Synthola 16X3 V1.2 – Assembly Guide

The Synthola 16X3 comprises the following modules:

1 X Synthola 16X3 panel;

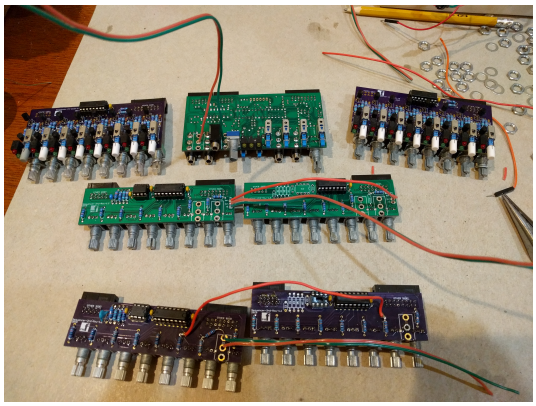
1 X Synthola CV-Trans Module;

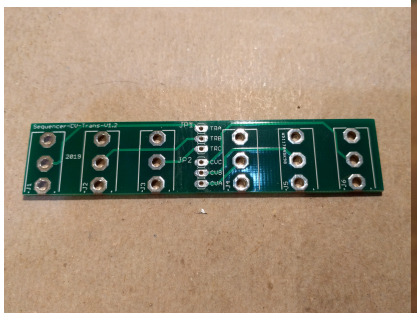
1 X Synthola Main Module;

2 X Synthola CV Board;

4 X Sytnthola 2nd Row;

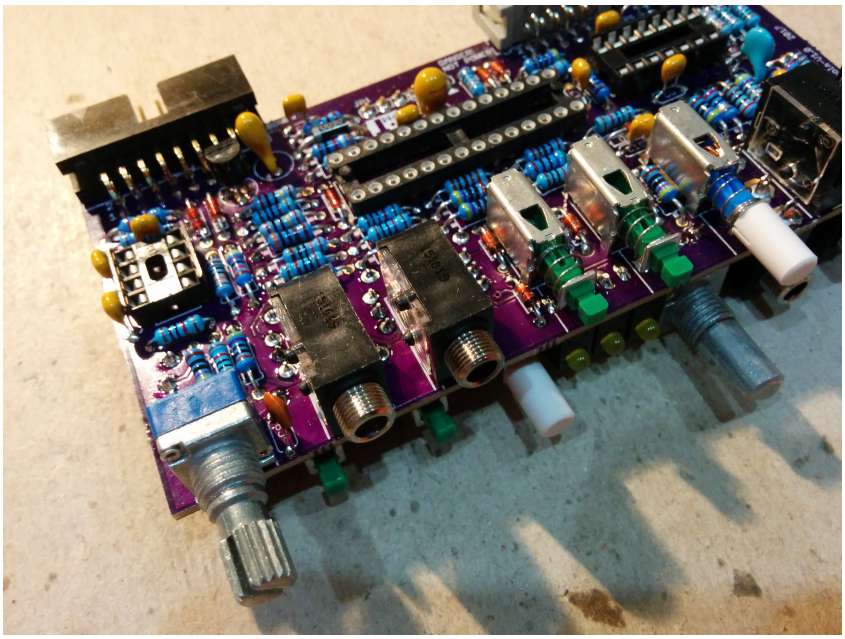
This guide is for building the Synthola 16X3 with 54hp panel. You will need to obtain and understand the Assembly Guides for all the modules above that are needed to complete the Synthola 16X3.





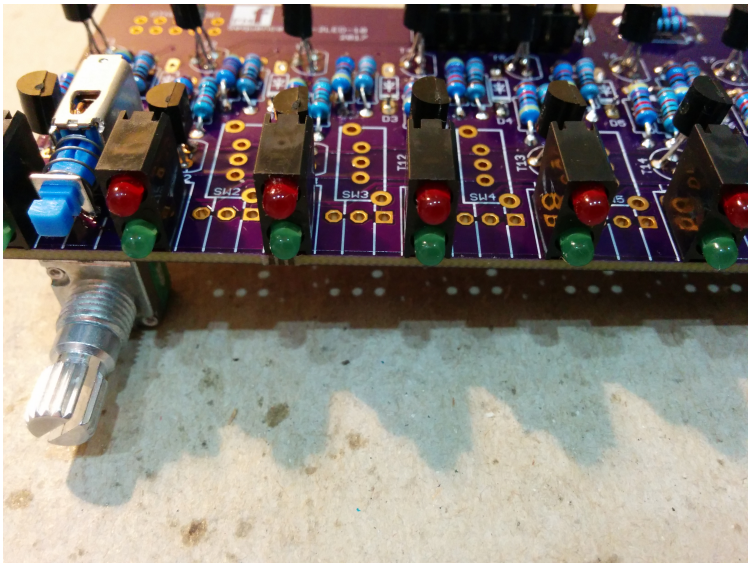
1. Main board

   Build the Synthola Main Board leaving off the CV and Transpose jacks J4 and J7.



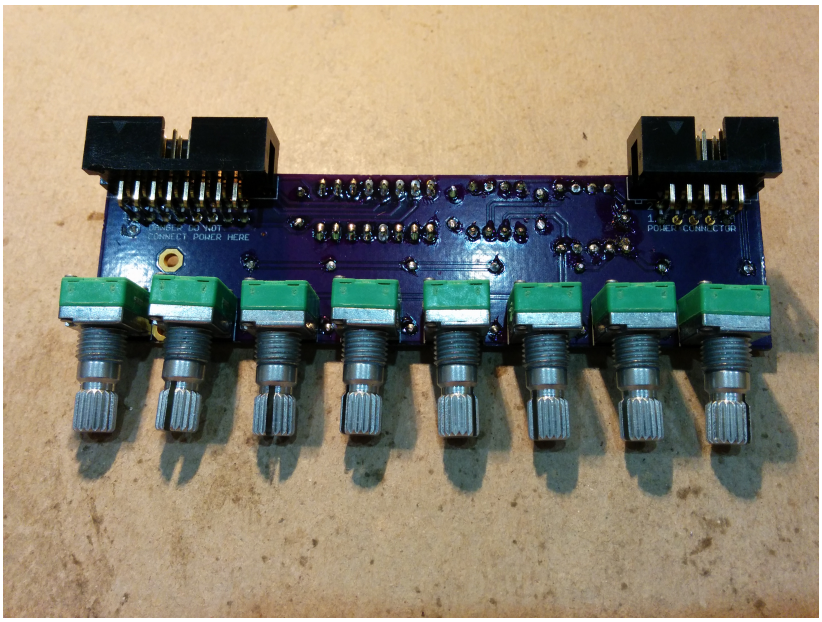
2. CV Boards

   Build 2 Synthola CV boards. These will be referred to as CVA1 and CVA2.



