



# ***FGPS International***

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## **Px11Utils Release Notes**

Date: 16/09/2020

Version: 1.83

<b>No.</b>	<b>Module</b>	<b>Description</b>
1	GUI	Improvements for High DPI monitors.

Date: 15/09/2020

Version: 1.82

<b>No.</b>	<b>Module</b>	<b>Description</b>
1	Format Check	Improved handling when mandatory EPSG codes missing in geodetic records.



Date: 20/08/2020

Version: 1.81

No.	Module	Description
1	Format Check	In HC,2,3,0 records, offsets must be blank if there are multiple "towed-by" objects.
2	Format Check	Improved error message when EPSG code missing from geodetic record.

Date: 08/07/2020

Version: 1.80

No.	Module	Description
1	Format Check	Bugfix: Reinstated click on error list to open record details.

Date: 19/05/2020

Version: 1.79

No.	Module	Description
1	Format Check	Single file window now allows drag drop of file from Windows Explorer.
2	Inspect	Now allows drag drop of file from Windows Explorer.



Date: 11/03/2020

Version: 1.78

No.	Module	Description
1	Format Check UKOOA	P294 database folder now deleted after format check.

Date: 02/03/2020

Version: 1.77

No.	Module	Description
1	Format Check	Now accepts a file dragged and dropped from Windows Explorer.
2	Format Check	Now indicates if a coordinate is given that is not available in the referenced CRS, e.g. if coordinate 3 is given for a 2D CRS.

Date: 25/02/2020

Version: 1.76

No.	Module	Description
1	Application	"DPI awareness" enabled (correction). This ensures a cleaner GUI on displays with very high resolutions, or where the Windows display scale factor is set to greater than 100%.



Date: 25/02/2020

Version: 1.75

No.	Module	Description
1	Application	"DPI awareness" enabled. This ensures a cleaner GUI on displays with very high resolutions, or where the Windows display scale factor is set to greater than 100%.

Date: 18/02/2020

Version: 1.74

No.	Module	Description
1	P111 converter	ORCA object type 37 "Air Gun Array" now identified as source node.

Date: 10/02/2020

Version: 1.73

No.	Module	Description
1	Format Check	Bugfix: Corrected handling when path to EPSG databases was incorrect.



Date: 20/12/2019

Version: 1.72

No.	Module	Description
1	Format Check	Improved handling of PPTYPEATTREF.
2	Inspect	Corrected hyperlink handling when more than ten in integer list.
3	P2 Converter	Bugfix: Was leaving log file open, causing problems when processing more than 45 files.

Date: 07/12/2019

Version: 1.71

No.	Module	Description
1	P2 Converter	Improved handling of unknown obs types.
2	Inspect	Corrected hyperlinks where there are multiple definitions in a single record.
3	Inspect	Hyperlink on OBJREF now jumps to HC,2,3,0 if there is one, rather than e.g. H2,5,3,0.



Date: 02/12/2019

Version: 1.70

No.	Module	Description
1	P2 Converter	Improved handling of USBL alignments.
2	Smart edit	Added ability to replace specific fields in any record with custom editing.

Date: 25/11/2019

Version: 1.69

No.	Module	Description
1	Format Check	Improved some error messages.
2	P2 Converter	Now handles P2/94 files without E1000 records.

Date: 13/11/2019

Version: 1.68

No.	Module	Description
1	Format Check	Improved handling of badly formatted header records.



Date: 09/10/2019

Version: 1.67

No.	Module	Description
1	Application	Now allows automatic upgrades. The frequency of update checks can be set in the Tools / Options menu.
2	Format Check	Improved performance when finding many errors.
3	Format Check	Improved checking of time formats.
4	Format Check	"invalid data" errors now bundled together.
5	Inspect	Added "Go to Line" option in popup menu.
6	Inspect	Added links to tables mentioned in comments.
7	Report	Improved network diagram.
8	Report	Now includes actual survey area.



