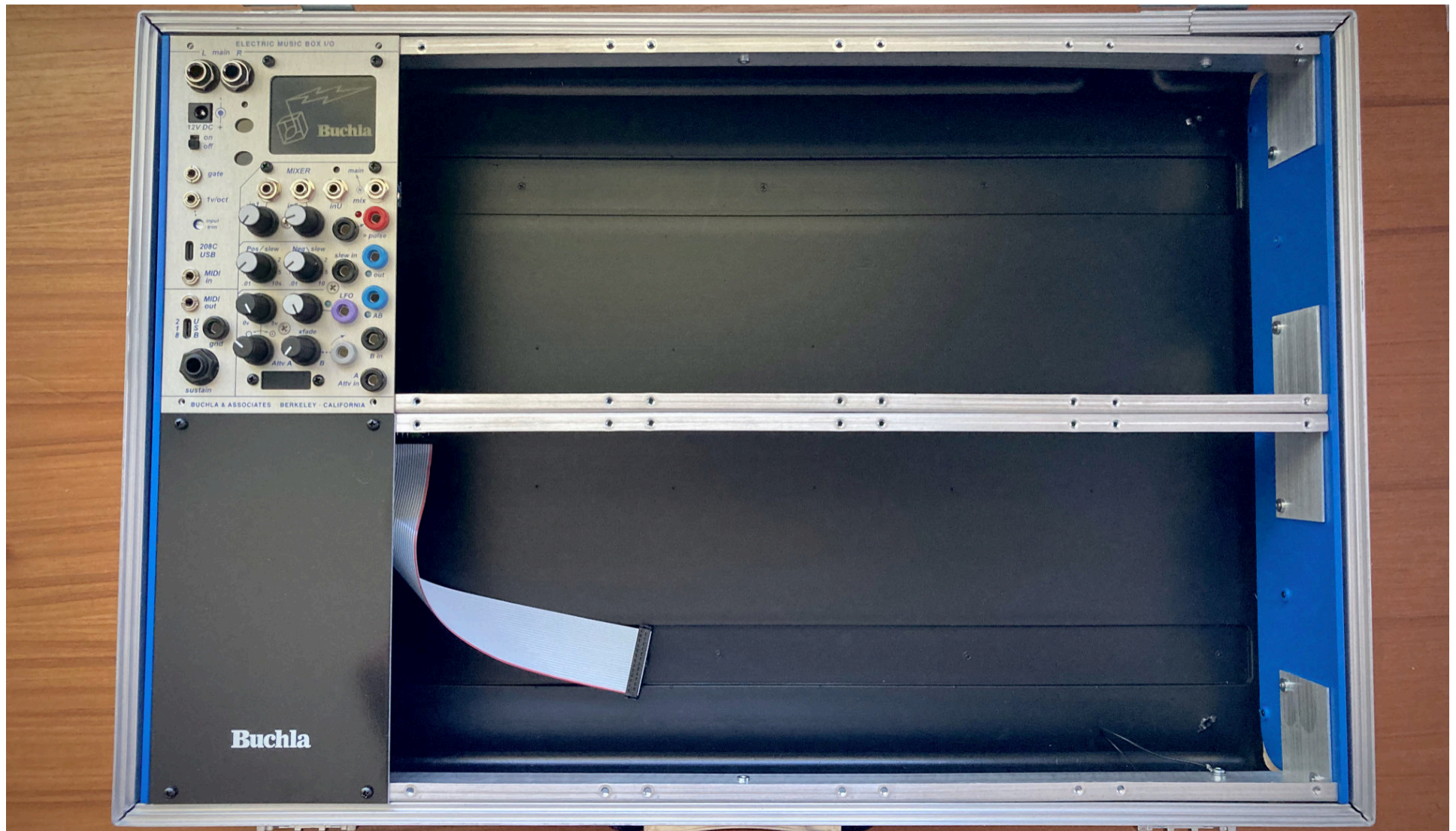


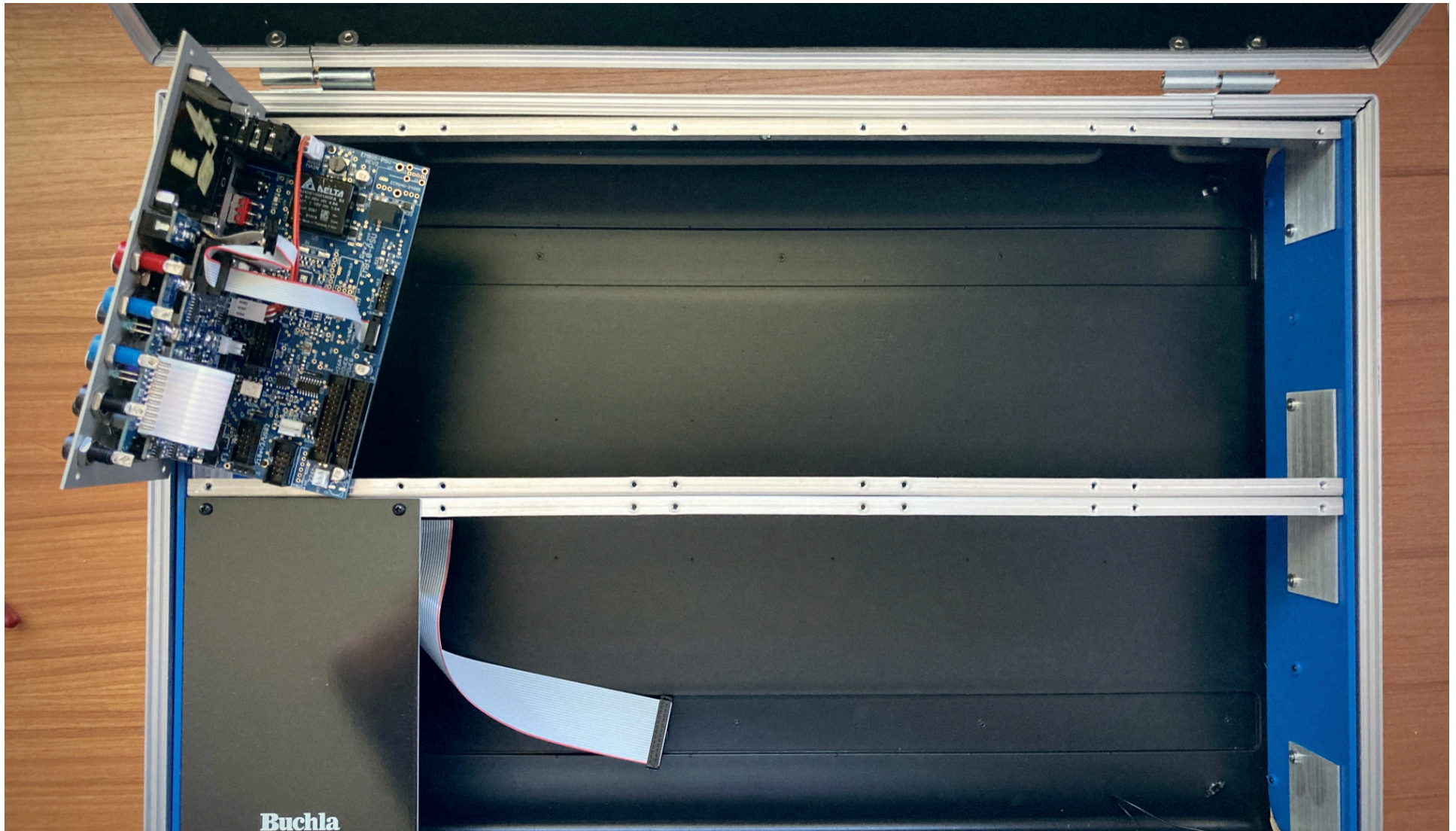
# ***MODERNIZE!***

**Step-by-step instructions on how to  
transfer the Easel Command's 208C  
and LEM218v3's 218 modules to the  
Modern Music Easel Case**



