airmet
Work with Confidence

QUICK START
GUIDE

Sound Examiner SE-400

TSI | **QUEST**™

SOUND EXAMINER SE-400

1. **Softkeys:** Four softkeys used as additional menu options with specifc screens.
2. **Backlight Key:** Used to illuminate the background of the display screen.
3. **Up Arrow Key:** Used to toggle through menu/setup options and scrolls through the values on the measurement screen.
4. **Left Arrow Key:** Used to navigate through menus and setup parameters.
5. **Run/Stop Key:** Used to run and stop a logged session.
6. **Right Arrow Key:** Used to navigate through menus and setup parameters.
7. **Enter Key:** Used to select menus and confirm setup parameter changes.
8. **Down Arrow Key:** Used to toggle through menu/setup options and scrolls through the values on the measurement screen.
9. **On/Off/Esc Key:** Used to power on, power off and/or escape or move back one screen.
10. **Windscreen:** Used to reduce noise effects from wind with minimal effects on the readings.

Figure 1

INTENDED USE

The SE-400 Series non-IS Sound Level Meter is intended to measure sound pressure levels in air and provide 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 suitability and proper use follow local regulations and refer to all information supplied. For more information contact a safety professional.

The SE-400 Series IS models are intended to measure sound pressure levels in air and may measure in certain hazardous locations as identified by the User Warnings, Safety Markings, and Standard information page iii, part number: 053-777 in the user manual.
Consult your company's safety professional for local standards.
Note: SE-400 IS model is manufactured with a red housing and black backing.

DANGERS, WARNINGS, CAUTIONS
SE-400 non-IS models:

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

+ Not for use in explosive or hazardous locations. This product is not intrinsically safe.
+ 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 temperatures lower than 0°C (32°F).
+ It is recommended that the SE-400 Series is charged for approximately 4 hours before first use.
+ The SE-400 Series Sound Level Meter may not be sufficient to carry out a full risk assessment of workers exposed to hazardous noise levels.

DANGERS, WARNINGS, CAUTIONS
SE-400 IS models:

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

+ Contains built-in lithium polymer battery. Do not incinerate or dispose of in fire. Do not disassemble, alter or re-construct.
+ This product must not be charged in hazardous locations.

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.

CAUTION

+ Substitution of components may impair the accuracy of the instrument. Repair should be done by authorized service personnel only.
+ 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 the battery outside of the range of 0°C to 40°C.
+ Battery run-time may be reduced when operating at temperatures lower than 0°C.
+ Contains Lithium Cell 4.2V/1500 mAH. Do not attempt to replace in a hazardous location.

General

+ Substitution of components may impair the accuracy of the instrument. Repair should be done by authorized service personnel only.
+ 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 the battery outside of the range of 0°C to 40°C.
+ Battery run-time may be reduced when operating at temperatures lower than 0°C.
+ Contains Lithium Cell 4.2V/1500 mAH. Do not attempt to replace in a hazardous location.

Getting Started

Attaching the Preamp

The SE-400 Series, models SE-401 non-IS and SE-402-R are 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. Rotate the preamp ring until secure.

Charging

The SE-400 Series is charged using the supplied USB charger or personal computer's USB port.
A fully depleted battery will require approximately 8 hours to fully charge when using the external battery charger.
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.

Powering On/Off

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

Calibrating

It is advisable to perform a field calibration before taking measurements to ensure your measurements are accurate in the current environment.

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).
3. Turn On the calibrator.
4. From the measurement screen, press the corresponding softkey from the ⌐⚊ menu.
5. Press the **CAL** softkey or select Calibration (See Figure 2-A.)
6. In the calibration screen, press **CAL** softkey or press ⬤ key. (See Figure 2-B.)
7. Press the corresponding ▲▼ softkeys to adjust the measurement to 114.0 dB. (See Figure 2-C.)
8. Press the ⬤ key to save the changes or escape to abort.
9. Press the 🔘 key twice to return to the main measurement screen.

Figure 2-A

Figure 2-B

Figure 2-C

Windscreen

The SE-400 Series features a removable windscreen. This is primarily designed to reduce noise effects from wind with minimal effect on the readings. It is recommended to use the instrument with the windscreen on at all times in order to 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

1. The frequency weighting and the time response may be changed on the instrument by pressing the corresponding **FS** or **ACZ** softkeys when in stop mode from the measurement screen. (See Figure 4-B.)
2. 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

▭ ■	00:00:00
\SETUP	
UNIT INFORMATION	
SETTINGS	
CALIBRATION	
MEMORY	
TIME-DATE	
COMMUNICATIONS	
SECURITY	
14-AUG-2011 11:14	
CAL	

Figure 3-B

▭ ■	00:22:49
\SETUP\SETTINGS	
Log Interval:	60 sec
Exchange Rate:	3
Peak Weighting:	A
Language:	English
Contrast:	5
03-NOV-2011 11:14	

Operating

Run, stop, and view results

1. To start a session, press the ⊙ key. 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.
2. Press the ⏷ / ⏶ arrows to scroll through measurements.
3. Press the ⊜ key to view single measurement screen (see 4-B).
   Press the ⏷ / ⏶ arrows to scroll through measurements.

Figure 4-A

▭ ▶	00:08:45
LAS	**86.9** dB
LASmx	95.4 dB
LASmn	80.2 dB
LApk	98.9 dB
LASeq	88.2 dB
14-NOV-2011 11:14	
⚲	F**S** |**A**C Z| 🖶

Figure 4-B

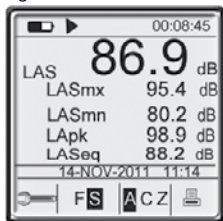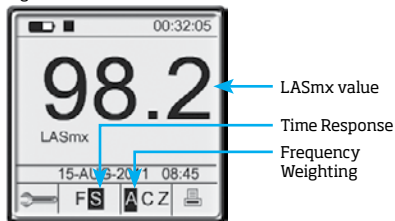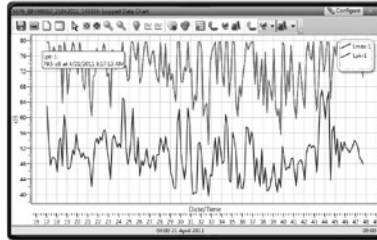| ▭ ■	00:32:05
	98.2
LASmx	
15-AUG-2011 08:45	
⚲	F**S** |**A**C Z| 🖶

← LASmx value

← Time Response

← Frequency Weighting

6

Viewing measurements in DMS

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

Figure 5-A

IMPORTANT: For appropriate use of hearing protection devices, consult your safety professional.
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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