



Hydrographic Survey Products, Inc Houston – Texas

Blue Tooth Smart Sensor Display & Interface Unit

Section 4 SCC Display and Interface Unit

The SCC Display / Interface Unit is an accessory that can be used with the SCC BT Smart Sensor or with the standard “wired” sensor. It provides a 2 line X 20 character Alpha Numeric Display with LED backlight, RS232 Interface and Power supply to the “Active Antenna”. The Display can be used to reset the sensor (causing a reset to any the predefined preset point) and displays the deployed cable length in real time as well as the average (averaged over a 5 second sample) line speed. A DB-9 connector is provided for data I/O to the sensor.

Operation

Connect the Active Antenna to the Display / Interface Unit (Port marked “Sensor” on the display) using the 5’ interface cable and Active Antenna cable. Connect a standard DB-9 male-female cable from the DB-9 port to a PC’s com port. Apply power using either the included 12Vdc wall mount power supply or an alternate source of 8 to 24 Vdc power (300mA max required).

The back light should now be illuminated and can be adjusted for optimal viewing. After a few seconds the display will show version and serial numbers of the display unit after which the deployed cable length. As the system has just been powered up, the deployed cable value will be the preset value saved in the SCC’s flash memory. The standard SCC data string will be output from the DB-9 connector at 9600 8N1. To test the operation of the system, the sheave wheel may be rotated by hand and both the display and RS232 data string should be seen to either increase or decrease, depending on the direction of rotation.

The Display / Interface incorporates a simple method of resetting the SCC Smart Sensor to any value. Rotate the PRESET control (lower right of the display) to the desired value. Note: pressing and turning will allow faster adjustment. The Preset Value will be displayed on the lower right of the LCD. When the desired value is reached, press the RESET Push Button / LED on the lower left of the display.

The message

CONFIRM RESET

If the button is pressed again within a few seconds the message:

RESETTING SENSOR

Followed by:

WAITING FOR SENSOR

If the Reset Push Button is not pressed a second time, the display will revert to the normal operating mode and no changes will have been made. After 10 seconds the standard display will return having been reset to the preset value. This procedure will not change the sensor's calibration value.

Contrast Adjustment

The contrast of the LCD can be adjusted by opening the rear of the display (4-screws) and locate the 10-turn pot on the main pcb marked "contrast" – adjust this for the required viewing contrast.

Feet / Meters

Many customers have expressed the wish to change the output units between feet and Meters. Sensors manufactured after S/N1624 have the ability to be programmed to output either Feet or Meters and Version 3 Display / Interface Units will display the units output by the sensor. As with the earlier versions of the Display / Interface Units, the sensor and display do not recognize units as such. If the sensor is calibrated in Feet then the output is in Feet. Likewise if the sensor is calibrated in Meters then the output is in Meters. The user is responsible to ensure that the sensor is calibrated using the same units as the sensor is programmed for.

Baud Rate

Version 3 allows the output the output baud rate to be 9600 (default) or 4800. Both are 8N1

However when using the display with the SCC BT sensor **ONLY USE 9600 BAUD.**

Output Data Sentence

Version 3 allows 1 of 4 data sentences to be output. The default is the standard \$SCCAnnnnn.nM,Scccc<cr><lf> as output by Version 1 Display / Interface units and the native output of the sensor. Custom strings can also be implemented if required, contact Hydrographic Survey Products.

All of the above options are set by either a 4-position DIP switch or by configuring the sensor as previously described. Access to the 4-position DIP switch is by removing the 4 screws and removing the rear panel of the Display / Interface Unit.

Position 1 Output Data String

Position 2 Change Sensor Type – Standard or BlueTooth

Position 3 Baud Rate 9600 / 4800 Baud

Position 4 Over rides the Units Descriptor from the Sensor and changes M to F or from F to M.

After changing any of the switch settings, recycle the power for the switch settings to be read at power up.

Connection				
RMK-4-MP	4-Pin XLR	5-Pin EN3	Color	Function
1	1	1	White	Data from Antenna
2	2	2	Black	Power / Data Ground
3	3	3	Green	Data to Antenna
4	4	4	Red	+8 to 24 VDC Power
		5		No Connection

Power Connector 2.1mm

Center Pin	+8 to 24 VDC
Outer Contact	Power Gnd

Data I/O DB-9 Female

DB-9 Pin 2	Data From Sensor to PC or Acquisition System
DB-9 Pin 3	Data To Sensor (Calibration data)
DB-9 Pin 5	Data Ground

Note:

If the SCC BT sensor is configured for power save mode then Display / Interface will not respond quickly. This is because the Display is waiting for data from the sensor before taking any user input. For example, if the sensor is configured to output every 15 seconds or when the cable out changes then the reset button must be held for up to 15 seconds before the command is executed.