



a xylem brand

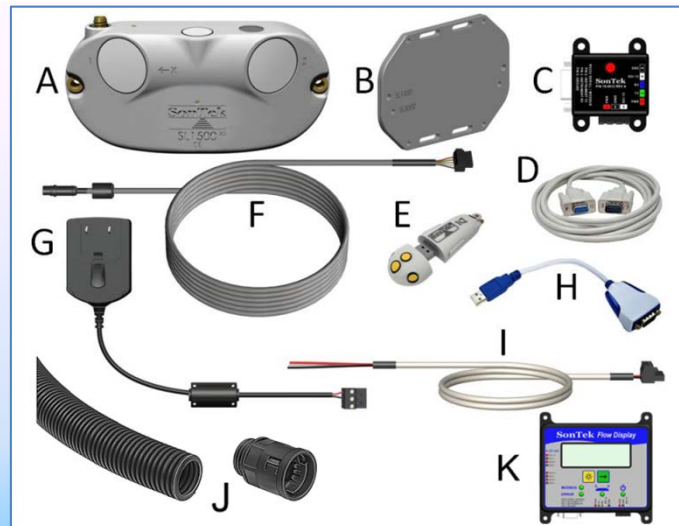
SonTek-SLTM

Copyright 2014 Xylem, Inc.

9940 Summers Ridge Road
San Diego, CA 92121 USA
Phone +1 (858) 546-8327
Web: www.sontek.com
Email: inquiry@sontek.com

What's in the Case

A	SonTek -SL
B	Mounting Plate
C	Cable Adaptor
D	RS232 Cable
E	USB Thumb Drive (SL Software)
F	SL Power/Communications Cable
G	AC Power Supply
H	USB to Serial Adaptor
I	Battery Hook-up Cable
J	Cable Conduit & Fitting (SL1500 only)
K	Flow Display (Optional)
L	Tool kit & Hardware (not shown)



Install SL Software

- Plug the USB thumb drive into your PC
- Run **Setup.bat** and follow the instructions
- Run SL Software on your PC
- Click Software Settings (upper left corner)
 - Specify a location to store data (**Data folder**)
 - Select software **Units** (this affects the software display, but not real time data output)

Additional Help: SL User's Manual



SL User's Manual.PDF – on the USB drive



Click the Help icon in the SL Software

Install SL Mounting Plate



- Bolt patterns for SL1500 & SL3000
- Brass hardware for corrosion resistance

Connect and Power the SL

USB to Serial Adaptor

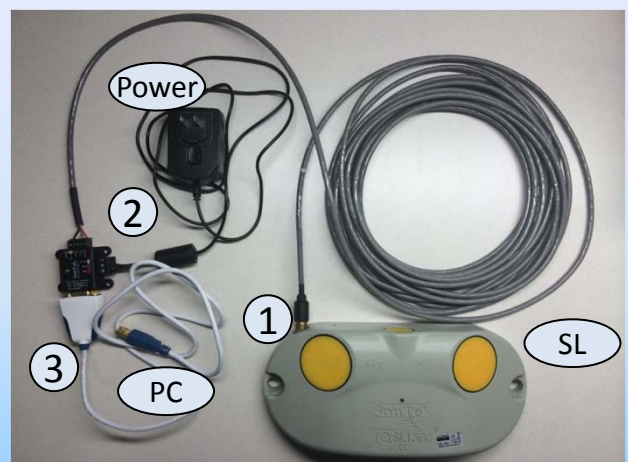
- Faster and more reliable than native serial ports
- Install driver from the USB thumb drive or here: <http://www.ftdichip.com/Drivers/D2XX.htm>

7-15 VDC Power Supply

- Connect either the AC adaptor (G) or the battery cable (I) to the cable adaptor (C)

Connect the SL to your PC

- 1) Connect SL cable (F) to the SL and cable adaptor (C)
- 2) Connect the power cable (G or I) to the cable adaptor (C) and the power source (outlet or battery)
- 3) Connect RS232 cable (D) to cable adaptor (C) and the USB to serial adaptor (H). Then connect to your PC
- 4) Run the SL software and click **Connect**



SL Software Operation

Connect to the SL

- Connect all cables and the power supply
- Click the **Connect** icon; all parameters are displayed

SmartPage Icons

- ✓ All settings in this section are valid
- ? Settings are at default values and should be reviewed
- ! Invalid settings may prevent calculation of flow data

Changing Parameters

- Click a **Change** button
- Click any **Blue** text for help

Starting data collection

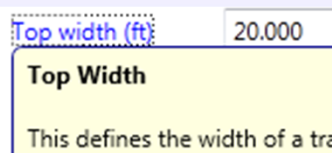
- Verify all parameters are set
- Click the **Start** button at the bottom of the page

Downloading data

- Click the **Download** button
- Data can be downloaded **during** data collection, without stopping the SL – even the current file!

View SL Data

- Click the **View Data** button
- Data can be organized by file name, site name, and operator
- Select file(s) and choose variables for display / review



Standard settings	Change
	File name: Lat310 Site name: Lateral 310 NE Operator name: Johnny Rotten Comments: Water salinity (ppt): 0.00
Channel shape	Change
	Geometry type: Irregular open channel Survey origin: Irregular open channel Instrument Y (ft): (not specified) Instrument Z (ft): (not specified)
Flow settings	Change
	$Q = V \cdot A$ Mean velocity equation type: Theoretic Remember total volume: Continuous Velocity threshold: 0.03 Flow threshold: Disabled
Real time data	Change
	Units: ft, ft/s, ft ³ /s, acre ft, ft ³ , *F, ft H ₂ O Output type: SDI-12 output

Field Installation Guidelines

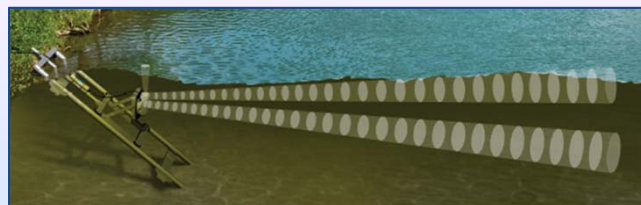
Location, Location, Location: It matters!

- Look for a long, straight section of uniform shape
- Avoid:
 - Changes in channel shape/direction
 - Inlets/Outlets. Nearby flow control structures
 - Vegetation and Beam Obstructions



Mounting

- Align SL x-axis with direction of channel flow
- Mount level. Beams pointing directly across channel
- Depth based on minimum expected water level
- Route cable through conduit for protection



Channel Dimensions / Survey

- Accurate channel dimensions are essential for good flow data
- Don't assume the dimensions – perform a channel survey



Real Time Data

SL Software: Real Time Data Settings

- Select and configure the output type
- Specify output units

SDI-12

- Connect SDI-12 data line to SL cable adaptor
- Disconnect SDI-12 when programming the SL

Modbus

- Uses same RS232 serial port as the SL Software

Flow Display (Optional)

- Replaces SL cable adaptor
- Continuous LCD readout of all key values
- Can be used in conjunction with other real time data

Analog Outputs (4-20 mA)

- Optional feature on Flow Display
- 4 output channels, each proportional to 1 variable

