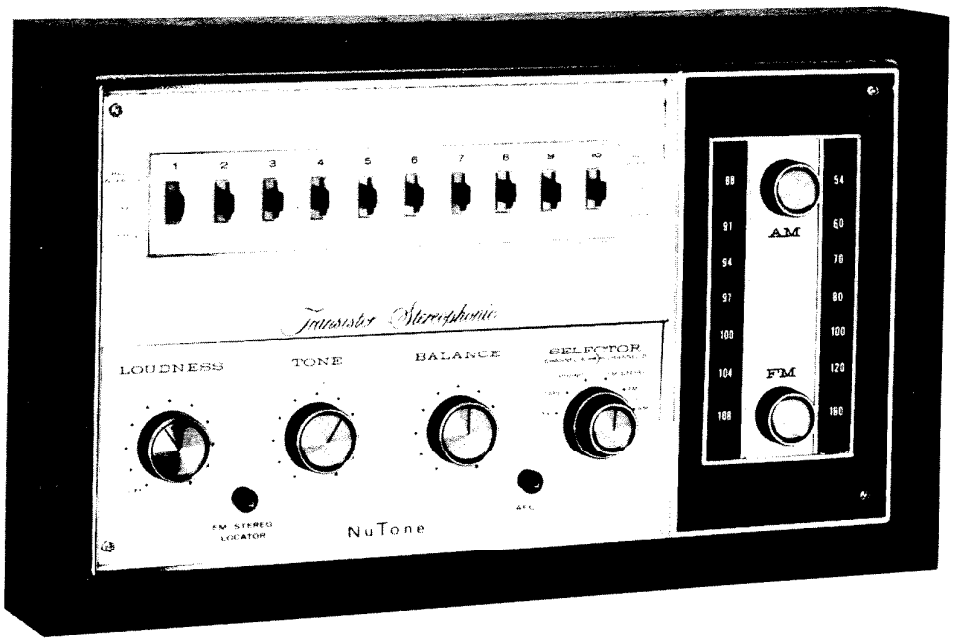
NuTone

SERVICE MANUAL



TRANSISTOR STEREO INTERCOM SYSTEM

MODEL 2071

NuTone

Madison & Red Bank Roads, Cincinnati, Ohio 45227

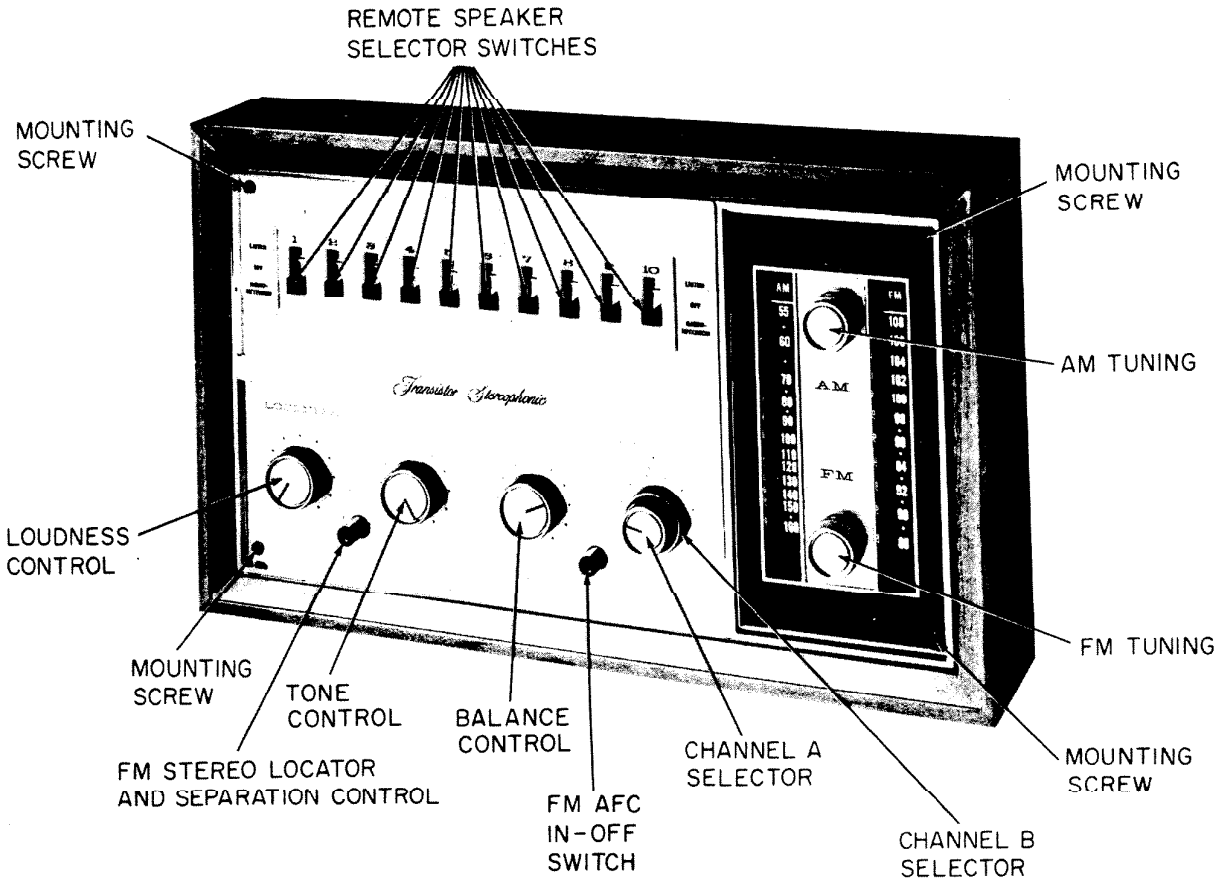


Fig. 1. Master station front panel.

CHECK-OUT PROCEDURE

1. Set all station selector switches to ON (down) position.
2. Rotate Loudness control two-thirds clockwise. AM-FM tuning dial will be illuminated.
3. Set both Selector switches to AM position.
4. Tune in AM radio station and check for reception from Channel A and B room speakers located near master. Set dual Volume control of Channel A speaker to maximum clockwise position.
5. Adjust Balance control for sound to come from area midway between Channel A and B speakers.
6. Rotate Tone control full range noting increase and decrease in treble and bass emphasis.
7. Set both Selector switches to FM position and depress AFC button to release (OFF) position.
8. Tune in FM radio station and press AFC button to ON position. Check reception at Channel A and B room speakers.
9. Set both Selector switches to FM STEREO position.
10. Depress and hold in FM Stereo Locator button and tune in FM stereo station. Release FM Stereo Locator button.

    NOTE: When the FM Stereo Locator button is depressed only stations transmitting FM stereo can be tuned in.

11. Rotate FM Stereo Locator control left or right for best separation and check for reception at Channel A and B room speakers.

    NOTE: Best setting of separation control can be made when the FM station is transmitting voice announcements and only one channel is used. Adjust the control for *minimum* response on the unused channel.

12. If a Model 2073 Record Changer is included in the system, set Selector switches to PHONO position. Play record on changer and check reception at Channel A and B speakers.
13. If system also includes Model 2405 Tape Recorder, follow the check out procedure outlined in 2405 Service Manual.
14. Talk from Channel A speaker to other speakers of system by depressing Talk pushbutton. Check intercom operation from each speaker with controls, including door speaker.
15. Set all Speaker Selector switches on Master to LISTEN (up) position. Set Selector switch controlling speakers near or in same room with Master to RADIO-INTERCOM position. With radio playing, talk from each Channel A speaker in system and check for intercom reception at speaker located in room with Master.

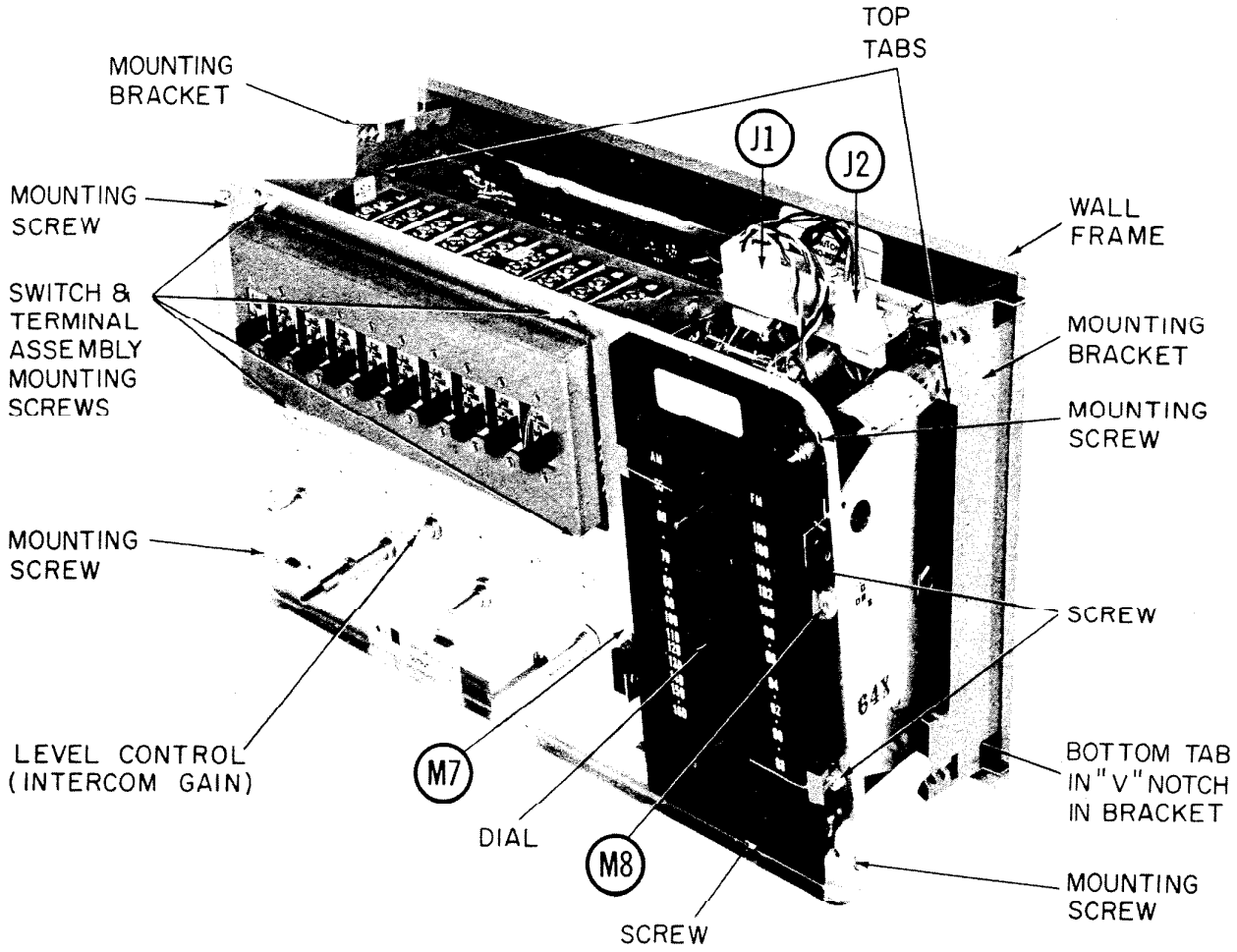


Fig. 2. Master station with front panel removed.

NOTE: If intercom volume level does not override radio, remove front panel of Master and adjust Level Set (R73) on front of chassis for normal radio listening level with Loudness control (R74) between ⅓ to ½ clockwise rotation.

16. Set speaker selector switches on Master to OFF (center) position and check that all speakers are silent.
17. To play TV audio signal through speakers, tap into TV audio circuit ahead of volume control through .01 to .05 mfd., 600V blocking capacitor. Using shielded wire, connect signal to TV audio input jack of Master. Set selector switches to TV position.

MASTER STATION DISASSEMBLY INSTRUCTIONS

Partial Disassembly

1. Turn Loudness control to OFF position.
2. Pull and remove seven (7) front panel control and switch knobs. It is not necessary to remove the FM Stereo Locator and FM AFC knobs.
3. Remove four (4) front panel mounting screws (Fig. 1) and remove front panel.
4. Remove four (4) mounting screws (Fig. 2) securing master unit to mounting brackets in wall housing.
5. Lift master unit forward and position bottom tabs on chassis sides in the "V" notches on mounting brackets (Fig. 2). The master unit is now self-supporting and will operate in this position with wiring terminals and connectors accessible.

Complete Disassembly

1. Perform Steps 1, 2, 3, 4 and 5 under "Partial Disassembly."
2. Disconnect connectors J1 and J2 and signal cables from jacks.
3. Remove four (4) screws (Fig. 2) securing switch and terminal assembly to master unit and remove assembly from master.
4. Lift master unit from mounting brackets and remove from wall housing. Switch and terminal assembly remains in wall housing.

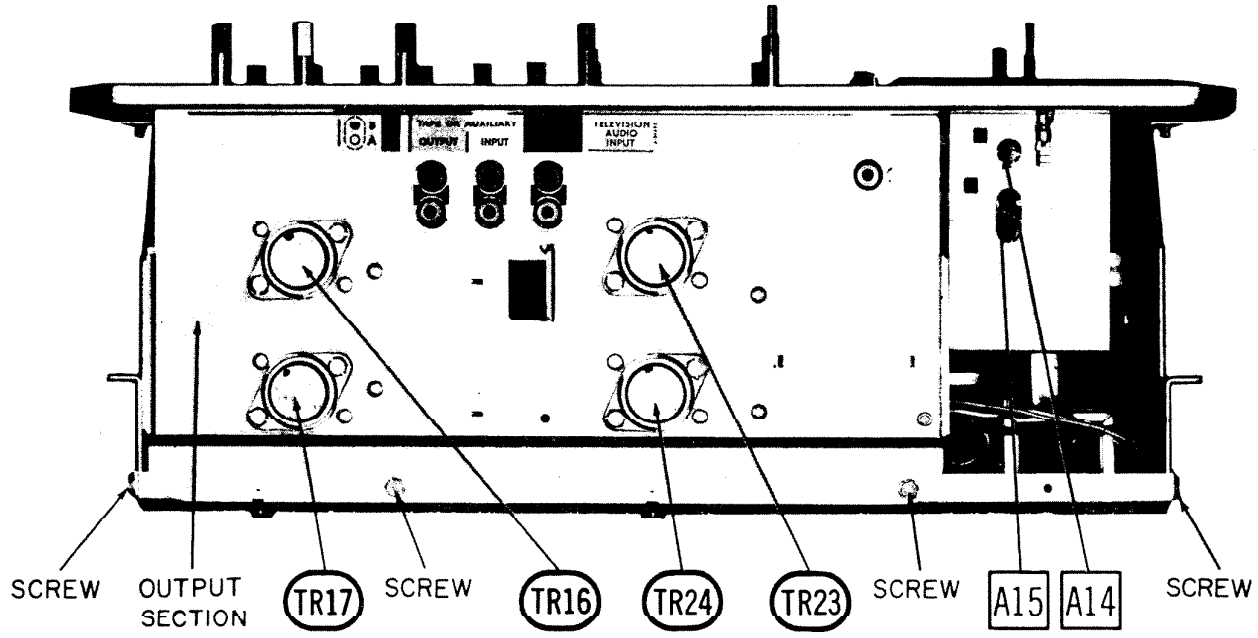


Fig. 3. Bottom view of master station.

