



Combined HARDWARE in HYPACK® 2014

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I know the new HYPACK® 2014 combined HARDWARE program looks a bit overwhelming to some, but it isn't too complicated. It is actually really nice to see all your configurations in one location and not have to open multiple windows.

For those of you who are overwhelmed with the new program and need a bit of time to get familiar with it, you need not fear as you still have the option to use the old hardware programs. To access the previous hardware programs select HELP – LEGACY SOFTWARE.

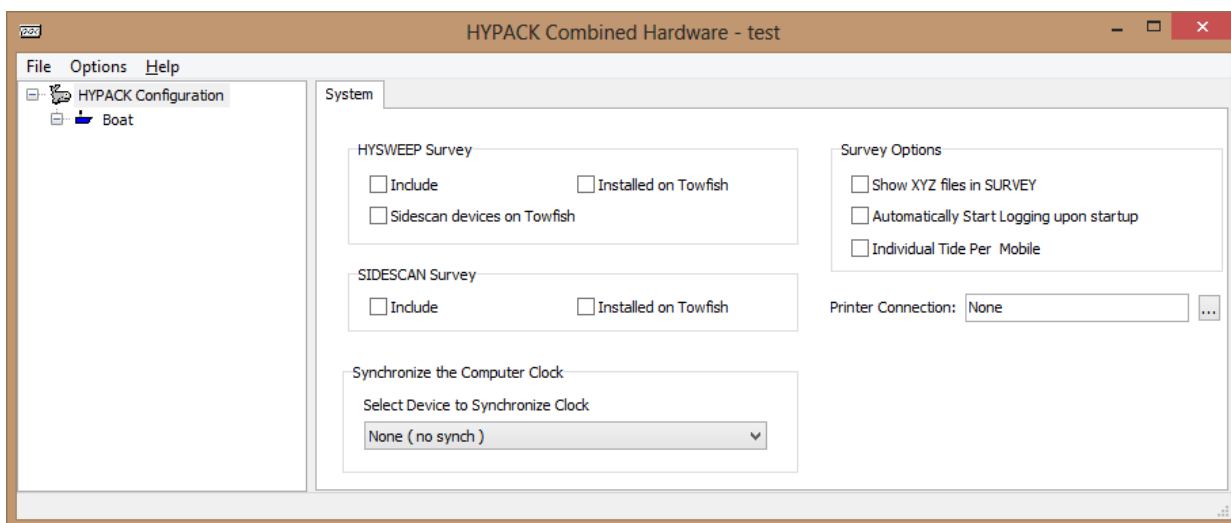
In this article, I will walk you through the steps for a simple single beam, multibeam and side scan setup. Image 1 below is the new layout window.

PROGRAM OVERVIEW

A little run through of this program before we get started:

- **Left-click** on the '**HYPACK Configuration**' to display the 'System' Tab. This is where you set the device with which you synchronize the clock. Whether you are configuring for HYSWEEP® or SIDE SCAN devices, installed on the towfish or the boat. (We will get back to this soon.)

