THE MK III

INSTALLATION AND OPERATION INSTRUCTIONS

VARIABLE FM RECEIVER

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We recommend that these instructions be read fully and carefully before any attempt is made to connect up, or use the equipment.

METHOD OF MOUNTING.

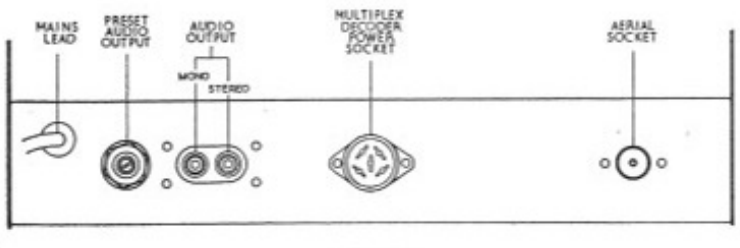
Chassis Model. Check that the 6 valves are securely seated in their holders and have not worked loose in transit. The Receiver is suitable for mounting in either a vertical or horizontal position; in either case a cut-out measuring $9\frac{7}{8}''$ x $4\frac{1}{8}''$ must be provided in the cabinet panel. If the Receiver is mounted in a vertical position then particular care must be paid to ventilation. The Chassis side flanges are secured in position by means of 4 wood screws. The fron tpanel is placed in position and secured by two 4BA screws which locate in 4BA hank bushes on the Chassis side flanges; secure the two control knobs making sure that the pointer on the selector control lines up with the three markings on the panel.

Case Model. The free-standing Case Model may be placed on any convenient shelf and it is simply necessary to ensure that adequate ventilation is provided; it is essential that the top ventilation grill is not obstructed in any way and in particular, other pieces of equipment should not in any circumstances be placed on top of the receiver case.

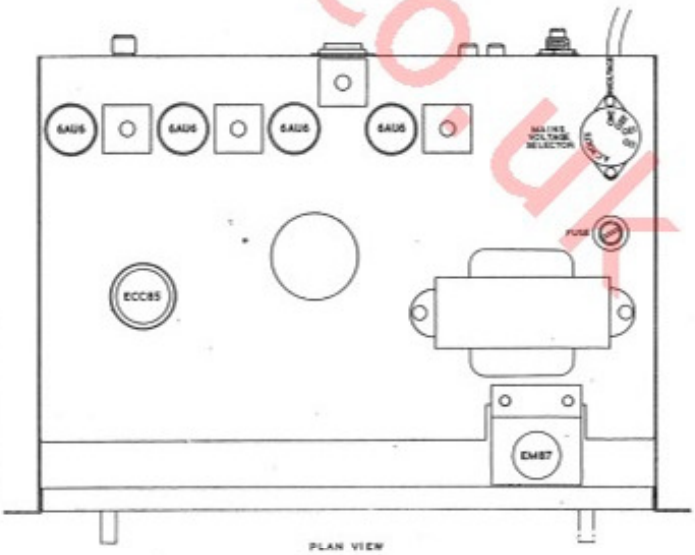
MAINS CONNECTION.

Set the mains voltage selector located on top of the Chassis to the appropriate supply voltage. When the supply voltage falls between two tappings always use the higher tapping i.e. supply voltage 230V use 240V tap. Connect a suitable 2-pin mains plug top to the 2-core mains lead. When the receiver is being used with a Rogers Amplifier the mains connection can conveniently be taken to one of the AC outlet sockets provided on the Amplifier Chassis. A suitable 2-pin mains plug for this purpose is supplied with the amplifier accessories. A screw-in fuse is located on top of the Chassis immediately next to the voltage selector socket, the fuse will protect the receiver in the event of component failure; if the receiver fails to light up when switched on the fuse should be checked for continuity. Fuse ratings:—

200-250 volt range 1.Amp anti-surge 20 x 5mm.
110-125 volt range 2.Amp anti-surge 20 x 5mm.



REAR VIEW



PLAN VIEW

AUDIO OUTPUT CONNECTIONS.

Two miniature phono sockets for audio output are located at the rear of the Chassis. Viewed from the rear, the stereo output is on the right, the mono output on the left.

Mono. Using low-loss screened cable connect the ouput from the mono socket to the radio input socket on the control unit. A pre-set volume control located next to the socket facilitates matching. To adjust set the control until satisfactory volume is obtained, if the output is distorted reduce the setting of the pre-set control i.e. rotate anti-clockwise. The pre-set control is set to maximum i.e. fully clockwise before leaving the factory. The length of the connecting cable should be limited to 3′.

