

ARIES MUSIC SYNTHESIZER-SYSTEM 300

KEYBOARD SYSTEM ASSEMBLY  
AR-311 KEYBOARD \* AR-313 KEYBOARD INTERFACE \* AR-320 CASE

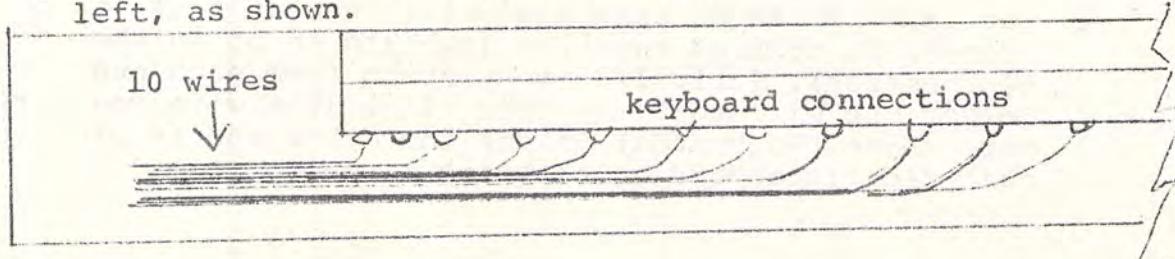
I. WIRING OF BOARD "A" TO KEYBOARD. REFER TO AR-311 KEYBOARD CONNECTIONS DRAWING, AND THE AR-313 BOARD LAYOUT CRAWING.

- ( ) 1. Cut three pieces of insulated wire, 48"each, and one piece 10", and strip 1/4" from each end.
- ( ) 2. Lay the keyboard upside down, as shown in the AR-311 drawing.
- ( ) 3. Connect one 48" wire to the buss wire labelled "Keyboard voice" on the right hand end of the keyboard. Solder. Solder the other end to the hole in the AR-313 Interface board "A" labelled "Keyboard Voice" on the layout drawing.
- ( ) 4. Solder another 48" wire to the buss wire labelled "Keyboard Gate Switches".
- ( ) 5. Solder the 10" wire to the left most lug on the keyboard, labelled "Keyboard Low". Solder the other end to the hole in board "A" labelled "Keyboard Lo".
- ( ) 6. Solder the next 48" wire to the next to last lug on the right side of the keyboard, labelled "Keyboard High". Solder the other end to the hole in board "A" labelled "Keyboard Hi".

II. WIRING OF BOARD "B" TO THE KEYBOARD.

This consists of connecting 61 wires from the keyboard lugs marked "K1", through "K61", to the same points on Board "B". IT IS NOT NECESSARY TO FOLLOW ANY ORDER. That is, K2 on Board "B" may go to K37, or any other "K" number on the keyboard. However, it is recommended that you follow this wiring procedure to avoid the wires interfering with the keyboard action. NOTE: Use thin insulated wire; No. 22 or smaller, and preferably solid.

- ( ) 1. Cut ten pieces of wire, each 29" long, and strip 1/4" of insulation from each end.
- ( ) 2. Solder one of these wires to the lug marked "K1" on the keyboard (see keyboard drawing) NOTE: The first lug is not K1!
- ( ) 3. Solder the other wires to the next nine lugs (K2 thru K10).
- ( ) 4. Grasp all 10 wires together, and pull them tightly to the left, as shown.



