TECHNICAL INFORMATION MODEL RBC

6 VALVE BROADCAST A.C. 1951

DESIGNED AND MANUFACTURED

RADIO (1936) LTD.

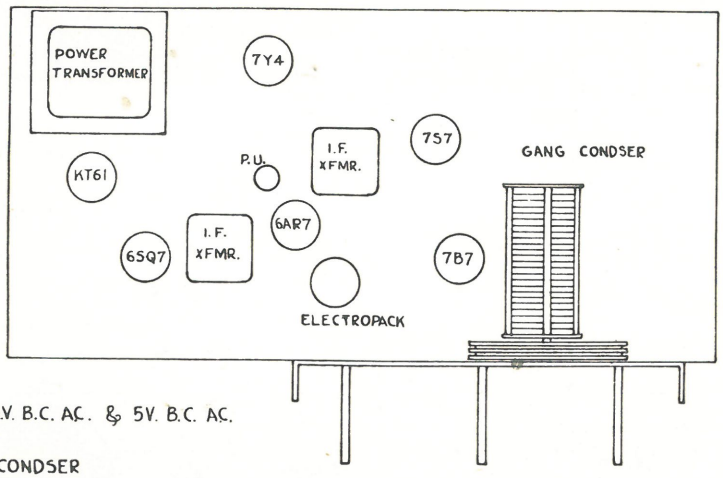
Power Supply	230v. 50CP/S	Rating	60 watts
Tuning Range	1600KC/S -- 550KC/S	Speaker	Rola 8H
I.F. Frequency	460KC/S	Power Output	3 watts

CIRCUIT DESCRIPTION :

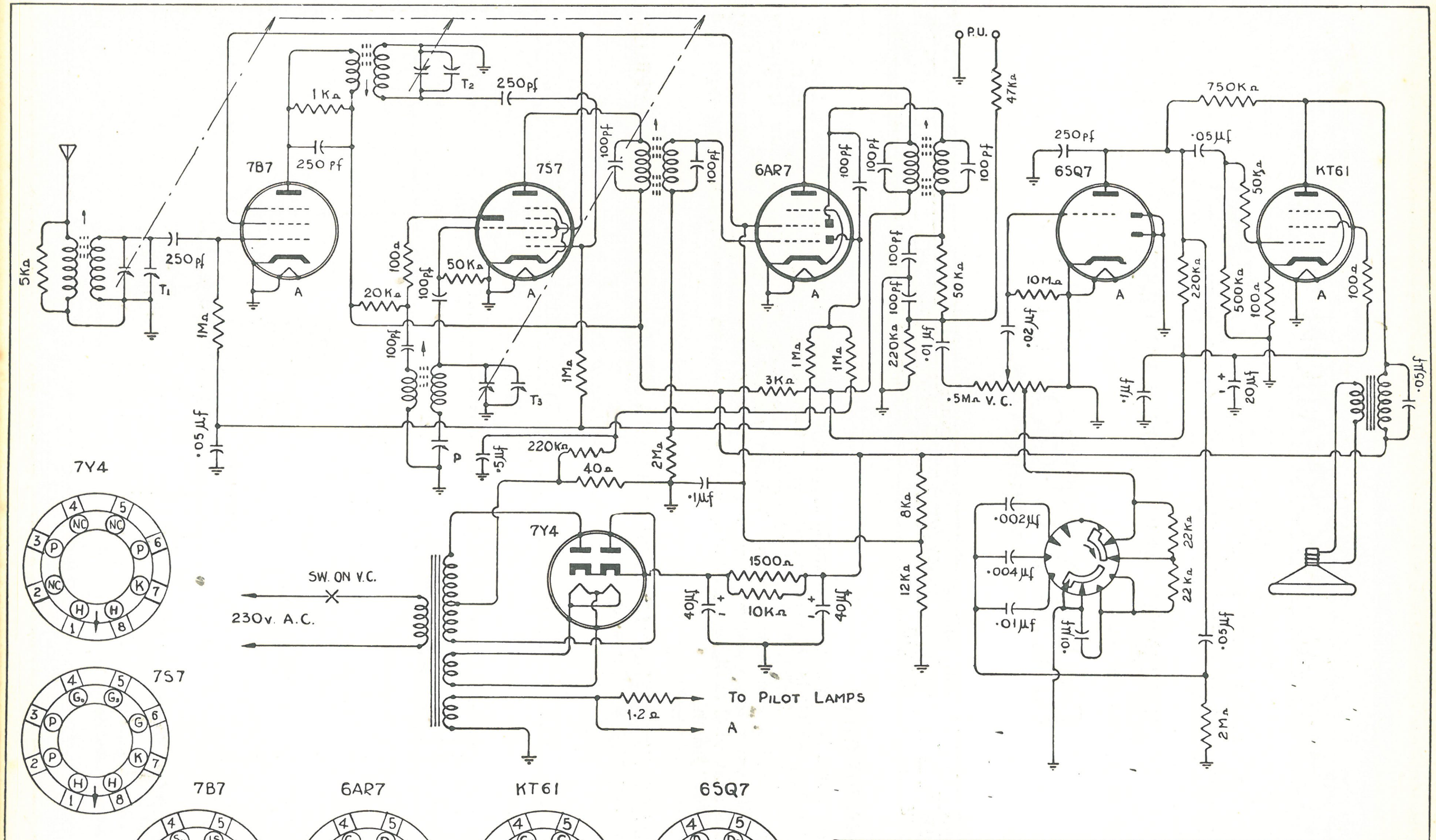
A type 7B7 valve is employed as a radio frequency amplifier and is coupled to a type 7S7 frequency changer, which is in turn coupled by means of a double tuned high gain I.F. transformer to a type 6AR7GT which combines the functions of intermediate frequency amplification, detection and AGC source. Voltage amplification is performed by a type 6SQ7GT and this valve is capacitively coupled to a type KT61 power amplifier. The 230v. AC mains source is converted to direct current by means of a double wound transformer type 7Y4 rectifier and filter system.

