

# SERVICE INSTRUCTIONS

## MANTEL CLOCK RADIO MODEL C-51

ARTIQUE WALNUT, WALNUT OR MAHOAGANY



Fig. 1. MODEL C-51  
ARTIQUE WALNUT, WALNUT DE MAHOAGANY

### TO REMOVE CHASSIS FROM CABINET

1. Remove all knobs by pulling in the outward direction.
2. Release the cabinet back.
3. Remove the three self tapping screws from the cabinet bottom that secure the chassis.

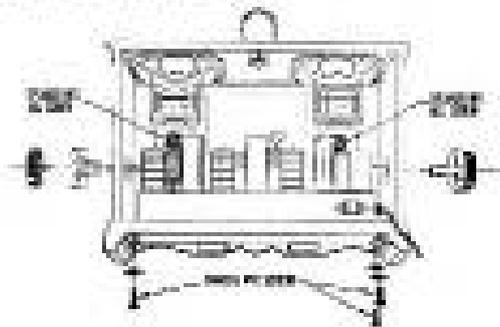


Fig. 2. Chassis Removal

4. Loosen the two screws that secure the speaker terminals and leave both speakers about one-half inch and lift out the chassis.

### NOTE

When replacing the chassis be sure to fit the feet of both speakers tightly against the back of the cabinet top. If any of the speaker wiring was removed be sure the connections are restored exactly as the original wiring.

### SPECIFICATIONS

Antenna ..... Built-in loop  
 Appliances Outlet Rating ..... 600 watts max.  
 Circuit ..... Superheterodyne (2nd Frequency 455 KC)  
 Class ..... Teleclonax with starting type  
 Frequency Coverage ..... 530-2000 KC  
 Overall Dimensions ..... Approximately 12" wd. x 9" h. x 4 1/4" d.  
 Power Rating ..... 100-120 watts, standard cycle AC only  
 Speaker ..... Two 2" speakers series connected, voice coil impedance 8.0 ohms (each speaker)  
 Tubes ..... 1 including 1 rectifier  
 \*Check for tube replacement with type indicated in back cover of manual for tube operation.

### OPERATION OF RADIO & CLOCK

#### A. TO OPERATE THE RADIO AND OUTLET MANUALLY

1. Press the small left-hand knob in and set at "OFF." Allow about one minute for the tubes to warm up.
2. Turn the VOLUME control (right knob at left side of cabinet) toward you to desired volume and then turn in the desired station with the TUNING control (large dark brown knob at right side of cabinet).
3. After the station has been manually tuned in, reset the VOLUME control as desired. To turn the radio and outlet off, simply set the small left hand knob at "OFF."



Fig. 3. Clock Face Showing Controls

#### B. TO HAVE THE RADIO AND OUTLET TURN ON AUTOMATICALLY AT A LATER TIME

1. Pull out the small left-hand knob and set at "OFF."
2. Allow about one minute for the tubes to warm up and then adjust the VOLUME and TUNING controls as outlined in Step 2 of Section A.
3. Pull out the small right-hand knob and turn until the hand (which is opposite the time you wish the radio and outlet to turn on automatically) aligns "buzz". (If "buzz" is desired, leave knob out; if not desired, press knob in (like Step 2).)
4. Set small left-hand knob at "OFF". The radio and outlet are now set to turn on automatically at the time to which the right hand is set.
5. If small right-hand knob was left in out position, the alarm will start to "buzz" 15 minutes after the radio and outlet turn on. To turn off the alarm, press small right-hand knob in.
6. To turn off the radio and outlet, simply press the small left-hand knob in.

**C. TO HAVE THE RADIO AND OUTLET TURN OFF AUTOMATICALLY AT A LATER TIME UP TO ONE HOUR**

1. Press the small left-hand knob in and set at "SLEEP" for one hour operation. (Knob pointer facing directly upward). If you wish to have the radio and outlet turn off sooner than one hour set the knob at some point between the "OFF" and "SLEEP" positions rather than all the way. For example for 15 minutes operation rotate the knob to the one-quarter position. For 20 minutes operation rotate the knob to the halfway position, etc.
2. Allow about one minute for the tubes to warm up and then adjust the VOLUME and TUNING controls as outlined in Step 2 of Section A on Page 1.
3. The radio and outlet will remain on for the desired length of time and then turn off automatically.

**D. TO HAVE THE RADIO AND OUTLET TURN OFF AUTOMATICALLY AFTER ONE HOUR AND THEN TURN ON AUTOMATICALLY AT A LATER TIME**

1. Pull out the small left-hand knob and set at "SLEEP" Knob's pointer facing directly upward.
2. Allow about one minute for the tubes to warm up and then adjust the VOLUME and TUNING controls as outlined in Step 2 of Section A on Page 1.

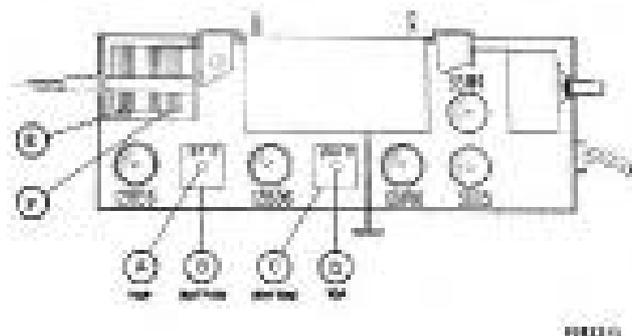


Fig. 4. Alignment Points & Tube Location

3. Pull out the small right-hand knob and turn until the SLEEP knob is opposite the time you wish the radio and outlet to turn on automatically. If alarm "buzzer" feature is desired, leave knob out; if not desired, press knob in. (See Step 5.)
4. The radio and outlet will remain on for one hour and turn off automatically. They will then turn on again automatically at the time in which the SLEEP knob is set.
5. If small right-hand knob was left in out position, the alarm will start to "buzz" about 15 minutes after the radio and outlet turn on. To turn off the alarm, press the small right-hand knob in.
6. To turn off the radio and outlet, simply press the small left-hand knob in.

