



MÄK Stealth 5.0-ngc Release Notes

This document provides the following release-specific information for MÄK Stealth 5.0-ngc:

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Systems Supported and System Requirements

This section describes platform support and system requirements for the MÄK Stealth. For the most up-to-date information about systems supported, see the Product Versions page on the MÄK web site at: http://www.mak.com/product_version.htm.

Stealth for PCs

The Stealth for PCs requires the following:

- ♦ A Pentium-class PC (or higher) with minimum 1GHz processor
- ♦ An OpenGL 1.2-compliant graphics card.
- ♦ Windows 2000 SP2, or Windows XP.
- ♦ 800 MB of disk space. 550MB is for terrain databases, model files, and other data files.
- ♦ 256 MB of RAM, 512 MB if you plan to use the complete dismounted infantry models.

3D Video Boards Supported

In general, Stealth 5.0-ngc should support any board that claims to support OpenGL 1.2. The Stealth has been tested with NVidia GeForce graphics cards.

Java Support for Model Mapper

The Model Mapper is a Java application. To use it, you must install Java 1.4.1 or later.

Online Help Browser Requirements

The online help system included with this release of the Stealth is an HTML-based system. To view online help, you must have a web browser installed that supports Javascript, which must be enabled.

Network Compatibility

HLA only

Stealth 5.0-ngc was built against VR-Link 3.8.1-ngc and is compliant with:

- ♦ RPR-FOM 1.0 and a subset of 2.0 (draft 6 and 14)
- ♦ MÄK RTI 2.0.2-ngc
- ♦ DMSO RTI NG v6.

Stealth 5.0-ngc is compatible with applications that use earlier versions of VR-Link if they support versions of the RPR FOM listed above.

DIS only

Stealth 5.0-ngc supports DIS 2.0.4, IEEE 1278.1, 2.1.4, and IEEE 1278.1a, and can therefore interoperate with DIS applications of any of these versions.

FOM Support

Stealth 5.0-ngc has built-in support for versions 0.5, 0.7, 0.8, 1.0, and 2.0 of the RPR FOM. It also supports VR-Link's ability to support alternative FOMs through the FOM Mapper. By default, Stealth 5.0-ngc uses RPR FOM 1.0.

The keywords for specifying different versions of the RPR FOM with the `-f` startup option are:

- ♦ RPR FOM 0.5: `v1RPR05`
- ♦ RPR FOM 0.7: `v1RPR07`
- ♦ RPR FOM 0.8: `v1RPR08`
- ♦ RPR FOM 1.0: `v1RPR10`
- ♦ RPR FOM 2.0 draft 6: `v1RPR20006`
- ♦ RPR FOM 2.0 draft 14: `v1RPR20014`.

For information about FOM mapping and specifying the FOM version to use, see *MÄK Stealth User's Guide*.

New Features and Product Updates

Stealth 5.0-ngc has been completely redesigned and updated, as follows:

- ♦ The Stealth now uses Multigen-Paradigm Vega Prime for rendering graphics.
- ♦ The Stealth GUI has been completely redesigned. It is now based on the Qt toolkit from Trolltech.
- ♦ Stealth configuration files have been updated and streamlined.
- ♦ You can customize explosions, flame, and smoke effects.
- ♦ The environmental model is more flexible.
- ♦ Stealth documentation has been updated to describe the new GUI and application features.
- ♦ Stealth 5.0-ngc does not support a plug-in API.
- ♦ The Stealth includes an updated demonstration file (Windows only).

Updated Graphical User Interface

The new GUI includes the following features:

- ♦ All controls are within one window, with menus and dockable toolbars.
- ♦ Support for full screen, demonstration mode.
- ♦ Object list provides a hierarchical view of entities.
- ♦ Ability to save unlimited number of views to file.
- ♦ Detonation list.
- ♦ Entity and aggregate information displays.
- ♦ Information about unattached objects can be viewed.
- ♦ The eyepoint location can be specified by entering coordinate values.
- ♦ Ability to set environmental features such as date and time of day.

