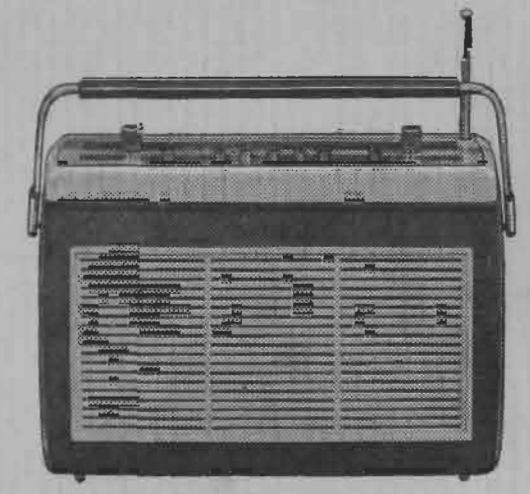


RYLAND HUNTLEY  
*Radiosange*  
11, OLD BOND STREET,  
BATH. — Telephone 4212

# beolit 600

## SERVICE MANUAL



8-66  
PRINTED IN DENMARK  
1-3 RESORSE-TRYCKERIET • STRUER

AS BANG & OLUFSEN PRODUKTIONSSKAB

STRUER-DENMARK Telephone (978) 5 11 22\* - Telex 4289 - Cable Address Bangoluf



## TECHNICAL DATA

Aerial, AM: Ferrite aerial for LW, MW, and FW. Provision for connection of auto aerial; ferrite aerial may be cut out on LW and MW by means of pushbutton.

Aerial, FM: One telescopic whip; provision for connection of auto aerial.  
Auto mounting bracket: Type 920 H 9.

Tape recorder connection: See page 13.

Wave bands,

Model TR 53:	LW 940 - 2040 m,	320 - 147 kc/s
	MW 187 - 545 m,	1600 - 550 kc/s
	SW 48 - 50 m,	6.2 - 5.95 Mc/s
	FM	87 - 100 Mc/s

Model TR 52:	LW 940 - 2040 m,	320 - 147 kc/s
	MW 200 - 545 m,	1500 - 550 kc/s
	FW 75 - 206 m,	4 - 1.45 Mc/s
	FM	87 - 100 Mc/s

External-speaker impedance: 3.5Ω. Jack plug cuts out built-in speaker when inserted.

Dry cells: Six 1.5-volt standard dry cells (American standard: Type D).

Battery drain: AM, approx. 25 mA at low volume, approx. 45 mA at 50 mW output.

Gramophone: See page 13.

Dimensions: 12<sup>3</sup>/<sub>4</sub> in. wide, 9<sup>3</sup>/<sub>4</sub> in. high, 4<sup>1</sup>/<sub>4</sub> in. deep  
(325 × 248 × 108 mm).

Radiator, Model TR 52: AM-FM tuning, battery checking.

Power output: 1 Watt max.

Weight: 11.4 lbs (3.68 kg).

