**TUNING RANGE:**
Sensi
tive output meter and is recommended; generator is connected in the following adjustments.

**UNDISTORTED OUTPUT:**
The meter to use the (0-30) volt scale and advance volume control of receiver until a readable indication is noted after signal disturbed.

15 to 36000 K. C. is the correct instrument for the purpose; speaker.

**EQUIPMENT REQUIRED:**
(1) One 6H6G, discriminator; one 6Q7G, 2nd (and 1st) audio; two 6F6G output, and one 5Y4G rectifier.

**DIAL CALIBRATION:**
1. Loosen the coupling set screws. Then turn the tuning condenser fully closed and the dial to the first index line. Now tighten the shaft coupling set screws, and rotate the dial until the 520 K. C. mark is midway between the index line and the glowing beam indicator.
2. With condenser in this position loosen the set screws of the shaft coupling on the tuning condenser.
3. Then turn the tuning dial until the glowing beam indicator is entered on the index line.

**NOTE:** Be careful when turning the dial that the position of the tuning condenser is not disturbed.

4. Now tighten the shaft coupling set screws.

**INTERMEDIATE FREQUENCY CIRCUIT**
With signal generator output lead connected through a 1 mfd condenser to the grid of the 6AK.5, 6V6 or 6H6G and controls set as follows, adjust I. F. compensators for maximum output.

- Magnetic Tuning Knob (3A) off
- Tone Control (3C) normal
- Volume Control (6R) maximum
- Receiver dial 580 K. C.
- Signal generator 470 K. C.
- Range Switch position (Broadcast)
- Compensators in order (53), (51A), (45A), (45B).

**RADIO FREQUENCY CIRCUIT**

*Fig. 2. I. F. Compensators Top of Chassis*

**Tuning Range 530 to 1720 K. C.:**
1. Connect the signal generator output lead through a 1 mfd condenser to "RED" terminal of the aerial panel and the generator group to the chassis of the receiver.
2. Other controls set as under intermediate frequency circuit, with the exception of those as follows: Adjust compensators for maximum output as follows:

<table>
<thead>
<tr>
<th>Range</th>
<th>Signal</th>
<th>Receiver</th>
<th>Compensators</th>
</tr>
</thead>
<tbody>
<tr>
<td>Switch</td>
<td>Generator</td>
<td>Dial</td>
<td>In Order</td>
</tr>
<tr>
<td>1</td>
<td>1500 K. C.</td>
<td>1500 K. C.</td>
<td>(27) (7A)</td>
</tr>
<tr>
<td>1</td>
<td>580 K. C.</td>
<td>580 K. C.</td>
<td>(26) Roll gang through signal when padding this compensator. (See Note B)</td>
</tr>
<tr>
<td>1</td>
<td>1500 K. C.</td>
<td>1500 K. C.</td>
<td>(27)</td>
</tr>
<tr>
<td>1</td>
<td>1500 K. C.</td>
<td>1500 K. C.</td>
<td>(27) (7A)</td>
</tr>
</tbody>
</table>

**Alignment of Compensators**

- **NOTE A:** To accurately adjust the frequency oscillator compensator to the fundamental (instead of the image signal), turn the oscillator compensator to the maximum capacity position (clockwise). Then slowly turn compensator counter-clockwise until a second maximum peak is obtained on the output meter. This second peak is the fundamental signal, and the compensator must be adjusted for maximum output with it. The first peak from maximum capacity position of the compensator is the image signal and must not be used in adjusting this compensator.
- **NOTE B:** First tune compensator (28) slightly to the right or left and vary the receiver tuning condenser for maximum output about the 580 K. C. dial mark. Now turn compensator (28) to the right or left to obtain maximum output. If the output remains constant, turn compensator (28) to the right or left, and again vary the tuning condenser for maximum output. The output decreases, set the compensator in the opposite direction. This procedure of setting the compensator and then varying the tuning condenser is continued until there is no further gain in output reading.
- **NOTE C:** To eliminate the effect of the R. F. compensator detuning the osc. circuit, a variable tuning condenser of approximately 350 mfd., is connected from the oscillator condenser to ground, as indicated in the padding instruction above. Tune the added condenser until the second harmonic of the receiver oscillator beats against the signal from the generator, resulting in a maximum indication on the output meter. Then adjust compensators as noted for maximum output.