5. Loosen three (3) screws (Figs. 3 and 4) and remove screw holding plug bracket (Fig. 4) and remove protective shield over bottom of printed wiring board.
6. Remove two (2) screws (Fig. 3) then lift and remove output section from three slots in front plate.
7. Remove four (4) locknuts from controls and four (4) screws (Figs. 3 and 4) at corners of chassis, securing chassis to end support brackets, and pull printed board assembly as far from front plate as wiring will permit.
8. To gain access to components in the FM tuner, remove screw (Fig. 2) in dial, lift dial, remove two (2) screws (Fig. 2) securing end support bracket to front plate and remove end support bracket.

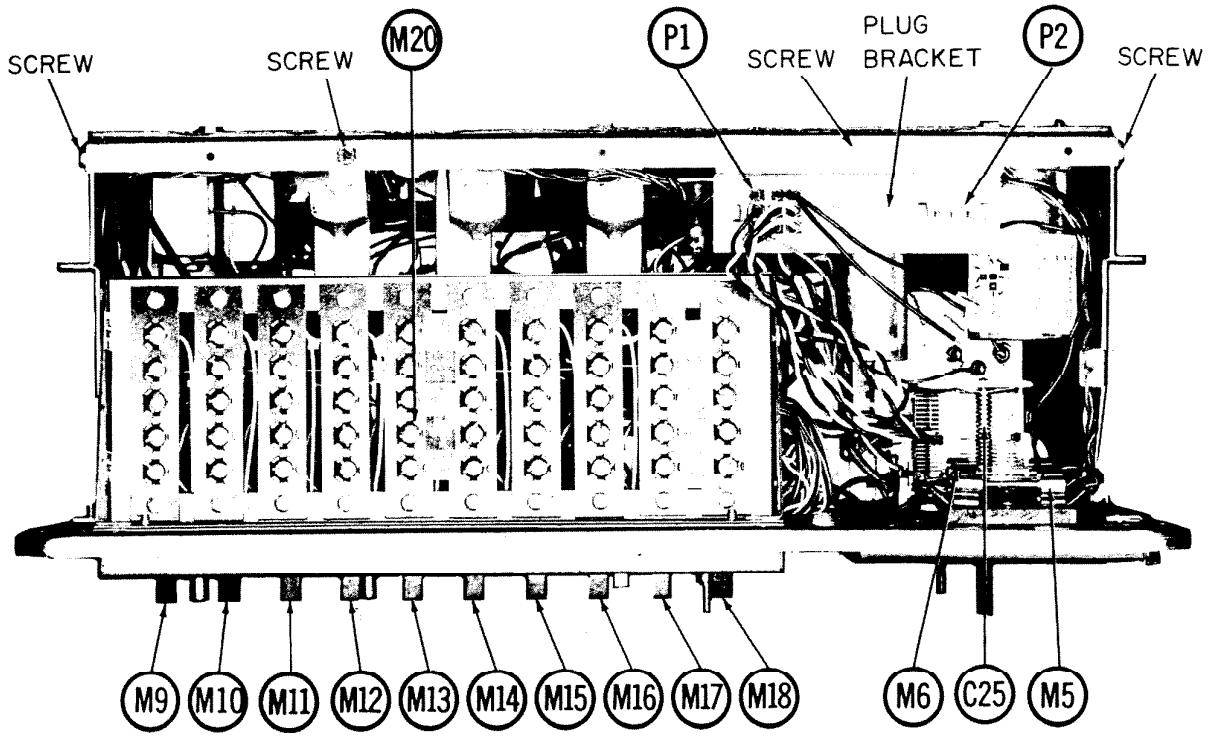


Fig. 4. Top view of master station.

OPERATION AND TESTING FOR BENCH SERVICE

1. An auxiliary power transformer assembly is required to apply power to the master when it is removed from the wall mounting for testing on the bench. Fabricate the auxiliary power transformer assembly as shown in Fig. 5. Connect J2 and P2 on the master and connect the power transformer to 120VAC.
2. 3.2 ohm speakers are connected to plug P1 for testing operation of the master on the bench. A jumper is connected between contacts 2Y and 6X of plug P1 to complete the common connections.
3. Connect test speaker to contacts 3 and 2Y of plug P1 for intercom input.
4. Connect test speaker to contacts 6X and 9A of plug P1 for output of Channel A.
5. Connect test speaker to contacts 5 and 8B of plug P1 for output of Channel B.

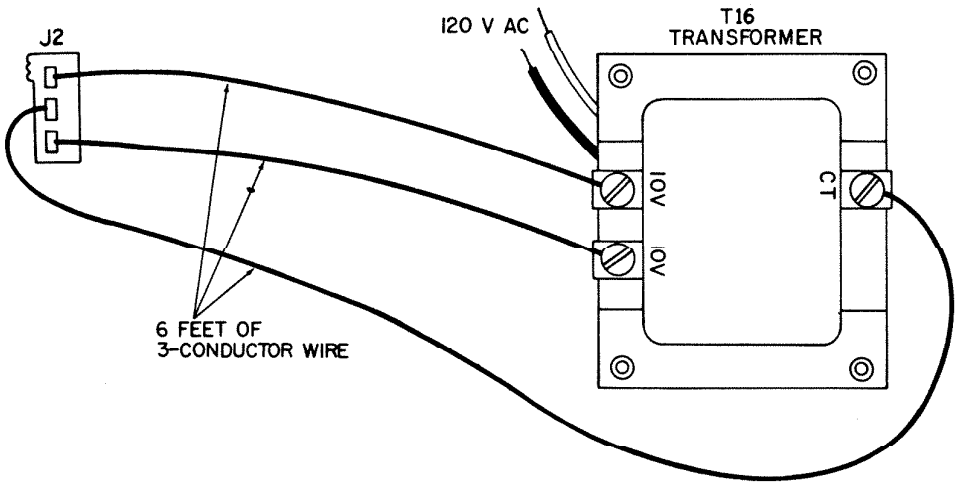


Fig. 5. Auxiliary power transformer assembly.

TROUBLESHOOTING

The following trouble chart is useful in isolating the more common troubles. Remembering that common circuitry is connected to perform several different operations of the Radio-Intercom System, one source of trouble may appear in several functions of operation.

As the Master unit is completely transistorized, extreme caution must be taken during servicing procedures to avoid accidental damage to the transistors. Turn power to Master OFF whenever performing any soldering. Use low wattage soldering equipment and solder or unsolder components as fast as possible.

A VTVM, with a DC scale of 0 to 1.5 volts, will be required to measure most transistor base and emitter voltages. Components should be removed from the circuit when making resistance measurements to avoid incorrect polarity battery voltage of the ohmmeter being applied to a transistor. It is also important that circuit components are not inadvertently shorted during service function.

TROUBLE CHART

TROUBLE	SUGGESTED CHECK POINTS
System "dead"	Check that AC power is being applied to power transformer (T16). Check for secondary low voltage on pins of J2. Check fuses M5 and M6. Check switch (M4) on loudness control (R74). Check diodes D9, D10, D11, D12 and associated circuitry. Check amplifier stages, TR14, TR15, TR16, TR17, TR21, TR22, TR23, TR24 and associated circuitry. Check switch M2. Check output transformers T12 and T14.
No AM radio. Other operations normal.	Check voltage readings of TR4, TR5 and TR6. Check L5, L6,, T5, T6 and T7 and associated circuitry. Check switch M2.
No FM radio. Other operations normal.	Check voltage readings of TR1, TR2, TR3, TR4, TR5 and TR6 and associated circuitry of FM tuner assembly. Check T1, T2, T3 and T4. Check switch (M2).
No FM stereo radio. Other operations normal.	Check voltage readings of TR7, TR8 and TR9 and associated circuitry of L7, L8 and L9, T8, T9 and T15. Check switch M1 and M2.
No intercom operation. Other operations normal.	Check input transformer T10. Check transformer T10 connections to plug P1.
One or more remote stations inoperative in transmission, reception, or both.	Check inoperative remote stations for defective wiring connections at remote station. Check switch, volume control and speaker in remote station.

ALIGNMENT INSTRUCTIONS—
READ CAREFULLY BEFORE ATTEMPTING ALIGNMENT

Prealignment Instructions

Output of signal generator should be no higher than necessary to obtain an output reading.
Volume control should be at minimum position.
Alignment Tools—Standard hex and slotted type.

AM RF and IF Alignment

Set Selector Switch (M2A & B) on AM position.

	Dummy Antenna	Signal Generator Coupling	Signal Generator Frequency	Radio Setting Dial	Connect VTVM	Adjust	Remarks
1.	.01 mfd	High side to point A. Low side to chassis.	455KC (400 cycle mod.)	Mid Scale	DC probe to point B.	A1, A2, A3.	Adjust for maximum deflection. Keep generator output at minimum to obtain output reading.
2.	.01 mfd	High side to point A. Low side to chassis.	1620KC (400 cycle mod.)	Tuning gang fully open.	DC probe to point B.	A4	Adjust for maximum deflection.
3.	.01 mfd	High side to point A. Low side to chassis.	537KC (400 cycle mod.)	Tuning gang fully closed.	DC probe to point B.	A5	Adjust for maximum deflection. Repeat Steps 2 and 3.
4.	50 mmf	High side to point C.	1400KC (400 cycle mod.)	1400KC	DC probe to point B.	A6	Adjust for maximum deflection.
5.	50 mmf	High side to point C.	600KC (400 cycle mod.)	600KC	DC probe to point B.	A7	Adjust for maximum deflection. Repeat Steps 4 and 5.

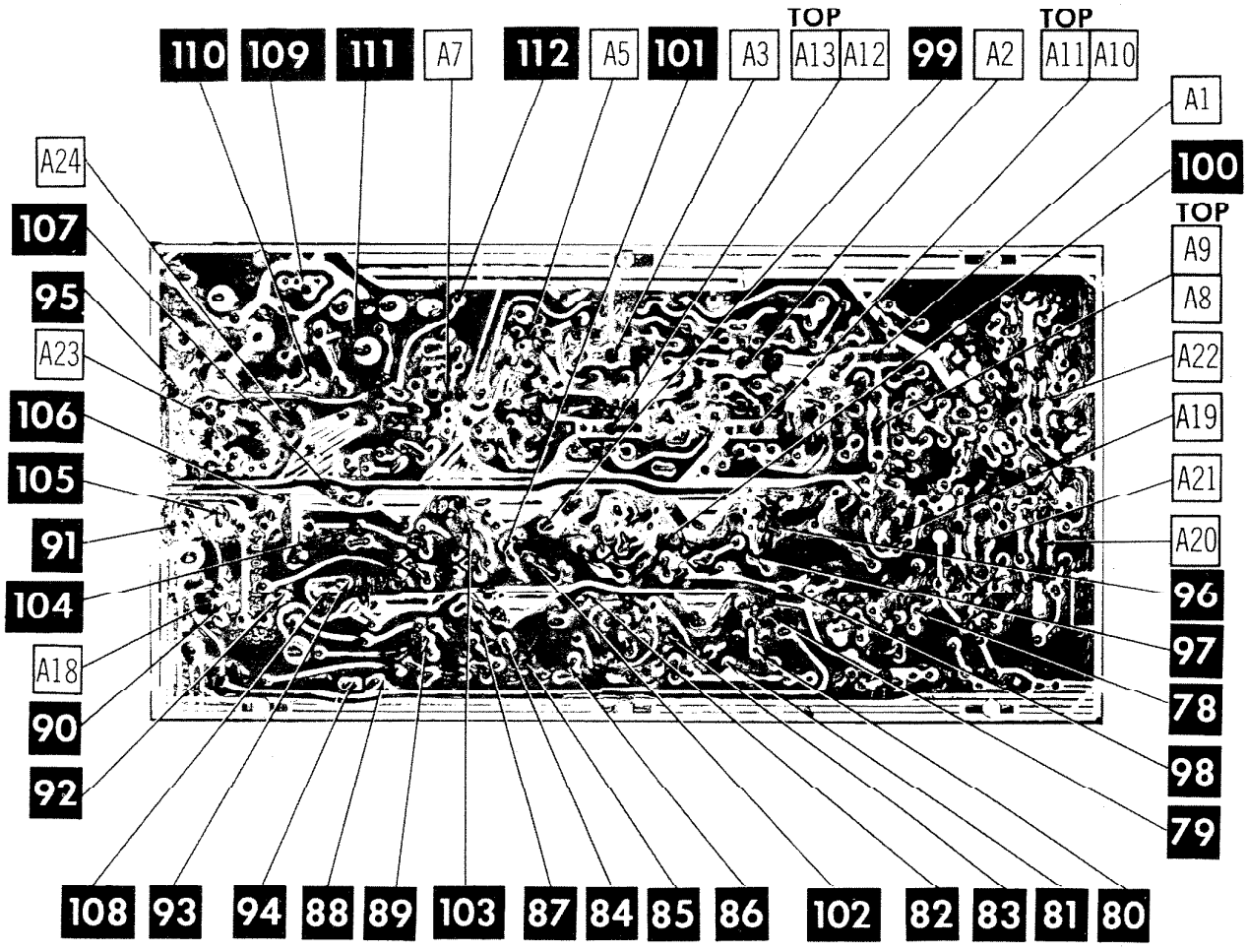


Fig. 6. Bottom view of printed board—CircuiTrace and alignment points.

