

ELECTRO-VOICE P1250 POWER AMPLIFIER



SOME POWER amplifiers trace their heritage from the world of recording studios and broadcast facilities, while others jumped into the live-sound market feet first. Electro-Voice (E-V) can claim a very long history in live sound, and through its many sister companies in the Mark IV Audio Group, can call upon experience in every facet of the audio industry. Although the new Precision Series of amplifiers is very definitely built for the live-sound market, and specifically for touring-sound applications, it is also built to the standard of a fine studio monitor amplifier. The high quality of construction can be directly attributed to the German manufacturing of this series by Dynacord for E-V.

The P1250 is a powerful unit with the ability to produce a very clean 1000 watts into an 8-ohm load in bridged-mono mode (350 watts/ch @ 8 ohms and 500 watts/ch @ 4 ohms 20 Hz to 20 kHz). This amp not only produces this power cleanly, it also offers a proprietary Thermal Brain Circuit (to prevent hot heads from

blowing up the loudspeakers) that emulates the thermal behavior of a typical low-frequency driver. This allows the P1250 to produce an additional 40 percent above its rated power for short durations without fear of destroying the loudspeaker, thus keeping the long-term power from overheating the voice coil while still allowing transients to pass through without limiting. Of course, this is only a safety feature if your LF driver is capable of handling the rated power of the P1250. The Thermal Brain isn't smart enough to recognize that a \$40 Radio Shack 12-inch woofer is connected before melting its 50-watt voice coil, although it will protect the amplifier afterwards!

The P1250 has been carefully designed to incorporate features that make installation and operation into a live-sound system as painless and accurate as possible. For example, there are balanced XLRs for input to each channel (a transformer is optional) and Speakon connectors for output connection (two Speakon cable connectors

are also included). There are also XLR-M connectors for cascading the inputs to another amplifier, as well as recessed sliding switches for chassis ground lift; parallel-mono or dual-channel input mode; bridged or normal (two channel) output mode; and fast (high-frequency applications) or slow (bass and subbass applications) time-constants for the overload-protection limiter. The P1250 includes internal jumpers to select between the three most common

input sensitivities (26 dB of constant gain; full power at 0 dBu or +6 dBu input levels). The front panel has two input attenuators that include detents and extremely fine adjustment near the top (0, -0.1, -0.8, -1, -2.2, -3, -4, -5, -6, -8, -10, -12, -17, -26, -62 dB) that track very accurately in both channels. Unfortunately, the level control knobs have a position indicator that is very hard to see from a distance. There is also an LED indicator for

ROAD TEST

MANUFACTURER: Electro-Voice, 600 Cecil Street, Buchanan, MI 49107. Tel: 616-695-6831.

APPLICATIONS: A power amplifier specifically designed for touring and other portable uses.

SUMMARY: The P1250 includes all of the power and protection required for many live sound applications in just two rack spaces.

STRENGTHS: Comprehensive protection circuitry; excellent quality; easily adapted to most sound system gain structures and grounding schemes; selectable bass-boost specific to E-V loudspeakers and a generic setting for many compact loudspeakers.

WEAKNESSES: Requires a deep (18-inch) rack; difficult to see indicator on input attenuator knob.

PRICE: \$1900

BY WADE MCGREGOR

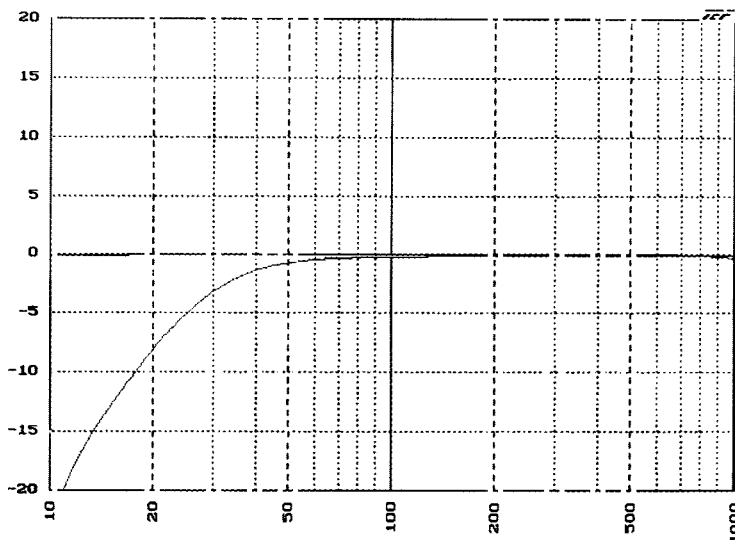


FIGURE 1: The P1250 includes very practical high-pass filtering switchable between Off (blue line), 15 Hz (green line), and 31 Hz (red line). Filtering is applied to both channels.

each channel's status of power on; input signal presence; output signal presence; limiting; protection mode (including muting during power up/down); and processor functions on.