ANTENNA :

A STANDARD INVERTED "L" TYPE ANTENNA WITH A FLAT TOP OF APPROXIMATELY 30 FEET IS RECOMMENDED.



VALVE LAYOUT FOR 6V. B.C. AC. & 5V. B.C. AC.
FOR 5V OMIT 7B7
6V. HAS A 3 GANG CONDSER
5V. HAS A 2 GANG CONDSER



DRAWN : B.B. James 30-5-51
CHECKED : A.J. Watkins.
APPROVED: [illegible]

CIRCUIT DIAGRAM 6.V. BROADCAST A.C. MODEL RBC

VOLTAGES APPEARING BETWEEN VALVE PINS AND CHASSIS FRAME

VALVE PIN NO.	1	2	3	4	5	6	7	8
7B7 R.F. Amp	6.3AC	210DC	90DC	—	–	-1.4DC	–	–
7S7 Freq. Changer	6.3AC	210DC	125DC	- 20DC	90DC	-1.4DC	–	–
6AR7 I.F. Amp.	–	–	180DC	90DC	-.4DC	-1.8DC	–	6.3AC
6SQ7 Volt. Amp.	–	-.9DC	–	–	–	90DC	6.3AC	–
KT61 Power Amp.	–	6.3AC	205DC	180DC	–	–	–	– 3DC
7Y4 Rect.	300DC	– 2.3DC	260AC	-	–	260AC	300DC	300DC

NOTE.—DC READINGS TAKEN WITH V.T.V.M. OFF STATION.

D.C. RESISTANCES

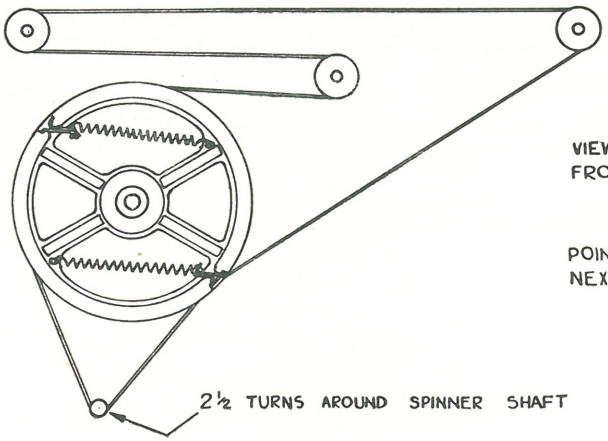
Ant. Coil Primary	18ohms	I.F. Primary	11ohms
Ant. Coil Secondary	3.5ohms	I.F. Secondary	11.0ohms
Det. Coil Primary	10.5ohms	PX Primary	32ohms
Det. Coil Secondary	3.5ohms	PX Secondary	550ohms
Osc. Coil Primary	.9ohms	OX Primary	530ohms
Osc. Coil Secondary	2.75ohms	OX Secondary	1ohm

ALIGNMENT INFORMATION

Adjust volumn control for Max. Gain.

Adjust Sig. Generator output to no higher than necessary to obtain output meter reading.

DUMMY ANT	Generator Coupled to	Generator Frequency	Receiver Dial Setting	ADJUST	Approx. Sens. for 50mw. output
.1 MFD	GRID 6AR7	460 KC/S	550 KC/S	2nd I.F. Trimmers for Max.	2000 micro volts.
.1 MFD	GRID 7S7	460 KC/S	550 KC/S	All I.F. Trimmers for Max.	30 microvolts
RMA STANDARD	ANT. LEAD	1400 KC/S	1400 KC/S	OSC Trimmer for Max.	
" "	" "	1400 KC/S	1400 KC/S	RF and DET Trimmers for Max	1 microvolt.
" "	" "	600 KC/S	Through 600 KC/S	Padder for Max	1 microvolt.



