



# Model 831-INT Docking Station

Compact Interface for All Accessories in a Noise Monitoring Station

## Highlights

- Weather sensor interface
- Powered USB hub for communication and GPS accessories
- AC, battery or solar powered
- Battery charge management including solar power
- Power for Model 831, outdoor microphone and weather sensors
- Cabling made easy
- Rugged and reliable

## Applications

- Permanent Noise Monitoring
- Temporary Noise Monitoring



Model 831-INT Docking Station

**Model 831-INT seamlessly integrates the Model 831 with its wide range of accessories**

The Model 831-INT provides the outdoor microphone with both electrical power and control commands for its electrostatic actuator and humidity readout. Weather sensors are connected to the Model 831-INT for wind speed and direction, outdoor temperature and humidity, barometric pressure, rain and hail.

The Model 831-INT further simplifies cabling by providing a USB hub where the GPS unit, the analog or wireless modem connect.

The AC power unit also controls the intelligent charging of the Sealed Lead Acid (SLA) backup batteries. The DC power input is available for solar powered installation.

Finally, the Model 831-INT hosts the Model 831 sound level meter as the heart of a permanent noise monitoring system.



### Model 831 Interface

- Logging of signals from all sensors and DC voltages
- Power for Model 831
- Power and control signals for Models 426A12 and PRM2100 outdoor microphone
- Power for 4 USB ports and logic I/O lines

### Meteorological Inputs

- Four channels, typically used to measure wind speed, wind direction, temperature and relative humidity
- Sensor power is provided
- Connectors: removable screw terminal for wire leads
- Speed: Scale factor for pulses / revolution
- Direction: ratio-metric voltage divider with voltage reference provided
- Two channels: adjustable scale and offset (pre-set for SEN030 temperature and humidity sensor)

Note: The Model 831 scales signals to engineering units

### 4-Port USB Powered Hub

- Cellular Modem: MDMUSB-E
- Analog Modem: MDMUSB-A
- GPS unit: GPS001
- Combined meteo sensor: SEN031
- Up to 500 mA per port

### 2 Digital I/O Lines

- 1 Logic Input, 0 - 5 V (Typical use: open door detection)
- 1 Logic Output, open drain. 0 - 50 V (Typical use: exceedance warning)
- Provides 10 to 15 V power port for external peripherals, up to 100 mA

### Miscellaneous

- Watchdog system will restart the system in the event of system faults
- Compact design cradles the Model 831 & provides for mounting in permanent enclosures
- LED Indicators show
  1. Mains Power
  2. Charger Status:  
On = Full Charge Mode  
Blink = Trickle/Recovery Mode
  3. System Power
  4. USB Hub Power

### Battery Management and Charge Control

- One or two 12 V sealed lead-acid (SLA) batteries
- Connector: removable screw terminal
- Automatic system shutdown on low batteries
- Charging: automatic charger for SLA batteries. 1 Ampere current limited

