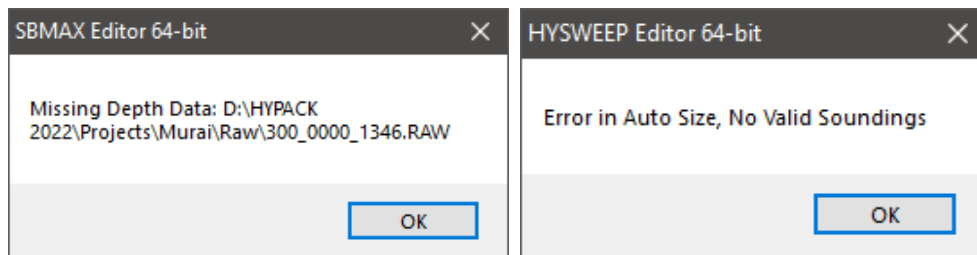




"No Valid Soundings" Error in SBMAX64 or MBMAX64

By Cali DeCastro

You've been out collecting data all day, and everything looked great during collection. But when you return to the office to process, you receive the dreaded "No Valid Soundings" or "Missing Depth Data" error in the editor, or the sounding data just simply doesn't appear.



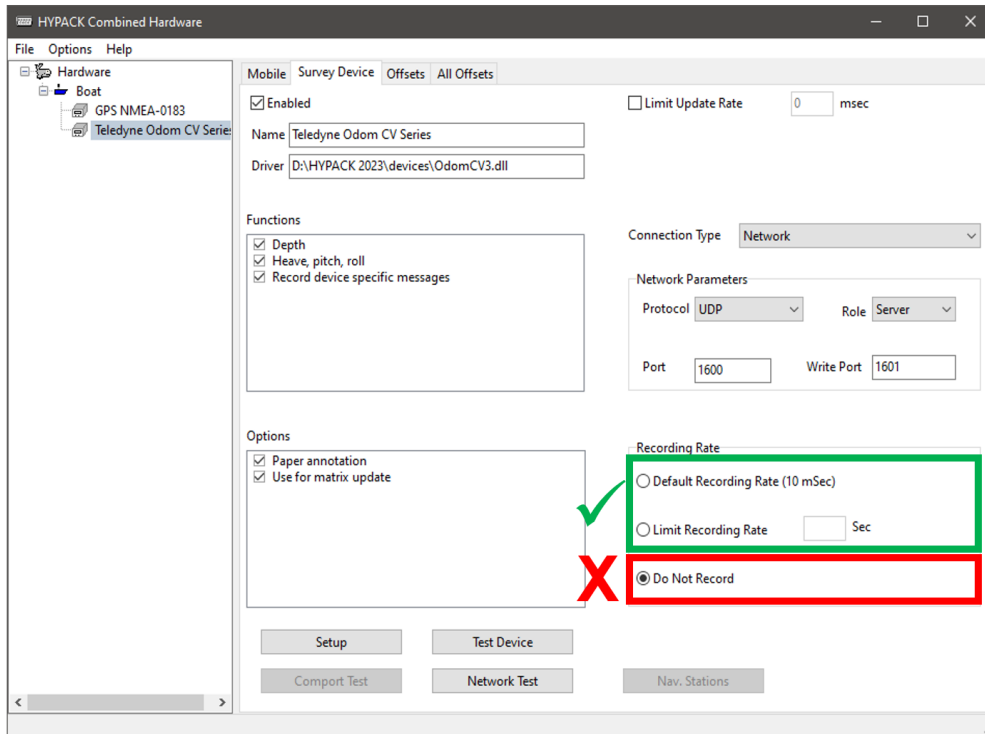
First things first: Try not to panic. Most of the time when we receive calls about this, the sounding data is in fact there, it's just a matter of figuring out why you've received this error and correcting it.

In this article I'll highlight some of the most common reasons for this error and how to fix it (if it is possible to fix).

RECORDING RATE SET TO "DO NOT RECORD"

