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SoundCHEK Connect Sound Level Meter

Cat. No. 702 Series

Operating Instructions

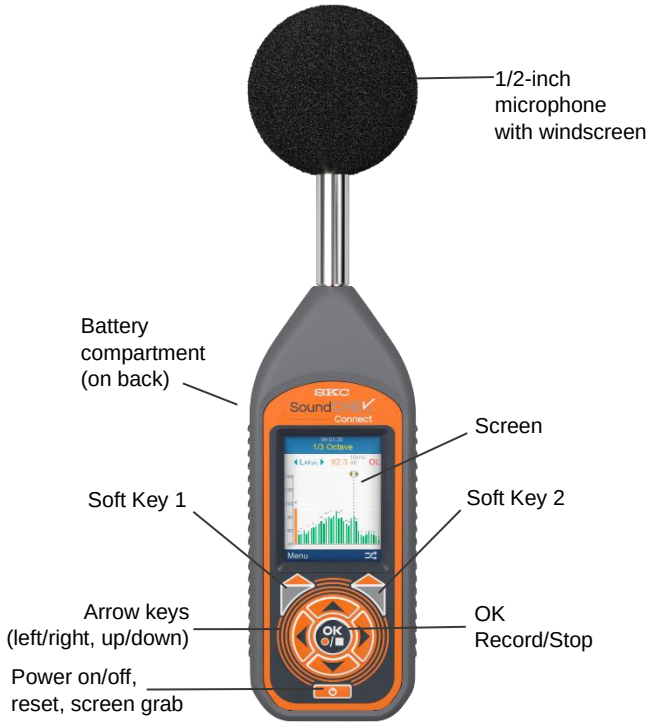

Figure 1. SoundCHEK Connect Overview

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INTRODUCTION

This user manual is written for all models of the SoundCHEK Connect sound level meter. Some parameters and features may not be available for your specific model.

Review your model in the *Connect Models and Features* to determine which parameters and features are available where required.

Every model of the SoundCHEK Connect sound level meter has built-in Wi-Fi, so you can automatically upload your recordings to our simple to use in-browser software at skcCHEKBox.com. Your data here is secure, always available, and backed up automatically.

SoundCHEK Connect can also be connected to SKC CHEKBox through the PC app SKC ChekBox Gateway, which enables you to upload your recordings via your PC using the included Micro USB Cable and your PC's Internet connection. You can also update your instruments software as and when required. An alert in CHEKBox will inform you when updates are available.

The SoundCHEK Connect sound level meter can also act as a USB drive, allowing access to your saved recordings and transfer of the standard format .csv recorded files so you can open them in your preferred spreadsheet application and create your own reports.

Checking Kit Contents

If you ordered Cat. No.	Your package should contain
702-003	**Class 1 meter,** rubber boot, 4 AA batteries USB cable, wrist strap, windscreen, and USB drive with manual, in a protective carry case
702-004	**Class 1 meter with 1/1 Octave Module (SO),** rubber boot, 4 AA batteries USB cable, wrist strap, windscreen, and USB drive with manual, in a protective carry case
702-007	**Class 1 meter with Statistics and Event Recording (SE),** rubber boot, 4 AA batteries USB cable, wrist strap, windscreen, and USB drive with manual, in a protective carry case
702-008	**Class 1 meter with Statistics and Event Recording and 1/1 – 1/3 Octave Modules (SEO),** rubber boot, 4 AA batteries USB cable, wrist strap, windscreen, and USB drive with manual, in a protective carry case
702-009	**Class 2 meter,** rubber boot, 4 AA batteries USB cable, wrist strap, windscreen, and USB drive with manual, in a protective carry case
702-010	**Class 2 meter with 1/1 Octave Module (SO),** rubber boot, 4 AA batteries USB cable, wrist strap, windscreen, and USB drive with manual, in a protective carry case
702-011	**Class 2 meter with Statistics and Event Recording Module (SE),** rubber boot, 4 AA batteries USB cable, wrist strap, windscreen, and USB drive with manual, in a protective carry case
702-012	**Class 2 meter with Statistics and Event Recording and 1/1 – 1/3 Octave Modules (SEO),** rubber boot, 4 AA batteries USB cable, wrist strap, windscreen, and USB drive with manual, in a protective carry case

Models and Features

SoundCHEK Connect models and features are listed below. The SoundCHEK Connect models are presented with all the required features to fulfil specific applications where noise measurement is a requirement, such as for Safety or Construction.

Safety
SoundCHEK Connect Safety **Class 1 Cat. No. 702-003, Class 2 Cat. No. 702-009** LSPL, LEQ, LMIN, LMAX, LPEAK, LEP'd, Exposure Points, Dose Hearing Protector Calculator Voice Memo Recording
Safety Octave
SoundCHEK Connect Safety Octave **Class 1 Cat. No. 702-004, Class 2 Cat. No. 702-010** LSPL, LEQ, LMIN, LMAX, LPEAK, LEP'd, Exposure Points, Dose Octave Band Analysis (1/1): LSPL, LEQ, LMAX, LMAX, LPEAK Hearing Protector Calculator Voice Memo Recording
Safety & Environmental
SoundCHEK Connect Safety & Environmental **Class 1 Cat. No. 702-007, Class 2 Cat. No. 702-011** LSPL, LEQ, LMIN, LMAX, LPEAK, LEP'd, Exposure Points, Dose Statistical Parameters: LTM3, LTM5, Lday, Levening, Lnight, Ldn, Lden, NA, 10 user-definable Ln values (L1 - L99, 0.1 dB resolution) Hearing Protector Calculator Voice Memo Recording Noise Event Recording
Safety & Environmental Octave
SoundCHEK Connect Safety & Environmental Octave **Class 1 Cat. No. 702-008, Class 2 Cat. No. 702-012** LSPL, LEQ, LMIN, LMAX, LPEAK, LEP'd, Exposure Points, Dose Statistical Parameters: LTM3, LTM5, Lday, Levening, Lnight, Ldn, Lden, NA, 10 user-definable Ln values (L1 - L99, 0.1dB resolution) Octave Band Analysis (1/1 or 1/3 Octaves): LSPL, LE, LEQ, LMAX, LMAX, LPEAK, Ln's Hearing Protector Calculator Voice Memo Recording Noise Event Recording

Microphone and Preamplifier

Measurement microphones by the very nature of their manufacture are precision components that are easily damaged through incorrect use. Great care must be taken when using the instrument to ensure the longevity of the microphone.

Microphone Types

Three different types of microphone are manufactured, and each is designed for measuring noise in different applications outside the scope of this manual. Each one, however, has a different sound incidence angle. The sound incidence angle determines the angle at which the SoundCHEK Connect sound level meter is held relative to the actual noise source being measured.

- **Free Field**
  Sound Incidence Angle = 0°
  Point the sound meter directly towards the noise source.

- **Pressure Field**
  Sound Incidence Angle = 90°
  Point the sound meter at 90° to the noise source.

- **Random Incidence Field**
  Point the sound meter at approximately 70° to the noise source.

Note: *To comply with all international legislation, all SoundCHEK sound level meters are fitted with a* ***Free Field*** *measurement microphone. Always point the sound level meter directly toward the noise source.*

Microphone Polarization

Microphones require a polarization voltage to operate and are manufactured in two ways:

- **Externally Polarized —** These microphones require an external charge for the microphone to operate which is generally 200V and supplied by the sound level meter.
- **Pre-polarized —** These microphones generate the polarization voltage internally and do not require the externally generated 200V polarization charge.

All microphones supplied with SoundCHEK Connect sound level meters are **pre-polarized**.

Microphone Sensitivity

The sensitivity of a microphone is determined by the output voltage it produces for a defined sound source.

Microphones are manufactured with numerous sensitivity levels and operate within a specified tolerance. Different microphones of the same model may therefore give slight differences in readings when used on the same sound meter. To allow for this all SoundCHEK Connect sound level meters have been designed to accommodate any variations in the tolerance of the supplied microphone up to ± 3 dB.

All models of the SoundCHEK Connect sound level meter with Class 1 approval have been designed for microphones with a sensitivity of 50 mV/Pa.

All models of the SoundCHEK Connect sound level meter with Class 2 approval have been designed for microphones with a sensitivity of 25m V/Pa.

Great care must be taken to ensure the microphone and sound meter sensitivities match, otherwise incorrect readings will occur.

Removing the Microphone

The microphone is fitted to the preamplifier by screwing the microphone in a clockwise direction ensuring that the preamplifier spring pin is located centrally in the microphone.

To remove the microphone, unscrew in a counterclockwise direction.

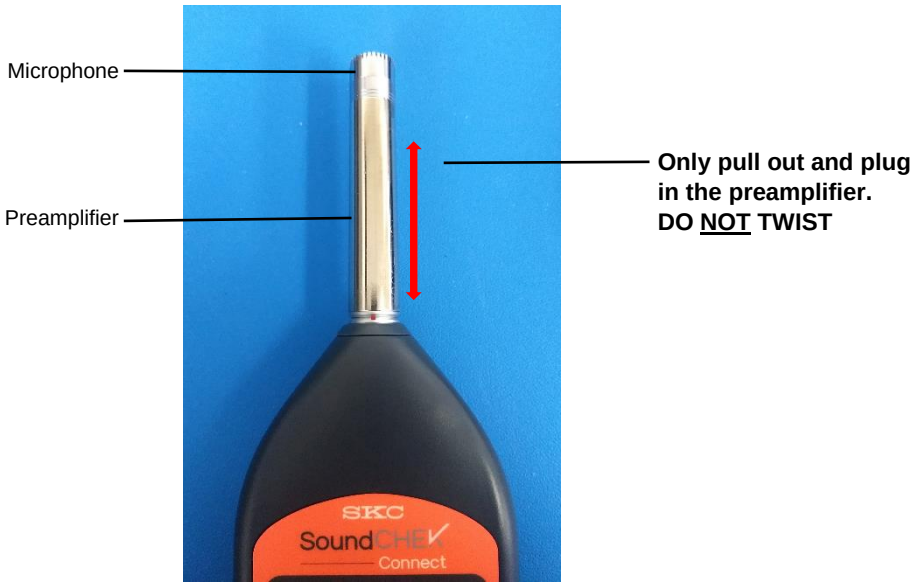
The microphone has a protection grid that can also be unscrewed and removed; great care must be taken to ensure that this is NOT removed.

Underneath the protection grid is the microphone diaphragm, which should never be touched or be subject to dust or dirt. Doing so may damage the microphone beyond repair or affect its acoustic response dramatically.

Attaching/Removing the Preamplifier

To attach the preamplifier (*see below*), position the RED orientation key on the preamplifier with the RED identification mark on the sound level meter and gently push the preamplifier into the connector.

To remove, gently pull the preamplifier stem away from the instrument body.



To prevent damage occurring to your SoundCHEK Connect sound level meter or your pre-amplifier assembly, never attempt to twist the preamplifier.

Certifiable Calibration

The calibration process includes the microphone, preamplifier, and sound level meter. Any change in this measurement chain will require a new calibration certificate.

SKC offers a complete calibration service offering a NIST calibration that can be supplied with or without a test report. It is recommended that your sound meter instrumentation is calibrated annually to ensure your measuring equipment is completely accurate and fully compliant.

Measuring Sound

Always calibrate your SoundCHEK Connect sound level meter before and after taking measurements using the SKC AcoustiCHEK Sound Level Calibrator Cat. No. 703 Series. Your SoundCHEK Connect can be set for calibration immediately after the unit has been turned on. *See **Startup Options** for further details.*

Incidence Angle

It is essential to hold your SoundCHEK Connect at the correct angle to the noise source. SoundCHEK Connect sound level meters are supplied with Free Field (meeting IEC standards) microphones, which require an incidence angle of 0°. While measuring, always point your SoundCHEK Connect directly towards the noise source.

Sound Level – General Recommendations

In some environments, high levels of noise can occur. The SoundCHEK Connect sound level meter has been designed for complete accuracy up to sound levels of 140 dB.

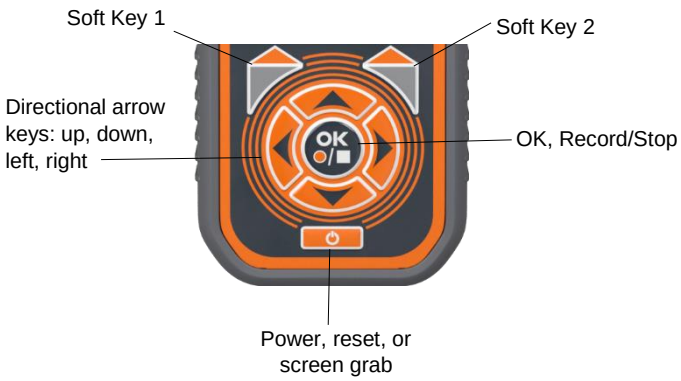
Before you record measurements, take the time to ensure you have chosen the optimum range for the application. Wherever possible, the optimum range is when the average measured signal is approximately halfway between the top of the range and the bottom of the range without an overload condition.

If the noise levels are too low for the range selected, the meter will display an under range condition. Under these circumstances, you will need to select a lower range. *See Measurement Setup, Weightings & Range for detailed information.*

If measuring low level noise, be aware of the inherent noise levels caused by a combination of thermal and electrical noise from both the microphone and the sound level meter. Measuring data that lies within 10 dB of the lowest quoted level on the lowest measuring range may be influenced by the self-noise of the system. See Performance Profile for inherent noise levels and range limits.

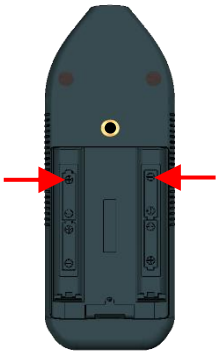
Using the Keypad

All models of the SoundCHEK Connect sound level meter have the same keypad layout and operation.



Powering the Sound Level Meter

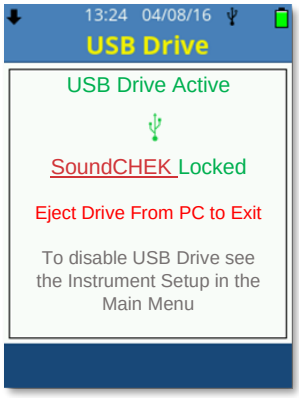
The sound level meter can be powered from four 1.5V AA size batteries, four 1.2V rechargeable batteries, or the micro USB connection via a USB port or power supply capable of delivering > 0.5 A.



The battery compartment is located on the back of your sound meter. Remove the battery door and insert the batteries using the correct polarity shown where the batteries are fitted (*see right*).

Replace the battery door securely before using the instrument.

While powering the instrument using the USB cable, you may be shown the screen below. This screen will disappear when the instrument verifies that the USB is providing power only and is not connected to a PC. This option can be disabled (*see Instrument Setup/USB Drive for more information*).



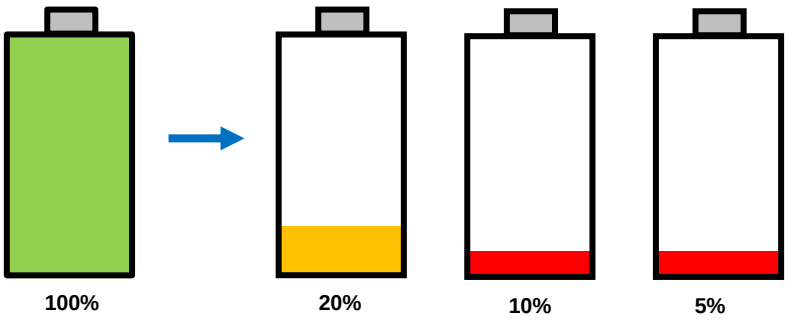
Turning Power On/Off

Turn on: In all power configurations, press the **Power Key** once. The instrument will take several seconds to boot and load configuration settings.

Turn off: Hold the **Power Key** down for two seconds and follow the on-screen instructions (*see below*). ***Note**: If no key is pressed within two minutes of turning on the sound level meter, the unit will automatically power down.*

Determining Battery Level

The SoundCHEK Connect is equipped with a multi-level battery indicator:



At approximately 5% charge, the battery indicator will FLASH RED. If the batteries are not replaced, the unit will automatically shut down and save the recording if necessary.

