LA-1240 LA-1250 LA-1350 and LA-4350 Sound Level Meter

Data measurement by the Timer Measurement Function

ONO SOKKI CO., LTD.

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1. Overview of the Timer Measurement Function

The LA-1250/1350/4350 sound level meter is provided with the timer measurement function. The measurement function starts measurement automatically at the specified measurement start time.

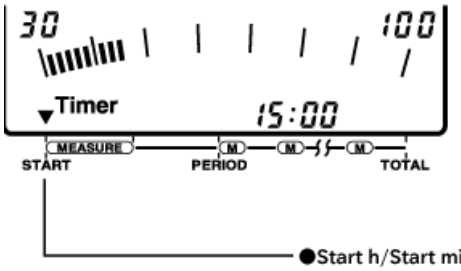
By setting the measurement interval and total measurement time in addition to the measurement start time, you can perform repetitive measurement. All the measurement items Leq/LE/LMAX/LX(LA-1250/1350) or Leq/LE/LMAX/LPK/LX(LA-4350) can be measured at the same time.

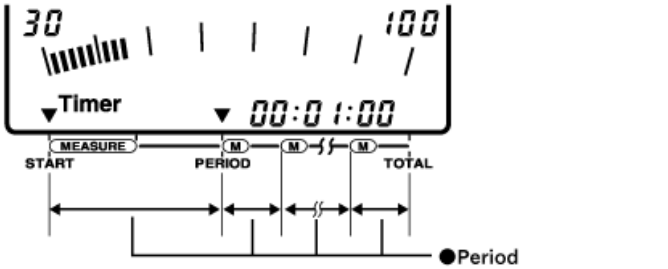
At the end of each measurement, the data is automatically stored in the block memory. The measurement start time for the timer measurement function is the time to start the timer measurement. After pressing the panel switch [START], measurement is started when the time of the internal clock agrees with the specified time.

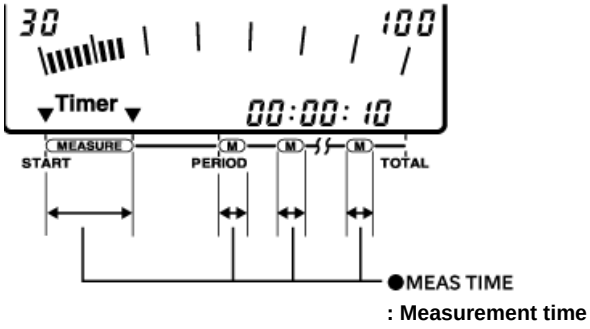
The measurement time is the time of actual single measurement. The measurement is executed for the setting time. The measurement period is the time interval between the start time of one measurement and the start time of the next measurement. Measurement is repeated in specified periods. The total measurement time is the total time of a series of repetitive measurements. Measurement is repeated until [Measurement period x Number of repetitions] exceeds the specified time.

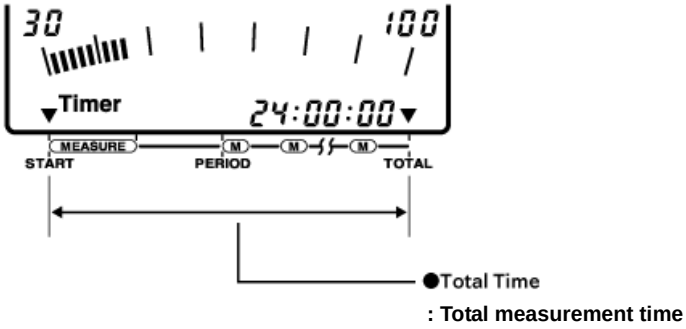
[Notes]

- Make sure to set the present time correctly.
- If the measurement time, measurement period, or total measurement time is 000:00:00, predetermined measurement is performed as a special case of timer measurement.
- Immediately after clearing the block memory, data is always stored from address 0001 of block B0. You cannot specify the block address in timer measurement. When data has been stored in all address block B0 and measurement still continues, data is stored in address 0001 of block B1. In addition, when new timer measurement is started, data is stored from the address 0001 of the block next to the one in which data has been stored at the end of the previous timer measurement.
- If data has already been stored in up to block 9, timer measurement is performed without storing data. To store data again, clear the block memory.
- The LA-1250/1350/4350 sound level meter incorporates two separate clocks for calendar and elapsed measurement time. Therefore, the calendar time may be different from the measurement time. Please note that this is not a failure.









