



Multiple Offsets in Survey

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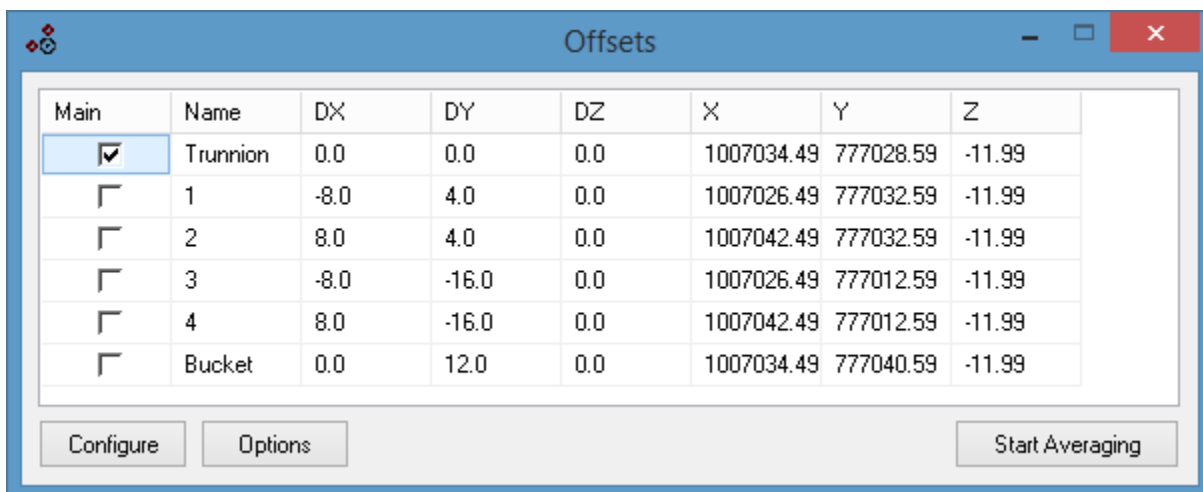
One of the new features to look for in HYPACK® 2014 is the ability to specify multiple offsets (or tracking points). Prior to HYPACK® 2014, you had the ability to specify one tracking point. This was done in the HYPACK® HARDWARE program. The tracking point, as defined in the HYPACK help file is:

“...the position used by the SURVEY program to position the vessel in the world. It is used to provide left/right guidance, make automatic “start line” and “end line” decisions, and calculate horizontal distances between the vessel and features in your survey area. It is also the location at which Quickmark targets will be marked. The tracking point is configured by entering horizontal offset relative to the boat origin in the Mobile tab.”

In HYPACK® 2014, the tracking point specified in HYPACK® HARDWARE automatically becomes the first Offset.

To access the Offsets Window in SURVEY, select WINDOW-NEW-OFFSETS from the main menu. The Offsets window looks like Figure 1.

