



**Probe power:** front panel DC output for HP active high impedance accessory probes.

**HP-IB interface:** rear panel interface meeting IEEE 488-1975 for remote operation. Used for tracking synthesizer interface.

**Additional outputs:** rear panel demodulated audio; phase jitter meter.

## General

### Operating Environment

**Temperature:** 0° to 55°C.

**Relative humidity:** 95%, 0° to 40°C.

**Altitude:** ≤15,000 ft.; ≤4600 meters.

### Storage environment

**Temperature:** -40°C to 75°C.

**Altitude:** ≤50,000 ft.; ≤15,240 meters.

**Power:** 100/120/220/240 V, +5%, -10% 48 to 66 Hz, 150 VA.

**Weight:** 23 Kg (50 lbs) net; 30 Kg (65 lbs) shipping.

**Size:** 177 mm H x 425.5 mm W x 466.7 mm D (7" x 16.75" x 18.38")

## 3336 A & B Abbreviated Specifications

(See Data Sheet or manual for complete specifications)

### Frequency

#### Frequency range of signal outputs

Signal Output	3336A	3336B
75 Ω Unbalanced	10 Hz to 20.999 999 999 MHz	
135 Ω Balanced		10 kHz to 10.999 999 999 MHz
124 Ω Balanced		10 kHz to 2.099 999 999 MHz
150 Ω Balanced	10 kHz to 2.099 999 999 MHz	
600 Ω Balanced	200 Hz to 109.999 999 kHz	

All balanced outputs are usable over wider frequency ranges but are not specified in under and overrange operation.

**Resolution:** 1 μ Hz for frequencies <100 kHz, 1 μ Hz for frequencies ≥100 kHz.

**Accuracy (instruments without option 004):** ±5 x 10<sup>-6</sup> of programmed frequency.

**Aging rate (instruments without option 004):** ±5 x 10<sup>-6</sup>/year (20° to 30°C).

**Warm-up time:** 30 minutes.

### Amplitude

**Range:** 75 and 600 Ω outputs; -72.99 to +7.00 dBm

124, 135 and 150 Ω outputs: -78.23 to +1.76 dBm.

**Level accuracy, 20° to 30°C:**

75 Ω output			75 Ω output with option 005*		
dBm			dBm		
+7.00	±.15 dB		+7.00	±.12 dB	
-3.00	±.25 dB	±.30 dB	-3.00	±.16 dB	
-13.00	±.30 dB	±.35 dB	-13.00	±.18 dB	
-33.00	±.35 dB	±.40 dB	-33.00	±.22 dB	
-72.99	±.35 dB	±.40 dB	-72.99		
	10Hz	10MHz		10 Hz	20.9 MHz

\*high accuracy attenuator

124 Ω output: 50 kHz to 10.9 MHz ±.15 dB -8.23 to 1.76 dBm, ±0.3 dB -18.23 to -8.24 dBm, ±.35 dB -38.23 to -18.24 dBm ±.4 dB -78.23 to -38.24 dBm.

135 Ω/150 Ω output: 10 kHz to 2.09 MHz, ±.17 dB -8.23 to +1.76 dBm, ±.32 dB -18.23 to -8.24 dBm, ±.37 dB -38.23 to -18.24 dBm, ±.42 dB -78.23 to -38.24 dBm.

600 Ω output: 200 Hz to 109.9 kHz, ±.30 dB -3.00 to +7.00 dBm/±.40 dB -13.00 to 2.99 dBm, ±.45 dB -33.00 to -12.99 dBm ±.50 dB -72.99 to -32.99 dBm.

1. Add ±.03 dB for 0° to 55°C operation.

2. Warm-up time is 30 minutes.

**Amplitude blanking:** <-85 dBm output during blanking

### Spectral purity

**Phase Noise:** <-64 dB, Models 3336A and 3336B, for a 3 kHz band, 2 kHz either side of a 20 MHz carrier.

**Harmonic level:** -35 dB, 10 Hz to 30 Hz; -50 dB, 30 Hz to 50 Hz; -60 dB, 50 Hz to 1 MHz; -55 dB, 1 MHz to 5 MHz; -50 dB, 5 MHz to 20 MHz.

