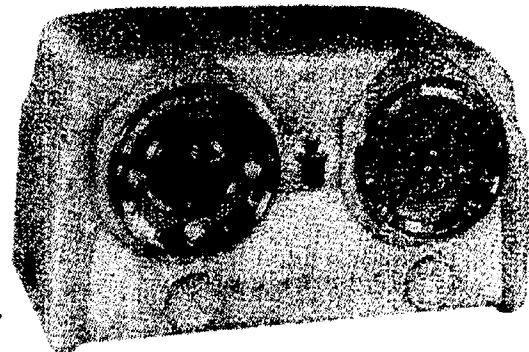


Model No.	Color
11-120U	Dulux White
11-121U	Ebony
11-122U	Chartreuse
11-123U	Maroon
11-124U	Regal Blue
11-125U	Sumatra Green



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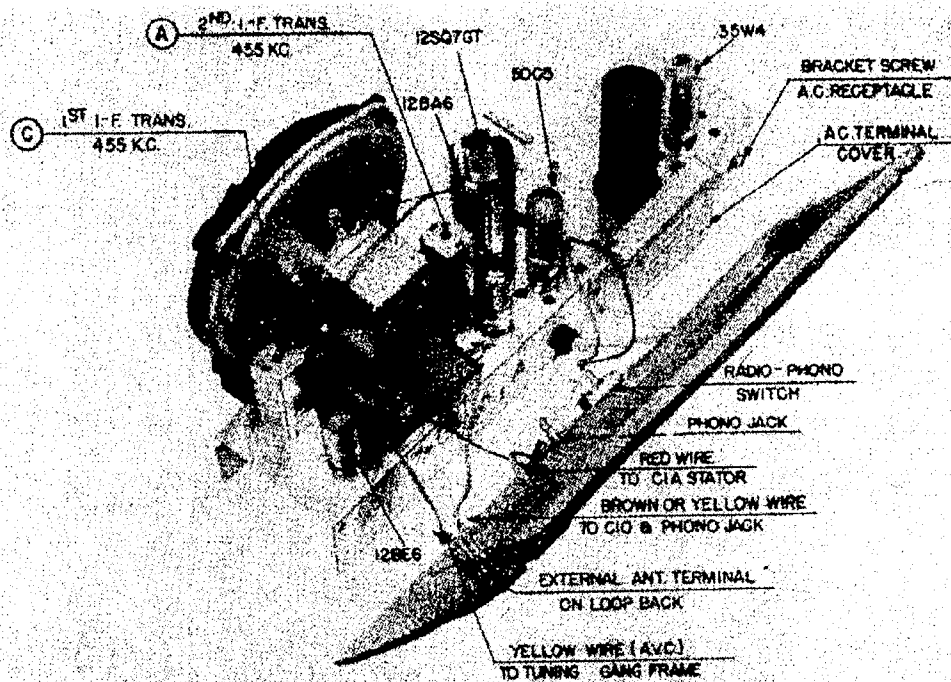
Chassis, Top View DESCRIPTION Courtesy www.nucow.com

TYPE: Five-tube, single band, Superheterodyne
FREQUENCY RANGE: 540 to 1600 kc.
INTERMEDIATE FREQUENCY: 455 kc.
POWER SUPPLY: 60 cycle, a.c. only.
VOLTAGE RATING: 105-125 volts.
POWER OUTPUT: 1 watt maximum.
POWER CONSUMPTION:

Radio and Clock 35 watts
Clock 2 watts

TUBE COMPLEMENT:

Type	Function
12BE6	Converter
12BA6	I. F. Amplifier
12SQ7GT	Detector, AVC, 1st. A. F. Amplifier
50C5	A. F. Power Output
35W4	Rectifier



Under no circumstances should a ground be connected to this receiver.