VIEW OF DIAL STRINGING LOOKING FROM BACK OF SET

POINTER STRING ON SIDE OF DRUM NEXT TO DIAL BACKPLATE

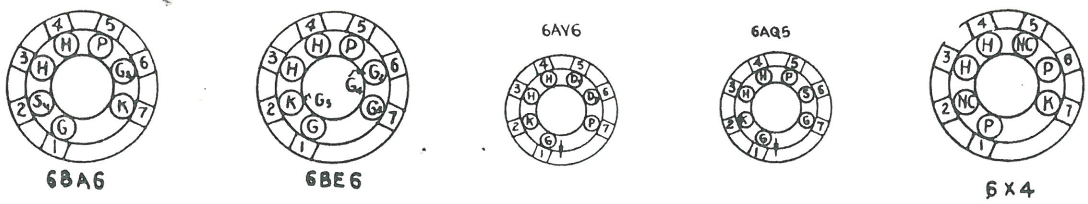
AMENDMENTS AND REMARKS:

4 S/N 136615 uses 6AV6 EBL21

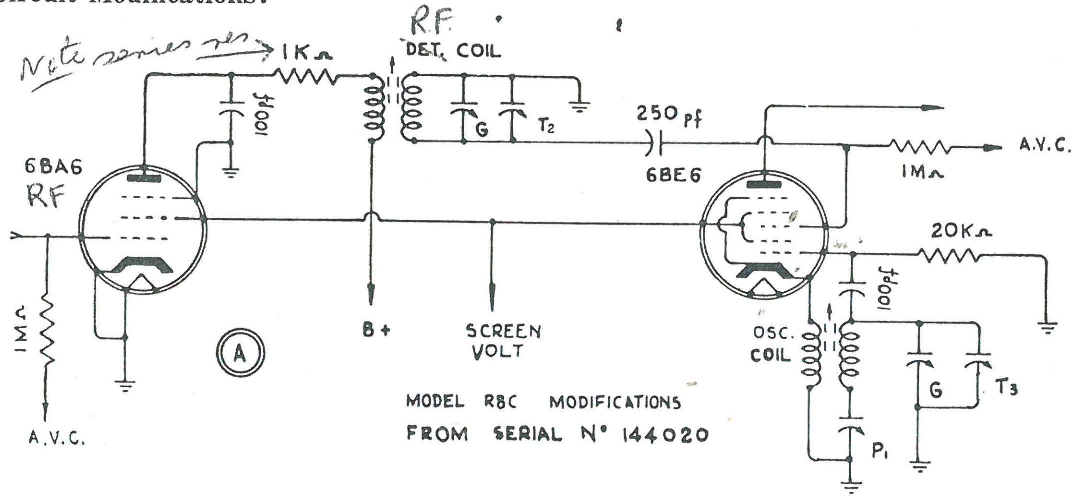
RBC. AMENDMENTS, commencing Ser. No. 144020.

I.—Valve Complement:

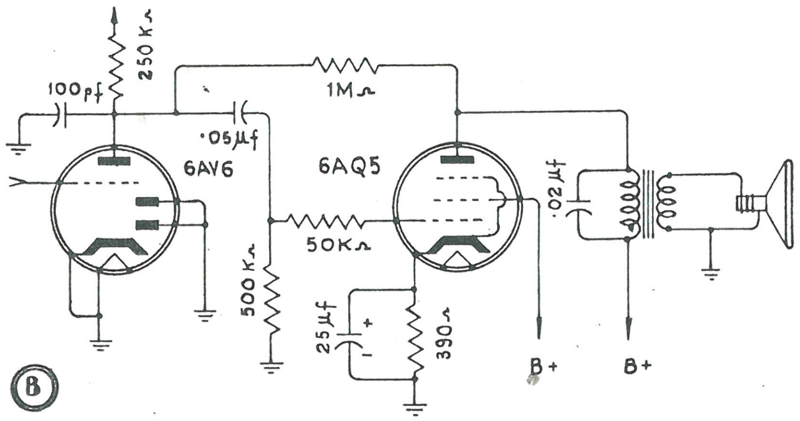
1 —	6BA6	R.F. Amplifier.
1 —	6BE6	Frequency Changer.
1 —	6AR7GT	I.F. Amplifier, Detection and A.V.C.
1 —	6AV6	Voltage Amplifier.
1 —	6AQ5	Power Amplifier.
1 —	6x4	Rectifier.



II.—Circuit Modifications:



B/C. on coil data changed—the osc. is cathode coupled.



MODIFICATIONS FOR MODELS RBC, RBE, RAX, RBH
FROM SERIAL N° 143868

Valve Pin numbers modified as No. 1 Valve Complement.

MODEL R.B.C.—These amendments effective from Ser. No. 136654 on.

EBL21 Type Tube replaces the KT61 Type Tube.—Requires change from Octal Wafer Socket to Loctal Socket—Circuit values remain as Schematic.

6AV6 Type Tube replaces the 6SQ7 Type Tube.—Requires change from Octal Wafer Socket to 7 pin Miniature Socket.—Circuit values remain as Schematic. Voltages will be the same but the Pin Numbers will vary with the Type valve socket used.

.05 mfd. 500V. Condenser across Speaker Primary changed to .02 mfd. 500V. Condenser.

Cressall Candohm replaced by 1w. Carbon Resistors.

The 2-30K. 1w. Resistors replace the Candohm Screen Feed and the 47 ohm. replaces the 40 ohm. portion of the Candohm.