MODELS 37G508, 37G566
Chassis 7GM
Schematic, Trimmers
Parts

WELLS-GARDNER & CO.

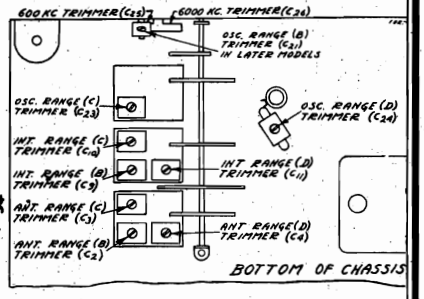

Fig. 3—Location of Trimmers (Latest Models)

R 6 1600 ohm 2.0 W.
R 7 2.0 Megohm .2 W.
R 8 300000 ohm .5 W.
R 9 50000 ohm .2 W.
R11 20000 ohm .2 W.
R12 60000 ohm .5 W.
R13 25000 ohm 1.0 W.
R14 80000 ohm .2 W.
R15 150000 Tone Cont.
R16 235 ohm 2.0 W.
R17 100000 ohm .2 W.
R18 500000 ohm .2 W.
T 1 Antenna R.F. Trans.
T 2 Interstage R.F. Trans
T 3 1st. I.F. Trans.
T 4 2nd I.F. Trans.
T 5 Osc. Inductors
T 6 Power Trans.
T 7 Output Trans.
L 1 Speaker Field
L 2 Osc. Tracking Coil

C32 .002 mf. 600 V.
C33 .03 mf. 180 V.
C34 .01 mf. 480 V.
C35 .004 mf. 600 V.
R 1 150 ohm .2 W. } Dual Vol.
R 2 2500 ohm } Control
R10 50000 ohm } Control
R 3 30000 ohm .5 W.
R 4 6000 ohm .5 W.
R 5 2500 ohm .2 W.

GROUPS OF CIRCUIT ELEMENTS ENCLOSED IN DOTTED RECTANGLES COMPRISE DISTINCT MECHANICAL ASSEMBLIES.
THE CAPACITY OF SHIELD "C" "D" AND "E" IS 50 MMF EACH.

C22 1400 mmf.
C23 2-25 mmf.
C24 2-25 mmf.
C25 300-600 mmf. } ONE UNIT
C26 40-100 mmf. }
C27 .10 mf. 360 V.
C28 35 mmf.
C29 15 mf. 300 V.
C30 14 mf. 400 V.
C31 .05 mf. 600 V.

C12 .25 mf. 240 V.
C13 .05 mf. 780 V.
C14 70-150 mmf. } ONE UNIT
C15 70-150 mmf. }
C16 70-150 mmf. } ONE UNIT
C17 150-250 mmf. }
C18 50 mmf.
C19 .25 mf. 360 V.
C20 .25 mf. 360 V.
C21 2-25 mmf.

C 1 250 mmf.
C 2 2-25 mmf.
C 3 2-25 mmf.
C 4 2-25 mmf.
C 5 .05 mf. 180 V.
C 6 .25 mf. 180 V.
C 7 .05 mf. 240 V.
C 8 .10 mf. 360 V.
C 9 2-25 mmf.
C10 2-25 mmf.
C11 2-25 mmf.

ARROWS INDICATE CONNECTIONS PRESENT IN BAND SWITCH WHEN IN POSITION SHOWN.

	POSITION 1 STANDARD WAVE (B)	POSITION 2 SHORT WAVE (C)	POSITION 3 SHORT WAVE (D)
ANT. & OSC. SECTION	5 6 7 8 9 11 12 1 2	5 6 7 8 9 11 12 1 2	5 6 7 8 9 11 12 1 2
INT. SECTION	4 5 6 7 8 9 11 12 1 2	4 5 6 7 8 9 11 12 1 2	4 5 6 7 8 9 11 12 1 2

CONTACT LOCATIONS 3, 4 AND 10 IN ANT. AND OSC. SECTIONS AND 3 AND 10 IN INT. SECTION ARE BLANK.