Date: 18/07/2019

Version: 1.66

No.	Module	Description
1	Format Check	Bugfix: List of errors sometimes did not show full error text after rerunning check.
2	Format Check	Some fields no longer regarded as mandatory.
3	P1/P2 Converters	Px11 output now only includes units of measure that are actually used.

Date: 04/06/2019

Version: 1.65

No.	Module	Description
1	Format Check	Added checks that official EPSG codes exist in the reference EPSG database.
2	Format Check	Improved some error messages.
3	Inspect	Minor GUI improvements.
4	P1 Converter	Bugfix: In some cases firing source id was out of sync with the source file.





Date: 04/02/2019

Version: 1.64

No.	Module	Description
1	Format Check	Improved handling of source objects and source fired events.
2	Format Check	Improved layout of options window.

Date: 25/09/2018

Version: 1.63

No.	Module	Description
1	Inspect	Improved handling of P6/11 files with many B6/M6 records.
2	Report	Now includes coastlines map.



Date: 14/09/2018

Version: 1.62

No.	Module	Description
1	Format Check	Batch processing now adds summary of files with errors to log.
2	Format Check	Bugfix: Crashed when no code given for coordinate operation method.
3	Format Check	Improved error messages where variant values could not be decoded.
4	Format Check	Bugfix: Occasional crash when checking against EPSG.

Date: 28/06/2018

Version: 1.61

No.	Module	Description
1	Licensing	Corrected evaluation of Pro or Lite licence when floating licence server in use.



Date: 18/05/2018

Version: 1.60

No.	Module	Description
1	Format Check	Added options to use CRS type to determine order of coordinate conversion checks.
2	Format Check	Extension field definition descriptions now checked against spec where appropriate.
3	Format Check	Added checks on geographic extent.
4	Format Check	Added checks on X1 records.
5	Format Check	Bugfix: Multiple file processing sometimes produced invalid reports.
6	P190 Converter	Added handling of 'G' records.

Date: 04/04/2018

Version: 1.59

No.	Module	Description
1	Format Check	Corrected handling of switch to multiple files.
2	Format Check	Cleaned up memory and process handling.
3	Format Check	Precision of coordinate checks now limited to max 1.0 metres.
4	Reports	Bugfix: Sometimes crashed when creating report.



Date: 27/03/2018

Version: 1.58

No.	Module	Description
1	Format Check	B6 coords will now be checked using bin grid coords as the reference point.
2	Format Check	Improved handling of sexagesimal values, especially in projection parameters.
3	Format Check	Error in description field no longer prevents further processing of a record.
4	Format Check	Added option not to check EPSG names.
5	Format Check	Added option for choosing precision of coordinate checks.
6	Format Check	Can now be performed in batch mode (PRO version only).

Date: 22/02/2018

Version: 1.57

No.	Module	Description
1	Format Check	Coords checking of B6/M1/M6 now respects option to check first rec only.
2	Format Check	Added wait cursor and some performance improvement when loading integrity check results.
3	Format Check	Reduced bin grid coordinate check to 3dp.



Date: 21/02/2018

Version: 1.56

No.	Module	Description
1	Format Check	Bugfix: Regression of EPSG version handling.

Date: 21/02/2018

Version: 1.55

No.	Module	Description
1	Format Check	Bugfix: Handle erroneous values being used in coordinate calculation.
2	Format Check	Bugfix: Bin grid transformation now converts coords according to axis UOM.
3	Format Check	Now checks coordinate conversions for M1, B6 and M6 records.



Date: 08/02/2018

Version: 1.54

No.	Module	Description
1	Format Check	Bugfix: Errors in coordinate axes were being reported twice.
2	Format Check	Bugfix: Coordinate transformations listed in EPSG as type "conversion" should not have source and target CRS checked.
3	Format Check	H2,2,0,0 record definition updated with comment "Blank for solid inserts" in some fields.
4	Format Check	Extension fields: Only decode value according to UNITREF if one given.

