



FGPS International

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SeisPos Release Notes

Refer to the [user manual](#) for details of new features.

Date: 17/09/2020

Version: 22.75

| No. | Module | Description |
|------------|---------------|--|
| 1 | Reports | Bugfix: Sometimes crashed when generating reports during automatic processing. |

Date: 15/09/2020

Version: 22.74

| No. | Module | Description |
|------------|---------------|---|
| 1 | Input | Node names can now be longer (and some other names). NOTE: due to possible changes in node names it is recommended to start a new project after installing this version. |
| 2 | Output | Bugfix: Corrected record ids when P1/90 output from a P2/11 input. |



Date: 11/09/2020

Version: 22.73

| No. | Module | Description |
|-----|-----------------|--|
| 1 | Input | Echosounder obs name allows for more characters. |
| 2 | Precondition | Bugfix: crash when importing external data. |
| 3 | Network Display | Improved X axis label layout for printing. |
| 4 | Reports | Bugfix: User report editor was not opening. |

Date: 20/08/2020

Version: 22.72

| No. | Module | Description |
|-----|---------------------------|---|
| 1 | Network Adjust | Bugfix: FSP array orientation not correctly computed when no RGPS pairs available. |
| 2 | Network Adjust, Output | Nodes with multi-reference nodes now computed as average of reference nodes' positions. |
| 3 | Output | Improved handling of nodes with multiple reference nodes. |
| 4 | Output | Bugfix: P111 file did not contain HC,2,3,0 records for gun string nodes. |



Date: 22/07/2020

Version: 22.71

| No. | Module | Description |
|-----|--------|---|
| 1 | Output | Bugfix: Depth coordinates sometimes not output when running with multiple parameter sets. |
| 2 | Output | Improved logging. |

Date: 22/06/2020

Version: 22.70

| No. | Module | Description |
|-----|-----------------|---|
| 1 | Output | Now writes transducer depth correction comments when no date given. |
| 2 | Online services | Now uses SFTP for file uploads. |

Date: 12/05/2020

Version: 22.69

| No. | Module | Description |
|-----|--------|---|
| 1 | Output | Bugfix: Corrected P190 grid coordinates when forcing grid units to centimetres and output CRS is different to survey CRS. |



Date: 11/05/2020

Version: 22.68

| No. | Module | Description |
|-----|--------|---|
| 1 | Output | Bugfix: Corrected P190 rx coordinates when forcing grid units to centimetres. |

Date: 07/05/2020

Version: 22.67

| No. | Module | Description |
|-----|---------|--|
| 1 | General | Bugfix: OK/Cancel buttons were hidden on some popup prompts. |

Date: 20/04/2020

Version: 22.66

| No. | Module | Description |
|-----|--------------|--|
| 1 | Project | Now supports acquisition systems DOLPHIN OBS SOURCE and DOLPHIN OBS RECEIVER. |
| 2 | Output | Corrected value of scale factor in ppm when outputting 7-param rotation vals in H2600 records. |
| 3 | Report Plots | New feature to separate shot event data according to source fired. |



Date: 18/03/2020

Version: 22.65

| No. | Module | Description |
|------------|---------------|---|
| 1 | Output | Only generate header record for buoy/NFH nodes if the node record will be output. |
| 2 | Output | When GAM selected for output an H0105 record will also be created in the header. |
| 3 | Output | SPS line name now adheres to "use x rightmost characters from line name" option. |
| 4 | Report | Bugfix: User options for PDF/CSV output were being ignored. |



Date: 17/03/2020

Version: 22.64

| No. | Module | Description |
|-----|-----------------------|---|
| 1 | P2/11 Input | Corrected decoding of vessel ref for T2,3,3,0 records for cases where the given source OBJREF was not directly towed by the vessel. |
| 2 | Database | Removed utility to perform P cable modifications - this must be done during P2 input. |
| 3 | Compass Bias Estimate | Revised default values. |
| 4 | Network Adjust | Acoustic obs SDs are now displayed and entered in milliseconds. |
| 5 | Network Adjust | Exclude colocated nodes is unchecked by default for 2D datasets. |
| 6 | Output | Now allows user defined object type 37 "Air Gun Source" as firing and non-firing source. |
| 7 | Output | NFH Ids now written to P190 H0105 records. |
| 8 | Report, Plots | Improved formatting. |

Date: 09/03/2020

Version: 22.63

| No. | Module | Description |
|-----|--------|---|
| 1 | Input | Bugfix: incorrect application of gun-array offset from towpoint-in-sea. |



