

# SIGNAL GENERATORS

## Synthesized CW Generator

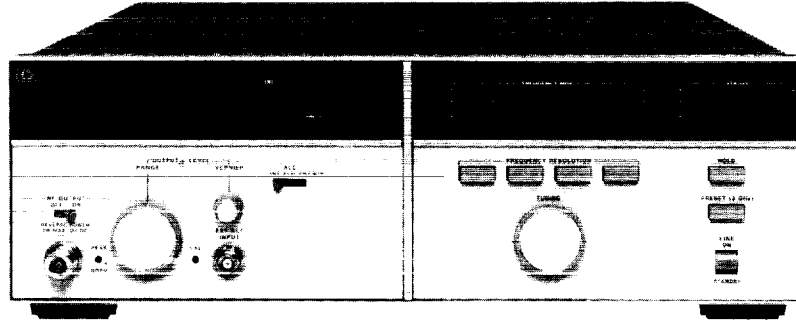
Model 8671B

- 2 to 18 GHz frequency range
- +8 dBm calibrated output power
- Low spurious signals

- Low phase noise
- 128 dB dynamic range
- 1 to 3 kHz frequency resolution



HP 8671B



### HP 8671B Synthesized CW Generator

The HP 8671B is an economy 2.0 to 18.0 GHz synthesized CW generator. It meets all the requirements for a clean CW source. It features synthesized output with 1, 2 or 3 kHz resolution, 128 dB dynamic range, +8dBm calibrated output power, full programmability, low phase noise and low spurious signals.

#### General Purpose Measurements

For applications requiring a microwave local oscillator, the HP 8671B is the ideal solution. A simple, uncluttered, easy to use generator, the HP 8671B provides accurate, clean signals to upconvert and downconvert signals into the desired measurement frequency range.

The +8dBm output capability (with plenty of reserve) is just what you need to drive mixers. You can now take full advantage of the entire 2.0 to 18.0 GHz frequency range from a single instrument. The HP 8671B provides broadband synthesizer capability for the price of a non-synthesized source.

As a microwave source for downconversion, important measurements like noise figure and modulation analysis become more affordable. The HP 8671B with an external mixer allows you to make these measurements at an IF with the HP 8970A and 8970B Noise Figure Meters and the HP 8901A/B and HP 8902A Modulation Analyzers. Other downconverted measurements may include network, spectrum, and waveform analysis.

#### ATE Systems

The +8dBm output capability of the HP 8671B provides the extra margin you need for automated systems. Higher power at the source means sufficient power at the unit under test, even after losses through cables and switches. For automated systems, the requirements for low phase noise, low spurious signals, and precise frequency settability are easily accommodated by the HP 8671B.

### HP 8671B Specifications

#### Frequency Characteristics

**Frequency range:** 2.0–18.0 GHz (18.6 GHz overrange).

**Frequency bands and resolution:** band 1: 2.0 to 6.2 GHz 1 kHz  
band 2: 6.2 to 12.4 GHz 2 kHz  
band 3: 12.4 to 18.0 GHz 3 kHz

**Time base:** internal 10 MHz ( $<5 \times 10^{-10}$ /day aging rate) or external 5 or 10 MHz.

**Frequency switching time:** <15 ms to be within specified resolution, all bands.

#### Spectral Purity

**Single-sideband phase noise (1 Hz BW, CW mode):**

F <sub>c</sub>	Offset from F <sub>c</sub>				
	10 Hz	100 Hz	1 kHz	10 kHz	100 kHz
Band 1	-58 dBc	-70 dBc	-78 dBc	-86 dBc	-110 dBc
Band 2	-52 dBc	-64 dBc	-72 dBc	-80 dBc	-104 dBc
Band 3	-48 dBc	-60 dBc	-68 dBc	-76 dBc	-100 dBc

**Harmonics (up to maximum frequency, output level meter readings <0 dB on 0 dBm range and below):** <-25 dBc.

**Sub-harmonics and multiples thereof:** <-25 dBc.

#### Spurious

**Non-harmonically related:** <-70 dBc, Band 1; <-64 dBc, Band 2; <-60 dBc, Band 3.

**Power line related and fan rotation related within 5 Hz below line frequency and multiples thereof:**

F <sub>c</sub>	Offset from F <sub>c</sub>		
	<300 Hz	300 Hz to 1 kHz	>1 kHz
Band 1	-50 dBc	-60 dBc	-65 dBc
Band 2	-44 dBc	-54 dBc	-59 dBc
Band 3	-40 dBc	-50 dBc	-55 dBc

#### Output Characteristics

**Output level (+15°C to +35°C):** +8 to -120 dBm

**Flatness (0 dBm range, +15°C to +35°C):** ±0.75 dB, Band 1, ±1.00 dB, Band 2, ±1.25 dB, Band 3.

**Output level switching time:** <20 ms, internally leveled

<10 ms, typical within one output level range

**Source impedance:** 50 ohms nominal.

#### Remote Operation

**Frequency:** Programmable over full range with same resolution as manual mode

**Output Level:** Programmable in 1 dB steps

**RF:** Choice of either ON or OFF

**ALC:** Choice of either internal leveling, diode leveling, or power meter leveling

#### Interface functions:

SH1, AH1, T6, TE0, L4, LE0, SR1, RL0, PP2, DC1, DT0, C0, E1.

#### General

**Operating temperature range:** 0°C to +55°C.

**Power:** 100, 120, 220, 240 V, +5%, -10%, 48-66 Hz; 300 VA max.

**Weight:** net, 27 kg (60 lb). Shipping, 32.5 kg (72 lb).

**Size:** 133 mm H x 425 mm W x 603 mm D (5.25" x 16.75" x 23.75").

#### Ordering Information

HP 8671B Synthesized CW Generator

**Option 907:** Front panel handle kit

**Option 908:** Rack mounting flange kit

**Option 909:** Front panel handle kit plus rack mounting flange kit

**Option 910:** Extra operating and service manual

**Option W30:** Two additional years of return to HP warranty

#### Price

\$24,000

+\$55

+\$33

+\$80

+\$60

+470