

WINJAW+



Release Notes WINJAW+

describes included functions up to and including version 3.0.6
Illustrations in this user manual may differ.

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Please always quote the serial number of the product when making enquiries!

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1 Foreword

This document contains the release notes for the respective version of WINJAW+ v3.0.

1.1 Installation

See software instruction manual WINJAW+.

1.2 Safety Information

There are no special safety instructions for this software version. General safety relevant notes can be found in the WINJAW+ user manual.

1.3 Applicable Documentation

#	Description
1	WINJAW+ Software User Manual (EN)
2	WINJAW+ Software manual (EN)

1.4 WINJAW+ System Requirements

	Minimum requirements	Recommended requirements
CPU	Intel Core i5 / 8th generation or comparable	Intel Core i5 / 11th generation (x64) Intel Core i7 / 11th generation (x64) cf. i7-11800H
RAM	8GB RAM	16GB RAM
Data storage	500 GB SSD technology recommended	1TB SSD
GPU	1 GB available graphics memory (VRAM) OpenGL4.6 support DirectX 9.0c	1 GB available graphics memory (VRAM) OpenGL4.6 support DirectX 9.0c
Graphics card		cf: NVIDIA® GeForce RTX™ 3050Ti cf: NVIDIA® T1200
Display	Full HD (1920x1080pixels)	Full HD (1920x1080pixels)
Connections	1 x USB 2.0	1 x USB 3.1, 1 x USB-C
Operating system	Windows 11	Windows 11 22H2
PDF viewer	Ex: Adobe Reader DC	Ex.: Adobe Reader DC
WINJAW+ Function and Digital Occlusion	-	O
WINJAW+ <%APP_SPLINT%>, <% APP_ATT_DESIGNER%> >	-	O
WINJAW+ Basic function Articulator,<% APP_FUNCTION%>, <%APP_CENTRIC% >	O	O



If you have any questions regarding the system requirements listed above, please contact your dealer's support department.



2 WINJAW+ 3.0

2.1 New functions

#	Description
General	
1	The value of the battery indicator of the JMA Optic-system, is displayed below the battery icon during a measurement. Clicking on the battery icon also displays the charging status, the connection type and the device used.
2	The Camper plane is supported as an additional patient reference plane. For this purpose, the subnasal point must be entered instead of the orbital point.
3	During a measurement, the coupling buckets and the alignment bucket are displayed as a 3D object for live feedback.
4	Both the C-positioning arc as well as the T-pointer and the porion pointer are displayed as a 3D object for live feedback during a measurement
5	The new alignment tray (01960430) is available in the measuring sequence for matching intraoral scan data. It is placed with the pointer between 11 and 21 and aligned with the buccal cusps of the maxillary molars and premolars. In the further course of the measurement, the alignment tray is merged with the intraoral scan data in the software.
6	The performance of the 3D graphics display has been improved. Thus, from WINJAW+ 5 compatibility with OpenGL 4.6 is required.
7	The 3D view can be controlled with shortcuts. The shortcuts can be found in the WINJAW+ - Software manual (chapter Shortcuts)
8	The possibility to customize the target paths during export exists in the program settings. The customization options can be found under Export .
9	Measurements can be displayed in a 3D representation in the Acquisition and Viewer modes. In addition, measurements in the Function and Digital Occlusion module can be displayed in an occlusion display. The occlusal contacts are displayed in scaled colors, depending on their intensity.
10	The display of the current position on a track of the measurement has been adapted. The current position is now displayed as a circle instead of a ball.
11	In the view mode, there is an option to select specific time spans in the time line. These can then be selected separately and played back individually.
12	During a measurement, the workflow plan is displayed in the navigation area. It is used for general orientation within the workflow. This flowchart can be shown or hidden as required. The instructions for individual work steps in the upper area of the user interface are still displayed.
13	Intercondylar diagrams can be displayed in the 3D view in record and view modes. These can be shown and hidden as required in the display management.
14	Motion tracks are only displayed for the actual cycle regardless of whether it is enabled or not. This improves the clarity of the results.
15	In the recording process, it is possible to select which upper jaw bite fork is used.