Date: 01/02/2018

Version: 1.53

No.	Module	Description
1	Format Check	Parameter values now compared against EPSG ref DB.
2	Format Check	Ellipsoid constants now computed for case where inverse flattening not given in EPSG.
3	Format Check	Improved checking of transformation accuracy value.
4	Format Check	Added check for CRS and transformation definitions - EPSG version/date/source should not be given if no EPSG code given.
5	Format Check	Corrected reporting of source/target CRS error in transformation.



Date: 31/01/2018

Version: 1.52

No.	Module	Description
1	Format Check	Improved checking of Px11 records against reference EPSG DB.
2	Format Check	Improved handling of datum epoch and related error messages.

Date: 22/01/2017

Version: 1.51

No.	Module	Description
1	Format Check	Only check UOM quantity type against base for EPSG UOMs.
2	Format Check	Now handles EPSG method 1049 "P6 (I = J-90°) seismic bin grid transformation".
3	Format Check	Now checks EPSG values against deltas of all versions from 8.0 to 9.2, as well as the actual reference DB.
4	Inspect	Added hyperlink from PPTYPEATTREF to new table.



Date: 05/12/2017

Version: 1.50

No.	Module	Description
1	Format Check	Error reporting improvements.

Date: 24/10/2017

Version: 1.49

No.	Module	Description
1	Format Check	Error reporting improvements.
2	Inspect	GUI improvements.
3	Inspect	Ensure "Save As" defaults to same folder as original file.
4	All modules	Module windows are now positioned to the right of the main window.

Date: 06/09/2017

Version: 1.48

No.	Module	Description
1	P1 Converter	Added detection of NFH id in "spare" columns of 'Z' records.





Date: 05/09/2017

Version: 1.47

No.	Module	Description
1	P1 Converter	Bugfix: Sometimes crashed when not all nodes present at each shot.
2	P1 Converter	Added option "Num shots for node search" - applicable when not all nodes are present at each shot.

Date: 30/08/2017

Version: 1.46

No.	Module	Description
1	Format Check	Improvements to Px11 time conversion checks.
2	Format Check	Corrected handling of 1.0 version files.
3	Inspect	Corrected hyperlinks in repeated fields.



Date: 04/08/2017

Version: 1.45

No.	Module	Description
1	Licensing	Bugfix: Sometimes crashed when saving offline licence request.

Date: 07/07/2017

Version: 1.44

No.	Module	Description
1	New - OGP File Report Utility	Generates summary report of contents of one or more Px11 files.
2	New - OGP File Search Utility	Searches a set of Px11 files using criteria for number of vessels, sources or streamers.
3	New - OGP File Smart Edit Utility	Allows replacement of OBJREF or OBSID in one or more Px11 files.
4	General	GUI improvements.



Date: 29/05/2017

Version: 1.43

No.	Module	Description
1	Format Check	Added fine grained options allowing choice of integrity checks.
2	Format Check	Some fields no longer regarded as mandatory.
3	Format Check	Source Unit Code for POSC UOMs now checked against the POSC id.
4	Format Check	Improved handling and reporting of escape sequences.
5	Format Check	Corrected checking of julian day format.
6	Format Check	Improved CRS record checks.
7	Format Check	Improved checking attribute names against spec.
8	Format Check	Object names and short names now checked for uniqueness (this is not mandatory but recommended).
9	Format Check	Coordinate conversions now checked in S1, P1, and first receiver of R1 records.
10	Inspect	Added option to filter all records relevant to a single CRS (in popup menu).



Date: 19/05/2017

Version: 1.42

No.	Module	Description
1	Inspect	When inspecting files that are too large to edit (approx 350MB or larger) only a portion of the file will be loaded, and it will be read only.

Date: 05/05/2017

Version: 1.41

No.	Module	Description
1	Format Check	Some fields no longer regarded as mandatory, OBJNAME no longer required to be unique.
2	Format Check	Removed some spurious EPSG error messages.
3	Inspect	Cleanly handle files that are too large for the inspector (approx 350MB or larger).

