



# SERVICE MANUAL

MODEL

**TP II**

“BIKINI”

ISSUED: DECEMBER, 1961

**KOLSTER-BRANDES LIMITED**  
FOOTSCRAY                      SIDCUP                      KENT

SERVICE DEPOTS

41 BENT STREET,  
CHEETHAM, MANCHESTER

Telephone: BLAckfriars 1751 (3 lines)

FOOTSCRAY,  
SIDCUP, KENT

FOOTscray 7733 (6 lines)

87 McALPINE STREET,  
GLASGOW

CENtral 1779



# Service Data

## for TP11 (BIKINI)

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### GENERAL DESCRIPTION

A personal portable receiver incorporating six transistors and one germanium Diode giving complete coverage on Long and Medium Wavebands.

The cabinet is moulded and supplied in three colours. Tuning and volume controls are rim edge type and a socket is provided for attaching an ear-piece.

The earpiece and leather carrying case are optional extras.

### DIMENSIONS

Width	Height	Depth	Weight (incl. battery)
5 $\frac{1}{4}$ "	2 $\frac{7}{8}$ "	1 $\frac{3}{8}$ "	11 $\frac{1}{2}$ ozs.
(13.4 cms)	(7.2 cms)	(3.6 cms)	(325 grs.)

### BATTERY

One 9 volt	Eveready Type	PP3
	Drydex Type	DT3
	Vidor Type	T6003

### TRANSISTOR COMPLEMENT

Circuit Ref.	Function	Make	Type	Make	Type
TX1	Oscillator Mixer	G.E.C.	GET874	TEXAS	2G344A
TX2	1st I.F. Amplifier	G.E.C.	GET873	TEXAS	2G345A
TX3	2nd I.F. Amplifier	G.E.C.	GET873	TEXAS	2G345B
TX4	Audio Driver	G.E.C.	GET113	TEXAS	
TX5 & TX6	Push-Pull Output	G.E.C.	GET113	TEXAS	

(matched pair)

### DIODE DETECTOR

BTH Type CG64H  
or G.E.C. Type GEX12

### POWER OUTPUT

150 Mw for 10% distortion

### POWER CONSUMPTION

On Loudspeaker	Standing Current	9 mA
	50 mW Output	24 mA
	150 mW Output	36 mA
	Average Listening Level	20 mA
On Earpiece	Average Listening Level	5 mA

**CIRCUIT DESCRIPTION**

The TP11 is a Six Transistor Superhet Receiver. Medium and Long Wave aerial coils are mounted on a Ferrox Cube Rod, and coupled to the base of the mixer transistor TX1. The oscillator circuit is connected between the collector and emitter of TX1.

Two stages of I.F. amplification are employed, TX2 and TX3, across each of which is a neutralizing condenser.

A.G.C. voltage is obtained from the detector diode, CG64H and applied to TX2.

The volume control, R12, also functions as the diode load which provides audio frequency to the driver transistor TX4.

The collector of TX4 feeds the phasing transformer which supplies the push-pull output transistors, TX5 & TX6. The loudspeaker which has a 40Ω speech coil is connected across the secondary of the output transformer. This winding also supplies feed back to the emitters of the output transistors.

When the earpiece is plugged in the output stages are disconnected, the earpiece is then driven from the output of the driver transistor, TX4, thus considerably reducing battery consumption.

**Removal of Chassis from Cabinet**

1. Slacken cabinet back retaining screw.
2. Remove cabinet back.
3. Remove three chassis fixing screws, located as follows :
  - A. One immediately below centre of rod aerial.
  - B. One immediately below volume control.
  - C. One situated  $\frac{3}{4}$ " from bottom left hand corner of chassis.  
*Be sure not to disturb the screw coloured red at top left hand corner of chassis.*
  - D. Gently remove chassis from cabinet at the same time detaching pointer drive from periphery of disc mounted on gang condenser shaft and remove the wave change indicator slide.

**To Replace Chassis**

Reverse order of procedure given above.

