Integrating Sound Level Meters

LA-5570/5560/2560

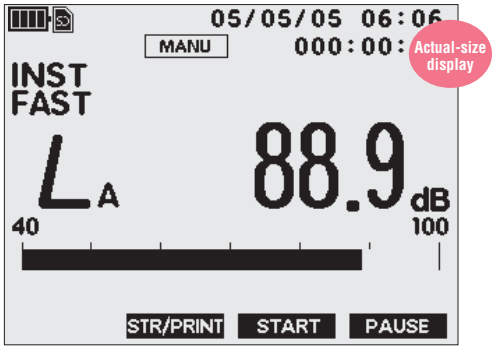
ONO SOKKI

High-functionality Sound Level Meter having affinity with a PC

LA-5570/5560/2560 high-functionality sound level meters conform to various sound level meter standards such as the IEC and the JIS, and are designed to be easily connected to a PC. An SD memory card slot and a USB connector are provided as standard to meet the growing requirements for computer processing of measurement data. Data can be easily read just by connecting a sound level meter to a Windows-based PC, without any special software. Easy to use menu-driven display like a mobile phone is adopted and also various analysis functions (options) are provided. It can be used as a one-channel recording device (sound recorder), and transfer the recorded data to various software of Ono Sokki.

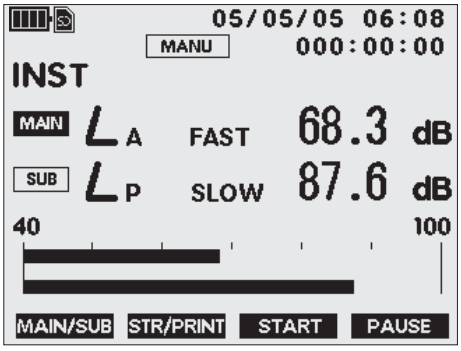
Large, Easy-to-read Display

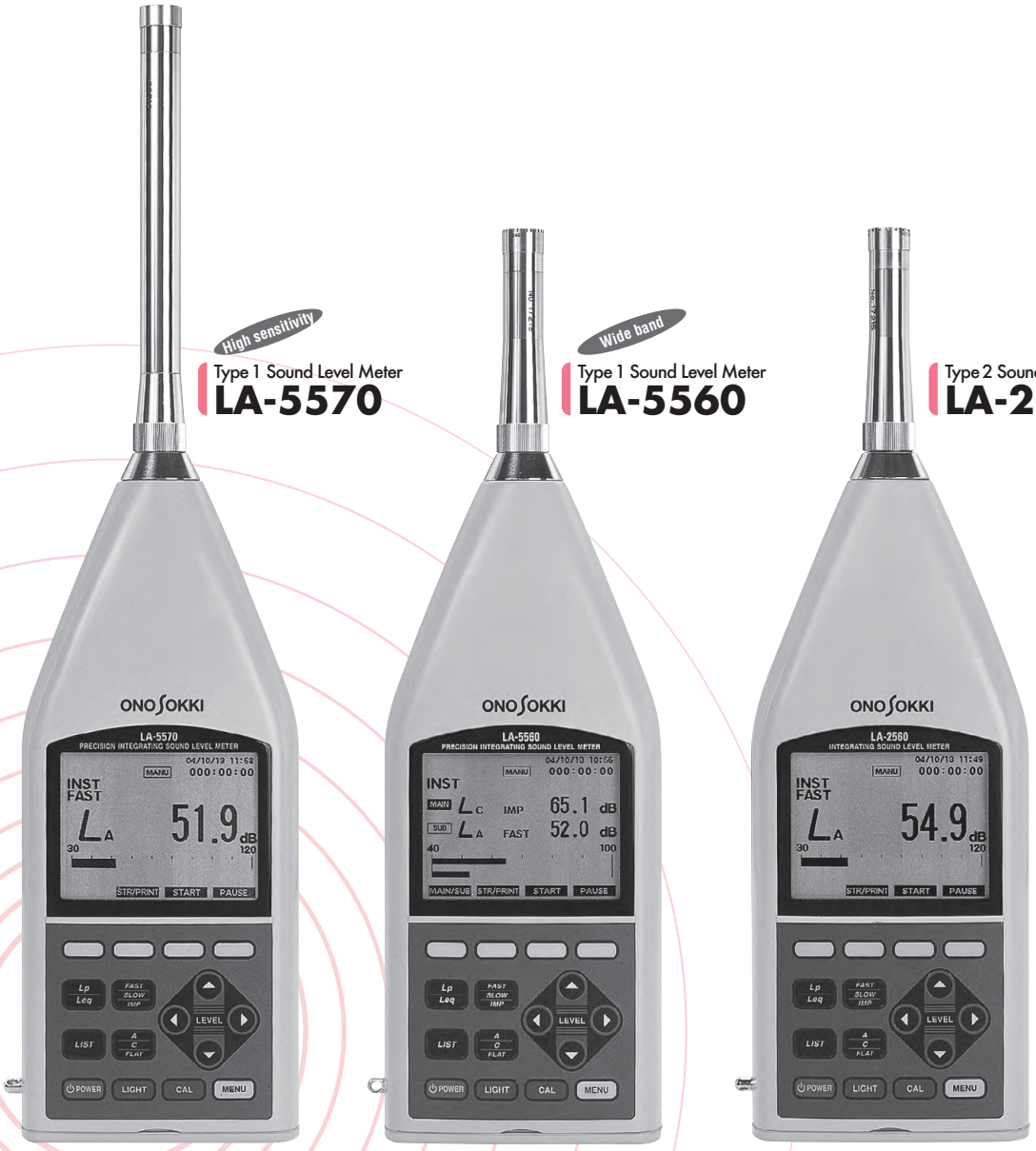
The large 2.8" LCD (320 x 240 dots) used for the display screen provides improved legibility of the on-screen information. Calculation values such as Leq and L_N and the setting menu parameters can be clearly and effortlessly read.



