EQUIPMENT LOST OR DAMAGED IN TRANSIT

When delivering the equipment to you, the truck driver or carrier’s agent will present a receipt for your signature. Do not sign it until you have (a) inspected the containers for visible signs of damage and (b) counted the containers and compared with the amount shown on the shipping papers. If a shortage or if evidence of damage is noted, insist that notation to that effect be made on the shipping papers before you sign them.

Further, after receiving the equipment, unpack it and inspect thoroughly for concealed damage. If concealed damage is discovered, immediately notify the carrier, confirming the notification in writing, and secure an inspection report. This item should be unpacked and inspected for damage WITHIN 15 DAYS after receipt.

Report all shortages and damages to RCA, Broadcast and Television Department, Camden 2, N. J. Radio Corporation of America will file all claims for loss and damage on this equipment so long as the inspection report is obtained. Disposition of the damaged item will be furnished by RCA.

REPLACEMENT PARTS AND ENGINEERING SERVICE

RCA field engineering service is available at current rates. Requests for field engineering service may be addressed to your RCA Broadcast Field Representative or the RCA Service Company, Inc., Broadcast Service Division, Camden, N. J. Telephone: WOodlawn 3-8000.

When ordering replacement parts, please give symbol, description, and stock number of each item ordered.

The part which will be supplied against an order for a replacement item may not be an exact duplicate of the original part. However, it will be a satisfactory replacement differing only in minor mechanical or electrical characteristics. Such differences will in no way impair the operation of the equipment. Parts with no stock numbers are standard components. They are not stocked by RCA and should be obtained from your local electronic parts distributor.

The following tabulations list service parts and electron tube ordering instructions according to your geographical location.

### SERVICE PARTS

<table>
<thead>
<tr>
<th>LOCATION</th>
<th>ORDER SERVICE PARTS FROM:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Continental United States, including Alaska and Hawaii</td>
<td>RCA Electron Tube Division, Parts and Equipment, P.O. Box 654, Camden, New Jersey or through your nearest RCA Regional Office. Emergency orders may be telephoned, telegraphed, or teletyped to RCA Emergency Service, Bldg. 60, Camden, N. J. (Telephone: WO 3-8000).</td>
</tr>
<tr>
<td>Dominion of Canada</td>
<td>RCA Victor Company Limited, 1001 Lenoir Street, Montreal, Quebec or through your local Sales Representative or his office.</td>
</tr>
<tr>
<td>Outside of Continental United States, Alaska, Hawaii and the Dominion of Canada</td>
<td>RCA International Division, Clark, N. J., U.S.A. or through your local Sales Representative.</td>
</tr>
</tbody>
</table>

### ELECTRON TUBES

<table>
<thead>
<tr>
<th>LOCATION</th>
<th>ORDER ELECTRON TUBES FROM:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Continental United States, including Alaska and Hawaii</td>
<td>Local RCA Tube Distributor.</td>
</tr>
<tr>
<td>Dominion of Canada</td>
<td>RCA Victor Company Limited, 1001 Lenoir Street, Montreal, Quebec or through your local Sales Representative or his office.</td>
</tr>
<tr>
<td>Outside of Continental United States, Alaska, Hawaii and the Dominion of Canada</td>
<td>Local RCA Tube Distributor or from: Tube Department RCA International Division 30 Rockefeller Plaza New York 20, New York, U.S.A.</td>
</tr>
</tbody>
</table>

RETURN OF ELECTRON TUBES

If for any reason, it is desired to return tubes, please return them through your local RCA tube distributor, RCA Victor Co. Ltd., or RCA International Div., depending on your location.

PLEASE DO NOT RETURN TUBES DIRECTLY TO RCA WITHOUT AUTHORIZATION AND SHIPPING INSTRUCTIONS.

It is important that complete information regarding each tube (including type, serial number, hours of service and reason for its return) be given.

When tubes are returned, they should be shipped to the address specified on the Return Authorization form. A copy of the Return Authorization and also a Service Report for each tube should be packed with the tubes.

