

CEL-300 Series Convertible Noise Dosimeters and Sound Level Meters

Key benefits

- ❑ Switch on and record in less than 5 minutes
- ❑ Store over 1 month's worth of measurements
- ❑ Standard setups for guaranteed compliance
- ❑ Customized setups for special tasks
- ❑ Large time history memory in CEL-360
- ❑ Direct printout from meter
- ❑ Windows software for control and download
- ❑ Convertible between dosimeter and sound meter



CEL-320S sound meter with stalk microphone



CEL-360 dosimeter with cable microphone

Introduction

The CEL-300 Series Convertible Noise Dosimeters are the last word in simplicity and ease of use. Two models provide all the necessary functions of fully featured instruments with many user enhancements that help both the new user and the long-term user. Just fit the battery, choose the microphone style, switch on the instrument and you are ready to start recording. Select the recording method from a list of pre-programmed setups and off you go. The instrument takes care of all the settings for you so no need to worry about getting it wrong. It could not be easier, press the Start button on the keypad and the measurement will begin straight away.

Of course if you need to customize the instrument then the included software will intuitively guide you through the process and your new settings will be uploaded and remembered for the next time too.

Both the CEL-320 and the CEL-360 cover three measurement ranges from 30 to 140 dB to ANSI type 2 specifications. Choose from A or C frequency weightings and Slow, Fast or Impulse time weightings. Select Q as 4, 5 or 6 for dose measurements. Overall results for the maximum, minimum and average noise levels are saved together with the ability to set two threshold cutoff levels and a single criterion level for all noise dose calculations. Begin recording immediately or with the CEL-360 set a delayed start and stop time up to a month in advance for the instrument to record automatically.

The CEL-360 is also a logging instrument that will store up to 10 key noise parameters to show the changes that occurred during the run to find out when the noise was highest. This is invaluable for planning a noise control policy or before undertaking potentially costly noise reduction work.

A choice of microphones allows the instruments to be used as conventional personal noise dosimeters or as small hand held sound level meters ideal for community noise measurements as well as noise in the workplace.

New Windows™ software completes the package for both instruments. The CEL-320 and 320S models are provided with a copy of dB10 software (version 2) as standard and the CEL-360 and 360S models come with the more advanced dB12 software as standard. Both these packages are full 32 bit programs that will run on the latest versions of the popular MS Windows™ operating system for IBM compatible PC's. The software will allow previous recordings from the earlier CEL-420 and CEL-460 noise dosimeters to be opened and viewed so that earlier recordings can still be used and analyzed.

TECHNICAL SPECIFICATIONS

CEL-320 & CEL-360 Noise Dosimeters and CEL-320S & CEL-360S Sound Level Meters

International standards	
Accuracy standards - Dosimeter	ANSI S1.25 – 1992. IEC1252: 1993 BS EN 61252.
Accuracy standards - Sound level meter	ANSI S1.4 – 1983 Type S(2),* ANSI S1.43 – 1997* IEC-651: 1979 (EN 60651) Type 2I,* IEC-804: 1985 (EN 60804) Type 2,
Electro-magnetic standards	EN 50081-1:1992, EN 50081-2: 1993 EN 50082-1:1992, EN 50082-2: 1995

* over temperature range 32°F - 104°F (0°C - 40°C)

Measurement ranges		
Display range	Primary RMS range at 1 kHz	Peak
30 – 100 dB	41 – 86 dB	63 – 103 dB
50 – 120 dB	55- 106 dB	83 – 123 dB
70 – 140 dB	75 – 125 dB Defined from 10 dB above noise floor to a crest factor limit of 5	103 – 143 dB

