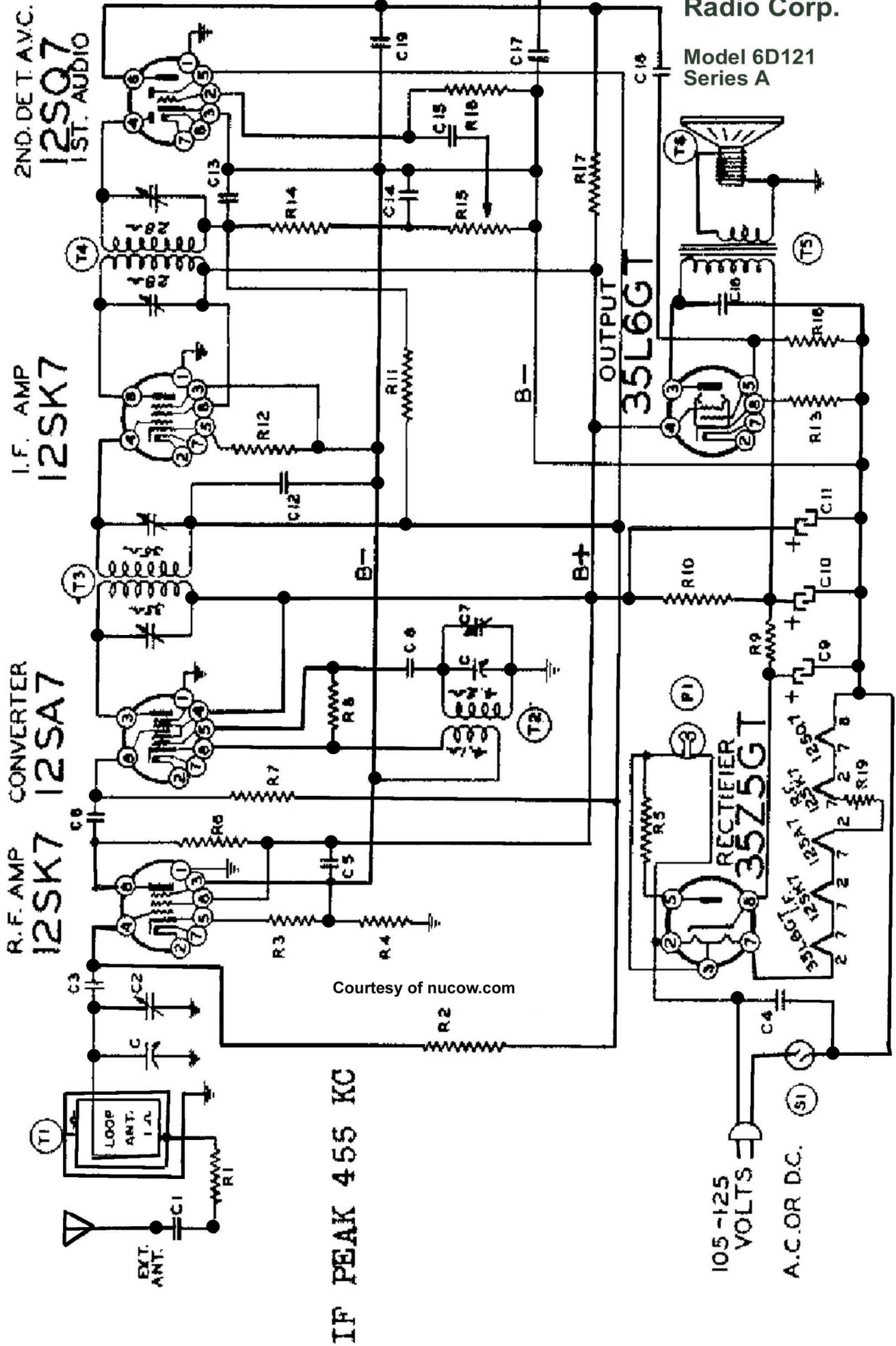


Belmont
Radio Corp.

Model 6D121
Series A



2ND. DET. A.V.C.
12SQ7

I.F. AMP
12SK7

R.F. AMP CONVERTER
12SK7 12SA7

35L6G

RECTIFIER
35Z5GT

(T1)

LOOP ANT. I.F.

