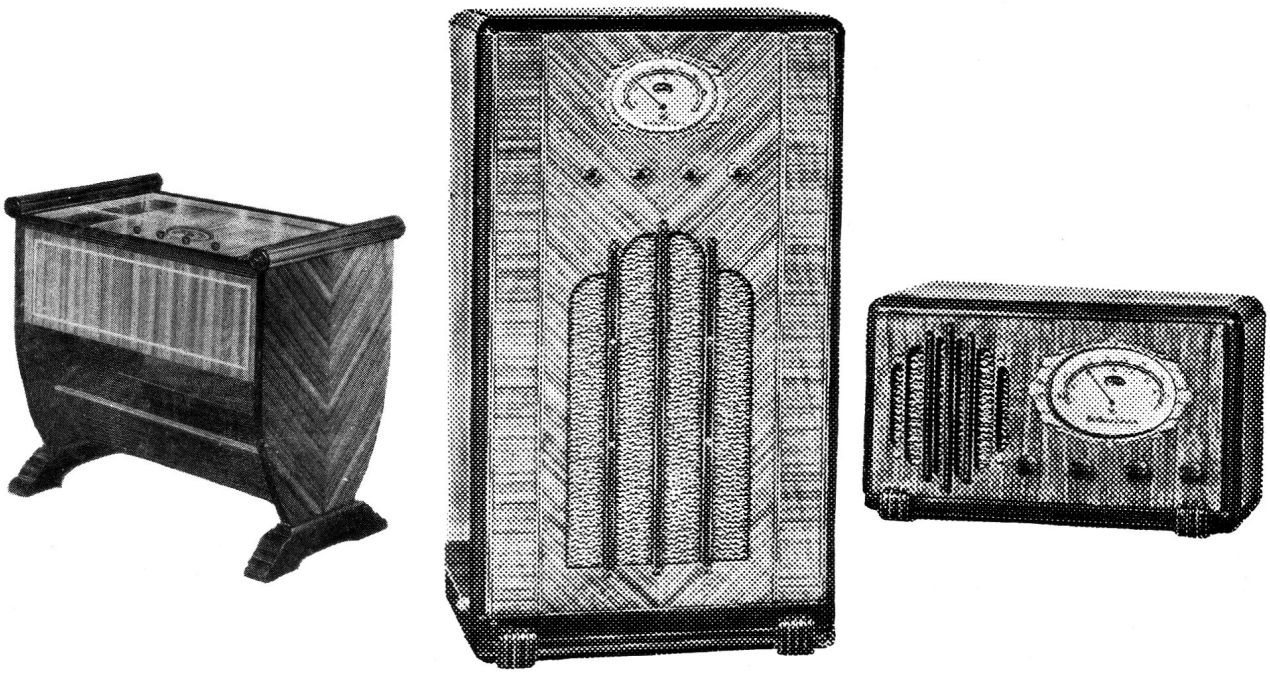
Models 625, 626, 627, 625A, 626A, 627A

The "Mandalay", The "Belfast" The "Glasgow"



Specifications

Frequency Range:

Broadcast, Green—535 to 1720 K.C.
Short Wave, Red—8.82 to 10.24 megacycles

I.F.:

470 K.C.

Tubes:

Type	Function
6A8G	Converter
6K7G	I.F. Amplifier
6H6	2nd Detector, A.V.C.
6F5	1st A.F. Amplifier
6V6G	Output Amplifier
5Y4G	Rectifier

Power Supply:

Models 625, 626, 627—105 to 125 volts A.C., 60 cycles.
Models 625A, 626A, 627A—105 to 125 volts A.C. 25 to 60 cycles.

A.V.C.:

Partial control applied on 6K7G and full control on 6A8G.

Controls:

Left to Right—Power switch and volume control; tuning control; wave-change switch; tone control.

Loudspeakers:

Models 625, 626: Six inch electrodynamic.
Model 627: Eight inch electrodynamic.

Cabinets:

Model 625: Coffee table combination with plate glass top.
Model 626: Table model.
Model 627: Console model.