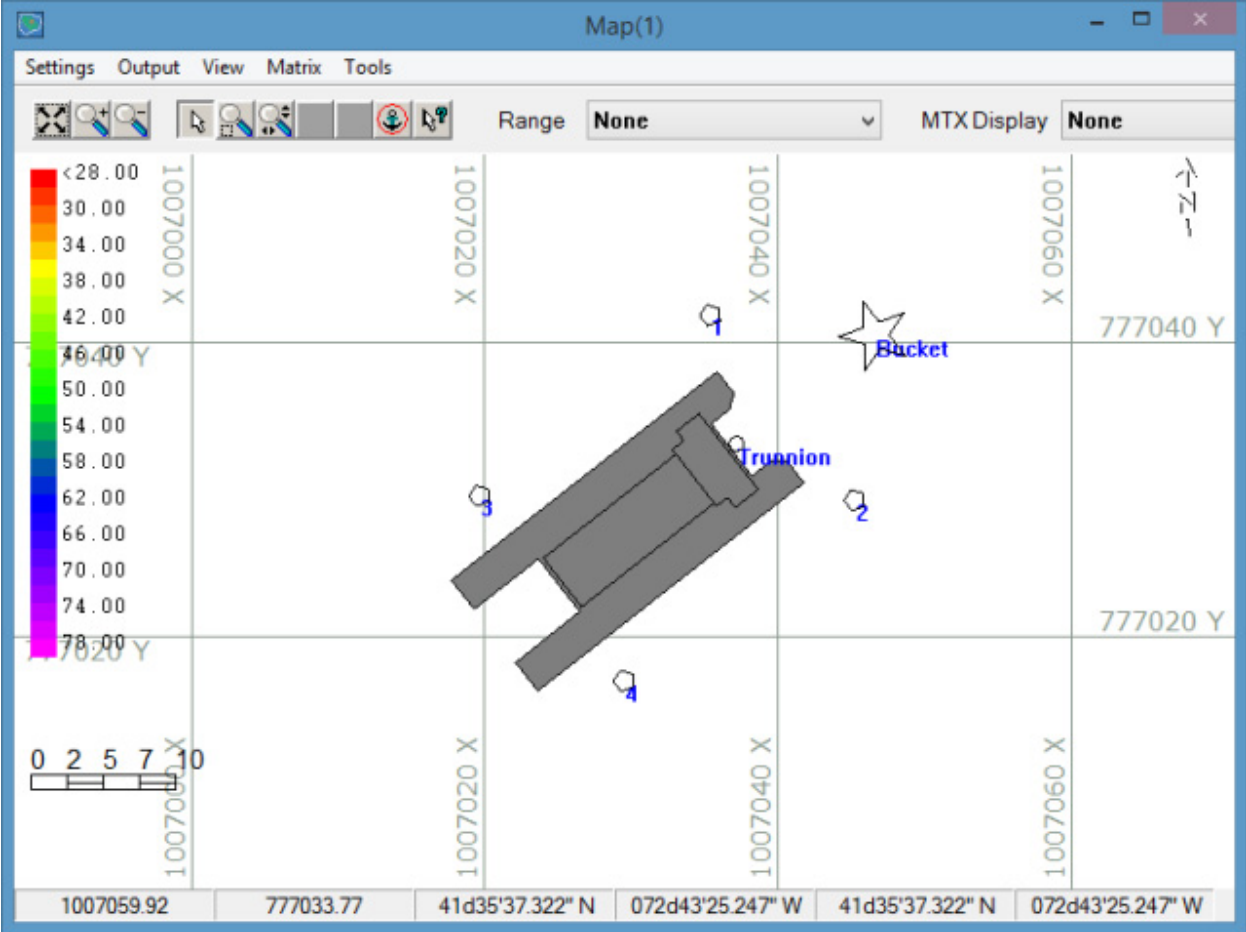
FIGURE 1. Offsets Window



This is a display window showing the name, XYZ offset values relative to the origin of, and current XYZ position of that offset. It also gives you the ability to switch the current Offset/Tracking Point. The selected “Main” Offset becomes the tracking point in SURVEY.

On the Survey map window, the set of Offsets in Figure 1 looks like Figure 2:

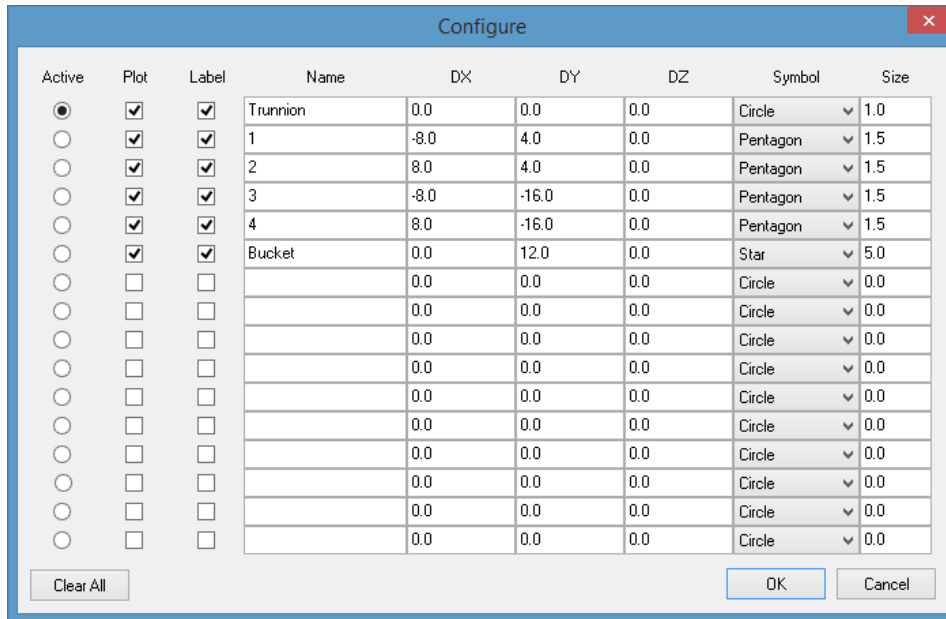
FIGURE 2. Sample Offsets in the SURVEY Map Window



CONFIGURING OFFSETS

In Figure 1, you will notice there is a "Configure" button. This is where you set up your Offsets. The configuration screen looks like Figure 3:

FIGURE 3. Configuring your Offset Positions



You can specify up to 16 Offsets. With each Offset, you specify the Name, dX, dY, dZ (relative to the vessel origin of the main vessel), and display symbol style and size. You can also set the **active** Offset and whether or not to display the symbol and label of each Offset on the Survey Map.

AVERAGING

Another feature of the new Offsets is the ability to keep an average position over a given span of time. On the main Offsets window, you will notice a “Start Averaging” button. When pressed, the program will begin keeping the position of each Offset and the “Start Averaging” button will become “Stop Averaging.” When you stop averaging, a report will pop-up (optional – under “Options”) showing the following information:

FIGURE 4. Sample Offset Position Averaging Report

Report Date: 11/15/2013
Report Start Time: 12:20:34
Report End Time: 12:21:06
Units: Feet

HDOP: Min 1.00 Max 1.10
Num of Sats: 8 9
GPS Mode: 2 2

Offset	Name	Avg X	Avg Y	Avg Z	SD-X	SD-Y	SD-Z
1	Trunnion	1007035.54	777027.93	-12.00	0.00	0.00	0.07
2	1	1007027.54	777031.93	-12.00	4.08	9.66	0.07
3	2	1007043.54	777031.93	-12.00	9.80	3.73	0.07
4	3	1007027.54	777011.93	-12.00	19.32	8.16	0.07
5	4	1007043.54	777011.93	-12.00	7.45	19.60	0.07
6	Bucket	1007035.54	777039.93	-12.00	9.74	10.15	0.07

THE NEXT STEP

The next step for this improvement is going to be Target windows where you will be able to set a constant display of a particular Offset to a target. As it is now, when you have a target selected and shown in the Data Display, it shows the distance to the current tracking point. The tracking point can be changed to see the distance from any Offset by selecting that Offset in the Offset window, but that also changes the recorded position and the position used for all other Survey calculations. The Target windows will display the offset-to-target information without bothering the rest of the system.

LIMITATIONS

The only current limitation to Offsets is that they only apply to the Main Vessel. There are plans to expand it to all mobiles in the future.

If you have any questions about multiple offsets, please feel free to contact HYPACK Support for more information.