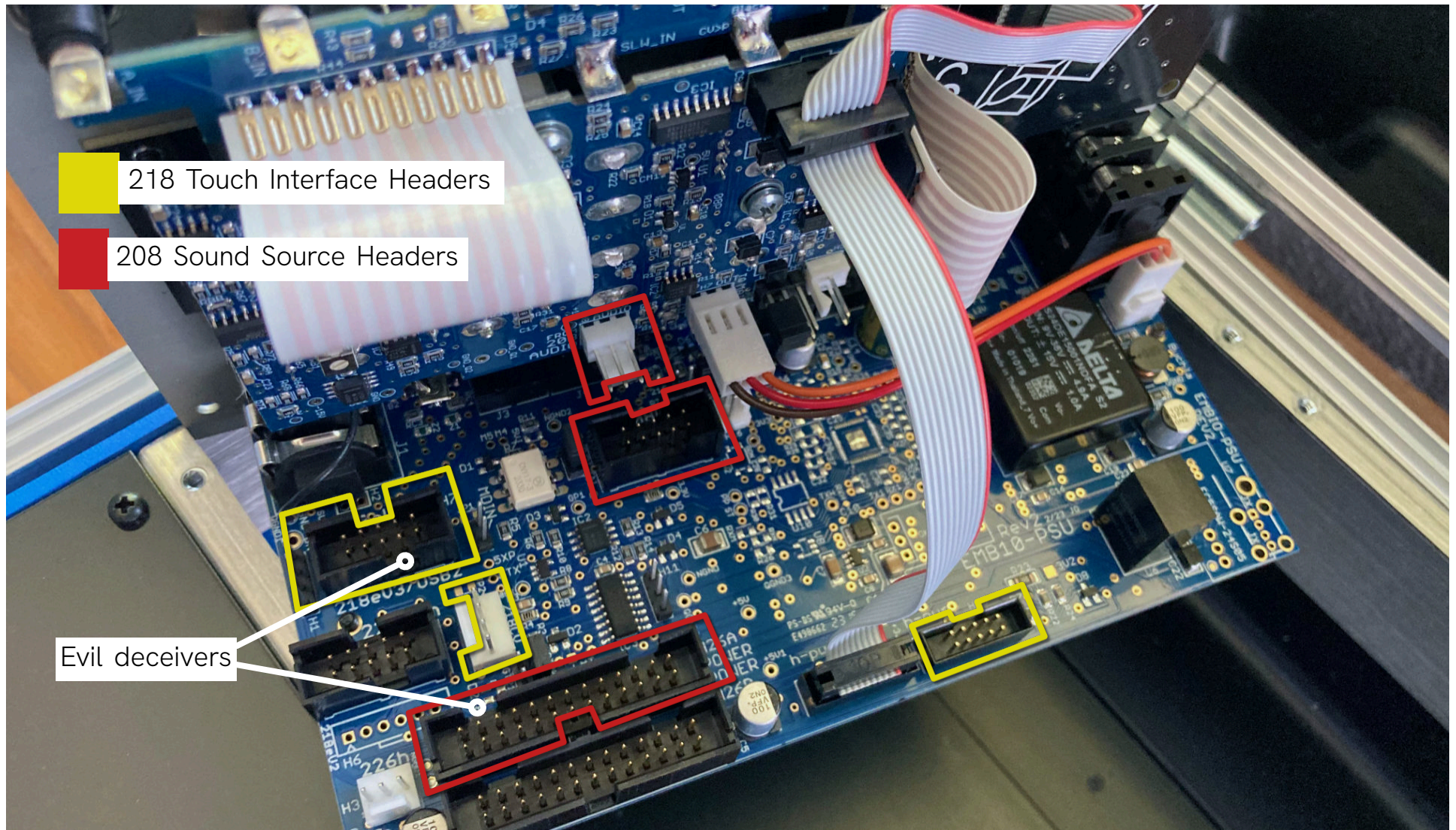
## Your Modern Easel Case, as delivered

The top left module is called the Electric Music Box I/O, or EMBIO. You will be connecting cables from the 208C Sound Source and the 218 Touch Activated Voltage Source to the EMBIO such that all the audio, midi, USB, and power for those modules will be directed through the EMBIO. You will need a Phillips #1 screwdriver to complete assembly.



## Remove and Position EMBIO

The first step is to remove the four (4) black 4-40 screws that hold the EMBIO to the case rails. Position it as shown for easy access to the headers. If you are unfamiliar with the term, "headers" are the places you'll plug cables into the circuit board. You will be un-plugging cables from the LEM 218 and Easel Command boards, and plugging in cables to the EMBIO's headers.



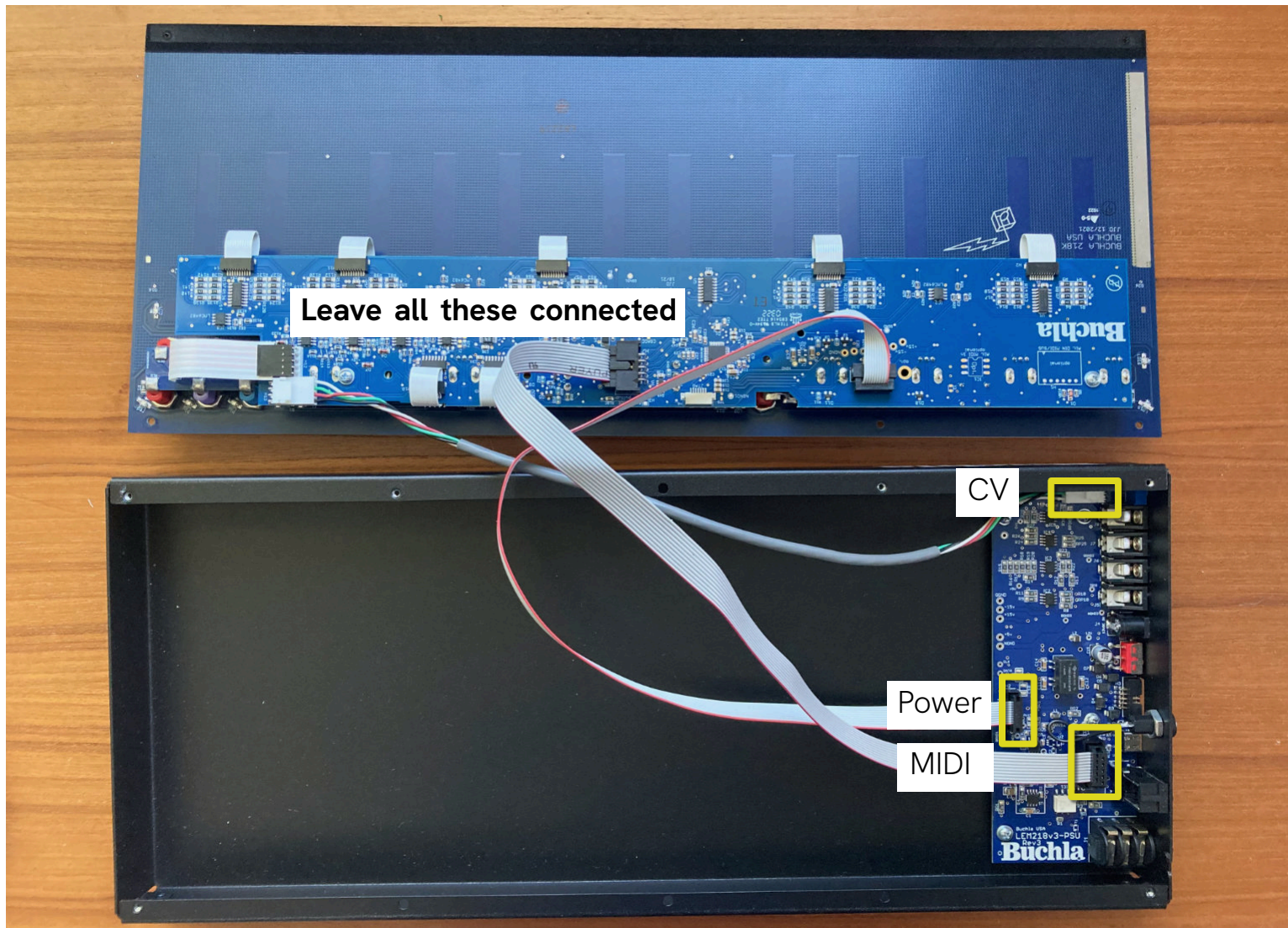
## Connections to the EMBIO

You will need to connect three (3) cables from the 218 to the EMBIO and three (3) cables from the 208 to the EMBIO as shown above. All the headers you will need to access are “keyed” with a notch so they can only be plugged in one way. The keys are indicated by notches in the outlines above. Note that the headers have some other notches in them. Those are known as “evil deceivers” as you can sometimes mistake them for keys! The real keys are symmetrical and placed in the middle. Fortunately, evil deceivers are offset from center and will not allow you to plug in the cable incorrectly, mitigating their evilness.



