GENERAL ELECTRIC

Models C415, -A, -B, C416, -A, -B, and C417

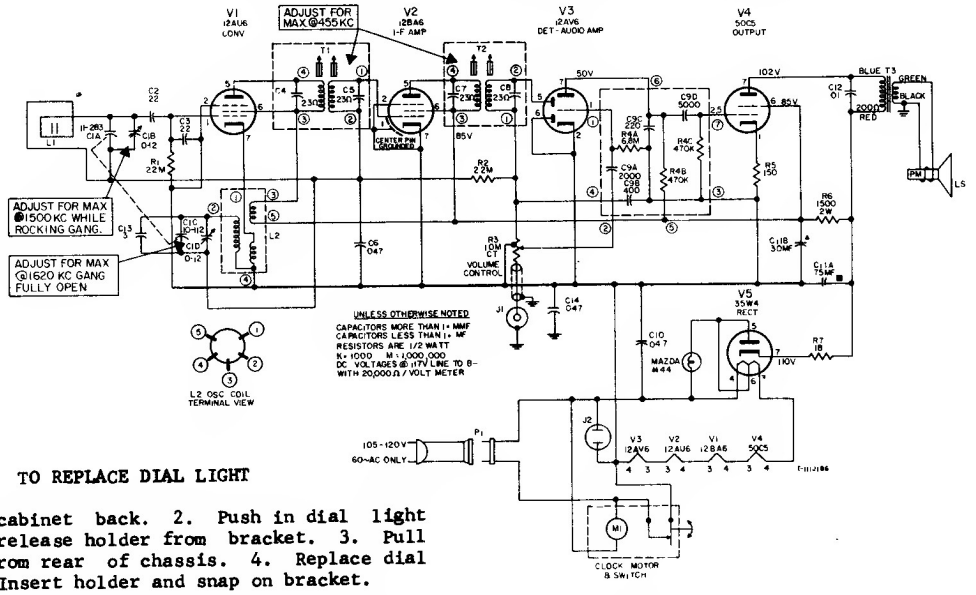
TO REMOVE CHASSIS FROM CABINET

1. Remove tuning, volume and timer knobs.
2. Remove time set knob from shaft at back of cabinet. Hold shaft and turn knob counter clockwise.
3. Remove five hex-head screws on cabinet back.
4. Remove four hex-head screws on bottom of cabinet.
5. Remove Snooz-Alarm. knob.
6. Remove timer by unscrewing four Phillips head screws.
7. Unsolder speaker leads from speaker.
8. Pull chassis out slowly. Leads from chassis to timer remain attached for A. C. while testing.

CAUTION

The chassis uses the dip solder copper-plated printed circuit to eliminate most of the interconnecting wiring. When soldering, keep the heat to a minimum to prevent the printed wiring from becoming unbonded. A 35 to 50 watt soldering iron is recommended.

Always use an isolation transformer when servicing this receiver. To protect the test equipment being used when aligning, connect the output lead of the signal generator to the grid of an I. F. tube through a .05 capacitor. This will prevent the output impedance of the generator from having a loading effect on the circuit.