SYSTEM 300  
KEYBOARD SYSTEM ASSEMBLY

- ( ) 5. Starting from the end near K1, twist the bundle slightly. While pulling, twist all the way to the end.
- ( ) 6. Find the wire furthest in from the end of the bundle, and cut off all the others to be even with it.
- ( ) 7. Cut ten new wires, each 36" long, and strip the ends.
- ( ) 8. Solder these to the next ten lugs (K11 thru K20).
- ( ) 9. Keeping this bundle separate, pull to the left and twist, like the first 10.
- ( ) 10. Cut off the other ends to be even, as before.
- ( ) 11. Cut ten new wires, each 43" long, and repeat for the lugs K21 thru K30. You should now have three bundles.  
NOTE: They should come to different lengths when pulled to the left.
- ( ) 12. Cut ten more wires, each 50" long, and repeat for K31 thru K40.
- ( ) 13. Cut ten more wires, each 57" long, and repeat for K41 thru K50.
- ( ) 14. Cut eleven finally, each 64" long, and repeat for K51 thru K61. Notice the lug between K60 and 61; do not mistake this for K61.
- ( ) 15. You should now have six neat bundles of wire. They should be held together about every 6" with tape, lacing, or cable ties if possible, and pushed down into the corner of the keyboard case. NOW, WIRE TO BOARD "B".
- ( ) 16. Solder the ends of the longest bundle of wires (the last one wired to the keyboard) to Board "B", in the holes labelled K51 thru K61 (see Board "B" assembly drawing).  
NOTE: Run wires through from the component side of the board "B".
- ( ) 17. Solder the next longest bundle into holes for K41 thru K50.
- ( ) 18. Repeat for K31 thru K40.
- ( ) 19. Repeat for K21 thru K30.
- ( ) 20. Repeat for K11 thru K20.
- ( ) 21. Repeat for K1 thru K10.

THIS COMPLETES WIRING OF KEYBOARD TO BOARD "B".

III. POWER CONNECTIONS

You may use any type of wire or connector you wish for the +15v, -15v, +5v, and ground. If you're going to use the keyboard with the ARIES SYSTEM 300 Power Supply, however, there is a male plug furnished which fits the power supply.

Recommended Procedure:

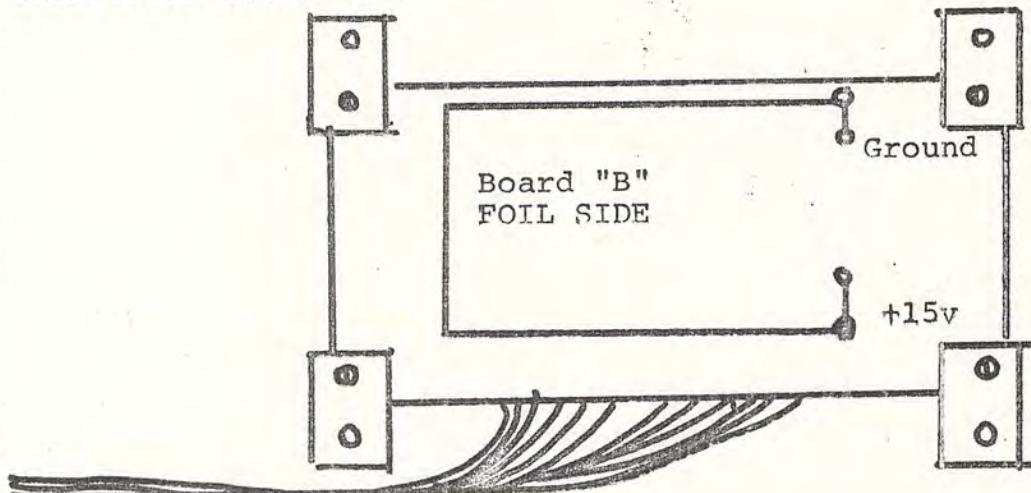
- ( ) 1. Cut four pieces of insulated wire, each 6 feet (or longer, if desired to allow keyboard to be further from synthesizer). Strip 1/4" insulation from each end.
- ( ) 2. Solder one wire to Board "A", +15v. (The wire you left bare above the board.) Solder the other end to pin 1 of the male plug (standard octal base).

SYSTEM 300  
KEYBOARD SYSTEM ASSEMBLY

- ( ) 3. Solder the second wire to Board "A", -15v. Solder the other end to pin 3 of the plug.
- ( ) 4. Solder the third wire to Board "A", +5v. Solder the other end to pin 5 of the plug.
- ( ) 5. Solder the last wire to Board "A", ground, ( to bare part of wire above board). Solder other end to pin 7 of plug.
- ( ) 6. Twist or harness the four wires together neatly.

THIS COMPLETES ALL WIRING OF YOUR ARIES KEYBOARD SYSTEM.  
PROCEED NOW TO MOUNT THE BOARDS AND PANEL TO THE KEYBOARD CASE.