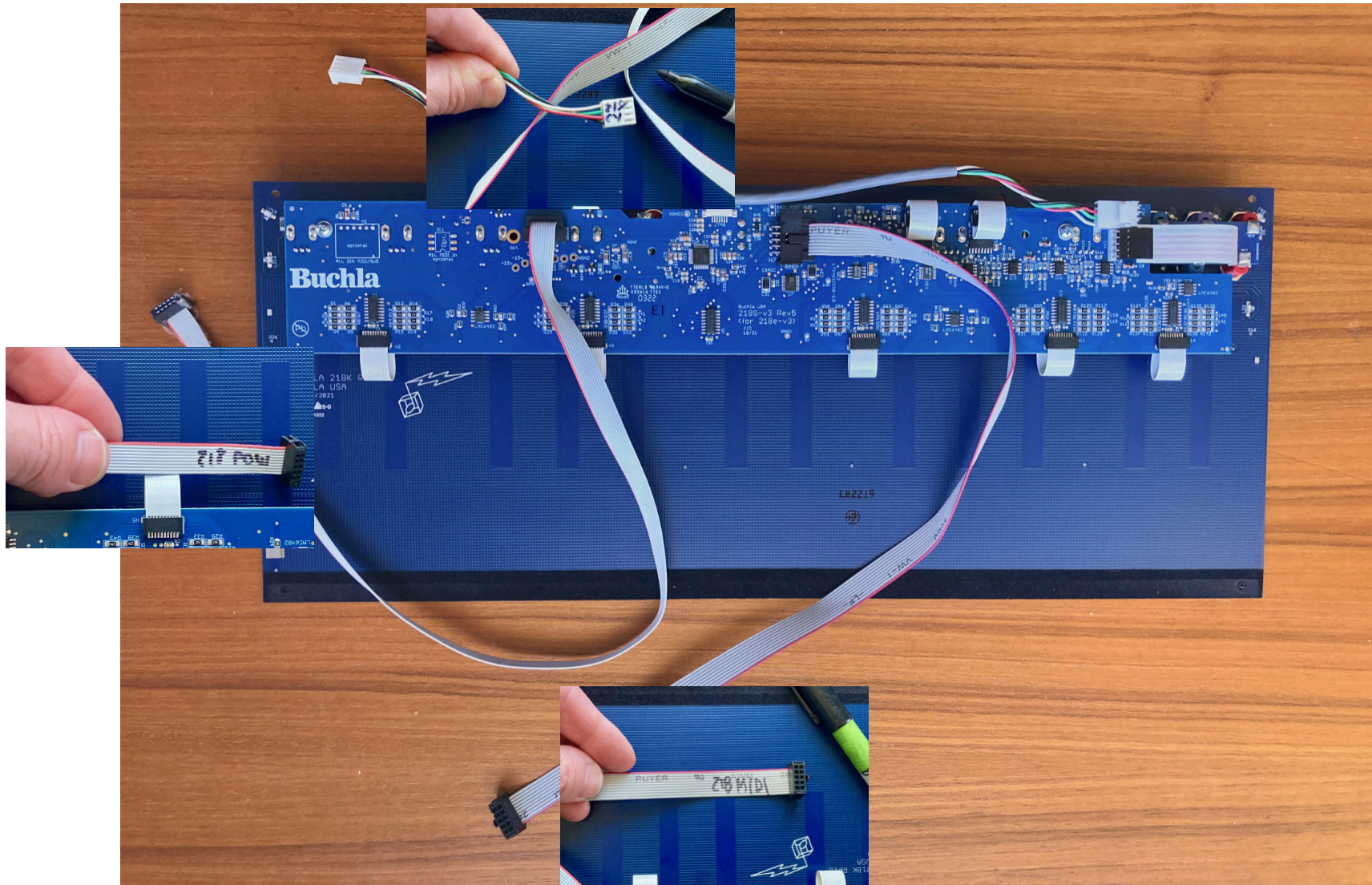
## Remove 218 Module from LEM case

There are six (6) Phillips screws to remove that will free the 218 module from the case. Place the black 4-40 Phillip's head screws and washers in a cup or dish so you don't lose them. You will need them for final assembly! You can tell this manual was created in real-time on a real customer's equipment because one of the knobs is missing a cap, indicating a well-used instrument. Don't worry, the cap was found it and the customer is happy!



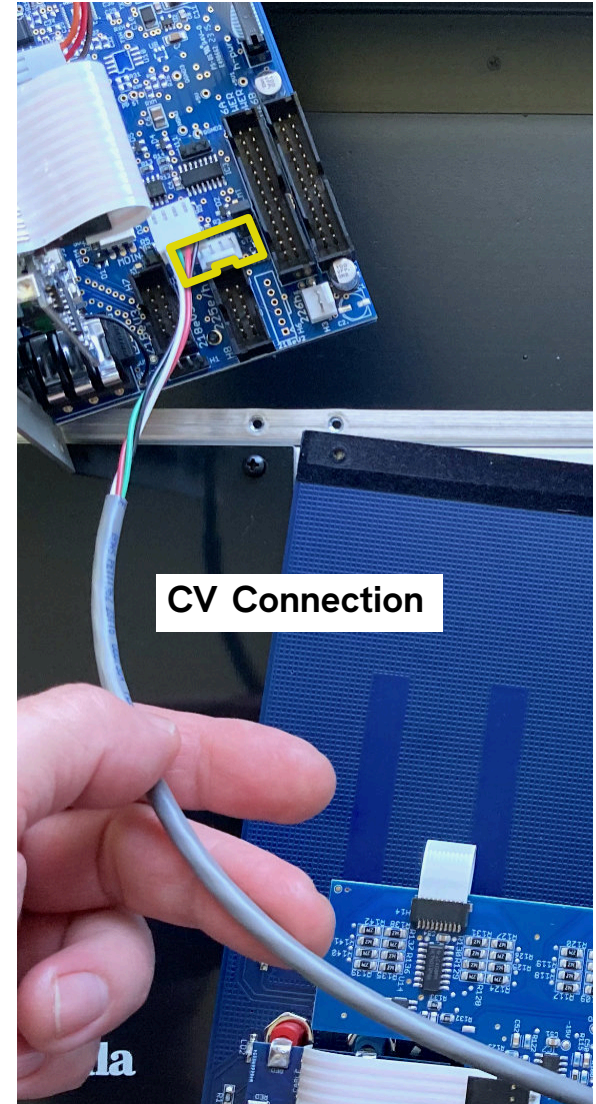
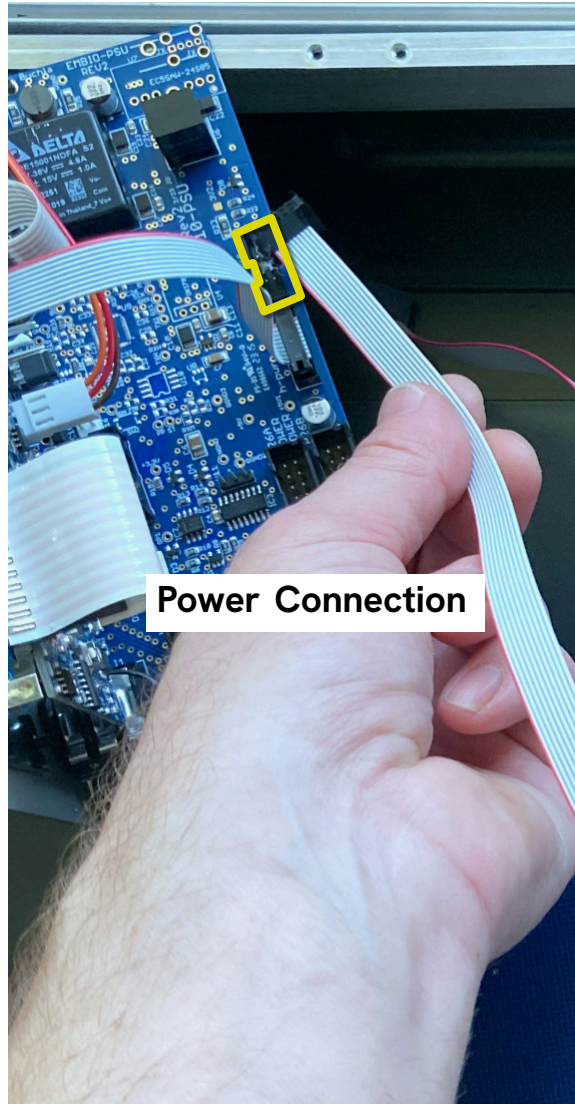
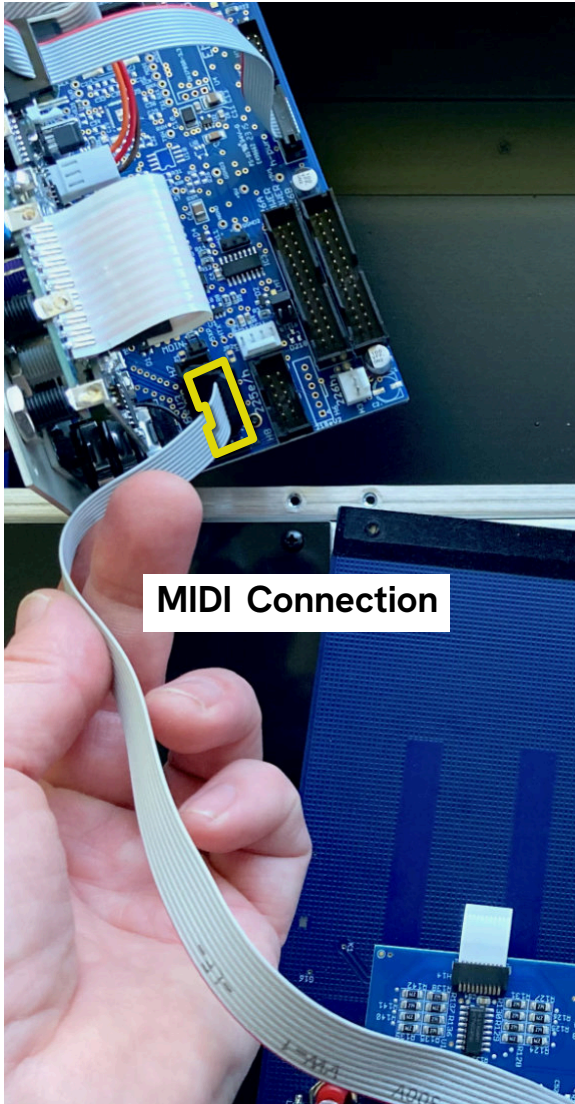
## Disconnect the 218

Disconnect the three cables from the highlighted headers of the LEM218 board. A firm tug is all it takes. Operate near the header, rather than pulling on the cable. Leave the cables connected to the 218 module.



