

TRANSMISSION TEST EQUIPMENT

VIDEO TEST SETS

KS-19763, L1/A OSCILLOSCOPE

1. GENERAL

1.01 This section refers to the KS-19763, L1 oscilloscope manufactured by the Hewlett-Packard Company.

1.02 This section is reissued to include information on modifications to the List 1 oscilloscope and the addition of the List 1A model.

1.03 The installation, operation, maintenance, and circuit description of this equipment are included in the Operating and Service Manual issued by the manufacturer. A copy of the manual is included with each unit ordered. Additional copies can be obtained by placing an order with the Western Electric Company as follows:

(Quantity) Manual, Operating and Service
(for KS-19763, L1/A Oscilloscope)
Hewlett-Packard Company
1900 Garden of the Gods Road
Colorado Springs
Colorado 80907

2. DESCRIPTION

2.01 The KS-19763, L1/A oscilloscope (Fig. 1) is intended for use in monitoring and maintaining television transmission facilities. It is also referred to as an A-scope or a television waveform monitor. It is designed to display the line and field waveforms of the standard monochrome or color television signal, particularly vertical interval test signals (normally referred to as VITS). All components of the oscilloscope, with the exception

of the cathode ray tube, are solid state. The KS-19763, L1/A is 16-3/4 inches wide, 5-1/4 inches high, 21-1/2 inches deep, and weighs 34 pounds. It accepts signals from 0.2 V to 2.0 V PP, either 75-ohm unbalanced or 124-ohm balanced. Power consumption is 70 watts at 117 V, 50 to 400 Hz. Figure 2 illustrates the front panel controls and their function.

2.02 Since introduction of the KS-19763, List 1 oscilloscope, various modifications have been accomplished to overcome roll-off problems in high-frequency response and to allow the scope to be used in making all lineup and routine tests performed on Video Transmission Systems.

2.03 Identification of the various modified models is as follows—those modified for humidity problems only will have an "M" stamped on the faceplate preceding the serial number, those modified for humidity and resistor problems will be stamped "AM." Those scopes modified for new features and subsequent production models will be designated List 1A.

2.04 Features have been added in the List 1A oscilloscope which permit it to be substituted for the Dumont 304A, Tektronix 524, or KS-15512. These features make the oscilloscope useful for making differential phase and gain, impulse noise, and video cable system tests and measurements.

2.05 The various sections which require the use of an oscilloscope in testing and maintenance are being reissued to include the use of the List 1A oscilloscope.