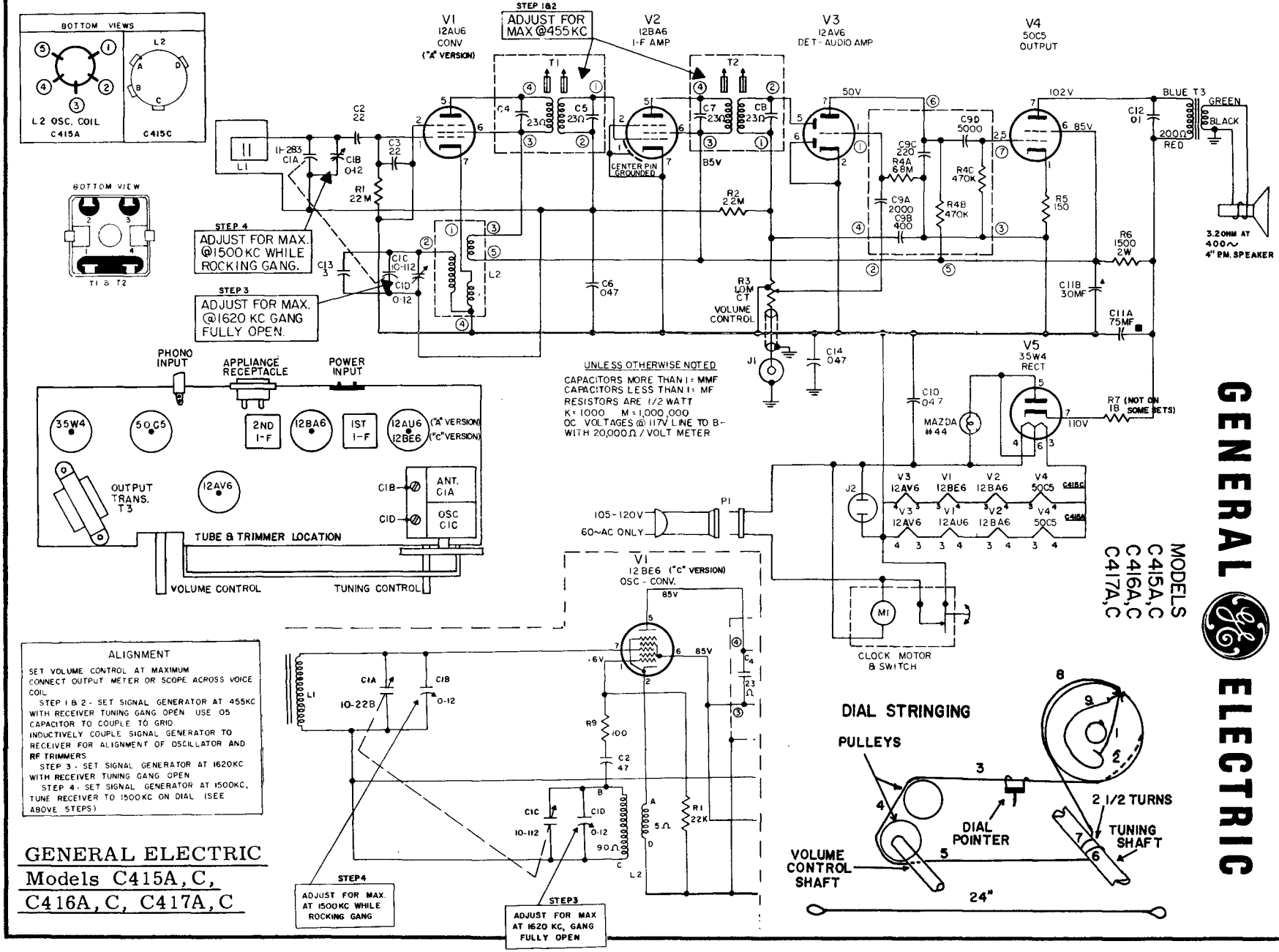


TO REPLACE DIAL LIGHT

1. Remove cabinet back. 2. Push in dial light holder and release holder from bracket. 3. Pull holder out from rear of chassis. 4. Replace dial light. 5. Insert holder and snap on bracket.

STEP	CONNECT TEST OSCILLATOR TO	TEST OSCILLATOR SETTING	TUNING GANG SETTING	ADJUST FOR MAXIMUM OUTPUT
		I. F. ALIGNMENT		
1	V2, 12BA6 grid (pin 1) in series with .05 mfd.			Cores of 2nd I.F. Transformer T2
2	V1, 12AU6 grid (pin 1) in series with .05 mfd.			Cores of 1st I. F. Transformer T1
3				Recheck adjustment of T1 and T2
		R. F. ALIGNMENT		
4	Inductively coupled to radio loop	1620 kc	Tuning gang Open	C1D
5		1500 kc	For Maximum Output	C1B*

* Rock Tuning for maximum while adjusting C1B.