Simultaneous Measurement of Six Conditions

The LA-5570/5560/2560 sound level meters are capable of simultaneous measurement in three time weightings of FAST, SLOW and IMPULSE with respect to two frequency weightings selected from A-weighting, C-weighting and Flat. Measurement can now be performed without worrying about forgetting to capture some data.

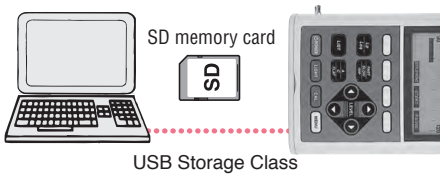




Standard accessories

- AC adapter
- Signal cable: AX-501
- Windscreen (ø90mm)
- Hand strap
- Type AA batteries
- Carrying case
- SD memory card (256MB)
- Shoulder belt
- Instruction manual

Simple and Easy Data Processing



All measurement results are stored on an SD memory card. Data can be transferred by connecting a sound level meter to a Windows-based PC via a USB cable or an SD memory card directly into a PC card slot. The data inside of an SD memory card can be read on a Windows-based PC without any special software in either case. If required, spreadsheet or other similar software can be freely used to process the measured data.

* The memory of maximum approx. 2kB is used for storing of one data.

Mobile Phone-like Easy Operability

Measurement conditions can be set on an easy-to-read and intuitive menu-driven display, enabling operation similar to that of using a mobile phone. Moreover, for enhanced operability, parameters that are most frequently used have been assigned to panel keys on a front panel of a sound level meter.

Remote Operation Also Enabled

RS-232C communication function enables remote operation of a sound level meter from a PC and data transfer to a PC.

Optional Functions

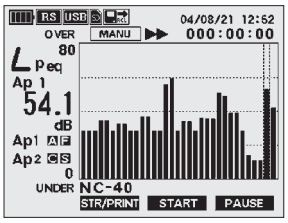
LA-0551 1/1 Real-time Octave Analysis
LA-0552 1/3 Real-time Octave Analysis

Real-time octave analysis functions can be added to a sound level meter. Adding one of these options expands the analysis range up to the 20kHz band, and enables coverage of the entire audible range.

Applicable standards : JIS C1514 Class 1
IEC 61260 Class 1

Analysis bands : 31.5Hz to 16kHz
10 bands (1/1 octave)
20Hz to 20kHz
31 bands (1/3 octave)

Measurement items : Simultaneous measurement of L_{eq}, L_E, L_{MAX}, L_{MIN}, L_p



A 1/1 octave filter analysis and an NC value measurement are included in the LA-0551. A 1/3 octave filter analysis and a loudness value measurement*1 are included in the LA-0552.

1: The loudness value measurement is available in the LA-5560 and LA-5570.
- ***The memory of maximum approx. 2kB for LA-0551 is used for storing of one data.***
- ***The memory of maximum approx. 3.3kB for LA-0552 is used for storing of one data.***

LA-0553 Spectrum Monitor

This is the first time that Ono Sokki has used its FFT technology, which has earned good reputation for reliability over the years, in an option for a sound level meter.