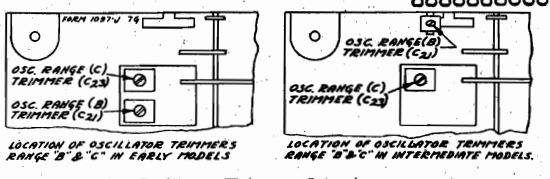

Fig. 4—Oscillator Trimmer Location

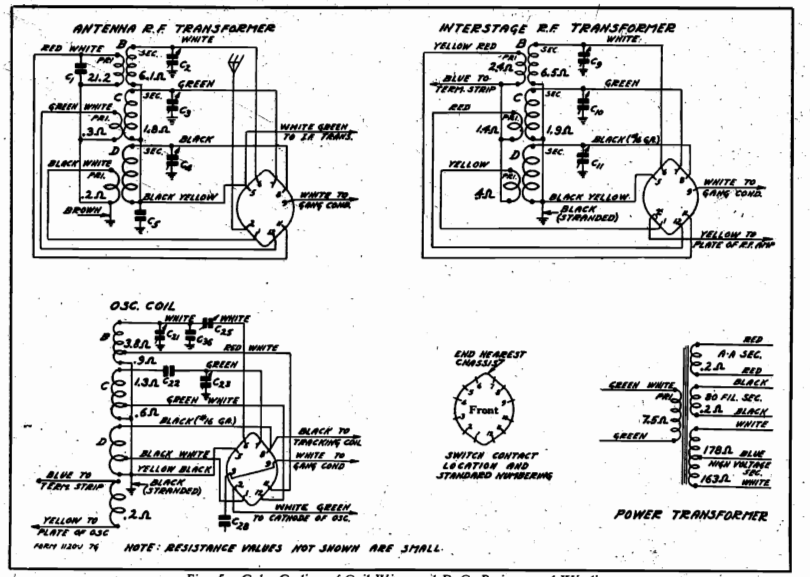

Fig. 5—Color Coding of Coil Wires and D. C. Resistance of Windings (Also see complete D. C. Resistance List in this Manual)

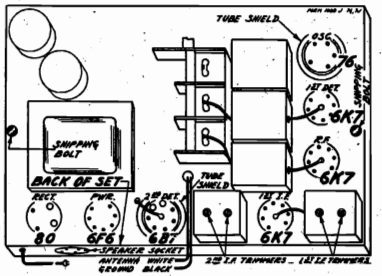

Fig. 6—Location of Tubes

VOLTAGES AT SOCKETS
Line Voltage, 115 - Volume Control at Maximum
Antenna Shorted to Ground

Type of Tube	Function	Heater or Filam't	Plate to Ground	Screen to Ground	Cathode to Ground	Plate M. A.
6K7 (6D6)	R. F.	6.1	230	95	3.0	6.4
6K7 (6D6)	1st Det.	6.1	230	100	9.0	3.2
76	Osc.	6.1	100			5.2
6K7 (6D6)	I. F.	6.1	230	120	3.0	9.
6B7	2nd Det.	6.1	55(1)	40		2.3
6F6 (42)	Power	6.1	215	230	17(2)	30.0
80	Rectifier	4.7				34. per plate

(1) As read with 500,000 ohm meter
(2) As read across R16

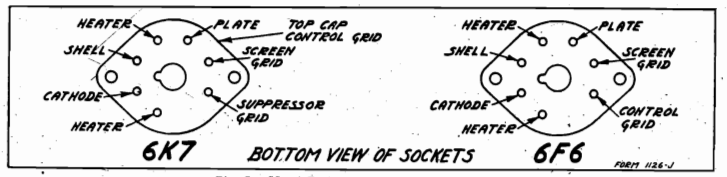

Fig. 7—Metal Tubes—Bottom View of Sockets

Servicing R. F. Coil Assemblies

The R. F. transformers and oscillator coil assemblies in this receiver are sold complete with can. This is due to the fact that the trimmers are soldered to the can, and cannot be easily disassembled.

The lead colors and resistances of the various windings in each assembly are shown in Fig. 5.

If it is ever necessary to remove one of coil assemblies from the can, proceed as follows: First remove the nuts from the screws at the top of the can. The outside lug on the trimmer condenser is inserted in a slot in the coil can, and this lug is soldered into position.