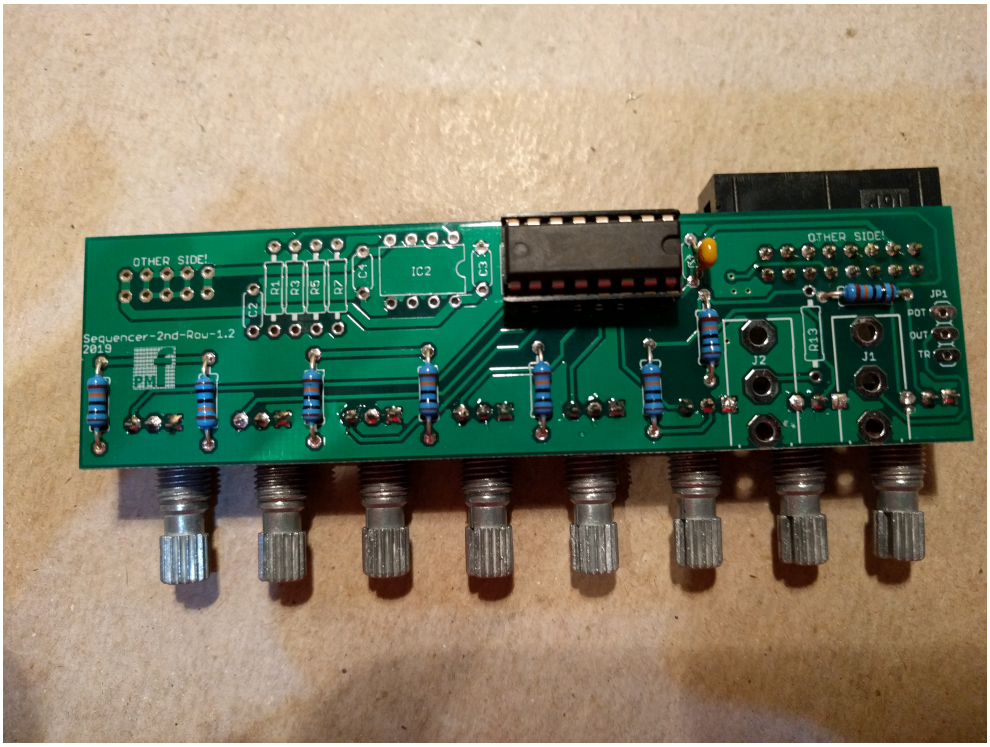
3. 2nd and 3rd Rows

Build 2 Synthola 2nd Row boards. These will be referred to as R2B1 and R2C1.



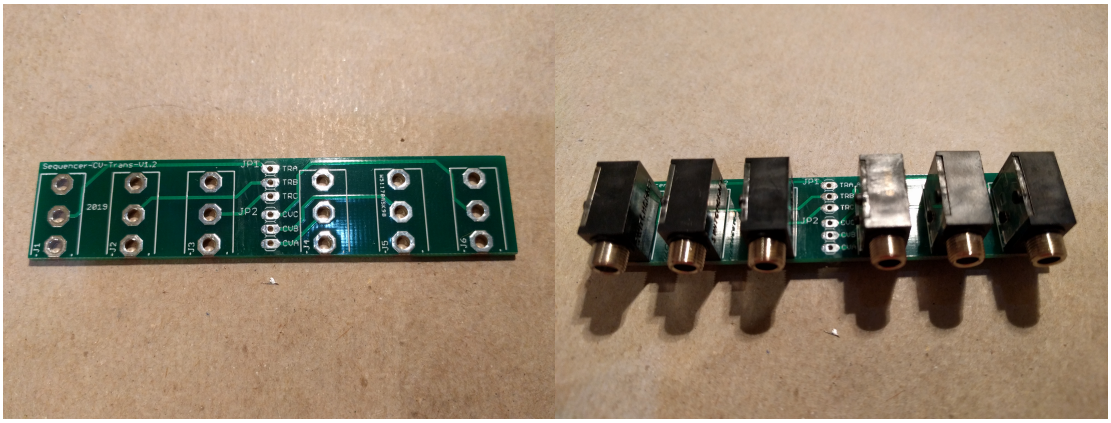
Build 2 Synthola 2nd Row boards **without the opamp and associated parts**. These will be referred to as R2B2 and R2C2.

These are the parts to omit: SV2, IC2 and socket, R1, R3, R5, R7, R13, C2, C3, J1, J2.



