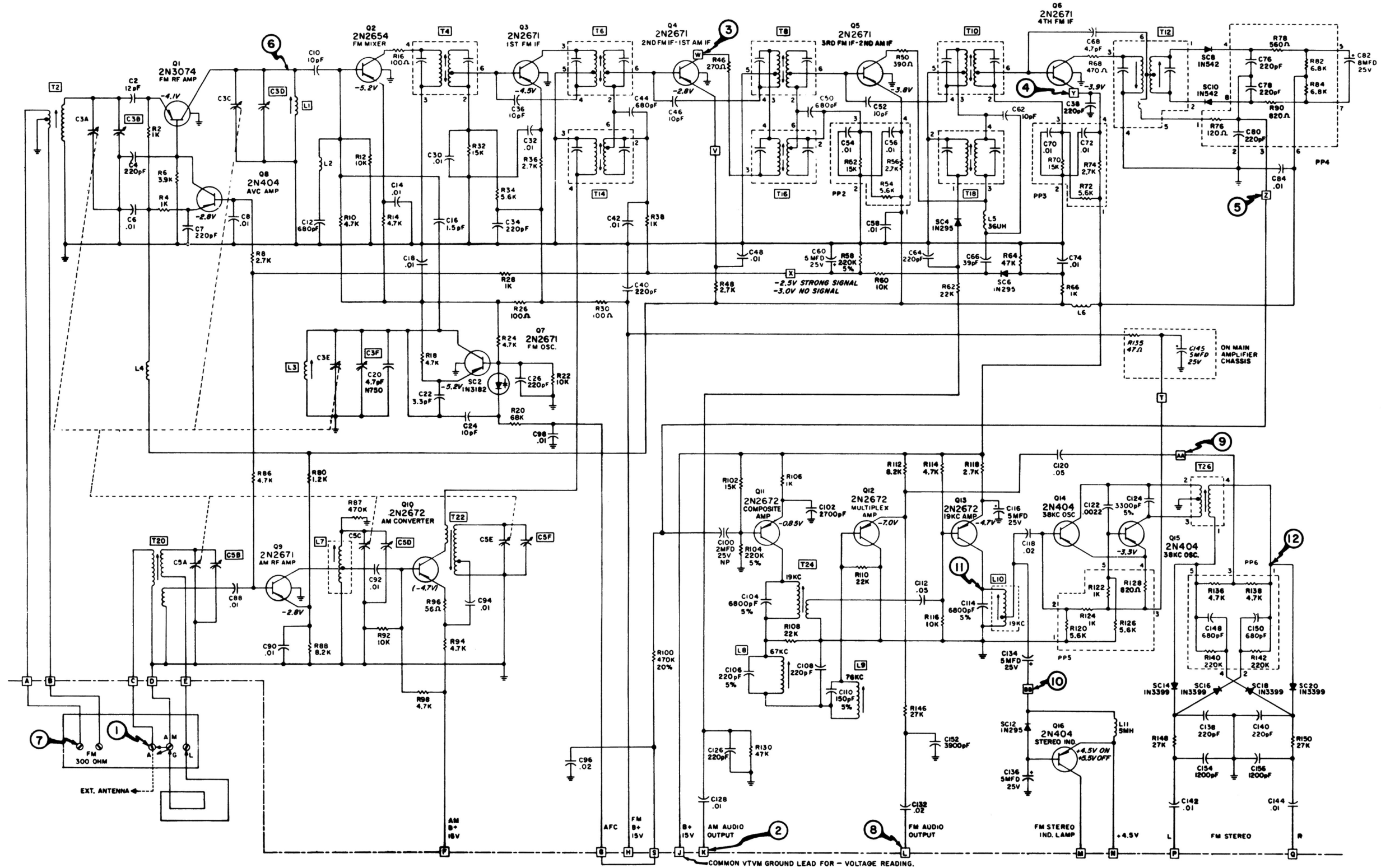
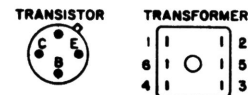