**Spurious:** all non-harmonically related signals will be more than 70 dB below the fundamental or -100 dBm (-115 dBm with option 005 except 150 or 600 Ω), whichever is greater.

### Phase offset

**Range:** ±719.9° with respect to arbitrary starting phase or assigned zero phase.

**Resolution:** 0.1°.

**Increment accuracy:** ±0.2°

**Ambient stability:** ±1.0 degree of phase per degree C

### Frequency sweep

**Sweep time:** linear sweep, .01 sec. to 99.99 sec, single log sweep, 2 sec to 99.99 sec, continuous log sweep, .1 sec to 99.99 sec

**Maximum sweep width:** specified frequency range of selected output

**Minimum sweep width:** log sweep, 1 decade; linear sweep, minimum sweepwidth (Hz) = .1 (Hz/sec) x sweep time (sec).

**Phase Continuity:** sweep is phase continuous over full frequency range.

**Sweep flatness:** ±.15 dB, fast leveling, 10 kHz to 20 MHz, .03 s sweep time; ±.15 dB, normal leveling, 50 Hz to 1 MHz, .5 s sweep time.

**Amplitude modulation:** modulation depth, 0 to 100%. Modulation frequency range, 50 Hz to 50 kHz.

**Phase modulation:** range, 0 to ±850°. Linearity, ±.5% from best fit straight line. Modulation frequency range, dc to 5 kHz.

**External leveling:** input from an external voltage source to regulate the signal amplitude at a remote point.

### Options

#### Option 001, 3336A Synthesizer/Level Generator:

1.6/5.6 mm 75Ω connector mates with WECO 358A. (3336B)

124Ω connector mates with WECO 372A.

#### Option 004, high stability frequency reference:

**Accuracy:** ±5 x 10<sup>-8</sup>

**Aging rate:** ±5 x 10<sup>-8</sup>/week after 72 hours continuous operation ±1 x 10<sup>-7</sup>/month after 15 days continuous operation.

**Ambient stability:** ±5 x 10<sup>-7</sup> maximum, 0° to 55°C.

**Option 005, high accuracy attenuator:** Improves level accuracy and spurious level. See main specifications.

### General

#### Operating environment

**Temperature:** 0° to 55°C.

**Relative humidity:** ≤85%, 0° to 40°C.

**Altitude:** ≤15,000 ft., ≤4600 meters.

#### Storage environment

**Temperature:** -50° to +65°C.

**Altitude:** ≤50,000 ft., ≤15,240 meters.

**Power Requirements:** 100/120/220/240 V, +5%, -10%, 48 to 66 Hz, 60 VA, (100 VA with all options), 10 VA standby.

**Size:** 132.6 high x 425.5 wide x 497.8 deep; 5¼" x 16¾" x 19¾".

**Weight:** Net wt., 10 kg. (22 lbs). Shipping wt., 15.5 kg. (34 lbs).

### Ordering Information

#### 3586A Selective Level Meter (CCITT)

**Opt 001:** 1.6/5.6 mm 75 Ω Connector

**Opt 003:** Transmission Impairments Option

**Opt 004:** High Stability Frequency Reference

#### 3586B Selective Level Meter (N. American)

**Opt 001:** 75 Ω Connector mates with WECO 358A

and 124 Ω Connector mates with WECO 372A

**Opt 002:** 1740 Hz Equivalent Noise Bandwidth Filter Replaces 2000 Hz.

**Opt 003:** Transmission Impairments Option

**Opt 004:** Same as 3586A

#### 3336A Synthesizer/Level Generator (CCITT)

**Opt 001:** 75 Ω 1.6/5.6 mm Connector

**Opt 004:** High Stability Frequency Reference

**Opt 005:** High Precision Attenuator

#### 3336B Synthesizer/Level Generator (N.American)

**Opt 001:** 75 Ω WECO 358A, 124 Ω WECO 372A

**Opt 004, 005:** Same as 3336A

### Price

**\$9200**

add \$100

add \$475

add \$625

**\$9200**

add \$100

N/C

add \$475

add \$625

**\$4100**

add \$100

add \$550

add \$550

**\$4100**

add \$100