Date: 09/03/2020

Version: 22.62

| No. | Module | Description |
|-----|-------------------|---|
| 1 | Project line list | Bugfix: Line status were corrupted after changing FGSP/LGSP. |
| 2 | Input | Bugfix: was not using gun-array offset from towpoint-in-sea. |
| 3 | Database | Improved handling when no CRS found in the EPSG database. |
| 4 | Precondition | Bugfix: Edited parameters were not saved before saving parameter set. |
| 5 | Report, Plots | Bugfix: User defined plot name appeared in GUI only, now appears in plot. |

Date: 25/02/2020

Version: 22.61

| No. | Module | Description |
|-----|----------------|---|
| 1 | Precondition | Revised default gates for P cable. |
| 2 | Network Adjust | Improvements made for P Cable processing. |
| 3 | Network Adjust | Bugfix: P cable rotation was not being written. |
| 4 | Reports | Bugfix: PDF output now correctly generated with High DPI screen settings. |
| 5 | Multiplot | Plots with overlays now marked as such in the plot title. |



Date: 11/02/2020

Version: 22.60

| No. | Module | Description |
|-----|--------|---|
| 1 | Output | Bugfix: Now handles more than 128 chars in export parameter file paths. |

Date: 10/02/2020

Version: 22.59

| No. | Module | Description |
|-----|------------------------|--|
| 1 | Input | Bugfix: Was sometimes erroneously reporting inconsistent central meridian for a UTM one. |
| 2 | Input | Bugfix: Corrected display of INPUT ABORTED message. |
| 3 | Output | User can now add custom header records which will be output verbatim. |
| 4 | Output | Added option to output SeisPos version and date when generating header from file. |
| 5 | Report, Trend Analysis | Bugfix: Summary files were not updated when plot modification type was changed. |
| 6 | Report, Stat Tests | All configured stat tests now run during automatic processing. |



Date: 17/01/2020

Version: 22.58

| No. | Module | Description |
|-----|------------------------|---|
| 1 | Line List | Improved performance when applying changes. |
| 2 | Plot Configuration | Added option to output PDF and/or CSV. |
| 3 | Report, Trend Analysis | Bugfix: Plot names for multi-series plots was not separated into the individual series. |

Date: 03/01/2020

Version: 22.57

| No. | Module | Description |
|-----|----------------------|--|
| 1 | Report, Plots | Improved handling of waypoints when every SP has a waypoint. |
| 2 | Report, Stat Testing | Bugfix: Various minor bugs. |



Date: 29/12/2019

Version: 22.56

| No. | Module | Description |
|-----|---------------------|--|
| 1 | Report Stat Testing | Bugfix: Was misreporting min/max value for vessel plots. |
| 2 | Network Adjust | Bugfix: Comparison nodes with no data sometimes with spurious coordinates. |

Date: 24/12/2019

Version: 22.55

| No. | Module | Description |
|-----|----------------------|--|
| 1 | Report, Stat Testing | New report module for statistical testing. |

Date: 24/12/2019

Version: 22.54

| No. | Module | Description |
|-----|--------|-------------|
| 1 | | No change. |



Date: 23/12/2019

Version: 22.53

| No. | Module | Description |
|-----|------------|---|
| 1 | Output SPS | Apply user defined line name for multiple parameter sets if single line selected. |

Date: 20/12/2019

Version: 22.52

| No. | Module | Description |
|-----|----------------------------------|---|
| 1 | Network Adjust, QC, Report Plots | Now removes flip flop waypoints when calculating waypoint relative node movement. |

Date: 20/12/2019

Version: 22.51

| No. | Module | Description |
|-----|-------------------------|--|
| 1 | QC, Report, Plot Config | Bugfix: crash when configuring Gunarray plots. |



Date: 12/12/2019

Version: 22.50

| No. | Module | Description |
|-----|----------------|---|
| 1 | Network Adjust | Bugfix: Was using rejected observations. |
| 2 | Network Adjust | Bugfix: Was sometimes hanging when starting the module. |

Date: 05/12/2019

Version: 22.49

| No. | Module | Description |
|-----|------------|--|
| 1 | Input P294 | Corrected obs data time handling around midnight. |
| 2 | Input P294 | Corrected warnings for hires timestamps. |
| 3 | Database | Corrected display of obs data times from second day of line. |



Date: 04/12/2019

Version: 22.48

| No. | Module | Description |
|-----|---------------------------------|--|
| 1 | Input, Database, Network Adjust | Updates for USBL alignment corrections. |
| 2 | Input | Now maps user-defined USBL obs types to internal USBL obs types. |
| 3 | Input P294 | Now creates all GPS QC obs by default after reading the satellite system definition. |
| 4 | Input | Improved handling for corrupted P2/11 records. |
| 5 | Database | Updated creation of 2D observations to handle P2/11. |

