

Comparison of Metrosonics and CEL Personal Noise Dosimeters

Feature description	Metrosonics Dosimeters			CEL dosimeters	
	3060	3070	3080	320	360
ANSI S1.4 accuracy	type 2	type 2	type 2	type 2	type 2
lowest measurable noise level (dB)	40	40	40	30	30
highest measurable noise level (dB)	140	140	140	140	140
measurement range (dB)	100	100	100	70	70
number of measurement ranges	1	1	1	3	3
Frequency weightings (<i>for rms</i>)	A or C	A or C	A or C	A or C	A or C
Frequency weightings (<i>for peak</i>)	same as rms	same as rms	same as rms	C or Z	C or Z
Time weightings (<i>response</i>)	S or F	S or F	S or F	S, F or I	S, F or I
Amplitude weightings (<i>exchange rate Q</i>)	3, 4, 5 or 6	3, 4, 5 or 6	3, 4, 5 or 6	3, 4, 5 or 6	3, 4, 5 or 6
amplitude resolution (dB)	0.1	0.1	0.1	0.1	0.1
dose resolution (%)	0.01	0.01	0.01	0.01	0.01
over range indicator in display (<i>o/l</i>)				yes	yes
under range indicator in display (<i>u/r</i>)				yes	yes
peak detector range (dB)	top 28	top 28	top 28	top 40	top 40
number of thresholds	0, 80, 90	two 40 - 140	two 40 - 140	two 70 - 90	two 70 - 90
criterion level for dose (dB)	84, 85, 87, 90	60 - 100	60 - 100	80 - 90	80 - 90
ceiling level (dB)	115 fixed	115 fixed	60 - 140	30 - 140	30 - 140
battery pack	9V	9V	9V	9V	9V
battery life (hrs)	40	40	40	50	50
size (in)	3.0 x 1.0 x 5.2	3.0 x 1.0 x 5.2	3.0 x 1.0 x 5.2	2.6 x 1.2 x 4.8	2.6 x 1.2 x 4.8
weight (oz)	15	15	15	11	11
LCD display	16 characters	16 characters	16 characters	custom design	custom design
removable microphone assembly	yes	yes	yes	yes	yes
security levels to prevent tampering	one level	one level	two levels	two levels	two levels
settable user ID #			6 digits	6 digits	6 digits
calibration level (dB)	102 only	102 only	80 - 130	30 - 140	30 - 140
calibration level saved with run	no	pre & post saved	pre & post saved	pre & post saved	pre & post saved
RS232 digital output for download	n/a	yes	yes	yes	yes
parallel output for direct printing	n/a	yes	yes	yes with adaptor	yes with adaptor
maximum number of separate runs stored	1 run	175 runs	175 runs	50 runs	50 runs
maximum number of profile points stored	n/a		57,000		220,000
measures Lp (<i>instantaneous</i>)	yes	yes	yes	yes	yes
measures Lmx (<i>maximum</i>)	yes	yes	yes	yes	yes
measures Lmn (<i>minimum</i>)				yes	yes
measures Lpk (<i>peak</i>)	yes	yes	yes	yes	yes
measures Leq (<i>energy average</i>)	yes	yes	yes	yes	yes
measures Lav (<i>time average</i>)	yes	yes	yes	yes	yes
measures elapsed time (<i>duration</i>)	yes	yes	yes	yes	yes
stores real time (<i>date & time</i>)		yes	yes	yes	yes
range amplitude distribution 1dB steps			yes	yes	yes
time history data logging of profiles			5 parameters		10 parameters
number of profile period intervals			1s to 1 hr		15 from 1s to 1 hr
variable dose criterion duration (hr)			4, 6, 8, 10, 12, 16, 18		1, 4, 8, 10, 12, 24
customer variable TWA duration (hr:mn)				0:01 to 23:59	0:01 to 23:59
measures LAE (<i>sound exposure level</i>)			yes	yes	yes
measures L10% (<i>10 percentile level</i>)			yes	yes	yes
measures L50% (<i>50 percentile level</i>)				yes	yes
measures L90% (<i>90 percentile level</i>)			yes	yes	yes
measures L95% (<i>95 percentile level</i>)				yes	yes
measures L99% (<i>99 percentile level</i>)				yes	yes
measures Dose% (<i>actual dose %</i>)	yes	yes	yes	yes	yes
measures Proj dose% (<i>projected for 8 hr</i>)	yes	yes	yes	yes	yes
measures TWA (<i>Time Weighted Average</i>)	yes	yes	yes	yes	yes
measures Pa2h (<i>sound exposure</i>)				yes	yes
measures LEP,d (<i>personal daily exposure</i>)				yes	yes
user selectable working day (hr:mn)					yes
customizable parameters via software				yes	yes
Intrinsic safety approval (<i>UL, C-UL</i>)	yes	yes	yes	pending	pending
CE mark approval	yes	yes	yes	yes	yes
Windows analysis software as standard			yes	yes	yes
Instrument only price (\$)					
Instrument kit price inc, meter, cal, w/scr, case, without cable & s'ware (\$)					
Instrument kit price inc, meter, cal, w/scr, case, including cable & s'ware (\$)					

Note - information for above comparison taken from manufacturer's published brochures and liable to change without notice 02/05