

Release GC-PowerStation v5.3 Notes

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New Features

Select / Unselect Polygons

An entire polygon can now be selected or unselected by using these options on the right click menu. The polygon that sits under the crosshair is selected or unselected if it is on an edit-ready layer. If a polygon contains one or more sub-polygons (i.e. a polygon that interacts with another polygon to form clearances) then these polygons will be selected separately.

Reorder Polygons

This function reorders polygons that are selected so that all selected polygons become sub-polygons of the largest polygon. This will produce interactions between selected polygons and can be used to create the correct interaction between polygons.

Auto Set Bedsize

An option has been added under the Tools > Bedsize menu item to set the bed size to the extents of the visible data. This option is intended to aid in cases where negative layers are displayed in True Film mode but some or all of the data sits outside the current bedsize.

Enhanced Features

Overhauled DFM report

The DFM report option has been overhauled to allow the generation of an ASCII text file containing DFM errors. The number of optional fields to be included in the report has been increased to allow any field that appears in the query window to be output to the text file. Also, there are a number of options for formatting the file to provide a file format that can be used to communicate DFM errors between relevant parties.

Co-ordinates Summary

The co-ordinates summary now also shows the angle in the Relative Co-ordinates summary. The angle is measured from the Zero Relative location to the current crosshair location.

Grid Size

The default grid size can be set in the Tools > Customize > Options tab. This is the grid size that will be used for all new jobs. If a GWK is loaded then the grid settings are taken from the GWK file.

GC-Basic functionality

A number of new GC-Basic functions have been added to the product. These new functions are enabling customers to create, adapt and streamline their process flows. Among the numerous functions added are:

- GetMarkedLayers
- NetCompareErrList
- CreateTopReferenceNetLayer
- CreateBottomReferenceNetLayer
- NetCompareErr
- CompareNetList
- Reorder Polygon

On Line Help

As always the On Line Help has been updated to include these new and enhanced functions.

Items Fixed since v5.2.2

This list is customer reported issues fixed for this release.

- #3277 Fixed a problem with exploded text polygon display
- #3272 Fixed problem in which polygon homeplates weren't being scan and replaced properly.
- #3265 Fixed issue with unpredictable tool bar resizing and application crash when hot keys were used within GC-Explorer
- #3258 Fixed a conflict with DFM Run list and GCB that was causing an application crash.
- #3257 Fixed an issue with PTH Annular Ring not showing results for all layers
- #3253 Fixed issue with outputting multiline text strings to DXF.
- #3250 Fixed a minor message error. In the aperture table editor, manually changing an aperture's D code to match the D code of an existing aperture results in the message, (eg) "a001 already contains T Code 11. Create duplicate T Code? It now says D Code rather than T Code.
- #3240 Added support for the crosshatch command in the DXF / DWG format.
- #3238 Certain RS-274-X files containing specific characters and strings were being incorrectly recognized as DPF job files. This has been addressed.
- #3237 Increased security features added to all license controlled products.
- #3235 Updated the Query dialog to correctly display the sixth D-Code number (when necessary).
- #3234 Added support for spline polylines in DXF /DWG files.
- #3232 Implemented new solution that allows unlimited macro name length and unlimited use of tilde character within an RS-274X file.
- #3223 Updated and improved the location of text in DXF and DWG files.
- #3212 Fixed an updating issue in Netlist Compare to correctly display newly found results in the results few. Application was previously crashing.
- #3198 Improved the format recognition of drill files.
- #3196 Fixed a problem where extraneous information was created when two or more drill layers are combined into a single drill layer.
- #3195 Fixed a problem concerning buffer cleanup in the Home Plate and C Pad creation processes. Pads on the original layer are now correctly retained.
- #3193 Updated the DFM report to include all available fields.
- #3191 Added the layer name to the DFM report field options.
- #3189 Massaged drill table reader to continue looking for a stand-alone UNITS line after finding an apparent units declaration in comment(s).
- #3186 Remove Innerlayer Unused pads now runs on Edit enabled layers rather than the physical layer stack.
- #3185 OdDb3dSolids are now supported within a DXF or DWG file.
- #3184 Updated selection buffer information following a script iteration.
- #3178 Attributes were not being retained after some functions were run. The following functions have been updated: Sequence, Reorder Rout and Tool Compensation.
- #3175 Fixed a crash when unifying a Drill table that only contain tools used as routs.
- #3168 Improved the methodology of loading DXF files with units that are outside of our visible extents. We now try with the current job units, then with mm and then mils. If all of these fail to load the file then we will scale the job to fit (if the user requests us to do so).
- #3164 Update to the DXF toolkit resolves an issue that prevented this file from loading correctly.
- #3163 Resolved issue with the import of unrecognized fonts in DXF / DWG. Previously the application would crash if the properties of these text apertures were called.
- #3162 Fixed a problem with a rounding display in the Shave Pads dialog.
- #3161 Fixed internal issue with Fire output.
- #3160 It appears that after running Advanced Scan and Replace and/or Replace Sketched Pads, then selecting Undo, the data is converted back into the original shape, but there are new shapes used in constructing the original shape, such as buried pads, traces, etc. This problem has been resolved.
- #3159 Auto-adjust bedsize option added (see above).
- #3157 Resolved an issue where file extensions were not correctly updated when outputting with a PDF file.

