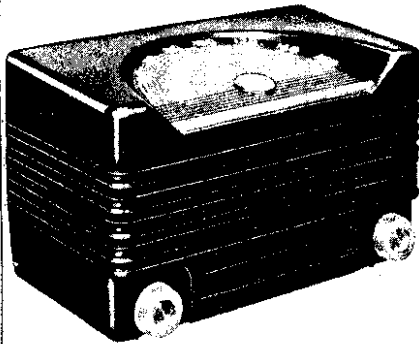


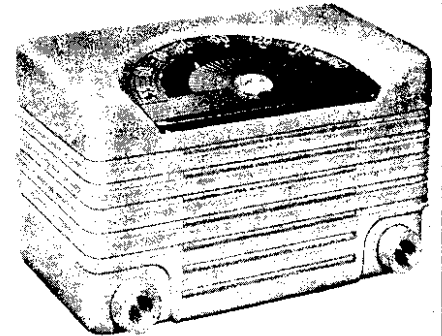
MODELS 204,
205, Ch. 165



Model 205
Brown

MAJOR COMPONENTS

Cabinet	7582
Model 204	7583
Model 205	165
Radio Chassis	5238
Loop Antenna	744A
Dial, Calibrated	746A
Dial Insert	2434
Bracket, Dial Mechanism	3710
Backboard	3703
Knobs	



Model 204
Ivory

SPECIFICATIONS

Line Voltage	115V DC or 115V AC 60 cps
Power Consumption	26 Watts
Tuning Range	540 KC to 1650 KC
Number of Tubes	5
Audio Power Output	1.0 Watt
Speaker Type	5" PM
Cabinet	
Height	6-3/4"
Width	11"
Depth	6"

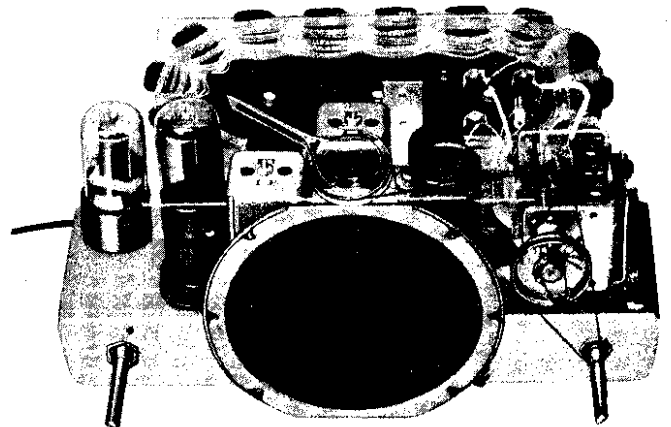


Figure 1. Chassis 165

ELECTRICAL AND MECHANICAL DATA

Power Requirements:	
Operating Voltage	115V DC or 115V AC 60 cps
Consumption	26 watts
Tuning Range	540 KC to 1650 KC
Audio Power Output	1.0 watt
Output Impedance	3.2 ohms
Intermediate Frequency	455 KC

TUBE COMPLEMENT

1	12SA7	Converter	V1
1	12SG7	IF Amplifier	V2
1	12SQ7	2nd Det., AVC, 1st Audio	V3
1	50L6GT	Audio Output	V4
1	35Z5GT	Rectifier	V5

Chassis 165 is a 5-tube AM AC-DC superheterodyne incorporating a built-in loop antenna and a 5" PM speaker. A binding post is available on the loop antenna for connection to an external long wire antenna which will be required in very weak signal areas only. Dial stringing information is given in Figure 2.

