



USBL Systems in HYPACK®

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We get a lot of users asking us if we interface to USBL (Ultra Short Baseline) systems, and while we have various drivers available to interface to USBL systems it is always a source of confusion as to which driver should be used. This document is not an interface guide, but merely a guide to steer the user in the direction of the proper device driver for their USBL system. Since most systems have different output formats, you have a choice of different device drivers that can be used.

As of July 2010, these are the USBL device drivers currently available in HYPACK 2010:

- Trackp.dll Trackpoint II ROV Acoustic System
- Trackman.dll TrackMan Interface
- IXSEA_USBL.dll IXSEA USBL
- Nautronix.dll Nautronix ATS Acoustic System
- SSB.dll SSB (NMEA) Position Device
- KongsbergHPR410.dll Kongsberg HPR410P

You may find a few other device drivers in the Obsolete and Custom folders that are located in the HYPACK® Devices folder, but these are generally unsupported (read that “obsolete”) or one-offs for a specific customer. Although there are only 6 device drivers listed above, most USBL systems are capable of emulating an output string that could be read by one of those drivers.

The following is a breakdown of the HYPACK® USBL device drivers, the expected data string, and the USBL systems that can interface to these drivers:

TRACKP.DLL - (TRACKPOINT II ROV ACOUSTIC SYSTEM)

This device driver is looking for the 2EC string:

1 12:24:23 199 20.5 124.7 40.9 109.5 16.0 0.0

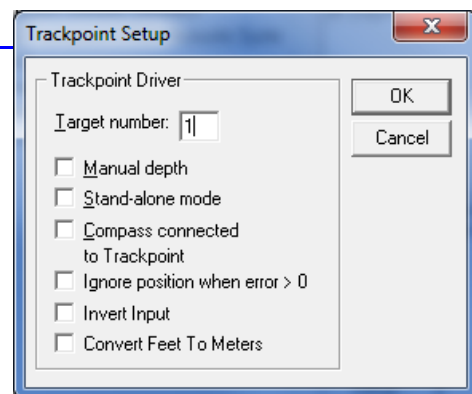
It is easy to set up. Just connect to the serial port, enter the beacon number and choose the options you may want to use in the Driver Setup dialog:

FIGURE 1. *Trackp Driver Setup*

This driver parses the relative X, Y and Z coordinate location of the beacon.

You can use this driver with the following USBL systems:

- Trackpoint 2 – Select the 2EC output
- LinkQuest’s Tracklink Systems – Select the “TP2” output string.
- Sonardyne USBL systems – Select Trackpoint 2 string



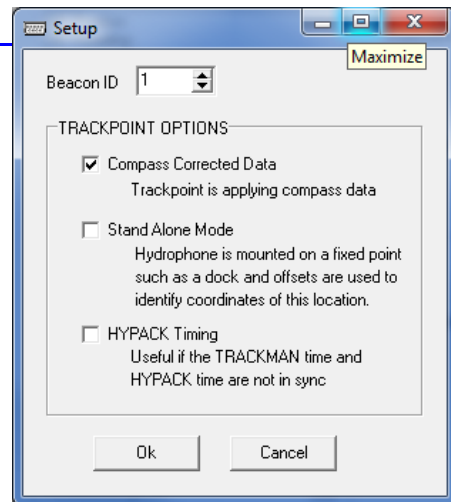
- AAE Easytrak – Select the Trackpoint 2EC string

TRACKMAN.DLL (TRACKMAN INTERFACE)

If you are using the ORE TRACKMAN software, you can use the HYPACK Trackman.dll, which reads the ORE \$POREG format. In addition to a serial output, the Trackman software is capable of outputting this message via Ethernet broadcast, thus eliminating the need for a serial port.