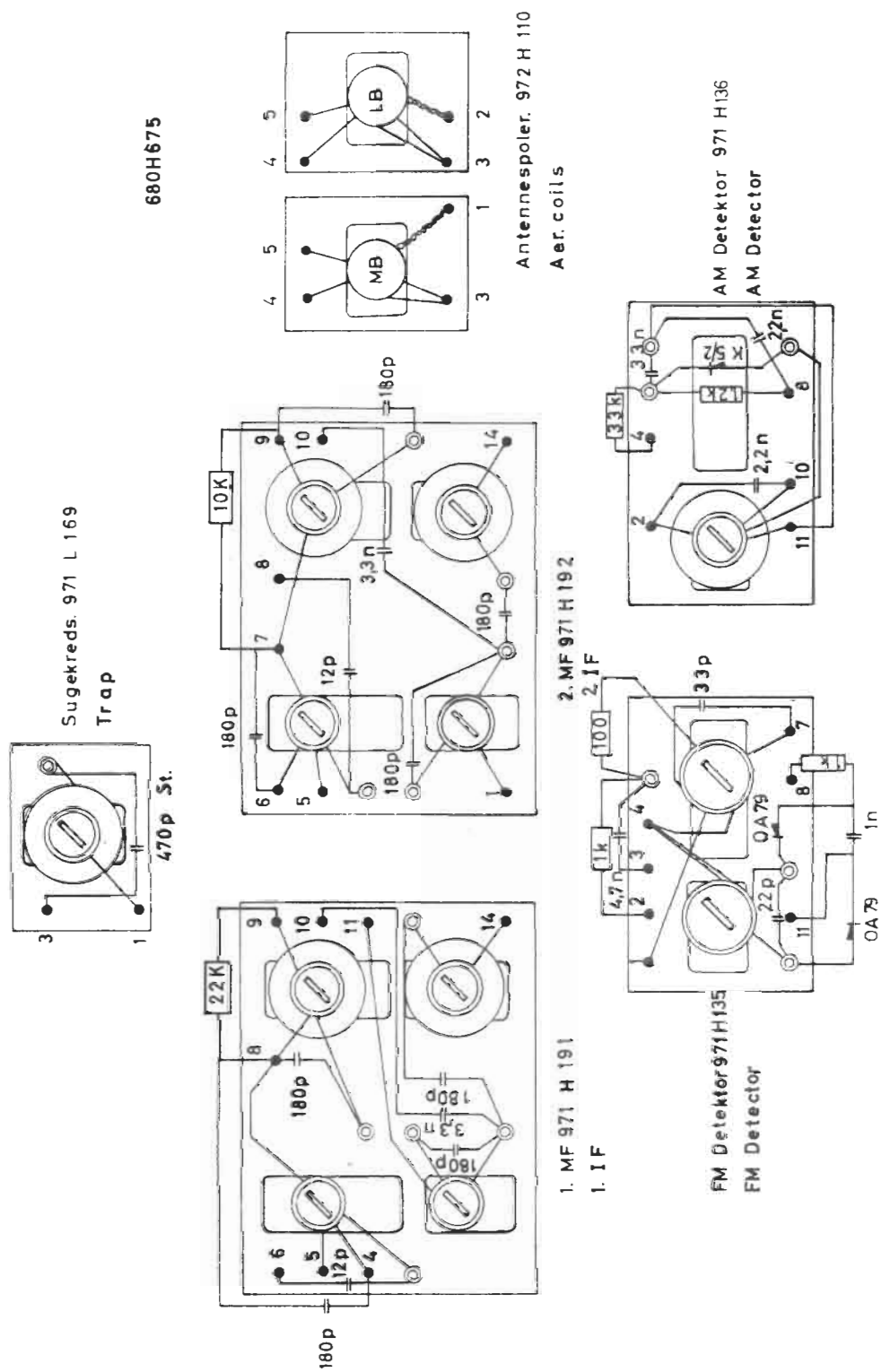








WIRING DIAGRAM FOR IF TRANSFORMERS



NOTES:

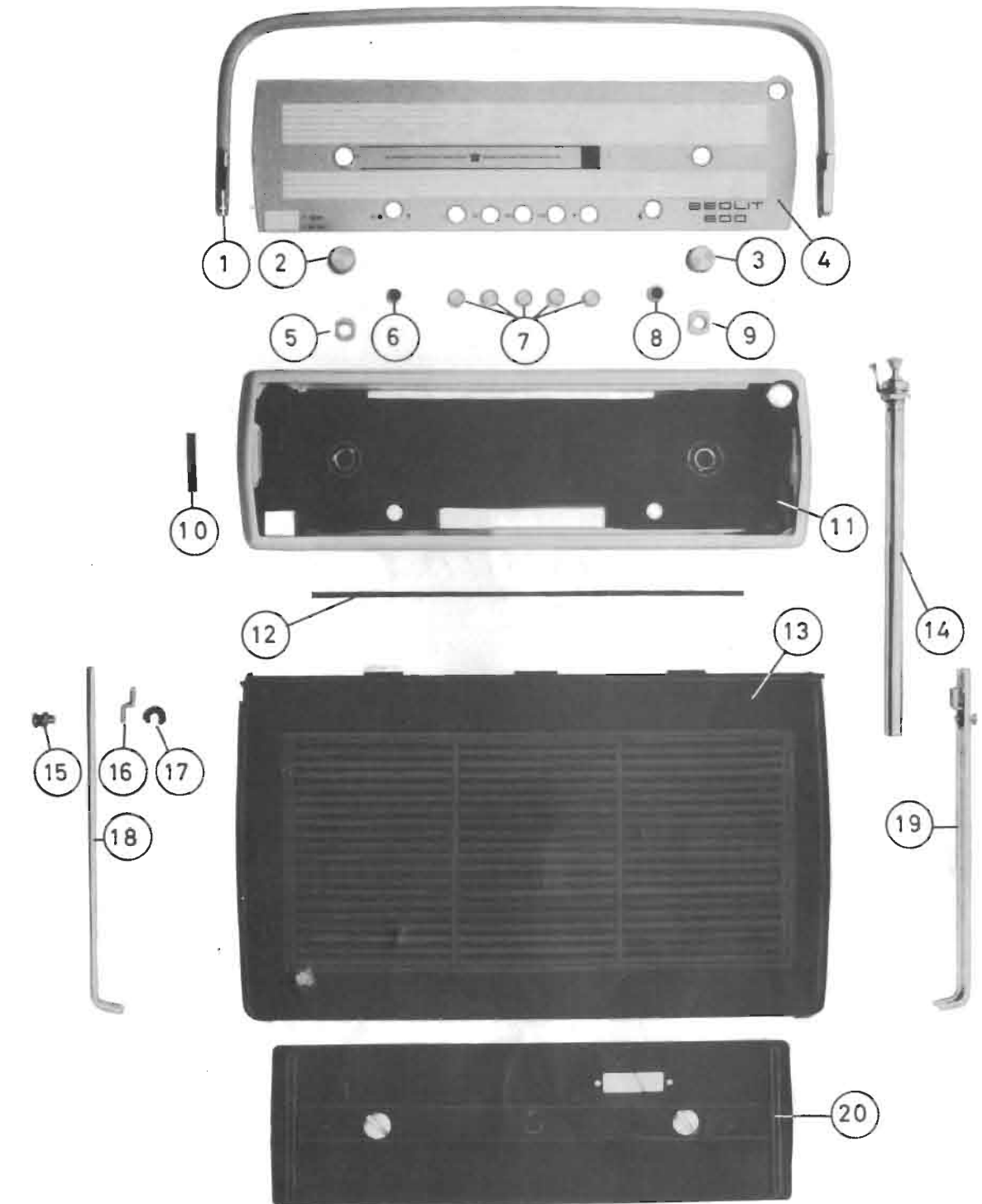
A series of horizontal lines for handwritten notes, spanning the width of the page.



