



Fig. 6 Performance curves for the "Oxford" amplifier and control unit.

ROGERS "OXFORD" AMPLIFIER AND CONTROL UNIT

Carrying out the British tradition of high-class workmanship, the "Oxford" amplifier and control unit built by Rogers Developments and distributed in the U. S. by Ercona Corporation offer a wide range of control in a two-unit amplifier system.

The power amplifier employs two 6CA7/EF-34's in a conventional Ultra-Linear Williamson circuit with Partridge transformers and adequate filtering. It is a

model of wiring neatness, and provides for different speaker impedances by a plug which makes the necessary interconnections between the transformer secondaries. The amplifier is fused, is equipped with plugs to supply power to the preamplifier and to an auxiliary tuner, and has two switched a.c. outlets for additional equipment.

The control unit is furnished with a laminated panel with the letters engraved through the opaque layer, allowing the light to shine through the translucent plastic. The unit is designed to be mounted behind a rectangular cutout, with the panel in front. Six controls are provided—volume (and on-off switch), bass and treble tone controls, low-pass filter, rumble filter, and selector switch. In addition, there are two jacks accessible from the front, one to feed a tape recorder and one into which the tape playback amplifier may be plugged.

The power amplifier is extremely conservative in design, delivering its 20-watt output with ease, although when overworked the same tubes can do somewhat more. The 1M distortion curves for the amplifier are shown in the bottom section of Fig. 6. The unit is capable of feeding loudspeaker impedances of 2-3 ohms, 6-8 ohms, 12-16 ohms, and 30 ohms, with the measurements being made with a 16-ohm resistive termination. For external equipment, such as a tuner, the amplifier can supply 475 volts at 40 ma (before filtering) for a tuner.

The upper section of Fig. 6 shows the curves obtainable from four of the possible curves—the remaining two are of less importance to U. S. users and are not shown, although let it be said that they follow the prescribed curves quite closely. The rumble filter is controllable between 25- and 60-cps cutoffs, with the curves being shown in the center section of Fig. 6, along with the various curves for the low-pass filter. The effect of the 25-cps filter is not detrimental to the music at all, but it removes any rumble frequencies that might be encountered from poor turntables—either in the home or at a radio station. The 60-cps position offers some noticeable

attenuation of the very low bass, but is helpful in severe cases of rumble. The low-pass filters are also sharp, cutting off at the rate of 30 db per octave, and the points of cutoff are well chosen to reduce hiss or needle scratch from noisy records and to reduce atmospheric noises.

The tone controls employ tapped switches, and provide two cut positions and three boost positions for bass, and three cut and three boost positions for treble. The resulting curves are also shown in the center section of Fig. 6. The operation of the control unit is quiet, and click suppressors prevent pops. There are four inputs to the control unit—two for radio, with one having a level-set control, one for phonograph, also equipped with a level-set control, and one for microphone. With the level-set controls at maximum, a 1-watt output is obtained from an input of .015 volts at the radio jacks, 4.2 mv at the phono jack, and 0.52 mv at the microphone jack. With a 10-mv signal fed into the phono jack, the tape-record jack provides a signal of 0.85 volts unaffected by the volume control, but it does follow the tone controls and filters. A radio input signal of .034 v. will give the same output at the tape-record jack with the level-set control at maximum, thus permitting the user to balance the inputs to furnish the same signal at the input to the tape recorder. Plugging into the tape replay jack cuts off all other inputs, and provides the same gain as from the radio input.

Mechanically the two units are well built. The input plugs furnished are not standard with U. S. practice, but we have long deplored the poor quality of the usual phono plug. For equipment of the general high quality encountered in hi-fi components, we believe that a better plug should be made available. And while these plugs are undeniably better, the fact that they are not interchangeable with U. S. phono plugs might be considered a disadvantage, though it shows up principally when one has to test many different units. However, in a permanent installation the non-standard plugs should cause no trouble.

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Fig 7 (below). The Rogers "Oxford" control unit, which is designed to work with the power amplifier shown in Fig. 8 (right). Both are of excellent appearance and neat construction.