FIGURE 1. *New Configuration*

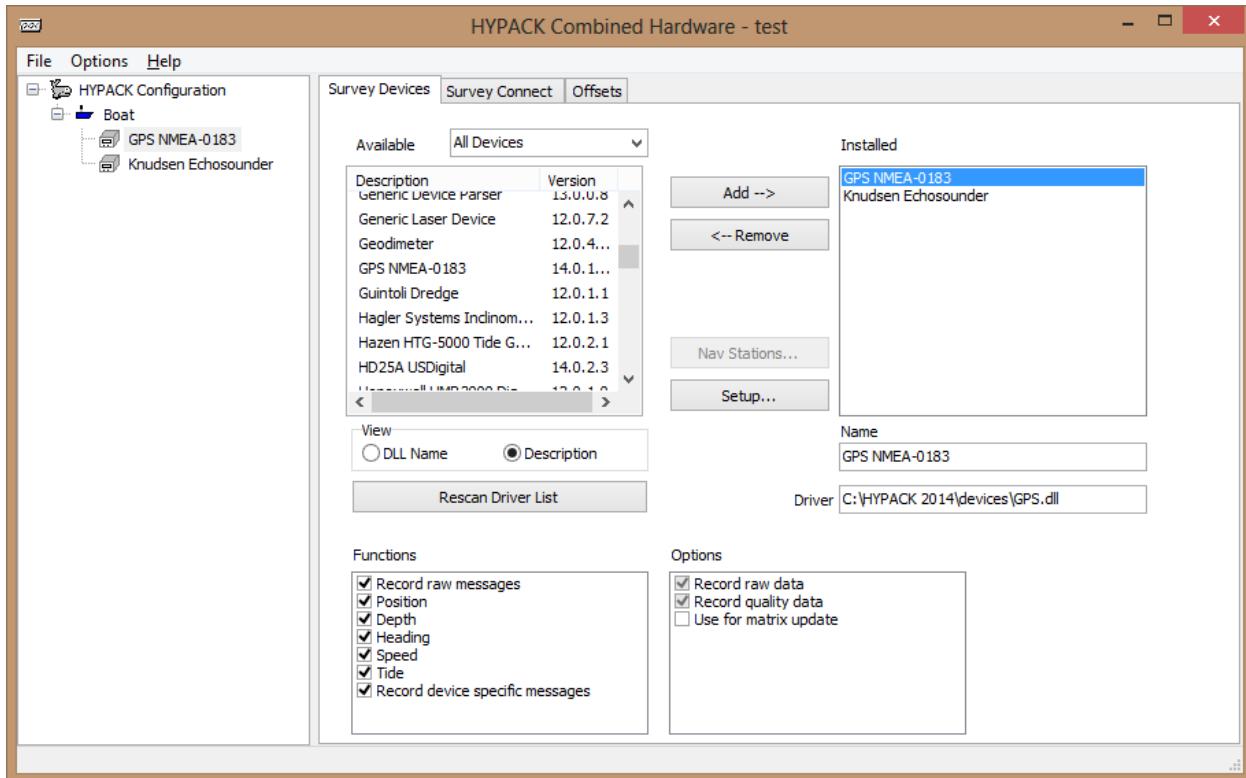


- **Right-click** on the '**HYPACK Configuration**' to add a mobile.
- **Left-click** on the **Boat** or additional mobile to open 3 tabs to the right:
 - '**Mobile**' **Tab**: Allows you to rename the boat or mobile and to enter the tracking point offsets.
 - '**Survey Devices**' **Tab**: Allows you to select the devices you are integrating.
 - '**Vessel Shape**' **Tab**: Allows you to add and display your boat shape.
- **Right-click** on an added **mobile** to delete the selected mobile.