### LIST OF RCA REGIONAL OFFICES

- **Atlanta, Georgia**
  1121 Rhodes-Haverty Bldg.
  134 Peachtree St. NW
  1Jackson 4-7703
- **Dallas, Texas**
  7901 Empire Freeway
  FLeetwood 2-3911
- **Boston, Mass.**
  1901 Commonwealth Ave.
  Rambouillet 2-2014
- **New York, New York**
  36 W. 49th St.
  JUdson 6-5800
- **Chicago, Ill.**
  1186 Merchandise Mart Plaza
  DELaware 7-0700
- **Kansas City, Mo.**
  340 Home Savings Bldg.
  HArrison 1-6480
- **Seattle, Washington**
  2250 First Ave.
  MAin 2-8350
- **Cleveland, Ohio**
  1600 Keith Bldg.
  CHerry 1-3450
- **Los Angeles, Calif.**
  ROLdway 3-8027
- **Bran^uSan Francisco, Calif.**
  420 Taylor St.
INSTRUCTIONS

Focus Current Regulator
MI-40524-A

RADIO CORPORATION OF AMERICA
INDUSTRIAL ELECTRONIC PRODUCTS, CAMDEN, N. J.
Figure 1 — Focus Current Regulator
TECHNICAL SUMMARY

ELECTRICAL SPECIFICATIONS
Power Input .......................... 109 to 125 volts ac, 60 cycles, 100 watts
280 volts dc, regulated, 12 ma (from RCA Type WP-15 or
equivalent power supply).
Output .................................. 78 milliamperes, regulated, to focus and alignment coils

MECHANICAL SPECIFICATIONS
Width .................................. Standard 19 inch relay rack
Height .................................. 5-1/4 inches (rack space)
Depth .................................. 9-3/8 inches
Weight .................................. 22 pounds

TUBE COMPLEMENT
1 RCA Type 5R4-GY
1 RCA Type 12AX7
2 RCA Type 6BX7

RECOMMENDED TEST EQUIPMENT
The following items will facilitate adjustment
and maintenance of the Focus Current Regulator.
Vacuum Tube voltmeter, RCA Type WV-97A
Plate Current Meter, RCA Type MI-21200-C1

EQUIPMENT LIST
The following items are included with the
RCA MI-40524-A Focus Current Regulator:

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Focus Current Regulator including tubes in place</td>
</tr>
<tr>
<td>2</td>
<td>Instruction Book IB-36250-3</td>
</tr>
<tr>
<td>3</td>
<td>Packing List MI-40524-A</td>
</tr>
</tbody>
</table>

DESCRIPTION
The RCA MI-40524-A Focus Current Regulator
shown in Figure 1, is intended to provide constant current for the Image orthicon focus
and alignment coils in the MI-40500-B Color Camera. This unit provides a normal current
output of 78 milliamperes through three sets of series-connected focus and alignment coils.

INSTALLATION
Mount the MI-40524-A regulator in a convenient location in a standard relay rack.
Referring to the Schematic Diagram, Figure 4, make the required power connections to jack
J1. The 280 volt, regulated d-c reference voltage should be obtained from power supply
which supplies the +8 regulated voltage to the camera.

Measure the voltage of the a-c power line
at terminals 1 and 2 of jack J1, then adjust
the position of the primary tap lead on
transformer T1 to the nearest corresponding position.

Figure 3 illustrates typical connections to
the camera focus and alignment coil circuits.

Check the electrical connections then turn
the power switch to ON and allow the equipment
to warm up for a few minutes.

Measure the current in the focus coil circuits by plugging an RCA type MI-21200-C1
plate current meter into jack J3. This meter
will indicate directly the current value in
milliamperes. Alternatively, an RCA VoltOhmyst
adjusted to indicate 78 volts d-c, may be
connected between jack J2 and the chassis.
ground. The voltage indicated will correspond to the current value in milliamperes.

Adjust the DC ADJUST control, R16, until 78 milliamperes flow in the output circuit. This control provides an adjustment range of approximately ±4.0 milliamperes.

**OPERATION**

Operation of this unit will require only setting the POWER ON-OFF switch to the appropriate position. The value of current flowing in the output circuit should be checked regularly with a VoltOhmmyt or Plate Current Meter as described under INSTALLATION. Readjust the DC ADJUST control as required.

**MAINTENANCE**

With ordinary care, a minimum of service will be required to keep this equipment in satisfactory operation. To avoid interruption during operation due to equipment failure, a regular schedule of inspection should be established.

Keep the chassis and external surfaces clean and free of dust, and periodically check power cable connections for good contact.

Check all tubes at regular intervals in a tube tester, replacing weak tubes to prevent possible failure during operation. Trouble due to failure of circuit components may be isolated and corrected by referring to the Schematic Diagram, Figure 4, and the Table of Typical Operating Voltages. Circuit components may be located by referring to Figure 2.

The Typical Output Connection Diagram, Figure 3, also shows typical voltages at various points in the output circuit.

