



## MODEL 730

# SPARTAN™ NOISE DOSIMETER

- Truly wireless – with wireless charging and Bluetooth low-energy 4.1 communication
- Full control and live monitoring via LD Atlas app
- Download and view measurements, generate reports, and share annotated data from the app
- Automatically connect and download data via G4 LD Utility software
- Built-in bump and motion detection
- Automatic calibration of your dosimeter
- Optional Event Sound Recording (730-ESR)
- Optional 1/1 Octave filters (730-OB1)

## TYPICAL APPLICATIONS

- Worker noise exposure measurements
- Task-based noise measurements
- Compliance to OSHA, MSHA, ACGIH, and ISO 9612
- EU Directive 2003/10/EC compliance

## WIRELESS WORKER NOISE MEASUREMENTS

The Spartan™ Model 730 Noise Dosimeter is designed to make worker noise dose measurements easy and fast. With Spartan, control test setup and measurements directly from the Larson Davis Atlas™ mobile app. All essential tasks can be completed from your iOS™ or Android™ device.

LD Atlas offers interference-free monitoring using low-energy Bluetooth, ensuring that you get the valuable data you need the first time. When a test is complete, Spartan communicates with LD Atlas to download the data, which is viewable directly from a phone or tablet. Generate reports, including the full data file, from the mobile interface before sharing via email.

To begin testing, simply remove the dosimeters from their rugged case and attach them to workers. After a shift, place the dosimeters back in the case where they will charge wirelessly and the data files can be downloaded. Built-in measurement of motion and bumps, combined with optional event audio recordings and 1/1 octave frequency analysis, provide additional data to help you understand what caused the noise.

The G4 LD Utility software offers another option for control of your testing. With all the functionality of the LD Atlas mobile app, G4 LD Utility adds the ability to complete “what-if” analysis to model potential changes and determine the impact of different data selections.

SPECIFICATIONS	
<b>Performance</b>	
Standards	ANSI S1.25-1991 (R2017), IEC 61252 Ed. 1.2
Linear Operating Range	52 – 140 dB rms A-weighted
Dynamic Range	94 dB
Peak Range	78 – 143 dB Peak, C-weighted
Peak Weightings	A, C, Z
RMS Weightings	A, C, Z
Time Weightings	Slow, Fast, Impulse
Frequency Range	20 Hz to 10 kHz
Data Logging	1 second samples
Logged data	$L_{Aeq}$ , $L_{Ceq}$ , $L_{Cpeak}$ , $L_{Zpeak}$ , $L_{ASmax}$ , $L_{AFmax}$ , TWA3, TWA5, Motion
Memory	8 GB internal
Communications	Bluetooth Low Energy 4.1 USB 2.0 (Micro-B connector)
Battery	Rechargeable Lithium Ion
Run Time	40 hours typical
Charge Time	3 hours from full discharge
Charger	Qi-compliant wireless or USB
Compliance	CE, ROHS, WEEE
Motion	Overall motion percentage and bump
Languages	English, Spanish, Italian, French, Portuguese, German
<b>Virtual Dosimeter</b>	
Virtual Dosimeters	4 independent with configurable LED indication
Exchange Rate	3, 4, 5, 6
Criterion Level	70.0 to 100.0 dB
Threshold	70.0 to 100.0 dB
Shift Time	1 to 24 hours
Alarms	2 independent with configurable indication
Measurement Results	Dose; ProjDose; $L_{AVG}$ ; TWA(8); Proj TWA(8); Lex, 8h; Lep,d; Proj Lep,d
<b>Summary Measured Values (Common to all virtual dosimeters)</b>	
$L_{\omega T}$ (SPL), $L_{\omega eq}$ (Leq), $L_{\omega pk}$ (Lpeak), $L_{\omega TMax}$ (Lmax), $L_{\omega TMin}$ (Lmin) where $\omega = A, C, \text{ or } Z$ frequency weighting T = F, S, or I time weighting Lpeak, Lmax, & Lmin including time of occurrence $L_{C-A}$ Exposure (Pa <sup>2</sup> s & Pa <sup>2</sup> h), Motion Exceedance count and time for 2 rms and 3 peak thresholds Overload count, duration, and percentage	
<b>Mechanical</b>	
Display	Color LCD 176 x 176 pixels, always on with low light sensor and front light
Ingress Protection	IP65
Keys	Four buttons
Weight	112 g (4.2 oz.) including clips and windscreen
Dimensions	85 x 54 x 39 mm (3.35 x 2.13 x 1.54 in.) dosimeter only

