

COGO+ Version 3.0 Release Notes

April 16, 2011

Version 3.0 of COGO+ is a significant update to COGO+50 Version 2.12. This document summarizes the newly added features and enhancements, and provides installation and upgrade instructions.

By installing and using COGO+ you agree to the following terms and conditions:

Legal Disclaimer

1. Under no circumstances shall Simple Geospatial Solutions be liable for any direct, indirect, special, consequential or other damages, lost profits, or lost data that result from the use of, or the inability to use, the COGO+ software.
2. In no event shall total liability to you from any/all damages or losses exceed the amount you paid, if any, for the COGO+ software.

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New in Version 3.0

1. Redesigned main user interface for accessibility and speed improvements. The arrow keys now allow complete navigation of all menus without leaving the main interface.
2. Database system completely overhauled for major speed improvements.
3. *Point-to-Point* renamed to *Point Traverse* with two possible modes, the Standard mode and a new Sideshot mode.
4. *Point Traverse Standard* now accepts offset values when calculating intersections.
5. *Inverse Points* allows the user to enter a station at the beginning or the end of the line and then solve coordinates for any station and offset between the points.
6. *Inverse Curve* and *Horizontal Curve Solver* have improved coordinate calculation functions.
7. *Offset Intersect* program has been expanded to handle all types of *Intersections*.
8. All the intersection algorithms have been rewritten to make them more flexible.
9. A new *Fit Points* program with options to fit points to a straight line (same as the old linear regression); best fit points to a curve, or to calculate a double proportion solution.
10. A new optional setting allows adjusted points to be given a new number by providing an additive number to use, or to overwrite the point coordinates as before.
11. Multiple *Levelling* jobs can now be created.
12. *Traverse Plus* improvements.
13. *Alignments* improvements.
14. *Vertical Curve Solver* improvements.
15. *Plot Points* program features new zooming and panning abilities.

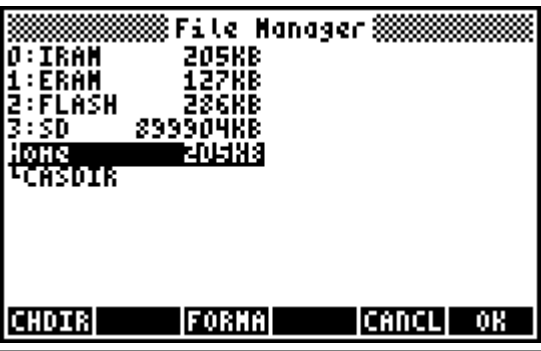
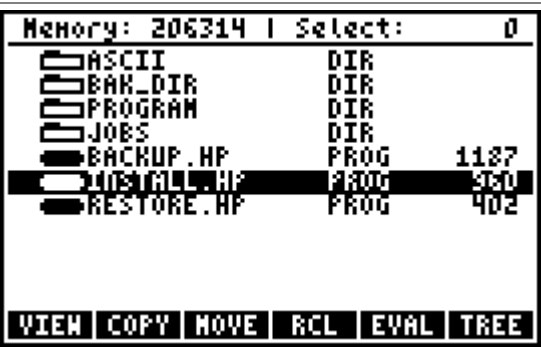

16. Direct backup of jobs to the SD card can now be done from the job manager.
17. A new COPY softkey in **Store New Point** allows copying coordinates from another point to create a new point.
18. A new Codelist feature allows the user to define a list of codes that can be used to select codes for point descriptions.
19. A new Point Browser added to **Recall Points**. All the points in the job are sorted lowest to highest and coordinates of the selected points may be viewed.
20. **Import** and **Export** have been improved to work more efficiently.
21. All input forms have been improved for speed and consistency.
22. User settings have been split into categories, with new options now available.
23. A new GEOD menu that features a **Conversions** program to convert between Grid and Geodetic coordinates. The program handles many projection zones including UTM and State Plane Coordinates. Any Transverse Mercator, Lambert Conformal Conic (2SP) or Lambert Conformal Conic (1SP) currently not available could be added upon request. The Oblique Transverse Mercator projections are not supported at this time. The GEOD menu will be expanded in future updates.
24. Many tweaks and small improvements throughout.

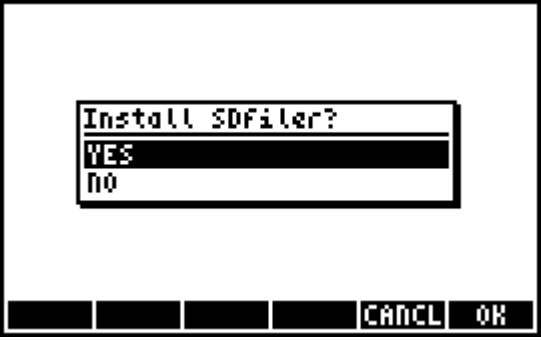

Installing or Upgrading to Version 3.0

This is a no charge update for everyone who purchased an activation code for COGO+50. If you are installing the software for the first time, you will be able to use the software in a limited DEMO mode until a valid activation code is provided. It is highly recommended to use a SD card to install the software and for operation of the software in general.

NOTE: There is also a [COGOPLUS.exe](#) file available which is a self-extracting archive that reduces Step 2 shown below. When/if prompted to overwrite files on the SD card, choose "Yes to All".