Apply a soldering iron to the can at the point of the soldered connection. Then with a screw driver lift up on the outside edge of the trimmer (edge soldered to can) until the trimmer is clear of the can. After the trimmers are all unsoldered, the coil can be taken out.

Twenty-five Cycle Receivers

The twenty-five cycle receiver differs from the sixty cycle receiver only in the fact that a different power transformer is used. The correct power transformer is shown in the parts list.

The twenty-five cycle receiver can be operated satisfactorily from a sixty cycle power supply. However, the reverse is not true, the sixty cycle receiver cannot be operated from a twenty-five cycle power supply.

A 115-230 Volt, 40 to 60 cycle as well as other power transformers with special power ratings are also available for this model.

A standard arrangement for switch contact location numbering has been adopted. This numbering is illustrated in Fig. 5. In contact locations not used, the number applying to that particular location is not employed.

Changes in Early Models

In the early models of this receiver, the antenna transformer (T1) had two Range B Primary windings as shown in Fig. 8.

The oscillator Range B and C trimmer locations varied in the early and intermediate models of this receiver as shown in Figs. 3 and 4.

Referring to Fig. 2, in the early models of this receiver, contact No. 4 in the interstage section of the band selector was not used. The purpose of this contact arrangement is to short out variable resistor R2 in the second short wave position. In these models the relative positions of resistors R1 and R2 were reversed. The common connection from the suppressor grid and cathodes of the R. F. and I. F. amplifier tubes was connected to the control arm of variable resistor R2. The latter was connected to resistor R1 which was grounded at the other end. The by-pass condenser C6 remains connected as before, to the cathode and suppressor grid connection.

The type 6K7 and 6F6 metal tubes replace the types 6D6 and 42 glass tubes respectively which were used in the early models.

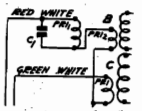

Fig. 8—Antenna Transformer in Early Models

Phonograph Connections

Phonograph connections can be made as shown in Fig. 9. The parts required are shown in the parts list. Knockouts are provided in the back panel of the chassis for mounting the phono jack and phono switch—See Fig. 10.

For mounting the 12 mfd. 25 volt dry electrolytic condenser, two No. 27 drill holes should be drilled in the side of the chassis directly below the wet electrolytic condensers. These holes are 1¼" from the bottom, 7⁄8" and 3¾" from the front of chassis. The ground lug which extends out from the side of the chassis should be bent back into the chassis wall.

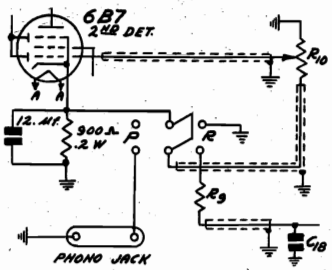

Fig. 9—Phonograph Connections

Replace the single lug insulated terminal strip (located on the rear panel, directly in back of the band selector switch) with (P-4A39) double lug insulated terminal strip with ground lug. Be sure to solder back to this new terminal strip any leads that were connected to the other terminal strip.

The connections are made by opening the diode return circuit at the volume control. Unsolder the 50,000 ohm resistor R9 (covered with saturated sleeving in early models) from the lug at the volume control and from the shielded lead which runs from the I. F. transformer. Cut this shielded lead to length and connect to the open lug on the new terminal strip. Connect one side of the 50,000 ohm resistor R9 to the same lug and the other side to the phono switch—see Fig. 9. Ground the shield to the ground lug of the terminal strip.

The extra shielded lead which is provided should be inserted into a piece of saturated sleeving.

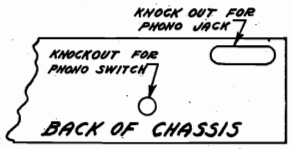

Fig. 10—Location of Phono Knockouts

Series 7GM—Replacement Parts

NOTICE—A change has been made in our parts numbering system. Old parts which are used in new receivers will have a new number assigned to them. For your convenience we are listing below the new part number and the corresponding old part number, should there be one. **Order by new part number only.**

There is a large letter on the chassis which identifies the set as to major part changes. When ordering parts please be sure to mention the series number and this large letter.

