

**CASELLA**   
A DIVISION OF TSI

# 630 Series

## Digital Sound Level Meter

With advanced functionality and simple user interface, the 630 range is designed to make occupational and environmental noise measurements quickly and easily.



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## Applications

### Occupational Noise Measurement

- Workplace noise assessments according to ISO9612, OSHA 29CFR 1910.95
- Selection of hearing protection
- Calculation of noise exposure
- Ensuring compliance with workplace noise legislation

### Environmental Noise Measurement

- Boundary noise assessments
- Noise nuisance complaints
- Measurements according to ISO1996, BS4142
- UK Construction Section 61 notices

## Key Features

- Ideal for environmental or occupational monitoring
- Easy to use switch-on-and-go functionality
- Latest digital technology with a high resolution color TFT display
- Pre-configured set-ups for occupational and environmental measurements
- Voice notes to annotate measurements
- Audio (WAV) recording
- Single measurement range up to 140dB, no range adjustment required
- Data markers, back erase function and audio recording
- Level triggered events for transient measurements
- Real-time octave and 1/3 octave measurements
- Simultaneous measurement of all parameters with all frequency and time weightings
- Class 1 or Class 2 models available
- 2GB memory for more than 1 year of data storage
- Removable pre-amp
- Environmental outdoor kit available

## Occupational Noise Measurements

The 63x series is designed to make workplace noise measurements as quick and simple as possible. The displayed information can be made as simple or comprehensive as required and all measurement parameters are stored simultaneously, so no incorrect measurements can be made.

When the unit is calibrated with the CEL-120 calibrator, the calibration dates and times are stored and downloaded to Casella insight software, validating the accuracy of measurements.

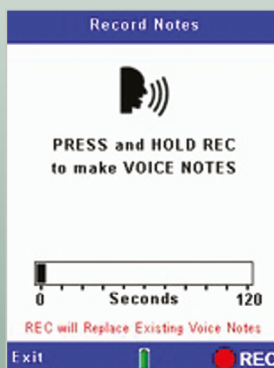
Average, peak, and octave band measurements are performed at the same time, so only one measurement needs to be made for all workplace noise applications.

- Simultaneous measurements of all workplace noise parameters
- Standard set-ups for workplace noise legislation
- Measures parameters for hearing protection selection by the SNR, HML and octave band method
- Analyse time history of noise levels
- Optional high range microphone, up to 165dB



Lightweight with a bright color display, the 63x makes workplace noise measurements easy

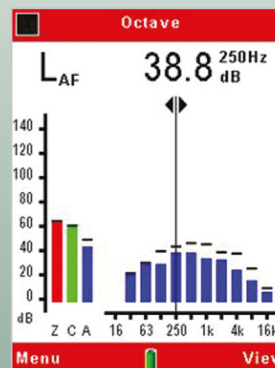
### Simple User Interface...



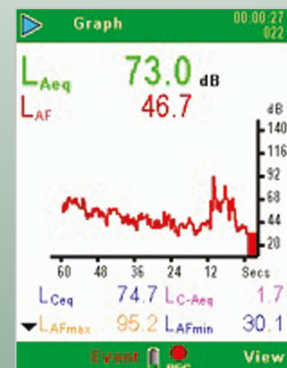
Record voice notes to easily identify measurements



Simple icon based user interface



Octave measurements for the selection of PPE



See the time history of noise levels

## Environmental Noise Measurements

Data can be marked to signify any significant events, the data from which can be removed afterwards in insight software.

Up to 60 hours of audio files can be stored, commonly used for noise source identification. Stored audio can be played back on the instrument using headphones or downloaded to Casella insight software.

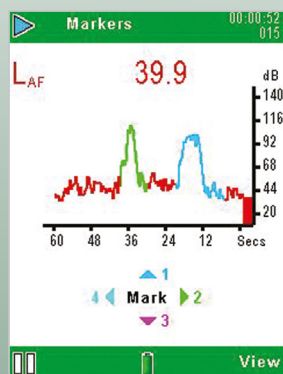
For unattended monitoring, event mode (CEL-633) allows trigger levels (dB) to be set, so additional data (e.g.  $L_{eq}$ ,  $L_{max}$ ) is stored together with the audio file for later play back or analysis, as well as a profile down to 10ms intervals.

An environmental noise monitoring kit is available which protects the instrument and microphone from the weather and allows unattended monitoring for up to 10 days.

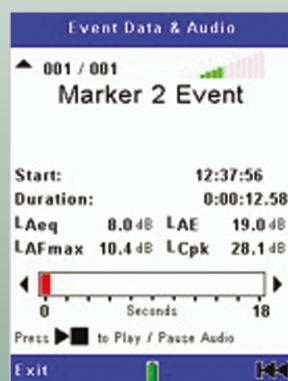
- Simultaneous broadband and frequency measurement
- Data markers
- Back erase function
- Real-time frequency analysis
- Single measurement range
- Triggered 'event' capture



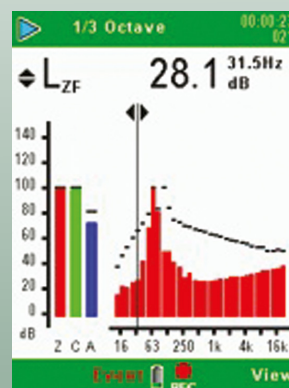
A dedicated environmental kit is available



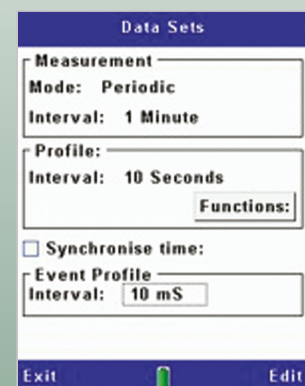
Significant noise events can be marked



Listen to audio files from the 63X Series with headphones



Realtime frequency analysis and single measurement range



Set 2 levels of time history storage

## 63x series Model Selection

### Model Functionality

There are 2 models available, please see the model selection table below for the one you require (e.g. CEL-632). Then select your frequency analysis requirements by adding 'A' for broadband, 'B' adds octave band and 'C' adds 1/3 octave e.g. CEL-632C. Then add either a 1 or a 2 to denote the accuracy class e.g. CEL-632C1. Each instrument comes complete with a standard kit case, windscreen and calibration certificate.