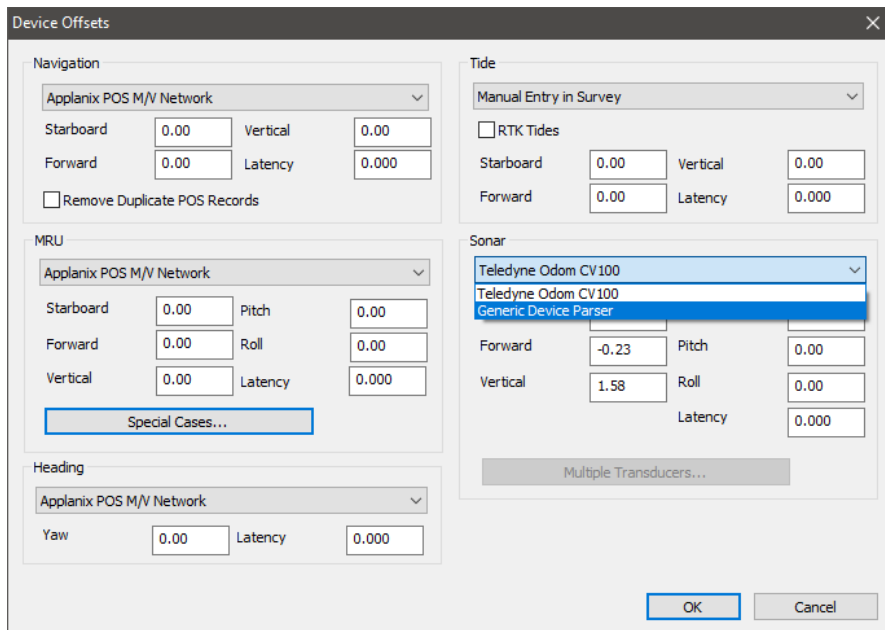
This is the only issue that I will discuss in this article that is NOT recoverable. ALWAYS double check in HYPACK Combined Hardware before surveying to ensure your devices are set to record at the appropriate rate (the default setting is 10 msec). If you've inadvertently set

to “Do Not Record”, there will be no messages recorded from that device and there is no way to recover the missing data except to reacquire it.



INCORRECT SOUNDING DEVICE SELECTED IN READ PARAMETERS

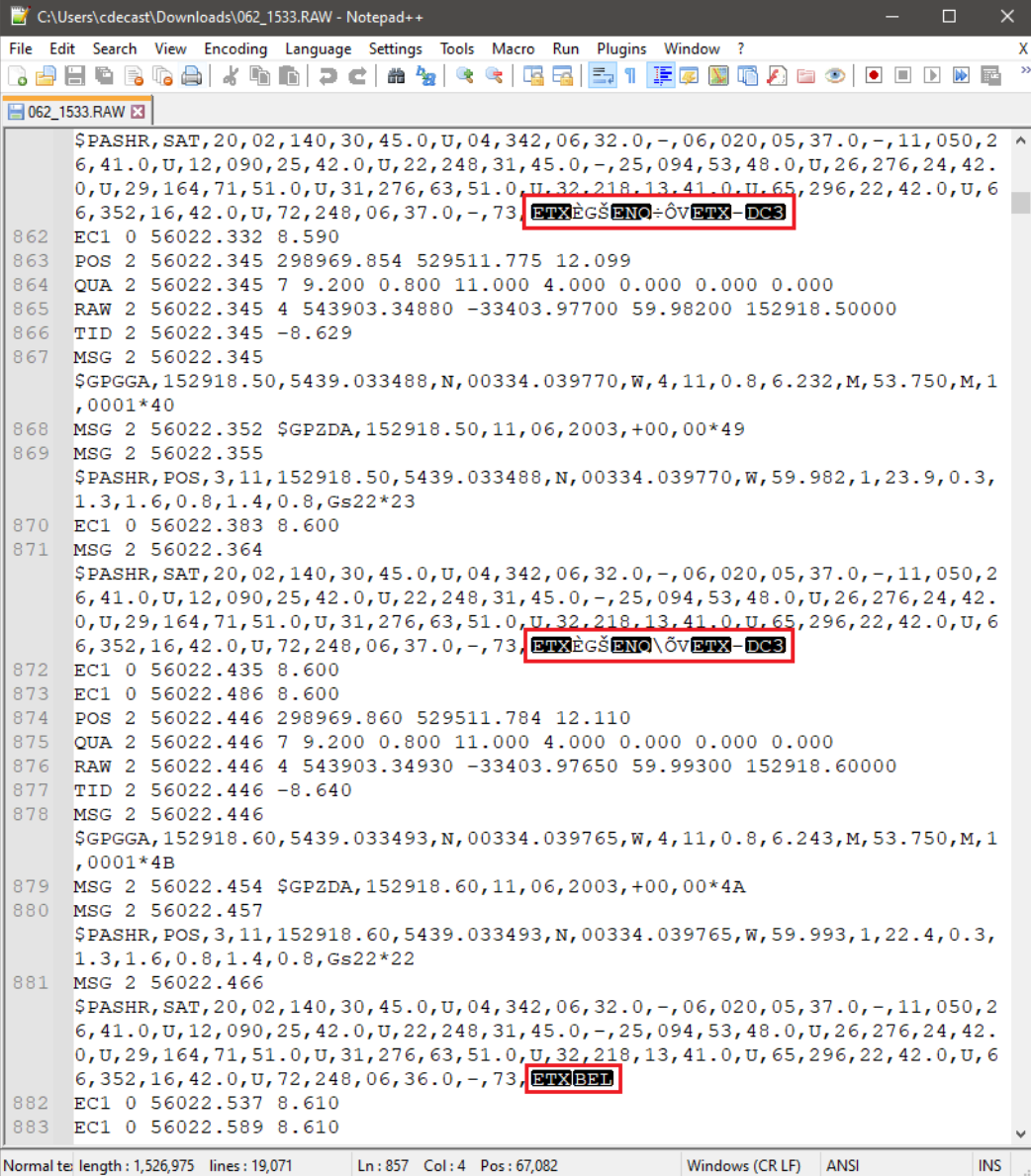
Depending on how your devices were set up and how data was collected, sometimes there will be more than one option available for the Sonar Device. If the wrong device is selected, you'll receive an error when you load the data in the editor. In this example, the Generic Device Parser is available as a selection under Sonar Device, but if chosen, would result in a “Missing Depth Data” error.



