

X•PAD Survey 3.6.500

This document contains a list of all changes, new features, bugs fixed introduced in this last version of **X•PAD Survey 3**.

General

BUG **Minor bugs:** some minor bugs fixed.

X•PAD Survey 3.6.400

This document contains a list of all changes, new features, bugs fixed introduced in this last version of **X•PAD Survey 3**.

General

BUG **Minor bugs:** some minor bugs fixed.

GPS

NEW! **Zenith 40:** added full support of the new GeoMax Zenith40 GNSS receiver.

X•PAD Survey 3.6.300

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TPS

- BUG** **Zoom 40/70/90**: a double click to open the keyboard generates a problem on display the virtual keyboard.
- BUG** **Zoom 70/90**: fixed an error on defining the search window.
- BUG** **Zoom25/50**: fixed an issue on the target constant.

Export

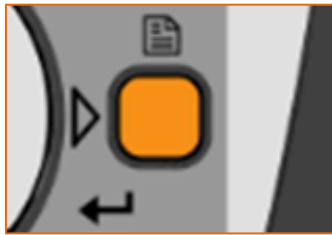
- BUG** **GSI format**: fixed an error in export of negative target height.

X•PAD Survey 3.6.100

This document contains a list of all changes, new features, bugs fixed introduced in this last version of X•PAD Survey 3.

TPS

NEW! Zoom 70/90: button below allow to switch on and off the laser pointer:



NEW! Zoom 70/90: button allow to switch from prism to reflectorless:



X•PAD Survey 3.6.000

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TPS

NEW! **Zoom 70:** support of the new GeoMax Zoom70 Robotic Total station.

NEW! **Prism search with controller's GPS position:** a new strategy is available when the prism is lost. The GPS position of the controller is used to rotate directly toward the direction of the prism.

X•PAD Survey 3.5.700

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TPS

BUG **Set horizontal angle:** general improvement to avoid some special cases.

GPS

BUG **Mountpoints:** from some server the list of the mountpoints was not downloaded.

Survey

BUG **Set of angles:** fixed a bug when different type of prism were used.

Roading

BUG **Clothoid:** fixed a bug in some special cases.

Volume

NEW! **Volumes:** calculation in cubic yards.

Import & Export

NEW! **Export DXF:** a new option allows to decide if export or not layers that are switched off.

X•PAD Survey 3.5.600

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Coordinate system

NEW! **Multi points local system:** if the cartographic system is defined then it is used for a better calculation of the localization.

NEW! **Report:** general improvements.

Import & Export

NEW! **Export LSS:** general improvements.

NEW! **Import ASCII:** if only GPS position is available then grid coordinates are automatically calculated during the importation.

BUG **Import X-PAD RAW file:** fixed an issue in importing polyline data.

Roding

BUG **Calculation of the position:** fixed a special case on calculating the current position along the axis.

X•PAD Survey 3.5.500

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GPS

NEW! Zenith 35 - GALILEO: full support of Galileo constellation.

TPS

NEW! Measure F1/F2 - Lock: after automatic rotation to the F2, prism is automatically locked.

NEW! E-bubble: angular values according to the unit settings.

BUG Automatic free station: fixed a bug that in some cases didn't allow to find the solution.

BUG Power search left-right: to stop it was necessary to click two times.

Stakeout

BUG Surface: fixed a bug in case of triangle with area 0.

BUG Report stakeout: export order was wrong.

Roding

NEW! Stakeout: it is now possible to switch directly to sideslope stakeout from the current position.

NEW! Sideslope: slope can be calculated from last segment.

NEW! Stakeout: it is possible to stakeout not only the main axis but also the edge polylines.

Import/Export

NEW! LSS Export (UK): general improvements.

NEW! LandXML - surface: now it is faster to import the data.

NEW! **LandXML:** export of TPS measures.

NEW! **M-GEO format (Polland):** new export format.

NEW! **Import points:** point properties from current survey codes library.

NEW! **X-PAD RAW file:** added the software version number and fixed some small bugs.

NEW! **DXF – 2D:** 3D polylines are exported as lightweight polylines.

X•PAD Survey 3.5.400

This document contains a list of all changes, new features, bugs fixed introduced in this last version of **X•PAD Survey 3**.

TPS

NEW! **Zoom25/40/50:** included the support of the new GeoMax total stations.

Survey

BUG **Linework:** fixed a small bug.

Stakeout

NEW! **Stakeout surface:** surface is now drawn below the points and doesn't cover them.

Roading

BUG **Egg-shaped clothoid:** fixed a bug.

X•PAD Survey 3.5.300

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General

NEW! **Lambert Conformal conic projection:** added the calculation of the local scale factor.

TPS

NEW! **Automatic free station:** EDM is now set to standard automatically.

