

# INSTRUCTION MANUAL

## CHANGE NOTICE

Change 1

### SERIES 79 RECORDER 79000A000

#### 1-1. GENERAL

1-2. This change contains information which should be added to the instruction manual (S79 3-73) for the Series 79 Recorder, part number 79000A000.

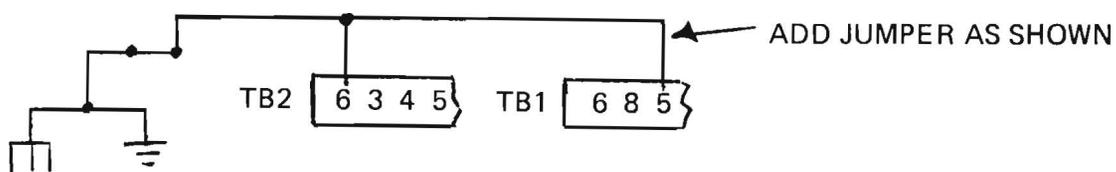
#### 1-3. EFFECTIVITY

1-4. This change applies to manuals for all Series 79 Recorders.

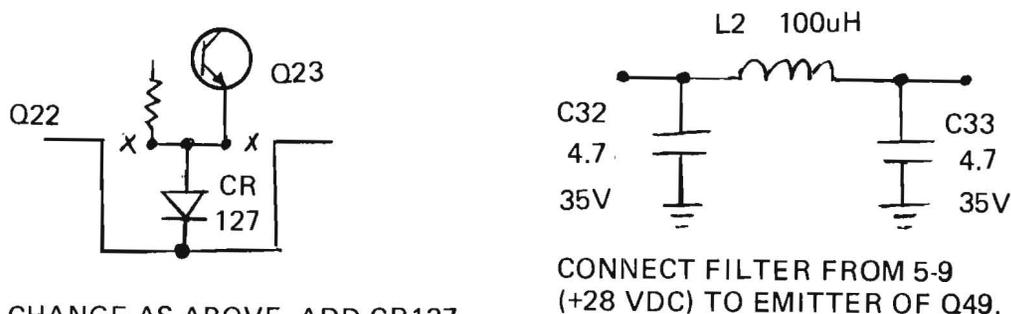
#### 1-5. SECTION VI

1-6. Change Section VI schematics as follows:

a. Figure 6-1, page 6-3/6-4:



b. Figure 6-2, page 6-5/6-6. C16 is 150, 15V, R26 is 120K.



c. Figure 6-4, page 6-9/6-10. Connect two 1N4004 as follows:

1. Cathode to (U, V), anode to (D, E).
2. Cathode to (X, W), anode to (N, M).

d. Figure 6-5, page 6-11/6-12. Connect two 1N4004 as follows:

1. Cathode to R2 (+28), anode to emitter of Q7.
2. Cathode to R1 (+28), anode to emitter of Q3.

e. Figure 6-10, page 6-21/6-22. Change R64 to 120 and C43 to 47, 20V. Delete CR17. CR16 is STB 567.



# Professional Audio Service Bulletin

Mincom  
Division **3M**  
COMPANY

Bulletin No. 19

## MODIFYING M-79 FOR IMPROVED HIGH FREQUENCY RESPONSE AT 7½ IPS

**PURPOSE:** To preclude the necessity of readjusting bias when switching between 7½ ips and 15 ips.

**NOTE:** If machine is used at 30 ips or CCIR with these modifications, C-23 should be shorted with a jumper wire.

### PARTS NEEDED PER TRACK:

K-A	1 ea.	Reed Relay - SPDT - 24-28V 83-1550-3620-1 or equivalent	\$38.00 Ea.
CR-A		1N4004 Diode 83-1530-0151	.35 Ea.
R-13		33K ¼ watt resistor 83-9520-2109-1	.45 Ea.
R-A		750 ohm ½ watt resistor 83-1520-7357-9	.35 Ea.
R-41A		200 ohm variable resistor 83-1520-1572 .750" x 1.750" perf brd or pc brd (see figure 2)	5.30 Ea.