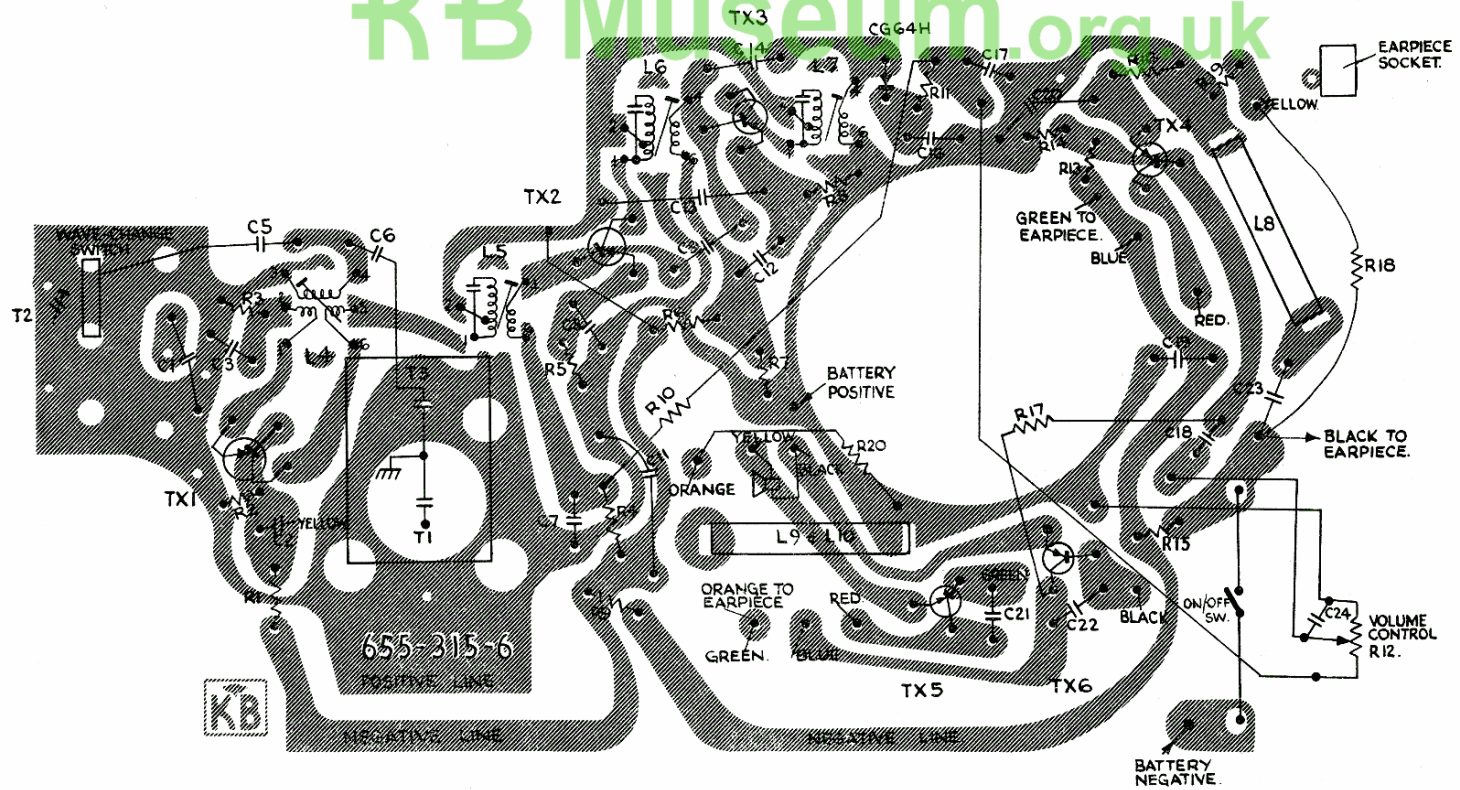
**WARNING**

**The loudspeaker is not secured to either chassis or cabinet, being only a push fit through the circular cut out in the printed board.**

**Care must be exercised to prevent the speaker falling free of chassis, as this might result in fracture of connecting leads and possible damage to speaker.**

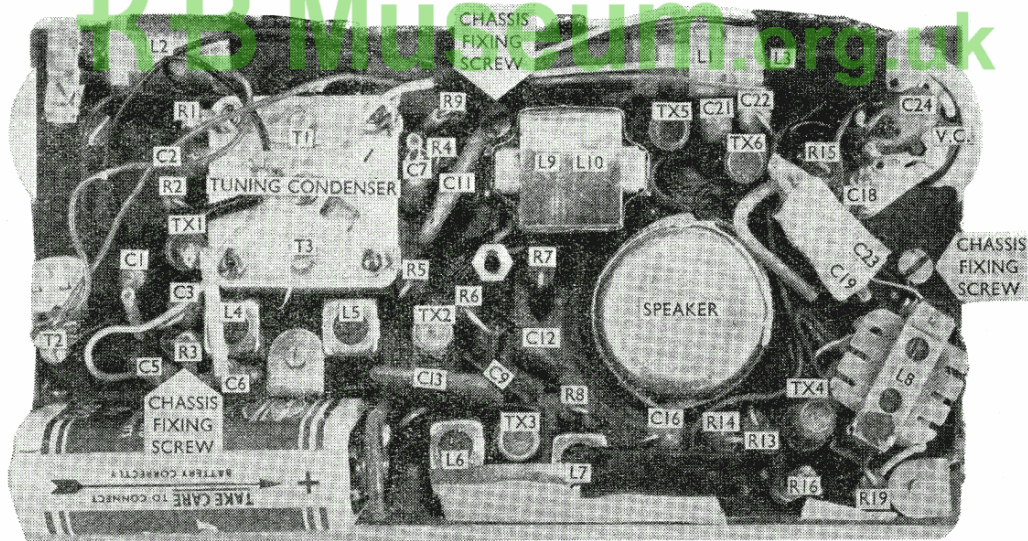
# PRINTED CIRCUIT AND SCHEMATIC

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TOP CHASSIS LAYOUT



SPARE PARTS LIST TP11

Prices are subject to alteration without notice.

