

## Features

- ◆ 30 Hz to 20 kHz Level Meter
- ◆ Ease of use – single button operation
- ◆ 100 hours operation with dry cells
- ◆ Noise w/wo tone Meter
- ◆ Programme Weighting Filter
- ◆ 400 Hz Notch Filter
- ◆ 400 Hz Distortion Measurement
- ◆ 0.1 to 100 V dc voltmeter
- ◆ Bar-graph meter
- ◆ Built-in 400 Hz oscillator
- ◆ AC monitor output

## *Audio/Sound Broadcast Testing*



**H HEUER INSTRUMENTS**

**LEVEL METER LM21**

# LEVEL METER LM21

## 30 Hz to 20 kHz

The Level Meter LM21 is a handheld battery powered instrument. The main characteristic of the LM21 is the large number of facilities provided in such a small package.

### Easy and Fast Operation

Most instruments of this complexity revert to menu tree mode selection thereby necessitating handbook guidance or on screen help. The LM21 can be operated without these aids. Every measurement function is activated by a single key making the LM21 fast and easy to use.

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 LM21 runs for 100 hours on quality dry cells. The battery condition is continuously monitored and if the voltage falls below 3.8 V a warning is given.

### Wideband Level Meter

The LM21 measures signals in the range 30 Hz to 20 kHz and noise levels down to -90 dBm with the programme weighting filter. Noise with tone and distortion measurements at 400 Hz are also possible together with the above filters. High resolution mode gives 0.01 dB and 0.1 Hz.

On many occasions it is important to set a particular range manually especially when monitoring line activity.

## Technical Specifications (LM21)

#### Frequency Measurement

<i>Range</i>	30 Hz to 20 kHz with level > -60 dBm wideband
<i>Resolution</i>	1 Hz, 30 Hz to 20 kHz
<i>expanded</i>	0.1 Hz, 10 Hz to 1.7 kHz
<i>Accuracy</i>	± 0.025 % ± 0.1 Hz

#### Level Measurement

<i>Level range</i>	-80 dBm to +30 dBm fully autoranging or manual range setting
<i>Attenuator accuracy</i>	+30 dBm to -30 dBm: ± 0.15 dB less than -30 dBm: ± 0.25 dB
<i>Frequency response (wideband)</i>	300 Hz to 4 kHz: ± 0.1 dB 30 Hz to 20 kHz: ± 0.2 dB
<i>Level Measurements</i>	absolute(dBm/mV), relative(dBr)
<i>Resolution</i>	0.1 dB, expanded: 0.01 dB
<i>Detector type</i>	True RMS Quasi-Peak for Weighted measurement
<i>Bridging Loss</i>	< 0.10 dB, 200 Hz to 20 kHz
<i>Return Loss</i>	≥ 35 dB, 200 Hz to 20 kHz
<i>Balance Ratio</i>	≥ 40 dB, 30 Hz to 20 kHz

#### Input Impedance

600 Ω, 1200 Ω balanced, or 600 Ω bridging (100 kΩ)

#### Filters

<i>Wideband</i>	30 Hz to 70 kHz
<i>Flat</i>	30 Hz to 22 kHz, CCIR Rec 468-3
<i>Programme Weighting</i>	CCIR Rec 468-3 Quasi-Peak measurement
<i>400 Hz Notch</i>	390 Hz to 410 Hz

#### Noise Measurement

<i>Noise level range</i>	-80 to +10 dBm
<i>Accuracy</i>	± 1 dB
<i>Resolution</i>	0.1 dB or 0.01 dB
<i>Filters</i>	Wideband, Weighted, Flat

#### Distortion Measurement

<i>Range</i>	0.1 % to 100 %
<i>Test tone frequency</i>	390 to 410 Hz
<i>Filters</i>	Wideband, Weighted, Flat

#### Built-in Oscillator

<i>Frequency</i>	400 Hz, 600 Ω balanced
<i>Level</i>	0 dBm / -10 dBm ± 0.1 dB

#### DC Voltmeter

<i>Range</i>	0 to 100 V, 1 % of FSD ± 0.1 V
<i>Resolution</i>	0.1 V

#### Interfaces

<i>Input</i>	balanced, floating 3-pin CF connector
<i>Output</i>	balanced, floating 3-pin CF connector
<i>Charging</i>	2.5 mm DC socket
<i>AC Monitor</i>	3.5 mm DC socket

#### Power Supply

<i>Battery Type</i>	4 AA (NiCd or Alkaline)
<i>Battery Life</i>	30 hrs typical (NiCd)
<i>Low Battery Indication</i>	< 3.8 V
<i>AC Operation (&amp; charging)</i>	Ext. Adaptor: 240Vac to 6 Vdc (100mA)
<i>Auto Power-Off</i>	12 mins after last button press

#### General

<i>Display</i>	16x2 LCD
<i>Audio Monitor</i>	built-in speaker with volume control

#### Operating Temperature

<i>Operating Temperature</i>	0 °C to 50 °C
<i>Storage Temperature</i>	-20 °C to 60 °C

#### Dimensions

<i>Dimensions</i>	178 mm x 97 mm x 55 mm (L x W x H)
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*Weight* 790g with batteries

Data subject to alterations without notice



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