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Part No.	Schematic Symbol	Description	Part No.	Schematic Symbol	Description
CONDENSERS					
C-8D-10953	C17	.15 MFD x 400 volts.	115146		Cams
C-8D-10778	C1, C15	.002 x 600 volts, +40%, -15%	115143		Key washer (13 used on cam shaft)
Q-8F3-12	C3	.470 mmfd., mica, ±20%	117528		Brass spacer (one used on cam shaft)
C-8D-10760	C4	.1 x 400 volts, +20%	117602		Brass spacer (four used on cam shaft)
C-8D-10775	C5	.25 x 200 volts, ±20%	131181		Spring washers, for locking collar
C-8F3-8	C6, C8, C19	.001, mica, ±20%	117604		Locking collar
11994 or		Electrolytic (for 50-60-cycle sets),	117600		Level shaft
A-8C-10077	C9, C10, C11	40 mfd. x 150 volts, 20 mfd. x 150 volts, 20 mfd. x 150 volts.	115361		Lever with roller
C-8D-10770	C12	.05 x 200 volts, ±20%	120283		Return spring for levers
129161	C13, C14	Dual .0001, mica, ±10%	115449B		Dial bracket assembly
C-8D-10774	C16	.02 x 400 volts, ±20%	112785		Pointer
C-8D-10778	C18	.004 x 600 volts, ±20%	A-53A-10989		Drive cord, 6 inches used
RESISTORS					
C-9B1-13	R1	1000 ohms, ½ watt, ±20%	A-49A-11087		Spring on tuning shaft, for cord
C-9B1-31	R2	1 megohm, ½ watt, ±20%	A-3N-11096		Spacer under above spring
C-9B1-50	R3	100 ohms, ½ watt, ±10%	120143		Take-up spring for drive cord
C-9B1-26	R4	150,000 ohms, ½ watt, ±20%	B-6D-10241		Dial scale
C-9B1-42	R5	22 ohms, ½ watt, ±10%	112-659-1		Crystal, clear, for dial scale
C-9B1-70	R6	4700 ohms, ½ watt, ±10%	A-2M-7758		Cinch buttons for fastening scale to bracket
C-9B1-25	R7	100,000 ohms, ½ watt, ±20%	117833		Brass spacer (for spacing pointer from dial)
C-9B1-23	R8, R14	47,000 ohms, ½ watt, ±20%			
C-9B2-53	R9	180 ohms, 1 watt, ±10%			
C-9B2-63	R10	1200 ohms, 1 watt, ±10%			
C-9B1-34	R11	3.3 megohms, ½ watt, ±20%	10798		MISCELLANEOUS
C-9B1-52	R12, R13	150 ohms, ½ watt, ±10%	101218 or	R15, S1	Line cord and plug
C-9B1-29	R16	470,000 ohms, ½ watt, ±20%	A-10A-10626		Volume control and switch, 1 megohm
C-9B1-27	R17	220,000 ohms, ½ watt, ±20%	B-3A-10211	C, C2, C7	2-gang variable condenser
C-9B1-35	R18	4.7 megohms, ½ watt, ±20%	107249	P1	Pilot light bulb, type T-47
C-9B2-44	R19	33 ohms, 1 watt, ±10%	134123		Rubber bumper, (bottom of cabinet)
COILS					
C-212-11565	T1	Loop antenna assembly, complete on back	B-23J-11464		Cardboard back (specify color)
A-13D-10215	T2	Oscillator coil	A-2M-10096		Cinch buttons, for fastening back to cabinet (4 used)
108140H or	T3	Input I.F. coil in can, 455 Kc.	13141		Cinch buttons, to cover trimmer holes in cabinet
B-13A-12023			B-5B-11463-8		Pushbuttons (6 used)
108145 or	T4	Output I.F. coil in can, 455 Kc.	A-23L-11960		Station call letters, set
B-13B-12022			A-6C-11899		Acetate tabs for call letters
(See note on page 3)			5C-11228-9		Cabinet, bakelite, ivory color
			128-686-8		Knob, volume, ivory color
			A-5B-10994-9		Knob, tuning, ivory color
			A-3F-10995		Locking screw for tuning knob.
			120388		Locking spring for tuning knob
			A-2H-10996		Reset key
121210		8-prong octal tube sockets, molded			
121171		8-prong socket for 12SK7, laminated			
121216		Socket base, bakelite			
107271 or		Pilot light socket assembly			
A-47A-11470					
SPEAKER					
114197	T6	5-inch P.M. speaker			
105104	T5	Output transformer for speaker			
DIAL PARTS					
115448		End plate (right hand bracket)			
115448C		End plate (left hand bracket)			

NOTE: On some sets slug tuned I-F.s are used instead of trimmer tuned I-F.s. 108-140H and 108-145 are trimmer tuned. B-13A-12023 and B-13B-12022 are slug tuned. The slug tuned I-F.s are tuned from the top and bottom (secondary on top, primary on bottom).

