

Fig. 1—Derived frequency response.

tional gimmick for that new line of restaurants, Lirpa Lunches, but upon consulting the instruction manual we discovered it was an amplifying device for the cartridge. After close examination we decided it was to be used in place of a more conventional electronic cartridge preamp.

In keeping with the unusual design approaches used in the Model 5 Kg tonearm, the accompanying cartridge is totally unlike any other modern cartridge we have ever tested. Basically it is circular in shape, about 2¾ inches in diameter and approximately half an inch thick. On the circumference, 25 degrees from being perfectly vertical, is the stylus assembly which is among the most rugged that this reviewer has ever tested. This is obvious by simply looking at it, since it's over half an inch long, is 3/64 inch in diameter, and is solid metal. Apparently the Lirpa designer was not overly concerned with the problem of stylus mass. The cantilever is secured to the cartridge by what appears to be your basic, run-of-the-mill set-screw.

If one were to view the cartridge from either side, one would notice some highly unusual design features. On the side not facing the record is a circular piece of mica film about 2¼ inches in diameter (more than likely the mica referring to "moving mica" in the manufacturer's specs). This is the first cartridge that this reviewer has encountered incorporating such a transducer. On the side of the cartridge facing the center of the record is a bent piece of metal tubing obviously designed to mate with the connecting section of the tonearm. The mounting seemed very positive though no locking scheme was provided. Just ahead of the cartridge assembly is a dust bug type brush; Prof. Lirpa is obviously concerned about record hygiene. Also, on the very top of the cartridge is a slot which, I discovered after much puzzlement, is the anti-skating device holder. Evidently, in an attempt to reduce costs, the usual weight or spring-type compensators have been foregone in favor of the dubiously effective penny-on-cartridge arrangement.

Measurements

We installed the Lirpa Model 5 Kg tonearm and cartridge on a Technics SP-10 MkII, the only turntable we know of that can rotate with two kilograms of pressure. In testing this rather unorthodox tonearm and cartridge, we were required to use some rather unorthodox testing procedures. One method consisted of affixing (with Scotch Magic Tape) a ce-

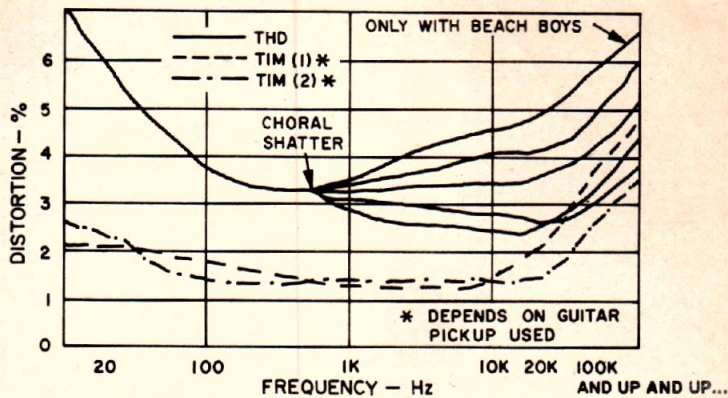


Fig. 2—Distortion vs. frequency.

ramic guitar pickup to the interior of the amplification horn. This was necessitated by the fact that the Lirpa cartridge lacked any facility for connecting an amplifier (in the conventional sense) to it via an electrical conductor (a wire, you clod).

In our preliminary setup we set the vertical tracking pressure at the recommended 1.75 kg. A suggestion in regard to one human engineering aspect of the Lirpa tonearm might be in order at this point. This is one of the few tonearms that lacks the facility of a calibrated tracking force scale. Though not an insurmountable inconvenience, it is just a might tricky slipping a bathroom scale (as recommended in the instruc-