Features Not Supported in this Release

The following features were available in Stealth 4.2-ngc, but are not supported in this release:

- ♦ Support for geocentric databases
- ♦ Plug-in API
- ♦ Joystick control
- ♦ Support for ModSAF view control PDUs
- ♦ Stealth recording
- ♦ Terrain following in absolute mode
- ♦ Attached parts
- ♦ Statistics
- ♦ Multi-channel and multi-pipe support.

If one of these features is of particular importance to your use of the Stealth, please contact MÄK support and let us know.

Editing ACF Files

The stealth uses an ACF file (defined in *./config/default.acf*) to configure its basic visual effects. Most parameters such as time of day, field of view, and fog are configurable through MTL configuration files, the Stealth GUI, and Stealth View Control messages in addition to the ACF file. However, clouds, smoke, flame, and detonation explosions can be configured only in the ACF file.

We recommend that you use Multigen-Paradigm Lynx Prime to edit ACF files. However, if you do not have this utility, you can edit the file by hand, as follows

- ♦ Clouds are defined as `vpEnv:EnvCloudLayer` objects. You can edit the elevation of the layer, the transition range, and the texture.
- ♦ Smoke and Flame (displayed with destroyed entities) are defined as `vpFx:FxParticleSystems` with the name "Smoke" and "Flame" respectively. You can edit the smoke scale, fade duration, texture, and wind.
- ♦ Detonations are displayed with the effect `vpFx:FxExplosion2`. You can edit the overall duration, fade duration, and scale.

Updated Configuration Files

There is no longer any difference between parameters on PC and on UNIX platforms. Many parameters have been eliminated. If you have customized MTL files from previous versions of the Stealth, you must port them to the new parameters. In many cases, the only change is in capitalization. In other cases there are slight changes in the parameter names, but their mapping to old parameters should be fairly obvious. The configuration file parameters are documented in the MTL files themselves. As noted in a previous section, the Stealth now uses an ACF file as well as MTL files.

Stealth Demonstration

The Stealth includes a demonstration executable that runs a recorded exercise that you can display in the Stealth. It allows you to run the Stealth and see its features without the need to set up an exercise to generate input. To run the demonstration:

1. Start the Stealth.
 - For DIS, choose Start → MAK Technologies → Stealth 5.0-ngc DIS.
 - For HLA, choose Start → MAK Technologies → Stealth 5.0-ngc HLA.

The DIS Stealth listens for DIS traffic on port 3000 and your network's default broadcast address. The HLA Stealth attempts to join the federation "VR-Link" with federate name "Stealth" and RPR FOM 1.0. You must have a working HLA configuration on your machine to run the HLA Stealth.

The Stealth loads a variety of models before launching the GUI and initializing an empty 3D scene.

2. Load the berkeley terrain database.
 - a. Choose File → Open Database. An Open dialog box is displayed.
 - b. Select *berkeley.mtl*. This file specifies an OpenFLT terrain along with its corresponding origin. The status bar indicates the status of the loading process. When the load is complete, you should see a view of Berkeley, California, U.S.A.
3. Generate some network traffic.
 - To generate DIS data, run *./demo/demoLoggerTapeDIS.exe*.
 - To generate HLA data, run *./demo/demoLoggerTapeHLA.exe*.
4. To start the demo, press the Logger's "play" button.



The demonstration Logger executables are modified versions of the MÄK Logger. They can only play the recording created for the demonstration. You cannot record an exercise with the demonstration versions of the Logger. However, the controls for playing a recording (rewinding, pausing, fast forwarding, and so on) are all functional. (For more information about the MÄK Logger, please contact MÄK Technologies.)

Known Problems and Product Restrictions

- ♦ On some Windows systems, the Stealth may crash if it does not have a sound card and sound is enabled. To avoid this problem, disable sound in *params.mtl*, by setting the **EnableSound** parameter to 0.
- ♦ If you hold down the mouse button and drag the cursor near an entity in the display, the Stealth attaches to the entity.
- ♦ When an entity leaves an exercise and then rejoins it, its emitter system can disappear.
- ♦ Trajectory histories are not supported in this release.
- ♦ Vapor trails are disabled in the *TrailMap.mtl* file. You can enable them; however, using trailing effects can degrade performance.
- ♦ Trails do not always rotate correctly.