PARTS LIST,

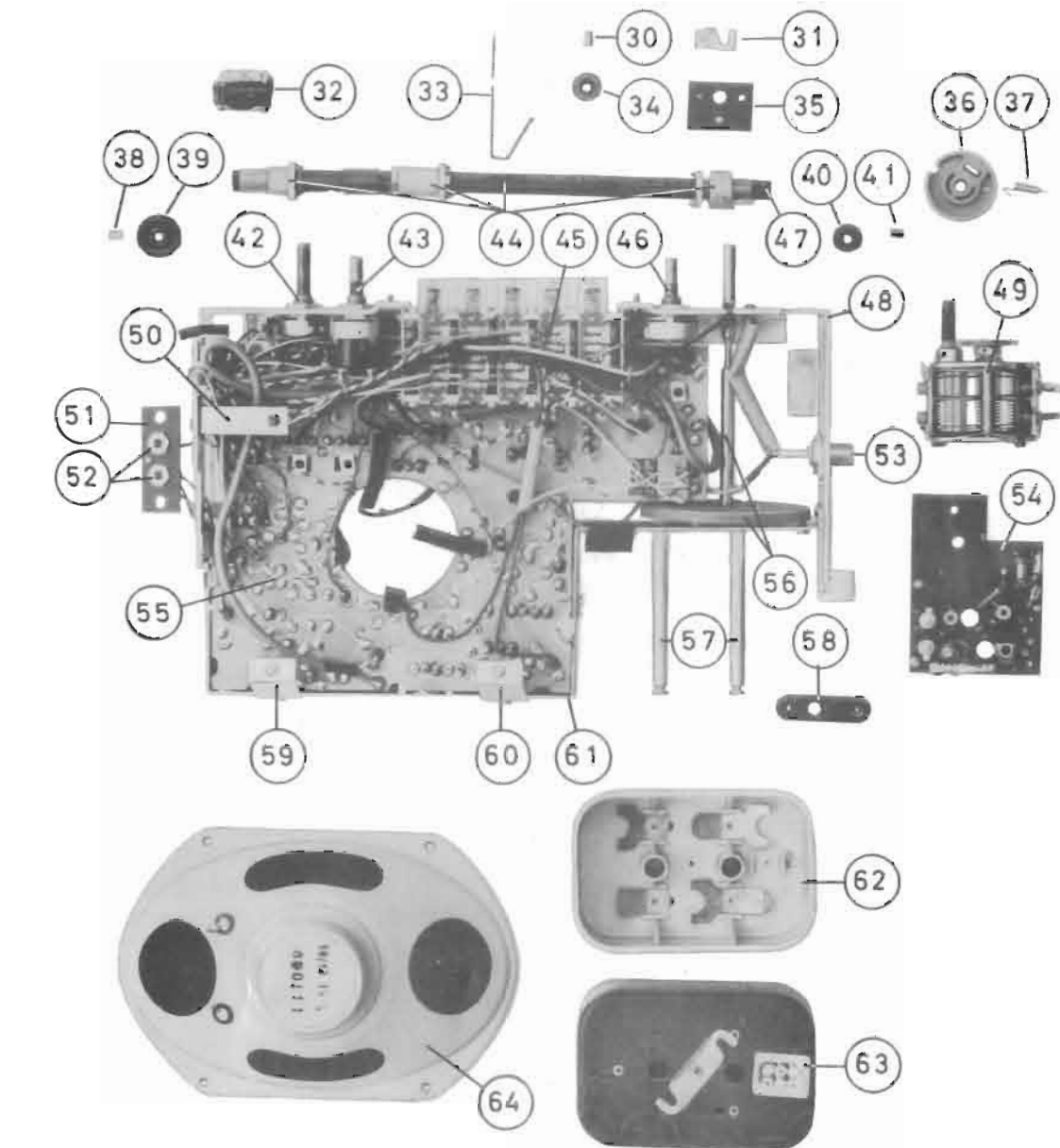
BEOLIT 600 TR 52 and BEOLIT 600 TR 53

1	Carrying handle, TR 53.	760 H 482
*	- - - TR 52.	760 H 397
*2	Knob, volume	928 L 134
*3	Knob, tuning	322 L 159
4	Dial, TR 53.	566 F 163
*	- TR 52.	566 F 160
*5	Bushing	415 L 76
*6	Knob, on/off switch and <del>volume</del> <sup>BASS</sup> control	760 L 495
*7	Buttons for pushbutton switch	322 L 162
*8	Knob, treble	760 L 496
9	Bushing	415 L 76
10	Moulding	280 L 429
*11	Top	840 F 475
12	Moulding	280 L 428
*13	Cabinet half section, TR 53	
	dark grey, speaker grille light grey	690 H 98
	light grey,	690 H 99
	blue,	690 H 100
	black,	690 H 101
	Cabinet half section, TR 52	
	blue, one-colour	690 H 61
	yellow,	690 H 62
	green,	690 H 63
	red,	690 H 64
	light grey,	690 H 65
	dark grey,	690 H 66
	black,	690 H 56
*14	Telescopic whip	2033-3
*15	Pin	469 L 16
*16	Bracket	248 L 521
*17	Seeger circlip	SL 5
18	Ornamental strip, TR 53(Gram. -Speaker)	280 H 336
*	- - TR 52(Tape rec. -Speaker)	280 H 325
*19	- - TR 52 and TR 53(Aer.)	280 H 326
*20	Bottom complete,	
	blue	690 H 67
	yellow	690 H 68
	green	690 H 69
	red	690 H 70
	light grey	690 H 71
	dark grey	690 H 72
	black	690 H 60