Phonograph connection — To use a record player with this receiver insert the pickup plug of the record player into the Phono jack on back of receiver. Then slide the Radio-Phono Switch on the back of the receiver to the "Phono" position. Connect the power cord of the record player to a convenient electric outlet of the correct voltage and frequency. Operate the record player in the normal manner. The controls of the receiver operate the same as for radio programs.

Page 2 of 7 ALIGNMENT PROCEDURE Courtesy www.nucow.com

1. To remove the chassis from the cabinet, proceed as follows:
 - a. Turn the tuning control completely counter-clockwise to close the gang.
 - b. Remove the volume and tuning control knobs, and the dial pointer.
 - c. Remove the cabinet back and loosen the screw on the terminal cover behind the electrolytic capacitor. Lift up the cover and disconnect the three leads to the clock.
 - d. Connect a jumper between the terminal coded yellow and the center terminal on the terminal board.
 - e. Remove the two screws in the top corners of the chassis apron that secure the chassis to the cabinet.
 - f. Loosen the slotted hex head screw on the right rear of the chassis and slide the screw toward the center of the chassis to release power receptacle from opening in side of cabinet.
 - g. Slide the chassis from the cabinet.
2. Connect an output meter across the speaker voice coil.
3. The r.f. signal input from the signal generator should be connected as indicated in the alignment chart. Connect the signal generator ground to the top lug on loop antenna back (See Chassis Top View, page 1).
4. Turn the volume control on full and adjust the signal generator output to produce approximately midscale deflection of the output meter, but maintain signal generator output as low as possible to prevent AVC action in the receiver.

ALIGNMENT CHART

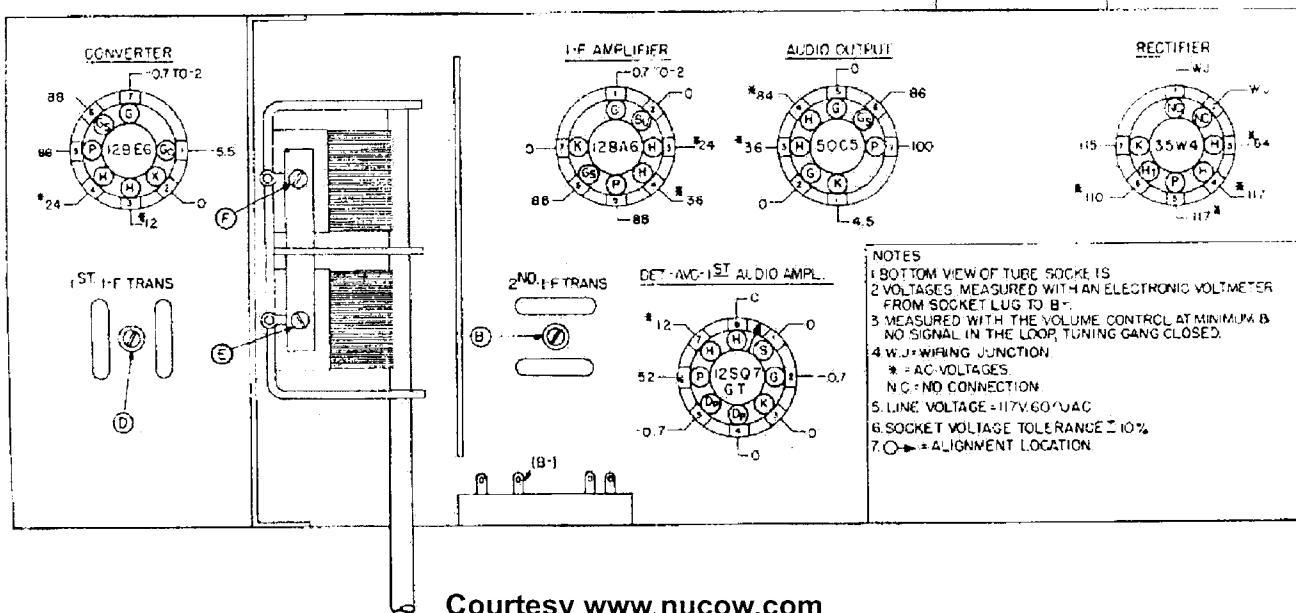
Alignment adjustment locations are shown on "Chassis, Top View,"
and on "Socket Voltage Chart".