## Label the cables

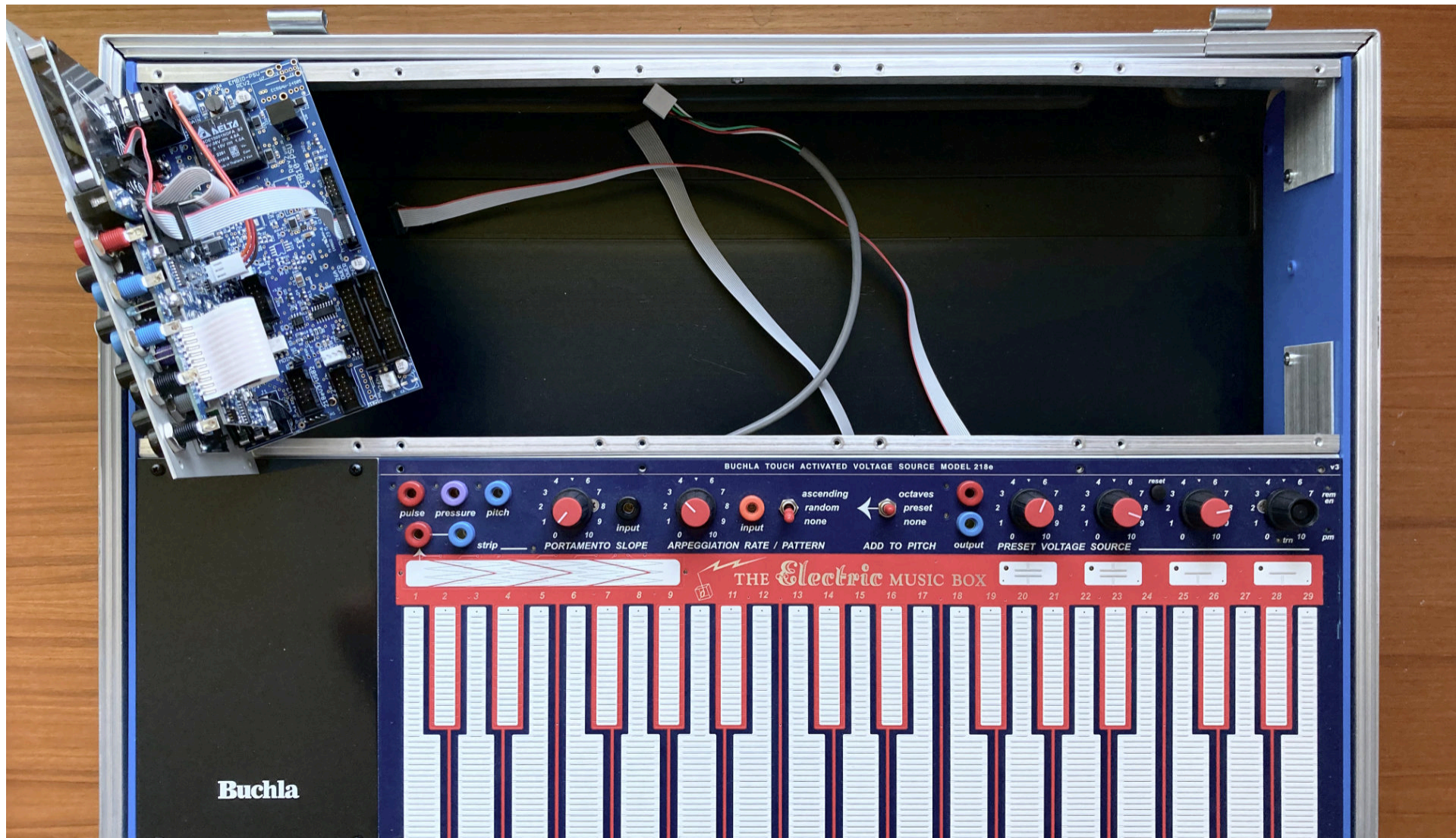
It's not a terrible idea to grab a Sharpie™ and write labels on the cables. While each cable header shape is unique in this case, it just makes it easier to distinguish from the 208 cables and reduce errors.



## EMBI0<>218 connections

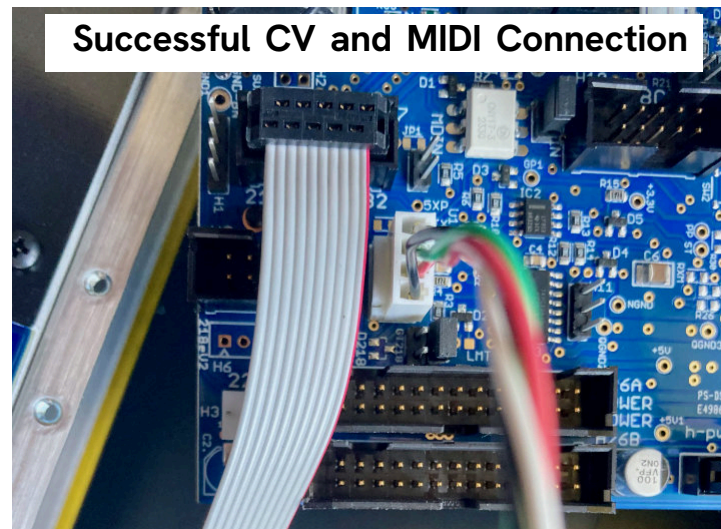
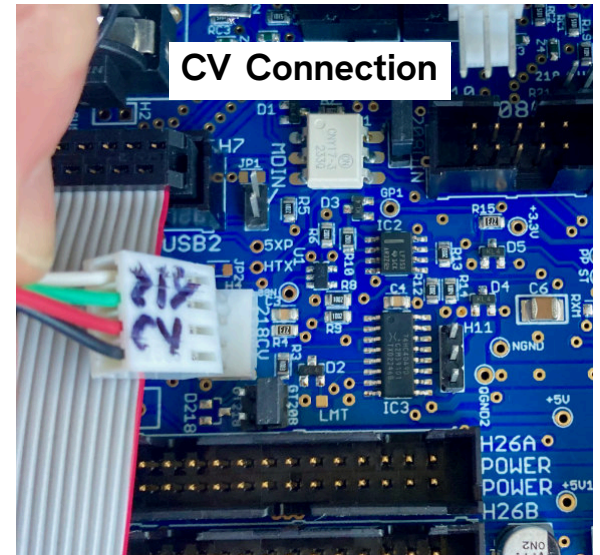
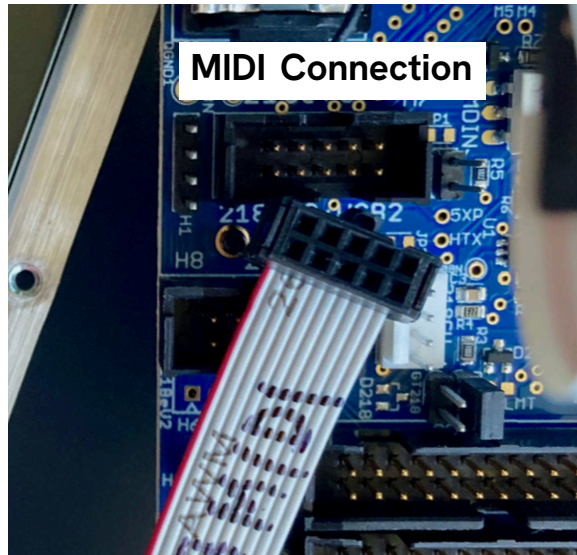
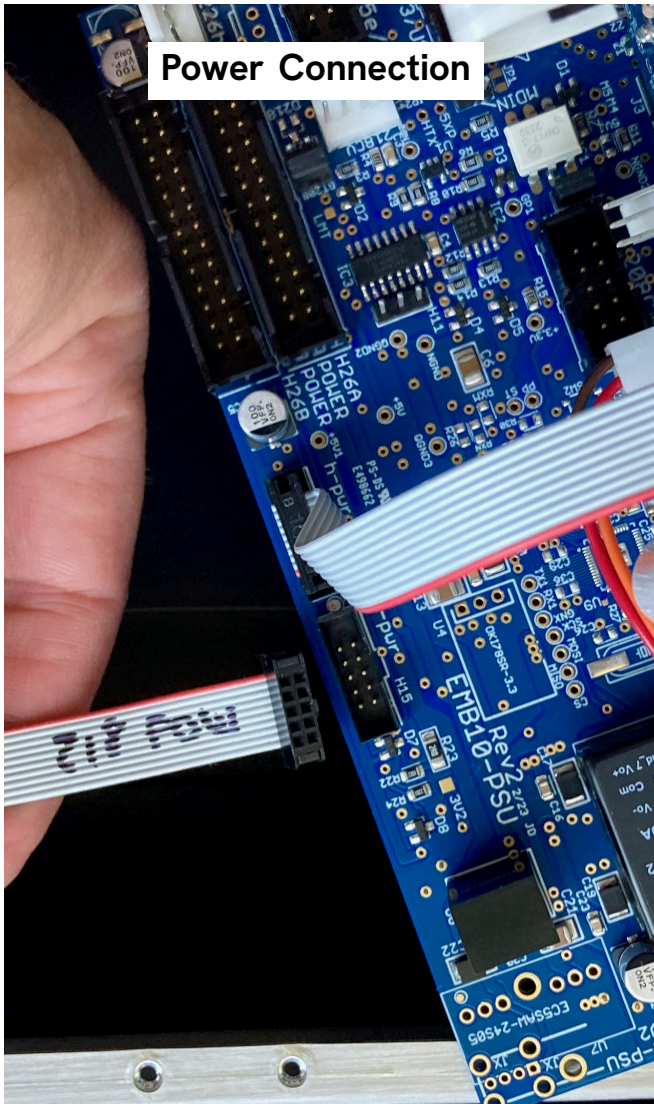
These illustrations show where all the connections for the 218 are made on the EMBIO. Fortunately, you labeled the cables in the previous step so it will be easy to hook up!