Date: 25/11/2019

Version: 22.47

| No. | Module | Description |
|-----|--------|--|
| 1 | Input | Improved handling of P2 files with incomplete headers. |



Date: 22/11/2019

Version: 22.46

| No. | Module | Description |
|-----|--------|--|
| 1 | Input | New option to create virtual shots for P2 files with no E1000, E2,1,0,0 or T2,3,3,# records. |

Date: 21/11/2019

Version: 22.45

| No. | Module | Description |
|-----|----------------|--|
| 1 | Network Adjust | Updates to auto-configuration of ROV networks. |

Date: 19/11/2019

Version: 22.44

| No. | Module | Description |
|-----|----------------------|---|
| 1 | Automatic processing | Now includes final report if a configuration has been set up. |
| 2 | Network Adjust | updates to handle ROV vessels. |
| 3 | Output | Corrected fsp/lsp handling for single line output. |
| 4 | Output | Zipped output files now contain timestamp. |



Date: 11/11/2019

Version: 22.43

| No. | Module | Description |
|-----|--------------|--|
| 1 | Project | Now allows loading of all defaults on every line even when inputting using interactive mode. |
| 2 | Output | Now allows multiple parameter sets to be output in one run. |
| 3 | Output | Now allows output files to be zipped (original output file will be removed after zipping). |
| 4 | Final Report | Corrected data range for precon plots when FGSP not same as FSP. |

Date: 04/11/2019

Version: 22.42

| No. | Module | Description |
|-----|--------------------|--|
| 1 | Output | Bugfix: Existing header comments were not being cleared when reading new ones from parms file. |
| 2 | TASTE Report Plots | Bugfix: FPD plots missing data. |



Date: 01/11/2019

Version: 22.41

| No. | Module | Description |
|-----|----------------------|---|
| 1 | TASTE Report Plots | Bugfix: Sometimes crashed when plotting, some plots missing data. |
| 2 | P2 Header Difference | Improved handling of zip files. |
| 3 | Report Plots | Corrected font colour for plots that show nominal. |

Date: 30/10/2019

Version: 22.40

| No. | Module | Description |
|-----|--------|--|
| 1 | Output | Added option "Output entire shot range" to override FGSP/LGSP from line. If in use, the project option "Always adjust entire shot range" should also be applied. |
| 2 | Output | GUI tidy, "other information" section now has popup menu. |

Date: 28/10/2019

Version: 22.39

| No. | Module | Description |
|-----|---------------|--|
| 1 | Final Reports | Ensure correct configuration file extension used with "save as". |



Date: 26/10/2019

Version: 22.38

| No. | Module | Description |
|------------|----------------|--|
| 1 | Network Adjust | Bugfix: some excluded node statistics were incorrectly reported. |
| 2 | Report Plots | New option to overlay plots. |

Date: 20/10/2019

Version: 22.37

| No. | Module | Description |
|------------|----------------|--|
| 1 | Network Adjust | Bugfix: error is calculating dynamic gun-array derived observations for P2/11. |



Date: 14/10/2019

Version: 22.36

| No. | Module | Description |
|-----|---------|---|
| 1 | Reports | CSV file column headers now contain both names when outputting data for comparison plots. |
| 2 | Reports | CSV file data now output to 6dp. |

Date: 09/10/2019

Version: 22.35

| No. | Module | Description |
|-----|--------|---|
| 1 | Input | When format checking Px11 files, "invalid data" errors are now bundled together in the log. |

Date: 09/10/2019

Version: 22.34

| No. | Module | Description |
|-----|---------|---|
| 1 | Output | Added option to specify seismic datum value. |
| 2 | Reports | Bugfix: Precon shot event data sometimes not plotted. |



Date: 03/10/2019

Version: 22.33

| No. | Module | Description |
|-----|----------------|--|
| 1 | Precondition | Bugfix: Corrected handling of GPS data when no waypoints available. |
| 2 | Network Adjust | Bugfix: corrected display of P cable derived observation attributes. |

Date: 02/10/2019

Version: 22.32

| No. | Module | Description |
|-----|--------------|---|
| 1 | Precondition | Bugfix: Corrected handling of GPS data when no waypoints available. |



Date: 30/09/2019

Version: 22.31

| No. | Module | Description |
|-----|----------|---|
| 1 | Input | P2/86 streamer and source are now referenced to their respective towpoints. |
| 2 | Database | Bugfix: incorrect nominal for acoustic observations in ms. |
| 3 | Output | Bugfix: Corrected source depths. |

Date: 26/09/2019

Version: 22.30

| No. | Module | Description |
|-----|---------------------------------|---|
| 1 | Output | Bugfix: Corrected offsets and depth nominals. |
| 2 | Multiplot | Bugfix: Sometimes crashed when closing the plot window. |
| 3 | Precondition, Network Adjust | Network display orientation is now saved. |



