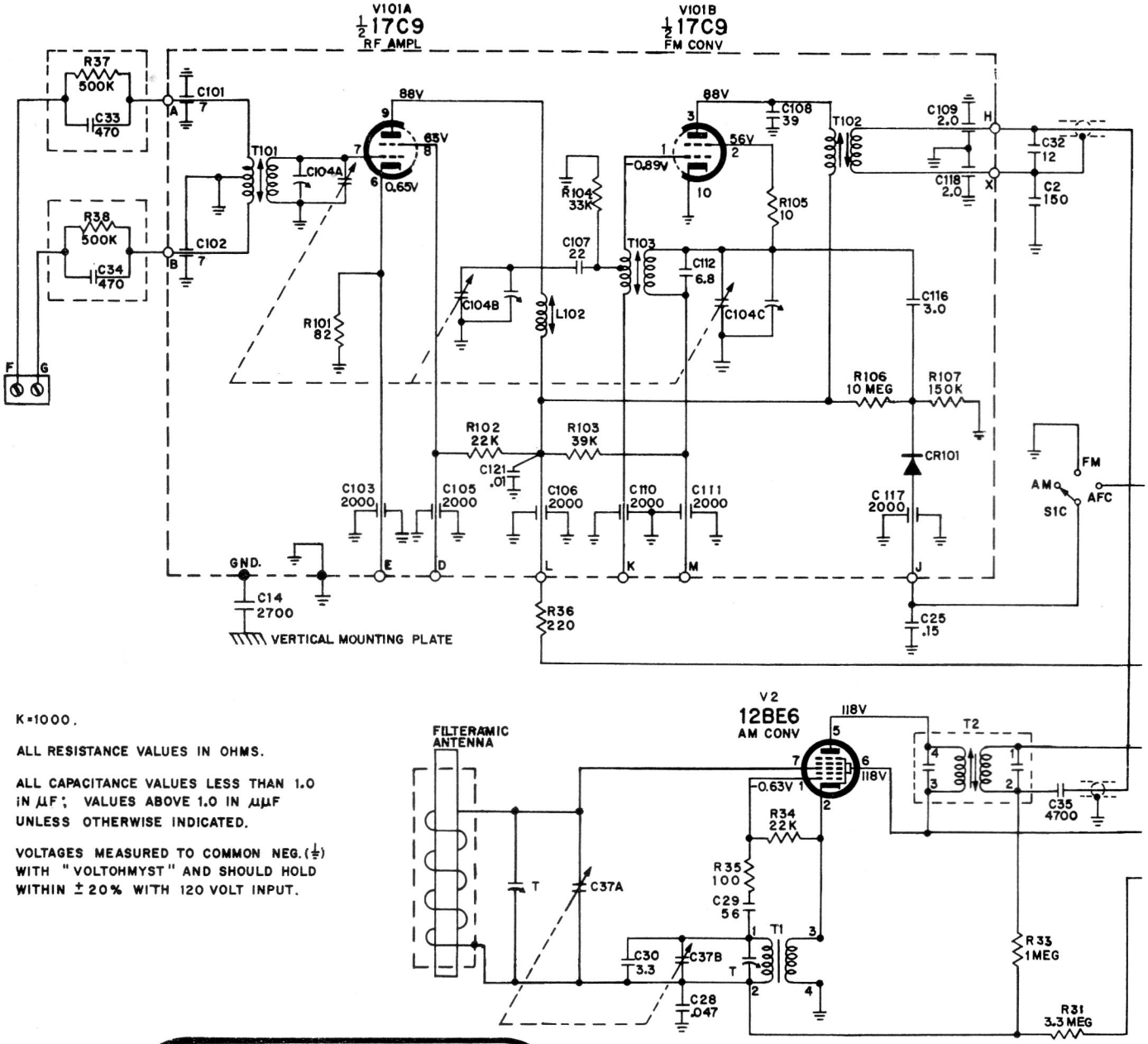
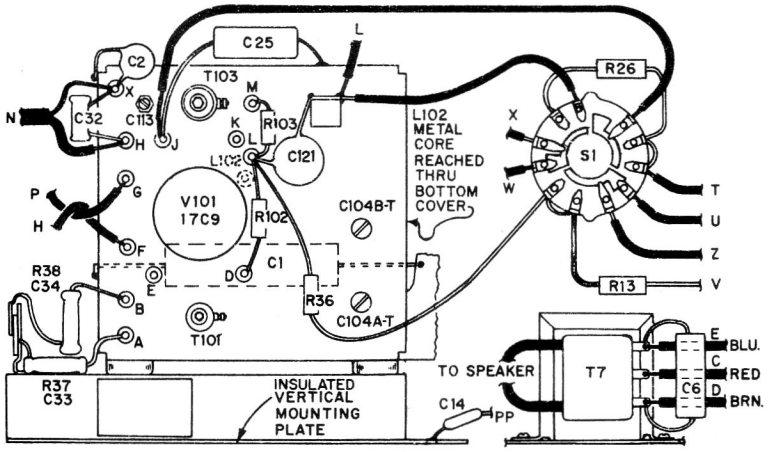