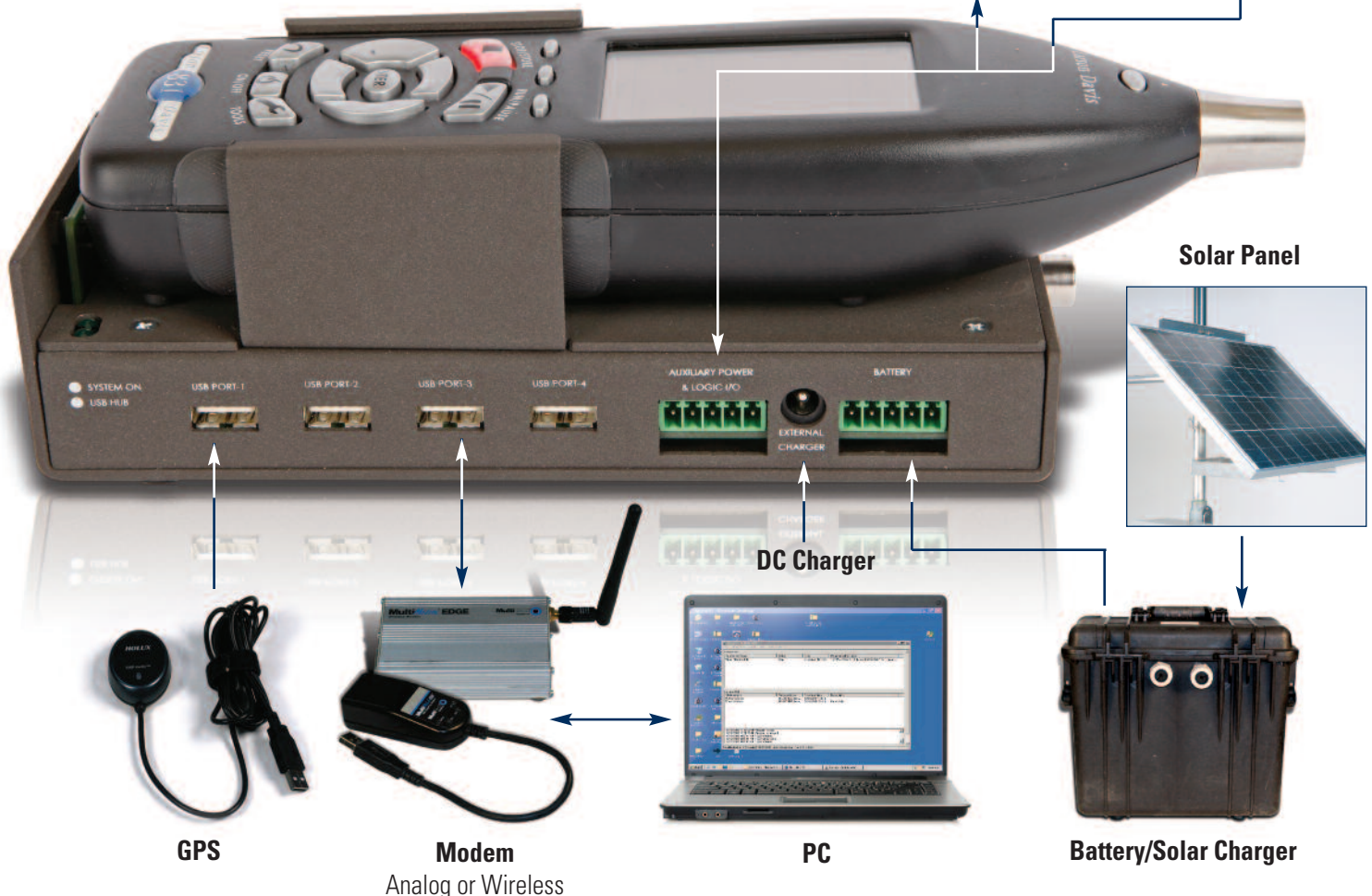
charge capability, with pulsed trickle charge for deeply discharged batteries. Efficient Switch-Mode Power Supply circuitry to reduce heat and improve reliability.