Date: 24/09/2019

Version: 22.29

| No. | Module | Description |
|-----|----------------|---|
| 1 | Project dialog | Bugfix: Available options did not always match the acquisition system. |
| 2 | Project | New options to specify streamer towpoint on vessel offsets for P2/11 datasets. |
| 3 | Database | Create 2D Nodes & Obs for P2/94 now uses only values from streamer and gun records to determine towpoint on vessel. |
| 4 | Report Plots | Added radial separations to Gun-array plots. |

Date: 18/09/2019

Version: 22.28

| No. | Module | Description |
|-----|--------------|--|
| 1 | Database | Now applies fan tail width, if specified, when computing observation nominals. |
| 2 | Report Plots | Bugfix: first point in vessel distance plot was sometimes zero. |



Date: 17/09/2019

Version: 22.27

| No. | Module | Description |
|-----|-------------|---|
| 1 | Application | Now allows automatic upgrades. The frequency of update checks can be set in the Tools / Options menu. |
| 2 | View P2 | Bugfix: Now correctly handles zip files and files with no line endings. |
| 3 | Database | Handle nodes of slightly different X offsets when creating sub-array separation nodes. |
| 4 | Output | Save initial spaces when saving format string for tidal reduction data. |

Date: 14/09/2019

Version: 22.26

| No. | Module | Description |
|-----|----------------|--|
| 1 | Network Adjust | Bugfix: recomputed NFH nodes were not being saved. |



Date: 11/09/2019

Version: 22.25

| No. | Module | Description |
|-----|----------------|--|
| 1 | Project | Added project type Triggerfish OBS Source. |
| 2 | Input | Corrected handling of user defined object types for P2/11. |
| 3 | Network Adjust | Sub-array nodes (gun, NFH etc.) are now positioned relative to the sub-array. Sub-array azimuth is now independent of array azimuth when Dynamic Offsets option is used. |
| 4 | Output | Improved depth correction comments. |
| 5 | Output | Bugfix: Occasional corruption of R1 record timestamp for P1/11. |



Date: 27/08/2019

Version: 22.24

| No. | Module | Description |
|-----|--------------|---|
| 1 | Precondition | Bugfix: depth obs nominal was the wrong sign. |
| 2 | Database | Bugfix: created duplicate observation type sometimes being corrupted. |
| 3 | Output | Can now use polynomial streamer shape for networks with no acoustics (2D). |
| 4 | Output | Bathymetric depth origin for OBS Source projects now defaults to centre of source. |
| 5 | Output | Bugfix: Echosounder depths now correctly taken from next in list when first has bad data. |
| 6 | Output | P111 S1 records now get water depth in extension field. |



Date: 12/08/2019

Version: 22.23

| No. | Module | Description |
|-----|----------------|--|
| 1 | Main Menu | Added options to open project input and output folders. |
| 2 | Input | User defined observation types in P2/11 now applied in database. |
| 3 | Network Adjust | Bugfix: feather results for P cable projects not stored properly. |
| 4 | Network Adjust | Magnetic variation is now recorded for each shot. |
| 5 | Output | New option to specify the start record when reading tidal reductions from file. |
| 6 | Output | Depth data for non echosounder records is now specified by selecting the echosounder to use from the list on the bathymetric tab. If more than one echosounder is selected the depth data will be taken from the first one unless it has bad data for that shot in which case the next one will be used. |
| 7 | Output | Echosounder depths can now be adjusted for heave. |



Date: 31/07/2019

Version: 22.22

| No. | Module | Description |
|-----|----------------|---|
| 1 | Input | EPSG defaults now automatically saved from first line in project. |
| 2 | Input | For subsequent lines, EPSG items now compared to defaults. |
| 3 | Network Adjust | Bugfix: access violation for P cable when nodes were rejected. |
| 4 | Output | For P1/11, line name can now be longer than 16 characters. |
| 5 | Output | Bugfix: Corrected addition of Z offset when outputting source depths. |

Date: 30/07/2019

Version: 22.21

| No. | Module | Description |
|-----|--------|--|
| 1 | Output | Bugfix: For P111, record type definitions are now updated when forcing WGS84 to CRS C. |



Date: 29/07/2019

Version: 22.20

| No. | Module | Description |
|-----|-------------------|--|
| 1 | Database / Output | Autocreated EPSG items now based on version 9.7. |
| 2 | Network Adjust | Values for computed magnetic variation are now available for plots and reports. |
| 3 | Output | Bugfix: Corrected handling of source output when shot number decrementing. |
| 4 | Output | For P111, allow forcing of WGS84 coords to CRS C. |
| 5 | Output | When outputting source depths, depth sensor Z offset now added to the depth value. |