**ALIGNMENT PROCEDURE**

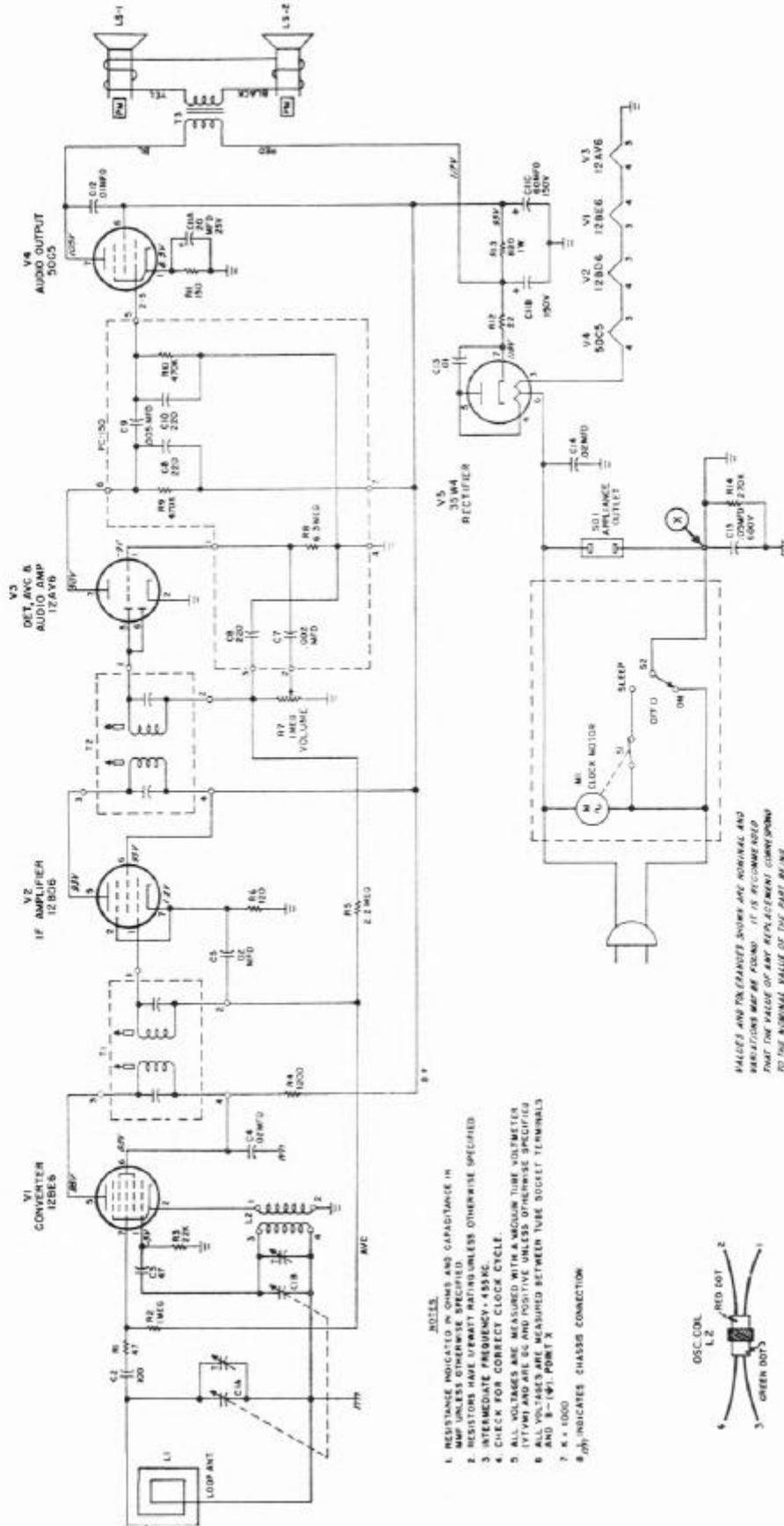
TO AVOID SHOCK HAZARD, CONNECT POWER THROUGH AN ISOLATION TRANSFORMER

- Ground metal safety arrears valve coil.
- Set volume control at maximum.
- Use a non-metallic instrument lead.
- Refer to Fig. 1 for location of alignment adjustments.
- Inspector must have insulated output and cover with 500 BU, 1400 BU and 1100 BU.
- To avoid AFO action use lowest output setting of generator that gives a satisfactory reading on meter.

Step	Signal Generator Connection	Generator Frequency	Receiver Dial Setting	Adjust
1.	High side (pins 1, 2) of 500 BU generator to slide plates of oscillator portion of tuning gang. Low side to B <sub>1</sub> (pin 3).	450 BU	1600 KC	A-2 (201 SP) and C-1 (2nd IF)
2.	Disconnect a loop of a test lead at wire and connect it to the signal generator. Loosely couple the loop to the top section of the antenna.	1400 BU	Tuning gang fully open	B (1st AF, trimmer)
3.	Same as Step 2.	1100 BU	1400 KC	F (1st AF, trimmer)



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Fig. 5. Schematic Diagram