

# KOLSTER-BRANDES LIMITED

FOOTSCRAY

SIDCUP

KENT

MODEL  
**KR 40T**



## SERVICE DATA

ISSUED JAN., 1954



### DESCRIPTION

**GENERAL.** The K-B Model KR 40T is a 7 valve, 10 waveband tropicalised superheterodyne receiver for operation on AC power supplies of 100-125V and 200-250V at 50-100 cps.

#### **WAVE RANGE**

Medium Wave	- 535-1,600 Kc/s. (560-187 m.)	Bandspread 25M.	- 11-4 -12-06 mc/s.		
Short Wave	- 1-95-6-1 mc/s. (154-492 m.)	"	19M.	- 14-75-15-68 mc/s.	
Bandspread 49M.	- 5-89-6-22 mc/s.	"	16M.	- 17-0 -18-25 mc/s.	
"	42M.	- 6-89-7-4 mc/s.	"	13M.	- 20-6 -22-2 mc/s.
"	31M.	- 9-29-9-82 mc/s.	"	11M.	- 24-7 -26-65 mc/s.

#### **VALVES.**

RF Amplifier	- BRIMAR 6BA6	Output	- BRIMAR 6AU5
Freq. Changer	- BRIMAR 6BE6	Rectifier	- BRIMAR 6X4
IF Amplifier	- BRIMAR 6BA6	Tuning Eye	- BRIMAR 6U5G
LF Amp. & Det.	- BRIMAR 6AT6		

**OUTPUT.** 2.8 watts into an 8" P.M. speaker.

**CONSUMPTION.** 54 watts.

**WEIGHT.** 24 lbs. (11 kilos).

**DIMENSIONS.** Height 15" (38 cms.) width 23" (58 cms.) depth 10" (25 cms.).

**GRAMOPHONE PICK-UP.** Sockets are provided at the back of the chassis for the connection of leads from a gramophone pick-up of either the low voltage moving iron or crystal type. The switching of radio to gram is made by the milled screw situated between the sockets. For radio screw clockwise, for gramophone unscrew anti-clockwise a few turns. The tone and volume controls operate for both radio and gram positions.

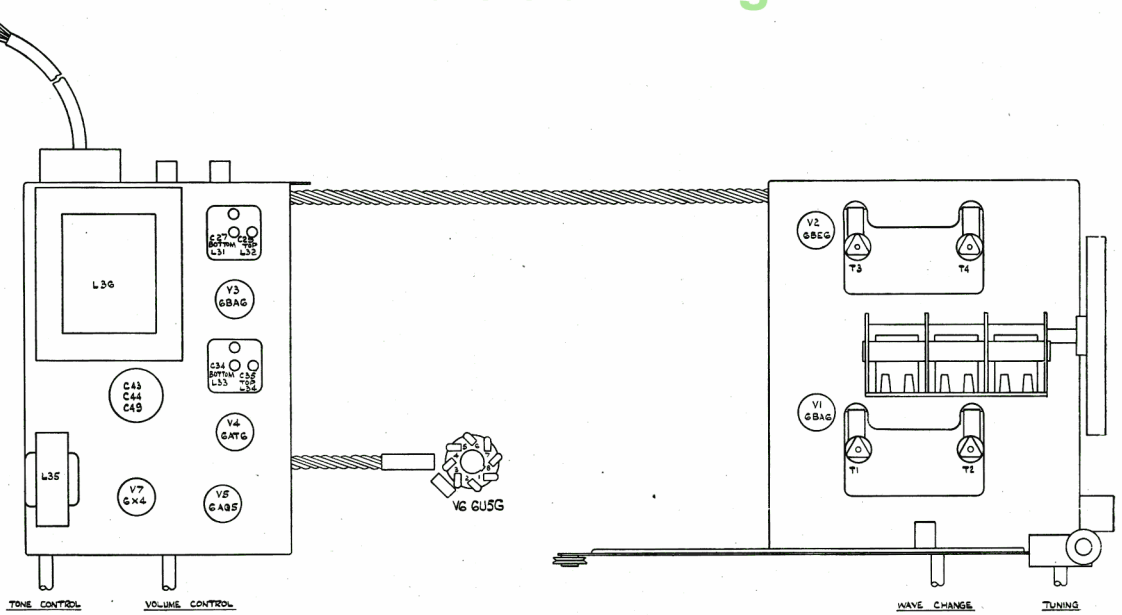
**EXTENSION LOUDSPEAKER.** Sockets are provided for an external speaker of 2-4 ohms impedance, a milled screw is provided between the sockets in order to silence internal speaker as required.