MISCELLANEOUS

New Part No.	Old Part No.	Description	List Price
3A129	2025	Type 80 Tube Socket (4 Prong), Glass Tube	$ .10
3A112	1884	Type 42 Tube Socket (6 Prong), Glass Tube	.10
3A210		Type 6F6 Tube Socket (Metal Tube)	.15
3A126	2022	Type 76 Tube Socket (5 Prong), Glass Tube	.10
3A120	1944	Type 6B7 Tube Socket (7 Prong), Glass Tube	.15
3A113	1885	Type 6A6 Tube Socket (6 Prong), Glass Tube	.10
3A211		Type 6K7 Tube Socket (Metal Tube)	.15
3A58	1637	5 Prong Speaker Socket	.10
12A211		8" Dynamic Speaker Complete with Output Transformer (T7)	5.95
12A221		10" Dynamic Speaker Complete with Output Transformer (T7)	6.45
12A222		6" Dynamic Speaker Complete with Output Transformer (T7)	4.15
17X1	10320	Glass Dial Crystal	.15
28X25	20875	Crystal Retainer Ring	.10
Specify Name of Knob & Model of Receiver		Small Push-on Type Knob Large Set Screw Type Knob Special Selectivity Control Knob (Set Screw Type)	.15 .20 .45
2X38	10387	Felt Washers (Used behind Knobs)	.10
8X23	10272	Rubber Chassis Mounting Cushions	.10
32X32	40434	Tube Shields	.15
32X30	40424	Tube Shield Bases	.10
4A38	2106	Single Lug Terminal Strip (Mounting foot to Left of lug)	.10
4A17	1421	Single Lug Terminal Strip (Mounting foot to Right of lug)	.10
4A49		Single Lug Terminal Strip (Mounting hole used)	.10
4A50		Two Lug Terminal Strip (Both lugs insulated—Mounting hole in center)	.10
13X80	70786	Line Cord and Plug	.50
13X214		Antenna and Ground Lead Assembly	.30
2A40		3 Section, 3 Position, Band Change Switch	1.70
2A42		Selectivity Switch	.45
30X14	30342	Grid Clip Only—for Glass Tubes	.10
31X44		Grid Clip Only—for Metal Tubes	.10

TRANSFORMERS AND COILS

New Part No.	Code	Description	List Price
9A376	T1	Antenna Trans. and Can Assembly	$2.80
9A377	T2	R. F. Interstage Trans. and Can Assembly	2.25
9A379	T3	1st I. F. Trans. and Can Assembly	1.70
9A380	T4	2nd I. F. Trans. and Can Assembly	2.10
9A378	T5	Oscillator Coil and Can Assembly	2.25
53X91	T6	115 volt 60 cycle Standard Power Transformer	3.60
53X92	T6	115 volt 25 cycle Special Power Transformer	5.95
53X93		115-230 volt 40-60 cycle Special Power Transformer	4.95
53X99	T6	230 volt, 50 cycle Special Power Transformer	4.10
9A391	L2	High Frequency Oscillator Tracking Coil	.25