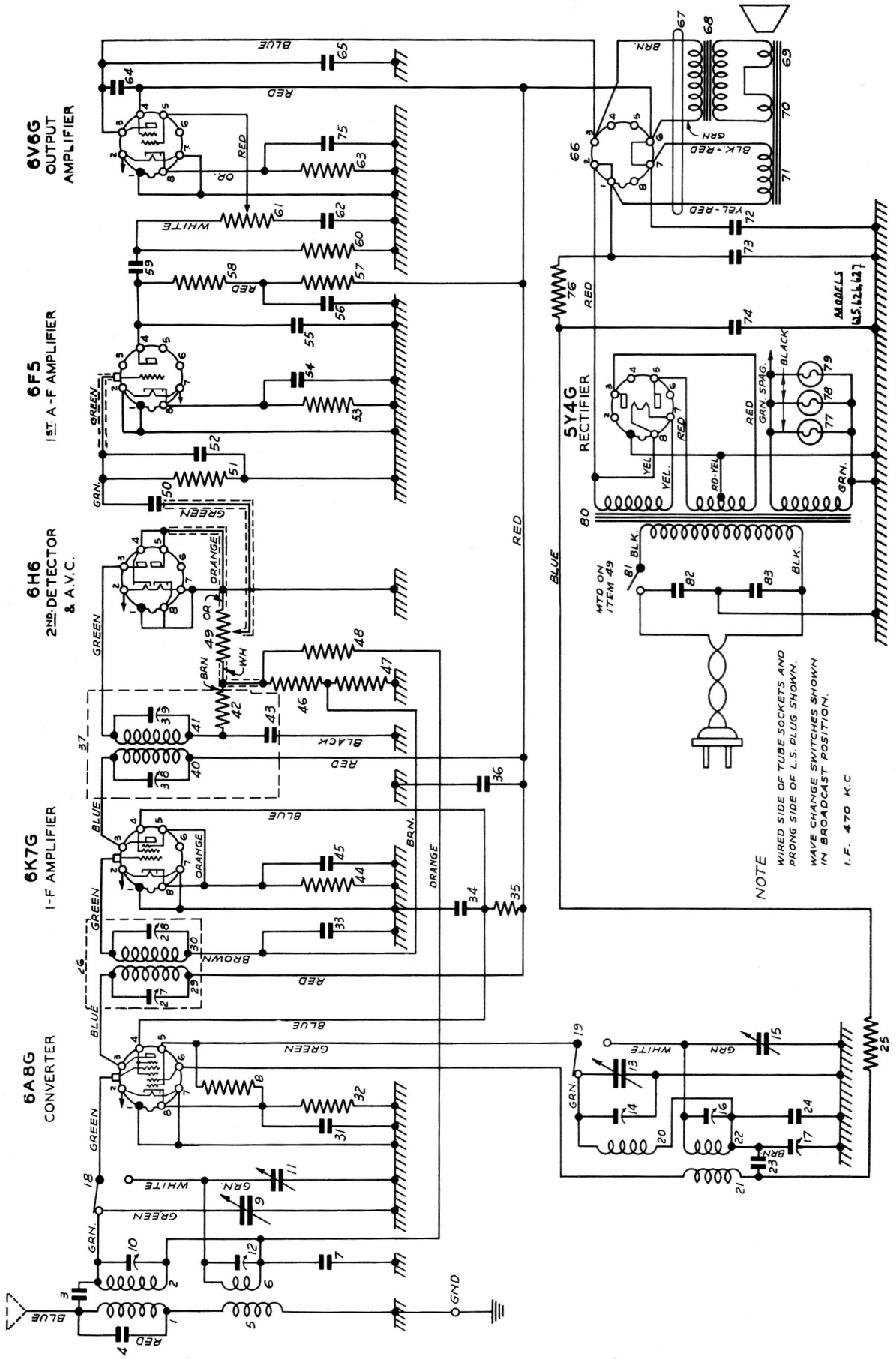


Figure 3. Schematic Diagram, Models 625, 626, 627 Receivers.