### REMOVAL OF CHASSIS

Remove the four knobs by pulling forward. Detach the Tuning Drive Cord from the tuning pointer and backplate cord assembly. Remove the four chassis fixing screws from the underside of the cabinet, both sub-chassis may now be withdrawn from cabinet.

GREEN  
 RED  
 BLACK

page TWO

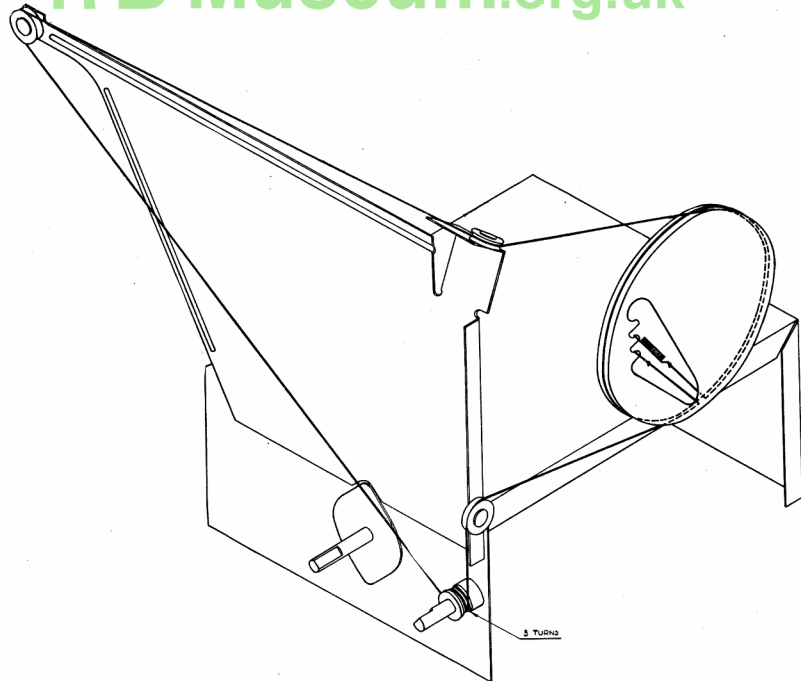


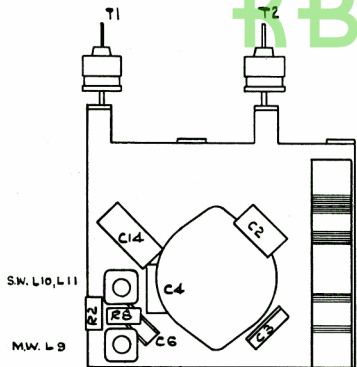




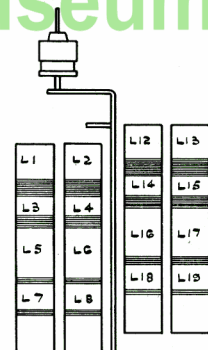
TUNING DRIVE ASSEMBLY

 KB Museum.org.uk

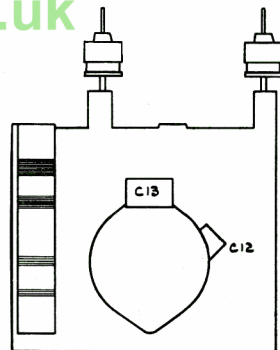




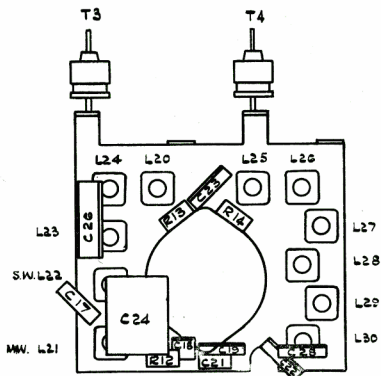
**FRONT (AERIAL)**



**AERIAL/RF COIL UNIT**

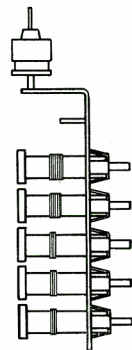


**REAR (RF)**



**FRONT**

**OSCILLATOR COIL UNIT**



**SIDE**

# ALIGNMENT CHART FOR KR 40T

\*Operations MUST be carried out in the order indicated.