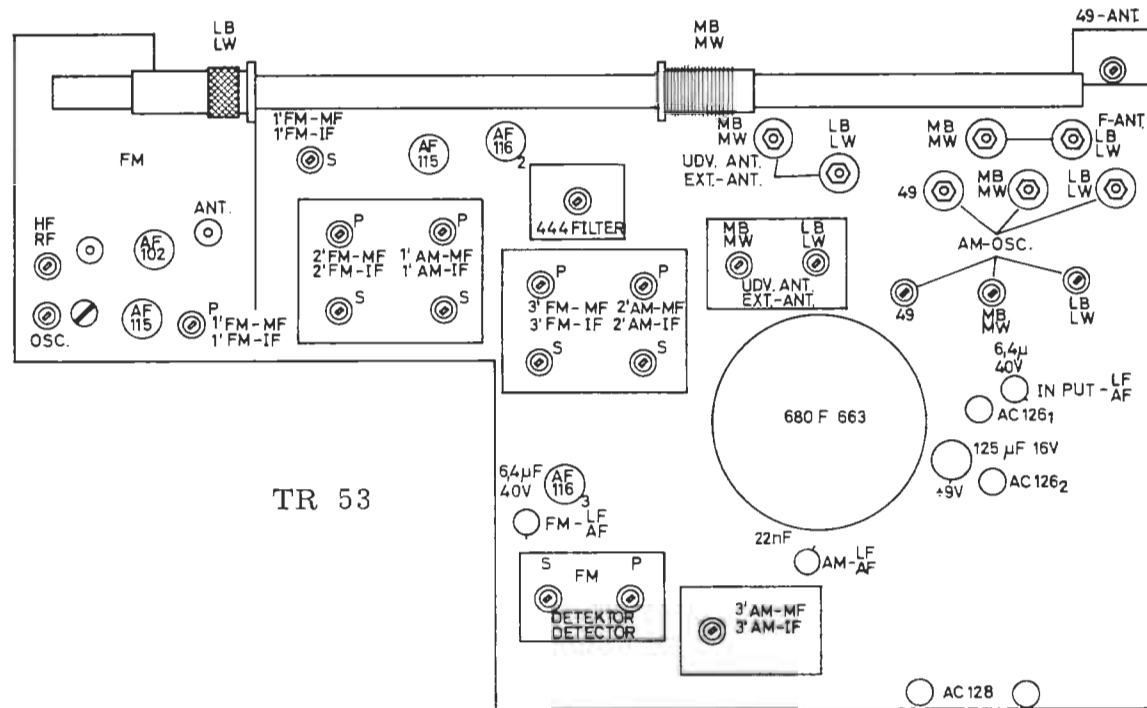


30	Bushing.....	410 L 165
31	Lock piece.....	586 L 51
32	Radicator.....	858 H 31
33	Dial pointer.....	760 L 455
34	Cord pulley.....	10163-06
35	Bearing.....	530 L 444
36	Dial drive wheel.....	312 H 39
37	Spring.....	330 L 194
38	Bushing.....	410 L 165
39	Cord pulley.....	10343-05
40	Cord pulley.....	10163-06
41	Bushing.....	410 L 165
*42	Potentiometer, volume.....	854 L 794
*43	Potentiometer, bass.....	854 L 796
44	Ferrite rod, complete with coils, TR 53 ..	601 H 15
*	- - - - - TR 52 ..	601 H 6
*45	Pushbutton switch assembly.....	760 L 460
*46	Potentiometer, treble.....	854 L 795
*47	Ferrite rod.....	760 L 477
*	Holder for ferrite rod.....	530 L 433
48	Chassis bracket, TR 53 ..	504 C 176
	- - - - - TR 52 ..	504 C 213
*49	Tuning capacitor.....	840 L 325
50	Bracket.....	245 L 73
51	Mounting plate for jacks.....	592 L 52
52	Jacks.....	81/123
*53	Aerial jack.....	840 L 331
*54	PW unit, FM tuner.....	915 H 21
	Transistor, RF.....	AF 102
	- mixer.....	AF 115
55	PW unit, IF and AF, TR 53.....	915 H 157
	- - - - - TR 52.....	915 H 53
	Diodes.....	Four OA 79's
	Socket for electrolytic capacitor.....	506 H 101
	IF transformers, 1st IF.....	971 H 191
	2nd IF.....	971 H 192
	AM det.....	971 H 136
	FM det.....	971 H 135
	Potentiometer.....	2.2KΩ P4
	Potentiometer (TR 52).....	500Ω S 50