BINARY DATA WITHIN RAW FILE

Sometimes a device (usually GPS) can inadvertently be configured to send binary messages, which get recorded in the HYPACK RAW file. When these binary messages are mixed in with other messages, HYPACK will not read the data correctly.

You can check for binary characters by opening the RAW file in a text editor (Notepad or Notepad ++). If you see unusual characters that are not plain-text, such as those shown below, this is likely the issue.



```
C:\Users\cdecast\Downloads\062_1533.RAW - Notepad++
File Edit Search View Encoding Language Settings Tools Macro Run Plugins Window ?
062_1533.RAW
$PASHR, SAT, 20, 02, 140, 30, 45.0, U, 04, 342, 06, 32.0, -, 06, 020, 05, 37.0, -, 11, 050, 2
6, 41.0, U, 12, 090, 25, 42.0, U, 22, 248, 31, 45.0, -, 25, 094, 53, 48.0, U, 26, 276, 24, 42.
0, U, 29, 164, 71, 51.0, U, 31, 276, 63, 51.0, U, 32, 218, 13, 41.0, U, 65, 296, 22, 42.0, U, 6
6, 352, 16, 42.0, U, 72, 248, 06, 37.0, -, 73, BTXÈGŠENQ+ôvBTX-DCS
862 EC1 0 56022.332 8.590
863 POS 2 56022.345 298969.854 529511.775 12.099
864 QUA 2 56022.345 7 9.200 0.800 11.000 4.000 0.000 0.000 0.000
865 RAW 2 56022.345 4 543903.34880 -33403.97700 59.98200 152918.50000
866 TID 2 56022.345 -8.629
867 MSG 2 56022.345
$GPGGA, 152918.50, 5439.033488, N, 00334.039770, W, 4, 11, 0.8, 6.232, M, 53.750, M, 1
, 0001*40
868 MSG 2 56022.352 $GPZDA, 152918.50, 11, 06, 2003, +00, 00*49
869 MSG 2 56022.355
$PASHR, POS, 3, 11, 152918.50, 5439.033488, N, 00334.039770, W, 59.982, 1, 23.9, 0.3,
1.3, 1.6, 0.8, 1.4, 0.8, Gs22*23
870 EC1 0 56022.383 8.600
871 MSG 2 56022.364
$PASHR, SAT, 20, 02, 140, 30, 45.0, U, 04, 342, 06, 32.0, -, 06, 020, 05, 37.0, -, 11, 050, 2
6, 41.0, U, 12, 090, 25, 42.0, U, 22, 248, 31, 45.0, -, 25, 094, 53, 48.0, U, 26, 276, 24, 42.
0, U, 29, 164, 71, 51.0, U, 31, 276, 63, 51.0, U, 32, 218, 13, 41.0, U, 65, 296, 22, 42.0, U, 6
6, 352, 16, 42.0, U, 72, 248, 06, 37.0, -, 73, BTXÈGŠENQ\ôvBTX-DCS
872 EC1 0 56022.435 8.600
873 EC1 0 56022.486 8.600
874 POS 2 56022.446 298969.860 529511.784 12.110
875 QUA 2 56022.446 7 9.200 0.800 11.000 4.000 0.000 0.000 0.000
876 RAW 2 56022.446 4 543903.34930 -33403.97650 59.99300 152918.60000
877 TID 2 56022.446 -8.640
878 MSG 2 56022.446
$GPGGA, 152918.60, 5439.033493, N, 00334.039765, W, 4, 11, 0.8, 6.243, M, 53.750, M, 1
, 0001*4B
879 MSG 2 56022.454 $GPZDA, 152918.60, 11, 06, 2003, +00, 00*4A
880 MSG 2 56022.457
$PASHR, POS, 3, 11, 152918.60, 5439.033493, N, 00334.039765, W, 59.993, 1, 22.4, 0.3,
1.3, 1.6, 0.8, 1.4, 0.8, Gs22*22
881 MSG 2 56022.466
$PASHR, SAT, 20, 02, 140, 30, 45.0, U, 04, 342, 06, 32.0, -, 06, 020, 05, 37.0, -, 11, 050, 2
6, 41.0, U, 12, 090, 25, 42.0, U, 22, 248, 31, 45.0, -, 25, 094, 53, 48.0, U, 26, 276, 24, 42.
0, U, 29, 164, 71, 51.0, U, 31, 276, 63, 51.0, U, 32, 218, 13, 41.0, U, 65, 296, 22, 42.0, U, 6
6, 352, 16, 42.0, U, 72, 248, 06, 36.0, -, 73, BTXBBB
882 EC1 0 56022.537 8.610
883 EC1 0 56022.589 8.610
Normal text length: 1,526,975 lines: 19,071 Ln: 857 Col: 4 Pos: 67,082 Windows (CR LF) ANSI INS
```