### PROCEDURE:

1. Remove Q-20, R-13, R-19, CR-9 and discard.
2. Remove any jumper connected to points E-10 through E-13.
3. Remove TP-2 (white) from board. Use care in not lifting pads from pc board (see figure 1).
4. R-41-A will be mounted in place of TP-2. Clip off rear lead of R-41-A. Drill a hole midway between and slightly above TP-2 mounting holes. This hole and forward most hole will be used to mount R-41-A (see figure 1).
5. Locate trace running from R-42 to wiper of R-41. Cut this trace about an inch from R-42.
6. Drill a hole behind bottom lead of C-14 (erase trimmer). Do not drill through any traces.

7. Locate same trace as in Step 5 and drill a hole into this trace between C-14 and Q-16 (see figure 1).
8. Mount relay K-A on a piece of perf board and mount the perf board to the mounting screws of Q-16 and Q-17 using two 6-32 nuts (see figures 1 and 2).
9. Install new R-13 (33K ohm).
10. Install CR-A into holes from which R-19 was removed.
11. Install R-A (750 ohm) between E-11 and E-12.
12. Connect a pair of wires to coil of relay K-A and route across top of board to terminals E-11 and E-12. Connect one wire to E-11 and the other to E-12.
13. Connect a wire from the wiper of K-A to R-42. Connect to the end of R-42 closest to the relay.
14. Connect a wire from the normally closed contact of K-A to trace going to wiper of R-41 through hole drilled in Step 7 above.
15. Install R-41-A in location vacated by TP-2 (a drop of selastic will hold it in place).
16. Connect a wire from the normally open contact of R-A (through hole drilled in Step 6 above) to the wiper of R-41-A.
17. Connect a wire from front term of R-41-A to front term of R-41.
18. Fill in (with solder) the rear mounting hole of TP-2. This trace must not be broken.
19. Place signal brd on extender card and install in machine.
20. Place machine in record at low speed and monitor the wiper of R-41 with scope. A bias waveform should be visible.
21. Switch recorder to high speed (maintaining record mode); bias waveform should disappear. Switch scope to wiper of R-41-A; bias should be present.

**NOTE:** If bias is the reverse of Steps 20 and 21, the wires going to the normally open and normally closed contacts of K-A should be reversed.

22. Monitor TP-1 with VTVM (record mode) and adjust R-121 for 1.2V RMS (1 volt on 24 track).

NOTE: Before continuing with record alignment, reproduce alignment should be checked and adjusted if necessary.

23. To align bias the upper bias adjust R-41 is used for low speed and the lower R-41-A for high speed.
24. The bias must be adjusted (using appropriate pot) for 5db overbias at 15kHz for any speed (including 7½ ips).

Typical record response with above bias settings are:

7½ ips (-10VU input) flat to 15kHz -3VU 19kHz  
15 ips ( 0VU input) flat to 20kHz -3VU 24kHz  
30 ips ( 0VU input) flat to 20kHz -3VU 24kHz

