

2. Color Video, Luminance and Bandpass Amplifier Alignment.

IMPORTANT: Be sure to read the instruction outlined under OPERATION, Section B, Obtaining A Video Sweep, before attempting to perform the following adjustments and checks.

- a. Perform steps a through l of Section 1, above, entitled Black & White Video Amplifier Alignment and Check above.
- b. Connect the R.F. OUTPUT Cable of the TVG-2 through a Video Marker Box to the input grid (Point 1 of Figure 7) of the 1st Video Amplifier. If you do not have a Video Marker Box connect the R.F. OUTPUT Cable directly to Point 1. (Use a .5 Mfd. isolation condenser when connecting to a point which has a D.C. voltage). Although a Marker Box is recommended for Color T.V. work, a procedure discussed in steps n and r below is usable but caution must be exercised when using this method because of the difficulty in accurately determining the frequency of the marker pip you are observing, and the relative amplitude of the pips. The 4.1 MC and 4.5 MC markers are no problem since they are fundamentals of the Marker Generator.
- c. Connect the output of the 1st Video Amplifier (Point 2 of Figure 7) through a diode probe to the Vertical Input of the oscilloscope.
- d. Set the oscilloscope Vertical Gain Controls to the maximum gain position (Set the oscilloscope on the Hi Sensitivity Position).
- e. Turn the R.F. output control up until a pattern of the desired amplitude is obtained (Use the smallest amount of signal necessary from the TVG-2 to prevent overloading the circuit under test). A properly aligned set will have a response as shown in Figure 1.
- f. If desired, the zero beat can be shifted to the "Left" or "Right" of the waveform by adjusting the Sweep Generator Tuning Dial.
- g. If desired the waveform can be reversed from "Left" to "Right" or "Right to Left" to compare with a standard photograph or drawing by throwing the Sweep Generator SWEEP Switch to the "ON" or "REVERSE" position.
- h. If a single pattern with a base line is desired throw the BLANKING - DOUBLE PATTERN Switch to the blanking position.
- i. Turn the Marker Generator MARKER Switch to the "Variable" position and the RANGE Switch to the "A" Band Position.
- j. Turn the Marker Generator Tuning Dial to the 4.5 MC position.
- k. Turn the MARKER OUTPUT Control up until a marker pip appears on the waveform. (In some cases the 4.5 MC trap will not allow a marker signal through although the MARKER OUTPUT Control is at the maximum position. In this case turn the Marker Generator Tuning Dial back and forth around the 4.5 MC point to accurately determine the frequency at which the 4.5 MC trap is set.)
- l. Adjust the 4.5 MC trap, (Point 3 of Figure 7) for a response as shown in Figure 1.
- m. Disconnect the diode probe from Point 2 and connect the probe to the plate (Point 4 of Figure 7) of the Luminance or 2nd Video Amplifier. The properly aligned set should have a response as shown in Figure 2. The dashed line in Figure 2 indicates the extent to which the 3.58 MC tray may affect the Luminance response curve.