- #3156 Modified the warning message when overwriting an existing file to the more intuitive "File xxxx already exists. Do you wish to Append, Overwrite, or Cancel?"
- #3155 Removed extra warning messages when saving a PDF file in the PDF Editor.
- #3154 Added keyboard command functionality to the Box Creation command.
- #3153 Fixed a bug that caused a crash if a DFM List was imported with a DFM sub-check highlighted.
- #3146 Updated a number of less used characters in the FONT2 font to correctly display.
- #3143 Clean up of unallowable layer extents when loading a GWK file is now implemented.
- #3142 Updated the CU coverage algorithm. The algorithm was ignoring cases where other data on the same net was exposed by the SM opening that was under investigation. Since the marked data did not include the exposed pad/trace, the error was reported. The error was omitted when the Check was run on the whole layer (including the exposed entities). This particular dataset displayed a scenario that this algorithm needs modification to handle the situation when there is other entities having a different net code is sitting in between the violation and the exposed pad/trace.
- #3139 Feed Rate in Drill Rack was being incorrectly assigned during Fixed Width file parsing. This problem is now corrected. Also a valid range of 10 - 500 inches/minute was introduced based on the limits of the Excellon CNC-7 specification.
- #3138 Fixed a contour issue that caused the Solder Bridging DFM check to freeze up on this dataset.
- #3133 Retained the minimum Plane Area value between runs of DFM.
- #3132 Very small arcs are no longer vectorized in the RS-274X output. This applied to arcs less than 1 mil in length.
- #3131 Fixed problem that resulted in a crash when running Shave Pads on this dataset.
- #3130 Problem with crash due to array overflow while reading very large numeric sequence into a temporary buffer has been fixed.
- #3120 Updated our polygon handling to allow for the teaching of sub polygons. This is closely tied to the new polygon selection functionality mentioned above.
- #3115 Filter Selection fields are now cleared following the running of the function.
- #3103 Fixed issue when loading an image in DXF format that was larger than our visible extents. We now ask the user if we can automatically scale the image to fit.
- #3101 Improvements made to the display of selected polygons. The two new functions to Select and Unselect Polygons now allow the selection of the entire polygon in one action. The original behavior of allowing selection of each individual polygon section is also allowed.
- #3091 Extended the number of layers that can be output using the Default option in the RS-274X output from 20 to 40.
- #3090 Added function to find the layer number of selected data.
- #3077 Fixed a DXF / DWG import issue that resulted in incorrectly created circuit edges created with an OddDbRegion entity.
- #3075 Fixed minor problem with the Jump to Component Hotkey not working in the right click menu.
- #3071 Updated the level of accuracy when specifying the location of the Clip Selected data
- #3044 Migrated to DWGDirect toolkit for enhanced flexibility and error trapping.
- #3036 Added a warning to better explain to the user that the Remove Buried function works on the image that is shown on screen. This approach allows us the most flexibility to run Remove Buried on various datasets.
- #3034 Pad Shaving has been updated so that the resulting shaved pad now becomes a custom pad. This custom pad can then be shaved again to better allow the user to enhance the data for yield improvement.
- #3026 Drill Table Unify command to take into account feed speed and spindle value when deciding if drills of same diameter/platedness can or should be combined.
- #3023 Loading this DXF file no longer results in a 'List Full' error message.
- #3022 Updated the values determined by the auto import code regarding the arc quadrant/full switch.
- #3020 Update to the DXF / DWG import function now automatically scales data to fit within our extents.
- #3005 We are now correctly interpreting this DXF file.
- #2981 Correct interpretation of splines from the DXF file is now occurring.
- #2920 DXF files with different offsets now correctly load into the product.
- #2891 Merging GWK files incorrectly counted the number of layers in use and would then incorrectly report that the list was full. This issue has been addressed with a message to explain to the user their options.

#2877 Right and Left bullet creation is now consistent with Up and Down direction

#2449 Implementation of the upgraded DXF / DWG import modules fixes a crash with this dataset.

#2427 S-curves and ellipses are now created correctly from the DXF / DWG import files.