EXAMPLE OF A SIMPLE SINGLE BEAM SETUP

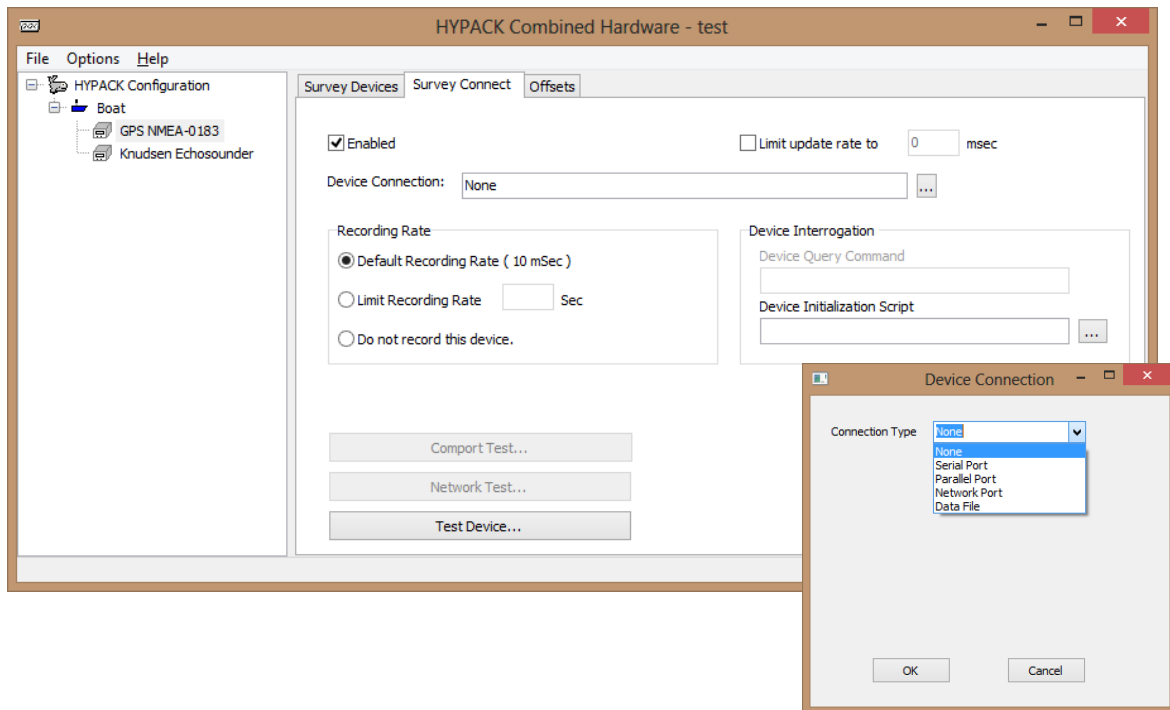
1. **Start with a New Configuration** (Figure 1).
2. **Adding Devices** (Figure 2).

FIGURE 2. Adding Devices



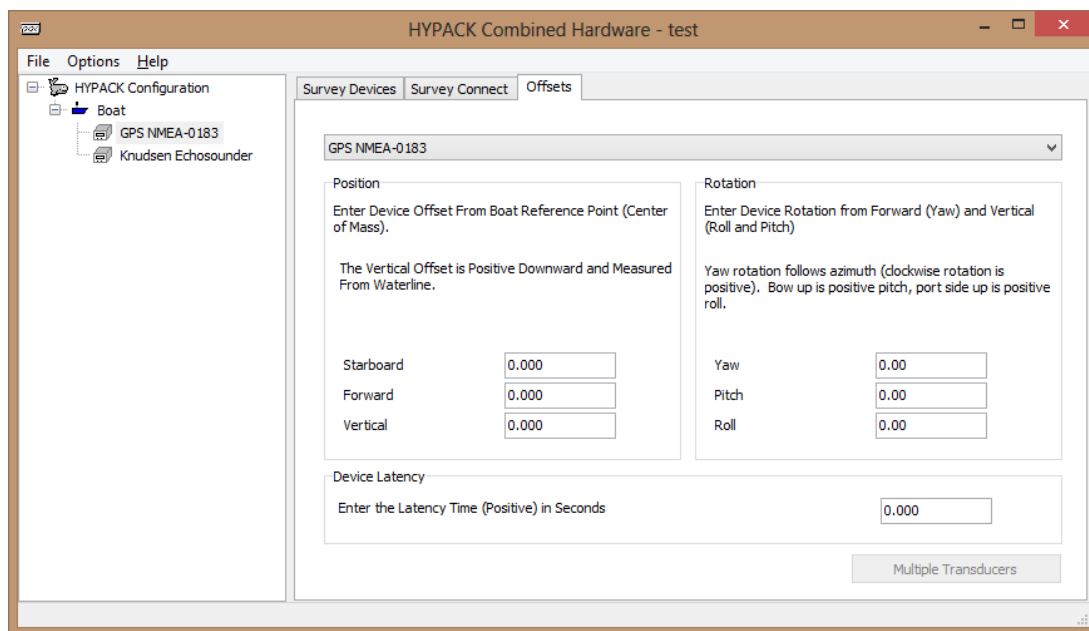
- a. **Select the 'Boat'.** The Survey Devices tab becomes available.
 - b. **Select the Survey Devices.** For each device, select the device and click [Add -->].
3. **Device Setup:** For each device, if it has setup options, click the 'Setup...' button and configure your options.
 4. **Functions/Options:** Select for each device.
 5. **SURVEY Connect:** Once you add the devices, the Survey Connect Tab becomes available. (Figure 3)