CONDENSERS

New Part No.	Code	Capacity	Voltage	Type	List Price
47X59	C1	250 mmf.		Moulded	$ .15
17A36	C2	2-25 mmf.		Range B—Antenna Trimmer (1500 KC Adjustment)	.10
17A36	C3	2-25 mmf.		Range C—Antenna Trimmer (5000 KC Adjustment)	.10
17A36	C4	2-25 mmf.		Range D—Antenna Trimmer (15000 KC Adjustment)	.10
46X80	C5	.050 mf.	180	Tubular	.15
46X102	C6	.250 mf.	180	Tubular	.30
46X103	C7	.050 mf.	240	Tubular	.15
46X105	C8	.100 mf.	360	Tubular	.20
17A36	C9	2-25 mmf.		Range B—1st Detector Trimmer (1500 KC Adjustment)	.10
17A36	C10	2-25 mmf.		Range C—1st Detector Trimmer (5000 KC Adjustment)	.10
17A36	C11	2-25 mmf.		Range D—1st Detector Trimmer (15000 KC Adjustment)	.10
46X104	C12	.250 mf.	240	Tubular	.25
46X80	C13	.050 mf.	180	Tubular	.15
17A33	C14 C15 C16 C17	70-150 mmf. 70-150 mmf. 70-150 mmf. 150-250 mmf.		1st I. F. Trimmer Condensers	.40
17A34				2nd I.F. Trimmer Condensers	.40
47X36	C18	.50 mmf.		Moulded	.10
46X116	C19	.250 mf.	360	Tubular	.35
46X107	C20	.250 mf.	360	Tubular	.30
17A36	C21	2-25 mmf.		Range B—Oscillator Trimmer (1730 KC Adjustment)	.10
47X60	C22	.1400 mmf.		Moulded	.30
17A36	C23	2-25 mmf.		Range C—Oscillator Trimmer (5800 KC Adjustment)	.10
17A36	C24	2-25 mmf.		Range D—Oscillator Trimmer (18300 KC Adjustment)	.10
17A35	C25	300-600 mmf.		Oscillator Padding Condenser (600 KC Adjustment)	.45
	C26	40-100 mmf.		Oscillator Padding Condenser (6000 KC Adjustment)	
46X105	C27	.100 mf.	360	Tubular	.20
47X53	C28	35.0 mmf.		Moulded	.10
44X11	C29	18.0 mf.	300	Wet Electrolytic	1.10
44X10	C30	14.0 mf.	400	Wet Electrolytic	1.25
46X108	C31	.050 mf.	600	Tubular	.20
46X100	C32	.092 mf.	600	Tubular	.15
46X110	C33	.030 mf.	180	Tubular	.15
46X109	C34	.010 mf.	480	Tubular	.15
46X114	C35	.004 mf.	600	Tubular	.15
25A38		3 Gang Condenser Complete with Drive Assembly—less Dial Assembly			4.75

DIAL AND DRIVE ASSEMBLY

New Part No.	Description	List Price
5A27	Gang Condenser Bracket & Bearing	$ .45
26X320	Drive Shaft	.15
24X207	Drive Pulley with Set Screw	.10
20X70	Main Shaft Pointer Stud	.10
24X205	Gear (Rotary)	.10
24X210	Gear (Stationary)	.10
28X35	Gear Spreader Spring	.10
36X205	Main Pointer Shaft Assembly	.45
26X209	Micrometer Pointer Shaft Assembly	.55
24X209	Compound Gear Assembly	.25
37X33	Tension Pulley Arm Assembly	.15
28X42	Tension Pulley Spring	.10
8X35	Drive Belt	.20
30X36	Dial Clamp to secure Dial Strip to Frame with 6-32 x 3/16" mounting screw	.10
	Dial Strip Only (Specify Series No. and Name of Receiver)	.50
15X22	Double End Pointer	.10
15X26	Micrometer Pointer	.10
7A26	2012 Pilot Lamp Bulb (6-8V)	.15
7A27	2126 Pilot Lamp Sockets and Spring Clips	.10
15A38	Dial Bracket Assembly Complete	3.95
28X34	Pointer Slide, Take-up Spring Only	.10
10X9	4" Black Drive Cord Only Dozen	.10
29X42	Brass Collars and Set Screws Only for Securing above Drive Cord to Shaft	.10

NOTE: The Gang Condenser and Drive Assembly, less Dial Assembly, can be purchased complete—see Condenser List.

RESISTORS

New Part No.	Code	Resistance	Watts	Type	List Price
A94151	R1	151 ohm	0.2	Carbon	$ .15
36X204	R2 R10	2,500 ohm 500,000 ohm		Dual Volume Control	1.75
B93303	R3	30,000 ohm	0.5	Carbon	.20
B94602	R4	6,000 ohm	0.5	Carbon	.25
A94252	R5	2,500 ohm	0.2	Carbon	.15
D93163	R6	16,000 ohm	2.0	Carbon	.45
A95205	R7	2.0 Megohm	0.2	Carbon	.10
B94304	R8	300,000 ohm	0.5	Carbon	.15
A95503	R9	50,000 ohm	0.2	Carbon	.10
A94203	R11	20,000 ohm	0.2	Carbon	.15
B94603	R12	60,000 ohm	0.5	Carbon	.15
C94253	R13	25,000 ohm	1.0	Carbon	.15
A94803	R14	80,000 ohm	0.2	Carbon	.15
40X203	R15	150,000 ohm	Tone	Control	.75
41X42	R16	235 ohm	2.0	Armored Wire Wound	.25
A94104	R17	100,000 ohm	0.2	Carbon	.15
A95504	R18	500,000 ohm	0.2	Carbon	.10