NEW! **Scan surface:** improved the speed in “Fast” mode and fixed some small bugs.

Import & Export

BUG **DXF:** fixed a bug on exporting custom symbols for the topographic points.

X•PAD Survey 3.5.200

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General

- NEW!** **Date and time format:** the current Windows settings are used to display all information about date and time.
- NEW!** **Temperature unit:** in **TPS Atmospheric coefficients** it is possible to enter the temperature in C° or in F°.
- NEW!** **Input coordinate in ECEF:** a new point can be insert with ECEF coordinate. ECEF coordinates can be handled also in editing of o the point.

CAD

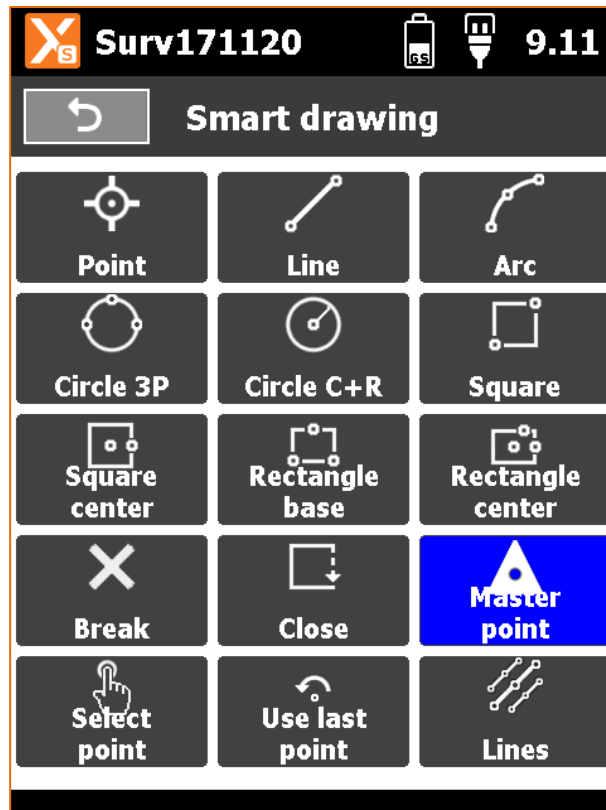
- BUG** **Offset arc:** fixed error if offset value was greater than the arc radius.

Survey GNSS

- NEW!** **Master point:** a new category of point can be stored. If some points require a longer time acquisition it is possible to select the option “Master point” and define the time to stay on this type of points. In this way you can easily collect reference points with more accuracy than standard points.

Export

- BUG** **ASCII export:** fixed a bug in ASCII export.



NEW! **RTCM3.1:** adjusted RTCM3.1 GNSS position (latitude – longitude – height) is stored for each point and measure; before it was stored the original GNSS position without adjustment. To each measure is also stored the adjustment values (delta latitude, longitude, height).

NEW! **GNSS raw data interval:** added interval of 15 secs.

Stakeout

NEW! **Reset stakeout status:** in **Job > Survey data > Points > Tools** it is possible to reset the “already stakeout” status of each point. In this way a point can be stakeout again.

TPS

NEW! **Measure TPS:** tape measurement now stores the value 34.4 as target constant.

NEW! **Report Free station:** angular residual is included in the free station report.

X•PAD Survey 3.5.100

This document contains a list of all changes, new features, bugs fixed introduced in this last version of **X•PAD Survey 3**.

TPS

NEW! **X-Pole:** added additional check and generic improvements.

GPS

NEW! **Base mode:** option to enter the antenna height in slant mode.

X•PAD Survey 3.5.000

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TPS

NEW! **Check out of level:** Measures with the total station out of level are now checked by X-PAD; if the level is over the limit defined by the user, the measure is not accepted and discarded. In this way you have more control on your work and on your surveyed points.

NEW! **False target lock:** Sometimes happens that TPS lock another prism or lock a false target; if you are far from the total station it is almost impossible to understand that TPS is not locked to your target. A new check has been introduced in X-PAD and detects if you are storing points on the same position; if this condition is verified a warning appears to the user informing that probably the TPS is not locked to your prism. No more risk to store a lot of points on the same position!

NEW! **Automatic free station:** Sometimes in a job site there are several fixed control points and every time you have to measure some of them to calculate your free station. With the new Automatic free station option you can press one button and the TPS will search and measure the control points in a total automatic way and you have just to check if the free station residuals can be accepted! The position of the target points detected in the job site is stored and they are skipped during the power search.

NEW! **Fixed targets:** Fixed targets in the job site can be detected after the station setup and their position is stored; during power search, if a fixed target is locked, then it is automatically discharged and the power search restart automatically to find the next target. In this way there is no risk to lock on wrong target and loose time to restart the power search.

