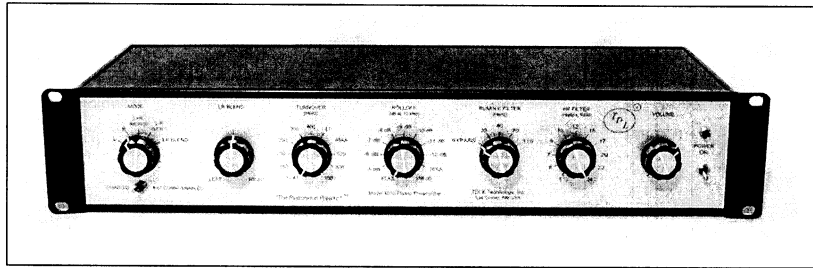


THE RESTORATION PREAMP™
(for cylinders, vertical cut, 78s, 45s and early LPs)
Model 4010
First Version January 2008



This preamplifier was especially designed for listening to and restoring mono recordings. It features a full range of Turnover frequencies and Rolloff attenuations easily selected by front panel rotary switches. It also has five switch-selectable Rumble Filter frequencies and eleven selectable output Lowpass Filter frequencies. It has very low output noise and very low power line hum pickup, two features essential to creating a CD-quality wave file. The built-in low-noise power supply is as quiet as battery operation.

INPUT: Stereo: 47,000 ohms for both the left and right channels.

EXTERNAL PROCESSOR: On the rear panel there are out and in stereo connectors for using an external noise reduction processor such as an *Esoteric Sound Noise Reducer*, *Packburn Audio Noise Suppressor*, *CEDAR Retouch* or *Diamond Cut Live*. There is a front panel switch to Enable or Disable these connectors. Output impedance: 100 ohms, input impedance: 10K.

GAIN: Zero to 52, 56 or 60 dB at 30 to 35 Hz using the single-turn audio taper volume control. (The maximum gain is set with two internal, easily changed jumpers.)

MODE SWITCH: This five position switch selects either the Left channel, Right channel, Left + Right (mono mode), Left - Right (vertical cut mode) or a Left/Right blend. Blend is a single-turn, continuous control that is fully Left channel in its CCW position and fully Right channel in its CW position. The middle position is equal parts of Left and Right.

TURNOVER: Choice of eleven frequencies: FLAT, 150, 200, 250, 300, 400, LP, RIAA, 629, 800 and 1000 Hz.

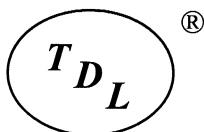
ROLLOFF: Choice of eleven attenuations (at 10 kHz): FLAT, -5, -6, -7, -8, -9, -10, -11, -12, RIAA and -16 dB.

RUMBLE FILTER: BYPASS, 20, 40, 70 or 110 Hz. (This is a 3-pole, Butterworth highpass filter, -18 dB/octave.)

HF FILTER: Choice of eleven frequencies: 5, 6, 7, 8, 10, 12, 15, 17, 20, 22 or 24 kHz. (This is a 2-pole Butterworth lowpass filter, -12 dB/octave.)

DYNAMIC RANGE: Figures 1 and 2 show that the preamp's internal noise level is very low, even at maximum bandwidth and 60 dB maximum gain. Early recordings have a rather limited dynamic range so the actual range you can achieve will depend on the recording and the noise and hum out of your turntable.

CONNECTORS: Two female, rear panel mount RCA input connectors (stereo). Two female, rear panel mount RCA connectors for output (mono). There is a 5-way binding post near the input connectors for connecting the preamp enclosure to the turntable frame as this may help reduce hum pickup (see the Operation section in the User Guide for more information on hum reduction). Rear panel 2.5 mm male input power connector and fuse holder for the 24 VDC power supply. A red LED lights when the preamp power is ON.



... since 1957

TDL® Technology, Inc.

5260 Cochise Trail, Las Cruces, NM 88012-9736 (USA)

575-382-3173, FAX 575-382-8810

<http://www.tdl-tech.com>

FURNISHED ACCESSORIES: 24 VDC wall power supply for 115 VAC, 60 Hz and Printed User Guide. The User Guide in *Adobe Acrobat* .pdf format may also be downloaded from our web site. The User Guide contains an extensive Table of Turnover frequencies and Rolloff attenuations for many brands and years of recordings.

PHYSICAL: Rack mount enclosure measuring 19 x 9 x 3-1/2 inches overall including connectors and knobs. Weight is 2.2 kgm (about 4.7 pounds). Four rack-mounting screws are furnished as are stick-on rubber bumpers for the four corners of the enclosure bottom for non-rack mount installation.

PRICE: See price list.