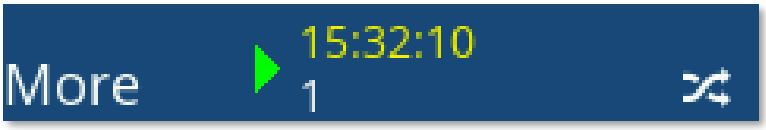
Interpreting Instrument Icons

Several icons are displayed on the sound level meter to easily identify the functionality or useful settings of the instrument. See the following table for an explanation of the icons. ***Note**: An asterisk (*) indicates an icon that appears where that option is fitted.*

	Low Measuring Range Active
	High Measuring Range Active
	User Template Active
	Voice Memo Recorded (Flashes while recording)
	Noise Event Recorded (Flashes while recording)*
	USB Active
	WiFi – Error with Connection
	WiFi Connected / Signal Strength
	Downloading Data via WiFi from CHEKBox Software
	Uploading Data via WiFi to CHEKBox Software
	Uploading to & Downloading from CHEKBox Software
	Battery Charge
	Recording Data Active
	Recording Data Stopped
	File Review Active

The top light blue bar on the screen displays most of the information icons, the current time, date, measurement range and the current screen selected.

The bottom lighter blue bar will display the Record, File Review, or Stop symbols in a similar position to the image shown below. ***Note****: The image shown here may have different values than those on your display.*

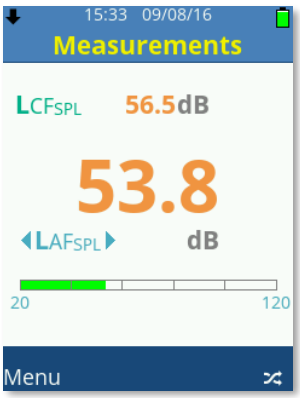


OPERATION

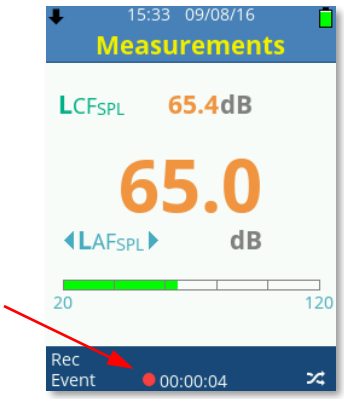
The SoundCHEK Connect sound level meter has three primary operational modes:

- Real Time
- Recording
- File Review

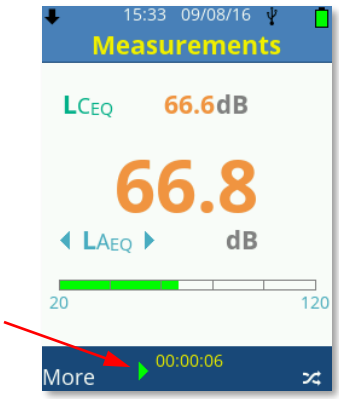
Each mode can be quickly identified by viewing the bottom bar: Real Time has no icon, Record has a standard red record symbol, and File Review shows a standard green play symbol.



Real Time



Record



File Review

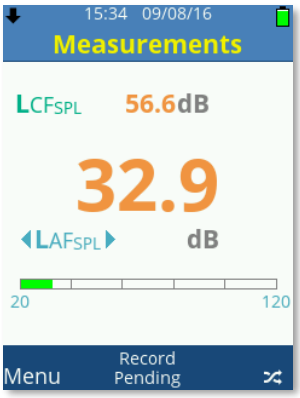
Real Time Mode

This is the standard mode of operation for the sound level meter. The menu system can be accessed while in real time mode and the instrument settings can be changed if required.

Measurement screens are accessible but not all parameters all available while real time mode is active. It is possible to reset parameters in real time mode by quickly pressing the **Power** Key. ***Note***: When Screen Shot is enabled, the **Power** key cannot be used to reset parameters. File Review or Recording a data file can both be achieved through real time operation.

Recording Mode

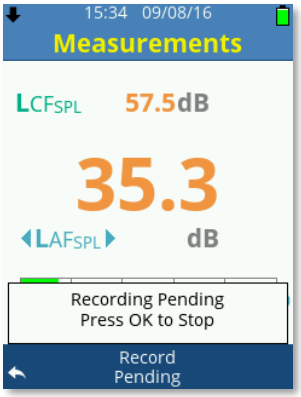
Recording data is achieved by pressing the **Record** key while in real time mode. The settings for recording are applied under **Measurement Setup**, **Data Recording**. If **Smart Timers** or **Start On** have been selected, then the instrument may show Record Pending:



This indicates that a recording is scheduled to start at the specific time or date set.

DO NOT switch off the instrument as the recording will not take place while the instrument is off.

To stop a pending recording, press the **Stop** key while in any measurement screen, and press the **OK** key to stop the recording or **Soft Key 1** to cancel the stop request.

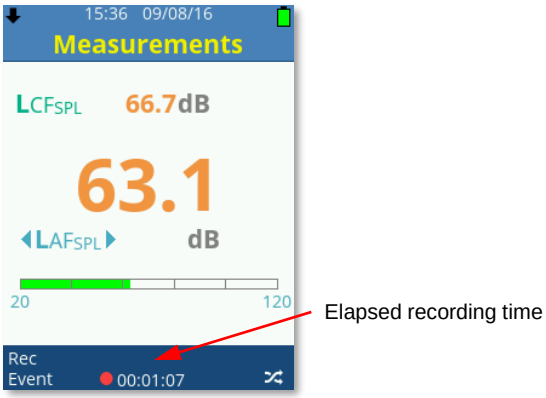


Recording Screen Display

The settings made under Data Recording will affect the information and how it is displayed on your SoundCHEK Connect instrument.

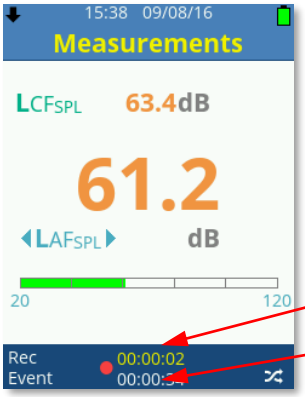
Time History Disabled

If Time History is not enabled for the recording, the bottom bar will only indicate the elapsed recording time.



Time History Enabled

When Time History is enabled for the recording, the bottom bar will display the elapsed recording time and the current long interval countdown time.

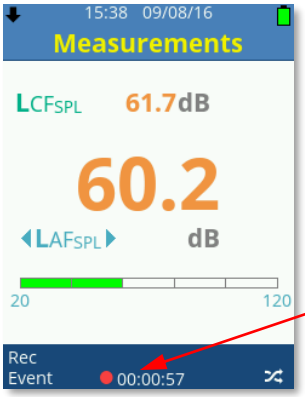


Long interval countdown time

Elapsed recording time

Time History Disabled, Duration Timer Set

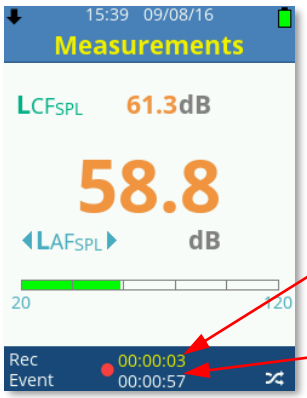
When Time History is disabled for the recording but the Duration Timer is enabled, the bottom bar will only display the remaining recording time.



Remaining recording time

Time History Enabled, Duration Timer Set

When both Time History and Duration Timer are enabled for the recording, the bottom bar will display the remaining recording time and the current long interval countdown time.

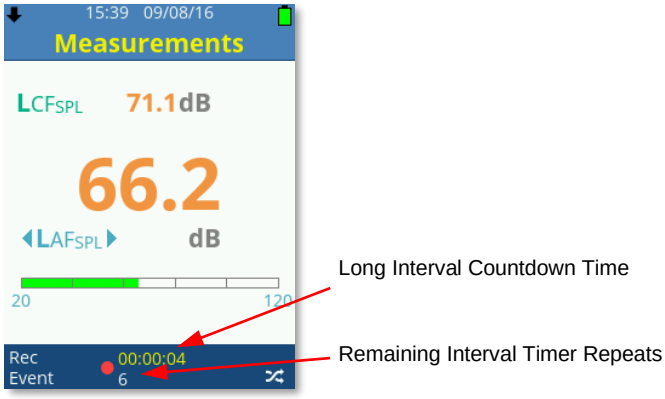


Long interval countdown time

Remaining recording time

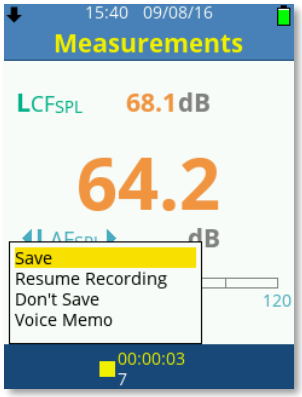
Time History Enabled, Interval Timer Set

When both Time History and Interval Timer are enabled for the recording, the bottom bar will display the remaining interval timer repeats and the current long interval countdown time:



Stop Active Recording

Pressing the **Stop** key during an active recording will display a Yellow standard stop symbol to indicate the recording has been temporarily halted and will also display the available options shown below. Scroll through the available options using the **Up** or **Down Arrow** keys, and press **OK** to choose from the following selections:



Save. Select to save the recording using either manual or auto file naming as selected.

Resume Recording. Select to continue with the data recording; data will not be including during the time period that the recording was halted.

Don't Save. Select to return to Real Time mode without saving the current recording.

Voice Memo. Select to attach a voice memo audio recording to the current data recording. Press the **Stop** key to stop the voice memo audio recording and return to the available options.

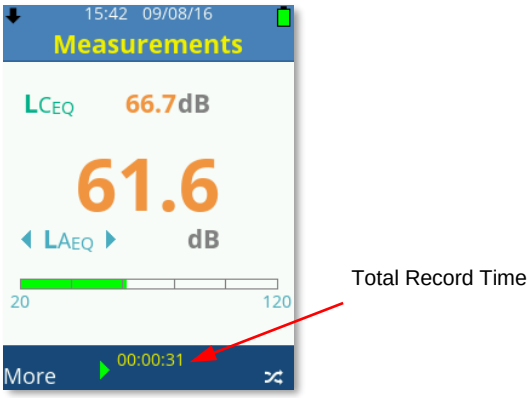
File Review Mode

The settings that were made under Data Recording will affect the information and how it is displayed on your SoundCHEK Connect instrument.

1. Use the **Up** or **Down Arrow** keys to scroll through measurement screens or the **Left** or **Right Arrow** keys to scroll measurement parameters.
2. Use **Soft Key 2** to swap between measurement 1 or measurement 2 and Long Interval selection if Interval Timers have been used.
3. Use the **Left** or **Right Arrow** keys to scroll parameters and Long Interval selection if Interval Timers have been used.

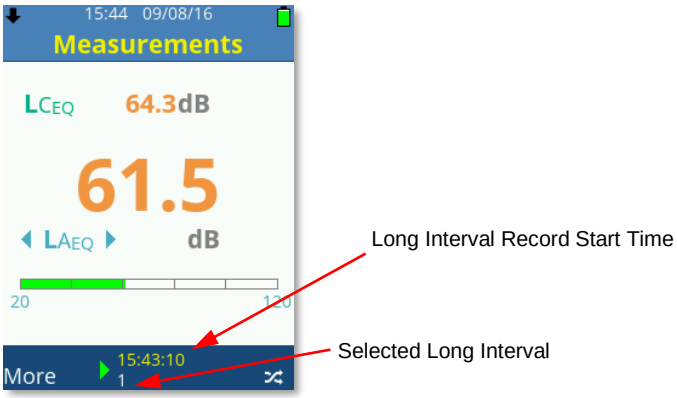
Time History Disabled

If Time History was not enabled for the recording, the bottom bar will only indicate the total recording time:

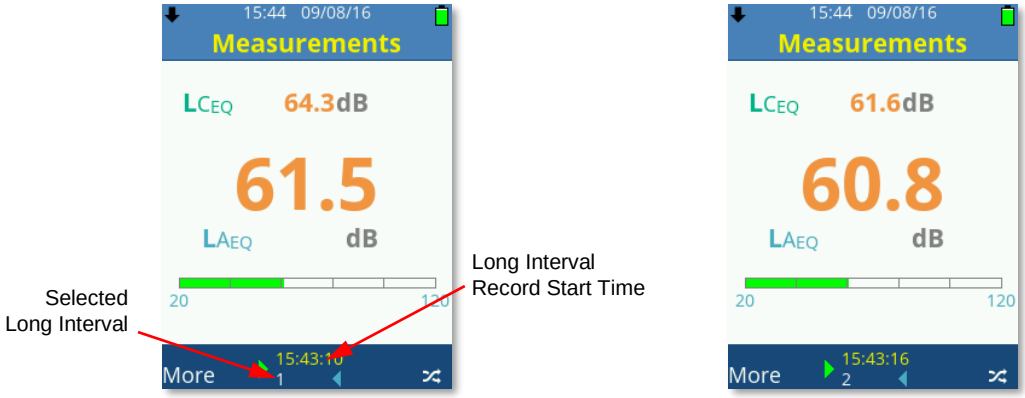


Time History Enabled

If Time History was enabled for the recording, the bottom bar will display the selected long interval and the time this long interval started recording:

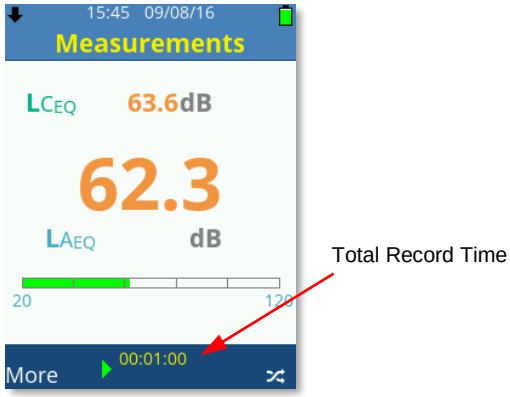


1. With the Long Interval Selected, use the **Left** or **Right Arrow** keys to scroll and select any of the Long Interval periods.
2. Use **Soft Key 2** to swap between measurement 1 or 2 and view data as required for any Long Interval period.



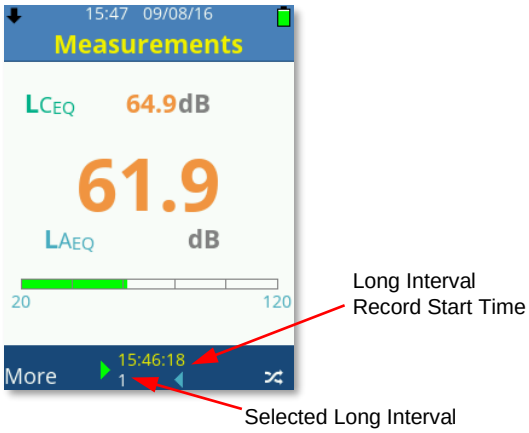
Time History Disabled, Duration Timer Set

If Time History was not enabled for the recording but the Duration Timer has been, the bottom bar will only indicate the total recording time:

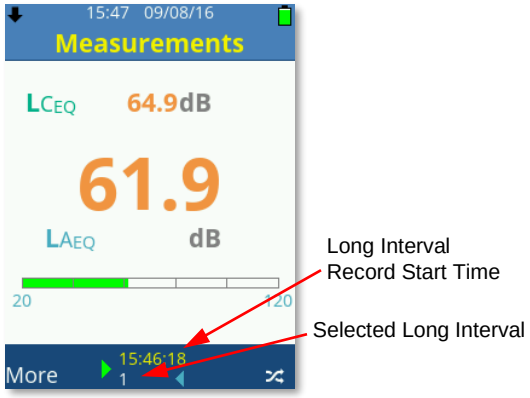


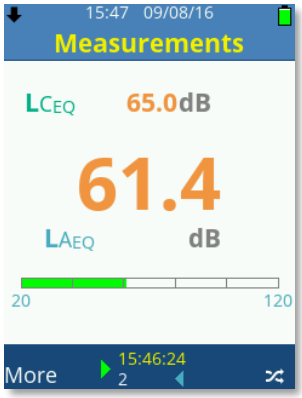
Time History Enabled, Duration Timer Set

When both Time History and Duration Timer were enabled for the recording, the bottom bar will display the remaining recording time and the current long interval countdown time:



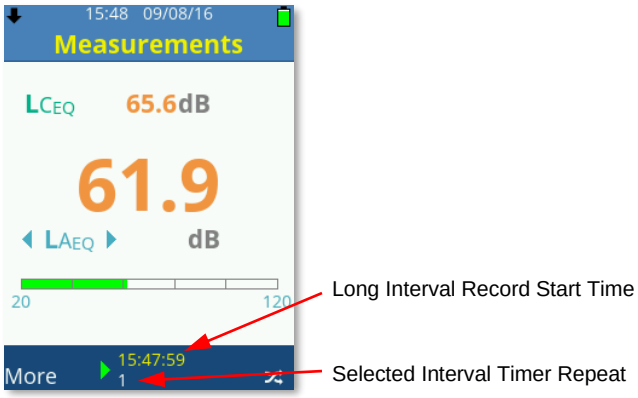
1. With the Long Interval Selected, use the **Left** or **Right Arrow** keys to scroll and select any of the Long Interval periods.
2. Use **Soft Key 2** to swap between measurement 1 or 2 and view data as required for any Long Interval period.



