1 YEAR
WARRANTY

CE

OMEGA®

User's Guide



Shop online at omega.com℠

e-mail: info@omega.com
For latest product manuals:
omegamanual.info

HHSL-101
USB Digital Sound Level Data Logger

omega.com info@omega.com

Servicing North America:

U.S.A.: Omega Engineering, Inc., One Omega Drive, P.O. Box 4047
Stamford, CT 06907-0047 USA
Toll-Free: 1-800-826-6342 (USA & Canada only)
Customer Service: 1-800-622-2378 (USA & Canada only)
Engineering Service: 1-800-872-9436 (USA & Canada only)
Tel: (203) 359-1660 Fax: (203) 359-7700
e-mail: info@omega.com

For Other Locations Visit omega.com/worldwide

The information contained in this document is believed to be correct, but OMEGA accepts no liability for any errors it contains, and reserves the right to alter specifications without notice.

TABLE OF CONTENTS

Introduction. . . . . 2 – 3
Key Features. 3
Safety Instruction 4
What's in the Package 4
Product Overview 4
Setup Instructions. . . . . 4 – 5
    Install the Battery . . . . . 4 – 5
    Software, Drivers, Configuration. 5
Operating Instructions . . . . . 5 – 6
    Deploy the Unit 5
    Button Functions. . . . . 5 – 6
Specifications 6
Maintenance Tips 7

INTRODUCTION

Thank you for purchasing the HHSL-101 USB Digital Sound Level Data Logger. Please read this user's manual carefully and thoroughly before using the instrument.

The HHSL-101 is a low-cost, compact, battery-powered sound level meter capable of unattended logging (recording) of the decible level of an environment for days, weeks, or months. Data logging can be started or stopped by pushing a button on the unit, eliminating the need to bring a laptop to the job site.

Windows® 7 and Windows® XP are registered trademarks of Microsoft Corporation.

After a data log has been captured and stored, it can be uploaded as a .txt file to any PC running the Windows®7 or Windows® XP operating system after plugging the HHSL-101 into one of the computer's USB ports. The HHSL-101's internal flash memory is large enough to store up to 32000 data points.

Included with the product—which is slightly larger than a thumb drive—is a mini-disc with the drivers needed to interface the unit to the computer, as well as software that can display a data log file as a table or graph and/or export it to Microsoft Excel. Exporting to Excel is recommended for sophisticated trending and analysis of sound level data and easy detection of unexpected excursions.

KEY FEATURES

- One button starts/stops data logging without a PC
- Plug-and-play USB 2.0 interface; no need for cables, cradles or docks
- Large storage capacity offers the ability to track, store, and download 32,000 data points into Excel-Format.
- LCD displays real time sound level
- A/C frequency weighting
- FAST/SLOW time weighting
- MAX/MIN/AVG displays
- High and low alarm limit, selectable sampling time
- Ability to analyze data in graph view using included software and also print or save the results.

SAFETY INSTRUCTION

Do not use the HHSL-101 in the presence of flammable or explosive gases.

WHAT'S IN THE PACKAGE

The HHSL-101 comes in a blister pack containing:

- The instrument (with included "1/2 AA" battery)
- A disc with software drivers for Windows® 7 or Windows® XP computers, a program for capturing data logs and displaying them as curves, a software installation and operation manual, a PDF of this user's manual
- A stand to mount the instrument
- A USB extension cord
- A hard copy of this user's manual (inside the fold-over card)

PRODUCT OVERVIEW

Fig. 1 shows the main components, controls, display and connectors of the HHSL-101. names and functions before moving on to the Setup Instructions.

A. Microphone
B. Function button
C. LCD
D. Protective cap
E. Full-size USB plug

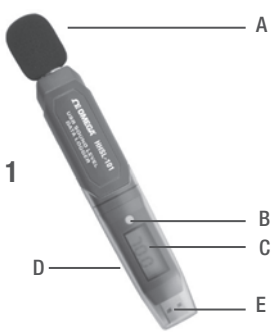


Fig. 1

SETUP INSTRUCTIONS

INSTALL THE BATTERY

The HHSL-101 uses a 3.6VDC "1/2 AA" Lithium-ion battery (included). **To open the battey compartment**, use a screwdriver with a fine point to push in the silver flange

showing through the small square hole in the rear of the unit. Push back the cover, insert a fresh battery in the correct orientation, and replace the cover, pushing it forward until you feel and hear a click.