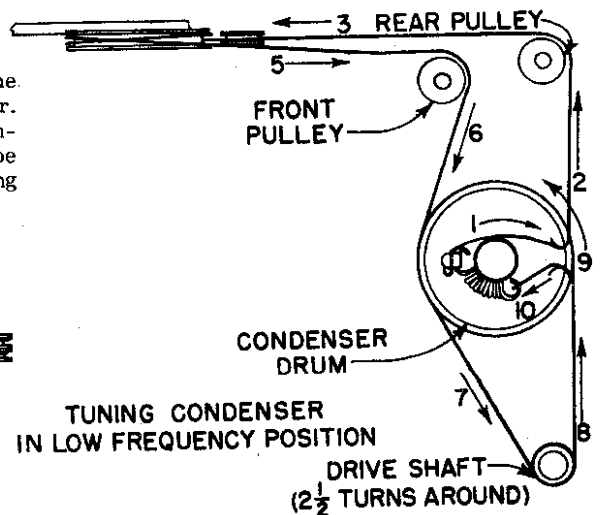
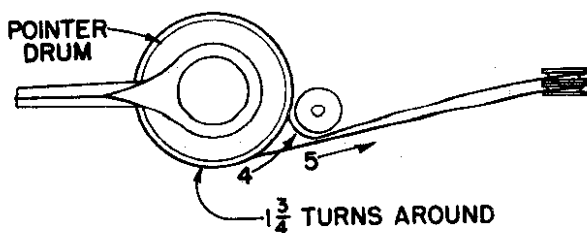


Figure 2. Dial Stringing

MODELS 204,
205, Ch. 165

ALIGNMENT

Equipment:

1. Signal generator capable of generating frequencies of 1650 KC, 1400 KC, and 455 KC.
2. AC meter with 2.5 V scale.
3. 0.1 mfd, 200 V blocking capacitor.

Procedure:

CAUTION: The chassis is the AC-DC type, and care should be exercised to avoid coming in contact with grounded objects when touching the chassis.

If the alignment is performed on a metal topped bench that is grounded, an isolation transformer must be used between the AC supply and the chassis. Allow the receiver to warm up for several minutes. Connect the AC voltmeter across the speaker voice coil. (An output meter may be used.) Set meter to 2.5 volt scale.

TABLE I - ALIGNMENT PROCEDURE

Step No.	Signal Generator Frequency, KC	Adjust	Instructions
IF			
1	455 modulated	T4 Pri, Sec T3 Pri, Sec	Connect "hot" side of generator to antenna loop binding post, and connect ground side to receiver chassis through 0.1 condenser. Keep signal level low enough to keep maximum reading on lower half of meter scale. Set volume control at maximum and tuning condenser plates all the way unmeshed.
RF			
2	1650 modulated	C4	Tuning condenser plates unmeshed. Connect generator to wire loop about 6" in diameter. Place loop one foot from and parallel to antenna loop. Generator level should be adjusted to produce reading on lower half of meter scale. Adjust C4 for maximum output.
3	1400 modulated	C3	Generator input remains unchanged. Turn tuning condenser so that dial pointer is over extreme clockwise calibration mark. Adjust C3 for maximum output.

NOTES:
 The pin voltage readings are obtained with no signal input to receiver.
 D.C. voltages measured with 20,000 ohm/volt meter.
 A.C. voltages measured with 1,000 ohm/volt meter.
 All voltages measured with reference to B-.
 Live voltage 115V A.C.

