



## 1310-B Oscillator

- 2 Hz to 2 MHz
- 20-V, constant output,  $\pm 2\%$
- 0.25% distortion

The superior characteristics of this oscillator make it an exceptionally useful laboratory signal source.

Constant output over a very wide frequency range facilitates frequency-response measurements.

High-resolution dial and exceptional amplitude and frequency stability are important for measurements of filters and narrow-band devices.

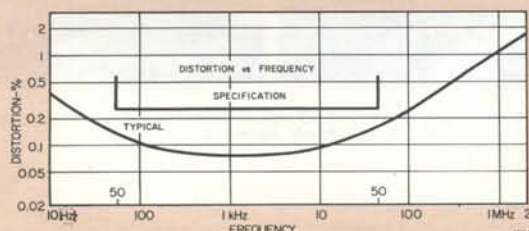
Equally useful in 600-ohm and 50-ohm circuits, since distortion is independent of load, even a short circuit.

When phase-locked to a frequency standard, the oscillator can deliver a high-level standard-frequency output with adjustable amplitude and low distortion.

**Description** A capacitance-tuned, RC Wien-bridge oscillator drives a low-distortion output amplifier, which isolates the oscillator from the load and delivers a constant voltage behind 600 ohms. All solid-state circuits ensure long, trouble-free life.

A jack is provided for introduction of a synchronizing signal for phase locking or to furnish a signal, independent of the output attenuator setting, to operate a counter, or to synchronize an oscilloscope or another oscillator.

Note: This product is manufactured also in Europe.



### SPECIFICATIONS

**Frequency Range:** 2 Hz to 2 MHz in 6 decade ranges. Overlap between ranges, 5%.

**Accuracy:**  $\pm 3\%$  of setting.

**Stability** (typical at 1 kHz): Warmup drift, 0.1%. After warm-up: 0.003% short term (10 min), 0.03% long term (12 h).

**Controls:** Continuously adjustable main dial covers decade range in 305°, vernier in 4 turns.

**Synchronization:** Frequency can be locked to external signal. Lock range  $\pm 3\%$  per volt rms input up to 10 V. Frequency dial functions as phase adjustment.

**Output Voltage:** 20 V open circuit, nominal.

**Power:**  $\geq 160$  mW into 600  $\Omega$ .

**Output Impedance:** 600  $\Omega$ . One terminal grounded.

**Attenuation:** Continuously adjustable attenuator with  $>46$ -dB range.

**Distortion:**  $<0.25\%$ , 50 Hz to 50 kHz with any linear load. Oscillator will drive a short circuit without clipping.

**Hum:**  $<0.02\%$ , independent of attenuator setting.

**Amplitude vs Frequency:**  $\pm 2\%$ , 20 Hz to 200 kHz, into open circuit or 600- $\Omega$  load.

**Synchronization:** Constant-amplitude (0.8-V), high-impedance (27-k $\Omega$ ) output to drive counter or oscilloscope.

**Terminals:** Output, GR 938 Binding Posts; sync, side-panel telephone jack.

**Available:** ADAPTOR CABLE 1560-P95 (telephone plug to double plug); 0480-9838 SET to rackmount 1310 alone; 0480-9880 SET to rackmount 1310 side-by-side with same-size instrument such as the 1309 Oscillator, 1369 Tone-Burst Generator, or 1232 Amplifier-Detector.

**Power:** 105 to 125, 195 to 235, or 210 to 250 V, 50 to 400 Hz, 12 W.

**Mechanical:** Convertible-bench cabinet. DIMENSIONS (wx hxd): 8x6x8.13 in. (204x153x207 mm). WEIGHT: 7.75 lb (3.6 kg) net, 10 lb (4.6 kg) shipping.

Description	Catalog Number
<b>1310-B Oscillator</b>	
115-V Model	1310-9702
220-V Model	1310-9703
230-V Model	1310-9704
<b>1560-P95 Adaptor Cable</b>	1560-9695
<b>480-P308 Rack-Adaptor Set</b>	0480-9838
<b>480 Rack-Adaptor Set</b>	0480-9880



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