SCHEMATIC DIAGRAM T41-1 AM/FM TUNER CHASSIS



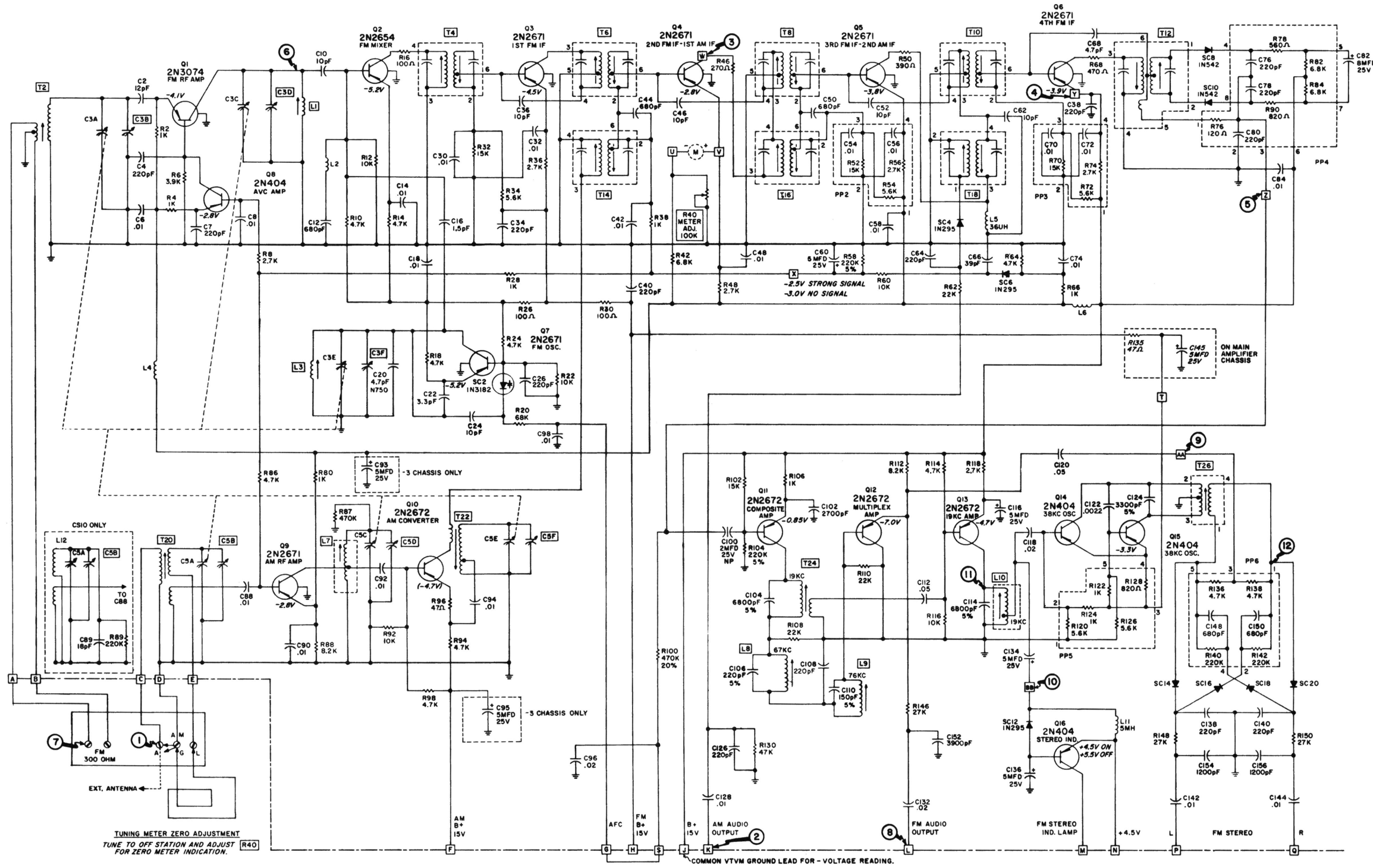
SCHEMATIC NOTES



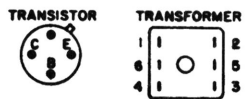
1. Voltages shown are average readings measured with no signal input. Variations may be noted due to normal production tolerances. All negative transistor voltages are measured with common lead to B+ supply [J], using a VTVM. All + voltages are measured to chassis ground.
2. Voltages at points [F], [H], [J], and [N] are measured in respect to chassis ground.

3. Line Voltage: 120 VAC, 60 cycle.
4. All transistor base voltages will be approximately 0.2 volt more negative than emitter voltage.
5. Capacitors are in microfarads unless otherwise specified.
6. All voltages in brackets are measured in AM position.