4. CV-Trans Board

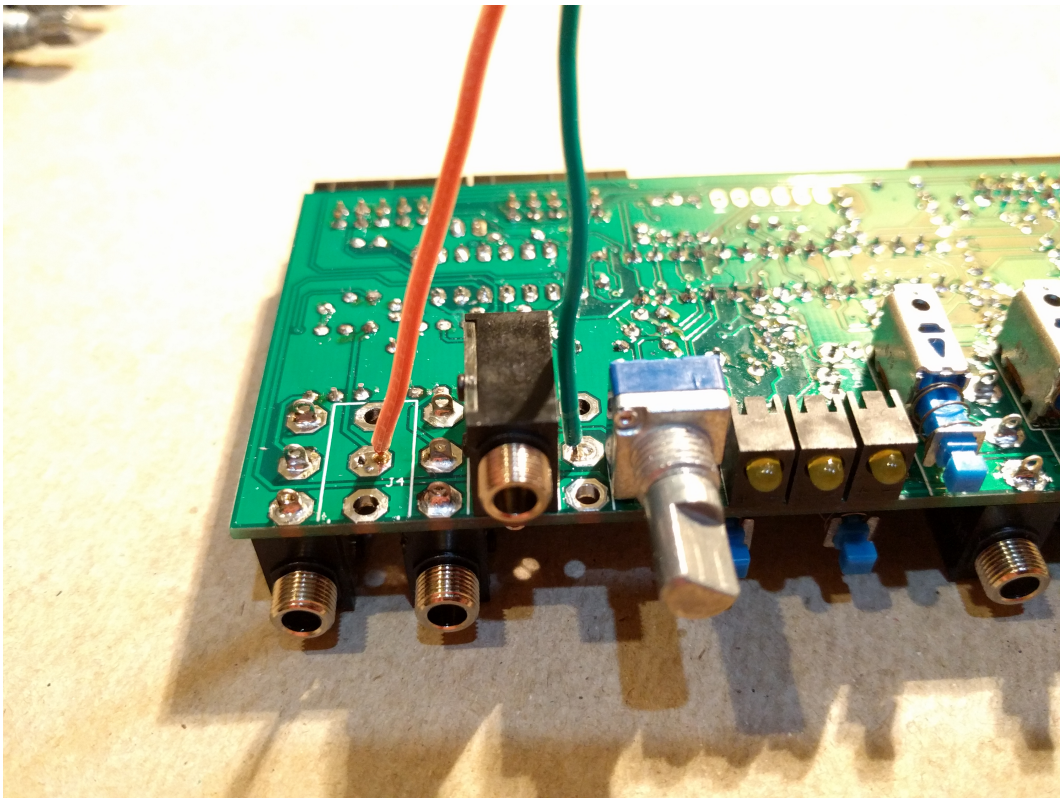
   Build the CV-Trans board. The jacks are installed on the TOP of the board.



5. Prepare the Main board

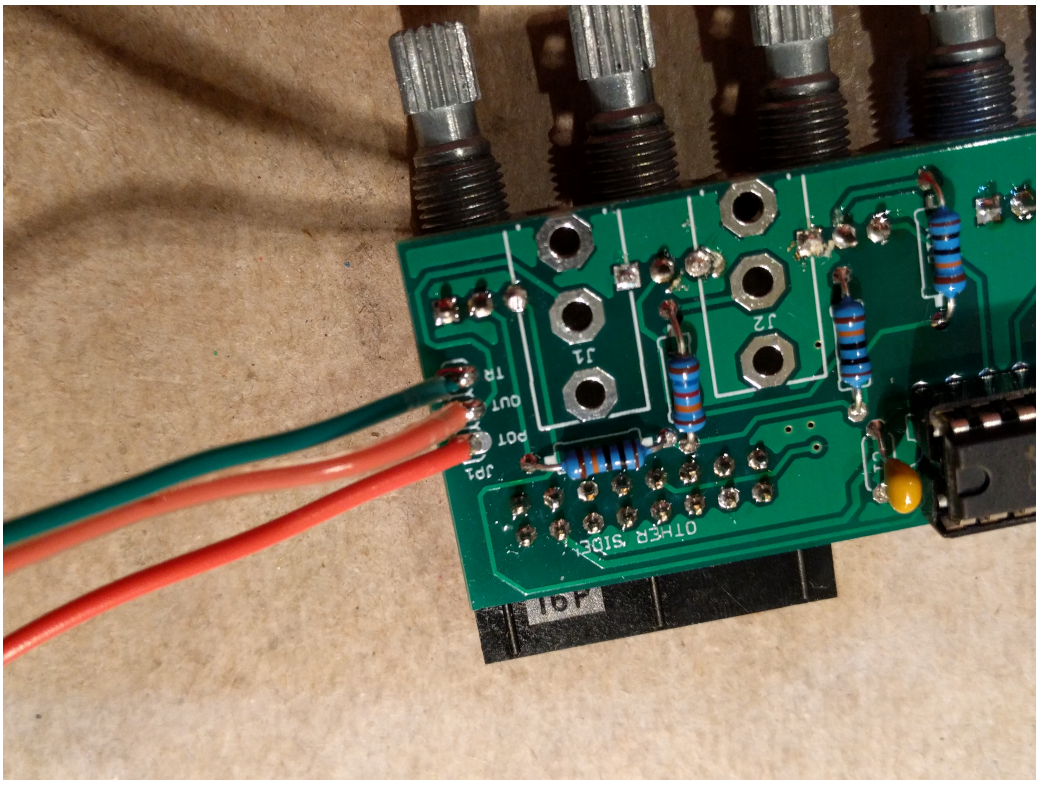
   Install a 6" long wire from the center pad of the CV Out jack footprint and the Transpose In footrpint. These are J4 and J7. Install the wires from the bottom and solder on the top.

   Install one 6" long wire from the ground pad (nearest the board edge) of the CV Out jack footprint.