JDC:lj

FIGURE 1

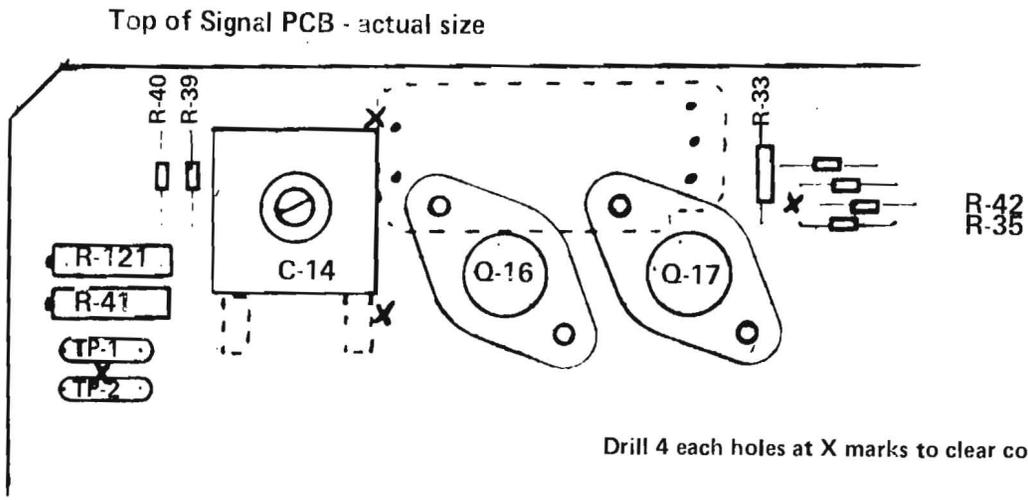


FIGURE 2

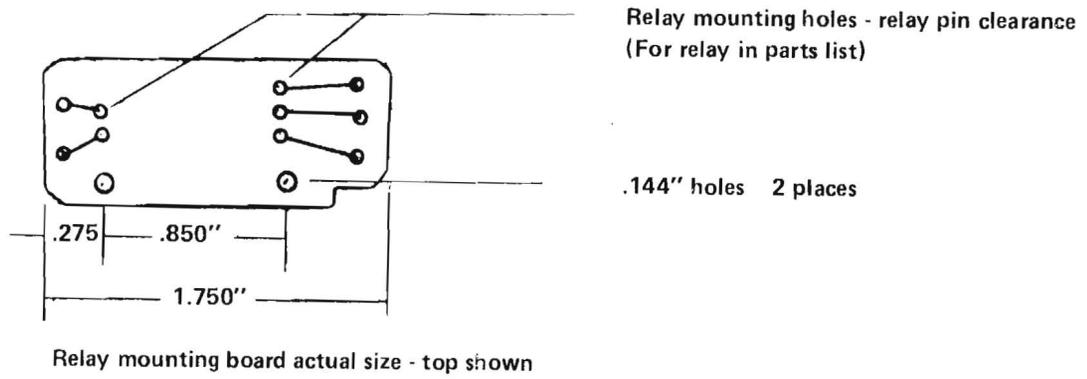
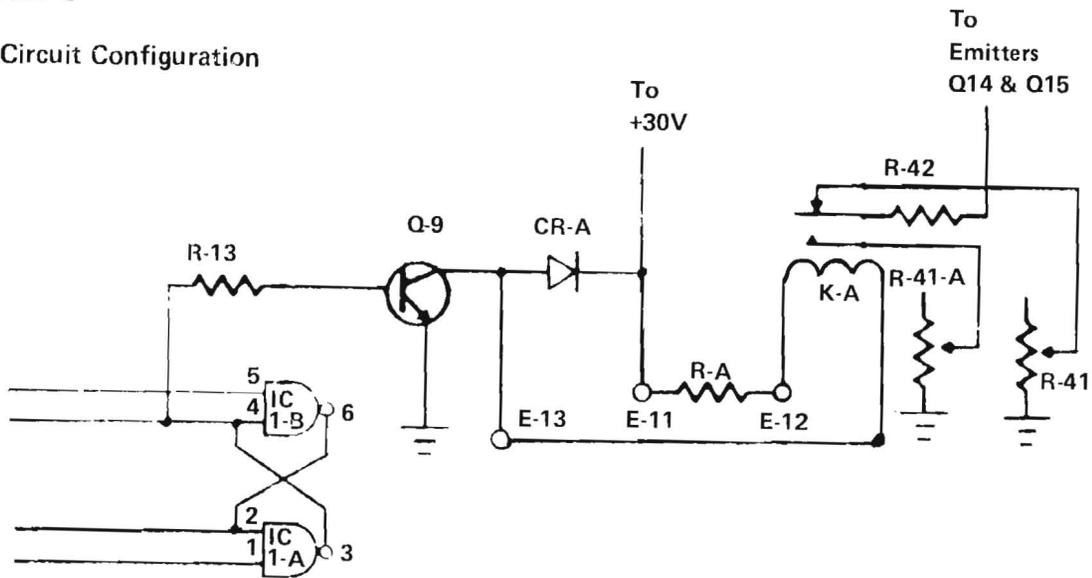


FIGURE 3

New Circuit Configuration



# Field Service Bulletin



SPECIAL TECHNICAL

SUBJECT: Modification to Eliminate Possible Sync Oscillation

APPLICABLE TO: All M-79 Professional Audio Recorders

Procedure:

1. Remove power from machine.
2. Remove Track 1 Signal Electronics board from housing.
3. Remove L-10, 100uh coil and replace with 110 ohm, 1/4W, 5% resistor (Mincom Catalog No. 83-9520-2131).
4. Remove C-54, .0047uf capacitor and replace with 75 k ohm, 1/4W, 5% resistor (Mincom Catalog No. 83-9520-2171).
5. Repeat steps 3 and 4 for each Signal Electronics board in the particular M-79 that is to be modified.
6. Change Signal Electronics board schematic to reflect these changes.