K=1000.

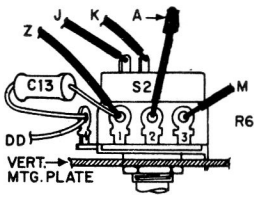
ALL RESISTANCE VALUES IN OHMS.

ALL CAPACITANCE VALUES LESS THAN 1.0 IN μF; VALUES ABOVE 1.0 IN μμF UNLESS OTHERWISE INDICATED.

VOLTAGES MEASURED TO COMMON NEG.(⏚) WITH "VOLTOHMYST" AND SHOULD HOLD WITHIN ± 20% WITH 120 VOLT INPUT.

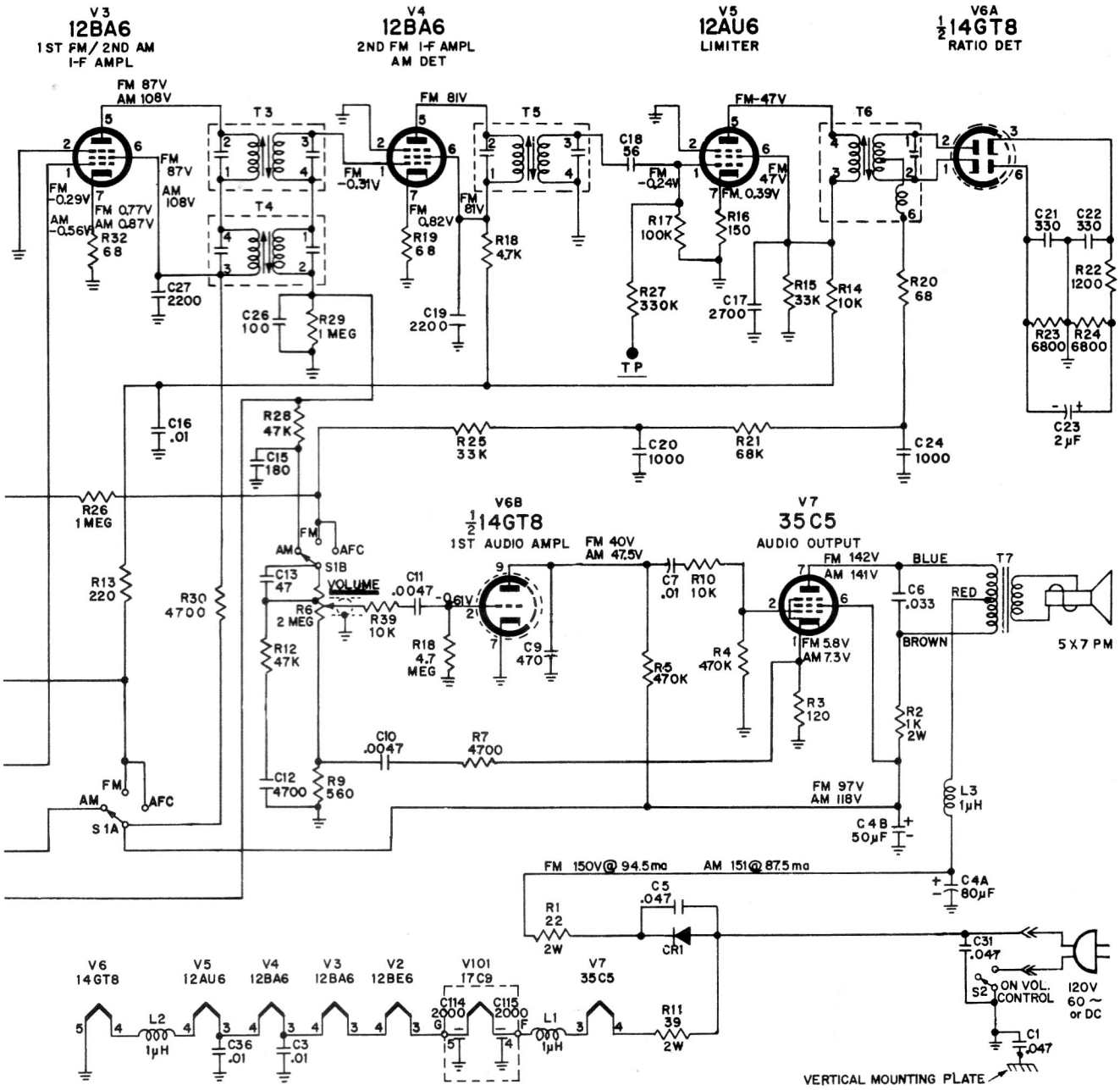


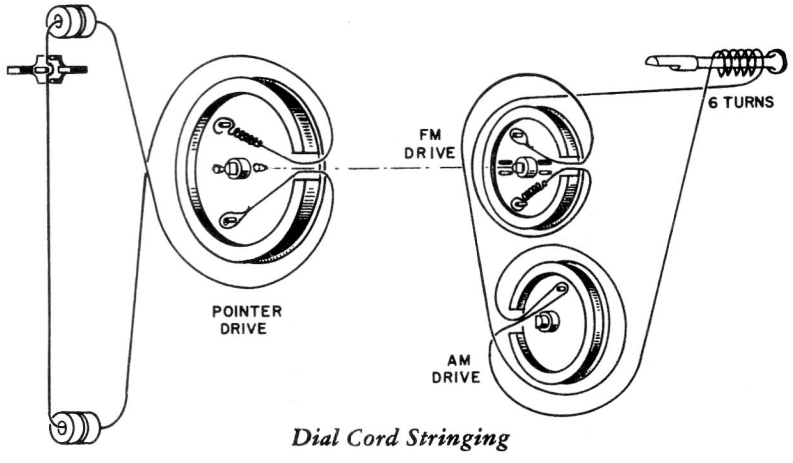
FM Tuner Layout



R6 & S2 Wiring

XF-632





Dial Cord Stringing

ALIGNMENT PROCEDURE

CAUTION

THIS CHASSIS IS CONNECTED DIRECTLY TO THE POWER LINE. TO AVOID SHOCK HAZARD, AN ISOLATION TRANSFORMER SHOULD BE USED DURING SERVICE WORK.

INSTRUMENTS REQUIRED

Signal Source

1. RF Signal Generator (RCA WR-49B or equivalent).
2. TV/FM Sweep Generator (RCA WR-69A or equivalent).
3. Crystal-Calibrated Marker Generator (RCA WR-99A or equivalent).