Date: 29/07/2019

Version: 22.19

| No. | Module | Description |
|-----|----------------|---|
| 1 | Network Adjust | Bugfix: error writing streamers to P1 for P cable projects. |



Date: 27/07/2019

Version: 22.18

| No. | Module | Description |
|-----|----------------|---|
| 1 | Network Adjust | Bugfix: small error in computing average streamer heading for P cable projects. |

Date: 26/07/2013

Version: 22.17

| No. | Module | Description |
|-----|----------------|--|
| 1 | Input | Include Seapronav OBS Source for mapping hi-res shot times from P2/11 extension field. |
| 2 | Network Adjust | Bugfix: P cable azimuth wrapped. |

Date: 25/07/2019

Version: 22.16

| No. | Module | Description |
|-----|----------------|--|
| 1 | Network Adjust | Bugfix: occasional access violation computing compass coordinates for P cable acquisition. |



Date: 23/07/2019

Version: 22.15

| No. | Module | Description |
|-----|--------|--|
| 1 | Input | Bugfix: For SeaProNav acquisition system, corrected hires timestamp copy when there are a different number of general events to source fired events. |

Date: 22/07/2019

Version: 22.14

| No. | Module | Description |
|-----|--------|--|
| 1 | Input | For SeaProNav acquisition system, hires timestamp from general event now copied to source fired event. |
| 2 | Output | Bugfix: source depth was being written to NFH Z records when option checked to output source depth to Z records. |
| 3 | QC | Bugfix: Corrected crossline calculation when waypoints in opposite direction to actual shots. |



Date: 18/07/2019

Version: 22.13

| No. | Module | Description |
|-----|----------------|---|
| 1 | Input | Now saves all fields in P211 HC,0,2,0 record, these can be edited in the "Header General" section of the database module. |
| 2 | Input | Now saves rx type definitions from the P211 HC,2,2,0 record, these can be edited in the "Header Receiver Type Definitions" section of the database module. |
| 3 | Input | Now saves description of local reference point field from the P211 HC,2,3,0 record, these can be edited in the "Header Nodes" section of the database module. |
| 4 | Input | For SeaProNav acquisition system, hires timestamp in extension field 102 is now accepted. |
| 5 | Database | spinc no longer affected when loading defaults for Header / General table. |
| 6 | Network Adjust | Bugfix: incorrect feather calculation for P2/11 acquired in reverse. |
| 7 | Output | For SeaProNav acquisition system, NFH ID now taken from cols 6 and 7 of the node name. |
| 8 | Output | P111 header now includes all fields in HC,0,2,0 record if available. |
| 9 | Output | P111 header now always includes description of local reference point in HC,2,3,0. |
| 10 | Output | P111 header now only includes units of measure that are actually used. |
| 11 | Output | P111 header now includes receiver type definitions from P2/11 input file if available. |



Date: 11/07/2019

Version: 22.12

| No. | Module | Description |
|-----|--------------|---|
| 1 | Project | If "Create 2D Nodes and Obs" is switched on, the V1SC layback must also now be entered for P2/11. |
| 2 | Report Plots | Bugfix: Occasional crash when creating vessel plots. |
| 3 | QC | Bugfix: Occasional crash when creating vessel plots. |

Date: 10/07/2019

Version: 22.11

| No. | Module | Description |
|-----|------------------|---|
| 1 | Multiplot window | Improved performance when plotting large number of values. |
| 2 | Precon | Bugfix: Rectify Negative Ranges function sometimes crashed. |
| 3 | Output | Record ID now given sequential number if otherwise not found. |



Date: 30/05/2019

Version: 22.10

| No. | Module | Description |
|-----|-----------------------|--|
| 1 | Main | Added to Utilities Menu option to view P2 header. |
| 2 | Input | Bugfix: P2/11 user defined obs types could be repeated in database. |
| 3 | Precondition | Lat & lon obs summary now reported in degrees (was pseudo-metres). |
| 4 | Database | Bugfix: Sometimes crashed if loading default obs cancelled by user. |
| 5 | Compass Bias Estimate | Bugfix: was ignoring user specified SP range. |
| 6 | Network Adjust | Bugfix: was failing when gunarray plots enabled but no gunarrays in the configuration. |
| 7 | Multiplot | Improved search functions in plot list. |

Date: 13/05/2019

Version: 22.09

| No. | Module | Description |
|-----|--------|--|
| 1 | Output | Bugfix: Corrected handling of layback for depths at record positions for very small shot time intervals. |