Date: 25/04/2017

Version: 1.40

No.	Module	Description
1	Format check	Improved some EPSG error messages.



Date: 25/04/2017

Version: 1.39

No.	Module	Description
1	General	Recent file lists now push the most recent entry to the top, and are limited to 50 entries.
2	Format Check	Improved checking of TRS example with non standard time formats.
3	Format Check	Corrected shot count.
4	Inspect	Hyperlinks now refresh after paste or whenever file is edited.
5	P190 Converter	Improved error handling, converter now continues even if projection not available.

Date: 06/04/2017

Version: 1.38

No.	Module	Description
1	Format Check	Added detection of badly formatted date/time fields.
2	Record Details Window	Bugfix: Copy text was not working correctly.
3	Record Details Window	Copy text can now be done with CTRL-C.



Date: 29/03/2017

Version: 1.37

No.	Module	Description
1	Installer	Now includes option of installing EPSG and Nadcon databases.
2	Format Check	Added support for new P6 record "H6,3,0,0 Bin Grid Axis Attributes"
3	Format Check	Many improvements to format and integrity checking.

Date: 09/03/2017

Version: 1.36

No.	Module	Description
1	Format Check	Report now includes reference EPSG database version.
2	UKOOA P2 Converter	now creates extra CRS for stations if there are any.



Date: 03/03/2017

Version: 1.35

No.	Module	Description
1	Format Check	Many improvements to format and integrity checking.
2	Format Check	New strict option insists on all fields being populated unless explicitly allowed blank in the spec.
3	Inspect	No longer uses UTF8 encoding, all Px11 files should be Ascii encoded.
4	UKOOA Converters	Special characters now removed from some texts, escaped in others.
5	UKOOA Converters	Corrected output of extension fields with more than one value.
6	UKOOA P1 Converter	Added H1,0,0,0 / H1,0,1,0 / H1,0,2,0 records to P1/11 output.
7	UKOOA P1 Converter	Corrected conversions of coordinates to WGS84 in some cases.
8	UKOOA P2 Converter	Corrected handling of times after midnight.



Date: 30/11/2016

Version: 1.34

No.	Module	Description
1	Format Check	Improved checking of references for compound CRS.
2	Format Check	Improved checking of mandatory records for coordinate transformations.
3	Format Check	Some records no longer regarded as mandatory, but summary record counts will be checked.
4	Inspect	File and record window layout can now be changed.
5	Inspect	Text search can now be repeated using F3 key.
6	Inspect	Ref codes now displayed as hyperlinks which can be clicked to jump to definition record.
7	Record Details Window	Columns now autoresize when the window size is changed.
8	Record Details Window	Now displays ref code.
9	Converter	OGP output files now have time output to 6dp, although rounded to 1dp as per UKOOA format precision





Date: 12/10/2016

Version: 1.33

No.	Module	Description
1	Inspect	Text filter can now be applied recursively.
2	Inspect	Saving file no longer writes BOM.

Date: 09/08/2016

Version: 1.32

No.	Module	Description
1	Inspect	Improved handling of large files and long lines, tidied GUI layout.

Date: 19/05/2016

Version: 1.31

No.	Module	Description
1	UKOOA to OGP P2 Converter	Bugfix: Corrected some UOM references.



Date: 18/05/2016

Version: 1.30

No.	Module	Description
1	UKOOA to OGP P2 Converter	FPD data now added as T2,5,5,0 Position Data records.
2	UKOOA to OGP P2 Converter	Projected CRS now has its own datum record.
3	UKOOA to OGP P2 Converter	Bugfix: Corrected rotation parameters in datum transformations.

Date: 10/05/2016

Version: 1.29

No.	Module	Description
1	Format Check	Various improvements in reference chain checks.
2	Record Details Window	Now displays ampersand correctly.
3	UKOOA to OGP P1 Converter	Improvements to CRS records.
4	UKOOA to OGP P2 Converter	Now cleans up temporary files created during conversion.
5	UKOOA to OGP P2 Converter	Improved process logging.



