

CASELLA

620XY/K *series*

Casella 620XY/K Sound Level Meter

Ideally suited to a wide range of industrial noise measurement applications. The 620XY/K series sound level meters use the latest digital technology to give high standards of performance in a compact design.

www.casellasolutions.com



620XY/K series

Applications

- Occupational Noise Measurement
- Workplace noise according to ISO9612 and OSHA 29CFR 1910.95
- Selection of hearing protection
- Calculation of noise exposure
- Ensuring compliance with workplace noise legislation
- Machinery noise tests

Using a high resolution colour TFT display, the 620XY/K 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.

Key Features

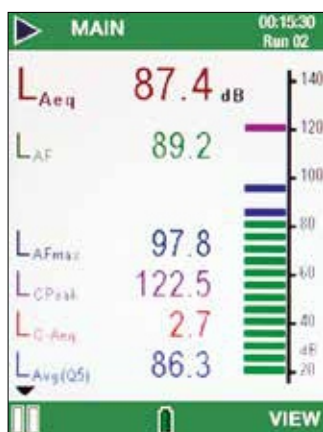
- Compact, rugged design
- Simple operation
- Single large measurement range
- Large memory
- High resolution colour display
- Real-time octave band analysis
- Simultaneous measurement of all workplace noise parameters
- Instrument menu in 9 languages
- Pre-defined and user configurations available
- Automatic calibration function
- Long battery life
- Calibration : Factory Calibrated with traceability to NPL
- Suitable to connect to portable Printers and also to PC

High Resolution Colour Display

The 620XY/K 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.

- Unique colour coding of measurements
- Bright backlight



Broadband measurement screen



| | | | |
|--------------------------------|----------------------|--------------------|------|
| CASSELLA CEL-620x/1P 002-00_06 | | | |
| Serial number: | 2834659 | | |
| Response: | Freefield | | |
| Start: | 29-Jul-2016 10:37:23 | | |
| Duration: | 0:02:12 | | |
| Pause Duration: | 0:00:30 | | |
| Overload: No. Run: | 3 | | |
| CALIBRATION | | | |
| Before: | 28-Jul-2016 12:22:41 | | |
| RESULTS (dB) | | | |
| L _{Aeq} | 68.7 | L _{AFmax} | 95.4 |
| L _{AFmin} | 31.6 | L _{AE} | 88.8 |
| Location | | | |
| Operator Name | | | |
| Signature | | | |
| Witness | | | |
| SPECIMEN COPY | | | |



620XY/K series

Simple Operation

The 620XY/K 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 set-ups. Four pre-defined set-ups can be used to satisfy local workplace noise legislation. Two user set-ups can be defined to display parameters and weightings as required. Regardless of the setup used, the 620XY/K 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 620XY/K series acts like a memory card, so data files can be moved to a PC and easily reviewed without the need for proprietary software.

- Intuitive menu structure
- Multilingual user interface
- Predefined and user selectable set-ups



Set-up selection



Multi-lingual Interface

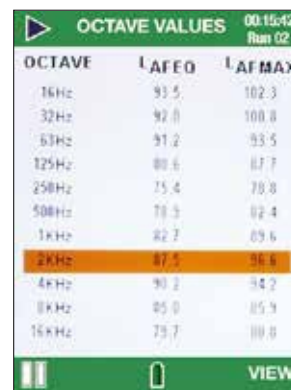
Digital Technology

By using Digital Signal Processing (DSP) technology, the 620XY/K 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.

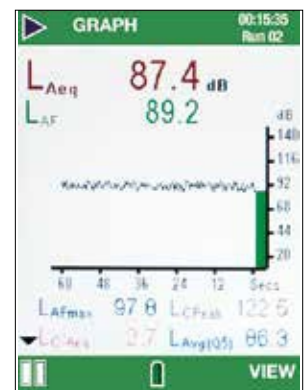
On the CEL-620C model, 1/3 octave and octave analysis is performed in real-time, saving time compared to performing measurements sequentially.

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.

- Large measurement range
- Simultaneous measurement
- Automatic calibration
- Internal Clock
- PCABS IP40



Tabular octave results



Time history display

Instrument Range & Calibration...

All 620XY/K 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-620C model performs real-time 1/3 octave and octave band analysis from 12.5Hz to 20kHz, 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.

