

*Pickering's XUV/4500-Q:
A Truly Wideband CD-4
Compatible Cartridge*

Pickering XUV/4500-Q four-channel discrete, SQ, QS, and stereo cartridge. Weight: 6½ grams. Price: \$139.95. Warranty: "Limited." Warranted against manufacturing defects (with the exception of stylus wear). Owner pays shipping one way.

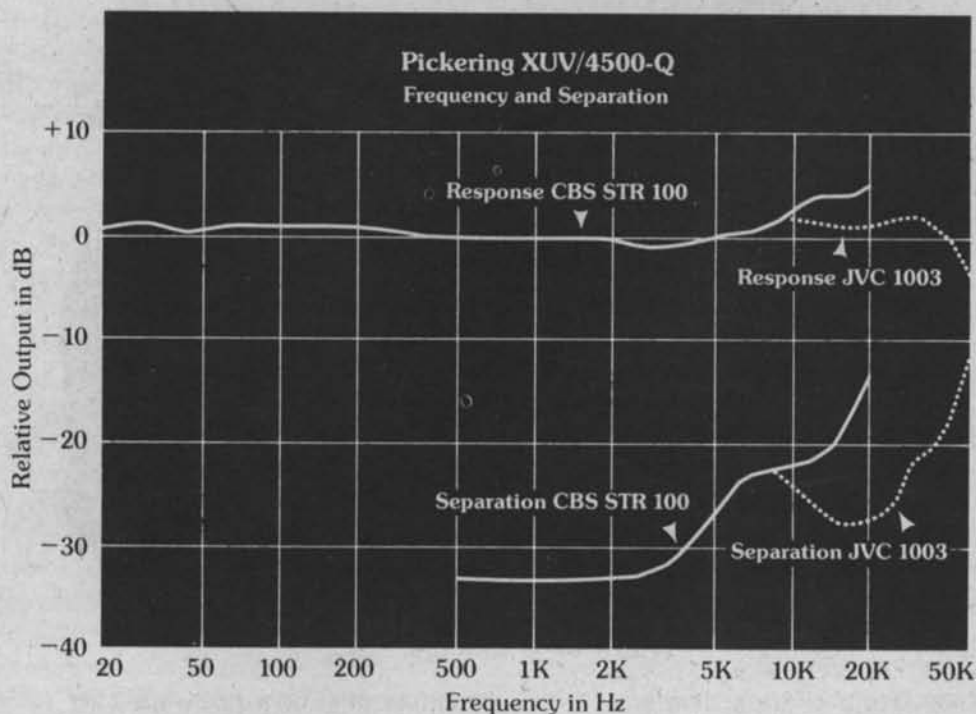
The XUV/4500-Q tops the Pickering line of phono cartridges. It is billed as "a cartridge that can play both stereo and 4-channel discrete records with total precision at a 1-gram tracking force." Well now, in our book, "total precision" is a virtue approached but never attained. But that hyperbole aside, the XUV/4500-Q is an outstanding cartridge.

At a price of \$139.95, you have a considerable investment locked up in this new Pickering cartridge. Perhaps to ease the pain somewhat, Pickering has packaged it in an attractive genuine leather, hinged-lid box. They've kept the advertising imprints to a minimum, so you can use the case as an attractive cigarette holder or jewelry box. But you didn't plunk down that cash for a cuff-link case; what's inside? The XUV/4500-Q is a relatively small cartridge mounted in an effective magnetic shield. As is true of the better recent Pickering's, it comes complete with a pivoting soft brush that rides just ahead of the stylus to wipe away any record dust. We judged it very effective in removing the light

dust that settles on a disc while it is playing. This keeps the stylus clean so that distortion (from fuzz balls) and extraneous clicks are minimized. Since dust accumulation on the stylus can be a major cause of poor CD-4 performance, we think the inclusion of the brush is an excellent idea. Unfortunately, this leaves no room for the addition of a flip-down stylus guard. Pickering's V-Guard feature does help to protect the stylus from accidents, but users should still exercise some care.

Three styli are available for this XUV cartridge: the D4500Q Quadrahedral for four channel and stereo; the D4541, a 0.001-inch conical diamond for older LPs; and the D4543, a 0.0027-inch conical diamond for the 78-rpm buff. Rated tracking force is 1 gram on the Quadrahedral, 2 to 5 grams on the 1-mil LP, and 3 to 7 grams for the 78-rpm stylus. We tested the cartridge with the Quadrahedral stylus, which we would recommend, not only for four-channel discrete discs, but for any good stereo or matrix collection as well. Pickering's Quadrahedral has a cross section similar to, but not identical with, the Shibata-type stylus. Pickering claims its 0.0003-inch-by-0.0028-inch stylus makes more consistent contact with the record than does a Shibata.

The XUV/4500-Q is rated for both discrete



four-channel (CD-4 or Quadradisc) use as well as stereo and four-channel matrix discs. Now many cartridges make that claim, but we have found that many of them have either a low output and frequently an irregular response and poor crosstalk in the "carrier" band (20 kHz to 50 kHz), or poor tracking ability and response in the base band. In short, when playing stereo records, many CD-4 cartridges just don't sound as good as a really fine stereo-only pickup. Pickering claims to have solved this problem, and we were anxious to see.

