

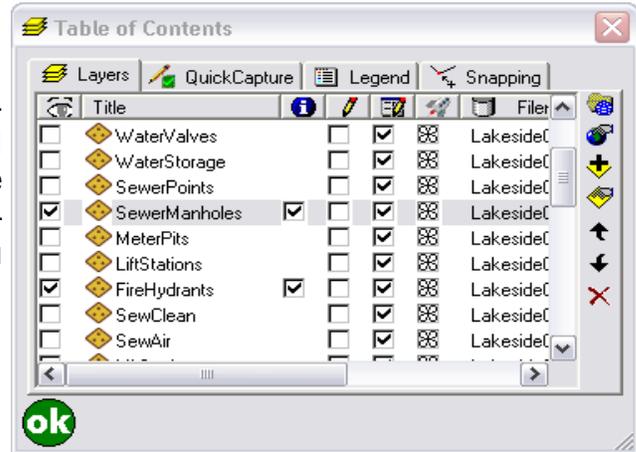
Recommended Techniques to Prevent ArcPad® from Freezing on a GPS Handheld

June 11, 2015

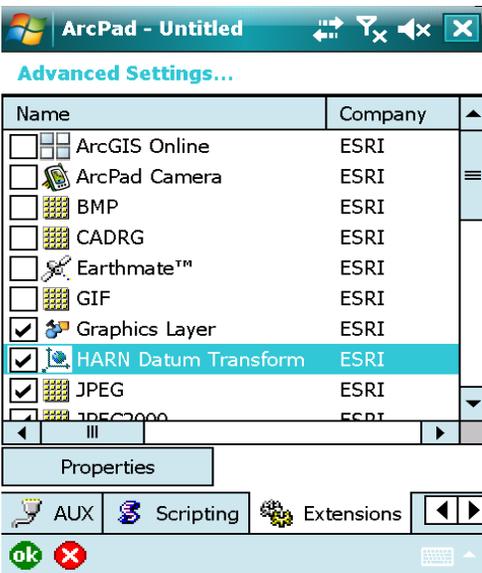
When running ESRI® ArcPad® on a GPS Handheld, be aware that the higher resolution screens require four times as much RAM as the lower resolution devices. For this reason, and for the ease of data collection for field workers, we recommend simplifying and minimizing as much as possible to avoid freezing issues, slow performance and unnecessary work for data collection crews. The following suggestions will help to lower the RAM needed to run ArcPad efficiently and prevent freezes.

Minimize the number of layers, domains and related tables. Keep in mind what your field workers really need for their data collection, and avoid checking out unnecessary layers and extensive schemas. Doing this from the beginning will prevent major frustrations in the field. However, if you find yourself in the field with an overloaded map, you can still fix the issue.

To reduce the number of layers, tap the Table of Contents button.



Select only the layers that are absolutely required right then. It is best to only use three or four at a time for best performance. Tap OK, and then Save the map. If you are able to do this without ArcPad crashing, then you should be all set. If you are unable to even get this far without a crash, you may need to open the .apm in ArcPad on the desktop, turn off the unneeded layers, save the .apm, and then transfer to the handheld again. Layers can be added as needed, but remember to keep as few as possible on all at once. If you would like to see how the number of layers and size of the layers affect the processing speed, please watch the video [here](#).



Turn off unneeded extensions in the *Advanced Options>Extensions* tab of ArcPad. The ArcGIS® Online and the ArcPad Camera are the largest memory consumers, and performance will improve if these are turned off.



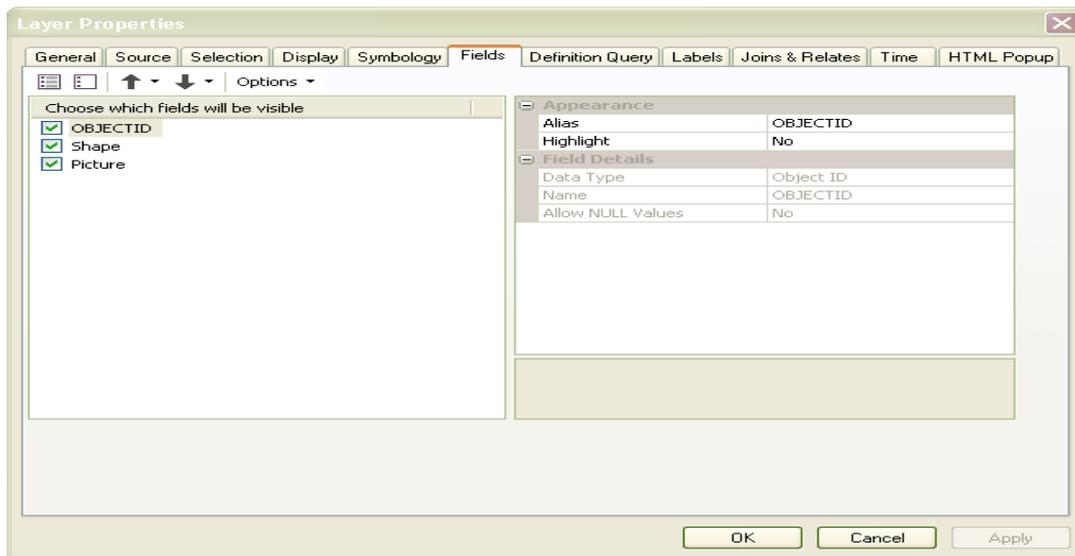
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The firmware version should always be the latest available for your handheld. For example, the latest for the 6000 Series GeoExplorer® is version 3.06.1 and this can be downloaded from [here](#). Click on the *GeoExplorer 6000 Series Handheld> Downloads> GeoExplorer 6000 Downloads> GNSS Firmware Releases> GeoExplorer 6000 series GNSS firmware update-version 3.06.1*.