<table>
<thead>
<tr>
<th>TYPICAL VOLTAGES AT J1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pin</td>
</tr>
<tr>
<td>-----</td>
</tr>
<tr>
<td>1</td>
</tr>
<tr>
<td>2</td>
</tr>
<tr>
<td>3</td>
</tr>
<tr>
<td>4</td>
</tr>
<tr>
<td>5</td>
</tr>
<tr>
<td>6</td>
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<td>7</td>
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<td>8</td>
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<td>9</td>
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<tr>
<td>10</td>
</tr>
<tr>
<td>11</td>
</tr>
<tr>
<td>12</td>
</tr>
</tbody>
</table>

**TYPICAL TUBE SOCKET VOLTAGES**

(Conditions: Alignment coil pots (3) in center position.)

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Type</th>
<th>Function</th>
<th>Grid Pin</th>
<th>Grid Volts</th>
<th>Plate Pin</th>
<th>Plate Volts</th>
<th>Cathode Pin</th>
<th>Cathode Volts</th>
</tr>
</thead>
<tbody>
<tr>
<td>V1</td>
<td>5R4-GY</td>
<td>Rectifier</td>
<td>-</td>
<td>-</td>
<td>4.6</td>
<td>-</td>
<td>2.8</td>
<td>455</td>
</tr>
<tr>
<td>V2</td>
<td>6BX7</td>
<td>Regulator</td>
<td>1.4</td>
<td>260</td>
<td>2.5</td>
<td>442</td>
<td>3.6</td>
<td>272</td>
</tr>
<tr>
<td>V3</td>
<td>6BX7</td>
<td>Regulator</td>
<td>1.4</td>
<td>260</td>
<td>2.5</td>
<td>442</td>
<td>3.6</td>
<td>272</td>
</tr>
<tr>
<td>V4</td>
<td>12AX7</td>
<td>DC Amplifier</td>
<td>2</td>
<td>171</td>
<td>1</td>
<td>260</td>
<td>3</td>
<td>172</td>
</tr>
</tbody>
</table>
**REPLACEMENT PARTS**

Parts with no RCA stock number are standard components. They are not stocked by RCA and should be obtained from your local electronic parts distributor.

<table>
<thead>
<tr>
<th>Symbol No.</th>
<th>Stock No.</th>
<th>Drawing No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>C1 to C3</td>
<td>207231</td>
<td>426750-3</td>
<td>Capacitor: paper, 5 μf +20 -10%, 1000 v Not used</td>
</tr>
<tr>
<td>C4</td>
<td>207229</td>
<td>980192-24</td>
<td>Capacitor: paper, 1.0 μf ±10%, 1000 v</td>
</tr>
<tr>
<td>C5</td>
<td>3883</td>
<td>980157-10</td>
<td>Fuse: 2 amp</td>
</tr>
<tr>
<td>C6,C7</td>
<td>55998</td>
<td>727963-17</td>
<td>Connector: male, 12 contacts</td>
</tr>
<tr>
<td>F1</td>
<td>54409</td>
<td>845648-2</td>
<td>Connector: tip jack, red</td>
</tr>
<tr>
<td>J1</td>
<td>18466</td>
<td>844080-2</td>
<td>Connector: jack (metering)</td>
</tr>
<tr>
<td>J2</td>
<td>207228</td>
<td>949838-1</td>
<td>Choke: filter</td>
</tr>
<tr>
<td>L1</td>
<td>54254</td>
<td>727969-18</td>
<td>Connector: female, 12 contacts</td>
</tr>
</tbody>
</table>

**RESISTORS:**

- Fixed, composition - Unless otherwise specified
- 270,000 ohms ±10%, 2 w
- 270 ohms ±10%, 1 w
- 100 ohms ±10%, 1 w
- 1 meg ohm ±10%, 1 w
- 27,000 ohms ±5%, 2 w
- 1 meg ohm ±10%, 1 w
- Wire wound, 1000 ohms ±1%, 25 w
- 10,000 ohms ±1%, 1 w
- Variable, carbon, 10,000 ohms ±10%, 2 w
- 100,000 ohms ±1%, 1 w
- 16,000 ohms ±5%, 2 w
- Wire wound, 50 ohms ±1%, 1 w
- 16,000 ohms ±5%, 1 w
- 270,000 ohms ±10%, 2 w
- 1000 ohms ±5%, 1/2 w
- 470,000 ohms ±5%, 1 w
- 680,000 ohms ±5%, 2 w
- 16,000 ohms ±5%, 1 w

**Miscellaneous**

- Switch: toggle, D.P.D.T.
- Transformer:
- Tube: vacuum
- Holder: fuse
- Socket: tube
- Cup: insulating, J3
- Knob: block, R16
Figure 3 — Typical Output Connections
Figure 4 — Schematic Diagram, Focus Current Regulator