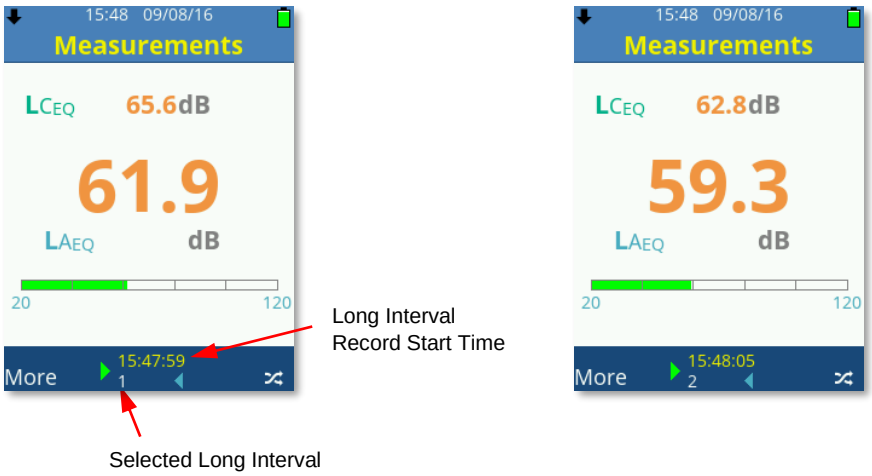


Time History Enabled, Interval Timer Set

When both Time History and Interval Timer were enabled for the recording, the bottom bar will display the selected Long Interval record start time and the selected Interval Timer Repeat:

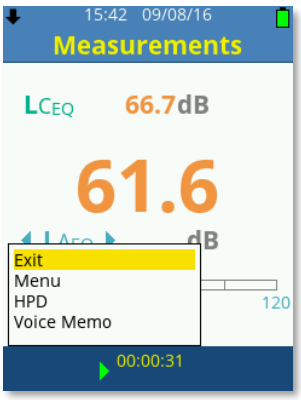


1. With the Long Interval Selected, use the **Left** or **Right Arrow** keys to scroll and select any of the Long Interval periods.
2. Use **Soft Key 2** to swap between measurement 1 or 2 and view data as required for any Interval Timer Repeat.



File Review Options

During File Review, press **Soft Key 1** to display the available options.



Scroll through the options using the **Up** or **Down Arrow** keys, and press **OK** to choose from:

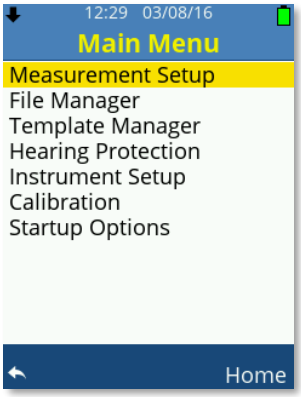
- **Exit** — Quit File Review mode and return to Real Time mode
- **Menu** — Access the menu system of the SoundCHEK Connect sound level meter; File Review mode remains active
- **HPD** — Access the Hearing Protector Database using the file open in File Review
- **Voice Memo** — Attach a voice memo audio recording to the current data recording. Press the **Stop** key to stop the voice memo audio recording and return to the available options.

Menu Navigation and Settings

The Main Menu is available to all models of SoundCHEK Connect sound level meters and is selected using **Soft Key 1** when labelled as **Menu**.

On most screens in the SoundCHEK Connect menu system, **Soft Key 1** can be used to go back to the previous screen. This will be displayed as the symbol when available.

Similarly, **Soft Key 2** can be used to go back to the measurement screen; this will be displayed as **Home** when available. Scroll through the available options using the **Up** or **Down Arrow** keys and press **OK** to choose the highlighted selection.



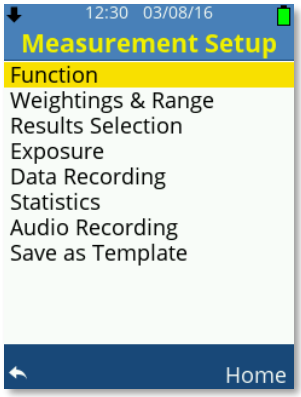
***Note**: Hold down the directional arrow keys to rapidly change or scroll through elections*.

***Note**: The Main Menu is not available when the sound level meter is recording.*

Measurement Setup

Select Measurement Setup to change how and what your sound level meter records and displays.

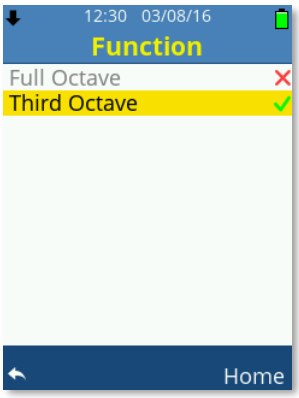
Scroll through the available options using the **Up** or **Down Arrow** keys and press **OK** to choose the highlighted selection.



Function

Scroll through the available options using the **Up** or **Down Arrow** keys and press **OK** to choose the highlighted selection.

Octave band analysis does not have to be used and can be disabled as required. Only one analysis method can be selected at any time and all analysis is on Measurement One only.



Full Octave

When the function Full Octave is selected, full octave band analysis is performed on measurement one and will produce the additional following parameter data for the short and long interval if used at the following frequencies:

Frequencies
16 Hz, 31.5 Hz, 63 Hz, 125 Hz, 250 Hz, 500 Hz, 1 kHz, 2 kHz, 4 kHz, 8 kHz, 16 kHz
Short Interval
Leq, Lmin, Lmax, Lpeak, Le*
Long Interval
Leq, Lmin, Lmax, Lpeak, Le*, Ln1*, Ln2*, Ln3*, Ln4*, Ln5*, Ln6*, Ln7*, Ln8*, Ln9*, Ln10*

**Where fitted and enabled*

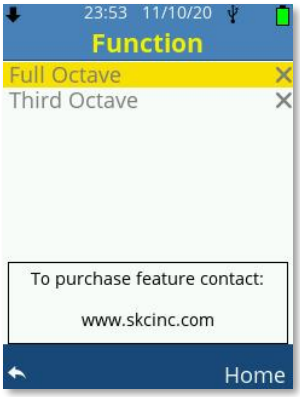
Third Octave

When the function Third Octave is selected, one third octave band analysis is performed on measurement one and will produce the additional following parameter data for the short and long interval if used at the following frequencies:

Frequencies
12.5 Hz, 16 Hz, 20 Hz, 25 Hz, 31.5 Hz, 40Hz, 50 Hz, 63 Hz, 80 Hz, 100 Hz, 125 Hz, 160 Hz, 200 Hz, 250 Hz, 315 Hz, 400 Hz, 500 Hz, 630 Hz, 800 Hz, 1 kHz, 1.25 kHz, 1.6 kHz, 2 kHz, 2.5 kHz, 3.15 kHz, 4 kHz, 5 kHz, 6.3 kHz, 8 kHz, 10 kHz, 12.5 kHz, 16 kHz, 20 kHz
Short Interval
Leq, Lmin, Lmax, Lpeak, Le*
Long Interval
Leq, Lmin, Lmax, Lpeak, Le*, Ln1*, Ln2*, Ln3*, Ln4*, Ln5*, Ln6*, Ln7*, Ln8*, Ln9*, Ln10*

**Where fitted and enabled*

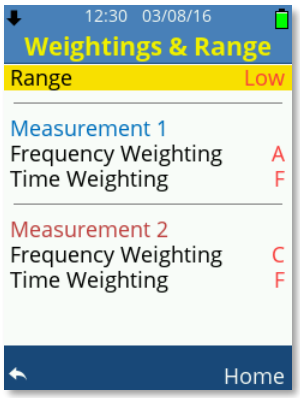
Upgrade to Octave Band Analysis. If your SoundCHEK Connect model does not have access to octave band analysis (full octave and/or third octave), the screen below will be displayed. Upgrade your SoundCHEK Connect sound level meter remotely in minutes. Email skcorder@skcinc.com for details.



Weightings & Range

Select Weightings & Range to change the measurement range and the weightings applied to each measurement.

Scroll through the available options using the **Up** or **Down Arrow** keys and use the **Left** or **Right Arrow** keys to change the selection.



Range

SoundCHEK Connect has two operating ranges, Low and High. The Low range measures linearly from 25 to 100 dB while the High range measures linearly from 45 to 140 dB.

For display scaling purposes, the displayed ranges on the instrument show 20 to 100 dB for the Low range and 40 to 140 dB for the High range.

Frequency Weighting

SoundCHEK Connect simultaneously measures sound on Measurement 1 and Measurement 2, and each one can have independent Frequency Weightings applied. Select from A, C, and Z weightings.

Time Weighting

Your SoundCHEK Connect sound level meter simultaneously measures sound on Measurement 1 and Measurement 2 and each can have independent Time Weightings applied.

Select from ‘S’ - Slow, ‘F’ - Fast or ‘I’ - Impulse weightings.

Results Selection

Under Results Selection you can select which standard results you wish to enable. Those that are enabled are displayed on the instrument and are recorded, and any that are disabled will neither be displayed nor recorded.

Scroll through the available options using the directional **Arrow** keys and press **OK** to toggle the highlighted selection. ***Note****: The screen at below left may differ from your SoundCHEK Connect sound level meter model. The example on the right shows another model for which certain parameters are not available*.

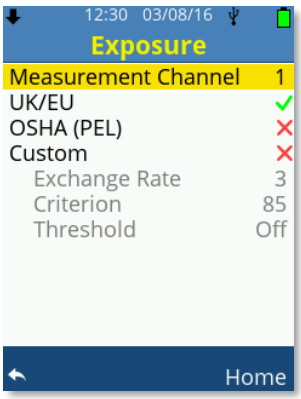
The time periods recorded by the instrument are determined by the Time History settings, the settings made within the Timer Selection or by the user manually stopping the recording.

If the Duration Timer has been set under Timer Selection, this will be shown on the Data Recording screen as the Total Record Time. If no settings are made with Timer Selection, then **Not Set** will be shown.

1. Scroll the available options using the **Up** or **Down Arrow** keys.
2. Press **OK** or the **Left**, **Right Arrow** keys to toggle Time History On.
3. Use the **Left** or **Right Arrow** keys to amend the values for Short Time Interval and Long Time Interval.
4. Press the **OK** key to select Timer Selection.

Exposure

Under Exposure you can enable or disable whether your SoundCHEK Connect sound level meter displays and records exposure data. Scroll through the available options using the directional **Arrow** keys, and press **OK** or the **Left**, **Right Arrow** keys to toggle the highlighted selection.



UK/EU

Select this option for requirements meeting UK or EU legislation. Exchange Rate, Criterion and Threshold are fixed as below:

- Exchange Rate = 3
- Criterion = 85
- Threshold = Off

When UK/EU is selected, the Exposure measurement screen displays and records the following parameters: LEPd, DOSE (Pa^2h), POINTS, POINTS/Hr

If any other display language other than English is selected, the Exposure measurement screen displays and records the following parameters: LEPd, DOSE (%)

OSHA (PEL)

Select this option for requirements meeting OSHA (PEL) legislation. Exchange Rate, Criterion and Threshold are fixed as below:

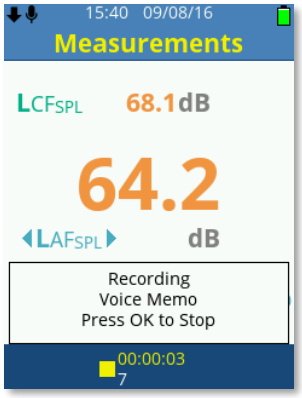
- Exchange Rate = 5
- Criterion = 90
- Threshold = 80

When OSHA (PEL) is selected, the Exposure measurement screen displays and records the following parameters: LAVG, DOSE (%), TWA

Custom

Select this option to manually set legislation requirements as needed:

- Exchange Rate = 3, 4, 5 or 6
- Criterion = 70, 75, 80, 85, 90 or 95
- Threshold = Off, 70, 75, 80, 85, 90 or 95



Scroll through the available options using the directional **Arrow** keys, press **OK** or the **Left**, **Right Arrow** keys to change the setting.

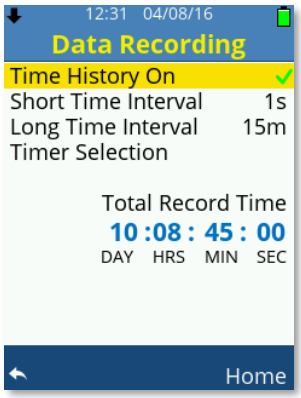
When Custom is selected, the Exposure measurement screen displays and records the following parameters: AVG, DOSE (%), TWA

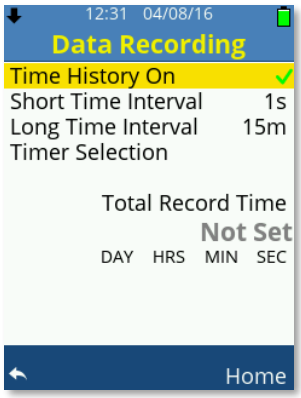
Data Recording

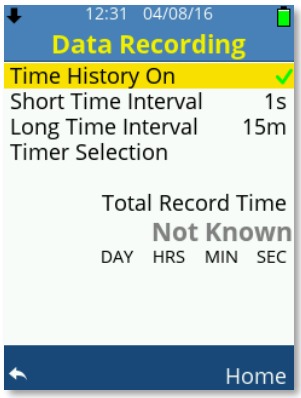
Select Data Recording to determine if the data recording should contain a time history and if used, which time interval periods are to be used.

The instrument records over the time periods determined by the Time History settings in conjunction with the settings made within the Timer Selection or by the user manually stopping the recording. If a recording period can be calculated by the instrument this will be shown as the Total Record Time

Selections made within the Timer Selection where the instrument can calculate the record time, this will be shown on the Data Recording screen as the Total Record Time. If no settings are made with Timer Selection, **Not Set** will be shown; if calculations of the record time cannot be made, **Not Known** will be shown.



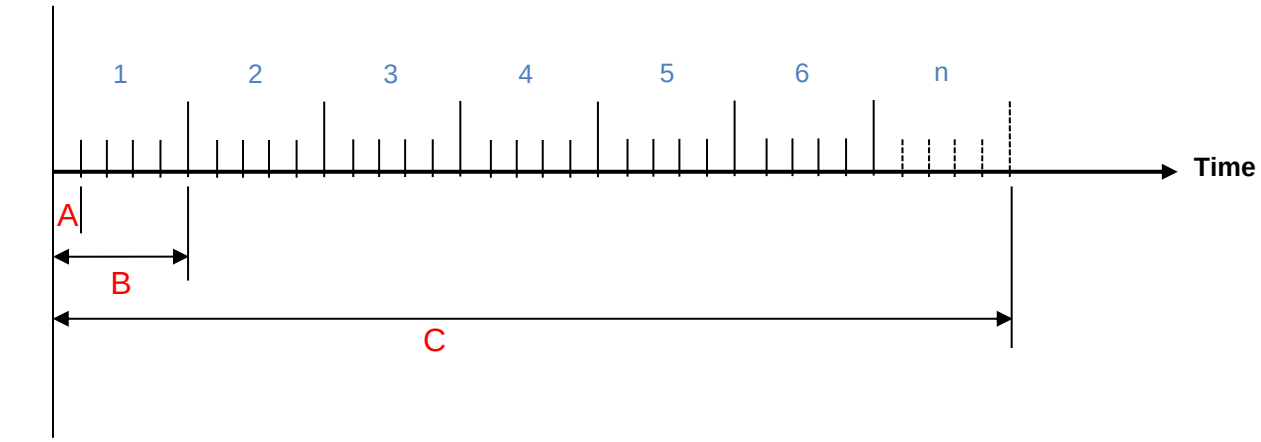




1. Scroll the available options using the **Up** or **Down Arrow** keys.
2. Press **OK** or the **Left**, **Right Arrow** keys to toggle Time History On.
3. Use the **Left** or **Right Arrow** keys to change the values for Short Time Interval and Long Time Interval.
4. Press the **OK** key to select Timer Selection.

