



MODEL 214

TYPE OF CIRCUIT: Model 214 is a six tube battery operated superheterodyne receiver intended for use in rural districts, and has both broadcast and short wave reception.

TUNING RANGE: 530—1720 K.C.
2.3—7.1 M.C.
7.0—22.0 M.C.

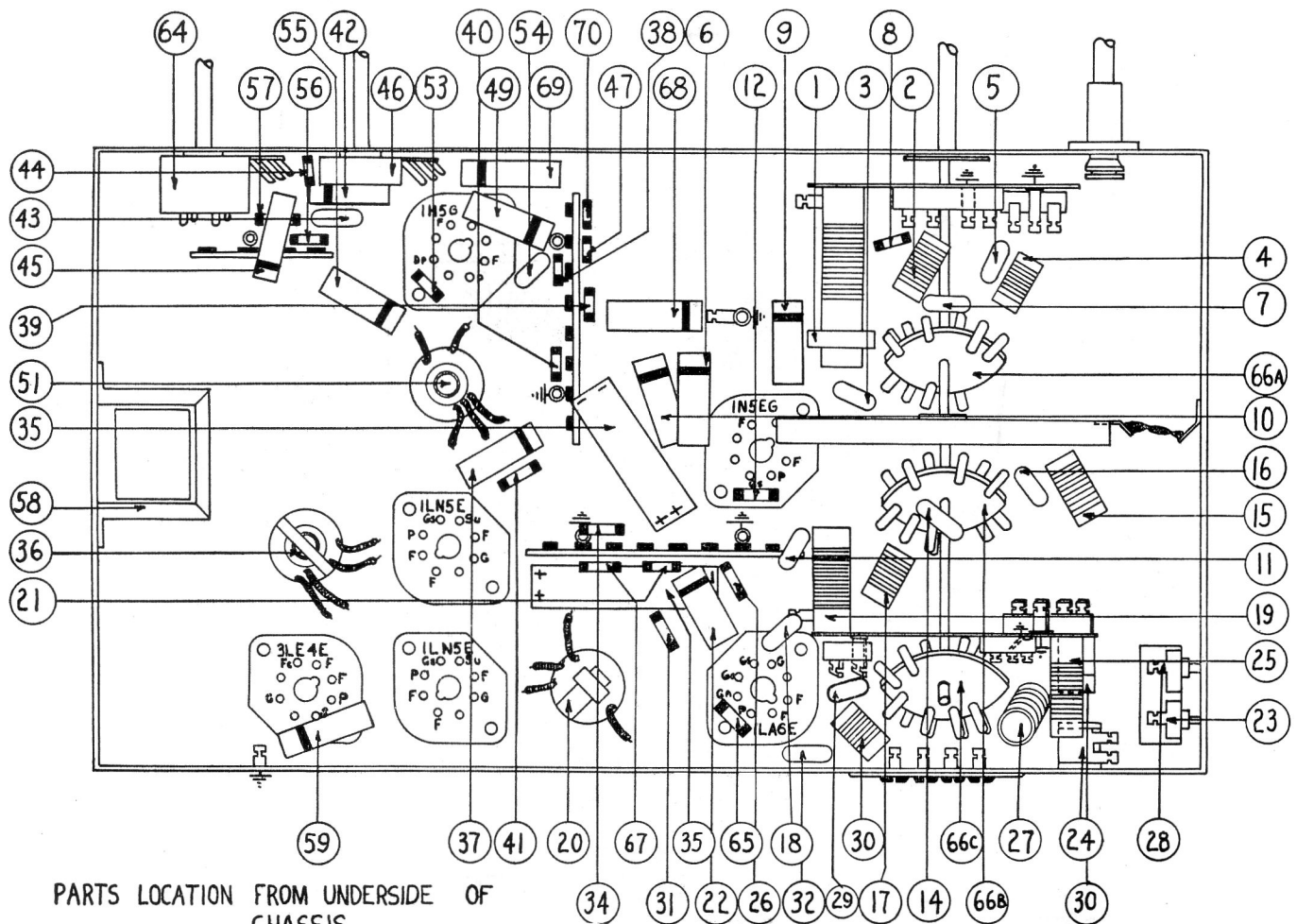
AERIAL: For maximum performance this set must have the Philco Battery Set Aerial, Part No. 40-6383.

INTERMEDIATE FREQUENCY: 460 K.C.

PHILCO TUBES USED: 1—1N5EG R.F. Amplifier; 1—1LA6E Converter; 2—1LN5E I.F. Amplifier; 1—1H5G Det.-Audio Amp.; 1—3LE4E Output.