ALIGNMENT INSTRUCTIONS (Cont'd)

FM RF and IF Alignment

Set Selector switch (M2A & B) on FM position.
Use frequency modulated signal with 450KC sweep.
Use 60 cycle sawtooth voltage in scope for horizontal deflection.

	Dummy Antenna	Signal Generator Coupling	Signal Generator Frequency	Radio Dial Setting	Oscilloscope	Adjust	Remarks
6.	.01 mfd	High side to point D. Low side to chassis.	10.7MC	Point of non-interference.	Vert. Amp. to point E. Low side to chassis.	A8, A9	Adjust for symmetrical "S" curve (Fig. B).
7.	.01 mfd	High side to point A. Low side to chassis.	10.7MC	10.7MC	Vert. Amp. to point F. Low side to chassis.	A10, A11, A12, A13	Adjust for curve of maximum amplitude and symmetry (Fig. A).
8.	270 ohm resistor	High side to point G. Low side to point H.	106MC	106MC	Vert. Amp. to point E. Low side to chassis.	A14, A15, A16, A17	Adjust for symmetrical "S" curve (Fig. B). Reduce sweep width if necessary.
Only make following adjustment if unit will not track properly.							
9.	270 ohm resistor	High side to point G. Low side to point H.	108.5MC	108.5MC	Vert. Amp. to point E. Low side to chassis.	A18	Adjust for symmetrical "S" curve (Fig. B).
10.	270 ohm resistor	High side to point G. Low side to point H.	87.5MC	87.5MC	Vert. Amp. to point E. Low side to chassis.	L4	Expand or compress coil for symmetrical "S" curve (Fig. B). Reduce sweep width if necessary. Repeat Steps 9 and 10 until no further improvement is noted. Repeat Steps 7 and 8.

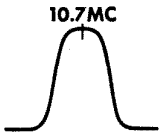


Fig. A.

Fig. B.

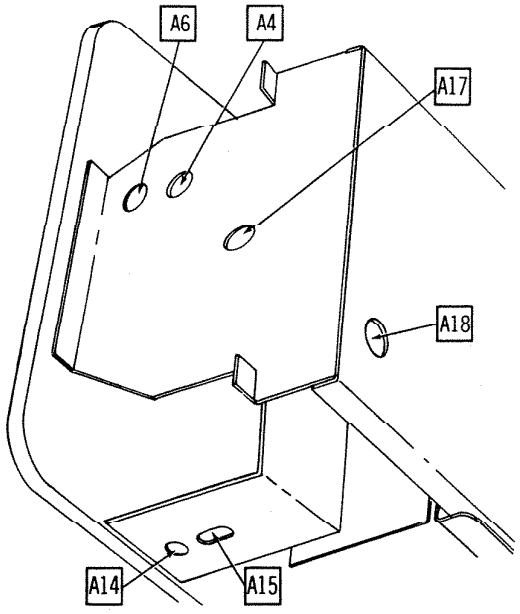


Fig. 7. Location of AM and FM tuner alignment points.

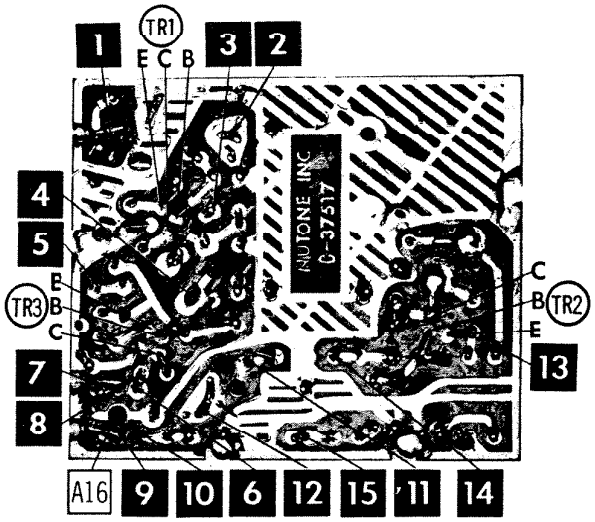


Fig. 8. Bottom view of FM tuner printed board.

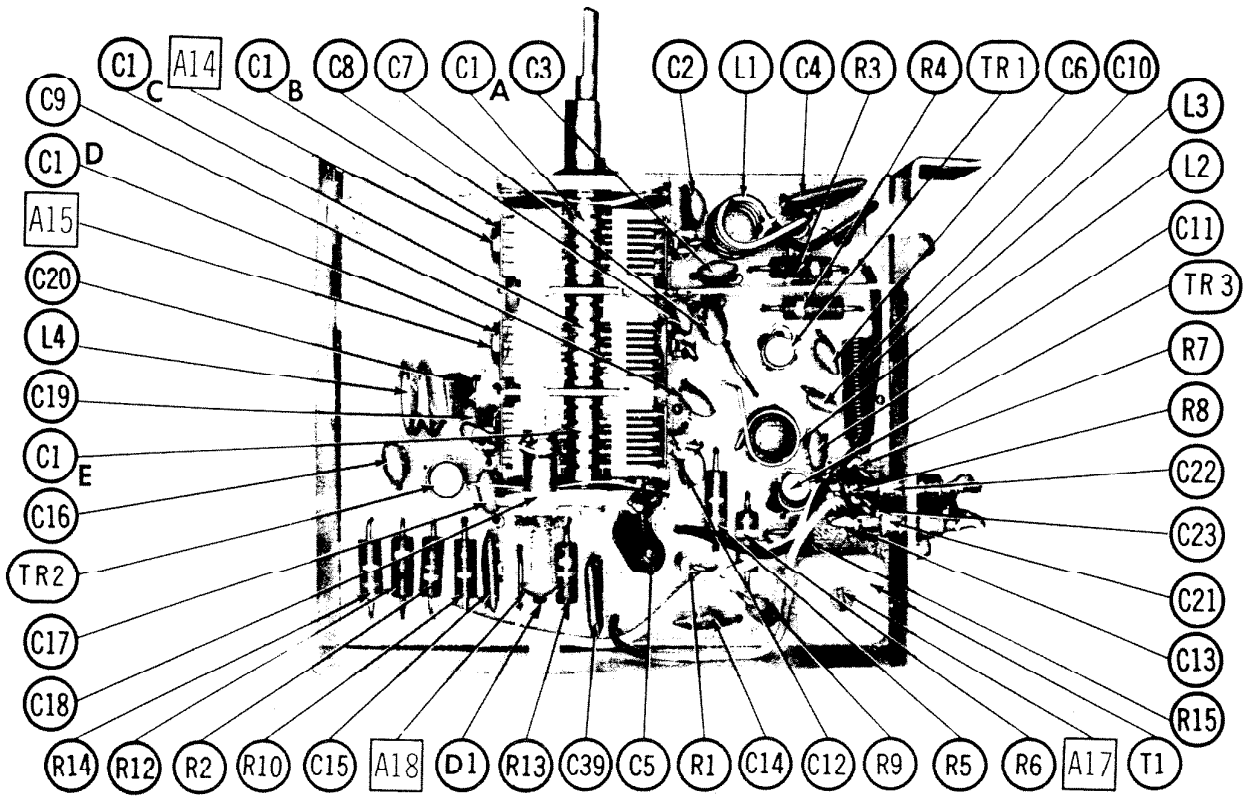


Fig. 9. Top view of FM tuner printed board.

ALIGNMENT INSTRUCTIONS (Cont'd)

FM Multiplex Alignment

Selector Switch (M2A & B) to FM STEREO Position
ON-OFF Switch M4 to ON
Separation Control set to midrange.
Use FM Stereo Signal Generator or Audio Signal Generator

Signal Generator Coupling	Signal Generator Frequency	Connect Scope	Adjust	Remarks
11. High side to point I , low side to chassis.	67KC (2.8V PP)	Vert. amp. to point J	A19	Connect Pin 2 of T8 to ground. Adjust A19 for minimum output. Remove ground from Pin 2 of T8 after adjustment is made.
12. High side to point K , low side to chassis.	19KC (40MV PP)	Vert. amp. to point L . (Use low capacity probe.)	A20	Adjust for stable scope pattern.
13. High side to point K , low side to chassis.	19KC (40MV PP)	Vert. amp. to point M . (Use low capacity probe.)	A21	Adjust for maximum output.
14. High side to point K , low side to chassis.	19KC (40MV PP)	Vert. amp. to point N . (Use low capacity probe.)	A22	Adjust for maximum output.
15. Disconnect signal generator.	—	Vert. amp. to Point L . (Use low capacity probe.)	A20	Adjust for stable scope pattern.
16. High side to point O , low side to chassis.	38KC (400MV PP)	Vert. amp. to point P .	A23, A24	Adjust for maximum output.

ALIGNMENT INSTRUCTIONS (Cont'd)

Signal Generator Coupling	Signal Generator Frequency	Connect Scope	Adjust	Remarks
Stereo Separation Measurement FM Stereo generator must be used.				
17. High side to point K , low side to chassis.	Composite (45% L-R, 45% L-R, 10% 19KC 400MV PP)	Vert. amp. or positive probe of VTVM to point Q .	—	Record voltage measurement (V^1).
18. High side to point K , low side to chassis.	Composite (45% L-R, 45% L-R, 10% 19KC 400MV PP)	Vert. amp. or positive probe of VTVM to point R .	—	Record voltage measurement (V^2).
—	—	—	—	Minimum separation = 23db Separation (db) = $20 \log \frac{V^1}{V^2}$ Measurement can be read directly in db if an AC VTVM is used.

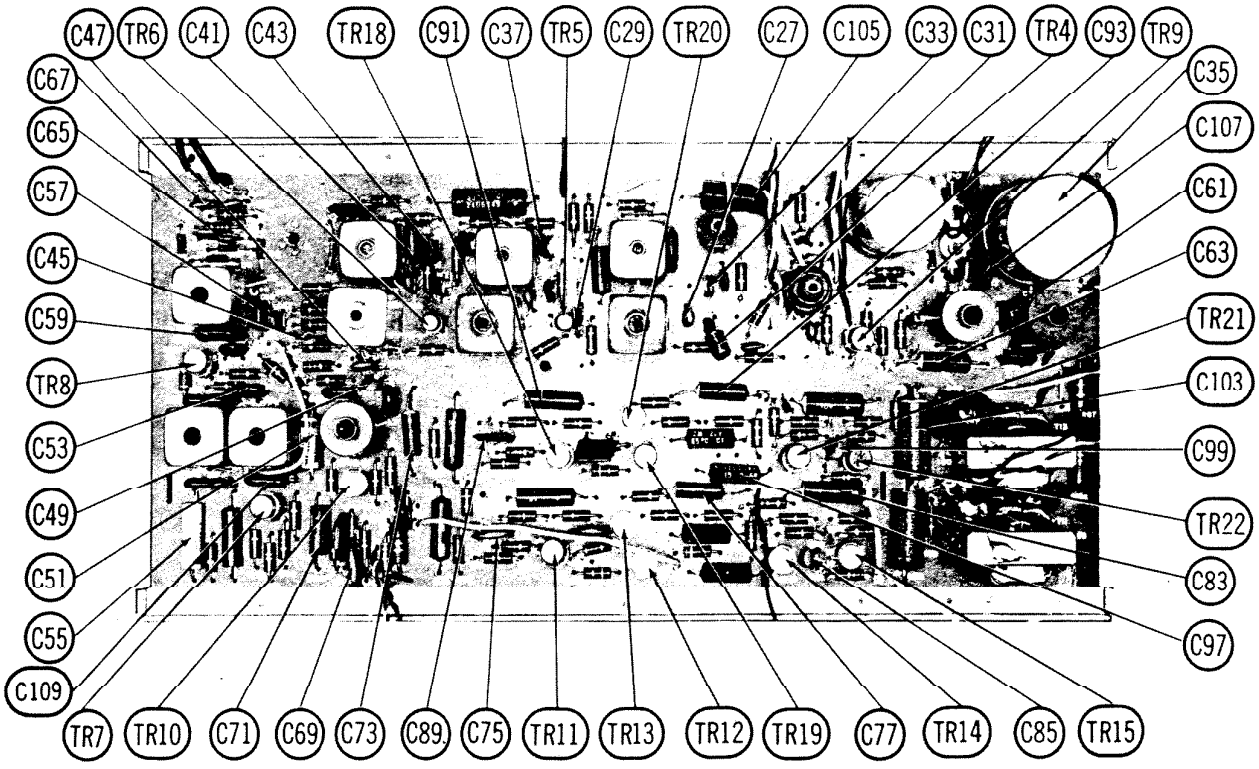


Fig. 10. Top view of receiver printed board—capacitor identification.