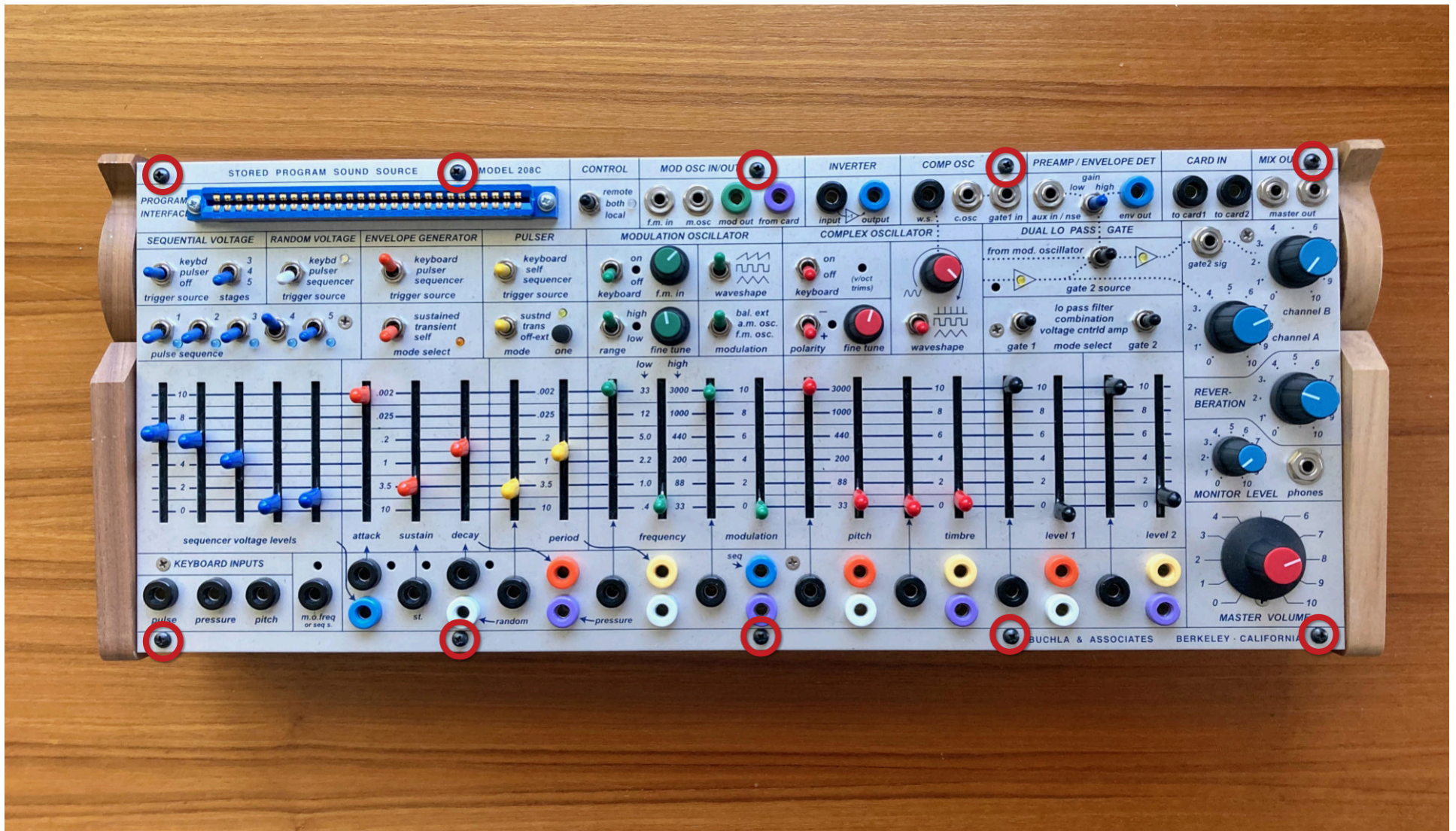
## Prepare to connect

Place the 218 in the case as shown. Pull the cables underneath the rail where you can easily grab them and connect to the EMBIO's headers. Don't fasten the 218 to the case with screws just yet!



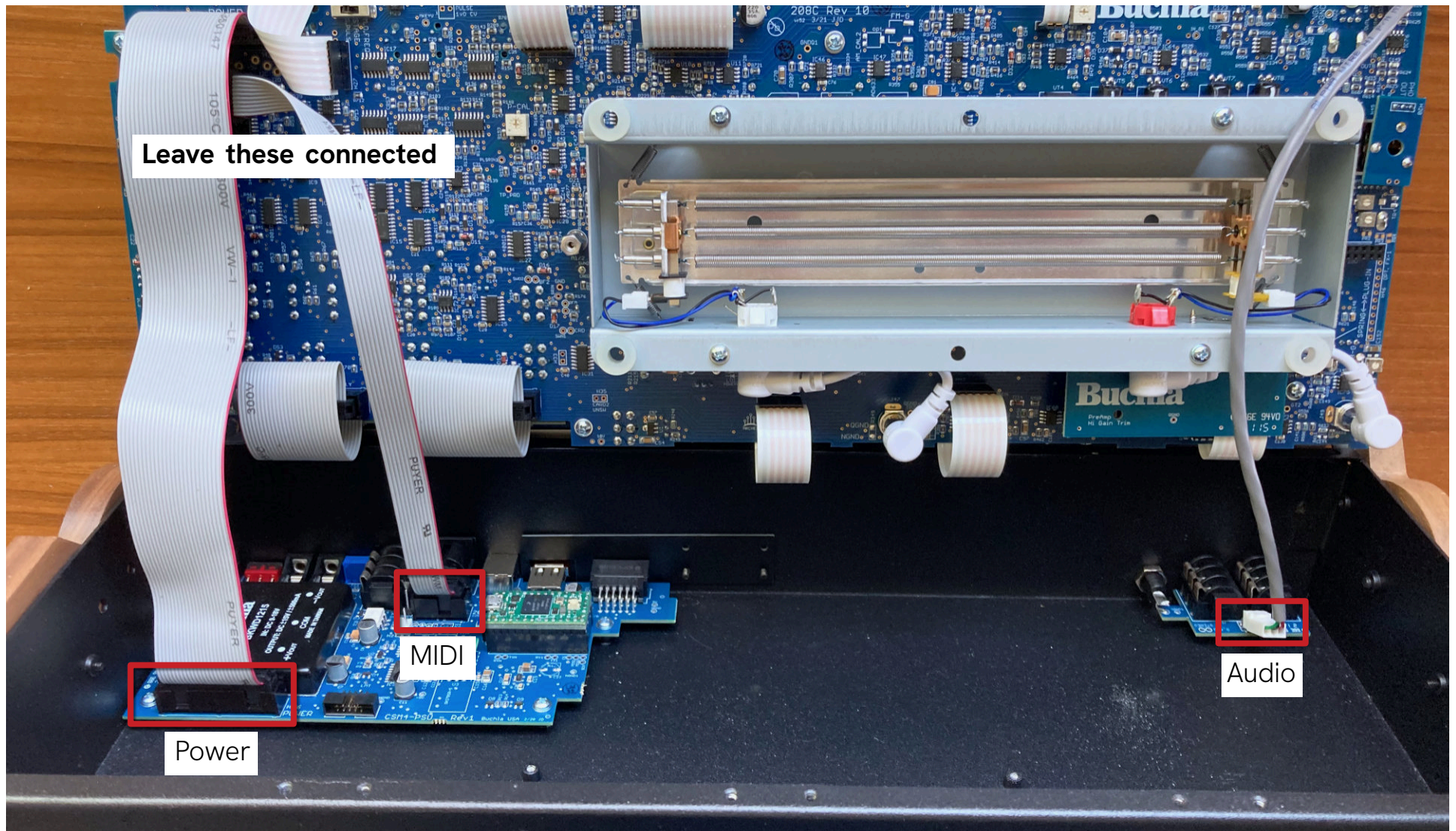
## Connect the 218 to the EMBIO

Above are the detailed views of where to connect the 218 cables to the EMBIO.



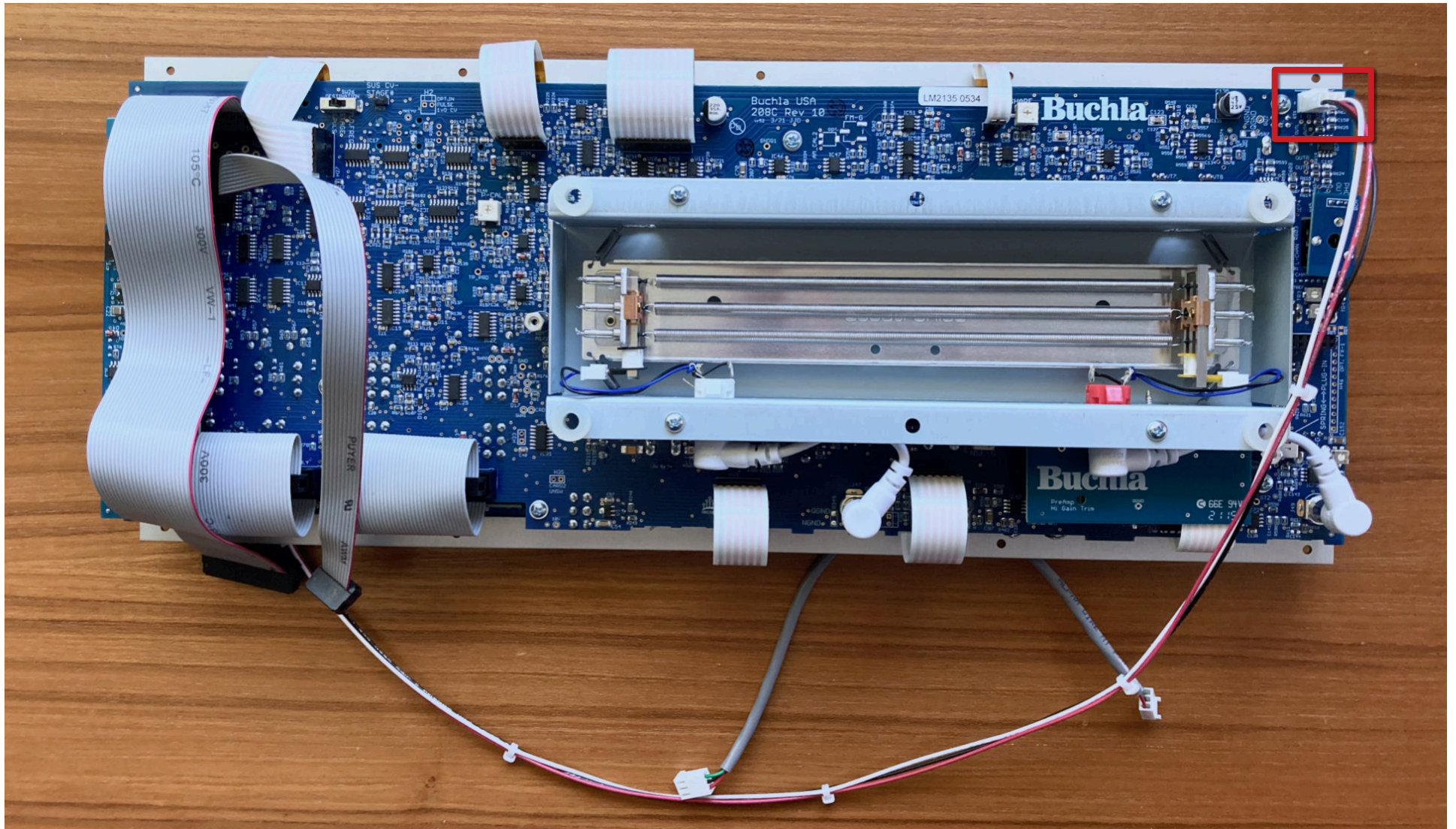
## Remove 208c module from Easel Command case

There are ten (10) Phillips screws to remove that will free the 208c module from the case. Place the black 4-40 Phillip's head screws and washers in a cup or dish so you don't lose them. You will need them for final assembly!



