McIntosh MAC4100 RCA Jack Replacement PCB

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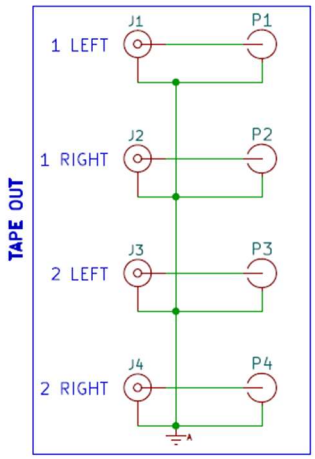
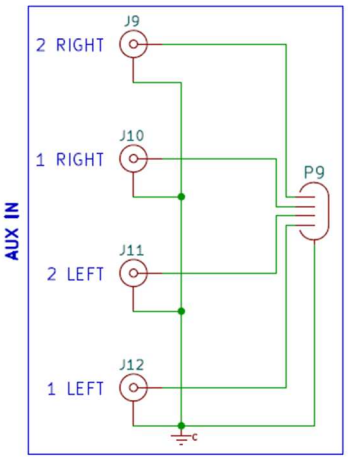
1. Remove the unit's back panel enough so that the RCA jack wiring is easily accessible. Take several photos from several angles to use as a reference when wiring up the RCA jack board. Removing one of the heat sink assemblies may help with this.
2. Desolder each shielded cable. Drill out all 17 original rivets holding the original RCA jacks in place. Save the four original black cover pieces. *Note: In future kits, I will be including a new matte-black cover plate to eliminate the need to re-use the four original ones*.
3. Install 17 #6-32 x ½" long machine screws in the holes where the rivets were. The screw between the "TAPE 1" and "TAPE 2" jacks serves as the star ground point and should have an internal tooth lock washer underneath the head to ensure a solid electrical connection to chassis ground.
4. Place the four original black cover pieces over the screws and secure them in place with either hex nuts or spacers. **The spacing between the back panel and the surface of the RCA jack board should be about 4 mm for proper clearance.**
5. Install and solder all 17 new RCA jacks (CUI part number **RCJ-022** and **RCJ-023**) on the jack board. Note that the typical color coding for an RCA audio pair is white for left and red for right.
6. Place the board over the 17 screws and mount it in place with hex nuts. Use a hex nut with an internal tooth lock washer for the star ground screw.
7. Wire the RCA board up, referring to your photos and the included schematic. Short the solder jumpers on the board to correspond with the way your unit was originally wired:

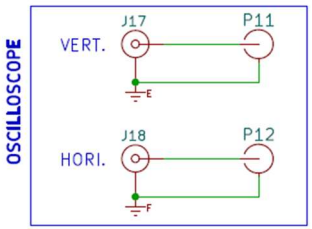
- JP1 or JP2: Short to connect the shields of the "TAPE 1 and 2 IN" jacks to chassis ground (JP1 and JP2 are redundant, use either one)
- JP3: Short to connect the shields of the "AUX 1 and 2" jacks to chassis ground
- JP4: Short to connect the shields of the "SCOPE VERT" jack to chassis ground
- JP5: Short to connect the shields of the "SCOPE HOR" jack to chassis ground
- JP6: Short to connect the shields of the "PREAMP OUT" and "POWER AMP IN" jacks to chassis ground
- JP7: Short to connect the shields of the "TAPE 1 and 2 OUT" jacks to the shields of the "TAPE 1 and 2 IN" jacks

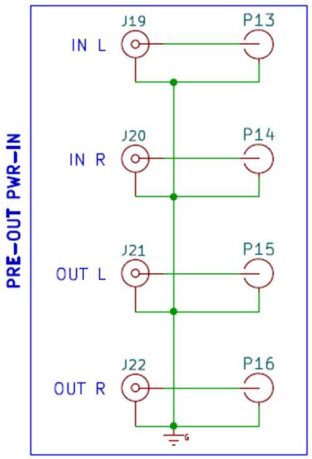
Example: In the unit I installed this board in, the shields of the AUX, TAPE OUT, TAPE IN, and PRE OUT/POWER IN jacks were all tied to the chassis grounding screw by the factory. This corresponds to shorting JP3, JP1 or JP2, JP7, and JP6. Additionally, there was a 10 nF (0.01 uF) capacitor between the shields of the PHONO jacks and chassis ground, which is implemented as the capacitor footprint C1.

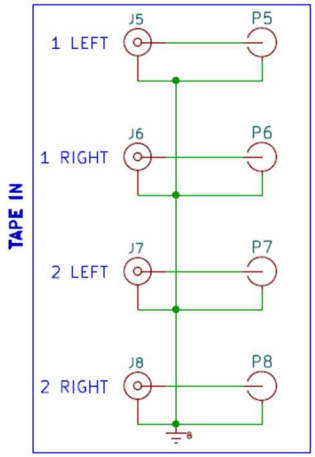
Note: RCA jumpers must be connected between the "PRE-OUT" and "POWER AMP IN" jacks in order for audio to pass through to the amplifier outputs.

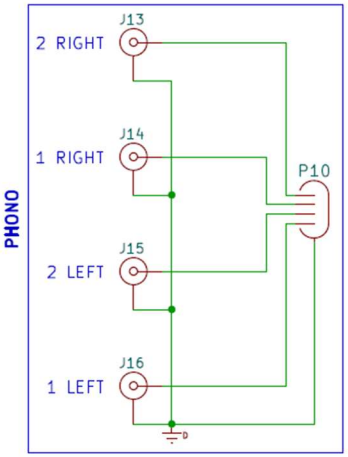












Notes:

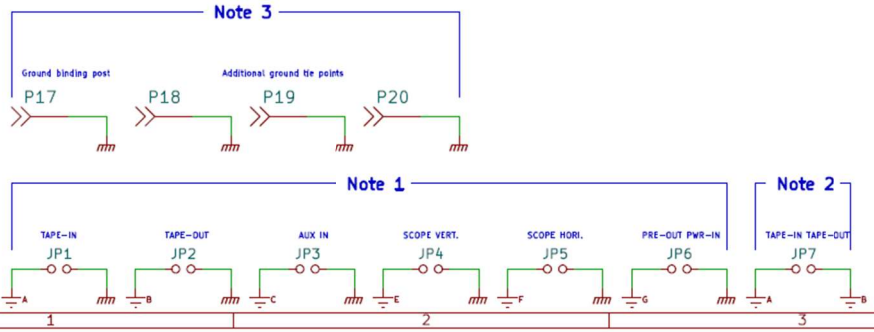
1: Solder jumper on any inputs that have a wire connecting their grounds directly to chassis

2: Solder jumper only if unit has a wire connecting TAPE-IN and TAPE-OUT grounds together

3: Connect wire from rear-panel ground binding post to P17. If unit has additional wires connecting to chassis from another part of the circuit, connect them to P18-P20.

Parts:

Left RCA Jacks: RCJ-023
Right RCA Jacks: RCJ-022
10nF Capacitor: ECQ-E2103KF



MAC4100 RCA Board

ProAudio Electronics

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