

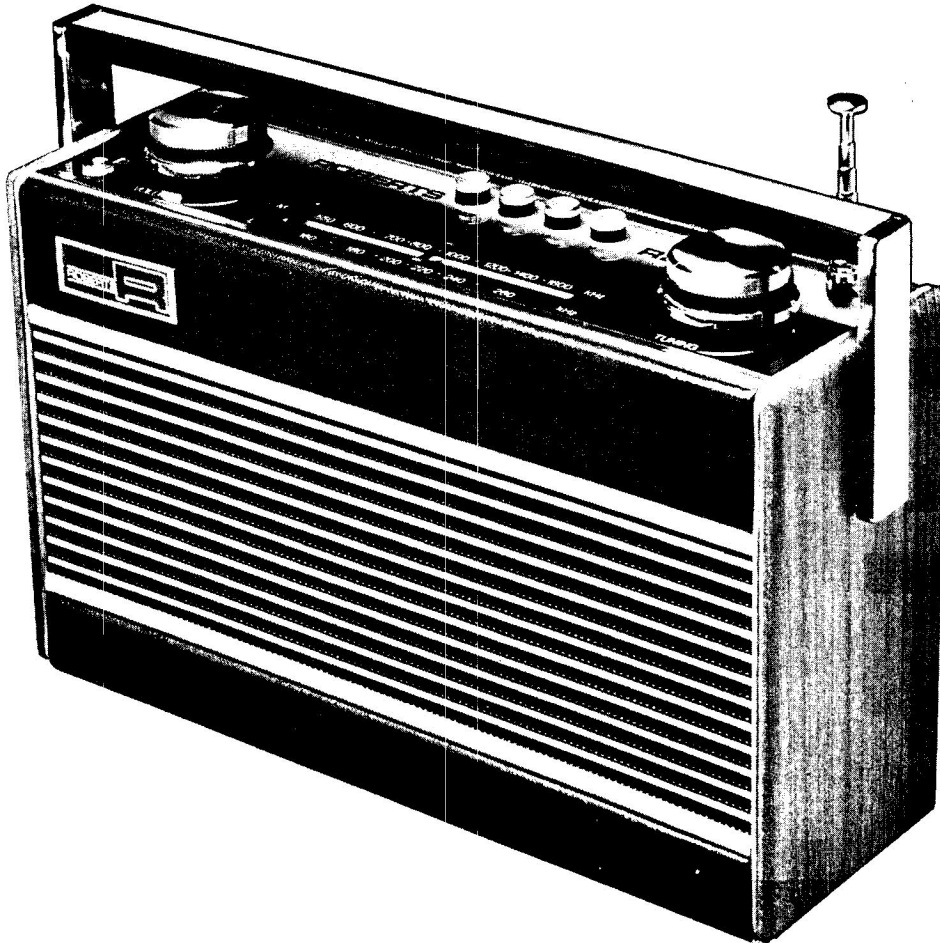


BY APPOINTMENT TO  
HER MAJESTY THE QUEEN  
RADIO MANUFACTURERS  
ROBERTS RADIO CO LTD

# THE ROBERTS R25

FM/AM Mains Battery Portable

## Technical Data



### SPECIFICATION

#### SEMI-CONDUCTORS

- 3 Integrated circuits
- 1 Transistor
- 7 Diodes

#### WAVEBAND COVERAGE

MF 530-1610 kHz  
LF 150-265 kHz  
VHF 88-108 MHz

#### POWER OUTPUT

Battery 1W (THD 10%)  
Mains 2W (THD 10%)

