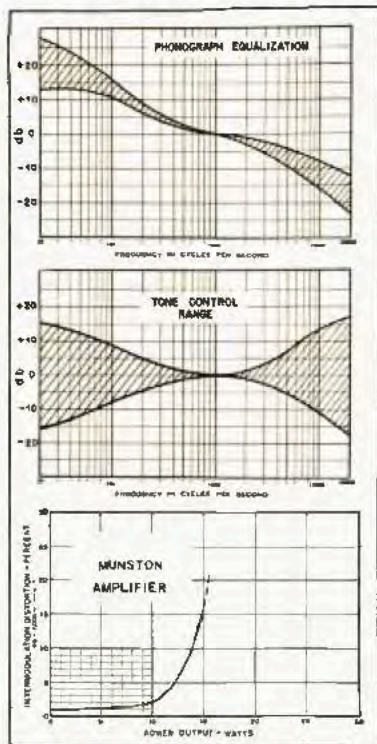


Equipment Report

12-Watt Munston Amplifier-Preamplifier—Miratwin MST-2D Magnetic Pickup Cartridge—Hermon Hosmer Scott 311 FM Tuner



NEWCOMERS to the hi-fi fold who have begun to collect records since the introduction of the long-playing microgroove type in 1948 have increasingly less need for a variety of phonograph equalization curves in their equipment than the old timer who has been collecting records for many years. It has long been the prediction of this observer that when there was sufficient standardization of recording characteristics there would appear an amplifier which was designed to accommodate the basic curve—such as the RIAA has become, practically—with such other variations as might be required being supplied by “touching up” with the bass and treble tone controls. With the introduction of the 12-watt Munston Amplifier, this department modestly admits, “We told you so.” In all seriousness, however, the design philosophy of this amplifier offers several features which make it possible for the music lover to fulfill his desires for a suitable amplifier at a relatively low cost.

While there is no denying the need for a wide variety of recording characteristic curves in an amplifier to be used by the veteran record collector who has all kinds of records perhaps dating back to the twenties, it is equally certain that a collection of LP records can be played with a reasonably close match of characteristics provided the amplifier has a properly adjusted phono curve built into it, and suitable flexibility of the tone controls. AUDIO

has long maintained that exact certainty of the equalization to published curves was not the panacea that it would appear to be—there are too many other variables. Carried to extremes, the “hypercritical” listener might insist on slavish duplication of all possible curves. He would then set the controls to correspond to the curve allegedly employed by the recording company in making the original tape and sit back and listen, even though the music didn’t sound “right.” If we may assume that the listener’s system were perfect, this might be a possible solution. But there is always the possibility that the monitoring speaker in the mixing booth could be deficient in bass, for example, and the engineer would therefore boost the bass in the recording so it sounded right in his monitoring speaker, which would make it overbassy in a proper system. Or perhaps the microphone position was not ideal, and compensations were introduced to make it sound like the producer wanted it. In any case, the listener doesn’t have to listen to it with the specified curve—if it is not exactly to his liking, he should make changes in his settings until it is.

The Munston amplifier has only one phonograph position on its selector switch—a position which gives a medium amount of bass boost and a fixed rolloff of approximately 9 db at 10,000 cps. On the TREBLE control, four designations are indicated—points where the control should be set for four specific curves. Similarly, the phono position introduces a fixed amount of bass boost, and marked points indicate where the bass control should be set to give a curve corresponding to the markings. With this type of equalization, the listener is encouraged to “cheat” the controls slightly in the vicinity of the indicated point if he feels that the reproduction is not perfect—

Fig. 1. (left). Performance curves for the 12-watt Munston Amplifier. Fig. 2 (below). Over-all schematic of the Munston.