REPLACEMENT PARTS LIST

Item	Description	Part Number
1	Bdct. Ant. Trans., Pri.	K-3186
2	Bdct. Ant. Trans., Sec.	
3	5 mmf. Coupling Capacitor.	
4	Capacitor, 50 mmf. mica	K-1611-1
5	S-W Ant. Trans., Pri.	K-3188
6	S-W Ant. Trans., Sec.	
7	Capacitor, 0.1 mf, 175 V	K-2227-9
8	Resistor, 50,000 ohms	K-2226-6
9	Bdct. Ant. Sect. Tuning Cap. (402 mmf. max.)...Part of	K-3305
10	1.5-10 mmf. Trimmer Cap.	K-1458-5
11	S-W Ant. Sect. Tuning Cap. (15 mmf. max.)....Part of	K-3305
12	3-25 mmf. Trimmer Cap.	K-1458-6
13	Bdct. Osc. Sect. Tuning Cap. (402 mmf. max.)...Part of	K-3305
14	3-25 mmf. Trimmer Cap.	K-1458-6
15	S-W Osc. Sect. Tuning Cap.) (15 mmf. max.)	K-3305
16	1.5-10 mmf. Trimmer Cap.	K-1458-5
17	40-120 mmf. Trimmer Cap.	K-3083-3
18	W-C Switch, Ant. Section. Model 625	K-3226-3
19	W-C Switch, Osc. Section. Model 626-627	K-3226-2
20	Bdct. Osc. Coil	K-3187
21	S-W Osc. Trans., Pri.	K-3189
22	S-W Osc. Trans., Sec.	
23	Capacitor, 0.005 mf, 350 V.	K-2228-5
24	Capacitor, 300 mmf, mica	K-1611-4
25	Resistor, 20,000 ohm	K-2226-8
26	1st I.F. Trans. Assem. (Includes items 27-30)	K-2881
27	30-130 mmf. Trim. Cap.	K-2134-1
28	30-130 mmf. Trim. Cap.	
29	1st I-F Trans., Prim.	K-2882
30	1st I-F Trans., Sec.	
31	Capacitor, 0.05 mf, 175 V.	K-2227-8
32	Resistor, 450 ohms	K-2226-43
33	Capacitor, 0.02 mf, 175 V.	K-2227-7
34	Capacitor, 0.1 mf, 350 V.	K-2228-9
35	Resistor, 30,000 ohms.	K-2226-44
36	Capacitor, 0.1 mf, 350 V.	K-2228-9
37	2nd I-F Trans. Assem. (Includes items 38-43)	K-2883
38	30-130 mmf. Trim. Cap.	K-2932-1
39	30-130 mmf. Trim. Cap.	
40	2nd I-F Trans. Prim.	K-2884
41	2nd I-F Trans., Sec.	
42	Resistor, 50,000 ohms.	K-2226-6
43	Capacitor, 100 mmf, mica.	K-1611-2
44	Resistor, 450 ohms	K-2226-43
45	Capacitor, 0.1 mf, 175 V.	K-2227-9
46	Resistor, 2 meg	K-2226-1
47	Resistor, ½ meg.	K-2226-3
48	Resistor, 2 meg	K-2226-1
49	½ meg. Vol. Control (Model 625)	K-3302-2
49a	½ meg. Vol Control (Model 626-627)	K-3302-1
50	Capacitor, 0.02 mf, 175 V.	K-2227-7
51	Resistor, 1 meg	K-2226-2
52	Capacitor, 100 mmf. mica.	K-1611-2
53	Resistor, 4,000 ohms.	K-2226-28
54	Capacitor, elec., 5 mf, 25 V.	K-3442-1
55	Capacitor, 100 mmf, mica.	K-1611-2
56	Capacitor, 0.05 mf, 350 v.	K-2228-8
57	Resistor, 1/10 meg.	K-2226-5
58	Resistor, ¼ meg.	K-2226-4
59	Capacitor, 0.02 mf, 350 V.	K-2228-7
60	Resistor, ½ meg.	K-2226-3
61	¼ meg. Tone Control (Model 625)	K-3303-2
61a	¼ meg. Tone Control (Model 626-627)	K-3303-1
62	Capacitor, 0.001 mf, 350 V.	K-2228-1
63	Resistor, 300 ohms	K-2226-20
64	Capacitor, 100 mmf, mica.	K-1611-2
65	Capacitor, 0.003 mf, 350 V.	K-2228-3
66	Loudspeaker Plug	K-2678
67	Loudspeaker Cable	—
68	Output Trans. Assembly (Model 625-626)	K-2718-4
68a	Output Trans. Assembly (Model 627)	K-2718-1
69	Voice Coil (and Diaphragm) (Model 625-626)	K-3674
69a	Voice Coil (and Diaphragm) (Model 627)	K-3379
70	Hum Bucking Coil (Model 625-626)	—
70a	Hum Bucking Coil (Model 627)	—
71	Field Coil (Model 625-626) (Not replaceable)	—
71a	Field Coil (Model 627)	K-3378-1
72	Elec. Cap., 8 mf, 240 V.	K-3190
73	Elec. Cap., 8 mf, 370 V.	
74	Elec. Cap., 4 mf, 270 V.	
75	Elec. Cap., 10 mf, 13 V.	
76	Resistor, 20,000 ohms.	K-2226-8
77	Dial Lamp, 6.3 V.	K-2589-3
79		
80	Power Trans. Assem., 60 cy.	K-2179-12
80a	Power Trans. Asssm., 25 cy.	K-2179-13
81	A. C. Switch (Mounted on Item 49)	—
82	Capacitor, 0.025 mf, 520 V.	K-1750
83	Capacitor, 0.025 mf, 520 V.	