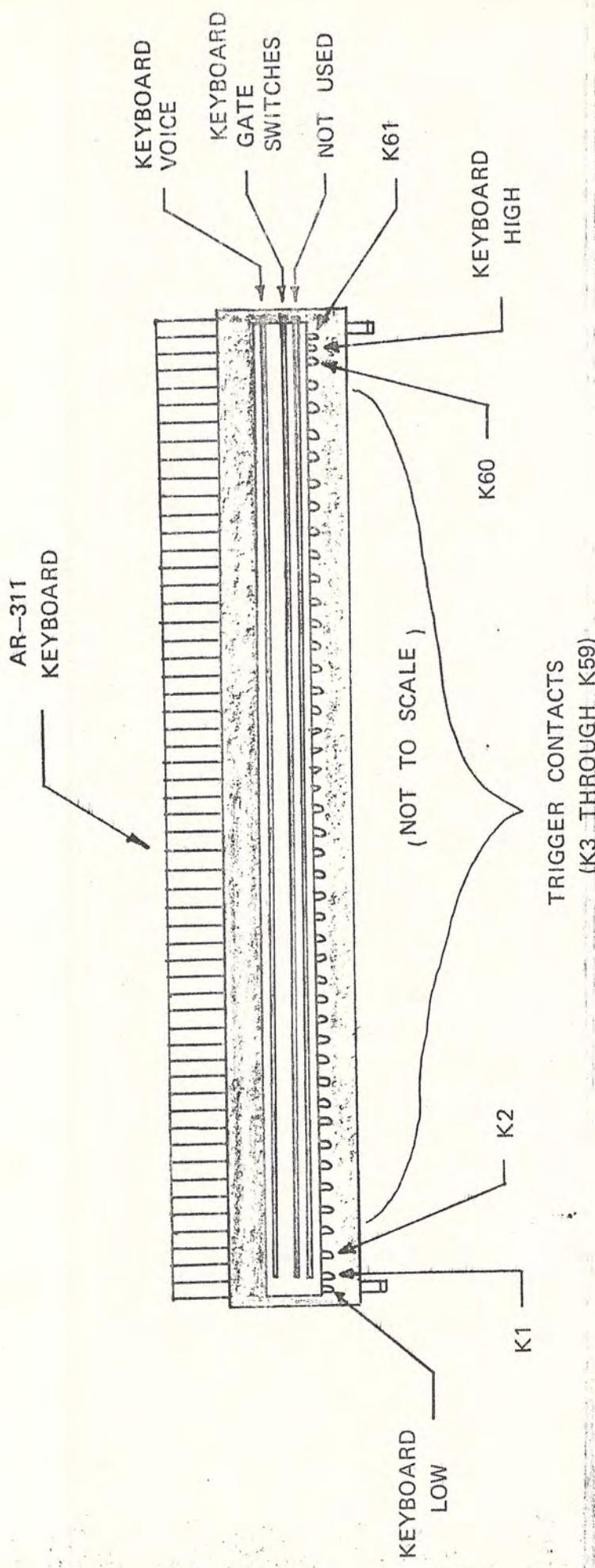
- ( ) 1. If the case is already assembled, remove the top cover (long wood strip) and the panel board. If the case is not assembled, assemble everything except panel board and top cover. (See AR-320 Case instructions.)
- ( ) 2. Push the wired panel through the hole in the panel board (panel must be on side of board with bevelled outerholes).
- ( ) 3. Fasten panel down to board with four wood screws.
- ( ) 4. Mount Board "A" on bottom of panel board: Push four wood screws through Board "A" from component side. Place four spacers on screws AFTER pushing them through board. Screw into bottom of panel board, roughly in center of board. NOTE: No holes have been provided on panel board on some units.
- ( ) 5. Mount small brackets with small machine screws and nuts on corners of Board "B":



- ( ) 6. Hold Board "B" as shown above. Bend wire bundles down flat against board, and toward bottom left on above drawing as shown.
- ( ) 7. Screw Board "B" Brackets to keyboard case, in the four rounded slots provided.

SYSTEM 300  
KEYBOARD SYSTEM ASSEMBLY

- ( ) 8. VERY IMPORTANT! Check that no wires interfere with keyboard contacts" action. Tuck wires into bottom corner of keyboard case. It is advisable to fasten the bundle down with INSULATED staples, cement, or tape.
- ( ) 9. Complete case assembly by fastening down panel board and top cover



-----  
BOTTOM VIEW  
-----

AR-311 KEYBOARD CONNECTIONS