#### LOUDSPEAKER

100mm (4.0") round, 8 ohms impedance

#### BATTERY      MAINS      SUPPLY

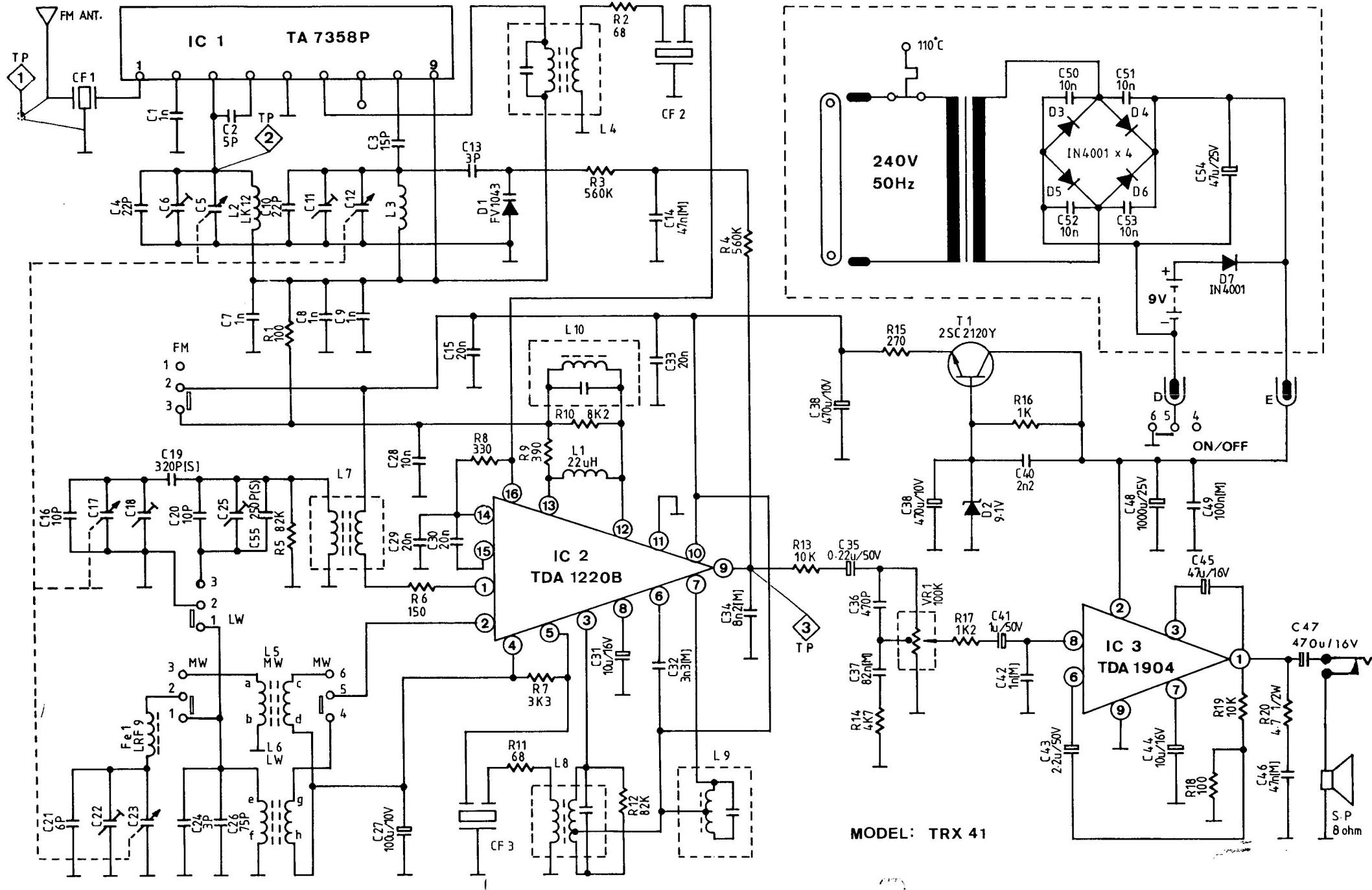
9V PP9 (VT9) type    240V    50 Hz

### DISMANTLING

1. Remove base, quick release fastener and flange head screw, disconnect loudspeaker and power supply.
2. Remove screw retaining telescopic aerial, remove flange head screw at either end of case (above handle fixing).
3. Ease complete chassis out from top of case.
4. PSU may be removed through bottom of case after removing screw securing it to rear of case.

The Company reserves the right to amend the specification without notice.