MISCELLANEOUS:

Loudspeaker Assy. (Models 625-626)	K-2861
Sockets, octal base	K-1924-3
Sockets, octal base	K-1924-1
Dial Scale	K-3169

REPLACEMENT PARTS LIST—Continued

Description	Part Number
Dial Clips	K-2436
Indicator	K-2654-3
Drive Disc Assy	K-3180-1
Set Screw for W/C Indicator	K-2502-6
Reduction Drive Assy. (Models 626-627)	K-3178-1
W/C Indicator	K-3184
Dial Lamp Socket	K-2835
Tube Shield	K-2267-3
Grid Clip	K-3031
Insulation Strip	K-2505
Insulation Strip	K-2594
Chassis Mounting Screw	K-2787-8
Chassis Mounting Washer	K-2516-1
Spcl. Head Screw (Speaker—Model 626)	K-2971-1
Spcl. Head Screw (Speaker—Model 627)	K-2971-2
Rubber Grommets (Speaker—Model 626)	K-2498-2
Knob—"Volume-Off"	K-2765-2
Knob—"Tuning"	K-2765-5
Knob—"Band"	K-2765-9
Knob—"Tone"	K-2765-8
Felt Washers for Knobs	K-2491-4
Escutcheons Complete	K-3172
Escutcheon Mounting Screws	K-3081-3
Reduction Drive Assy. (Model 625)	K-3178-2
Plate Glass, drilled (Model 625 only)	K-3268
Tuning Wrenches (all models)	K-836

REALIGNING INSTRUCTIONS

To secure full advantage of the performance characteristics of these receivers, any realignment necessary should be carried out carefully. A reliable test oscillator or signal generator and also an output meter, should be employed. A signal generator utilizing harmonics to cover the short-wave band should not be used

I. F. ALIGNMENT:

(*a*) Set the signal generator to 470 k.c. and connect its output through a 0.1 mf. capacitor to the grid cap of the first detector (type 6A8G tube). Set the receiver dial to about 600 k.c. and turn the wave change switch to the broadcast position.

(*b*) Adjust trimmers, items 27, 28, 38 and 39 for maximum output.

(*c*) Reduce the output from the generator to as low a value as will give an output reading and check the adjustments. All trimmers should peak properly.

R. F. ALIGNMENT—BROADCAST BAND:

(*a*) With the gang all in check the position of the pointer. It should line up with the end of the calibration line. Put the wave-change switch in broadcast position.

(*b*) Couple the signal generator to the antenna (blue) lead through a 100 mmf. mica capacitor. Connect the ground (black) lead to ground.

(*c*) Set the generator and receiver to 1600 k.c. Adjust trimmer, item 14, to bring in the signal and then adjust trimmer, item 10, for maximum sensitivity.

(*d*) Set the generator to 600 k.c. and tune the receiver to it. Adjust trimmer, item 17, at the same time rocking the gang, until maximum sensitivity is obtained.

(*e*) Recheck at 1600 k.c.

R. F. ALIGNMENT—SHORT-WAVE BAND:

(*a*) Substitute a 400-ohm carbon resistor in place of the capacitor in the lead from the signal generator. Turn the wave-change switch to the short-wave position.

(*b*) Set the receiver and generator to 9.5 megacycles and adjust trimmer, item 16, to bring in the signal.

(*c*) Adjust trimmer, item 12, at the same time rocking the gang, until maximum sensitivity is obtained.

