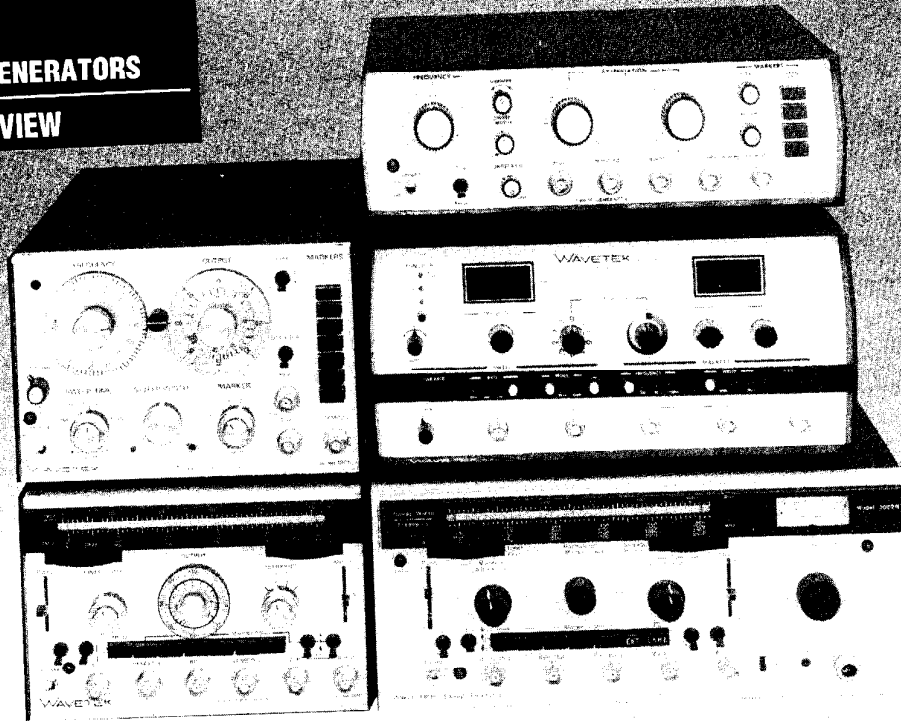


## RF SWEEP GENERATORS OVERVIEW



# Sweep Generators

Wavetek manufactures sweep generator products to cover frequencies from 1 to 2500 MHz. These products are used in 50 or 75 ohm applications.

**2002B:** This 1 to 2500 MHz Sweeper operates in start/stop, delta F, or CW mode. Any frequency range may be swept in any given band, in either direction, at rates up to 50 sweeps per second. Sweeps can be manual, triggered, or recurring. In addition to the standard crystal controlled harmonic markers, five optional markers may be installed. An optional GPIB interface is available. (50 ohm output impedance).

**2001:** This Sweep/Signal Generator covers the range from 1 to 1400 MHz in three bands. Operating modes are start/stop, delta F and CW. Crystal controlled harmonic markers at 1, 10 and 50 MHz are standard, and up to three additional harmonic or single frequency markers may be added optionally. (50 ohm output impedance).

**1801C:** This Sweep/Signal Generator covers the 1 to 1000 MHz range. Designed for TV and CATV applications, this 75 ohm output system has a  $\pm 0.25$  dB flatness with an output level variable from -33 to +57 dBmV. The sweep rate may be set from 10 to 100 milliseconds and from 1 to 100 seconds. Harmonic markers at 1, 10, and 100 MHz are provided, and up to 3 harmonic or single frequency markers may be added optionally.

**1080/1081:** This Sweep Generator covers the range from 1 to 1000 MHz, and may be operated in CW, delta F and full sweep modes. Center frequency and output level are displayed on a  $3\frac{1}{2}$  digit readout. Harmonic markers are provided at 1, 10 and 100 MHz, and a variable "bright spot" marker is activated in the full sweep mode. (1080 = 50 ohm output impedance; 1081 = 75 ohm).

**1062/1067:** This economical Sweep Generator covers the range from 1 to 500 MHz. The output level is controlled by turret and continuously variable pin diode attenuators in a range from -60 to

+10 dBm on the 1062 (50 ohm output impedance) or -7 to +57 dBmV on the 1067 (75 ohm output impedance). Up to 4 different crystal controlled harmonic or single frequency markers may be added optionally.