### Instrument Kits

For an instrument kit add /K1 to the instrument part number e.g. CEL-632C1/K1. Instrument kits include the relevant instrument, acoustic calibrator (CEL-120), USB download cable, batteries and calibration certificates.

63xseries	632	633
Cumulative Results	●	●
Period Results	●	●
Profile Results	●	●
Statistical Values (Ln%)		●
Audio Voice Notes	●	●
Marker Events	●	●
Level Events		●
External Events	●	●

## Accessories

<b>CEL-6840</b> Standard kit case*	<b>CEL-6718</b> Lightweight tripod
<b>196030C</b> Executive kit case	<b>CMC73</b> Portable printer kit (fits in 196030 kit case)
<b>CEL-251</b> Microphone Class 1*	<b>MIC1</b> High range microphone (to 165dB)
<b>CEL-252</b> Microphone Class 2*	<b>MPA1</b> High range microphone adaptor (for use with MIC1)
<b>CEL-120/1</b> Acoustic Calibrator Class 1**	
<b>CEL-120/2</b> Acoustic Calibrator Class 2**	
<b>CEL-PC18</b> Universal power supply	
<b>CMC51</b> USB download cable*	

\* included with instrument

\*\*included with instrument kit (with CEL-63XY/K1 where 'X' and 'Y' represent the model numbers)



## Management Software

Casella Insight data management software is a powerful yet simple tool to download, analyse and report from either workplace or environmental noise data.

- Analysis of noise level time history
- Replay voice notes and event audio
- Intuitive user interface
- Remove anomalous data from results
- Analysis of time history
- Generate comprehensive reports
- Store data by, person, place, location
- Manage multiple instruments and calibration

Switch between managing data or instruments with simple tabs

Simple tree structure to manage data e.g. person, place, etc.

Time history may be viewed, analyzed and annotated as required

Sort data by person, process, etc.

Multiple parameters can be displayed and sorted simultaneously

Data can be dragged and dropped to the tree structure as required

Data may be graphed and copied to other applications

For more detail on Casella Insight Data Management Software, please visit the 'Products' section of [casellasolutions.com](http://casellasolutions.com)

## Technical Specification

Standards: IEC61672: 2002 Class 1 and 2, ANSI S1.4: Type 1 and 2 (1983)

Filters: IEC61260: Class 0, ANSI S1.43: (1996)

Note: IEC61672 replaces 2 obsolete standards, IEC60651 and IEC60804

### General

Measurement range: 20-140dB RMS (143.3dB peak)

Total Noise floor: 19dB(A) Class 1, 25dB(A) Class 2

Time weightings: Fast, Slow and Impulse simultaneously

Frequency weightings: A, C and Z (un-weighted) simultaneously

Frequency bands: 11 Octave bands 16Hz-16kHz (B&C models)  
33 Octave bands 12.5Hz-20kHz (C models)

Amplitude weighting (Q): 3, 4 and 5 simultaneously

Back erase: Last 10s in cumulative mode (all models)

Timers: Duration 1s-24h,

On/Off timers: 6 sets with selectable times and a repeat function

### Physical

Tripod mount: ¼" Whitworth socket

Batteries: 3x AA Alkaline, 10-15 hours dependent on back light

External power: 9-14V DC at 150mA

Weight: 332g including batteries

Size: 230x72x31mm inc preamp and microphone

### Measured Parameters

Broadband:  $L_{X,Y}$ ,  $L_{X,Ymax}$ ,  $L_{X,Ymin}$ ,  $L_{X,eq}$ ,  $L_{X,peak}$ ,  $L_{avg}$ , LC-LA,  $L_{X,eq}$ ,  $L_{TMS}$ ,  $L_{TMS}$ ,  $L_{AE}$ . Workplace dose values are calculated within insight software.

Octaves and ½ octaves:  $L_{X,Y}$ ,  $L_{X,eq}$ ,  $L_{X,Ymax}$ , 5x  $L_n$  (on CEL-633). Where X is the frequency weighting A, C or Z and Y represents time weighting Fast (F), Slow (S) or Impulse (I). All weightings simultaneously measured where appropriate.

CEL-633 model additionally stores 5x  $L_n$  values in broadband and octave modes. For time history data, all parameters are logged for period times plus 6 selectable profile parameters (plus 5x  $L_n$  values on CEL-633).

### Memory

Memory: 2GB (>1 year logging when set to 1 second interval, 999 runs). All parameters stored and accessible via Casella insight. Total measurement runs: 999. Events: 999 events/run. 10 hours of audio recording in high quality mode, 60 hours in low quality mode. For long term unattended monitoring the 63x series takes a new run daily for up to a total of 400 days.

### Audio Recording

Low Quality: 8,000 samples/s @ 8bit (64kb/s), up to 4kHz

High Quality: 24,000 samples/s @ 8 bit (192kb/s), up to 12kHz

### Environmental

Operating 0 to 90%RH in the absence of condensation

Conditions: Temperature of -10 to +50°C (Class 1) and 0 to 40°C (Class 2)

Atmospheric pressure of 65 to 108kPa.

### Languages

User interface can be changed via the menu: English, French, German, Spanish, Italian, Portuguese, Chinese.

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