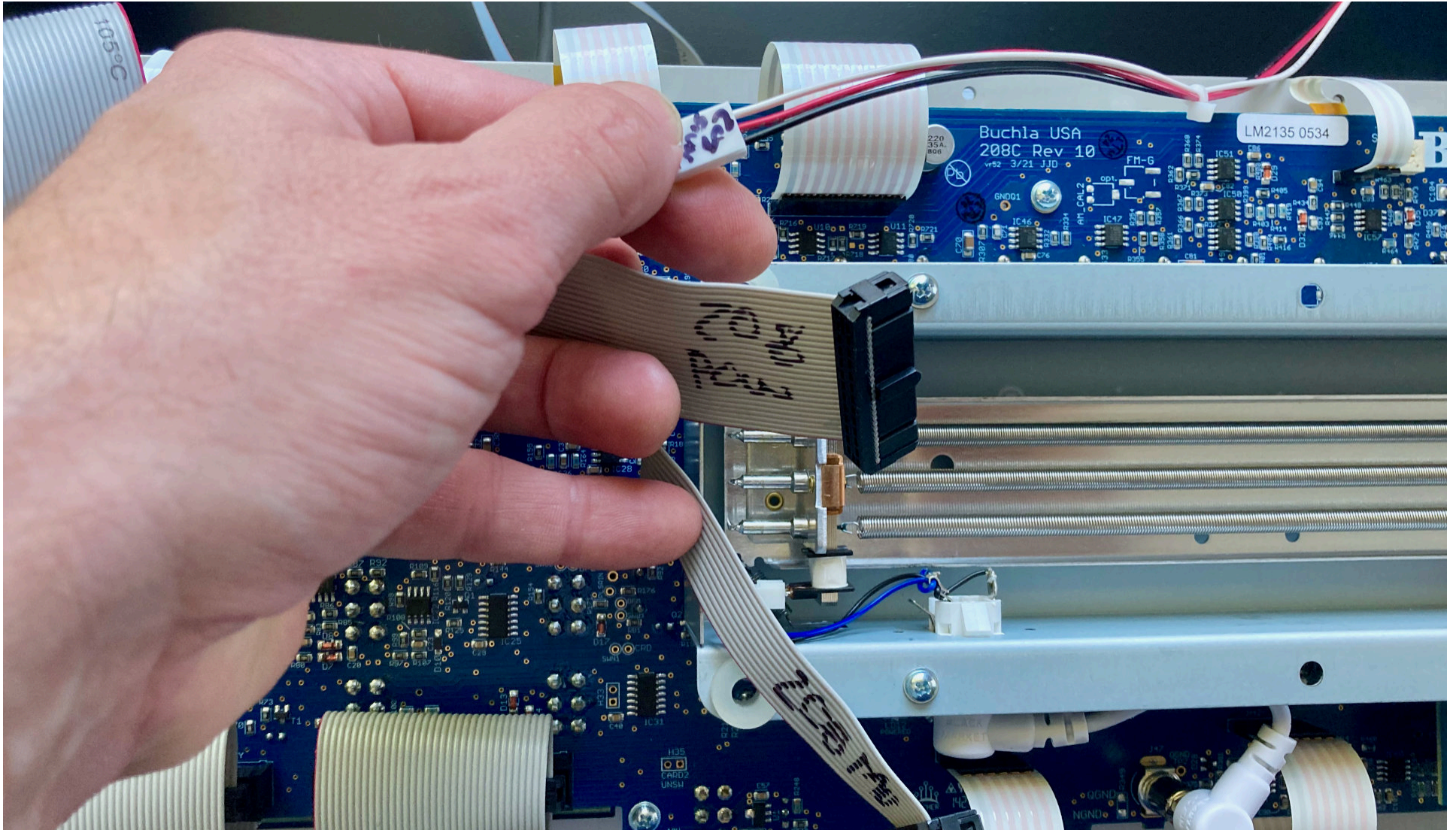
## Disconnect the 208

Disconnect the three (3) highlighted cables from the Easel Command's case to free the 208c module.



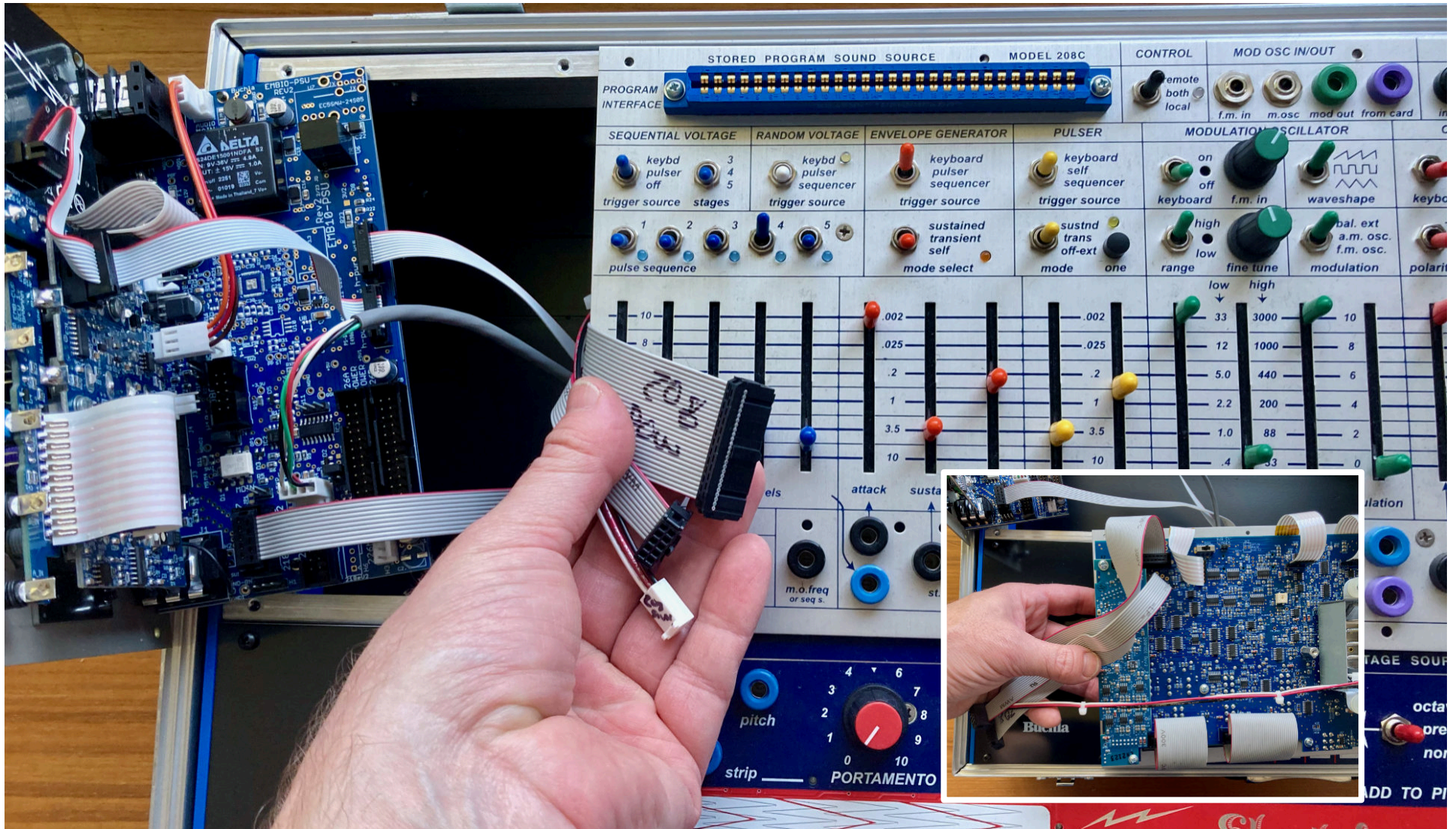
## Replace audio cable

Disconnect the short audio cable from the 208c and replace it with the supplied audio cable. This cable is longer so it can reach the EMBIO's connection.