**1076/1077:** This comparator set up enables quick, easy, accurate measurement results over a wide amplitude range or for go/no-go testing. The comparator enables an oscilloscope display of both a reference and a test trace. The attenuators are adjusted to determine the difference in amplitude between the reference and test traces. (1076 = 75 ohm impedance; 1077 = 50 ohm impedance).

**1611:** This dual trace display oscilloscope is designed for use with sweep systems. The large, 19 inch screen makes measuring response variations easier.

# RF SWEEP GENERATORS OVERVIEW

## RF SWEEP GENERATOR SELECTION GUIDE

Top Frequency (Low Frequency is 1 MHz)	500 MHz	500 MHz	1000 MHz		1400 MHz	2500 MHz
MODEL	1062	1067	1080,1081	1801C	2001	2002B
Output Power (dBm)	+10 to -55	+57 to -7 (dBmV)	+13 to -70 (1080) +60 to -10	+57 to -33 (dBmV) +60	+10 to -80	+13 to -77
Flatness (dB)	±0.25	±0.5	±0.25		±0.5	
Spurious Content Harmonic	>30 dBc above 10 MHz					
Frequency Bands	1 Band				3 Bands*	4 Bands*
Impedance	50 Ω	75 Ω (50 Ω 1080)		75 Ω **	50 Ω	
Sweep Time	Variable/Line Locked			Variable/Line Locked/Calibrated Manual		
Operating Modes	ΔF/CW		Full Sweep/ ΔF/CW	ΔF/CW	Start/Stop/ΔF/CW	
Modulation Capability	AM/FM		FM Only	AM/FM		
Remote Programming Analog Standard for Center Frequency, Sweep Width and Output Level	•	•	•	•	•	GPIB Optional *
Square Wave Generator						•
External CW	•	•	•	•	•	•
Harmonic Markers Std.	Optional		1,10,100		1,10,50	1,10,50,100
Harmonic Markers Opt.	1,5,10,50,100		N/A	1 to 100	5, 100	5
Single Frequency Range	1 to 500		N/A	1 to 1000	1 to 1300	1 to 1300
Optional Marker Space	4		N/A	4	3	5

\* See Specifications

\*\* 50 Ω available

# 1000 MHz Single Band Sweepers

- Frequency Range 1 to 1000 MHz
- CW,  $\Delta F$  and Full Sweep Modes
- Digital Readout
- 1% Display Linearity
- Auto Zero

Series 1080 compact and economical sweep generators feature simple operation, 1% display linearity, digital readout and three operating modes: CW,  $\Delta F$  and full sweep. Models 1080 and 1081 have the same frequency range but different power output levels.

### CW, $\Delta F$ , Full Sweep

Frequency in CW mode is set by a ten-turn control and displayed with 1 MHz resolution on a 3½ digit display. In  $\Delta F$  mode, sweep width range (200 kHz to 1000 MHz max) is

set by a 100 MHz/Step selector and a 100 MHz vernier. In full sweep mode, the frequency control and display operate as a variable marker.

### Power Output

Model 1080 has an output power range of +13 to -70 dBm into 50 $\Omega$  and is continuously adjustable with a 10 dB/Step attenuator and an 11 dB vernier. Output level is displayed on a 3½ digit readout with 0.1 dB resolution. An "auto-zero" circuit improves frequency accuracy. Model 1081 is a 75 $\Omega$  version

with a calibrated output of +60 to -10 dBmV.

### Marker System

The birdy bypass marker system in the Series 1080 is controlled by a front-panel switch for selection of harmonic markers at 1, 10 and 100 MHz. Differences in marker amplitudes make identification of markers easy, and marker width is adjustable for optimum wide and narrow band operation. A calibrated variable marker is provided in the full sweep mode. External marker input is standard.



## SWEEP GENERATORS

## SERIES 1080

**FREQUENCY****Range**

1 to 1000 MHz.

**Readout**

3 1/2 digit vacuum Fluorescent display.

**Resolution**

1 MHz.

**Accuracy**

**CW, Center Frequency of  $\Delta F$ , and Variable Marker:**  $\pm 10$  MHz. Frequency accuracy can be improved to  $\pm 1$  MHz at a specific frequency.