Limit ArcPad extensions to only one if at all possible. Each third-party extension (Trimble® GPSCorrect™ or Laser Technology LaserGIS) requires a certain amount of RAM just to run.

Turn off unneeded fields before checking out. Many pages of attributes can slow down performance. This can be done in the Layer Properties in ArcMap®. Right-click the layer, go to *Properties> Fields Tab*. Uncheck the fields that are not needed before running the checkout.



Create multiple checkouts for large areas. For example, instead of making one big checkout for a whole county, make 4 different checkouts that are smaller. A field worker can open only the area needed and work much more efficiently. While this may take a few extra minutes in the office, it will save you hours of frustration in the field.

Use the QuickDraw to draw layers at a lower resolution requiring less



RAM.

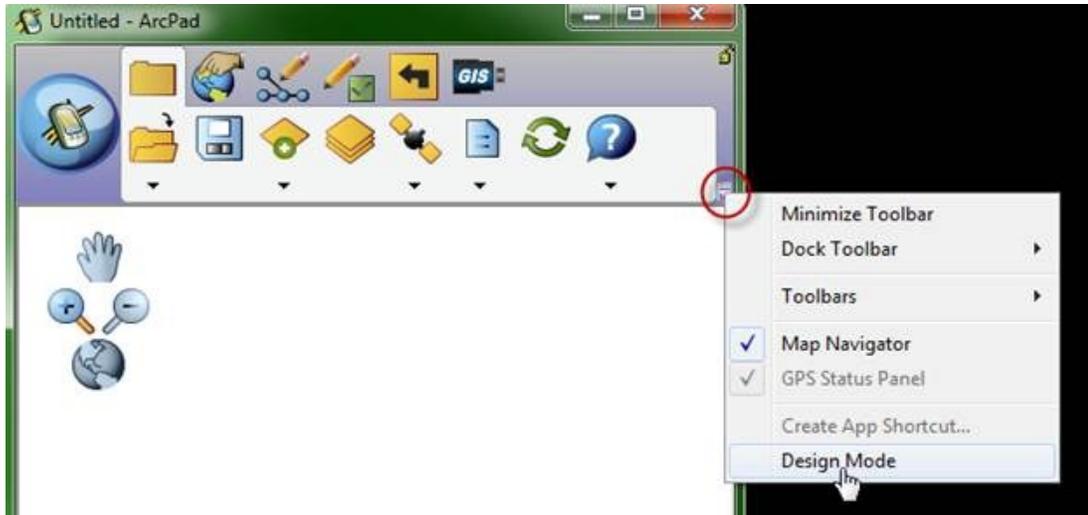
Avoid zooming and panning before the map is redrawn. Every zoom or pan requires RAM to redraw the map. Freezing issues seem to be triggered by multiple zooms in a row when re-drawing many layers. Try to wait until the map is completely finished drawing before zooming or panning. Again, less layers and smaller layers will increase the speed of the drawing.

Simplify the ArcPad Toolbar using the Toolbar Manager. Each tool will use some memory, so eliminate as many as possible. Not only will ArcPad run faster, but your field crew will be more efficient.

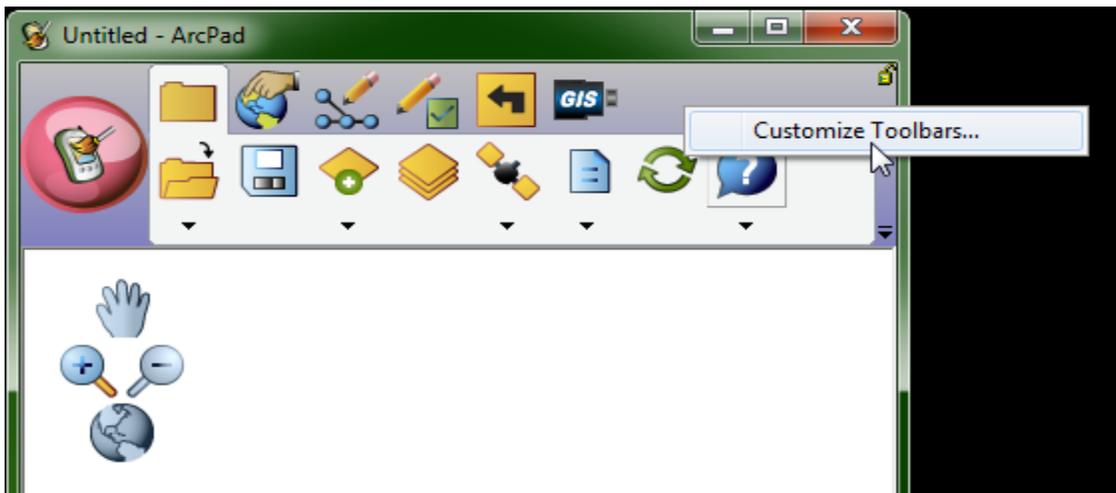
To open the Toolbar Manager, open ArcPad on the Desktop, and *Design Mode*.



click the button. Click



Right-click the toolbar, and click *Customize Toolbars*. This will bring up the Toolbar Manager.



If you need more help with the Toolbar Manager, go to [Help for your ArcPad Version](#).

Turn up the Processor on the Geo 6000 or 7. Go on the Geo to *Start> Settings> Power> Processor tab*. Move the slider bar toward *Performance*.