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January 18, 2006

Remote Commands for GSM-19 and GSM-90 Systems

Many types of applications call for means of controlling magnetometers and gradiometers from a distance (i.e. remotely). GEM facilitates this process through a variety of commands. This document provides a short summary of how to initialize the system for remote commands, a listing of remote commands, and a short description of each.

Note: This listing is not exhaustive; additional commands, such as magnetometer power on or off, may be available on request.

Starting the Remote Command Process

There are two possible starting points for issuing remote commands. One is from the magnetometer's main menu; the other is from the Remote screen (which will appear by default if you leave the magnetometer in the remote state after using the magnetometer).

1. Starting from the Main menu. The common method is to start from the main menu. Here, the approach is to turn on the magnetometer (B key) and then press C-info followed by A-remote. The system displays the Remote menu:

```
3                                     3
3                                     3
3   remote  115200bps                 3
3                                     3
3                                     3
3   press 1C -> main menu             3
3                                     3
3                                     3
```

You are now in Extended remote mode. Even after power off, the system will remain in this mode.



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After the RS-232 link is made, you will see the Extended remote menu as follows:

```
Gem Systems GSM-19 v6.0 26 V 2004 dw3fr.v6
?-menu &-defaults !-tests Cyymmddwhhmmss-set-time
d-date(mm-dd-yyyy) t-time
Txx-tuning F-field O-magnetic-observatory
x-auto-tuning y-no-auto-tuning I-tuning-initialize
5-50Hz 6-60Hz 0-no-filter P-time-format Q-output-format [field]
R-run cycle-time D-down U-up 0001.0s
h-auto-cycle g-external-trigger q-mode[transmission]
14.1V auto-tune no 55uT auto-cycle 60Hz AC filter
```

2. Starting from the Extended remote menu. If you have left the system in its Extended remote mode, the system displays the following screen when you turn on the system:

```
3 3
3 3
3 3
3 F-keyboard-control 3
3 3
3 3
3 3
3 3
```

This screen is displayed for 5 seconds, during which you have an opportunity to switch back to the normal keyboard mode. If you do not press F-keyboard control, the system will display the Remote menu as follows:

```
3 3
3 3
3 remote 115200bps 3
3 3
3 3
3 press 1C -> main menu 3
3 3
3 3
```



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Explanation of Commands

The following summarizes commands for the GSM-19. Note that other commands may be available depending on requirements.

Command	Explanation
?-menu	Display available commands
&-defaults	Restore initial defaults (from Eprom)
!-tests	Access menu for test options
Cyymmddwhhmmss-set-time	Initialize time
d-date(mm-dd-yyyy)	Record date
t-time	Record time
Txx-tuning	Set initial field
F-field	Take a single reading (slow mode)
O-magnetic-observatory	Special slow mode
x-auto-tuning	Set magnetometer to continue tuning
y-no-auto-tuning	Set magnetometer to fixed tuning (set with Tuning command)
I-tuning-initialize	Automatically find tuning range
5-50Hz	Filter
6-60Hz	Filter
0-no-filter	Turn off filter
P-time-format	Set time format
Q-output-format [field]	Set output format
R-run	Start endless cycling
cycle-time D-down U-up 0000.2s	Set cycle time
h-auto-cycle	Cycle automatically
g-external-trigger	Cycle by external trigger
q-mode[transmission]	Transmit without confirmation
14.1V auto-tune no 55uT auto-cycle 60Hz AC filter	Status line. Displays current programming.

Note: All readings can be terminated with the S-stop command.