2. Limitation on timer measurement

- **Setting of measurement time, measurement period, and total measurement time**

  Generally, the relationship between the above three settings is as follows;

Measurement time (MEAS TIME)≦Measurement period (PERIOD)≦Total measurement time (TOTAL TIME)

If you fail to comply with this relationship, the settings are automatically adjusted from the measurement time setting except for the following special cases. That is when the measurement time setting is larger than the measurement period setting, the measurement period setting is automatically changed to the same value as the measurement time setting just after pressing the panel switch [START]. Also, it is same when the measurement period setting is larger than the total measurement time setting.

Special case (1) When the measurement time is set to 000:00:00

When the measurement is started, the measurement period and total measurement time are automatically set to 000:00:00. In this case, the measurement start time setting is valid and the measurement time is the time until you press the panel switch [PAUSE]. Although, the data is not stored in the block memory, calculated value can be stored in the manual memory when the timer measurement is turned OFF after completes the measurement.

Special case (2) When the measurement period is set to 000:00:00

When the measurement is started, the total measurement time is automatically set to 000:00:00. In this case, the setting of measurement start time is effective. The measurement is stopped after measurement for the set measurement time is performed once. Although, the data is not stored in the block memory, calculated value can be stored in the manual memory when the timer measurement is turned off after the measurement is completed.

Special case (3) When the total measurement time is set to 000:00:00.

The measurement for the set measurement time and measurement period are repeated until the timer measurement is forcibly turned OFF. Data is stored until measurement from the last address of the block memory is completed.

- **Pausing measurement and erasing data**

  You can pause the measurement or erase data by pressing the panel switch [PAUSE], even in timer measurement. The pause indicator appears while the measurement is pausing. The pause indicator blinks during data erasing the data. However, when the time is reached to the next measurement start time while the measurement is pausing or data is erasing, those operations are terminated and the next measurement is forcibly started. The last measurement data which is immediately before the next measurement is stored in the block memory.

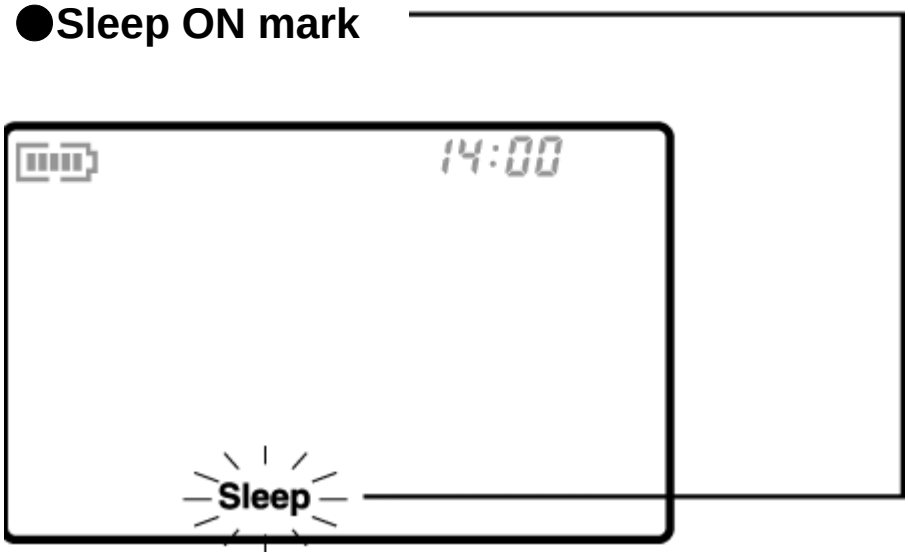
- **Forcibly terminating timer measurement**

  Generally, the timer measurement is continued until the total measurement time has elapsed. However, timer measurement is forcibly terminated by pressing the panel switch [START] again during waiting state of measurement state or during measurement. The data which are already measured are remains in the block memory.

- **Power-saving operation mode**

  Timer measurement is associated with the power-saving mode function. The power-saving mode function reduces the power consumption while the actual measurement is not performed in timer measurement, by automatically turning OFF a part of the power of the sound level meter to start up in power-saving mode. Sleep ON mark is displayed on the LCD screen during the power-saving mode.

