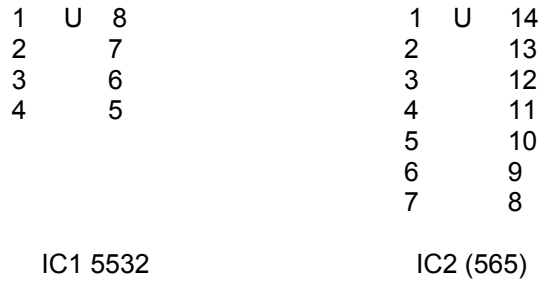
Following are some dc voltage readings you should find on the IC pins on this kit.

If your meter is analog, make the + DC readings with the black lead (-) to circuit ground (G). Make the DC readings with the red lead (+) touching (G). A digital tester will indicate polarity and the black lead (-) can always be the (G) contact (common).



IC1 5532 IC2 (565)

The IC pins are numbered as shown above as viewed from the component side of the board.
IC1
pin 1 0VDC
pin 2 0VDC
pin 3 0VDC
pin 4 -7VDC
pin 5 0VDC
pin 6 0VDC
pin 7 0VDC
pin 8 +7VDC

IC2
pin 1 -6VDC
pin 2 0 to +1VDC
pin 3 0 to +1VDC
pin 4/5 appx. +2VDC
pin 6/7 +3 to +6VDC
pin 8 -4 to +4VDC
pin 9 appx. 0VDC
pin 10 +6VDC
pins 11-14 n.c. open circuit

If you'd like, call armed with your tester and I'll go through these with you. If something is not right, I could offer advice as to what to check to isolate the trouble.

Be sure the jumper wire is installed behind IC2 on the board. The Defeat SG jumper must be installed if using a three-wire dualDC power supply connection (V+, Ground/common/0v, V-).

There are two four-circuit power supply connection areas on the board. Each has a rectangle around it and one is a bit larger with a darker line or bar at one side. This area is where a four-circuit header connector could be installed and the polarizing tab on the header would match up with the line or bar. The smaller area is where wires would solder, to daisy-chain on to another board in a system.
Here is a PAiA web page example of the four-circuit power connection set-up with one of our 9770 series power supplies:

http://www.paia.com/proddetail.asp?prod=9770U&cat=12
<http://www.paia.com/proddetail.asp?prod=9770U&cat=12>

On battery power, it takes one battery for the positive supply and one battery for the negative supply.

These can wire in at either of the four-circuit power supply areas on the board (notice the printed-circuit is just extending from one area directly over to the other).
In the four-circuit dc power supply set-up as used with the 9770 series power supplies, there are separate

circuits for Signal Ground and power Ground. They join at the power supply, but the wiring from the power supply onwards is separate for the two circuits. This gives the audio circuits the cleanest, most quiet ground. On battery power though, the two grounds G and SG must join on the board, so, you must put a jumper wire in at the points labeled 'defeat SG'. This links G and SG.
The wiring point with SG circled is for the pots and jacks. A wire from the SG point ties them to the circuit board ground, circuit-common. The reason it is separate from the SG points in the rectangled groups is that these groups could be occupied with the power supply daisy-chain.

See chapter five of the EPFM book for battery power examples; pages 210-212 for dc adapter and single to dual supply examples.

Below is a sketch of the way two nine-volts are wired for the dual-dc supplies.

For the Ring Modulator, the carrier rejection is usually not complete, or, when the trim is adjusted for minimum ring tone, it's still detectable. The best thing to do to maximize your signal to noise ratio and get all the signal in and through the device as possible. There is a resistor that is selected for line/instrument/sustain and if you keep this as low as possible, it will be less sensitive to input noise that could cause the unit to 'open' the way for the carrier. This means you'd need to send the unit a pre-amped or buffered guitar signal, or one that is from the output of some other effects unit. Grounding the input jack will give you an idea of whether there is rejection trouble, or, noise on the input being modulated.

The last time I had one through here for service with excessive bleed, I did this:

In the testing and troubleshooting of the CA9 Ring Modulator, it was found that the ring tone null was at the lowest amount; however it was put lower by making the 4700ohm mix resistor R8 for the ring tone a 47k (this decreases the gain of the ring side from x10 to x1 but doesn't seem to take away from the effect as much as it does reduce the 'nulled' ring tone. Also, the trim circuit was altered to put the adjusting disk at the ground instead of the signal side of the circuit (this is for trims with a metal adjusting disk). This prevents the introduction of noise when using a conductive adjusting tool.

If the trouble persists, don't hesitate to get back with any other questions that may arise, or, send a photo of the current state of the project (and the pcb soldering) and I might be able to see something and offer further advice.

Thank you. Sincerely, Scott Lee