Stereo. The Rogers Multiplex Decoder is supplied complete with leads terminated in suitable plugs for connection to the stereo output socket and the 5-pin HT socket at the rear of the receiver Chassis. No other connections are necessary and the dual stereo output is then taken from the connections on the Decoder. The power available from the 5-pin socket is 250 volts DC at 7 milli/amps. The Rogers Multiplex Decoder incorporates all necessary dropping resistors.

AERIAL CONNECTION.

The co-axial aerial down lead should be connected to the co-axial plug provided, the braiding being taken to the body of the plug, the centre conductor soldered to the centre pin of the plug. Great care must be taken in making this connection, if too much heat is applied in making the solder joints, it is possible to melt the insulator and weld the centre conductor to the outer braiding without realising it. The aerial input socket is located at the rear of the Chassis on the extreme right when viewed from the rear.

CHOICE OF AERIAL.

The use of a correctly designed FM aerial is essential for the satisfactory operation of the receiver, for stereo reception the aerial is even more critical and an aerial which has proved satisfactory for Mono reception will not necessarily provide satisfactory Stereo reception. Makeshift aerial installations will invariably give rise to trouble and we strongly discourage their use. The actual aerial chosen will of course be governed by local reception conditions; in a good reception area a simple indoor dipole will suffice, in a fringe area a high gain external array will be necessary. With external installations the aerial should be mounted as high as possible and clear of metal objects such as gutters, water pipes, tanks, metal window frames, T.V. aerials etc. etc., correct orientation is also important and the aerial should be rotated for maximum signal. In some cases the optimum setting may not be clearly defined and in such cases we suggest that the aerial be rotated until a point is reached where the sound is distorted, it should then be rotated through a further 90°— slight tilting of the aerial may also affect performance to a certain extent. The connection of more than one FM receiver to a single aerial is not recommended.

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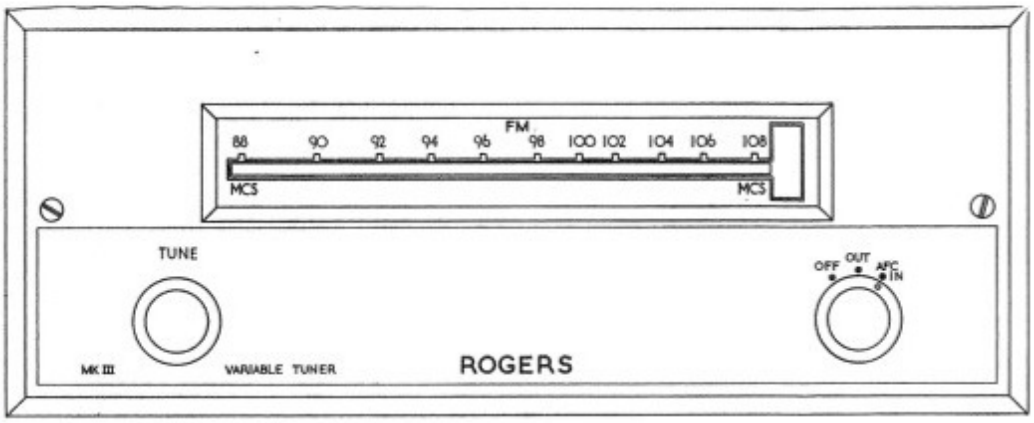

FRONT PANEL

METHOD OF OPERATION.

A three-position rotary switch located on the right of the front panel combines the functions of mains on/off switching and AFC switching. The receiver should be switched on by selecting the AFC 'OUT' position and left for two minutes to warm-up, rotate the tuning control to the desired station frequency. The tuning indicator displays two vertical green bands which vary in length as the receiver is tuned, maximum length denotes the correct tuning point. To ensure that the receiver will remain locked to the station position AFC 'IN' should now be selected, with the switch in this position the tuning indicator will be extinguished, if the receiver is tuned with the AFC control at position 'IN', then it will be found that the tuning is very broad. When the Rogers Multiplex Decoder is in operation a neon indicator located at the left-hand side of the tuning scale will light indicating when a stereo carrier is being received. When no Multiplex Decoder is available a stereo broadcast can be received in 'monaural' form.

BRIEF TECHNICAL SPECIFICATION.

