

CHALK RIVER GRAPHICS

CrgMaps Documentation

Installation and User's Guide

Chalk River Graphics

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Forward

CrgSim provides the ability to display a “real life” sized Primary Flight Display (PFD), Nav Display (ND), and EICAS Display for users of Flight Simulator X. Two PFDs, two Nav displays, one EICAS display, and one Map display are available. One set of a PFD and Nav for the Captain, one set of a PFD and Nav for the First Officer, and one shared EICAS. The instruments may be run on a different computer (or computers) than the one the simulator is executing on (and should be).

The Moving Map display software is available as a separate download to reduce the size of the instruments download. To run `crgmap.exe` you will need some of the components that are in the CrgSim zip file, specifically **`crgcom.exe`** and **`crgfsx.exe`** (for FSX) or **`crgr3d.exe`** (for Prepar3d).

`Crgmap.exe` uses legacy graphics so it is possible it may run on XP machines. If you have an older XP machine it may be worth the time to try to run the Map display on that computer.

So for step number ONE if you have not already done so download the CrgSim distribution zip file. Read the included documentation and install the components from that package that you want to run. The only required software from the main instrument distribution package is `crgcom.exe` and `crgfsx.exe` (if you are running FSX) or `crgr3d.exe` (if you are running Prepar3d).

Please read all the documentation from the main instrument distribution package.

If you find a problem with the software please let us know. The web site is at www.crgsim.com. It is read-only since we ran out of time trying to clear the spam from the site. We can be reached at sim30@crgsim.com

Thanks and enjoy.

CrgMap Installation

Unzip CrgMaps in a directory on the computer that you will be using as the map display computer. Within this new directory is a folder called “CrgMaps” that will contain the executable “crgmaps.exe” and a few image files. There are also 3 additional directories : M01, M05, and M10. The M10 directory contains maps that are 10 slightly larger than a 10 degree rectangle of latitude and longitude. The M05 directory contains 5 degree rectangles and the M01 directory contains more detailed maps of varying size.

The main map distribution package contains 3 levels of maps (M10, M05, and M01) for:

- Seattle, Wa.,
- Colorado Springs, Co.
- Frankfurt, Germany.

There are three additional map packages available described below.

Each additional map distribution contains the same 3 directories: M10, M05, and M01. To install any or all of these packages just copy the contents from each directory to the corresponding directory of the main installation. You can verify the correct location of each map. Maps beginning with M10xxx belong in the M10 directory, M05xxx maps belong in the M05 directory, and so on.

When the copy function is complete you can execute crgmaps.exe. Please read the paragraph in the main documentation file containing suggestions on where to locate the CrgSim directories.

The Map Display “should” run with all of the default FSX planes and most of the FSX add-ons as long as the simulator object keeps FSX informed of the current latitude and longitude.

Maps Copyright

The cartography is from www.openstreetmap.org. OpenStreetMap is *open data*, licensed under the [Open Data Commons Open Database License](https://opendatacommons.org/licenses/odbl/) (ODbL). For full copyright information please go to:

www.openstreetmap.org/copyright

Further information on the Open Database License is available at:

www.opendatacommons.org

and

www.creativecommons.org

Maps Coverage

To keep the download manageable the only maps distributed with the CrgMaps zip file are level 2, 3, and 4 maps centered on SeaTac Airport located in the state of Washington, 3 map levels for Frankfurt, Germany and 3 map levels for Colorado Springs, Co.

To test CrgMaps select one of these locations in your flight simulator. You can try out the 3 levels of map detail while on the ground. For testing the moving map feature you will have to fly around the local area. The map display will automatically change map levels if you fly out of the coverage of the most detailed map.

Additional map packages are available at:

www.crgsim.com

At this time the maps cover the United States, parts of Canada, Central America, parts of South America, Australia, New Zealand, and most Europe to Western Russia.

Map Package Coverage

- CrgPak1 - 40S to 40N, 130W to 80W (U.S., parts of Canada, Central America, parts of South America) These are mainly level 4 maps.
- CrgPak2 - 20S to 40S, 110E to 180E (Australia and New Zealand) These are mainly level 4 maps
- CrgPak3 - 30N to 60N, 10W to 40E (Most of Europe to Western Russia) Mainly level 3 maps with some level 4 maps.