* Operation	Alignment of	Connect Signal Generator to	Inject Signal Via	Adjust Input Signal to	Set Wave Band Switch to	Set Tuning Pointer to	To be adjusted for maximum output	NOTES
1	I.F.	Mixer Grid	·1 mfd.	422 kc/s	M.W.	Datum	Cores of I.F. Trans. 2nd upper, lower. 1st upper, lower	<p>The tuning pointer should be set to the datum mark with the gang condenser at maximum capacity.</p> <p>The input signal should be progressively reduced as the sensitivity increases with alignment and kept as low as is reasonable.</p> <p>The tuning condenser should be rocked slightly for maximum gain whilst finally adjusting the aerial trimmers.</p> <p>The operations for 2, 3, 4, and 5 should be successively repeated until scale accuracy and maximum sensitivity have been attained.</p>
2	M.W.	Aerial Socket	Standard Dummy Aer.	600 kc/s	"	600 kc/s	Osc. Coil L21	
3	"	"	"	1,400 kc/s	"	1,400 kc/s	Osc. & Aerial Trimmers T3 & T1	
4	S.W.	"	"	2·5 mc/s	S.W.	2·5 mc/s	Osc. Core L22	
5	"	"	"	6·0 mc/s	"	6·0 mc/s	Osc. & Aerial Trimmers T4 & T2	
6	"	"	"	6·1 mc/s	49 M.	6·1 mc/s	Osc. Core L23	
7	"	"	"	7·2 mc/s	42 M.	7·2 mc/s	Osc. Core L24	
8	"	"	"	9·6 mc/s	31 M.	9·6 mc/s	Osc. Core L25	
9	"	"	"	11·8 mc/s	25 M.	11·8 mc/s	Osc. Core L26	
10	"	"	"	15·3 mc/s	19 M.	15·3 mc/s	Osc. Core L27	
11	"	"	"	17·8 mc/s	16 M.	17·8 mc/s	Osc. Core L28	
12	"	"	"	21·6 mc/s	13 M.	21·6 mc/s	Osc. Core L29	
13	"	"	"	26·0 mc/s	11 M.	26·0 mc/s	Osc. Core L30	

## VOLTAGE CHART KR 40T

Mains Input 240 v. in 240 v. Tap Aerial and Earth Disconnected		Band switch M.W. Pointer at Datum				Volume Control at Minimum Readings approximate				
Valve	Function	Volts measured between SOCKET and CHASSIS								
		1	2	3	4	5	6	7	8	TOP CAP
V1 6BA6	R.F. Amplifier	0	0·6	6·3 AC	0	105	86	0·6	—	—
V2 6BE6	Oscillator Mixer	N	0	6·3 AC	0	190	75	N	—	—
V3 6BA6	I.F.	0	0·6	6·3 AC	0	175	88	0·6	—	—
V4 6AT6	L.F.	N	0	6·3 AC	0	N	N	56	—	—
V5 6AQ5	Output	0	8·3	6·3 AC	0	213	187	0	—	—
V6 6U5G	Magic Eye	—	6·3 AC	30	192	0	—	0	0	—
V7 6X4	Rectifier	206	—	6·3 AC	0	204 AC	206 AC	219	—	—
Volts across 1st Electrolytic							C49		219	
" " 2nd "							C44		192	
" " 3rd "							C43		187	
" " Smoothing Resistors							R28, 27		27, 5	
Total Mains Current							—		190 ma	
" H.T. "							—		64 ma	

### IMPORTANT

This Receiver uses BRIMAR Valves and was specifically designed around them.

Its performance may be impaired unless BRIMAR Valves of the correct types are used when replacements are needed.