When using this driver, connect to the network port, enter the beacon number and choose the options you may want to use in the Driver Setup dialog:

FIGURE 2. *Trackman Driver Setup*



IXSEA_USBL.DLL (IXSEA USBL)

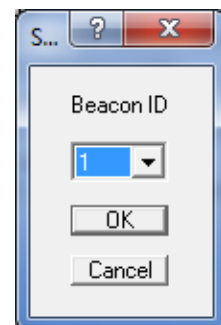
The IXSEA GAPS system uses HYPACK's IXSEA_USBL.dll. The output selected should be the \$PTSAG message, which looks like this:

```
$PTSAG, #00035, 100750.472, 12, 09, 2007, 00, 4214.434, N, 00843.851, W, F, 0000, 0, 0000*0B
```

Unlike the Trackpoint, the GAPS system outputs an absolute position in latitude and longitude.

The IXSEA GAPS is a serial device so setup the proper serial port and simply enter the beacon ID in the SETUP dialog:

FIGURE 3. *IXSEA Driver Setup*



NAUTRONIX.DLL (NAUTRONIX ATS ACOUSTIC SYSTEM)

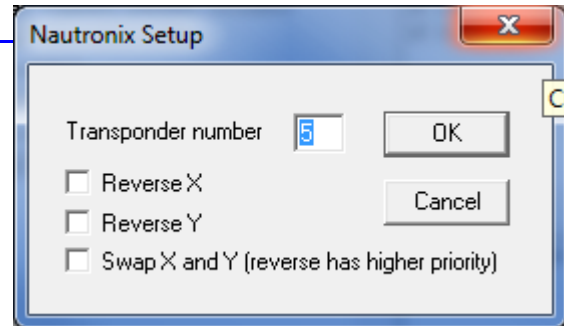
You can interface a Nautronix USBL system with our nautronix.dll (Nautronix ATS Acoustic System). The nautronix.dll is looking for the ATSI ASCII string which looks like this:

```
10 Jul 2008 15:15:39:621 B:5 E:0 X:50 Y:-100 D:749.0 H:0.0  
P:0.0 R:0.0
```

In the SETUP dialog, simply enter the Transponder number. You also have the option to swap and reverse the X and Y values.

FIGURE 4. *Nautronix Driver Setup*

Sonardyne's USBL systems are also capable of emulating the ATSI ASCII message.

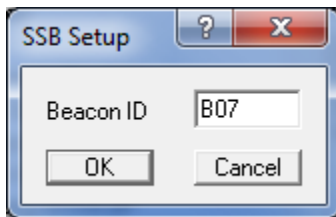


SSB.DLL (SSB (NMEA) POSITION DEVICE) & KONGSBERGHPR410.DLL (KONGSBERG HPR410P)

Both the SSB.dll and the KongsbergHPR410P.dll look for the same message, a pseudo-NMEA string sometimes called the SSB, HiPAP or HPR string. This string looks something like this:

```
$PSIMSSB,230154.97,B07,A,,C,N,M,6.26,0.18,33.09,4.2,N,,,*46
```

Both drivers have an identical SETUP dialog. All you need to do is enter the Beacon ID:



You can use the SSB.dll or the KongsbergHPR410P.dll with the following USBL systems:

- Most Kongsberg HiPAP and HPR systems
- Sonardyne USBL systems
- AAE Easytrak USBL systems

The following table lists the various USBL systems, and the expected output message for the recommended HYPACK® device driver.

TABLE 1. USBL Systems, their Output Messages and HYPACK® Driver

USBL SYSTEM	OUTPUT MESSAGE	HYPACK® DEVICE DRIVER
ORE Trackpoint 2	2EC	Trackp.dll
ORE Trackpoint 3	\$POREG	Trackman.dl
LinkQuest TrackLink	TP2	Trackp.dll
IXSEA GAPS	\$PTSAG	IXSEA_USBL.DLL
Nautronix ATS	ATS ASCII	Nautronix.dll
AAE Easytrak	Trackpoint 2EC	Trackp.dll
Kongsberg/Simrad HPR/HiPAP	SSB	SSB.dll
Sonardyne Scout, Ranger Fusion	Trackpoint II	Trackp.dll