If no map is available for the aircraft location then a “No Map Available” message will display on the screen.

Map Description

The aircraft is represented with a symbol in the center of the display. When nearing the edge of a map, the map stops moving while the aircraft symbol moves to the edge of the map tile. When the aircraft moves to another map the aircraft symbol will appear on the opposite side of the display and move toward the center of the new map. The maps are fairly large so map change should be infrequent.

The display from CrgMaps is expected to show well at instrument sizes up to approximately 850x850 pixels.

There are 3 levels of map detail:

- Map level 4 covers a 10 degree lat/long rectangle.
- Map level 3 covers a 5 degree lat/long rectangle.
- Map level 2 varies but usually covers about a ½ to a 1 degree lat/long rectangle.

Local AI traffic, out to about 20 Km, will display on the maps. The altitude of the AI aircraft will be displayed below the AI aircraft symbol. If the aircraft flies below 1000 feet above ground level then the altitude above ground level will be displayed above the aircraft symbol in red.

In the image of the level 2 map, several pages below, there is one AI aircraft displayed flying at an altitude of 27000 feet.

If a CrgSim flight plan has been loaded then way points within the map boundaries will be displayed on the map along with the way point names.

How to Select Map Detail

Map level may be selected by:

- pressing a number key 2, 3, or 4 while the FSX screen is selected or
- selecting the map window and pressing a number key 2, 3, or 4.

The number key to map level is:

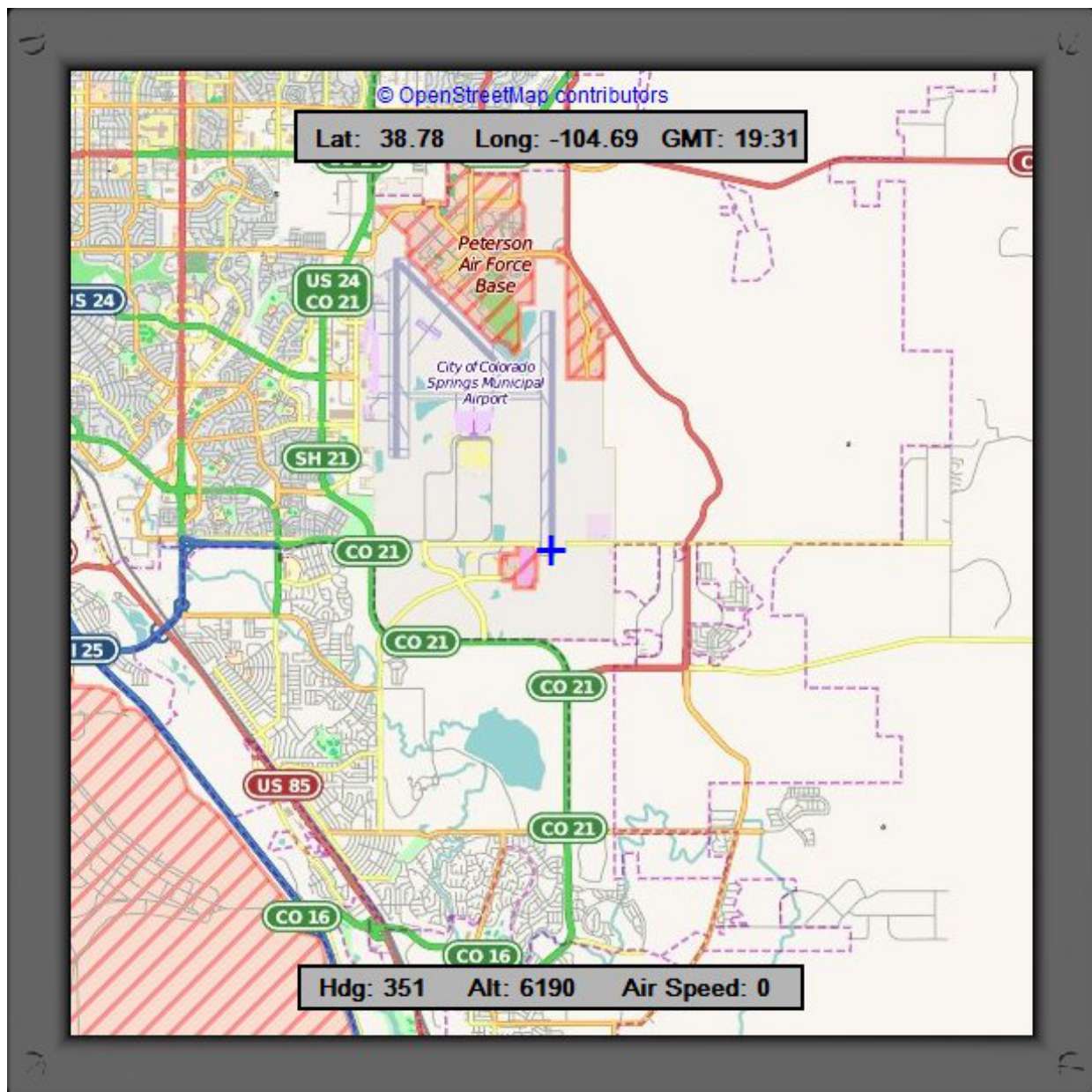
- Key 2 - enable display of level 2 maps
- Key 3 - enable display of level 3 maps
- Key 4 - enable display of level 4 maps

