

# TALK

SOUND

FROM THE MAKERS OF "SCOTCH" BRAND MAGNETIC TAPE

Bulletin No. 12

## THE USE OF METAL AND PLASTIC REELS WITH "SCOTCH" SOUND RECORDING TAPE

"SCOTCH" Sound Recording Tape is now available on 3", 4", 5" and 7" plastic reels. In addition a 7" metal reel is available on order.

Generally speaking, each of these reels will work on almost all of the current home magnetic tape recorders. Some recorders, however, require a certain type of reel for proper operation and suggest some modifications for operation of certain recorders with "SCOTCH" Sound Recording Tape.

- (1) "SCOTCH" Plastic reels 3", 4" and 5" will operate on all current recorders except latest models of the Brush recorders BK 911 and BK 914 and Wilcox-Gay 8U12 and 8T11. (See note on metal reels in (3) below.)
- (2) "SCOTCH" Plastic reels 7" operate on all current recorders except those noted in (1) above, and recorders designed for operation with 5" reels such as Revere.
- (3) "SCOTCH" Metal reel 7" - will operate on all recorders except those designed for 5" reels but is primarily recommended for use with the following recorders:

Brush - BK 401 and BK 403 - After prolonged operation the surface of the motorboard on these recorders became quite hot. Because of the heat resistance of the metal reel its use is recommended.

Brush BK 411 and BK 414  
Wilcox-Gay - 8U12 and 8T11 - All of these recorders use the same type of tape motorboards. The metal reel is recommended for use on these recorders as its heavier weight insures a more proper operation of the clutch and automatic rewind features.

Several production modifications have been made during the manufacture of the Brush BK 411 and BK 414 and the Wilcox-Gay 8U12 and the 8T11 models. Some models of these recorders use a motorboard in which the driving pin has been eliminated and the twin lugs have been stamped from the face plate of the clutch assembly. On these models the "SCOTCH" metal reel should be used. Full directions for its use are given with each roll of tape on metal reels.

The tape handling units used in the manufacture of the Brush BK 411, Brush BK 414, Wilcox-Gay 8T11 and Wilcox-Gay 8U12 tape

(12)

recorders utilize a hold-down nut to anchor the reels. The 5/8" set screw in the reel post to which the hold-down nut is fastened was designed for operation with the Brush reel and is too short in many cases to allow correct operation with the "SCOTCH" Plastic Reel.

To correct this difficulty, it is recommended that this set screw be replaced with a 7/8" #8 Allen set screw which will allow proper operation of these recorders with all type reels. Since set screws also serve as a clutch adjustment for these recorders, the following directions must be carefully observed when changing to a 7/8" set screw:

- (1) If your machine is an early model BK 411 very short set screws were used and were held in place by Glyptol cement. Remove set screws located in the top end of the reel posts with a #8 Allen wrench. If yours is cemented by Glyptol and is set too hard to turn, apply a few drops of solvent such as G. E. No. 1500 Glyptol thinner to dissolve the cement.
- (2) Replace with 7/8" #8 Allen set screws and #8 1/4" hexagon locking nuts. (If desired, the hardware for this conversion will be supplied free by 3M upon written request to:

W. H. Madden  
Electrical, Insulation & Sound  
Recording Tape Div.  
Minnesota Mining & Manufacturing Co.  
900 Fauquier Avenue  
St. Paul 6, Minnesota

- (3) Place the control lever in "Fast Forward" and adjust the set screws so the

rewind clutch turns freely and the take-up clutch is engaged. (Turning the screws clockwise disengages, and counter-clockwise engages the clutch.)

- (4) Place the control lever in "Fast Reverse" and adjust the set screws so take-up clutch turns freely and reversing clutch is engaged.

(Some units may contain a small friction brake between each turntable, and its corresponding clutch face. This will apply a small amount of drag on each turntable, preventing complete freedom of its rotation when not engaged with the clutch.)

- (5) Recheck #3.
- (6) Place recorder in "Play" or "Record" and make sure #3 is still satisfied.
- (7) Trip automatic rewind trip lever and be sure #4 is satisfied. Check both in "Record" and "Play".
- (8) Both clutches should engage in "Stop" position to produce complete braking action.
- (9) When correctly adjusted, all above conditions will be satisfied.
- (10) Tighten securely hexagon locking nuts.

If reel clamping nuts were not furnished with your machine, they may be purchased from your Brush or Wilcox-Gay dealer. (Brush part number 107185). #8 Wing nuts may also be used.