EXTECH®

USER MANUAL

Sound Level Alert
SL130W

dB -110   OVER   3:58 PM   1-01

MAX
92.1 dB

83.5 dB   4:10 PM   1-01

A   S   LIMIT
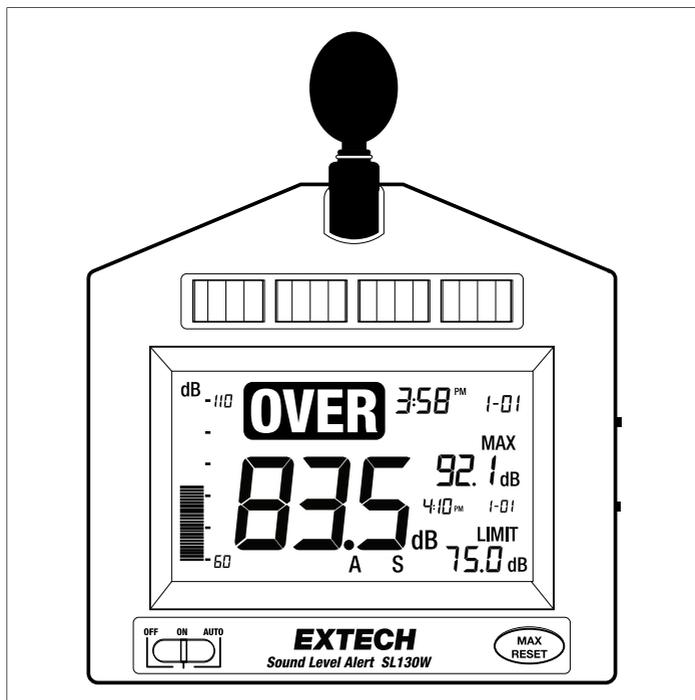75.0 dB

-60

OFF   ON   AUTO

EXTECH
Sound Level Alert SL130W

MAX
RESET

Introduction

Thank you for selecting the Extech SL130W Sound Level Alert. This instrument is designed for wall or tripod mounting, desktop use, or handheld operation.

The SL130W meets the IEC 61672:2013 Type 2 SLM standard (for units with a serial number ending with an 'A'). Legacy units, with a serial number not ending with an 'A', meet IEC 60651-1979 and ANSI S1.4 1983 type 2 SLM standards. The serial number is printed inside the rear battery compartment.

- Serial Number example with 'A' suffix: S/N: 34437**A**
- Serial Number example without 'A' suffix: S/N: 34432

This device is shipped fully tested and calibrated and, with proper use, will provide years of reliable service. Please visit our website for customer support and to check for the latest version of this manual.

Features:

- Electret condenser microphone rotates 180 degrees
- Measures sound level from 30 to 130 dB
- Digital and bar graph indication of sound levels
- Selectable weighting and response time
- Alarm alerts using color-coded LED lamps and large display text
- Maximum reading hold with date/time stamp and reset button
- Automatic ON/OFF timer extends battery life
- Includes AC adapter
- Alarm output drives external relay switches for remote alarm indication

Description

Front Panel
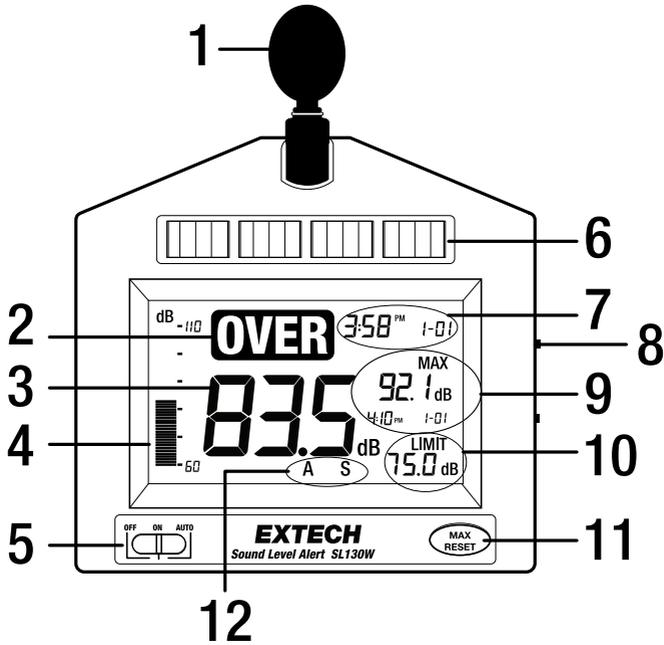
1. Microphone with windscreen
2. Over-range alarm indication
3. Sound level digital reading
4. Bar graph reading
5. OFF/ON/AUTO power switch
6. Alert LED lamps
7. Time and date
8. Side control panel
9. Maximum reading with time and date stamp
10. Alarm limit
11. Maximum reading reset button
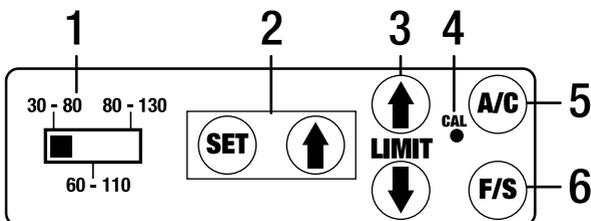12. Weighting and response time settings

