

*Sound level meter*  
**TYPE 6236**  
*Precision Sound level meter*  
**TYPE 6238**



## *Capture the sound*

World first! Built-in 0-dB function (Option)

Symbolizing the next-generation sound level meter  
with extremely high resolution and reliability

 **ACO CO.,LTD.**

## Excellent cost performance, beating down the equivalent

In accordance with growing environment conservation, the evaluation of environmental noise such as traffic noise or industrial equipment noise, or better understanding of the labor health environment at offices, factories, etc are getting more important than ever before. On-site measurement of environmental noise is strongly expected to have high resolution and real-time analyzing function on the spot. Moreover, in the field of product development such as car parts electric appliances, etc., it is required to measure and analyze the sound of ultra-low level more accurately, corresponding to the rise of consciousness that the acoustic characteristics such as silence, tone quality, etc., should be the part of the product, which is deeply related to our human hearing sensation.

TYPE 6236/6238 displays its greatest force for these needs. Measurement of most measurands, such as Equivalent continuous A-weighted sound pressure level ( $L_{Aeq}$ ), Sound exposure level ( $L_{AE}$ ), A-weighted sound pressure level ( $L_A$ ), etc., is possible. Equipped with a card slot, enables to add the specified analyzing function by inserting the option program card (SD Card). Various program cards (Option) are available, such as 1/1 and 1/3-octave analysis card, FFT analysis Card etc. The "0-dB" function [ world first ] (Option · built in the main body) realizes the super-wide-range measurement over 0 ~ 80dB(A), i.e., from ultra-low sound pressure level to high pressure level.

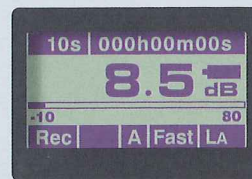
This equipment is symbolizing the next-generation sound level meter with extremely high resolution and reliability.

### The "0-dB"function [ world first ](Option)

measurement of the noise of ultra-low sound pressure level is possible. The function displays the greatest force in the evaluation of "quietness" or sound quality of silent model of recent IT/OA equipments, as well as in those of air-conditioning noise level or sound isolation capability of newly built concert halls where the room ambient noise is below "NC-20".

\* Technology relating to "0-dB measurement Function" is the fruit of joint research work with Shizuoka University.

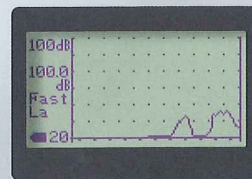
#### ● Example of the display for 0-dB function



### Equipped with a function of displaying NC-curve with evaluated NC index

by inserting Real-time 1/1 or 1/3-octave Analysis Card, evaluated NC index is displayed in real time, empowering the evaluation of on-site noise measurement.

#### ● Example of the display for TL (Time level)



### Percentile sound pressure level ( $L_N$ )

any 5 selectable values is available.

### Measurement of Equivalent continuous A-weighted sound pressure level ( $L_{Aeq}$ )

measurement of environmental noise required to secure occupational health.

### Wide linearity range of 100dB

covers wide range of 20~130dB.

### Equipped with an USB Ver1.1 function

allows data processing for PC.

### Backlight LCD screen for high

visibility and easy-on-the eye display.

### Timer function

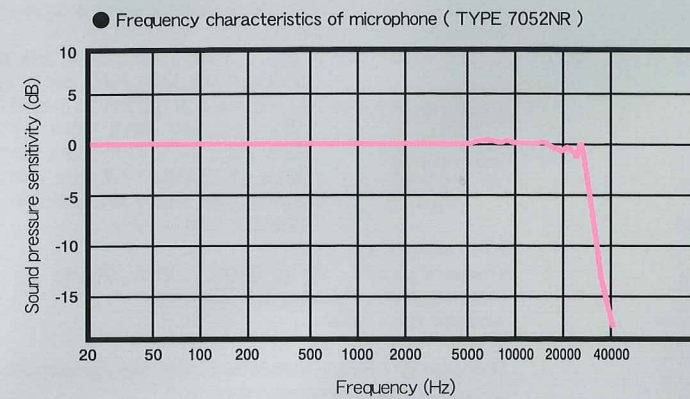
measurement can be paused or restarted at any point of time by installing the function.

### Excellent cost performance, beating down the equivalent

covers most measurands in current criteria.