SCHEMATIC DIAGRAM T41-2,-3 AM/FM TUNER CHASSIS



SCHEMATIC NOTES

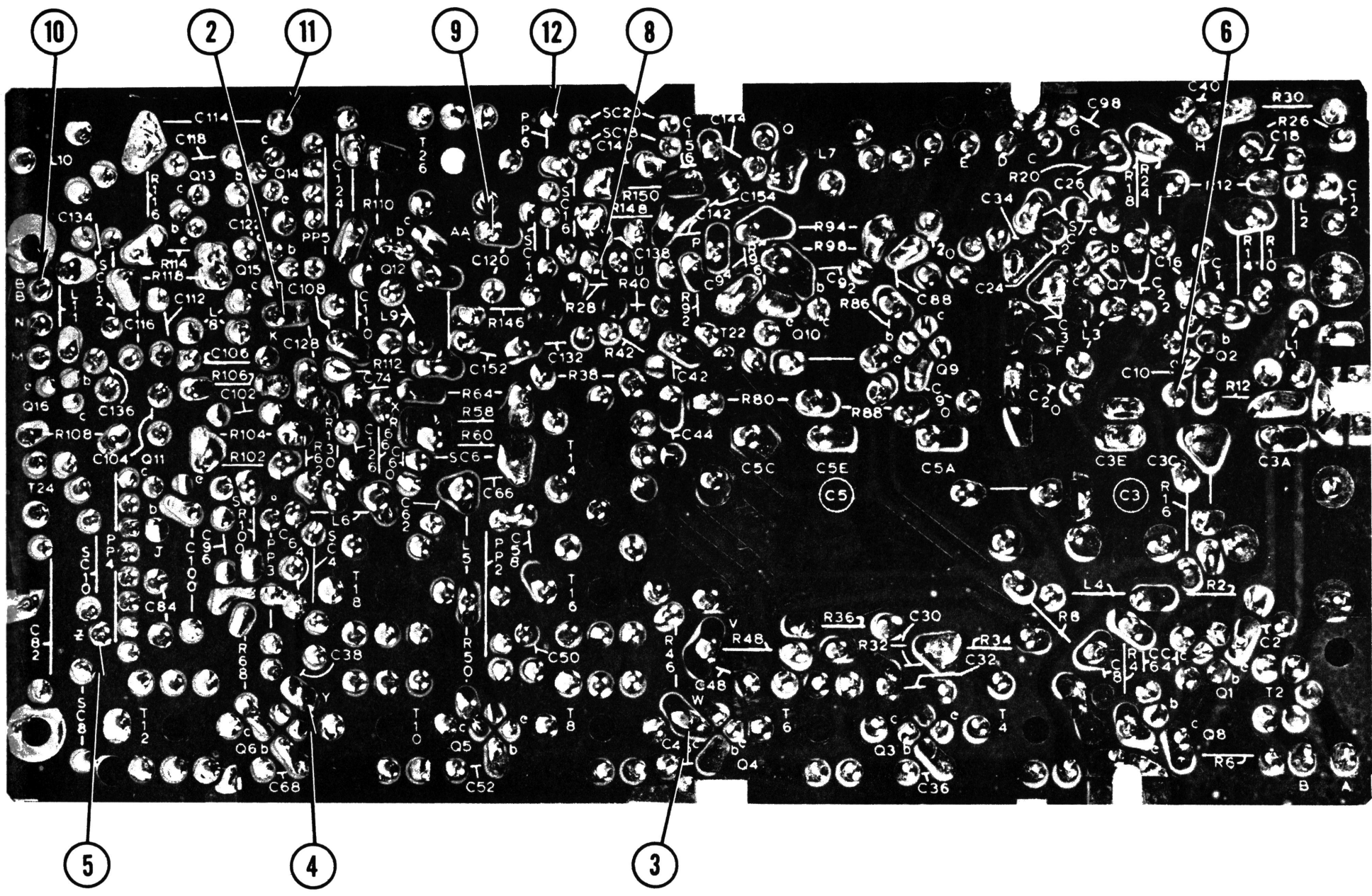


1. Voltages shown are average readings measured with no signal input. Variations may be noted due to normal production tolerances. All negative transistor voltages are measured with common lead to B+ supply [J], using a VTVM. All + voltages are measured to chassis ground.
2. Voltages at points [F], [H], [J], and [N] are measured in respect to chassis ground.

