

382-C SERVICE MANUAL

The 382-C is identical to the 342-C with the exceptions of the AM IF section and the front end. All test procedures and board layouts for the Audio and IF sections are outlined in the 342-C manual.

1. Preliminary 455 kHz Alignment

Set Tuning to middle of AM band, 1000 kHz. Output from Left Tape Out jack. Input from 455 kHz generator (modulated to 30% with 400 kHz) to External AM Antenna Inputs (shorting bar removed). With 2 μ V or less generator output peak the first IF can for maximum output (single tuned can). After peaking, remove 455 kHz generator leads and reconnect external AM antenna shorting bar.

2. Oscillator Adjustment

With tuning condenser maximum capacity (fully closed) adjust pointer to "0" on logging scale (center of pointer aligned with center of "0"). Couple output of AM generator (600 kHz modulated to 60% with 400 Hz) to loopstick with AM coupling loop, using mechanical stop for 1" penetration of loopstick. Tune unit to 600 kHz. Attenuate input of rf signal until signal level is just noticeable on scope (using maximum usable scope sensitivity). Adjust oscillator coil T203 while manually tuning unit for output peak as read on VTVM. Set AM generator to 1600 kHz modulated to 60% with 400 Hz.

Tune unit to 1600 kHz. Adjust oscillator trimmer C225 for maximum output as read on VTVM using weak rf input signal.

Repeat the above adjustments of oscillator coil and oscillator trimmer until no further improvement can be made.

3. Antenna Trimmer Adjustment

Set AM generator to 1400 kHz modulated to 60% with 400 Hz. Tune unit to 1400 kHz. Adjust antenna trimmer C232 for maximum output as read on VTVM using weak rf input signal.

4. 600 kHz Measurements

With unit tuned to 600 kHz and AM coupling loop set for 1" penetration, set rf attenuator for an input to the AM coupling loop equivalent to 500 μ V. Note audio output - should be between .75 and 1.25 volts from Tape Out jacks. Attenuate rf input (approx. 10.0 μ V). Check audio output which should not drop more than 3.0 dB from that noted for input equivalent to 500 μ V.

5. 1000 kHz Measurements

(a) With unit tuned to 1000 kHz and AM coupling loop set for 1" penetration, set rf attenuator for an input to the AM coupling loop equivalent to 500 μV . Note audio output - should be between .75 and 1.25 volts from Tape Out jacks. Attenuate rf input to approx. 10.0 μV . Check audio output which should not drop more than 3.0 dB from that noted at 500 μV .

(b) Set rf input to the AM coupling loop equivalent to a 500 μV . Measure harmonic distortion of audio output. Maximum allowable THD is 2.0%.

6. 1400 kHz Measurements

With unit tuned to 1400 kHz and AM coupling loop set for 1" penetration, set rf attenuator for an input to the AM coupling loop equivalent to approx. 620 μV . Note audio output - should be between .75 and 1.25 volts from Tape Output jacks. Attenuate rf input to 10 μV . Check audio output which should not drop more than 3 dB from a 500 μV input.

7. Calibration

(a) With AM coupling loop set for 1" penetration, set rf attenuator for an input to the AM coupling loop equivalent to a 300 $\mu\text{V}/\text{M}$ field at 600 kHz. Tune unit to 600 kHz tuning for maximum Tuning Meter reading. Check calibration of Dial Pointer - should read 600 kHz ± 10 kHz.

(b) Repeat above procedure for the following frequencies:

<u>Frequency</u>	<u>Calibration</u>
800 kHz	800 kHz ± 10 kHz
1000 kHz	1000 kHz ± 20 kHz
1200 kHz	1200 kHz ± 20 kHz
1400 kHz	1400 kHz ± 10 kHz
1600 kHz	1600 kHz ± 10 kHz

(c) At 1600 kHz check for a rise and fall of meter indication and audio output as unit is tuned through the rf signal.