CrgMaps will use the selected map detail if a map is available at the current aircraft latitude and longitude. If a map is not available at the selected detail it will look for a larger coverage maps until one is found (if a map exists) for the current location. For example is map level 2 is selected but the only map for the location is map level 4 then map level 4 will be used. If the aircraft flies into an area that has level 2 map then the display will automatically switch to a level 2 map.

Display Nav Aids, Airports, and Waypoints.

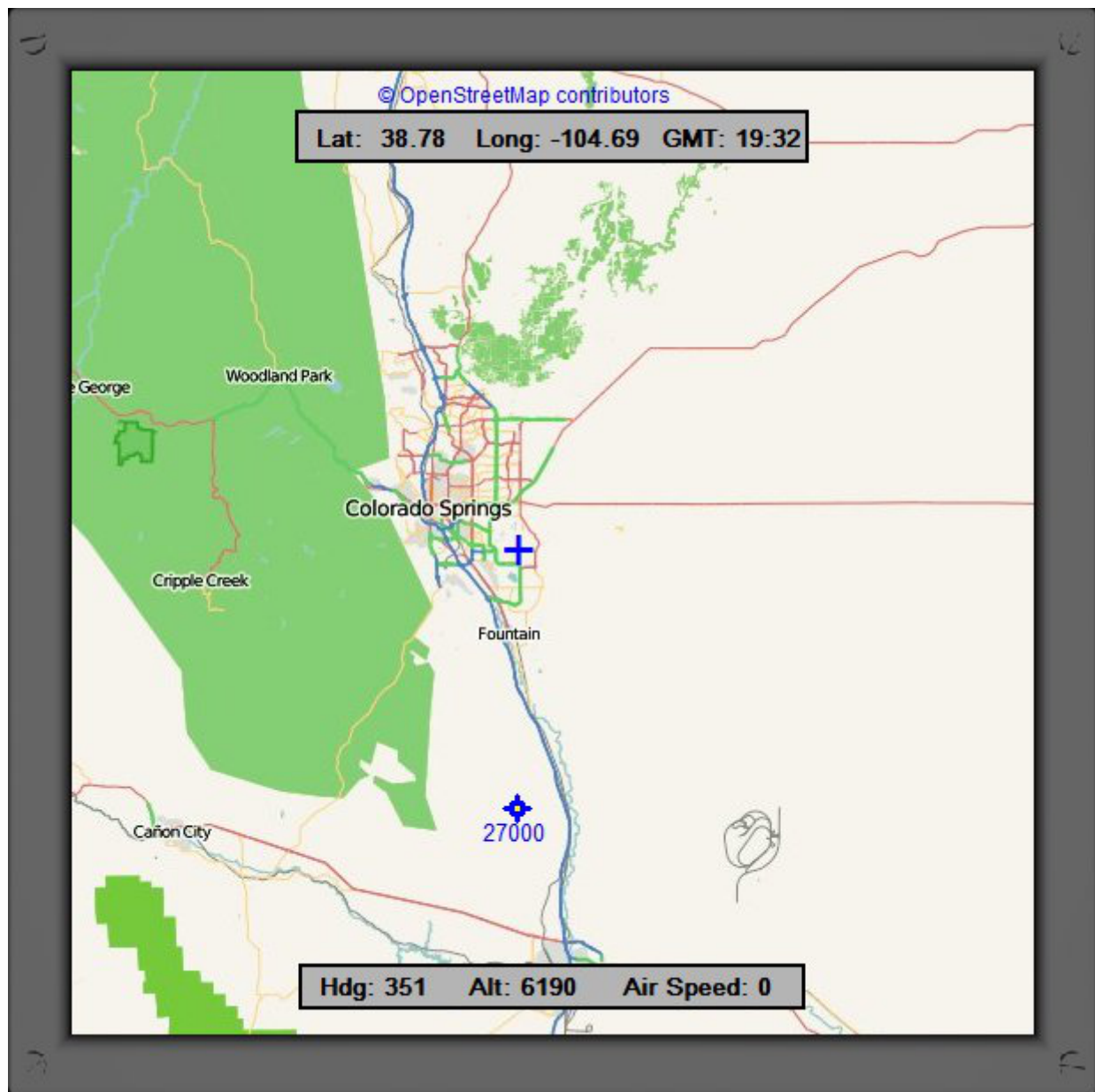
These features will display on the selected map based on the Nav Display selections on your aircraft. NavAids, waypoints, and airports are displayed as:

