ONO SOKKI

LA-1440 and LA-4440 Sound Level Meter

Measure L_{Aeq} and $L_{A_{MX}}$ (Maximum Value) and stores the values in MANUAL mode

This manual explains how to use the LA-1440 and LA-4440 Sound Level Meter for measuring noises in several measurement points, while going around a wide area of a site such as a factory, by showing the following cases for instance: a user utilizes the sound level meter to manually measure L_{Aeq} and $L_{A_{MX}}$ for 10 minutes and store the measurement data in the MANUAL memory mode (retain display data). $L_{A_{MX}}$ and L_x (time rate sound level) measurements can be operated with L_{Aeq} measurement.

* $L_{A_{MX}}$ indicates the maximum value of instantaneous sound level of L_A.

■ Basic concept of operation

Most of sound level meters including the LA-1400 series Sound Level Meter have screens indicating the instantaneous value for L_A and the calculation value such as for L_{Aeq}, L_{MX}, L_{MN}, and L_N. On the instantaneous value screen, an instantaneous value is updated every second. On the calculation value screen, each value is measured and calculated based on the measurement time specified in the menu. Each value is displayed as the result of measurement and calculation after the START button is pressed. This manual refers to the former measurement as instantaneous measurement and the latter as calculation measurements.

In the following operation procedure, " " indicates a button on the panel ("MENU" for example) and [ ] indicates an optional item in the menu ([MEMORY] for example).

■ Measurement condition

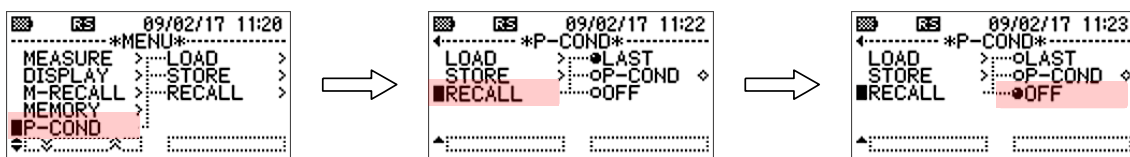|	
Measurement starting time	At the time of START button is turned ON.
Total measurement time	10 minutes
Measurement time	10 minutes
Time weighting characteristic	FAST
Frequency characteristic	A

■ Buttons used for menu operation

1. Press the "MENU" button on the measurement screen to display the menu. Press the "MENU" button while the menu is displayed, the screen returns to the measurement screen.
2. The Up, Down, Left, and Right arrows on the "UP/DOWN" button can be pressed to move the cursor to an optional item in the menu.
3. For value setting, use the "Up/Down arrow" on the "UP/DOWN" button to select a numerical value and the "Left/Right arrow" to select a digit.
4. Press the "ENTER" button to confirm the selected item and setting value.
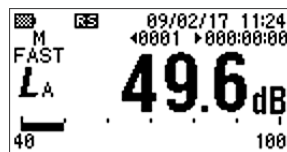
■ Operation procedure

1. Starting in the factory default condition

Start the sound level meter with the factory default setting. The sound level meter is initialized to "frequency characteristic: A; time weighting characteristic: FAST; instantaneous measurement".

-1. Switch on the power with the "Power" switch.

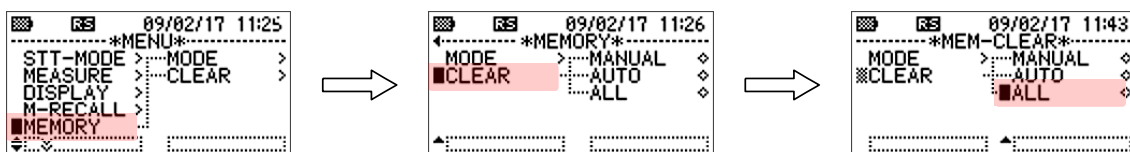-2. Press the "MENU" button to display the menu screen. On that screen, select [P-COND] → [RECALL] → [OFF].

-3. Press the "MENU" button to return to the measurement screen.

-4. Switch off the power with the "Power" switch. After a while, switch the power on again. The sound level meter is started with the factory default setting.
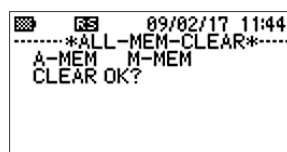

2. Clearing all memories

Clear all memories of MANUAL, AUTO 1, AUTO 2, and AUTO 3.