Date: 09/05/2019

Version: 22.08

| No. | Module | Description |
|-----|-----------------|---|
| 1 | Input | P294 input can now handle more than one transformation to the same datum. |
| 2 | Output | Warning now given if hires timestamp is more than 0.1s different from actual shot time. |
| 3 | Report Plots | Added new auto plots for separations. |
| 4 | Online Services | Now has explicit support for zipping and uploading P2 files. |

Date: 27/04/2019

Version: 22.07

| No. | Module | Description |
|-----|---------|---|
| 1 | Reports | Bugfix: Corrected comparison plots when using hires timestamps. |



Date: 26/04/2019

Version: 22.06

| No. | Module | Description |
|-----|---------|--|
| 1 | Output | Improved handling of shots with same timestamp. |
| 2 | Reports | Shot report now split into separate summary and exception reports. |
| 3 | Reports | Improved vessel speed and CMG calculations to take into account quasi-simultaneous shooting. |
| 4 | QC | Improved vessel speed and CMG calculations to take into account quasi-simultaneous shooting. |

Date: 20/04/2019

Version: 22.05

| No. | Module | Description |
|-----|--------------|---|
| 1 | Precondition | Improved observation group assignments. |
| 2 | Output | File header now created anyway if append option used but no existing file to append to. |
| 3 | Output | Bugfix: was outputting incorrect SPS point depth. |



Date: 21/03/2019

Version: 22.04

| No. | Module | Description |
|-----|---------|---|
| 1 | Output | Corrected source id for NFH nodes. |
| 2 | Support | Corrected handling of line status file for zip uploads. |

Date: 20/03/2019

Version: 22.03

| No. | Module | Description |
|-----|--------|--|
| 1 | Output | For P1/90, added option to output grid coordinates in centimetres. |

Date: 19/03/2019

Version: 22.02

| No. | Module | Description |
|-----|--------|---|
| 1 | Input | Improved error message when shot increment does not match that given in the H00@8 record. |
| 2 | Precon | No longer deletes duplicate time samples for hires timestamp observations. |
| 3 | Output | Improved handling of hires timestamps very close together. |



Date: 04/03/2019

Version: 22.01

| No. | Module | Description |
|-----|----------------|---|
| 1 | Network Adjust | Bugfix: error computing P cable polynomial model. |
| 2 | Database | Improved recognition of NAD27 datum defined in P2/94. |
| 3 | Database | For P294 NAD27 to WGS-84 transformation single NADCON transformation is assigned. |

Date: 02/03/2019

Version: 22.00

| No. | Module | Description |
|-----|----------------|---|
| 1 | Network Adjust | Bugfix: was not handling P cable arcing through 0° azimuth. |



Date: 01/03/2019

Version: 21.99

| No. | Module | Description |
|-----|--------------|---|
| 1 | Database | Now prompts to delete TIME STAMP samples when records are deleted from General Event or Source Fired Event table. |
| 2 | Precondition | DSD test now uses rate of change for latitude and longitude observations. |
| 3 | Output | Bugfix, was not recognising tide data format specifier for Month ('M'). |
| 4 | Output | Now handles 2 digit year for tide data format. |
| 5 | Output | Added P111 option to use gun depth data in source records. |
| 6 | Output | Added P111 option to specify NDP for grid coords. |



Date: 01/02/2019

Version: 21.98

| No. | Module | Description |
|-----|----------------|--|
| 1 | Project | Create subarray separation nodes is now enabled by default. |
| 2 | Precondition | Improved observation group assignments. |
| 3 | Precondition | Bugfix: Apply scale to group was not working properly. |
| 4 | Network Adjust | Bugfix: was creating gun strings for virtual nodes. |
| 5 | Output | Now supports day month year format (dMy) in tide file. |
| 6 | Output | Added option to add tide value instead of subtracting. |
| 7 | Report | Performance improvement for datasets with waypoints defined for each shot. |

Date: 19/01/2019

Version: 21.97

| No. | Module | Description |
|-----|----------------|--|
| 1 | Network Adjust | Now interpolates NFH coordinates when Compute Gun Coordinates option is enabled. |
| 2 | Output | For P111, source records now get water depth in additional field if bathy origin at record position. |



Date: 15/01/2018

Version: 21.96

| No. | Module | Description |
|-----|-----------------------|---|
| 1 | Licensing | Improved error messages when activation fails. |
| 2 | Precondition | Default interpolation length for RGPS reduced to 50s. |
| 3 | Precondition | No longer autorejects observation with 0 SD after it has already been preconditioned. |
| 4 | Precondition | Bugfix: deleting a layer was setting last layer parameters to 0. |
| 5 | Compass Bias Estimate | Added support for P cable. |
| 6 | Network Adjust | Revised P cable handling. |
| 7 | Output | Improved handling of NFH records in P1/11. |
| 8 | QC, Reports | Corrected display of derived obs with angular units. |