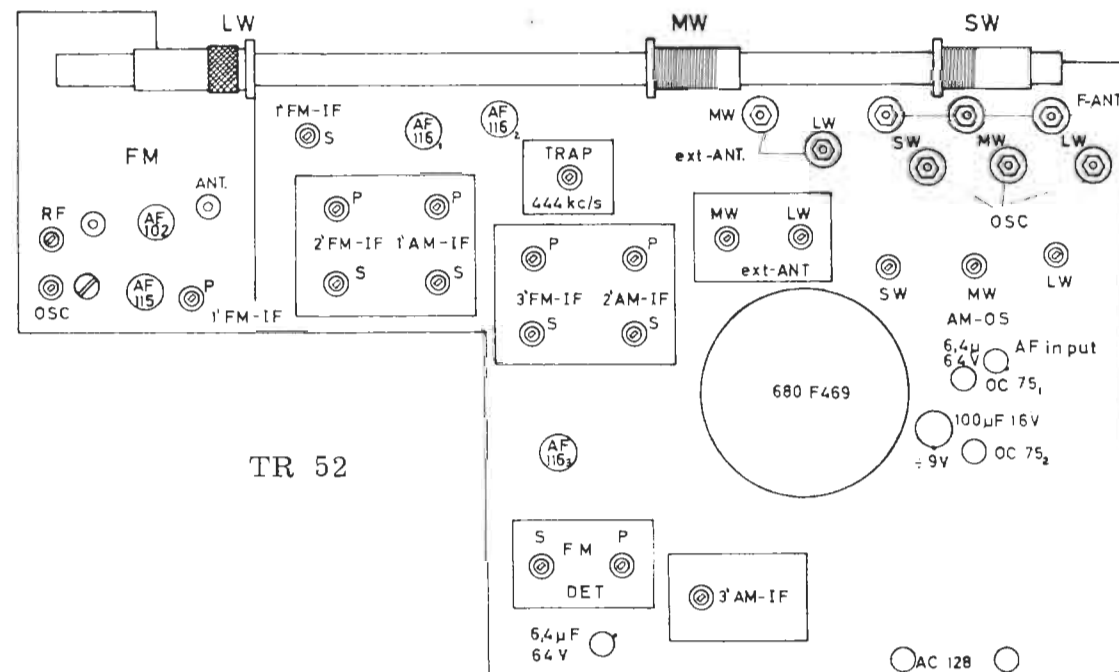




AM ALIGNMENT AND SENSITIVITIES



TR 53



TR 52

The 444kc/s AM-IF should be aligned with the receiver tuned to the centre of the MW band and the tuning core of the series trap screwed all the way out. Apply the sweep generator signal at point A, through a 0.1µF capacitor. Connect the oscillograph to the top of the potentiometer and adjust the five IF cores for maximum response and symmetrical curve form. Bandwidth should be 5kc/s at 6dB down. Tune the series trap for minimum response.



Points of Alignment

With the tuning capacitor at full capacitance, the pointer should cover the two points at the right-hand side of the dial. Sensitivities on ferrite aerial, measured in a screened room with a frame aerial:

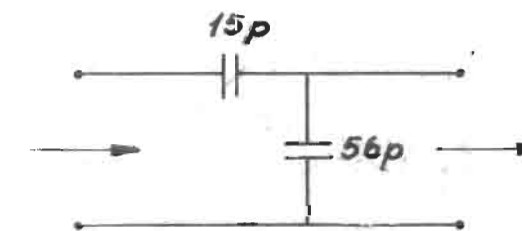
Model TR 53:

LW:	160 kc/s	400µV/m at 50mW;	272 kc/s	315µV/m at 100mW
MW:	584	71 - - 50 -	1484	63 - - 50 -

Model TR 52:

LW:	160 kc/s	315µV/m at 50mW;	272 kc/s	160µV/m at 50mW
MW:	656	100 - - 50 -	1430	63 - - 50 -
FW:	1596	100 - - 50 -	3750	80 - - 50 -

Alignment for external aerial should be performed through a dummy aerial.



Model TR 53:

LW:	160 kc/s	45µV at 50mW;	272 kc/s	125µV at 500mW
MW:	584	35.5 - - 50 -	1484	63 - - 100 -
SW:	6Mc/s	4.5 - - 50 -		

Model TR 52:

LW:	160 kc/s	50µV at 50mW;	272 kc/s	25µV at 50mW
MW:	656	45 - - 50 -	1430	50 - - 50 -

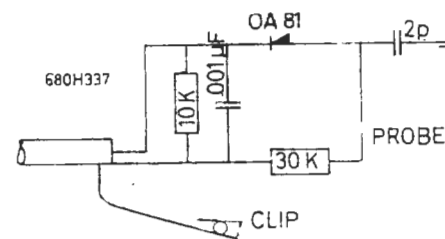
The radicator should be adjusted with new dry cells inserted and with the MW and FW pushbuttons depressed. Adjust the 250Ω potentiometer for maximum radicator reading.