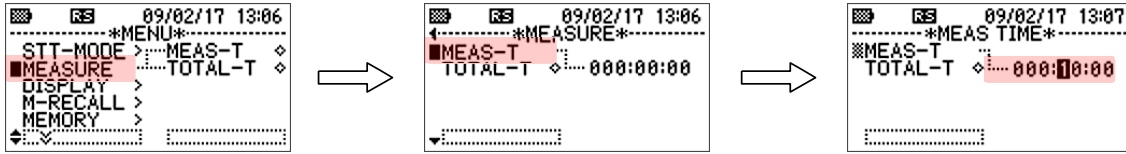-1. Press the "MENU" button to display the menu screen. On that screen, select [MEMORY] → [CLEAR] → [ALL].

-2. When the confirmation message screen [CLEAR OK?] appears, press the "ENTER" button. This operation will clear all memories.
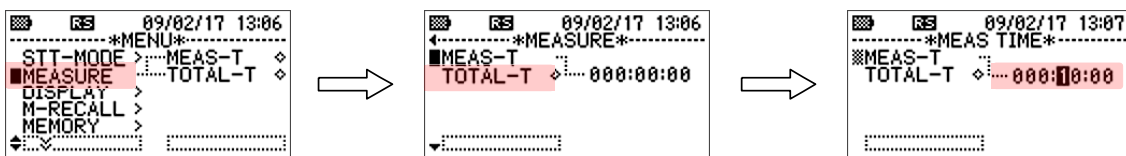

-3. Press the "MENU" button to return to the measurement screen.

3. **Setting 10 minutes (10:00) as the measurement time and 10 minutes (00:10:00) as the total time**

    -1. Press the "MENU" button to display the menu screen. On that screen, select [MEASURE] → [MEAS-T] and set [000:10:00] as 10 minutes for the measurement time.
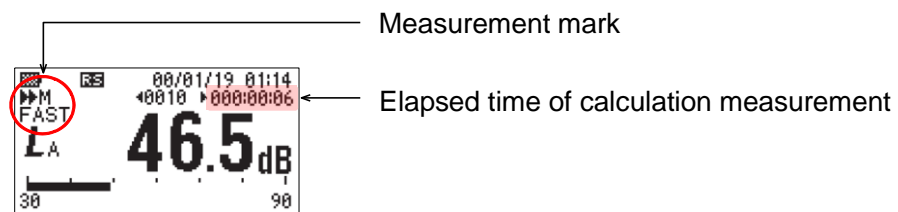

    -2. On the menu screen, select [TOTAL-T] and set [000:10:00] as 10 minutes for the total time. When starts measurement with those settings, the measurement will automatically stop 10 minutes later.

4. **Starting measurement**

    -1. Press the "START" button to start measurement.

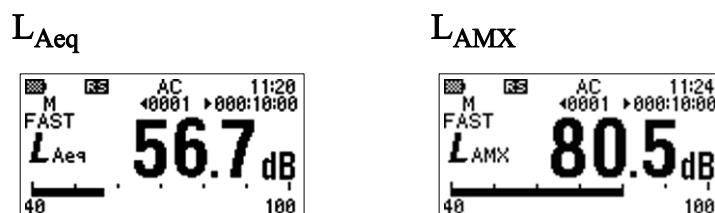Measurement mark

Elapsed time of calculation measurement

    -2. Measurement automatically stops 10 minutes later and the measurement mark disappears. If you want to stop at any specific time, press the "PAUSE" button during measurement.

