

Features

- ◆ 85 hours operation with dry cells
- ◆ Battery voltage monitor
- ◆ Loop current LED
- ◆ 200 kHz level generator
- ◆ 15 Spot frequencies
- ◆ Sweep
- ◆ Closed-box electronic calibration
- ◆ Complex impedance
- ◆ Muting

Transmission Testing



H HEUER INSTRUMENTS

LEVEL GENERATOR LG41

LEVEL GENERATOR LG41

Rev 2, May 2003

10 Hz to 200 kHz

The Level Generator LG41 is a handheld battery powered instrument.

Easy and Fast Operation

The LG41 has been designed for ease of use without requiring the use of a handbook. The frequency and level of the output signal can be quickly and easily set using only the rotary knobs. Other modes of operation are configured by pressing a single button.

A 32 character, 2 line LCD gives a clear indication of impedance, level and frequency.

Battery Life

Long battery life is one of the most important features of portable equipment. The LG41 runs for 85 hours on quality dry cells. The battery condition is continuously monitored and if the voltage falls below 3.8 V a warning is given. Every time the LG41 is turned on it displays the battery voltage for 2 sec as a guide to the user as to the remaining battery life.

Frequency Range

The output frequency of the LG41 can be varied over a wide range between 10 Hz and 200 kHz. Resolution of 0.1 Hz is possible over the whole range.

A set of predefined frequencies in the range 200 Hz to 3600 Hz, are provided which enable the user to quickly step through commonly used frequencies. The LG41 is also capable of continuously sweeping through the spot frequencies to characterise the frequency response of a circuit.

Level Range

The output level can be set between -56 dBm and +10 dBm with a choice of 4 output impedances: 0 Ω , 135 Ω , 600 Ω or TN12. Muting of the output level is also possible.

Loop Hold

The LG41 will automatically hold a subscriber loop when connected by sinking the DC current. If the line current exceeds 10 mA the red *Loop* LED will be illuminated.

Technical Specifications (LG41)

| | |
|-------------------------|--|
| Frequency | |
| <i>Range</i> | 10 Hz to 200 kHz |
| <i>Accuracy</i> | $\pm 0.001\%$ ± 0.01 Hz |
| <i>Resolution</i> | 0.1 Hz: 10 Hz to 200 kHz |
| <i>Spot Frequencies</i> | 200 Hz, 300 Hz, 400 Hz, 600 Hz, 820 Hz, 1020 Hz, 1200 Hz, 1600 Hz, 1800 Hz, 2000 Hz, 2400 Hz, 2700 Hz, 3000 Hz, 3400 Hz, 3600 Hz |
| <i>Sweep Mode</i> | The following sequence is provided - 820 Hz (1020 Hz) reference for 10 sec - pause for 5 sec - spot frequencies for 5 sec each - pause for 5 sec |
| <i>Control</i> | Frequencies are set by a rotary control, increment and decrement with a single control |

Level

| | 100 Hz to 20 kHz | up to 200 kHz |
|-----------------------------|--------------------|-------------------|
| 600 Ω and 0 Ω | -50 dBm to +10 dBm | -50 dBm to +5 dBm |
| TN12 and 135 Ω | -50 dBm to +5 dBm | -50 dBm to +5 dBm |
| Accuracy | ± 0.2 dB | ± 0.4 dB |

| | |
|--------------------------|---|
| <i>Resolution</i> | 0.1 dB |
| <i>Quiet Mode (Mute)</i> | Generator disconnected and output terminated with selected impedance |
| <i>Control</i> | Levels are set by a rotary control, increment and decrement with a single control |

Impedance

| | |
|---------------------------|---|
| <i>Output Impedance</i> | 0 Ω , 135 Ω , 600 Ω , TN12 (220 Ω + 120 nF//820 Ω) |
| <i>Output Return Loss</i> | >35 dB, 300 Hz to 200 kHz (600 Ω) |

Distortion

| | |
|------------------|----------|
| <i>Harmonics</i> | < -50 dB |
|------------------|----------|

Balance Ratio

| | |
|--|-----------------|
| | 40 dB (200 kHz) |
|--|-----------------|

Loop Hold

The instrument is capable of holding a looped telephone circuit

Interfaces

| | |
|--------------|--|
| <i>Input</i> | balanced, floating 3-pin 4 mm CF connector |
| <i>LM41</i> | RJ-11 6P6C socket |

Power Supply

| | |
|--------------------------------------|--|
| <i>Battery Type</i> | 4 AA (NiCd or Alkaline) |
| <i>Battery Life</i> | 25 hrs typical (NiCd) 85 hrs typical (Alkaline) |
| <i>Low Battery Indication</i> | < 3.8 V |
| <i>AC Operation (& charging)</i> | Ext. Adaptor: 240Vac to 12 Vdc (200mA) |
| <i>Auto Power-Off</i> | 12 mins after last button press |

General

| | |
|------------------------------|-------------------------------------|
| <i>Display</i> | 16x2 LCD |
| <i>LEDs</i> | Loop Hold, Charging |
| <i>Operating Temperature</i> | 0 $^{\circ}$ C to 50 $^{\circ}$ C |
| <i>Storage Temperature</i> | -20 $^{\circ}$ C to 60 $^{\circ}$ C |
| <i>Dimensions</i> | 178 mm x 97 mm x 55 mm (L x W x H) |
| <i>Weight</i> | 700g with batteries |

Data subject to alterations without notice



H HEUER INSTRUMENTS PTY LTD

766 Pennant Hills Road, Carlingford NSW 2118
Sydney, Australia Web: www.heuer.com.au
Tel: +61 2 9871 8207 Fax: +61 2 9872 5985