●Sleep ON mark



After terminating the timer measurement, the mode is automatically switched to the power-saving mode when there are 30 seconds or more waiting time for next actual measurement and no key operation for 10 seconds. However, when the RS-232C ON mark is turned ON, the mode cannot be switched to the power-saving mode. Even in the power-saving mode, the normal measurement waiting mode is restored in the following cases;

Press and hold any panel switch for 2 seconds or more.
10 seconds before the next actual measurement is started.

[Notes]

- The power consumption in the power-saving mode is 1/3 times or less that of the normal operating mode. Therefore, continuous operating time by dry cell battery becomes longer than the time written on the specification.
- Data communication by RS232C is not available in the power-saving mode.

3. Timer measurement condition setting and operation procedure

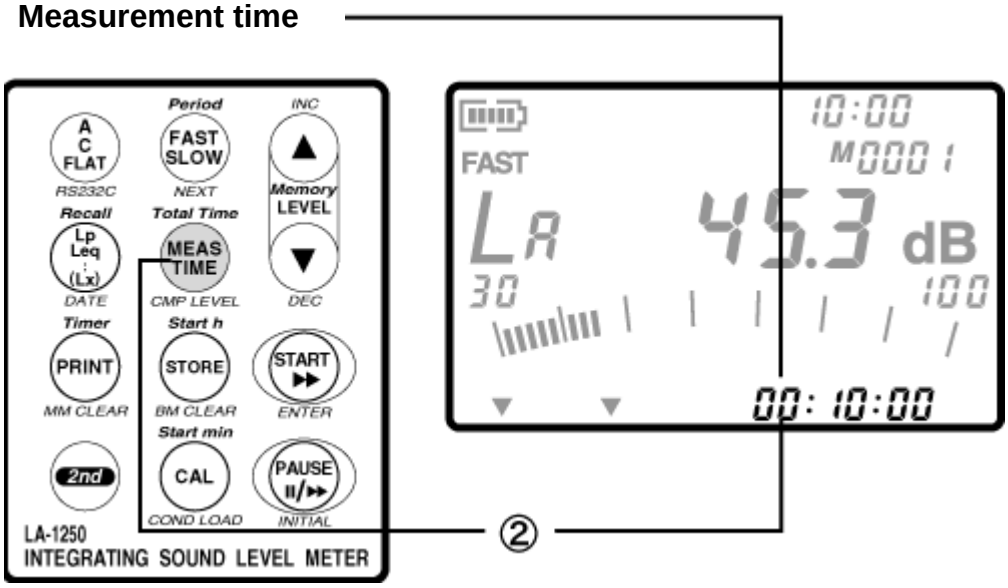
Set the condition and operate the timer measurement in the following procedure.

①Set the general measurement conditions.

②Set the measurement time.

Press the panel switch [MEAS TIME] to set the measurement time.

Measurement time



③Set the measurement start time (Hour/Minute).

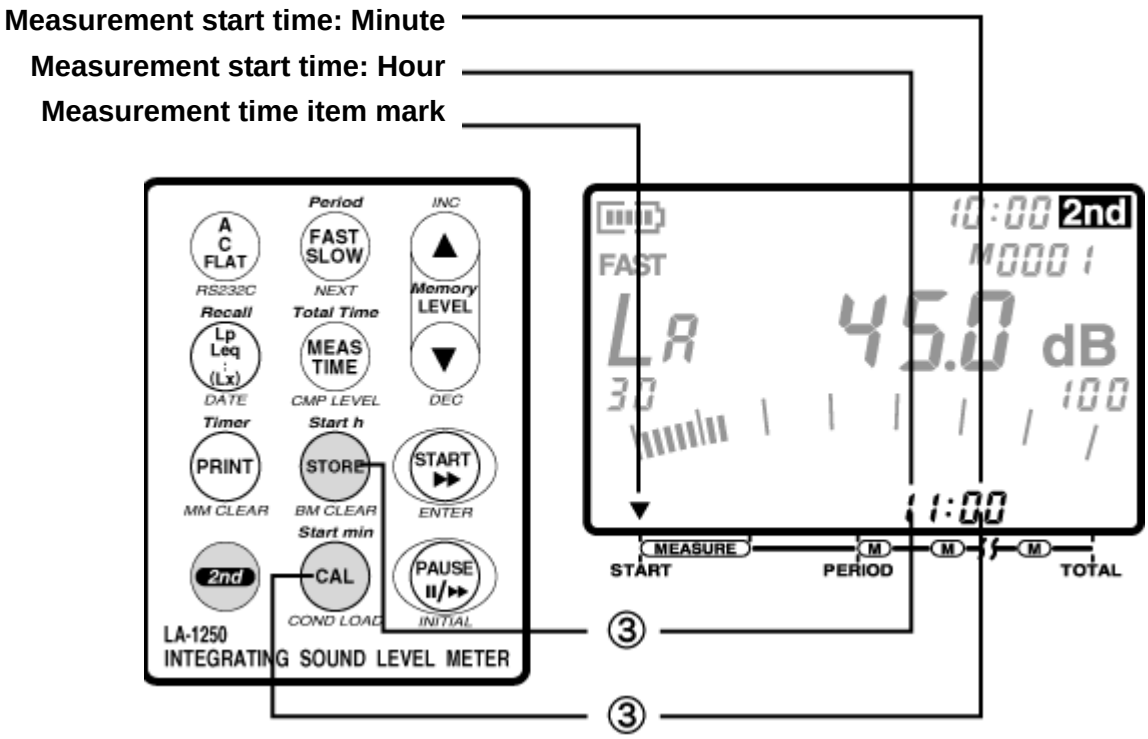
Switch the panel switch mode to secondary and press [Start h] to select the measurement start time (Hour).

