



MODEL 821IH-QPR

FIREARMS ACOUSTIC ANALYSIS

- Measure up to 183 dB
- Class 1 Sound Level Meter
- 48 kHz sampling rate
- Simple setup for gunfire testing applications
- Easy-to-navigate, responsive, touch display
- Long battery life, up to 40 hours
- Bluetooth BLE 4.1 wireless communication
- Full control with LD Atlas mobile app
- Dosimetry option included for noise exposure measurements

MEASURE SOUND PRESSURE LEVEL

Many firearm examiners are tasked with determining whether installation of a suppressor on a firearm results in a “perceptible” reduction of the sound pressure level of a gun. The Larson Davis Spartan 821IH-QPR provides this functionality utilizing an easy-to-use handheld platform. Included BLE technology allows for easy measurement control using the LD Atlas mobile app or included software. Meters may also be connected via USB-C.

With the included 1/4” prepolarized pressure microphone, Spartan 821IH-QPR is capable of reading levels up to 183 dB, easily capturing levels typically associated with gunfire testing. Included G4 LD Utility software provides automatic wireless or USB data download, and convenient data storage options. View tabular data, visualize results on a graph, create custom reports, and export data to a variety of formats.

REPORTING USING MEASUREMENT HISTORY				
Record #	Date	Time	Run Duration	LZpk (max)
1	2023-12-29	10:10:14	00:00:05.0	141.8
2	2023-12-29	10:10:26	00:00:06.0	137.4
3	2023-12-29	10:10:40	00:00:06.0	136.7
4	2023-12-29	10:10:51	00:00:07.0	138.1
5	2023-12-29	10:11:01	00:00:05.0	140.9
6	2023-12-29	10:11:09	00:00:05.0	137.9

**Simple setup to view data from each
gunshot without creating numerous files**

Preliminary

SPECIFICATIONS	
GENERAL	
Dynamic Range (A-weighted typical)	61 to 183 dB
Peak Dynamic Range (Z-weighted typical)	103 to 186 dB
Peak Rise Time	30 μ s
Time Weightings	Fast, Slow, & Impulse
Frequency Weightings	A, C, & Z
Data Storage (microSD card)	8 GB standard Up to 32 GB (μ SDHC) and 256 (μ SDXC)
Communication	USB-C, Bluetooth BLE 4.1
Display	480 x 800 color with capacitive touch
Power	Internal Lithium battery, USB-C or external 12 V
Battery Recharge	Qi Wireless, USB-C, or external 12 V
Typical Runtime (internal battery @ 22 °C)	40 hours (display off) 15 hours (display on)
External Power	6 V to 24 V DC (720 mW typical with display off)
Logging	Time history: 1 s to 1 h Measurement History: 1 min to 6 h
Metrics	Leq, Lmax, Lmin, Lpeak, Ln (6 values), Time above
1/1 and 1/3 Octave Metrics (Optional)	Leq, Lmax, Lmin
Signal Output	AC/DC on 3.5 mm TRS jack
Operating Temperature	-30 to 60 °C
Dimensions (H x W x D)	10.1 x 3.3 x 1.3 inches 260 x 83 x 32 mm
Weight	12.1 oz (383 g)
FILTERS (OPTIONAL)	
Bandwidth	1/1 and 1/3 Octaves
Frequencies (base 10)	1/1: 8 Hz to 16 kHz 1/3: 6.3 Hz to 20 kHz
Standards Compliance	ANSI S1.11-2014 Class 1 IEC 61260:2014 Class 1
STANDARDS	
Acoustic	ANSI S1.4-2014 Class 1, IEC 61672-1:2013 Class 1
Noise Dosimetry	ANSI S1.25-1991 IEC 61252:2017
Safety	Directive 2014/35/EU IEC 61010-1:2010 RoHS Directive 2011/65/EU
Approvals	CE, RoHS, WEEE

INCLUDED ACCESSORIES	
DESCRIPTION	MODEL
Pressure Microphone (0.25 mV/Pa)	377A12
Preamplifier	PRM821
1/4" Microphone Adapter	ADP043
USB-C Cable	CBL242-03
Software	G4 LD Utility

OPTIONAL ACCESSORIES	
DESCRIPTION	MODEL
Replacement internal lithium batteries	BAT026
Power cable with Anderson Powerpole® connectors to bare wires (6 in. / 15 cm)	CBL226-1/2
External 12 V power cable for 721 and 821 of length 15 in. (38 cm). Terminated with Anderson Powerpole® connector	CBL241-01
Universal AC power supply with USB-C output connector	PSA045
Hard shell shipping and carrying case	CCS060
Qi charger pad with USB-C connector	PSA046
Tripod with low acoustic signature for use with Sound Level Meters. Max height 80 inches (2 m)	TRP025
Accessory kit for Class 1 Sound Level Meters; includes case (CCS060), power supply (PSA045), Class1 calibrator (CAL1200) & windscreen (WS001)	X21-ACC
Accessory kit for Class 2 Sound Level Meters; includes case (CCS060), power supply (PSA045), Class 2 calibrator (CAL1150) & windscreen (WS001)	X21-ACC1
Option to add 1/1 and 1/3 Octave Band filters	X21-OB3
Option to disable Bluetooth	X21-NBT
8 GB, industrial grade microSD memory chip	X21-SD-8GB
Preamplifier extension cables up to 200 ft. (60 m)	EXC series



Meter Ports