



831C Sound Level Meter and NMS Kit Guide

SECTION 1:

This shipment contains _____ Sound Advisor Model 831C kits.
Each kit includes items in this section as noted.

- _____ **079A06** 1/2" Mic Windscreen, 3.5" diameter or
- _____ **079A07** 1/4" Mic Windscreen, 3.5" diameter

Microphone (see table on right)

- _____ **PRM831** Standard Preamp for 831C
- _____ **PRM2103** Heated preamp with remote calibration check and humidity reading. *Requires EPS044 case and CBL222 cable.*

- _____ **EXC010** **EXC series cable**, 5 pin Switchcraft extension cable for **use with PRM831**, used as optional extender between meter and preamp. 10, 20 and 50 ft length options.
- _____ **EXC020**
- _____ **EXC050**

- _____ **CBL222-08** Extension cable for **use with PRM2103** and EPS044. Provides data, control, and power via Anderson Powerpole connectors. 8 and 20 ft lengths available.
- _____ **CBL222-20**

NOTE: Preamplifier release button

- _____ **CBL138** USB Cable USB A to Mini USB, connects meter to computer or power.

- _____ **PSA029** AC Power Adaptor.

- _____ **Batteries** (4) AA rechargeable batteries. Batteries may be installed in meter.

- _____ **DVX014** USB WiFi Adaptor



Job # _____ Customer _____

First Rental Period † _____

† Rental period starts the calendar date after shipment, and ends on date returned. Rentals can be kept beyond the initial period, and are extended at the same period and rate. Rentals returned in an extension period are billed at a net prorated basis based on return date. Let us know if your company requires a new PO or payment method for extension charges.

Microphone(s)

377B02 ships unless otherwise requested. Model 831C can apply a digital correction factor to measure Random Incidence with a Freefield Microphone (and the reverse). Units ship with case, o-ring to mate between preamplifier and mic in outdoor use, desiccant, and microphone guideline sheet.



Quantity	Microphone Model	Size	Type	Noise Floor (dBA)	Low Range Indicator (dBA)	Overload (dBpk)
	377B02	1/2"	Freefield	17.1	26.2	143.5
	377C20	1/2"	Random	15.3	24.4	143.5
	377C01*	1/4"	Freefield	35.7	44.8	172.3
	377C10*	1/4"	Pressure	36.3	45.5	178.8
	377A12*	1/4"	Pressure	37.5	48.6	192.8
	378A04	1/2"	Freefield	6.5	--	80/100**

*Includes ADP043 1/4 inch microphone to 1/2 inch preamp adaptor

**100dB 10Hz – 5000Hz, 80dB for other frequencies, ADP074 and accessories required

831C (Firmware revision 3.3.0 or higher)

Meter Options and Special Notes:

	831C-LOG Time History Logging (multi parameter, increments from 20ms to 24hr)
	831C-ELA Measurement History Logging: exceedance/events, intervals, and daily
	831C-OB3 Selectable real time 1/1 and/or 1/3 octave filter set
	831C-SR Sound Recording: level and dynamic based event recording and more
	831C-SW Direct USB support of Sierra Wireless RV-50 gateway
	Preload Meter Setup: preload user specified measurement set up onto meter(s) prior to shipment from The Modal Shop
	Data Download from meter(s) upon return to The Modal Shop and electronically send data to the following recipient(s):
	Other:

SECTION 2:

One accessory kit included for each family of meter rented unless otherwise specified.

- _____ **CAL200** Calibrator with adapters (if necessary), manual or instruction sheet. Section 5.4 of the 831C Manual is short (1 page!) and covers calibration, including meter screenshots.



- _____ **ADP109** 1/4 in adaptor _____

Information including:

- | | | |
|-------|--------------------------|---|
| Paper | <input type="checkbox"/> | This sheet as a reference |
| USB | <input type="checkbox"/> | • 831C Operation Manual |
| Email | <input type="checkbox"/> | • G4 LD Utility software *Note* |
| Omit | <input type="checkbox"/> | • G4 LD Utility Software Manual |
| | <input type="checkbox"/> | • Calibration certs for each meter and microphone, and calibrator |
| | <input type="checkbox"/> | • Rental Tracking Sheet, includes serial numbers of units shipped |

Please note that USB's are used as a default for the above information, but G4 LD Utility software is also available for download from <http://larsondavis.com/product-support> in the "Software" section. The 831C manual can be found in the "Sound Level Meters" section. **Feel free to call us if you have any questions at +1 513-351-9919**

Videos are available showing calibration and other helpful hints at - <http://larsondavis.com/product-support/technical-tutorials>

Note:

G4 LD Utility software is compatible with all 32 bit and 64 bit versions of Windows 7 and 8.1, and 10. The administrator of the PC must install G4 for successful installation. Rental laptops are available with G4 software preloaded. Meter setup and data download services are also available.