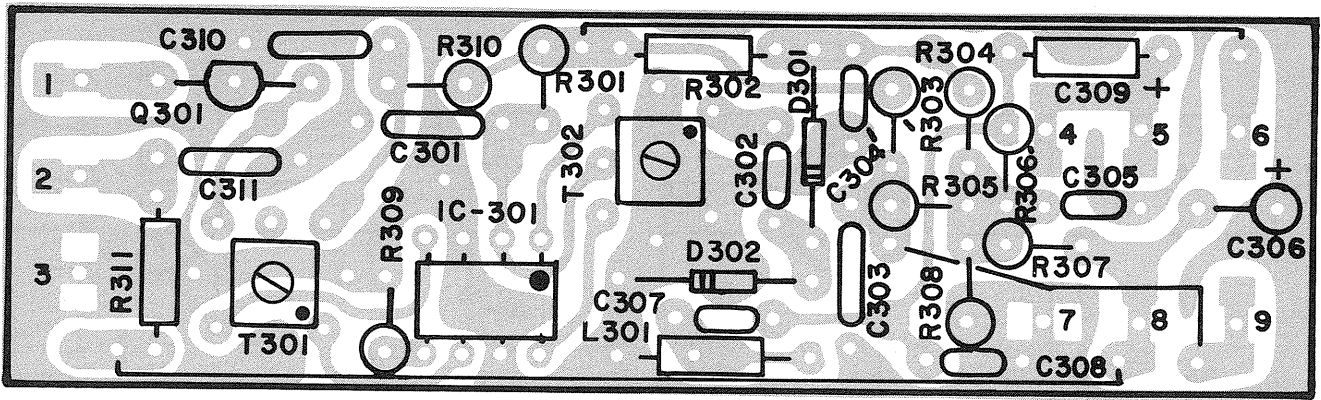
(d) Meter should read in first block on noise. However, some higher meter indication is not unusual due to noise within the plant. With full gen. sig. of approx. 600 μV meter should read no lower than beginning of fourth block.

8. Final Listen AM

Using headphones plugged into the front panel Phone jack and Loudness control adjusted for adequate output, slowly tune across the AM dial listening for oscillations and no output indicating shorting tuning capacitor plates.

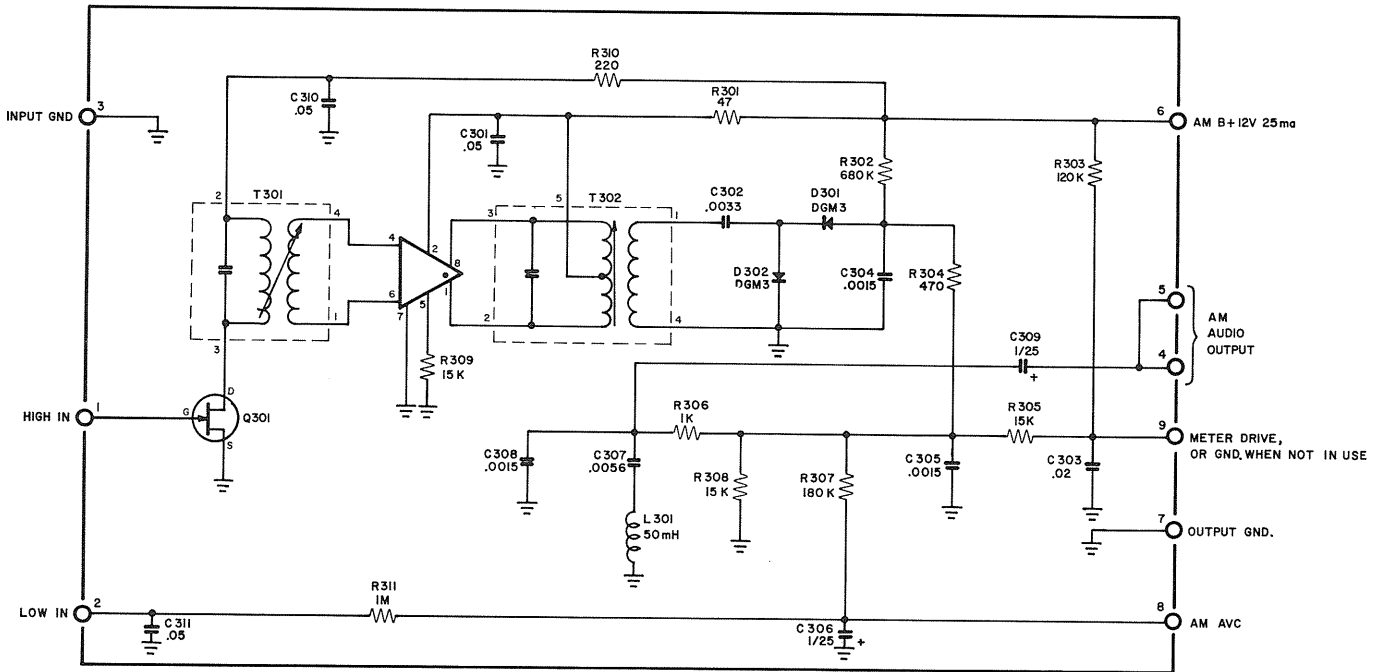
Remove shorting bar on external antenna. Connect outside antenna to unit. Check calibration and tuning meter indication using stations. Remove outside antenna, replace shorting bar and tighten screws. Turn ac power off and remove headphones from unit. Remove all test cables.