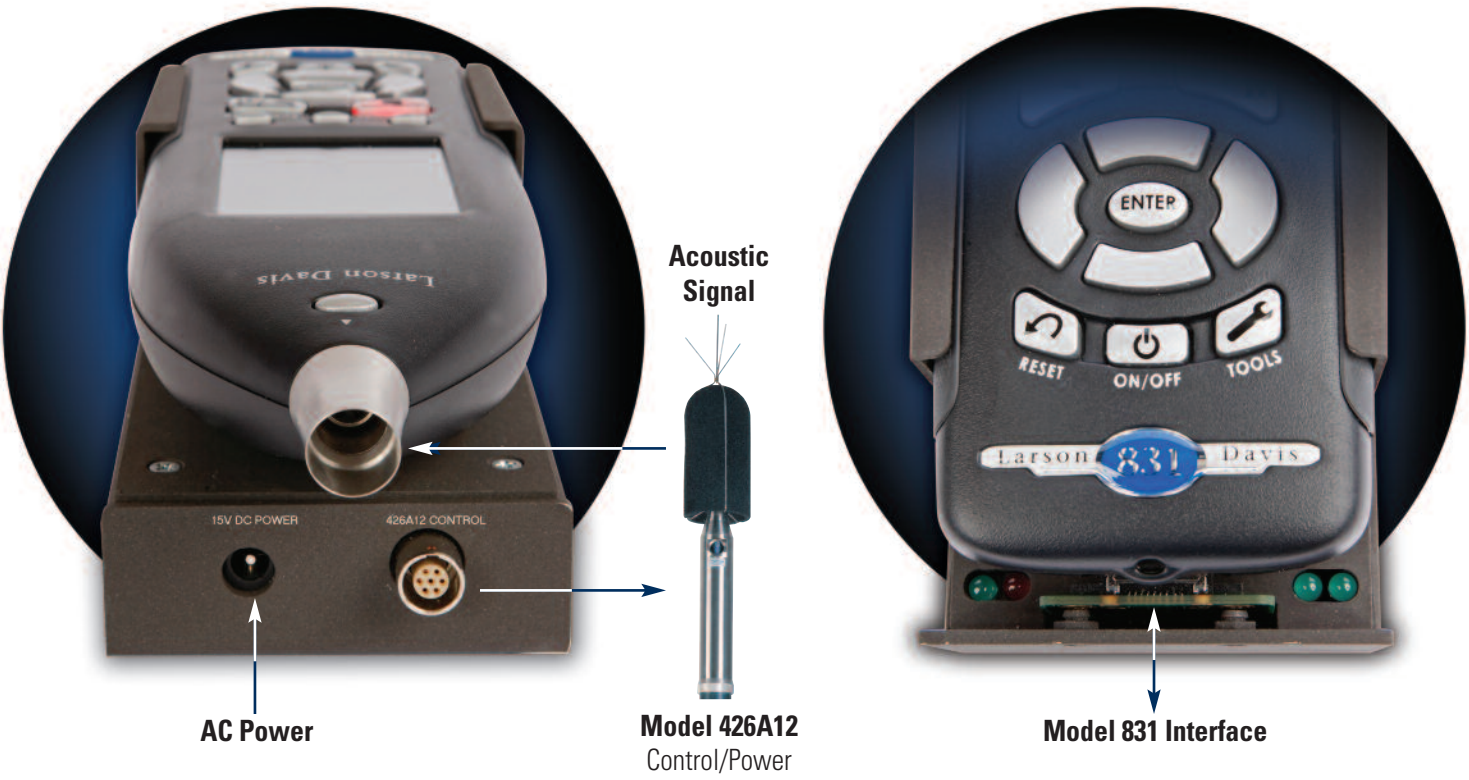
### AC powered

- AC Power provided by 15 V 3.5 A: PSA030
- Seamless, automatic power switching from mains power to battery backup when mains power fails
- Automatic charge of backup batteries
- Automatic power up with mains power restoration, if battery was discharged

### DC powered

- Can be powered from a battery and/or solar panel charger





**SEN028**

Wind Speed/Direction



**SEN029**



**SEN030**

Temperature/Humidity



# Model 831-INT Docking Station



## Specifications

Power	100-240 VAC, 50 or 60 Hz 12-30 VDC
Weight	0.454 kg (1 lb)
Size (L x W x H)	195 x 76.2 x 69.3 mm (7.68 x 3.00 x 2.73 in.)
Operating Temperature	-40 to 70 °C (-40 to 158 °F)
IEC61672	With Model 831 Type 1 Sound Level Meter

## Ordering Information

831-INT	Model 831 Docking Station
---------	---------------------------

## Included Accessories

PSA030	100-240 VAC, 50-60 Hz, IEC connector power supply (3.3A at 15V)
CBL159	1 ft USB cable

## Optional Accessories

MDMUSB-A	Analog Modem
MDMUSB-E	Wireless Edge Modem
GPS001	GPS unit for location and clock
SEN028	Wind speed and direction sensor
SEN029	Wind speed and direction sensor (economic)
SEN030	Temperature and humidity sensor
SEN031	Combined meteorological sensor
426A12	Permanent Outdoor Pre-amplifier / Microphone
NMS031	Fiberglass NMS enclosure (AC power)
NMS032	Fiberglass NMS enclosure (DC/solar power)

## Optional Cables

CBL152	Acoustic signal from Model 426A12 (20ft)
CBL153	Power and Control for Model 426A12 (20ft)
CBL167	Power and data cable for SEN031
DVX008A	USB to serial adaptor for RS232 modem or CBL167

## Optional Accessories



**Model 831**  
Type 1 Sound Level Meter



**Model 426A12**  
Permanent Outdoor  
Microphone



**Model NMS031/2**  
Fiberglass NMS  
enclosure (AC/Solar power)



**Model TRP019**  
20 ft tilt-down  
pole



**Model TRP020**  
20 ft heavy duty  
tripod

# LARSON DAVIS

A PCB PIEZOTRONICS DIV.

3425 Walden Avenue, Depew, NY 14043-2495 USA

Phone 716-926-8243

Toll-Free in USA 888-258-3222

Fax 716-926-8215 E-mail [sales@larsondavis.com](mailto:sales@larsondavis.com)

Web Site [www.larsondavis.com](http://www.larsondavis.com)

ISO 9001 CERTIFIED

© 2009 PCB Group, Inc. In the interest of constant product improvement, specifications are subject to change without notice. PCB, and ICP are registered trademarks of PCB Group Inc., SoundTrack LXT, Spark and Blaze are registered trademarks of PCB Piezotronics, Inc. HV Manager is a trademark of PCB Piezotronics, Inc. All other trademarks are property of their respective owners.

LD-831\_INT-0909

Printed in U.S.A.

For environmental noise monitoring and building acoustics, **Larson Davis** offers a full line of instruments, accessories and software. For personal noise and vibration exposure monitoring, Larson Davis complements this with sound level meters, personal noise dosimeters, human vibration meters, audiometric calibration systems and hearing conservation programs.

Visit [www.larsondavis.com](http://www.larsondavis.com) to locate  
your nearest sales office