

# Gemini Series Command Reference

## General Programming

- Explanation of command description format — see page 2.
- Command syntax guidelines — see pages 3 & 4.
- Programming tools, to assist with configuration, terminal emulation, developing programs (GT6 & GV6), and downloading and uploading files:
  - Motion Planner, for Windows 95/98/NT — see page 5.
  - Pocket Motion Planner, for Windows CE — see page 9.
  - Communications Server (32-bit OLE automation server for communication between the Gemini and your custom Windows applications) — see page 195.

**NOTE:** The commands described in this document can be used only with Motion Planner, Pocket Motion Planner, or the Communications Server.

- Programming guide for GT6 & GV6 users — see page 19.
  - Programming fundamentals (creating and executing programs, program flow control, error handling, etc.).
  - Basic operation setup (setup wizards, resetting the drive, limits and homing, target zone, programmable I/O, etc.).
  - Motion programming (basic and advanced profiling).
- **CAUTION — 6K Users:** If you are using a 6K Controller and Gemini Drives, you should try to use two COM ports — one for the 6K and one for the Gemini Drive. If your computer has only one COM port, you will have to swap the serial cable connection between the 6K and the Gemini. Be aware that you must quit Motion Planner before swapping the serial cable between products. After the cable swap, you may launch Motion Planner and select the newly connected product. Failure to quit Motion Planner before the swap will corrupt communications with the attached Gemini or 6K.
- Drive configuration procedures:
  - If you are using Motion Planner — see page 6.
  - If you are using Pocket Motion Planner — see page 11.
- Drive operating system (firmware) update. The file, GEM\_n\_nm.ops, can be downloaded from the Compumotor web site (<http://www.compumotor.com>).
  - If you are using Motion Planner — see page 8.
  - If you are using Pocket Motion Planner — see page 13.
- Parker motor configuration table update. The file, GEM\_motors.mtr, is used by Motion Planner and Pocket Motion Planner to auto-configure various operating parameters for specific motors. This file can be downloaded from the Compumotor web site (<http://www.compumotor.com>).
  - If you are using Motion Planner, place the updated file in the Motion Planner directory (default location is \Program Files\Compumotor\Motion Planner).
  - If you are using Pocket Motion Planner, transfer the updated file to your hand-held PC and copy it to the \My Documents\Gemini directory.
- Command quick-reference tables (syntax, range, etc.):
  - Commands listed alphabetically — see page 187.
  - Commands listed by functional group — see page 191.

## Troubleshooting

- LED diagnostic table — see page 15.
- Error messages — see page 15.
- Commonly used status commands (binary status bits are numbered 1 to n, from left to right):
  - TERRLG..... Error log reports the last 10 error conditions (cleared with CERRLG).
  - TAS..... General report, including fault conditions.
  - TASX..... Additional report of conditions not covered with TAS.
  - TCS..... If TASX bit #7 or bit #28 is set, you can identify the cause with TCS.
  - TINO..... Bit #6 indicates status of Enable input (“1” = OK to enable drive).
  - TIN..... Status of digital inputs, including end-of-travel inputs.
  - TOUT..... Status of digital outputs.
- Hardware and serial communication problems – refer to the Troubleshooting chapter in your Gemini drive’s *Hardware Installation Guide*.
- You must configure all motor parameters (see DMTR for list); otherwise, the drive will detect a motor configuration error, which prevents the drive from being enabled. Be sure to follow the drive configuration procedure (page 6 for Motion Planner, page 11 for Pocket Motion Planner) to help avoid this error condition.
- Any fault condition (see TAS and TASX reports) will cause the drive to shut down.
- The drive cannot be enabled (DRIVE1) unless the Enable input is grounded and the Reset input is not grounded.
- The GT6 & GV6 drives are shipped from the factory with the hardware end-of-travel limits enabled (LH3), but not connected. Therefore, motion will not be allowed until you do one of the following:
  - Install limit switches or jumper the end-of-travel limit terminals to ground.
  - Disable the limits with the LH0 command (only if the motor is not coupled to the load).
  - Reverse the active level of the limits with INLVL00.
- There are three methods of resetting the drive (all command settings are remembered after reset):
  - Issue the RESET command.
  - Momentarily close the Reset input.
  - Cycle power to the drive.
- To return the drive to its factory default settings, issue the RFS command. Be sure to save the current configuration first (in Motion Planner or Pocket Motion Planner), in case you need to restore the most recent settings. GT6 & GV6 users: Save your program/profiles files.
- If you need technical assistance, contact your local ATC or distributor, or refer to the numbers and internet addresses listed on the inside of this manual’s front cover.