Alignment Sequence	Signal Generator Output			Position of Dial pointer	Adjust for Maximum Output
	Frequency in KC	In Series with	To		
1	455	200 mmf.	External Ant. Screw	1620	A, B, C & D (See Note 1.)
2	1620	200 mmf.	External Ant. Screw	1620	E
3	1400	200 mmf.	External Ant. Screw	1400	F (See Note 2.)

ALIGNMENT NOTES

1. Repeat adjustments (A, B, C & D) in sequence. until maximum output is obtained.
2. After the chassis and loop antenna have been replaced in the cabinet, repeat alignment sequence "3". Adjust "F" by inserting screw driver through the hole provided in the bottom of the cabinet.

SOCKET VOLTAGE CHART

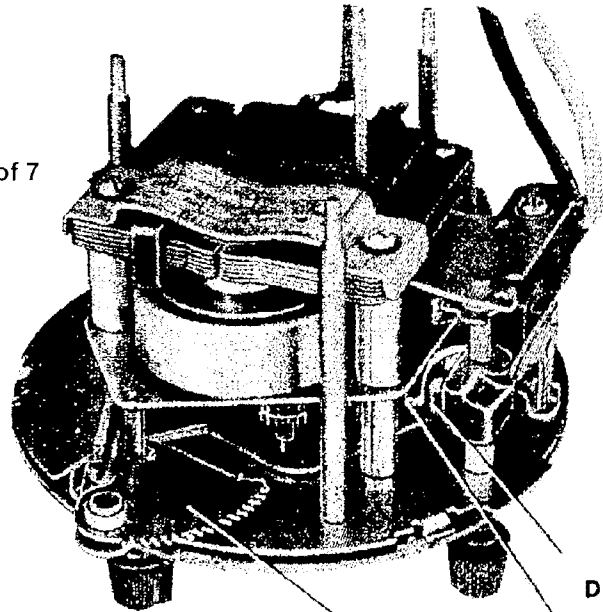
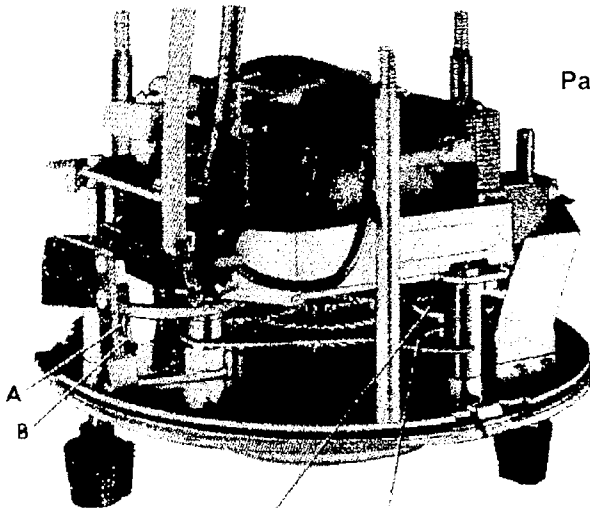


CLOCK ADJUSTMENTS

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PROCEDURE FOR CHECKING TIMER SWITCH AND VIBRATOR:

1. With the time set knob, turn the clock hands so as to advance the time at least one (1) hour. (For ease in checking, it is recommended that the time be set to the hour.)
2. Attach test light to black and yellow switch leads.
3. Turn switch knob to "Radio" position - light must go on.
4. Turn switch knob to "Off" position - light must go out.
5. Set alarm disc so that small pointer on hour hand reads two (2) hours in advance of the time of the clock. **EXAMPLE:** If the clock hands are set to read 7 o'clock, set the alarm disc to read 9 o'clock.
6. Turn sleep switch to "60" - test light must go on.
7. Turn time set knob advancing clock hands to next hour - light must go out and SLEEP SWITCH SECTOR GEAR must be completely disengaged within one (1) hour plus or minus eight (8) minutes.
8. Manually push SLEEP SWITCH SECTOR GEAR in until it touches its mating pinion WITHOUT meshing - light must go on.
9. Turn switch knob to "Radio Alarm" position.
10. Turn time set knob to advance clock hands so they read 15 minutes until the next hour. Then slowly advance the hands until the test light lights, which indicates the contacts are closed. The contacts must close somewhere between 14 minutes to the hour and 4 minutes past the hour.
11. Remove test light and connect 110 volt supply to the black and red leads.
12. Turn time set knob to advance the clock hands 4 minutes - vibrator must NOT buzz. Then advance the hands 14 minutes - vibrator MUST buzz within this 14 minute period.



TIMING CAM **TIMING CAM FOLLOWER**
ADJUSTING CONTACTS:

Courtesy www.nucow.com

SLEEP SWITCH SECTOR GEAR

D
C

1. Set the alarm disc so that the time indicated by the small pointer on the hour hand is different (at least 1 hour) from the time indicated by the hands of the clock. Then set switch to "Radio Alarm" position so that the **TIMING CAM FOLLOWER** rests on the **TIMING CAM**. Contacts shall be adjusted at .020" minimum gap.
2. With switch in "OFF" position contacts shall remain open as in step one and there shall be clearance between **TIMING CAM FOLLOWER** and **TIMING CAM**.
3. With switch in "Radio" position, contacts shall be closed. Check for proper contact pressure by depressing **CONTACT (A)**, using a small pointed tool. If **CONTACT (B)** follows **CONTACT (A)**, a noticeable amount before the contacts separate, the pressure is sufficient.
4. Set the switch to "Radio Alarm" position; pull out and turn alarm set knob counter-clockwise until the **TIMING CAM FOLLOWER** drops into the slot of **TIMING CAM**. The contacts shall be closed. Check contact pressure as previously described in step three.
5. **SWITCH ARM (C)** should clear **CAM (D)** by .008" minimum when in the "Radio Alarm" position.

TIMING:

1. Adjust timer for contact closure at 6:55 o'clock. On repeat tests, contacts shall close at 6:55 plus or minus 3 minutes. At all other settings the contacts shall close between 12 minutes before and 2 minutes after the setting time.
2. Check time keeping for a minimum of twelve hours with power applied to the motor. Clock must be run with vibrator (buzzer) shut off.

VIBRATOR ADJUSTMENT:

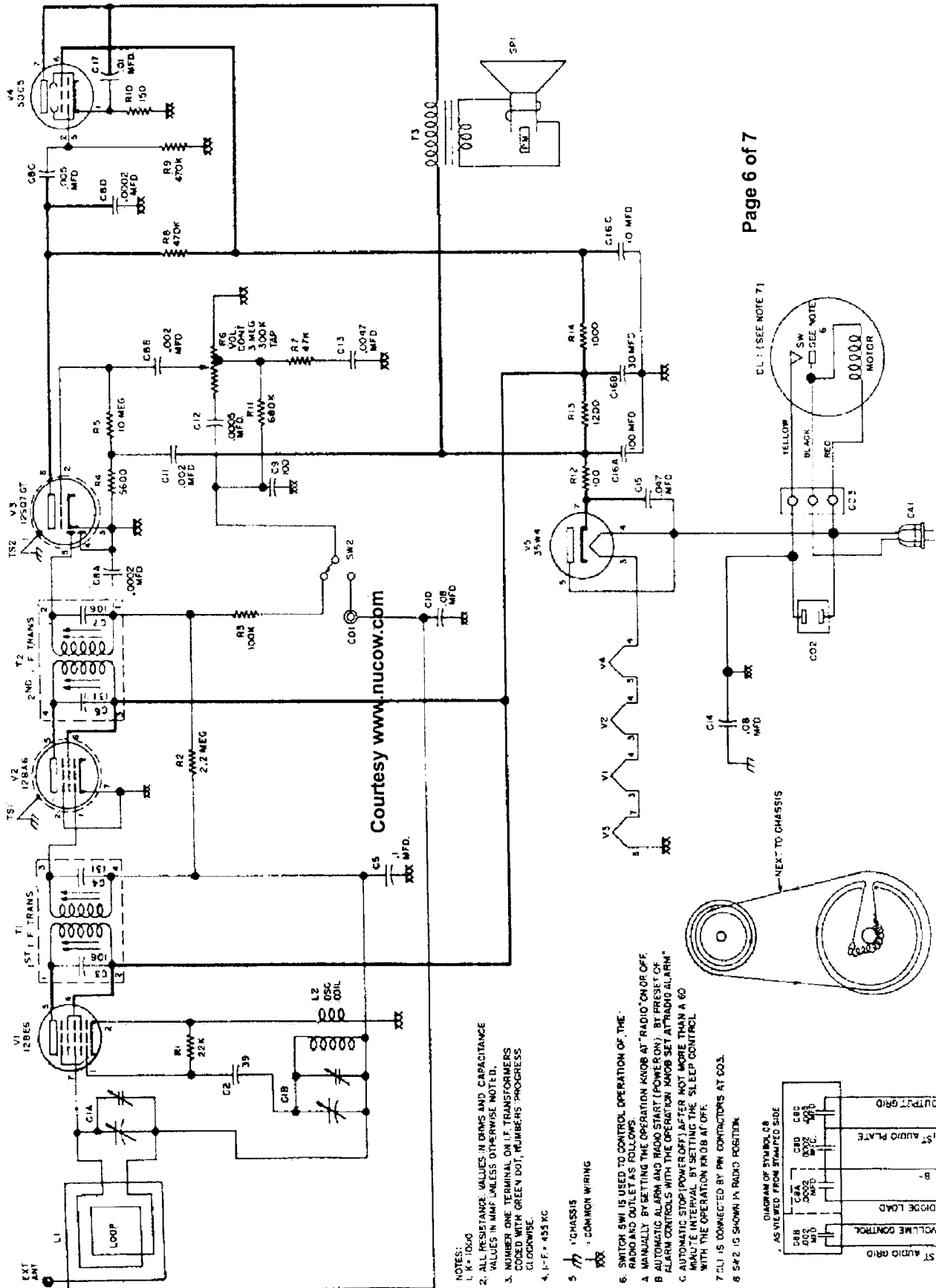
1. Vibrator shall start buzzing 10 minutes plus or minus 5 minutes after contact closure occurs.
2. When the alarm set knob is pushed in ("shut-off" position of vibrator) the shut-off spring shall lift the vibrator sufficiently above the cam, so that the cam will not contact the vibrator in any position.
3. Adjust vibrator for good sounding position.
4. Vibrator shall be manually shut off before completion of buzzing period.

CLOCK LUBRICATION

1. Center stack bearing in base plate and hole in back gear pinion should be lubricated with Nye watch oil or equivalent.
2. Path of switch locating spring on bracket should be lubricated with Dixon graphite grease.

