VHF/UHF Sweep/Signal Generator

- 1 to 500 MHz and 450 to 950 MHz
- Calibrated Output (+57 to −33 dBmV)
- Excellent Flatness and Linearity
- Complete Crystal Marker System
- Features for CATV Applications

1 to 950 MHz Frequency Range
The solid state Model 1801B 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.

The optional 450 to 950 MHz range adequately covers the bands of the future.

Calibrated Output
The ultra flat (±0.25 dB, 1 to 500 MHz) 75Ω 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 are on a single cable. This is very useful for an accurate frequency indication when sweeping long lines or cable systems.

Sweep Rate Versatility
The Model 1801B 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. The Model 1801B may be used with any available sweep receiver.

Special CATV Feature
The Model 1801B can operate in conjunction with the Model 1075 or 1076 Comparator-Attenuator. When the Model 1075 is plugged into the Model 1801B, the PIN diode attenuator is time shared with the equalization, tilt and 0.1 dB attenuator by the comparator. The Model 1801B will accept the tilt, notch filter and pulse marker options that are very desirable in most CATV test applications. For further information, see page 203.
MODEL 1801B

RF FREQUENCY

Frequency Range
1 to 500 MHz.
450 to 950 MHz (optional).

Dial Calibration
10 MHz/div with 5 MHz vernier.

Accuracy
10 MHz or 2% of selected frequency
(whichever is greater).

Sweep Width
200 kHz to 500 MHz.

Display Linearity
2%.

Spurious Signals
- 30 dB above 10 MHz.

Residual FM
Less than 7.5 kHz peak.

Drift
Less than:
100 kHz for 5 minutes;
2 MHz for 8 hours.

NOTE: At a constant temperature after ½ hour warm-up.

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

RF OUTPUT

Maximum Output Amplitude
+57 dBmV, 0.7 Vrms.

Output Flatness
1 to 950 MHz: ±0.35 dB.

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 950 MHz.

MARKER SYSTEM

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

Accuracy
±0.005%.

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

Amplitude
Adjustable from approximately 1 mV
to 1 V p-p.

REMOTE PROGRAMMING

Rear mounted jack provides neces-
sary connections for remote control
of center frequency, sweep width and
20 kHz vernier output control.

External FM
±16 V 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 –5V 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) be-
tween 0.2 and 2V may be used to
level RF output.

External Triggering
10V pulse will trigger a single sweep.

GENERAL

Connectors
Type BNC (Type F available).

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.

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

OPTIONS

A-1 $90
Single Frequency Marker.
1 to 950 MHz. Specify frequency.

A-2 $110
Harmonic Type Marker.
Comb frequency markers at 1, 5,
10, 50 or 100 MHz. Specify fre-
quency.

NOTE: Harmonic type 0.1 MHz markers with
associated 1.0 MHz markers are available. $220

A-4 $90
1 kHz Square Wave Generator.
Plug-in module provides square wave
modulation of RF output.

A-5 $50
Pen Lift.
Provides contact closure during for-
ward sweep trace. Binding post ter-
minals are provided on rear panel.

A-6 $245
Plus $25 each crystal.
Single Frequency Marker.
35 to 52 MHz. Up to five pulses
selected by plug-in crystals.

A-7 $130
Pilot Carrier Notches.
RF output is blanked (shut-off) at two
internally adjustable frequencies. An
on/off switch is on the front panel. In-
ternal controls determine the fre-
quency and width of each notch.

A-8 $300
UHF Option.
450 to 950 MHz.

ACCESSORIES

Model K103 $50
Rack Mount (for mounting one unit).

Model K104 $55
Rack Mount (for mounting two units).

FACTORY/FOB

Beech Grove, IN

PRICE

Model 1801B $2495
1 to 500 MHz

Model 1801B-A-8 $2795
1 to 950 MHz
(with both bands)