INSTRUCTION MANUAL
MT975
SOUND LEVEL METER

1. ⚠ 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:

- **Environment conditions**
  ① Altitude lower than 2000 meters
  ② Relatively humidity ≤90％RH
  ③ Operation Ambient 0 ~ 40°C

- **Maintenance & Clearing**
  ① Repair or servicing are not covered in this manual and should be performed by a technician.
  ② Periodically wipe the case with a dry cloth. Do not use solvents or eradicator on this instrument.

- ☐ **Safety symbols**
  CE **Comply with EMC**

2. FUNCTIONS DESCRIPTION

This Sound Level Meter is designed for noise project; quality control; illness prevention and cure and all kinds of environmental sounds measurement. It is applied to the sounds measurement at factory; school; office; traffic access and household, etc.

- This unit confirms to the IEC61672-1 CLASS2 for Sound Level Meters.
- MAX & MIN measurements
- Over range display

- ● Under range display
- ● A & C Weighting
- ● FAST & SLOW response
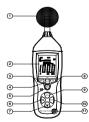- ● Analog AC/DC outputs for connection to frequency analyzer or X-Y shaft recorder
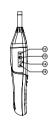
3. SPECIFICATION

Standard applied: IEC61672 -1 CLASS2
Accuracy:±1.4dB
Frequency range:31.5HZ ~ 8KHZ
Dynamic range:50dB
Memory:32700
Level ranges: LO:30dB~80dB
Med:50dB~100dB
Hi:80dB~130dB
Auto:30dB~130dB
Frequency weighting: A/C
Time weighting: FAST (125ms), SLOW (1s)
Microphone: 1/2 inch electret condenser microphone
Display: 4 digits LCD display with a resolution of 0.1dB
Display Update: 2 times/sec.
MAX hold: Hold the Maximum reading
MIN hold: Hold the Minimum reading
HOLD: Hold the readings
Alarm function: "OVER"is when input is more than upper limit of range."UNDER"is when input is less than lower limit of range.
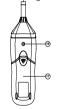**Analog output:** AC/DC outputs from earphone outlet AC=1Vrms ,DC=10mV/dB

Data output: USB data traffic

Auto power off: Meter automatically shuts down after approx. 15 minutes of inactivity.

Power supply: One 9V battery, 006P or NEDA1604 or IEC 6F22.

Power life: About 30hours

Operation temperature and humidity:

0°C~40°C,10％RH~90％RH

Storage temperature and temperature:

-10°C ~+60°C，10％RH~75％RH

Dimension: 278 (L) x 76 (W) x 50(H) mm

Weight： 350g

Accessories： Instruction manual, battery, screwdriver, $\mathcal{C}$ 3.5mm earphone plug, windscreen, software, USB cable.

4. NAME AND FUNCTIONS

① **Windscreen**

② LCD：

SYMBOL	FUNCTION
LCD	4 digits
MAX	Maximum hold
MIN	Minimum hold
OVER	over range
UNDER	under range
FAST	Fast response
SLOW	Slow response
dBA	A-Weighting(responseto human sense)
dBC	C-Weighting(response to machine monitor)
30—130	Range indicate
REC	Recording data into computer
AUTO	Auto level range selection
FULL	Memory full
HOLD	Data hold function
⌀	AutopoweroffPress the "SETUP" button to disable power off
🔋	Low battery indicate

③REC **button**

3.0 DATALOGGER function

Press "REC" button once the power has been switched on, the display will show "REC" to start Data Recording，press the button again to exit the record (Note: In order to avoid data error, please don't power it off under REC condition, when the REC function is deleted then it can power off).

3.1 Adjusting DATALOGGER response

Press the ⊙ button continuously before power it on，then press ⏻ ,it will be displayed as following: Press 'LEVEL' button to adjust memory time,press 'HOLD' button to hold the setup；

3.2 Data zero function

Select the button continuously before power it on，loosen the button when the display showing'CLR' after the meter power on,which indicates that the data in DATALOGGER has been deleted.

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④SETUP button

4.0. The time chip adjustment

Press 'SETUP' button and then power it on，when 'TIME' symbol displays then loosen 'SETUP'，the meter will be under time adjustment mode，at the time the display will show the date as following:

Select the 'SETUP' button for a second time, the 'hour adjustment mode will be displayed：

Select 'LEVEL' to save the adjustment. Press the 'HOLD' function to save the setup;

Press the 'SETUP' button for a third time, the 'hour' adjustment mode will be displayed:

Press
(h-P=P.M,h-A=A.M)
'LEVEL' to make the adjustment，press 'HOLD' to save the setup；

Press the 'SETUP' button for a fourth time, the 'date' adjustment mode will be displayed

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Press
'LEVEL' to make the adjustment，press 'HOLD' to keep the setup；

Press the 'SETUP' button for a fifth time, the 'month' adjustment mode will be displayed：

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Press
'LEVEL' to make the adjustment，press 'HOLD' to save the setup；

Press the 'SETUP' button for a sixth time, the 'year' adjustment mode will be displayed:

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Press
'LEVEL' to make the adjustment，press 'HOLD' to save the setup:

Press the 'SETUP' button for a seventh time, the 'time'

8

adjustment mode will be displayed:

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Press 'HOLD' to save the setup. The time and date will return to the factory setup once the battery is flat or needs to be replaced, if the time can't be adjusted, initialize the time chip first.

