

Phono Curve Data For Indolent Engineers

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Originally designed for use with the General Radio Graphic Level Recorder, the new CBS glide-tone test record can be used with any good quality audio graphic level recorder by transposing the resultant curves.

IF YOU ARE INVOLVED with development, design, or testing of phonograph equipment, the new Columbia STR100 record will relieve you of much tedium in recording response data. Of course, this assumes your place of work has an automatic or semi-automatic recording curve tracer of some sort.

It really doesn't matter what kind of curve recording equipment you have, provided it can do the following:

1. Record level variations in decibels on your coordinate paper.
2. Move with a constant and repeatable speed.
3. Provide some kind of monitor so you can start the machine when the 1000-cps reference tone stops.

Your apparatus will need a positive start control plus enough dynamic range to record the corresponding channel crosstalk. You'll want to record the crosstalk curve as directly related to the given channel trace. To obtain a frequency lineup, you will have to arrange some means of monitoring the 1000-cps calibrating signal at the beginning of the glide tone. When you hear this signal stop, start the curve tracer going.

When the 1000-cps reference tone stops, the glide tone starts at 40 cps. At 20,000 cps the gliding signal stops thus indicating the termination of the test. It is important that you be able to locate the start and end points definitely on the trace made by your apparatus. It is the key to the method of transposition to standard audio frequency response paper. Once you have the mechanics of curve tracing worked out and can identify the start and stop points of the glide tone on your trace, the rest is easy.

The glide tone recording is made using a logarithmic rate of sweep. So you'll need an accurately printed or drawn logarithmic frequency reference chart of some sort. Clearprint Paper Co. No. T1

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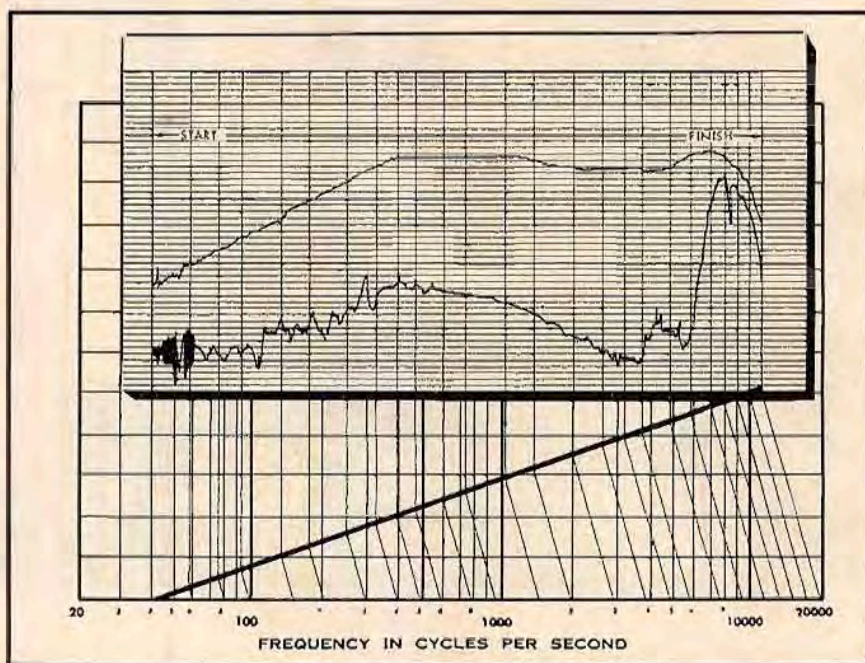


Fig. 1. An example of transposing a curve to standard form.

frequency paper is one. It has semilog printing and shows calibrations from 20 to 20,000 cps.

The procedure is as follows:

1. Draw diagonal from finish line on curve (20,000 cps) to 40-cps point on standard paper.
2. Draw diagonal from finish line (intersection of line drawn in step 1.) to 20,000 cps point on standard paper.
3. Extend lines from curve tracer paper to line drawn in step 1.
4. Now extend these same lines from point where they intersect step 1. diagonal to frequency coordinate line at the same angle as the line drawn in step 2.

Explain your needs to your friendly draftsman and show him Fig. 1. He or you can prepare a custom transparency or something to locate accurately any frequency on your own trace.

As a result of this revelation, we now look forward to a whole rash of vastly improved phono instruments? **Æ**



"Boy, what a day! The electronic brain broke down and we all had to think!"