Large digital display

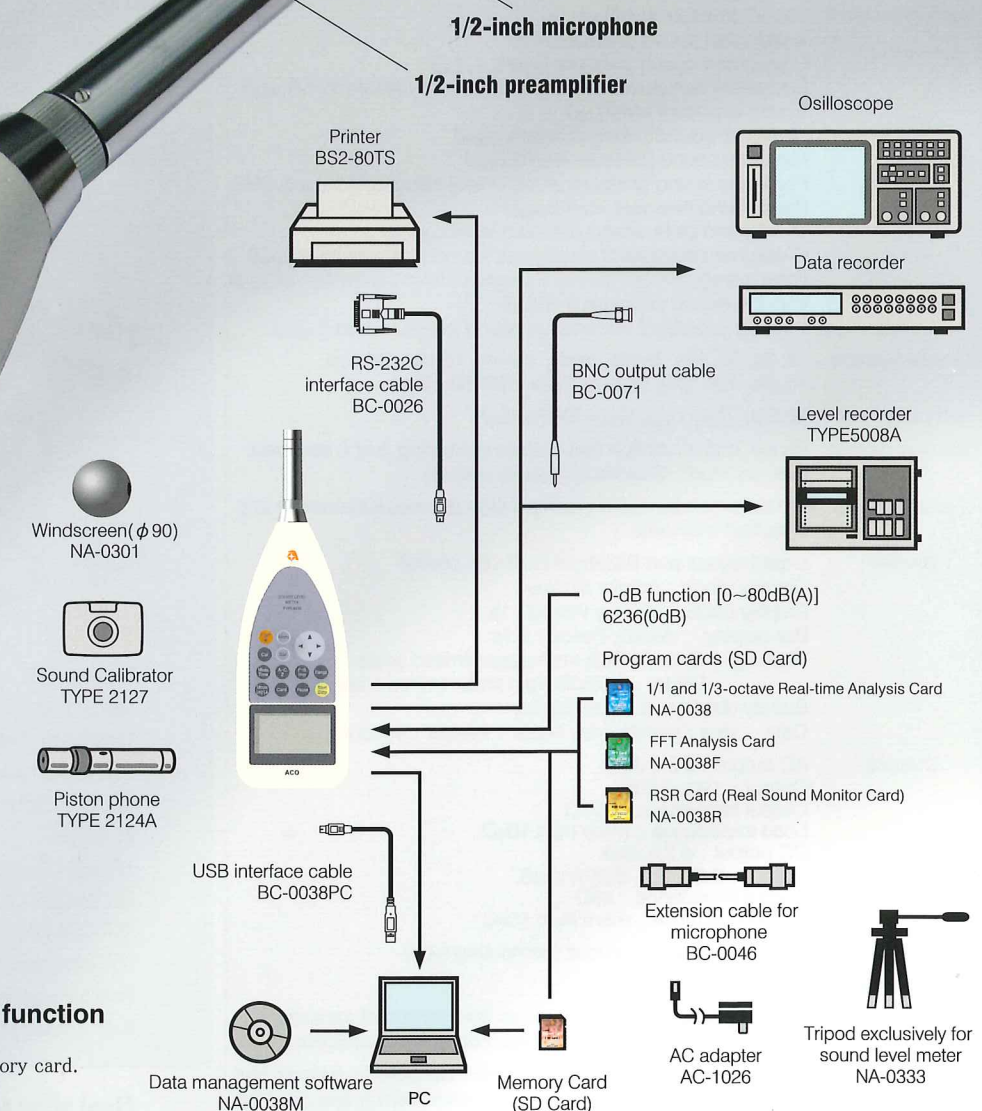
Memory card slot



### Configuration

1. Main body
2. Memory Card (SD Card)
3. Windscreen
4. Carrying case
5. Four 1.5V Alkaline cells IEC type LR6
6. Driver
7. Hand strap
8. Instruction manual

### 【 System configuration 】



### Equipped with a memory function

realized by in built-in memory or memory card.

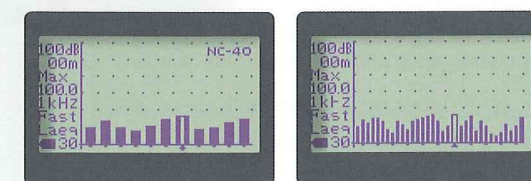


### Abundant program cards (Option)

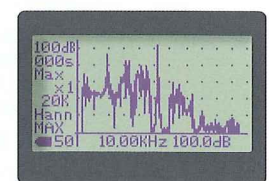
1/1 and 1/3-octave Real-time analysis card  
FFT analysis Card  
RSR card (Real sound recording Card), etc.