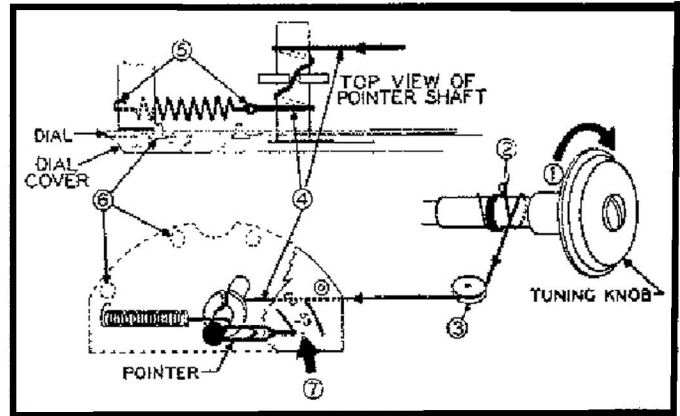
Slug tuned I-F.s cannot be used to substitute trimmer tuned I-F.s but trimmer tuned I. F.s can be used to substitute slug tuned I-F.s.

REPLACING DIAL POINTER DRIVE CORD

Six inches of cord are required in the set. Use a piece slightly longer so that knots may be tied at each end. Numbers below correspond to circled numbers in diagram.

1. Rotate tuning knob to extreme clockwise position. This closes tuning condenser. Knob should remain in this position until installation is completed.
2. Tie cord to loop in spring as shown. Wind cord one turn around shaft in direction shown.
3. Pass cord over idler pulley.
4. Pass cord over pointer shaft; wind it one turn around shaft; pass it through key washer; wind it one more turn around shaft.
5. Hook spring over end of dial support. Tie cord to spring. **IMPORTANT:** Before tying knot stretch spring enough so that full contraction of spring will rotate pointer shaft at least one-half turn.
6. Remove dial crystal by removing Cinch buttons.

7. Make sure tuning knob is in extreme clockwise position. Then rotate pointer clockwise, against friction of shaft, until it is in horizontal position, as shown.



ALIGNMENT PROCEDURE

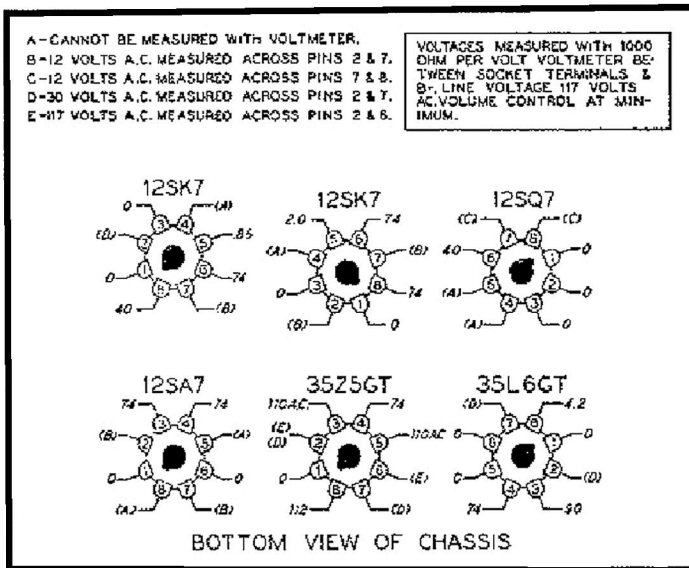
- No aligning adjustments should be attempted until all other possible causes of trouble have been checked.
- Chassis must be removed from cabinet for proper alignment. Slight adjustments of the oscillator and antenna circuits can be made, without removing the chassis, through two holes provided on the bottom of the cabinet. The two adjustment screws can be reached with a long insulated screwdriver.
- It is important that during alignment the loop antenna

- be maintained at the same distance from the chassis as when the chassis is installed in the cabinet.
- Turn volume control to maximum for all adjustments.
- Connect ground post of signal generator to B— of radio through a 0.1 mfd. condenser.
- Connect dummy antenna value in series with generator output lead.
- Connect output meter across primary of output transformer.

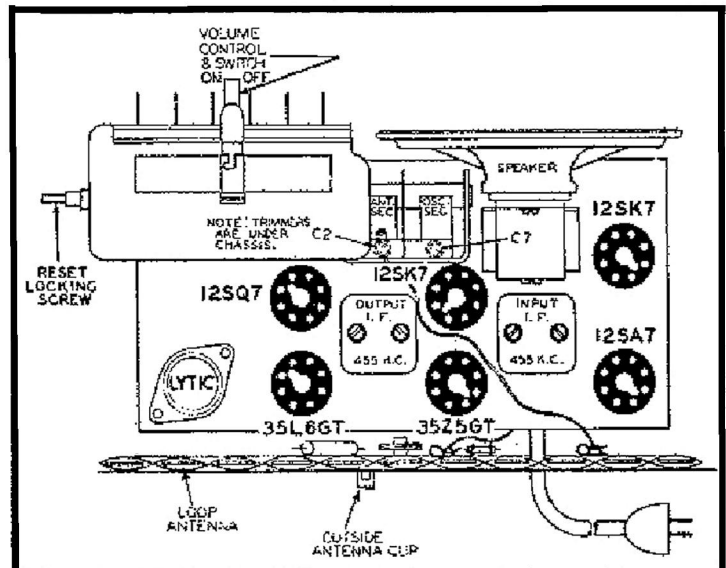
Band	Signal Generator Frequency Setting	Dummy Antenna	Connection to Radio	Tuning Condenser Setting	Adjust for Maximum Output (see chassis view)
L.F.	455 Kc.	0.1 mfd.	Grid of 12SA7	Rotor full open (plates out of mesh)	4 trimmers on input and output I.F. transformers (See note on page 3)
	1650 Kc.	0.1 mfd.	Grid of 12SA7	Rotor full open (plates out of mesh)	Oscillator trimmer C7 on bottom of radio
	1400 Kc.	None	See note A	Set dial at 1400 Kc.	Antenna trimmer C2 on bottom of radio