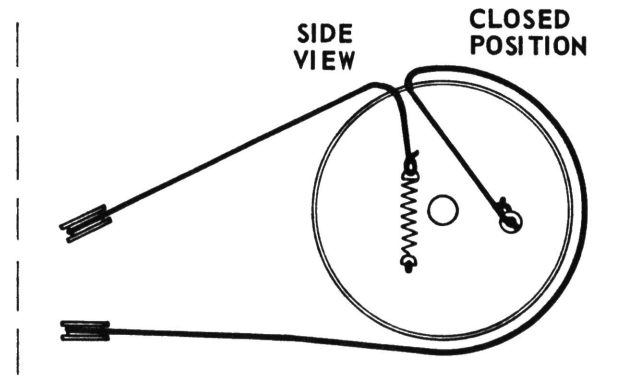
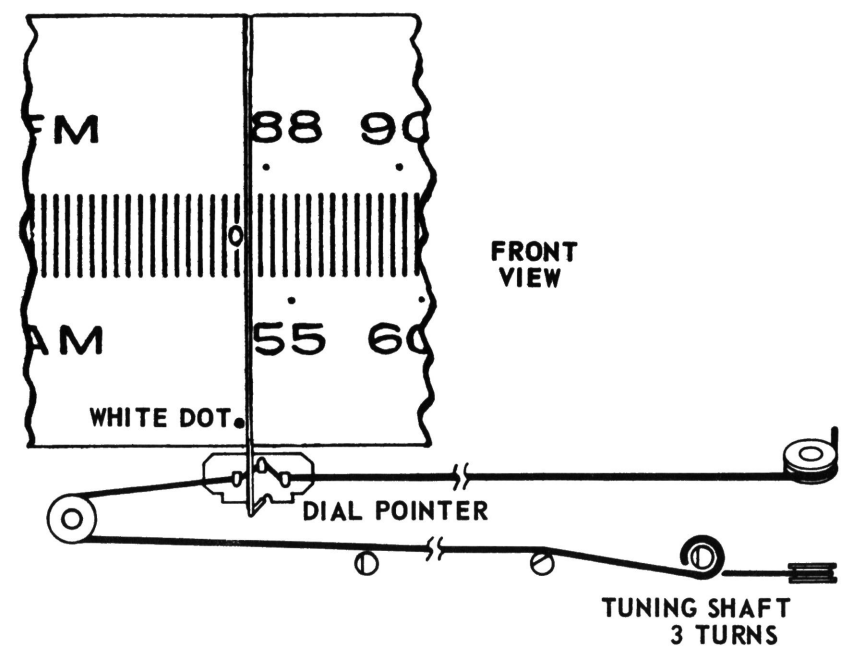
3. Line Voltage: 120 VAC, 60 cycle.
4. All transistor base voltages will be approximately 0.2 volt more negative than emitter voltage.
5. Capacitors are in microfarads unless otherwise specified.
6. All voltages in brackets are measured in AM position.

