SBE 25 SEALOGGER Reference Sheet

(see SBE 25 User's Manual for complete details)

Sampling Modes

- **Normal** – Logging started by putting SBE 25 in quiescent (sleep) state (**QS**), waiting at least 3 seconds, and then putting magnetic switch in On position. Data is stored in memory after last recorded data. **OR**
  Logging started by putting magnetic switch in On position when not in quiescent state, and then sending **GL** (start logging, overwriting any data in memory) or **RL** (resume logging, adding data to memory after last recorded data).
  Logging stopped by putting magnetic switch in Off position, clicking Stop on SEATERM's Toolbar or typing Ctrl Z. When logging stopped, power is removed from sensors.
- **Standby** – Designed for work where there are repetitive, short casts. Logging started by sending **SB**, waiting at least 3 seconds, and then putting magnetic switch in On position.
  Logging stopped by putting magnetic switch in Off position. When logging stopped, power is **not** removed from sensors. To exit Standby mode and remove power to sensors, click Stop on SEATERM's Toolbar or type Ctrl Z.

Communication Setup Parameters

1. Double click on SeaTerm.exe.
2. Once main screen appears, in Configure menu select SBE 25. Click on COM Settings tab in dialog box. Input:
   - Serial Port: COM1 through COM10 are available
   - Baud Rate: 600 (or other if applicable)
   - Data Bits: 7
   - Parity: Even
   - Mode: RS-232 (Full Duplex)

Deployment

1. Batteries (alkaline; see manual for recharging procedure for Ni-Cad batteries):
   A. *Remove battery end cap*: Wipe dry housing/end cap seam. Unthread end cap by rotating counter-clockwise. Wipe dry O-ring mating surfaces in housing with lint-free cloth.
   B. *Remove and replace battery cover plate and batteries*: Remove three Phillips-head screws and washers from battery cover plate, and remove cover plate. Turn SBE 25 over and remove batteries. Install new batteries, + terminals against flat contacts and - terminals against spring contacts. Align battery cover plate with housing. Reinstall three Phillips-head screws and washers, while pushing hard on battery cover plate to depress spring contacts at bottom of battery compartment.
   C. *Reinstall battery end cap*: Remove water from O-rings and mating surfaces with lint-free cloth. Inspect O-rings and mating surfaces for dirt, nicks, and cuts. Clean/replace as necessary. Apply light coat of O-ring lubricant to O-ring and mating surfaces. Fit end cap into housing and rethread into place, using a wrench to ensure end cap is tightly secured.
2. Program SBE 25 for intended deployment (see other side of this sheet for *Command Instructions and List*):
   A. Set time and date with **ST**.
   B. Ensure all data has been uploaded, and then send **IL** to make entire memory available for recording. If **IL** is not sent, data will be stored after last recorded sample.
   C. Establish setup parameters.
3. Install a cable or dummy plug for each connector on main housing end cap. Install a locking sleeve over each plug/cable connector. Connect other end of cables to appropriate sensors.
4. Verify hardware and external fittings are secure.
5. If applicable, remove Tygon tubing that was looped end-to-end around conductivity cell for storage. Reconnect conductivity cell to SBE 25's plumbing.
6. **Normal mode** – With SBE 25 in quiescent state for at least 3 seconds, put magnetic switch in On position, **or**
   With SBE 25 awake, put magnetic switch in On position and then send **GL** or **RL**.
7. **Standby mode** – With SBE 25 awake, send **SB**. Wait at least 3 seconds, and then put magnetic switch in On position.

Command Instructions and List

- Input commands in upper or lower case letters and register commands by pressing Enter key.
- SBE 25 sends **#** if invalid command is entered.
- If system does not return S> prompt after executing a command, press Enter key to get **S>** prompt.
- If new command is not received within 2 minutes after completion of a command, SBE 25 returns to quiescent (sleep) state.
- If in quiescent (sleep) state, re-establish communications by clicking Connect on Toolbar or pressing Enter key to get **S>** prompt.
- Commands followed by * alter SBE 25 memory and prompt user twice before executing (* is not part of command). To execute command, type *y* and press Enter key in response to *message* Y/N. Then hold down Ctrl key and type *y*, and press Enter key in response to are you sure ^Y/N. Any other responses abort command.
- SBE 25 does not respond to any commands while logging.
- If SBE 25 is uploading data and you want to stop it, press Esc key or click Stop on SEATERM's Toolbar. Press Enter key to get S> prompt.

See the Manual for detailed descriptions of commands.

Category	Command	Description
Status	**DS**	Display status and setup parameters.
Setup	**ST**	Set real-time clock date and time
	SRx	**x=** baud rate indicator (1=600, 2=1200, 3=9600, 4=4800). Default 600.
	CC *	Configure a number of parameters: • Internal data storage rate • Real-time data output rate • Pressure sensor range • Pressure temperature compensation value • Minimum conductivity frequency for pump turn on • Pump turn-on delay • Stop CTD on upcast? • Battery type • Number of external voltages to sample
	LWx	**x=** wait interval (milliseconds) after each line of data. Normally set to 0; increase for very slow computers. Range 0 – 65535.
	IR *	Initialize memory, which destroys all logged data in memory.
	QS	Place SBE 25 in quiescent (sleep) state. Main power turned off, but memory retention not affected.
Logging	**IL ***	After all previous data has been uploaded, send this command before starting to log to make entire memory available for recording. If not sent, data stored after last sample if logging is started with magnetic switch.
	GL *	Start logging now, overwriting any data in memory. Switch must be On before send **GL**.
	RL *	Resume logging now, storing data to memory *after* existing data. Switch must be On before send **RL**.
	SB *	Put SBE 25 in Standby Mode.
Data Upload	**DCx**	Upload data from cast **x**, at 600 baud. If **x** omitted, data from cast 0 is uploaded.
	DAx	Same as **DC**, but baud is 38400.
	DBx	Same as **DC**, but baud is 9600.
	DEx	Same as **DC**, but baud is 19200.
	DDb,e	Upload data from scan **b** to scan **e**, using same baud rate as used for general communication (**SR**). If **b** and **e** omitted, data from all casts are displayed.
	DHb,e	Upload headers from header **b** to header **e,** using same baud rate as used for general communication (**SR**). If **b** and **e** omitted, headers from all casts are displayed.
Diagnostic	**TM ***	Perform memory test, which destroys all logged data in memory.
	TE *	Perform extended memory test, which destroys all logged data in memory.
	FR	Measure and display temperature and conductivity frequency. SBE 25 runs continuously during test, drawing current. Press Esc key or click Stop on SEATERM's Toolbar to stop test.
	VR	Measure and display (main battery voltage/5.0161), (back-up lithium battery voltage/3.873), pressure voltage, pressure temperature voltage, and external voltages. SBE 25 runs continuously during test, drawing current. Press Esc key or click Stop on SEATERM's Toolbar to stop test.