

Astro-Physics GTOCP4 Version History and Bug Fixes

Version VCP4-P01-14, 07/16/20

- Added support for keypad updates through bottom COM port and USB. Both 9-pin COM ports and the USB now support keypad firmware and database uploads.
- This installation package for VCP4-P01-14 also includes the : [WiFi A404.wif](#) update

Version VCP4-P01-13, 1/14/19

- Fix bug: Corrected errors in responses to encoder status queries.

Version VCP4-P01-12, 10/22/18

- Fix bug: Slew Scaling factor incorrectly calculated when standard slew command is issued, and when slew scaling is enabled. Affected 3600s, 400/600s with 32:1 gearboxes, and some OEM mounts.

Version VCP4-P01-11, 12/19/17

- Fix bug where a meridian delay could cause an incorrect internal limit calculation if the delay crossed the LST 24/0 rollover point.

Version VCP4-P01-10, 9/17/17

- Ignore whitespace in numeric data when using terminal page of embedded browser.
- Fix bug causing erratic motion when meridian overflows from 23:59:59 to 0:00:00 during slew.
- Recognize negative sign on entry of hour-only format for GMT offset.

Version VCP4-P01-09, 8/29/17

- Backed out change in VCP4-P01-07: Hour Angle command now returns "normalized" hour-angle again. Added new command to return un-normalized representation of HA.
- Both hour angle commands now return 0:00.0 if mount has not been initialized.
- Fix bug in PEM record function to allow proper playback of PEM record "drift"
- Fix bug that corrupts Centering Rate when reading Guide Rate.
- Fix bug that results in errors introduced in the saved mechanical positions and zero'ing the meridian delay, in a power interruption that does not result in reboot of the unit (i.e. recoverable Low Voltage Warning)
- Fix bug in trim command responses.

Version VCP4-P01-08, 7/25/17

- Fix bug that prevents completion of slew in RA axis when zero tracking rate selected. Bug introduced in VCP4-P01-07

Version VCP4-P01-07, 7/21/17

- Implemented method of allowing software updates to be performed while preserving the calibration of the mount.
- Eliminate internal limit-bounce if unit powers up in internal limits.
- Bug Fix: When internal limit is active with zero tracking speed selected, fix bug that produces tracking in direction opposite sidereal rate in RA axis.
- Bug Fix: Fixed issue of rounding up 59+ seconds in seconds field, to 60 in both DDD*MM:SS and HH:MM:SS formats.

Version VCP4-P01-06, 6/15/17

- Internal limits added. Fixed RA limits at hour-angles that position the counter weights straight up. Fixed DEC limits at 180 degrees from the pole.
- "Page not Found" web page auto-redirects to main page.
- Bug Fix: Auto-Guide moves superimposed on zero tracking rate produce proper rates.
- Bug Fix: Keypad download support restored, bug introduced in VCP4-P01-04 (COMM2 and Keypad serial interfaces logically swapped)

Version VCP4-P01-05, 04-18-17

- Bug Fix: Absolute Encoder based "Go Home" (\$HA# command) function fails to complete move in DEC axis. Bug introduced in VCP4-P01-04.

Version VCP4-P01-04, 03-08-17

- Safety slew/ meridian delay now allows delay of +/- 11:59:59.
- Improved accuracy of RA/DEC readings in standard servo loop.
- Add web page entry for indicating WiFi Firmware revision in Advanced WiFi Settings page.
- Allow WiFi Module firmware updates from web browser or serial (Ymodem).
- Extensive restructuring.
- Improved reliability in startup when no wifi network is available.
- Bug Fix: Improved recovery from lost WiFi network connection, in concert with WiFi firmware revision A402.

- Bug Fix: Joining or leaving a WiFi network from the web-page occasionally resulted in hung GTOCP4.
- Bug Fix: "EW" field reversed in status string (:GOS#) command response.
- Bug Fix: List of available networks web-page occasionally failed to update after joining or leaving a network.

Version VCP4-P01-03, 10-28-16

- Improve accuracy of gear angle command responses.
- Allow use of encoders to trim the pointing at the end of a slew, enabled separately from tracking corrections.
- Fixed bug that prevented DEC centering rate from updating when using :Rcxxx# command.
- Fixed bug in handling of blocked command sets received on a network port in some situations.

Version VCP4-P01-02, 09-28-16

- Added command to allow slew without "safety slew" logic.
- Added support for 3600GTO Precision (incremental) encoder on RA axis, used for tracking corrections.
- Included Home and Limit Switch support for the GTOCP4 as it was with the with GTOELS box.
- Added support for independent RA and DEC centering rates, intended for future use with joy-stick controllers.
- Bug fix: Update DEC centering rate when guide rates are selected to make it function the same as RA and same as in GTOCP1/GTOCP2/GTCOP3.

Version VCP4-P01-01, 07-12-16

- Include signal strength in table of available Wi-Fi networks when using browser to connect the GTOCP4 to a Wi-Fi network. This will assist in adjusting the GTOCP4 Wi-Fi antenna for optimal reception. Added serial command to provide strength of currently joined Wi-Fi "hot spot".
- Force retention of IP addresses when re-booting during a web browser-based download, by not issuing a DHCP request as a client.
- DHCP server mode does not provide a default gateway in the DHCP reply. Done to avoid problems of PC not knowing whether a given subnet is accessed locally on one interface, or through a gateway on another interface.
- Software downloads using Wi-Fi disabled due to unreliable nature of Wi-Fi.
- Bug fix: Include timed moves in PEM correction recording.
- Bug fix: If DHCP client times out, apply default IP address, subnet and default gateway.
- Bug fix: Upload/download of PEM curves using Ethernet can be done without intermittent Servo Fault indication.
- Bug fix: To prevent overlap in buffering for different communication interfaces.
- Bug fix: No longer hangs if CP4 is scanning available Wi-Fi networks and more than 10 are available.
- Bug fix: Command returns correct Wi-Fi MAC address when unit has joined a Wi-Fi network.
- Bug fix: When setting Absolute Encoder home, reset encoder correction loop to avoid trying to correct for a 360 degree error when starting with an encoder position outside 0-360 degree range.
- Bug fix: PEM programming offset is correctly computed.

July 16, 2020

Version VCP4-P01-00, 05-06-16, Initial Release