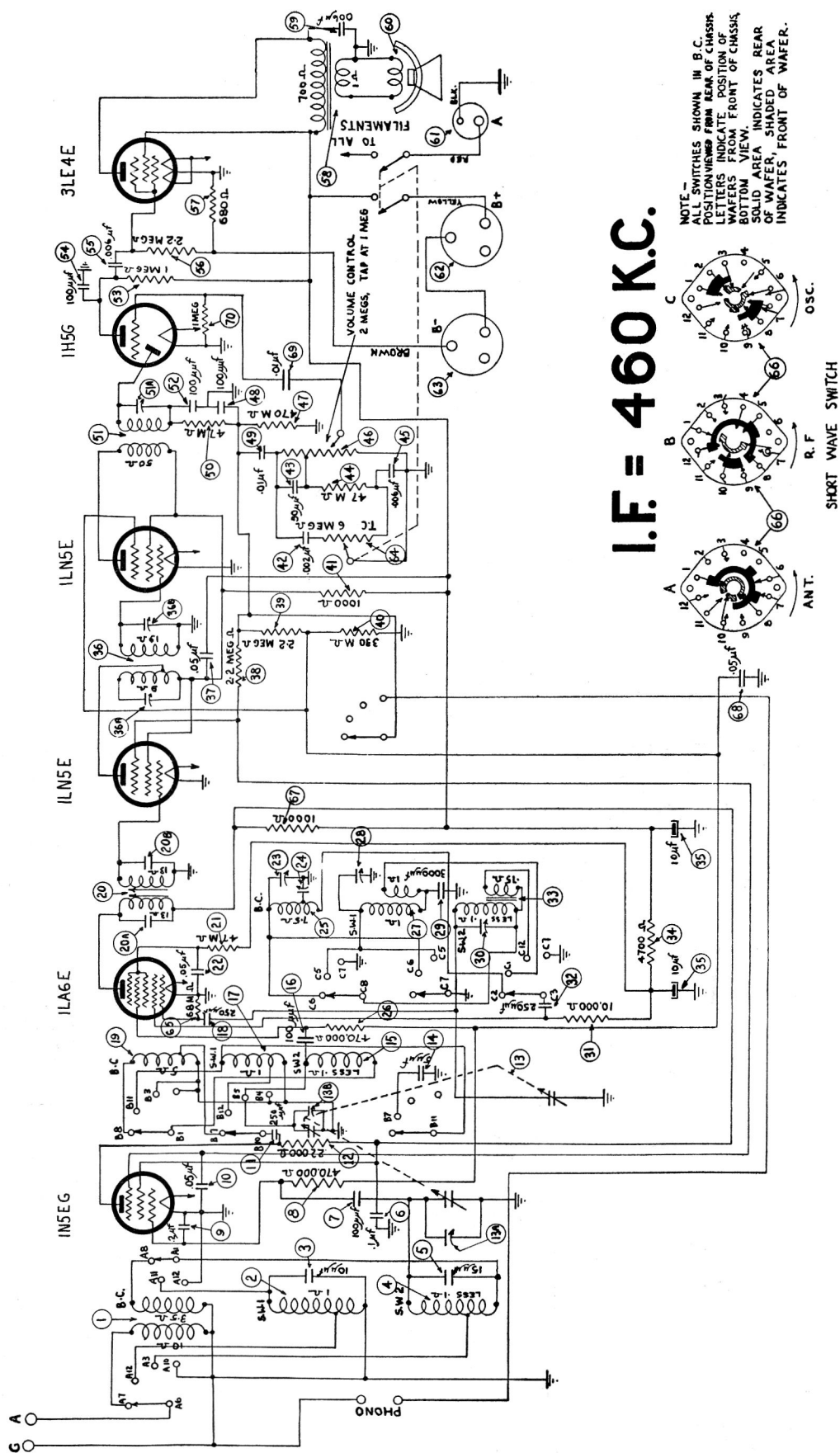
POWER SUPPLY: These models require 1½ volts of "A" power and 90 volts of "B" power. The power may be supplied from a separate "A" battery and two "B" batteries. We recommend Philco "A" battery No. 151-18L and two Philco "B" batteries No. P30F.

BATTERY CURRENT: "A" battery 300 M.A.
"B" battery 14 M.A.