#	Description
Database	
16	Clicking on the zebris Medical GmbH-logo opens the <i>About WINJAW+</i> -window opens. Under the category Technical support is the button <i>Open logfile folder</i> . In case of a malfunction, this document can be sent to the dealer.
17	It is possible to enable the change of the reference planes in the program settings. If a manual change of the reference plane is desired, it can be edited in the measurement settings afterwards.
Measuring mode	
18	The sound effects during the measurement process have been adjusted. Exclusively when recording the reference system, an acoustic signal appears when the sensor is outside the recording range of the measuring system.
View mode	
19	In view mode, positions and manually defined points are made visible in the various view options. The recorded positions can be selected individually in the right column of the user interface under <i>Positions</i>
20	As part of the implementation of the <i>EPA diagram</i> in the view mode, the display of the density of the motion tracks has also been implemented. The selection of the different display modes can be done in the <i>view mode</i> in the view of the <i>tracks</i> . To do this, one of the three condyle items is selected above the timeline. You can choose between <i>velocity-coded tracks, motion tracks and tracks and density matrix</i> .
21	Profile lines can be shown and hidden in the show/hide manager. (view)
22	In the view mode, the display of the axis diagram has been added to the view of the <i>tracks</i> .
23	In the view mode, the display of condylar tracks in the form of an EPA diagram has been added. These diagrams can be found in the <i>Tracks</i> view.
24	Filter and search functions have been implemented in the import and export dialog.
25	*.xml exports are also available for the Stratos articulator. To perform this export, " <i>Export zebris jaw motion</i> " must be selected in view mode under the export button.
Report	
26	Furthermore, it is possible to insert the name of the institution in the reports. This can be useful if reports are passed on to third parties. The name of the institution can be inserted in the program settings under Report .
27	In the <i>patient database</i> , information about the laboratory and the patient's insertion date can be added. For this purpose, the corresponding measurement is selected and the properties of the measurement are called up with the pencil icon . The data can be added in these properties.
28	In the report the used attachment or alignment buckets can be displayed. (Report)
Module functions	
29	In the Articulator and Function Analysis modules, the tools menu for editing exposures has been implemented. This function can be found in the view mode. (View)

#	Description
30	In the PS1 articulator module, it is possible to record and evaluate hinge axis and kinematic axis.
31	After performing a measurement in the " <i>Articulator</i> " and " <i>Function and Digital Occlusion</i> " modules, it is possible to obtain the setting values of the following articulators: <ul style="list-style-type: none"> • Amann Gırrbach Artex • SAM • Panadent • KaVo Protar • Ivoclar
32	In the <i>Jaw Relation</i> module, it is possible to record a manual correction. This can be activated in the <i>Measurement Setups</i> under <i>Measured parameters</i> and integrated into the measurement sequence.
33	In the <i>Cerec articulator</i> module, the bite fork or the Alignment fork is also displayed in the acquisition mode.
34	In the <i>EPA</i> module, the display of the measurement results has been improved. Both in the view mode and in the Report, the directions of the axis diagrams are indicated. This simplifies the interpretation and evaluation of the results.
Function and Digital Occlusion	
35	In the <i>Function and Digital Occlusion</i> module, it is possible to export model data to sirona coordinate systems.
36	Following the measurement in the <i>Function and Digital Occlusion</i> module, it is possible to output an EPA report.
37	Following the measurement in the <i>Function and Digital Occlusion module</i> , it is possible to output a function report.
38	In the view mode the import of 2D and 3D facescans is possible. The background as well as the mouth can be cut out to simulate the real patient situation.
39	The export options in the <i>Function and Digital Occlusion</i> module have been expanded. When exporting <i>models</i> , it is now possible to include recorded positions such as the rest position in the export.
40	In view mode, the <i>Manual therapeutic position</i> tool can be used to define and save manually created positions.
41	A report profile for Cerec is created in the <i>Report</i> mode.
42	After inserting intraoral scan data, it is possible to create models which can then be closed and printed.
43	One method for merging intraoral scan data is matching with the pointer. This function can be set in the measurement settings of the <i>Function and Digital Occlusion</i> module in the <i>Reference system</i> area under <i>Match Scans by</i> . In the measurement process, reference points are defined with the pointer of the C-Positioner and then merged with the intraoral scan data.
44	In view mode, the occlusion view can be controlled using zoom buttons, the mouse or shortcuts.