Code GM21519

October 1973

# Field Service Bulletin

Mincom  
Division **3M**  
COMPANY

TECHNICAL NO. 127

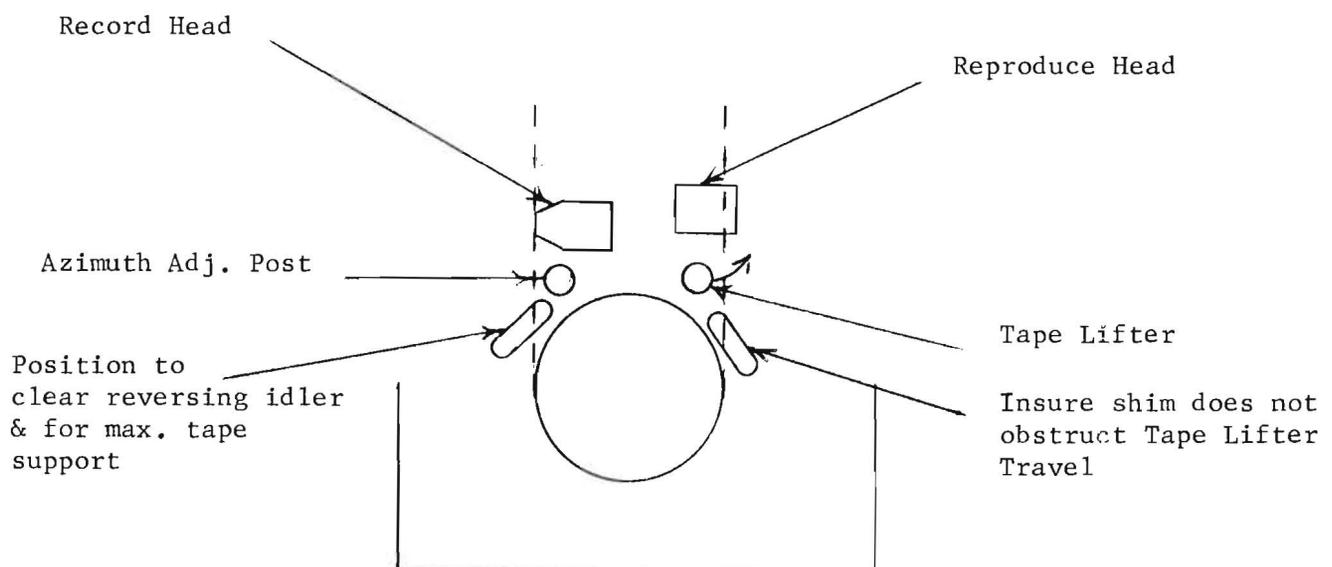
Subject: M-64 Quick Start Mode Modification

Applicable to: Only M-64 Professional Audio Recorders set for 7 1/2 & 15 ips Operation.

## Procedure:

- I. Unsolder wire from TB1-3. Splice a wire on the wire just removed of sufficient length to reach TB2-1. This will now place the ingoing & outgoing pressure idler solenoids in parallel.
- II. Remove tape transport shrouding to gain access to ingoing idler dashpot. Remove Truarc that secures dashpot linkage to transport casting.
- III. Remove Idler dampening arm and dashpot piston. Replace transport shrouding.
- IV. Install .050 inch shims and glue to trim casting using contact cement. Position shims per diagram in Figure 1.

Note: Mincom Catalog number for shim is: 83-3230-0650



July 1972

# Field Service Bulletin

Subject: DOLBY interface with M-79 Professional Audio Recorder

Applicable to: M-79 Record which interface with DOLBY M series or DOLBY A-type units.