FIGURE 3. Connecting Device(s)



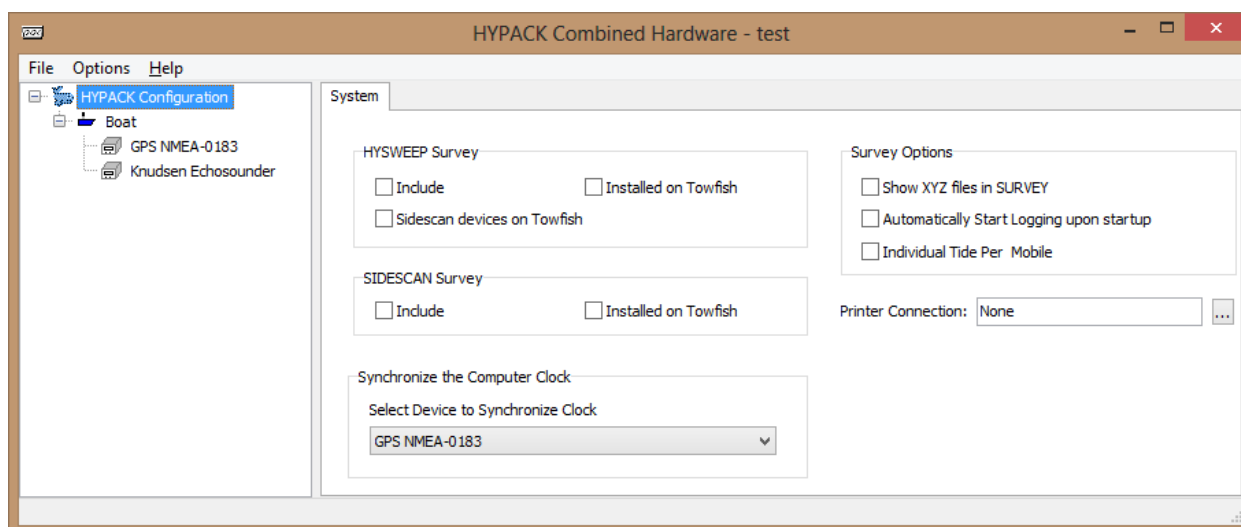
- a. **Select the correct device connection** for your systems (serial, network, etc).
- b. **Use the Test Devices Option** to assure proper communication.
6. **Offsets:** Once you add the devices the Offsets Tab will also be available. Enter the offsets for each device. (Figure 4)

FIGURE 4. Setting Offsets for each Device



7. **Select the device to Synchronize Clock.** Select HYPACK Configuration and the device with which to synchronize your clock. (Figure 5)

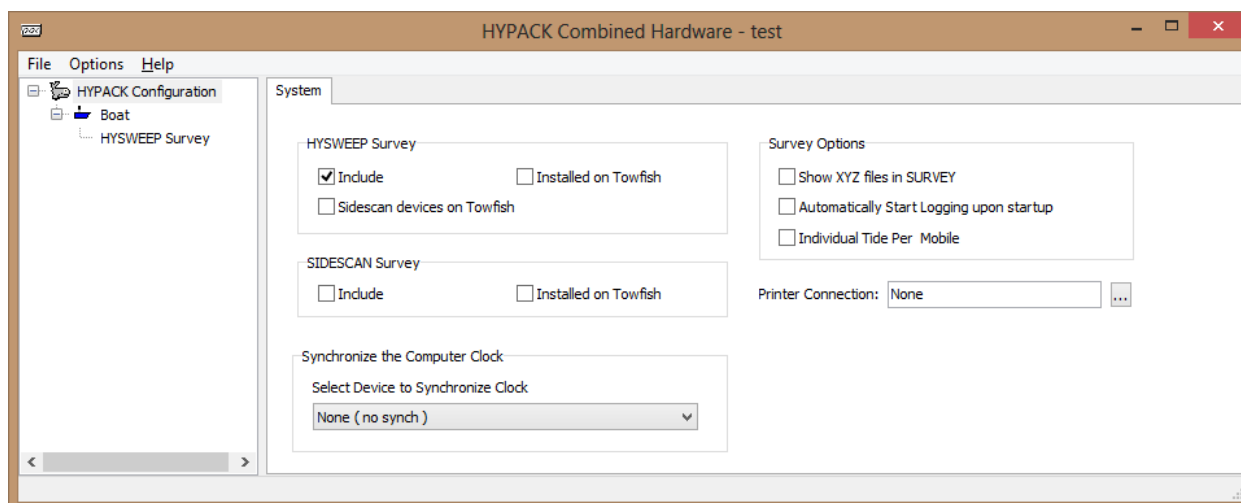
FIGURE 5. Simple Single Beam Setup with GPS Synchronization Selected



