



Dynaco Improves Its Deluxe Preamp

The Equipment: Dynaco PAT-5, a stereo preamp-control unit. Dimensions: 13½ by 4¼ inches (front); 11¼ inches deep. Price: \$199 in kit form or \$325 factory-wired, (as Model PAT-5A); optional CAB-1D wood case, \$19.95; CAB-2D case (holds PAT-5 plus FM-5 or AF-6 tuners), \$21.95. Warranty on kit-built units: one year parts, service fee for labor, shipping costs paid by owner; on factory-assembled units: one year parts and labor, shipping costs paid one way. Manufacturer: Dynaco, Inc., P.O. Box 88, Blackwood, N.J. 08012.

Comment: With the Model PAT-5, Dynaco advances its product offering in the separate "deluxe" preamp-control class to a unit with better performance and considerably more features and versatility than in its previous PAT-4 (HF test reports, December 1967; reprinted in *HIGH FIDELITY'S Test Reports* annual).

The improved performance is readily noted by a comparison of test data on the two models. The PAT-5 has, for the same signal output, lower distortion, better signal-to-noise ratio, more linear response (especially true of its RIAA equalization characteristic), and better square-wave response. If these improvements are in sum what might be expected as a normal upgrading over the years by a conscientious manufacturer, the added features in the new preamp may leave the system perfectionist eager to put it to use.

For one thing, the PAT-5 has the relatively unusual option (for a separate preamp) of front-panel speaker switching. For another, it has a circuit-interrupt option called the EPL (for external processor loop), by means of which you can patch in a separate speaker equalizer or similar outboard signal-processing unit. This feature can be used with a quadriphonic adapter (returning two of its four channels to the preamp while feeding the other two channels to a back-channel amplifier). Or, by connecting the EPL left output to the EPL right input and vice versa, the switch can be used to reverse stereo channels. The EPL normally is wired after the monitor switches but before an input-follower stage that precedes the VOLUME and BALANCE controls. By special modification (described in the owner's manual) it can be wired after the input follower, though still ahead of those controls. This will allow the use of longer than normal (6-foot) cables to the outboard unit—which should have an input impedance of at least 10,000 ohms and an output impedance of 1,000 ohms or less.

The headphone output can be altered to suit different headphone impedances and sensitivities and even for use with some self-energized electrostatics (like the Koss ESP-

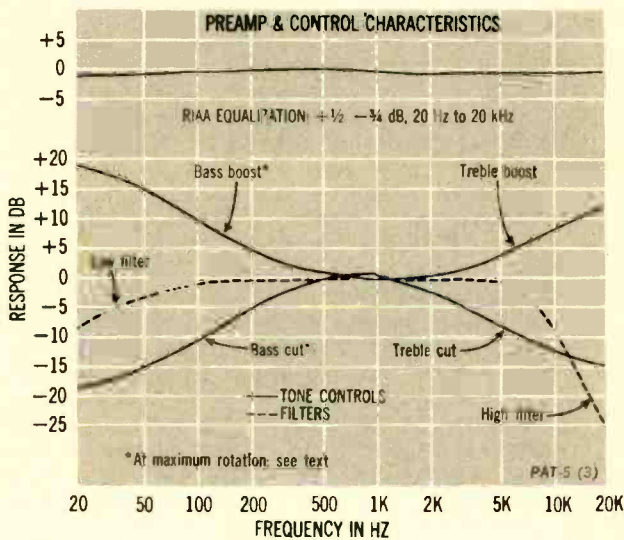
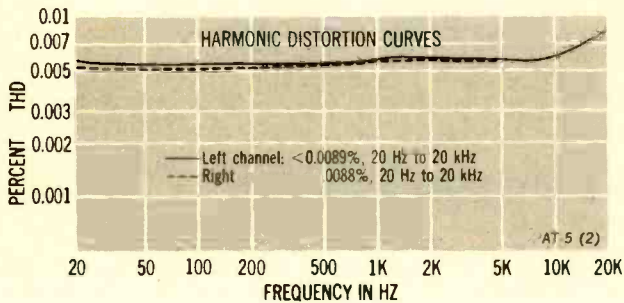
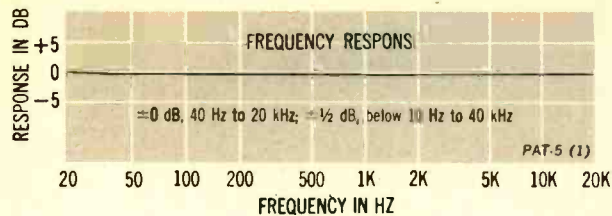
6). The power supply may be wired for AC supplies of 100 to 130 volts or for 200–260 volts, and can be used with current at either 50 or 60 Hz. While the PAT-5 POWER switch is used to turn the entire sound system on or off, it is designed to leave the preamp itself on at all times to eliminate turn-on and turn-off transients and to prolong the life of its internal components. With this arrangement, the unit draws 12 watts constantly. However, as a concession to "energy conservation purists," the manual offers instructions for modifying the wiring for "fully off" switching.