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



CEL 120 Calibrator

When the CEL-120 calibrator is attached, the instrument automatically enters calibration mode

Technical Specification

| | |
|----------------|---|
| Standards: | IEC61672: 2013 Class 1 and 2, ANSI S1.4: Type 1 and 2 1983 (R2006), IS 15575 |
| Filters: | IEC61260: Class 0, ANSI S1.43: (1996) |
| Note: | IEC61672 replaces 2 obsolete standards, IEC60651 and IEC60804 |
| Certification: | PTB, CE and Calibrated by NPL India |

Technical:

Total measurement range: 20 to 140dB RMS (single range), 143.0 dB Peak
25 to 165dB RMS (single range) with MIC1

Frequency weightings RMS: Simultaneous A, C & Linear (Z)
Frequency weightings Peak: Simultaneous A, C & Linear (Z)

Time weightings: Simultaneous Slow, Fast & Impulse

Exchange Rate : 3, 4 and 5

Thresholds: 70 to 90 (dB) in 1 dB steps (applicable to L_{avg} only)

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

Display: 320x240 pixel transmissive colour TFT with update period 0.5 second

Frequency response: 6Hz to 20kHz

Calibration: 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 10-15 hours dependent on back light
More than 24 hours with external battery pack (POW1)

External power: 9-14V DC at 250mA via 2.1mm connector

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)

Memory : MicroSD 2/4/8 GB Non Volatile Internal

Runs stored: 999

Resolution : 0.1dB Display Resolution

GPS (Optional) : Inbuilt (Non Removable)

Sampling Rate : 67.2 KHz

Audio Recording : (Optional)

Low Quality : 8000 samples/s @8 bit (74kb/s) up to 4khz

High Quality : 24000 samples/ @8 bit (192kb/s) up to 12 khz

Timers : Duration 1s-24h

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

Language : English

Microphone: 1/2" pre-polarised Electret/Condenser

Accuracy : +/- 0.7dB (Class 2), +/- 0.2dB (Class 1)

Measured Parameters:

CEL-620A: $L_{X,Y}$, L_{XYmax} , L_{XYmin} , L_{Xeq} , L_{Xpeak} , L_{avg} , L_C , L_A , L_{XLeq} , L_{TM3} , L_{TM5} , L_{AE} , L_{10} , L_{50} , L_{90}
Elapsed Time

CEL-620C: $L_{X,Y}$, L_{XYmax} , L_{XYmin} , L_{Xeq} , L_{Xpeak} , L_{avg} , L_C , L_A , L_{XLeq} , L_{TM3} , L_{TM5} , L_{AE} , L_{10} , L_{50} , L_{90}

1/1 Octaves: $L_{X,Y}$, L_{Xeq} , L_{XYmax} **1/3 Octaves:** $L_{X,Y}$, 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 -10 to 50°C Atmospheric pressure of 65 to 108kPa |
| In Storage | 0 to 90%RH in the absence of condensation Temperature -20 to 60°C Atmospheric pressure of 65 to 108kPa |

Note : CEL-620 XY/K

X Denotes - Model type A (Broad Band), B (Octave Band),
C (1/3 Octave & Octave Band)

Y Denotes - For Class 1 or Class 2

K Denotes - Kit along with optional selected accessories

Ordering Information

| | |
|--------------------|---|
| CEL-620A1/K | Class 1 Sound Level Meter Kit |
| CEL-620B1/K | Octave Band Class 1 Sound Level Meter Kit |
| CEL-620C1/K | 1/3 rd Octave Band Class 1 Sound Level Meter Kit |

All instruments and calibrators are provided with calibration certificates.

Instrument Kits

Complete kit options are available with sound level meter, acoustic calibrator (CEL-120), soft/hard carry case, windshield, instruction manuals, USB cable, Insight data management software, Dot Matrix/Thermal Printer, Printer Cable, 4AA Rechargeable Cell & Charger.



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

Other (Optional) Accessories

| | |
|-----------------|--|
| TGP | Thermal Graphic Printer Kit Softland Iprint marvel |
| DMP | Dot Matrix Printer Kit Softland Iprint marvel DMP |
| CEL-6718 | Lightweight tripod |
| CEL-251 | Microphone Class 1 |
| CEL-252 | Microphone Class 2 |
| PC18 | Universal power supply |
| CMC51 | USB download cable |
| MIC1 | 1/4" High Range Microphone (25 to 165 dB) |
| MPA1 | High Range Microphone Adaptor (for use with MIC1) |

Printers Key Features :

- BIS Approved
- Internal Storage
- Strong Battery Backup
- Rechargeable
- Handheld

CASELLA INDIA

TSI Instruments India Pvt Ltd

1203, 12th floor, Eros Corporate Park, Sector-2
IMT Manesar Gurugram Haryana (India) 122051
Contact: +91 956007 5904, +91 956 007 5984
Email: Rajeshjoshi@casellasolutions.com