

TALK

SOUND

FROM THE MAKERS OF "SCOTCH" BRAND MAGNETIC TAPE

BULLETIN No. 21

February, 1953

OUTPUT VS. BIAS CURRENT CURVES FOR "SCOTCH" BRAND MAGNETIC RECORDING TAPES

These curves show the relationship of the reproduced signal to the amount of supersonic bias current used in recording. The audio current in the recording head is held constant at a level about 20 db below that required to give a 1% distorted signal.

The curves shown apply to the following "SCOTCH" Brand Tape types:

Type B

#111 A (4RBA)
#114
#115
#116
#117

Type BQ

#111 A (5RBA)
#109 (RBE)
#111 AP (6RBA)

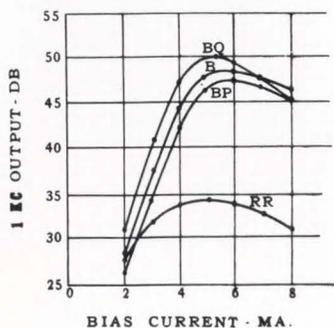
Type BP

#101
#103
#104

Type RR

#112 (obsolete)

The curves are of particular interest to recording engineers in determining the opti-

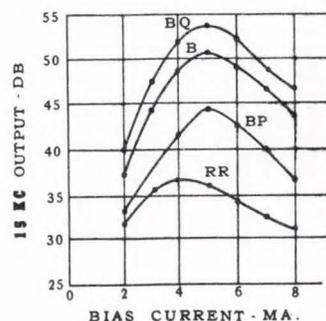


imum conditions for recording on the various kinds of tape. Since the audio input level is the same for all curves, the relative output levels of the various tape types at any particular bias value can be read directly from the curves. The optimum recording bias is approximately that giving the peak output, but in many cases, a somewhat greater bias will give a steadier signal.

These curves were taken under the following conditions:

Recording machine - Ampex Model 300
Tape Speed - 15"/sec.
Bias frequency - 70kc
Record head gap - .002"
Equalization - NARTB Standard

The performance of these tapes on other machines will be similar to that indicated by the curves. However, there may be some differences due to different record heads, levels of recording or equalization.



Magnetic Products Division

3M
COMPANY

"SCOTCH" is a registered trademark of the 3M Co., St. Paul 19, Minn.