EXAMPLE OF A SIMPLE MULTIBEAM SETUP

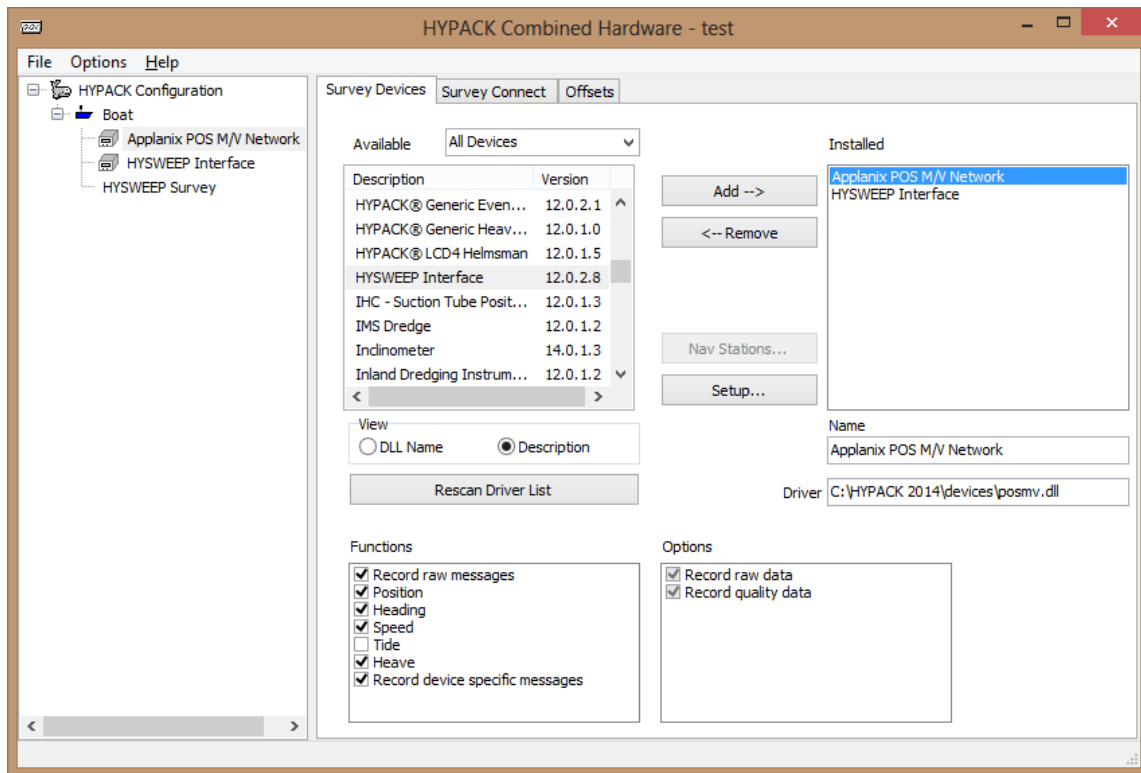
1. **Start with a New Configuration.**
2. **Select “Include” under HYSWEEP® SURVEY.** This will list HYSWEEP® SURVEY (a.k.a. HYSWEEP® HARDWARE) under the Boat. (Figure 6)