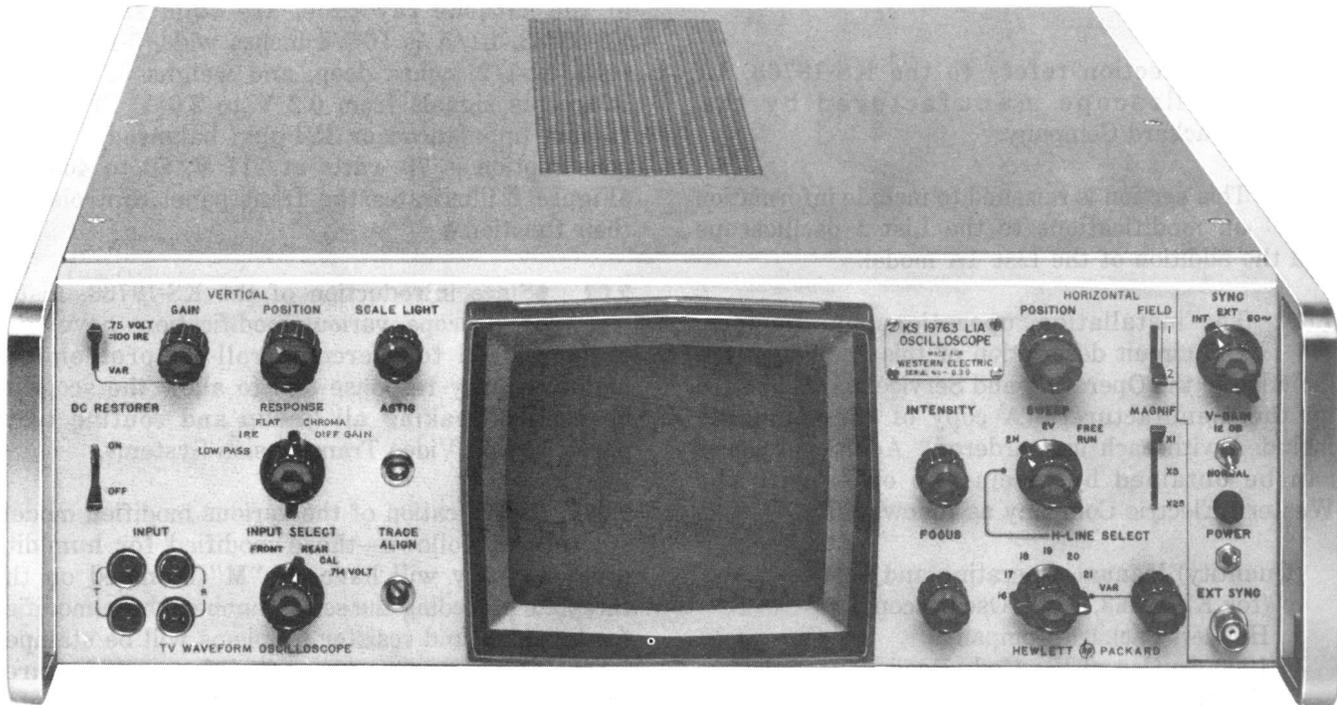


Fig. 1—KS-19763, List 1A Oscilloscope

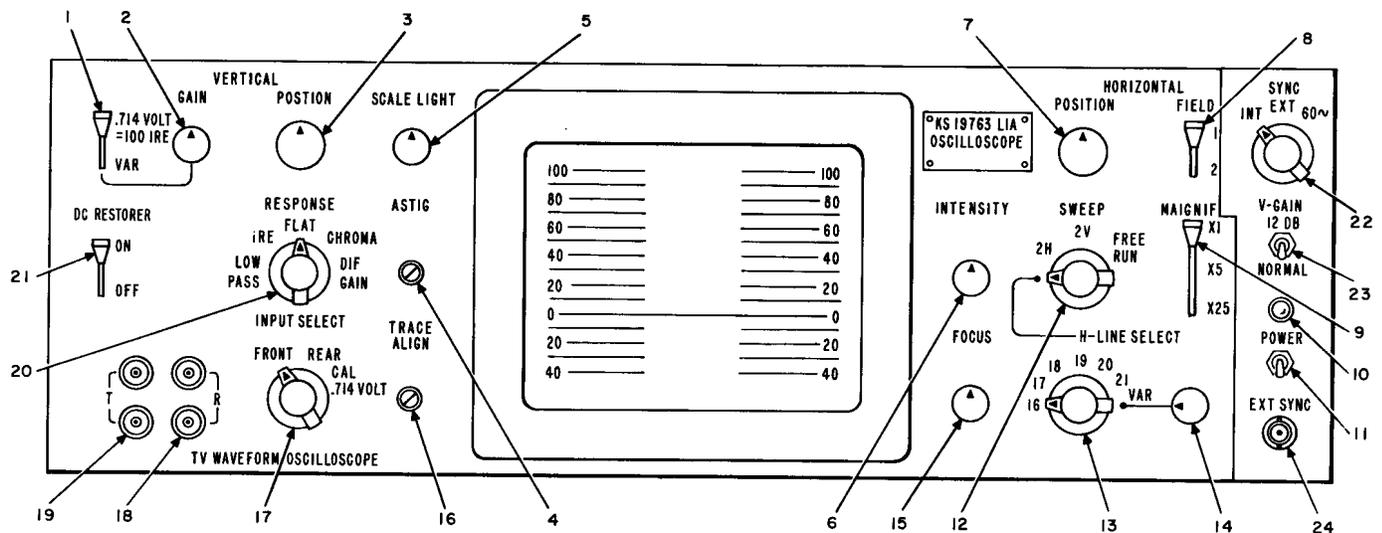


Fig. 2—Front Panel Controls

1. .714 VOLT = 100 IRE lever switch. Selects fixed or variable gain for the vertical amplifier.
2. GAIN control. Adjusts vertical amplifier gain to desired level.
3. VERTICAL POSITION control. Adjusts vertical position of the display.
4. ASTIG adjustment control. Used in conjunction with FOCUS control to adjust sharpness of trace (adjusted for round dot).
5. SCALE LIGHT control. Controls CRT internal flood gun for varying screen illumination (and better trace/graticule contrast).
6. INTENSITY control. Adjusts brightness of the display trace.
7. HORIZONTAL POSITION control. Adjusts horizontal position of the display.
8. FIELD lever switch. Selects either of the fields desired.
9. MAGNIFIER lever switch. Multiplies the display horizontal sweep by 1, 5, or 25 times.
10. POWER indicator. Indicator lights when instrument power is on.
11. POWER ON switch. Controls ac power to the instrument.
12. SWEEP selector switch. Selects the instrument horizontal sweep mode.
13. H-LINE SELECT selector switch. Selects specific horizontal line for display when SWEEP switch is set to H-LINE SELECT.
14. H-LINE SELECT VAR control. Selects any horizontal line for display when H-LINE SELECT switch is set to VAR.
15. FOCUS control. Adjusts focus of trace for sharpness.
16. TRACE ALIGN adjustment control. Aligns display baseline with the graticule horizontal axis.
17. INPUT SELECT selector switch. Selects the vertical input signal source.
18. R input jacks. Input jacks for inverted (ring) signal.
19. T input jacks. Input jacks for non-inverted (tip) signal.
20. RESPONSE selector switch. Selects vertical amplifier response filters.
21. DC RESTORER lever switch. Provides a voltage reference level for positioning the video signal on the CRT.
22. SYNC switch. A 3-position lever switch for selecting the various sync modes, i.e., INT — internal, EXT — external, or 60~ (AC power line rate).
23. 12 dB GAIN switch. A 2-position switch for increasing the vertical gain by 12 dB.
24. EXT SYNC jack. A connector jack for inserting an external sync signal.