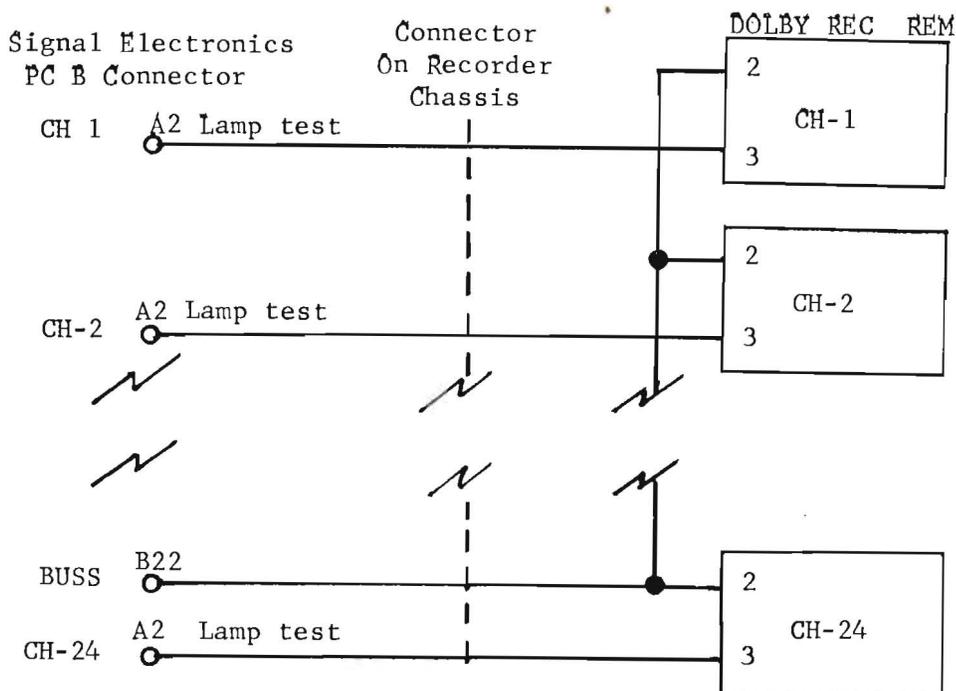
Purpose: Provide remote connection of DOLBY units to M-79 recorder

Remote connection of M series DOLBY units to M-79 (see figure 1).

1. Connect pin A-2 of each channel signal electronics pc board to pin 3 of the DOLBY unit through a suitable connector on the recorder chassis.
2. Connect pin B-22 bus on signal electronic pc board pin 2 of ALL DOLBY units.
3. Insure R102 and R108 in CAT 44 Interface Module are 6.8 K ohms (earlier models had 2.7 K ohm or 3.3 K ohm resistors); if the resistors are not the correct values, replace them with resistors of the correct value.

NOTE: Increasing the resistor values to 6.8 K ohms increases remote sensitivity to 6 volts "ON" and 4 volts "OFF".

4. Correct operation is when the voltage between pin 2 and pin 3 of the DOLBY unit is 10.5 volts "ON" and 0 volts "OFF".



July 1973

FIGURE 1

Remote connection of A-type DOLBY units to M-79 (see figure 2).

1. Connect a jumper between pin 6 of IC-2 (B) to pad E-26 (connects to pin B-16) on signal electronics pc board.
2. Connect pin B-16 of each channel signal electronics pc board to pin 3 of the DOLBY unit through a suitable connector on the recorder chassis.
3. Connect pin B-22 bus on signal electronics pc boards to pin 2 of ALL DOLBY units.
4. Correct operation is when the voltage between pin 2 and pin 3 of the DOLBY unit is 15 volts "ON" and 0 volts "OFF".

NOTE: This configuration will also work with M series DOLBY units.