Number of analysis lines: 400

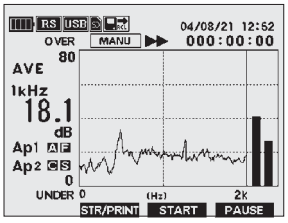
X-axis expansion function: x1, x2, x4

Frequency ranges: 1kHz, 2.5kHz, 5kHz, 12.5kHz, 25kHz

Calculated parameters: Instantaneous values, power average

List display function: The 15 highest peak values

- ***The memory of maximum approx. 9kB is used for storing of one data.***



LA-0554 Sound Recording

Use this option when you want to save sound data directly to a sound level meter.

Recording file format: WAV file format, sampling rate: 64kHz

A/D resolution: 16-bit

Data is saved to an SD memory card inserted in a sound level meter*2.

- ***Maximum of 15 minutes can be stored for one file.***

2: The memory of approx. 128kB is used for one second.

LA-0555 Advanced Comparator Output

The LA-0555 makes it possible to compare a preset level with an instantaneous level. The compared results are output from the comparator output terminal (COMP) at the bottom of a sound level meter.

Delay time: Can be set to 0, 1, 2, 5, 10, 20, 50, 100, 200, 500ms, 1, 2, 5 or 10s.

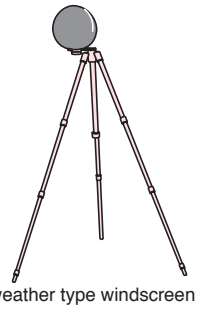
Output hold time: Can be set to 0.1, 0.2, 0.5, 1, 2, 5, 10, 20, 30, 60s or manual.

Moreover, when the LA-0551 or LA-0552 is installed in a sound level meter, the comparator function can also be used as an octave band comparator.

* A high-speed SD memory card (with data transfer speed of at least 10MB/s) is required when using an optional function. A high-speed SD memory card is sold separately.

Options and Peripheral Devices

LA-0206 (except for LA-5570)
All-weather Windscreen

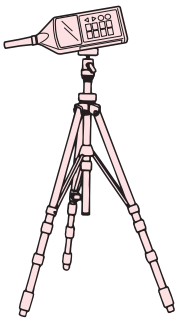


Using the all-weather type windscreen reduces noise caused by the wind when performing sound level measurements outdoors, and prevents the microphone from being damaged by rain or snow.

- Screen diameter: ø200mm

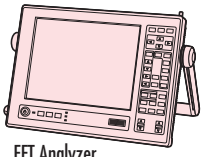
Note: The tripod and microphone extension cable are required (sold separately).

LA-0203C Sound Level Meter Tripod



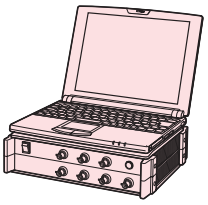
This tripod is Ono Sokki's standard tripod for use with sound level meters. The maximum height is 161.5cm, and the minimum height can be reduced to less than 10cm.

CF-7200A/DS-2000/DS-3000
Signal Analyzing Systems



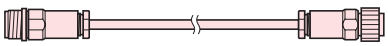
FFT Analyzer
CF-7200A

Multi-channel Data Station
DS-2000/3000 Series



Using the CF-7200A FFT Analyzer, the DS-2000/3000 series Data Station for frequency and other analysis enable even more advanced measurement whereby the cause and appropriate countermeasure can be determined simply from the measurement of the sound level.

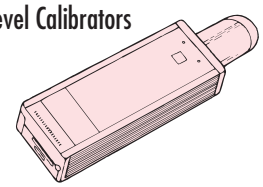
AG-3300 series
Extension Cable



AG-3301	5m
AG-3302	10m
AG-3303	20m
AG-3304	30m

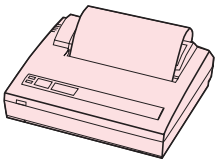
- The MI-0301 microphone holder is provided as standard.

SC-2120A/3120
Sound level Calibrators



A sound level calibrator is indispensable for determining the reference measurement value for a sound level meter. The SC-2120A model is a speaker type used for 1kHz, 94dB output (IEC 60942: Class 2, JIS C 1515 Class 2), while the SC-3120 model is a piston phone type used for 250Hz, 114dB output (IEC 60942: Class 1/C, JIS C 1515 Class 1/C).