Sylvania AM/FM Tuner Chassis T41-1,-2,-3

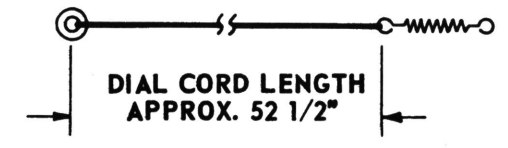
— BOTTOM ROADMAP T41-1 —



— DIAL STRINGING —



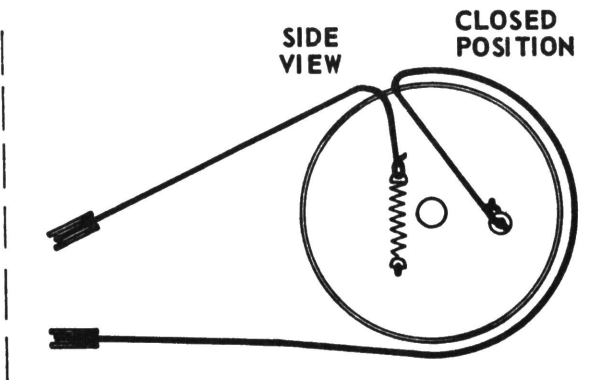
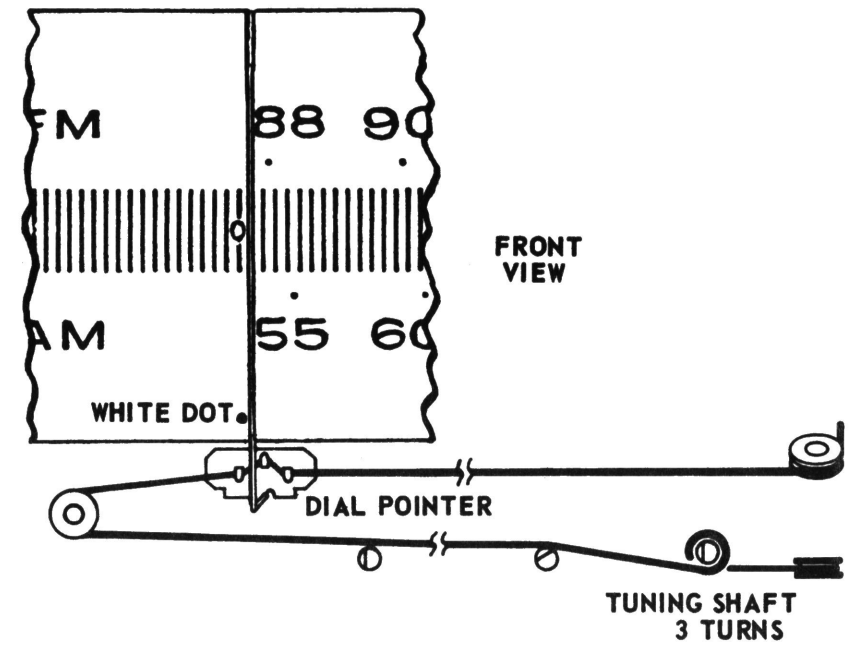
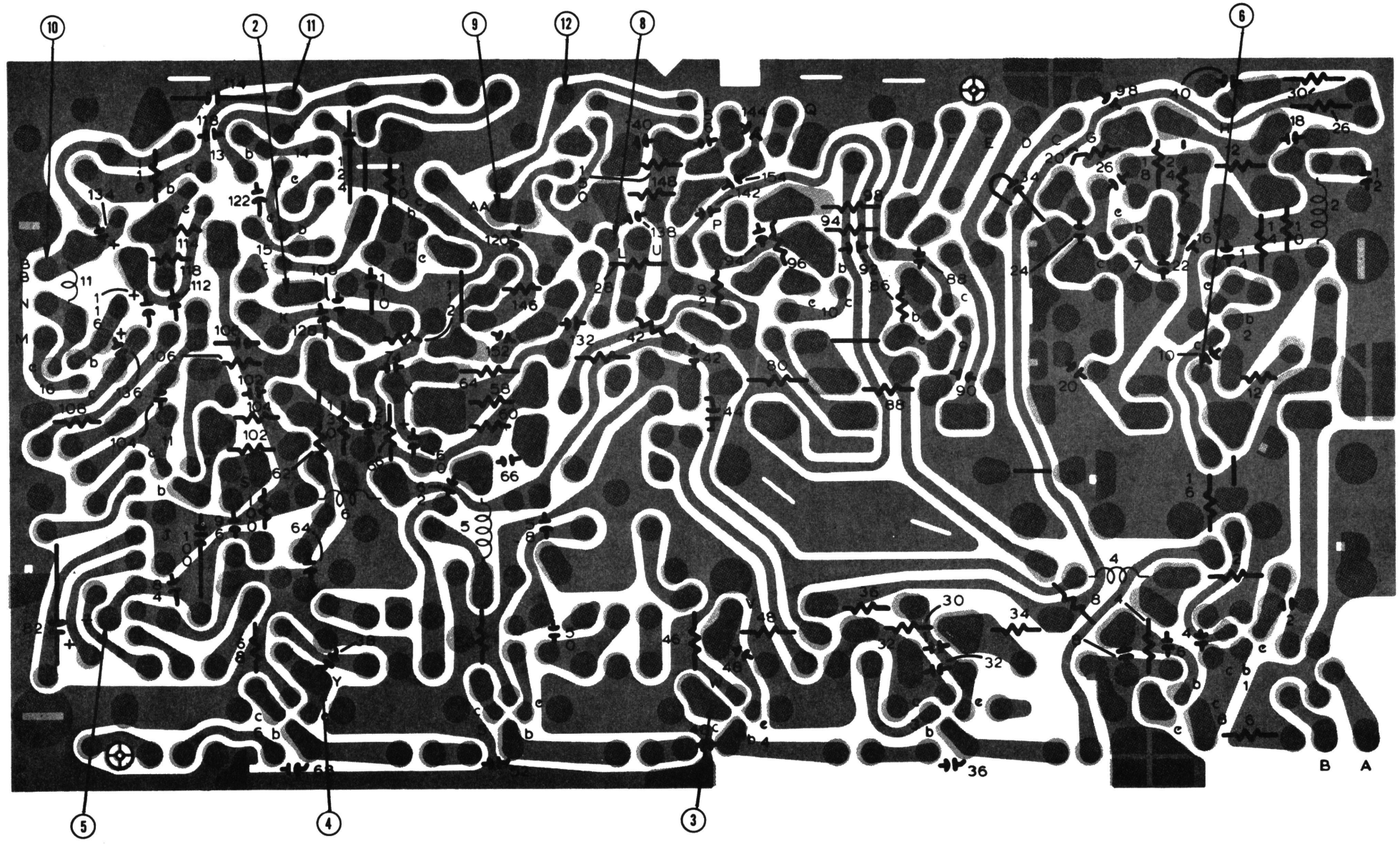
Dial Pointer Position
Position Dial Pointer over white dot at extreme left side of dial glass with the tuning capacitor gang fully CLOSED. Secure by pressing metal tabs.



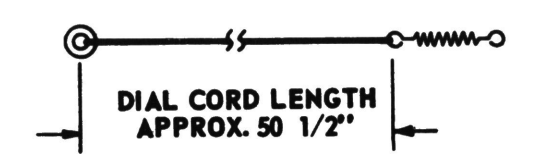
Sylvania AM/FM Tuner Chassis T41-1,-2,-3

— DIAL STRINGING —

— BOTTOM ROADMAP T41-2-3 —



Dial Pointer Position
Position Dial Pointer over white dot at extreme left side of dial glass with the tuning capacitor gang fully CLOSED. Secure by pressing metal tabs.