Some other interesting touches are the option for wiring the preamp to provide 6 dB of channel separation instead of complete A + B channel blending in the mono mode; tone controls that have most effect at the frequency extremes, particularly in the bass and at only moderate tone-control rotation (the bass turnover frequency drops automatically with the degree of either cut or boost, while treble turnover is fixed at approximately 2 kHz), so that the tone-control curves are tailored to some degree for speaker compensation and can be used for loudness compensation (there is no conventional loudness feature); a TONE CONTROLS DEFEAT button that removes the tone controls electrically from the circuit; and the option of altering either or both of the phono inputs for use with microphones, or to change the input gain characteristic for special pickups. In addition, Dynaco provides a table of optimum capacitance values for use with nine brands of phono cartridges and with fourteen makes of turntables, plus instructions for modifying input capacitance, if necessary, for best performance with your phono equipment.

Despite all that is "going on" here, the unit's front panel is neatly laid out with no sense of clutter. At the upper left is the INPUT SELECTOR knob with positions for PHONO 2, PHONO 1, TUNER, TAPE 1, TAPE 2, and SPARE. To its right is a similarly sized VOLUME control. Then there are four smaller knobs for CHANNEL BALANCE, BASS, TREBLE, and SPEAKERS. The BASS and TREBLE knobs are dual-concentric so that they control each channel independently. The speaker se-



Square-wave response



lector selects either, both, or neither of two separate stereo pairs of speakers—assuming, of course, that the output of the system's power amp is connected via the speaker panel at the back of the PAT-5. The headphone jack, too, becomes operative only if this wiring has been made.

At the lower left of the front panel are two buttons for tape monitoring. (Two recorders may be used, and you can dub from one to the other by selecting the source deck at

Dynaco PAT-5 Preamp Additional Data

Input characteristics (for 2 volts output)

	Sensitivity	S/N ratio
phono 1 & 2	2.8 mV	69 dB
tuner	210 mV	86 dB
tape 1 & 2	210 mV	86 dB
spare	210 mV	86 dB

the selector knob and monitoring the copying deck—assuming it has a monitor head—at the pushbuttons.) Then there are buttons for STEREO/MONO mode in each channel, one for the EPL feature, a pair for LOW and HIGH FILTERS, and the TONE CONTROLS defeat. The headphone output is to the right of this group, followed by the POWER switch.

The rear panel is fairly busy looking since it contains the special speaker hookup panel in addition to the regular pin jacks for signals going in and out. The speaker panel has color-coded binding posts (for the leads from the amplifier and those to the speakers) that accept banana plugs, spade lugs, or stripped leads. Signal input jacks are provided for PHONO 1, PHONO 2, TUNER, TAPE 1, TAPE 2, and SPARE. The EPL feature has its own IN and OUT jacks. There are, of course, the two sets of output jacks for feeding tape recorders, and there are two more pairs of jacks for the main signal output. The output of these pairs is identical; you can use one to feed your amplifier and the second for equalized output (via the tone controls) to, say, a tape recorder. Four AC convenience outlets (three of which are controlled by the front panel off/on switch), the unit's power cord, and a grounding screw complete the picture here. The preamp is protected by a 1/4-amp fuse that is wired internally.

The measurements made at CBS Labs match the preamp's published specifications or exceed them, sometimes to a spectacular degree. Distortion readings generally are one hundred times better than claimed. Response is a ruler-straight line across the audio band, being down by 1/4 dB at 10 Hz and 1/2 dB at 40 kHz. Controls, filters, and so on work as claimed. The only possible quibble we could have—and it is a very minor one—is that the low-frequency filter doesn't lop off the very deep bass quite as steeply as specified.

The PAT-5 obviously has been designed for a wide range of applications, including some that get into the "advanced hobbyist" or even professional area, but this should not deter one from considering it for use in a normal high-quality music reproduction system. Using this model can be as simple or as complex as you like, and even in its simplest role as a phono preamp and general control center it is a superb product.

CIRCLE 142 ON READER-SERVICE CARD

COMING NEXT MONTH

Ten—count 'em—equipment reports will appear in our October issue.