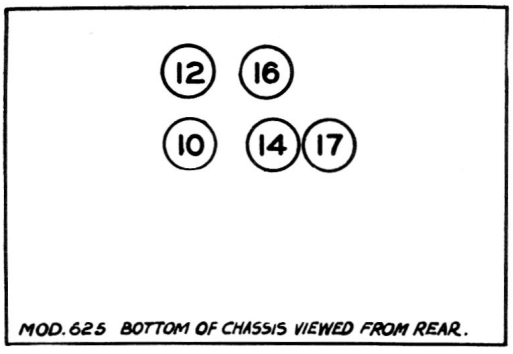


Figure 2.—Underside Aligning Positions

D.C. RESISTANCE OF COILS — OHMS

Item	Description	Resistance
1	Bdct. Ant. Trans., Pri.	17
2	Bdct. Ant. Trans., Sec.	3.7
5	S-W Ant. Trans., Pri.	Below 0.5
6	S-W Ant. Trans., Sec.	Below 0.5
20	Bdct. Osc. Coil.	7.2
21	S-W Osct. Trans., Pri.	Below 0.5
22	S-W Osc. Trans., Sec.	Below 0.5
29	1st I-F Trans., Pri.	12.5
30	1st I-F Trans., Sec.	12.5
40	2nd I-F Trans., Pri.	12.5
41	2nd I-F Trans., Sec.	12.5
68	Output Trans., Pri.	800
	Output Trans., Sec. (Models 625-626).	0.75
	Output Trans., Sec. (Model 627).	Below 0.5
69	Voice Coil (Models 625-626) Imp. 4.7 ohms at 400 cy.	3.1
	Voice Coil (Model 627) Imp. 1.82 ohms at 400 cy.	1.5
70	Humbucking Coil.	Below 0.5
71	Field Coil.	1800
80	Power Trans., Pri. (60 cy.).	7.0
	Pri. (25 cy.).	10.8
	H.V. Sec. (60 cy.).	300
	H.V. Sec. (25 cy.).	480
	Heaters.	Below 0.5
	Rectifier.	Below 0.5

SOCKET RESISTANCE READINGS TO GROUND — OHMS

TUBE	Top Cap (Cont. Grid)	Pin No. 1 Shell	Pin No. 2 (Heater)	Pin No. 3 (Plate)	Pin No. 4 (Screen)	Pin No. 5	Pin No. 6	Pin No. 7 (Heater)	Pin No. 8 (Cathode)
Type 6A8G Converter	2.42 meg.	0	Below 0.5	1800 ①	31800 ①	(No. 1 Grid) 50,450	(No. 2 Grid) 40,000 ①	0	450
Type 6K7G I-F Amplifier	0.42 meg.	0	Below 0.5	1800 ①	31800 ①	(Suppressor) 450	—	0	450
Type 6H6 2nd Detector & A.V.C.	—	0	Below 0.5	0.47 meg.	(Cathode) 0	(Plate) 0	—	0	0
Type 6F5 1st A-F Amplifier	1 meg.	0	0	—	(Plate) 352,000	—	—	Below 0.5	4000
Type 6V6G Output Amplifier	—	0	Below 0.5	2600 ①	1800 ①	(Grid) 0.5 meg.	—	0	300
Type 5Y4G Rectifier	—	0	—	60 cy.–150 25 cy.–240	—	(Plate) 60 cy.–150 25 cy.–240	—	0 ①	(Heater) 0 ①

① Measured to Rectifier Filament.

These readings were taken with the set switched off and the tone control in the treble position. The pin numbers for the sockets correspond with those shown on the schematic circuit.

SOCKET VOLTAGE READINGS

These readings were taken with the gang capacitor all in, wave change switch on the broadcast band, and line voltage of 115 volts. Voltage readings can be duplicated using any good voltmeter having a resistance of 1000 ohms per volt, such as the Weston Model 663 Volt-Ohmmeter or the Weston Model 772 having a resistance of 20,000 ohms per volt. Current readings can be duplicated with the Model 772 and the Model 666-1A Socket Selectors. When taking readings with the selector attachment, connect a 0.1 mf. capacitor from the grid of the tube in the selector to the chassis, to prevent oscillation.

TUBE	VOLTAGES				CURRENTS—M.A.		
						PLATE	
	Heater (A-C)	Plate	Screen	Cathode	Screen	Normal Bias	Bias red. 4½ Volts
6A8G	6.3	225①	85	4.3	3.0	2.0②	4.7
6K7G	6.3	225	85	3.0	1.3	5.5	7.8
6F5	6.3	68	—	0.65	—	0.3	0.5
6H6	6.3	—	—	0	—	—	—
6V6G	6.3	200	225	12	3.5	33.0	37.5
5Y4G	5.1	—	—	325	Plate 28	Plate 28	—

① Anode Grid Voltage — 140

② Anode Grid Current — 4.2 ma.