#	Description
45	When inserting the intraoral scan data, it is possible to adjust the position of the lower jaw in 6 directions of freedom. To do this, select <i>Adjust model position</i> after loading the models and then make changes with the respective slider.
46	A plausibility check has been implemented when importing intraoral scan data in the <i>Function and Digital Occlusion</i> module. This checks the plausibility of the merged intraoral scan data. If there are distances of less than 0.05 mm between the scans, these areas are marked in color. This marking warns of possible errors.
47	In view mode, among other things, distances can be measured in the section cut area using a 3D measurement tool.
48	A new coordinate system for exporting data has been implemented in the view mode of the <i>Function and Digital Occlusion</i> module. The coordinate system is based on the object to be milled. This can be found under <i>Export</i> or <i>Export models</i> . It is then possible to select <i>Milling</i> as the <i>export type</i> .
49	An overview of the entire measurement process can be shown and hidden during the measurement.
50	In view mode, it is possible to calculate a Monson sphere in the tools area. This can be shown and hidden in the view management.
51	In the <i>Report mode</i> of the <i>Function and Digital Occlusion</i> module, it is possible to obtain a chewing analysis. To do this, you can select " <i>Function and Digital Occlusion</i> ". In this case, incisal movement traces are displayed and an evaluation of the balance of the chewing movement is also displayed. This is displayed in the lower area of the <i>frontal view-chewing Incisal</i> .
52	The images of the <i>Function and Digital Occlusion</i> module can be exported as *.dentalProject.
53	In the view mode, additional shortcuts have been implemented for the lower jaw, upper jaw, grid, section cut and for switching the contacts on and off. A complete overview of all shortcuts can be found in the software manual (chapter Shortcuts).

2.2 Optimizations

#	Description
General	
1	UI improvements: increase time for static positions to 3 seconds. In addition, a circular grid is displayed when the rectangular grid is not visible. The color representation of points has been changed depending on the view. The color representation of points has been adjusted.
2	If the sensor is outside the field of view of the JMA Optic during a measurement, the <i>start button</i> is deactivated and a hint is activated.
3	The <i>module selection</i> is divided into two sections. On the left side the list of available modules is displayed. On the right side the selected module is displayed. The separator of these two pages is

#	Description
	always inserted in the middle of the page. The separator can be adjusted manually. It can be moved up to the width of a module icon at most. User settings of this view are saved.
5	Comment boxes in the report are shown even if the box is empty.
6	Scaling of all XML exports has been extended to milliseconds.
7	When entering numbers into text boxes, both comma and dot can be used as decimal separators. It is not possible to enter a value of "-0".
8	In the <i>About WINJAW+</i> -dialog under <i>Program information</i> the activation code can be viewed.
9	The measurement settings of the <i>Function and Digital Occlusion</i> module have been adjusted. The setting options of the face measurement have been simplified.
10	The display of the measurement settings has been adapted. They are now displayed more clearly.
11	The PLY data handling has been refactored to speed it up.
12	The display of the <i>EPA diagram</i> has been unified for all applications.
13	The selection dialogs for time marks, material configuration, measurement plan and measurement configuration have been unified.
14	The display of error messages has been improved. These are integrated as pop-up windows in the user dialog.
14	The coordinates for the C-bow (black) and the C-positioning bow (gray) have been corrected. The selection of which of these C-bows is to be used can be made in the <i>Hardware Setup</i> , after selecting a measuring system in the other settings.
15	The JMA Optic USB device has been integrated as default in the <i>Hardware Setup</i> .
16	Export of whole datasets from the database has been adjusted. If the option " select all " is selected in the database while filters are active, only displayed measurements or patients are adopted.
	View mode
17	The different areas of the view mode have been rearranged.
18	The order of the import and export buttons in the view mode has been switched. This rearrangement was done to achieve a unified display in all application modes.
	Module-specific optimizations
	Function and Digital Occlusion
19	In the <i>Function and Digital Occlusion</i> module, it is possible to merge intraoral scan data using a 01960320. To use this function, select <i>Bite fork</i> in the category <i>Match Scans by</i> under <i>Reference system in the measurement settings</i> .
20	In view mode, the accuracy of sections is increased. The sections are displayed more finely and thus the more precise display of distances is possible.
21	New PLY formats are supported in the <i>Function and Digital Occlusion</i> module. These are the formats from Planmeca emerald and Ivoclar.

#	Description
22	In the view mode of the occlusion analysis, profile lines, mouth line and laugh line are hidden in the sections. They are still displayed in the overall view without sections.
23	The zoom function in the <i>Function and Digital Occlusion</i> module has been optimized.
24	The mtl format is supported as a new OBJ format in the <i>Function and Digital Occlusion</i> module.
25	Zoom-in and zoom-out buttons are implemented in the <i>occlusion</i> view window in the view mode of the module <i>Function and Digital Occlusion</i> .
26	In the view mode of the occlusion analysis, the color scale can be changed using the mouse wheel.
27	The view module <i>Function and Digital Occlusion</i> has been restructured. This has simplified the main navigation.
28	When opening the occlusion analysis in view mode, it is possible to display real tooth contacts.
29	In the view mode of the occlusion analysis, section cuts of the models can be analyzed. These section cuts are inserted at four predefined positions in the models and can be adjusted as required. To activate this function in view mode, select the <i>Section cut</i> button on the right side of the interface. The positions can be changed with the slider of the individual section.
30	In the <i>Function and Digital Occlusion</i> module, bite fork matching has been optimized.
31	In the <i>Function and Digital Occlusion</i> module, scanned positions can be transferred to the XML export.
32	In the view mode of the <i>Function and Digital Occlusion</i> module, an envelope can be calculated for the existing models. This can be activated in the <i>tools</i> in the <i>view mode</i> .
33	In the <i>PS1 Articulator</i> module, misalignment of virtual condyles can be avoided by using the C-Positioner.