PHONO ATTACHMENT PARTS

New Part No.	Description	List Price
2A31	Phono Switch (Double Pole Double Throw Switch)	$ .60
3A12	Phono Jack	.10
10A36	Switch Knob	.20
45X37	12.0 mf. - 25 Volt - Dry Electrolytic Condenser	.75
A94901	900 Ohm - 0.2 Watt Resistor	.15
	12 Inches of No. 722G Shielded Hookup Wire	.10
4A39	Terminal Strip	.10

General Service Data

D. C. Resistance of Windings
Refer to Fig. 5.

Following are the D. C. resistances of the various windings in the chassis. The values given below will vary slightly in different sets.

Part No.	Item	Code	D. C. Resistance in Ohms
9A376	Antenna Transformer	T1	
	Range B Primary Winding		21.2
	Range C Primary Winding		0.3
	Range D Primary Winding		0.2
	Range B Secondary Winding		6.1
	Range C Secondary Winding		1.8
	Range D Secondary Winding		Small
9A377	R. F. Interstage Transformer	T2	
	Range B Primary Winding		2.4
	Range C Primary Winding		1.4
	Range D Primary Winding		0.4
	Range B Secondary Winding		6.0
	Range C Secondary Winding		1.9
	Range D Secondary Winding		Small
9A378	Oscillator Coils	T5	
	Range B Grid Coil		
	Red White Tap to White		3.8
	Red White Tap to Ground		0.9
	Range C Grid Coil		
	Green White Tap to Green		1.3
	Green White Tap to Ground		0.6
	Range D Grid Coil		
	Black White Tap to Black		Small
	Black White Tap to Ground		Small
	Oscillator Plate Coil		0.2
9A379	1st I. F. Transformer	T3	
	Primary Winding		11.6
	Secondary Winding		
	Long Portion		11.4
	Short Portion		0.8
9A380	2nd I. F. Transformer	T4	
	Primary Winding		14.3
	Secondary Winding		4.4
*12A223	Dynamic Speaker (8")	L1	
	Output Transformer Primary Winding	T7	510.
	Output Transformer Sec. Winding	T7	1.0
	Speaker Field		1025.
	Speaker Voice Coil		4.1
	Speaker Bucking Coil		0.2
53X91	115 Volt 60 Cycle Power Transformer	T6	
	Primary Winding		7.5
	Tube Filament Winding (A-A)		0.2
	80 Filament Secondary		0.2
	High Voltage Secondary Winding		
	Center Tap to Inside		163.
	Center Tap to Outside		178.
9A391	High Frequency Oscillator Tracking Coil.	L2	1.1

*Speakers with other part numbers may have slightly different values of D. C. resistance.

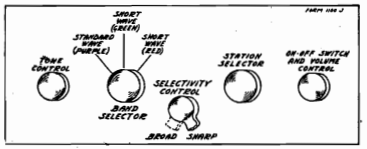

Fig. 1—Arrangement of Controls

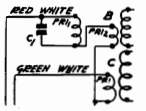

Fig. 8—Antenna Transformer in Early Models

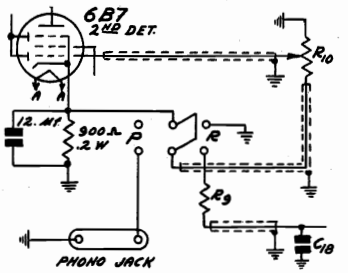

Fig. 9—Phonograph Connections

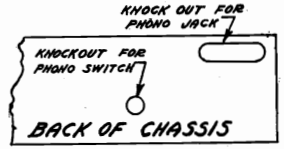

Fig. 10—Location of Phono Knockouts

WELLS-GARDNER & CO.

