

Here are a few tips for the new Rev B ACA boards

1. Always install the FET's, even if you will not use the Mute & T/B function. If you are not using the Mute circuit, ground one of the Mute CTL pins with a jumper wire as recommended on the schematic.
2. Use #4 screws with 3/16" hexagon standoffs for mounting. This will keep the top and bottom ground planes separated except for the connection made on the PCB. If you want to keep your console's Chassis ground separate from the 2-ACA-Bo card's ground planes, use a nylon standoff in the bottom right corner. Those holes are labeled "GND".
3. Typically, the vintage API style mix bus is fed with a -2dBu signal thru a 47k bus resistor. So that is a signal that is unbalanced and 6dBu below the channels direct out. With a -2dBu signal thru a 47k bus resistor, the output level of the ACA will be approximately -0.5dBu . This is important if you are using different bus resistors than 47k . If they are not 47k (most are not) you will have to modify the ACA's feedback resistors to yield the above levels. If you change the feedback R's (R10 & R13), you should also recalculate and change the feedback caps (C11 & C15). The stock -3dB knee frequencies are shown on the schematic. Try to get as close to those as you can.
4. With the ACA setup to deliver the above-specified gain, apply a -2dBu signal thru a 47k bus resistor to the ACA's input, fader at wide open, the resulting level at the output of the 325 Booster circuit should be approximately $+4.45\text{dBu}$.
5. Faders above 10k are not recommended.
6. If you want an easy balanced return from the 2-Mix insert point, a Burr Brown INA134 is a simple solution. This is a unity gain receiver that will easily drive the fader and not impart any additional sonic footprint to this glorious circuit. Besides PSU decoupling caps, no outside components are needed to implement this chip. They are brilliant.
7. I use non-locking .156" KK headers for all in/out connections. I insert them from the bottom of the PCB and push the pins down. I then solder from the top of the PCB using an alligator clip as a heatsink so the solder does not run up the length of the pin. Sloppy solder up the side of the pins can lead to intermittent connections. Please refer to the pics below. As stated on the BOM, I carry all of the appropriate Molex connectors at the store.