#### ● Example of the display for 1/1, 1/3-octave filter



#### ● Example of the display for FFT analysis Card



# SPECIFICATIONS

Type	TYPE 6236	TYPE 6238
Applicable Standards	JIS C1509-1 : 2005 Class 2 IEC 61672-1 : 2002 Class II	JIS C1509-1 : 2005 Class I IEC 61672-1 : 2002 Class I
Measurement Range	20Hz ~ 20kHz	5Hz ~ 20kHz
Microphone (Sensitivity)	TYPE 7052NR (-33dB, Stand-alone -31dB)	TYPE 7146NR (-29dB Stand-alone -27dB)
Level Range Control	10dB 6step 20 ~ 80dB, 20 ~ 90dB, 20 ~ 100dB, 20 ~ 110dB, 30 ~ 120dB, 40 ~ 130dB	
Measurement Level	A : 28 ~ 130dB(0 ~ 80dB / 0-dB measurement function in ON) C : 36 ~ 130dB Z(FLAT) : 38 ~ 130dB C peak : 55 ~ 141dB Z(FLAT)peak : 60 ~ 141dB	
Self-noise level	The lower limit of the measurement range in dB lies 6dB higher than self-noise level.	
Linearity Range	100dB	
Time weighting	Fast, Slow, Impulse	
Frequency weighting	A, C, Z(FLAT)	
Measurement items	Sound pressure level(L <sub>p</sub> ) A-weighted sound pressure level, C-weighted sound pressure level(L <sub>A</sub> , L <sub>C</sub> ) Equivalent continuous A-weighted sound pressure level(L <sub>Aeq</sub> ) Sound exposure level(L <sub>AE</sub> ) Maximum sound pressure level(L <sub>Amax</sub> ) Minimum sound pressure level(L <sub>Amin</sub> ) Percentile sound pressure level(5 freely selectable values, LAN) Peak sound pressure level(L <sub>ppeak</sub> ) C-weighted peak sound pressure level(L <sub>Cpeak</sub> ) C-weighted equivalent continuous sound pressure level(L <sub>Ceq</sub> ) Power average of maximum sound pressure level in a given interval(L <sub>Atms</sub> ) Impulse sound pressure level(L <sub>Ai</sub> ) Impulse equivalent continuous sound pressure level(L <sub>Aleq</sub> )	
Measurement time	1s, 3s, 5s, 10s, 1min, 5min, 10min, 15min, 30min, 1h, 8h, 12h, 24h, Manual (Max. 199h59m59s)	
Sampling Time	20.8 μs (L <sub>eq</sub> , L <sub>max</sub> , L <sub>min</sub> ) 100ms (L <sub>N</sub> )	
Data clear function	Pause, and a function that deletes preceding 3 or 5 sec. data Memory start ; Selectable Auto or Manual	
Timer function	A marker can be set to start and stop the measurement at any specified moments.	
Display	Liquid crystal and Backlight (128×64 points) Display range : 4digits display Display cycle : display Period : 1s Bar display : display Period : 0.1s Warning : Over ; +3dB from upper limited scale Under ; -0.6dB from lower limited scale Battery display : 5 steps display Date : year / month / day / hour : minute : second	
Outputs	AC output : φ 2.5 Jack Output : 1Vrms (FS) Output impedance : 600Ω Load impedance : more than 10kΩ DC output : φ 2.5 Jack Output : 2.5V (FS), 0.25V/10dB, Output impedance : 50Ω Load impedance : more than 10kΩ	
RMS detection circuit	True RMS detection circuit (computing type)	
Processing	Digital	
Pause	Normal pause function, as well as the function of canceling the data before pausing the measurement, are available.	
Data Storage Functions	Sound pressure level or Processed values stored in built-in Memory or Memory card. Manual Storage : Sound level, Calculation value, Memory time, Store the Sampling Time to Built-in memory or on Memory card. Auto Storage : Sampling interval 100ms, 200ms, sound level , Leq etc. Processing Card : Storage of calculation results	
I / O	Direct output to printer, control and output data to computer Digital output of real-time noise waveform with USB interface.	
Comparator Output	Comparator Function with threshold level.	
Battery Type	Four 1.5V Alkaline cells IEC type LR6, Optional AC adapter Battery life : Alkaline dry cell ; Approx.9 hours when Switch on a back light ; Approx.1/3 Consumption current : Approx.150mA (When input 6V) at Calculation OFF.	
Operating temperature	-10 ~ 50°C 30% ~ 90%RH (no condensation)	
Weight	Less than Approx.450g (Including batteries)	

Option	<ul style="list-style-type: none"> <li>1/1 and 1/3-octave Real-time Analysis Card Applicable standards : JIS C1514 (IEC61260) : Class1 Measurement mode : Sound pressure level (L<sub>p</sub>), Equivalent continuous Sound pressure level (L<sub>eq</sub>), Sound exposure level(L<sub>E</sub>), Maximum sound pressure level (L<sub>max</sub>) (One of the measurement modes selected as above is displayed.) Frequency analysis band : 1/1- octave filter ; 16Hz, 31.5 Hz, 63 Hz, 125 Hz, 250 Hz, 500Hz, 1kHz, 2kHz, 4kHz, 8kHz, AP 1/3- octave filter ; 12.5Hz, 16Hz, 20 Hz, 25 Hz, 31.5Hz, 40Hz, 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, AP</li> <li>FFT Analysis Card Frequency span : 2kHz, 5kHz, 10kHz, 20kHz Time window : Rectangular, Hanning Analysis line : 400 Zoom : ×1, ×2, ×4 Processing : Sound pressure level, Linear average value, Max,</li> <li>RSR card (Real sound recording card) This card enables automatic recording with specified level and time, namely adding the function of recording real wave data. The data is recorded in WAVE file format (48kHz 16bit Mono), easily corresponding to most common application software of acoustic analysis, as well as displaying its greatest force in all kinds of acoustic analysis.</li> </ul>
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Option																									
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