” I would select and open this folder.



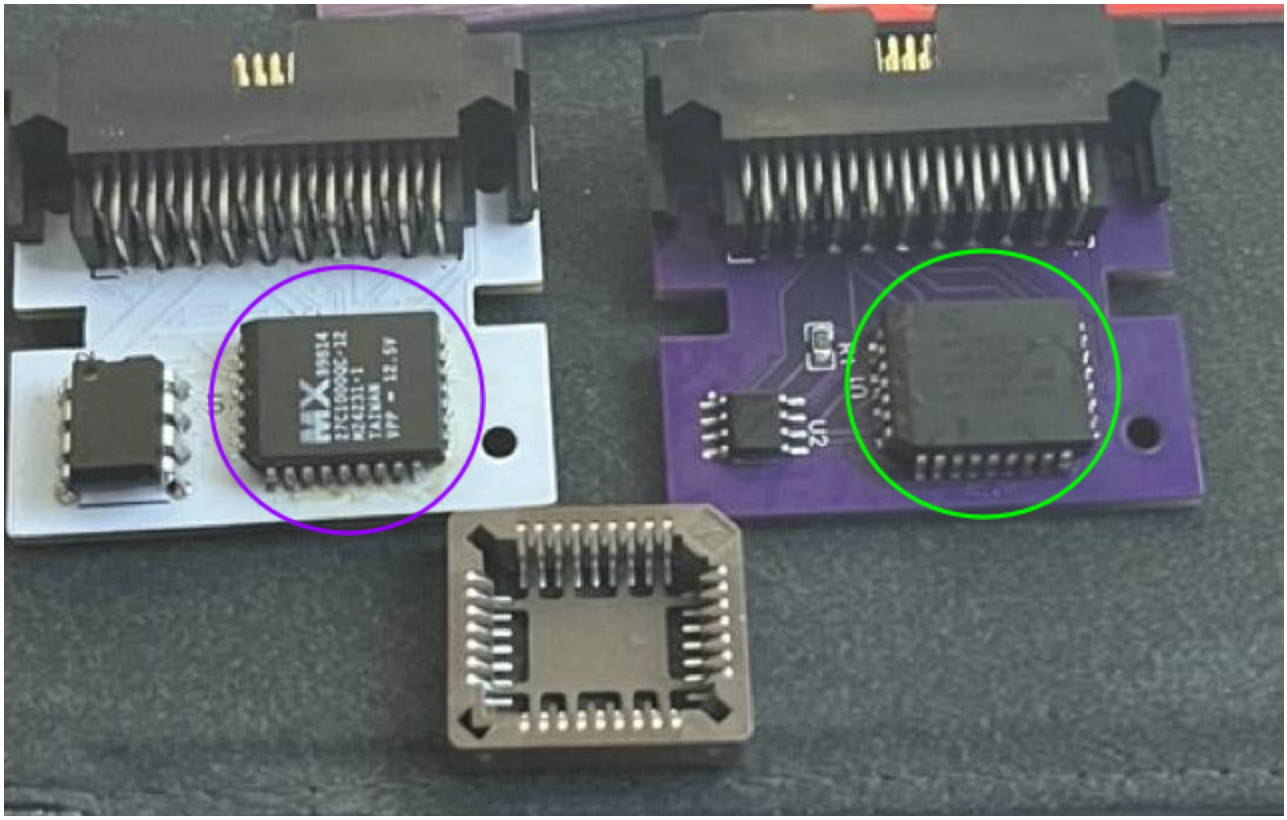
Now that you have opened your folder for the ROM of choice you will see a .bin file in this folder. Select this file and click “Open”.



This Screen will now appear. Click “OK” to confirm.

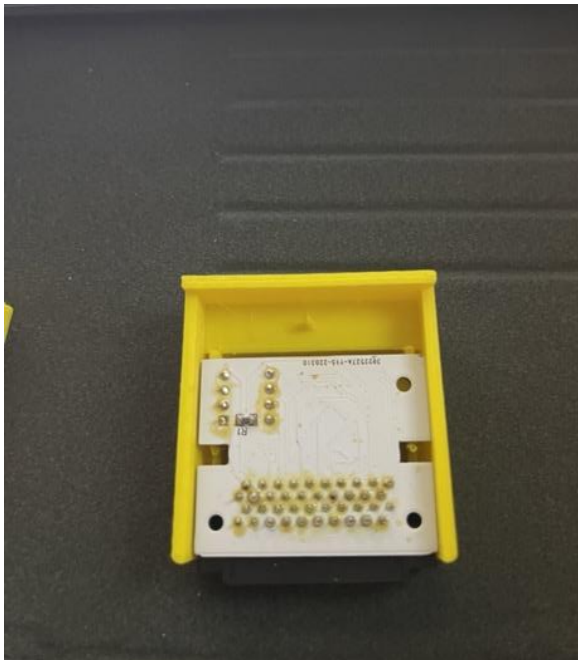


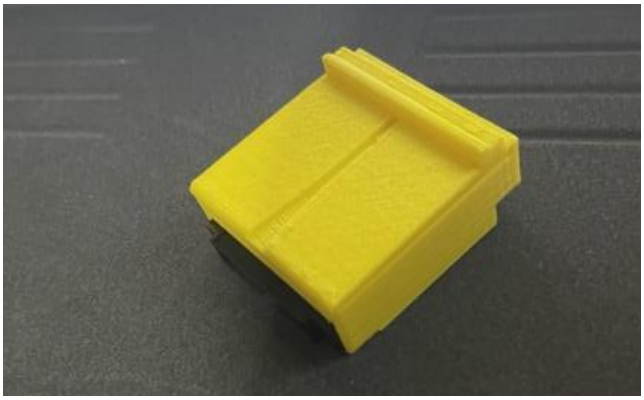
We will now click the “PROG.” Button you see above. A box will pop up and you will need to click the button that says “Program”. You will now see the status of the programming as it is happening once a message appears saying “Done”. You may disconnect the 32 Pin PLCC Adapter from your programmer. From here remove the EEPROM from the 32 Pin PLCC Adapter.



Step 6 Soldering the EEPROM or Soldering the 32 Pin PLCC EEPROM Socket

Above you will see both boards have had the EEPROMS soldered directly to the board. If you like you can do this or you may solder on a 32 Pin PLCC Socket and simply place the chip into the socket. From here everything in terms of programming and soldering is done.





Step 7 Assembling the 3D Printed Case OPTIONAL

Begin by placing the board into the bigger piece of the case bottom side up with the connector facing the opening. From here simply place the top cover on like you see above. If you don't have a 3D printer or didn't have the .stl file included in the "Everything Apple TechStep" folder sent off to be made you can simply pry your existing ROM Cartridge casing apart and use it instead. At this point you are done and may enjoy and use your Apple TechStep and it's newly made ROM Cartridges, great job!