BOTTOM VIEWS
L2 OSC. COIL
C415A
C415C
BOTTOM VIEW
T1 & T2
V1
12AU6
CONV
("A" VERSION)
STEP 1&2
ADJUST FOR MAX @455KC
V2
12BA6
I-F AMP
V3
12AV6
DET - AUDIO AMP
V4
50C5
OUTPUT
T1
T2
CENTER PIN GROUNDED
50V
85V
102V
BLUE T3
GREEN
BLACK
RED
3.2 OHM AT 400~ 4" PM. SPEAKER
L1
L2
C1A 10-283
C1B 0-12
C1C 10-112
C1D 0-12
C2 22
C3 22
C4 230Ω
C5 23Ω
C6 047
C7 230Ω
C8 23Ω
C9A 2000
C9B 400
C9C 220
C9D 5000
C10 047
C11A 75MF
C11B 30MF
C12 01
C13 3
C14 047
R1 22M
R2 2.2M
R3 1.0M CT VOLUME CONTROL
R4A 6.8M
R4B 470K
R4C 470K
R5 150
R6 1500 2W
R7 (NOT ON 1B SOME SETS)
J1
J2
P1
M1
V5
35W4
RECT
MAZDA #44
110V
105-120V 60~AC ONLY
CLOCK MOTOR & SWITCH
STEP 4
ADJUST FOR MAX. @1500KC WHILE ROCKING GANG.
STEP 3
ADJUST FOR MAX. @1620 KC GANG FULLY OPEN.
PHONO INPUT
APPLIANCE RECEPTACLE
POWER INPUT
35W4
50C5
2ND I-F
12BA6
1ST I-F
12AU6 12BE6
("A" VERSION) ("C" VERSION)
OUTPUT TRANS. T3
12AV6
ANT. C1A
OSC C1C
TUBE & TRIMMER LOCATION
VOLUME CONTROL
TUNING CONTROL
UNLESS OTHERWISE NOTED
CAPACITORS MORE THAN 1= MMF
CAPACITORS LESS THAN 1= MF
RESISTORS ARE 1/2 WATT
K= 1000 M = 1,000,000
DC VOLTAGES @ 117V LINE TO B- WITH 20,000Ω / VOLT METER
V3 12AV6 V1 12BE6 V2 12BA6 V4 50C5 C415C
V3 12AV6 V1 12AU6 V2 12BA6 V4 50C5 C415A
V1
12BE6 ("C" VERSION)
OSC - CONV.
85V
.6V
C1A
C1B
10-22B
0-12
R9 100
C2 47
C1C 10-112
C1D 0-12
R1 22K
5Ω
90Ω
STEP4
ADJUST FOR MAX. AT 1500KC WHILE ROCKING GANG
STEP3
ADJUST FOR MAX AT 1620 KC, GANG FULLY OPEN
DIAL STRINGING
PULLEYS
DIAL POINTER
2 1/2 TURNS
TUNING SHAFT
VOLUME CONTROL SHAFT
24"
ALIGNMENT
SET VOLUME CONTROL AT MAXIMUM
CONNECT OUTPUT METER OR SCOPE ACROSS VOICE COIL
STEP 1 & 2 - SET SIGNAL GENERATOR AT 455KC WITH RECEIVER TUNING GANG OPEN USE .05 CAPACITOR TO COUPLE TO GRID INDUCTIVELY COUPLE SIGNAL GENERATOR TO RECEIVER FOR ALIGNMENT OF OSCILLATOR AND RF TRIMMERS
STEP 3 - SET SIGNAL GENERATOR AT 1620KC WITH RECEIVER TUNING GANG OPEN
STEP 4 - SET SIGNAL GENERATOR AT 1500KC, TUNE RECEIVER TO 1500KC ON DIAL (SEE ABOVE STEPS)
GENERAL ELECTRIC
Models C415A, C, C416A, C, C417A, C
GENERAL ELECTRIC
MODELS C415A,C C416A,C C417A,C