

CASELLA

62X SERIES



Casella 62X Digital Sound Level Meter



The 62X series sound level meters use the latest digital technology to give standards of performance never seen in such a compact design.

Applications

- Occupational Noise Measurement
- Workplace noise
 - Selection of hearing protection
 - Calculation of noise exposure
 - Ensuring compliance with workplace noise legislation
 - Machinery noise tests

Key features

- Compact, rugged design
- Simple operation
- Single large measurement range
- Large memory
- High resolution colour display
- Real-time octave band analysis ('B' models)
- Simultaneous measurement of all workplace noise parameters
- Instrument menu in 9 languages
- Pre-defined and user configurations available
- Automatic calibration function
- Long battery life

Using a high resolution colour TFT display, the 62X series is specifically designed to ensure taking noise measurements is quick and easy.

Different models are available depending on your requirements for use in general workplace noise measurements, up to full industrial hygiene requirements where octave band analysis is required for the effective selection of hearing protection.

Octave band measurement screen



High resolution colour display

- Unique colour coding of measurements
- Bright backlight
- View in all light conditions

The 62X series uses colours of the high-resolution display to aid the user in making measurements. Measurement screens are colour coded depending on the mode of operation. For example, during a measurement run, the header and footer of the display is green (shown right), whereas when a run is stopped they are red, similar to traffic lights for 'stop' and 'go'.

Measured parameters are displayed in different colours, and the bar graphs are illustrated with the same colours to give an easy understanding of the noise climate.



Broadband measurement screen

Simple operation



Set-up selection

Multi-lingual user interface

- Intuitive menu structure
- Multilingual user interface
- Predefined and user selectable setups

The 62X series was designed with ease of use in mind. The menu structure is designed to pick up and use without the use of a manual. A simple icon structure is used with word prompts for each selection, available in seven languages.

The instrument has six selectable setups. Four pre-defined setups can be used to satisfy local workplace noise legislation. Two user setups can be defined to display parameters and weightings as required. Regardless of the setup

used, the 62X series measures and stores all parameters and weightings even if not selected. These can be viewed if necessary on the software.

Up to 100 measurements can be stored without the need to download. All runs are date and time stamped. When connected to a PC via the USB connection, the 62X series acts like a memory card, so data files can be moved to a PC and easily reviewed without the need for proprietary software.

Digital technology



Tabular octave results

Time history display

- Large measurement range
- Simultaneous measurement
- Automatic calibration

By using Digital Signal Processing (DSP) technology, the 62X series measures all the workplace noise parameters simultaneously with necessary time and frequency weightings, preventing incorrect setup of the instrument. The instrument has a single large measurement range of 20-140dB, eliminating the need to change measurement range and preventing errors.

On the CEL-620B model, octave analysis is performed in real-time, saving time compared to performing measurements sequentially.

Octave band results are shown in both bar-graph and tabular form with the dominant frequency highlighted. Time history of the broadband noise level is displayed in real-time, so a user can see how the noise level varies with time.

Instruments range



Automatic calibration

- Range of instruments available
- Future proof upgrade ability
- Complete measurement kits
- All models available in Class 1 or Class 2

All 62X models are integrating so measure average noise levels as well as peak levels for workplace noise legislation. CEL-620A model also simultaneously measures the L_C and L_A used within the HML method for the selection of hearing protection. In addition, the CEL-620B model performs real-time octave band analysis from 16Hz to 16kHz, values which are used in the

octave band method for selection of hearing protection. If future requirements change, any instrument can be upgraded to a higher model without returning to Casella. Complete measurement kits are provided with an acoustic calibrator in a robust kit case complete with instruction manuals and calibration certificates.

Technical Specification

Applicable Standards:

IEC 60651 - 1979	Octave filters (CEL-620B model only):
IEC 60804 - 2000	IEC 61260 Class 0
IEC 61672 - 2002	ANSI S1.11-2004
ANSI S1.4 -1983 (R2006)	
ANSI S1.43 - 1997 (R2007)	

Technical:

Total measurement range:	20 to 140dB RMS (single range), 143.0 dB Peak
Frequency weightings RMS:	Simultaneous A, C & Linear (Z)
Frequency weightings Peak:	Simultaneous A, C & Linear (Z)
Time weightings:	Simultaneous Slow, Fast & Impulse
Amplitude weightings:	Q3, Q4 and Q5 (Q4 & Q5 applicable to L_{avg} only)
Thresholds:	70 to 90 (dB) in 1 dB steps (applicable to L_{avg} only)
Noise floor:	<33dB(A) Class 2, <25dB(A) Class 1
Runs stored:	100
Display:	320x240 pixel transmissive colour TFT
Frequency bands:	11 octave bands 16Hz to 16kHz (CEL-620B model only)
Calibration information:	Stores pre and post run calibration date, time and level
Output (P.C.):	USB 2.0 'A' to 'Mini B'
Batteries:	3 x AA Alkaline (supplied) or rechargeable
External power:	9-14V DC at 250mA via 2.1mm connector
Battery life:	11 hours with backlight on, 20 hours backlight off
Tripod mount:	1/4" Whitworth socket
Size mm (in):	72 x 229 x 31mm (2.8 x 9.0 x 1.2")
Weight gm (oz):	295g (10.4oz)

Measured Parameters:

CEL-620A
 L_{XY} , L_{XYmax} , L_{XYmin} , L_{Xeq} , L_{Xpeak} , L_{avg} , L_C - L_A , L_{Xleq} , L_{TM3} , L_{TM5} , L_{AE}

CEL-620B
 L_{XY} , L_{XYmax} , L_{XYmin} , L_{Xeq} , L_{Xpeak} , L_{avg} , L_C - L_A , L_{Xleq} , L_{TM3} , L_{TM5} , L_{AE}

Octaves: L_{XY} , L_{Xeq} , L_{XYmax}

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.

Environmental:

In operation:	Relative humidity of 5% to 90% (non-condensing)
	Temperature 0 to 40°C (class 2), -10 to 50°C (class 1)
	Atmospheric pressure of 65 to 108kPa
In storage:	Relative humidity of 5% to 90% (non-condensing)
	Temperature -20 to 60°C
	Atmospheric pressure of 65 to 108kPa

ORDERING INFORMATION

CEL-620A/2:	Integrating Digital Sound Level Meter (Class 2)
CEL-620B/2:	Integrating Octave Band Sound Level Meter (Class 2)

CEL-620A/1:	Precision Integrating Digital Sound Level Meter (Class 1)
CEL-620B/1:	Precision Integrating Octave Band Sound Level Meter (Class 1)

All instruments and calibrators are provided with calibration certificates. Casella CEL also has a UKAS calibration facility if required.

INSTRUMENT KITS

Complete kits are available with acoustic calibrator (CEL-120), kit case, windshield, instruction manuals and USB cable. For a complete instrument kit add /K1 to the part number e.g. CEL 620A/2/K2. A typical instrument kit is pictured on the right.

Kits come complete with Casella Insight Data Management Software, see Insight data sheet for more details.



OTHER ACCESSORIES

CEL-6840	Standard kit case	CEL-6718	Lightweight tripod
196030c	Executive kit case	CEL-251	Microphone Class 1
CEL-6841	Windshield	CEL-252	Microphone Class 2
CEL-120/1	Acoustic Calibrator Class 1	PC18	Universal power supply
CEL-120/2	Acoustic Calibrator Class 2	CMC51	USB download cable

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