

1400 MHz Sweep/Signal Generator

- Wide Frequency Range
- Start/Stop, ΔF and CW Modes
- Calibrated RF Output System
- Calibrated Sweep Width

1 to 1400 MHz Frequency Range

Model 2001 Sweep/Signal Generator offers versatility and a wide frequency range of 1 to 1400 MHz in a rugged, solid state instrument. Provision for complete remote programming and external AM or FM modulation is standard.

Multiple Operational Modes

Operating modes are Start/Stop, ΔF , and 100% duty cycle CW. In the ΔF mode, sweep width is read directly on the calibrated slide rule type dial.

Sweep Rate Versatility

The sweep may be line locked or at rates of 50 sweeps per second to 1 sweep every 100 seconds. Manual and triggered modes are provided.

Calibrated RF Output

The high output (10 mW) is internally leveled to within ± 0.5 dB over the entire range and has provision for external leveling. The RF output system is variable from +10 to -80 dBm in 1 dB increments.

Marker System

The 2001 has a crystal controlled birdy bypass marker system and the standard unit includes three harmonic markers at 1, 10 and 50 MHz. Up to six plug-in marker modules (each with individual on/off switches) may be added to the marker system. The markers may be at single discrete frequencies or at harmonically related frequencies (comb type markers).

Markers can be specified with the instrument or ordered at a later date for field installation. Size and width controls enable optimum adjustment of the marker display. The markers may be tilted up to 90° for easy viewing when displayed with steep transition signals, or they

may be rectified by a front panel switch for X-Y plotter applications. Model 2001 also converts a 100 mV external marker input signal to a birdy marker.

Model 2001 will interface with most network analyzers and attenuation test sets.

SPECIFICATIONS

RF FREQUENCY

Range:

- 1 to 500 MHz (band 1).
- 450 to 950 MHz (band 2).
- 900 to 1400 MHz (band 3).

Dial Calibration: 10 MHz/div.

Accuracy: 10 MHz (band 1). 2% of selected frequency (bands 2 and 3).

Sweep Width: 200 kHz to 500 MHz. Calibration in 10 MHz/div.

Operating Modes: ΔF , CW, Start/Stop.

Display Linearity: 2%.

Spurious Signals: -30 dB (10 to 1400 MHz).

MODEL 2001

Residual FM: <7.5 kHz peak.

Drift: (At a constant temperature after ½ hour warm-up.) <100 kHz to 5 minutes; <1 MHz for 8 hours.

Blanking: Blanking of RF output during retrace; removed for CW operation.

RF OUTPUT

Impedance: 50Ω.

Maximum Output Amplitude: +10 dBm.

Output Flatness: ±0.5 dB (at 10 dBm).

Attenuation: Continuously adjustable from +10 to -80 dBm. 70 dB in 10 dB steps plus a 20 dB PIN diode attenuator calibrated in 1 dB increments.

Accuracy

±0.5 dB to 500 MHz.

±1 dB to 1000 MHz.

±2 dB to 1400 MHz.

SWEEP CHARACTERISTICS

Sweep Modes: Recurring, single sweep, external trigger, manual and line lock.

Sweep Time: Continuously variable from less than 10 ms to greater than 100s, in 4 decade steps, plus vernier.

Horizontal Output: 16V p-p symmetrical about ground (0 to +10V available upon request).

MARKER SYSTEM

RF Markers: 1, 10 and 50 MHz harmonic markers are standard. Up to 3 additional crystal-controlled plug-in birdy bypass markers can be installed, and rear panel external marker input is provided. Markers may be either discrete frequency (Option A-1) or harmonic type (Option A-2).

Marker Switches: Individual on/off switches provided for each marker.

Accuracy: ±0.005%.

Width: Adjustable from approximately 15 to 400 kHz in 4 steps.

Amplitude: Adjustable from approximately 15 mV to 12V p-p and 100 μV to 50 mV p-p.

Marker Tilt: Adjustable from vertical to approximately 90°.

External Marker: BNC input accepts CW signal for conversion to birdy marker. Input level must be at least 100 mV into 50Ω.

Recorder Processing: Front panel switch removes negative portion of birdy markers for use with X-Y recorders.

REMOTE PROGRAMMING

Rear mounted jack provides necessary connections for remote control of center frequency, sweep width and 20 dB vernier output control.

External FM: ±16V results in full deviation at rates up to 4 kHz. With reduced deviation and linearity, modulation rates to 100 kHz are possible.

External AM: 0 to -18V external signals are applied to 20 dB vernier output attenuator. With average voltage set to midrange, modulation possible to 50 kHz.

External Leveling: External negative signal (ALC) between 0.2 and 2V may be used to level RF output.

GENERAL

Dimensions: 20.9 cm (8¼ in.) wide; 14.3 cm (5½ in.) high; 34.9 cm (13¾ in.) deep.

Weight: 9.1 kg (20 lb) net; 11.4 kg (25 lb) shipping.

Power: 115 or 230V ±10% (available for 100 or 200V at no extra cost); 50 to 400 Hz; approximately 20 watts.

OPTIONS

A-1: Single Frequency Marker 1 to 1400 MHz. Specify frequency.

A-2: Harmonic Type Marker. Comb type frequency markers at 5 or 100 MHz. Specify frequency.

ACCESSORIES

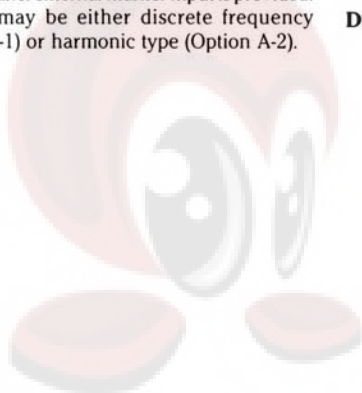
K103: Rack Mount for mounting one unit (PN 1019-00-0028).

K104: Rack Mount for mounting two units (PN 1019-00-0029).

D152: Detector: (See page 232).

FACTORY/FOB

Indianapolis, IN



SG Labs
test & measurement instruments