FIGURE 6. Including HYSWEEP® SURVEY



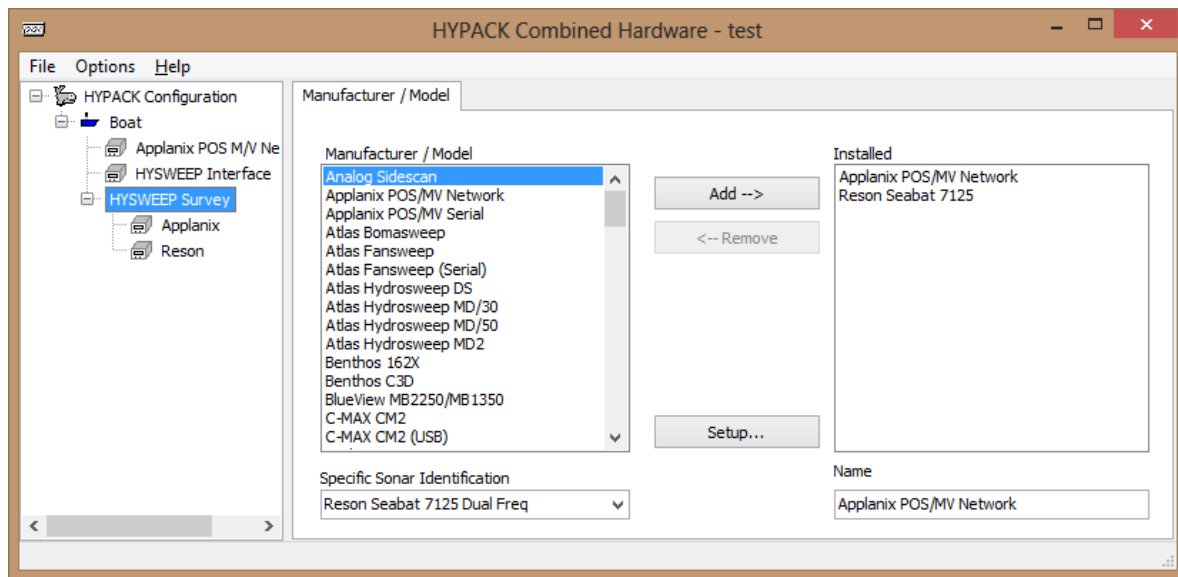
3. **Add devices under HYPACK Configuration.**
 - a. **Select the ‘Boat’.** The Survey Devices Tab becomes available.
 - b. **Select the Survey Devices.** For each device, select the device and click [Add -->]. (Figure 7)
 - c. **Add the HYSWEEP® Interface** in addition to your position device. (Figure 7)

FIGURE 7. Adding HYSWEEP® Devices



4. **Device Setup:** For each device, if it has setup options, click the ‘Setup...’ button and configure your options.
5. **Functions/Options:** Select for each device.
6. **Survey Connect:** Once you add the devices, the Survey Connect Tab will be available.
 - a. Select the correct device connection for your systems (serial, network, etc).
 - b. Use the Test Devices Option to assure proper communication.
7. **Offsets:** Once you add the devices the Offsets Tab will also be available. Enter the offsets for each device.
8. **Add HYSWEEP® SURVEY information.** Select “HYSWEEP Survey” under the Boat – The Manufacturer/Model Tab opens.