Date: 02/02/2016

Version: 1.28

No.	Module	Description
1	Record Details Window	Now always includes header with name of record and background colour matching the specification.

Date: 07/01/2016

Version: 1.27

No.	Module	Description
1	Format Check	Added check for matching OBJREF and name in P1/S1/R1 records.
2	Format Check	Removed incorrect check on H1,4,0,0 records.
3	UKOOA to OGP Converter	P2/94 converter now includes comments.
4	UKOOA to OGP Converter	P2/94 converter: Corrected occasional crash when converting position data.
5	UKOOA to OGP Converter	P2/94 converter: Corrected satsys reference number.
6	UKOOA to OGP Converter	Can now convert P1/90 to P1/11.



Date: 30/11/2015

Version: 1.26

No.	Module	Description
1	All	Updated handling of P1/11 X1 records to version 1.1.

Date: 17/09/2015

Version: 1.25

No.	Module	Description
1	Format Check	Bugfix: Improved check of Logical Position Reference Number in H1,4,0,0 record.
2	Inspect	Added record comment fields from the specifications.
3	Record Details Window	Added record comment fields from the specifications.
4	Record Details Window	No longer clicks to close, and is non-modal (can be kept open).
5	Record Details Window	Field values now displayed unescaped if necessary (e.g. "\u0026" => "&").
6	Record Details Window	Text can now be copied using right click popup menu.
7	GUI	Various minor improvements.



Date: 24/08/2015

Version: 1.24

No.	Module	Description
1	Format Check	Bugfix: Now correctly finds gun volume units for gun strings.

Date: 18/07/2015

Version: 1.23

No.	Module	Description
1	NEW VERSIONS	Px11Utils now comes in two versions, Lite and Pro. There are some restrictions in the Lite version.
2	Converter	Pro Version Only: New batch converter for any number of files.
3	Converter	Pro Version Only: Process more than 50 shots for any one line.
4	Converter	Guns no longer output as H2,5,3,0 records.

Date: 14/07/2015

Version: 1.22

No.	Module	Description
1	Format Check	Minor updates for Px11 version 1.1.



Date: 11/07/2015

Version: 1.21

No.	Module	Description
1	Converter	Improvements to P2/92 to P2/11 converter.

Date: 12/06/2015

Version: 1.20

No.	Module	Description
1	Format Check / File View	Bugfix: Now handles fields longer than 1K characters.
2	Inspect	Bugfix: Suppress warning when clicking past end of file in left hand pane.

Date: 08/06/2015

Version: 1.19

No.	Module	Description
1	All	Added handling of P6/11 records.



Date: 30/05/2015

Version: 1.18

No.	Module	Description
1	Px11Utils	IMPORTANT: Px11Utils is still free, but now requires a licence. Please contact FGPS if you wish to use this application.
2	Format Check	Improved mandatory records check.

Date: 25/03/2015

Version: 1.17

No.	Module	Description
1	Format Check	Added check for mandatory records.
2		Format Check Result summaries now colour coded.



Date: 20/03/2015

Version: 1.16

No.	Module	Description
1	All	Further updates for P2/11 P1/11 version 1.1.

Date: 14/01/2015

Version: 1.15

No.	Module	Description
1	Main Window	Added link to "PxSpec" - the Px11 Online Specification Summary
2	All	Updated P2/11 P1/11 handling to version 1.1 (draft 09/12/14) of the IOGP specification.
3	Format Check	Added button to open log file

Date: 20/11/2014

Version: 1.14

No.	Module	Description
1	Inspect	Improved filtering
2	Inspect	Extra warnings now given if saving edits to original file





Date: 19/11/2014

Version: 1.13

No.	Module	Description
1	Format Check	Bugfix: T2,1,1,2 record defaults to first vessel TRS if streamer objref is blank
2	Inspect	Bugfix: Now selects correct record in right hand pane when filtered

Date: 27/10/2014

Version: 1.12

No.	Module	Description
1	Inspect	Added options for selecting only part of the file; greatly improves performance when working with large files.