Note: If the battery is removed from a unit before it has been set up from software or while it is recording, the unit must be reconfigured before it can be reactivated. If it is not reconfigured, the unit will remain in standby mode.

Replacement "1/2 AA" batteries are available from Omega (part no. OM-EL-BATT).

SOFTWARE, DRIVERS, CONFIGURATION

Please refer to the software manual on the CD for installation, configuration and operating instructions.

OPERATING INSTRUCTIONS

DEPLOY THE UNIT

The HHSL-101 is particularly easy to deploy on a job site because the unit does not need to be plugged into a computer to be activated (ready to start logging data). The HHSL-101—with its protective cap on—can be deployed either by laying it on a horizontal surface or by mounting it onto the stand provided.

BUTTON FUNCTIONS

To turn on the device, press and hold the unlabeled yellow Function button (Fig. 1, Callout B) for 3 seconds. If the device has not yet been activated, this operation will activate the device and the LCD will display **Log**. If the device is already activated, this operation will deactivate the logger and the LCD will display **Con**. If the memory is full, the LCD will

display **FUL** during recording. The data logger has 5 display modes which are **Normal**, **Max**, **Avg** and **Status**. Press the button briefly to switch between these modes.

Normal: displays current sound level

Max: displays the maximum reading recorded since activation of this mode

Min: displays the minimum reading recorded since activation of this mode

Avg: displays the average value of readings recorded since activation of this mode

Status: displays status of the device

- **Log**: currently logging data
- **Con**: inactive; connect to computer to configure for next data logging session
- **Ful**: memory is full
- **---** configured and ready to start logging

SPECIFICATIONS

Range: 30~130dB Resolution: 0.1dB Accuracy: ±1.5dB

Max capacity: 32000 data points Link Protocol: USB 1.0/2.0

Power supply: DC3.6V Li Battery Capacity: 1200mAh

Working current: <1mA

Operating temperature: 32° to 122°F (0° to 50°C)

Operating humidity: 10-90%RH non-condensing

Storage temperature: 14° to 122°F (-10° to 50°C), 5% to 95%RH w/o battery

Dimensions: 7.09 x 1.10 x 1.06 in. (180 x 28 x 27 mm)

Weight: 2.01 oz. (57g) w/o battery

MAINTENANCE TIPS

- Avoid dropping the unit. Do not subject it to violent shock or vibration or expose it to strong electromagnetic fields (for example, near arc welders or induction heaters).
- Keep the unit out of direct sunlight.
- Do not use chemicals or abrasive cloth to clean the display window or housing.
- Before storing the HHSL-101 for an extended period of time (several months or more), remove the battery to avoid having it leak and damage the unit.

WARRANTY/DISCLAIMER

OMEGA ENGINEERING, INC. warrants this unit to be free of defects in materials and workmanship for a period of **13 months** from date of purchase. OMEGA's Warranty adds an additional one (1) month grace period to the normal **one (1) year product warranty** to cover handling and shipping time. This ensures that OMEGA's customers receive maximum coverage on each product.

If the unit malfunctions, it must be returned to the factory for evaluation. OMEGA's Customer Service Department will issue an Authorized Return (AR) number immediately upon phone or written request. Upon examination by OMEGA, if the unit is found to be defective, it will be repaired or replaced at no charge. OMEGA's WARRANTY does not apply to defects resulting from any action of the purchaser, including but not limited to mishandling, improper interfacing, operation outside of design limits, improper repair, or unauthorized modification. This WARRANTY is VOID if the unit shows evidence of having been tampered with or shows evidence of having been damaged as a result of excessive corrosion; or current, heat, moisture or vibration; improper specification; misapplication; misuse or other operating conditions outside of OMEGA's control. Components in which wear is not warranted, include but are not limited to contact points, fuses, and triacs.

OMEGA is pleased to offer suggestions on the use of its various products. However, OMEGA neither assumes responsibility for any omissions or errors nor assumes liability for any damages that result from the use of its products in accordance with information provided by OMEGA, either verbal or written. OMEGA warrants only that the parts manufactured by the company will be as specified and free of defects. OMEGA MAKES NO OTHER WARRANTIES OR REPRESENTATIONS OF ANY KIND WHATSOEVER, EXPRESSED OR IMPLIED, EXCEPT THAT OF TITLE, AND ALL IMPLIED WARRANTIES INCLUDING ANY WARRANTY OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE HEREBY DISCLAIMED. LIMITATION OF LIABILITY: The remedies of purchaser set forth herein are exclusive, and the total liability of OMEGA with respect to this order, whether based on contract, warranty, negligence, indemnification, strict liability or otherwise, shall not exceed the purchase price of the component upon which liability is based. In no event shall OMEGA be liable for consequential, incidental or special damages.