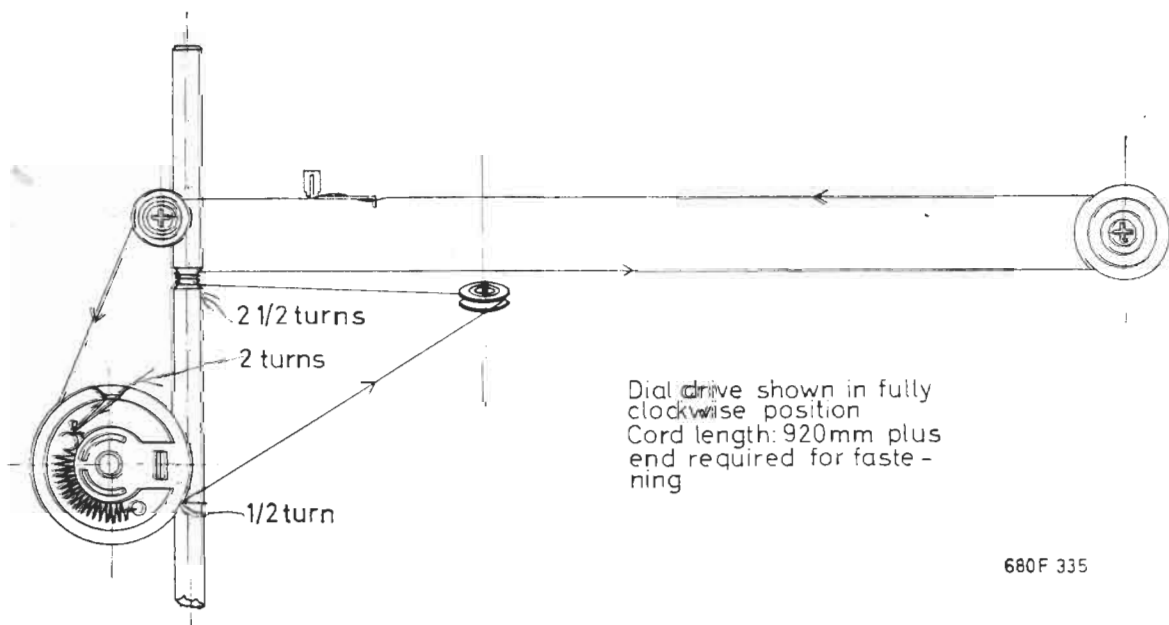
### FM Alignment

Apply a 94 Mc/s sweep signal through the aerial jack and connect the diode probe from the oscillograph at point C (the base of AF116<sub>3</sub>). Adjust the seven IF cores for maximum response and symmetrical curve form. Bandwidth should be 250 kc/s  $\pm$  30 kc/s at 6 dB down. The discriminator curve should be taken off across the 220 pF capacitor numbered 28 in the circuit diagram, without the diode probe, and the last core (the secondary) should be adjusted for symmetrical curve form. The semi-variable 2 K $\Omega$  potentiometer should be adjusted for max. noise suppression. The FM tuner osc. and aerial coils should be adjusted at 90 Mc/s whilst the osc. and aerial trimmers should be adjusted at 99 Mc/s.



Sensitivity: 94 Mc/s: 6  $\mu$ V for 1 volt across the 5  $\mu$ F/70 V capacitor (No. 33). 26 dB signal-to-noise ratio at 4  $\mu$ V EMF.

### DIAL DRIVE



680F 335



### Disassembling the Receiver

1. Remove the carrying handle by applying light pressure in the direction of the arrow A.
2. Take off the bottom. Remove screws marked B at both sides.
3. The sides may now be removed by first shifting them in the direction of the arrow C and then pulling them lightly in the direction of the arrow D.
4. Remove the two cabinet sections by tilting them in the direction of the arrows E.
5. The top is held to the chassis by four screws. These are located at the ends of the ferrite aerial and at the two tone controls.