DPU-414 (connection cable supplied)
Printer for Use with Sound Level Meters



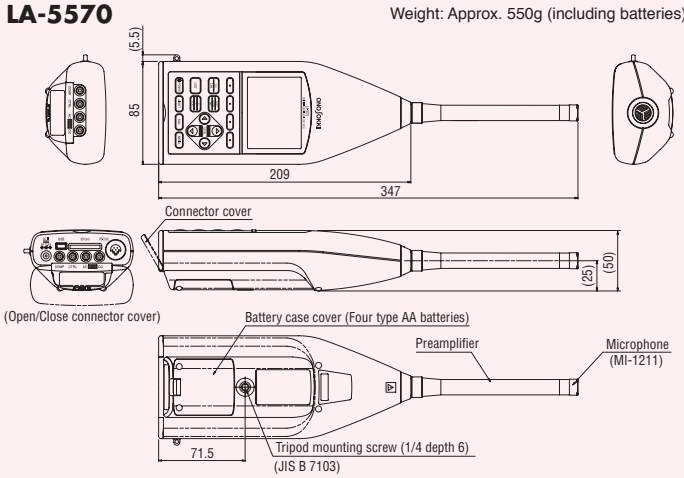
The DPU-414 is a printer for use with sound level meters. Connecting the printer to a sound level meter enables manual printing, auto printing, and memory printing. (The AC adapter is sold separately).

- AC adapter PW-4007
- Recording paper CX-050B (30-m/roll, 10 rolls/box)

Outer Dimensions

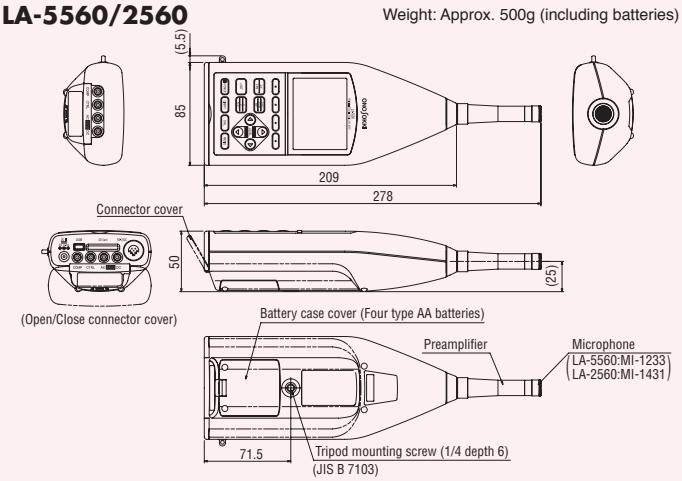
LA-5570

Weight: Approx. 550g (including batteries)



LA-5560/2560

Weight: Approx. 500g (including batteries)



