(A)

C24

R19

(vi

WAVECHANGE

FIVE - valve, two - waveband portable receiver for operation from all-dry batteries or 195-255V 50c/s AC mains.

Date released. July, 1956.

(V2)

Price at time of release, 18gns.

(V3

Manufacturer. Berec Radio, Ltd., Hercules Place, Holloway, London, N7. Service department. Hercules Place. London, N.7. Weight including batteries 8lb. 13oz.

WAVECHANGE +

TUNING

Wavebands. MW. 182-570metres 1,650kc/s). LW, 1,080-1,900metres 278kc/s.).

Aerial. Ferrite rod.

216 195 235 21:

BATTERY/OFF/MAINS

L3 L4

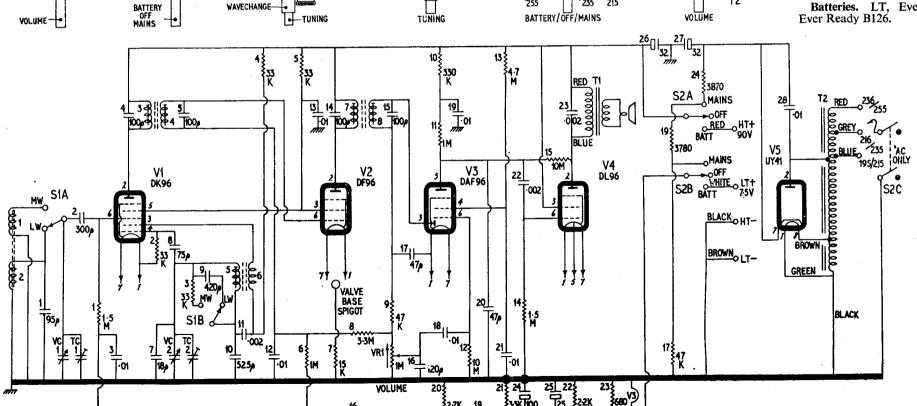
Valves. DK96 frequency changer; DF96

VOLUME



IF amplifier: DAF96 diode detector and Alamplifier; DL96 output pentode; UY41 halfwave rectifier.

Batteries. LT, Ever Ready AD38. H1, Ever Ready B126.



## COMPONENT RATINGS

# Capacitors

500V: C3 11-13 18 19 21-23 28. Electrolytic 275V: C26

Electrolytic 25V: C242.5.

#### Resistors

3 watt: R19 24. All others & watt.

nductors	
-	

L		Onnas	
i	 	1	
2	 	4	
3, 4	 	1.2	
5	 	2.5	
6	 	1.5	
7, 8	 	10	
r			
i	 Pri. 650		
	Sec	. 0.4	

01....

2 Red to black 400 Grey to black 380 Blue to black 360 Green to black Common

Brown to black 35 Yellow to black 350

### **VOLTAGE AND CURRENT CHECKS**

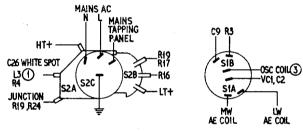
Readings taken at 225V AC (voltage tap 216-235). Current ratings mA unless otherwise stated.

Valve

No.	Va	Ia	Vg2	Ig2	Vg4	Ig4	Vk	Ik Fil
V1	84	0.7	37	1.5	80	0.17	_	<b>— 1.20</b>
V2	84	0.68	80	0.21		_		<b>—</b> 1.10
V3	35	$35\mu A$	16	9μA				-1.22
<b>V</b> 4	80	4.5	84	0.84			5.2	1.15
							(r	ins 1-5)
							`-	1.12
							(r	oins 5-7)
V5						2	200	30.5 30Ý
								AC

Voltage drop across 22-ohm limiting resistor R18—0.5V. Total additive LT volts—6.29V. Total measured LT volts—6.25V. Total LT current on AC mains is 22mA, while the total HT current is 8.5mA. On battery, the total LT current is 22-25mA, HT reading being 8.5-10mA.

Where anodes and screens are fed through high-value resistors, voltage readings will depend on resistance of voltmeter used; due allowance should be made for this.



SWITCH CONNECTIONS

### ALIGNMENT

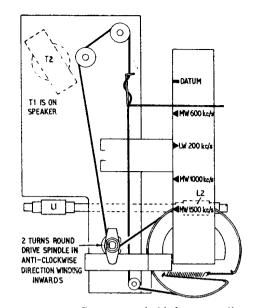
Remove chassis from cabinet (see Dismantling), connect an output meter across output transformer secondary and set volume control at maximum. Input from signal generator should be kept as low as may be consistent with a readable output from the set.

IF stages. Switch to MW, set gang at maximum capacity. Inject modulated 470kc/s at pin 6 V1 via a .01mF high-insulation capacitor.

L8, L7, L4, L3. Tune cores in that order for maximum output, using the outer peak in each case. Repeat procedure until no further improvement is possible—keeping input at low level (below AVC point).

RF stages. MW circuits must be aligned before LW.

MW. Set gang at maximum capacity, switch to MW, check that pointer is aligned to datum mark on scale backplate.



Connect a suitable loop or radiator to signal generator and place it at least 3 ft. from chassis coaxially with rod aerial.

Set pointer to 500metres (600kc/s) calibration mark, inject modulated signal via loop or radiator.

L5, L6. Adjust core for maximum output.

L1. Tune for maximum output by sliding coil along Ferrite rod—this is a critical adjustment.

Set pointer to 200metres (1,500kc/s) calibration mark, inject 1,500kc/s signal.

TC2, TC1. Adjust for maximum output. Check calibration at Imc/s mark on scale backplate.

Repeat adjustment of L5, L6, L1, TC2, TC1 as described above until no further improvement is possible. Then seal sliding coil L1 on Ferrite rod.

LW. Set pointer to 1,500metres (200kc/s) calibration mark, and inject 200kc/s signal via loop or radiator.

L2. Adjust, by sliding coil along Ferrite rod, for maximum output, rocking the gang if necessary.

Seal L2 on Ferrite rod.

#### DISMANTLING

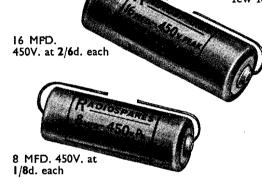
Chassis removal. Take off knobs—pull-off type. Remove back. Remove fibre protective cover—clipped to chassis. Next, unscrew the three 2BA screws securing chassis to cabinet.

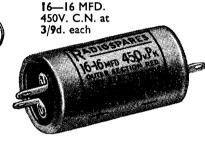
Note. A protective cover of insulating tape should be placed over the sockets at rear of mains distribution panel.

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