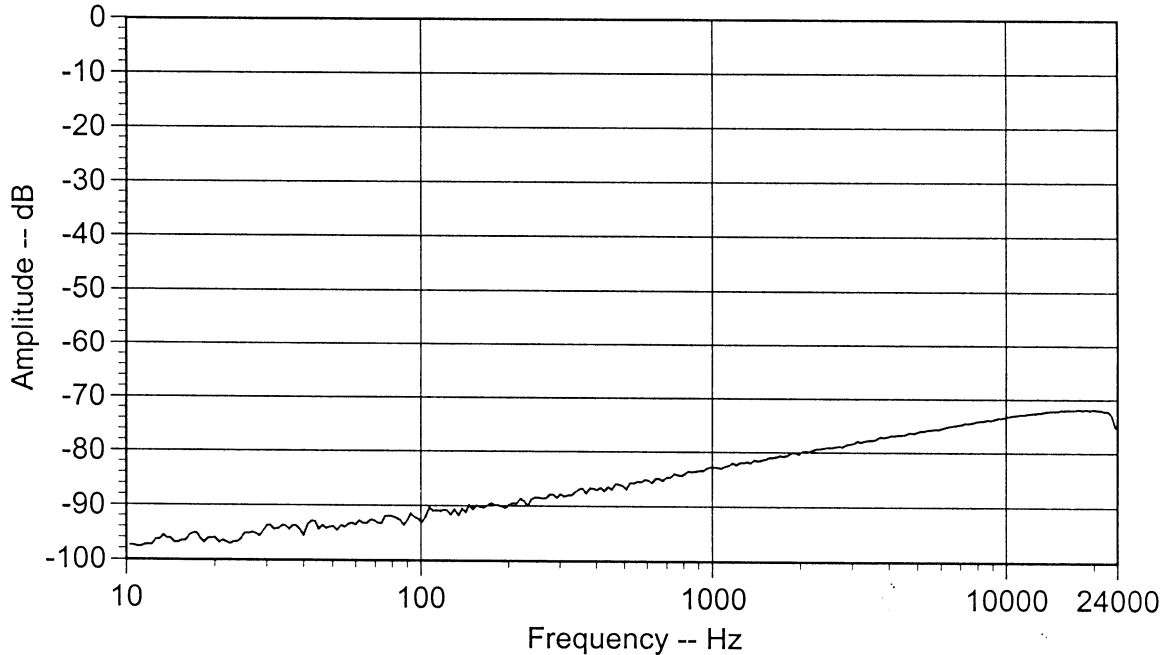


Figure 1 -- Output noise with stereo inputs open, Turnover and Rolloff FLAT, Rumble Filter to BYPASS, HF Filter to 24 kHz and Volume set to maximum (52 dB).

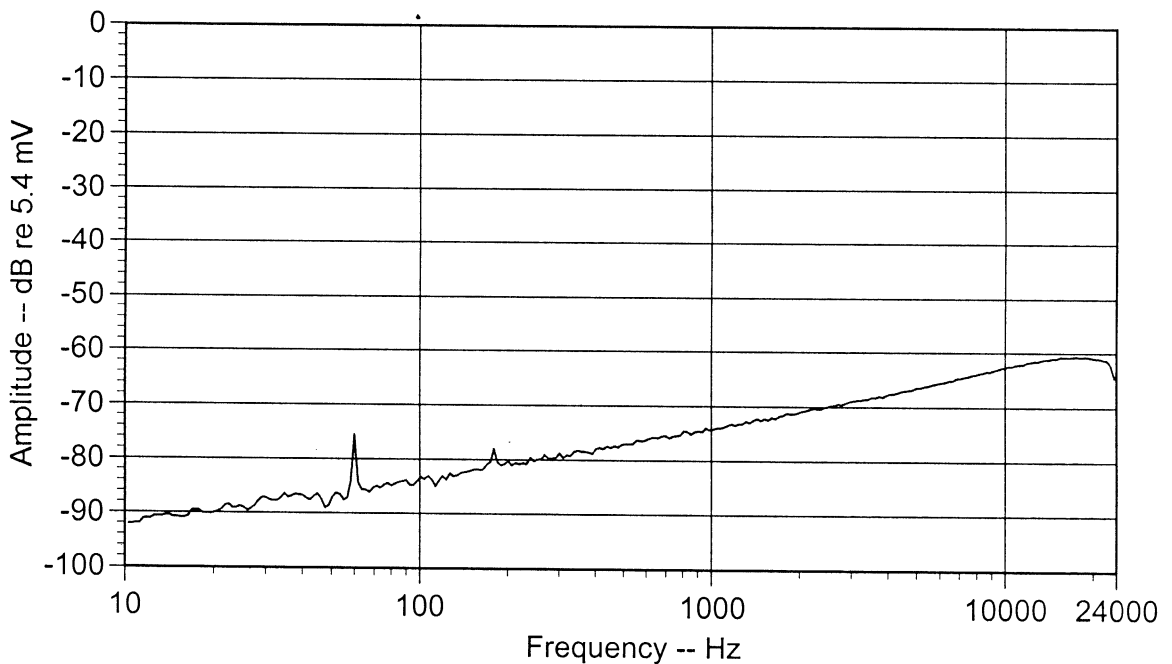


Figure 2 -- Output noise with Stereo inputs connected to turntable, Mode set to MONO, Turnover and Rolloff FLAT, Rumble Filter to BYPASS, HF Filter to 24 kHz and Volume set to maximum (60 dB). Turntable ON and running at 33-1/3 RPM.