    The "PAUSE" button is used to activate the temporary stop function. When the "PAUSE" is pressed again, the sound level meter restarts measurement to complete the remaining measurement time in total 10 minutes.
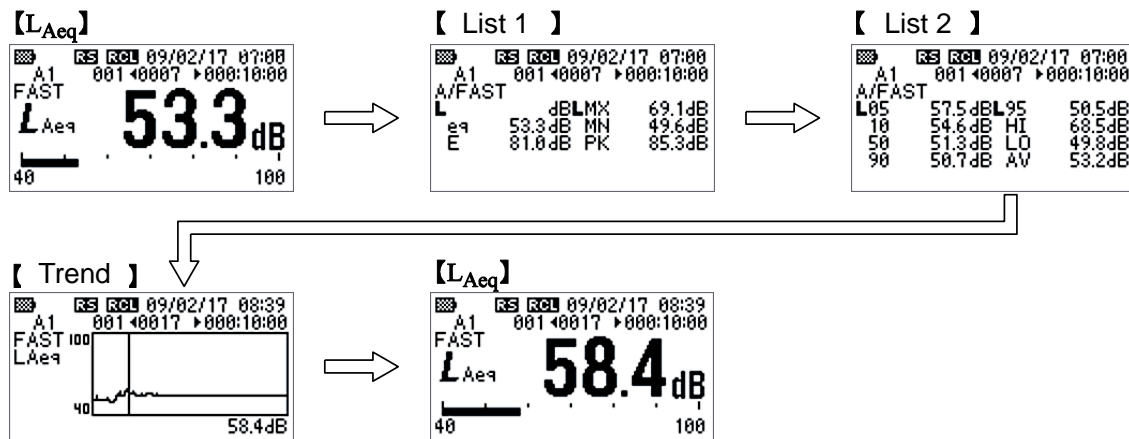
    -3. If you want to start another measurement during one measurement, press the "START" button. This operation clears the previous calculation measurement values.

5. **Pressing the "Lp/Leq" button several times to display calculation measurement values L_{Aeq} and L_{AMX} (max. value).**

L_{Aeq} L_{AMX}

6. List display

-1. Press the "DISP" button to display the list of measurement data. The listed data changes every time the "DISP" button is pressed.

【L_{Aeq}】   【 List 1 】   【 List 2 】
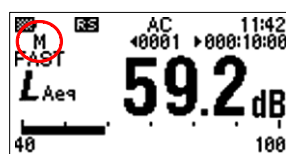

【 Trend 】   【L_{Aeq}】

-2. When press the "START" button during the list display enables to start calculation measurement. On the [List 1] screen, L_{eq} and L_{MX} up to the current elapsed time for measurement are displayed.
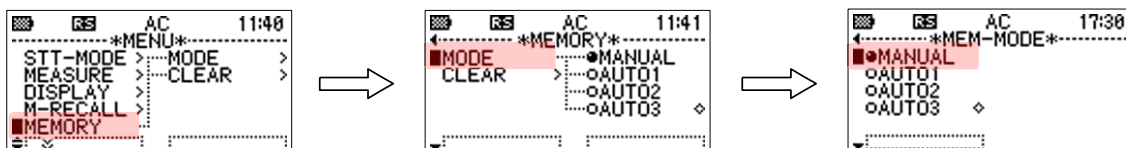

7. Storing calculation measurement values to MANUAL memory mode

-1. Confirm that the "M" mark (store in MANUAL mode) is indicated as shown in the following figure.

-2. If the "M" mark is not indicated, set MANUAL as following procedure. Press the "MENU" button to display the menu screen. On that screen, select [MEMORY] → [MODE] → [MANUAL].
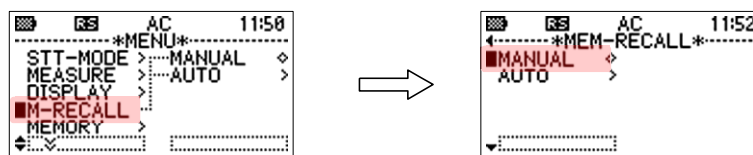

-3. Press the "STORE" button. The [STR] mark is indicated for a moment on the upper part of the screen and the contents of (6. List display) is stored.
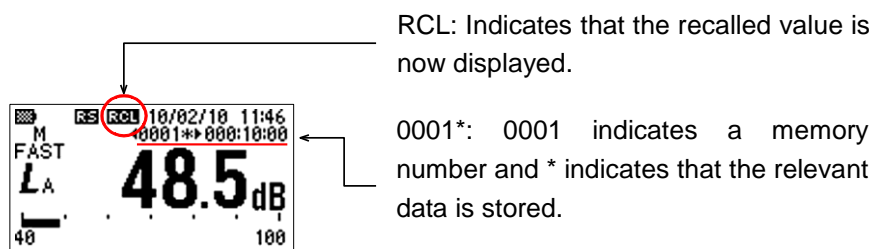
8. Repeating measurement

-1.   Press the "START" button to perform the next measurement.

