

VHF/UHF Sweep/Signal Generator

- 1 to 1000 MHz Frequency Range
- Calibrated Output (+ 57 to - 33 dBmV)
- Excellent Flatness and Linearity
- Complete Crystal Marker System
- Features for CATV Applications

Versatility

Solid state Model 1801C Sweep/Signal Generator provides features and options ideally suited for the manufacturer of TV and CATV equipment and for the installers and operators of CATV systems. Model 1801C's 1 to 1000 MHz frequency range is standard.

Calibrated Output

The ultra-flat (± 0.25 dB, 1 to 1000 MHz) 75 Ω output system is calibrated from + 57 to - 33 dBmV. A three position front-panel level switch permits the output level to be increased or decreased by an identical fixed amount (internally adjustable to provide changes ranging from ± 0.05 to ± 0.5 dB). This

feature aids in flatness measurements by providing an accurate, rapid calibration reference which is unaffected by the return loss of the test device or system. A dc block on the RF output prevents accidental equipment damage.

Marker System

The crystal controlled birdy marker system may be used to modulate (blank) the RF output so both sweep and markers may be on a single cable. This is very useful for an accurate frequency indication when sweeping long lines or cable systems.

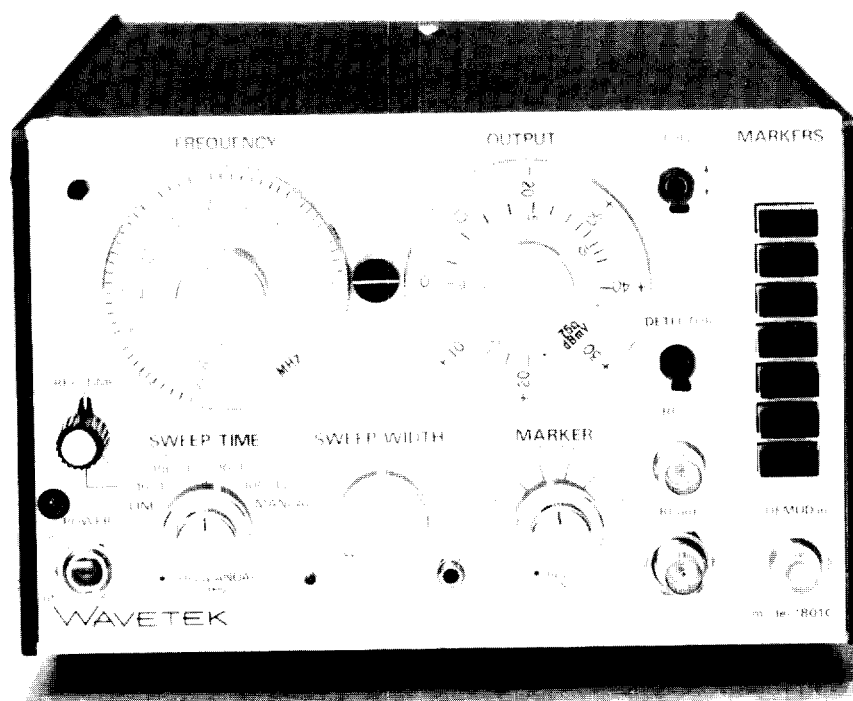
Sweep Rate Versatility

Model 1801C will sweep at line frequency or as slow as 1 sweep in 100

seconds. In addition, a special sweep rate position provides a variable 1 to 10 ms sweep that repeats every 1 to 10 seconds. This is ideal for simultaneous sweep testing of operating cable systems with minimum subscriber interference. Model 1801C may be used with any available sweep receiver.

Special CATV Features

Model 1801C can operate in conjunction with Model 1075 or 1076 Comparator-Attenuator. When Model 1075 is plugged into Model 1801C, the PIN diode attenuator is time shared with the equalization, tilt and 0.1 dB attenuator by the comparator.



MODEL 1801C

SWEEP GENERATORS

RF FREQUENCY**Range**

1 to 1000 MHz.