Time History On – Enabled

When Time History On is enabled the SoundCHEK Connect sound level meter will simultaneously and independently record data at the selected Short and Long Time Interval Settings.



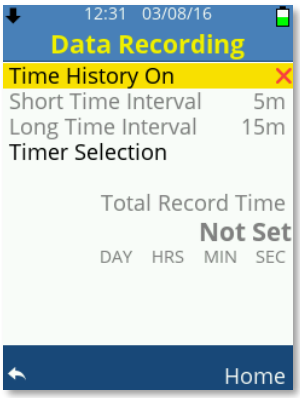
Where:

- A = Short Time Interval
- B = Long Time Interval
- C = Interval Timer, Smart Timer or Duration Timer, Total Measurement Length

***Note**: Long Time intervals do not have to be multiples of the Short Time interval. Only calculations over the Long Time Interval are displayed on screen.*

Time History On – Disabled

If Time History On is disabled, then all data recordings made will not contain any Time History data and the Short and Long Time Interval settings become unavailable. In this case, you will just get one set of measurements over the total measurement time.



Short Time Interval. When Time History On is enabled, each recording will calculate data over the Short Time Interval selected. The available options for the Short Time Interval are as follows:

- 10ms, 100ms, 200ms, 500ms, 1 to 59s, 1 to 60m

If timers are used, then non-cumulative data is reset at the start of each Short Interval period. ***Note:*** *Calculations over the Short Time Interval are not displayed on screen.*

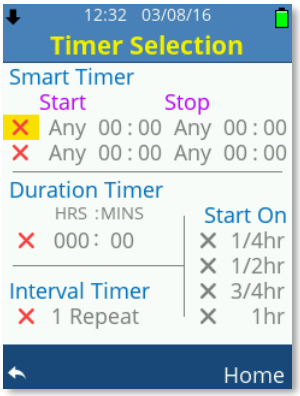
Long Time Interval. When Time History On is enabled, each recording will calculate data over the Long Time Interval selected. The available options for the Short Time Interval are as follows:

- 1 to 59s, 1 to 59m, 1 to 24Hr

If timers are used, then non-cumulative data is reset at the start of each Long Interval period. ***Note:*** *Calculations over the Long Time Interval are displayed on screen if used.*

Timer Selection

Choose Timer Selection to set the overall automatic recording length.



1. Scroll the available options using the **Up** or **Down Arrow** keys.
2. Press **OK** to toggle the selected option On/Off.
3. With the option enabled, use the **Left** or **Right Arrow** keys to move and highlight the selection to change. Use the **Up** or **Down Arrow** keys to change the selection.

Only one of the following options can be enabled at any time:

Smart Timer. SoundCHEK Connect allows the use of two simultaneous Smart Timers where the user can select the Start/Stop day and the Start/Stop times.

Smart Timers can be used with or without Time History enabled.

The settings can be changed as shown below:

- **Start: (Day, Hours, Minutes)**
  Day: Any, Mon, Tue, Wed, Thu, Fri, Sat, Sun
  Hours: 00 to 23
  Minutes:00 to 59
- **Stop: (Day, Hours, Minutes)**
  Day: Any, Mon, Tue, Wed, Thu, Fri, Sat, Sun
  Hours: 00 to 23
  Minutes:00 to 59

***Note**: The Data Recording screen shows the Total Record Time if Day is not set to Any Timer will not be started until the **Record** key is pressed while in the measurement screen.*

THE INSTRUMENT MUST BE ON FOR ANY TIMER TO OPERATE.

Duration Timer. Allows the user to manually enter the total recording time and can be used with or without Time History enabled. The settings can be changed as shown below:

- 000 to 999 HRS, 00 to 59m

***Note**: The option Start On becomes available if Duration Timer is enabled.*

Interval Timer. The Interval Timer is only available when Time History On is enabled and allows the user to select how many times to repeat the Long Time Interval.

The total recording time is hence the Long Time Interval * Repeat Selection. The repeat setting can be changed as shown below:

- 1 to 1000

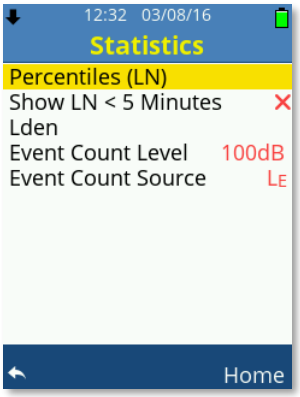
***Note:** The option Start On becomes available if Interval Timer is enabled.*

Start On. If required, the instrument can be set to start recording on the next Time Marker that is enabled for Start On. For example: If the current time is 9:10 am and the Start On 15m is enabled, then after the user presses the Record button, the recording will only start at 9:15 am.

Statistics

Select Statistics to determine if the data recording should contain statistical data that may be useful for environmental applications.

Statistics are only available in instrument models fitted with this feature.



1. Scroll the available options using the **Up** or **Down Arrow** keys.
2. Press the **OK** key to select Percentiles (LN) or Lden.
3. Press **OK** or the **Left**, **Right Arrow** keys to toggle Show LN < 5 Minutes.
4. Use the **Left** or **Right Arrow** keys to amend the values for Event Count Level and Event Count Source.

Percentiles

Choose Percentiles to enable or disable Percentiles, commonly referred to as LNs, by using the **OK** key or the **Left**, **Right Arrow** keys to change Enable LNs between the following options:

- Off, Measure 1, Measure 2 or Measure 1 & 2

When LNs are enabled, the selection of individual LNs becomes available using the **Up** or **Down Arrow** keys to scroll. A maximum of ten percentiles can be selected and each one (LN1 to LN10) can be individually set to the following value:

- Off or 1 to 99

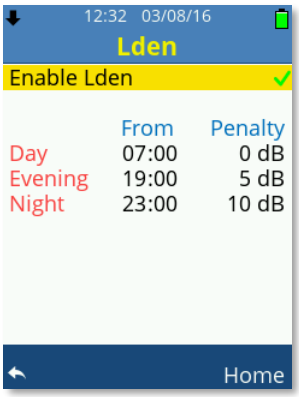
Use the **Left** or **Right Arrow** keys to amend the values for each LN. Press the **OK** key to toggle any LN Off/On. Individually disabled LN data will not be displayed or recorded.

Show LN < 5 Minutes

Percentiles (LNs) ideally require at least 5 minutes of recording time to gather enough data to be accurate, however, they may be shown where the recording time is less than 5 minutes. Enable this option if this is required.

Lden

Choose Lden to set day, evening, and night settings.



1. Press **OK** or the **Left**, **Right Arrow** keys to toggle enable Lden.
2. When enabled Day, Evening and Night become available. Scroll through the available options using the **Up** or **Down Arrow** keys and use the **Left** or **Right Arrow** keys to amend the values.

   Day, Evening and Night can be individually set as follows:

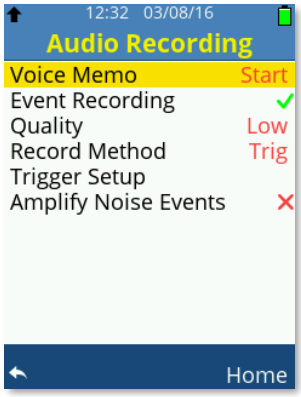
   From (hh:mm) 00:00 to 23:59

   Penalty (dB) 0 to 20

Upgrade to Statistics. If your particular SoundCHEK Connect model does not have access to statistical data, the screen below will be displayed. Upgrade your SoundCHEK Connect sound level meter remotely in minutes. Email skcorder@skcinc.com for details.

Audio Recording

The Audio recording screen is available to all models of SoundCHEK Connect to allow setting Voice Memo audio recording. However, Event recording is only available to specific models.



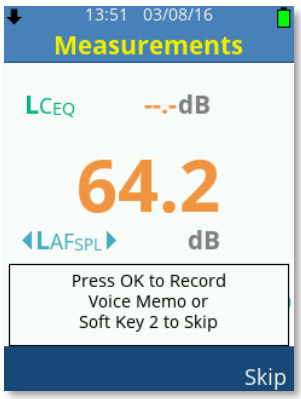
1. Scroll through the available options using the **Up** or **Down Arrow** keys.
2. Press **OK** or the **Left**, **Right Arrow** keys to toggle Event Recording.
3. Use the **Left or Right Arrow** keys to change the Quality settings.
4. Use the **Left** or **Right Arrow** keys to change the values for Quality and Record Method.
5. Press the **OK** key to select Trigger Setup.
6. Press **OK** or the **Left**, **Right Arrow** keys to toggle Amplify Noise Events.

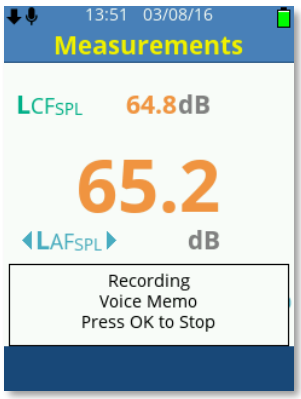
Voice Memo

Voice Memo allows the user to attach a voice recording to a data recording. All voice memo audio files can be a maximum length of one minute and are saved as .wav file format, recorded at 12 kHz, 16 bit, and unweighted.

Settings for Voice Memo are as follows: Start, End, Off

Start. The user can be prompted automatically to attach a voice memo at the start of a recording.



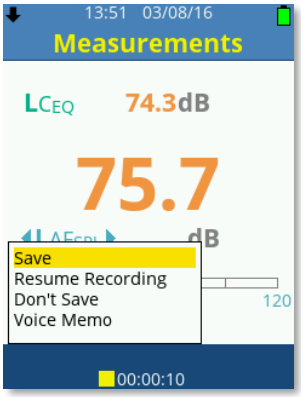


1. Press the **OK** key to start a Voice Memo recording or **Soft Key 2** labelled **Skip** to start the data recording without creating a voice memo.
2. Press the **OK** key to stop the Voice Memo recording and start the data recording.

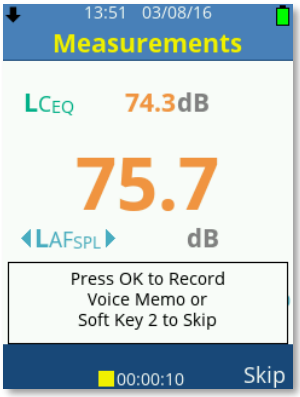
Note: *While recording a Voice Memo, the Voice Memo icon will flash. Any data recording with a Voice Memo audio file displays the Voice Memo icon.*

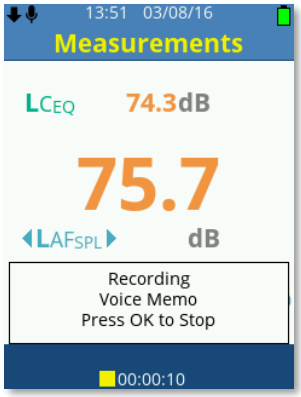
Note*: Multiple Voice Memo audio files can be attached to a data file if required.*

End. The user can be prompted automatically to attach a voice memo at the end of a recording.



1. Scroll through the available options using the **Up** or **Down Arrow** keys, ensuring **Save** is selected, and press the **OK** key.
2. Press the **OK** key to start a Voice Memo recording or **Soft Key 2** labelled **Skip** to save the data recording without creating a voice memo.
3. Press the **OK** key to stop the Voice Memo recording and save the data recording.



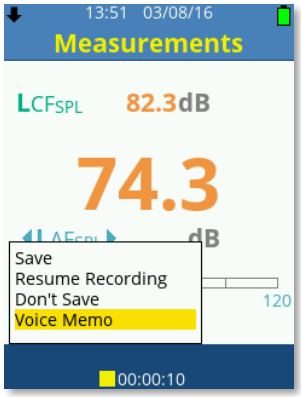


***Note**: While recording a Voice Memo, the Voice Memo icon will flash. Any data recording with a Voice Memo audio file displays the Voice Memo icon.*

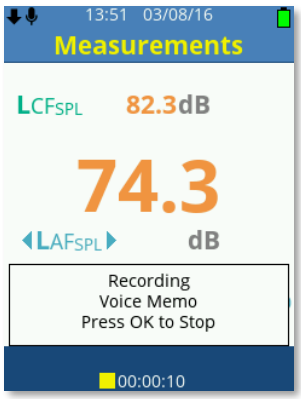
***Note**: Multiple Voice Memo audio files can be attached to a data file if required.*

Off. Select Off for Voice Memo when automatic prompts are not required. Adding a Voice Memo can still be achieved during a recording, after a recording, or when in file File Review to view a saved data file.

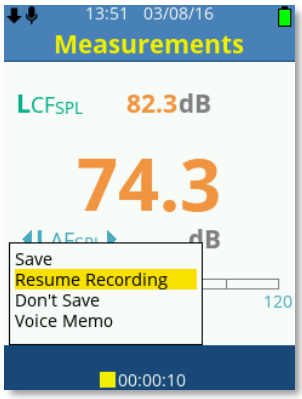
1. During a **data recording** press the **Stop** key to pause the recording.



2. Use the **Up** or **Down Arrow** keys to highlight Voice Memo.



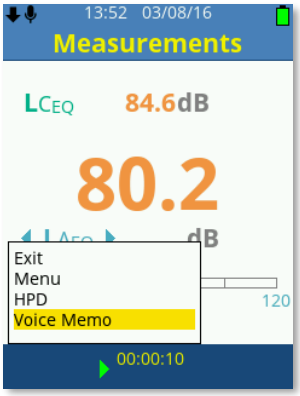
3. Press the **OK** key to start a Voice Memo recording or **Soft Key 2** labelled **Skip** to save the data recording without creating a voice memo.
4. Press the **OK** key to stop the Voice Memo recording and save the data recording.

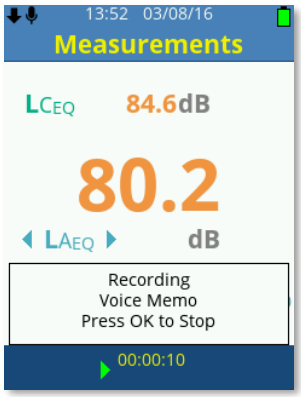


5. Select Resume Recording to continue the data recording or Save to save the file.

During file **File Review, p**ress the **Stop** key to pause the recording.

1. Use the **Up** or **Down Arrow** keys to highlight Voice Memo, and then press the **OK** key to start a Voice Memo recording.
2. Press the **OK** key to stop the Voice Memo recording and attach to the open data recording.





***Note**: While recording a Voice Memo, the Voice Memo icon will flash. Any data recording with a Voice Memo audio file displays the Voice Memo icon.*

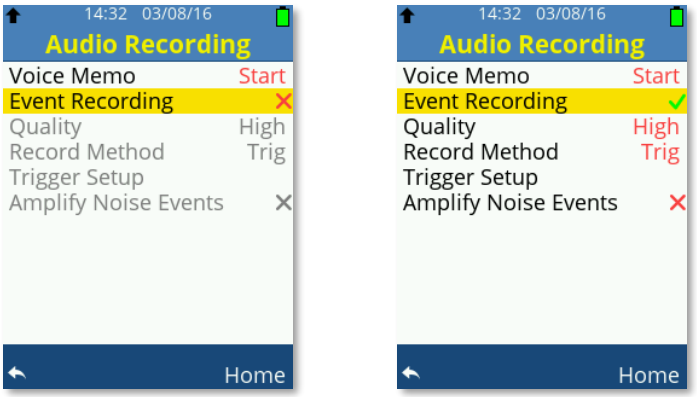
***Note**: Multiple Voice Memo audio files can be attached to a data file if required.*

Event Recording

Event Recording is only available to specific models. This powerful feature allows the user to set automatic noise event audio recordings that are triggered and recorded as required. All event recordings are saved as .wav file format, unweighted and limited to 2 GB in size. When Event Recording is enabled, the options below become available for selection:

- Quality

- Record Method
- Trigger Setup - Becomes available when Record Method set to Trig
- Amplify Noise Events



Quality. Set the recording quality of the Event Recording. The options are listed below:

- Low = 12 kHz, 16 Bit
- Med = 24 kHz, 16 Bit
- High = 48 kHz, 16 Bit

***Note**: Higher quality audio produces larger file size noise event audio files.*

Record Method. Set the recording method of the Event Recording as Cont or Trig:

- **Cont** – This setting will produce a continuous noise event audio file as soon as the data recording is started, it will not require a trigger event. The audio file ends when the data recording ends or up to a maximum file size of 1.9 GB.