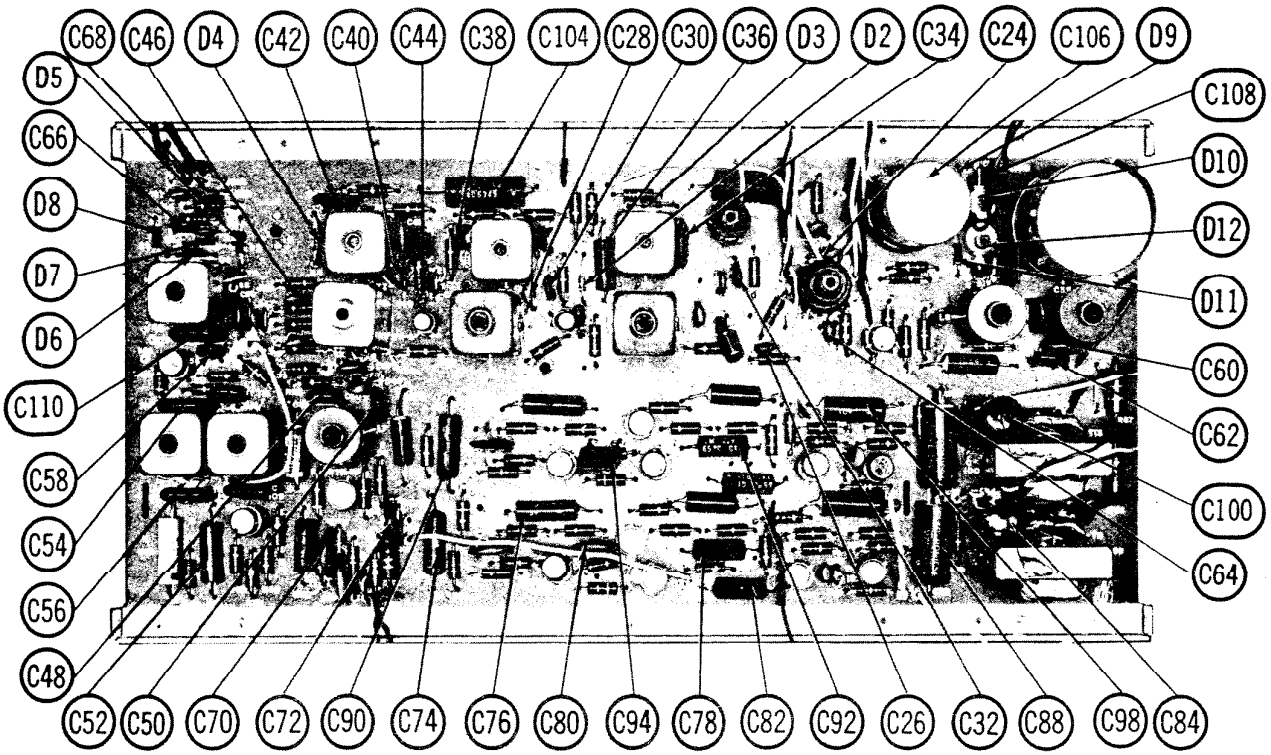


Fig. 11. Top view of receiver printed board—capacitor identification.

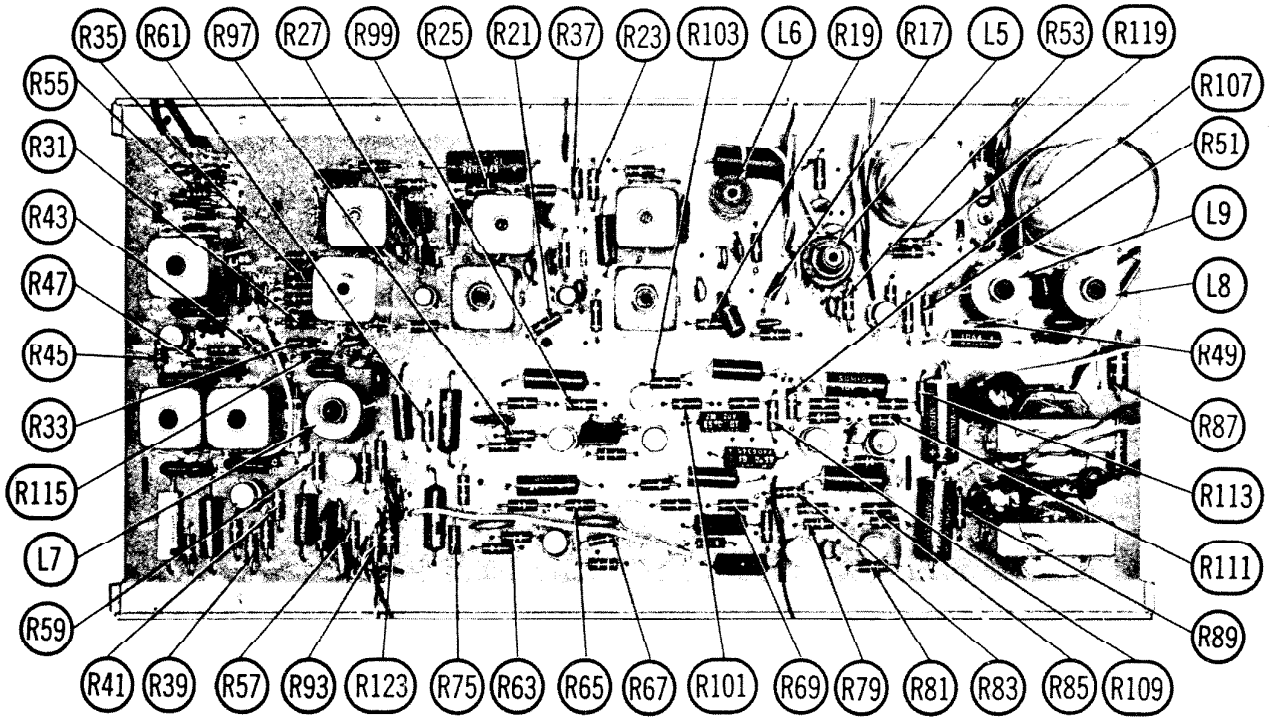


Fig. 12. Top view of receiver printed board—resistor identification.

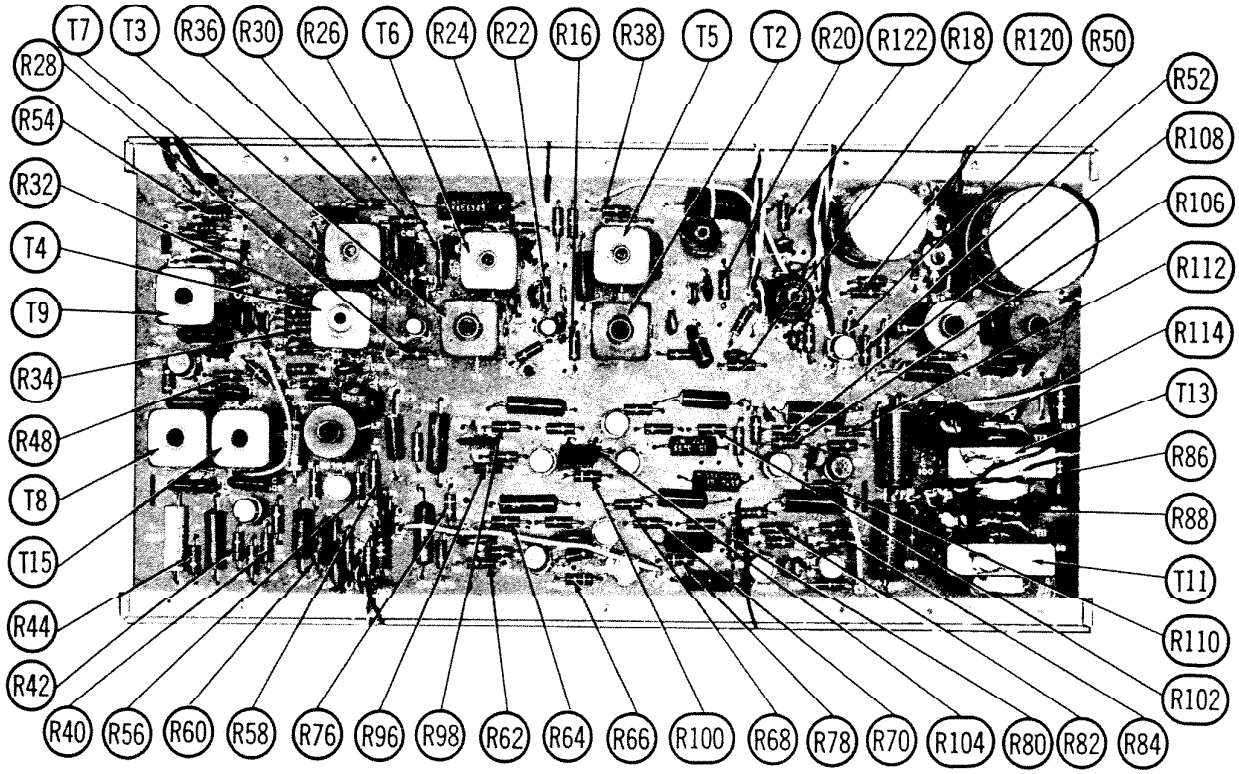


Fig. 13. Top view of receiver printed board—resistor identification.

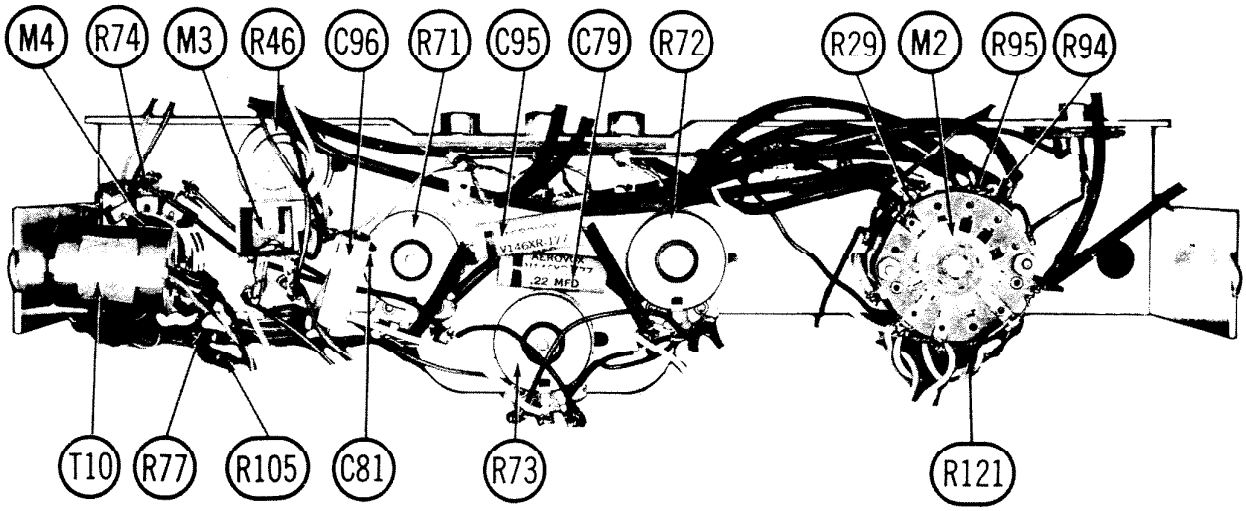


Fig. 14. Rear view of front panel.

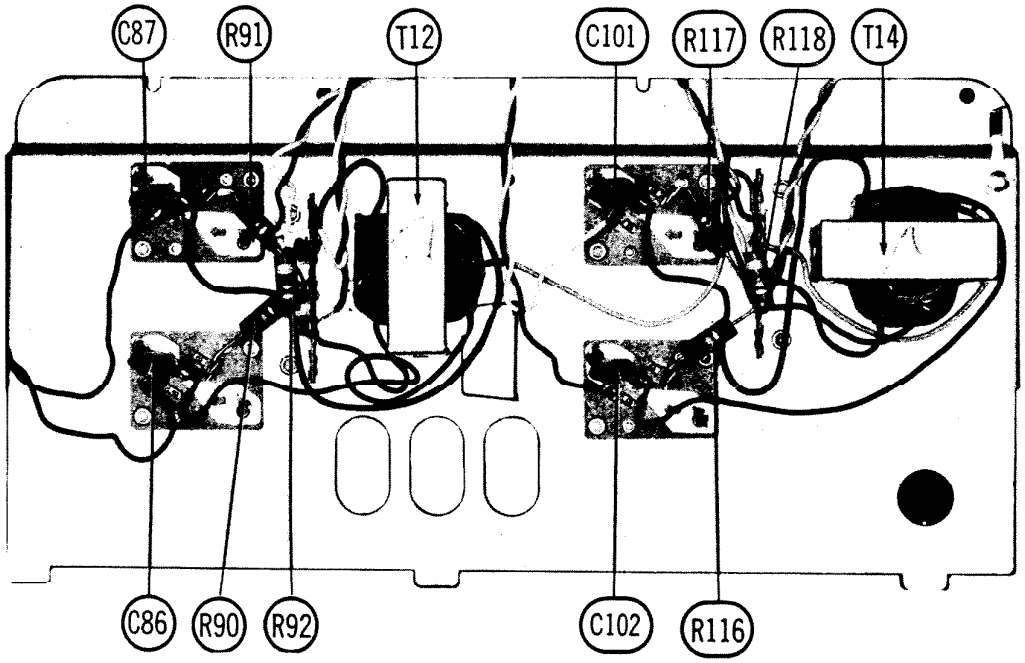


Fig. 15. Rear view of bottom panel.

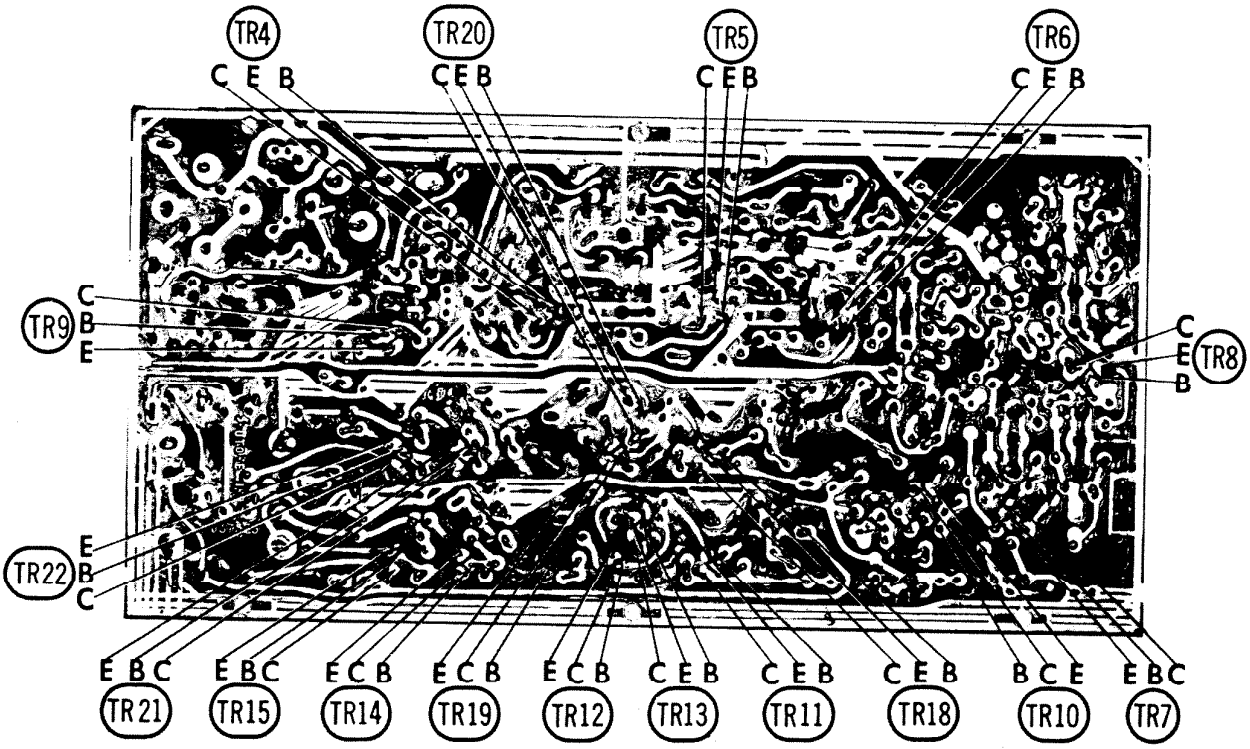


Fig. 16. Bottom view of receiver printed board—transistor CircuiTrace points.

