

Hydromagic Version 9 New Features – Improved Editing and Export, PPK GNSS Import, New Route Planner

Description

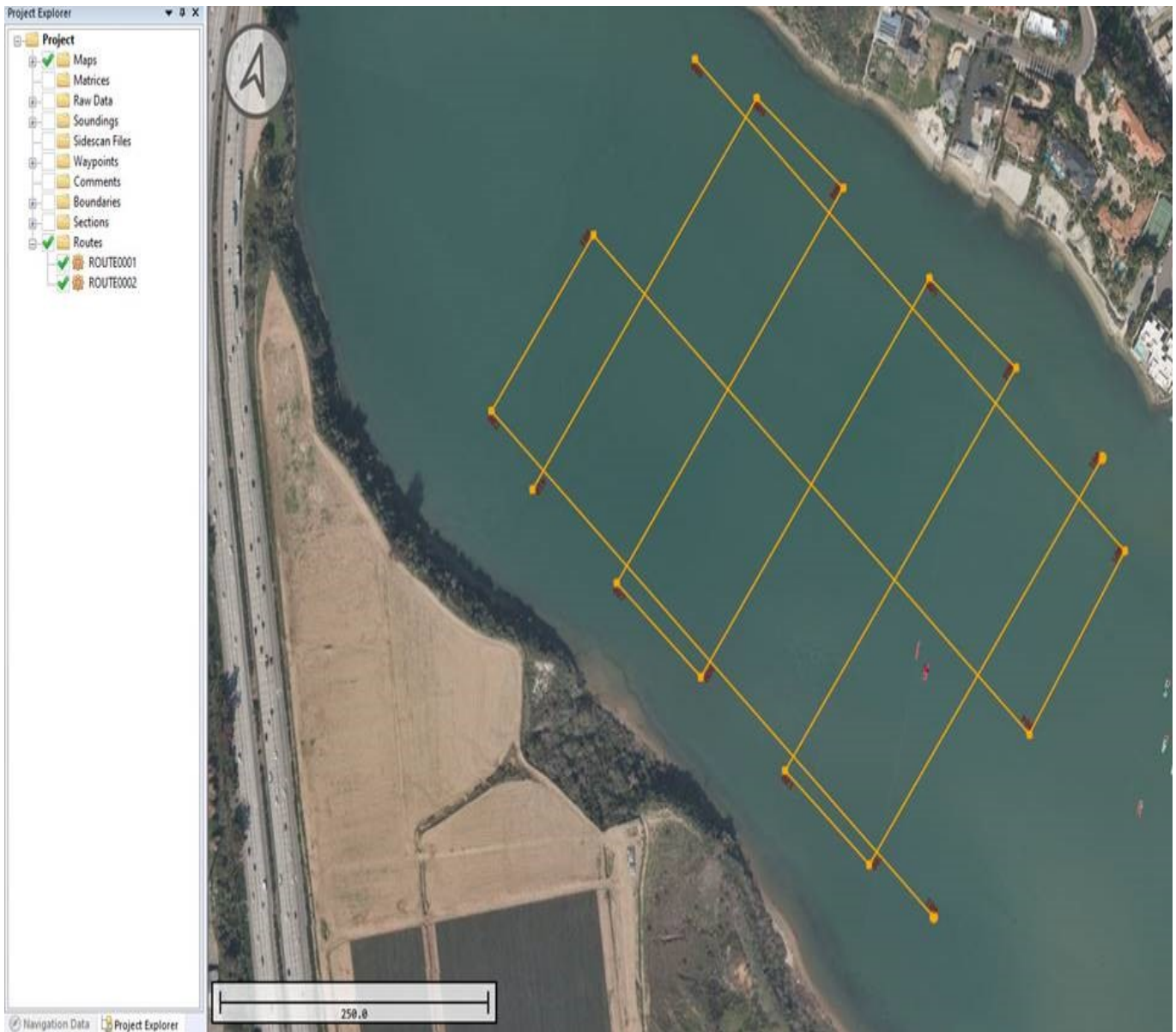
LIST OF KEY NEW FEATURES

ZOOM AND PAN KEYBOARD SHORTCUTS

- Avoid messing with the annoying laptop touchpad in the field, Page up / Dn and Arrow keys now operate zoom and pan