Date: 26/06/2014

Version: 1.11

No.	Module	Description
1	Format Check	H2,1,1,2 now checks Shot Reference Point Number after reading entire header
2	Format Check	N1,2 record now correctly finds CRS

Date: 10/06/2014

Version: 1.10

No.	Module	Description
1	Format Check	corrected decoding of data types for compound CRS
2	Format Check	allow CRS3 to be blank in H1,1,0,0 and H1,2,0,0 records.
3	Format Check	improved checking/decoding of CRS refs for P1/S1/R1 records



Date: 09/06/2014

Version: 1.09

<b>No.</b>	<b>Module</b>	<b>Description</b>
1	Record details popup	caption now includes record name.
2	Format Check	fixed gun volume data type decoding.
3	Main form	improved quick parse feature.
4	Format Check	allow nodes to use same OBJREF as objects.
5	Format Check	errors now only logged for a record if at least one has not been seen before.

Date: 09/04/2014

Version: 1.08

<b>No.</b>	<b>Module</b>	<b>Description</b>
1	Main form	added quick parse feature.



Date: 06/02/2014

Version: 1.07

No.	Module	Description
1	Format Check	Bugfix: now handles user defined PSATTREF in HC,2,1,1 records.
2	Format Check	Bugfix: now handles user defined OBJATTREF in HC,2,3,1 records.
3	Format Check	Bugfix: now handles user defined OBJTYPEREF in HC,2,3,0 records.
4	Format Check	Bugfix: In H2,6,1,0 records REFSTN need not be unique if used with different SATSYSREF.
5	Format Check	Enhancement: Tidied logging output.
6	Format Check	Bugfix: H1,0,2,0 "Attribute units" now assumed to be text if blank.
7	Format Check	Bugfix: H1,1,0,1 unit code fields 9 and 10 may be blank if no error ellipse data recorded.

Date: 28/01/2014

Version: 1.06

No.	Module	Description
1	Format Check	Enhancement: Made some reference checks more lenient.
2	Format Check	Bugfix: Fixed crash when parsing R1 record with only one receiver group



Date: 28/10/2013

Version: 1.05

No.	Module	Description
1	Format Check	Enhancement: Minor GUI improvements
2	Format Check	Enhancement: New integrity check on OBSID in T2,5,4,0 and T2,5,5,0 records.

Date: 25/10/2013

Version: 1.04

No.	Module	Description
1	Inspect	Bugfix: Catch out of memory errors when working with large files
2	Main Window	Enhancement: Can now be minimised with all child windows
3	Format Check	Bugfix: Corrected line number for some integrity errors



Date: 07/10/2013

Version: 1.03

No.	Module	Description
1	Format Check	Bugfix: H2,2,0,0 - only check LoadUnitCode if non-zero
2	Format Check	Bugfix: H2,5,3,0 - save node number and short name
3	Format Check	Bugfix: H2,5,4,0 - some integrity checks now performed after all records have been read
4	Format Check	Bugfix: H2,6,1,0 - corrected checking of Reference station number

Date: 03/10/2013

Version: 1.02

No.	Module	Description
1	Format Check	Bugfix: Could not handle files with records longer than 1K - now handles any length record.
2	Format Check	Bugfix: Ran out of memory with large files
3	Format Check	Bugfix: Corrections when checking integrity of some records
4	Format Check	Enhancement: Added count of records with integrity errors
5	Format Check	Enhancement: Improved error logging



Date: 12/06/2013

Version: 1.01

No.	Module	Description
1	P2/11 Import	Bugfix: H2,5,3,0 records now check OBJREF and OBJNAME instead of saving them.

Date: 01/06/2013

Version: 1.00

No.	Module	Description
1		Initial creation