

**TECHNICAL STANDARDS AND GOOD ENGINEERING PRACTICES
OF THE
NATIONAL ASSOCIATION OF BROADCASTERS
FOR
ELECTRICAL TRANSCRIPTIONS AND RECORDINGS FOR RADIO BROADCASTING**

NOTE

The Recording and Reproducing Standards Committee was organized at Detroit on June 26, 1941. Seventy-seven members of the Committee, representing organizations interested in recording and reproduction for radio broadcasting, participated in the work. Sixteen standards, adopted before the war interrupted this activity, are attached hereto.

The Committee is expected to complete the remaining items, already approved for standardization.

Officially adopted March 19-20, 1942
by the NAB Board of Directors.

1. OUTER DIAMETERS

It shall be standard that the outer record diameter fall within the limits specified in the following table:

| <u>Nominal</u> | <u>Finished Records (Pressings or Instantaneous)</u> | <u>Lacquer Originals for Process</u> |
|----------------|--------------------------------------------------------------|------------------------------------------|
| 16" | 15-15/16" \pm 3/32" | 17-1/4" \pm 1/16" |
| 12" | 11-7/8" \pm 1/32" | 13-1/4" \pm 1/16" |
| 10" | 9-7/8" \pm 1/32" | 11-1/4" Minimum |

2. CENTER HOLE DIAMETER

It shall be standard that the record center hole diameter be 0.288" \pm 0.001".

3. TURNTABLE CENTER PIN DIAMETER

It shall be standard that the diameter of the center pin of a transcription turntable be 0.2835" \pm 0.0005".

4. OUTERMOST GROOVE DIAMETER

It shall be standard that the diameter of the outermost groove be within the limits specified in the following table:

| | |
|---------------------|----------------------|
| 16" - outside start | 16-1/2" \pm 1/16" |
| 16" - inside start | 15-9/16" maximum |
| 12" - outside start | 11-1/2" \pm 0.020" |
| 10" - outside start | 9-1/2" \pm 0.020" |

5. INNERMOST GROOVE DIAMETER

It shall be standard that the diameter of the innermost groove shall be not less than 7 1/2" in the case of 33 1/3 R.P.M. records and not less than 3 3/4" in the case of 78 R.P.M. records.

6. UNIFORMITY OF GROOVE SPACING

It shall be standard that the recorded grooves on a record shall be so spaced that at no point (except the concentric stopping groove) does the pitch deviate from the mean groove pitch by more than 5 per cent.

7. STOPPING GROOVE

It shall be standard that at the termination of the recording groove spiral a locked concentric stopping groove shall be provided.

8. NUMBER OF BLANK GROOVES

It shall be standard that the number of blank grooves, before modulation occurs, shall

be not less than two complete revolutions nor more than four, exclusive of any starting spiral.

9. RECORDING TURNTABLE SPEED (R.P.M.)

It shall be standard that the mean speed of the recording turntable be either 33 1/3 or 78.26 R.P.M. \pm 0.5%.

10. WOW FACTOR

It shall be standard that the maximum instantaneous deviation from the mean speed of the recording turntable, when making the recording, shall not exceed \pm 0.1% of the mean speed.

11. RECORD WARP

It shall be standard that the maximum departure of the surface of a record from a true plane because of warping shall not be in excess of 1/16".

12. MINIMUM LABEL INFORMATION

It shall be standard for the label of a recording to contain at least the following technical information:

- Type of recording - vertical or lateral
- Speed - 78.26 or 33 1/3
- Direction of feed (start) - outside-in or inside-out
- Recording frequency characteristic

13. FREQUENCY CHARACTERISTIC FOR VERTICAL RECORDING

It shall be standard that the recorded frequency characteristic on vertically recorded records be as shown in figure 1.

14. FREQUENCY CHARACTERISTIC FOR LATERAL RECORDING

It shall be standard that the recorded frequency characteristic on laterally recorded records be as shown in figure 2.

15. STARTING SPIRAL GROOVES PER INCH

It shall be good engineering practice in recordings having a starting spiral to use a rate of eight grooves per inch for the spiral. (Tolerance \pm 2 grooves per inch).