COMPONENT	CIRCUIT REFERENCE	PART No.	PRICE
<b>BATTERY LEAD ASSEMBLY</b>		655/135	
<b>CABINET:</b>			
Front, Blue		655/146	14 0
" Red		655/146/1	14 0
" Yellow		655/146/2	14 0
Back, Blue		655/150	10 9
" Red		655/150/1	10 9
" Yellow		655/150/2	10 9
<b>COILS:</b>			
Rod Aerial Assembly		655/30	12 9
Oscillator Coil		655/27	8 9
1st & 2nd I.F. Coils		655/50	10 9
3rd I.F. Coil		655/52	10 9
<b>CONDENSERS:</b>			
Tuning Condenser		655/210	20 6
30µF 6v.	C20	KEM167/S	2 6
30µF 12v.	C19, C23	KEM166/S	2 6
8µF 6v.	C7, C18	KEM165/S	2 6
<b>DRIVE DRUM ASSY.</b>		655/165	2 3
<b>JACK SOCKET</b>		13/52	3 0
<b>KNOB (TUNING)</b>		655/185	1 0
<b>POINTER ASSEMBLY</b>		655/130	6
<b>SPEAKER</b>		655/250	19 9+
			10 8 P.T.
<b>SWITCH, WAVE CHANGE</b>		655/234	4 6
<b>SWITCH, WAVE CHANGE INDICATOR PANEL</b>		655/245	6
<b>TRANSFORMERS:</b>			
Driver		655/83	9 6
Output		655/95	10 9
<b>TRIMMER</b>		655/240	1 6
<b>VOLUME CONTROL ON/OFF</b>		9/51	13 6
<b>MISCELLANEOUS:</b>			
Cord Sling		655/127	2 3
Earpiece Assembly		655/154	17 6
Pouch		655/255	3 9

CIRCUIT DIAGRAM

TX2 GET 873 TX3 GET 873  
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TX1  
GET 874

TX4  
GET 113

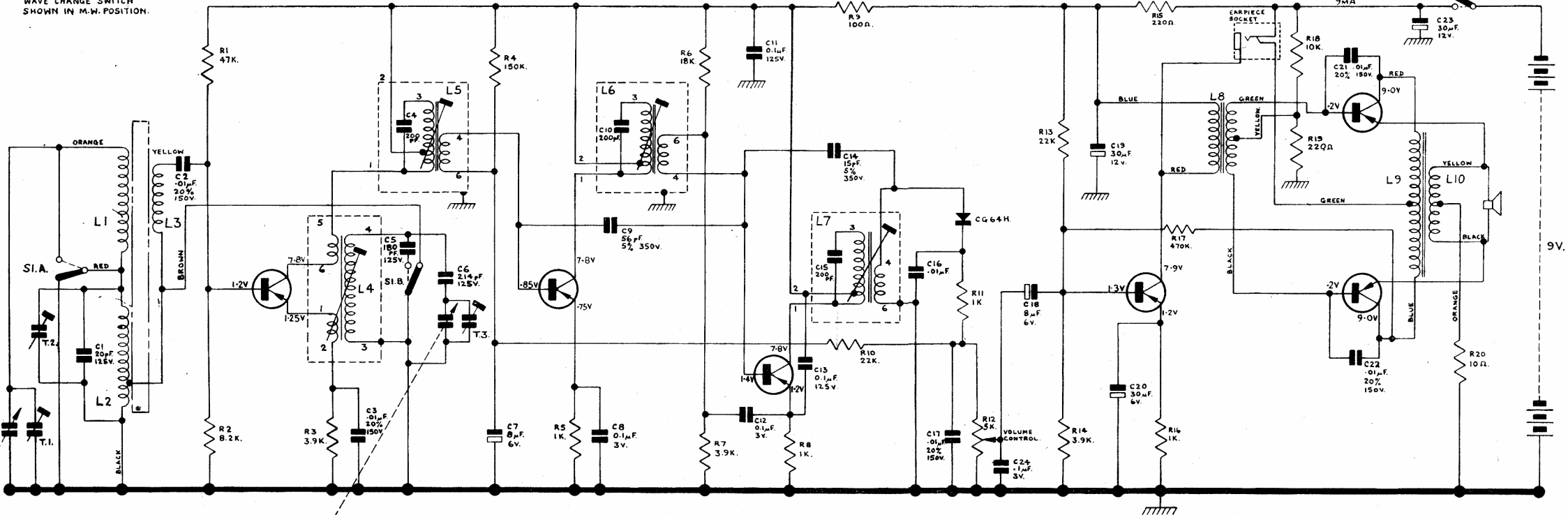
TX5 & 6  
GET 113

TP11

MATCHED PAIR.

WAVE CHANGE SWITCH SHOWN IN M.W. POSITION.

ON/OFF SWITCH GANGED TO VOLUME CONTROL.



ALL RESISTORS  $\pm 10\%$  1/2 WATT EXCEPT WHERE STATED.

I.F. 470 Kc/s.

TEXAS TRANSISTORS MAY BE USED AS ALTERNATIVES TO G.E.C.

Function	Type
MIXER	2G344A
1st I.F.	2G345A
2nd I.F.	2G345B
DRIVER	2G374A
OUTPUT	2G381 (matched pair)