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It is my hope that you find the file of use to you personally – I know that I would have liked to have found some of these files years ago – they would have saved me a lot of time !

Colin Hinson

In the village of Blunham, Bedfordshire.



**TEST METER  
TYPE TM1**

***Operating & Service  
Instructions***



## DESCRIPTION

The Pye Radiotelephone Test Meter Type TMI is an instrument designed for servicing Vanguard and Cambridge Pye Radiotelephone equipments. It enables performance checks to be readily carried out in both the transmitters and receivers. It is supplied with a 9-lead cableform terminating in a suitable plug for test sockets in the Vanguard equipment, test leads terminating in insulated test prods, a two-range diode probe and a retractable built-in antenna.

When not in use, the 9-way plug, test prods and the diode probe are stowed in the lower compartment and the selector switch set to TRANSIT.

## OPERATION

All tests on the Vanguard and Cambridge should be carried out in accordance with the instructions given in the relevant sections of the Service Manuals supplied with these equipments. The Test Meter TMI has a sensitivity of 20,000 $\Omega$ /volt and covers the following ranges:-

0 to 15.0 volts

0 to 2.5 volts

0 to 50 $\mu$ A

## DIODE PROBE

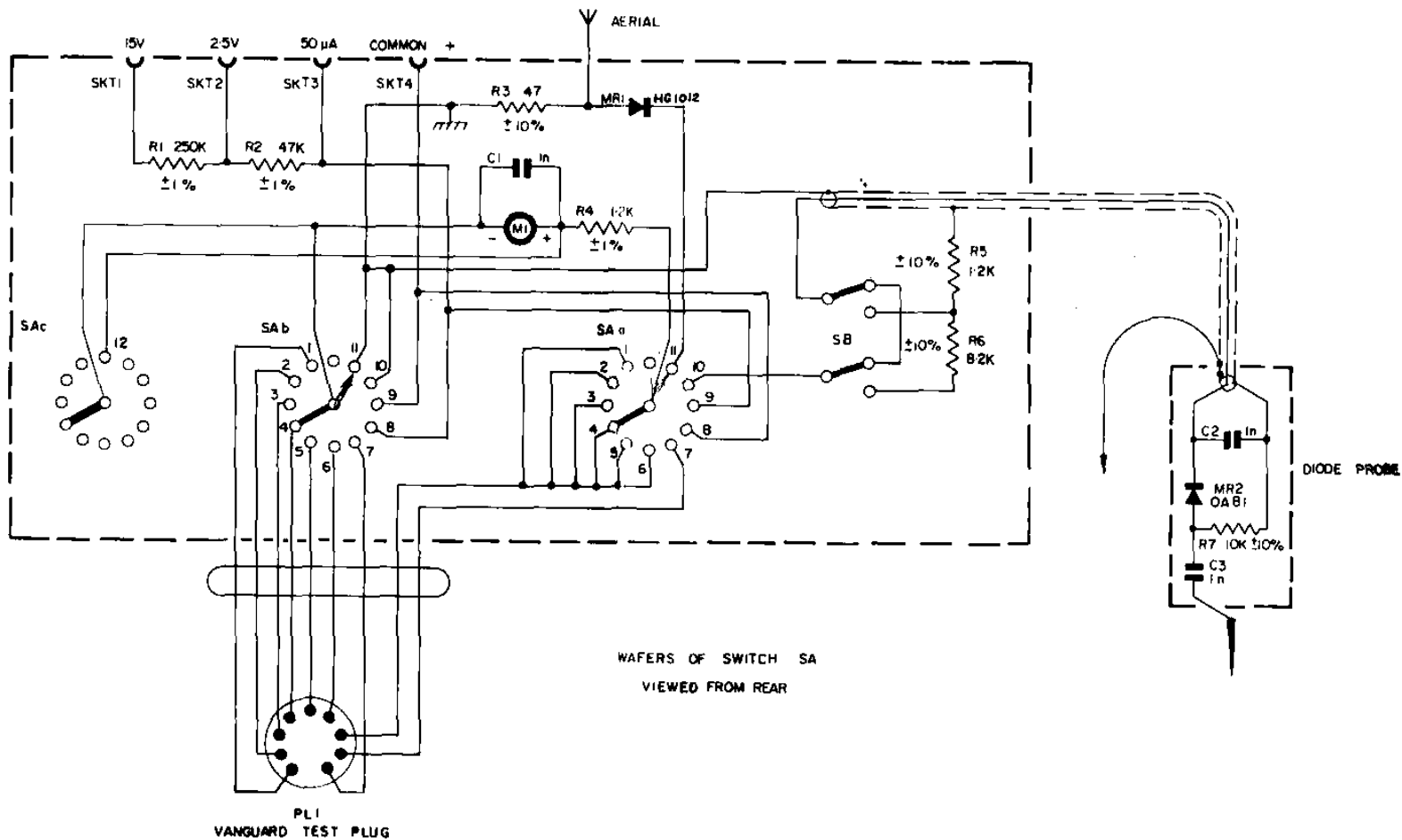
This has two ranges (X1 and X10) selected by the double pole change-over switch on the meter front panel and is used with the selector switch at the position marked PROBE.

