

TALK

SOUND

FROM THE MAKERS OF "SCOTCH" BRAND MAGNETIC TAPE

Bulletin No. 15

THE USE OF NO. 111 SOUND RECORDING TAPE ON MACHINES DESIGNED FOR NO. 112 TAPE

Recent developments in the art of magnetic recording have made possible the attainment of professional quality recordings at tape speeds slower than believed feasible a few years ago. One of these developments is our present "SCOTCH" No. 111 Sound Recording Tape which has exceptionally high output and uniform magnetic properties. Consequently the newer professional recording machines have been designed to use No. 111 Tape and

are operating at slower speeds. Extensive tests prove that the older high speed machines designed for No. 112 Tape can also be adapted to use No. 111 Tape, and that a substantial improvement in signal to noise ratio will result.

A brief comparison of the operating characteristics of No. 111 and No. 112 on a typical machine are shown below:

<u>Tape Property</u>	<u>No. 111</u>	<u>No. 112</u>
Bias required for peak output at low frequencies	5.2 ma.	4.5 ma.
Erase required for 50 db. reduction in signal	104 ma.	135 ma.
Audio input required for a 1% distorted signal	0 db.	- 1.5 db.
Output level recorded as above	0 db.	- 11.5 db.
Frequency response at .001" wave length equalized	0 db.	- 3.5 db.

Apparent from the above table is the fact that the recording characteristics of the two tapes are nearly identical. Recordings made on No. 111 Tape using No. 112 machine settings are very satisfactory, although a small improvement can be realized by increasing the bias about 15% and raising the audio input level

1.5 db. Also apparent is the fact that No. 111 Tape gives 11.5 db. more output for the same distortion. This results in a substantial increase in signal to noise ratio. The high frequency response is also slightly improved and better erasure can be expected.

Magnetic Products Division **3M**
COMPANY

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