MODELS 37G508, 37G566
Chassis 7GM
Circuit Data, Alignment

Circuit

This model is a three band receiver with a tuning range in each band as shown in the specifications above. Three band coverage is accomplished by means of three sets of R. F. and oscillator coils and a three section triple throw switch.

Referring to the schematic circuit diagram, Fig. 2, T1 and T2 are the antenna and interstage R. F. transformer assemblies and T5 is the oscillator coil assembly. The standard wave, 1st and 2nd short wave coils in each assembly are indicated by the letters B, C and D respectively. The three sections of the band switch are designated in the schematic as the antenna, interstage and oscillator sections.

The band switch completes connections to the coils in use. It also short circuits the R. F. transformer secondary and oscillator coil of lower frequency not in use.

The antenna transformer with tuned secondary feeds into a type 6K7 R. F. amplifier tube. The output of this tube is fed through the interstage R. F. transformer with tuned secondary into another 6K7 tube which functions as the 1st detector.

A separate type 76 tube is employed in the oscillator circuit. Referring to the oscillator assembly T5, Fig. 2, B, C and D refer to the standard wave, 1st short wave and 2nd short wave oscillator coils respectively. The oscillating circuit is always resonant at 456 KC above the frequency to which the R. F. amplifier is tuned.

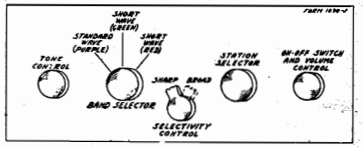

Fig. 1—Arrangement of Controls

The oscillator potential is fed into the cathode circuit of the 6K7 first detector tube. This results in the intermediate or beat frequency of 456 KC being present in the plate circuit of this tube.

One stage of I. F. amplification is employed using a 6K7 tube. The primaries and secondaries of the first and second I. F. transformers are tuned by small trimmer condensers.

Selectivity Control—Referring to the 1st I. F. transformer T3 in Fig. 2, it will be noted that there is a coupling winding shown in the illustration below the primary. Refer also to the by-pass arrangement in the pentode plate circuit of the 6B7.

When the selectivity control is in the sharp position, the coupling winding is open circuited and the loose coupling which exists between the primary and secondary of this transformer results in high selectivity. High audio frequencies are by-passed to ground through condenser C35.

When the selectivity control is in the broad position, the coupling winding which is wound under the primary is connected in series with the secondary. This provides overcoupling which results in a greatly widened resonance curve. Passage of a wide range of audio frequencies is thus obtained.

In order to allow passage of the higher audio frequencies in the broad position, the capacity of the by-pass condenser to ground is greatly reduced (C35 and the capacity of shield E in series).

Dual Volume Control—A dual manual volume control is employed. In one section the audio voltage applied to the 1st audio section of the 6B7 tube is varied (R10). In the other section the R. F. and I. F. bias is varied (R2). The purpose of the latter section is to reduce the sensitivity of the receiver at low volume settings in order to cut down noise pick-up between stations. The variable section R2 is shorted out through contact No. 4 of the interstage section of the band selector when in the 2nd short wave position.

A type 6B7 duo diode pentode tube functions as the second detector and a one stage audio amplifier. The two diode plates are connected together. AVC voltage is applied through isolating resistors to the control grid circuits of the R. F. and I. F. tubes. The audio voltage developed across volume control resistor R10 is applied through the movable arm to the control grid of the 6B7 tube. Resistance coupling is used between the first audio stage and the output stage which employs a type 6F6 output pentode tube. A type 80 full wave rectifier tube is used in the power unit.

Alignment and Calibration

Use a non-metallic screwdriver for the adjustments. The complete procedure is as follows:

I. F. Adjustment

Set the signal generator for a signal of 456 KC.

Connect the output of the signal generator through a .1 mf. condenser to the grid of the 1st detector.

Connect the ground lead of the receiver to the ground post of the signal generator.

Turn the band selector to the Range B position (standard wave band—purple dial color).

Turn the selectivity switch to the sharp position and keep it in this position for all adjustments.

Turn the volume control to the maximum position.

Attenuate the signal from the signal generator to prevent the levelling-off action of the A.V.C.

Then adjust the four I.F. trimmers until maximum output is obtained. The adjusting screws for these condensers are reached from the top of the chassis, and the location is shown in Fig. 6.

