

# Release Notes GC-PowerPlace v14.3

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# New Features

## Support for Gerber X2

Support for the new Gerber extension has been added. This extension adds Layer Types and Side information to Gerber layers making the setting up layer order and properties automatic after loading these updated files. The extension also supports aperture attributes that are assigned based on usage. These aperture attributes are also supported in GraphiCode products. They can be accessed via the attribute tab of the Pad or Trace Properties page.

## Select by Attributes

The addition of attributes from the Gerber X2 extension requires that pads and traces be selected based on the assigned attributes. The Select by Attributes has been added to the Edit > select menu. This function allows pad or traces to be selected based on the attributes chosen. If multiple attributes are selected, the selection is based on an <OR> approach. So, for instance, if you check Attribute A and Attribute B then the features that are selected will either have Attribute A assigned OR Attribute B assigned.

## Select Same Attributes

As an alternative to using the Select by Attributes function you can also use a more graphical approach to select attributes. The right click Select Same Attributes allows the user to hover over an entity (much like Select This Tool) and then right clicking and choosing Select Same Attributes. The pop-up dialog allows users to Select all entities of Editable layers that are assigned a specific attribute of the entity in question or also any entity that has any of the attributes assigned.

So for example if the pad has the Fiducial attribute assigned AND the Ref\_PT attribute assigned, right clicking on the Fiducial entry and choosing Select will select all pads on the Edit layers assigned the Fiducial attribute. Likewise for the Ref\_PT attribute. If you click OK to the dialog, all pads assigned either Fiducial OR Ref\_PT will be selected.

## Apply Layer Settings

Assigning Physical Layer Type, Side, color and order can be now done via the Apply Layer Settings function, found in the Layer List by right clicking on the Physical Layers entry. The function uses ini files to modify the layer settings based on the incoming filename.

When the function is invoked the user is asked to pick the ini file to be used. The last used ini file is presented by

default. The function will then change the layer properties based on layer property information in the ini file. If your Gerber files are from a single source, then the dialog allowing the picking of the ini file can be skipped by holding down the Shift key.

GraphiCode has supplied an example ini file called Example.ini that can be used to Apply Layer settings to the Gerber files contained in the Examples directory supplied during installation. To handle different filenames, make a copy of this file, rename and modify for your specific requirements.

The information on how to modify the ini file is included in the top portion of the Example.ini file supplied by GraphiCode.

## Items Fixed since v14.2

This list is customer reported issues fixed for this release.

#318 Added a warning to the user when aperture macros incorrectly missed the 0 from negative variable values. Simple values (-2,-0.005) do not require a 0 but if using a variable, the 0 is expressly required as per the specification (0-\$3).

#315 Poorly created DXF file resulted in some strange 'bulged ends' on certain traces. The code was modified to ensure the image produced matched the AutoCAD image.

#310 An internal error did not reset appropriate variables after running Plugin functions. The code has been modified to correct this.

#301 Fixed a bug that caused an incorrect or missing print image when the data was scaled by a value of less than 1.

#269 An RS-274X aperture macro with the first element defined as exposure off no longer cuts the underlying data as per the RS-274X specification clarification. However, because a number of CAD exports incorrectly assume that it will, an option has been added to the Tools > Customize > Settings to allow for the intended image to be generated. This option is grouped with other non-standard aperture macro options to try and help users generate the intended (although incorrect as per the specification) image.

#268 As with Track #266 a custom macro that results in nothing (for example a small exposure on round pad and a larger exposure off square) has no effect on the image generated by the Gerber file.

#266 Following the clarification of the RS-274X specification and the Gerber X2 development a number of ambiguous issues were resolved. Now, custom macros containing exposure off commands (creating a hole) no longer affect any previously drawn data. The exposure off within an aperture macro only cuts data within the macro.

#213 We have updated the DXF/DWG export in the 64bit build to function as expected. Also enhanced the output to match the specific GWK colors used and also modified the import to match (as closely as possible) non-standard colors defined in the DXF or DWG file.