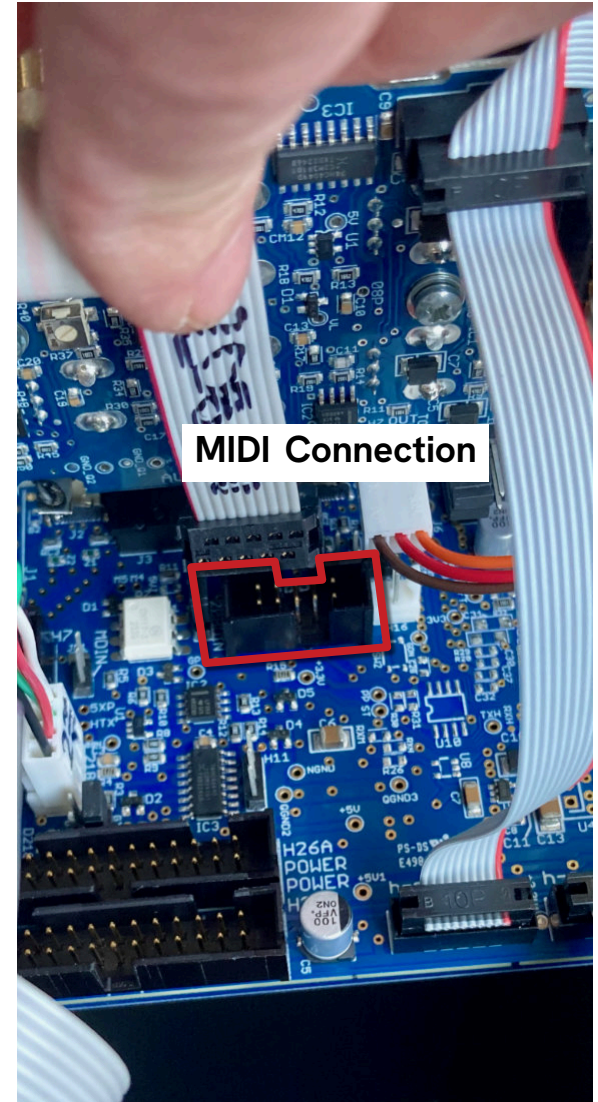
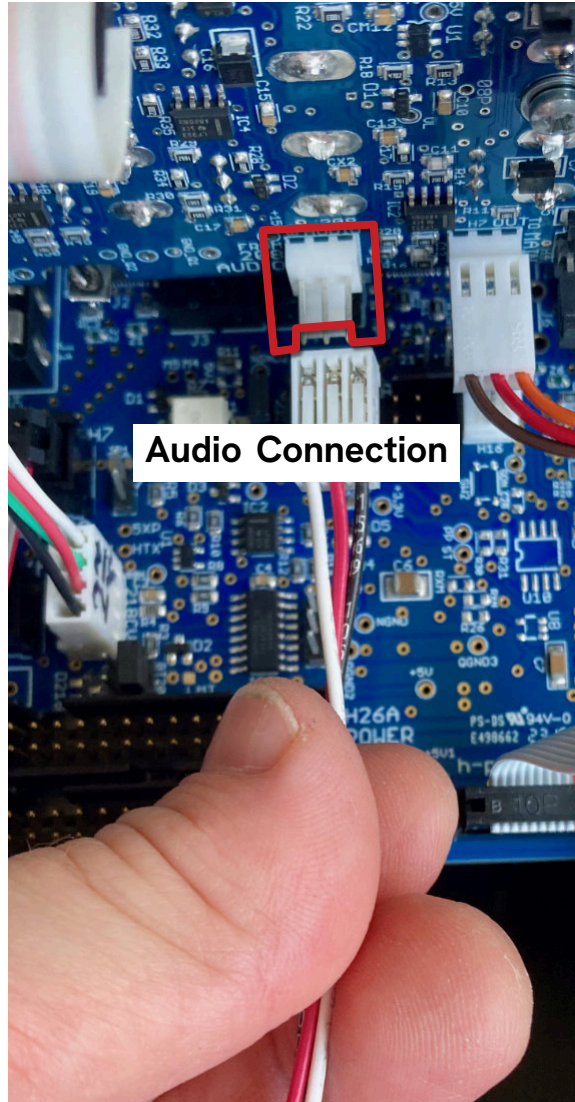
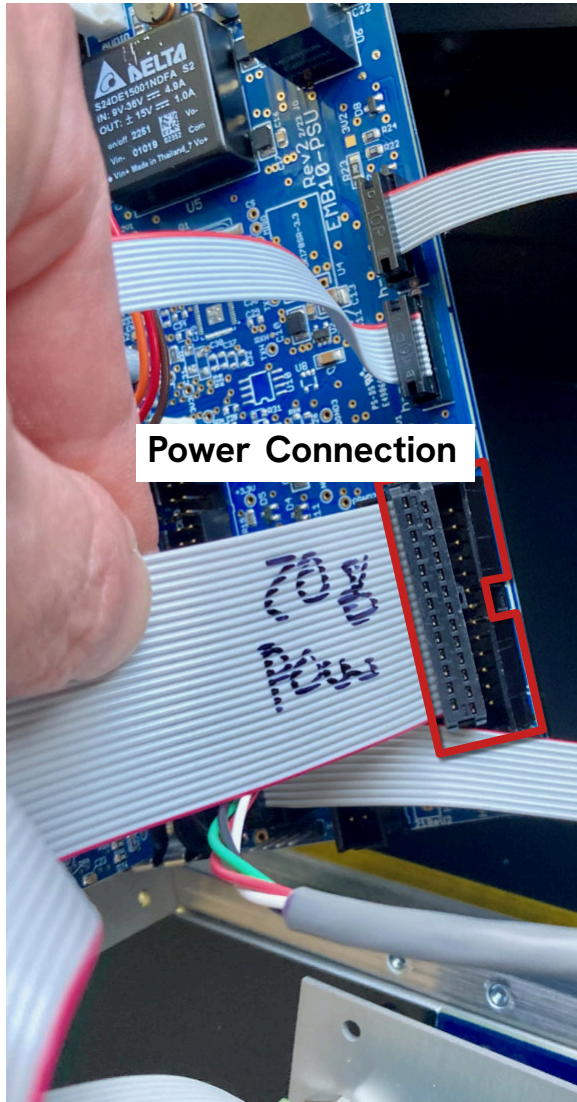
## Label the cables

As with the 218, it's a good idea to write some labels on the cables so you can connect them to the EMBIO with confidence.



## Prepare to connect

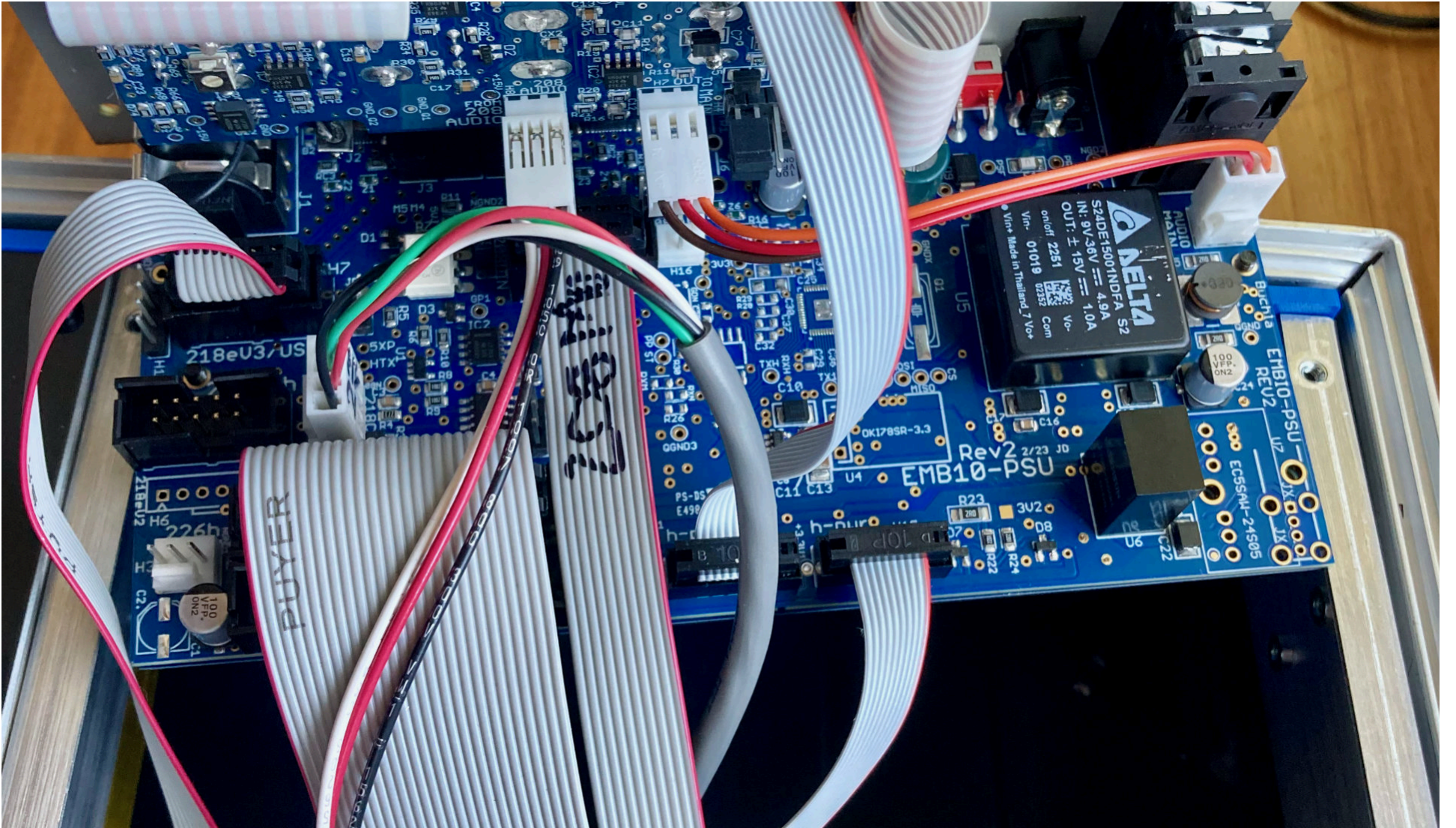
Gather the three cables in one hand and place the 208 module in the case. Refer to the inset for the gather, before placing the module in the case. When placing the 208 in the case, it can be helpful to tilt the top edge in first, then make sure no cables get pinched on the bottom edge. Refer to [this video](#) for an example. It is possible to make the connections before putting the 208 in the case, however, it is a bit more stable when the module is in the case. Do not fasten the screws for the 208 faceplate yet!