-2.   While L_{Aeq} or a list is displayed after measurement, press the "STORE" button to store data.

9. Recalling (redisplaying) data stored in MANUAL mode

-1.   Press the "MENU" button to display the menu screen. On that screen, select [M-RECALL] →
      [MANUAL].

-2.   Press the "MENU" button to return to the measurement screen, where the [RCL] mark is indicated.
      The [RCL] mark indicates that the stored data is recalled and displayed.

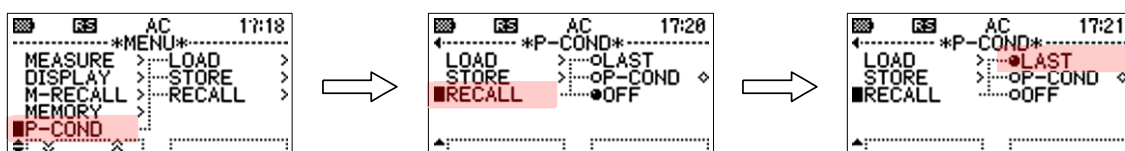RCL: Indicates that the recalled value is now displayed.

0001*:   0001 indicates a memory number and * indicates that the relevant data is stored.

The left or right arrow key of the UP/DOWN button can be used to change the memory number. Note, however, that only 0001 can be displayed when data is stored in memory number 0001 only.

-3.   Press the "DISP" button to display the list.

-4.   When the "MENU" button is pressed, the [RCL] mark is disappeared and returned to the
      measurement screen.

10. Remembering the setting condition when the power is switched off, and starts with the same condition when the power is turned on next

-1.   Press the "MENU" button to display the menu screen. On that screen, select [P COND] → [RECALL]
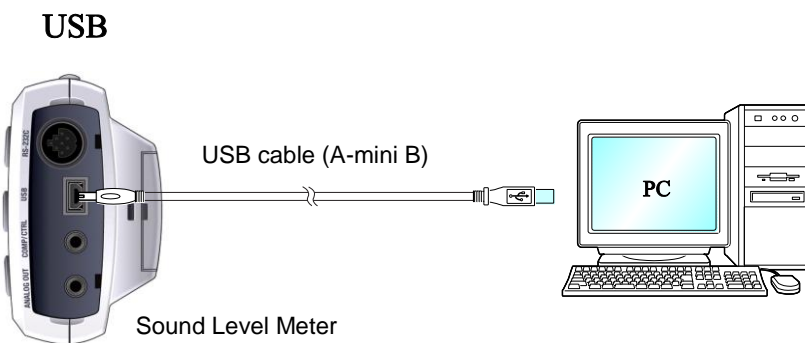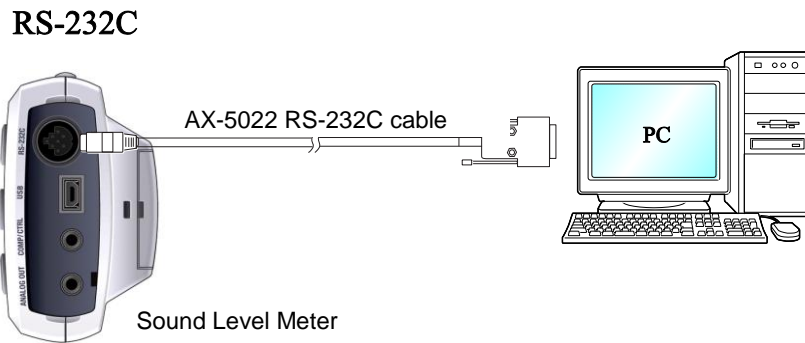   → [LAST].

11. Uploading stored data to a personal computer

-1. Connecting to a personal computer

Two modes are available for connecting to a personal computer: one is the virtual COM port mode using a USB cable (A-miniB) and the other uses an AX-5022 type RS232C cable.

When using a USB cable, you need to install the relevant driver and set the USB ID number to the sound level meter. For more information, refer to the Instruction Manual - Interface.

RS-232C

AX-5022 RS-232C cable

PC

Sound Level Meter

USB

USB cable (A-mini B)

PC

Sound Level Meter

End