The measurement time item mark (▼) is indicated at the character [START] printed on the filter under the LCD, and the measurement start time appears at the measurement time display screen. Press the panel switch [Start h] again to set the measurement start time (hour). The measurement start time is preset and each time you press the panel switch [Start h], it changes as follows;

00:XX→ 01:XX → 02:XX → … → 23:XX → - -:- -

If you set [- - : - -] in the measurement start time, the measurement starts at the same time as pressing the panel switch [START]. After switching the panel switch mode to secondary, press the panel switch [Start min] and select the measurement start time (Minute). The measurement start time (Minute) is preset in unit of 10 minutes and each time you press the panel switch [Start h], it changes as follows;

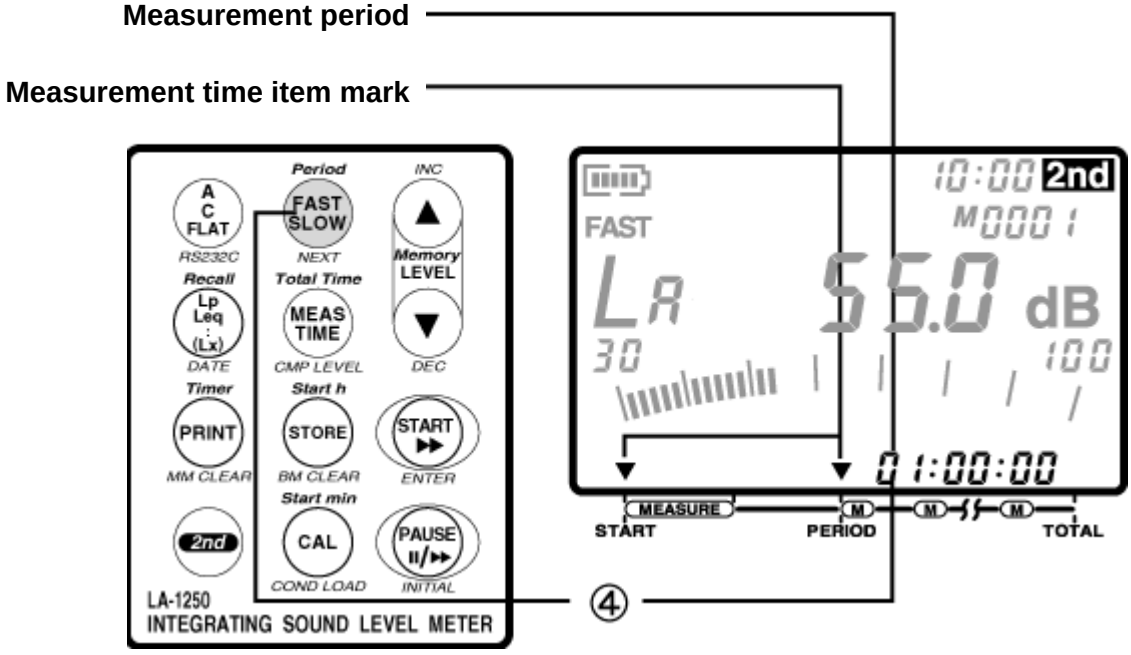
XX:00 → XX:10 → XX:20 → … → XX:40 → XX:50



④Set the measurement period.

