Digitron

Class 2 Sound Level Meter

ST-25D

- ±1dB high accuracy & 0.1dB resolution
- IEC61252:2002 & IEC 61672
- Leq value with A/C/Z/B frequency weightings
- 28dB-133dB wide measurement range

Meter vs. Analyzer

A sound level meter is a device that allows you to determine the acoustic intensity and to measure the sound pressure level, but does not necessarily determine levels of sound in relation to tolerance of the human ear. Scarlet Tech ScarletSound™ sound level meters are suitable for professional application, including measurement of sound at work and environmental sound measurement.

Sounds analyzers provide octave bands analysis to help Safety Manger identify exactly noise sources easily by looking into the most relevant frequency components. The frequency domain information is based on DSP technology. ScarletSound™ ST-25D is the one you need.

Octave analysis (Optional)

- Real time 1/1 octave spectral analysis of noise
- Parallel A/C/Z weighting
- Analysis is realized by digital filter (G = 2)
- Noise exposure measurement range 0...65.535 Pa2h

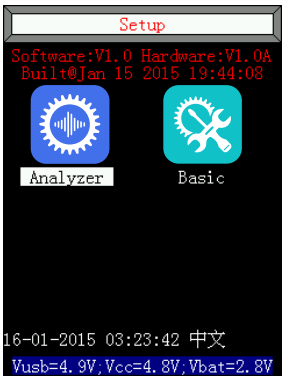
Modularization

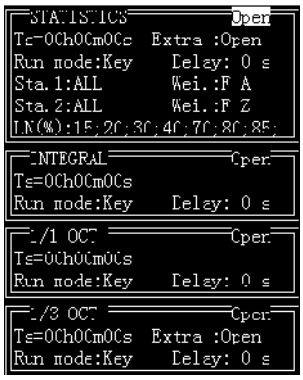
ST-25D series is designed by dividing major functions into modules. By installing different modules, ScarletSound™ provides experts the most flexibility to choose the functions they really need.

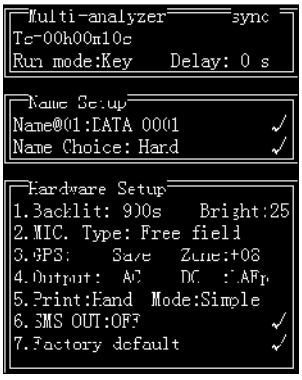
- 1/1 octave band module
- Statistic analysis module
- Data logger module

Main Function List

Menu Interface







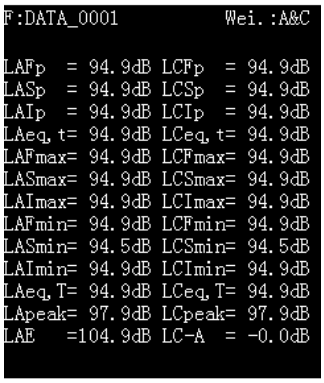
1. Integrating Function

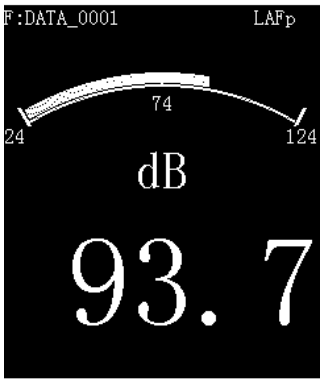
1) Measuring Interface: $L_{xy}i$, $L_{xy}p$, $L_{xeq}t$, $L_{xeq}T$, $L_x max$, $L_x min$, $L_x peak$ LAE, LC-A, SEL

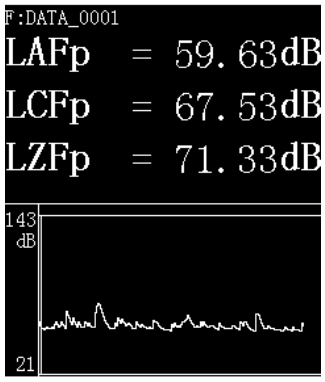
Note: x is A,C,Z, y is F,S,I

2) Integrating time: 1s~99h59m59s, set in random

3) Measuring Interface: Simple, List, Huge, Big interface







2. Statistical Analysis Function

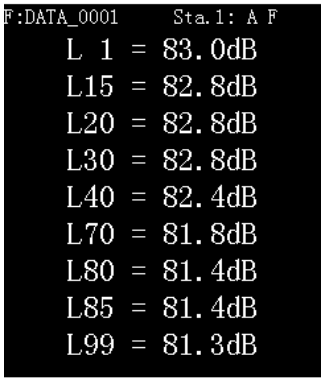
1) Main Function: The statistical analysis, 24 hours noise monitor automatically.

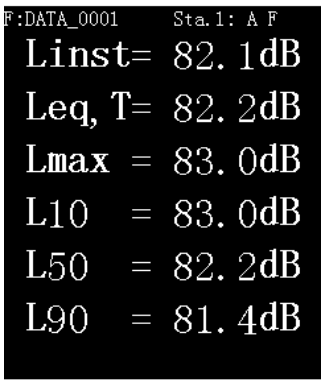
2) Mainly Measure Index: L_{xyp}, $L_{xeq,0.5s}$, $L_{xeq,T}$, L_{xymax}, L_{xymin}, L_{xyeqT} , SEL, Ln as minimum: 1, 5, 10, 50, 90 with 0.1 dB resolution, SD

Note: x is A,C,Z y is F,S,I n is 1~99

24h measures index: L_d, L_n, L_{dn}.

