



WG-295C Video MultiMarker

GENERAL

The RCA WG-295C Video MultiMarker is an absorption-type marker device which will provide seven simultaneous reference markers on a sweep response curve at factory-set frequencies in the video range. Designed especially for use in the sweep alignment and trouble-shooting of color television receivers, the MultiMarker connects directly to the IF/VF output connector of WR-59 and WR-69 series vhf sweep generators. Connection to the sweep generator is made by means of a coaxial cable approximately 14 inches long which is attached to the MultiMarker. The IF/VF Output Cable of the sweep generator is connected to the output connector of the WG-295C. A switch is provided on the WG-295C to permit switch-disconnection of the unit during if alignment.

The markers are narrow and distinct and appear on the video-response curve as "suck-out" or absorption-type pips which point toward the base line of the sweep trace. The markers are set at 0.5, 1.5, 2.5, 3.08, 3.58, 4.08, and 4.5 Mc. These are the frequencies generally used in checking and aligning chrominance circuitry in color-TV receivers.

A unique feature of the WG-295C is the seven "touch terminals" - one for each marker - located on top of the MultiMarker case. When one or more of the terminals is touched, the corresponding marker or markers on the sweep trace will disappear. All markers can be removed simultaneously by means of a shorting switch on the unit.

The seven absorption circuits of the WG-295C consist of high-Q tuned circuits loosely coupled to the output circuit of the sweep generator. The tuned circuits absorb a small amount of the sweep signal, thus producing a dip or notch in the sweep trace. This technique has the advantage of freedom from spurious markers which might otherwise make it difficult to identify the desired marker. Insertion loss throughout the video range is only 1 db or less. With markers switched out, response is essentially unaffected up to 50 Mc. The WG-295C measures 2-1/4" x 2-1/4" x 6-3/4".

OPERATION

The WG-295C is designed for use in the video frequency range up to 4.5 Mc. The insertion loss and mismatch caused by the MultiMarker are very low throughout this range. If the sweep generator is used at video frequencies above 4.5 Mc, the traps can be removed from the output circuit simply by setting the sliding MARKERS switch to "OUT" to avoid the possibility of amplitude distortion.

Use of the WG-295C is straight forward; markers may be identified by touching the terminals on the MultiMarker case. The markers are sufficiently accurate for use in checking alignment of the video amplifier, chrominance bandpass filter, and the I and Q channels.

ALIGNMENT OF WG-295C

The frequencies of the seven absorption traps are adjustable within narrow limits to permit precise alignment. Frequencies are adjusted by means of slug-tuned inductors. Alignment of the WG-295C requires an RCA WR-59 or WR-69 TV Sweep Generator, an oscilloscope such as an RCA WO-33A or WO-91A, a WG-357A IF Diode, and a crystal calibrated signal generator such as the RCA WR-99A.

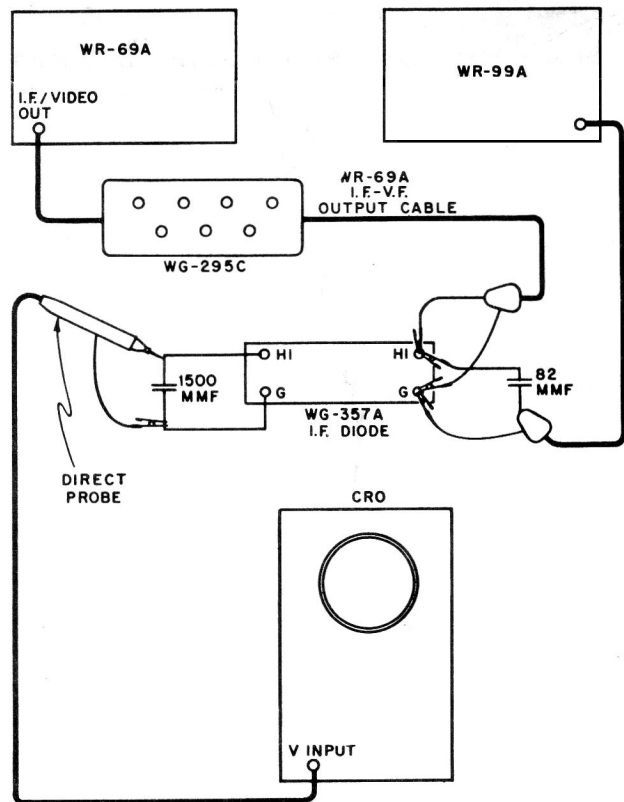


Fig. 1 - Test setup for alignment of WG-295C Video MultiMarker.