Side Panel
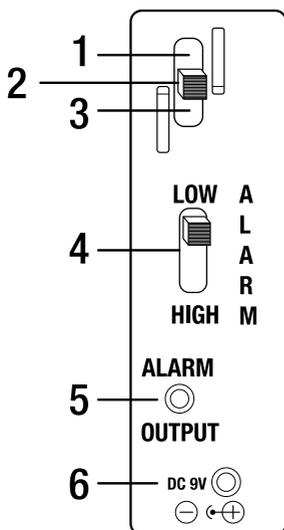
1. Alert switch (green position)
2. Alert switch (red-green position)
3. Alert switch (red position)
4. High/Low alarm switch
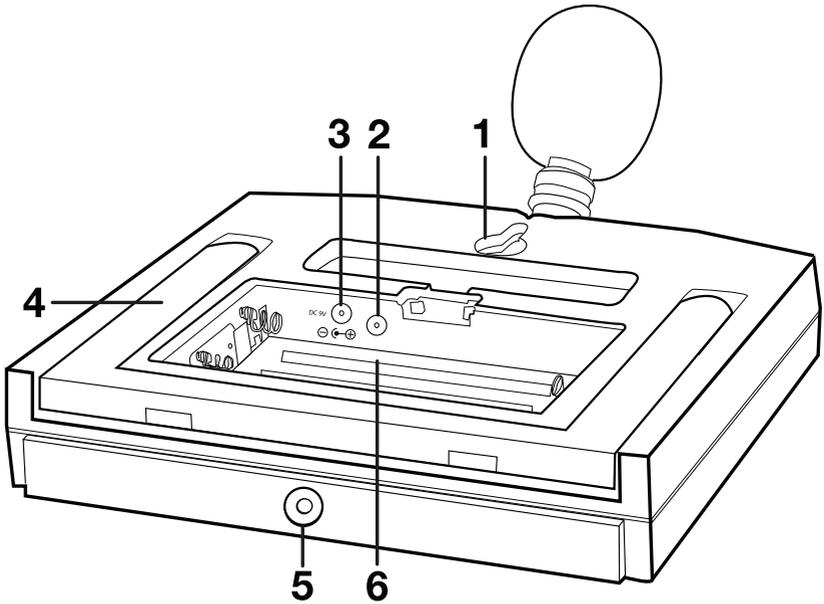5. Alarm output jack (3.5 mm mono)
6. AC adapter jack

Note: If desired, the alarm output and AC adapter jacks in the battery compartment can be used instead of the jacks in the side panel.

Rear Controls

1. Range switch
2. Time and date setting buttons
3. Alarm limit setting buttons
4. Calibration adjustment
5. Weighting button (A or C)
6. Response time button (Fast or Slow)

Rear and Bottom Panels

1. Wall mount
2. Alarm output jack (3.5 mm mono)
3. AC adapter jack
4. Tilt stand
5. Tripod mount
6. Battery compartment

Note: If desired, the alarm output and AC adapter jacks on the side panel can be used instead of the jacks in the battery compartment.

Measurement Considerations

- Use a windscreen to protect the microphone in windy conditions.
- Calibrate the meter often, especially if the meter has been idle for an extended period.
- Do not store or operate the meter in areas of high temperature or humidity.
- Keep the meter and the microphone dry.
- Avoid severe vibration.
- Remove the batteries when the meter is stored.

Meter Placement

The SL130W can be placed on a desktop, using the rear tilt stand, or it can be mounted on a wall or tripod.

When mounted on a wall (rear mounting hole), orient the microphone perpendicular to the wall to minimize acoustic reflections. When using a tripod, use the mounting screw hole, on the bottom of the unit.

Meter Power

Connect the adapter to the DC jack in the side panel or the DC jack in the battery compartment. For battery operation, install 8 'AA' batteries in the rear compartment.

Battery life is approximately 240 hours (10 days) of continuous use. Extend the life to 30 days, assuming an 8-hour day, using the automatic ON/OFF timer (AUTO), explained in the following sections.

Power Switch
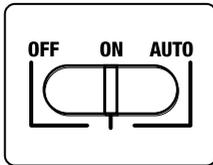
- ON position: Meter operates continuously
- OFF position: Meter power OFF
- AUTO position: Meter powers ON and OFF automatically, based on the AUTO ON/OFF settings (see next section).