Dial Calibration

20 MHz/div with 20 MHz vernier.

Accuracy

20 MHz.

Sweep Width

200 kHz to 1000 MHz.

Display Linearity

1%.

Spurious Signals

-30 dB above 10 MHz.

Residual FM

<10 kHz peak in CW mode.

Drift

(At constant temperature after 1/2 hour warm-up.)

<100 kHz/5 minutes;

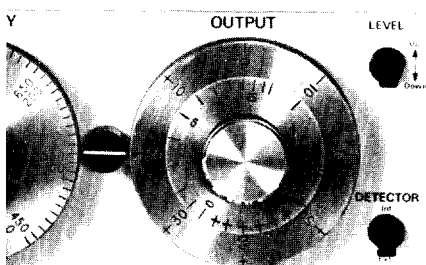
2 MHz for 8 hours.

RF OUTPUT**Maximum Output Amplitude**

+57 dBmV 0.7 Vrms.

Impedance75 Ω (50 Ω available).**Output Flatness** ± 0.25 dB, 1 to 1000 MHz.**Attenuation**

Continuously adjustable from +57 to -33 dBmV. 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. ± 1.0 dB to 100 MHz.

Calibrated RF Output

Reference Attenuator

Internally adjustable from 0 to 0.5 dB above and below output level.

Slope AdjustmentTo compensate for external cables, detectors, etc., up to ± 1 dB/GHz of slope may be imposed on the RF output via the front panel slope control.**Output Connector**

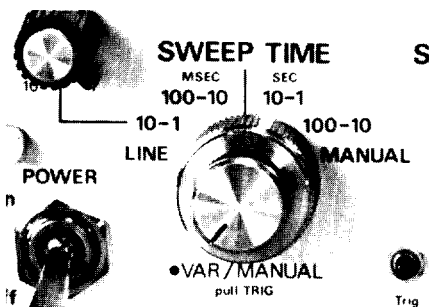
Type BNC (type F available).

SWEEP CHARACTERISTICS**Sweep Modes**

Recurring, single sweep, external trigger, manual and line lock.

Sweep Time

Continuously variable from 10 to 100 ms and from 1 to 100s, plus a special variable 1 to 10 ms sweep time range with an associated variable 1 to 10s repetition rate for testing of operating CATV systems.



Cable System Sweeping

MARKER SYSTEM**RF Markers**

Provision for up to 6 crystal-controlled plug-in birdy bypass markers, plus rear-panel external marker input. Markers may be either discrete frequency (Option A-1) or harmonic type (Option A-2).

Accuracy

0.005%.

Amplitude

Adjustable from approximately 1 mV to 1 Vp-p.

Width

Adjustable from approximately 15 to 400 kHz in 4 steps.

REMOTE PROGRAMMING

Rear-mounted jack provides connections for remote control of center frequency, sweep width and 0 to 20 dB vernier level control.

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

0 to -5 V 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 2 V may be used to level RF output.

External Triggering

10 V pulse will trigger a single sweep.

GENERAL**Dimensions**

20.9 cm (8 1/4 in.) wide; 14.3 cm (5 3/4 in.) high; 34.9 cm (13 3/4 in.) deep.

Weight

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

Power115 or 230 V $\pm 10\%$ (available for 100 to 200 V at no extra cost); 50 to 400 Hz, approximately 20 watts.**OPTIONS****A-1**Single Frequency Marker.
1 to 1000 MHz. Specify frequency.**A-2**Harmonic Type Marker.
Comb type frequency markers at 1, 5, 10, 50 or 100 MHz. Specify frequency.

NOTE: Harmonic type 0.1 MHz markers with associated 1.0 MHz markers are available.

ACCESSORIES**K103**Rack Mount for Mounting One Unit.
(P/N 1019-00-0028.)**K104**Rack Mount for Mounting Two Units.
(P/N 1019-00-0029.)

See page 172 for details.

FACTORY/FOB

Beech Grove, IN