The special filters selectable (for each channel) on the rear of the unit provide low-frequency boosts (see fig. 1) that conform to the response of specific loudspeaker tunings. A table is provided in the manual to assist users in matching their Theile-Small B_6 alignment (referred to as "step-down" tuning by E-V) TL-series loudspeakers. This extends the frequency response of these loudspeakers and implements excursion protection limiting in the amplifier to allow safe operation of these loudspeakers with the extended bass response. Other loudspeakers using the same basic loudspeaker design criteria can also make use of these filters. Contact your E-V dealer if you need specific information regarding the application of these filters with your loudspeakers. There is a 12-dB/octave high-pass filter to protect loudspeakers

not intended to produce subbass. The high-pass is switchable between 15 Hz, 31 Hz and Off (see fig. 2).

The LPN mode is intended to allow users of compact full-range loudspeakers to extend the low-frequency response in situations where they need the system to sound like it includes subwoofers. This cannot provide the output levels that large subwoofers can achieve at very low frequencies, but it will provide a very big sound from compact vented loudspeakers that can handle the power of the P1250. However, users should be aware that when small, less capable loudspeakers are used at high sound pressure levels, this much bass-boost may make them sound distressed and increase their harmonic distortion.

This amplifier is a fully professional unit that even includes com-

plete service instructions, bench-alignment procedures, and detailed schematic drawings; along with operating instructions in the concise owner's manual. Although there are settings on the rear of this amplifier that could easily destroy inappropriate loudspeakers, E-V gives the user credit that such settings will be applied only to loudspeakers that can handle them. This is especially true of the low-frequency

boost offered by the LPN mode. Although there is considerable protection circuitry to save a power-hungry compact SR loudspeaker, this setting could shred less robust units that cannot handle the P1250 output power capability. The very quiet variable-speed cooling fans use a well-managed thermal control system that keeps them from becoming the howling

monsters found in many amplifiers.

The P1250 amplifier is highly recommended for applications where its full output capability and processing can be used to advantage. The thoughtful application of filters matching common loudspeaker configurations will provide many users with a convenient alternative to a separate processor. This offers users all the bass enhancement of a processor tucked neatly inside of an excellent sound-reinforcement amplifier. Compact convenience for the road.

For those in need of a power amp without the additional processing, E-V has several other models that share the P1250's basic design and construction. The Precision Series includes: P1200, 370 watts/channel @ 8 ohms @ 1 kHz, list price \$1700; P1250, 370 watts/channel @ 8 ohms @ 1 kHz, list price \$1900; P2000, 560 watts/channel @ 8 ohms @ 1 kHz, list price \$2600; P3000, 850 watts/channel @ 8 ohms @ 1 kHz, list price \$3400.

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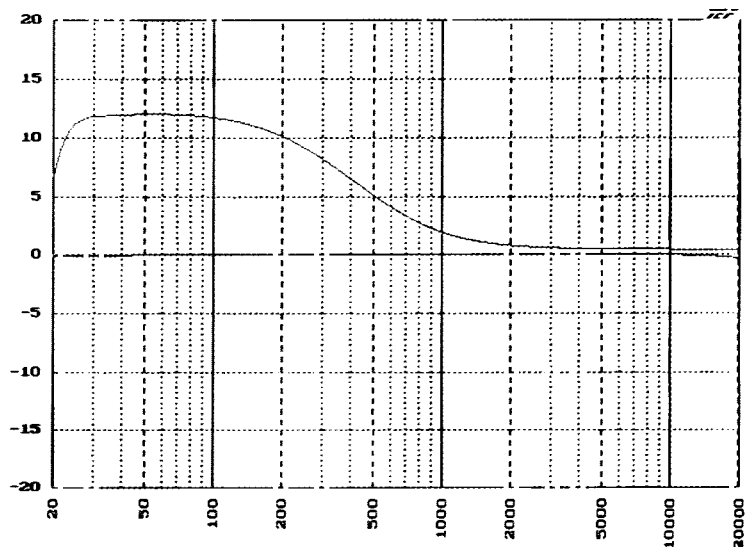


FIGURE 2: The P1250 processing features the LPN mode, which applies a second-order shelving filter at 50 Hz (red line) to increase the low-frequency output of smaller vented loudspeakers. The blue line shows amplifier response without processing on.