

# LISST-STREAMSIDE

A pumped in-line Sediment Sensor for continuous monitoring of shallow streams and rivers

## • Particle Size Distribution • Sediment Concentration

The LISST-StreamSide from Sequoia Scientific, Inc. is a laser particle sizer specifically designed for monitoring shallow rivers, streams, or ponds. It is a flow-through instrument for use in field environments. Water is pumped through the instrument and the detailed size distribution and volume concentration is measured and stored on board. A water sample is not

retained - after flowing through the instrument the water is simply returned to the source or other appropriate drain. Therefore no sample handling or lab processing is required. Sampling protocols are easily programmed using a touch panel display. A built-in clean water background system allows for automatic "zeroing" of the instrument

before each measurement or on a fixed schedule. This automatic recalibration of the instrument allows the instrument to compensate for fouling of the optics, for example due to biological growth. Communication with the instrument is through a standard serial link that is compatible with many wired and wireless remote data transfer devices.



# LISST-STREAMSIDE Pumped in-line Sediment Sensor

## FEATURES

- Small-angle forward laser light scattering (laser diffraction) - compliant with ISO-13320-1 standard
- Records detailed size distribution and concentration in 32 size classes - computed using state-of-the-art random shape inversions
- Standard 5mm optical path for high concentrations
- Built-in Clean water delivery system for automatic clean water background collection
- 5.1" touch panel display, 320 × 240 pixels (3.4" W × 4.5" H), 16-bit color
- Built-in Compact Flash memory (128MB standard, expandable to 4GB)
- All data-processing is performed on board and the data stored in ASCII-format – no post-processing necessary
- Nominal 12VDC power (110VAC or 220VAC optional)
- Sealed NEMA-4X housing with clear cover
- Specially designed 12V sealed pump is available and recommended for use with the LISST-StreamSide
- Outputs: Total volume concentration, mean size, standard deviation, optical transmission, size distribution, battery voltage, clean water tank level

## SPECIFICATIONS (subject to change without notice)

### Sediment concentration range

- 10-3,000 mg/l @ < 1mg/l resolution (actual range is grain-size dependent)

### Size range

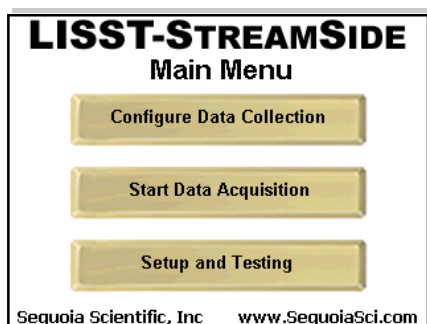
- 2.5-500 μm in 32 log-spaced size classes

### Sample Acquisition Time

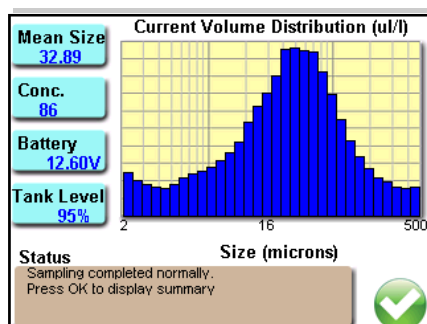
- 1 sec for 30 measurement average
- Typical maximum sample rate is 1 size distribution every 5 minutes
- Number of measurements per average and sample rate is programmable

### Mechanical and electrical

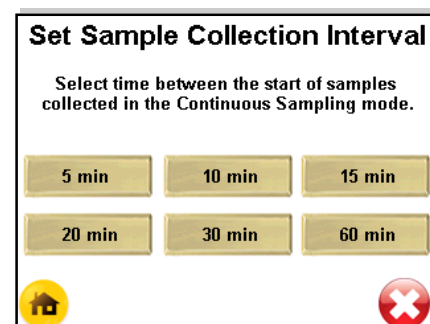
- Dimensions: 30 cm (11.8") × 18 cm (7.1") × 25 cm (10") [H×D×W]
- Data storage: Standard 128MB (max 4GB) flash card is capable of storing 75,000 size distributions and associated sample information
- Power: 6-15VDC, 500mA max during sampling (excluding pump)
- Communications: RS-232 @ 9600 baud



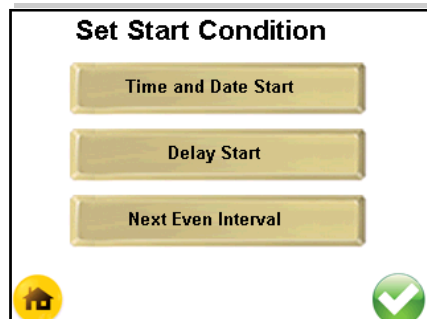
Touch panel screenshot of Main Menu



Size distribution screenshot



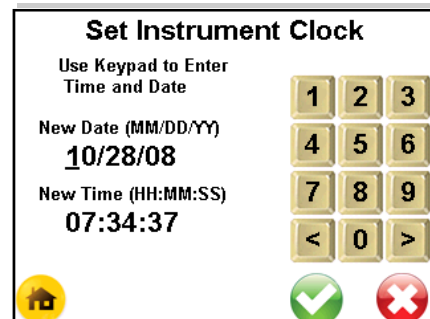
Sample Collection Interval Menu



Start Condition Menu



Background Collection Interval Menu



Instrument Clock Menu