4.1. USB communications setting:

Turn on the meter, connect the unit to the computer. Select the software COM3（COM4）. Press 'SETUP' and ⊘ will disappear from the display to indicate and disable auto power off, that the USB data will start transmitting.

⑤ **FAST/SLOW button:**
Time weighting selection
FAST: fast sampling measurement, 1 time per 125mS.
SLOW: slow sampling measurement, 1 time per second.

⑥**MAX/MIN button:**
Select the Maximum and Minimum hold button for once to enter the MAX/MIN measurement, 'MAX' will be displayed on the LCD screen. Maximum sound level will be captured and held a until higher sound level is captured. Press the button again, 'MIN' will appear on the LCD screen and the minimum sound level will be captured and held until a lower sound level is captured. Press the button one more

9

time to exit MAX/MIN measurement.

⑦LEVEL **button: Level range selection**
Each time you press "LEVEL" button, the level range will change between 'Lo' level, 'Med' level, 'Hi' level and 'Auto' level in that sequence.

⑧ 🔆 **Backlight button**

8.0．Turn the backlight on/off

8.1．DATALOGGER response setting;

Press the button continuously until 'INT' symbol appears. Press 'LEVEL' to set up the data memory response and press 'HOLD' to savethe setting.

⑨ **Frequency weighting select button**
  A：A-Weighting
  C：C-Weighting

⑩ **HOLD button:**
  Press "HOLD" button, The hold function freezes the reading in the display.

⑾ Power button

Turn the meter power ON/OFF

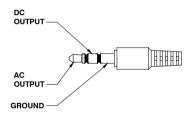⑿ **External DC 9V power supply terminal**
   1 x DC 9V power supply.
   Aperture size:
   external diameter: 3.5mm
   internal diameter: 1.35mm

⒀ USB interface
   USB signal output is a 9600 bps serial interface.

⒁ AC/DC signal output earphone outlet

   AC: Output voltage: 1Vrms equivalent to each range
   step.
   Output impedance: 100Ω
   DC: Output voltage: 10mV/dB
   Output impedance: 1kΩ

   ⒂ **Calibration potentiometer**（CALL）
      Select the (CALL) function for external standard level
      calibration adjustments

⒃ **Tripod mounting screw**

⒄ **Battery cover**

⒅ **Microphone**

1/2 inch Electret Condenser microphone

5. CALIBRATION PROCEDURES

①　Make the following switch settings:
Frequency weighting:　　A-weighting
Time weighting:　　　　FAST
Level range:　　　　　　50 ~100dB

② Insert the microphone housing carefully into the 1/2 inch insertion hole of the calibrator（94dB @ 1kHZ）.

③ Turn on the calibrator switch and adjust the CALL potentiometer of the unit 94.0dB is displayed.

NOTE: All products are well calibrated before shipment.

Recommended recalibration cycle: 1 year.

6. MEASUREMENT PREPARATION

① Remove the battery cover on the back and insert one 9V battery.

② Replace the back cover.

③ The ⟦symbol⟧ symbol will appear on the LCD screen when the battery voltage drops below the operating voltage and once the battery is flat.

④ When the AC adapter is used, insert the plug of the adapter （3.5φ） into the DC 9V connector on the side panel.

7. OPERATING PROCEDURE

① Switch on the meter.

② Press the 'LEVEL' button to select the desired level, based on 'UNDER' or 'OVER' do not appear on the LCD.

③ Select 'dBA' for general noise sound level and 'dBC' or measuring sound level of acoustic material.

④ Select 'FAST' for instant sound and 'SLOW' for average sound level.

⑤ Select 'MAX/MIN' button for measuring maximum and minimum noise level.

⑥ Hold the instrument comfortably in your hand or fix it to a tripod and measure sound level at a distance of 1~1.5 meter.

8. NOTICE

i. Do not store or operate the instrument at ahigh temperature and high humidity environment.

ii. When not in use for long time, remove the

13

battery to avoid battery liquid leakage and damage to the instrument.

iii. When using the instrument in the presence of wind, it is essential to mount the wind absorber to avoid undesirable signals.

iv. Keep the microphone dry and avoid sever vibration.

9. Accessories:

① CD with software
② USB interface cable
③ screwdriver

10. Installing the software

1.0   Start windows

1.1   Insert the CD into the CD-drive.

1.2   Run SETUP.EXE installation program in file DISK1, install it to the referred directory

1.3   Install CP210X drive software：

Connecting the meter with the computer by USB interface, install CP2102 drive software in my computer property:\hardware\facility management\ COM CP210X USB.

USB Drive Installation

1. Copy the CP210XWIN Drivers to a certain directory, such as: C:\ usb_driver.

2. Connect the USB to the computer, the Windows system will show finding a new hardware. Choose specific directory C:\ usb_driver according to the instruction.

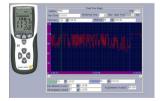3. After Driver installation, a new COM port will be

14

added to the Ports in the Device Manager. Port number will be ranged following the primary COM ports, such as: COM3 or COM4.

1.4　Once the drive software is installed, start the application software, connect the meter to the computer with the USB, then search for the COMX port occupied by CP210X, press $\overset{\text{SETUP}}{\bigcirc}$ button, The '$\bigcirc$' symbol will not appear on the display，this will indicate that the meter is transmitting data to the computer.

1.5　Enter the menu REAL TIME \ 'SETUP' to set the monitoring data (data volume, response, monitoring time)

1.6　DATALOGGER menu:

The computer reads the memory data in the meter when REC mode does not appear on the display and the connection is in order.

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