Sylvania AM/FM Tuner Chassis T41-1,-2,-3

AM/FM ALIGNMENT PROCEDURE

Alignment is an exacting procedure and should be undertaken only when necessary. If alignment of both AM and FM is required, the AM section should be aligned first. The following equipment is required for alignment.

- AM**
1. Signal generator; frequency range of 455KC to 1650KC and 30% modulation.
 2. Oscilloscope or a sensitive AC VTVM.

- FM - Sweep Generator Method**
1. Sweep generator with a 10.7MC marker.

2. Signal generator, frequency range of 88MC to 108MC and 22 KC deviation.
3. Oscilloscope

Allow test equipment several minutes warm-up time. During alignment keep generator output at lowest useable level. The RF shield cover must be on chassis during alignment.

With the tuning gangs fully closed set the dial pointer over the dot (located at the left of the tuning scale on the dial glass). Check the tracking of the dial pointer by tuning across the dial and rechecking over-the-dot position.

AM ALIGNMENT (Engage AM Push-Button)

STEP	TUNING CAPACITOR SETTING	TEST EQUIPMENT HOOK - UP	GENERATOR FREQUENCY	ADJUSTMENT POINT	ADJUST FOR
1	600 KC	SIGNAL GENERATOR - Signal to test point ①. Ground lead to "G" on antenna terminal board. VTVM or OSCILLOSCOPE - Vertical input to test point ②	455 KC	T18 Bottom T18 Top T16 Bottom T16 Top T14 Bottom T14 Top	Maximum amplitude on scope or meter
2	600 KC	SIGNAL GENERATOR - Same as step 1. VTVM or OSCILLOSCOPE - Same as step 1.	600 KC	T22 Osc. Coil L7 Interstage Coil *T20 Ant. Coil	Maximum amplitude on scope or meter
3	1400 KC	SIGNAL GENERATOR - Same as step 1. VTVM or OSCILLOSCOPE - Same as step 1.	1400 KC	C5F AM Osc. Trimmer C5D AM Interstage Trimmer C5B AM Ant. Trimmer	Maximum amplitude on scope or meter

* NOTE: When adjusting T20 Antenna Coil, the loop antenna on the cabinet must be used. Do this alignment with chassis in cabinet. (SC880 Series Only)

Repeat Steps 2 & 3 for optimum performance.

FM ALIGNMENT (Engage FM Push-Button)

STEP	TUNING CAPACITOR SETTING	TEST EQUIPMENT HOOK - UP	GENERATOR FREQUENCY	ADJUSTMENT POINT	ADJUST FOR
1	108 MC	SWEEP GENERATOR - Signal to test point ③. Ground lead to chassis ground near Test Point ③ OSCILLOSCOPE - Vertical input to test point ④.	10.7 MC center frequency	T10 Top T10 Bottom	Maximum gain and for symmetry of response curve.
2	108 MC	SWEEP GENERATOR - Same as step 1.	10.7 MC center frequency	T12 Top	Adjust for balanced "S" curve and centering 10.7 MC marker.

STEP	TUNING CAPACITOR SETTING	TEST EQUIPMENT HOOK - UP	GENERATOR FREQUENCY	ADJUSTMENT POINT	ADJUST FOR
Repeat Step 2.					
3	108 MC	OSCILLOSCOPE - Vertical input to test point ⑤. SWEEP GENERATOR - Signal to test point ⑥.	10.7 MC center frequency	T12 Bottom T8 Bottom T8 Top T6 Bottom T6 Top T4 Bottom T4 Top	Adjust for maximum peak separation. Maximum gain and for symmetry of response curve.
4	90 MC	OSCILLOSCOPE - Vertical input to test point ④. SIGNAL GENERATOR - Signal to test point ⑦ thru a balanced 300 ohm output. VTVM or OSCILLOSCOPE - Vertical input to test point ⑧.	90 MC	L3 FM Osc. Coil L1 FM Interstage Coil T2 FM Ant. Coil	Maximum gain indication
5	106 MC	SIGNAL GENERATOR - Same as step 4. VTVM or OSCILLOSCOPE - Same as step 4.	106 MC	C3F FM Osc. Trim C3D FM Interstage Trimmer C3B FM RF Trim	Maximum gain indication

Repeat Step 4 & 5 until shift is noticed for proper tracking.

MULTIPLEX ALIGNMENT PROCEDURE PRELIMINARY INSTRUCTIONS

Multiplex alignment is very exacting and should not be undertaken unless absolutely necessary or adequate alignment equipment is available. The FM RF and FM IF sections MUST be properly aligned before proceeding with FM multiplex alignment.

Outlined below is an alternate method of FM MULTIPLEX ALIGNMENT using a standard Multiplex Broadcast as the signal source. Whenever FM multiplex alignment equipment is used, follow the procedures specified by the equipment manufacturer. Peaking of the 19KC and 38KC coils is easily accomplished. Correct phase relationship is absolutely essential for maximum channel separation.