PARTS LOCATION FROM UNDERSIDE OF CHASSIS
MODEL 214

SCHEMATIC DIAGRAM — MODEL 214



ALIGNMENT OF COMPENSATORS

EQUIPMENT REQUIRED:

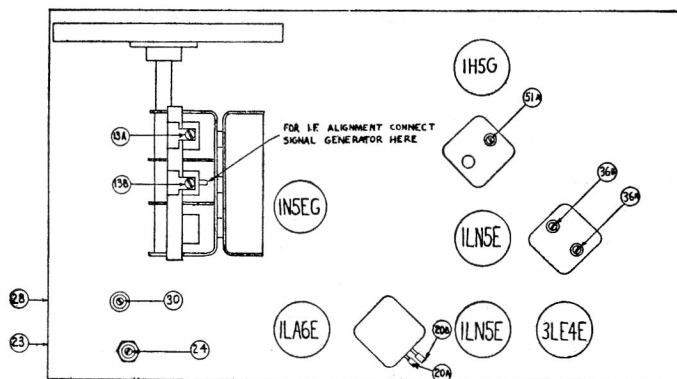
(1) **Signal Generator**—Philco Model 177 Signal generator which has a fundamental frequency range from 115 to 32,500 K.C. is the correct instrument for this purpose.

(2) **Output Meter**—Philco Model 028 Circuit Tester incorporates a sensitive output meter and is recommended.

(3) **Philco Fibre Handle Screw Driver**, Part No. 45-2610 and **Fibre Wrench**, Part No. 3164.

OUTPUT METER: The Philco 028 Output Meter is connected to the plate and screen terminals of the output tube and is adjusted for the 0 to 30 scale. After connecting the output meter, adjust the compensators in the order as shown in the tabulation below. If the output meter goes off scale when adjusting the compensators, reduce the strength of the signal from the signal generator.

LOCATION OF COMPENSATORS
MODEL 214



Operations in Order	SIGNAL GENERATOR		RECEIVER			Special Instructions
	Output Connections to Receiver	Dial Setting	Dial Setting	Control Setting	Adjust Compensators	
1	High Side to 1LA6E Grid Cap	460 K.C.	580 K.C.	Wave Switch B.C. Volume Maximum	51A 36B 36A 20B 20A	Note B
2	To Antenna Lead	21 M.C.	21 M.C.	Wave Switch S.W. 2 Volume Maximum	30 13B 13A	Note A Note C
3	To Antenna Lead	9 M.C.	9 M.C.	Wave Switch S.W. 2 Volume Maximum		Check Calibration Note C
4	To Antenna Lead	6 M.C.	6 M.C.	Wave Switch S.W. 1 Volume Maximum	28	Note C
5	To Antenna Lead	3 M.C.	3 M.C.	Wave Switch S.W. 1 Volume Maximum		Check Calibration Note C
6	To Antenna Lead	1500 K.C.	1500 K.C.	Wave Switch Bdst. Volume Maximum	23	Note D
7	To Antenna Lead	580 K.C.	580 K.C.	Wave Switch Bdst. Volume Maximum	24	Note D Roll Gang
8	To Antenna Lead	1500 K.C.	1500 K.C.	Wave Switch Bdst. Volume Maximum		Check Calibration Note D

NOTE A—DIAL CALIBRATION—Before adjusting the R.F. padders the dial must be aligned to track properly with the tuning condenser. To adjust the dial proceed as follows: With the tuning condenser in the closed position (maximum capacity) set the dial pointer on the small index mark just to the left of the 2.3 M.C. mark.

NOTE B—When adjusting the I.F. padders the high side of the signal generator is connected through a .5 mfd. con-

denser to the stator of the middle section of tuning condenser. The ground lead to the generator is connected to the ground terminal of the receiver.

NOTE C—The Dummy Antenna is a 400 ohm resistor.

NOTE D—The Dummy Antenna is a 200 mmfd. condenser.

