

# KOLSTER-BRANDES

## 830 and 831

Four valve, plus rectifier, three waveband superhet in table (830) and console (831) models. Suitable for 110-150 and 200-250 v., 50 cycle supplies. Made by Kolster-Brandes Ltd., Cray Works, Sidcup, Kent.

**Circuit.**—The aerial is connected through alternative tappings provided by R1, while R2 is a shunt "static discharge" resistor. Coupling to the input coils is by a winding and also bottom capacity coupling by means of C2, the A.V.C. decoupling condenser. After a

single tuned circuit the signal enters V1, a conventional frequency-changer.

Iron-cored coils are used in tuned-grid M. and L.W. oscillator circuits and for both the I.F. transformers. The latter have permeability adjustments, the shunt condensers being fixed. V2 the I.F. amplifier is conventional.

V3, the double-diode triode, is arranged on the usual lines. The A.V.C. diode is energised from V2 anode. V4, the output pentode, is resistance-capacity fed and has a parallel tone circuit.

V5 is a full-wave rectifier with straight-forward smoothing circuit.

P.U. and low-impedance extra speaker connections are provided, with switches. Pilot lamp: 12-16v. .3 amp.

Mains consumption: 72 watts.  
Console model 831 is electrically similar to 830 except for C14 and C27. (See table.)

### GANGING

**I.F. CIRCUITS:** Tune set to 580m., inject 464 kc. to V1 grid through .1 mfd. and adjust I.F. cores.

**M.W. BAND:** Inject 600 kcs. to aerial, tune to 500 m. and adjust core of L7. At 1,400 kc. (214 m.) adjust T5 and T2. Readjust L7 at 600 kc., rocking gang. Readjust T5 and T2 at 1,400 kc.

**L.W. BAND:** Adjust L8 at 175 kc. (1,714 m.). Adjust T6 and T3 at 350 kc. (857m.). Readjust L8 at 175 kc., rocking gang. Readjust T6 and T3 at 350 kc.

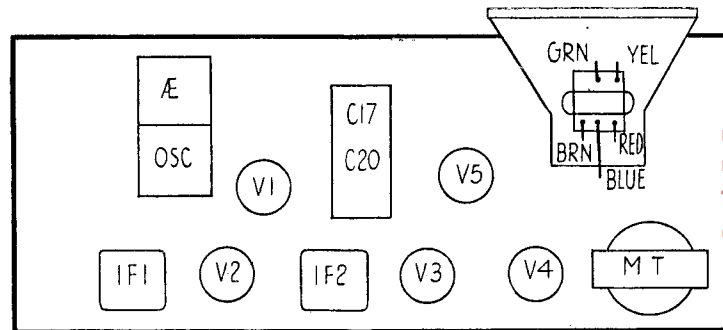
**S.W. BAND:** Inject to aerial through 400 ohms. Adjust T4 and T1 at 15 mc. (20 m.).

### RESISTANCES

R	Ohms	R	Ohms
1	10,000	12	500,000
2	2,000	13	50,000
3	20,000	14	150,000
4	500,000	15	7,000
5	25,000	16	500,000
6	50,000	17	500,000
7	150	18	500,000
8	50,000	19	400
9	300	V.C.	500,000
10	300	T.C.	50,000
11	50,000	Field	1,200

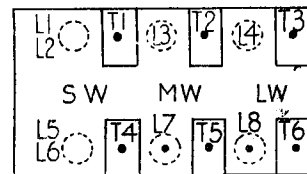
### CONDENSERS

C	Mfds.	C	Mfds.
1	.005	14	.01
2	.004	15	2
3	150 mmfds.	16	25
4	150 mmfds.	17	16
5	.00005	18	.001
6	.1	19	.03
7	.1	20	16
8	.02	21	.1
9	150 mmfds.	22	.0005
10	280 mmfds.	23	.001
11	.000025	24	230 mmfds.
12	.005	25	400 mmfds.
13	25	26	25 mmfds.
14	.02	27	.0003
			(in 831 only).



### VALVE VOLTAGES

V	Type	Anode	Screen	Cathode
1	20D2	280	69	2.1
		58 (OSC Anode)		
2	9D2	280	69	2.5
3	11D5	105	—	1.6
4	7D5	280	290	18
5	R2	324 A.C.	—	370 D.C.



The small diagram above identifies the trimmers on the compact coil unit. The circuit is the same for both table and console models, except for C14 and C27, which are referred to in the text. In the console the speaker is below, instead of on the chassis.

