

## HEXPANDER

### Hexpander is not tracking well

- 1) Check that Traktion switch is set correctly: left = Roland, right = Axon
- 2) Check that saddles are plugged into Hexpander correctly: 123456 = EBGDAE for guitar, 2345(6) = GDAE(B) for bass, with the blue wire on ground, and the silver wire on the signal side close to the labels 123456. There is no danger in trying the plug both ways, but the correct way will work better.
- 3) Are your saddles reversed? ResoMax ghost bridges must be installed with the screws facing the neck. The pickups won't work very well if you flip the bridge around so that the screws face the tail piece.

### QuickSwitch doesn't work properly

- 1) Check if the QuickSwitch is plugged into the board properly. Because it has a 2x2 pin connector, it is possible to plug it in ¼ turn the wrong way. Make sure that the connector is plugged in with the black wire on the ground row with all the other black wires, and the blue and red wires on the signal row with all the other colored wires.
- 2) Unplug the QuickSwitch (as if the QuickSwitch is in the middle position). If the ghost system works fine without it, then there's a problem in the QuickSwitch, and it should be replaced.

### When the 1/4" & 13 pin cable are connected, there is only volume to my synth if the MIDI volume pot is set at about halfway. If turned up full, it drops out.

Plugging the ¼" jack in results in the Hexpander being powered by the Acousti-Phonic battery.

The MIDI control voltage from the Hexpander is nominally 0V to 5V. The voltage produced by the Hexpander is capable of getting just a bit above 5V when the pot is at the max. This ensures that the volume really does go all the way up when the pot is turned up. The value of "just a bit" depends on the supply voltage. When powered from the 13-pin cable it's not much. When powered from the Acousti-Phonic battery it is more; the control voltage can get up to 5.8V. It appears that a few MIDI peripherals don't like this, and respond by acting as if the control voltage had gone to zero. A work around would be to change the MIDI volume pot to 100k. Another possibility would be to put a fixed resistor in series with the top end of the MIDI volume pot, a value of 47k might be appropriate.

### One saddle is quieter than the rest / no sound / not tracking well

- 1) Make sure there are no mechanical coupling problems between the string, the saddle, and the bridge. Check that your saddle height adjustment screws are set so that the saddle is level, and that the string is passing over the saddle properly, not caught on the intonation spring, etc.
- 2) The easy test: unplug the saddle from the input to the board and swap the plug with another one. If the problem remains on the same saddle, this points to a defective saddle. If the problem stays on the same channel, this points to a defective board. For example, if the G-string in #3 is quiet, unplug it and plug it into #4, where the D-string was working fine. If the G-string is still quiet plugged into #4, the pickup needs to be replaced. If the G-string works fine in #4 but now the D-string is quiet in #3, then channel #3 is defective, and the Hexpander needs to be replaced.
- 3) The definitive test: exchange the two saddles, unwinding and replacing the strings, and repeat the above test.

## ACOUSTI-PHONIC

### Acoustic output is louder/quieter than mags

There is a blue and white adjustment pot on the Acousti-Phonic PC board to adjust the level of the acoustic signal to match the mag signal. Use a small screwdriver to get the level the way you like it. CW is louder and CCW is quieter. At the factory we set this at about 2/3 scale (pointed at the "33" that's stamped on the part) but it may need to be set higher or lower for your guitar.

### My battery is draining rapidly (dead in 3-4 days) and no acoustic output in Stereo Mode at 1/4" jack. Yet output is fine on pin-7 if Hexpander is also installed

Stereo Switched Output Jack has been soldered to BE-5003-00 cable assembly with red and white wires reversed.

QuickSwitch operates erratically, like both signals on in two positions

Because the QuickSwitch plugs in with a 2x2 harness, it's possible to get it turned 90 degrees either way. Check that the blue and red wires are on the row nearest the labels, and the black wire is by itself on the ground row.

### Acousti-Phonic has acoustic output but no mags

1) First try unplugging the QuickSwitch. If this restores the mags, the QuickSwitch was either plugged in the wrong way, or is defective.

2) Test the mag channel using the acoustic pickups. Unplug the Acoustic Volume Harness, and move the acoustic pickups to the Mag input. If you can hear the acoustic pickups through the mag channel, then the Acousti-Phonic is working properly, and you should troubleshoot your mag system.

### Acousti-Phonic has mag output but no acoustic

**Possibly A:** The board may not be getting power. If this is the case, you may hear mags at 1/2 volume as they bleed through the board.

1) Have you connected the 9V battery harness properly? The black wire should be on the ground row right in the corner, and the two red wires should be on the signal row, nearest the labels BAT and PWR.

2) Are you using the stereo switched jack that came with the Acousti-Phonic? Other jacks (like deep barrel jacks) will need to be wired differently. See the wiring diagram section for other configurations.

3) Is the stereo switched jack soldered to the harness correctly? Make sure the solder lugs go to the contacts you think they do. Black(s) = sleeve, blue = tip, red = ring, white = switch

4) Is the jack switch operating properly? Inspect this visually. The switch works backwards to what you expect: 1/4" plug in = switch open = on, and 1/4" plug out = switch closed = off. (No kidding -- it's spooky, but it works)

5) Does the switch still operate when the jack is installed in the guitar? On some strats, the jack gets pressed up against the wall of the cavity. Rotate the jack so that this doesn't happen.

**Possibly B:** The Acoustic signal may be interrupted or shorting to ground

1) Unplug the QuickSwitch(as if the QuickSwitch is in the middle position). If the ghost system works fine without it then there's a problem in the QuickSwitch, and it should be replaced.

2) Bypass the Summing Board and Dual Connect Cable by unplugging them from the Acousti-Phonic, then unplug one pickup from the Summing Board and plug it into the Acousti-Phonic. If you get signal, then the problem is in the Summing Board or Dual Connect Cable and these need to be replaced.

3) Check your solder connections to the Acoustic Volume Pot. To bypass the pot, connect the yellow and violet wires together. If the Acousti-Phonic works with the harness bypassing the pot, then replace the pot.

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We test every pickup upon manufacture, but once in a while a defect turns up anyway. If you need to return a part, contact our customer service department for a Return Authorization number.

**E-mail: [rma@graphtech.com](mailto:rma@graphtech.com) or call 1-604-940-5353**

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