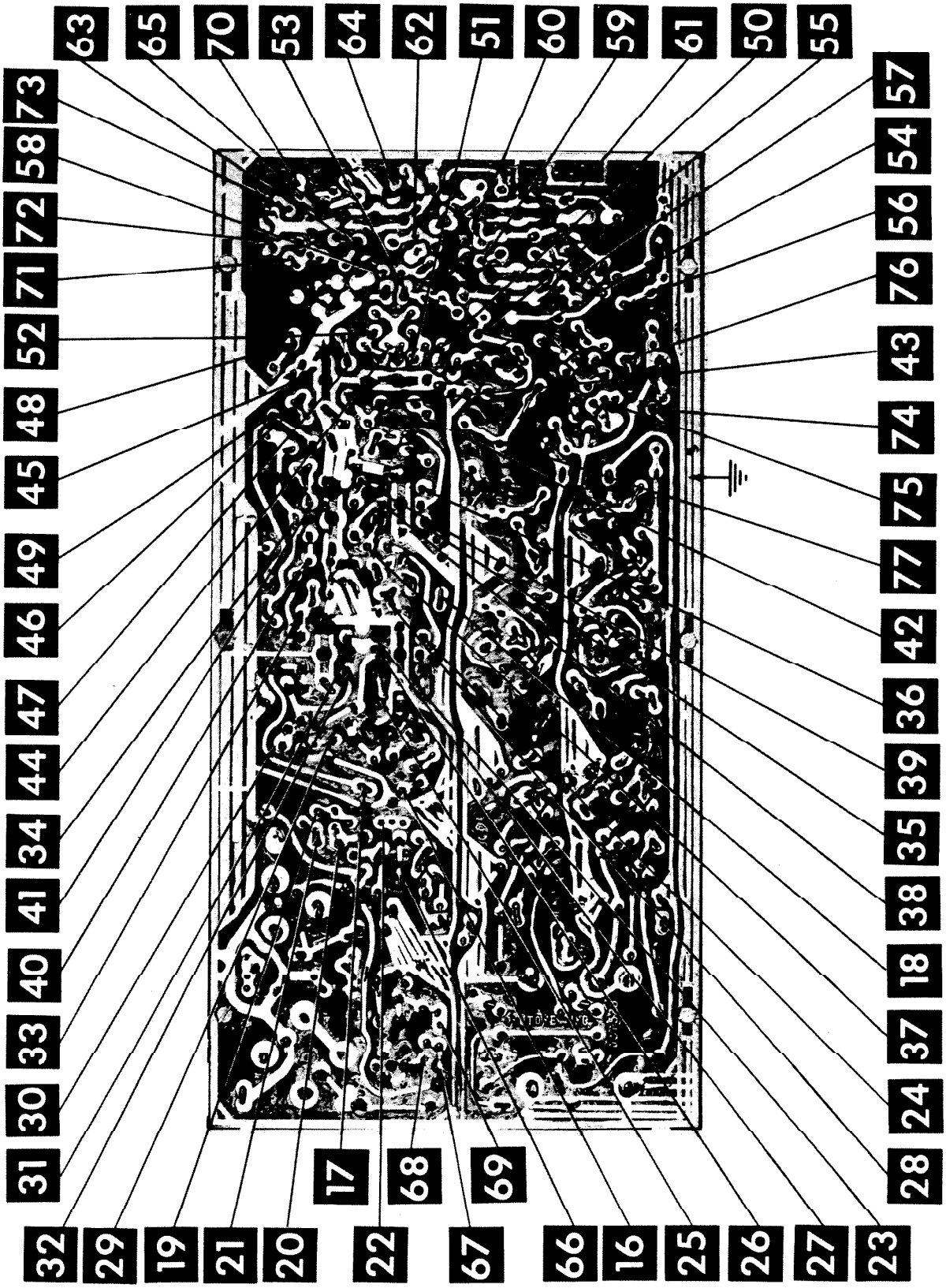


Fig. 17. Bottom view of receiver printed board—CircuiTrace points.

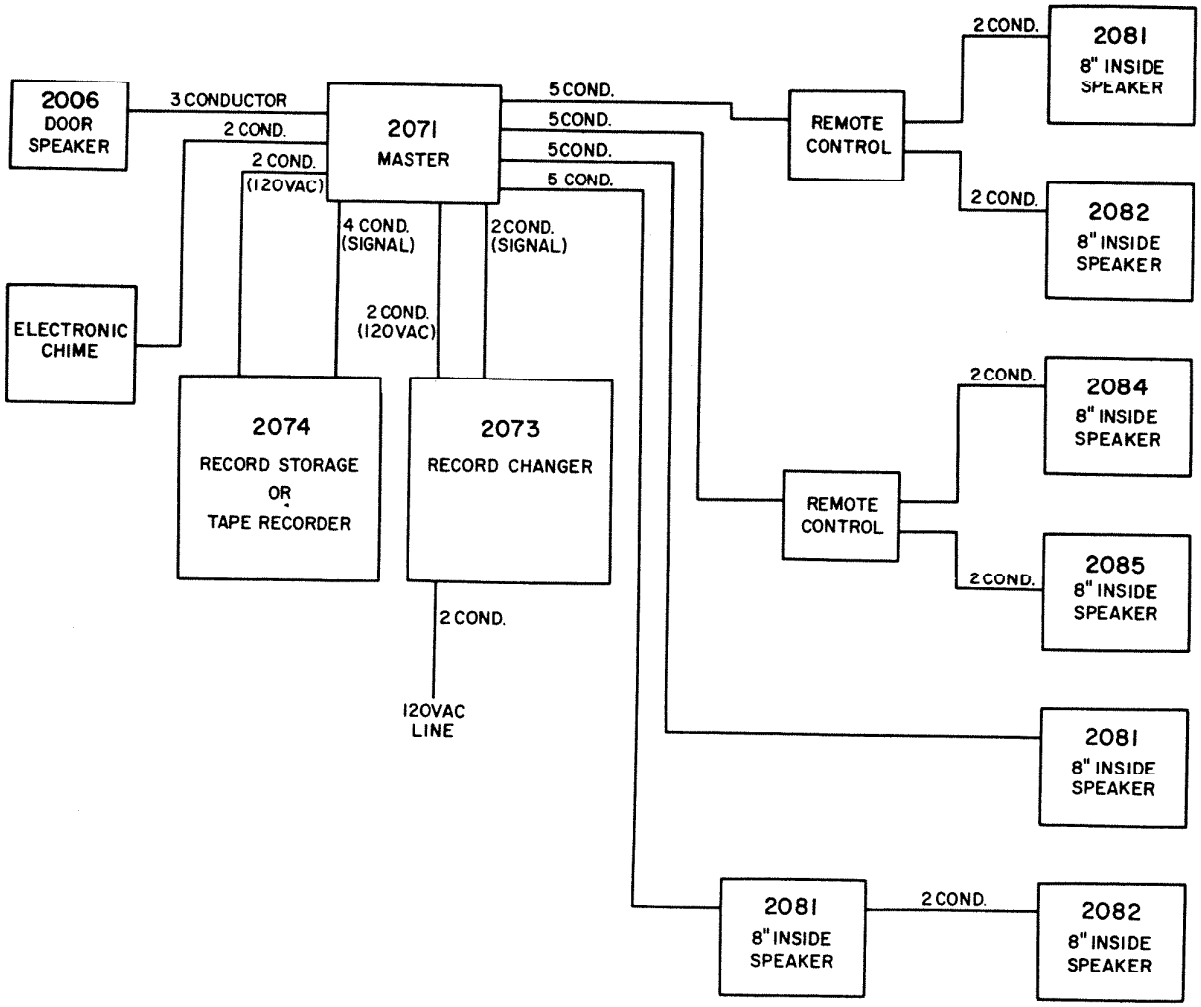


Fig. 18. Block diagram of complete radio-intercom system.

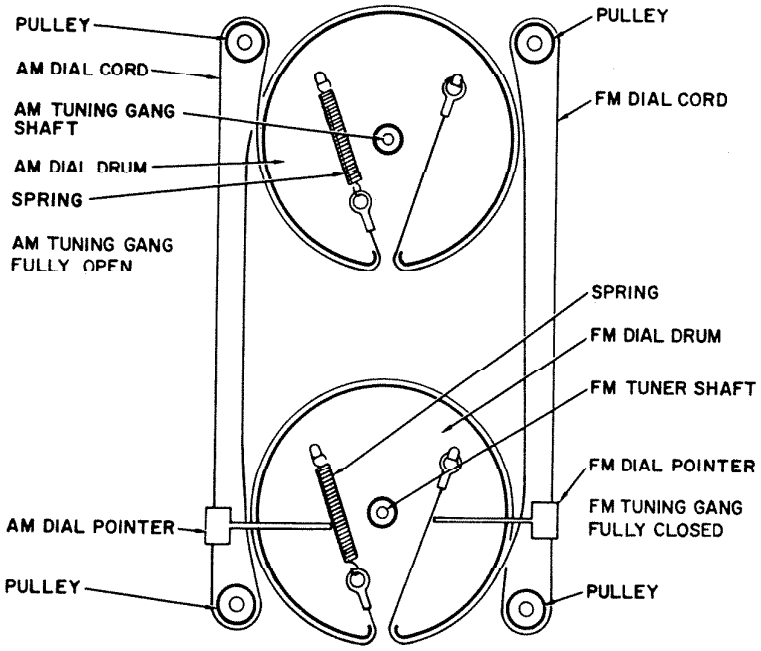


Fig. 19. Dial cord stringing guide.

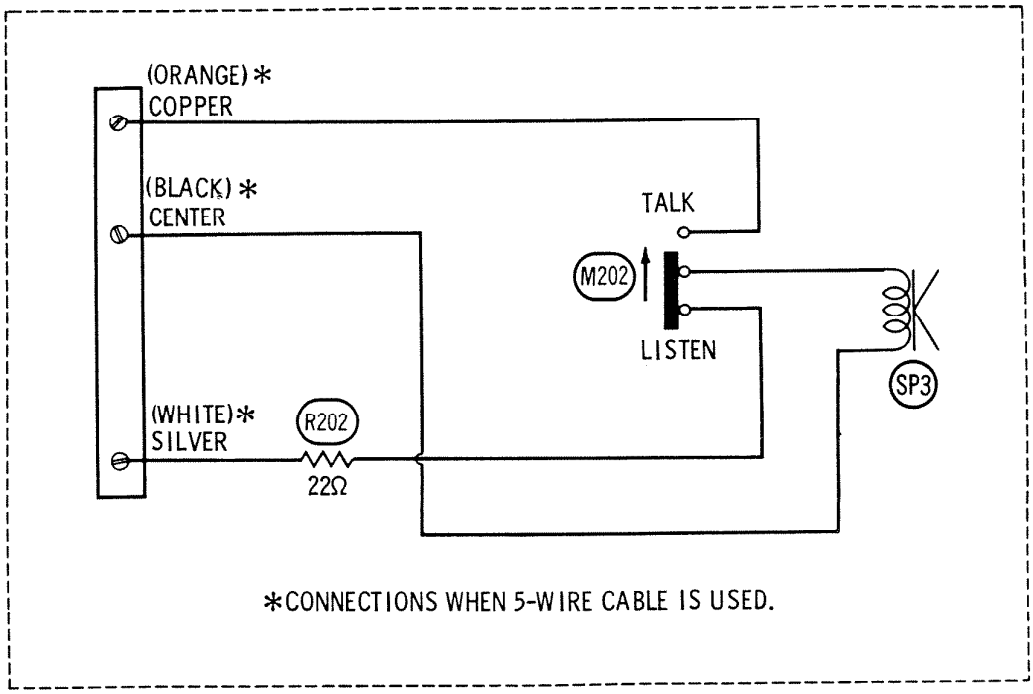


Fig. 20. Schematic of Model 2006 remote speaker.

