

**PLEASE NOTE: This describes the TCP Server protocol as of PlaneWave Interface 4 Beta 10. This protocol is still in a pre-release state, and is expected to change in significant ways in the near future!**

The PlaneWave Interface 4 application hosts a TCP socket server on port 8877.

After connecting to this server, a client can send ASCII commands and arguments. Each command and argument is terminated by a newline. After a command has received the expected number of arguments, the command will be executed.

Most commands respond with "OK\r\n" when they have been correctly parsed.

If there is an error (for example, if a non-numeric input is given when a number is expected), the response will be of the form:

ERROR [error\_message]\r\n

Numeric values are parsed and formatted using a "dot" as the decimal separator. For example, "1.234", rather than "1,234", as might be used in some locales.

| Command/Arguments   | Response        | Notes   |
|---|-----------------|---|
| close   | none            | TCP socket will be closed   |
| status  | See notes below | Get current status  |
| gotradecapp<br>[ra_apparent_hours]<br>[dec_apparent_degs] | OK or ERROR     | Begin slewing to specified RA/Dec coordinates, in the "apparent" coordinate frame. Slewing will begin immediately after receiving the final argument.     |
| tle<br>[tle_line_1]<br>[tle_line_2]<br>[tle_line_3]       | OK or ERROR     | Begin tracking a satellite described by the specified TLE. The first line is the satellite name. The second and third lines contain the orbital elements. |
| track   | OK              | Begin sidereal tracking at the current mount location.  |
| stop  | OK              | Stop all motion on the mount.   |
| settimeoffset<br>[offset_seconds]                         | OK or ERROR     | Apply a time offset to the target coordinate calculations. Useful for satellite tracking.   |
| radecoffset<br>[ra_offset_arcsec]                         | OK or ERROR     | Apply the specified RA and Dec offset to the current tracking target.   |

|  |              |  |
|--|--------------|--|
| [dec_offset_arcsec]                              |              |  |
| pulseguide<br>[direction]<br>[duration_millisec] | OK or ERROR  | Mimic the behavior of the ASCOM PulseGuide() method. |
| Any unrecognized command                         | UNRECOGNIZED |  |

## Status response format

beginstatus

mount.ra\_apparent\_hours=[right\_ascension\_hours]

mount.dec\_apparent\_degs=[declination\_degrees]

mount.is\_slewing=[1 if slewing, 0 if not]

mount.is\_tracking=[1 if tracking, 0 if not]

mount.latitude=[latitude\_degs]

mount.longitude=[longitude\_degs]

mount.azimuth=[azimuth\_degs]

mount.altitude=[altitude\_degs]

mount.lst=[local\_sideral\_time\_hours]

mount.geometry=[0 for Alt-Az, 1 for Equatorial Fork, or 2 for German Eq]

mount.field\_angle\_degs=[field\_angle\_degrees]

mount.field\_angle\_rate\_degs\_per\_sec=[field\_angle\_rate\_degs\_per\_sec]

endstatus