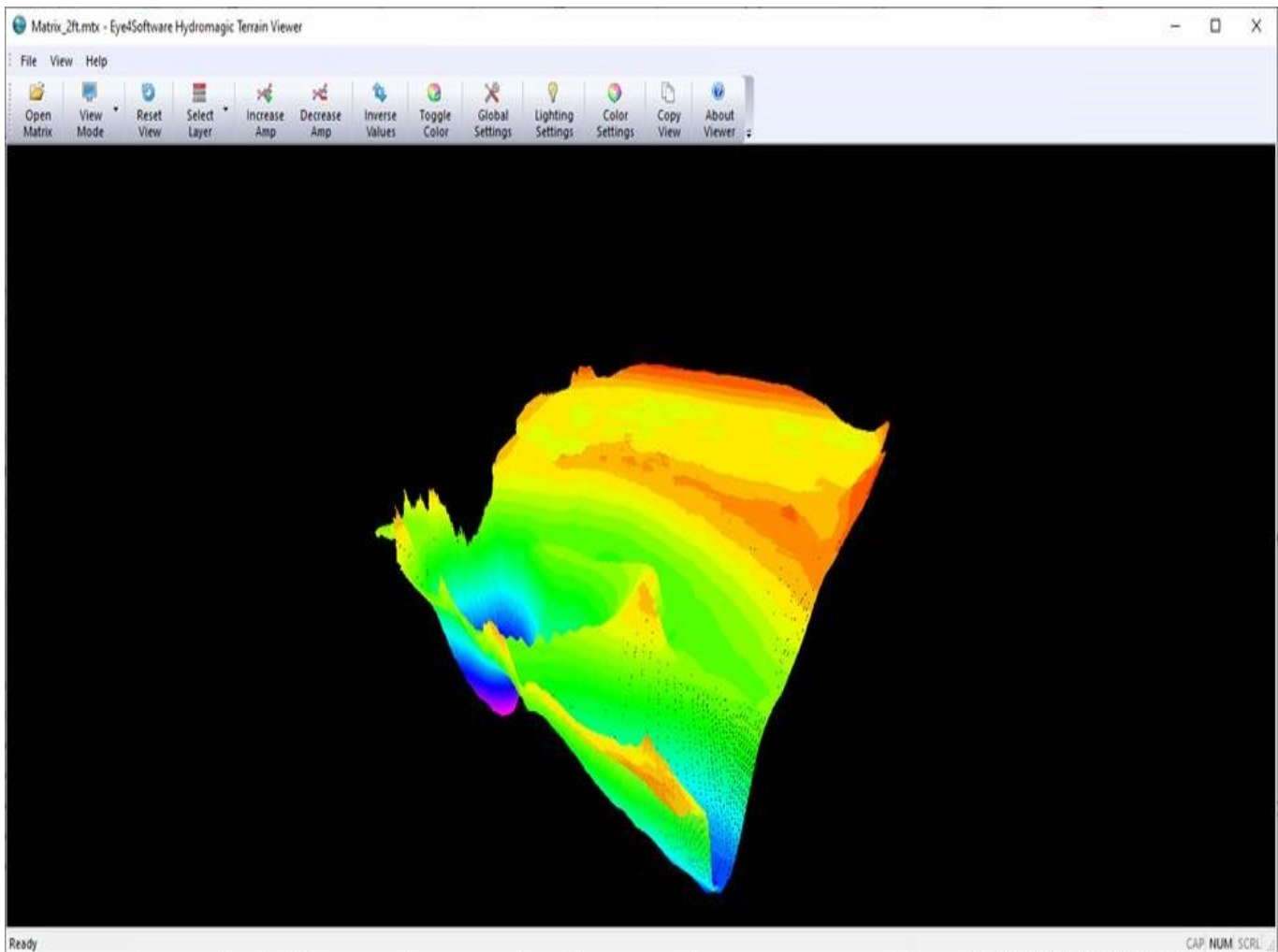
ENHANCED ROUTE PLANNER (for Robotic CEE-USV):