CIRCUIT DIAGRAM



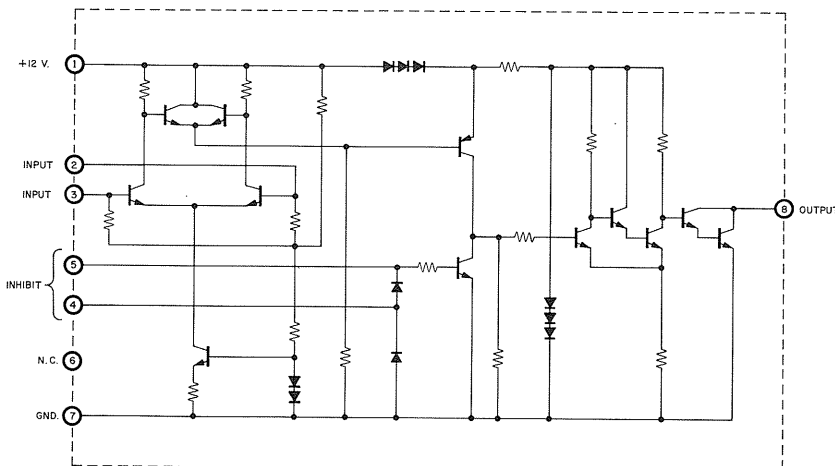
AM IF

019-1107-076



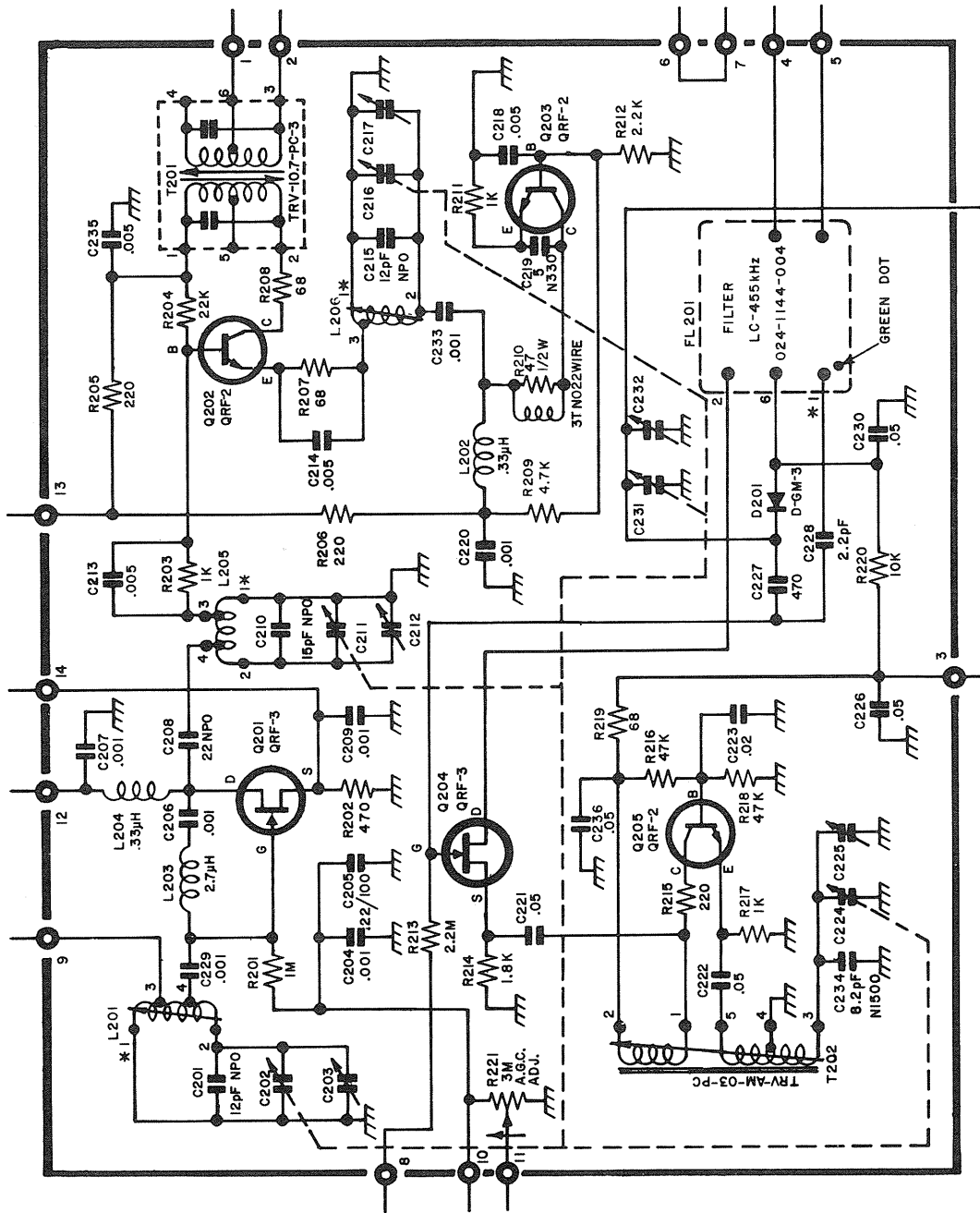
NOTES:

1. UNLESS OTHERWISE SPECIFIED, RESISTANCE IN OHMS 10% 1/4 WATT, AND CAPACITANCE IN MFD'S
2. IC 301 IS 020-1114-010, T 301 AND T 302 ARE 016-1093-024, Q 301 IS 020-1112-008
3. HIGHEST SERIES NUMBERS, C311, R311, L301, IC 301, T302, Q301, D302.



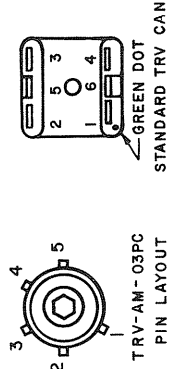
8 7 6 5
 ● 2 3 4
 TOP VIEW
 SC-5177P
 COMPARATOR IC

HIGHEST SERIES NUMBERS	VALUES
L206	C236
R221	T202
D201	Q205
	FL201



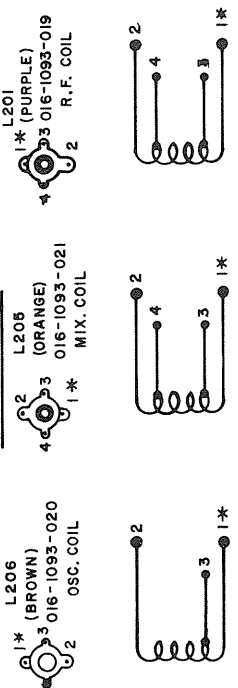
REV. 0

BOTTOM VIEW

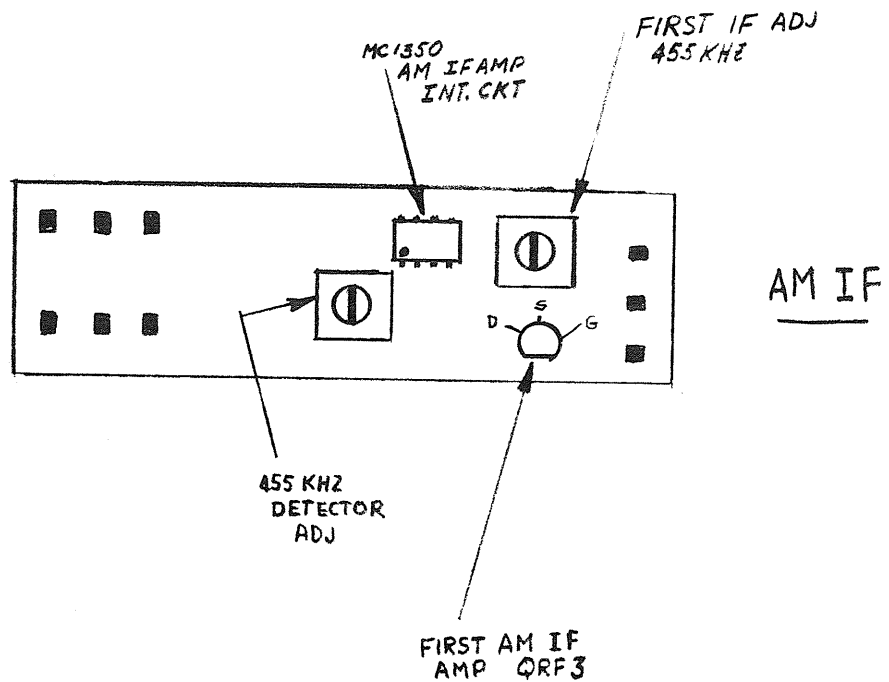
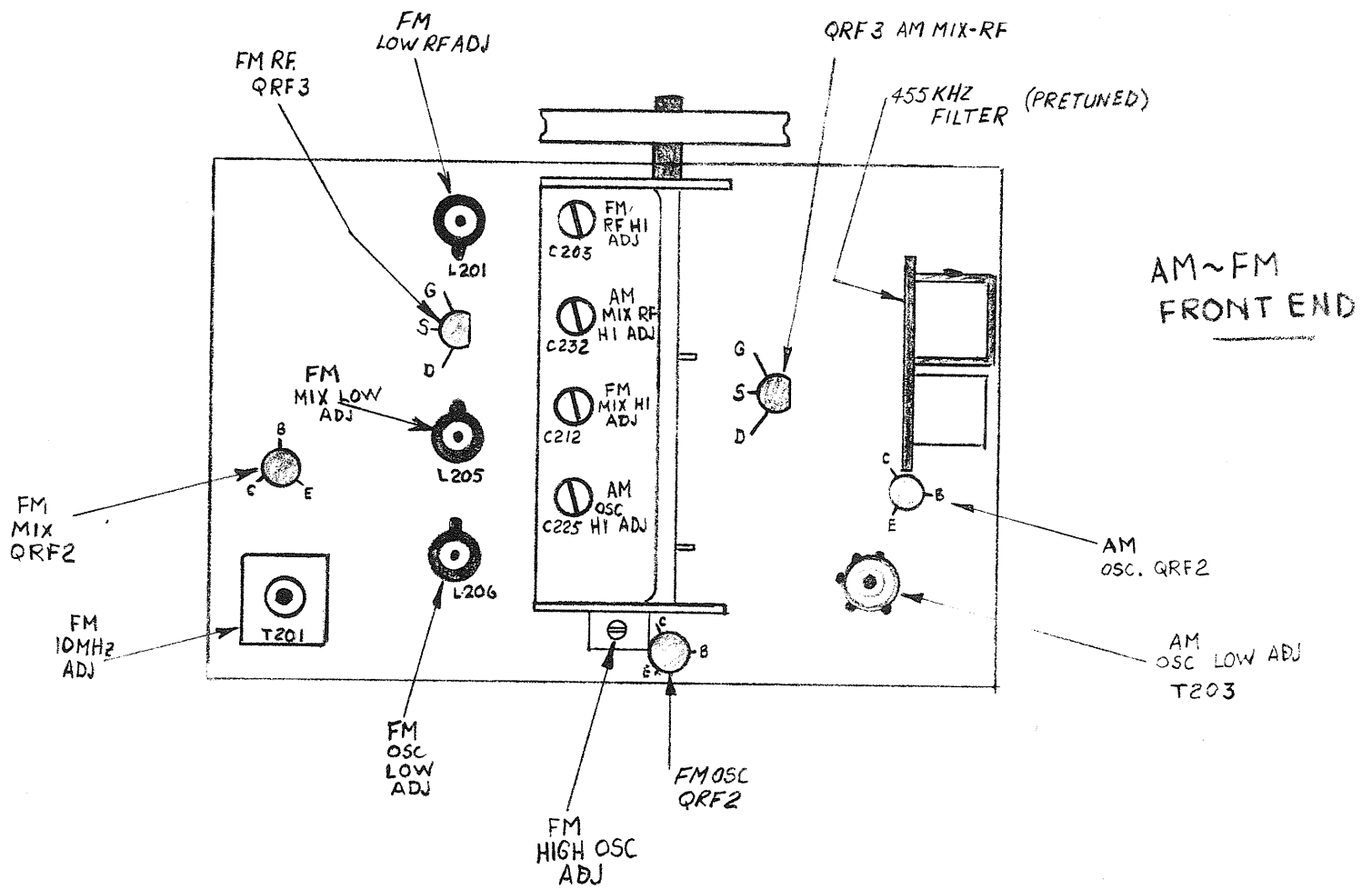


AM/FM FRONT END Z-PC-AM/FM-13

BOTTOM VIEWS



- NOTES:**
- UNLESS OTHERWISE SPECIFIED; RESISTANCE IN OHMS $\pm 10\%$. RESISTORS 1/4 WATT. CAPACITANCE IN MFDS.
 - * INDICATES START OF COIL WINDING.