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SECTION 3: Meter Case Options



—— **CCS001-831** Hard shell case for Model 831 Sound Level Meter
Standard method. Each unit ships in individual case. Useful if meters are being divided up at test location.

*Typical Box size and weight:
 22"x16"x10", 15 lb*

—— **CCS001-831-4** Rugged case holds up to (4) 831C, 831 or LxT units with preamplifiers and microphones, and (1) CAL200 calibrator.
Lower shipping costs by eliminating standard cases that ship with each meter.

*Typical Box size and weight:
 20"x16"x14", 25 lb*



SECTION 4: Outdoor components for 831C-based kits

Microphone Environmental Protection Kit



—— **EPS2116** Environmental protection for 1/2" preamplifiers (PRMLXT, PRM831, or PRM2103), with windscreen & bird spike. Mounting options for 1/4-20 thread (TRP001), 1.5" pipe (TRP003) and 3/4" NPT pipe included

Please see the following video for EPS2116 set up details: <https://www.modalshop.com/rental/learn/acoustics/eps2116-setup>

—— **No Environmental Protection Kit** Use your own EPS system or an alternate mounting as noted below.

—— **EPS2106-2** Environmental protection for 1/2" ICP® preamplifiers (PRMLXT or PRM831), includes windscreen, bird spikes, desiccants and threaded for 3/4" standard solid-wall PVC conduit thread (FEM)

—— **EPS2108-2** Environmental protection for 1/2 in preamplifiers (PRMLXT or PRM831), with windscreen, bird spikes, desiccants, 1/4-20 thread (FEM) for use with tripods.

Tripod Options



—— **ADP034** Larson Davis adaptor used to connect the EPS2116 to the TRP003 tripod

—— **TRP003** Ultimate support tripod, max height 8ft, used in portable NMS systems
Tripod for unattended monitoring.

*Typical box size and weight:
 14 lb for 1, 25 lb for 2, box 64"x 8"x 8"*

—— **TRP001** Larson Davis Instrumentation tripod with ADP032 preamp to tripod interface
Lightweight tripod, height adjusts from 21" to 56". Not recommended for long term monitoring or in heavy wind. Includes 1/4 – 20 mount

—— **No Tripod** Use your own tripod option. Use any tripod with a 1/4-20 male mounting thread (typical camera thread). Can be used with the 079A11 or EPS2116.



Microphone mounting

—— **079A10** Holds 1/4" microphone/preamplifier pair via friction fit, and mates to standard camera tripod via 1/4"-20 thread

—— **079A11** Holds 1/2" microphone/preamplifier pair via friction fit, and mates to standard camera tripod via 1/4"-20 thread

079A11





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Power Options



_____ **EPS042** kit for multi-day use. Includes:

- _____ Battery quick guide
- _____ **BAT015** 8 D-cell battery pack
- _____ BAT015 installation guide
- _____ BAT015 battery door
- _____ D-cell batteries (8 Alkaline included)
- _____ Power connection to meter

Typical run time on 8 batteries of 4-5 days with power save options activated and no USB peripheral usage. Can also load only 4 batteries into battery pack for half the run time.



_____ **EPS044-SLA** kit for multi-day use. Includes:

- _____ **CCS051** case with foam inserts, brackets, power distribution block, and accessories
- _____ **BAT0020** 35 Ah 12 Volt SLA battery *
- _____ **PSA038** Solar Charge Controller *
- _____ **CBL224-02** Charge controller to power block cable *
- _____ **CBL225-01** Fused battery cable *
- _____ **CBL226-02** Solar connectors to solar charger cable *
- _____ **CBL228-03** 831C to power block cable *
- _____ **ACC009** monopole (or alternate as noted in section

4) _____

Power connector removal tool, tie downs, stakes, Phillips #2 and #0 screwdrivers, and accessory case

Typical run time of 11-12 days with power save options activated and no USB peripheral usage.

