

**Important:** Always follow the recommended procedure outlined by the manufacturer of the set you are servicing. This is exceedingly important, because of the variety of circuits being used in Television. If you do not have the manufacturers' service notes, then use some such standard service as Howard Sam's. The following instructions are given as general information only. To properly align a Television Set, it is vital that you follow the set manufacturer's recommendations.

#### **1. Black & White Video Amplifier Alignment and Check**

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

- a. Inspect the A.C. plug to be sure the 1-1/2 Amp. line fuses are in place, then plug into a convenient 115 Volt 60 cycle receptacle.
- b. Two cables are provided with the TVG-2 and both are shielded leads, and identical, except one has clip, and the other has spade lugs. The lead with the clips is attached to the R.F. OUTPUT, and the lead with the spade lugs is attached to the HORIZONTAL CRO INPUT.
- c. Throw the PWR Switch to the "ON" position. The red pilot light will glow indicating that the instrument is in standby operation with all heaters on. Allow the instrument to warm up for at least 10 minutes before attempting any precision work.
- d. Turn the Oscilloscope PWR Switch to the "ON" position.
- e. Turn Sweep Generator SWEEP Switch to the "ON" position.
- f. Turn Sweep Generator RANGE Switch to the "C" Band.
- g. Turn the ATTEN RATIO Switch to the recommended 1K - VIDEO SWEEP position.
- h. Turn the RF. OUTPUT control to the minimum position.
- i. Set the SWEEP MC Switch to the sweep width position required to show the entire response band of the stage or stages being observed. The 9 MC position will be satisfactory for observing the overall Video Amplifier Response.
- j. Set the BLANKING - DOUBLE PATTERN Switch to the double pattern position.
- k. Set the Sweep Generator Tuning Dial Indicator to the degree marking for the particular sweep width selected in Step j. above.
- l. Connect the lead from the HORIZONTAL CRO INPUT cable to the oscilloscope Horizontal Input Terminals. Be sure that the oscilloscope Horizontal Input Control is set to "External" so that the 60 cycle sweep from the TVG-2 is used as the horizontal sweep voltage.
- m. Connect the R.F. OUTPUT cable of the TVG-2 to the output of the Video Detector. (Point 1 of Figure 6) If you wish to use a Video Marker Box it may be inserted in series with the R.F. OUTPUT cable at this time. Use a .5 mfd isolation condenser when connecting to a point that has a D.C. voltage.
- n. Connect the output of the Video Amplifier (Point 2 of Figure 6) through a diode probe to the Vertical Input of the oscilloscope.