**Sweep Width at 100 MHz Intervals:**  $\pm 10$  MHz.

**Sweep Width** $\Delta F$ , 200 kHz to 1000 MHz.**Full Sweep:** Same as range.**Display Linearity**

1% at maximum sweep width.

**Operating Modes**CW,  $\Delta F$ , and Full Sweep**Drift**

&lt;200 kHz for 10 min.

*NOTE: At a constant temperature after 1/2 hour warm up.*

**RF OUTPUT****Impedance****Model 1080:** 50 $\Omega$ .**Model 1081:** 75 $\Omega$ .**Power Level Range****Model 1080:** +13 to -70 dBm.**Model 1081:** +60 to -10 dBmV.**Output Flatness** $\pm 0.25$  dB.**Attenuation**

Continuously adjustable in 10 dB steps with an 11 dB vernier. Output level is displayed on a 3 1/2 digit readout with 0.1 dB resolution.

**Accuracy****Step Attenuator:**  $\pm 0.3$  dB +1% of attenuation.**Vernier Attenuator:**  $\pm 0.5$  dB.**Output Connector**

Type BNC.

**SPECTRAL PURITY****Harmonic Output**

1 to 2 MHz: &lt;-15 dBc;

2 to 10 MHz: &lt;-25 dBc.

10 to 1000 MHz: &lt;-30 dBc in 1 to 2000 MHz band.

**Nonharmonics**

1 to 400 MHz: &lt;-50 dBc;

400 to 1000 MHz: &lt;-35 dBc.

**Residual FM (CW Mode)**

&lt;10 kHz peak.

**SWEEP CHARACTERISTICS****Sweep Modes**

Recurring and single sweep.

**Sweep Time****Fast:** 0.010 to 1s (typical).**Slow:** 1 to 100s (typical).**Line:** Approximately 1/2 of AC line period.**Horizontal Output**0 to 10V, 1000 $\Omega$  impedance.**Blanking**

RF output is blanked during sweep retrace.

**MARKER SYSTEM****RF Markers**

Birdy bypass marker system is controlled by front-panel switch which provides selection of harmonic markers in these combinations: 100 MHz only; 100 MHz and 10 MHz; or 100 MHz, 10 MHz and 1 MHz.

**Accuracy** $\pm 0.005\%$ .**Amplitude**

Adjustable from approximately 1 mV to 250 mVp-p.

**Width**

Adjustable from approximately 10 to 500 kHz.

**Variable Marker**

(Full Sweep Mode Only.) 10-turn potentiometer and 3 1/2 digit frequency display function as a variable marker. Marker produces a bright spot on the display by momentarily delaying sweep ramp for approximately 2 ms. Accuracy is  $\pm 10$  MHz.

**External Marker**

BNC input accepts CW signal for conversion to a birdy marker. Input level must be  $\geq 100$  mV into 50 $\Omega$ .

**REMOTE PROGRAMMING****Frequency**

Rear-panel jack permits remote control of center frequency, sweep width and external frequency modulation.

**Level**

Rear-panel jack permits external control of RF output level over greater than 13 dB range.

**Trigger**

TTL input, during high to low transition. Also, by contact closure to ground.

**OUTPUTS****Pen Lift**

Contact closure during sweep.

**Blanking**

-15V during sweep, +15V during retrace.

**Sweep**

0 to 10V.

**Reference**

Output of 1V/100 MHz.

**Power Supply**

+18V, -18V, and common. External current limited to 10 mA.

**GENERAL****Dimensions**

28.6 cm (11 1/4 in.) wide; 13.3 cm (5 1/4 in.) high; 26.7 cm (10 1/2 in.) deep.

**Weight**

4.9 kg (10.8 lb) net; 6.8 kg (15 lb) shipping.

**Power**

90 to 110V; 105 to 125V;  
190 to 220V; or 210 to 250V;  
50 to 60 Hz; approximately 35 watts.

**ACCESSORIES****K019****\$75**

Rack Mount Kit adapts the instrument for center mounting in a standard 19 in. rack. 6 31/32 in. height.

**FACTORY/FOB****Beech Grove, IN****PRICE****Model 1080****\$3550****Model 1081****\$3550**