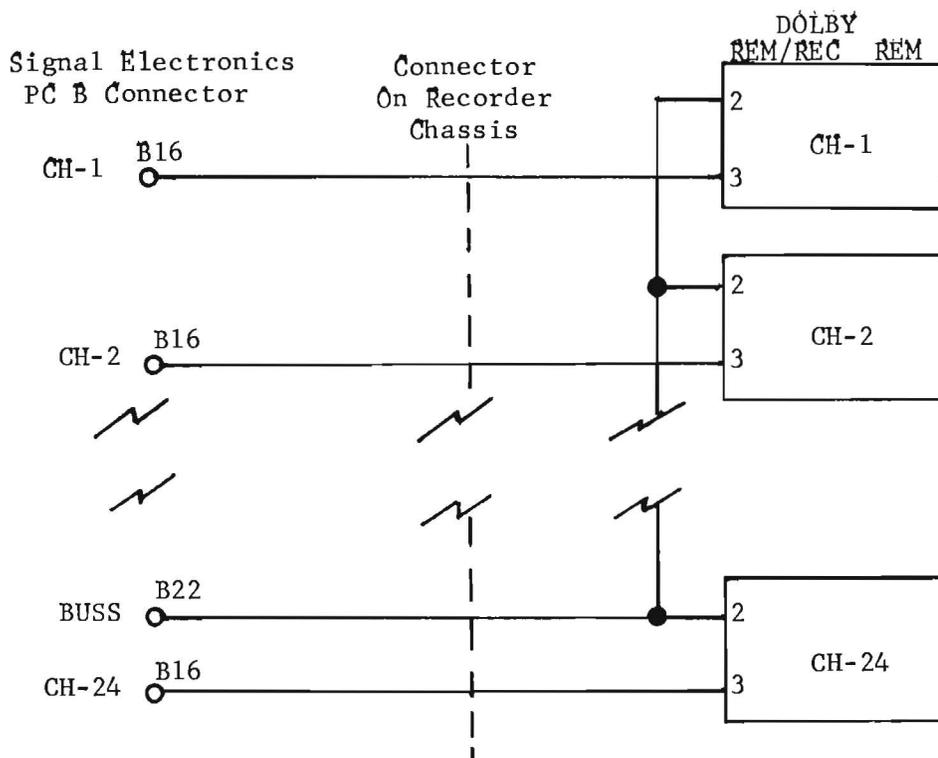


FIGURE 2

## PROFESSIONAL AUDIO PRICE LIST

**PROFESSIONAL  
USER NET**

### SERIES 79 RECORDER/REPRODUCER

M79/24 Track	83-0003-0301	*15 - 30	\$28,750.00
M79/16 Track Convertible	83-0003-0300	*15 - 30	19,750.00
M79/8 Track Convertible	83-0003-0299	*15 - 30	14,750.00
M79/4 Track	83-0003-0298	7.5 - 15 - 30	\$ 5,725.00
M79/2 Track Convertible	83-0003-0297	7.5 - 15 - 30	3,725.00
M79/1 Track Convertible	83-0003-0296	7.5 - 15 - 30	3,325.00
M79/24 Tk. w/Input Transformer	83-0003-0313	*15 - 30	\$29,662.00
M79/16 Tk. w/Input Transformer	83-0003-0312	*15 - 30	20,350.00
M79/8 Tk. w/Input Transformer	83-0003-0311	*15 - 30	15,054.00
M79/4 Tk. w/Input Transformer	83-0003-0325	7.5 - 15 - 30	\$ 5,877.00
M79/2 Tk. w/Input Transformer	83-0003-0324	7.5 - 15 - 30	3,801.00
M79/1 Tk. w/Input Transformer	83-0003-0323	7.5 - 15 - 30	3,363.00

\*Machine also capable of 7.5 - 15 ips and 5 to 45 ips variable speed

### SERIES 79 CONVERSIONS KITS

816 Expands 8 Tk. to 16 Tk.	83-5990-1384	\$ 7,500.00
824 Expands 8 Tk. to 24 Tk.	83-5990-1382	17,500.00
1624 Expands 16 Tk. to 24 Tk.	83-5990-1383	13,500.00

### ACCESSORIES

Selectake	83-5920-1858	\$ 1,050.00
A counter/locator for all recorder/reproducer models (does not include pick up)		
Pick Up - M79	83-5990-1353	\$ 200.00
M56	83-5990-1316	200.00
M64	83-5990-1317	200.00
Series 79 Synchronizer/Reader	83-5920-1935	8,390.00
A synchronizer/reader for the Series 79 Recorders		
Synchronizer only	83-1920-1948	5,500.00
Reader only	83-1920-1947	2,890.00
SMPTE Code Generator BE520	83-5920-1938	2,990.00
Edit Code Preamplifier	83-1930-3478	250.00
Resolver 60 Hz	83-5990-1413	450.00
19" Rack Mount Adapter	83-1210-0511	100.00
M79 Input Transformers	83-3540-1373	33.00
M79 1" Guide Conversion Kit (does not include base)	83-5990-1495	145.00
Transport Remote Control M79	83-5920-1939	238.00
1/4" Guide Assembly	83-5990-1507	99.00
Vega Cordless Microphone	AV 71/72 (154.6 MHz)	595.00
	AV 71/72A (151.953 MHz)	595.00
	AV 71/72B (151.625 MHz)	595.00
Vega Microphone Carrying Case	A-0580	29.95
8155A Flutter Meter (with NAB Weighting)	83-5990-1289	677.00
8155A Flutter Meter (with DIN Weighting)	83-5990-1288	730.00
8100A-W Flutter Meter	83-5990-1298	\$ 2,295.00

