

THROUGHOUT THE ALIGNMENT PROCEDURE, AS THE OUTPUT INCREASES, REDUCE GENERATOR OUTPUT TO THE LOWEST NEEDED FOR AUDIBILITY, TO AVOID OVERLOADING YOUR RECEIVER.

**NOTE:** The IF transformer slugs fit tightly. When you use the alignment tool, be careful not to chip out the slots into which the tool fits.

☒ Use the IF alignment tool with screwdriver tip supplied with your kit. Adjust the IF transformers for maximum meter reading. Start with Z-3 (top and bottom); then adjust Z-2 (top and bottom) and Z-1 (top and bottom). Repeat in the same order until no further gain is obtained. When the IF stages are close to alignment, an appreciable amount of noise will be heard because of the high sensitivity of the receiver.

☒ Repeat the oscillator tube shield. Remove the grounding wire, which was temporarily connected to terminal 3 of C-1.

☒ Mount the four rubber feet to the bottom plate with four 6-32 x 5/16" screws, four lockwashers and four nuts. Mount the bottom plate to the bottom of the chassis with six 6-32 x 5/16" screws, and six lockwashers. Notice that the trimmer holes in the bottom plate are opposite the C-12 and C-16 trimmer strips.

### HIGH FREQUENCY OSCILLATOR, RF AND MIXER ALIGNMENT

☒ Turn the bandspread capacitor fully clockwise (plates fully open). This is essential for correct calibration.

The other receiver controls remain in the same position as for IF alignment, except for the A-B-BAND-C-D switch which will be used in each of the four positions.

☒ Connect the output lead of the signal generator to a 300-500  $\mu\text{pfd}$  capacitor. Connect the other end of the capacitor to the antenna input of the receiver.

**Note:** Because adjustments at the high and low ends of the band affect each other, repeat each alignment step until no further gain is obtained. Follow the exact order given in the alignment chart. Adjust only the trimmer at the high end; adjust only the coil at the low end. All adjustments are made for maximum meter reading and loudest receiver output.

SEE THE ALIGNMENT CHART ON THE NEXT PAGE.

#### Step 1. Band A Oscillator Alignment

☒ Set the receiver bandswitch at A. Set the tuning dial of the receiver and signal generator EXACTLY at 1.65 mc. Use the screwdriver-tip alignment tool to adjust C-16A for maximum meter reading and loudest output.

☒ Set receiver and generator dials EXACTLY at .55 mc. Use the hex-tip alignment tool to adjust L-1 for maximum. Only a slight adjustment is needed because the coils are pre-aligned.

☒ Repeat step 1, following the exact order given in the chart.

#### Step 2. Band A RF and Mixer Alignment

☒ Set the receiver dial exactly at 1.4 mc, the generator at approximately 1.4 mc. Slowly "rock" the generator dial (a little to the right, then a

little to the left) to find the generator setting that produces maximum receiver output. Adjust C-12A, then C-3, the ANTENNA control.

☒ Set receiver exactly at .6 mc, generator approximately at .6 mc. "Rock" the generator dial to find the setting that produces maximum receiver output. Adjust L-9 then L-5 for maximum. Very slight adjustment is needed.

☒ Repeat step 2, following the exact order listed in the chart.

#### Step 3. Band B Oscillator Alignment

☒ Set bandswitch at B, receiver and generator EXACTLY at 4.6 mc. Adjust C-16B for maximum.

☒ Turn generator to 3.69 mc and turn up generator output to check for an image frequency (receiver still at 4.6 mc). If no signal is heard at the receiver, C-16B is correctly adjusted. However, if a signal is heard, C-16B is incorrectly adjusted to the wrong side of the signal frequency.

To correct the adjustment, turn the signal generator dial to 4.6 mc. A signal will still be heard. Now turn C-16B counterclockwise. The signal will become fainter, then inaudible. As you continue to turn C-16B counterclockwise the signal will be heard again and will reach a new maximum. At this point the oscillator is correctly adjusted to the high side.

☒ Set receiver and generator EXACTLY at 1.6 mc. Adjust L-2 for maximum.

☒ Repeat the entire step 3.

#### Step 4. Band B RF and Mixer Alignment

☒ Perform step 4 as shown in the alignment chart. As in step 2, "rock" the generator dial for maximum receiver output before adjusting C-12B and C-3 on the high end of the dial, or L-10 and L-6 at the low end of the dial. Repeat step 4.

#### Step 5. Band C Oscillator Alignment

☒ Set receiver and generator at the exact frequency shown in the chart and make the indicated adjustments. Check for an image by setting the receiver at 12.4 mc, generator at 11.49 mc. If no signal is heard, C-16C is correctly adjusted. If a signal is heard, set the generator dial at 12.4 mc and turn C-16C counterclockwise until a new maximum is reached.

#### Step 6. Band C RF and Mixer Alignment

☒ Perform step 6 as shown in the alignment chart. Remember to "rock" the generator dial as in step 4.

#### Step 7. Band D Oscillator Alignment

☒ Set receiver and generator at the exact frequency shown in the chart and make the indicated adjustments. Check for an image by setting the receiver at 30 mc, signal generator at 30.91 mc. If a signal is heard, correct by setting signal generator at 30 mc and turning C-16D clockwise until a new maximum is reached.

#### Step 8. Band D RF and Mixer Alignment

☒ Perform step 8 as shown in the alignment chart. Remember to "rock" the dial to find the desired generator setting.