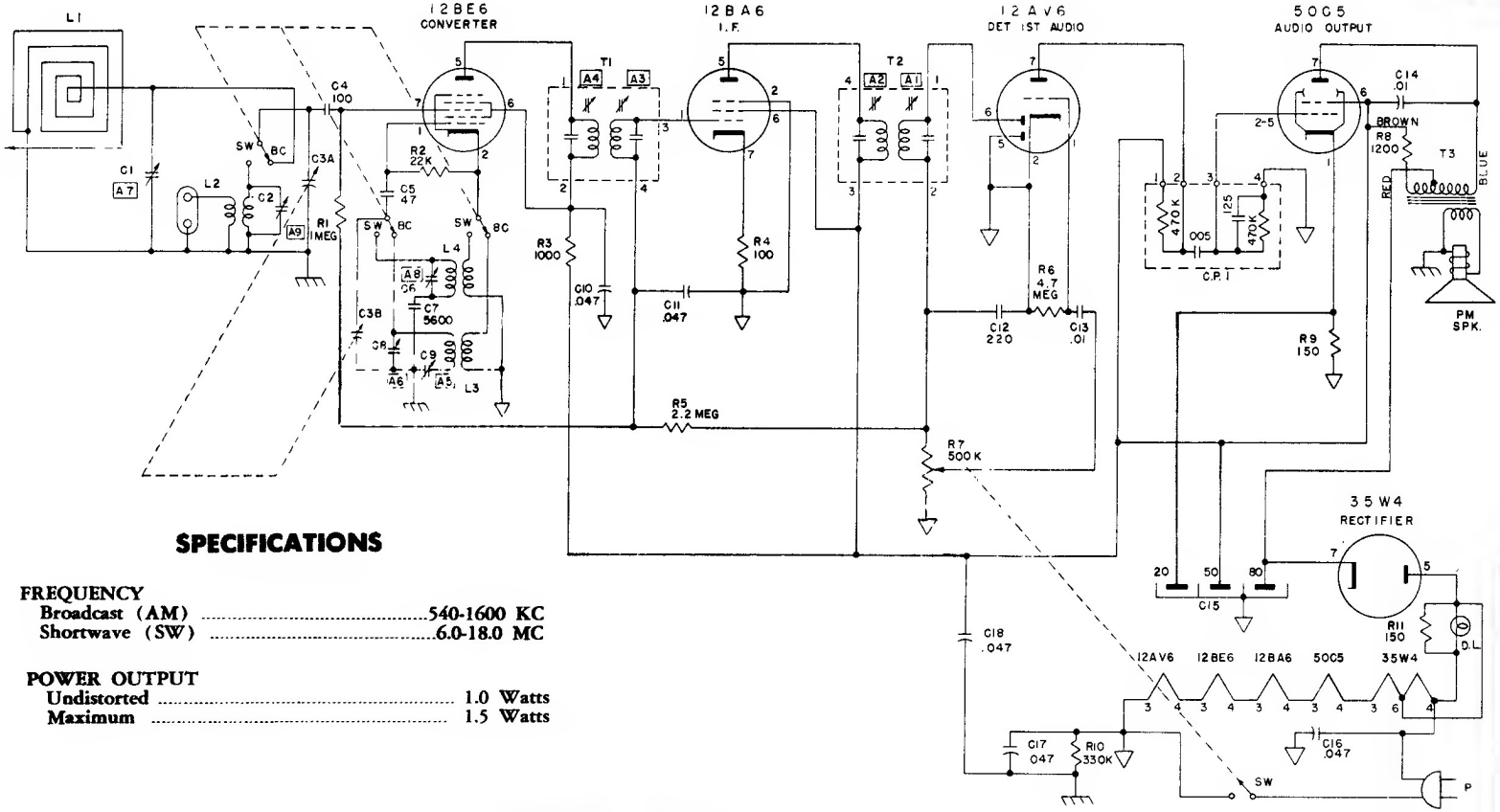
Arvin INDUSTRIES

RADIO 655 SWT
CHASSIS RE 327



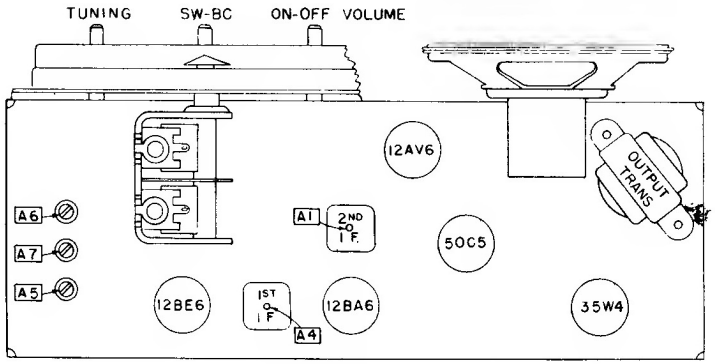
SPECIFICATIONS

FREQUENCY

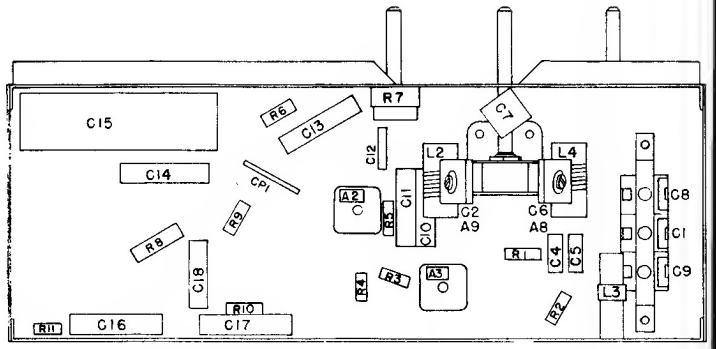
Broadcast (AM)	540-1600 KC
Shortwave (SW)	6.0-18.0 MC

POWER OUTPUT

Undistorted	1.0 Watts
Maximum	1.5 Watts



TUBE LAYOUT



LOCATION OF PARTS UNDER CHASSIS

Arvin Industries Model 655 SWT, Chassis RE-327

ALIGNMENT PROCEDURE

AM Tuning range—540 Kc to 1600 Kc. Intermediate Frequency—455 Kc. I.F. and R.F. measurements made at 500 milliwatts output—approximately 1.27 volts on a rectifier type voltmeter connected across speaker voice coil.
Approximately input for 500 MW output: R.F. with standard loop: at 600 Kc, 480 uv/m, at 1000 Kc, 360 uv/m; at 1400 Kc, 240 uv/m.

PRELIMINARY:

Output meter connection.....Across speaker voice coil
Output meter reading to indicate 500 MW.....1.27 volts
Generator Modulation.....30%, 400 cycles
Position of volume control.....Fully clockwise
Set band switch.....To left for AM alignment, to right for SW alignment

AM Alignment

Position of Variable	Generator Frequency	Dummy Ant.	(high) Generator Connection	Generator Connection Ground Lead	Adjust Trimmer In Order Shown For Max. Output	Trimmer Function
Open	455 Kc	.05 mfd.	Mixer Grid	Floating Grnd.	A1, A2, A3, A4,	I.F.
Open	1670 Kc		Test Loop	Test Loop	A6	Oscillator
Closed	535 Kc		Test Loop	Test Loop	A5	Osc. Pad.
1400 Kc	1400 Kc		Test Loop	Test Loop	A7	Antenna
600 Kc	600 Kc		Test Loop	Test Loop	A5	Osc. Pad.

Connect generator lead to a Standard Hazeltine Test Loop, Model 1150, place two feet from the set loop, or three turns of wire about six inches in diameter, placed about one foot from the set loop.
The alignment procedure should be repeated in the original order for greatest accuracy. Always keep the output from the signal generator at its lowest possible value to make the A.V.C. action of the receiver ineffective.

SHORT WAVE R.F.