NEW! **Free station results:** New details about the quality of the free station are now available; not just the horizontal and vertical residuals but also the residuals in East, North and the angular residuals.

GNSS

NEW! **Automatic base startup:** If the TPS has the Automatic free station option, then the GNSS has the Automatic base option; Automatic base consists in an automatic procedure that calculates first the right base position using the NTRIP server defined and then, on the calculated position, starts the base for the rover receivers that can start to work.

Survey & Stakeout

NEW! **Pictures autotag:** Store a point sometimes is not just store the position but it is also a recording of a picture of the point. The picture itself is incomplete without additional information as the recording time and the coordinates of the position. This information is now automatically included in every picture stored with a point.



Stakeout

NEW! **Point to stakeout:** In point's stakeout, it is now possible to change the target point directly from the main window without having to come back to the previous dialog.

NEW! **Sideslopes stakeout:** a new value can be displayed in the sideslopes stakeout; not only current slope, vertical distance to design slope, horizontal distance to design slope but also perpendicular distance to design slope.

Import & Export

NEW! **Import DXF in mm:** Sometime DXF drawings has been created in millimeters distance unit and to be imported in X-PAD have to be scaled in meters. A new option allows to specify if the drawing is in millimeter and then it is automatically scaled in meters.

X•PAD Survey 3.0.700

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General

- NEW!** **Autostart:** a new option in **Miscellaneous** allow to specify if auto start X-PAD when the controller is switched on.
- NEW!** **GPS NMEA:** the connection with an external generic NMEA receiver requires the activation of the **GPS Extended** module.
- NEW!** **Delete site:** now it is possible to delete a site and all its jobs.

Survey

- NEW!** **Invert coordinates:** the table of topographic points includes a new option that allow the invert the sign of the coordinates.
- NEW!** **Edit measure TPS:** horizontal and vertical distances are now displayed.

Stakeout

- NEW!** **Store entered coordinates:** manually entered coordinates can be stored as new point.

COGO

- NEW!** **Reference lines - decimals:** all decimals are now displayed.
- NEW!** **Reference lines – stakeout report:** if a point is stored, then it is also available in the report stakeout.

GPS

- NEW!** **Export to Topcon Machine Control:** GPS localization on multiple points can be exported in a specific format for Topcon Machine Control systems.

NEW! **Maximum DOP value:** can be specified with decimals.

BUG **Zenith35 – GDOP:** fixed a bug on GDOP visualization.

BUG **Base - Rover:** fixed some generic small bugs.

BUG **Survey and log raw data:** fixed some small bugs.

TPS

NEW! **Zoom30/35:** NavLight option has been included.

NEW! **Zoom30/35:** Electronic bubble has been included.

NEW! **Zipp20: FNC1 and FNC2** buttons open and close the corresponding window.

NEW! **Zoom90:** functions key **F7-F12** open and close the corresponding window.

NEW! **Zoom90 – input survey code:** key **FUNC + arrow left** open the list of survey codes.

NEW! **Zoom90 – Zipp20:** arrow left at the end of the input field, add a space character.

NEW! **Zoom90 – dot key:** key “.” allows to enter “.” character.

NEW! **Zoom90 – out of bubble:** if the bubble is out of the limit of 0.07 gon the measure is not accepted.

NEW! **TPS – Basic:** horizontal and vertical distances are recalculated according to the vertical angle changes.

BUG **Station setup:** fixed some minor bugs in display of some data.

Import & Export

NEW! **Import GSI:** imported points can overwrite existing points with the same name or can be automatically renamed.

NEW! **ASCII:** latitude-longitude values can be exported in the following formats:

- **DD°MM'SS.ssss"**
- **DD.MMSSsss**
- **Decimal degree**

NEW! **ASCII – Invert coordinates:** a new option in import and export allow to invert the sign of the coordinates.

NEW! **ASCII – file extension:** it is possible to define the extension of the ASCII file that will be created.

X•PAD Survey 3.0.600

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Survey

- NEW!** **SmartDrawing – Select point:** it is now possible to select an existing point on the screen; point is connected to the current line drawing.
- BUG** **SmartDrawing – Line delete:** fixed a problem in case the SmartDrawing line is deleted.
- BUG** **SmartDrawing – Arc:** fixed a problem if Arc is used and then the line is closed.

TPS

- NEW!** **Free station:** improved and made more robust the procedure that set the horizontal angle to the TPS.
- NEW!** **Allegro – X-Pole:** with **ALT+X** button it is possible to activate X-Pole and so move to TPS mode or to GPS mode.

