TECHNICAL INFORMATION

COVERING

BROADCAST RECEIVER TYPE "BYRON"

Manufactured by **COLLIER & BEALE Ltd. WELLINGTON.**

TYPE SET—A.C. Superheterodyne.

TUBES (six)—6BA6 R.F. Amp., ECH42 Converter, 6BA6 I.F. Amp., 6AV6 Det.-A.F., 6AQ5 Power Output, 6X4 Rectifier.

POWER SUPPLY—230 v. A.C. Rating 55 watts.

TUNING RANGE—Broadcast, 535-1530 kc.

ALIGNMENT INSTRUCTIONS

To set pointer, fully mesh condenser and set pointer at last reference mark at left end of dial. Set volume control at maximum and keep output from signal generator no higher than necessary to obtain output readings. Use insulated alignment tool for adjusting.

Dummy Antenna	Signal Generator Coupling	Sig. Gen. Frequency	Band Switch Position	Radio Dial Setting	Output Meter	Adjust	Remarks
0.1 μfd.	High Side to pin No. 6 (grid) of ECH42.	455 Kc.	BC	High freq. end	Across voice coil	A1, A2, A3, A4,	Adjust for maximum output
R.M.A. Standard	High Side to ant. Terminal	1400 Kc.	„	1400 Kc.	„	C21	„ „
„	„	1400 Kc.	„	1400 Kc.	„	C22 & C23	„ „
		600 Kc.	„	600 Kc.	„	C14	Rock variable and adjust for max. output. Recheck C21 at 1400 Kc. If C21 is changed recheck C22 and C23.

CAPACITORS

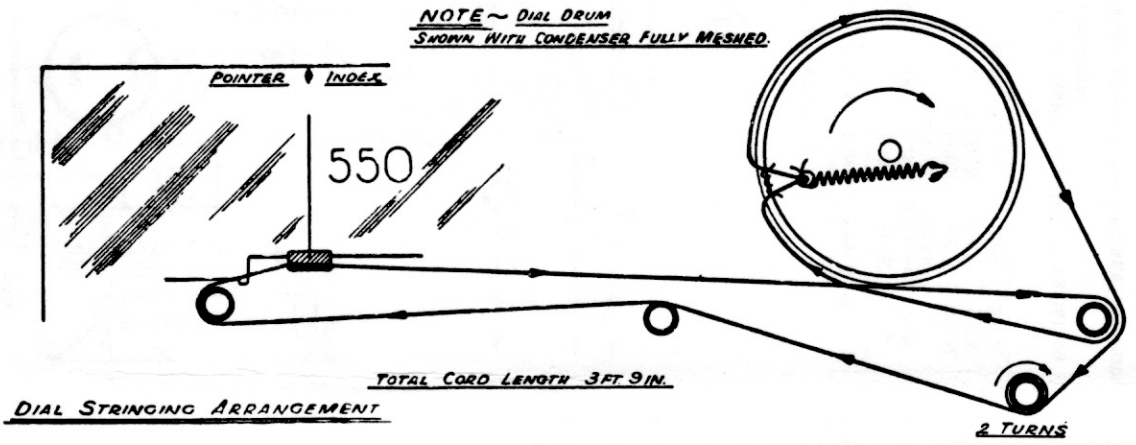
Ref. No.	Cap.	Volts
C1a	40 μfd.	450
C1b	40 „	„
C1c	20 „	„
C2-3	0.1 „	350
C4-6	0.05 „	„
C7	0.02 „	„
C8	0.01 „	Ceramic
C9	0.01 „	„
C10	0.01 „	350
C11	0.002 „	„
C12	0.001 „	„
C13	1000 μμfd.	Ceramic
C14	600 „	Padder Mica
C15	500 „	„
C16	500 „	„
C17-19	100 „	„
C20	50 „	„
C21-23	3-30 „	Trimmer
C24-26	5 „	Ceramic