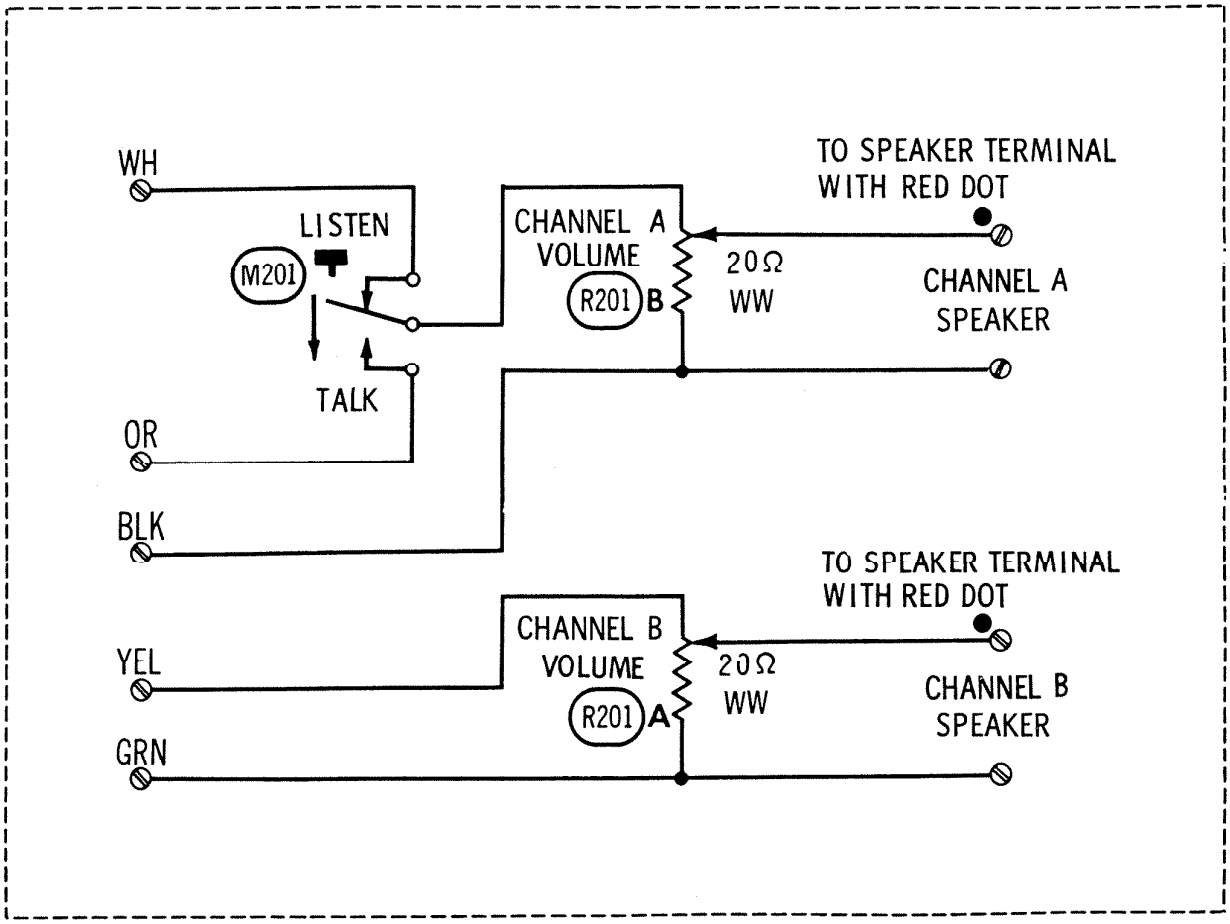


Fig. 21. Schematic of remote or break-away control panel.

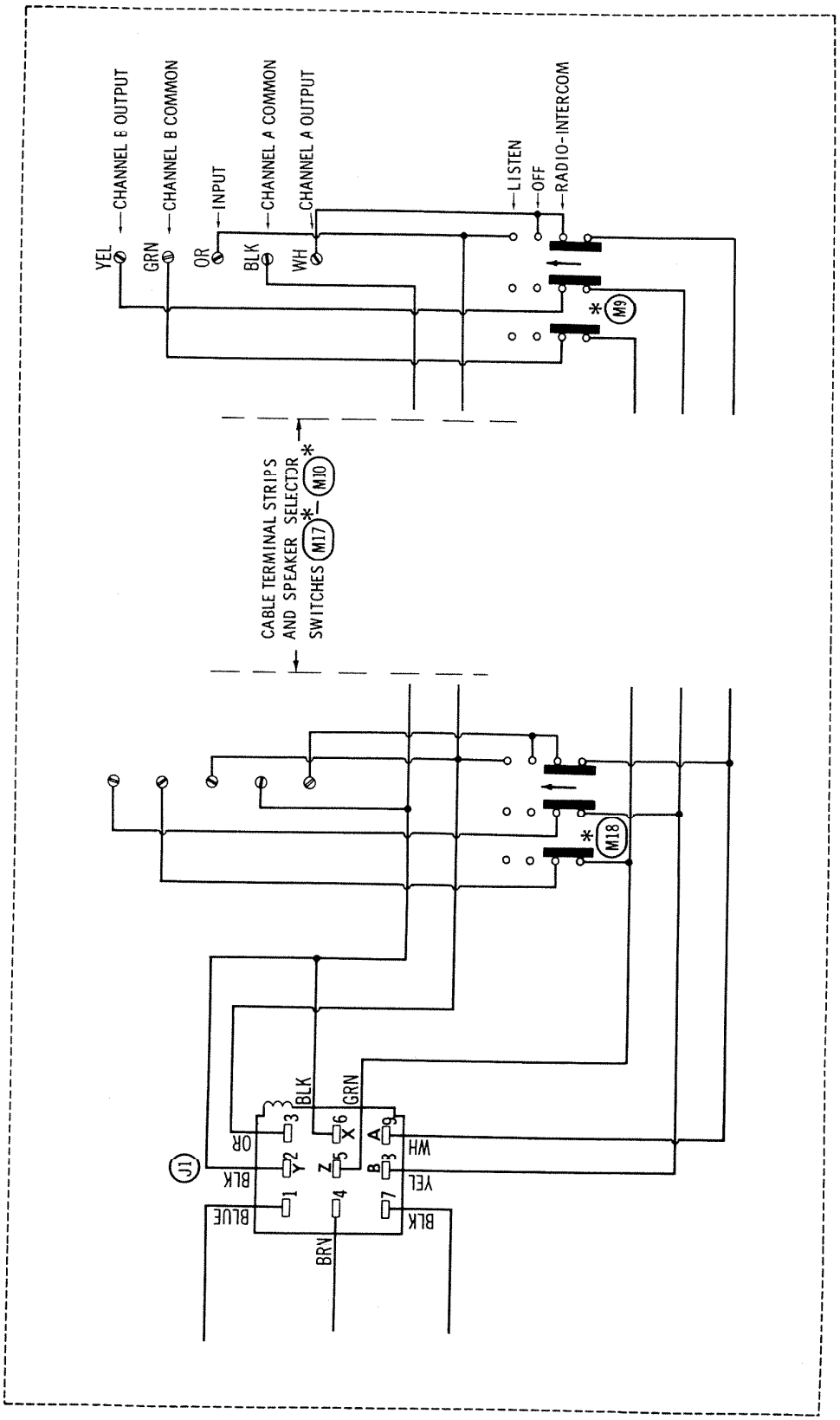
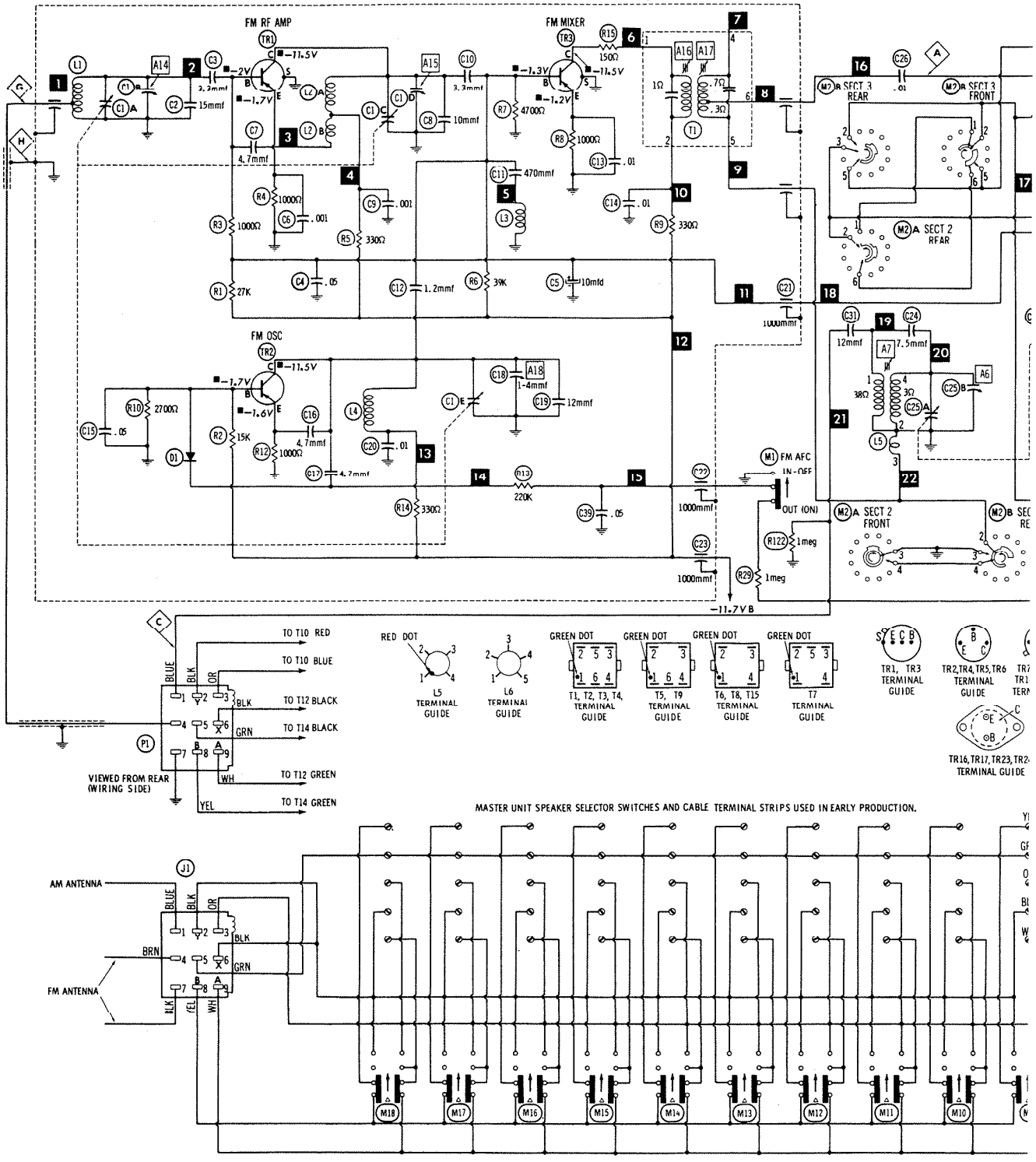


Fig. 22. Partial schematic of speaker selector switches used in late production models.


FM RF AMP
FM MIXER
FM OSC
FM AFC IN-OFF
OUT (ON)
SECT 3 REAR
SECT 3 FRONT
SECT 2 REAR
SECT 2 FRONT
-11.7V B
TO T10 RED
TO T10 BLUE
TO T12 BLACK
TO T14 BLACK
TO T12 GREEN
TO T14 GREEN
VIEWED FROM REAR (WIRING SIDE)
RED DOT
GREEN DOT
L5 TERMINAL GUIDE
L6 TERMINAL GUIDE
T1, T2, T3, T4, TERMINAL GUIDE
T5, T9 TERMINAL GUIDE
T6, T8, T15 TERMINAL GUIDE
T7 TERMINAL GUIDE
TR1, TR3 TERMINAL GUIDE
TR2,TR4,TR5,TR6 TERMINAL GUIDE
TR16,TR17,TR23,TR2
MASTER UNIT SPEAKER SELECTOR SWITCHES AND CABLE TERMINAL STRIPS USED IN EARLY PRODUCTION.
AM ANTENNA
FM ANTENNA

