

SIGNAL GENERATORS

Synthesized CW Generator

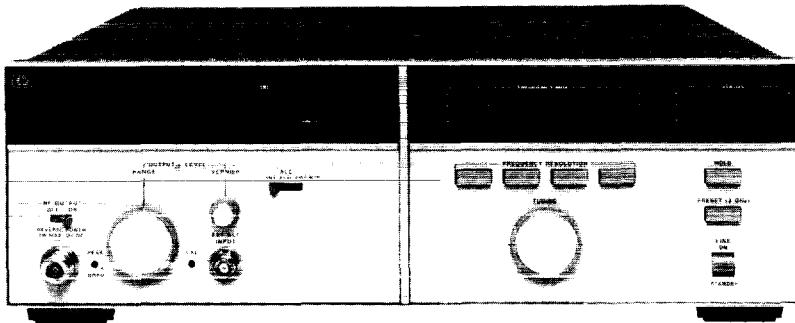
Model 8671B

- 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

DESIGNED FOR
HP-IB
SYSTEMS

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 setability 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_c	Offset from F_c				
	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_c	Offset from F_c		
	<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

Price

\$24,000

Option 907: Front panel handle kit

+\$55

Option 908: Rack mounting flange kit

+\$33

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

+\$80

Option 910: Extra operating and service manual

+\$60

Option W30: Two additional years of return to HP warranty

+\$470