We made all of our measurements on a Technics SL-1100 player with a 1-gram effective tracking force. (Note: To achieve a 1-gram effective force, you actually set the counterbalance to 2 grams, because of the 1-gram weight of the brush. Pickering recommends that the antiskating adjustment be set at the indicated—not the effective—tracking force. Thus, to achieve optimum 1-gram tracking, set *both* the force control and the antiskating adjustment to 2 grams.)

Since this is a CD-4 compatible cartridge, we loaded it with 100,000 ohms and 100 pfd, the CD-4 standards. (Pickering assures us that the

baseband response will be the same if the XUV/4500-Q is loaded with 47,000 ohms and 275 pfd, as is typical of stereo preamps. But then, of course, you don't have CD-4 capability.) First we measured the baseband (normal audio region) response and separation using the CBS STR-100 test record. Then we switched over to the JVC TRS-1003 to measure response and separation in the carrier region. The results are shown in the graph. We ran into some discrepancies, as you can see—not really due to the cartridge, but more likely to the test records, or, more precisely, to the interaction of the test records and the stylus. Using the STR-100, the response was flat +1 1/4 dB, -1 dB from 20 Hz to 7 kHz. Then there was a gradual rise to +5 dB at 20 kHz, the upper end of the CBS disc. Switching over to the JVC disc, which overlaps the CBS STR-100 in the upper region, we got better test results. Instead of being at +3 dB at 10 kHz, (CBS), we were at +1 1/2 dB (JVC). At 15 kHz, we were up only +1 dB (JVC) compared with almost +4 dB (CBS). At 20 kHz, we were at +1 1/4 dB (JVC) compared with +5 dB (CBS). From there on out the response held up extremely well, being down only 4 1/2 dB at 50 kHz. As measured on the STR-100, the midband

separation was excellent at 33 dB, with more than 20 dB of separation out to 15 kHz. From there, the separation dropped off to 13½ dB at 20 kHz. Again, the results were different (and better) with the JVC disc. Separation was 24 dB or better from 10 kHz to 25 kHz and then dropped off to 20½ dB at 35 kHz, 15 dB at 45 kHz, and 11 dB at 50 kHz. Unfortunately, test records are different. Because of the better separation measured on the JVC disc (something for which a cartridge cannot compensate), we would "marry" the curves at 10 kHz and rate the cartridge as having a response of ± 2 dB from 20 Hz to greater than 45 kHz, with 50 kHz being 4½ dB down. We would rate the separation as 33 dB in midband and better than 20 dB out to 35 kHz, 15 dB at 45 kHz, and 11 dB at 50 kHz. These are the most impressive figures overall that we have measured on any wideband cartridge and have not been bettered in any significant regard by any stereo-only pickup in the baseband region. An outstanding engineering job by Pickering.

The total harmonic distortion at 1 kHz from a 5 cm/second rms lateral velocity cut was 2.2 per cent. Output at this standard level was 4.2 mV, and the channel balance was excellent, the right being less than ¼ dB below the left. Response,

separation, etc., are not all that make up a good cartridge. The ability to track high modulation levels throughout the band without breakup or audible distortion is of paramount importance for clean-sounding reproduction. Here again, many cartridges are found wanting, especially wideband ones when tracked at a low force. But again, the XUV/4500-Q was superb. At 1 gram—a very low force for a CD-4 compatible cartridge—the XUV/4500-Q was able to trace all of our test records out to a level of +15 dB—and, on some bands, to +18 dB.

Our audition confirmed the test results. At 1 gram we were able to track the most technically tortuous records in our collection (including all bands of the Shure ERA III disc) with no audible signs of breakup. The sound was exceptionally clean, transparent, and extended. We were particularly impressed by the transient response of the cartridge and the clarity of the highs. This cartridge has a bright sound, perhaps a trifle brighter than some listeners are accustomed to. But having listened to a good number of master tapes over the years, we would say that the XUV/4500-Q comes closer to duplicating master sound quality than any cartridge we have heard to date.

CIRCLE 135 ON READER-SERVICE CARD

LAB TESTS/LAB TESTS/LAB TESTS/LAB TESTS/LAB

Jensen's C9852: Exceptional Speakers For Automobile Use

Jensen C9852 5¼ inch coaxial car speaker system. Dimensions: grille, 6¾ inches square; depth behind panel, 2¾ inches. **Price:** \$86.95 per pair. **Warranty:** "Limited." 1 year; user returns to service center or factory.

Jensen's C9852 (which includes a pair of speakers, grilles, and two 15-foot sets of connecting cables, mounting clips and screws) is expensive as automobile speaker systems go. But the speakers pack a lot of features often missing in less costly units. For one, they are coaxial speakers incorporating a 5½-inch woofer and a tweeter with a piezoelectric driver. The magnet used on the woofer is exceptionally large and powerful for an automotive speaker, employing 20 ounces of Syntox 6, a powerful magnetic ceramic. (The less expensive C9853 at \$71.95 is essentially similar, but with a 10-ounce magnet.)