CONDITIONS: Equipment sold by OMEGA is not intended to be used, nor shall it be used: (1) as a "Basic Component" under 10 CFR 21 (NRC), used in or with any nuclear installation or activity; or (2) in medical applications or used on humans. Should any Product(s) be used in or with any nuclear installation or activity, medical application, used on humans, or misused in any way, OMEGA assumes no responsibility as set forth in our basic WARRANTY/DISCLAIMER language, and, additionally, purchaser will indemnify OMEGA and hold OMEGA harmless from any liability or damage whatsoever arising out of the use of the Product(s) in such a manner.

RETURN REQUESTS/INQUIRIES

Direct all warranty and repair requests/inquiries to the OMEGA Customer Service Department. BEFORE RETURNING ANY PRODUCT(S) TO OMEGA, PURCHASER MUST OBTAIN AN AUTHORIZED RETURN (AR) NUMBER FROM OMEGA'S CUSTOMER SERVICE DEPARTMENT (IN ORDER TO AVOID PROCESSING DELAYS). The assigned AR number should then be marked on the outside of the return package and on any correspondence. The purchaser is responsible for shipping charges, freight, insurance and proper packaging to prevent breakage in transit.

FOR **WARRANTY** RETURNS, please have the following information available BEFORE contacting OMEGA:

1. Purchase Order number under which the product was PURCHASED,
2. Model and serial number of the product under warranty, and
3. Repair instructions and/or specific problems relative to the product.

FOR **NON-WARRANTY** REPAIRS, consult OMEGA for current repair charges. Have the following information available BEFORE contacting OMEGA:

1. Purchase Order number to cover the COST of the repair,
2. Model and serial number of the product, and
3. Repair instructions and/or specific problems relative to the product.

OMEGA's policy is to make running changes, not model changes, whenever an improvement is possible. This affords our customers the latest in technology and engineering.

OMEGA is a registered trademark of OMEGA ENGINEERING, INC.

© Copyright 2016 OMEGA ENGINEERING, INC. All rights reserved. This document may not be copied, photocopied, reproduced, translated, or reduced to any electronic medium or machine-readable form, in whole or in part, without the prior written consent of OMEGA ENGINEERING, INC.

Where Do I Find Everything I Need for Process Measurement and Control? OMEGA...Of Course!

Shop online at omega.com℠

TEMPERATURE

- Thermocouple, RTD & Thermistor Probes, Connectors, Panels & Assemblies
- Wire: Thermocouple, RTD & Thermistor
- Calibrators & Ice Point References
- Recorders, Controllers & Process Monitors
- Infrared Pyrometers

PRESSURE, STRAIN AND FORCE

- Transducers & Strain Gages
- Load Cells & Pressure Gages
- Displacement Transducers
- Instrumentation & Accessories

FLOW/LEVEL

- Rotameters, Gas Mass Flowmeters & Flow Computers
- Air Velocity Indicators
- Turbine/Paddlewheel Systems
- Totalizers & Batch Controllers

pH/CONDUCTIVITY

- pH Electrodes, Testers & Accessories
- Benchtop/Laboratory Meters
- Controllers, Calibrators, Simulators & Pumps
- Industrial pH & Conductivity Equipment

DATA ACQUISITION

- Data Acquisition & Engineering Software
- Communications-Based Acquisition Systems
- Plug-in Cards for Apple, IBM & Compatibles
- Data Logging Systems
- Recorders, Printers & Plotters

HEATERS

- Heating Cable
- Cartridge & Strip Heaters
- Immersion & Band Heaters
- Flexible Heaters
- Laboratory Heaters

ENVIRONMENTAL MONITORING AND CONTROL

- Metering & Control Instrumentation
- Refractometers
- Pumps & Tubing
- Air, Soil & Water Monitors
- Industrial Water & Wastewater Treatment
- pH, Conductivity & Dissolved Oxygen Instruments

M5562/0416