

## SE-400 SERIES DISPLAY AND KEYPAD



Figure 1

A. Softkeys (four softkeys used as additional menu options with specific screens.)
B. Backlight Key (used to illuminate the background of the display)
C. Up Arrow Key (used to toggle through menu/setup options and scrolls through the values on the measurement screen.)
D. Left Arrow Key (used to navigate through menus and setup parameters.)
E. Run/Stop Key (used to run and stop a logged session.)
F. Right Arrow Key (used to navigate through menus and setup parameters.)
G. Enter Key (used to select menus and confirm setup parameter changes.)
H. Down Arrow Key (used to toggle through menu/setup options and scrolls through the values on the measurement screen.)
I. On/Off/Esc Key (used to power on, power off and/or escape or move back one screen.)

### **DANGERS, WARNINGS, CAUTIONS**

#### **Danger**

Failure to observe the following procedures may result in serious personal injury.

- Not for use in explosive or hazardous locations.
- Contains built-in lithium polymer battery. Do not incinerate or dispose of in fire. Do not disassemble, alter, or re-construct.

#### **Warning**

Failure to observe the following procedures could damage the instrument.

- Read the manual before operation.
- Do not store in temperatures outside -20°C to 60°C (-13°F to 140°F)
- Do not immerse in liquids.
- Condensation may damage your instrument.
- Substitution of components may impair the accuracy of the instrument. Repair should be done by authorized service personnel only.

#### **Caution**

- The battery in this instrument has limited shelf-life, even if never used.
- A non-condensing environment is required for proper measurements.
- Do not charge battery outside the range of 0°C to 40°C (32°F to 104°F). Battery run-time may be reduced when operating at lower than 0°C (32°F) temperatures.
- 3M Quest recommends to fully charge the SE-400 Series for approximately 4 hours prior to first use.

#### **Intended Use**

The SE-400 Series is intended to measure sound pressure levels in air and provide local sound and noise detection measurements. It is fitted with 12 keys for powering on/off, viewing and/or running/stopping measurements, navigating and setting parameters (See Figure 1 for more information). For proper use, follow local regulations, refer to all information supplied, or contact a safety professional, or call 3M at 1-800-243-4630 (NA), or 3M on 0870 60 800 60 (UK) or 1800 320 500 (Ireland).

## GETTING STARTED

### Attaching the Preamp

The SE-400 Series, model SE-401 is equipped with a removable preamp and is shipped unattached to the SLM.

1. Place the preamp connector over the mating connector at the top of the instrument. Gently press down while rotating the preamp ring until the preamp connector drops into place.
2. Continue to rotate the preamp ring until secure.

### Charging

It is recommended to fully charge the SE-400 prior to first use.

Attach the external mini-USB battery charger into the SE-400 Series and plug into an electrical outlet. A second option is to charge with a mini-USB cable from a computer to the SE-400 Series.

Status of battery icon: When charging, the battery indicator will scroll, shading in the indicator. When the battery is fully charged, the battery indicator will stop scrolling. Note: expect approximately 8 hours to charge a fully depleted battery.

### Powering On/Off

1. Press the key until the start screen appears.
2. To power off, ensure the SE-400 Series is stopped. Press and hold key until the measurement screen disappears.

### Calibrating

It is advisable to calibrate the Sound Examiner SE-400 Series before and after a run to ensure highly accurate measurement results.

1. Ensure the SE-400 Series is turned on, stopped, and not logging.
2. Attach the calibrator and calibrator adapter to the SE-400 Series. Set the calibrator to 1000 Hz and 114 dB (if it is selectable). Turn on the calibrator.
3. Press the corresponding softkey for the setup menu.
4. Press the CAL softkey or select Calibration. (See Figure 2-A).
5. Press key to select the Calibration screen. (See Figure 2-B).
6. In the calibration screen, press the corresponding softkeys to adjust the measurement to 114.0 dB (See Figure 2-C).

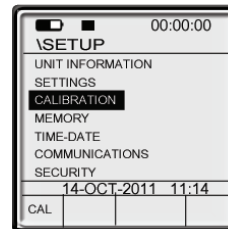


Figure 2-A

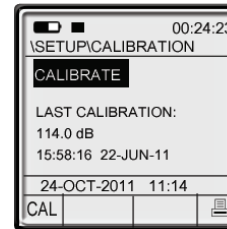


Figure 2-B



Figure 2-C

## Windscreen

The SE-400 Series features a removable windscreen, which is primarily used to reduce noise effects from wind with minimal effects on the readings. It is recommended to place and use the windscreen over the microphone at all times to help protect the microphone.

## Positioning

For area monitoring and general sound level sessions, position the instrument in the field at a 0° angle towards the noise source.

## Settings





- The response time and the frequency weighting settings may be changed from one of the measurement screens when stopped. To change, press the corresponding softkey repeatedly until the appropriate response time or frequency weighting settings are selected.
- To access the settings menu, select the  setup icon with the corresponding softkey.
  - To change the log interval, exchange rate, peak weighting, language, and/or contrast, select time/date, language settings by pressing  /  keys and press  key. (See Figures 3-A and 3-B.)









Figure 3-A



Figure 3-B

## OPERATING

### Running and Viewing Measurements

- Press the  key to begin a logging session. The run icon will appear with a run-time clock indicating the current duration of the session.
  - The multi-measurement screen (see Figure 4-A) will appear with the SPL displayed.
- Press the  /  arrows to scroll through measurements.
- Press the  key to view single measurement screen (see 4-B). Press the  /  arrows to scroll through the measurements.

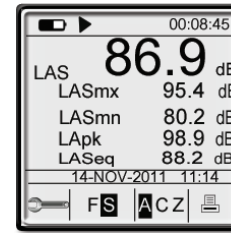


Figure 4-A

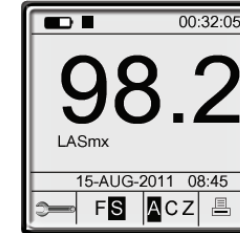


Figure 4-B

### Viewing measurements in Detection Management Software (DMS)

- Optional: To view the logged data in charts, tables, and customized reports, download the data into 3M™ Detection Management Software (DMS).

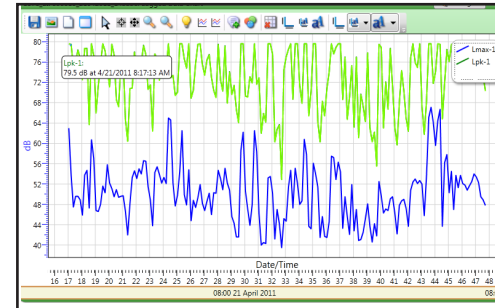


Figure 5-A: Example of a logged data chart in DMS

**IMPORTANT:** For appropriate use of hearing protection devices, consult your safety professional, applicable local standards or contact 3M (Local Contact Details). Note: Hearing protection sold separately. This product complies with the requirements of IEC61672-1 with the exception of clause 9.1c, "An instruction manual shall be provided as a printed document in one or more parts". A printed copy of the instruction manual is available on request.



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