IMPORTANT

Most FM Multiplex stations make announcements and broadcast news on one channel only. To make a final "touch up" adjustment for maximum separation, turn balance control on amplifier for maximum sound on the "reject" channel during such announcements and carefully adjust T24 for minimum sound on this channel. It is easier to adjust for minimum sound on the unused channel than for maximum on the channel being used for announcements or news broadcasts.

Depending on information transmitted by the multiplex station, it may be extremely difficult to adjust for maximum separation. A reliable multiplex generator should always be used whenever available.

MULTIPLEX ALIGNMENT Place Function Switch in FM STEREO Position

STEP	TEST EQUIPMENT HOOK - UP	SIGNAL USED	ADJUSTMENT POINT	ADJUST FOR
1	SIGNAL GENERATOR - Signal to test point ⑤ through a .01 mfd. capacitor.	76 KC	L9 76 KC Trap	Minimum Output indication
2	AC VTVM - AC probe to test point ⑨.	67.5 KC	L8 67 KC Trap	Minimum Output indication
	AC VTVM or OSCILLOSCOPE - AC probe to test point ⑩.	FM Stereo Transmission	L10 19 KC Pilot T24 19 KC Pilot	Maximum gain indication.
3	OSCILLOSCOPE - Vertical input to test point ⑪. Horizontal to test point ⑫.	FM Stereo Transmission	T26 38 KC Osc.	Figure 2 scope pattern or zero beat heard in speakers.

REPLACEMENT PARTS LIST

SCHEMATIC LOCATION	SERVICE PART NO.	DESCRIPTION
CAPACITORS (all ceramic unless otherwise specified)		
C2		5.6 pF (-1)
C2		12 pF (-2,-3)
C3	42-14530-1	Capacitor - Variable Tuning - FM
A		FM Ant. Gang
B		FM Ant. Trimmer
C		FM Interstage Gang
D		FM Interstage Trimmer
E		FM Osc. Gang
C3F	42-18146-1	FM Osc. Trimmer
C4		220 pF
C5	Part of C3	Capacitor - Variable Tuning - AM
A		AM Ant. Gang
B		AM Ant. Trimmer
C		AM Interstage Gang
D		AM Interstage Trimmer
E		AM Osc. Gang
F		AM Osc. Trimmer
C6		.01 mfd
C7		220 pF (-2,-3)
C8		.01 mfd
C10		3.3 pF (-1)
C10		10 pF (-2,-3)
C12		680 pF
C14		.01 mfd
C16		5.6 pF (-1)
C18		.01 mfd
C20		4.7 pF
C22		3.3 pF
C24		10 pF
C26		220 pF
C30		.01 mfd
C32		.01 mfd
C34		220 pF
C36		10 pF
C40		220 pF
C42		.01 mfd
C44		680 pF
C46		10 pF
C48		.01 mfd
C50		680 pF
C52		10 pF
C54, C56	Part of PP2	See "Misc. Elec. Parts"
C58		.01 mfd
C60	41-18229-17	5 mfd - Electrolytic - 25V
C62		10 pF
C64		220 pF
C66		39 pF
C68		4.7 pF
C70, C72	Part of PP3	See "Misc. Elec. Parts"
C74		.01 mfd
C76, C78, C80	Part of PP4	See "Misc. Elec. Parts"
C82	161-1089	8 mfd - Electrolytic - 25V
C84, C88		.01 mfd
C89		18 pF (-2,-3)
C90, C92, C94		.01 mfd
C93, C95	41-18229-17	5 mfd - Electrolytic - 25V (-2,-3)
C96		.02 mfd
C98		.01 mfd
C100	161-1085	2 mfd - 25V - NP
C102		2700 pF
C104	40-10285-6	6800 pF - 5%
C106	40-10285-3	220 pF - 5%
C108		220 pF
C110	41-10285-7	150 pF - 5%
C112		.05 mfd
C114	40-10285-6	6800 pF - 5%
C116	41-18229-17	5 mfd - Electrolytic - 25V
C118		.02 mfd
C120		.05 mfd
C122		2200 pF
C124	40-10285-1	3300 pF - 5%

