

DC/RF ALIGNMENT METER

MODEL TEK-7A



1. DESCRIPTION

The Motorola Model TEK-7A DC/RF Alignment Meter is used to align and check Motorola transmitters and receivers in the 25-174 mc frequency range.

The unit consists of 0-50 ua meter, a plug-in d-c r-f probe, and two front panel mounted switches whose functions are as follows:

- a. Meter - Reversing Switch - Reverses the polarity of the meter for an on-scale reading when the needle tends to indicate in the negative direction past zero.
- b. Range-Selector Switch - Rotary switch for selecting: RF ranges .5 V, 1 V, 5 V, or 15 V - DC ranges .1 V, 1 V, 5 V, 15 V, 100 V, or 200 V EXT METER position.

DC or r-f operation is selected by a slide switch located on the housing of the d-c/r-f probe.

2. ACCESSORY CABLE

An accessory cable (supplied with Motorola Model S1056A-9A and TU546 Series Portable Test

Sets) is available on separate order (Motorola part no. 1V855413). This cable is required when the alignment meter is used with the P-7208 Series Dummy Load to indicate transmitter r-f power output. This cable is also required when the d-c/r-f alignment meter is used to meter Motorola transmitters and receivers which contain a phone jack metering receptacle.

3. OPERATING INSTRUCTIONS

a. RF Field Intensity Indicator for Motorola Portable Equipment

(1) Insert the phone plug of the d-c/r-f probe into the PROBE/EXT METER receptacle.

(2) Place the slide switch on the d-c/r-f probe to the RF position.

(3) Locate the probe near the antenna of the unit under test.

(4) Adjust the sensitivity of the meter by the proximity of the probe to the antenna or by the range switch on the meter.

(5) Note the needle swing on the meter and select the proper switch positions for an on-scale reading.

b. Standard Tuning Meter or RF Power Output Indicating Device

(1) Place the range switch in the EXT METER position.

(2) Insert the red phone plug of the accessory cable into the PROBE/EXT METER receptacle on the alignment meter.

(3) Connect the black phone plug of the accessory cable to the dummy load or radio equipment to be metered.

NOTE

Radio equipment with the phone jack metering receptacle also contains a METER SWITCH which is used to select the circuit to be metered.

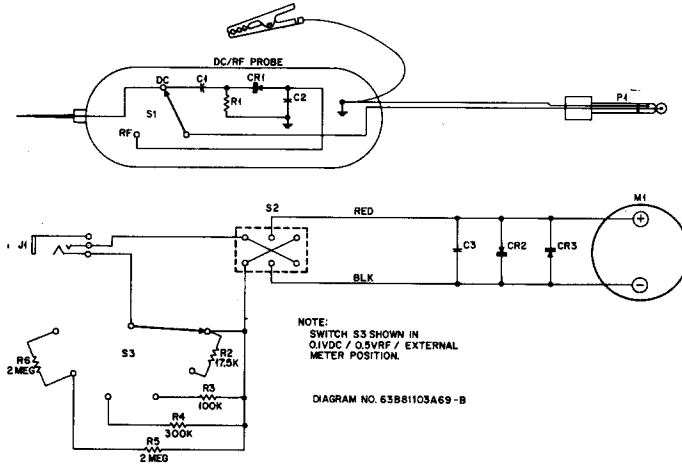
(4) Note the needle swing on the meter and select the proper switch positions for an on-scale reading.

c. DC or RF Voltmeter

(1) Insert the plug of the d-c/r-f probe into the PROBE/EXT METER receptacle on the alignment meter.

(2) Place the slide switch on the d-c/r-f probe to the DC position for d-c voltmeter operation or to the RF position for r-f voltmeter operation.

(3) Note the needle swing on the meter and select the proper switch positions for an on-scale reading.



PARTS LIST for Schematic Diagram 63B81103A69-B

REFERENCE SYMBOL	MOTOROLA PART NO.	DESCRIPTION
C1, 2	21K855384	CAPACITOR, fixed: 2000 uuf ±10%; 250 v .01 uf +80-20%; 600 v
C3	21K801139	
CR1	48C82178A02	SEMICONDUCTOR DEVICE, diode: SEE NOTE germanium silicon
CR2, 3	48B857965	
J1	9B82281C01	JACK, phone: female; open circuit; 3 cond.
M1	72C864363	METER, d-c: 0-50 microamps
P1	28K855278	PLUG, phone: male; open circuit; 3 cond.
R1	6R6320	RESISTOR, fixed: ±5%; 1/2 w unless stated
R2	6K855337	
R3	6R5553	
R4	6R2051	
R5, 6	6R5778	
S1	40B82893D01	
S2	40A80246	
S3	40C82091F01	

REVISIONS

DIAG. ISSUE	BOARD AND SUFFIX NO.	REF. SYMBOL	CHANGE	LOCATION
O1	TEK-7A	S3	ADDED 40A840008	PARTS LIST
A	TEK-7A	S3	WAS 40A840008	PARTS LIST
		C1, 2	WERE 21K837746, 2000 uuf. 500 V	
B	TEK-7A	R2	WAS 6K892453	PARTS LIST

NOTE:

Replacement diodes must be ordered by Motorola part number only for optimum performance.