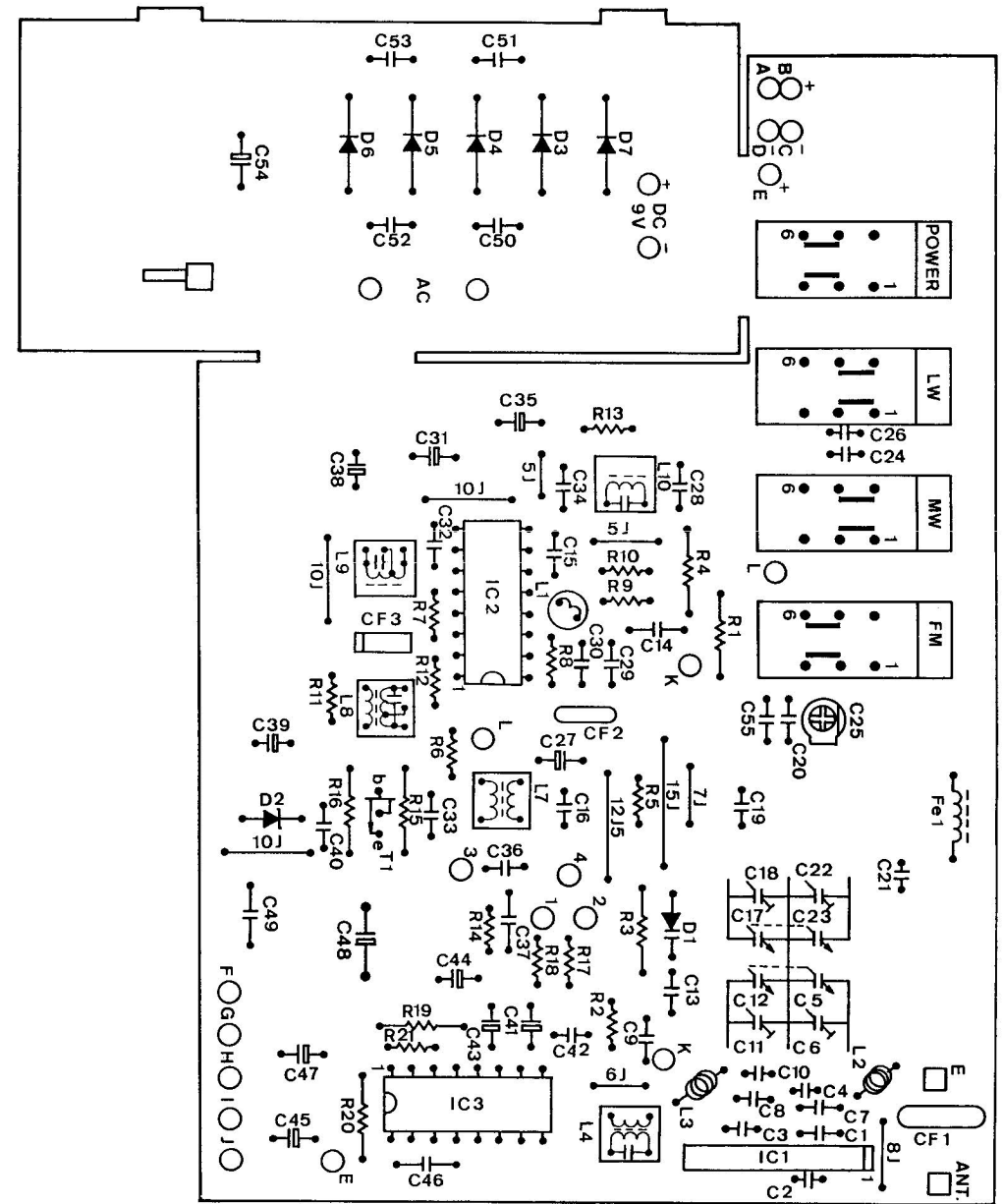
# Circuit Diagram



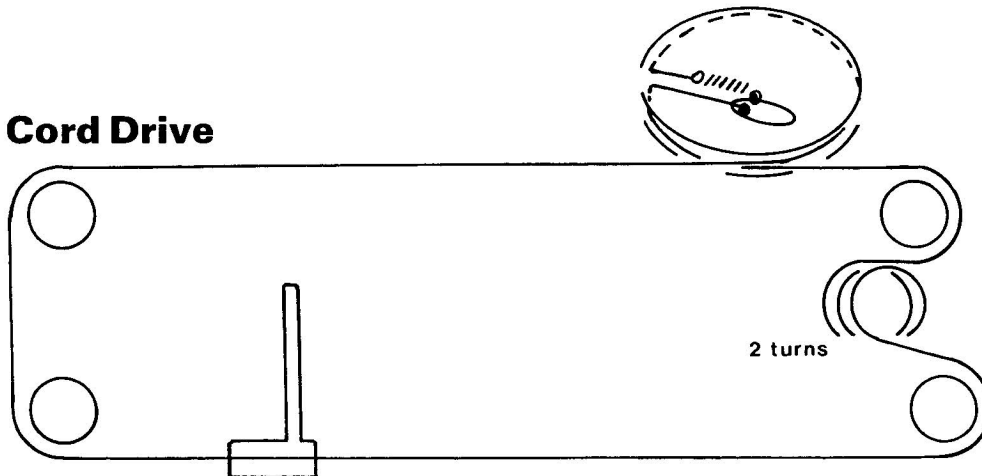
### Voltages

IC1 Pin	Battery		Mains		IC2 Pin	Battery		Mains	
	AM	FM	AM	FM		AM	FM	AM	FM
1		0.8		0.8	1	4.8	4.0	5.7	5.0
2		1.5		1.5	2	1.4	-	1.4	-
3		3.6		4.4	3	4.8	4.0	5.8	5.0
4		1.5		1.5	4	1.4	-	1.4	-
5		0		0	5	1.4	-	1.4	-
6		3.6		4.4	6	4.2	3.6	5.2	4.5
7		2.8		3.7	7	4.8	4.1	5.8	5.0
8		3.5		4.4	8	0.8	-	0.8	-
9		3.6		4.5	9	2.0	1.9	2.0	2.1
IC3 Pin					10	4.8	4.1	5.8	5.0
1	4.3		8.2		11	0	0	0	0
2	8.3		15.7		12	-	4.1	-	5.0
3	7.9		15.3		13	-	4.1	-	5.0
4	0		0		14	4.2	3.2	5.2	4.1
5	0		0		15	4.2	3.2	5.2	4.1
6	1.8		3.3		16	4.2	3.2	5.2	4.1
7	1.8		3.3		T1 c		8.3		15.7
8	1.8		3.3		b		8.2		9.2
9-16	0		0		e		7.6	7.5	8.6

### Component Layout (Print Side)



### Cord Drive



# Alignment

AM alignment – RF level low to avoid AGC action.

	STEP	Connect to	Frequency	Pointer	Max. output adjust
IF	1	Signal injected via coupling loop	468 kHz	HF end	L8
	2				L9
	3				Repeat alignment 1 and 2
MF	4	Oscilloscope to TP3	525 kHz	LF end	L7
	5		1625 kHz	HF end	C18
	6		Repeat alignment 4 and 5		
	7		560 kHz	Tune to signal	L5*
	8		1500 kHz		C22
LF	9	Repeat alignment 7 and 8			
	10		147 kHz	LF end	C25
	11		170 kHz	Tune to signal	L6
	12	Repeat alignment 10 and 11			

\* Before sealing coil to rod, alignment should be checked with chassis in cabinet as inductance of L5 is reduced by proximity of speaker frame. L5 will need to be 2-6mm further on rod than position determined with chassis out of cabinet

FM alignment – maintain input below limiting – 3dB

IF	1	Sweep generator via 10pf to TP2 Oscilloscope to TP3	10.7MHz	HF end	L4
	2				L10
	3				Repeat alignment 1 and 2 until 's' curve is symmetrical
RF	4	Signal generator to TP1	87.3 MHz	LF end	L3
	5		108.3 MHz	HF end	C11
RF	6	Oscilloscope to TP3			Repeat alignment 4 and 5
	7		90 MHz	Tune to signal	L2
	8		106 MHz		C6
	9		Repeat alignment 7 and 8		