  Continuous Event Recording can create large audio files. Set with caution.

- **Trig** – When the recording method is set to Trig, the Trigger Setup option becomes available. *See Trigger Setup below*.

Trigger Setup.

1. Press the **OK** key to enter the Trigger Setup options.
2. Scroll the available options using the **Up** or **Down Arrow** keys.

Trigger Edge – Use the **Left**, **Right Arrow** keys to select between Rise or Fall.

When set to **Rise**, triggering of the noise event audio file recording will begin when the Trigger Level is reached on the positive rising edge of the input noise, i.e., when the noise increases past the trigger level.

When set to **Fall**, triggering of the noise event audio file recording will begin when the input noise falls below the Trigger Level on the negative falling edge of the input noise.

Trigger Level – Use the **Left**, **Right Arrow** keys to adjust the Trigger Level as follows:

Low Range 45.0 to 110.0 in 0.5 dB resolution steps

High Range 45.0 to 135.0 in 0.5 dB resolution steps

The Trigger Level is the decibel (dB) level at which, when the input noise level crosses, on either the set Rising or Falling Edge, the trigger is set and the noise event audio recording begins.

It is not possible to adjust the value beyond 110.0 dB on while on the Low range. If this is attempted, the following warning will be shown:

Trigger Freq – Use the **Left**, **Right Arrow** keys to adjust the Trigger Frequency as required.

The available Trigger Frequencies depend on the operating function to which the SoundCHEK Connect sound level meter is set, Full Octave or Third Octave:

- **Full Octave Function** - All, 16 Hz, 31.5 Hz, 63 Hz, 125 Hz, 250 Hz, 500 Hz, 1 kHz, 2 kHz, 4 kHz, 8kHz, 16kHz
- **Third Octave Function** - All, 12.5 Hz, 16 Hz, 20 Hz, 25 Hz, 31.5 Hz, 40 Hz, 50 Hz, 63 Hz, 80 Hz, 100 Hz, 125 Hz, 160 Hz, 200 Hz, 250 Hz, 315 Hz, 400 Hz, 500 Hz, 630 Hz, 800 Hz, 1 kHz, 1.25 kHz, 1.6 kHz, 2 kHz, 2.5 kHz, 3.15 kHz, 4 kHz, 5 kHz, 6.3 kHz, 8 kHz, 10 kHz,

Set the Trigger Frequency so that the triggering point of the noise event audio recording is isolated only to the frequency specified. The noise event audio recording is not affected and records as normal.

If the Trigger Frequency is set to All, then no individual frequency is used to determine the triggering point of the noise event audio file.

If neither full nor third octave function is used, then the Trigger Frequency is set to All.

Record Time – Set the Recording Time of the triggered noise event audio file.

1. Use the **Left**, **Right Arrow** keys to adjust the Hours, Minutes and Seconds as required.
2. Scroll the available options using the **Up, Down Arrow** keys or the **OK** key.

The maximum Record Time is 23:59:59 (hh:mm:ss)

Noise Event Recordings can create large audio files. Set with caution.

Amplify Noise Events. Noise events are recorded within the audio range of the sound level meter and hence a recorded noise event may not be audible from a computer and speaker system.

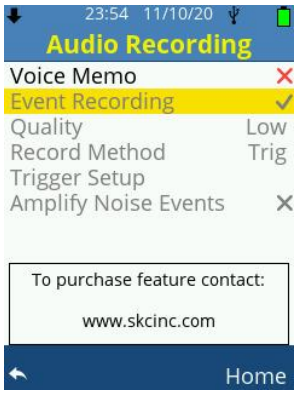
Imagine a noise event recording is triggered at 100 dB, a fairly loud noise event, however, the SoundCHEK Connect sound level meter measures sound up to 140 dB and as such the noise event is insignificant in comparison.

The unamplified audio is required if the noise event audio is to be used for any legal reasons with your noise data or if you wish to remeasure the noise levels from the recorded file.

If you wish to audibly hear audio noise events, then enable this option which will automatically amplify noise event recordings so that the noise event recording can be identified easily.

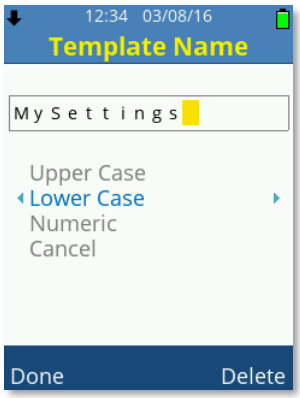
Amplified Noise Events **ARE NOT** reversible to unamplified audio.

Upgrade to Event Recording. If your SoundCHEK Connect model does not have access to Event Recording, the screen below will be displayed. Upgrade your SoundCHEK Connect sound level meter remotely in minutes. Email skcorder@skcinc.com for details.



Save as Template

Choose Save as Template to save all current settings to a file known as a Template which can be loaded at any time to your exact requirements, quickly and easily. Templates can be recalled using Template Manager in the Main Menu.

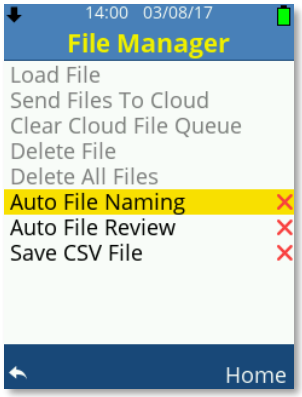


1. Scroll through the available options using the **Up** or **Down Arrow** keys. Upper Case is selected as default.
2. Use the **Left**, **Right Arrow** keys to adjust the character as required:
   Upper Case: A to Z
   Lower Case: a to z
   Numeric: 0 to 9
3. Press the **OK** key move to the next character and repeat the steps until you have successfully entered a template name.
4. Use **Soft Key 2** labelled **Delete** to delete the highlighted character if required.
5. **To return to the previous screen without saving the template**, select Cancel
6. **To save the template using the file name entered**, use **Soft Key 1** labelled **Done**.

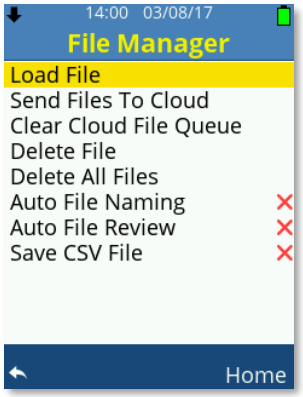
***Note**: A maximum of 16 characters can be used for a template name.*

File Manager

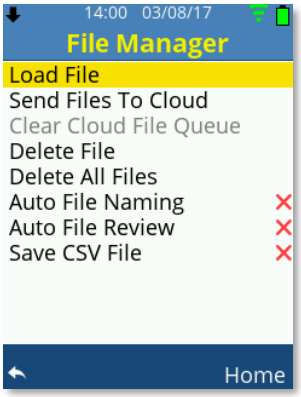
Select File Manager to load saved files, delete saved files, and toggle Auto Playback off/on. Option availability will depend on data files being saved as shown below:



No files saved



Files saved, Wi-Fi off



Files saved, Wi-Fi on

1. Scroll the available options using the **Up** or **Down Arrow** keys, press **OK** to choose from the following:
    - Load File
    - Send Files To Cloud
    - Clear Cloud File Queue
    - Delete File
    - Delete All Files

2. Press **OK** or the **Left**, **Right Arrow** keys to toggle the following:
    - Auto File Naming
    - Auto File Review
    - Save CSV File

Load File

1. Scroll through the saved data files using the **Up** or **Down Arrow** keys and press the **OK** Key to open the selected file in File Review mode.

   The file number and total number of data files saved are located at the top left hand side of the list. If multiple files exist, use the **Left** or **Right Arrow** keys to scroll the data files by page.

2. Press **Soft Key 2** labelled Filter to open a new window for file filtering options (*see below*).

Filter Selection: Filter the list of saved data files by the selections made.

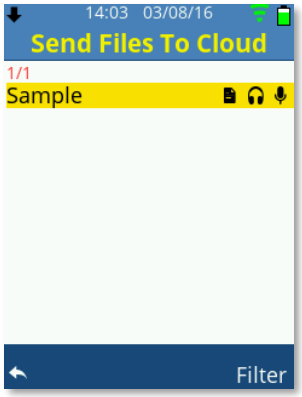
Scroll through the options using the **Up** or **Down Arrow** keys and press the **OK** Key or the **Left**, **Right Arrow** keys to toggle each available option.

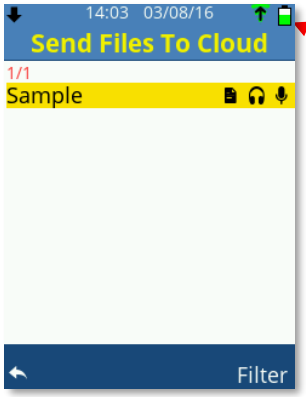
Only one option from **All Time**, **Today**, **Previous 7 Days** or **Current Month** can be selected at any time.

Send Files To Cloud

- *A reliable Wi-Fi internet connection is required to upload data using this option.*

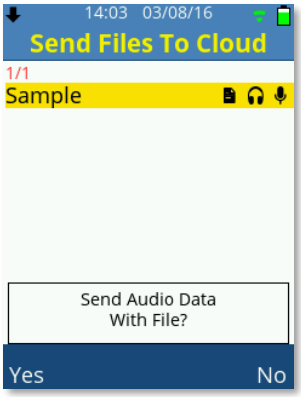
1. Scroll through the saved data files using the **Up** or **Down Arrow** keys and press the **OK** Key to manually send the selected file to skcCHEKBox.com. During an upload, a white arrow will be shown to the left of the Wi-Fi symbol.
2. The file number and total number of data files saved are listed in red. If required, press **Soft Key 2** labelled Filter to open a new window for file filtering options. If multiple files exist, use the **Left** or **Right Arrow** keys to scroll through the data files by page.
3. Associated icons are shown alongside the file name if the saved data file was created from a template, or any type of audio recordings are also associated with the file.





Arrow indicates Uploading

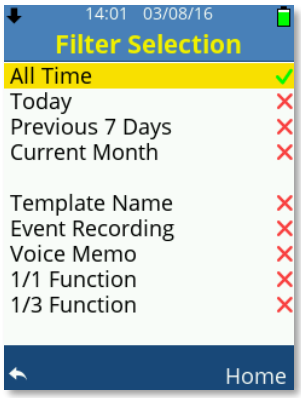
4. If the data recording contains any type of audio recording, the message shown on screen at right will be displayed before the file is uploaded.



5. **To upload all the associated audio files with the data file**, press **Soft Key 1** labelled **Yes**.
6. To upload only the data file, press **Soft Key 2** labelled **No**. ***Note****: A reliable Wi-Fi internet connection is required to upload data using this option.*

Filter Selection

Filter the list of saved data files by the selections made. Scroll the options using the **Up** or **Down Arrow** keys and press the **OK** Key or the **Left**, **Right Arrow** keys to toggle each available option.

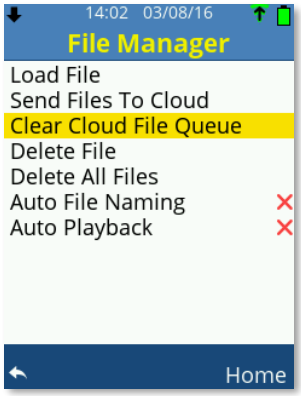


Only one option from **All Time**, **Today**, **Previous 7 Days** or **Current Month** can be selected at any time.

Some options may be grey and not selectable depending on your SoundCHEK Connect sound level meter model.

Clear Cloud File Queue

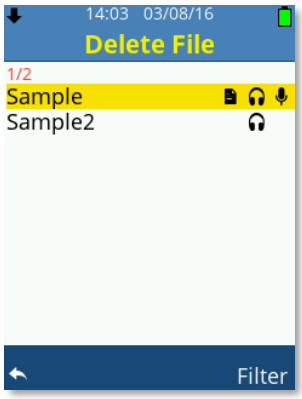
Select Clear Cloud File Queue to cancel all pending file uploads. This option only becomes available if a file exists in the upload queue.



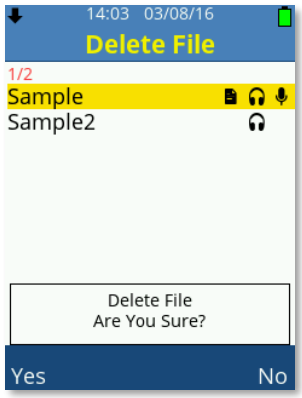
Delete File

Choose Delete File to delete one individual data recording and any associated audio recordings.

1. Scroll the available data files using the **Up** or **Down Arrow** keys and press **OK** to select the file to delete.



2. If multiple files exist, use the **Left** or **Right Arrow** keys to scroll the data files by page.
3. **To delete all associated files**, press **Soft Key 1** labelled **Yes.**
4. **To cancel**, press **Soft Key 2** labelled **No**.

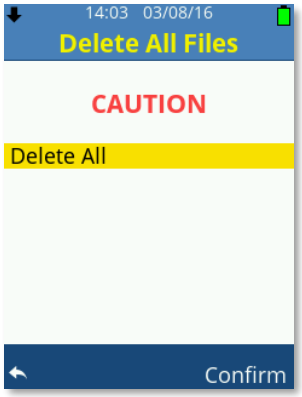


Delete All Files

Choose Delete All Files to delete all data recordings and all associated audio recordings.

1. To cancel, press **Soft Key 1** to go back to the previous screen.
2. To delete all files, press **Soft Key 2** labelled **Confirm**.

Deleted files are unrecoverable.



Auto File Naming

When Auto File Naming Is Enabled

Each data recording and all its associated audio files are automatically named using the naming structure below:

COUNT_C_TIME_DATE.dat	Data File
COUNT_C_TIME_DATE.csv	Data CSV File
COUNT_V_TIME_DATE.wav	Voice Memo Wav File
COUNT_A_TIME_DATE.wav	Noise Event Audio Wav File

Each data file and any associated audio files begin with an incremental count:

- 00001 to 99999

Each file is then tagged with one of the following for easy identification:

- D – Data File
- C – CSV File
- V – Voice Memo
- A – Noise Event Audio File

Each file is then time and date stamped in the format as per language selected.

File names on the SoundCHEK Connect display are suppressed, so the date is not visible.

When Auto File Naming Is Disabled

The user enters a file name manually. Each data recording and all its associated audio files are structured as below:

FILENAME.dat	Data File
FILENAME.csv	Data CSV File
FILENAME_V_TIME_DATE.wav	Voice Memo Wav File
FILENAME_A_TIME_DATE.wav	Noise Event Audio Wav File

Each audio file is then tagged with one of the following for easy identification:

- V – Voice Memo
- A – Noise Event Audio File

Each audio file is then time- and date-stamped in the format as per language selected.

Auto File Review
When Auto File Review is enabled and each data recording ends and is saved either automatically or manually, the SoundCHEK Connect automatically displays the file.

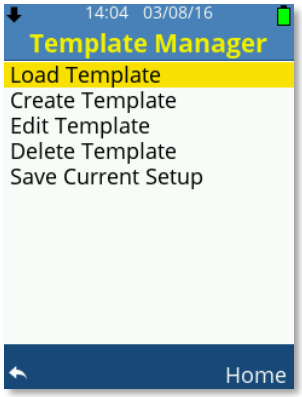
Save CSV File
Enable Save CSV File to also save a CSV file. Converting the data file to the CSV file automatically occurs after the data file is saved and depending on the file size, may take several moments to complete.

The CSV file can be copied from the USB Drive and opened in spreadsheet applications.

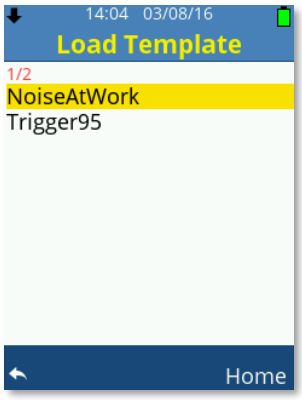
Templates

Select Template Manager to save, edit, or create templates. Option availability will depend on user templates existing or factory pre-installed templates being supplied with your particular model of SoundCHEK Connect sound level meter.