Basic Specification

		LA-5570	LA-5560	LA-2560
Applicable standards		JIS C 1505:1988		JIS C 1502:1990
		IEC60651:1979 Type1		IEC60651:1979 Type2
		IEC60804:2000 Type1		IEC60804:2000 Type2
Measurement range (IEC)		A: 19 to 120dB C: 25 to 120dB FLAT: 33 to 120dB	A: 25 to 130dB C: 29 to 130dB FLAT: 35 to 130dB	A: 25 to 130dB C: 29 to 130dB FLAT: 35 to 130dB
Measurement range (JIS)		A: 22 to 120dB C: 28 to 120dB FLAT: 36 to 120dB	A: 28 to 130dB C: 32 to 130dB FLAT: 38 to 130dB	A: 26 to 130dB C: 30 to 130dB FLAT: 36 to 130dB
Frequency range		20Hz to 12.5kHz	20Hz to 20.0kHz	20Hz to 8.0kHz
Microphone		MI-1211 1/2-inch bias type	MI-1233 1/2-inch electret condenser type	MI-1431 1/2-inch electret condenser type
Level range		10-dB step x 6 levels/wide range x 2 levels		
Linearity range		Normal range: 75dB/wide range: 100dB		
Time weighting		FAST (125ms), SLOW (1s), IMPULSE (Rising 35ms, Falling 1.5s)		
Frequency weighting		A, C, FLAT		
Measurement items		L_P, TACTMAX, L_{eq}, L_E, PEAK, MAX, MIN, L_N (L_{HI}, L_5, L_{10}, L_{50}, L_{90}, L_{95}, L_{LO}, L_{AV}, and two more any L_N data)		
Measurement time		User-specified (HH:MM:SS.S) from 0.1s to 199h 59m 59.9s		
Dual mode function		Provided as standard (simultaneous measurement of 2 frequency weighting conditions x 3 time weighting conditions for each).		
Sampling interval		15.6μs (L_P, L_{eq}, L_E, PEAK, MAX, MIN), 100ms (L_N)		
Display unit		2.8" LCD (320 x 240 dots) with backlight		
Digital display		4-digit/0.1dB resolution/updated every 1s		
Bar indicator		Standard: Display range 60dB/resolution 0.2dB/updated every 0.1s Wide range: Display range 90dB/resolution 0.3dB/updated every 0.1s		
Low battery display		The battery voltage (4 to 6V) is indicated by an 8-segment display (flashes when the battery is low).		
Memory function		OFF, AUTO (6 types), MANUAL, RECORD • Stored on an SD memory card*.		
Panel condition memory		Power-off memory		
Clock function		Built-in (Year/month/day/hour/minute)		
Backup function		The battery backup function backs up the internal clock for approximately 20days (The internal battery is automatically charged by the batteries or the AC adapter when the power is on).		
Calibration signal		Electronic calibration by built-in transmitter (1kHz sine wave) Normal range: -6dB of full scale (wide range: -16dB of full scale)		
AC output		Full scale: 0.707Vrms (normal range)/2.234Vrms (wide range) Load resistance: 10kΩ or higher Linearity range: 80dB (normal range)/90dB (wide range)		
DC output		Full scale: 2.5V Scale factor: 0.5V/10dB (normal range)/0.25V/10dB (wide range) Load resistance: 10kΩ or higher		
Interface	RS-232C	Provided as standard, boud rate: 9600, 115200bps *AX-5022 cable is sold separately.		
	USB	Provided as standard, compliant with USB Mass Storage Class specification Ver. 1.1 USB connection cable: USB (A) male-USB (mini-B 5-pin) male (sold separately)		
	Others	SD memory card*		
Power supply		Four type AA batteries or AC adapter		
Battery life (continuous use)		Approx. 8hours (alkaline batteries in used)		
Operating (storage) temperature range		-10 to +50°C (-20 to +60°C) with no condensation		
Operating (storage) humidity range		30 to 90%RH (10 to 90%RH) with no condensation		
Outer dimensions		Approx. 85(W) x 347(H) x 50(D) mm	Approx. 85(W) x 279(H) x 50(D) mm	
Weight (including batteries)		Approx. 550g	Approx. 500g	
Accessories		AC adapter, signal cable:AX-501, windscreen (ø90mm), hand strap, type AA batteries, carrying case, SD memory card (256MB), shoulder belt, instruction manual		

*Up to 1GB of an SD card can be used. Please use recommended one by Ono Sokki.

Sound Level Meter Functions Chart

		Linearity range 100dB		
		With memory (manual memory)		
		Continuous measurement (block memory or auto memory)		
			Wide band (to 20kHz)	High sensitivity (from 22dB [A])
Type 2		LA-2560	—	—
Type 1		—	LA-5560	LA-5570
General measurement (Instantaneous values (L_p), maximum values (L_{max}), equivalent continuous sound level (L_{eq}))		●	●	●
Variable noise (Equivalent continuous sound level (L_{eq}), percentile sound level (L_N), sound exposure level (L_E))		●	●	●
Workplace environment (Leq measurement for a duration of 10 minutes)		●	●	●
Machinery noise		●	●	●
Factory noise		●	●	●
Multiple frequency weighting setting		●	●	●
Multiple time weighting setting		●	●	●
Interface	RS-232C	●	●	●
	USB	●	●	●
	SD memory card	●	●	●
Level judgment (comparator output)		○	○	○
External control		●	●	●
Storing interval of sound level		Calculated, instantaneous, analyzed by optional function values : 100ms or more		
1/1, 1/3 real-time octave analysis		○	○	○
1/1, 1/3 octave filter *1		○	○	○
1/1, 1/3 octave comparator *2		○	○	○
Sound recording		○	○	○
Spectral monitor		○	○	○
Loudness value measurement *3		—	○	○

● : Standard specification ○ : Option required

1: The 1/1 octave filter is included in the 1/1 real-time octave analysis optional software (LA-0551), while the 1/3 octave filter is included in the 1/3 real-time octave analysis optional software (LA-0552).

2: A real-time octave analysis optional software (LA-0551 or LA-0552) and the advanced comparator output optional software (LA-0555) are both required.

3: The loudness value calculation function is included in the 1/3 real-time octave analysis optional software (LA-0552). (not available for the LA-2560)

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ONO SOKKI

• Outer appearance and specifications are subject to change without prior notice.

URL: http://www.onosokki.co.jp/English/english.htm

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