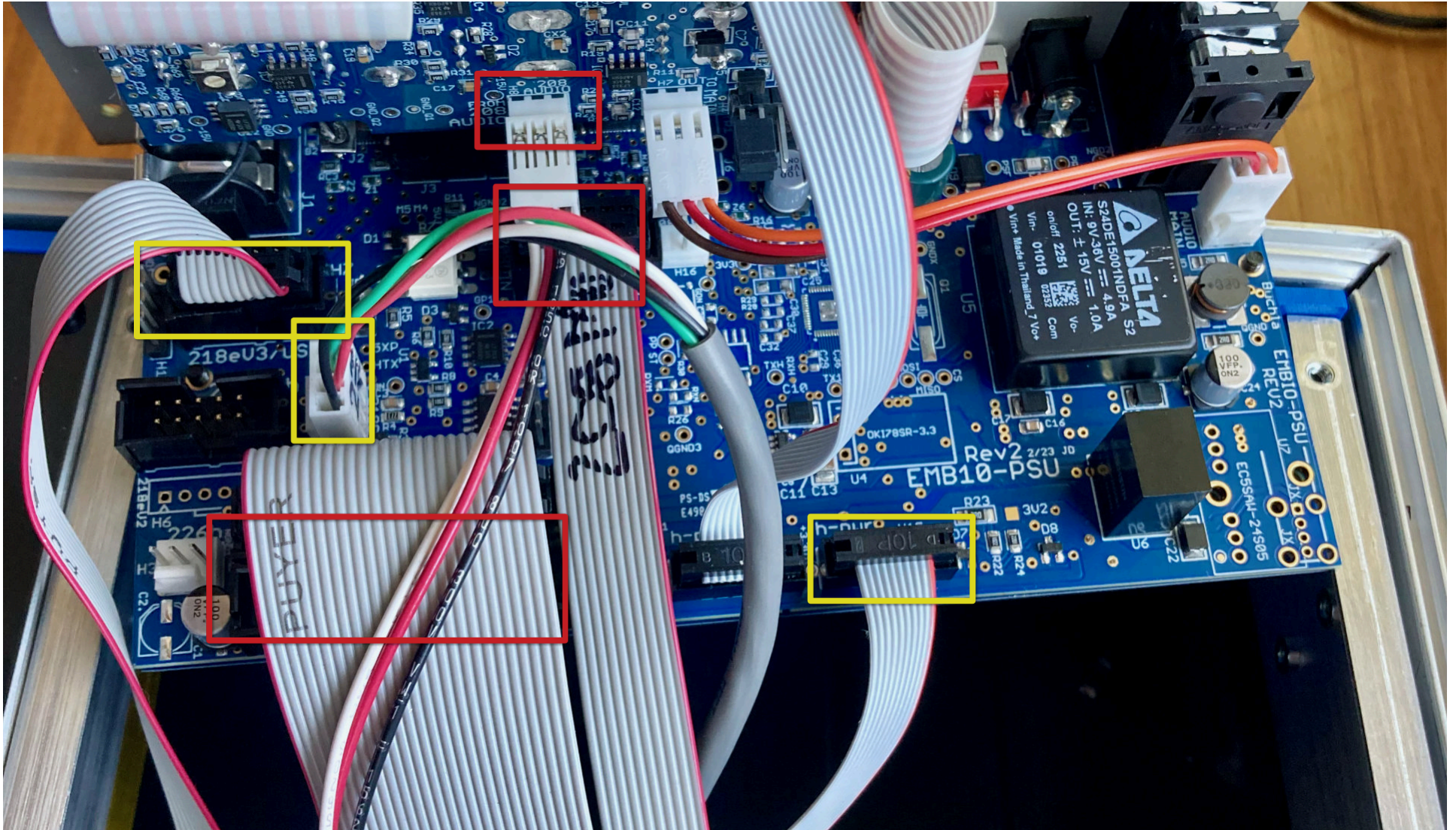


## Connect to the EMBIO

These illustrations show where all the connections for the 208 are made on the EMBIO. Note that the audio connection is made on the circuit board perpendicular to the board where all other connections are made.

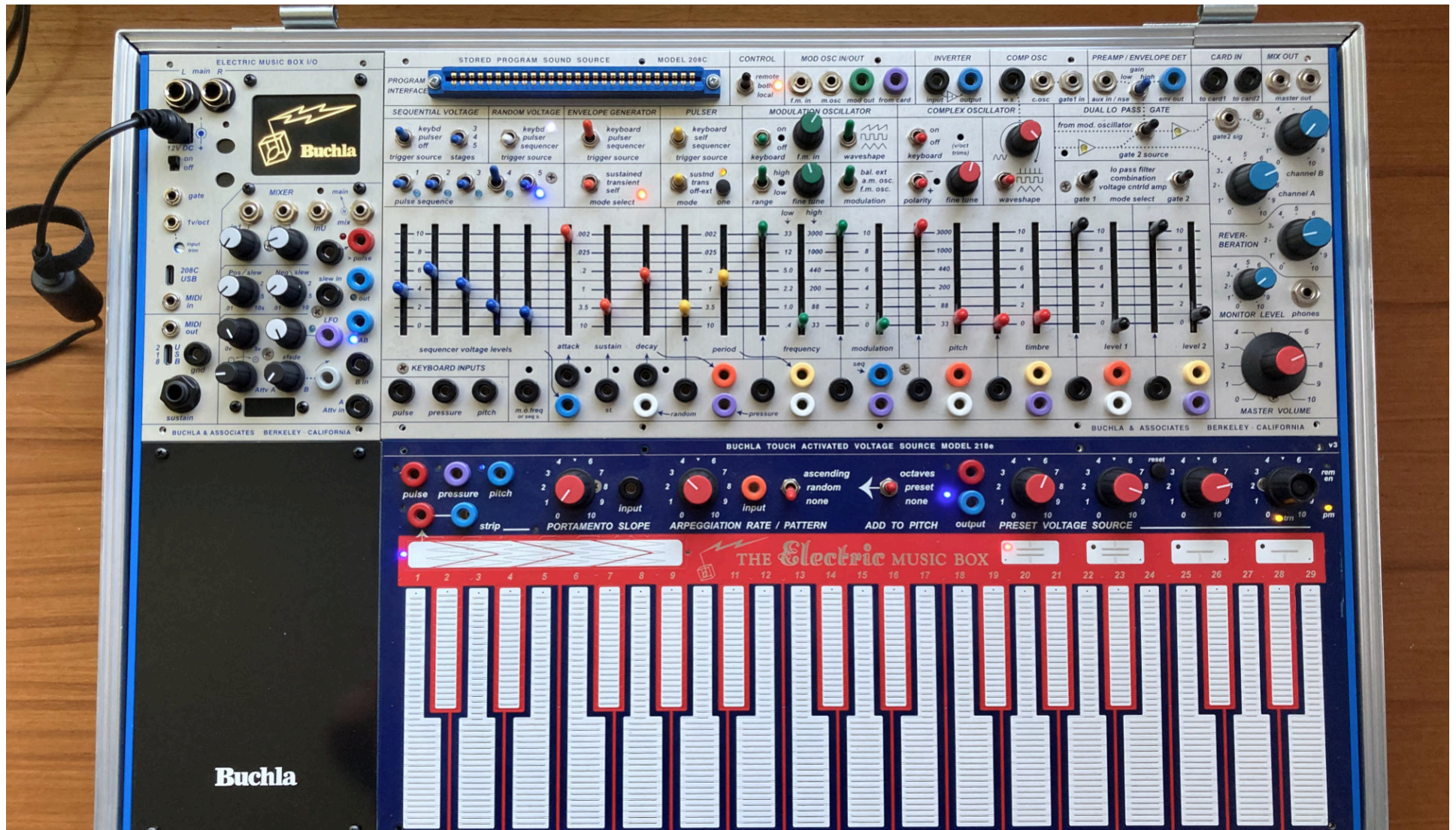






## Everything is connected

Your connections from the 218 and 208 to the EMBIO should now all be secure and functional. Let's check!



## Plug in, turn on, and test

Before you fasten the faceplates using the screws you saved from disassembly, connect your power supply and turn on the EMBIO. You should see LEDs illuminate on the 218 and 208. Turn off the EMBIO, and connect the 208c to your computer. Turn power on the EMBIO and confirm the 208 shows up as a USB MIDI device. Repeat for the 218. If it does not show up, you may need to double check the MIDI ribbon cable connections.



## Patch and play

Create a simple patch, as above. Tap some keys on the 218 and make sure you get the expected sounds. While this test shows headphones casually and stylishly laid on the 218, it is an even better test to use the EMBIO L/R jacks to confirm that the audio connection between the 208 and EMBIO is secure.



## Finish

If all tests out ok, then replace the twenty (20 black screws to fasten the modules to the case.

Play and enjoy!