Frequency Coverage:	88-108 mc/s (Variable).
Sensitivity:	1½ microvolts for 20DB quietening.
Audio Output:	.25V. R.M.S. (Variable).
Aerial Impedance:	70-90 ohms co-axial. 300 ohm twin-feeder (To order only).
Valves:	ECC.85. 4 x 6 AU6. EM87.
Operating Voltage:	110-205-225-245V. 50/60 cps.
Mains Consumption:	40 Watts.

IMPORTANT: Save the carton together with all fittings in case it may be necessary to return the unit for service. If this does prove necessary, great care should be taken in packing so as to minimise the possibility of damage being sustained in transit. Any transit damage resulting from inadequate packing will not be covered by our Guarantee nor will it be covered by the Carriers. Where possible we recommend that equipment be returned by Passenger Train at Company's risk.

ROGERS DEVELOPMENTS (ELECTRONICS) LTD.

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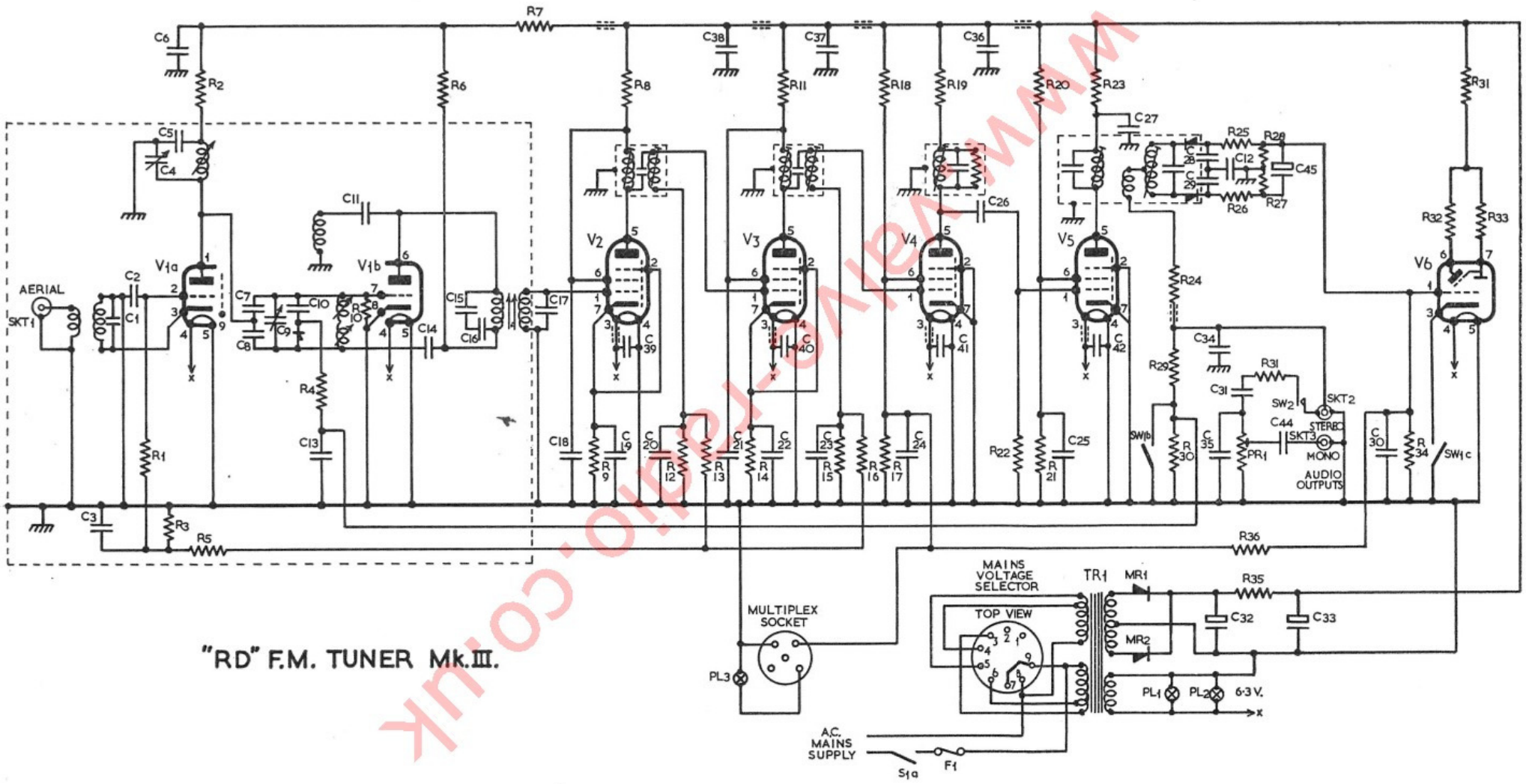