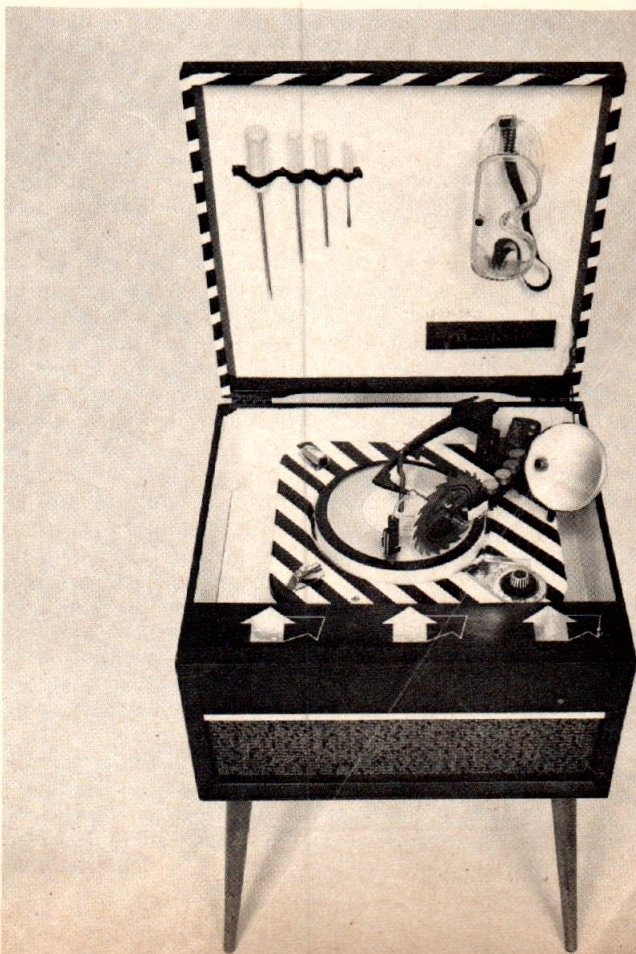


Fig. 3—Response to a 1-kHz square wave.

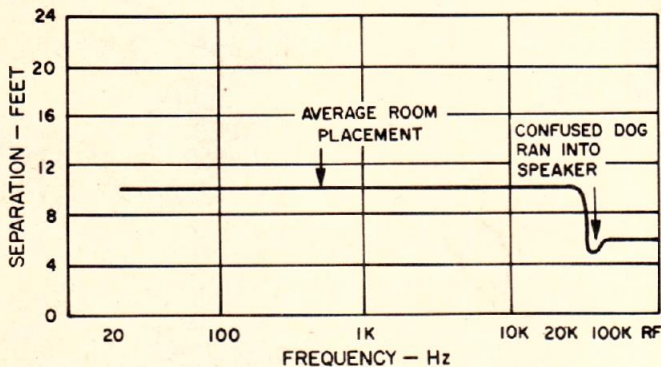
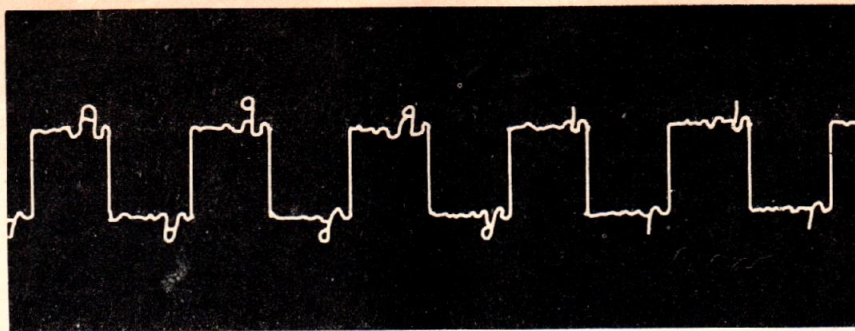


Fig. 4—Separation and frequency response of the Lirpa Model 5 Kg tonearm and cartridge combination.

tion manual) between the tonearm and the turntable while trying to adjust the tracking force. Even trickier is the prospect of holding the scale vertically and setting the tonearm against it while setting the anti-skating (calibrating in penny-weights for some inexplicable reason).

