MULTIFUNCTIONAL
SOUND LEVEL METER

SL-1350

This Sound level meter is small in size, light in weight, easy to carry. Although complex and advanced, it is convenient to use and operate. Its ruggedness will allow many years of use if proper operating techniques are followed. Please read the following instructions carefully and always keep this manual within easy reach.

1. FEATURES

✂ Compatible with standards of IEC 651 Type 2, ANSI 1.4 Type 2.

✂ Widely used to test the sound level of environment, machinery, vehicle, ship and other noise.

✂ Multifunctional. It offers 4 measurement parameters: Lp (sound level), Leq (Equivalent Continuous A Sound Level), Lmax (Maximum Sound Level) and L_N (Percent of all readings over alarm value set).

✂ With alarm set and alarm output.

✂ This meter permits choice of 'A', 'C', or 'Flat' weighting and 'Slow' / 'Fast' response times.

✂ DC output: $0\sim1.3V\,10mV/dB$.

✂ Auto range selection and digital display with no guessing errors.

✂ Manual or automatic shut down. The tester can be switched off by

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✂ pressing the power key at any time. On the other hand, The tester can be set to auto power off between 1 to 9 minutes or disable auto power off.

✂ The tester can memorize 30 groups of measurement results and measuring conditions for later use or download to PC.

✂ Can communicate with PC computer for statistics, printing and analysing by the optional cable and the software for RS232C interface.

2. SPECIFICATIONS

Display:0.5"(13mm)4-digitLCD with backlight

Parameters measured: Lp, Lmax, Leq , L_N.

Measurement range:
Lp: 30~130dB (A)   35~130dB (C)
35~130 dB (F)

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Memory: 30 groups with measuring conditions
Built in calibration signal: 94dB at 1kHz (sinusoidal)
Frequency range: 20 to 12,500 Hz
Alarm value set: 30-130 dB
Alarm output: LED and optional relay contact (NC)
PC interface:
RS232C Low battery indication
Power supply:
4x1.5v AAA (UM-4 battery)
External DC power supply:
6 V DC, 100mA
Size:236x63x26 mm
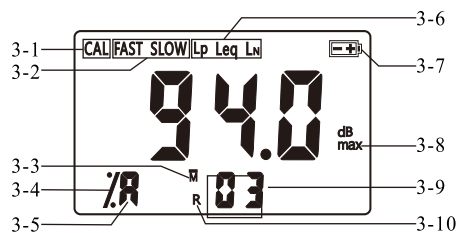Weight: 170g (including batteries)
Standard delivery:
1.Main Unit
2.Carrying Case
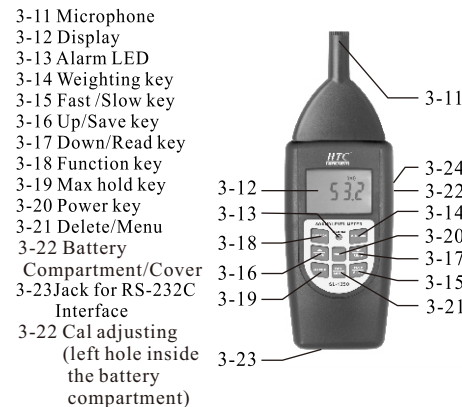3.Operation Manual
4.Windscreen

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Optional Accessories:
1. ND9 sound level meter
2. Cable and software for RS232C
3.External relay
4. AC adapter

3.FRONT PANEL

3-1 Calibration Mark
3-2 Time Weighting
3-3 Memory state
3-4 Mark for L_N
3-5 Weighting Icon
3-6 Function Mark
3-7 Battery indicator
3-8 Max Hold
3-9 Number Memorized
3-10 Browsing Icon

3-11 Microphone
3-12 Display
3-13 Alarm LED
3-14 Weighting key
3-15 Fast /Slow key
3-16 Up/Save key
3-17 Down/Read key
3-18 Function key
3-19 Max hold key
3-20 Power key
3-21 Delete/Menu
3-22 Battery Compartment/Cover
3-23 Jack for RS-232C Interface
3-22 Cal adjusting (left hole inside the battery compartment)

4.MEASURING PROCEDURE

4.1 Press the ⬛ key (Fig.1, 3-20) and release to switch on the

4.2 Check whether the function selected is right. If not, change it by depressing the ⬛ key. The default setting is Lp, weighting A, Fast. Lp - current sound pressure level

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Leq- Equivalent Continuous A Sound pressure Level, i.e. Arithmetically mean value in a period of time set.

