



1. TECHNICAL SPECIFICATION

Accuracies are referred at the temperature of 23°C±5°C with <80%HR

MEASUREMENT RANGE

- Type A weighting: 25 ÷ 140dB
- Type C weighting: 30 ÷ 140dB
- Type Z (linear) weighting: 35 ÷ 140dB
- Peak C SLM: 50 ÷ 143dB

Range [dB]	0 ÷ 90	10 ÷ 100	20 ÷ 110	30 ÷ 120	40 ÷ 130	50 ÷ 140
A Weighting	25 ÷ 90	25 ÷ 100	25 ÷ 110	30 ÷ 120	40 ÷ 130	50 ÷ 140
C Weighting	30 ÷ 90	30 ÷ 100	30 ÷ 110	30 ÷ 120	40 ÷ 130	50 ÷ 140
Z Weighting	35 ÷ 90	35 ÷ 100	35 ÷ 110	35 ÷ 120	40 ÷ 130	50 ÷ 140
Peak C	50 ÷ 93	50 ÷ 103	50 ÷ 113	50 ÷ 123	60 ÷ 133	70 ÷ 143

FREQUENCY WEIGHTING (Type A / C / Z)

- It complies with IEC61672:2002Class 1, CNS 7129, IEC60651:1979Type 1, IEC60804:2000Type 1

MICROPHONE

- Pre-polarized condenser ½ " with pre-amplifier
- Nominal sensitivity (at reference conditions): 50mV/Pa
- Frequency range: 10Hz ÷ 20kHz
- Noise: < 16dB(A)

AC OUTPUT

- Output ratio: 1mV AC / 0.1dB
- Maximum output voltage: 3.2Vrms
- Output impedance: 1kΩ

PC CONNECTION

- mini-USB: compliance with 1.1 and 2.0 release
- Connection to USB pen drive: suggested TRASCEND JF V30 2GB

GENERAL CHARACTERISTICS

- Level linear range: >90dB
- Resolution: 0.1dB (Statistic), 0.01dB (1/1 e 1/3 OCT)
- Frequency range: 10Hz ÷ 20kHz (±0.2dB) ; 1Hz ÷ 23kHz (±1.0dB)
- Range gain: -10dB, 0dB, 10dB, 20dB, 30dB, 40dB
- Range control error: ≤ 0.1dB
- Self-generated noise voltage: <4μV (1Hz ÷ 23kHz linear)
- Background noise: <13dB(A), 15dB(C), 25dB(Z)
- Total noise: <18dB(A), 23dB(C), 28dB(Z)
- Measuring voltage range: 15μV ÷ 10V (TRMS)
- Frequency weighting: A / C / Z
- Time weighting: Fast, Slow, Impulse, Peak C+, Peak C-
- A/D internal converter: 24 bit
- Anti-aliasing filter: cut-off frequency 23.5kHz, attenuation 100dB
- Sampling rate: 20.8μs (48kHz)
- Intergration time: 1s ÷ 24h pre-defined or customized
- Internal memory: 64kBytes flash memory
- Data storage: max 128 groups / max 256 calibrations

CHARACTERISTICS OF STATISTICAL ANALYSIS

- Features: SLM statistical analysis with A frequency weighting
Frequency integration with customized interval
SLM statistical analysis during 24 hours (24H)

Type of analysis	Measured parameters (*)
Statistical	L_{AFp} , L_{AFmax} , L_{AF5} , L_{AF10} , L_{AF50} , L_{AF90} , L_{AF95} , L_{AFmin} , SD , L_{Aeq1s} , $L_{Aeq,T}$, L_{AE} , L_{AeqT} .
24H	L_d , L_n , L_{dn} more than the parameters of statistical analysis
Integration	L_{xyp} , L_{xyi} , $L_{xseq,1s}$, $L_{xseq,T}$, L_{AE} , E , C_{peak+} , C_{peak-} , L_{AFmax} , L_{AFmin} , L_{AFeqT} , L_{ASeqT} , L_{AlegT}