Scroll through the available options using the **Up** or **Down Arrow** keys and press **OK** to select the highlighted template.



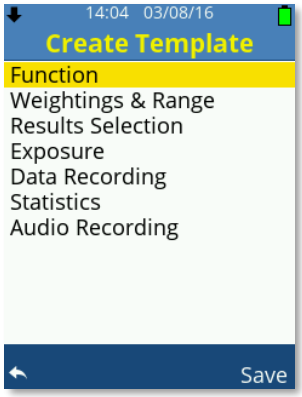
Load Template



1. Scroll through the available templates using the **Up** or **Down Arrow** keys, press **OK** to choose and load the highlighted template.
2. If multiple templates exist, use the **Left** or **Right Arrow** keys to scroll through the templates by page.

Create Template

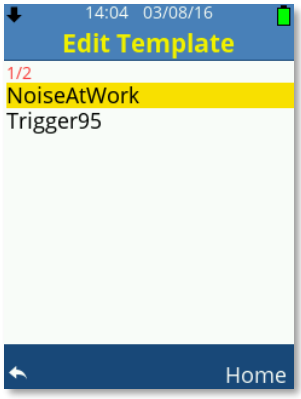
Select Create Template to change the instrument settings and store them into a new template. Create Template is very similar to the Measurement Setup screen, which can be referred to for further information.



1. Scroll through the options using the **Up** or **Down Arrow** keys and press **OK** to choose the selection and adjust the instrument settings as required.
2. Use **Soft Key 2** labelled **Save** to save the instrument settings into a template.

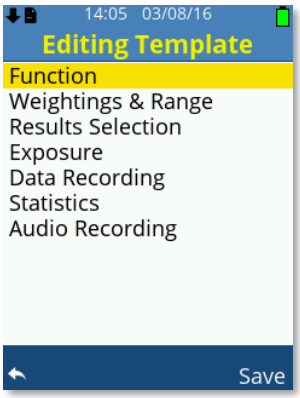
Edit Template

Select Edit Template to quickly change the instrument settings held within a saved template.



Scroll through the available templates using the **Up** or **Down Arrow** keys and press **OK** to load and edit the highlighted template. If there are multiple templates, use the **Left** or **Right Arrow** keys to scroll through the templates by page.

Editing Template is very similar to the Measurement Setup screen (*see Measurement Setup for more information*).

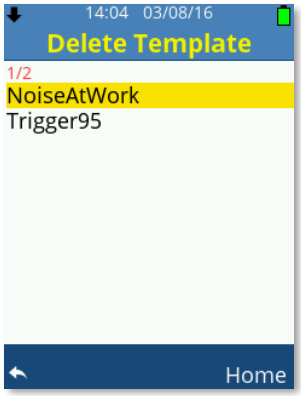


1. Scroll through the options using the **Up** or **Down Arrow** keys and press **OK** to choose the selection and adjust the instrument settings as required.
2. Use **Soft Key 2** labelled **Save** to save the new settings and overwrite the existing template.

***Note**: Templates can be modified and saved as new templates. Load the template, edit, and then save as a new template.*

Delete Template

Choose Delete Template to delete one individual template file. ***Note****: Factory pre-installed templates are non-removable.*

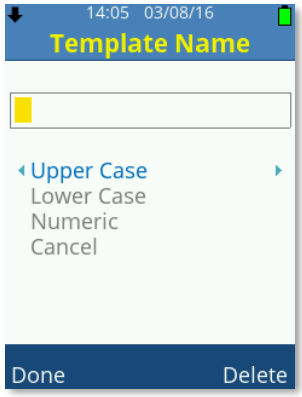


Deleted user templates are unrecoverable

1. Scroll the available templates using the **Up** or **Down Arrow** keys and press **OK** to select the template to delete.
2. If multiple templates exist, use the **Left** or **Right Arrow** keys to scroll through the templates by page.

Save Current Setup

Choose Save Current Setup to save the current instrument settings as a template with your chosen name.



1. Scroll the available options using the **Up** or **Down Arrow** keys, by default Upper Case is selected.
2. Use the **Left**, **Right Arrow** keys to adjust the character as required:
   - Upper Case: A to Z
   - Lower Case: a to z
   - Numeric: 0 to 9
3. Press the **OK** key move to the next character and repeat the steps until you have successfully entered a template name.
4. Use **Soft Key 2** labelled **Delete** to delete the highlighted character if required.

5. T**o return to the previous screen without saving the template**, select Cancel.
6. **To save the template using the file name entered**, use **Soft Key 1** labelled **Done**.

Hearing Protection

Hearing Protection is only available on specific SoundCHEK Connect models and is an internally stored database of leading manufacturers of hearing protectors.

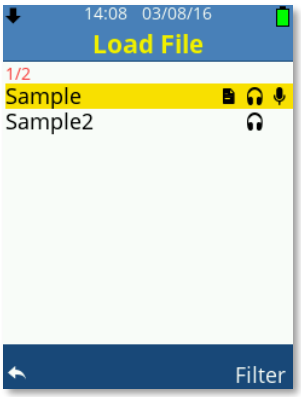
Selecting Hearing Protection allows you to quickly and easily identify which hearing protector would suit a specific noise environment after analyzing your measured data.

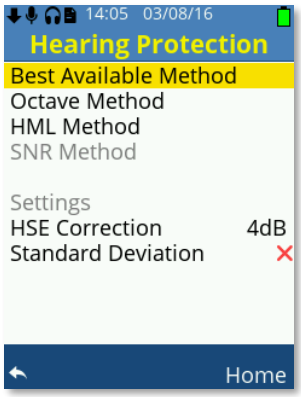
All the assumed protection values calculated are color-coded, allowing you to instantly see if the hearing protector offers the right amount of protection:

APL Value	APL Color Coding	Protection Level
< = 70 dB	RED	Over Protected
70 to 80 dB	GREEN	Good
80 to 85 dB	AMBER	Border Line
> = 85 dB	RED	Under Protected

It is highly recommended that overprotection where levels at the ear are below 70 dB is avoided. Overprotection can impact communication, causing the user to remove the protection and also reducing the ability to hear warning signals such as fire alarms.

1. Scroll the available data files using the **Up** or **Down Arrow** keys and press the **OK** key to open the highlighted file.
2. If multiple files exist, use the **Left** or **Right Arrow** keys to scroll through the data files by page.





3. Method availability will depend on the settings of the selected data recording.
4. Scroll the available methods using the **Up** or **Down Arrow** keys and press the **OK** key to select the highlighted method.
5. Under Settings, press the **OK** Key or the **Left**, **Right Arrow** keys to adjust HSE Correction and/or Standard Deviation.

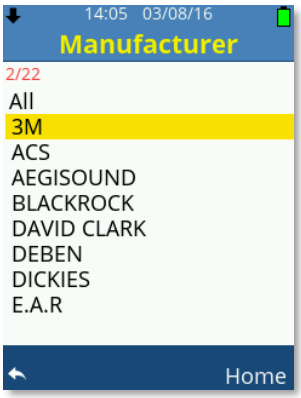
Best Available Method

Select Best Available Method to automatically choose the best method to analyze your data file. The order in which the automatic method selection is made is as follows and does depend on how the data recording was configured:

1. Octave
2. HML
3. SNR

Octave Method

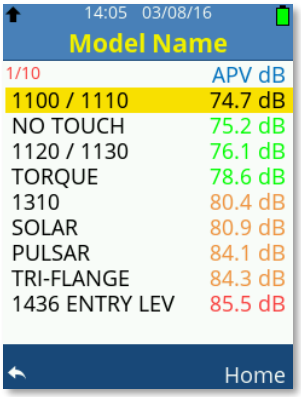
The most accurate method to calculate hearing protection data, Octave Method is only available if your SoundCHEK Connect sound meter model is fitted with octave band analysis and if the data recording was recorded using full octave or third octave analysis.



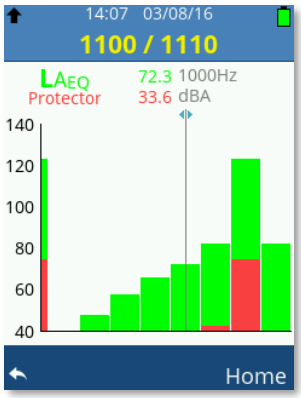
1. Scroll the available manufacturers using the **Up** or **Down Arrow** keys or by page using the **Left** or **Right Arrow** keys; press the **OK** key to select the highlighted option and show the calculated protection level for each model of the manufacturer.

   Alternatively, select **All** to show the calculated hearing protection for each model of all the manufacturers.

   The selected manufacturer number and the total number of available manufacturers are listed in red. Hearing protection models are shown alongside the calculated assumed protection value. The listing is in order, showing the lowest assumed protection value first.



2. Scroll through the available hearing protection models using the **Up** or **Down Arrow** keys or by page using the **Left** or **Right Arrow** keys.
3. Press the **OK** key to select the highlighted model and show the frequency data for the open data file. Use the **Up** or **Down Arrow** keys to toggle between graph or table view; in graph view, use the **Left** or **Right Arrow** keys to scroll through the octave bands.



***Note**: Octave method Hearing Protection Calculations require that measurement 1 is 'A' weighted. If the data recording was made with measurement 1 using 'C' or 'Z' frequency weightings, they will be converted to 'A' weighting for the purpose of calculations only.*

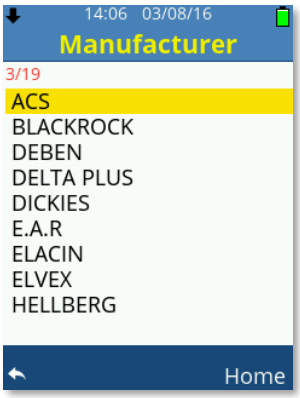
The original data file is NOT modified.

HML Method

- *Not all hearing protectors have HML data.*
- *If the data file is not recorded with the frequency weighting 'A' and 'C' for measurement 1 and 2. respectively, the HML method cannot be used.*

HML is the second most accurate method to calculate hearing protection data and one that does not require octave band analysis, however, the data file must be recorded using the following Frequency Weightings:

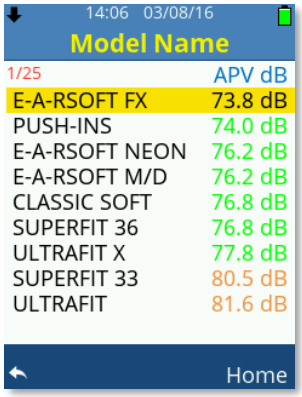
- Measurement 1 = 'A' Weighting
- Measurement 2 = 'C' Weighting



1. Scroll the available manufacturers using the **Up** or **Down Arrow** keys or by page using the **Left** or **Right Arrow** keys, press the **OK** key to select the highlighted option and show the calculated protection level for each model of the manufacturer.

   Alternatively, select **All** to show the calculated hearing protection for each model of all the manufacturers.

   The selected manufacturer number and the total number of available manufacturers are listed in red. Hearing protection models are shown alongside the calculated assumed protection value. The listing is in order showing the lowest assumed protection value first.



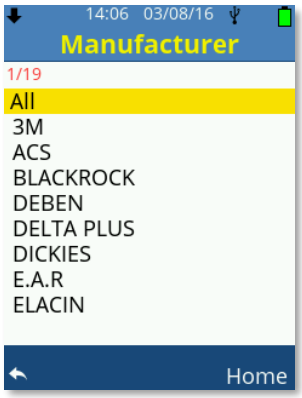
2. Scroll the available hearing protection models using the **Up** or **Down Arrow** keys or by page using the **Left** or **Right Arrow** key; and press the **OK** key to select the highlighted model and show the data for the open data file.

SNR Method

- *Not all hearing protectors have SNR data.*
- *If the data file is not recorded with the frequency weighting 'C' for measurement 1 then the SNR method cannot be used.*

The least accurate of the best methods to calculate hearing protection data and one that does not require octave band analysis, however, the data file must be recorded using the following Frequency Weighting:

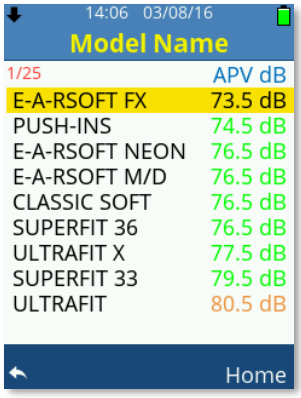
- Measurement 1 = 'C' Weighting



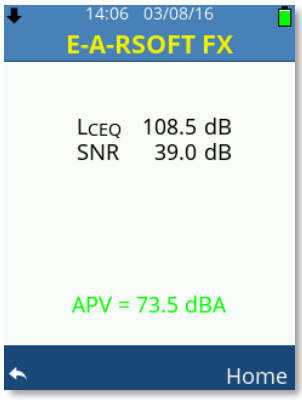
1. Scroll the available manufacturers using the **Up** or **Down Arrow** keys or by page using the **Left** or **Right Arrow** keys and press the **OK** key to select the highlighted option and show the calculated protection level for each model of the manufacturer.

   Alternatively, select **All** to show the calculated hearing protection for each model of all the manufacturers. The selected manufacturer number and the total number of available manufacturers are listed in red.

   Hearing protection models are shown alongside the calculated assumed protection value. The listing is in order showing the lowest assumed protection value first.

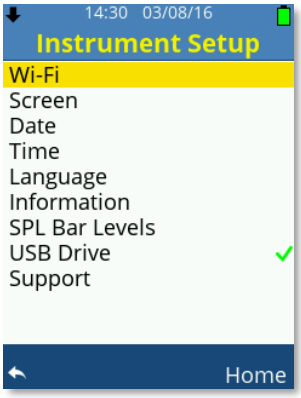


2. Scroll the available hearing protection models using the **Up** or **Down Arrow** keys or by page using the **Left** or **Right Arrow** keys; press the **OK** key to select the highlighted model and show the data for the open data file.



Instrument Setup

Instrument Setup is available to all models of SoundCHEK Connect and is where specific instrument settings are made.



Scroll through the available options using the **Up** or **Down Arrow** keys, press **OK** to choose from the following:

- Wi-Fi
- Screen
- Date
- Time
- Language
- Information
- SPL Bar Levels
- Support

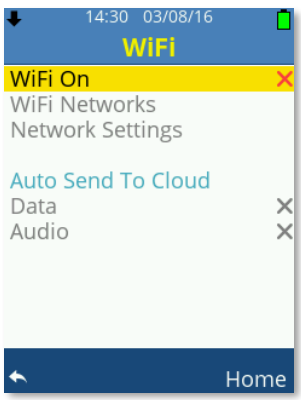
Press **OK** or the **Left**, **Right Arrow** keys to toggle the following option:

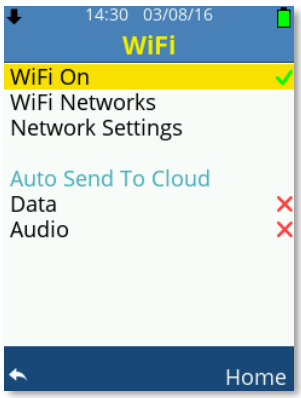
- USB Drive

Note: *To reduce interference and keep operating power low, SoundCHEK Connect houses a low power omni directional antenna.*

Wi-Fi

To upload data to SKCChekBox.com directly from the instrument using a Wi-Fi connection, Wi-Fi must be enabled on the instrument and connected to a network that is within range.



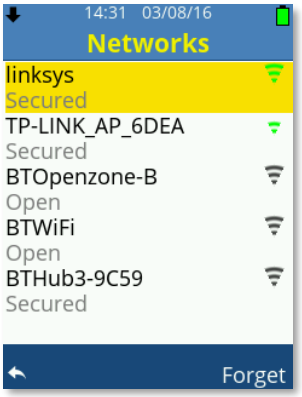


1. Press **OK** or the **Left**, **Right Arrow** keys to toggle WiFi On.
2. When WiFi On is enabled and the options for Wi-Fi become available, scroll through them using the **Up** or **Down Arrow** keys.
3. Press the **OK** key to select WiFi Networks or Network Settings.
4. Press **OK** or the **Left**, **Right Arrow** keys to toggle Auto Send To Cloud – Data or Audio.