L_N- Statistic analysis, i.e. What percent of all measurement values are larger than or equal to the alarm value set by the user. For setting the alarm value, please see page 7.

4.3 Check whether the weighting is right. If not, change it by depressing the ⬛ key to select 'A', 'C' or'Flat'. With 'A' weighting selected, the frequency response of the meter is similar to the response of the human ear. 'A' weighting is commonly used for environmental or hearing conservation programs such as OSHA regulatory testing and noise Ordinance law . 'C' weighting is a much flatter response and is suitable

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for the sound level analysis of machines, engines, etc.

NOTE: Weighting 'A' will be automatically selected when measuring Leq.

4.4 Use the ⬛ key to select a Fast (125 ms) or a Slow (1 second) response time. Select Fast to capture noise peaks and noises that occur very quickly. Select the Slow response to monitor a sound source that has a consistent noise level or to average quickly changing levels. Select Slow response for most applications.

4.5 The reading is the peak one if the icon `max` appears on the Display. The reading is an instant value if `max` does not show up. The

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appearance of symbol `max` is controlled by depressing the key in the process of measurement.

5. STORING AND RECALLING READINGS

5.1 When in `M̄` state, you can save the reading together with measuring conditions to the memory of the meter by pressing the [SAVE] key. Then the icon `M̄` changes to 'M' automatically while the number of memorized readings increases 1.

5.2 No matter in `M̄` state or 'M' state, the memorized data can be browsed by depressing the [READ] key. The browsing state is marked in 'R' on display. When in 'R' state, all the readings memorized can be recalled by depressing the [SAVE] key or [READ] key.

5.3 To delete the memorized value in memory, just enter the browsing

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state and locate the reading to be deleted by the [SAVE] key or [READ] key, then depress the [DEL/MENU] key. If there is an "Err0" on the display, it indicates there is no reading to delete anymore.

6. HOW TO SET THE LEQ TIME?

Leq is used to assess the rms average noise level over a preset period of time, often the starting point of a noise assessment. To take a Leq measurement , the period of time over which it is to be made must be selected. The longer the period of measurement time, the more accurate the Leq reading will be. To set the period of measurement time, just press [DEL/MENU] for about 8seconds till "Leq" is on the display, release the key, then select the set time among 10s, 1min, 5min, 10min, 15min, 30min, 1hour, 8hour, 24hour by

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depressingUp or Down key. To quit, just depress any key except or key.

7. HOW TO SET THE ALARM VALUE?

The alarm LED is on when the instant measurement value is larger than or equal to the alarm value set. The default setting value at the factory is 85dB. Users can change it to any value between 30-130dB by following steps. Depress [DEL/MENU] for about 5 seconds, release it after "AL" shows on display, then press [SAVE] key or [READ] key to preset the alarm value as desired.To quit, just depress any key except [SAVE] or [READ] key.

8. HOW TO SET THE TIME OF AUTO POWER OFF

The default setting for auto power off at the factory is 5 minutes. That means the meter will auto power off

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5 minutes from the time of last key operation. Users can change it to any value between 1-9 minutes by following steps.Depress [DEL/MENU] for about 10 seconds, release it after "AUГO" shows on display,then press [SAVE] or [READ] key to preset the time as desired. To disable the function of auto power off, just preset the time to 0. It will not be off automatically andCan only be shut down manually in such a case.

9. CALIBRATION

The standard method to calibrate the meter requires an external ND9 calibrator in addition to a small screw-driver.

9.1 Calibrate the meter by the ND9
   a. Turn the meter ON
   b. Put the meter in the 'A' weighting mode

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c. Put the meter in the 'SLOW' response mode

d. Place the microphone into the calibrator. Turn the calibrator ON.

e. Adjust the meter's CAL potentiometer so that the meter's display matches the output of the calibrator.

9.2 Calibrate the meter by the built in signal

To enter the calibration state, just switch on the meter, depress the [FUNCTION] key till the icon "CAL" is on the display. Then use a screw-driver to adjust the meter's CAL potentiometer so that the meter displays 94dB.

10. CONSIDERATIONS

10.1 Wind blowing across the microphone increases the noise measurement. Use the supplied

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windscreen to cover the microphone when applicable.

10.2 Do not attempt to dismantle the meter yourself. There are no user-serviceable parts inside.

11. BATTERY REPLACEMENT

11.1 When battery voltage less than approx. 5v, it is necessary to replace the batteries.

11.2 Install a the batteries 4x1.5v AAA (UM-4) correctly into the case.

11.3 If the instrument is not to be used for any extended period, remove batteries.

Note: If AC adapter is used, batteries should be taken away.

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