Step	Description
Step 1	Download and save the COGOPLUS.zip file on your computer.
Step 2	Extract the contents of the zip file. Usually this is done by right-clicking on the file and selecting "Extract here" or "Extract files" or something similar. <i>The result should be a folder named COGOPLUS with files and sub-folders within it.</i>
Step 3	Copy the entire COGOPLUS folder to your SD card. <i>It is important to place this folder into the root directory of the SD card and not into some folder that exists on your SD card.</i>

Step 4	Insert your SD card into your calculator's card slot and open the File Manager. <i>(To open the File Manager use Left Shift, then APPS key)</i>	
Step 5	Press the 3 key to browse the SD card, or select 3:SD and press the Right Arrow key.	
Step 6	Locate the COGOPLUS folder on the SD card, then select it and press the Right Arrow key to browse the folder.	
Step 7	Select the INSTALL.HP program and press F5 [EVAL] to run the installation program. <i>The BACKUP.HP file in the directory can be used to create backups at any time while the RESTORE.HP file will restore a saved backup.</i>	
Step 8	An option is presented to backup your calculator before installing the software. <i>If you choose YES then you will be asked to enter a name for the backup to be saved as. All backups are stored in the BAK_DIR directory on the SD card.</i>	
Step 10	The program displays the name of the file that is currently being installed. For example "Installing L930.HP" is shown while installing Library 930. <i>Three separate libraries will be installed (930, 931, 932) which together make up the COGO+ software.</i>	

Step 11	The option to install SDfiler is presented if the software is not installed. <i>SDfiler is a third party application that will be of benefit to anyone exporting ASCII files to the SD card and importing these files into CAD or viewing them on the computer.</i>	
Step 12	Reboot (warmstart) the calculator to complete the installation. <i>Hold down the ON key and press the F3 C key, then release both to reboot.</i>	

USB Cable

If you choose to install the library files using a USB cable and the Connectivity software, follow the following basic guidelines to install or update the software:

1. PURGE Library 930, 931 and 932 if they are installed
2. Copy each L930.HP, L931.HP and L932.HP to the calculator and attach to Port 2. You may need to transfer one file at a time, store it into Port 2, then PURGE the variable and repeat for each library file.
3. Reboot the calculator.

Running COGO+

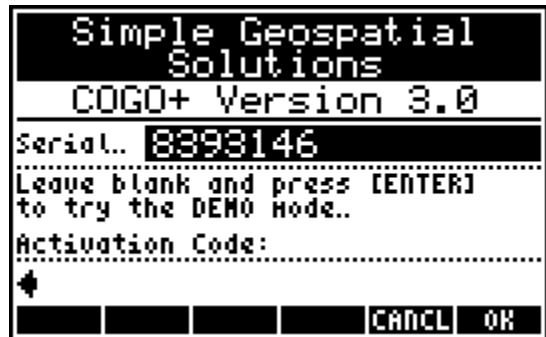
Once the software is installed there are a few ways to run the software. All these options should work regardless of RPN or ALGebraic mode set.

1. Open the library menu by using Right Shift then 2. This will display all the libraries installed on the calculator as softkeys. Find the softkey labeled **[COGO+]** and press it to reveal the available commands within the library which are **[COGO+]** and **[aboutCOGO+]**. Press F1 **[COGO+]** to start the software.
2. Lock Alpha mode and enter the command name COGO+ directly.
3. Press the APPS key to open the applications menu. Somewhere near the bottom of the list will be an entry which should look similar to "15.SGS COGO+". The number in front of the name may vary.
4. Lock Alpha mode and enter the command name SGS to open the COGO+ menu.

Activation Code

When you run the software for the first time, or any time until a valid activation code is supplied, you will be presented the option to enter a code to activate the software. On this screen is also shown the serial number that is needed to generate the code. **You will need this serial number when you purchase the activation code.**

The activation code is stored in Port 2 as a variable named "SurveyKey". Do not delete this variable, doing so will prompt the software to ask for the code again when you try running it, and could result in losing saved job data if a code is not provided.



Important Notes

Please review all the user settings before using the software to ensure your desired settings are active. Settings have changed since Version 2.12 and should be reviewed whether installing for the first time or if upgrading from a previous version.

The new primary distance unit setting **DOES NOT AFFECT JOB COORDINATES**. The primary distance unit is for input/output display only. The setting changes what happens when a m<>ft conversion is done and affects geodetic<>grid input/output. To change a job from metric to imperial or vice versa it is required to scale all points. This behaviour is consistent with how a CAD drawing operates. The coordinates are essentially unit-less, the setting is used to configure how the coordinates are interpreted for input and output.

Acknowledgements

Andreas Moeller – For valuable discussions and for providing some very fast list searching code. His website is <http://www.software49g.gmxhome.de/>

Edwin Cordoba – For sharing his code to check the battery level at http://groups.google.com/group/comp.sys.hp48/browse_frm/thread/453d77ac9ecbf7e1/ebe420474f36c151?lnk=gst&q=Edwin+batstatus#ebe420474f36c151

Werner Huysegoms – For the very fast SORT replacement found at <http://www.hpcalc.org/details.php?id=2828>

Tim Wessman and Claudio Lapilli – For SDfiler which is an optional install with COGO+ and can also be found at <http://www.hpcalc.org/details.php?id=6524>