3) Up to 28 statistical Ln % values, two statistical analyzers each has 7 preset to L1, L5, L10, L50, L90, L95 & L99 and 7 user defined Ln values. Two statistical analyzers with independent time and frequency weight.





3. SD Card & Sound Recording Function

1) The SD card can be used as a memory card after installing the program. Saved files can be opened in the EXCEL directly

2) When connected to the computer via USB interface, it changes SD card into U disk

3) Record Format: 8000 samples/s@8bit,
48000 samples/s@32bit

4) File Format: 'WAV' including calibration information

5) Record Time: fs=48k, record time less than 1h per file
fs=8k, record time less than 12h per file

6) Replay: by the meter or computer Data is captured to the SD memory card inserted in the sound level meter

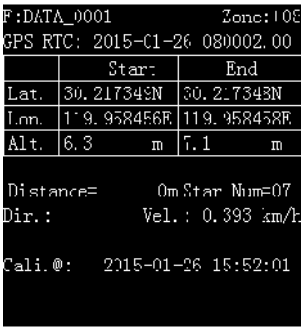
Optional Upgrade Function List

1. Real-time 1/1 Oct Spectrum Function

1) Filter type: Parallel (simultaneous) octave band filter, G10=103/10
2) Fulfills standards: IEC 61260: 1995 Class 2
3) Frequency bands: Octave bands 31.5Hz-8 kHz
4) Main Function: Noise real-time OCT spectral analysis
5) Frequency Weighting: A, C, Z can be chosen.
6) Filter Center Frequency（F0i）: 31.5 Hz, 63 Hz, 125 Hz, 250 Hz, 500 Hz, 1k Hz, 2 k, 4 kHz, 8 kHz Measuring Interface: List i and graph interface
7) Measuring Parameters: Lxyp, Lxeq,0.5s, Lxeq,T, , Lxymax, Lxymin, Tm, NR (noise rating number)
Note: x is A, C, Z, F0i y is F, S
8) Real-time Analysis Speed: 50 times/s

2. GPS Positioning Function

Measure longitude, latitude, altitude, movement speed which can be recorded together with the noise measu rement result.



Technical Specification

Fulfills Standards	IEC 61672 Class 2 IEC 61260 Class 2 IEC61252:2002
Microphone	1/2" prepolarized condenser microphone for free field (Sensitivity Level: -40dB)
Preamplifier	AWA14602 removable preamplifier
Frequency Range	20 Hz ~ 12.5kHz ± 1 dB (not including microphone)
Total Measurement Range	28dB-133dB (145dB Peak)
Measurement Level	Z(FLAT): 38 ~ 130dB
	C peak: 145dB
	Z(FLAT): peak: 145dB
Self-generated Noise	<23 dB(A), 28 dB(C), 35 dB(Z)
Frequency Weighting.	Parallel (simultaneous) A, C, Z, B, D
Time Weighting	Parallel (simultaneous) F, S, I, Peak
Measurement Parameters	Lxyp, Lxyi, Lxeq,1s, Lxeq,T, LAE, E, Cpeak, LAFmax, LAfmin, LAfeqT, LAseqT, LAieqT. Note: X is A, C, Z and Y is F, S, I
A/D Bits:	24 bits
Sampling Frequency	32 kHz.
Calibration	Using Class 2 Sound Calibrator
Correction Function	Diffusion field correction in order to comply with standards ANSI S1.4
Delay Time	The meter can delay 0~99s after pressing start measuring button
Back Erase Function	Elimination of undesired noise; example barking dogs, cars, doors
Display	240×320 color screen, adjustable brightness, backlight can be closed
Display Resolution	0.1 dB
Low battery indication	Symbol  indicate low battery
Data Storage (32 Mb FLASH RAM. 32G SD memory card is optional)	3328 groups of integrating measuring results only. 3328 groups of statistical results only ('statistical 1' and 'statistical 2' analysis index are same.)
	2663 groups of statistical results only ('statistical 1' and 'statistical 2' analysis index are different.)
Internal Clock	Error less than 1 min/month
Output Interface	AC Output (full scale): 1.0V AC RMS; Output Impedance: 1k Ω; Connector: ϕ 3.5 mm stereo plug
	DC Output: 20mV/dB; Output Impedance: 1k Ω; Connector: DB-9 plug
	RS232 Interface: To computer for output some measurement results instantaneous
	values , also to mini-printer for printing Transmission speed: 4800, 9600,115200 bps
	USB Interface: available and no need device drive. Allow USB to be controlled via communication commands
Power Supply	4×LR6 alkaline battery or rechargeable batteries
	5 V external power supply
Battery Life	Longest time of 30 hours continuously with 4×LR6 alkaline battery
Dimensions	240 (H) x 80 (W) x 30 (D), mm.
Weight	0.35 kg. (include batteries)
EMC	Type X
Environment	Working Temperature: -10 ~ 50 °C Storing Temperature: -20 ~ 70 °C Relative Humidity: 25 ~ 90 %

Accessories	AC adaptor, USB cable, windscreen, hand strap, windscreen fall prevention rubber, carrying case, USB-disk, user's manual
Bluetooth Module(Optional)	Can communicate with smart phone and realize wireless control sound level meter
Class 2 Calibrator	Optional
Printer	Optional
GPS	Optional