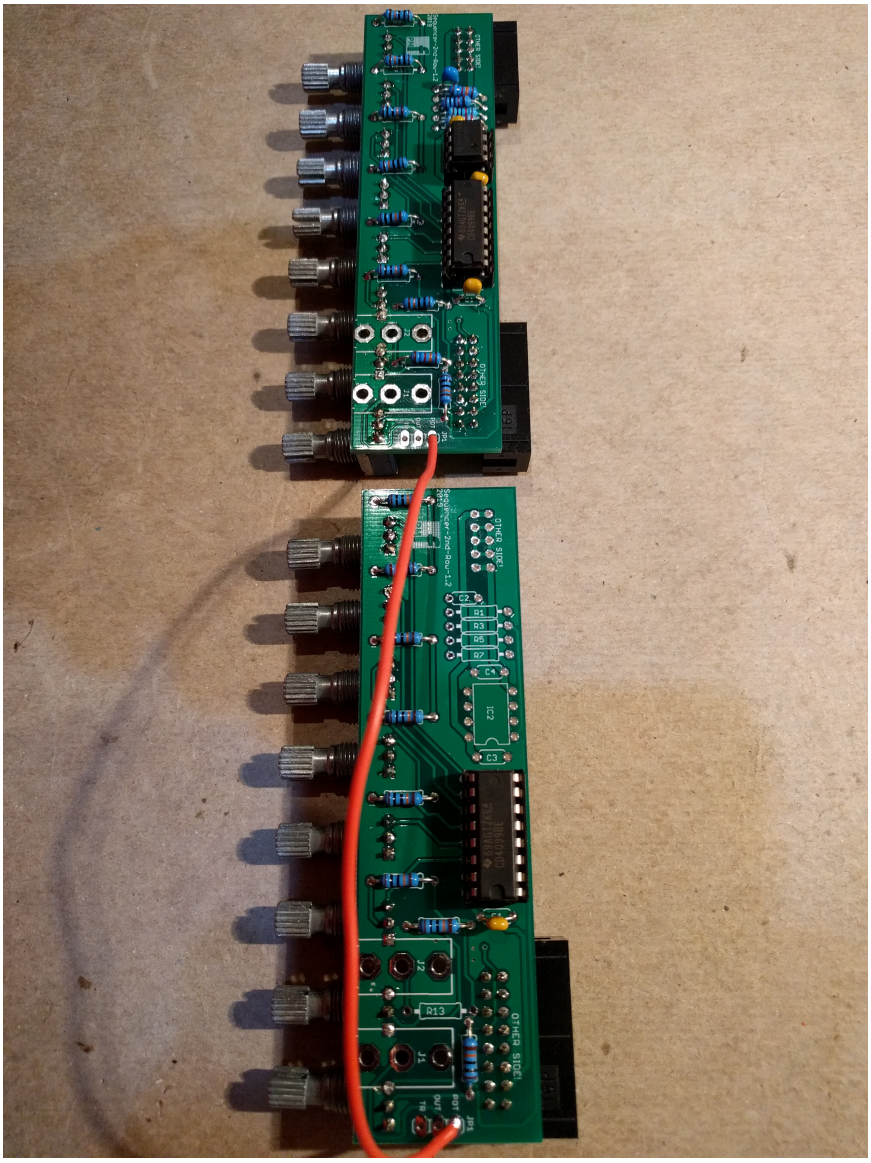
6. Prepare the 2nd row boards

   Install 3 8" long wires on the connector pads at the edge of each 2nd Row board that is fully populated. These are boards R2B1 and R2C1.



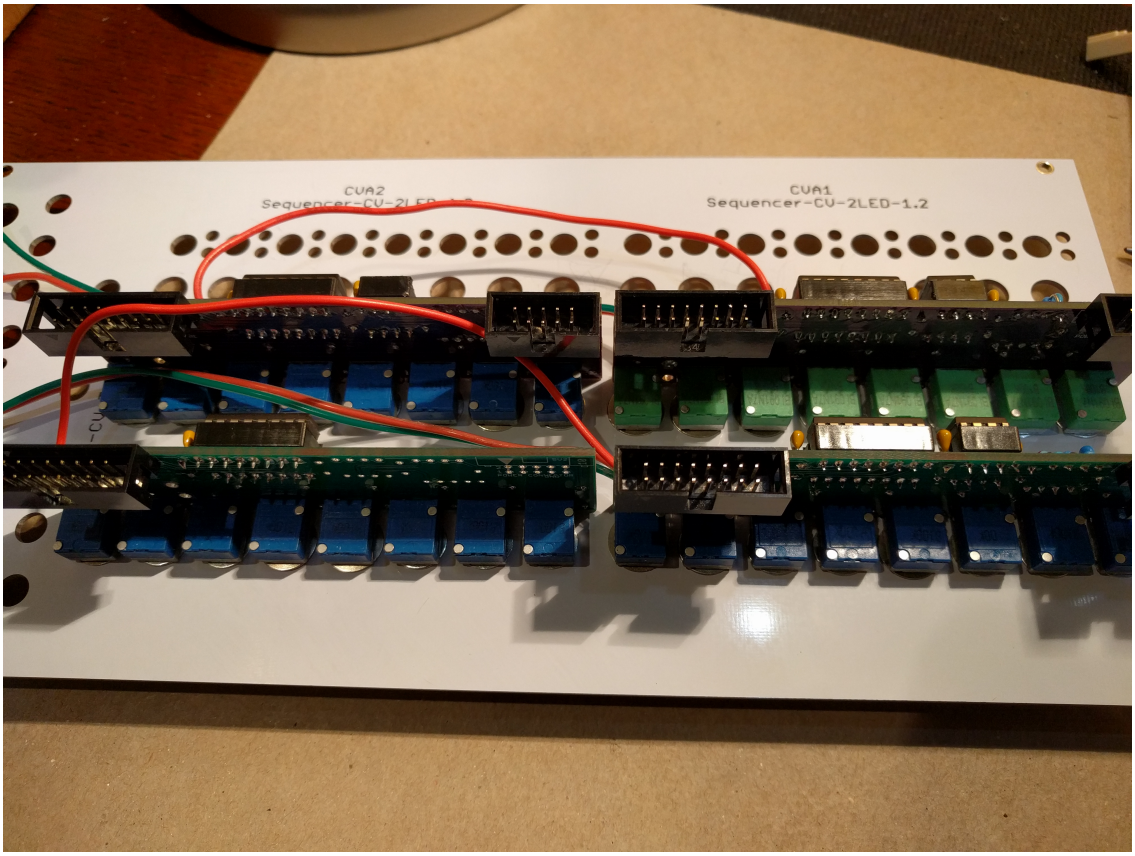
7. Connect pairs of 2nd Row boards

   Use the flying wire from the POT pad on the 2nd Row board to connect to the POT pad one of the part populated 2nd Row boards R2B1-R2B2. Repeat for the other pair of 2nd Row boards R2C1-R2C2.