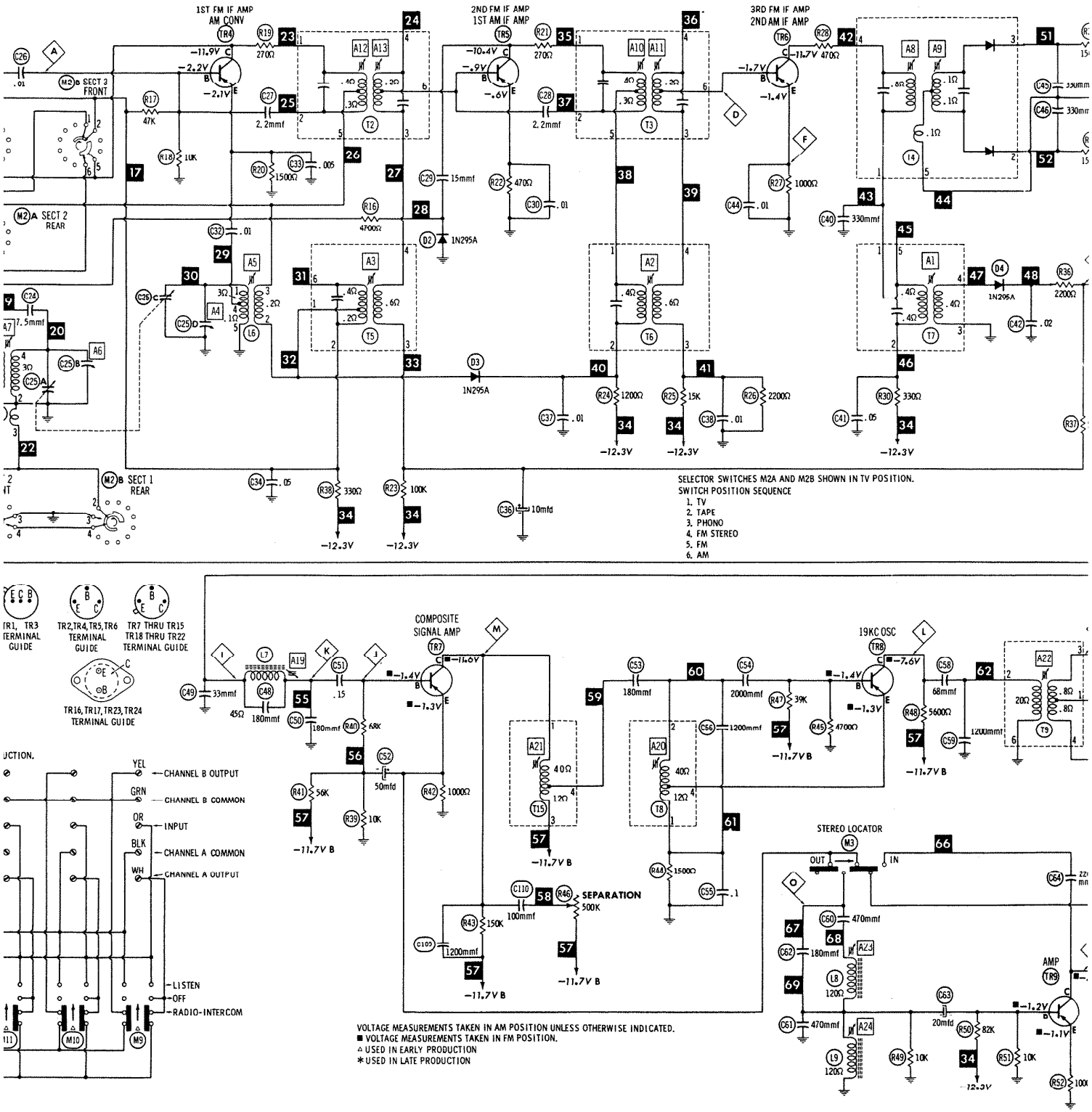
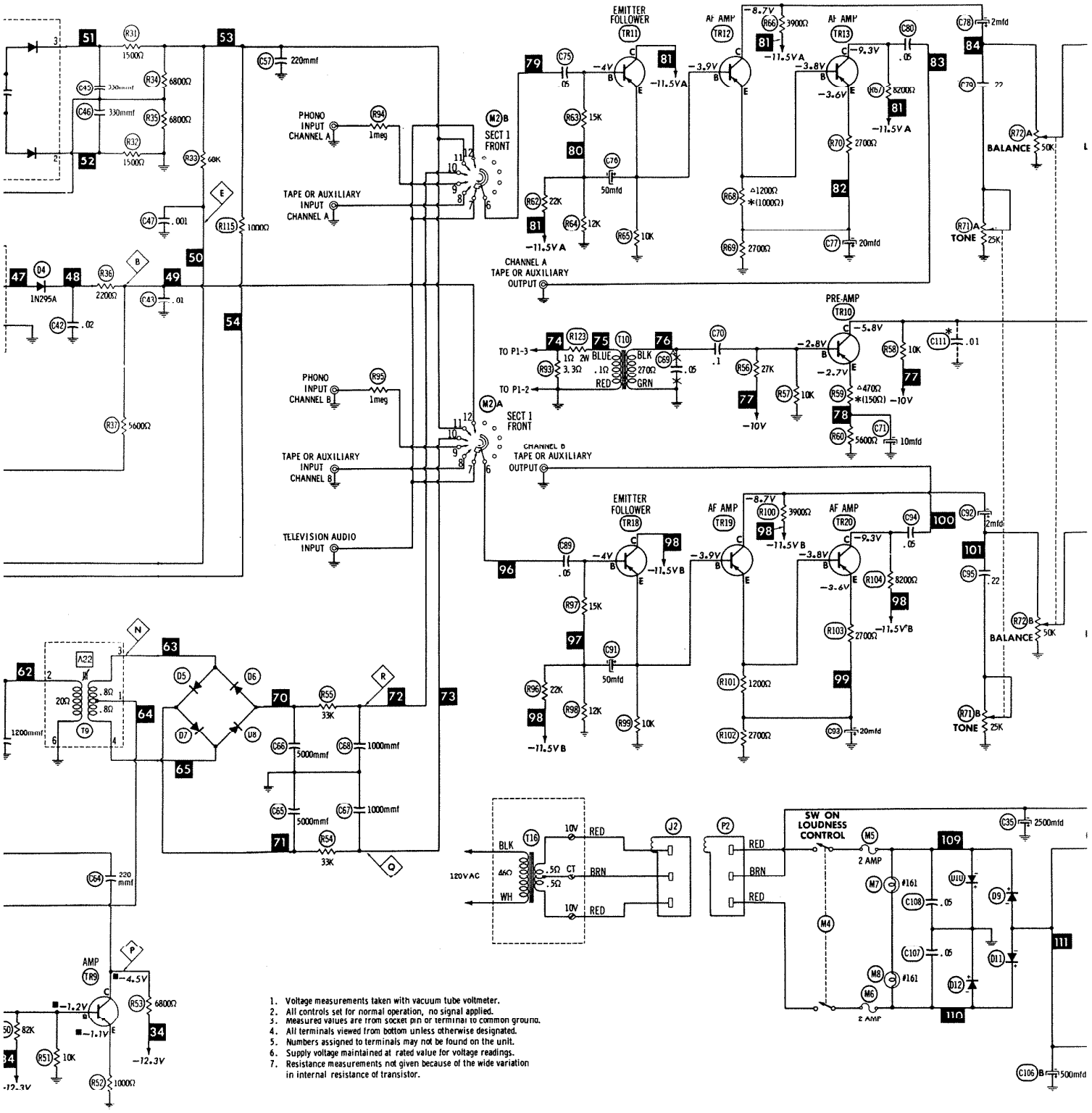
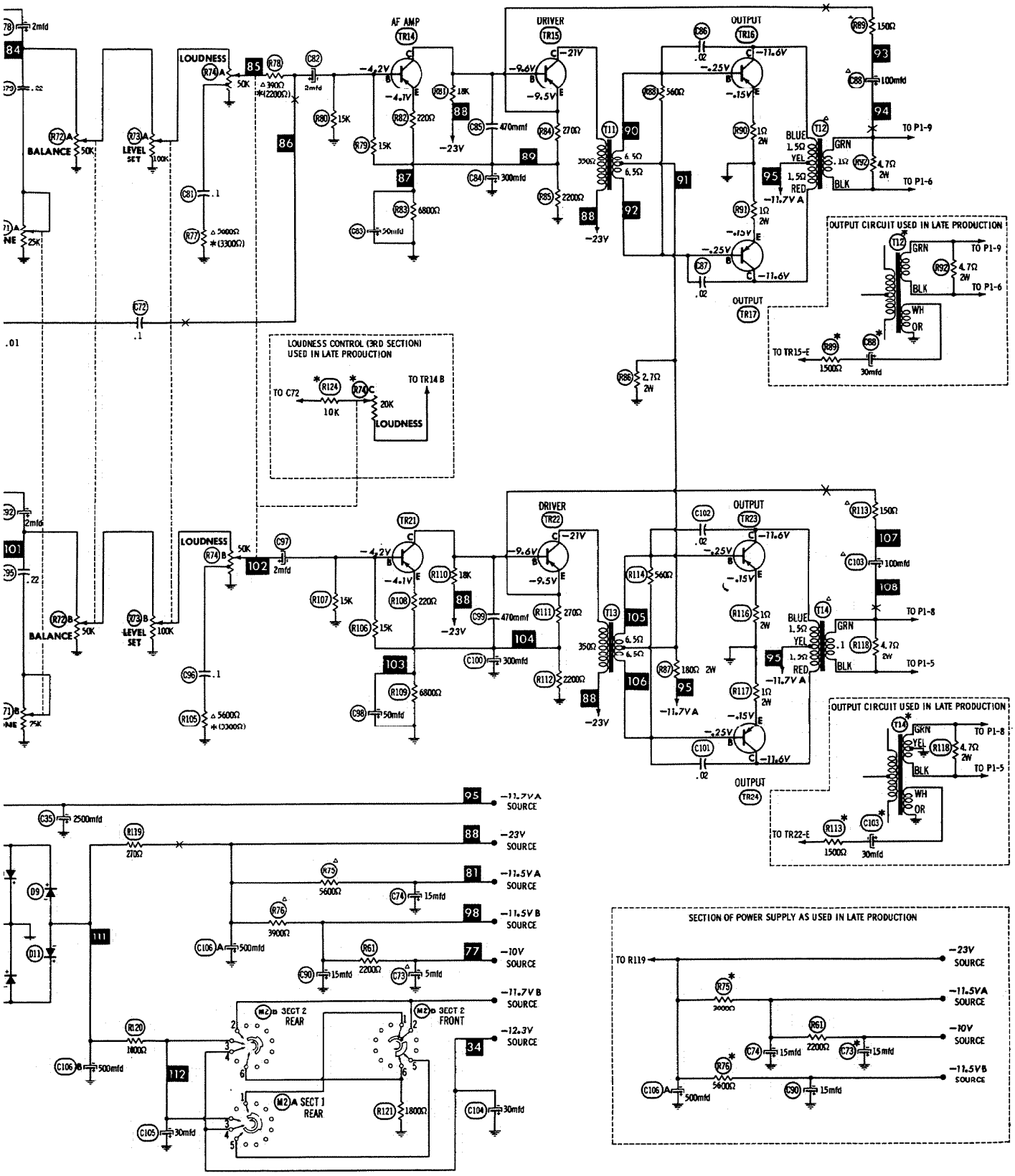


Fig. 23. Master statio



1. Voltage measurements taken with vacuum tube voltmeter.
2. All controls set for normal operation, no signal applied.
3. Measured values are from socket pin or terminal to common ground.
4. All terminals viewed from bottom unless otherwise designated.
5. Numbers assigned to terminals may not be found on the unit.
6. Supply voltage maintained at rated value for voltage readings.
7. Resistance measurements not given because of the wide variation in internal resistance of transistor.

23. Master station schematic.


AF AMP
DRIVER
OUTPUT
LOUDNESS
BALANCE
LEVEL SET
OUTPUT CIRCUIT USED IN LATE PRODUCTION
LOUDNESS CONTROL (3RD SECTION) USED IN LATE PRODUCTION
TO TR14 B
TO C72
LOUDNESS
TO P1-9
TO P1-6
TO P1-8
TO P1-5
TO TR15-E
TO TR22-E
BLUE
GRN
YEL
RED
BLK
WH
OR
SECT 2 REAR
SECT 2 FRONT
SECT 1 REAR
-23V SOURCE
-11.5V A SOURCE
-11.5V B SOURCE
-10V SOURCE
-11.7V B SOURCE
-12.3V SOURCE
SECTION OF POWER SUPPLY AS USED IN LATE PRODUCTION
TO R119

PARTS LIST

Ref. No.	Part No.	Description
		TRANSISTORS
TR1	36550	TI400, FM RF Amp
TR2	36552	TI387, FM Oscillator
TR3	36551	TI401, FM Mixer
TR4	36559	TI388, 1st FM IF Amp, AM Converter
TR5	36559	TI388, 2nd FM IF Amp, 1st AM IF Amp
TR6	36560	TI389, 3rd FM IF Amp, 2nd AM IF Amp
TR7	36558	2N408, Composite Signal Amp
TR8	36558	2N408, 19KC Oscillator
TR9	36558	2N408, Amp, Stereo Locator
TR10	36558	2N408, Pre-Amp, Intercom
TR11	36558	2N408 Emitter Follower, Chan. A
TR12	36558	2N408, AF Amp, Chan. A
TR13	36558	2N408, AF Amp, Chan. A
TR14	36558	2N408, AF Amp, Chan. A
TR15	36557	2N591, Driver, Chan. A
TR16	36556	2N301, Output, Chan. A
TR17	36556	2N301, Output, Chan. A
TR18	36558	2N408, Emitter Follower, Chan. B
TR19	36558	2N408, AF Amp, Chan. B
TR20	36558	2N408, AF Amp, Chan. B
TR21	36558	2N408, AF Amp, Chan. B
TR22	36557	2N591, Driver, Chan. B
TR23	36556	2N301, Output, Chan. B
TR24	36556	2N301, Output, Chan. B
		DIODES
D1	35060	AFC
D2	36508	1N295A, FM AGC
D3	36508	1N295A, AM Overload
D4	36508	1N295A, AM Detector
D5	36553	TI-6, Multiplex Switching
D6	36553	TI-6, Multiplex Switching
D7	36553	TI-6, Multiplex Switching
D8	36553	TI-6, Multiplex Switching
D9	36554	TI-55, Silicon Rectifier
D10	36555	1N536, Silicon Rectifier
D11	36554	TI-55, Silicon Rectifier
D12	36555	1N536, Silicon Rectifier
		CAPACITORS
C1	35056	FM Tuning
C2		15 mmf N330 10%, Ceramic Disc
C3		3.3 mmf 10%, Ceramic Disc
C4		.05 mfd @ 50V, Ceramic
C5		10 mfd @ 6V, Electrolytic
C6		.001 mfd, Ceramic Disc
C7		4.7 mmf NPO 10%, Ceramic Disc
C8		10 mmf 10%, Ceramic Disc
C9		.001 mfd, Ceramic Disc
C10		3.3 mmf 10%, Ceramic Disc
C11		470 mmf 10%, Ceramic Disc
C12		1.2 mmf + .25 mmf, Ceramic Disc
C13		.01 mfd @ 50V, Ceramic
C14		.01 mfd @ 50V, Ceramic
C15		.05 mfd @ 50V, Ceramic
C16		4.7 mmf NPO 10%, Ceramic Disc
C18	35062	1-4 mmf, Trimmer
C19		12 mmf 10%, Ceramic Disc
C20		.01 mfd @ 50V, Ceramic
C21	35061	1000 mmf, Feed-thru
C22	35061	1000 mmf, Feed-thru
C23	35061	1000 mmf, Feed-thru
C24		7.5 mmf NPO 10%, Ceramic Disc
C25	35059	AM Tuning
C26		.01 mfd @ 50V, Ceramic
C27		2.2 mmf NPO ± .25 mmf, Ceramic Disc
C28		2.2 mmf NPO ± .25 mmf, Ceramic Disc
C29		15 mmf N330 10%, Ceramic Disc
C30		.01 mfd @ 50V, Ceramic
C31		12 mmf N330 10%, Ceramic Disc
C32		.01 mfd @ 50V, Ceramic
C33		.005 mfd @ 50V, Ceramic Disc
C34		.05 mfd @ 50V, Ceramic Disc
C35	35057	2500 mfd, @ 35V, Electrolytic
C36		10 mfd @ 6V, Electrolytic
C37		.01 mfd @ 50V, Ceramic
C38		.01 mfd @ 50V, Ceramic
C39		.05 mfd @ 50V, Ceramic
C40		330 mmf 10%, Ceramic Disc
C41		.05 mfd @ 50V, Ceramic Disc
C42		.02 mfd @ 50V, Ceramic Disc
C43		.01 mfd @ 50V, Ceramic
C44		.01 mfd @ 50V, Ceramic
C45		330 mmf 10%, Ceramic Disc
C46		330 mmf 10%, Ceramic Disc
C47		.001 mfd 10 %, Ceramic Disc
C48		180 mmf 5%, Mica
C49		33 mmf 10%, Ceramic Disc
C50		180 mmf 5%, Mica
C51		.15 mmf @ 50V, Tubular
C52		50 mfd @ 3V, Electrolytic
C53		180 mmf 5%, Mica
C54		2000 mmf 5%, Mica
C55		.1 mfd @ 150V, Tubular
C56		1200 mmf 5%, Mica
C57		220 mmf 10%, Ceramic Disc
C58		68 mmf 5%, Mica
C59		1200 mmf 5%, Mica
C60		470 mmf 5%, Mica
C61		470 mmf 5%, Mica
C62		180 mmf 5%, Mica
C63		20 mfd @ 6V, Electrolytic
C64		220 mmf 10%, Ceramic Disc
C65		5000 mmf @ 50V, Ceramic Disc
C66		5000 mmf @ 50V, Ceramic Disc
C67		1000 mmf 10%, Ceramic Disc
C68		1000 mmf 10%, Ceramic Disc
ΔC69		.05 mfd @ 50V, Ceramic Disc
C70		.1 mfd @ 50V, Ceramic Disc
C71		10 mfd @ 6V, Electrolytic
C72		.1 mfd @ 50V, Ceramic Disc
ΔC73		5 mfd @ 15V, Electrolytic
*C73		15 mfd @ 15V, Electrolytic
C74		15 mfd @ 15V, Electrolytic
C75		.05 mfd @ 50V, Ceramic Disc
C76		50 mfd @ 3V, Electrolytic
C77		20 mfd @ 6V, Electrolytic
C78		2 mfd @ 20V, Electrolytic
C79		.22 mfd @ 150V, Tubular
C80		.05 mfd @ 50V, Ceramic Disc

Δ Used in early production. * Used in late production.