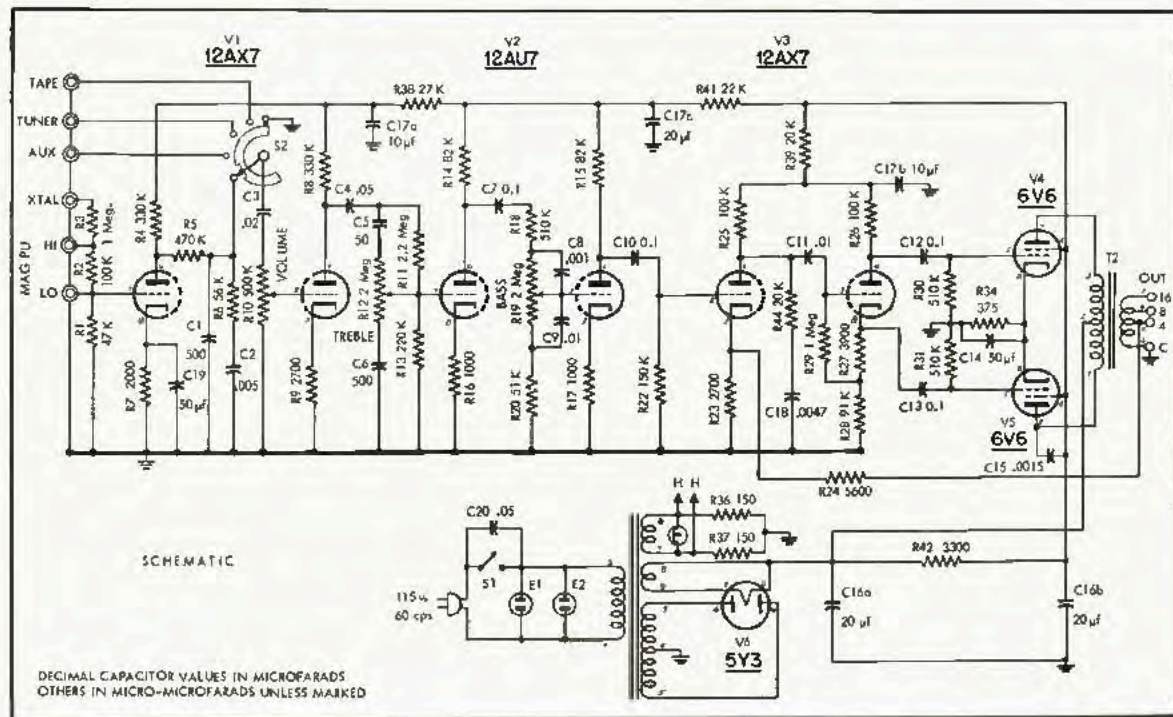




Fig. 3. Satin black case and brushed brass escutcheon present "decorator-type" appearance to the Munston Amplifier.

assuaging his conscience, if he must, with the excuse that "The knobs are probably not set right anyhow."

The response curves obtainable from the unit in the phonograph position are shown in the upper section of Fig. 1 over the range of indicated curves—further equalization may be obtained by going beyond the indicated points, both above and below the shaded portion. The tone-control action—in reference to any of the three high-level inputs—is shown in the center section, and the LM distortion is shown in the lower section. Figure 2 shows the schematic of the amplifier, and Fig. 3 portrays the external appearance of the unit, which measures 11½ in. wide by 9¾ in. deep by 4 in. high.

Performance

Sensitivity of the amplifier is relatively high, with an input of 2.4 mv giving the standard 1-watt output on phonograph, and an input of 25 mv giving the same output on the high-level inputs, both with the volume control at maximum. Hum and noise was measured at 66 db below 1 watt at normal settings of the volume control and with the tone controls flat. Strangely enough—but a plus feature rather than minus—the hum and noise measured the same whether at phono or high-level settings of the selector switch, both inputs being shorted.

Three phono input jacks are provided—accommodating both low- and high-level magnetic cartridges and crystals or other amplitude-responsive pickups. Three high-level jacks accommodate inner, tape, and auxiliary inputs, as indicated on the selector switch. 4-, 8-, and 16-ohm outputs are provided, and the amplifier is stable with practically any type of output load. Power consumption is 62 watts at the 1-watt output.

For the music lover who is looking for a maximum of simplicity and sufficient ease of operation that the distaff side of the family can soon learn to feel comfortable with the "system," the new Munston seems to be a practical answer, for it does give good listening quality and it is easy to operate. Added to this is a neat brushed brass escutcheon fronting a satin black case which provides adequate ventilation and furnishes the is for the beauty that does.

