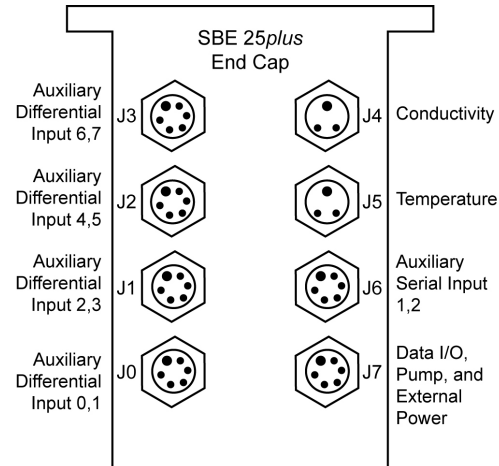


Setup

1. Double click on SeatermV2.exe. SeatermV2 opens, select *SBE 25plus*. Seaterm232 opens.
2. In Communications menu, select Configure. Select Comm port and baud rate (factory set to 9600), and click OK.
3. Seaterm232 should automatically connect to *25plus*. As it connects, it sends **GetHD** and displays response, and then fills Send Commands window with list of commands for your *25plus*.
4. Program *25plus* for intended deployment:
 - A. Ensure all data has been uploaded from memory, and then send **DeleteAll** to make entire memory available for recording.
 - B. Send **SetDateTime=yyyy-mm-ddThh:mm:ss** (year, month, day, hour, minute, second) to set real-time clock UTC date and time.
 - C. Set up other parameters as desired — see *Command Instructions and List on other side*.



Deployment

1. Batteries:
 - A. *Remove battery end cap (end cap without connectors):* 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 battery pack from housing:* Use a 9/64 inch hex drive to loosen captured post securing battery pack in housing. Pull handle up and then pull battery pack out of housing.
 - C. *Open battery pack and replace batteries:* Holding edge of battery pack cover, rotate cover counter-clockwise to unthread cover from pack. Put cover aside. Turn battery pack over and remove batteries. Install new batteries, with + terminals up.
 - D. *Reinstall battery pack cover:* Cover plate fits into battery pack only one way. Looking at cover plate, note that opening adjacent to *USB* marking must align with *USB* connector in battery pack. **Tighten cover until there is no gap between bottom O-ring and battery pack housing.**
 - E. *Reinstall battery pack in housing.*
 - F. *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. Install a cable or dummy plug for each connector on *25plus* sensor end cap. Install a locking sleeve over each plug/cable connector. Connect other end of cables to appropriate sensors.
3. Verify hardware and external fittings are secure.
4. Remove Tygon tubing that was looped end-to-end around conductivity cell for storage. Reconnect Tygon tubing from pump to conductivity cell.
5. To start logging—
 - Push in plunger switch; or
 - Send **StartNow**.

Data Upload

1. Double click on SeatermV2.exe. SeatermV2 opens, select *SBE 25plus*. Seaterm232 opens.
2. In Communications menu, select Configure. Select Comm port and baud rate (factory set to 9600), and click OK.
3. Seaterm232 should automatically connect to *25plus*. As it connects, it sends **GetHD** and displays response, and then fills Send Commands window with list of commands for your *25plus*.
4. If sampling logging, command *25plus* to stop logging by pulling out plunger switch, sending **Stop**, or clicking Esc key.
5. Click Upload menu to upload stored data.
6. Run SBE Data Processing to convert uploaded .xml file to .cnv file for use by other modules in data processing software. Process file and review data to ensure all data has been uploaded. SBE Data Processing can also convert real-time .hex file created by Seasave to .cnv file for use by other modules in data processing software.

Command Instructions and List (see manual for complete list and descriptions)

- Input commands in upper or lower case letters and register commands by pressing Enter key.
- Commands to enable a parameter (such as real-time output from a voltage channel) can be entered with *argument* as Y or 1 for yes, and N or 0 for no.
- 25plus sends an error message if an invalid command is entered.
- If 25plus does not return an S> prompt after executing a command, press Enter key to get S> prompt.
- If a new command is not received within 2 minutes after completion of a command, 25plus returns to quiescent (sleep) state.
- If in quiescent state, re-establish communications by selecting *Connect* in Seaterm232's Communications menu or pressing Enter key.
- 25plus does not respond to any commands while logging.
- If 25plus is uploading data and you want to stop it, press Esc key or type ^C; then press Enter key. Alternatively, select *Abort* in Seaterm232's Command menu.