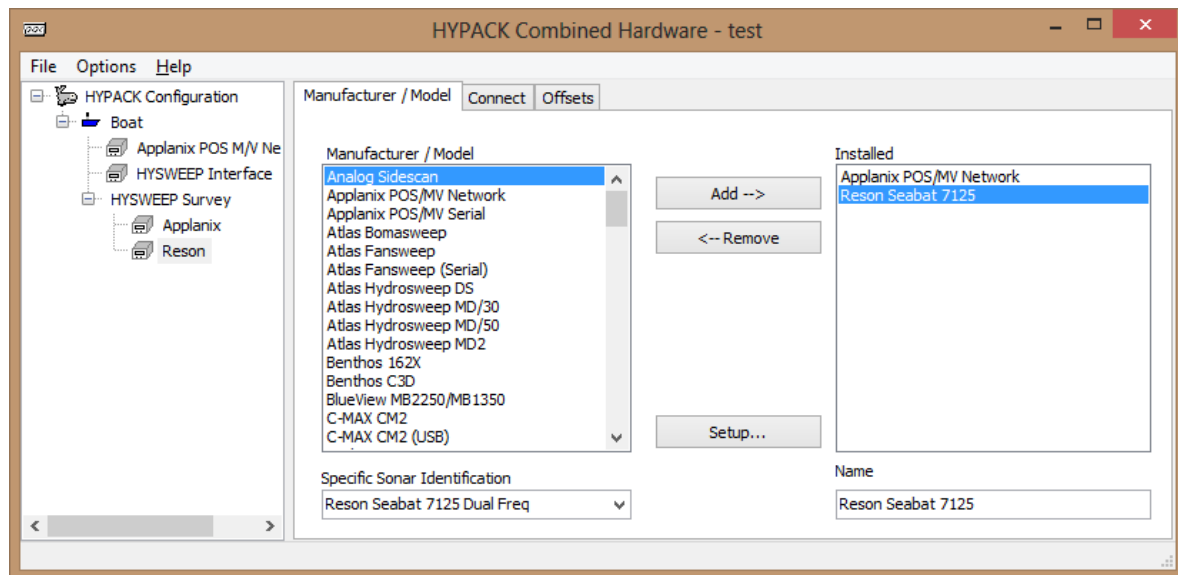
FIGURE 8. Adding to HYSWEEP® SURVEY (aka HYSWEEP® HARDWARE)



You no longer need to add HYPACK Navigation. (The information is now passed in the background during acquisition.) (Figure 8)

9. **Configuring Systems under HYSWEEP® SURVEY.** After you have selected and added the systems click on each one listed and two additional tabs will be available (Connect and Offsets). Configure each just like you did for HYPACK Configuration. (Figure 9)

FIGURE 9. Selecting Systems Added to HYSWEEP® SURVEY—New Connect and Offsets Tab Now Available



10. **Select the device to Synchronize Clock.** Select HYPACK Configuration and the device with which to synchronize your clock.

EXAMPLE OF A SIMPLE SIDE SCAN SETUP

1. **Start with a New Configuration** (Figure 1).
2. **Select “Include” under SIDE SCAN SURVEY.** This lists SIDE SCAN SURVEY (*aka SIDE SCAN HARDWARE*) under the Boat.
3. **Is this a towed or hull mounted sidescan?** If towed, select “Installed on Towfish”. (See Figure 10 and Figure 11: The configuration with and without the Installed on Towfish option* selected.)

Note: You need to have a mobile added before selecting “Installed on Towfish”. (Right-click on HYPACK Configuration and select the Add Mobile option.)

FIGURE 10. With “Installed on Towfish” Selected, SIDE SCAN SURVEY Moves Under “Mobile”