A. Before attempting short wave alignment, the Broadcast IF Alignment procedure must be completed.
   1. Turn band switch clockwise to Short Wave position.
B. Connect the Signal Generator to the antenna terminals (hank disconnected). A 50 MMF "Dummy" must be used in the "high-side" of the generator-lead and the generator "groundlead" connects directly to the ground-terminal.
   2. In aligning the short wave band some trouble may be experienced with image frequencies. The image frequency is separated from the desired frequency by a 910 Kc difference. In order to identify which signal is being picked up, use the following procedure to assure the receiver oscillator is above the incoming signal:
      a. With variable condenser completely open and the trimmer, A8, loose set the signal generator to 18 Mc. Then gradually tighten the trimmer until a signal is heard. This is the correct frequency. Now if the variable condenser is closed slightly, another signal will be picked up. This is the image frequency and must not be confused with the above desired frequency. This relationship must be maintained throughout the following balancing procedure. The image frequency must always be found by closing the variable a slight amount.
   3. Set generator to 6 Mc. The set must tune to maximum output slightly before variable is completely closed.
   4. Set Generator to 16 Mc. Rotate variable until the 16 Mc signal is heard at two points near the open position of the variable. Again the desired signal is the one with the variable open the farthest. Adjust the trimmer, A9, as for maximum outut. Rotate variable very slightly for a new maximum and repeak trimmer A9. Repeat this operation until no further increase can be obtained.

Part Number	Schematic Location	Description
Capacitors		
C20067-473	C10, 11	Capacitor, .047 mfd., 200V
C20068-103	C14	Capacitor, .01 mfd., 400V
C20068-473	C16, 17, 18	Capacitor, .047 mfd., 400V
C20067-103	C13	Capacitor, .01 mfd., 200V
C20065-470	C5	Capacitor, 47 mmf
C20065-101	C4	Capacitor, 100 mmf
C20065-221	C12	Capacitor, 200 mmf
C23099-562	C7	Capacitor, 5600 mmf
A25830	C15	Capacitor, electrolytic
C25834	C3A, B	Capacitor, variable
A25832	C1, 8, 9	Caacitor, Trimmer
Resistors		
C20061-151	R9	Resistor, 150 ohm
C20061-101	R4	Resistor, 100 ohm
C20061-102	R3	Resistor, 1000 ohm
C20223-122	R8	Resistor, 1200 ohm 2w 10%
C20061-223	R2	Resistor, 22K ohm
C20061-334	R10	Resistor, 330K ohm
C20061-105	R1	Resistor, 1 megohm
C20061-225	R5	Resistor, 2.2 megohm
C20061-475	R6	Resistor, 4.7 megohm
Cabinet		
R23228-5		Cabinet, Sea-Mist
C23299		Cabinet, rear cover
A24464-5		Knob, Sea-Mist
Miscellaneou		
AC25843-1	L2	Antenna coil S.W.

Part Number	Schematic Location	Description
D25844	L1	Antenna loop
B22953		Antenna loop mtg. brkt.
A25838		Antenna terminal board
A23237		Carton
C22963	R7	Control, volume & switch
A25873	CP1	Couplate
A19132		Dial Cord (10 for)
19133		Dial Cord Spring (10 for)
E40080		Dial crystal
A19351		Dial light bulb
A19628-2		Dial light socket
AC23302-5		Dial Plate Assembly
A19361		Hairpin clip (10 for)
A40474		I.F. Mtg. clip (5 for)
C20138-15		Line cord & plug
AC25871-1	L3	Oscillator coil B.C.
AC25843-1	L4	Oscillator coil S.W.
C23461-1		Pointer
A19124		Snap fasteners (10 for)
A20243-3		Socket, tube
A20243-1		Socket, tube plain
C25756	SPK	Speaker
A22941		Stud, flapper (10 for)
C25831		Switch, band
C25859		Switch band mtg. brkt.
C21797-6	T1, T2	Transformer I.F.
AC25868-1	T3	Transformer, output
A25832		Trimmer assembly
A22957-1		Tuning shaft
A25156		Tuning shaft brkt.