You can fix this issue using the StripBinary tool. See this quick tutorial here: [StripBinary Tool](#)

you've determined the value, you will need to reload the data in the editor, adding this latency value into the sonar in Read Parameters -> Devices -> Edit.

The screenshot shows the 'Device Offsets' dialog box with the following settings:

- Navigation:** HYPACK Survey, Starboard: 0.00, Vertical: 0.00, Forward: 0.00, Latency: 0.000
- MRU:** Applinix POS/MV Network, Starboard: 0.00, Pitch: 0.00, Forward: 0.00, Roll: 0.00, Vertical: 0.00, Latency: 0.000, Installed on Towfish: Special Cases...
- Heading:** HYPACK Survey, Yaw: 0.00, Latency: 0.000, Installed on Towfish:
- Tide:** HYPACK Survey, RTK Tides: , Starboard: 0.00, Vertical: 0.00, Forward: 0.00, Latency: 0.000
- Sonar:** R2Sonic Zero 2024
 - Sonar Head 1:** Starboard: -5.16, Vertical: 1.79, Forward: 1.26, Latency: 3599.96 (highlighted)
 - Sonar Head 2:** Starboard: [empty], Vertical: [empty], Forward: [empty], Latency: [empty]
 - Installed on Towfish: Installed On Rotator: Offsets... Multiple Transducers...

With the latency value added, the data should now load normally.

To fix this issue for good, you'll need to determine why your devices are not properly time-synced. Here are some articles we've written about how to time-sync devices, or you can contact HYPACK Tech Support to help get your devices set up correctly:

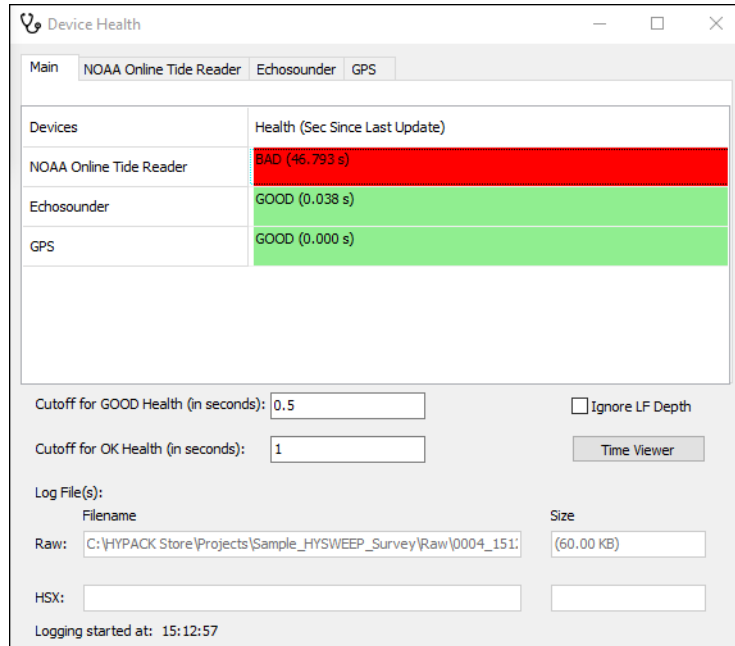
[GPS Timing and Synchronization](#)

[Workaround for Time Sync Issue in Windows 10](#)

[Timing Your Data in HYPACK and HYSWEEP Survey](#)

The Device Health feature in HYPACK® SURVEY can help you identify and monitor time sync issues during data collection. To launch Device Health, from the Survey menu go to

Options -> Shared Memory -> Device Health. You can set the thresholds for Good, OK, and Bad data within the Device Health window.



As always, if you have any questions about implementing any of these fixes or addressing other issues with your data, please don't hesitate to reach out to your HYPACK Tech Support team!