

ELAC STS 240D CARTRIDGE

AMONG my recent correspondents have been three English people who have taken up residence in Western Germany, and in each case the subject of the letter was the comparative quality and variety of the audio equipment available at equivalent prices in the two countries. The writers, who are unknown to each other, were in agreement that we are at present some way ahead of Germany in these respects, at least as far as disc reproducing equipment is concerned, but also that some of the German-made apparatus is of very high quality. One of the prime concerns of any equipment reviewer is to keep his outlook fresh and his enthusiasm undiminished, and this information from Germany, coupled with the fact that the majority of moving-magnet cartridges on the British market are of American origin, provided an added stimulus to our appraisal of the latest in the line of Elac pickups to be offered here. In fact, the moving-magnet principle as used in American pickups was invented by Elac, who hold the master patents.

The cartridge is similar in shape to the Decca *ffss*, but smaller, nicely finished in anthracite grey, and weighs, with its necessary mounting bracket, 10½ gm. All tests were conducted with the cartridge mounted in the standard shell of the SME 3009 Series II arm. The makers state on their instruction sheet that tracking weight may vary between 2½ and 4½ gm., according to conditions, but recommend that a value between 3 and 4 gm. be used. Preliminary tests were therefore carried out, as usual, to determine optimum pressure for universally good tracking of the grooves, including those of discs known to be troublesome. This procedure established tracking weight at 3½ gm., and this was not subsequently varied, save when the head was given a brief trial in an AT.6, auto-change unit (since the makers suggest that it may be used in auto-changers), where it was

found necessary to increase the pressure to 4½ gm.

Listening tests produced sounds of pleasing quality to which no one could take exception. Best results were achieved by the use of a little bass and treble lift (plus 1 on the controls) and a gentle roll-off above 10 Kc/s by the use of the low-pass filter. These settings seemed to give a sensibly flat response up to about 15 Kc/s, with clean reproduction over the range.

Measurements showed that output was high for a magnetic cartridge: 2mV/cm/sec at 1 Kc/s per channel; a useful feature. Channel balance was excellent. The measured response and crosstalk are shown on the graphs and confirmed expectations arising from the listening tests. Response is not quite up to the maker's claim for a maximum variation of ±2 dB up to 15 Kc/s, but is nevertheless satisfactory, and separation is outstandingly good, never less than 20 dB between 1 and 12 Kc/s.

The recommended load limits are 33 and 51 K. We used 47 K in our tests. The use of a 35 K input impedance would tend to decrease HF response and smooth out the slight hump in the curve at 15 Kc/s.

Compliance was found to be considerably less than stated, 4.5 c.u. in both directions, against the specified 8 c.u.

As usual with moving-magnet cartridges, the waveform was not pure in the upper-middle register, but no audible effects of this were apparent.

The vertical tracking angle is arranged to be approximately 15 degrees, in accordance with modern practice, and the cartridge is fitted into a Mumetal housing, which provides a complete hum shield, and proved to be very effective in practice.

The stylus is a 0.7 mil tip radius diamond, the 'compromise' type, of excellent shape and first class finish. A stylus of this size has certain advantages at comparatively high tracking

pressures and for playing older mono records, as is well known, but also disadvantages in the reproduction of modern stereo discs. There can be no doubt that 0.5 mil is the best size for a spherical stylus for stereo, and that the best compromise is no compromise at all, because, properly set and properly set-up, and given a maximum tracking force of not more than 3 gm., the elliptical stylus with a major axis around 0.6/7 mil and a minor axis of 0.2/3 mil gives the best possible reproduction from both mono and stereo discs; but there is no denying that the use of such styli raises problems for the designers and manufacturers of pickups, and must inevitably add something to the cost of the finished product.

Final listening tests with the STS 240D embraced the usual wide range of recordings of British and foreign origin, and, under the stated conditions, the cartridge gave no trouble of any kind, and provided consistently satisfactory results in mono and stereo, with good stereo separation, and firm round tone without edginess. We feel that it would be an advantage to offer this head with an alternative stylus of 0.5 mil tip radius.

This is a distinctly useful cartridge. Its higher than normal output makes it particularly suitable for use with amplifiers of medium gain, and it offers the possibility of considerably improved results to users of auto-changers who possess amplifiers with magnetic pickup inputs. The basic principle of the STS 240D is well known and has been well proved. Some further refinements in its application could make the Elac cartridge a serious competitor in the highest flight. In its present form, while it may not possess every virtue, it is very commendably free from vices.

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MANUFACTURER'S SPECIFICATION. Stereo moving-magnet pickup cartridge. **Frequency response:** 20 c/s-15 Kc/s ± 2 dB. **Output:** 2.2 mV/cm/sec. **Channel balance:** within 2 dB. **Channel separation:** 24 dB at 1 Kc/s. **Recommended load:** 33-51 K. **Inductance:** 650 mH. **Compliance:** 8 c.u. **Tracking force:** 2.5 gm. (max. 4.5 gm). **Stylus:** 0.7 mil. diamond. **Vertical tracking angle:** 15 degrees. **Weight:** 10.5 gm. (inc. mounting bracket). **Price:** £15 9s. 9d. (inc. tax). **Manufacturer:** Electroacoustic GMBH, Kiel, W. Germany. **U.K. Distributor:** Mitchell Enterprises Ltd., 61 West Street, Dorking, Surrey.

