

## Release Notes for g5.0

### 1. Upgrades, Features, and Bug Fixes

- 1.1. Includes and Improves upon all g 4.0 features.
- 1.2. Fit selection now in terms of time (not fringe number).
- 1.3. Fit sensitivity plots now included in real time (truncations).
- 1.4. Support for National Instruments A2D cards.
- 1.5. Support for WEO 200 Iodine Laser.
- 1.6. "Large View" now enabled (F12).
- 1.7. Bug in "Time Offset" fixed.
- 1.8. "Red/Blue" Sequencing enabled. Allows "L" series lasers to be run quickly in both modes, but still spread measurements over long periods.
- 1.9. Last windows opened now remembered.
- 1.10. Numerous stability bugs fixed.

### 2. Details

- 2.1. The portion of the drop to be fit by the software is now selected in terms of time, not fringe number (though fringe number is determined for reference and backwards compatibility). Typical values are 35-200 ms for FG5s, and 25-135 ms for A10s. The nearest integer fringe value can be determined by clicking "Update Fringe Windows" after selecting the start and stop times.
- 2.2. To determine the sensitivity of the calculated gravity value to the selected fit duration, select View | Drop Fit Sensitivity-Top and View | Drop Fit Sensitivity-Bottom while in real time or in replay. These graphs show the change in the gravity value as more (fewer) fringe times are added (removed) to the fit selection. The values are in  $\mu\text{Gals}$  and are plotted relative to the "nominal" fit selection determined in step 2.1. These "windows" about the start and stop of the drop are selected in Setup | Control | Fit Sensitivity (typically  $\pm 10$  ms). The plots will change depending on many things such as setup, and location quality, but typically the fit sensitivities for an FG5 should be smaller than approximately 2  $\mu\text{Gals}$ , and approximately 5  $\mu\text{Gals}$  for an A10.
- 2.3. Red/Blue Sequencing. Users of "L" series lasers (default for A10 gravimeters) can now enable Red/Blue sequencing in which a red set and a blue set can be acquired in quick succession, and then a longer time can be specified before the next sequence begins. For example, a red and blue set can be acquired 5 minutes apart (start to start), and then the sequence (starting with red again) can repeat again 1 hour later (red start to red start).

### 3. Notes for previous g users

- 3.1. Passwords. Password files generated for versions of g previous to g5 will NOT work with g5. Users that upgrade to g5 will need to uninstall previous versions of g, run g5SysChk, and send SysChk.bin to [mking@microgsolutions.com](mailto:mking@microgsolutions.com) to

receive an updated password file. This is required for each computer that runs g5. Note that all previous g data, point files, and templates will still exist and operate with g5.

4. **PCI vs. ISA.**

4.1. There are still effectively two versions of g5: one for real-time acquisition using an ISA Guide Time Interval Analyzer Card (most systems shipped prior to 2004) and another for real-time acquisition using a PCI Guide Time Interval Analyzer Card (most systems shipped after 2003). You will need to install the correct version of g5 to operate your gravimeter – contact Micro-g if you have any questions as to the version of your TIA card. Either version of g5 can be used to REPLAY any g data – the distinction is only important for real-time acquisition.

5. Any questions regarding the features of g5 or the upgrade process should be directed to Derek van Westrum at [dvanwestrum@microgsolutions.com](mailto:dvanwestrum@microgsolutions.com).