Switch the panel switch mode to secondary and press the panel switch [Period] to select the measurement period. The measurement time item mark (▼) is indicated at the character [START] and [PERIOD] printed on the filter under the LCD screen, and the measurement period appears at the measurement time display screen. Press the panel switch [Period] again to set the measurement period. The measurement period is preset and each time you press the panel switch [Period], it changes as follows;

000:00:00 → 000:00:1 → 000:00:03 → … →120:00:00→168:00:00

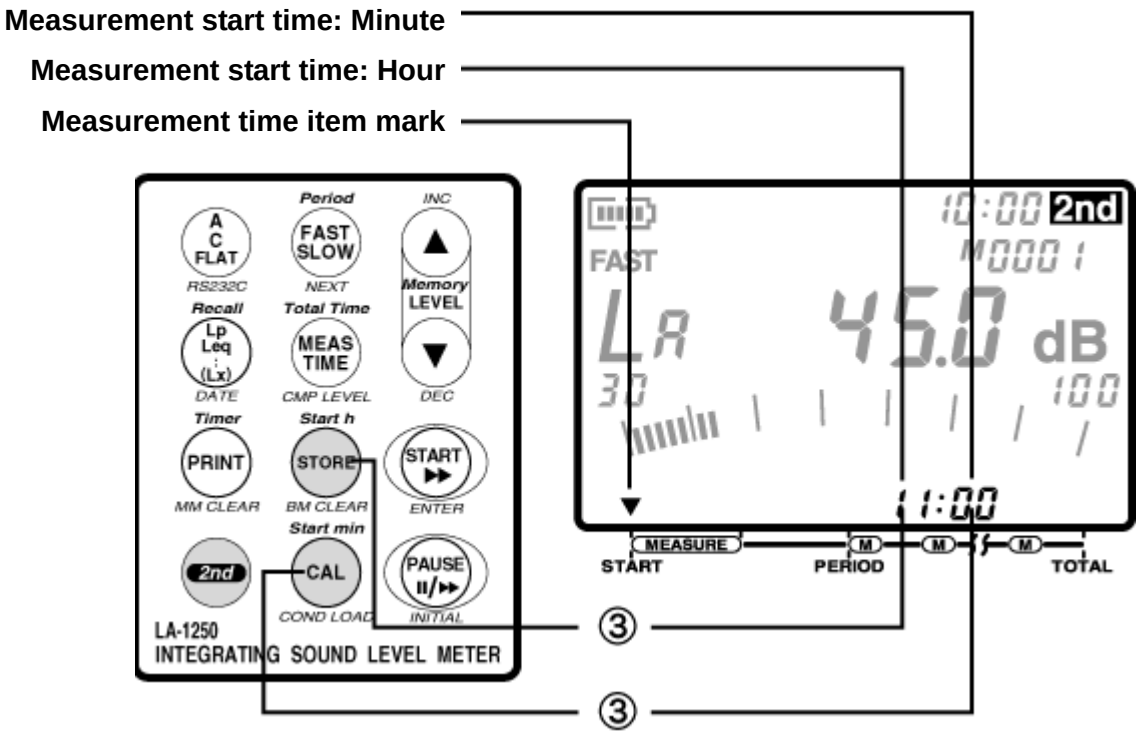


⑤Set the total measurement time.

Switch the panel switch mode to secondary and press the panel switch [Total Time] to select the total measurement time.