REPLACEMENT PARTS LIST

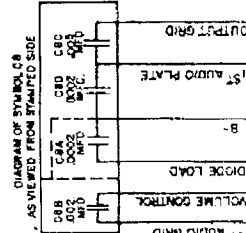
Symbol No.	Part No.	Description	Symbol No.	Part No.	Courtesy www.nucow.com Description
C1A	B-149437	Capacitor, Variable		AD-149598-4	Cabinet & Medallion Assy. (11-123U)
C1B		Capacitor, Variable		AD-149598-5	Cabinet & Medallion Assy. (11-124U)
C2	C-137727-109	Capacitor, 39 mmf., 10%, 200 v., ceramic		AD-149598-6	Cabinet & Medallion Assy. (11-125U)
C3	Part of T1	Capacitor, 106 mmf.		W-139921	Cltp, I.F. Transformer Mtg.
C4	Part of T1	Capacitor, 131 mmf.		W-131154-1	Cotter (External), Pointer Pulley
C5	39001-19	Capacitor, .1 mfd., 600 v., paper		B-149398	Cover, Clock
C6	Part of T2	Capacitor, 131 mmf.		W-147216	Cups, Suction
C7	Part of T2	Capacitor, 106 mmf.		B-149667-1	Escutcheon, Outlet
C8A	C-144675-1	Capacitor, .0002 mfd., 500 v.		D-149963-1	Escutcheon, Radio
C8B		Capacitor, .002 mfd., 500 v.		C-149964-1	Escutcheon, Clock
C8C		Capacitor, .005 mfd., 500 v.		D-149742	Gasket, Speaker
C8D		Capacitor, .0002 mfd., 500 v.		W-149341	Gasket, Clock Dial Grille & Ring
C9	B-143686-3	Capacitor, 100 mmf., 500 v., molded disc ceramic		AC-149962-1	Grille & Ring Assy., Clock Dial (11-120U)
C10	39001-85	Capacitor, .08 mfd., 600 v., paper		AC-149962-2	Grille & Ring Assy., Clock Dial (11-121U)
C11	39001-74	Capacitor, .002 mfd., 600 v., paper		AC-149962-3	Grille & Ring Assy., Clock Dial (11-122U)
C12	39001-5	Capacitor, .0005 mfd., 600 v., paper		AC-149962-4	Grille & Ring Assy., Clock Dial (11-123U)
C13	39477-39	Capacitor, .0047 mfd., 600 v., molded paper		AC-149962-5	Grille & Ring Assy., Clock Dial (11-124U)
C14	39001-85	Capacitor, .08 mfd., 600 v., paper		AC-149962-6	Grille & Ring Assy., Clock Dial (11-125U)
C15	39477-45	Capacitor, .047 mfd., 600 v., molded paper		AB-149524-1	Grille, Radio Dial (11-120U)
C16A	B-149541	Capacitor, 100 mfd., 150 v.		AB-149524-2	Grille, Radio Dial (11-121U)
C16B		Capacitor, 30 mfd., 150 v.		AB-149524-3	Grille, Radio Dial (11-122U)
C16C		Capacitor, 10 mfd., 150 v.		AB-149524-4	Grille, Radio Dial (11-123U)
C17	39477-41	Capacitor, .01 mfd., 600 v., molded paper		AB-149524-5	Grille, Radio Dial (11-124U)
R1	39373-60	Resistor, 22,000 ohm, 1/2 w.		AB-149524-6	Grille, Radio Dial (11-125U)
R2	39373-97	Resistor, 2.2 megohm, 1/2 w.		W-45580-2	Grommet (Rubber), Speaker Mtg.