- Now multiple routes can be imported or saved on the Project Explorer, instead of only allowing a single route.
- Start of the route is identified by a user defined “blob”.



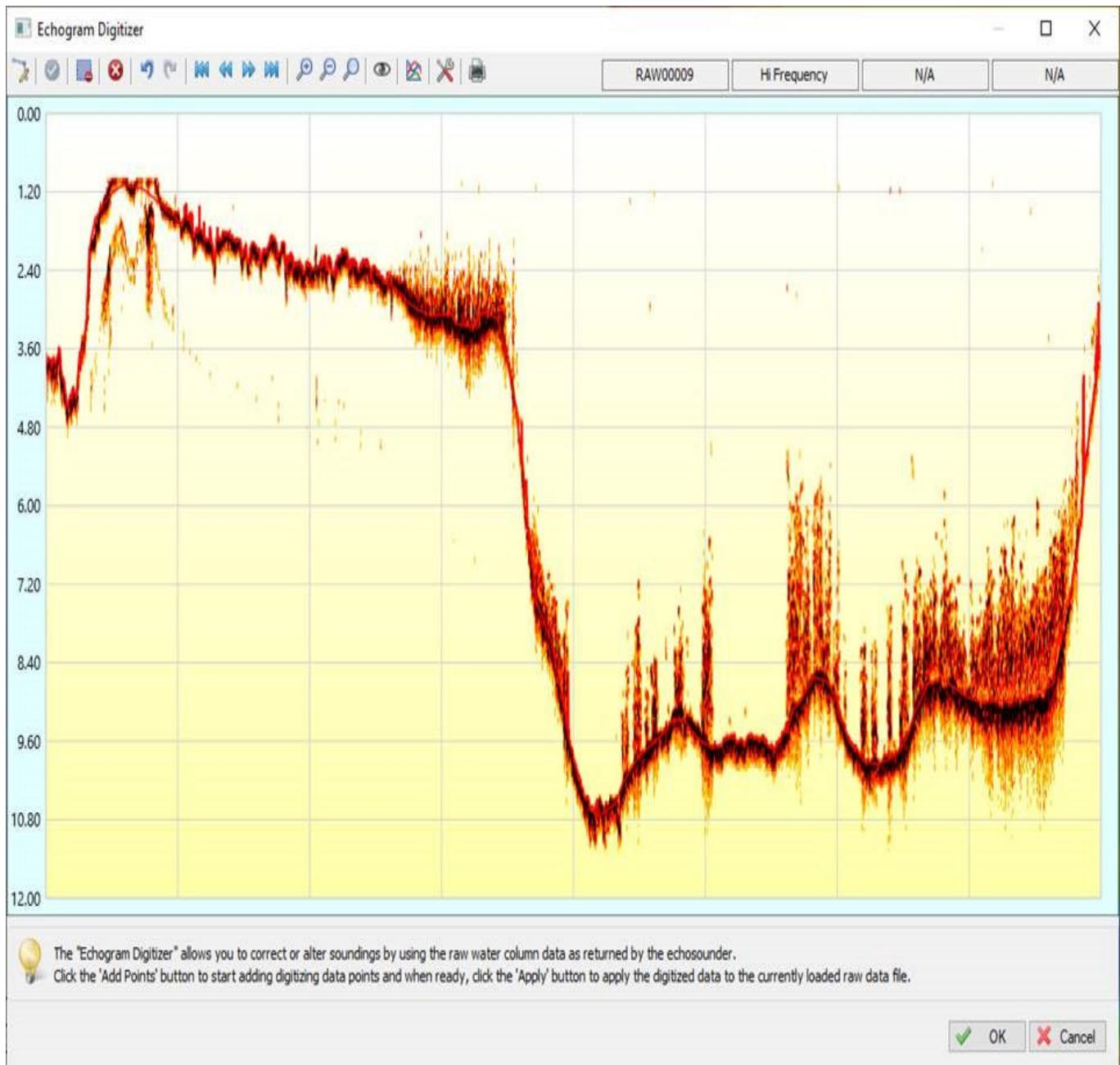
NEW 3D TERRAIN VIEWER:

- Greatly enhanced 3D view with infinite amplification
- Variable lighting intensity and viewing angle



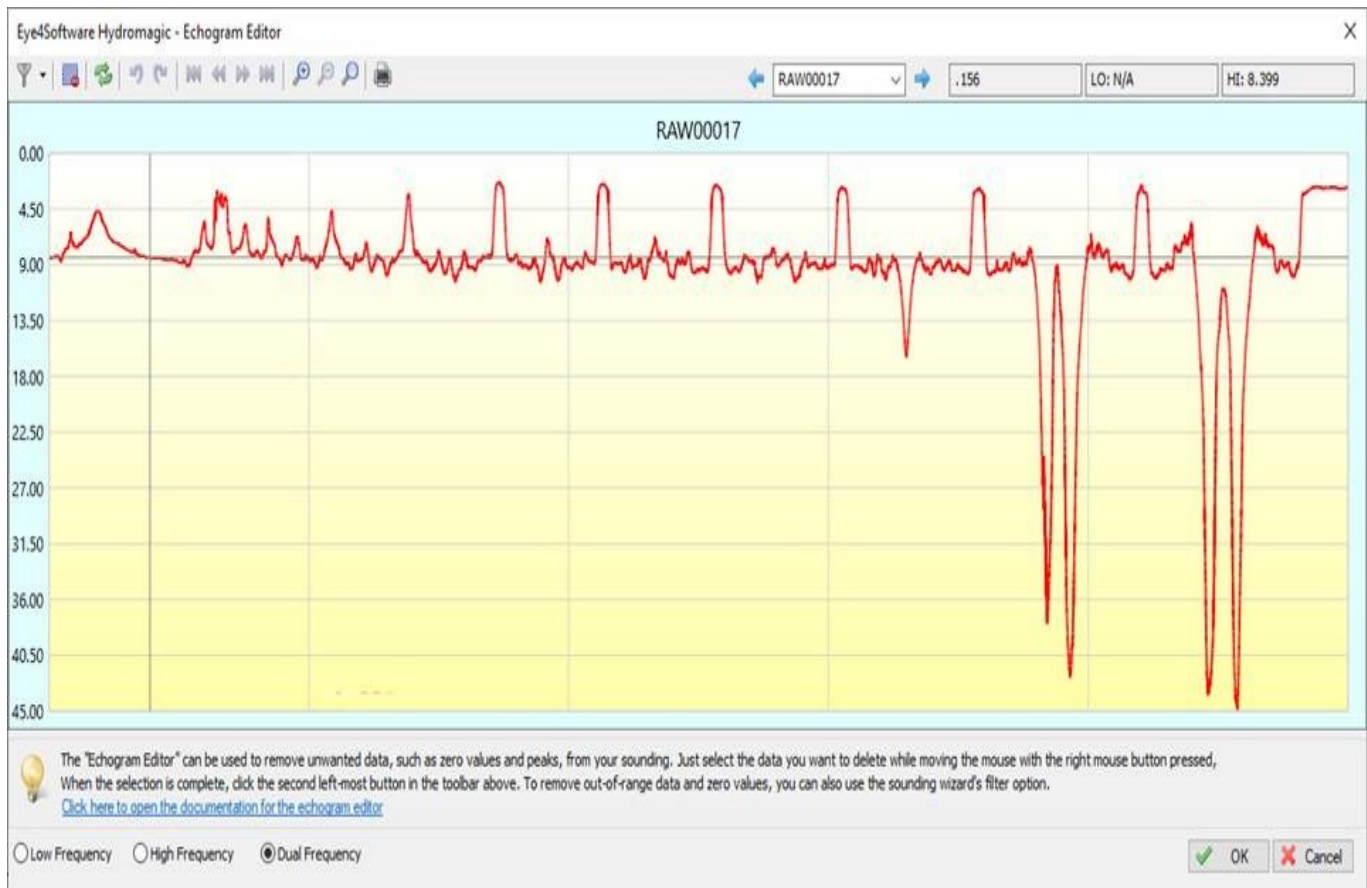
DETAILED AND ENHANCED ECHOGRAM VIEW AND EDITOR:

- Full HD water column with several color modes.
- User digitizer to “re draw” soundings.



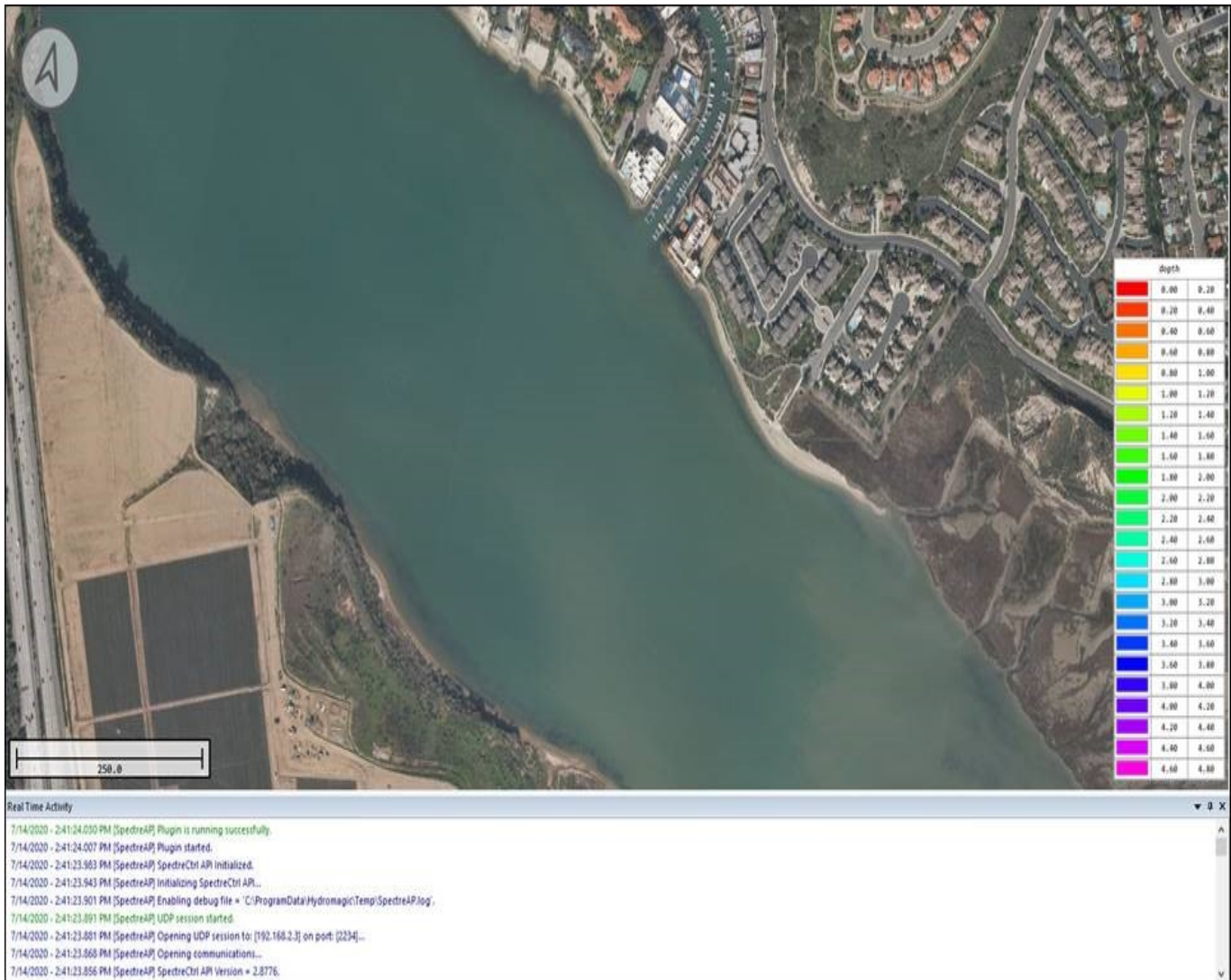
RAW FILE NUMBER DROP-DOWN DISPLAY WITH L/R ARROWS

