1. APPLICATION

The addition of this kit to a Model TEK-5B or TEK-5C Test BenchMetering Panel provides test metering for the "Micor" series of mobile radios. This kit expands the present range of testing capabilities of the panel while retaining all of the previous functions. The modified TEK-5B or 5C Panel will operate as it did prior to modification when the program switch is in the "A" position.

2. DESCRIPTION

The TEK-40 Conversion Kit consists of a five-layer program switch, prewired to a cable harness, and a conversion plug which will couple two standard TEKA-72 "Micor" Test Cables to the 20-pin metering receptacle on the TEK-5B/C Panel.

3. MODIFICATION

NOTE
A convenient means of holding the test panel during conversion is provided by removing the panel from the housing, reversing the panel, and refastening it to the housing. When the housing is placed on a flat surface, wiring and components are completely exposed.

a. Panel Preparation
Refer to the removal detail and remove the indicated wires and components.
b. Switch and Wiring Harness Installation

(1) Using the supplied #6-32 screws, lock-washers (4 each), and nuts (2 #6-32 nuts and two Tinnerman nuts) fasten the TEK-40 Switch Panel to the meter panel using the Tinnerman nuts and the holes at the bottom made available by the removal of the two test points.

**NOTE**

When installing the TEK-40 in the TEK-5B Meter Panel, the two Tinnerman nuts are used to clamp the switch panel to the meter panel as shown in the following detail.

![Diagram of TEK-40 Switch Panel installation](image)

(2) Referring to the TEK-40 wiring diagram, connect the wires to the indicated terminations (solder where necessary). Use the short length of yellow-green wire between pin 3 of the MIC connector and J2-20. Connect the short jumper of white-red wire between J2-9 and J2-19 to complete the conversion.

4. OPERATION

a. Install two TEK-72 Cables into the adapter plug retaining clip and fasten the clip to the adapter plug. A 7-pin red cable plug goes into the metering socket of the adapter plug and a 7-pin white cable plug goes into the control socket. The socket identifications are marked on the retaining clip.

b. Insert the adapter plug assembly into the 20-pin connector in the meter panel.

c. The TEK-40 Program Switch selects different sections of the "Micor" radio sets for metering as shown in the table below.

<table>
<thead>
<tr>
<th>SELECTOR POSITION</th>
<th>25-50 MHz &quot;MICOR&quot; RADIO</th>
<th>132-174 MHz &quot;MICOR&quot; RADIO</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Standard TEK-5B/C Operation</td>
<td></td>
</tr>
<tr>
<td>B</td>
<td>Exciter, PA*, Ant, Matching</td>
<td></td>
</tr>
<tr>
<td>C</td>
<td>Receiver, RCVR, PA*</td>
<td></td>
</tr>
<tr>
<td>D</td>
<td>Exciter</td>
<td>Power Control</td>
</tr>
<tr>
<td>E</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(Refer to sub-paragraph 4. f.)

d. Other functions that are operational in positions B, C, D and E are:

1. Receiver Audio Metering - (M7) when XMIT/REC switch is in REC position.

2. SPKR/LOAD Switch - In the LOAD position a 3-ohm resistor is substituted for the meter panel speaker selected by SPKR.

3. XMIT/REC Switch - In the XMIT position the range of meter 4 is 50-0-50 uA.

4. KEY - Panel mounted pushbutton provides P-T-T function.

5. MIC - The "Micor" microphone may be connected to the meter panel MIC connector if a TEK-74 Adapter is used.

e. When testing the "Micor" radio sets, the B meter (M9) monitors the regulated nominal 9.6 volts at the control board. This appears as a reading in the range of 600 to 700 on meter 9. To provide a "quick-check" capability, the meter bezel may be removed and the area between 600 and 700 darkened or colored with a pencil to indicate the correct regulator voltage range.

f. The converted TEK-5C (this paragraph does not apply to converted TEK-5B Panels) panel may display slightly lower readings on the first five meters. This error becomes significant when
checking PA currents on meter 5, therefore refer to the meter 5 nomograph for correct meter reading equivalents.

The standard correlation for the TEK-5B and the portable test set is:

$$100 \text{ mV} = 50 \text{ uA across 2000-ohm meter resistance}$$

In the TEK-5C:

$$100 \text{ mV} = 39 \text{ uA across 2560-ohm meter resistance}$$

Therefore, to convert the meter reading into actual power amplifier current, multiply the reading by 128% or 1.28. To convert from actual power amplifier current to meter reading multiply the current by 78% or 0.78.

For easy conversion refer to the meter 5 nomograph.
1P84253C65 ADAPTER PLUG ASSEMBLY
(TEK - 5 B/C WITH TEK-40 CONVERSION KIT
TO MICROM 7-PIN CABLES)

METERING
1. BRN METERING
2. RED METERING
3. ORG METERING
4. YEL METERING
5. GRN METERING
6. BLU REF. A
7. VIOLET REF. A

TO METER PANEL
8. J1 & J2 DETAIL
9. (10 20 30 40)

CONTROL
4. WHI-RED 300k P-T-T
5. YEL-BLU GROUND
6. BLK XMIT AUDIO
7. WHT-GND 9V REG.

NOTE:
1. J1 & J2 DETAIL

Adapter Plug Assembly

TEKA-72 CABLE ASSEMBLY
(Adapter Plug to Radio)
NOTE 3

CONNECTED TO
ADAPTER PLUG ASSEMBLY (METERING)

CONNECTED TO
ADAPTER PLUG ASSEMBLY (CONTROL)

NOTES:
1. W1 METERING CABLE ASSEMBLY IS A 7-CONDUCTOR CABLE
   WITH A 7-PIN PLUG ON EACH END.
2. W2 SAME AS W1 EXCEPT PIN 5 CUT OFF OR RED HANDLE END.
3. THESE CABLES ARE NOT SUPPLIED AS PART OF THE TEK-40
   CONVERSION KIT. THEY ARE AVAILABLE THROUGH LOCAL
   PARTS DEPOTS. THE CABLES USED WITH EITHER A TEK-17
   OR TEK-17A CABLE KIT WILL INTERCHANGE WITH THESE
   CABLES.

EFC-4639-A

P1 DETAIL
WHT

P2 DETAIL
RED

TEKA-72 Cable Assemblies

Adapter Plug and Cable Assemblies
Wiring Diagrams
Motorola No. PEPS-4738-A
6/6/72-NPC