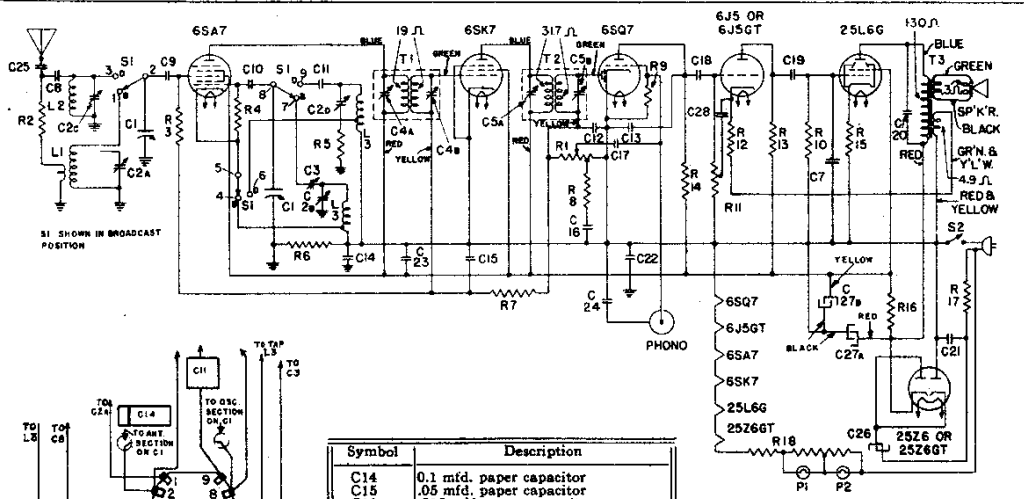
General Electric Co.

	Model: 20	**Chassis:**	**Year:** Pre 1945
	Power:	**Circuit:**	**IF:**
	Tubes:		
	Bands:		

Resources

Riders Volume 14 - GE 14-5



Symbol	Description
C1	Tuning condenser
C2A	"B" band antenna trimmer
C2B	"B" band oscillator trimmer
C2C	"D" band antenna trimmer
C2D	"D" band oscillator trimmer
C3	"B" oscillator padder
C7	220 mmf. mica capacitor
C8	6 mmf. mica capacitor
C9	100 mmf. mica capacitor
C10	47 mmf. mica capacitor
C11	3600 mmf. ±5% mica capacitor
C12, 13	220 mmf. mica capacitor

Symbol	Description
C14	0.1 mfd. paper capacitor
C15	.05 mfd. paper capacitor
C16	.015 mfd. paper capacitor
C17, 18	.005 mfd. paper capacitor
C19	.05 mfd. paper capacitor
C20	.01 mfd. paper capacitor
C21	.05 mfd. paper capacitor
C22	0.1 mfd. paper capacitor
C23	.01 mfd. paper capacitor
C24	0.1 mfd. paper capacitor
C25	.01 mfd. paper capacitor
C26	30 mfd. 250 V. dry electrolytic
C27A	40 mfd. 250 V. dry electrolytic
C27B	20 mfd. 250 V. dry electrolytic
C28	.01 mfd. paper capacitor
L1	"B" band Beam-a-Scope
L2	"D" band Beam-a-Scope
L3	Oscillator coil
R1	0.5 megohm volume control
R2	1000 ohms carbon resistor
R3	1.0 megohm carbon resistor
R4	33,000 ohms carbon resistor
R5	27 ohms carbon resistor

Symbol	Description
R6	470,000 ohms carbon resistor
R7	2.2 megohms carbon resistor
R8	22,000 ohms carbon resistor
R9	4.7 megohms carbon resistor
R10	100,000 ohms carbon resistor
R11	1.0 megohm tone control
R12	3300 ohms carbon resistor
R13	39,000 ohms carbon resistor
R14	470,000 ohms carbon resistor
R15	220 ohms carbon resistor
R16	3900 ohms 5 W. wire wound resistor
R17	30 ohms 2 W. wire wound resistor
R18	BL42D ballast resistor
S1	Band switch
S2	Power switch
T1	1st I.F. transformer
T2	2nd I.F. transformer
T3	Output transformer

Alignment Procedure

The location of trimmers is shown in Fig. 2. All RF trimmers are accessible through holes in the back cover or through the bottom of the cabinet.

The alignment procedure is given in table form. All IF alignments may be made with the chassis removed from the cabinet. However the RF alignments are made with the chassis and loop antennas securely bolted in the cabinet, as the relative position of the loop antenna with respect to the chassis materially affects it. The RF signal should be capacity coupled by placing a two foot wire for an antenna on the test-oscillator output post (high side). Keeping this antenna two feet or more from the receiver loop will generally insure freedom from too much coupling. Metal objects such as meters, tools, etc., should not be placed on top of the receiver cabinet.

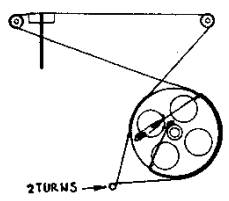


Fig. 1. Dial Stringing Diagram

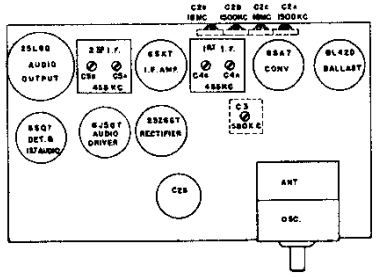


Fig. 2. Trimmer Location

GENERAL INFORMATION

Chassis Removal

Note: Care must be exercised in removing either the cabinet back or chassis to avoid changing the shape of either the short-wave or broadcast loop antenna. Any alteration in the loop will change its inductance and throw the receiver out of alignment.

ALIGNMENT CHART

Step	Connect Test-Osc. to	Test-Osc. Setting	Pointer Setting	Adjust Trimmers for Max. Output
1	6SK7 IF Grid in series with .05 mfd.	455 KC	"BC" Band 550 KC	C5A & C5B
2	6SA7 Conv. grid in series with .05 mfd.	455 KC	"BC" Band 550 KC	C4a & C4b
3	Capacity Coupled	580 KC	"BC" Band 580 KC	C3**
4	Capacity Coupled	1500 KC	"BC" Band 1500 KC	C2b (Osc.)
5	Capacity Coupled	1500 KC	"BC" Band 1500 KC	C2a (Ant.)
6	REPEAT STEP 3			
7	Capacity Coupled	18 MC	"SW" Band 18 MC	C2d * (Osc.)
8	Capacity Coupled	18 MC	"SW" Band 18 MC	C2c** (Ant.)

* Use minimum capacity peak.
** Rock gang condenser when making alignment.

Special Service Information

The following data will be very useful to servicemen equipped with vacuum-tube voltmeters or similar voltage-measuring instruments.

(1) Stage gains
Antenna Post to Converter Grid—4.3 at 1000 KC
Converter Grid to 6SK7 Grid—42 at 455 KC
6SK7 Grid to 6SQ7 Diode Plate—100 at 455 KC

(2) Audio gain
.06 volts, 400 cycles signal across volume control with control set to maximum will give approximately ½-watt speaker output.

(3) DC voltage developed across oscillator grid resistor (R4) averages 10.5 volts at 1000 KC or 8.0 volts at 10,000 KC.

* Variations of +10 or -20% permissible.