R3	39373-74	Resistor, 100,000 ohm, 1/2 w.		AC-149952-1	Knob, Volume-Tuning (11-120U)
R4	39374-34	Resistor, 5600 ohm, 10%, 1/2 w.		AC-149952-2	Knob, Volume-Tuning (11-121U)
R5	39373-107	Resistor, 10 megohm, 1/2 w.		AC-149952-3	Knob, Volume-Tuning (11-122U)
R6	B-149382	Control, Volume (3 meg., Tap 300 K ohm)		AC-149952-4	Knob, Volume-Tuning (11-123U)
R7	39373-67	Resistor, 47,000 ohm, 1/2 w.		AC-149952-5	Knob, Volume-Tuning (11-124U)
R8	39373-87	Resistor, 470,000 ohm, 1/2 w.		AC-149952-6	Knob, Volume-Tuning (11-125U)
R9	39373-87	Resistor, 470,000 ohm, 1/2 w.		B-149311-1	Knob, Switch (11-120U)
R10	39373-16	Resistor, 150 ohm, 1/2 w.		B-149311-2	Knob, Switch (11-121U)
R11	39373-90	Resistor, 680,000 ohm, 1/2 w.		B-149311-3	Knob, Switch (11-122U)
R12	39374-189	Resistor, 100 ohm, 10%, 2 w.		B-149311-4	Knob, Switch (11-123U)
R13	39374-114	Resistor, 1200 ohm, 10%, 1 w.		B-149311-5	Knob, Switch (11-124U)
R14	39373-33	Resistor, 1000 ohm, 1/2 w.		B-149311-6	Knob, Switch (11-125U)
TS1	W-147784	Shield, Tube (V2)		B-149339-1	Knob, Alarm Set (11-120U)
TS2	W-46447-1	Shield, Tube (V3)		B-149339-2	Knob, Alarm Set (11-121U)
CA1	C-149780	Cable & Plug Assy., Power		B-149339-3	Knob, Alarm Set (11-122U)
CO1	W-136998	Connector, Phono		B-149339-4	Knob, Alarm Set (11-123U)
L1	AC-149557	Loop Antenna & Back Assy.		B-149339-5	Knob, Alarm Set (11-124U)
L2	AW-148259	Coil, Oscillator		B-149339-6	Knob, Alarm Set (11-125U)
SP1	AD-145956-2	Speaker, 5-1/4" P.M.		B-150140-1	Medallion (11-120U, 11-121U, 11-123U, 11-124U, 11-125U)
SW1	Part of CL1	Switch, On-Off		B-150140-2	Medallion (11-122U)
SW2	W-148260	Switch, Radio-Phono		C-149621-1	Pointer, Tuning
CL1	AW-149689	Clock Assy.		W-149368	Pulley, Pointer Mtg.
T1	AC-139919-3	Transformer, 1st I.F.		W-51752	Spring, Drive Cord
T2	AC-139919-3	Transformer, 2nd I.F.		W-148469	Spring, Pointer Pulley
T3	B-147171	Transformer, Output		39462-2	Socket, Tube (V1,V2,V4,V5)
CO2	AB-149562	Outlet & Bracket Assy.		W-149987	Socket, Tube (V3)
CO3	W-149673	Contact Strip		AB-149438	Support & Bushing Assy., Pointer Pulley
	W-149366	Bracket, Speaker Support		W-149676	Washer (Rubber), Speaker Mtg.
	AD-149598-1	Cabinet & Medallion Assy. (11-120U)			
	AD-150015	Cabinet & Medallion Assy. (11-121U)			
	AD-149598-3	Cabinet & Medallion Assv. (11-122U)			



