Carlson®

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This is in regards to using Carlson SurvCE with a Robot or GPS receiver to do hydrographic surveys using a Depth Sounder.

If the depth sounder has a 9pin female RS232 cable and it can send out a generic NMEA 0183 string in a DBT or DPT format then we should be able to support it in SurvCE to combine the depth sounder readings with GPS or Robotic equipment.

If the manufacturer, dealer or customer can email support@carlsonsw.com an Ascii Text sample of the NMEA 0183 Output or Sample Output from the Depth Sounder using a laptop with Hyperterminal connected on Com1 to the Depth Sounder we can usually tell if these strings of code are supported by Carlson.

Generally speaking most people would need to use a data collector with 2 DB9 Com ports such as the Carlson Surveyor+ unless they have a Bluetooth GPS or Robot solution in which case they can use Bluetooth to connect to the GPS or Robot then use the Com1 9pin cable to connect to the Depth Sounder.

!!! Warning: The product below is an aftermarket Hardware Solution so we have NOT field tested this at Carlson Software and we don't provide support specific to this communication hardware. This is just intended to be a helpful resource to our customers as a proposed method of connecting two different 9pin devices at once !!!

There is a 3rd party Aftermarket option from "Socket Serial" listed at the link below as a "Serial I/O CF Card" which creates a Virtual Com3 9pin RS232 com port by plugging the one end of it into your Compact Flash slot in the top of your Carlson Explorer data collector:
http://www.socketserial.com/product.htm

Generic NMEA {requires SurvCE Version 2.50 and higher}
Sample String:
$SMDBT,39.5,f,12.0,M,6.5,F*09
$SDDPT,12.0,0.0*65

$XXDBT,xx.x,f,xx.x,M,x.x,F
In this sample the 2nd and 3rd "XX" characters are always ignored and the x's are the depth reading – this string contains all three values for Feet, Meters and Fathoms

$XXDPT,xx.x,0.0*65
The 2nd and 3rd characters "XX" are skipped and ignored and the x's are the depth reading - this string only contains values in Meters

Ohmex Sonarmite String for Output option NMEA 0183 DBT
{requires SurvCE 2.50 or higher}
Sample String:
$SMDBT,2.16,f,0.66,M,,*62\par

The "SM" after the $ sign gets ignored in when using the "Generic NMEA" depth sounder model so its able to use the depth values properly

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Hydrotrac HT97001 Depth Sounder {DESO25 I/O format}
Sample string:
DAxxxxx.xxfmCRLF

"DA" is skipped, x's are the depth reading, f or m is the setting for Feet or Metric to determine what mode the depth sounder is in, "CRLF" is a carriage return line feed
http://64.233.169.104/search?q=cache:whda2Y0ky3MJ:www.comm-tec.com/Prods/mfgs/Odom/Manuals/ht.pdf+hydrotrac+%22DESO+25+I/O%22&hl=en&ct=clnk&cd=1&gl=us&lr=lang_en

Horizon Depth Sounder {generic NMEA 0183}
Sample String:
$SDDBT,xxx.x,f,xxx.xx,M,xx.x,F <CRLF>
X's are the depth reading – this string contains all three values for Feet, Meters and Fathoms
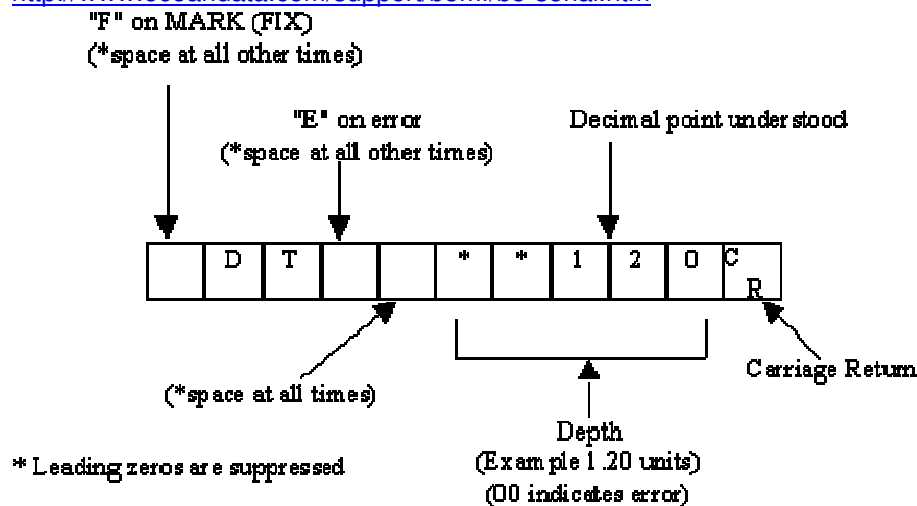
Odom Digitrace
Sample String:
_DTE_xxxxxCR

Were the _ is a space, DT is skipped, "E" shows if there is an error or it will simply be a space, xxxxx is the Depth Reading to two decimal places where **120 = 1.20 {leading zeros are suppressed}

http://www.oceandata.com/support/b5mf/b5-serial.htm

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!!! PLEASE NOTE: *Carlson Software DOES NOT provide tech support for creating custom RS232 9pin cables and the entry below is for informational purposes ONLY* **!!!**

Here is a Wikipedia article with information on generic RS232 9pin connections.

According to the Wikipedia article on RS232 cables at the link below this is the chart of Industry Standard pinouts of a DB9 RS232 cable connection:
http://en.wikipedia.org/wiki/Rs232#Pinouts

Signal		Origin		DE-9 (Pin number)
Name	**Abbrevation**	**DTE**	**DCE**	
Common Ground	G			5
Transmitted Data	TxD	●		3
Received Data	RxD		●	2
Data Terminal Ready	DTR	●		4
Data Set Ready	DSR		●	6
Request To Send	RTS	●		7
Clear To Send	CTS		●	8
Carrier Detect	DCD		●	1
Ring Indicator	RI		●	9

Origin DTE is the **Host** {Data Terminal Equipment} = Data Collector or Computer
Origin DCE is the **Slave** {Data Communications Equipment} = Instrument or Peripheral

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