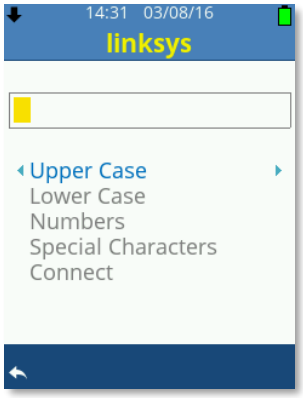
WiFi Networks

Allow several seconds for your SoundCHEK Connect to discover any networks. The network name is displayed with the connection type or status underneath and the networks signal strength.

1. Scroll the available networks using the **Up** or **Down Arrow** keys.



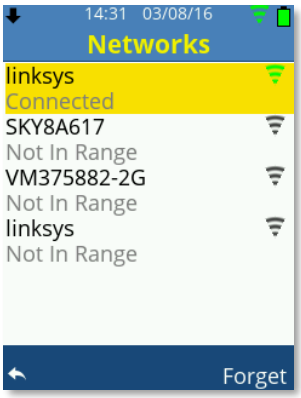
2. Press **OK** to select a network and enter the password up to a maximum of 16 characters if the network requires it:



3. Scroll the available options using the **Up** or **Down Arrow** keys, by default Upper Case is selected.
4. Use the **Left**, **Right Arrow** keys to adjust the character as required: -
   - Upper Case: A to Z
   - Lower Case: a to z
   - Numeric: 0 to 9
   - Special Characters: SPACE ! “ # $ % ‘ & * + ( ) , - . / : ; < = > ? @ [\ ] ^ _ ` { | } ~
5. Press the **OK** key move to the next character and repeat the steps until you have successfully entered the correct password.
6. Use **Soft Key 2** labelled **Delete** to delete the highlighted character if required.

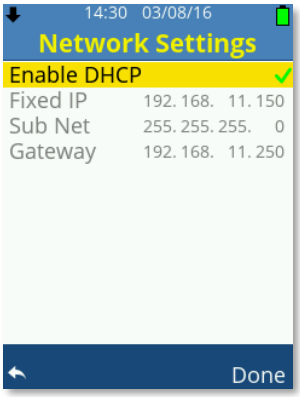
7. Use **Soft Key 1** to exit password entry without saving.
8. When the password is entered correctly select Connect and press the **OK** key.

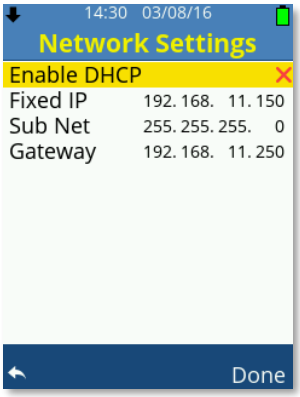
If the connection is successful, **Connected** will be shown under the network name and the Wi-Fi icon will be shown in the top light blue bar. ***Note:*** *You cannot connect to networks that require a browser login as SoundCHEK Connect does not have a web browser.*

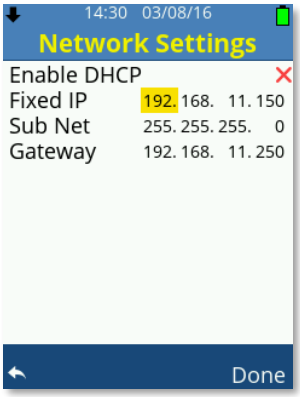


Network Settings

Under most circumstances, ensure DHCP is enabled. If your network does not use DHCP, see your IT administrator and ask them to set these advanced settings manually based on your particular network.



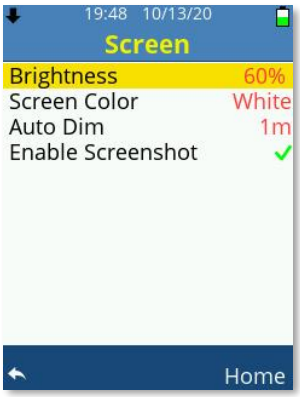




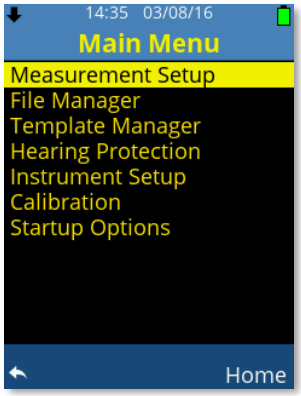
Always use **Soft Key 2** labelled **Done** to accept any changes made under Network Settings.

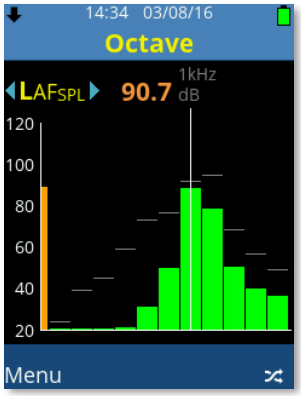
Screen

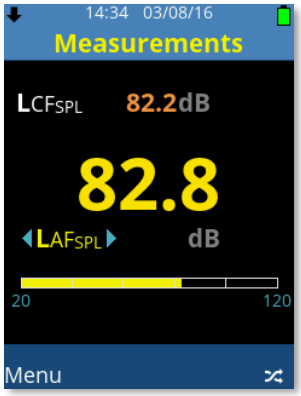
Select Screen to adjust screen brightness and color and to access power-saving features.



1. **Brightness:** Adjust brightness using the **Left**, **Right Arrow** keys to the required level. ***Note****: Increased screen brightness reduces battery operating time.*
2. **Color:** Adjust color using the **Left**, **Right Arrow** keys to toggle the screen color between White or Black.







3. **Auto Dim** will automatically dim the screen to after a set time to reduce operating power and increase battery run time. Use the **Left**, **Right Arrow** keys to adjust the Auto Dim to:

    - Off or 1 to 15 (minutes) – 1 minute is recommended

Note*: Press any key to exit the active auto dim function*

Enable Screen Shot

1. Press **OK** or the **Left**, **Right Arrow** keys to toggle Enable Screen Shot.
2. When screen shot is enabled, press the **Power** key to capture and save the current screen to the internal SD card.

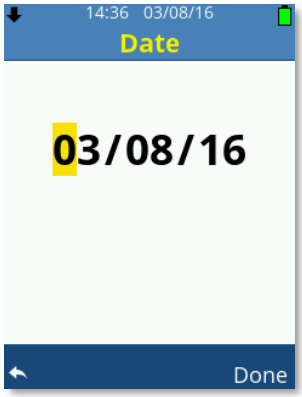
All images are saved in .ppm format; a suitable editor such as ‘Gimp’ can be used to save the file into other formats. Gimp can be downloaded free at the following address:

- https://www.gimp.org/

When Screen Shot is enabled, the **Power** key cannot be used to reset parameters. All saved screen shot files are accessible using the SoundCHEK Connect in USB Drive mode.

Date

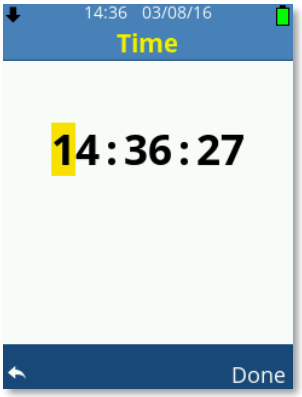
Enter the current date using the date format specific to your region.



1. Use the **Up**, **Down Arrow** keys to adjust the value.
2. Use the **Left**, **Right Arrow** keys to move forward or back.
3. Press **Soft Key 2** labelled **Done** to accept the date changes.

Time

Enter the current time using the time zone specific to your region.



1. Use the **Up**, **Down Arrow** keys to adjust the value.
2. Use the **Left**, **Right Arrow** keys to move forward or back.
3. Press **Soft Key 2** labelled **Done** to accept the time changes.

Language

Select the desired operating language of the instrument by scrolling through the options using the **Up** or **Down Arrow** keys. Press the **OK** key or use the **Left**, **Right Arrow** keys to switch the selected language as required and pressing **OK** to confirm the selection.

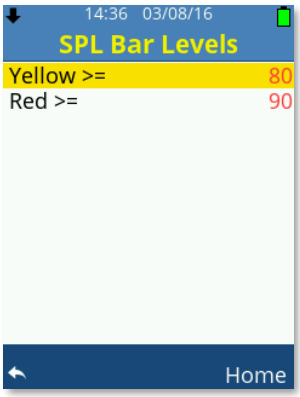
***Note**: If a language is inadvertently selected, press the following key sequence to access the language screen*: **Soft Key 1, Up, Up, Up, Ok, Down, Down, Down, Down, Ok**

Information

Select Information to show instrument-specific details.

SPL Bar Levels

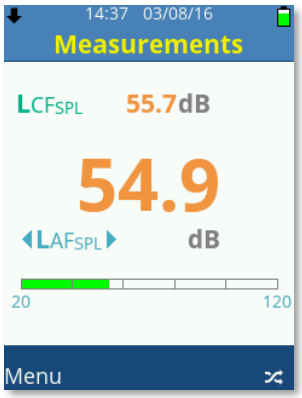
Select to adjust the levels at which color coding of the SPL bar appears.

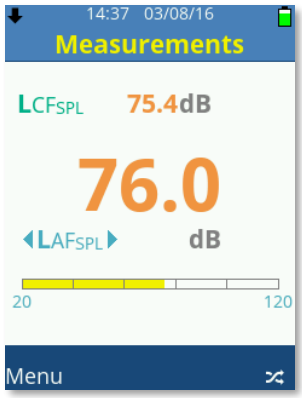


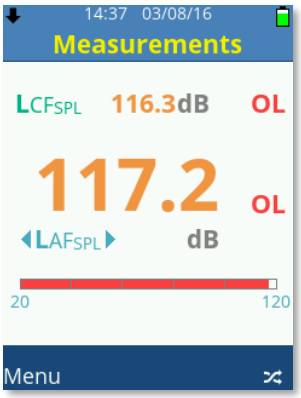
1. Scroll through the options using the **Up** or **Down Arrow** keys.
2. Use the **Left**, **Right Arrow** keys to adjust as follows:

   Yellow: 40 to 100 dB
   Red: 80 to 140 dB

Red values cannot be set lower than Yellow values, and any value below Yellow will be displayed as Green on the screen. ***Note****: Settings made for Red are range-dependent, and values between 121 and 140 will only be visible Red on the High range*.



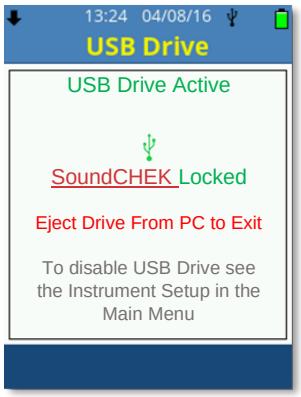




USB Drive

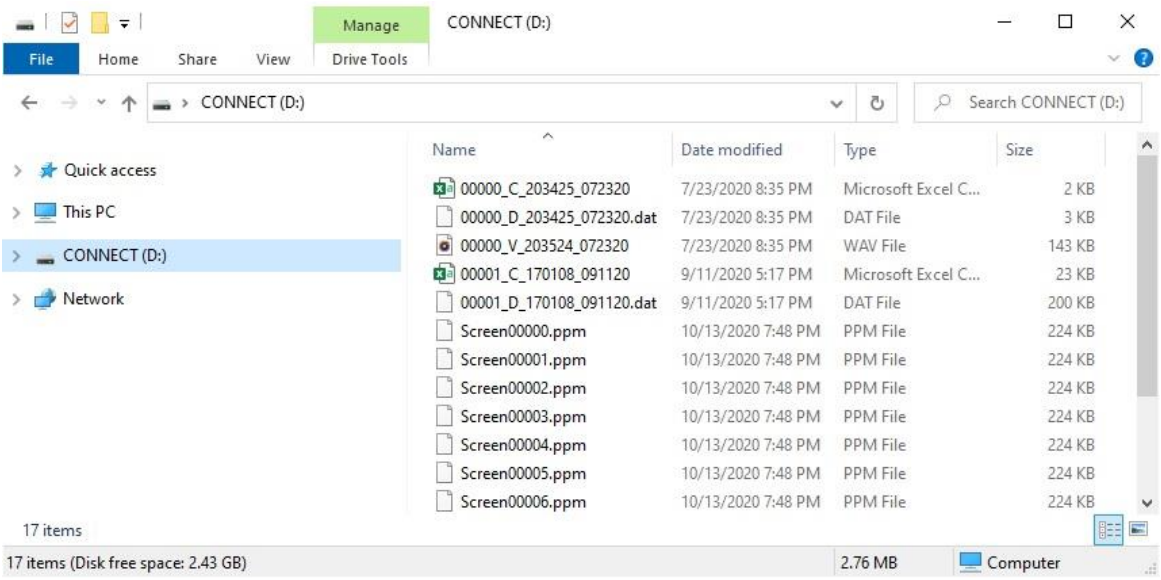
When USB Drive is enabled and the supplied USB cable is connected to the SoundCHEK Connect and a PC, the SD card of the SoundCHEK Connect becomes available.

1. Plug in the USB cable and the USB Drive Active screen will be displayed:



The SoundCHEK Connect will open as a folder and files can be copied and deleted as required. CSV files can be opened directly in most spreadsheet applications and .wav files can be played in most media players.

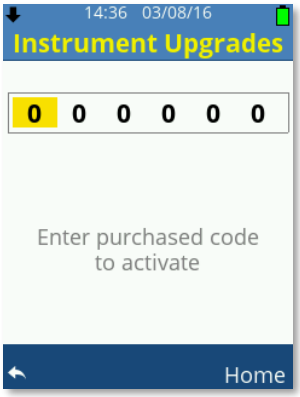
Deleted files are unrecoverable.

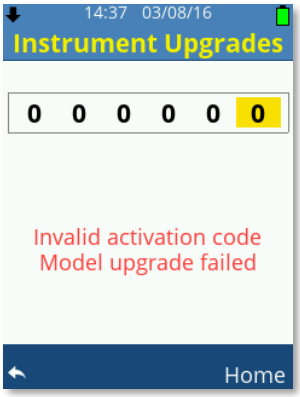


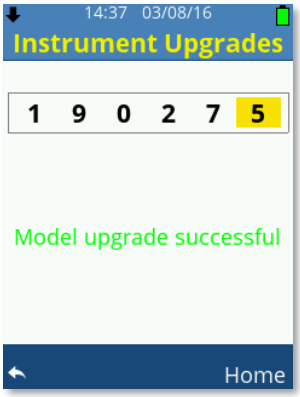
2. To exit USB Drive, on your PC right-click over the drive labelled SOUNDCHEK CONNECT under This PC and click **Eject**. Unplugging the USB cable without ejecting the drive first will not allow you to exit USB Drive.

Support

1. Press the OK key on Instrument Upgrades to instantly apply any upgrades purchased.
2. Enter your supplied upgrade code using the **Up**, **Down Arrow** keys to adjust the value.
3. Use the **OK** key or the **Left**, **Right Arrow** keys to move forward or back.
4. Press the **OK** key to enter to register the code.







Upgrade your SoundCHEK Connect sound level meter remotely in minutes. Email skcorder@skcinc.com for details. Include the instrument serial number.

Calibration

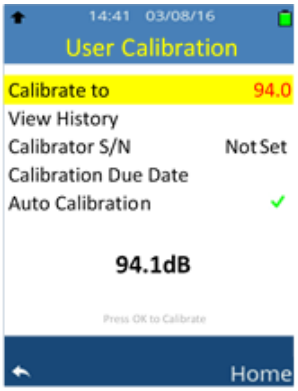
Select Calibration to acoustically calibrate your SoundCHEK Connect sound level meter.

It is recommended that the calibration procedure is performed before and after measurements have been taken using an SKC AcoustiCHEK Calibrator Cat. No. 703-001 or 703-002.

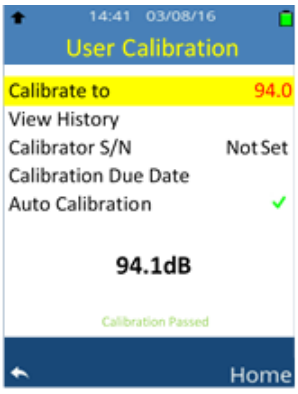
To activate an automatic calibration reminder, see Startup Options.