Set Date, Time, and ON/OFF Timer

1. Long press the SET button until the hours display begins to flash.
2. Use the up-arrow button to set the hours.
3. Press the SET button. The minutes display will flash. Set the minutes value.
4. Press SET to step through all the settings listed below. Meter powers ON and OFF automatically, based on the AUTO ON/OFF settings.

- Time of day (hours, minutes, AM/PM or 24–hour clock mode)
- Year
- Month
- Day
- AUTO ON (hours, minutes)
- AUTO OFF (hours, minutes)

Range Selection
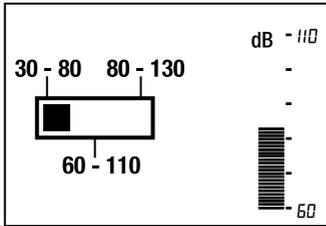
Slide the rear Range switch to the 30-80, 60-110 or the 80-130 position. The selected range will be indicated on the bar graph.

If the measured sound level exceeds the range selected 'OL' will appear. If the measured sound level is below the selected range, dashes will appear.

Select the range that is higher than the expected sound pressure level. The 60 to 110 range is recommended for most applications. Use the 30 to 80 range in quieter areas such as in offices and classrooms.

Note: When the range is changed, the MAX display may indicate an overload 'OL'. In these cases, press the MAX RESET button to clear the MAX display.

Set the Frequency Weighting (A/C)

Press the rear A/C button to set the frequency weighting. 'A' or 'C' appears at the bottom of the display.

With 'A' weighting selected, the frequency response simulates the response of the human ear. 'A' weighting is commonly used for environmental or hearing conservation (OSHA) and noise ordinance enforcement.

'C' weighting is a flat response and is suitable for monitoring the drone of machinery and engines.

Set the Response Time (Slow/Fast)

Press the rear F/S button to select FAST (125 milliseconds) or SLOW (1 second) response. 'F' or 'S' appears at the bottom of the display.

Select FAST to capture sounds that peak quickly (fireworks, for example). Select SLOW to monitor sound that has a consistent level, like the drone of machinery, or to average quickly changing levels.

Maximum (MAX) Hold

MAX
92.7 dB
4:10 PM   3-15
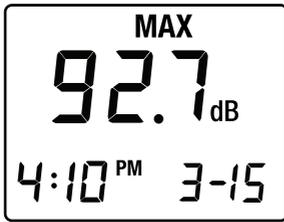
The SL130W monitors and displays the highest sound level measured since the meter was switched ON or since the MAX RESET button was pressed. The time and date of the MAX reading is also displayed.

To clear the MAX reading, press the front panel MAX RESET button. If the measured level is out of range, the MAX display will indicate 'OL'.

High and Low Alarms

Setting a High or Low Alarm Limit
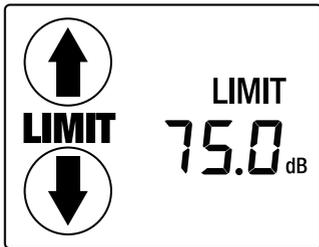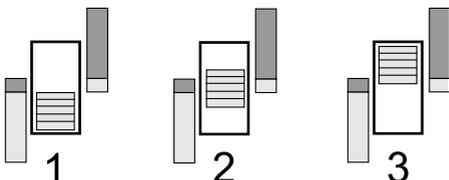
LIMIT
LIMIT
75.0 dB

Use the rear LIMIT arrow buttons to set the high or low alarm limit. Use the alarm switch in the side panel to select high or low alarm operation. The limit setting is shown on the display. The setting range is 30 to 130 dB.

If the sound level exceeds the limit, the 'OVER' indication appears, and a signal is sent to the alarm output jacks (one in the side panel and one in the battery compartment).

Alarm LED lamps and Alert Switch

The four LED lamps at the top of the meter's front panel alert the user when the sound level exceeds the alarm limit. The lamps are active only when on AC adapter power.

The lamps produce a steady or flashing, red or green, indication depending on the side panel alarm Alert switch setting (see the Table, below). The three switch positions are: (1) Red, (2) Red/Green, (3) Green, as shown below.

| Alarm switch position	Alert switch position	LED responses
High	Red (1)	Flashes red when the sound level exceeds the alarm limit.
	Red/Green (2)	Flashes red when the sound level exceeds the alarm limit. 40-second green indication when the level changes from high to low.
	Green (3)	40-second green indication when the level changes from high to low.
Low	Green (3)	Green when the sound level is below the alarm limit.
	Red/Green (2)	Green when the sound level is below the alarm limit. 40-second flashing red when the level changes from low to high.
	Red (1)	40-second flashing red when level changes from low to high.