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MIRATWIN MST-2 MAGNETIC PICKUP CARTRIDGE

The uniformly high quality of magnetic pickups already on the market might well seem to act as a deterrent to any manufacturer who might contemplate introducing another, but the new Miratwin was introduced nevertheless, and is likely to entrenched itself firmly amongst the others because of some of its features.

The Miratwin—built by the manufacturers of the Miracord XA-100 record changer and the Miraphon XM-110A manual record player—comes in two types, depending on the stylus supplied. The MST-2A is equipped with two sapphires, and the MST-2D is equipped with a sapphire stylus for standard grooves and a diamond for microgrooves. Both models are otherwise identical, and consist of two electrically and magnetically separate units permanently mounted back to back, as in Fig. 4, and carried in a mounting that switches electrical outputs as the pickup assembly is rotated so that the leads from the pickup housing do not twist back and forth with rotation of the pickup. A separate connecting lug on the mounting permits grounding the frame through the usual third pin on the pickup housing.

The stylus assembly of each of the pickup units may be removed easily using only one's fingernails, and when replaced is seated accurately because of a locating tab. Thus the styli can be changed easily by the user without the need for returning the



Fig. 4. The new Miratwin magnetic pickup cartridge.

pickup to the dealer or factory. The stylus shoe has sufficient vertical compliance to prevent damage in case the pickup is dropped on the record.

As should be expected from a high-quality pickup, response is flat within ± 2 db from 20 to 18,000 cps on LP Vinylite records, and from 20 to 22,500 cps on shellac 78's, using the correct stylus for each, the usual increase in the high end on shellac pressings is, of course, due to decreased compliance of the record material over the softer Vinylite.

Using a Cook Series 10 test record with a stylus velocity of 9 cm/sec at 1000 cps, the output of the LP side was measured at 49 millivolts, which matches the advertised claim for 55 mv at a 10-cm/sec stylus velocity; similarly, measured output for the same record using the standard stylus was 41 mv—both values being relatively high. With the microgroove stylus, a peak of about 1.1 db was noted at 17,000 cps, and output was down 3.3 db at 20,000 cps, the highest recorded on the Cook disc. Inductive hum pickup was almost unmeasurable—being of the same order of magnitude as that usually found with moving-coil types with impedances of the order of 2 ohms or so. No condition could be found where hum picked up from the phonograph motor could be heard in the loudspeaker with amplifier controls set for normal program output. Yet the impedance of the Miratwin is approximately 1450 ohms on the LP side, 910 on the standard. This is composed of inductances of 385 and 248 millihenries for LP and 78, respectively, and resistances of 1400 and 875 ohms for the two sides. Stylus compliance is stated to 4.2×10^{-6} cm/dyne, which is about normal for a high-quality magnetic pickup, and effective mass is listed at approximately 3 mg, which is also about normal.

Mounting is simplified by the construction of the cartridge, which is held in the "chassis" by the shaft of the turnover knob. The entire pickup assembly can be removed from its holder by pulling the knob and shaft out, allowing the unit to be lifted out and giving access to the holes for the mounting screws, which are furnished. Slotted holes in the holder provide some latitude in mounting.

The Miratwin tracks without distortion up to stylus velocities of 20 cm/sec (the highest levels of tones available on discs for testing) and shows no audible distortion of records with stylus velocities as high as 28 cm/sec. Needle chatter is desirably low, and there is no apparent magnetic pull exerted against a ferrous turntable to increase stylus force when only one record is between stylus and platter.

The cartridge has a total weight of 18 grams, and a load resistance of 50,000 ohms is recommended, resulting in a practical limit of 200 μ f for the connecting leads—which means about eight feet of the usual low-capacitance microphone cable (25 μ f/ft). The recommended stylus force for changers is 8 grams, reducing to 6 grams for manual turntables with high-quality arms.

The instruction booklet supplied with each Miratwin cartridge includes a serially-numbered machine-run response curve showing output at eight frequencies resulting from actual measurements, thus showing the user what he has a right to expect from his pickup.

With the relatively high output and very low hum pick-up, the Miratwin cartridge is especially well suited for any installation where a strong a.c. field has been causing trouble, but on the count of listening quality alone it must be considered one of the better-quality magnetic pickups.

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