## TEST PRODS

These are used in conjunction with the selector switch, the appropriate meter ranges being selected by plugging the prod leads into the correct sockets on the front panel.

## ANTENNA

This must be extended as required and used with the selector switch in the position marked RADIATION, for radiation tests. The test meter should be placed adjacent to the transmitter antenna; it should not be connected to the equipment.



Circuit Diagram

## AM & FM VANGUARD TESTS

Insert the 9-way plug into the appropriate test socket on the front panel of Vanguard transceiver and carry out the tests with the selector switch in positions indicated below:-

### AM & FM CAMBRIDGE

For checks on Cambridge equipment the normal position of the selector switch is at **METER + -** ; this may be changed to **- +** to reverse the meter reading without disconnecting the test prods. This is particularly useful for centring the discriminator.

The leads are plugged into the appropriate sockets to give the required meter range.

### RECEIVERS

Selector Switch Position	AM Receiver	AM Receiver	FM Receiver
	*PT B10 AM	AM 25 B	FM 25 B
	To measure:-	To measure:-	To measure:-
1	Ig - V201	not used	not used
2	not used	not used	not used
3	not used	not used	not used
4	not used	not used	not used
5	not used	not used	not used
6	not used	not used	not used
7	Id MR1	Id MR1	not used

\* Home Office version

### TRANSMITTERS

Selector Switch Position	AM Transmitter	AM Transmitter	FM Transmitter
	*PT B10 AM	AM 25 B	FM 25 B
	To measure:-	To measure:-	To measure:-
1	Ig - V201	not used	Ig - V602
2	Ig - V202	Ig - V201	Ig - V603
3	Ig - V203a	Ig - V202a	Ig - V604a
4	Ig - V203b	Ig - V202b	Ig - V604b
5	Ig - V204	Ig - V203	Ig - V605
6	not used	not used	Ig - V606
7	Ia - V204	Ia - V203	Ia - V606

## PARTS LIST

Code	ELECTRICAL			Part No.
C1/2/3	1n	Disc ceramic	300V +80-20%	660433
R1	250k $\Omega$		$\frac{1}{4}$ W $\pm$ 1%	NC25471
R2	47k $\Omega$		$\frac{1}{4}$ W $\pm$ 1%	NC47371
R3	47 $\Omega$		$\frac{1}{2}$ W $\pm$ 10%	NG47030
R4	1.2k $\Omega$		$\frac{1}{4}$ W $\pm$ 1%	NC12271
R5	1.2k $\Omega$		$\frac{1}{4}$ W $\pm$ 10%	NG12230
R6	8.2k $\Omega$		$\frac{1}{2}$ W $\pm$ 10%	NG82230
R7	10k $\Omega$		$\frac{1}{2}$ W $\pm$ 10%	NG10430
M1		Meter		9633930
MR1		Germanium diode HG1012		9634166
MRZ		Germanium diode OA81		707302

## MISCELLANEOUS

PL1	Test plug	9633983
SKT1/2/3	Test sockets (black)	9633932
SKT4	Test socket (red)	9633931
AE	Antenna (telescopic)	9633261
SA	Selector switch	9660049
SB	Double Pole Changeover switch	9634000

## MECHANICAL

Test lead assy. - red	9637214
Test lead assy. - black	9637215
Probe assy.	9637216
Cast box assy.	9637247
Front panel assy.	9637250
Cable assy.	9637251
4-way tagstrip assy.	9633254
Escutcheon plate	9608378
Knob	9633960
Handle	9633968
Capacitor clip	704792
Terminal knob	9634006
Eyelet	QK52103/A
Clip	700650
Components retaining clip	9608409