8. Install the CV boards and the 2nd Row boards

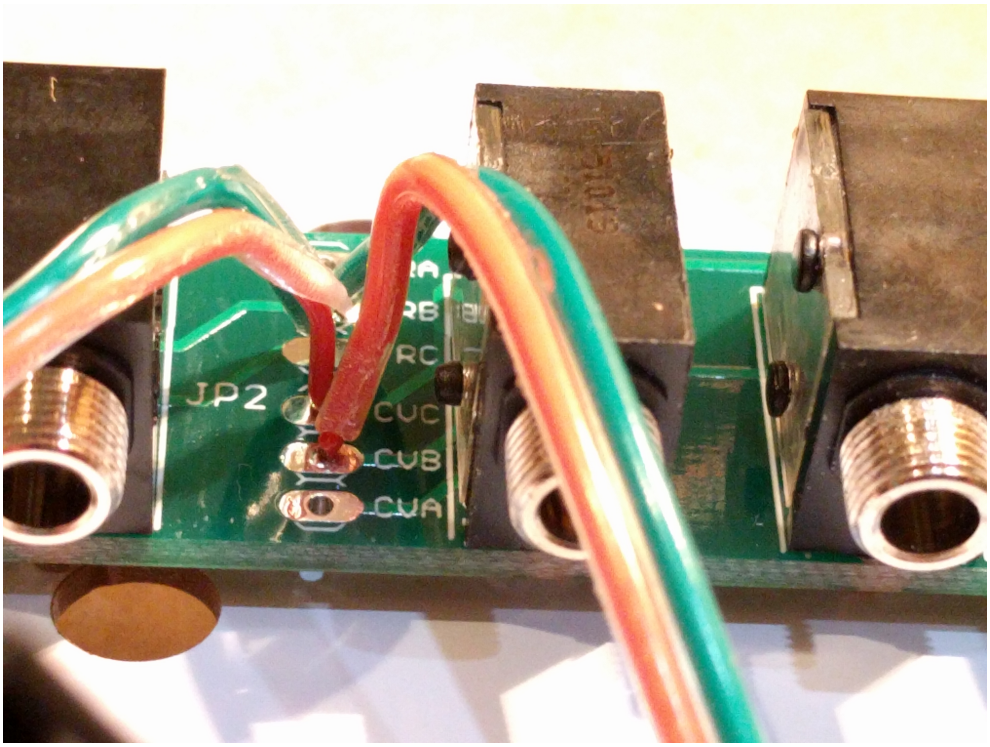
   Put washers on the pot shafts of boards CVA1, CVA2, R2B1, R2B2, R2C1 and R2C2. Install these boards into the panel. The location of each board is marked on the back of the panel. Secure with nuts on all the pots.



9. Connect the CV-TRANS module

   Solder the remaining wires from R2B1 and R2C1 to the CVB, TRB, CVC and TRC pads on the CV-TRANS module.

   The wires from the middle row R2B1 go to the CVB and TRB pads. The wires from the bottom row R2C1 go to the CVC and TRC pads.

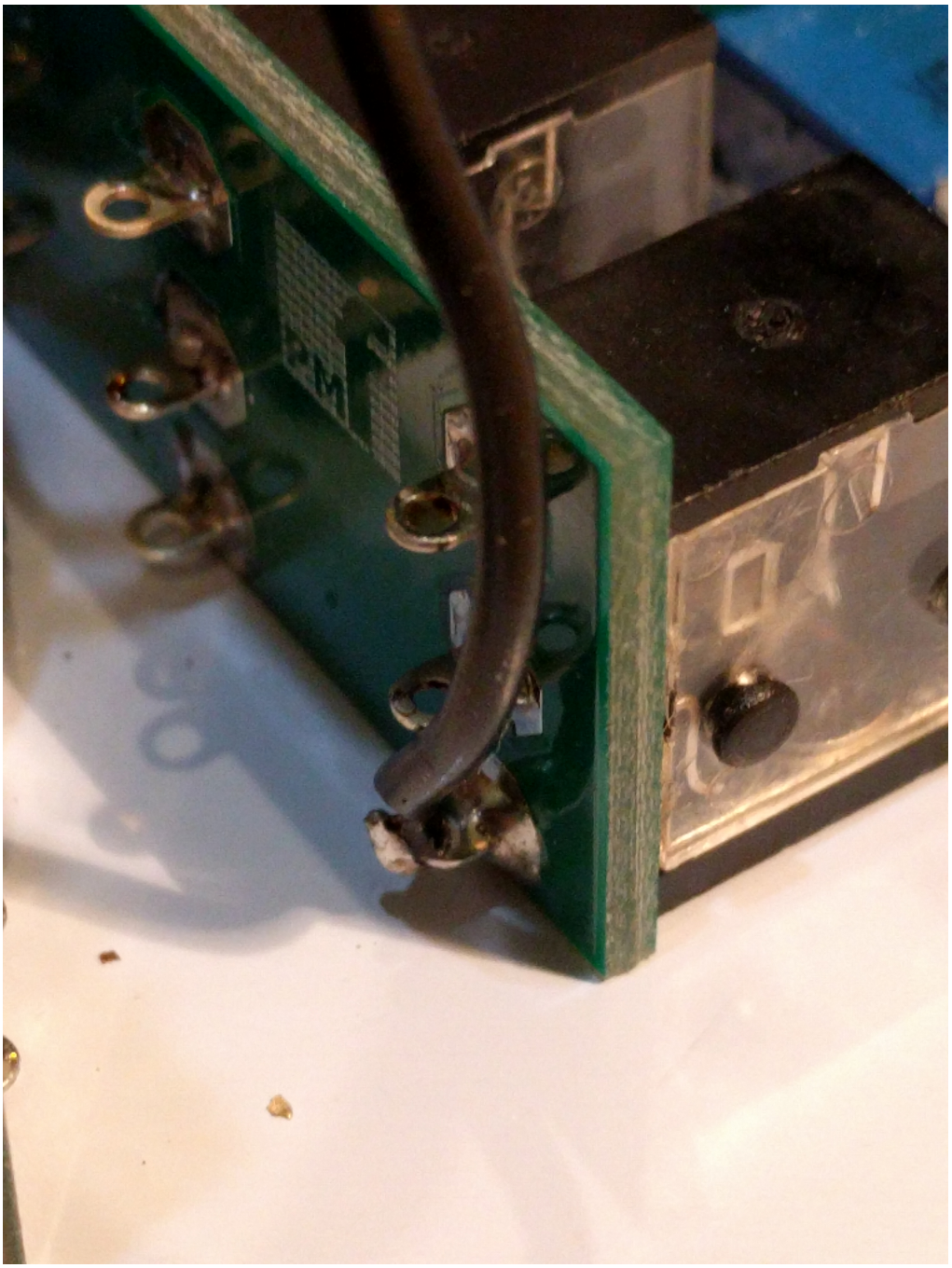


10. Connect the Main board to the CV-TRANS module

    Solder the CV and Transpose wires from the main board to the CVA, TRA pads on the CV-TRANS module.