Range B Alignment

1730 KC Adjustment

Set the signal generator for 1730 KC.

Turn the rotor of the tuning condenser to the full open position.

Keep the band selector in the standard wave position.

Connect the antenna lead of the receiver through a 200 mmf. condenser to the output of the signal generator.

For this and all subsequent adjustments keep the volume control at the maximum position and attenuate the signal from the signal generator to prevent A.V.C. action.

Adjust the oscillator Range B trimmer (C21) until maximum output is obtained. The location of this trimmer is shown in Figs. 3 and 4.

1500 KC Adjustment

Set the signal generator for 1500 KC.

Turn the rotor of the tuning condenser carefully until maximum output is obtained.

There is a lever arm in front of the large gear on the tuning condenser shaft by means of which the position of the station pointer may be adjusted. Set the station pointer at the 1500 KC mark on the dial scale by adjusting this lever arm.

Adjust the interstage Range B trimmer (C9) and antenna Range B trimmer (C2) to maximum.

600 KC Adjustment

Set the signal generator for 600 KC.

Turn the tuning condenser rotor until maximum output is obtained.

Turn the rotor slowly back and forth at the same time adjusting the 600 KC trimmer until the peak of greatest intensity is obtained. See Fig. 3 for location of this trimmer.

Range C Alignment

5800 KC Adjustment

Set the signal generator for 5800 KC.

Connect the antenna lead of the receiver through a 400 ohm resistor to the output of the signal generator.

Turn the rotor of the tuning condenser to the full open position.

Turn the band selector to the Range C position (1st short wave band—green dial color).

Adjust the oscillator Range C trimmer (C23) until maximum output is obtained. See Figs. 3 and 4 for location of this trimmer.

5000 KC Adjustment

Set the signal generator for 5000 KC.

Turn the rotor of the tuning condenser carefully until maximum output is obtained.

Adjust the interstage Range C trimmer (C10) and antenna Range C trimmer (C3) to maximum.

Do not change the setting of the oscillator Range C trimmer.

Range D Alignment

18,300 KC Adjustment

Set the signal generator for 18,300 KC.

Keep the antenna lead of the receiver connected through the 400 ohm resistor to the output of the signal generator.

Turn the rotor of the tuning condenser to the full open position.

Turn the band selector to the Range D position (2nd short wave band—red dial color).

Adjust the oscillator Range D trimmer (C24) until maximum output is obtained. See Fig. 3 for location of this trimmer.

15,000 KC Adjustment

Set the signal generator for 15,000 KC.

Turn the rotor of the tuning condenser carefully until maximum output is obtained.

Adjust the interstage Range D trimmer (C11) and antenna Range D trimmer (C4) to maximum.

When adjusting the interstage Range D trimmer, it will be necessary at the same time to turn the tuning condenser rotor slowly back and forth until the peak of greatest intensity is obtained.

Then go back and repeat the procedure as given for the 18,300 KC adjustment. If it is found necessary to make any appreciable change in the setting of the oscillator Range D trimmer, the 15,000 KC adjustment must be repeated.

Do not make any further change in the setting of the oscillator Range D trimmer.

6000 KC Adjustment

Set the signal generator for 6000 KC.

Turn the tuning condenser rotor until maximum output is obtained.

Turn the rotor slowly back and forth at the same time adjusting the 6000 KC trimmer until the peak of greatest intensity is obtained. See Fig. 3 for location of this trimmer.

Tuning Frequency Range
- B Range - - - - - - - - - - 535 to 1730 KC.
- C Range - - - - - - - - - - 1715 to 5800 KC.
- D Range - - - - - - - - - - 5750 to 18300 KC.

Sensitivity
- B Range Average - - - - 0.5 Microvolts Absolute
- C Range Average - - - 1.0 Microvolts Absolute
- D Range Average - - - - 2.0 Microvolts Absolute

Power Consumption - 68 Watts (At 115 volts 60 cycles)

Power Output - - - - - - 3 Watts Undistorted

Selectivity - 28 KC Broad at 1000 times Signal (Sharp)

Intermediate Frequency - - - - - - - 456 KC.

Speaker - - - - - - - - - 6" and 8" Dynamic