– Makes it easier to navigate through editing soundings



NEW REAL TIME ACTIVITY VIEW WINDOW

- All running processes are identified, with errors shown.
- Greatly enhances awareness of issues or setup problems.
- Particularly useful for monitoring CEE-USV autopilot communications.



POST PROCESSED KINEMATIC GNSS DATA HANDLING

– Real time GNSS data may be corrected using a PPK base station data file

Raw Data Tools - Post Processing Kinematic

Select PPK Correction Data File

File Name:

 Browse...  View...

Coordinate Options

☐ Input file has easting and northing coordinates (projected)

☒ Input file has longitude and latitude coordinates (geographic)

Coordinate Format:

Coordinate Reference System

If the coordinates stored in the file are not in WGS84 geographic coordinates, select the coordinate system used by clicking on the 'Select' button.

Currently selected: WGS84  Select...

Define PPK file format or select pre-defined format from list

Predefined File Type:

Date Format: (select correct order)

Time Format: (select correct order)

Comment Prefix:

Date Field #:

Time Field #:

X or Longitude Field #:

Y or Latitude Field #:

Geoid or Ellipsoid Field #:

Time Offset: minutes  Test...

 The Post Processing Kinematic function can be used to correct position data using PPK correction files generated with for instance RTKLib.
[Click here for detailed documentation on how to use PPK in Hydromagic.](#)

 OK  Cancel

ELEVATION MODE ELIMINATED AND EXPANDED MATRIX OUTPUT

– The software automatically shows soundings as elevations when tide / RTK is applied, with no need to switch modes. This was a source of confusion.

GREATLY ENHANCED MATRIX OUTPUT OPTIONS

– Simpler, faster and more powerful XYZ export options

Eye4Software Hydromagic - Generate a matrix file from soundings and boundaries

Select Source Data

Sounding Data: <None selected, optional>  Select...

Boundaries: <None selected, optional>  Select...

Sounding Channel: Corrected Depth (H*i* Freq*uency) *

Output File

Matrix Spacing:

Output Filename:  Browse...

 Use this tool to generate a matrix file from soundings and boundaries. Use the "Select..." buttons to select the source data and boundaries. [Click here to open the help file.](#)

Corrected Depth (Lo Frequency)
Corrected Depth (Hi Frequency)
Elevation (Lo Frequency)
Elevation (Hi Frequency)
Corrected Depth (Delta Lo-Hi)
Corrected Depth (Delta Hi-Lo)
Bottom Loss (Lo Frequency)
Bottom Loss (Hi Frequency)
Bottom Reflection (Lo Frequency)
Bottom Reflection (Hi Frequency)
Bottom Density (Lo Frequency)
Bottom Density (Hi Frequency)
Bottom Porosity (Lo Frequency)
Bottom Porosity (Hi Frequency)
Sensor Data Channel #1
Sensor Data Channel #2

DELTA MATRIX COMPUTATION

– Compare matrices to calculate volume changes

Eye4Software Hydromagic - Generate Matrix (Delta) X

Select Source Data

Matrix 1 - File Name: (pre-dredging)

Matrix 1 - Layer: (select layer)

Matrix 2 - File Name: (post-dredging)

Matrix 2 - Layer: (select layer)

Output File

Output Filename:

 Browse...