Courtesy of nucow.com Broadcast

Note A: Lay output lead of generator in back of loop antenna. Turn up generator output. Loop antenna will pick up energy.



VOLTAGES AT TUBE SOCKET TERMINALS



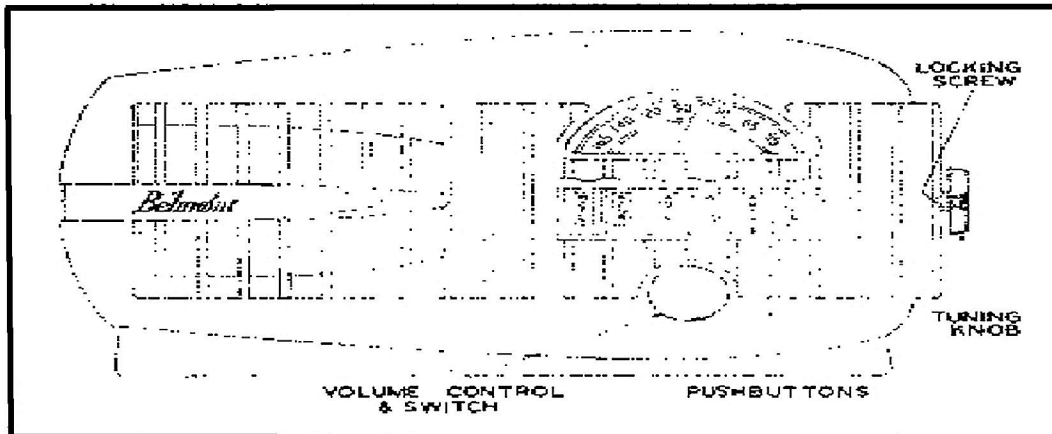
NOTE ON TUBE REPLACEMENT

Replace a defective metal 12SK7 tube with another metal tube. Replace a glass 12SK7 tube with either a metal tube or with an exact duplicate of the tube now in the set.

SETTING THE PUSHBUTTONS

The pushbuttons may be used, after proper adjustment, for the automatic tuning of any six stations which you select. They can be set up in any order.

1. Turn on the radio. Allow it to warm up for at least one minute.
2. Push out the call letters of the six stations from the call-letter sheets supplied with this manual.
3. Insert one call-letter tab in the rectangular opening in each of the pushbuttons, in any sequence. Press an acetate tab (supplied in small envelope) into each of the pushbuttons.
4. With the screwdriver supplied, check to see that the locking screw in the center of the tuning knob (see illustration) is loose. If it is not, turn it several turns to the left (counterclockwise). Courtesy of nucow.com
5. Press the first pushbutton down all the way. With one hand held the button down firmly and with the other carefully tune in the desired station. Release the pushbutton.
6. Follow this procedure for each of the five other buttons, adjusting each one for a different station.
7. Rotate the tuning knob on the side of the cabinet as far to the right as it will go. Tighten the locking screw in the center of the knob. **IT IS IMPORTANT THAT THIS SCREW BE TIGHTENED VERY FIRMLY.**
8. The pushbuttons are now properly set for automatic tuning. Any of the six stations may now be tuned in simply by pressing the proper button down as far as it will go. If it is desired to reset any of the buttons for a new station, loosen the locking screw in the center of the tuning knob, set the pushbutton as described above, and re-tighten the locking screw.



TECHNICAL DATA

Tuning range.....	530 to 1650 Kc.
Intermediate frequency.....	455 Kc.
Power consumption.....	35 Watts
Sensitivity (for 0.05 watt output).....	13 microvolts average
Selectivity.....	55 Kc. broad at 1000 x signal at 1000 Kc.
Power output (in voice coil)	
Undistorted.....	0.8 watt
Maximum.....	1.0 watt
Voice coil impedance.....	3.2 ohms