382-C PARTS LIST

QTY. PER UNIT	PART NUMBER	DESCRIPTION	QTY. PER UNIT	PART NUMBER	DESCRIPTION
2	011-1000-003	Ceramic Capacitor	8	030-1181-026	6 Post AMP Connectors
2	011-1000-006	Ceramic Capacitor	4	030-1189-008	Bulb
2	011-1000-009	Ceramic Capacitor	1	030-1190-006	Socket
2	011-1000-011	Ceramic Capacitor	3	030-1190-012	Socket
2	011-1000-012	Ceramic Capacitor	1	030-1192-001	Fuse Post w/washer & nut
1	011-1000-058	Ceramic Capacitor	2	030-1192-002	Fuse Post
1	011-1000-060	Ceramic Capacitor	1	030-1193-001	Transistor Socket
1	011-1006-033	Electrolytic Capacitor	1	030-1194-003	AC Outlet, Red
2	011-1004-022	Filter Capacitor	1	030-1370-001	Indicator Assembly
1	011-1006-033	Tubular Capacitor	1	031-1197-023	Dial Cord
2	011-1008-008	Mylar Capacitor	1	031-1198-013	Dial Pointer
1	012-1023-002	Zener Diode	1	031-1200-001	Plastic Feet
1	012-1025-002	Bridge Rectifier	4	031-1203-001	Nylon Pulley
4	013-1030-002	Speaker Fuse	4	031-1209-011	Spring
1	013-1031-007	Fuse, Slo-blo	1	031-1212-001	Deflector
3	015-1060-006	Input Jack	1	031-1241-002	Fly-wheel Assembly
1	015-1060-003	Input Jack	14	031-1360-001	Nylon PC Stand-off's
1	015-1061-007	Phone Jack	1	032-1250-206	Power Supply Brkt.
2	016-1092-011	Coil	1	032-1250-207	Switch Mtg. Brkt.
1	017-1095-010	Meter	1	032-1250-209	Diffuser Brkt.
3	018-1100-032	Single Knob	1	032-1250-219	Pulley Brkt.
2	018-1100-033	Rear Knob	1	032-1250-220	Pulley Brkt.
2	018-1100-034	Front Knob	1	032-1250-203	Tone Control Brkt.
1	018-1100-035	Tuning Knob	1	032-1251-103	Bottom Cover
1	018-1102-091	Panel	1	032-1251-104	Top Cover
1	018-1104-008	Panel Inlay	1	032-1252-094	Rear Chassis
1	018-1105-068	AM/FM Dial	1	032-1252-092	Main Chassis
1	020-1111-003	Power Transistor	1	032-1252-093	Front Chassis
1	021-1120-010	1/4 Watt Resistor	1	035-1275-001	FM Antenna
2	021-1120-018	1/4 Watt Resistor	1	100-1330-016	Front End Assy.
1	021-1120-023	1/4 Watt Resistor	1	100-1331-013	IF Board Assy.
1	021-1120-026	1/4 Watt Resistor	1	100-1332-005	Multiplex Board Assy.
4	021-1120-031	1/4 Watt Resistor	1	100-1333-013	Pre-amp Board Assy.
2	021-1120-042	1/4 Watt Resistor	2	100-1349-001	Driver/Power Board Assy.
2	021-1121-014	1/2 Watt Resistor	1	100-1334-003	Tone Control Board Assy.
2	021-1121-023	1/2 Watt Resistor	1	012-1024-001	SR 1-5 Zener Diode
1	021-1123-033	Stand-up Resistor	1	011-1012-006	CC 1.0 Capacitor
1	021-1125-011	Potentiometer	1	018-1100-038	Push Button Knobs
1	023-1137-043	Rotary Switch	7	021-1121-064	RC 21 -2.7M
1	023-1138-013	7 Section Switch	1	021-1126-004	CC/Resistor
1	024-1140-030	Power Transformer	10	030-1181-025	3 Post Amp Connectors
1	026-1152-001	Line Cord	2	032-1250-121	Antenna Mtg. Bracket
1	028-1165-017	Carton	1	035-1276-010	AM Antenna
2	028-1166-114	Filler	1	100-1331-017	AM/IF Board Assy.
1	028-1166-143	Filler			

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