SOUND LEVEL METER
DVM1351

INSTRUCTION MANUAL
HANDLEIDING
MANUEL D’UTILISATEUR
SAFETY INFORMATION

● Read the following safety information carefully before attempting to operate or service the meter.

● Use the meter only as specified in this manual; otherwise, the protection provided by the meter may be impaired.

Environment conditions

① Altitude up to 2000 meters
② Relatively humidity: 90% max.
③ Operating Ambient: 0 ~ 40°C

Maintenance & Cleaning

① Repairs or servicing not covered in this manual should only be performed by qualified personnel.

② Periodically wipe the case with a dry cloth. Do not use abrasives or solvents on this instrument.

Safety symbols

_meter is protected throughout by double insulation or reinforced insulation.

Complies with EMC
GENERAL DESCRIPTION AND FEATURES

Thanks you for selecting our Sound Level Meter. To ensure that you get the most from it, we recommend that you read and follow the manual carefully before use.

This unit conforms to the IEC651 type2, ANSI Sl.4 Type2 for Sound Level Meters.

The Sound Level Meter has been designed to meet the measurement requirements for industrial safety offices and sound quality control in various environments,

- Ranges from 35dB to 130dB at frequencies between 31.5Hz and 8KHz.

- Display with 0.1 dB steps on a 4-digits LCD.

- With two weighting, A and C.

- Both AC and DC signals output is available from a single standard 3.5mm coaxial socket suitable for a frequency analyser, level recorder, FFT analyser, graphic recorder, etc.
### SPECIFICATIONS

<table>
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<th>Specification</th>
<th>Details</th>
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</thead>
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<tr>
<td>Standard applied</td>
<td>IEC651 Type2, ANSI SI. 4 Type2.</td>
</tr>
<tr>
<td>Frequency range</td>
<td>31.5Hz ~ 8KHz</td>
</tr>
<tr>
<td>Measuring level range</td>
<td>35 ~ 130dB</td>
</tr>
<tr>
<td>Frequency weighting</td>
<td>A/C</td>
</tr>
<tr>
<td>Microphone</td>
<td>1/2 inch Electret condenser microphone</td>
</tr>
<tr>
<td>Display</td>
<td>LCD</td>
</tr>
<tr>
<td>Digital display</td>
<td>4 digits</td>
</tr>
<tr>
<td></td>
<td>Resolution : 0.1dB</td>
</tr>
<tr>
<td></td>
<td>Display period : 0.5 sec.</td>
</tr>
<tr>
<td>Time weighting</td>
<td>FAST (1 25mS ), SLOW (1 sec.)</td>
</tr>
<tr>
<td>Level ranges</td>
<td>Lo: 35 ~ 90dB and Hi : 75 ~ 130dB</td>
</tr>
<tr>
<td>Accuracy</td>
<td>± 1.5dB (under reference conditions)</td>
</tr>
<tr>
<td>Dynamic range</td>
<td>55dB</td>
</tr>
<tr>
<td>Alarm function</td>
<td>&quot; OVER &quot; is show when input is out of range</td>
</tr>
<tr>
<td>Maximum hold</td>
<td>Hold readings, with decay &lt; 1 dB / 3 minutes</td>
</tr>
</tbody>
</table>
| Calibration                               | Electrical calibration with the internal oscillator (1 KHz sine wave) }
<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
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<tbody>
<tr>
<td>AC output</td>
<td>0.65 Vrms at FS (full scale), output impedance approx. 600Ω</td>
</tr>
<tr>
<td>DC output</td>
<td>10mV / dB, output impedance approx. 100Ω</td>
</tr>
<tr>
<td>Power supply</td>
<td>One 9V battery</td>
</tr>
<tr>
<td>Power life</td>
<td>About 50hrs (alkaline cell)</td>
</tr>
<tr>
<td>Operating temperature</td>
<td>0 to 40°C (32 to 104°F)</td>
</tr>
<tr>
<td>Operating humidity</td>
<td>10 to 90%RH</td>
</tr>
<tr>
<td>Storage temperature</td>
<td>-10 to 60°C (14 to 140°F)</td>
</tr>
<tr>
<td>Storage humidity</td>
<td>10 to 75%RH</td>
</tr>
<tr>
<td>Dimensions</td>
<td>240(L) x 68(W) 25(H)mm</td>
</tr>
<tr>
<td>Weight</td>
<td>210g (including battery)</td>
</tr>
<tr>
<td>Accessories</td>
<td>9V battery, carrying case, screwdriver, instruction manual, windscreen, 3.5mm plug.</td>
</tr>
</tbody>
</table>
NOMENCLATURE AND FUNCTIONS

Microphone
1/2 inch Electret Condenser microphone

Display
Serves to display the sound pressure level (dB), over or under range "OVER", maximum hold data 'MAX HOLD' and Low battery indicator "BT".