The measurement time item mark (▼) is indicated at the character [START] and [TOTAL] printed on the filter under the LCD screen, and the measurement total time appears at the measurement time display screen. Press the panel switch [Total Time] again to set the total measurement time. The total measurement time is preset and each time you press the panel switch [Total Time], it changes as follows;

000:00:00 → 000:00:1 → 000:00:03 → … →120:00:00→168:00:00



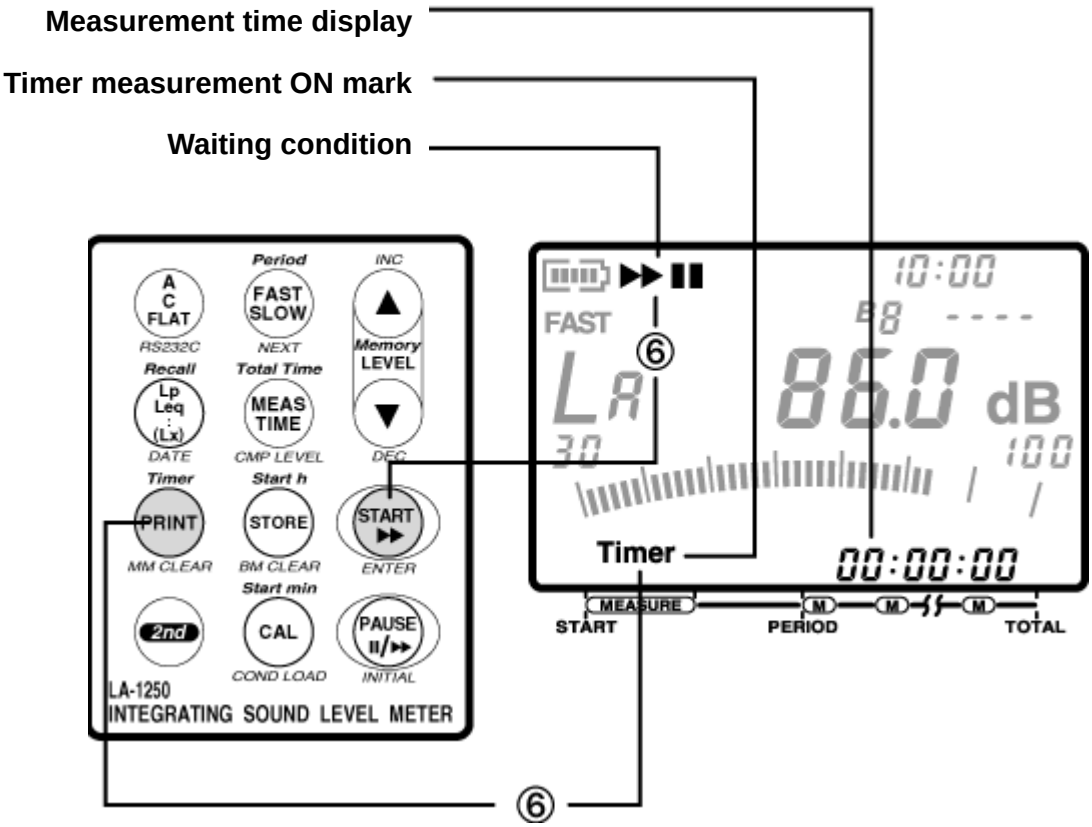
⑥Start the timer measurement.

Switch the panel switch mode to secondary and press the panel switch [Timer] to switch the timer measurement to ON.

When switch the timer measurement to ON, the timer measurement ON mark (Timer) is indicated.

Press the panel switch [START] to switch to the waiting condition for starting the timer measurement. In the waiting condition, calculation progress mark and pause mark is turned ON at the same time.

After pressing the panel switch [START], the measurement is started when the time of the internal clock agrees with the specified time for the first time. The mode is automatically switched to the power-saving mode when there are 30 seconds or more waiting time for next actual measurement and no key operation for 10 seconds. In addition, the mode is switched to the power-saving mode after all the measurement is terminated. When the measurement period is set as 10 seconds or more, the measurement results are outputted as a data for printing immediately after each measurement if the panel switch [PRINT] is pressed for 0.5 seconds or more just after starting the timer measurement.


Measurement time display
Timer measurement ON mark
Waiting condition
A C FLAT
RS232C
Period
FAST SLOW
NEXT
INC
Memory LEVEL
DEC
Recall
Lp Leq : (Lx)
DATE
Total Time
MEAS TIME
CMP LEVEL
Timer
PRINT
MM CLEAR
Start h
STORE
BM CLEAR
START
ENTER
Start min
2nd
CAL
COND LOAD
PAUSE
INITIAL
LA-1250
INTEGRATING SOUND LEVEL METER
FAST
⑥
LA
30
10:00
88.0
dB
100
Timer
00:00:00
MEASURE
START
PERIOD
TOTAL
⑥

End