(*) X = A/C/Z frequency weighting ; Y = F/S/I time weighting constants

CHARACTERISTICS OF 1/1 OCT AND 1/3 OCT

- Features: Noise's real-time OCT and 1/3 OCT spectral analysis with integral measuring
 - Frequency weighting: A/C/Z
 - Spectral analysis interface: all spectrum frequencies
 - Total analysis interface: performed with digital filter
 - Z weighting added with one digital high-pass filter (cut-off frequency: 4Hz)
 - Filter type: digital, G=2 for 1/1 and 1/3 octave analysis
 - Central frequency of 1/1 analysis:
 - 16Hz, 31.5Hz, 63Hz, 125Hz, 250Hz, 500Hz, 1kHz, 2kHz, 4kHz, 8kHz, 16kHz
 - Central frequency of 1/3 analysis:
 - 12.5Hz, 16Hz, 20Hz, 25Hz, 31.5Hz, 490Hz, 50Hz, 63Hz, 80Hz, 100Hz, 125Hz, 160Hz, 200Hz, 250Hz, 315Hz, 400Hz, 500Hz, 630Hz, 800Hz, 1kHz, 1.25kHz, 1.6kHz, 2kHz, 2.5kHz, 3.15kHz, 4kHz, 5kHz, 6.3kHz, 8kHz, 10kHz, 12.5kHz, 16kHz
 - Measured parameters (*): $L_{fmeq,1s}$, $L_{fmeq,T}$, L_{xyp} , L_{xyi} , $L_{xseq,1s}$, $L_{xseq,T}$, L_{AE} , E , C_{peak} , T_m
- (*) fm = central frequency ; X = A/C/Z frequency weighting ; Y = F/S/I time weighting constants
- Noise exposure (E)'s range: 0 ÷ 65.535Pa²h

CHARACTERISTICS OF HT151 PORTABLE CALIBRATOR

- Selectable SLM levels: 94dB and 114dB (reference to 2×10^{-5} Pa)
- Accuracy: ± 0.3 dB (94dB) ; ± 0.5 dB (114dB)
- Reference frequency: 1kHz $\pm 1\%$
- Distortion: $\leq 1\%$
- Reference standard: IEC 60942:2003 Class 1 and ANSI S1.40:1984
- Stability time: 3s
- Working temperature: -10°C ÷ 50°C (-14°F ÷ 122°F)
- Storage temperature: -25°C ÷ 0°C (-13°F ÷ 158°F)
- Humidity : <90%HR
- Atmospheric pressure: 65kPa ÷ 100kPa
- Power supply: 1x9V battery type IEC 6F22 or NEDA 1604
- Dimensions: 117(L) x 53(Ø) mm
- Weight (with battery and ½ " adapter): 250g



2. GENERAL SPECIFICATIONS

Display:

- Type of display: LCD, (240x160pxl), with backlight
- Sampling update : 1Hz (numerical), 10Hz (graphics)

Power supply:

- Internal supply: 4x1.5V alkaline batteries type IEC LR6, AA
- Battery life: about 8 hours
- External supply: adapter AC100-240V, 50/60Hz / 5VDC 2A

Mechanical specifications:

- Dimensions: 285 (L) x 90 (W) x 39 (H)mm
- Weight (with batteries): 500g

Environmental conditions:

- Max height: 2000m
- Reference temperature: 23°C ± 5°C
- Working temperature: 5 ÷ 40 °C
- Working humidity: <80%RH (up to 31°C) and <50%RH (at 40°C)
- Storage temperature: -10 ÷ 60 °C
- Storage humidity: <70%RH

Standard reference:

- Statistical and integration analysis: IEC 61672:2002 Class 1, CNS 7129
IEC 60651:1979 Type 1, IEC60804:2000 Type 1
- 1/1 and 1/3 octave analysis: IEC 61260:1995 Class 1

This meter is compliance to the requirements of 2004/108/EEC EMC Directive