Alarm Output

The meter sends a signal to its alarm output jacks when the alarm limit has been reached. The output signal can be connected to an AC or DC powered solid state relay (SSR) to control an external warning sign or an audible alert, for example.

To set a high or low alarm limit, see the 'Setting a High or Low Alarm Limit' section above.

There are two alarm relay output jacks, one in the battery compartment and one in the side panel. Use the output jack that best suits your mounting choice. The output jacks are 3.5 mm (mono) and provide 3.4 mA at 5 V DC, typical.

Connect the system as shown below for either AC or DC systems. Observe correct polarity and use diode suppression on inductive loads, as shown below for DC applications.
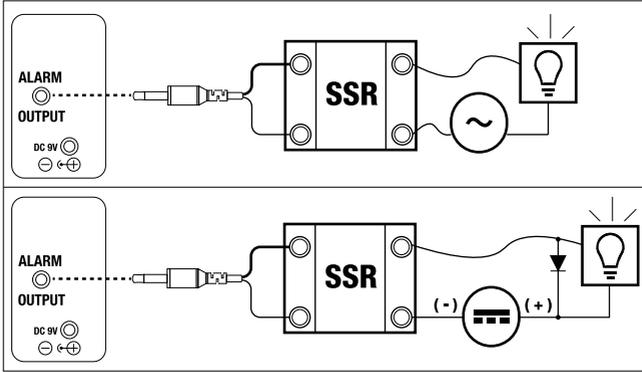
Calibration
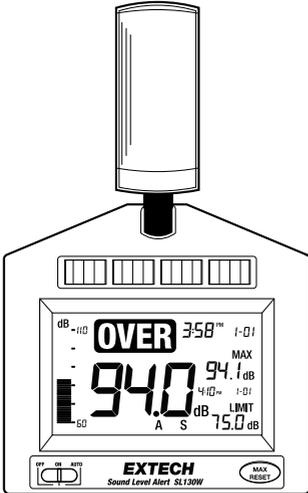
1. Set the meter to the 60 to 110 or the 80 to 130 range.
2. Place a calibrator over the microphone (as shown) and switch ON the calibrator.
3. The meter reading should match the calibrator output. Typical calibrator output levels are 94 and 114 dB.
4. If the meter is within ± 0.2, no adjustment is necessary.
5. To adjust the display, use the calibration screw (CAL) on the back of the meter.

Maintenance

Battery Replacement

Eight (8) AA batteries are installed in the rear battery compartment. Replace the batteries when the low battery icon appears on the display.

1. Switch OFF the SL130W.
2. Open the rear battery compartment.
3. Insert the batteries into the compartment, observing correct polarity.
4. Secure the battery compartment before use.

Do not dispose of used batteries or rechargeable batteries in household waste.

Cleaning and Storage

Wipe the housing with a damp cloth when necessary. Do not use abrasives or solvents. When storing the meter, remove the batteries and store them separately.

Specifications

General Specifications

Applicable standards	Meets IEC 61672:2013 Type 2 SLM standard (for units with a serial number ending with an 'A').
	Legacy units, with a serial number not ending with an 'A', meet IEC 60651-1979 and ANSI S1.4 1983 Type 2 SLM standards.
Display	Multifunction LCD; 4.6 x 3.125 in. (11.7 x 7.94 cm)
Microphone	0.5 in. electret condenser microphone
Maximum (MAX) Hold	Maximum reading is displayed with date and time
Under-range indication	Dashes are displayed (- - -)
Over-range indication	'OL' (overload) is displayed
Power	AC adapter (9 V, 500 mA) or eight (8) 'AA' 1.5 V batteries.
	LED alert lamps are not functional when battery powered.
Battery life	240 hours continuous use (approx.), 30 days (8 hours per day).
Operating temperature	32 to 122℉ (0 to 50℃)
Operating humidity	80% RH max.
Dimensions	8.75 x 7.1 x 1.25 in. (22 x 18 x 3.2 cm)
Weight	0.63 lbs. (285 g)

Measurement Specifications

Measurement ranges (dB)	30 to 80, 60 to 110, 80 to 130
Resolution	0.1 dB
Accuracy	± 1.5 dB (under reference conditions)
Frequency bandwidth	31.5 Hz to 8 kHz
Frequency weighting	'A' and 'C'
Response time	Fast (125 ms) and Slow (1 second)

Alarm Specifications

Alarm output	3.5 mm jack (3.4 mA at 5 V DC, typical)
Alarm limit setting range	30 to 130 dB

Customer Support

Customer Support Local Telephone List:

https://support.flir.com/contact

Returns (RMA):

https://customer.flir.com/Home

Warranty

Teledyne FLIR warrants this Extech brand instrument to be free of defects in parts and workmanship for two years from date of shipment. To view the full warranty text, please visit the support site, link below.

https://www.flir.com/support-center/warranty/

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