

A MULTI-PURPOSE 'SCOPE PREAMPLIFIER

DESCRIPTION

The JERROLD Model SPR-100 is an unusual oscilloscope preamplifier featuring a low hum and noise level, excellent stability and 60 cycle square wave response, and a built-in wide band detector and marker amplifier circuit. Although primarily designed for use with the JERROLD Model 95 and Model 220 Wide Band Sweep Generators, the unit is an excellent companion piece for most sweep generators and oscilloscopes. A three position switch permits connecting the built-in detector directly to the oscilloscope, through the amplifier with normal response, or through the amplifier with a high pass filter. The audio amplifier section exhibits a gain of at least 40 db (100 X) across a flat response from 10 cps to 25,000 cps \pm 1 db. 60 cycle square wave response of the amplifier contains less than 2% tilt. The maximum AF input signal required for a 1:1 signal-to-noise ratio is less than 50 microvolts and the maximum undistorted output is 5 volts into 100,000 ohms, or higher. The noise and hum output is less than 5 millivolts. In the high pass filter position the amplifier response is 6 db down at 1500 cps and 20 db down at 500 cps with the high frequency response being unaffected. In this position the response is useful when a delay line is used for impedance measurements and in other cases where it is desired to view responses that change rapidly with frequency, while minimizing the effects of slower variations.

The built-in detector exhibits a flat frequency response from 500 KC to 250 MC with a V.S.W.R. of less than 1.08. An RF input signal of 1 millivolt is required to obtain a 1:1 signal-to-noise ratio. The marker amplifier has provisions for two inputs and is provided with a gain control for setting the degree of marker signal on the response. A minimum signal of 5 millivolts is required for the marker amplifier. The marker amplifier response reduces the low frequency components that would normally cause distortion of the response curve at high marker gain settings and prevent marking with weak marker signals.



Model SPR-100

FEATURES

- ☆ HIGH GAIN
- ☆ BUILT-IN DETECTOR
- ☆ WIDE BAND RF RESPONSE
- ☆ HIGH PASS FILTER SECTION
- ☆ GOOD 60 CYCLE SQUARE WAVE RESPONSE
- ☆ DUAL MARKER INPUTS WITH GAIN CONTROL
- ☆ LOW V.S.W.R.

APPLICATIONS

- ☆ INCREASED GAIN FOR OSCILLOSCOPE PRESENTATIONS
- ☆ V.S.W.R. MEASUREMENTS USING HIGH PASS FILTER
- ☆ MEASUREMENTS OF PASSIVE NETWORKS
- ☆ DETECTION OF MODULATED RF
- ☆ INSERTION AND CONTROL OF MARKER SIGNALS

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SPECIFICATIONS

AMPLIFIER	<p>MAXIMUM UNDISTORTED OUTPUT: 5 volts into 100,000 ohms or higher.</p> <p>REQUIRED AF INPUT SIGNAL FOR 1:1 SN RATIO: 50 Microvolts.</p> <p>HUM AND NOISE OUTPUT: Less than 5 Millivolts</p> <p>GAIN: 40 db, 10 cps to 25,000 cps</p> <p>FREQUENCY RESPONSE FILTER POSITION: High frequency response unaffected Low Frequency response 6 db down at 1500 cps, 20 db down at 500 cps.</p> <p>SQUARE WAVE RESPONSE: 60 cycles, less than 2% tilt.</p>
DETECTOR	<p>FREQUENCY RESPONSE: 500 KC to 250 MC.</p> <p>VSWR: Less than 1.08</p> <p>REQUIRED RF SIGNAL FOR 1:1 SN RATIO: 1 Millivoit</p>
MARKER AMPLIFIER	<p>RESPONSE: Peaked at 50 KC</p> <p>REQUIRED INPUT SIGNAL: 5 Millivolts</p>
CONTROLS	<p>SELECTOR SWITCH: Detector Amplifier - OFF, Detector Amplifier - ON, Detector Amplifier - FILTER.</p> <p>MARKER GAIN: Establishes marker output.</p> <p>TOGGLE SWITCH: External or Internal Detector</p> <p>TOGGLE SWITCH: Power On and Off</p>
TUBE COMPLEMENT	<p>1 - 12AY7...Low Noise Audio Amplifier</p> <p>1 - 12AT7...Marker Amplifier</p> <p>1 - OB2....Voltage Regulator</p>
POWER REQUIREMENTS	<p>117 V a-c, 60 cps, 20 Watts</p>
CONNECTORS	<p>BNC at 50 ohms or Jerrold "F" series at 75 ohms</p>
DIMENSIONS	<p>H - 10", W - 7", D - 8"</p>
WEIGHT	<p>10 lbs.</p>