- NavAids - an orange circle with a white dot in the center.
- Waypoints - a blue circle with a white dot in the centered.
- Airports - a green circle with a white dot in the center.



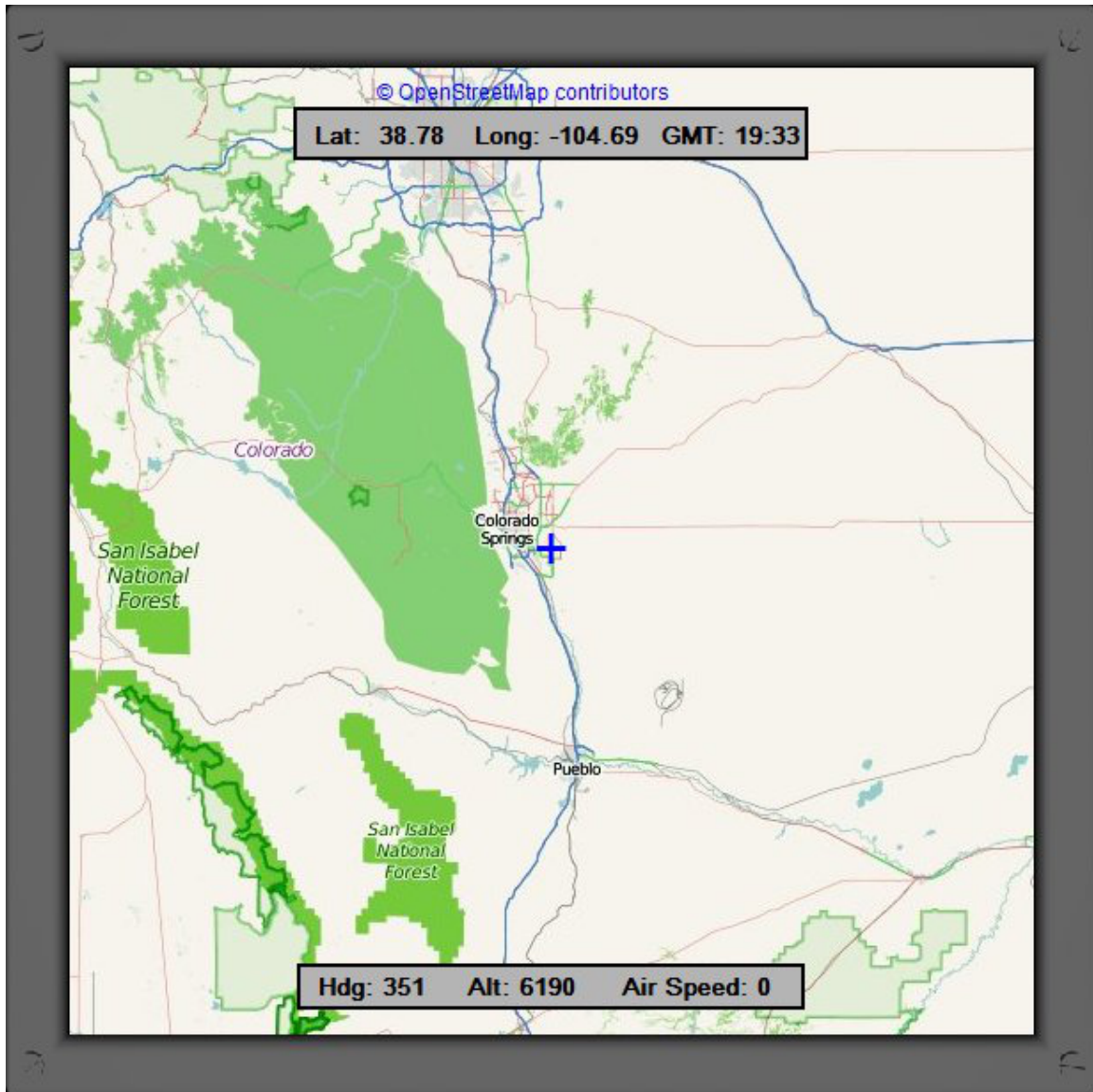
www.openstreetmap.org/copyright

The image above shows a map level 2 display centered on Colorado Springs, Colorado.



www.openstreetmap.org/copyright

The image above shows a map level 3 display centered on Colorado Springs, Colorado.



www.openstreetmap.org/copyright

The image below shows a map level 4 display centered on Colorado Springs, Colorado.

Config File

On startup crgmaps.exe looks for a configuration file in the same directory. If it finds a file named crgmaps.cfg it will open the file and read the contained parameter values.

Instrument size and location can be specified in the configuration file crgmaps.cfg as well as a command to display (or not) the bezel.

The map program uses winx, winy, height, width, and bezel the same as the instruments in the main distribution. There is one extra parameter that can be used if you want to rotate the map display by 90 degrees clock wise or counter clockwise. You can also invert the map display.

The parameter is “rot” and the allowed value are cw, ccw, invert, and none. If you want no rotation the rot parameter can be omitted.

You can configure Maps by clicking on the map display and then pressing the F2 key. The setup display lets you set the map size, map location, and whether or not there is to be a bezel around the map. To make the selections permanent press the F3 key.

The “rot” parameter is not settable through the setup screen. It is necessary to open the configuration file and set the “rot” selection with an editor.

SETUP	
XLOC	1775
YLOC	116
WIDTH	575
HEIGHT	575
Move Left	Left Arrow
Move Right	Right Arrow
Move Down	Down Arrow
Move Up	Up Arrow
Smaller Window	-
Larger Window	+
Done	F2
Save Parameters	F3
TO TERMINATE PROGRAM: EXIT SETUP	
THEN PRESS ESCAPE	

When making large changes in the map size (after saving the selections with F3) it will be necessary to close and restart the map program to properly size the maps.

Smaller map sizes do not make the actual map smaller, instead a smaller map area is displayed in the window so the full resolution is always available.

Map Requests

If you regularly fly in an area that is not covered by a map let us know. We hope to gradually add more map coverage and a requested map will go to the top of the list.

Suggestions for any changes or additions to information displayed on the maps is always welcome.

Also check out the www.openstreetmap.org site. They can always use help in adding to the map coverage and detail.

Enjoy.