Date: 21/12/2018

Version: 21.95

| No. | Module | Description |
|-----|-----------------|---|
| 1 | Network Adjust | Bugfix: derived observation name greater than 61 characters was causing access violation. |
| 2 | Online Services | added .gpf files to upload archive. |



Date: 17/12/2019

Version: 21.94

| No. | Module | Description |
|------------|---------------|--|
| 1 | Input | Improved handling of user def obs for P2/11. |
| 2 | Input | now handles zipped P2/11 files. |



Date: 13/12/2018

Version: 21.93

| No. | Module | Description |
|-----|--|---|
| 1 | Project | Provide a warning message if some directories could not be deleted during project/line deletion. |
| 2 | Input | Many more CRS now identified and given EPSG codes. |
| 3 | Input | Improved handling of line names with duplicate lines. |
| 4 | Network Adjust, QC, Report Plots, Trend Analysis | Added gun-array category to plots. |
| 5 | Output | Improved handling of concatenated operations in P111. |
| 6 | Output | Tide value, if available, is written to P1/11 P1 record additional field for echosounder records. |
| 7 | Output | P1/11 depths now output to 3dp. |
| 8 | Output | Echosounder records now have their own depth. Other records have depth from first selected echosounder. |
| 9 | Output | At least one echosounder record must be selected for depths to be output. |
| 10 | Output | SPS records available are now limited to Source and Echosounder (used only for depth & tide for S record). |
| 11 | Output | Tide file settings are now saved with the project (were global). These will have to be re-set when upgrading. |



Date: 29/11/2018

Version: 21.92

| No. | Module | Description |
|-----|----------|---|
| 1 | Input | When using NADCON transformations, EPSG CRSs NAD27 and NAD83 will be created (and only one of each). |
| 2 | Input | NADCON transformations now have an EPSG concatenated operation automatically created for convenience. |
| 3 | Database | Improved checking for changes when closing the module or saving defaults. |



Date: 27/11/2018

Version: 21.91

| No. | Module | Description |
|-----|----------------|--|
| 1 | IMPORTANT | Starting from version 21.91, the way CRS codes are allocated has been changed, particularly with regard to WGS 84, NAD27 and NAD83. |
| 2 | IMPORTANT | After upgrading to version 21.91, if CRS defaults have been saved, it will be necessary to input the next line manually and save them again. |
| 3 | Project/Input | Added new option to ignore duplicate shots. |
| 4 | Network Adjust | Replay now works on saved data. |
| 5 | QC | Bugfix: Sometimes crashed when opening vessel plot in project with hires timestamp obs. |
| 6 | Output | Updated SPS header records for which semi-colon terminator is required. |
| 7 | Output | Added new option to ignore duplicate shots. |
| 8 | Report plots | Bugfix: Corrected CSV column titles. |
| 9 | General | Improved matching of shot to time when two shots occur within one second. |

Date: 07/11/2018

Version: 21.90

| No. | Module | Description |
|-----|--------|--|
| 1 | Output | P190/SPS can now be output using hires times from P2/11 shot events. |



Date: 05/11/2018

Version: 21.89

| No. | Module | Description |
|-----|--------------|---|
| 1 | Report Plots | Bugfix: some plots created in previous version not correctly plotted. |

Date: 03/11/2018

Version: 21.88

| No. | Module | Description |
|-----|----------------|---|
| 1 | Network Adjust | Bugfix: was failing when Interpolate Unsolved Nodes option used and sub-array separations present. |
| 2 | Report Plots | Improved error handling when CSV file cannot be written due to it being open in another application. |
| 3 | Report Plots | Auto-configuration of sub-array separations now compare only adjacent sub-array centre nodes. |
| 4 | Output | Bugfix: P1/11 additional field for water depth referenced incorrect vertical CRS when depths reduced. |



Date: 26/10/2018

Version: 21.87

| No. | Module | Description |
|-----|----------------|--|
| 1 | Network Adjust | Bugfix: dynamic gun offsets was adjusting sub-array separation node offsets. |

Date: 26/10/2018

Version: 21.86

| No. | Module | Description |
|-----|----------|--|
| 1 | Database | Utilities Create sub-array nodes & obs: Sub-array centre comparison nodes now created. |
| 2 | Project | Added option to automatically create sub-array separations nodes. |