MARK III VARIABLE FM RECEIVER COMPONENT LIST

RESISTORS

R1	220K	10%	1/2 watt.
R2	1K	10%	1 – watt.
R3	100K	10%	1/2 watt.
R4	1M	10%	1/2 watt.
R5	470K	10%	1/2 watt.
R6	4.7K	10%	1/2 watt.
R7	2 x 27K	10%	1 – watt.
R8	10K	10%	1 – watt.
R9	100ohms	10%	1/2 watt.
R10	1M	10%	1/2 watt.
R11	10K	10%	1 – watt.
R12	180K	10%	1/2 watt.
R13	100K	10%	1/2 watt.
R14	100ohms	10%	1/2 watt.
R15	47K	10%	1/2 watt.
R16	470K	10%	1/2 watt.
R17	47K	10%	1/2 watt.
R18	47K	10%	1/2 watt.
R19	10K	10%	1 – watt.
R20	47K	10%	1/2 watt.
R21	47K	10%	1/2 watt.
R22	100K	10%	1/2 watt.
R23	10K	10%	1 – watt.
R24	100ohms	5%	1/8 watt.
R25	1.5K	10%	1/2 watt.
R26	1K	10%	1/2 watt.
R27	6.8K	10%	1/2 watt.
R28	6.8K	10%	1/2 watt.
R29	470K	10%	1/2 watt.
R30	470K	10%	1/2 watt.
R31	68K	5%	1/8 watt.
R32	100K	5%	1/8 watt.
R33	33K	5%	1/8 watt.
R34	1.5M	5%	1/2 watt.
R35	1.5K	10%	6 – watt.
R36	3.3M	10%	1/2 watt.

CAPACITORS

C1	36pf	5%	MICA
C2	1000pf	10%	CERAMIC
C3	1000pf	10%	CERAMIC
C4	3/10pf	—	—
C5	1000pf	20%	CERAMIC
C6	10Kpf	20%	
C7	15pf	5%	MICA
C8	15pf	5%	MICA
C9	3/10pf	—	—
C10	3pf	—	—
C11	20pf	10%	MICA
C12	220pf	10%	POLYSTYRENE
C13	.1mfd	10%	POLYESTER
C14	82pf	5%	MICA
C15	15pf	5%	MICA
C16	68pf	5%	MICA
C17	47pf	5%	MICA
C18	10Kpf	10%	CERAMIC
C19	10Kpf	10%	CERAMIC
C20	150pf	5%	POLYSTYRENE
C21	10Kpf	10%	CERAMIC
C22	10Kpf	10%	CERAMIC
C23	150pf	5%	POLYSTYRENE
C24	10Kpf	10%	CERAMIC
C25	10Kpf	10%	CERAMIC
C26	50pf	5%	MICA
C27	10Kpf	10%	CERAMIC
C28	220pf	5%	POLYSTYRENE
C29	220pf	5%	POLYSTYRENE
C30	10Kpf	10%	CERAMIC
C31	.022mfd	10%	POLYESTER
C32 } C33 }	32 x 32 x 16 mfd	—	ELECTROLYTIC
C34	30pf	5%	POLYSTYRENE
C35	1000pf	5%	POLYSTYRENE
C36	1000pf	10%	CERAMIC
C37	1000pf	10%	CERAMIC
C38	1000pf	10%	CERAMIC
C39–42	1000pf	10%	CERAMIC
C43	220pf	5%	POLYSTYRENE
C44	.022mfd	10%	POLYSTYRENE
C45	6.4mfd		ELECTROLYTIC

SILICON RECTIFIERS

MR1 BY100
MR2 BY100

FUSE

F1 500ma ANTI-SURGE 200–240V range.
1 amp ANTI-SURGE 100–125V range.

VALVES

V1a/b ECC.85.
V2, 3, 4, 5 6AU6.
V6 EM87.

POTENTIOMETERS

PR1 – 500K LOG

DIAL LAMPS

PL 1 & 2 – 8V 1 watt L.E.S.
PL 3 – Neon Indicator.