MODEL  
KR 40T

# SPARES LIST KR40T

ALWAYS QUOTE PART No. WHEN ORDERING SPARES

Component	Colour Code	Circuit Ref.	Part No.	Exp. Price List	Component	Colour Code	Circuit Ref.	Part No.	Exp. Price List
Cabinet ... ..	...	...	295/220	66	Dial Lampholder ... ..	...	...	295/193	6d.
Cabinet Back ... ..	...	...	295/222	2/9	Electrolytic 32+32mfd ... ..	...	...	KEM68	4/3
<b>COILS —</b>					Gang Condenser ... ..	...	...	295/210	11/6
M.W. Aerial ... ..	Orange, Blue, Blue	L9	295/17	1/6	Knob ... ..	...	...	290/260/4	4d.
M.W. Oscillator ... ..	Brown, Brown	L21	210/18	1/-	Knob (W/C) ... ..	...	...	290/260/5	6d.
S.W. Cover Aerial ... ..	Orange, Green, Yellow	L10, 11	295/19	1/6	Knob Escutcheons:—	...	...	...	...
S.W. Cover Oscillator	Red, Red, Orange	L22	211/20	1/-	Off-Tone ... ..	...	...	295/192	6d.
49M Oscillator ... ..	Brown, Yellow	L23	210/21	1/-	Volume ... ..	...	...	295/192/1	6d.
42M Oscillator ... ..	Brown, Green	L24	210/22	1/-	Wavechange ... ..	...	...	295/192/2	6d.
31M Oscillator ... ..	Brown, Blue	L25	210/23	1/-	Tuning ... ..	...	...	295/192/3	6d.
25M Oscillator ... ..	Brown, Violet	L26	210/24	1/-	Pointer Assy. ... ..	...	...	295/129	9d.
19M Oscillator ... ..	Brown, White	L27	210/25	1/-	Speaker ... ..	...	...	295/251	15/-
16M Oscillator ... ..	Yellow, Yellow	L28	210/26	1/-	Scale... ..	...	...	295/200	7/6
13M Oscillator ... ..	Yellow, Green	L29	210/27	1/-	Scale Backplate Assy. ... ..	...	...	295/12	4/6
11M Oscillator ... ..	Orange, Blue	L30	295/28	1/-	Scale Backplate Cord ... ..	...	...	295/194	3d.
Bandsread Aerial ... ..	Orange, Green, Blue	L1, 3, 5, 7	295/30	2/-	Switch Wafer ... ..	...	S4	295/203	1/9
Bandsread Aerial ... ..	Orange, Green, Violet	L2, 4, 6, 8	295/31	2/-	Switch Wafer ... ..	...	S1	295/204	1/6
Bandsread RF ... ..	Orange, Green, White	L12, 14, 16, 18	295/32	2/-	Switch Wafer ... ..	...	S3, 5	210/204	2/3
Bandsread RF ... ..	Orange, Blue, Green	L13, 15, 17, 19	295/33	2/-	Switch Wafer ... ..	...	S2	295/203/1	1/9
Cathode Choke ... ..	Yellow, Violet	L20	210/29	1/-	Switch Wafer ... ..	...	S6	210/203	2/3
Drive Cord ... ..	...	...	210/143/1	6d.	Switch Spindle ... ..	...	...	210/202/2	2/-
Drive Drum ... ..	...	...	73/146	1/3	Trimmer ... ..	...	...	89006/A	1/3
Dust Cores ... ..	...	...	160/226	3d.	Tone Control ... ..	...	...	80670/2	2/-
Dial Lamps ... ..	...	...	160/232/1	5d.	<b>TRANSFORMERS:—</b>				
					Mains ... ..	Red, Orange, Green	...	295/85	17/6
					Output ... ..	Red, Yellow, Red	...	297/95/T1	5/3
					I.F. ... ..	Blue, White	...	214/52	5/-
					Volume Control ... ..	...	...	80627/5	2/9

Prices are subject to alteration without notice

COIL & TRANSFORMER DATA			KR 40T		
CIRCUIT REF. No.	FUNCTION	RESISTANCE OHMS	CIRCUIT REF. No.	FUNCTION	RESISTANCE OHMS
L1	49M BANDSPREAD AERIAL COIL	LESS THAN 1	L23	49M BANDSPREAD OSCILLATOR COIL	LESS THAN 1
L2	42M " " " "	"	L24	42M " " " "	"
L3	31M " " " "	"	L25	31M " " " "	"
L4	25M " " " "	"	L26	25M " " " "	"
L5	19M " " " "	"	L27	19M " " " "	"
L6	16M " " " "	"	L28	16M " " " "	"
L7	13M " " " "	"	L29	13M " " " "	"
L8	11M " " " "	"	L30	11M " " " "	"
L9	M.W. AERIAL COIL	"	L31	1st I.F. PRIMARY	5
L10	S.W. COVERAGE COUPLING	LESS THAN 1	L32	1st I.F. SECONDARY	5
L11	S.W. COVERAGE TUNED	1.5	L33	2nd I.F. PRIMARY	5
L12	49M BANDSPREAD R.F. COIL	LESS THAN 1	L34	2nd I.F. SECONDARY	5
L13	42M " " " "	"	L35	OUTPUT TRANSFORMER PRIMARY	510
L14	31M " " " "	"		OUTPUT TRANSFORMER PRIMARY TAP TO FINISH	1.5
L15	25M " " " "	"		OUTPUT TRANSFORMER SECONDARY	LESS THAN 1
L16	19M " " " "	"			
L17	16M " " " "	"	L36	MAINS TRANSFORMER PRIMARY START TO 240V TAP	45
L18	13M " " " "	"		MAINS TRANSFORMER PRIMARY 120V TAP	11
L19	11M " " " "	"		MAINS TRANSFORMER SECONDARY H.T.	456
L20	CATHODE CHOKE	10		MAINS TRANSFORMER SECONDARY L.T.	4.4
L21	M.W. OSCILLATOR COIL	4			
L22	S.W. COVERAGE COIL	1.2			