**PROFESSIONAL  
USER NET**

**SERIES 79 AUDIO HEADS**

2" 24 Tk. Full Set Mounted	83-5950-1810 (includes Mount Plate)	\$ 4,622.00
2" 24 Tk. Erase Head	83-0001-0351	1,107.00
2" 24 Tk. Record Head	83-0001-0350	1,547.00
2" 24 Tk. Playback Head	83-0001-0349	1,768.00
2" 16 Tk. Full Set Mounted	83-5950-1798 (includes Mount Plate)	\$ 3,351.00
2" 16 Tk. Erase Head	83-0001-0417	789.00
2" 16 Tk. Record Head	83-0001-0416	1,102.00
2" 16 Tk. Playback Head	83-0001-0415	1,260.00
1" 8 Tk. Full Set Mounted	83-5950-1799 (includes Mount Plate)	\$ 1,863.00
1" 8 Tk. Erase Head	83-0001-0423	415.00
1" 8 Tk. Record Head	83-0001-0422	582.00
1" 8 Tk. Playback Head	83-0001-0421	666.00
Mount Plate for Series 79 Eight, Sixteen, and Twenty-Four		\$ 200.00
1/2" 4 Tk. Full Set Mounted	83-5950-1800 (includes Mount Plate)	\$ 878.00
1/4" 2 Tk. Full Set Mounted	83-5950-1801 (includes Mount Plate)	564.00
1/4" Mono Full Set Mounted	83-5950-1802 (includes Mount Plate)	370.00
Mount Plate for Series 79 Four, Two, and Mono		\$ 162.00

**MODEL 500 SERIES AUDIO HEADS**

2" 16 Tk. Full Set Mounted	83-5950-1366 (includes Mount Plate)	\$ 3,341.00
2" 16 Tk. Erase Head	83-5950-1369	789.00
2" 16 Tk. Record Head	83-5950-1367	1,102.00
2" 16 Tk. Playback Head	83-5950-1368	1,260.00
1" 8 Tk. Full Set Mounted	83-5950-1422 (includes Mount Plate)	\$ 1,853.00
1" 8 Tk. Erase Head	83-5950-1592	415.00
1" 8 Tk. Record Head	83-5950-1601	582.00
1" 8 Tk. Playback Head	83-5950-1610	666.00
Mount Plate for Model 500 Eight and Sixteen Tracks		\$ 190.00

**MODEL 400 SERIES AUDIO HEADS**

1" 8 Tk. Full Set Mounted	83-5950-1235 (includes Mount Plate)	\$ 1,798.00
1" 8 Tk. Erase Head	83-5950-1592	415.00
1" 8 Tk. Record Head	83-5950-1601	582.00
1" 8 Tk. Playback Head	83-5950-1610	666.00
1/2" 4 Tk. Full Set Mounted	83-5950-1230 (includes Mount Plate)	\$ 828.00
1/2" 4 Tk. Erase Head	83-5950-1787	179.00
1/2" 4 Tk. Record Head	83-5950-1596	250.00
1/4" 4 Tk. Playback Head	83-5950-1605	287.00
1/4" 2 Tk. Full Set Mounted	83-5950-1228 (includes Mount Plate)	\$ 514.00
1/4" 2 Tk. Erase Head	83-5950-1585	100.00
1/4" 2 Tk. Record Head	83-5950-1594	140.00
1/4" 2 Tk. Playback Head	83-5950-1603	162.00
1/4" 1 Tk. Full Set Mounted	83-5950-1227 (includes Mount Plate)	\$ 320.00
1/4" 1 Tk. Erase Head	83-5950-1584	49.00
1/4" 1 Tk. Record Head	83-5950-1593	74.00
1/4" 1 Tk. Playback Head	83-5950-1602	85.00
Mount Plate for Model 400 Full, Two, and Four Tracks		\$ 112.00
Mount Plate for Model 400 Eight Track		\$ 135.00

NOTICE: Prices subject to change without notice.

**Mincom Division** **3M**  
COMPANY  
300 SOUTH LEWIS ROAD • CAMARILLO, CALIFORNIA 93010