Date: 25/10/2018

Version: 21.85

| No. | Module | Description |
|-----|-----------------|---|
| 1 | All | Enhancements for GATOR ROV networks. |
| 2 | Database | Added node attributes for USBL alignment flags. |
| 3 | Network Adjust | Added Network menu items for choice of ROV network. |
| 4 | Report Plots | Corrected naming of FPD and comparison plots. |
| 5 | EPSG | Line database file now simply called line.gpf instead of having the same name as the directory. |
| 6 | Network Display | Improvements to node list, node dialog and obs dialog interactions. |
| 7 | Utilities | Added main menu utility to edit P2 in ascii or .zip file. |



Date: 25/09/2018

Version: 21.84

| No. | Module | Description |
|-----|--------------|--|
| 1 | Precon | Improved handling of overlay plots. |
| 2 | Output | Added option to use hires timestamp from obs for P190. |
| 3 | QC | Vessel shot time plot will now use hires timestamp if available. |
| 4 | Shot reports | time increment check will now use hires timestamp if available. |

Date: 14/09/2018

Version: 21.83

| No. | Module | Description |
|-----|---------------------|---|
| 1 | Compass Calibration | Gracefully handle streamers with no compasses. |
| 2 | Adjustment | Save grid data as soon as computed so that P1 output can be checked while adjustment still in progress. |
| 3 | Output | Added option to use hires timestamp from obs for P111. |
| 4 | Report Plots | Shot time report will now use hires timestamp if available. |



Date: 29/06/2018

Version: 21.82

| No. | Module | Description |
|-----|------------------|---|
| 1 | Final Report | "Exclude obs not used" and "Exclude nodes not used" options now checked by default. |
| 2 | Database, Output | New option for SPS for shot by shot user defined point codes. |

Date: 12/06/2018

Version: 21.81

| No. | Module | Description |
|-----|--------|--|
| 1 | Output | Bugfix: Corrected depth interpolation when output CRS different from survey CRS. |

Date: 11/06/2018

Version: 21.80

| No. | Module | Description |
|-----|--------|---|
| 1 | Output | Bugfix: Corrected depth interpolation when using depth origin at record position. |



Date: 04/06/2018

Version: 21.79

| No. | Module | Description |
|-----|--------------|---|
| 1 | Database | Gun Fired Event data can now be viewed and edited (available for P2/11 input only). |
| 2 | Precondition | Corrected logging of parameters during processing. |

Date: 14/05/2018

Version: 21.78

| No. | Module | Description |
|-----|--------|--|
| 1 | Input | P2/11 input now creates source fired events from T2,3,3,1 records if no corresponding T2,3,3,0 record available. |
| 2 | Precon | Bugfix: access violation sometimes when creating comparison plots. |
| 3 | Report | Bugfix: trend analysis comparison plot data was not correctly stored. |

Date: 02/05/2018

Version: 21.77

| No. | Module | Description |
|-----|----------------|---|
| 1 | Network Adjust | Bugfix: access violation handling dynamic gun-arrays when missing data. |



Date: 01/05/2018

Version: 21.76

| No. | Module | Description |
|-----|----------|---|
| 1 | Database | CRS Manager: Can now import ".geo" files. |

Date: 24/04/2018

Version: 21.75

| No. | Module | Description |
|-----|----------|---|
| 1 | Database | Source fired and general events can now be deleted. |

Date: 23/04/2018

Version: 21.74

| No. | Module | Description |
|-----|----------------|--|
| 1 | Network Adjust | Improved handling for very dynamic sub-arrays. |
| 2 | Network Adjust | Bugfix: was assigning incorrect azimuth to some gun-array nodes. |



Date: 17/04/2018

Version: 21.73

| No. | Module | Description |
|-----|--------------|--|
| 1 | Precondition | Bugfix: Obs unassigned to a group causing crash when plot by group option is used. |

Date: 11/04/2018

Version: 21.72

| No. | Module | Description |
|-----|----------------|---|
| 1 | Network Adjust | Bugfix: Was failing when gaps in certain RGPS gun observations. |

Date: 10/04/2018

Version: 21.71

| No. | Module | Description |
|-----|-----------|--|
| 1 | Output | P111 now gives choice of reduced or unreduced depth in additional field. |
| 2 | TA Report | Bugfix: Was using same data for some plots. |



Date: 04/04/2018

Version: 21.70

| No. | Module | Description |
|-----|--------|---|
| 1 | Output | Bugfix: Further corrections to handling of streamer depth sensors when not directly attached to streamer. |

Date: 23/04/2018

Version: 21.69

| No. | Module | Description |
|-----|----------------|--|
| 1 | Network Adjust | Now handles situation where only one of a lat/lon pair has been edited. |
| 2 | Output | Now reports invalid date/time in tide file. |
| 3 | Output | Bugfix: Corrected output of transformation coefficient parameters in P111. |
| 4 | Output | Bugfix: Corrected handling of streamer depth sensors when not directly attached to streamer. |