2.3 Bugfixes

#	Description
1	The problem with inserting a custom report logo was fixed.
2	The dimensions of the bitefork (01960320) were adjusted.
3	Both dot and comma can be used as decimal operators now.
4	The data output for the KaVo Articulator Report has been corrected. The output values refer to the Camper plane and not to the Frankfurt horizontal.
5	When exporting from the database, the selected patient will also be preselected in the export dialog.
6	The ASCII version of the PLY format is now supported.
7	The problem with CSV export from database has been fixed.

#	Description
8	The default minimum height for the initial translation rotation diagram has been set in <i>report mode</i> .
9	The problem with obj-file handling was fixed.
10	The selection of the bite fork for importing intraoral scan data must be made before starting the measurement.

3 WINJAW+ version history

3.1 Additional changes for WINJAW+ 3.0.6

#	Description
Bugfixes	
1	General: Fixed syntax errors in language packages. The languages pl, it, ro, sl, uk, fr, hu, nl were affected.

3.2 Additional changes for WINJAW+ 3.0.4

#	Description
Bugfixes	
1	General: The video export from Viewer has been fixed.
2	Function and Digital Occlusion: Manual therapeutic Position: Correction of the calculation of the reference position when the scan position is activated
3	Function and Digital Occlusion: It was not possible to delete individual markers on the tooth model. To delete them, it is necessary to right-click on the track and select 'Remove individual point'
4	Function and Digital Occlusion: *.dentalProject export: Error in model placement has been fixed (the plane correction was used for model placement as well)
5	Function and Digital Occlusion: CSV export from report: Value for lateral left has been fixed, the value for lateral right is no longer used for lateral left
6	Function and Digital Occlusion: FaceScan Import: *.obj File import has been fixed (when vertex indexes differ from texture indexes)
7	KaVo KTS: Error in the export of the *.jawMotion export from KaVo KTS has been corrected

Improvements

1	Centric Relation: added pin position for Artex articulator in report Centric Relation: new measurement profile added for the complete digital workflow
2	Centric Relation: The *.jawMotion export can only be selected if the upper jaw position was determined with the coupling tray in the measurement.
4	Function and Digital Occlusion: Resampling when importing tooth models has been deactivated to prevent perforation of the surface.

#	Description
5	Function and Digital Occlusion, Centric Realign and Articulator: The usability of the *.jawMotion export dialog has been improved
6	Function and Digital Occlusion: FaceScan import: A new set of matching metrics has been implemented. Now it's possible to match with orbital point, and nasal wing points.
7	Wifi Link Adapter: Firmware of the adapter has been updated to prevent interruptions and software crashes during measurement
8	General: Improved handling of software instances in case of software restarts within 5 seconds to avoid data conflicts.
9	General: Viewer: Improve visualization in tracks cards to prevent black flickering screens
10	General: New languages available. Following languages are supported by the software (nl, pl, it, ro, fr, es, de, en)

3.3 Additional changes for WINJAW+ 3.0.2

#	Description
Bugfixes	
1	Database: The default position of the screen splitter was incorrect. The bug is fixed and the splitter is now positioned in the center.
2	Function and digital occlusion: adding user points on jaw models was incorrect. The user point and the traces were placed between the condyles and not on the jaw models.
3	Function and digital occlusion: When moving the section with the mouse on the model, the section cut. This error has been fixed.
4	General: Devices without parameter block could not be initialized. This error is fixed.
Optimizations	
1	General: Add fallback if the system path is not available. This can happen if the system administrator does not allow access to MYDOCUMENTS, appdata, common appdata, system, windows, local_appdata, common_documents by policy. The implemented fallback directory is the desktop.
2	Wifi Link Adapter: firmware updated to prevent interruptions and software crashes during measurement.
3	General: A history of installed predecessor applications has been implemented to provide more information to support in case of compatibility problems.