Color Options

☒ Automatically generate and activate a color set

Color Set Name:

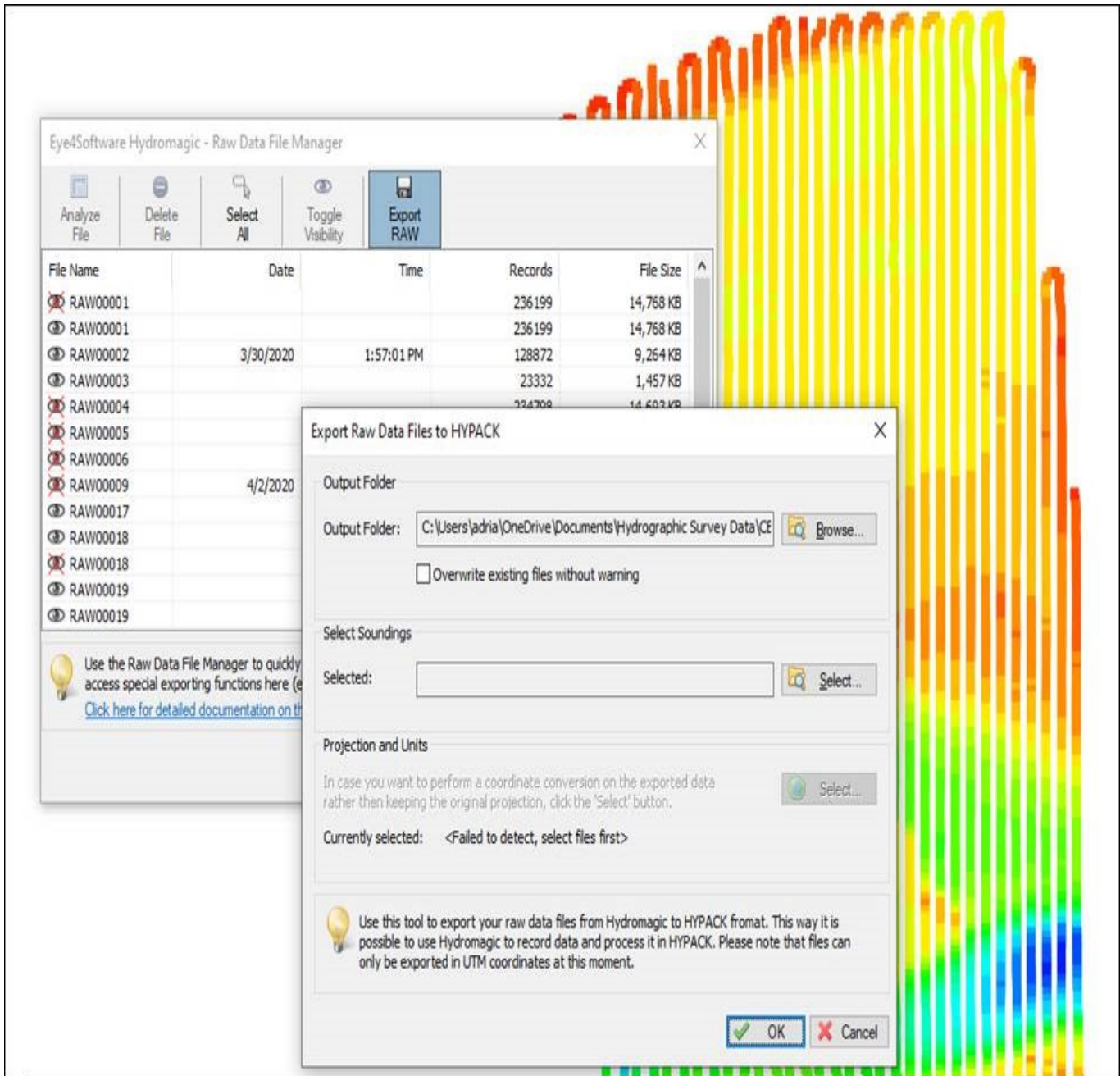
Color Selection:

 Use this tool to generate a matrix of differences between two matrix files. This will show information on the amount of material dredged, or sediment building up between different soundings.
[Click here to open the documentation for the delta matrix generation tool.](#)

 OK  Cancel

HYPACK EXPORT

– Hydromagic RAW files may be exported in HYPACK RAW format for conversion to a HYPACK project.



SIDE SCAN VIEWER

- Side scan data files may be mosaicked and incorporated into Hydromagic projects

NEW NAVIGATION VIEW TOOLBAR:

- Easier font changes and readout display adjustments:

The screenshot shows the 'Navigation Data' window on the left and the 'Data View Options' dialog box on the right.

Navigation Data

Position (Geographic)	
Longitude	E 000°00'00.0000"
Latitude	N 00°00'00.0000"
Position (Projected)	
Easting	000000.000
Northing	000000.000
Height (WGS84)	
Ellipsoidal	0.00 m
Depth	
Sounder Hi	0.00 m
Sounder Lo	0.00 m
Corrected Hi	0.00 m
Corrected Lo	0.00 m
Tide	
Level	0.00 m
Heading	
Heading	000.0
Speed	
Ground	0.00 kmh
GPS Information	
Sats	00
Fix	NO FIX
Diff Age	00
Beacon	0000
Motion	
Roll	+0.00
Pitch	+0.00
Heave	+0.00
Sound Velocity	
Velocity	1500.00 m/s
Dilution Of Precision	
PDOP	0.00
HDOP	0.00
VDOP	0.00
Navigation	
Target Bearing	0.0

Data View Options

Display Items

- ☒ Position - Geographic
- ☒ Position - Projected
- ☒ Height
- ☒ Depth - Lo Frequency
- ☒ Depth - Hi Frequency
- ☒ Tide
- ☒ Course
- ☒ Speed
- ☒ GPS Information
- ☒ Dilution Of Precision
- ☒ Navigation
- ☒ Motion
- ☒ Sound Velocity
- ☒ Recording

Select All Select None

Font Size

Select Font Size: 8 pixels

Refresh Interval

Select Interval: 1000 ms

You can decrease the size of the font in the dataview in case not all items fit in the view.

OK Cancel

MULTIPLE DEPTH COLOR SCHEMES:

- Save different depth / elevation ranges to avoid the need to keep manually changing the color palette ranges

Current Color Set ✕

Select active color set (click '...' to manage sets)

Depth ▼ ...

Color	Lower	Upper
	0.00	1.50
	1.50	3.00
	3.00	4.50
	4.50	6.00
	6.00	7.50
	7.50	9.00
	9.00	10.50
	10.50	12.00
	12.00	13.50
	13.50	15.00
	15.00	16.50
	16.50	18.00
	18.00	19.50
	19.50	21.00
	21.00	22.50
	22.50	24.00
	24.00	25.50
	25.50	27.00
	27.00	28.50
	28.50	30.00

+ Add... - Delete...  Edit...  Auto...

Color Legend Location and Visibility

Display in lower-right corner ▼

 You can select the active color set using the drop-down box at the top of the screen. Click the '...' button to manage the color sets associated with the project.

 OK  Cancel

DOWNLOAD HYDROMAGIC HERE: <https://www.eye4software.com/download/>