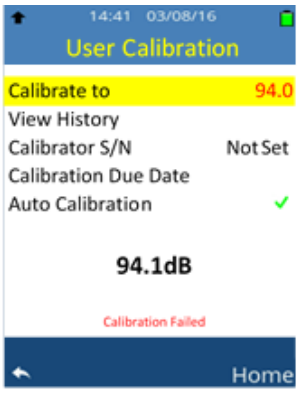
Calibrate to

Adjust the **Calibrate to** value between 90.0 and 114.5 dB in 0.1-dB steps using the **Left** or **Right Arrow** keys. Only include the microphone-dependent pressure to free field correction in this calibration adjustment.



1. Ensure the calibrator is attached to the microphone by gently inserting the microphone into the cavity of the calibrator. A certain amount of resistance should be felt while inserting the microphone as the O-ring on the calibrator forms a seal around the microphone. Ensure that the calibrator is turned on and set to the output level 94 dB.
2. When the Cal Value is set correctly, including corrections, press **OK** to begin calibrating your SoundCHEK Connect sound meter. A message will appear at the bottom of the screen indicating that calibration is taking place.
3. Successful or unsuccessful calibration will be indicated.





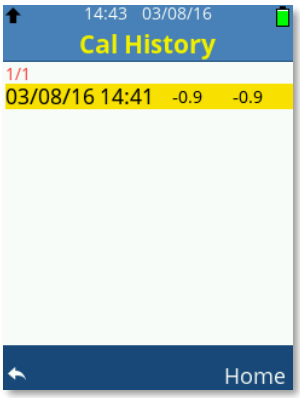
***Note**: If calibration is unsuccessful, ensure that your calibrator is turned on and is giving the correct output level, and that you have entered the correct Cal Value.*

Cal History

- *Calibration History cannot be disabled or deleted.*

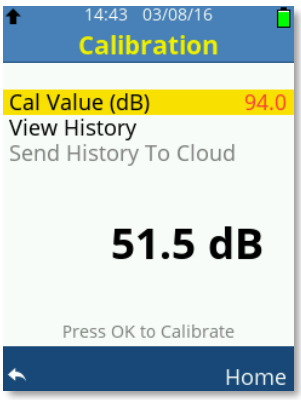
The SoundCHEK Connect sound level meter will store the time and date of the last 1000 successful calibrations. To the right of each calibration are internal scaling factors for the low and high ranges. These figures have only one purpose: to indicate any drift in your calibrations.

Scroll the calibration history using the **Arrow** keys as required.

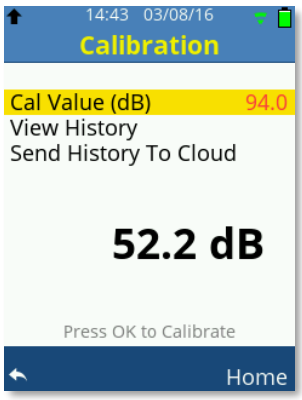


Send History To Cloud

The calibration history can be sent to SKCCHEKBox.com where you can also view the history online. The instrument must have Wi-Fi enabled and connected to a network that is within range.



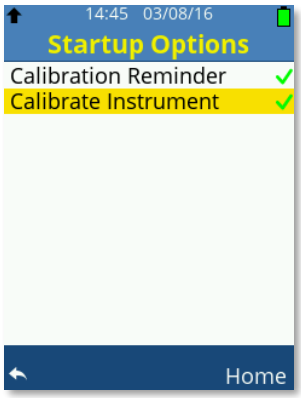
Wi-Fi Off



Wi-Fi On

Startup Options

Select useful calibration reminders when the SoundCHEK Connect instrument powers on by choosing Startup Options on the Main Menu.



1. Scroll the options using the **Up** or **Down Arrow** keys.
2. Use the **OK** key or the **Left**, **Right Arrow** keys to toggle the selection.

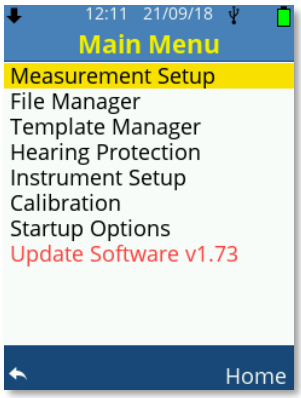
Calibration Reminder
Enable to show if the SoundCHEK Connect instrument has a valid calibration and when the next factory calibration is due.

Calibrate Instruments
Enable to automatically enter the instrument calibration function during start-up. It is recommended that this option is enabled.

Updates

Your SoundCHEK Connect can update operating software, HPD files, and SKC-certified templates through Wi-Fi.

Your instrument will periodically check for updates in the background and download latest software versions when they become available. The option to install these updates will then appear as a Main Menu option as shown below.



After choosing the option to update software, follow the on-screen instructions and your instrument will reboot with the latest software version installed.

If your instrument has less than 20% battery life remaining, you will be prompted to change your batteries or power through USB before the update can be performed.

Measurement Screens

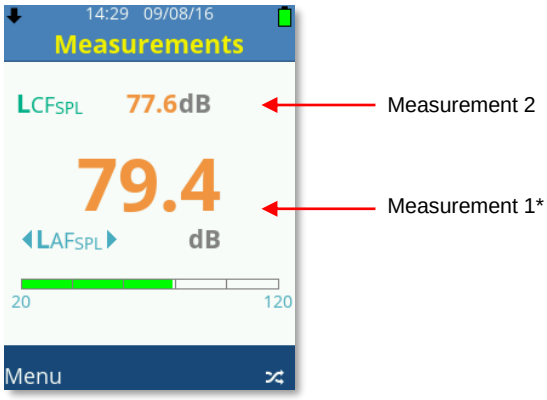
The SoundCHEK Connect sound level meter can independently and simultaneously record two measurements. Each measurement can have different time weightings and/or frequency weightings. To clearly identify these, they are named Measurement 1 and Measurement 2 on your instrument where any ambiguity may arise.

Where fitted, octaves and percentiles are only ever available for Measurement 1.

Scroll through the available measurement screens using the **Up** or **Down Arrow** keys.

Measurements

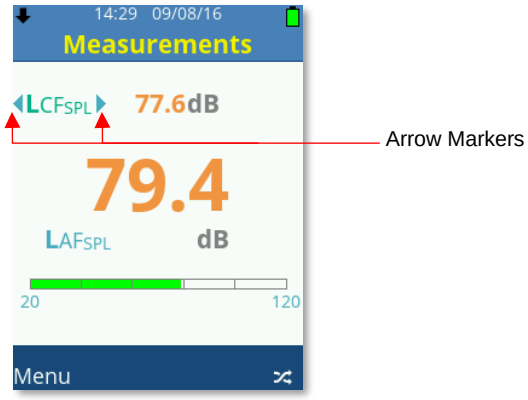
Your SoundCHEK Connect instrument (any model) will always show the Measurement Screen below after powering up:



**Measurement 1 on this screen is identified by the larger font size, required for legislation in certain countries.*

The color-coded measurement bar graph is only applicable to Measurement 1, and the values at which the color banding changes can be amended. *See **SPL Bar Levels** under **Instrument Setup** for details.*

Press **Soft Key 2** to move between the selection of Measurement 1 and Measurement 2. The selected Measurement is identified by having arrow markers on either side of the parameter as shown below. Use the **Left** or **Right Arrow** keys to scroll to the available parameters on either Measurement 1 or 2. *To disable or enable the parameters available on the **Measurements** Screen, see **Results Selection** in the **Measurement Setup** menu.*

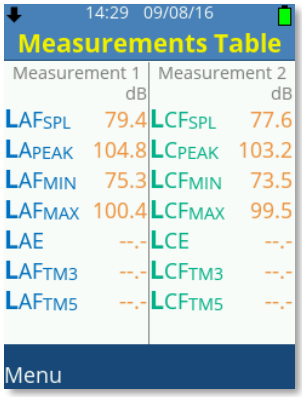


Only parameters specific to the model of SoundCHEK Connect sound meter owned are available. *See **SoundCHEK Connect Models & Features** for specific parameter availability as required.*

Upgrade your SoundCHEK Connect sound level meter remotely in minutes. Email skcorder@skcinc.com for details.

Measurements Table

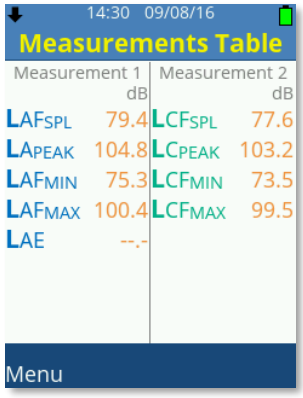
The Measurements Table screen conveniently shows all standard parameter values available on the sound level meter for both Measurement 1 and Measurement 2. This screen is available on all SoundCHEK Connect models.



*To disable or enable the parameters available on the **Measurements Table** Screen, see **Results**.*

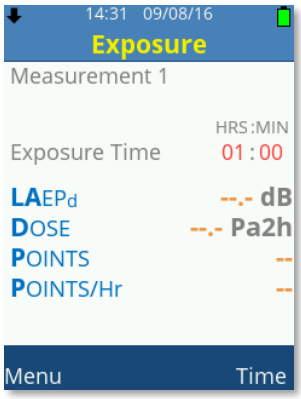
Only parameters specific to the model of SoundCHEK Connect sound meter owned are available. *See **SoundCHEK Connect Models & Features** for specific parameter availability as required.*

An example of the Measurements Table with fewer parameters selected is shown below:



Exposure

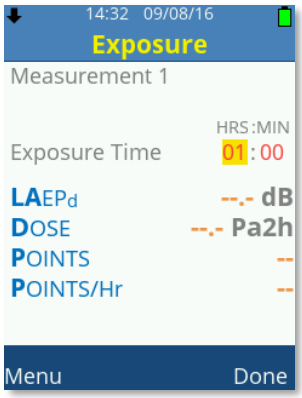
The Exposure screen can be calculated from Measurement 1 or Measurement 2. *See **Exposure** in **Measurement Setup** for how to change the calculated Measurements*. To comply with legislation for various countries, the instrument can be set to EU settings (*below left*) or OSHA settings (*below right*):



Custom settings may also be set. *See **Exposure** in **Measurement Setup** for details.*

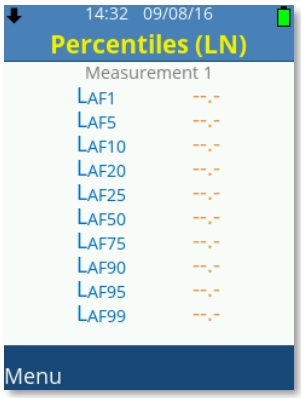
To edit the Exposure Time value:

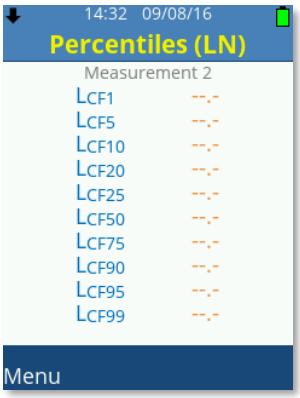
1. Press **Soft Key 2** to highlight HRS.
2. Use the **Up/Down Arrow keys** to adjust the value and **Left/Right Arrow keys** to move.
3. Press **Soft Key 2** to confirm.

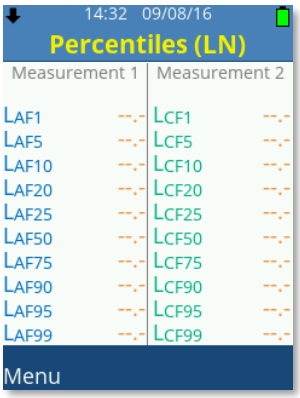


Percentiles (LN)

This screen is only available on SoundCHEK Connect sound level meters fitted with this option. Percentiles can be turned Off and the percentile level changed. *See* ***Percentiles (LN)*** *in* ***Measurement Setup*** *for further details.*

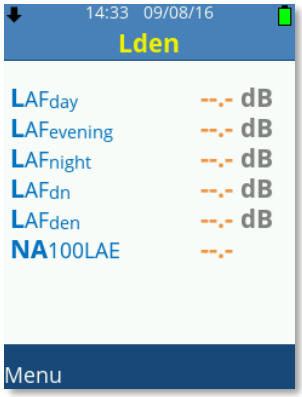






LDEN

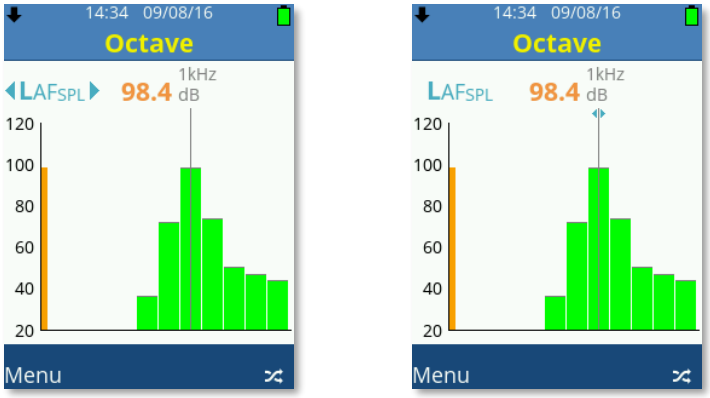
The Lden screen is only available for SoundCHEK Connect sound level meters fitted with this option and only calculated from Measurement 1.



1/1 Octave

The 1/1 Octave screen is only available for SoundCHEK Connect sound level meters fitted with this option and only calculated from Measurement 1. The 1/1 Octave can be turned Off if required. *See **Function** in **Measurement Setup** for further details.*

1. To change parameter, ensure the parameter name is selected and identified by arrows markers encapsulating the parameter, and then use the **Left** or **Right Arrow** keys to scroll the available parameters.
2. Press **Soft Key 2** to swap between the parameter selection and frequency bands.



3. When the 1/1 octave bands are selected, use the **Left** or **Right Arrow** keys to change the selected frequency band. The orange band can also be selected and shows the value calculated across the whole first octave band range.

Only parameters specific to the model of SoundCHEK Connect sound meter owned are available. *See **SoundCHEK Connect Models & Features** for specific parameter availability as required.*

1/3 Octave

The 1/3 Octave screen is only available for SoundCHEK Connect sound level meters fitted with this option and only calculated from Measurement 1.

The 1/3 Octave can be turned Off if required. *See **Function** in **Measurement Setup** for further details.*

ACCESSORIES/REPLACEMENT PARTS

Accessories	**Cat. No.**
AcoustiCHEK Calibrator, Class 2, 114 dB	703-002
AcoustiCHEK Calibrator, Class 1, with Built-in Barometer	703-001

Replacement Parts	**Cat. No.**
Replacement Windscreen, 2.5-inch diameter for ½-inch microphones	702-016
Replacement Microphone, Class 2, ½-inch pre-polarized with 25 mV/Pa microphone capsule	702-019
Replacement Microphone, Class 1, ½-inch pre-polarized with 50 mV/Pa microphone capsule	702-021
Replacement Preamplifier Assembly	702-022

SKC Limited Warranty and Return Policy
SKC products are subject to the SKC Limited Warranty and Return Policy, which provides SKC's sole liability and the buyer's exclusive remedy. To view the complete SKC Limited Warranty and Return Policy, go to skcinc.com/warranty.

APPENDIX A: PERFORMANCE PROFILE

Class	Available in Class 1 or 2
Measurement Range	**Linear** 25 to 140 dB **Peak** 40 to 143 dB
Frequency Range	20 Hz to 20 kHz
Frequency Weighting	A, C, and Z; peak C or Z weighted
Response Time	Fast, Slow, and Impulse
Measurement Channels	Two
Exchange Rate	3, 4, 5, and 6
Threshold Level	Off, 70, 75, 75, 80, 85 dB
Parameters	Lp, Leq, Lmax, Lmin, Peak, LAE, L10, L90, and 1 user-definable value
Standards	Meets ANSI S1.4 2014 and IEC 61672-1:2013
Languages	English UK and U.S., Chinese, French, German, Italian, Portuguese, Brazilian, Russian, Spanish, Dutch, Greek
Datalogging/time history	1 second to 24-hour interval options
Memory	32 GB
Connectivity	USB, Wi-Fi
Power	4 AA batteries (up to 8 hours) or USB
Temperature	**Class 1**: 14 to120 F (-10 to 50 C) **Class 2**: 32 to104 F (0 to 40 C)
Humidity	25 to 90%
Atmospheric pressure	65 to 108 kPa
Dimensions	8.3 x 2.8 x 1.2 in (21 x 7.1 x 3 cm), includes microphone
Weight	10.7 oz (305 g) without battery
Display	Full color, 1.5 x 2 in (3.8 x 5 cm)