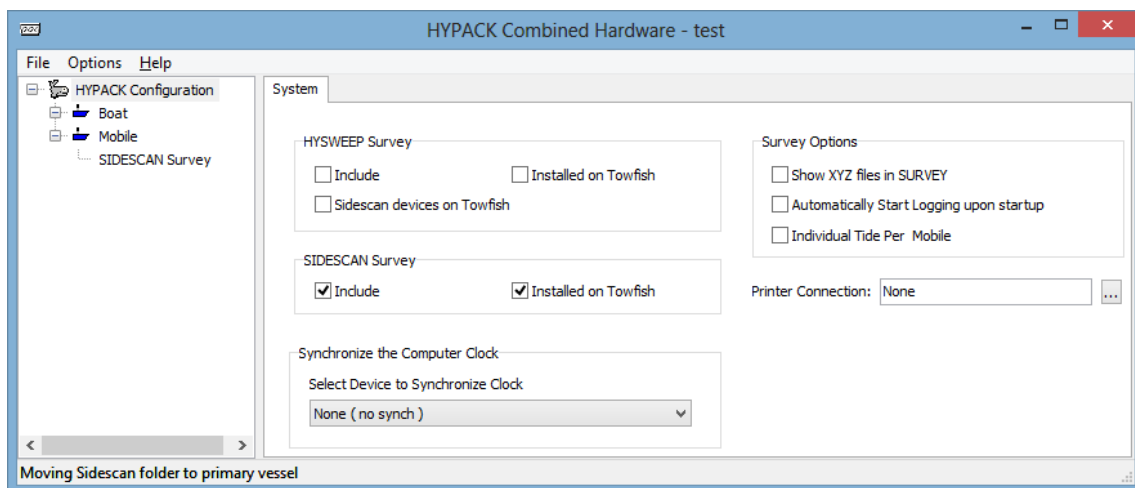
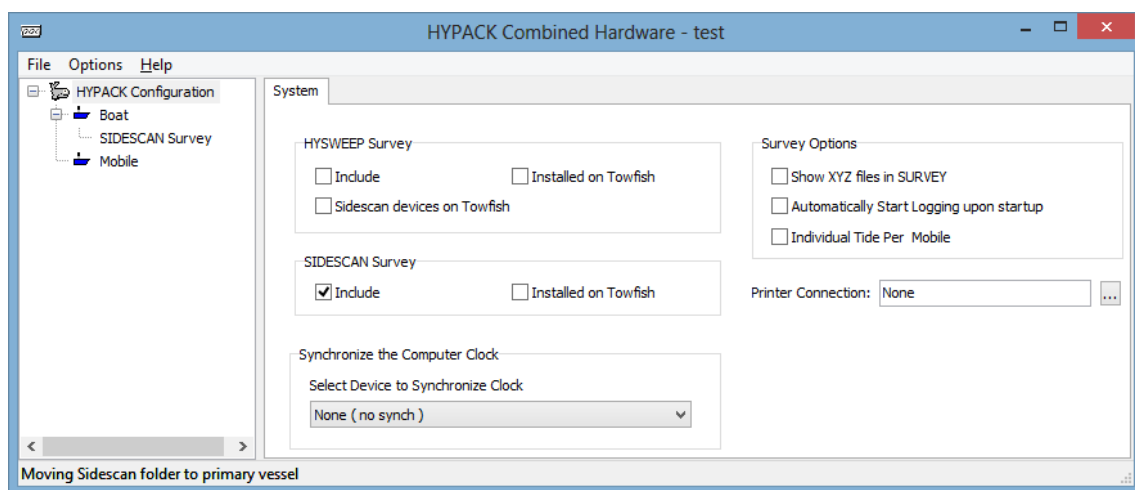


FIGURE 11. Without “Installed on Towfish” Selected, SIDE SCAN SURVEY Remains Under “Boat”



4. **Add Devices under HYPACK Configuration.**
 - a. **Select the ‘Boat’.** The Survey Devices tab becomes available.

- b. **Select the Survey Devices.** For each device, select the device and click [Add -->].
5. **Device Setup:** For each device, if it has setup options, click the 'Setup...' button and configure your options.
6. **Functions/Options:** Select for each device.
7. **SURVEY Connect:** Once you add the devices, the Survey Connect Tab becomes available. (Figure 3)
 - a. **Select the correct device connection** for your systems (serial, network, etc).
 - b. **Use the Test Devices** Option to assure proper communication.
8. **Offsets:** Once you add the devices the Offsets Tab will also be available. Enter the offsets for each device. (Figure 4)
9. **Add SIDE SCAN Survey information.** Select "SIDE SCAN Survey", which will be under the Boat or Mobile. The Manufacturer/Model tab opens for you to select your sonar.
10. **Configure each system under SIDE SCAN Survey.** After you have selected the systems, click on each one listed and two additional tabs will be available (Connect and Offsets). Configure each just like you did for the HYPACK Configuration.
11. **If you are using a towed system, add towfish.dll to the second mobile:** Select the Mobile and add the device. (See image 12 for this example)
12. **Select Device to Synchronize the Clock:** Click on HYPACK Configuration and select the device to synchronize.

FIGURE 12. Tow Mounted Side Scan Sonar with Single Beam Example