SCHEMATIC LOCATION	SERVICE PART NO.	DESCRIPTION
CAPACITORS (CONTINUED)		
C126		2200 pF (-1)
C126		220 pF (-2,-3)
C128		.01 mfd
C132		.02 mfd
C134, C136	41-18299-17	5 mfd Electrolytic - 25V
C138, C140		220 pF
C142, C144		.01 mfd
C145	41-10004-6	5 mfd - Electrolytic - 25V
C148, C150	Part of PP6	See "Misc. Elec. Parts"
C152		3900 pF (-2,-3)
C154, C156		1200 pF (-2,-3)
RESISTORS		
R2, R4		1K
R6		3.9K
R8		2.7K
R10		4.7K
R12		10K
R14		4.7K
R16		100 ohm
R18		4.7K
R20		68K
R22		10K
R24		4.7K
R26		100 ohm
R28		1K
R30		100 ohm
R32		15K
R34		5.6K
R36		2.7K
R38		1K
R40	37-14576-1	100K - Meter Zero Adjust (-2,-3)
R42		6.8K (-2,-3)
R46		270 ohm
R48		2.7K
R50		390 ohm
R52, R54, R56	Part of PP2	See "Misc. Elec. Parts"
R58		220K - 5%
R60		10K
R62		22K
R64		4.7K
R66		1K
R68		470 ohm
R70, R72, R74	Part of PP3	See "Misc. Elec. Parts"
R76, R78, R90	Part of PP4	See "Misc. Elec. Parts"
R80		1.2K (-1)
R80		1K (-2,-3)
R82, R84	Part of PP4	See "Misc. Elec. Parts"
R86		4.7K
R87		470K (-2,-3)
R88		8.2K
R89		220K (-2,-3)
R92		10K
R94		4.7K
R96		68 ohm
R98		4.7K
R100		470K - 20%
R102		15K
R104		220K - 5%
R106		1K
R108		22K
R110		22K
R112		8.2K
R114		4.7K
R116		10K
R118		2.7K
R120, R122, R124	Part of PP5	See "Misc. Elec. Parts"
R126, R128	Part of PP5	See "Misc. Elec. Parts"
R130		47K
R135		47 ohm

SCHEMATIC LOCATION	SERVICE PART NO.	DESCRIPTION
RESISTORS (CONTINUED)		
R136, R138	Part of PP6	See "Misc. Elec. Parts"
R140, R142	Part of PP6	See "Misc. Elec. Parts"
R146		27K
R148, R150		27K
COILS AND TRANSFORMERS (CONTINUED)		
L5	50-16103-13	Coil - AM RF Choke
L7	50-14541-1	Coil - AM Interstage
L6	50-10261-2	Coil - Filament Choke
L8	50-14553-1	Coil - 67KC
L9	50-14553-1	Coil - 76KC
L10	50-14555-1	Coil - 19KC
L11	50-18789-1	Coil - 5MH
L12	27-18788-1	Coil - Antenna Ferrite (-2,-3)
T2	50-14546-1	Transformer - FM Antenna Coil
T4	57-14549-2	Transformer - FM #1 IF
T6	57-14549-1	Transformer - FM #2 IF
T8	57-14549-1	Transformer - FM #3 IF
T10	57-14549-1	Transformer - FM #4 IF
T12	57-14552-1	Transformer - Ratio Detector
T14	57-14543-1	Transformer - AM #1 IF
T16	57-14543-1	Transformer - AM #2 IF
T18	57-14543-1	Transformer - AM #3 IF
T20	50-14540-1	Transformer - AM Antenna Coil
T22	50-14542-1	Transformer - AM Osc. Coil
T24	50-14554-1	Transformer - 19KC
T26	50-14562-1	Transformer - 38KC Osc.
MISCELLANEOUS ELECTRICAL PARTS		
PP2, PP3	32-14728-1	Plate - Bias IF - DC
C54, C70		.01 mfd
C56, C72		.01 mfd
R52, R70		15K
R54, R72		5.6K
R56, R74		2.7K

SCHEMATIC LOCATION	SERVICE PART NO.	DESCRIPTION
MISCELLANEOUS ELECTRICAL PARTS (CONT.)		
PP4	32-18222-1	Plate - Ratio Detector
C76		220 pF
C78		220 pF
C80		220 pF
R76		120 ohm
R78		560 ohm
R90		820 ohm
R82		6.8K
R84		6.8K
PP5	32-14729-1	Plate - 38KC Osc.
R120		5.6K
R122		1K
R124		1K
R126		5.6K
R128		820 ohm
PP6	32-18223-1	Plate - Multiplex Output
C148		680 pF
C150		680 pF
R136		4.7K
R138		4.7K
R140		220K
R142		220K
SC2	1N3182	Diode - Varicap
SC4, SC6, SC12	1N295	Diode
* SC8, SC10	1N542	Diode (Matched Pairs)
SC14	624-0011	Diode - Silicon
SC16	624-0011	Diode - Silicon
SC18	624-0011	Diode - Silicon
SC20	624-0011	Diode - Silicon
Q1	2N3074	Transistor
Q2	2N2654	Transistor
Q3, Q4, Q5	2N2671	Transistor
Q6, Q7, Q9	2N2671	Transistor
Q8, Q14, Q15, Q16	2N404	Transistor
Q10, Q11	2N2672	Transistor
Q12, Q13	2N2672	Transistor
*Or two (2) 1N541's matched.		