

Audvance record amplifier board

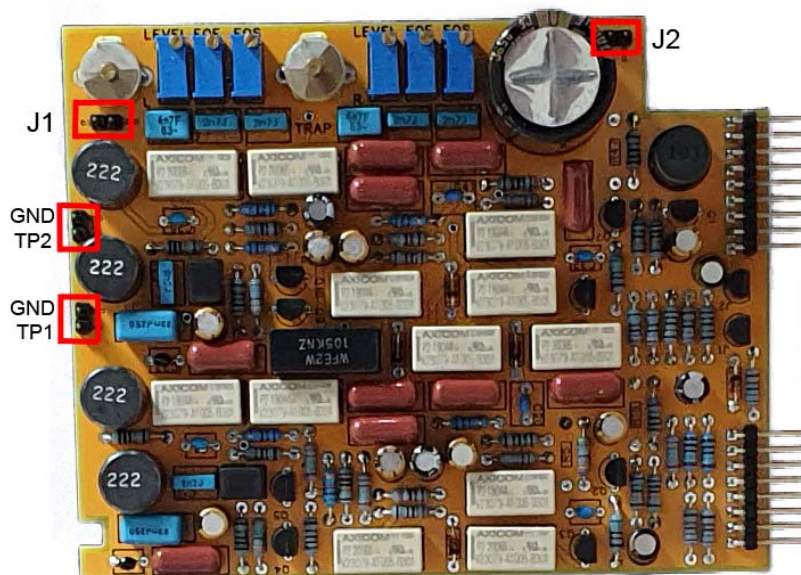
This board can be used in Revox B77 and PR99 machines as a direct replacement for all varieties of Revox record amplifier boards. The board has been pre-calibrated so you can use the board right away. When you order the board you can chose if you want pre-calibration for NAB or IEC/CCIR, for a standard or a high speed machine. Since every recorder is slightly different because of production tolerances and wear, the best performance will be achieved with a board that is calibrated on your machine.

Calibration

The calibrations of record level and record EQ should be done in a similar way as should be done with the Revox boards. All calibrations can be done while the machine is standing upright, which is very convenient.

You need a tone generator and an AC voltmeter or an oscilloscope to do the calibration:

- The bias trap is adjusted with the two round variable capacitors, left of the pots for the level setting in the picture below, one for each channel. Disconnect any input signals and put the recorder in the recording mode. Connect an oscilloscope or AC multimeter to the pins TP1/GND for the left channel and TP2/GND for the right channel. Make sure that the GND pins are connected to the ground of your multimeter or oscilloscope. A signal of about 150kHz signal is present on these pins. Adjust the capacitors for the lowest reading.
- Make sure that the reproduction/playback amplifier level settings are set correctly before you set the level on this board. Put the input level controls on the front of your recorder at maximum level. Put the monitor switch in the Input position. Apply a tone to the inputs of 400Hz and adjust the level on the tone generator so the output of your recorder is at a level of 775mV. Check that the level is the same for both channels.
- If your machine is a high speed machine, make sure jumper J2 is in place.
- Put the monitor switch in the Tape position, and start recording. Now adjust the level pots on the board so the output level is again 775mV for both channels.
- Lower the output signal of your tone generator with 20dB (10 times lower that is). This level is used for the rest of the calibration procedure. Select the equalization you want to calibrate for, that is NAB or IEC. Set the generator at 1kHz and measure the output level of the recorder. Increase the frequency to 10kHz and adjust the EQF pot (for the higher speed) or EQS pot (for the slower speed) so the output level of the recorder is the same for both 1kHz and 10kHz. Repeat this for the other channel.



Jumpers to select equalization

There are two places on the board where jumpers can be used. The jumpers are included. The jumpers are used to select the available equalization(s) as can be seen in the table below:

J1	J2	Equalization	
		Slow	Fast
No jumper	No jumper	3180us/90us	3180us/50us
Jumper	No jumper		
No jumper	Jumper	3180us/50us	3180us/50us
Jumper	Jumper	-/70us	-/35us

The first line in the table corresponds to the NAB equalization found in standard B77 machines with speeds of 3,75 ips and 7,5 ips. The third and fourth line correspond to the NAB and IEC/CCIR equalization found in B77 High Speed machines with speeds of 7,5 ips and 15 ips.

It is possible to switch between NAB and IEC/CCIR equalization as can be seen from the last two lines in the table. At J2 there should be a jumper in place to do this. Jumper J1 can be shorted remotely with any switch to switch equalization to IEC/CCIR.