- dB: Sound pressure level with 0.1dB resolution.
- OVER: Shown when the range setting is too high (or low).
③ Power and Range switch
- Turn power ON and select measurement range.
  (Hi range = 75 ~ 130dB, Lo range = 35 ~ 90dB)
- When "OVER" is indicated, slide range switch to another range for measurement.

④ Response and Max hold switch

Setting the meter dynamic characteristics (Fast / slow) and maximum value hold
S (slow response) : for comparatively stable noise measurement.
F (fast response) : for fast, varying noise.
MAX HOLD : the max. hold position is used to measure the maximum level of sounds. The maximum measured level is continuously updated.
To re-fresh, please set switch to "F" or "S" position to cancel existing value, then set switch to "MAX HOLD" position.

⑤ Function switch (A / C weighting & calibration selector)
A : A-weighting
C : C-weighting
CAL 94dB : Calibration

⑥ Calibration control can be adjusted clockwise or anticlockwise to standard 94.0dB.

⑦ Reset button:
Serves to reset the maximum level indication.

⑧ Output jack
Standard 3.5mm 3 pole coaxial output socket.
Serves to supply AC signals and log-converted DC signals to external equipment.
OUTPUTS

Two outputs can be accessed through 3.5mm stereo phone plug refer.
DC output : Logarithmic signal. 10mV/dB
Impedance : \( \leq 100\Omega \)
AC output : approx. 0.65Vrms corresponding to each range step.
Impedance : 600\( \Omega \)

Battery cover (on bottom)

LCD DISPLAY DESCRIPTION

1. Sound Pressure Level measuring value, resolution 0.1dB.
2. Measuring unit
3. When readout is out of range.
4. MAX HOLD: Maximum hold.
5. BT: Low battery indicator.
CALIBRATION PROCEDURES

(1) Using an acoustic calibrator

a) Make the following switch settings.
   RANGE : Hi
   RESPONSE : F
   FUNCT : A

b) Put the microphone carefully into the insertion hole of the calibrator.

c) Turn on the switch of calibrator and adjust the CAL screw of the instrument, until the level display indicates the desired level.

   Note : Our products are well-calibrated before shipment. Recommended calibrator cycle is one year.

(2) Calibration using the internal oscillator

a) Make the following switch settings.
   RANGE : Hi
   RESPONSE : F
   FUNCT : A

b) Adjust the unit to the readout.
MEASUREMENT PREPARATION

(1) Battery Loading:
   Remove the battery cover on the back and insert one 9V battery.
   Note: make sure the battery polarity is correct.

(2) Battery Replacement:
   When the battery voltage drops below the operating voltage, "BT"
   will appear on the display and the battery should be replaced with
   a new one.

OPERATING PRECAUTIONS

(1) Wind blowing across the microphone will bring additional
    extraneous noise. Once using the instrument in the presence of
    wind, the windscreen must be mounted in order not to pick up
    undesirable signals.

(2) Calibrate the instrument before operation if the instrument has not
    been in use for a long time or has been operated in a bad
    environment.

(3) Do not store or operate the instrument at high temperature and in a
    humid environment for a long period.

(4) Keep microphone dry and avoid severe vibration.

(5) Please take out the battery and keep the instrument in a low
    humidity environment when not in use.
MEASUREMENT

(1) Open battery cover and install a 9-Volt battery in the battery compartment.

(2) Turn on power and select the desired response and weighting. If the sound source consists of short bursts or only catching sound peak, set RESPONSE to FAST. To measure average sound level, use the slow setting.

Select A-weighting for a general noise sound level and C-weighting for measuring the sound level of acoustic material.

(3) Hold the instrument comfortably in the hand or fix it on a tripod and point the microphone at the suspected noise source, the sound pressure level will be displayed.

(4) When MAX HOLD mode is chosen, the instrument captures and holds the maximum noise level for a long period. Press "RESET"-button to reset the maximum level indication.

(5) Turn OFF the instrument when not in use.