* Denotes pre-installed items



_____ **SLP002** Portable 100 Watt solar panel with stand and connectors for use with EPS044

Continually charges battery of EPS044 for extended run time

SECTION 6: Weather Sensor Kit

This shipment contains _____ weather system kit(s) (includes items as marked below).

SEN031
or
SEN032



CBL229



DVX008A



Coupler



TRP003-WTHR

_____ **SEN031** Combined weather sensor: wind speed and direction, temperature, humidity, pressure, rainfall (includes coupler)

_____ **SEN032** Combined wind speed and direction sensor

_____ **DVX008A** USB Adaptor for DBM9 interface

_____ **CBL229** Cable for SEN031 and SEN032. Serial port for control and data, Anderson Powerpole connectors to power from EPS044. Connects to Model 831 with DVX008A.

_____ **Cable Length**

_____ **TRP003-WTHR** Tripod adaptor for SEN031. Includes 24" horizontal bar, heavy duty clamp and 3/4" X 4" PVC

_____ **CBL225-01** Adaptor power cable for battery with spade connectors and Anderson Powerpole connectors. 1 ft. length



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079A15



Additional Power Options *See online for additional information*

- _____ **CBL143** External Power Cabling for Two External 12 V Batteries
- _____ **CBL168** External Power Cabling for One External 12 V Battery

Additional Tripod and Mounting Options

- _____ **079A15** Tripod for temporary/attended testing. When used with 079A11 clip, holds mic/preamp pair with windscreens. Not designed to support weight of sound meter

USB Options

- _____ **DVX014** WiFi Wireless Adaptor *typically provided as standard*
- _____ **831-MEM32G** 32 GB USB low profile memory drive
- _____ **Weather** SEN031 and SEN032 weather sensors, *more information in Section 6*
- _____ **Modem/External Gateway** See NMS044 system
- _____ **GPS001** GPS unit for 831C provides global positioning information to 831C data
- _____ **Headset** use your own USB headset to listen to recorded audio files
- _____ **DVX012** USB to wired Ethernet adaptor. Connects 831C to Ethernet port. Ethernet cable not included. *Use when using more than 2 USB peripherals.*
- _____ **DVX013** 3 Port USB hub plus Ethernet to USB hub. Requires external 5 V power (**PSA036 included**).
- _____ **DVX015** Self Powered 2 port USB hub

Alternate Inputs (non-USB)

- _____ **ACC003** Headset with microphone boom, 2.5mm micro-jack for voice annotation
- _____ **ADP074** ICP® interface cable allows connection of a single axis ICP® accelerometer, provides BNC connection
- _____ **ADP097** Direct input adaptor BNC for Model 831

Additional Accessories

- _____ **CAL200** Class 1 acoustic calibrator with user selectable output of 94 or 114 dB at 1 kHz, 1/2" opening, *typically provided as standard*
- _____ **SWW-DNA** Data Navigation and Analysis Software navigate through extensive data with measurement organization, reporting, and data post-processing tools
- _____ **EPS037** Large environmental enclosure kit with BAT012, 100 Ah battery, battery charger and cabling. Typically provides 18 days of operation per charge (run time with no USB peripherals and power save on)
- _____ **012A10** BNC cable. 10 ft
- _____ **BNC m-m** BNC male to male adapter
- _____ **ACO WS7 7"** Windscreen for 1/2" microphones (untreated)
- _____ **ACO-WS7-80T 7"** Windscreen for 1/2" Microphones (80ppi) Dense-Treated Windscreen

Underwater Acoustics

- _____ **TC4013** Reson high sensitivity low frequency miniature hydrophone. 1Hz-170kHz, 700m operating depth, cab terminating in LEMO with BNC adaptor. *6m standard cable length, various cable lengths available*
- _____ **42AA** Pistonphone Calibrator, 114 dB @ 250 Hz
- _____ **RA0043** Pistonphone coupler for TC4013 hydrophone
- _____ **ADP005** BNC to 1/2 in microphone thread adapter, 18 pF with shorting
- _____ **TL8013** Protective cage for TC4013 hydrophone