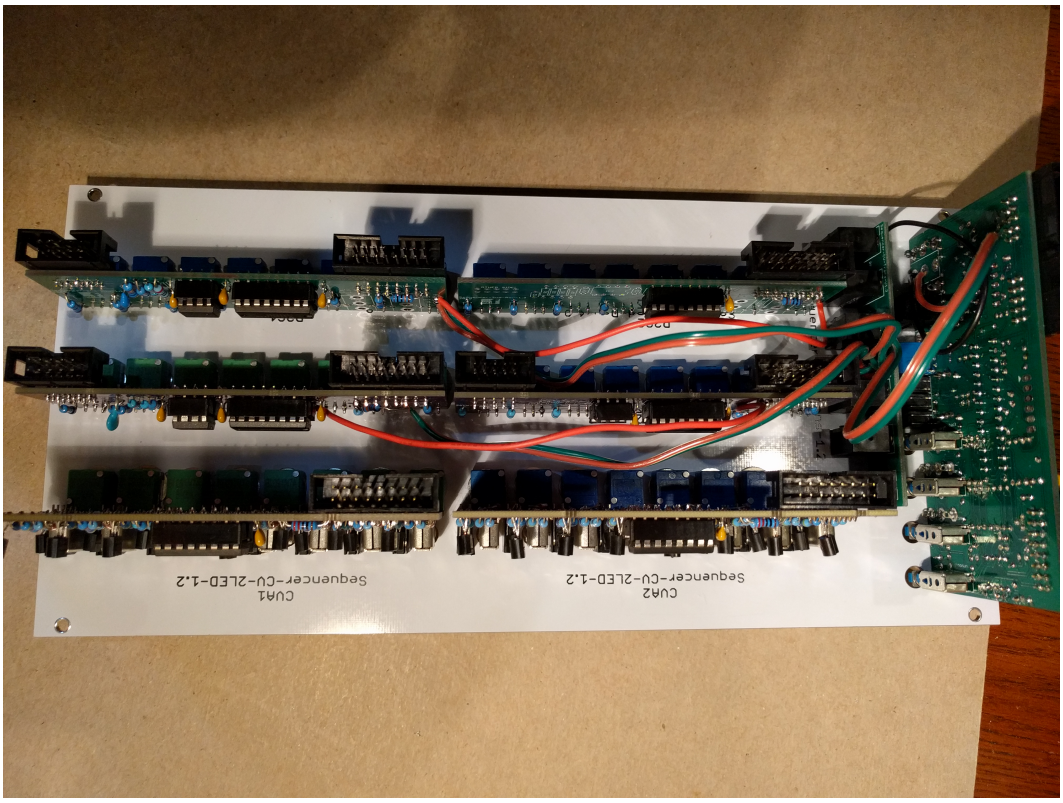
    Solder the ground wire from the main board to the ground pin of any one of the jacks on the CV-

TRANS baord.



11. Install the main board and CV-TRANS board

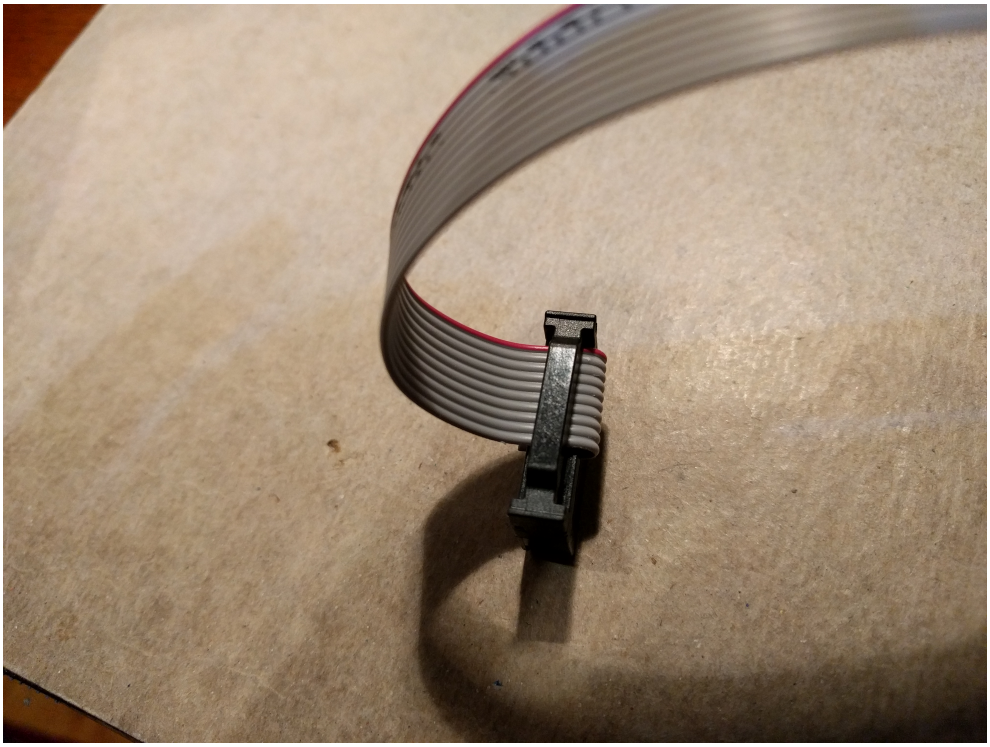
    Put washers on the pot shafts of the Main board and install the Main board and the CV-TRANS board into the panel and secure the pots and jacks with nuts.