Output Indicator

4. Vacuum Tube Voltmeter (RCA "Voltohmyst" or equivalent).
5. Oscilloscope (RCA WO-91A or equivalent).

Tools

6. Hex Head Alignment tool.
7. Thin Fiber Shaft Screwdriver Alignment tool.

General Alignment Conditions

1. Connect low side of signal source and output indicator to chassis ground unless otherwise specified. Ground connection should be kept close to high side connection.
2. Signal input should be kept as low as possible to avoid AVC action. (Set output indicator to highest sensitivity.)
3. Markers should be accurate (crystal controlled or checked against a crystal calibrator). The 10.7 mc marker used in each section of the FM alignment should be the same (generator dial should not be changed).
4. Marker insertion and amplitude should not distort the oscilloscope trace.
5. Standard Modulation is 400 cycles at 30% amplitude.
6. Volume or loudness control should be turned to maximum and tone controls to mid-position when they are between signal source and output indicator. AFC switch OFF.
7. Set function switch to band being aligned.

Step	Connect Signal Source To —	Set Signal To — Insert Markers —	Connect Alignment Indicator To —	Set Radio Dial To —	Adjust As Indicated
		FM—RATIO DETECTOR			
1	RF Generator To—V5 pin #1 (12AU6) through a 0.01 μf Capacitor	10.7 mc (unmodulated)	V.T.V.M. To—V6 pin #6 (14GT8)	Quiet Point on Band	T6—Bottom Core—for maximum negative voltage
2			V.T.V.M. To—across C20		T6—Top Core—for Zero voltage (crossover at 10.7 mc)
3	Repeat steps 1 and 2 as necessary to obtain an "S" curve linearity of ±75 kc maximum.				
		FM—IF STAGES			
1	FM Sweep Generator To—Junction R102 and T103	±0.25 mc Sweep centered at 10.7 mc 10.6, 10.7 & 10.8 mc Markers	Oscilloscope To—R27 (TP) on chassis	Quiet Point on Band	T5—Top & Bottom Cores—for max. symmetrical response—centered at 10.7 mc with 10.6 & 10.8 mc markers at equal heights and between 25% and 60% down on slope.
2					T3—Top & Bottom Cores—for same response as in Step 1.
3					T102—pri & sec. (on FM tuner)—for same response as in Step 1.
4	Repeat steps 1, 2 and 3 as necessary.				
		FM—RF STAGES			
1	Marker Generator—across antenna terminals through a matching network if necessary	108.5 mc (unmodulated)	V.T.V.M. To—R27 (TP) on chassis	108.5 mc	C113 (osc. trimmer)—for maximum
2		87.5 mc (unmodulated)		87.5 mc	T103 (osc. coil)—for maximum
3		108 mc (unmodulated)		108 mc	C104A-T (Ant. trimmer)—for max.
4					C104B-T (RF trimmer)—for max.
5		88 mc (unmodulated)		88 mc	T101 (Ant. transformer)—for max.
6					L102 (RF coil)—for max.
7	Repeat steps 1, 2, 3, 4, 5 and 6 as necessary.				
	Check overall response curve and repeat above sections as necessary until maximum sensitivity is obtained.				
		AM—IF STAGES			
1	RF Generator To—V2, pin #7 (12BE6) through a 0.01 μf capacitor	455 kc (modulated)	V.T.V.M.—across speaker voice coil	fully open	T4—Top & Bottom Cores—for maximum.
2					T2—Top & Bottom Cores—for maximum.
3	Repeat Steps 1 and 2 as necessary.				
		AM—RF STAGES			
1	RF Generator To—a standard radiating loop or to a short piece, or loop, of wire placed near AM antenna	1620 kc (modulated)	V.T.V.M.—across speaker voice coil	1620 kc (fully open)	C37B-T (osc. trimmer)—for maximum
2		1400 kc (modulated)		1400 kc	C37A-T (Ant. trimmer)—for maximum
3		600 kc (modulated)		600 kc (rock gang)	T1 (osc. Coil)—for maximum
4		1600 kc (modulated)		1600 kc	C37B-T (osc. trimmer)—for maximum
5	Repeat steps 1, 2, 3 and 4 as necessary.				
	Check sensitivity and repeat above sections as necessary until maximum sensitivity is obtained.				