16. RECORDING GROOVES PER INCH

It shall be good engineering practice to use numbers of grooves per inch in recording as follows: 96 - 104 - 112 - 120 - 128 - 136 - etc., in increments of eight. (Tolerance \pm 2 grooves per inch)

Figure 1

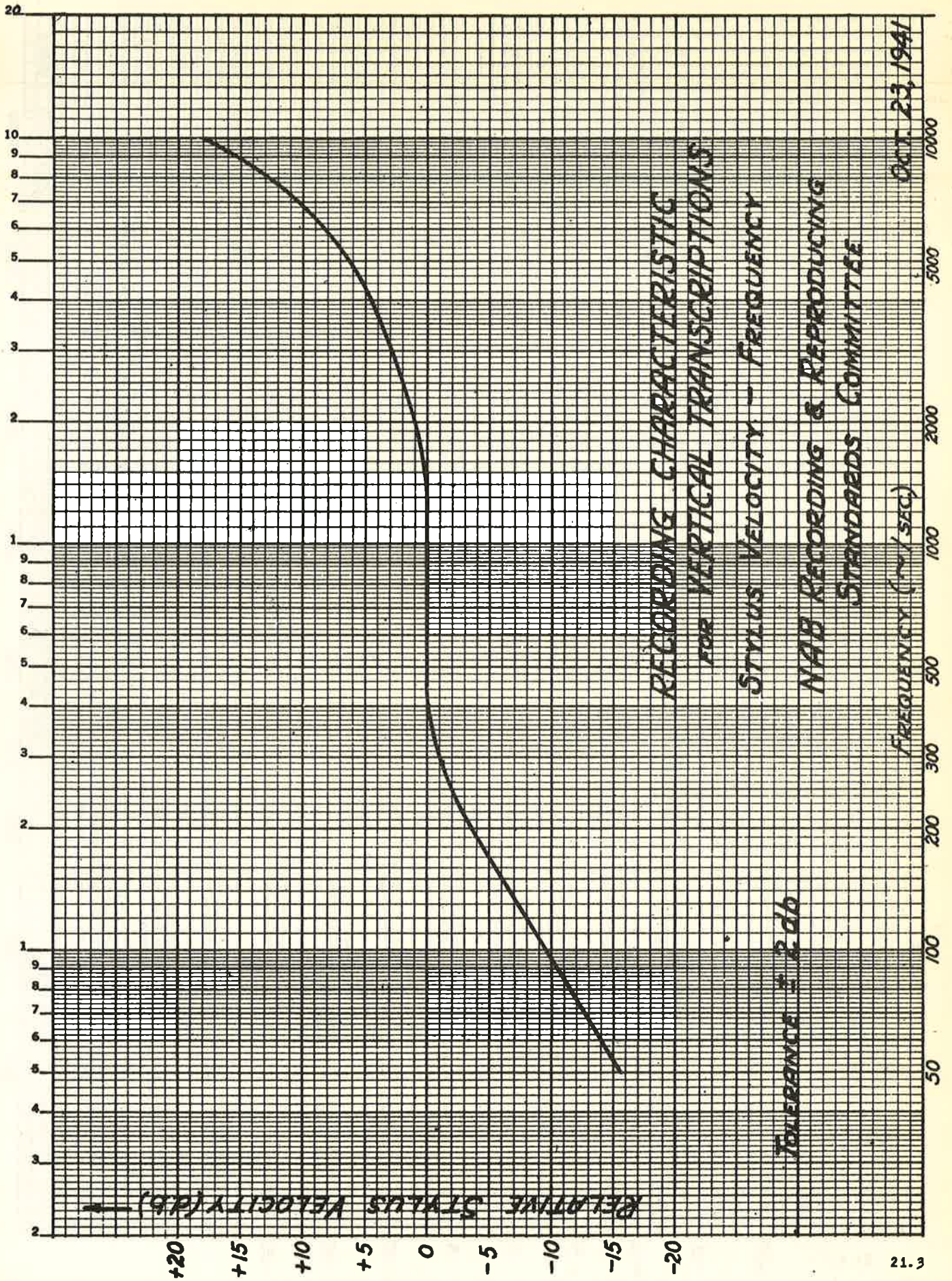


Figure 2