Dosimeter microphone	CEL-6681 ¼" electret microphone with clip, on 32in (0.8 m) plug-in cable.
Sound level meter microphone	CEL-425 ¼" electret microphone on 3in (75 mm) stalk.
Windscreen for microphone protection	Both microphones may be used with CEL-6225 Windshield that has no measurable effect on acoustic performance between 31.5 Hz - 8 kHz.
Frequency weightings	A, C, linear 20 Hz – 20 kHz.
Time weightings	Slow, Fast, Impulse, Peak.
Amplitude weightings (Q)	3, 4, 5, 6 dB exchange rates.
Displayed information	Lp, LAeq, LAE, Leql, Lav, Lmx, Lmn, Lpeak, 5 x Ln%, %DOSE1, projected %DOSE1, TWA1, %DOSE2, projected %DOSE2, TWA2, LEP,d, TWA,v, LEP,v, Duration, Date, Time, Run #, Wait, Pause, Battery V, security level.
Battery	Duracell MN 1604 (9 V), Approximately 40 hours lifetime.
Physical (excluding microphone)	4.8 x 2.6 x 1.2 in, 11 oz. (120 x 65 x 30 mm, 300 g),

	CEL-320	CEL-360
Maximum number of measurement runs	50	50
Number of pre-configured Set-Ups	7	7
Number of user configured Set-Ups	13	13
Threshold levels (dB) 70 to 90 dB in 1 dB steps	2	2
Criterion level (dB) 80 to 90 dB in 1 dB steps	1	1
Variable time for daily noise exposure level	00:00 – 23:59	00:00 – 23:59

Extra features in CEL-360 and 360S only	
Profile memory size	>220,000 data points
Profile results per period	Up to 10 user selectable
Profile intervals (15 total)	1, 2, 5, 10, 15, 20, 30 s 1, 2, 5, 10, 15, 20, 30, 60 m
Fixed duration timers (11 total)	5, 10, 15, 30 m 1, 2, 4, 8, 10, 12, 24 h
Delay start and stop timers With 16 pairs settable to the nearest minute	Up to 31 d 23 h 59 m in advance
Number of repeats	Up to 49 times

ORDERING INFORMATION

SIMPLE DOSIMETER KITS

CEL-320/K1 and CEL-360/K1 kits are available which include the Dosimeter, CEL-282 Acoustic Calibrator, CEL-6681 ¼" Dosimeter Microphone including clip and cable, CEL-6225 foam Microphone Dust Cover and CEL-6682 Kit Case. The CEL-320 includes the CEL-6702 dB10 software and C6671 download cable, the CEL-360 includes the CEL-6704 dB12 software package. Standard multiple kits are available in 5 or 10 packs. Use suffix X to exclude software and cable.

SOUND LEVEL METER KITS

CEL-320S/K1 and CEL-360S/K1 kits are available which include the SLM, CEL-282 Acoustic Calibrator, CEL-425 ¼" SLM Microphone, CEL-6225 Microphone Dust Cover, CEL-6682 Kit Case. The CEL-320S includes the CEL-6702 dB10 software and C6671 download cable, the CEL-360S includes the CEL-6704 dB12 software package. Standard multiple kits are available in 5 or 10 packs. Use suffix X to exclude software and cable.

OPTIONAL ACCESSORIES

Both the CEL-6681 and CEL-425 microphones are available as spares to convert the instrument from a dosimeter to a sound level meter or the other way around.

C6672/0.5	Centronics Printer adaptor (requires C6671 cable).
C6671	PC download cable (9 way D type connector).
CEL-6702	dB10 Version 2 standard software.
CEL-6704	dB12 Version 2 enhanced graphical software.
CEL-6648	Nylon padded belt pouch for CEL-3X0 series.
CEL-6225	Single foam dust cover for microphone.
CEL-6225/5	Pack of 5 foam dust covers for microphone.
CEL-282	Acoustic calibrator Class 2.
CEL-6682	Kit case for single dosimeter/sound level meter.
CEL-6679	Kit case for up to 10 instruments and calibrator.
CEL-6760	Environmental kit case for long-term surveys.
CEL-4672	Foam windscreen for external monitoring with CEL-6760 environmental kit case.