GPS

- NEW!** **NMEA Output - ZDA:** ZDA sentence has been added.
- NEW!** **Zenith35 – GDOP:** GDOP value is now handled.
- NEW!** **Zenith35 – Log raw data:** it is possible to decide if store the raw data in the Internal memory or in the External SD card.
- BUG** **Zenith35 – Base PPP:** fixed a bug in configuration Base-Rover in PPP mode.
- BUG** **Zenith10/20/35 – Log raw data:** fixed a bug on setting the record interval.

Coordinate system

- NEW!** **Default coordinate system per site:** Is it possible to save a coordinate system that will be used as default coordinate system for each job created in that specific site.

Stakeout

BUG **Stakeout of points:** name of the point in upper case.

Export

BUG **DXF export:** point's labels were exported without elevation.

X•PAD Survey 3.0.500

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General

NEW! **Latitude-Longitude in decimal degree:** it is possible to define the format of latitude and longitude values; not only Degree-Minutes-Seconds but now it is possible to use the Decimal degree.

Controllers

NEW! **Zenius5:** support of the new GeoMax controller Zenius 5.



GPS

NEW! **Zenith15 / Zenith 25 – controller GPRS:** support of the new firmware for Zenith15 and Zenith25 receivers that allow to use the GPRS of the controller. SIM now can be placed in the controller instead of the receiver.

NEW! **External GPRS - NTRIP address:** with External GPRS the IP address can be not only numeric.

BUG **Zenith10/20/35:** fixed some small bugs on storing the raw data file for post-processing.

TPS

BUG **Zoom90:** fixed some small bugs.

Stakeout

NEW! **Geocentric coordinates:** it is possible to enter geocentric (Earth centered) coordinates to stakeout.

Parcels

NEW! **Edit parcel:** it is now possible to edit existing parcels and change the name.

NEW! **Parcel from polyline:** it is now possible to transform drawing or survey polylines to parcels.

Import & Export

NEW! **Google Earth KML:** closed polylines are exported as polygons.

NEW! **LandXML:** survey drawing lines are now exported.

Roding

NEW! **Import ISTRAM/ISPOL format:** ISTRAM/ISPOL roding data format is now supported.

BUG **Import CLIP format:** fixed a bug in importation of CLIP format.

X•PAD Survey 3.0.400

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General

BUG **PS236**: fixed some wrong behaviors with Getac PS236.

CAD

BUG **Arc by 3 points**: fixed a bug in the drawing.

Zoom90

BUG **X•PAD on-board**: fixed some bugs and improved the support of the Zoom90 robotic total station. A new setup file has been created and must be used to install X•PAD on-board.

Survey

NEW! **Number of epochs and log raw data**: it is possible to change the number of epochs during survey and log raw data.

X•Pole

NEW! **Prism lost and not GPS fixed**: if the receiver is not in fixed mode the TPS rotate toward the prism using only the coordinate and not using the elevation.

NEW! **Free station**: reference point is acquired automatically with both systems (TPS and GPS) with one single click.

Volumes

NEW! **Auto adjust cut-fill**: volume on reference plane can be calculated with Auto adjustment of cut-fill. Keeping the defined plane slopes, the plane is adjusted vertically in order to balance cut and fill volumes.

X•PAD Survey 3.0.300

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General

NEW! **RAW file:** from RAW file it is now possible to import also the drawing and not only points & measures.

TPS

BUG **Zoom90 - OnBoard:** it was no possible to stop search operation with STOP button.

BUG **Zipp20:** country packages were not installed in the right way.

NEW! **Zoom90 – Reticle:** it is now possible to switch on-off the internal reticle light.

GPS

BUG **NMEA output:** Zenith35 was not supported.

Survey

BUG **Delete last point:** fixed a bug.

BUG **Station orientation – Backsight one point:** distance check was wrong if angle was set to “Current value”.

NEW! **Base & Rover:** base position is now ground position.

NEW! **Survey codes library:** it is now possible to define a survey codes library as default library.

NEW! **Survey codes library – new job:** when a new job is created it is possible to specify the survey codes library to use.

X•PAD Survey 3.0.200

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CAD

NEW! **Invert:** new command that allow to invert the direction of the selected lines, arcs and polylines.

GPS

NEW! **Zenith 35PRO:** full support of the new Zenith35 PRO: Galileo satellites, 16 radio channels, new radio protocols.

NEW! **GPRS on controller:** general improvements.

NEW! **RTCM3.1 – 1025:** support of the RTCM1025 message that define the coordinate system to use in the area.

Survey

NEW! **Smart Drawing – Simple mode:** new options that allow to use the last point or define a new starting point.

BUG **Smart Drawing:** fixed a bug.

Stakeout

BUG Stakeout point with reference line: fixed a bug.

Surface

BUG **Surface stakeout:** fixed a bug that occurs with triangles with two vertexes coincident.

X•PAD Survey 3.0.100

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General

NEW! Release X•PAD Survey 3: [What's new in Release 3](#)