REPLACEMENT PARTS LIST — PHILCO MODEL 214

Schem. No.	Description	Philco Part No.	Schem. No.	Description	Philco Part No.
1	Broadcast Antenna Coil.....	32-3422	47	Resistor (470,000 ohms).....	33-447244
2	Short Wave Antenna Coil.....	32-3415	48	Mica Condenser (100 mmfd.).....	(part of 51A)
3	Mica Condenser (10 mmfd.).....	60-010337	49	Tubular Condenser (.01 mfd.).....	30-4572
4	Police Antenna Coil.....	32-3419	50	Resistor (47,000 ohms).....	(part of 51)
5	Mica Condenser (15 mmfd.).....	60-015337	51	3rd I.F. Transformer.....	32-3399
6	Tubular Condenser (.01 mfd.).....	30-4572	52	Mica Condenser (100 mmfd.).....	(part of 51A)
7	Mica Condenser (100 mmfd.).....	60-110337	53	Resistor (1 Megohm).....	33-510244
8	Resistor (470,000 ohms).....	33-447244	54	Mica Condenser (100 mmfd.).....	60-110337
9	Tubular Condenser (.2 mfd.).....	30-4536	55	Tubular Condenser (.006 mfd.).....	30-4591
10	Tubular Condenser (.05 mfd.).....	30-4519	56	Resistor (2.2 Megohm).....	33-522244
11	Mica Condenser (250 mmfd.).....	60-125157	57	Resistor (680 ohms).....	33-168336
12	Resistor (22,000 ohms).....	33-322244	58	Output Transformer	32-8063
13	Tuning Condenser	31-2444	59	Tubular Condenser (.006 mfd.).....	30-4591
14	Mica Condenser (5 mmfd.).....	60-005357	60	Speaker	36-1529
15	Police R.F. Coil.....	32-3420	61	"A" Plug	27-4786
16	Mica Condenser (100 mmfd.).....	60-110337	62	"B" Plug	27-4347
17	Short Wave R.F. Coil.....	32-3416	63	"B" Plug.....	27-4347
18	Mica Condenser (250 mmfd.).....	60-125157	64	Tone Control and Switch.....	33-5394
19	Broadcast R.F. Coil.....	32-3417	65	Resistor (68,000 ohms).....	33-368244
20	1st I.F. Transformer.....	32-3442	66	Wave Switch	42-1564
21	Resistor (47,000 ohms).....	33-347244	67	Resistor (1,000 ohms).....	33-210344
22	Tubular Condenser (.05 mfd.).....	30-4519	68	Tubular Condenser (.05 mfd.).....	30-4519
23	Osc. Padder (1500 K.C.).....	31-6287	69	Tubular Condenser (.01 mfd.).....	30-4572
24	Osc. Padder (600 K.C.).....	31-6260	70	Resistor (1 Megohm).....	33-510244
25	Broadcast Osc. Coil.....	32-3423		Tube Shield	56-1566
26	Resistor (470,000 ohms).....	33-447244		Cam Assembly	38-9861
27	Osc. Short Wave Coil.....	32-3586		Speaker Cable	03-0008
28	Osc. Padder (6 M.C.).....	31-6287		Dial	27-5583
29	Mica Condenser (3,000 mmfd.).....	60-230124		Dial Spring	28-8751
30	Osc. Padder (18 M.C.).....	31-6345		Signal Flag Spring.....	28-8945FA3
31	Resistor (10,000 ohms).....	33-310244		Drive Card (Drive Drum).....	31-2458
32	Mica Condenser (250 mmfd.).....	60-125157		Drive Cord (Signal Flag).....	31-2516
33	Osc. Police Coil.....	32-3585		Vernier Drive	31-2451
34	Resistor (4,700 ohms).....	33-247344		Battery Cable	41-3498
35	Electrolytic Condenser (10 mfd.).....	30-2396		Pointer	56-1276FCP
36	2nd I.F. Transformer.....	32-3509		Knob (Vernier—Large)	27-4330
37	Tubular Condenser (.05 mfd.).....	30-4519		Knob (Wave Switch—Volume).....	27-4332
38	Resistor (2.2 Megohm).....	33-522244		Knob (Vernier—Small)	27-4862
39	Resistor (2.2 Megohm).....	33-522244		Knob (Tone Control).....	27-4872
40	Resistor (330,000 ohm).....	33-433244		Tube Socket (Octal).....	27-6057
41	Resistor (1,000 ohms).....	33-210344		Tube Socket (Loktal).....	27-6131
42	Tubular Condenser (.002 mfd.).....	30-4579		Chassis Mounting Bolts.....	W-1345FA3
43	Mica Condenser (50 mmfd.).....	60-050137		Chassis Mounting Washer.....	28-5114FA3
44	Resistor (47,000 ohms).....	33-347244		Speaker Mounting Washer.....	27-7467
45	Tubular Condenser (.006 mfd.).....	30-4591		Speaker Mounting Nut.....	W-124FA3
46	Volume Control	33-5392		Speaker Mounting Bolt.....	W-1606FB24

PHILCO PRODUCTS LIMITED

PARTS AND SERVICE DIVISION
TORONTO, ONT.

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