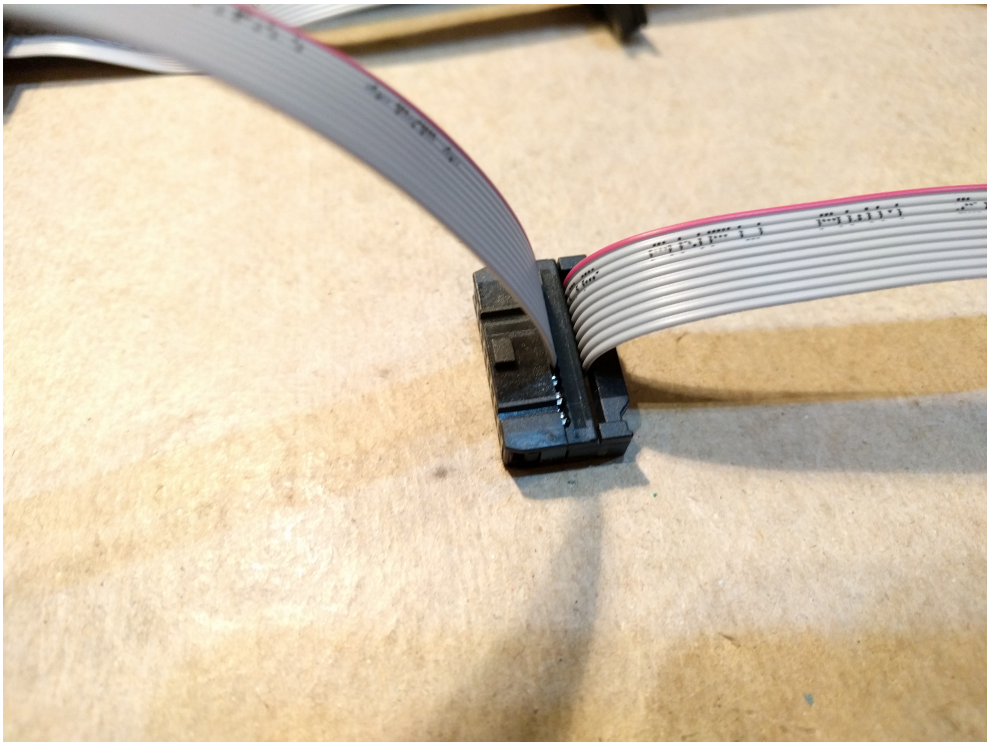


12. Make ribbon cables
    Note direction of keys and red stripe.
    One power cable is 12" long configured as follows:
    16pin----12"X16core------16pin

    The second power cable is 15" long configured as follows:
    16pin----10"X10core --------10pin------3"X10core------10pin

    You need 2 18" long CV cables as follows:
    10pin----9"X10core------16pin-------4"X10core--------16pin------4"X10core------16pin