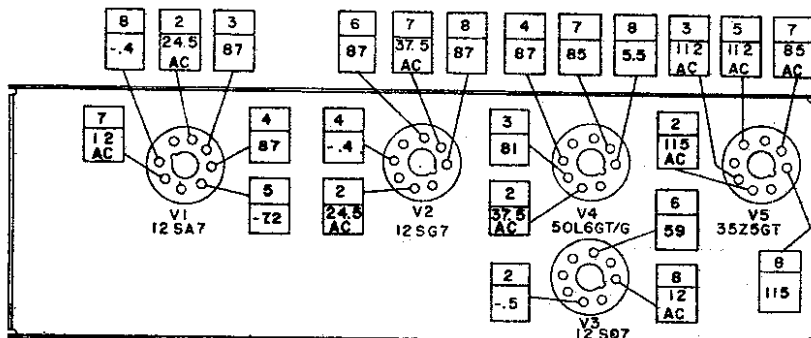


Figure 3. Pin Voltage Diagram

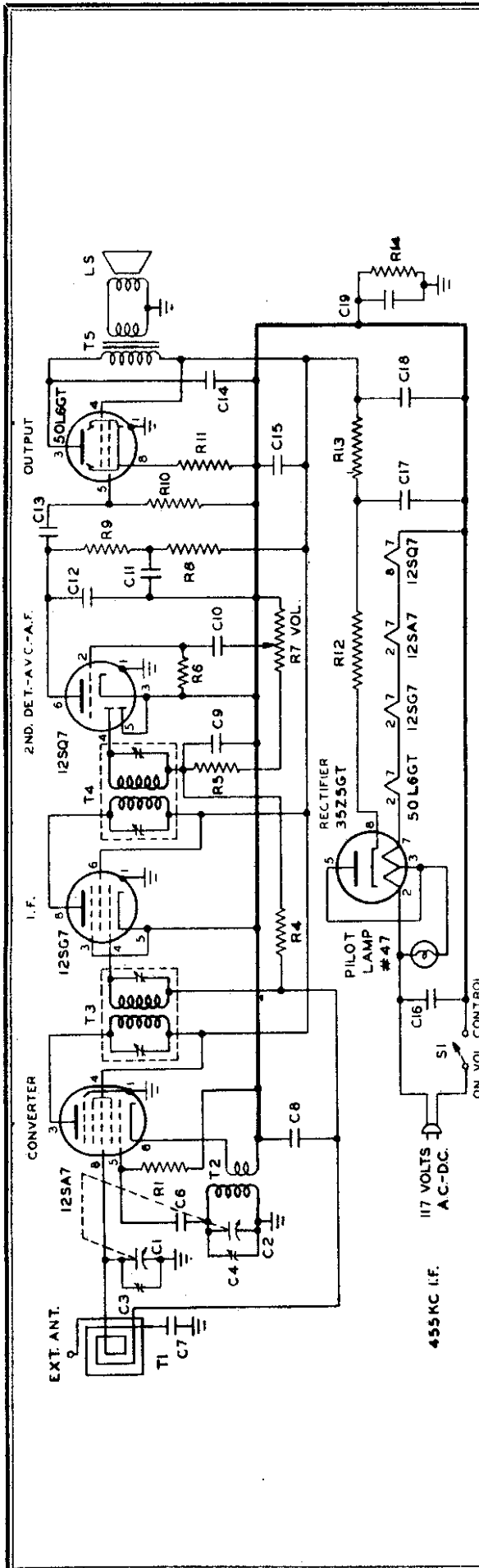


Figure 4 Receiver Schematic
PARTS LIST

All values of capacity are microfarads unless otherwise noted.
All resistors are 1/2 watt composition type with values given in ohms unless otherwise specified.

Symbol	Part No.	Value	Tolerance	Watts or Volts	Type	Description
C1	4401	0 - 388 mmf			2 Gang Variable	Loop, Antenna
C2		0 - 180 mmf				Coil, Oscillator
C3	Part of 2 Gang Variable					Transformer, Input IF (455 KC)
C4	Not used					Transformer, Output IF (455 KC)
C5	4000	100 mmf	20%			Transformer, Audio Output
C6	4102	.005		600	Mica	Speaker, 5" PM
C7	4100	.05		200	Paper	
C8	4001	270 mmf	20%	600	Paper	
C9	4102	.005		200	Mica	
C10	4100	.05		600	Paper	
C11	4001	270 mmf	20%	200	Paper	
C12	4102	.005		600	Mica	
C13	4106	.02		400	Paper	
C14	4100	.05		200	Paper	
C15	4101	.05		400	Paper	
C16	4201	50		150	Electrolytic	
C17	4121	.1		150	Paper	
C18	4501	22K	20%	400	Paper	
C19						
R1						
R2	Not used					
R3	4502	2.2 meg	20%			
R4	4504	47K	20%			
R5	4505	10 meg	20%			
R6	4836	500K	20%			
R7	4511	100K	20%			
R8	4500	220K	20%			
R9	4506	470K	20%			
R10	4510	150	20%			
R11	4508	47	20%			
R12	4700	500	10%			
R13	4506	470K	20%			
R14	Part No.					
S1	Part of R7					
T1	5238					Loop, Antenna
T2	5208					Coil, Oscillator
T3	5205					Transformer, Input IF (455 KC)
T4	5206					Transformer, Output IF (455 KC)
T5	5101					Transformer, Audio Output
LS	9003					Speaker, 5" PM

Volume Control

5 W