CATEGORY	COMMAND	DESCRIPTION
Status	GetCD	Display configuration (setup) data.
	InitCD	Reset all user-programmable parameters that appear in GetCD response to factory defaults.
	GetSD	Display status data.
	GetCC	Display pressure sensor calibration coefficients.
	GetEC	Display event counter data.
	ResetEC	Reset event counter
	GetHD	Display hardware data.
	InitHD	Reset all user-programmable parameters that appear in GetHD response to factory defaults (<i>Not Set</i>).
	GetFiles	Display all cast (.xml) & serial sensor (.txt) file names in memory.
GetFault	Display fault status of all auxiliary sensor channels.	
General Setup	SetDateTime=yyyy-mm-ddThh:mm:ss	Set real-time clock UTC date & time [yyyy = year, mm = month (01, 02, etc.), dd = day of month (01, 02, etc.), hh = hour (0-24), mm = minute, ss = second].
	SetBaudConsole=x	x= baud rate (600, 1200, 2400, 4800, 9600, 14400, 19200, 38400, 57600, & 115200). Default 9600.
	SetEchoConsole=x	x=Y (default): Echo characters received from computer. x=N: Do not.
	SetExecutedTag=x	x=Y (default): Display XML Executing & Executed tags. x=N: Do not.
Pump	QS	Enter quiescent (sleep) state. Memory retention unaffected.
	SetMinCondFreq=x	x= minimum conductivity sensor output frequency (Hz) to enable pump turn-on. Default 3000.
Voltage Sensor	SetPumpDelay=x	x= time (sec) to wait after SetMinCondFreq= is reached before turning pump on. Default 60 sec.
	SetVAuxDelay#=x	x= delay (sec) for supply of power to J# connector (0, 1, 2, 3; J3 also applies power to J6). Default 0.
Serial Sensor (#=1 or 2)	InitSer#	Reset all serial sensor setup parameters to factory defaults.
	SetEnableSer#=x	x=Y: Enable measurement of channel. x=N (default): Disable measurement of channel.
	SetNameSer#=x	x= string (0-10 characters) to describe sensor. Becomes part of .txt file name (if SetInlineSer#=N), after date & time.
	SetBaudSer#=x	x= baud between 25plus & sensor (600, 1200, 2400, 4800, 9600, 14400, 19200, & 38400). Default 9600.
	SetInlineSer#=x	x=Y (default): Store sensor data in-line with other data in .xml file. x=N: Store sensor data in separate (.txt) file.
	SetPromptSer#=x	x= prompt (0-10 characters) sensor sends to 25plus when ready to receive commands. Leave blank if no prompt. Default S>.
	SetMeasStringSer#=x	x= string (0-32 characters) 25plus sends to sensor to command it to take 1 sample when 25plus logging. If blank, no command will be sent. Default TS.
	SetMeasIntervalSer#=x	x= interval (sec) between each time 25plus sends command defined by SetMeasStringSer#= to sensor when 25plus logging. If SetMeasIntervalSer#=0, 25plus sends command as soon as it receives reply to previous request. Range 0-600 sec; default 0.
	SetStartStringSer#=x	x= string (0-32 characters) 25plus sends to sensor to command it to sample autonomously when 25plus logging. If SetStartStringSer#= (blank), no command will be sent. Default Start.
	SetExecCharSer#=x	x= decimal value (0-255) of command execution character 25plus adds to end of command defined by SetMeasStringSer#= & SetStartStringSer#=. 254=carriage return line feed ('\r\n'); 255=no execution character. Default 254.
	SetTermCharSer#=x	x= decimal value (0-255) of termination character sensor sends at end of reply. 254=carriage return line feed ('\r\n'); 255=no termination character. If 25plus does not receive termination character, it stops waiting after SetFailoutSer#=. Default 254.
	SetSuppressSer#=x	x=Y (default): Termination character & prompt sent by sensor to 25plus not included in data file. x=N: Termination character & prompt included in data file.
	SetTimeoutSer#=x	x= maximum time (sec) 25plus waits for prompt from sensor, indicating sensor completed processing command. Default 3.
	SetFailoutSer#=x	x= maximum time (sec) 25plus waits for data from sensor. Default 60.
	Real-Time Output	ToSer#=x
SetOutputFormat=x		x=0 (default): For use with Seasave. x=1: For use with autonomous water sampling systems.
SetHistoricRate=x		Applicable only if SetBaudConsole=4800 & SetOutputFormat=0. x=0: Slower; use if SBE 33 or 36 Deck Unit is appending NMEA & Surface PAR data. x=1: Faster.
Logging	SetVOut#=x	x=Y: Output data from voltage channel # (#=0, 1, 2, 3, 4, 5, 6, or 7) with real-time data.
	StartNow	Start logging now, storing data to memory.
Data Upload & Memory Reset	Stop	Stop logging.
	SetFile=x	x= index number for file you want to upload or delete (see UploadData= & DeleteFile).
	GetFile	Get & display file index number & name for file selected with SetFile=.
	UploadData=x,y	Upload file selected with SetFile=, starting at character x & uploading y characters. Range for x & y is 0 to (2 ³² - 1).
	DeleteFile	Delete file selected with SetFile=. Requires confirmation. 25plus updates all file index numbers larger than this one.
Stop logging before uploading.	DeleteAll	Make entire memory available for recording. Do not send until all data has been uploaded. Requires confirmation.
	InitLogging	Equivalent to DeleteAll. Requires confirmation.
Testing	TS	Apply power, take 1 measurement, output data in Hex (CTD & auxiliary voltage sensor data), & remove power
	TSC	Take continuous C measurements, output frequency (Hz). Click Esc to stop & remove power.
	TST	Take continuous T measurements, output frequency (Hz). Click Esc to stop & remove power.
	TSPR	Take continuous P measurements, output P & P temperature (both counts). Click Esc to stop & remove power.
	TSP	Take continuous P measurements & output pressure (dbars). Click Esc to stop & remove power.
	TSVR	Apply power, take measurements of all voltage channels, output raw counts. Click Esc to stop & remove power.
	TSV	Apply power, take measurements of all voltage channels, output voltages. Click Esc to stop & remove power.
	GetVAux#	Apply power, take measurements of channels on J# connector (#=0, 1, 2, 3; J3 also applies power to J6), output voltage data. Click Esc to stop & remove power.
	SetVAuxPower#=x	x=Y: Apply power to channels on J# connector (#=0, 1, 2, 3; J3 also applies power to J6). x=N: Remove power.