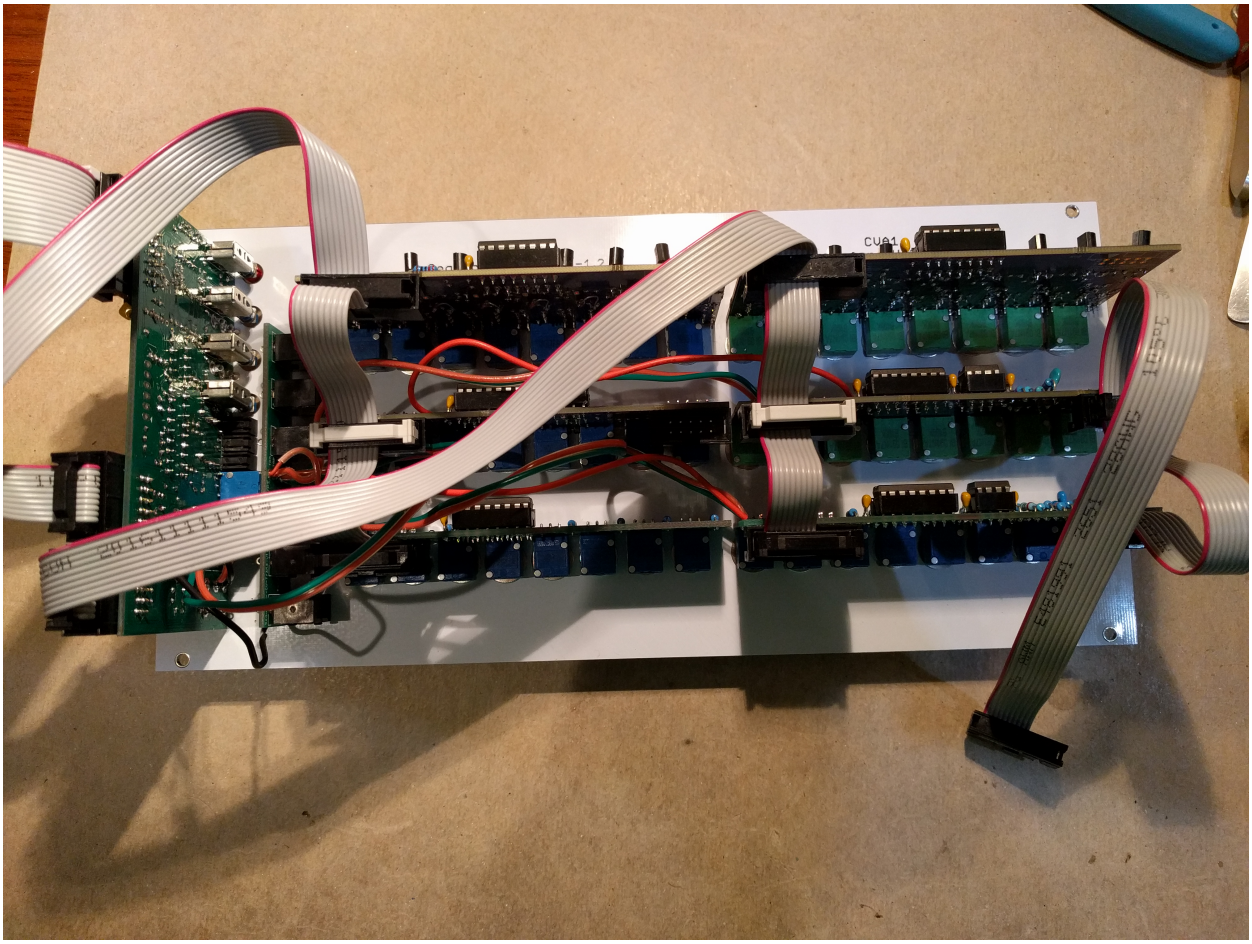


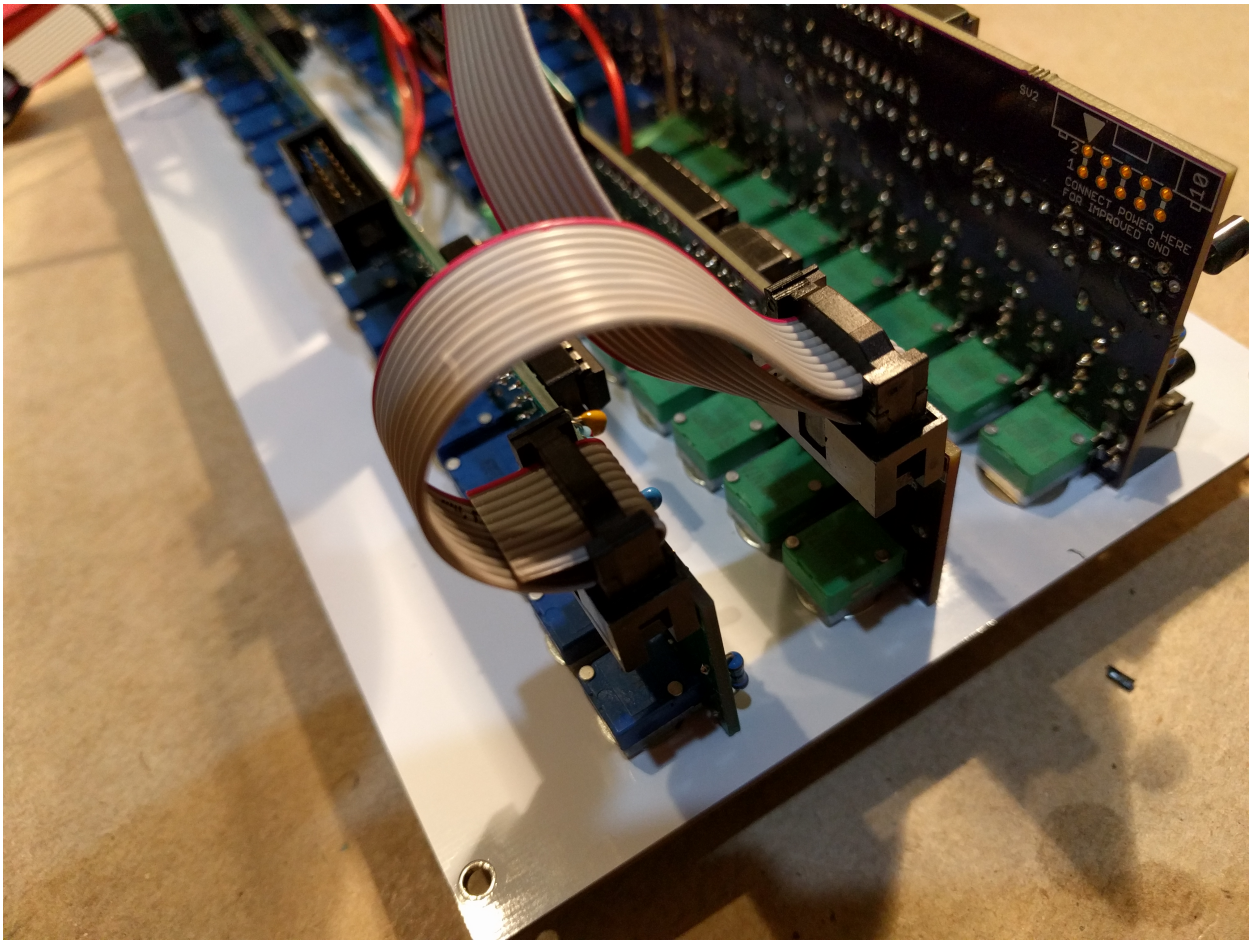


13. Install the ribbon cables

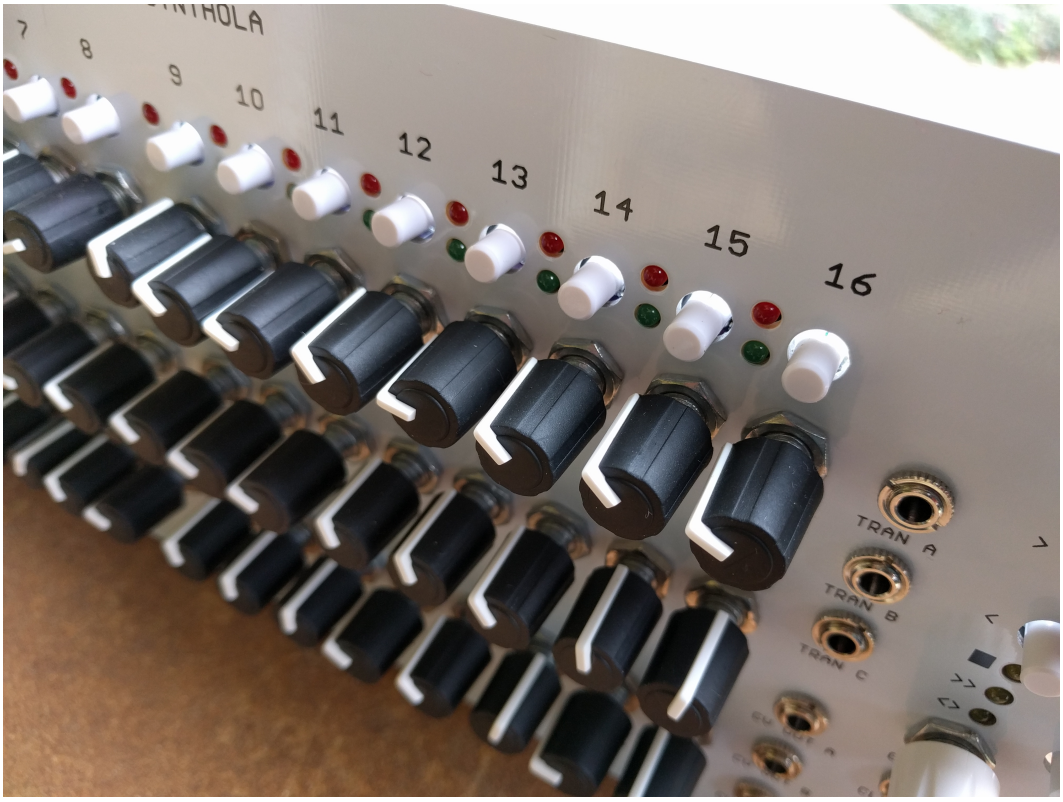
    The 16-16 cable goes to the 16 pin power connector on the main board.
    The 16-10-10 cable goes to the power connectors of the 2nd Row boards.
    Each 10-16-16-16 cable goes from the main board CV connector to the CV board and the two 2nd row boards beneath.

    The photo shows how this is done.




SV2
CONNECT POWER HERE
FOR IMPROVED GND

14. Install the knobs and the switch caps.



15. Connect the two power cords to the synth power supply.