SPECIFICATIONS (CONTINUED)																										
Microphone	¼-inch Model 375A03																									
Operating Temperature	-10 to +50 °C (14 to 122 °F)																									
Operating Humidity	Up to 90% RH, non-condensing																									
<b>1/1 Octave Filters (optional)</b>																										
Standards	ANSI/ASA S1.11-2014; IEC 61260-1:2014 Class 1																									
Filters	31.5 Hz to 8 kHz																									
Linear Operating Range	42 to 140 dB @ 1 kHz																									
Measured Results	$L_{Zeq}$ (Leq), $L_{ZTMax}$ (Lmax), $L_{ZTMin}$ (Lmin)																									
<b>Event Audio Recording (optional)</b>																										
Format	16-bit .wav																									
Sample Rate	8 kHz																									
Recording Time	Fixed: 2 s pre-trigger and 10 s post-trigger																									
Trigger Source	$L_{AS}$ , $L_{AF}$ , $L_{CS}$ , $L_{CF}$ , $L_{Aeq,1s}$ , $L_{Ceq,1s}$																									
Trigger Level	40 – 140 dB, selectable																									
<b>ORDERING INFORMATION</b>																										
730	Spartan 730 noise dosimeter with one windscreen and two clips. Includes calibration certificate																									
730-PKxx-EU 730-PKxx-UK 730-PKxx-US	Complete Spartan 730 noise dosimeter kit that includes quantity 'xx' dosimeters and one USB to Bluetooth dongle. Each dosimeter includes one windscreen, two clips, and a calibration certificate.																									
	<table border="1"> <thead> <tr> <th>'xx'</th> <th>Spartan 730 Dosimeters</th> <th>Calibrator (qty 1)</th> <th>Calibration Adapter</th> <th>Case</th> </tr> </thead> <tbody> <tr> <td>01</td> <td>1</td> <td>CAL150</td> <td>1 x ADP109</td> <td>CCS056</td> </tr> <tr> <td>03</td> <td>3</td> <td>CAL150</td> <td>2 x ADP109</td> <td>CCS057</td> </tr> <tr> <td>05</td> <td>5</td> <td>CAL150</td> <td>2 x ADP109</td> <td>CCS058</td> </tr> <tr> <td>10</td> <td>10</td> <td>CAL150</td> <td>2 x ADP109</td> <td>CCS059</td> </tr> </tbody> </table>	'xx'	Spartan 730 Dosimeters	Calibrator (qty 1)	Calibration Adapter	Case	01	1	CAL150	1 x ADP109	CCS056	03	3	CAL150	2 x ADP109	CCS057	05	5	CAL150	2 x ADP109	CCS058	10	10	CAL150	2 x ADP109	CCS059
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	- EU includes a Type C power plug for use in Europe - UK includes a Type G power plug for use in the UK - US includes a Type A power plug for use in North America																									
730-ESR	Spartan 730 option to add event sound recording																									
730-OB1	Spartan 730 option to add 1/1 octave filters																									
<b>Accessories</b>																										
CAL150	Class 2 calibrator, with user-selectable output 94 or 114 dB at 1 kHz, ½ in. opening with ¼ in. adaptor (ADP109) and calibration certificate included																									
WS012-XX	Replacement windscreen for Spartan 730. Available in 1, 3, 5, 10, or 25 packs where XX is the number of windscreens																									
730-CLIPS	Replacement clip for Spartan 730, quantity 2																									
CER-730	ISO 17025 factory calibration and certification of Spartan 730																									
ADP109	Calibrator adaptor for ½ in. to ¼ in. opening. Used with Spartan 730																									
DVX016	USB to Bluetooth dongle used with Spartan 730																									



3425 Walden Avenue, Depew, NY 14043-2495 USA

Toll-Free in the USA: 888 258 3222

Phone: 1 716 926 8243 | Email: sales@larsondavis.com

Larson Davis offers a full line of noise and vibration measurement instrumentation such as Class 1 and 2 sound level meters, outdoor noise monitoring systems, personal noise dosimeters, human vibration meters, audiometric calibration systems, microphones and preamplifiers, and data analysis software. Instrumentation is used in community and environmental noise monitoring, measurement of building acoustics, managing worker exposure to noise and vibration, and various automotive, aerospace, and industrial applications. Larson Davis is a division of PCB Piezotronics, Inc., a wholly owned subsidiary of MTS Systems Corporation.

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