MISCELLANEOUS

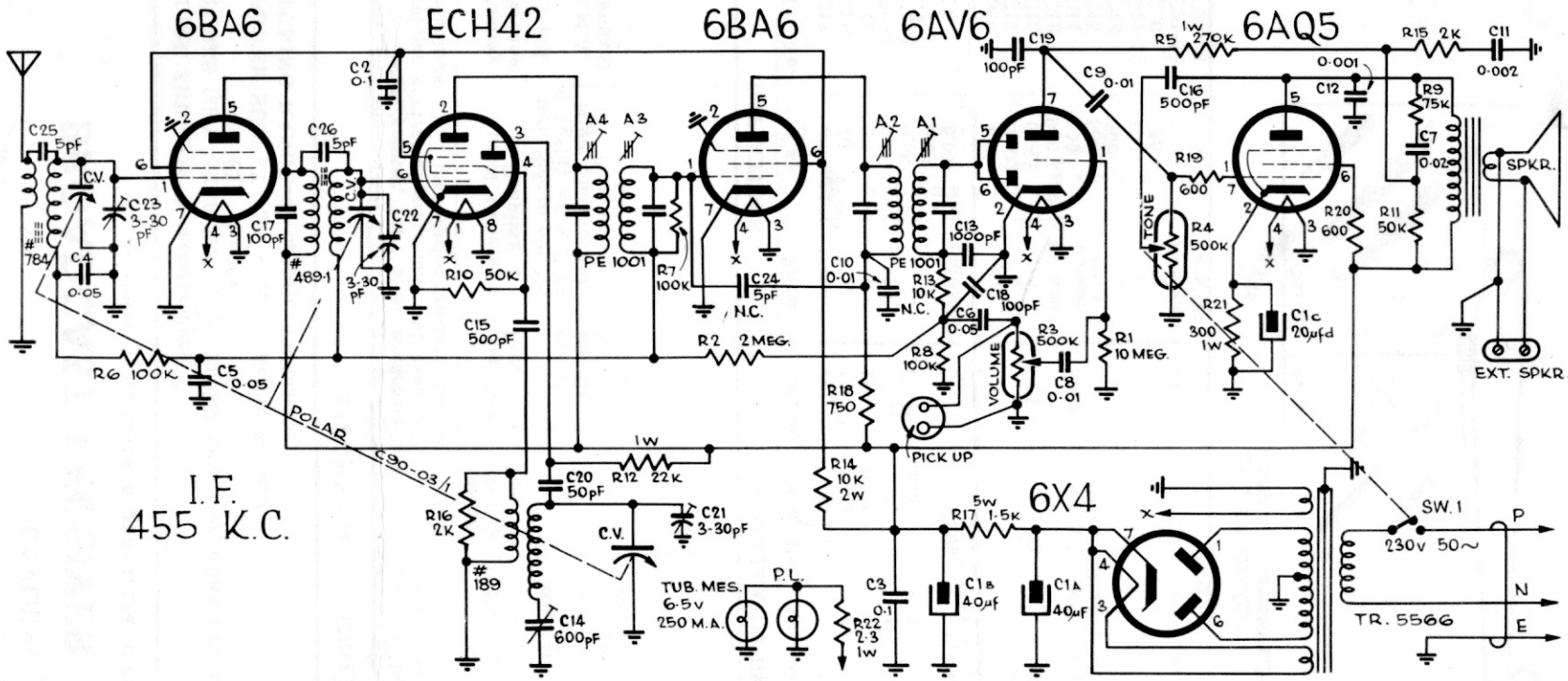
Ref. No.	Res., Pri.	Res., Sec.	
784	20 ohm	2.7 ohm	BC
489/1	64 „	2.7 „	BC
189	0.85 „	2.44 „	BC
PE1001	8.8 „	4.8 „	IF
PE1001	8.8 „	4.8 „	IF
	Volts	**Volts**	**Volts**
TR5566	230	350 aside	2 x 6.3
	Type	**Transformer**	
SP1	6-9H	5000 ohm	
SW1	S.P.S.T. switch attached to R4		
CV	Polar C90-03/1 (swing 351 μμfd.)		
PL	6.5 v., 0.25 amp. tub. M.E.S. lamp		

RESISTORS

Ref. No.	Res.	Watts
R1	10 meg.	½
R2	2 „	„
R3	500K ohm	Pot
R4	500K „	„
R5	270K „	1
R6	100K „	½
R7-8	100K „	„
R9	75K „	„
R10-11	50K „	„
R12	22K „	„
R13	10K „	„
R14	10K „	2
R15-16	2K „	½
R17	1.5K „	5
R18	750 „	½
R19	600 „	„
R20	600 „	„
R21	300 „	1
R22	2.3 „	1



DIAL STRINGING ARRANGEMENT



SCHEMATIC DIAGRAM MODEL "BYRON"

VOLTAGE READINGS

Use	Tube	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8
R.F.	6BA6	0	—	—	5.7	225	75	—	
Conv.	ECH42	5.7	215	80	—5	75	—	—5	—
I.F.	6BA6	0	—	—	5.7	215	75	—	
Det-A.F.	6AV6	0	—	—	5.7	0	0	80	
Output	6AQ5	0	11	—	5.7	200	225	0	
Rect.	6X4	300 ac	—	5.8	330	—	300 ac	330	

RESISTANCE READINGS

Use	Tube	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8
R.F.	6BA6	2.6 meg.	—	—	—	500K	510K	—	
Conv.	ECH42	—	500K	522K	50K	510K	2.5 meg.	50K	—
I.F.	6BA6	2.5 meg.	—	—	—	5.7K	510K	—	
Det-A.F.	6AV6	10 „	—	—	—	500K	500K	800K	
Output	6AQ5	5.6K	300	—	—	500K	5.6K	5.6K	
Rect.	6X4	480	—	—	500K	—	480	500K	

1. D.C. voltage measurements are at 20,000 ohms per volt—A.C. voltage measurements at 1,000 ohms per volt.
2. Socket connections are shown as bottom views.
3. Measured values are from socket pin to chassis.
4. Nominal tolerance on component values make possible a variation of ± 10% in voltage and resistance readings.
5. Volume control at maximum, no signal applied for voltage measurements.
6. Resistance readings in B+ circuits may vary widely according to condition of filter capacitors.