Courtesy www.nucow.com

NOTES:

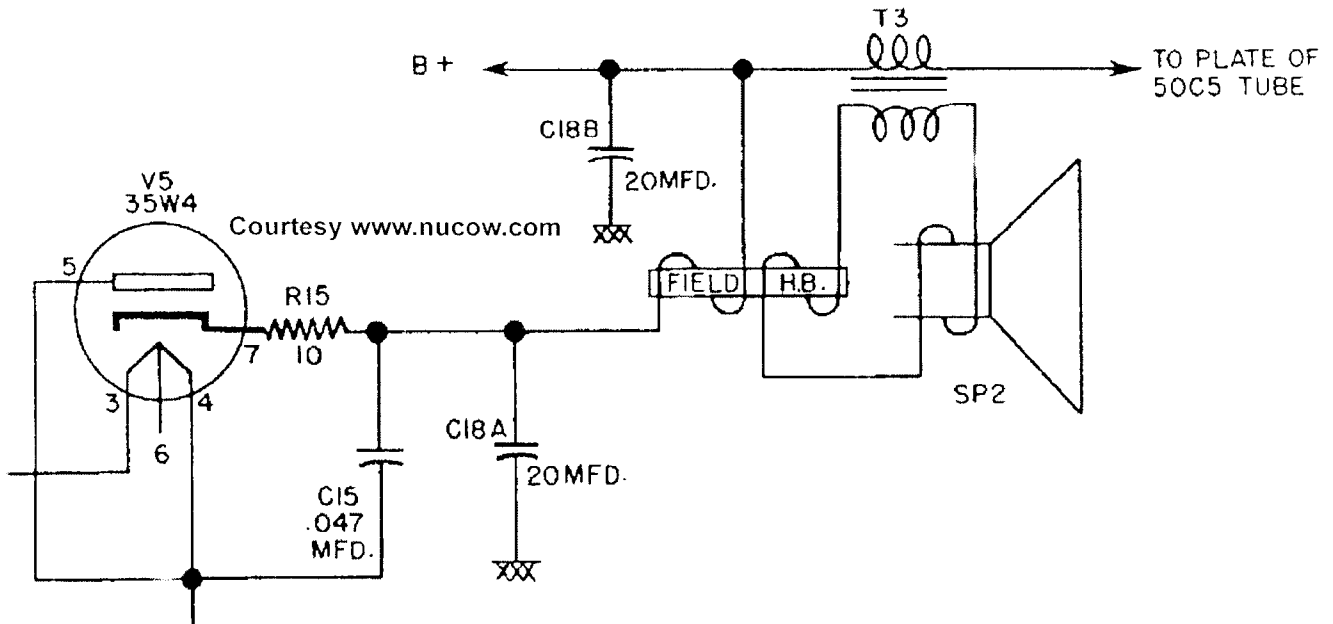
1. K = 10⁴
2. ALL RESISTANCE VALUES IN OHMS AND CAPACITANCE VALUES IN MMF UNLESS OTHERWISE NOTED.
3. NUMBER ONE TERMINAL ON I.F. TRANSFORMERS CODED WITH GREEN DOT, NUMBERS "PROGRESS" CLOCKWISE.
4. 1"-F = 455 KC
5. CHASSIS COMMON WIRING
6. SWITCH SW1 IS USED TO CONTROL OPERATION OF THE RADIO AND OUTLETS AS FOLLOWS:
 A. MANUALLY BY SETTING THE OPERATION KNOB AT "RADIO ON/OFF".
 B. AUTOMATIC ALARM AND RADIO START (POWER ON) BY PRESET OF ALARM CONTROLS WITH THE OPERATION KNOB SET AT "RADIO ALARM".
 C. AUTOMATIC STOP (POWER OFF) AFTER NOT MORE THAN A 60 MINUTE INTERVAL BY SETTING THE SLEEP CONTROL WITH THE OPERATION KNOB AT OFF.
7. CL1 IS CONNECTED BY PW CONTACTORS AT 603.
8. SW 2 IS SHOWN IN RADIO POSITION.



PLACEMENT OF DIAL DRIVE MOTOR TUNING CAPACITOR IN THE CLOSED POSITION.

SCHEMATIC DIAGRAM

To service the chassis 311-1, which is equipped with an E.M. speaker, refer to the following schematic sketch and parts list.



PARTS LIST

Symbol No.	Part No.	Description
C15	39477-45	Capacitor, .047 mfd. 600 V, molded paper
C18A	B-151617	Capacitor, 20 mfd., 150 V. } Two Section
C18B		Capacitor, 20 mfd., 150 V. } Electrolytic
R15	39373-1	Resistor, 10 ohm, 1/2 w.
SP2	151190-2	Speaker (5 " E.M., 680 ohm field)
T3	B-147171	Transformer, Output

ELECTRIC CLOCK PARTS LIST

Part No.	Description
151389-1	Crystal, Dial
151389-2	Rivet, Crystal (3 Required)
151389-3	Dial
151389-4	Disc, Alarm
151389-5	Hand, Sweep Second (Gold)
151389-6	Hands, Hour & Minute
151389-8	Knob, Time Set (Bronze)
151389-9	Field & Coil, 60 Cycle
151389-10	Rotor Unit, 60 Cycle