PARTS LIST (Cont'd)

Ref. No.	Part No.	Description
		CAPACITORS (Cont'd)
C81		.1 mfd @ 150V, Tubular
C82		2 mfd @ 20V, Electrolytic
C83		50 mfd @ 10V, Electrolytic
C84		300 mfd @ 15V, Electrolytic
C85		470 mmf 10%, Ceramic Disc
C86		.02 mfd @ 50V, Ceramic Disc
C87		.02 mfd @ 50V, Ceramic Disc
ΔC88		100 mfd @ 15V, Electrolytic
*C88		30 mfd @ 15V, Electrolytic
C89		.05 mfd @ 50V, Ceramic
C90		15 mfd @ 15V, Electrolytic
C91		50 mfd @ 3V, Electrolytic
C92		2 mfd @ 20V, Electrolytic
C93		20 mfd @ 6V, Electrolytic
C94		.05 mfd @ 50V, Ceramic
C95		.22 mfd @ 150V, Tubular
C96		.1 mfd @ 150V, Tubular
C97		2 mfd @ 20V, Electrolytic
C98		50 mfd @ 10V, Electrolytic
C99		470 mfd 10%, Ceramic Disc
C100		300 mfd @ 15V, Electrolytic
C101		.02 mfd @ 50V, Ceramic Disc
C102		.02 mfd @ 50V, Ceramic Disc
ΔC103		100 mfd @ 15V, Electrolytic
*C103		30 mfd @ 15V, Electrolytic
C104		30 mfd @ 30V, Electrolytic
C105		30 mfd @ 30V, Electrolytic
C106A	35058	500 mfd @ 35V, Electrolytic
B		500 mfd @ 35V, Electrolytic
C107		.05 mfd @ 50V, Ceramic
C108		.05 mfd @ 50V, Ceramic
C109		1200 mmf 5%, Mica
C110		100 mmf 5%, Mica
C111		.01 mfd @ 50V, Ceramic Disc
		CONTROLS AND RESISTORS
R1		27K, 10%, ½ Watt, Carbon
R2		•15K, 10%, ½ Watt, Carbon
R3		1000Ω, 10%, ½ Watt, Carbon
R4		1000Ω, 10%, ½ Watt, Carbon
R5		330Ω, 10%, ½ Watt, Carbon
R6		39K, 10%, ½ Watt, Carbon
R7		4700Ω, 10%, ½ Watt, Carbon
R8		1000Ω, 10%, ½ Watt, Carbon
R9		330Ω, 10%, ½ Watt, Carbon
R10		2700Ω, 10%, ½ Watt, Carbon
R11		Not Used.
R12		1000Ω, 10%, ½ Watt, Carbon
R13		220K, 10%, ½ Watt, Carbon
R14		330Ω, 10%, ½ Watt, Carbon
R15		150Ω, 10%, ½ Watt, Carbon
R16		4700Ω, 10%, ½ Watt, Carbon
R17		47K, 10%, ½ Watt, Carbon
R18		10K, 10%, ½ Watt, Carbon
R19		270Ω, 10%, ½ Watt, Carbon
R20		1500Ω, 10%, ½ Watt, Carbon
R21		270Ω, 10%, ½ Watt, Carbon
R22		470Ω, 10%, ½ Watt, Carbon
R23		100K, 10%, ½ Watt, Carbon
R24		1200Ω, 10%, ½ Watt, Carbon
R25		15K, 10%, ½ Watt, Carbon
R26		2200Ω, 10%, ½ Watt, Carbon
R27		1000Ω, 10%, ½ Watt, Carbon
R28		470Ω, 10%, ½ Watt, Carbon
R29		1 meg, 10%, ½ Watt, Carbon
R30		330Ω, 10%, ½ Watt, Carbon
R31		1500Ω, 10%, ½ Watt, Carbon
R32		1500Ω, 10%, ½ Watt, Carbon
R33		68K, 10%, ½ Watt, Carbon
R34		6800Ω, 10%, ½ Watt, Carbon
R35		6800Ω, 10%, ½ Watt, Carbon
R36		2200Ω, 10%, ½ Watt, Carbon
R37		5600Ω, 10%, ½ Watt, Carbon
R38		330Ω, 10%, ½ Watt, Carbon
R39		10K, 10%, ½ Watt, Carbon
R40		68K, 10%, ½ Watt, Carbon
R41		56K, 10%, ½ Watt, Carbon
R42		1000Ω, 10%, ½ Watt, Carbon
R43		150K, 10%, ½ Watt, Carbon
R44		1500Ω, 10%, ½ Watt, Carbon
R45		4700Ω, 10%, ½ Watt, Carbon
R46	34543	500K Separation Control (Includes M3 Stereo Locator Switch)
R47		39K, 10%, ½ Watt, Carbon
R48		5600Ω, 10%, ½ Watt, Carbon
R49		10K, 10%, ½ Watt, Carbon
R50		82K, 10%, ½ Watt, Carbon
R51		10K, 10%, ½ Watt, Carbon
R52		1000Ω, 10%, ½ Watt, Carbon
R53		6800Ω, 10%, ½ Watt, Carbon
R54		33K, 10%, ½ Watt, Carbon
R55		33K, 10%, ½ Watt, Carbon
R56		27K, 10%, ½ Watt, Carbon
R57		10K, 10%, ½ Watt, Carbon
R58		10K, 10%, ½ Watt, Carbon
ΔR59		470Ω, 10%, ½ Watt, Carbon
*R59		150Ω, 10%, ½ Watt, Carbon
R60		5600Ω, 10%, ½ Watt, Carbon
R61		2200Ω, 10%, ½ Watt, Carbon
R62		22K, 10%, ½ Watt, Carbon
R63		15K, 10%, ½ Watt, Carbon
R64		12K, 10%, ½ Watt, Carbon
R65		10K, 10%, ½ Watt, Carbon
R66		3900Ω, 10%, ½ Watt, Carbon
R67		8200Ω, 10%, ½ Watt, Carbon
ΔR68		1200Ω, 10%, ½ Watt, Carbon
*R68		1000Ω, 10%, ½ Watt, Carbon
R69		2700Ω, 10%, ½ Watt, Carbon
R70		2700Ω, 10%, ½ Watt, Carbon
R71A	34537	25K Tone Control (Channel A)
B		25K Tone Control (Channel B)
R72A	34542	50K Balance Control (Channel A)
B		50K Balance Control (Channel B)
R73A	34539	100K Level Control (Channel A)
B		100K Level Control (Channel B)
ΔR74A	34540	50K Loudness Control (Channel A) (Includes M5 & M6)
B		50K Loudness Control (Channel B)
*R74A	34027	50K Loudness Control, Chan. A (Includes M5 & M6)
B		50K Loudness Control, Chan. B
C		20K Loudness Control, Intercom
ΔR75		5600Ω, 10%, ½ Watt, Carbon
*R75		3900Ω, 10%, ½ Watt, Carbon

Δ Used in early production. * Used in late production.

PARTS LIST (Cont'd)

Ref. No.	Part No.	Description
		CONTROLS AND RESISTORS (Cont'd)
ΔR76		3900Ω, 10%, ½ Watt, Carbon
*R76		5600Ω, 10%, ½ Watt, Carbon
ΔR77		5600Ω, 10%, ½ Watt, Carbon
*R77		3300Ω, 10%, ½ Watt, Carbon
ΔR78		390Ω, 10½, ½ Watt, Carbon
*R78		2200Ω, 10%, ½ Watt, Carbon
R79		15K, 10%, ½ Watt, Carbon
R80		15K, 10%, ½ Watt, Carbon
R81		18K, 10%, ½ Watt, Carbon
R82		220Ω, 10%, ½ Watt, Carbon
R83		6800Ω, 10%, ½ Watt, Carbon
R84		270Ω, 10Ω, ½ Watt, Carbon
R85		2200Ω, 10%, ½ Watt, Carbon
R86		2.7Ω, 10%, 2 Watt, Carbon
R87		180Ω, 10%, 2 Watt, Carbon
R88		560Ω, 10%, ½ Watt, Carbon
ΔR89		150Ω, 10%, ½ Watt, Carbon
*R89		1500Ω, 10%, ½ Watt, Carbon
R90		1Ω, 10%, 2 Watt, Carbon
R91		1Ω, 10%, 2 Watt, Carbon
R92		4.7Ω, 10%, 2 Watt, Carbon
R93		3.3Ω, 10%, ½ Watt, Carbon
R94		1 meg, 10%, ½ Watt, Carbon
R95		1 meg, 10%, ½ Watt, Carbon
R96		22K, 10%, ½ Watt, Carbon
R97		15K, 10%, ½ Watt, Carbon
R98		12K, 10%, ½ Watt, Carbon
R99		10K, 10%, ½ Watt, Carbon
R100		3900Ω, 10%, ½ Watt, Carbon
R101		1200Ω, 10%, ½ Watt, Carbon
R102		2700Ω, 10%, ½ Watt, Carbon
R103		2700Ω, 10%, ½ Watt, Carbon
R104		8200Ω, 10%, ½ Watt, Carbon
ΔR105		5600Ω, 10%, ½ Watt, Carbon
*R105		3300Ω, 10%, ½ Watt, Carbon
R106		15K, 10%, ½ Watt, Carbon
R107		15K, 10%, ½ Watt, Carbon
R108		220Ω, 10%, ½ Watt, Carbon
R109		6800Ω, 10%, ½ Watt, Carbon
R110		18K, 10%, ½ Watt, Carbon
R111		270Ω, 10%, ½ Watt, Carbon
R112		2200Ω, 10%, ½ Watt, Carbon
ΔR113		150Ω, 10%, ½ Watt, Carbon
*R113		1500Ω, 10%, ½ Watt, Carbon
R114		560Ω, 10%, ½ Watt, Carbon
R115		1000Ω, 10%, ½ Watt, Carbon
R116		1Ω, 10%, 2 Watt, Carbon
R117		1Ω, 10%, 2 Watt, Carbon
R118		4.7Ω, 10%, 2 Watt, Carbon
R119		270Ω, 10%, ½ Watt, Carbon
R120		1000Ω, 10%, ½ Watt, Carbon
R121		1800Ω, 10%, ½ Watt, Carbon
R122		1 meg, 10%, ½ Watt, Carbon
R123		1Ω, 10%, 2 Watt, Carbon
*R124		10K, 10%, ½ Watt, Carbon
†R201A		20Ω Speaker Volume Control
B		20Ω Speaker Volume Control
R202		22Ω, 10%, ½ Watt, Carbon (2006B)
		TRANSFORMERS
T1	30550	1st FM IF
T2	30551	2nd FM IF
T3	30551	3rd FM IF
T4	30538	FM Discriminator
T5	30542	1st AM IF
T6	30540	2nd AM IF
T7	30541	3rd AM IF
T8	30043	19KC Oscillator
T9	30044	38KC Doubler
T10	30547	Intercom Input
T11	30549	Driver (Channel A)
ΔT12	30546	Output (Channel A)
*T12	30553	Output (Channel A)
T13	30549	Driver (Channel B)
ΔT14	30546	Output (Channel B)
*T14	30554	Output (Channel B)
T15	30048	Stereo Peaking
T16	40228	Power
		COILS
L1	30050	FM Antenna
L2A	30053	FM Mixer
L2B	30052	FM Neutralizer
L3	30058	RF Choke
L4	30051	FM Oscillator
L5	30548	AM Antenna
L6	30056	AM Oscillator
L7	30045	Stereo SCA Trap
L8	30046	Stereo Locator (Series)
L9	30047	Stereo Locator (Shunt)
		SPEAKERS
SP1	36018	8", 3.2Ω (Model 2081-82)
SP2	36044	8", 3.2Ω (Model 2084-85)
SP3	36003	3½", 3.2Ω (Model 2006)
		MISCELLANEOUS
M1	34538	AFC Switch, 2 pos. Slide
M2	40393	Selector Switch Assembly, 5 pos. Rotary
M3		Stereo Locator Switch (Part of R46)
M4		Power ON-OFF Switch (Part of R74)
M5	31160	Fuse, 2 Amp
M6	31160	Fuse, 2 Amp
M7	31450	Dial Lamp, #161
M8	31450	Dial Lamp, #161
ΔM9 thru M18	34536	Speaker Selector Switch, 3 pos. Slide
*M9 thru M18	34544	Speaker Selector Switch, 3 pos. Slide
*M20	40397	Speaker Selector Switch and Terminal Assembly
ΔM20	40384	Speaker Selector Switch and Terminal Assembly
†M201		Listen-Talk Switch (Remote-Break-Away Control)
†M202		Listen-Talk Switch, Spring Return (2006B)
J1	40385	Signal & Antenna Socket Assembly, 9 pin
J2	40353	Power Socket Assembly, 3 pin
P1	31249	Signal & Antenna Plug, 9 pin
P2	19693	Power Plug, 3 pin
	31498	Contact, P1 and P2 Plugs
	40388	FM Tuner Assembly

Δ Used in early production. * Used in late production. † See Nutone Factory Parts Price List for part number.