When checking the suggested anti-skating bias with the blank track of our test record, we encountered a somewhat disturbing problem. While lowering the tonearm onto the blank section of the record, we were taken aback as we watched the stylus literally dig a gouge into the whimpering disc of vinyl and, in fact, carve its way through completely. We therefore considered it a sound proposition to simply go by the book and follow the anti-skating setting suggested in the instruction manual (though we know as well as you do that the Lirpa manual is undoubtedly not a book to be trusted).

Considering our lack of vertically cut test records, we are hereby forced to accept the Lirpa claim that their cartridge resonates at a frequency of ~ 20 Hz. If it is any consolation to prospective buyers (regardless of how token their number may be), we did notice a prominent dip in the frequency response around 20 Hz (positive, mind you). We also noted that there was a somewhat disturbing amount of flaked lacquer (there is the outside chance that we used a 78) left on the record after being used with the Lirpa Model 5 Kg tonearm. Though not confirmed, several members of our listening panel claim they heard the record in question whimper while being played with this (savage?) tonearm.

Nonetheless, we were not able to measure its resonance while playing a laterally cut disc. We must say (painfully) that Prof. Lirpa has in fact licked the problem of arm resonance. It was obviously below the sensitivity threshold of our test equipment. But one must consider that, with few exceptions, lead "pigs" are not known for resonating excessively.

The arm fell well above what we consider the acceptable limit in regard to bearing friction (question: what bearings?). Both the vertical and horizontal pivot friction were in the region of 500 g. Needless to say, the vertical friction is just a

shade too high to safely track warped records without increased distortion. The mass of the tonearm also sets a record for our test lab. The model designation, 5 Kg, is not simply a catchy number but is also the mass of the tonearm (with cartridge installed). The mass without the cartridge in place was around 4.5 kg.

As for the cartridge, our first job was to determine the frequency response. After weighting our test results for the frequency response of the guitar pickup that we used for our mechanical-to-electrical transducer, we achieved the following result: One very well-erased test record. After three attempts we decided it was a futile effort to find a test record that could withstand the abnormally high tracking weight of the Lirpa tonearm. We considered mounting the cartridge in an alternate arm but the cartridge fittings were unlike those on either our SME or our Audio-Technica. In addition, the aluminum alloy tubes of both of these tonearms were too flexible to withstand the weight of the Lirpa cartridge, and we were left with two bent, totally unusable tonearms.

The hum and noise of the cartridge was generally pretty good, but it can vary depending on the positioning of the guitar pickup on the horn and if a wind is blowing on it. In attempting to measure the distortion we were faced with the same problem we encountered while trying to determine the frequency response. If listening tests are any indication, the IM and THD figures were quite high in that many a solo sounded very much like an entire choir singing consistently out of key.

Among other things, the Lirpa cartridge will never be noted for being a compliant cartridge. It isn't so much that it won't stay in the groove as that it won't yield to the modulation of the groove. It is one of the few cartridges that will not mistrack the fifth level on our Shure ERA-IV test record and is one of the few, if not the only, cartridges in existence that will totally erase this passage.

What can one say after seeing four perfectly good test records go to waste while being played with a totally unyielding cartridge and tonearm combination? This is not to mention the Health Queen bathroom scale that was so brutally destroyed while we attempted to set the tracking pressure.

The instruction manual calls it "the advent of a totally different technology." I'm not one to argue the point, as a moving-mica cartridge certainly is something new to me — but the manufacturer never reveals what is so great about this new technology. The manual also states that the Model 5 Kg has a sound totally unlike any other cartridge on the market today. This point, too, I won't argue since up to the first three playings it is quite different, and after that the difference in sound becomes even more apparent. In some circles it is known as total silence, and I don't mean aside from the music (good); I mean instead of the music (bad).

I won't go any further into the details of what this tonearm and cartridge combo sounds like or what it does to records, as I am afraid I might break out in tears. Suffice it to say that the Lirpa Model 5 Kg combination is completely different from any other I have heard or seen.

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