

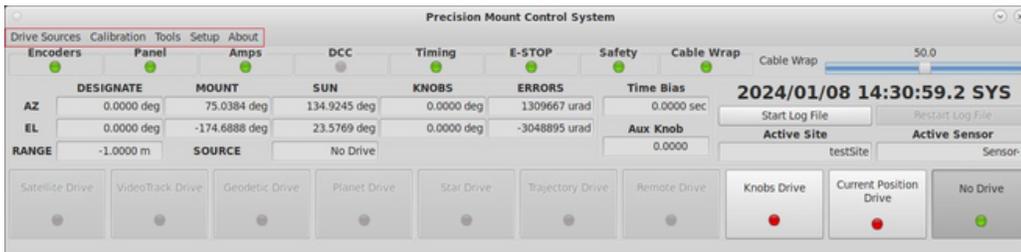
Precision Mount Control System Licensed Software

Precision pointing and tracking for Alt-Azimuth gimbals

The Precision Mount Control System (PMCS), a universal gimbal control system for Alt-Azimuth (elevation/azimuth) tracking mounts. PMCS is the product of over 20 years of experience in tracking objects ranging from mortars and hypervelocity projectiles to LEO and MEO satellites. This flexible and adaptable control system provides state-of-the-art features, including GUI and hardware control interfaces; remote control; radar, telemetry, and external computer control inputs; multiple drive modes; and more.

Features

- Multiple manual or automated tracking modes
- GUI and hardware interfaces
- Adaptable to many gimbal makes/models
- Video tracker interface
- Ability to operate remotely
- Custom electronics to increase reliability and speed
- Built-in safety features
- Built-in star calibration for up to 8 independent sensors
- User calibration of servo drive
- Real-time system logging for post-mission data analysis



PMCS Software (GUI) Control Panel

As an example of PMCS' capabilities, for a recent customer, VES integrated PMCS with a PlaneWave L600 gimbal, a 20" telescope, and a fast-steering mirror (no adaptive optics). This system consistently tracked LEO satellites and maintained the centroid of the satellite image within 3 microradians of the center of the camera array.



PMCS Hardware Control Panel

Adaptability

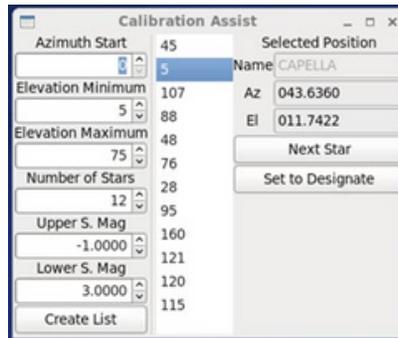
- Brushed or brushless motor interface
- Serial, parallel, or Ethernet interface to most popular brands of position encoders
- Mission-adaptable external inputs: radar, telemetry, TENA, nTSPI, Marshall GPS, or other external designation sources
- Multiple user interface options: GUI, control panel, joystick, or gamepad
- Multiple drive modes: geodetic, star (sidereal), planet, trajectory, satellite, video, and remote
- Multiple hardware configurations: footswitches, knobs, safety limits, etc.

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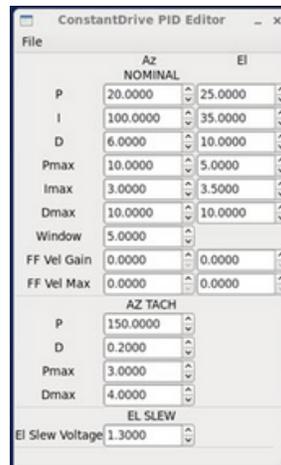
Metric Calibration

Built-in star calibration for internal mount and sensor models



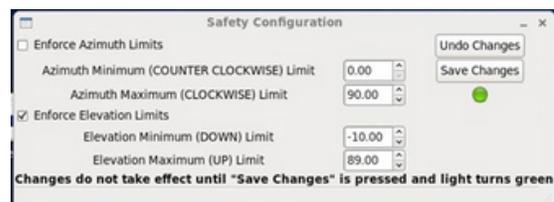
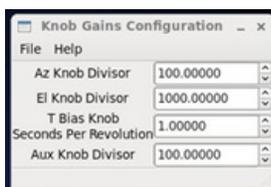
Servo & Hardware Calibration

User calibration of servo drive



Hardware Configuration

Intuitive setup for hardware elements: Foot switches, knobs, safety limits, etc.



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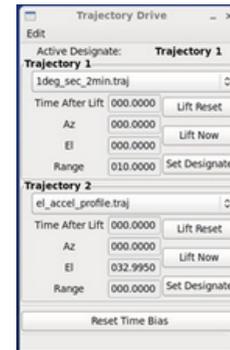
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Numerous Drive Modes

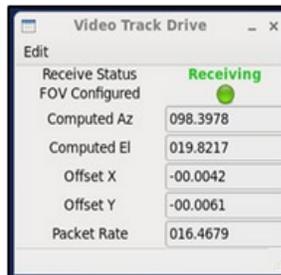
Geodetic Drive



Trajectory Drive



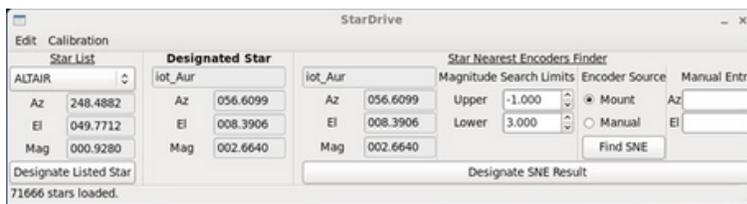
Video Tracker Drive



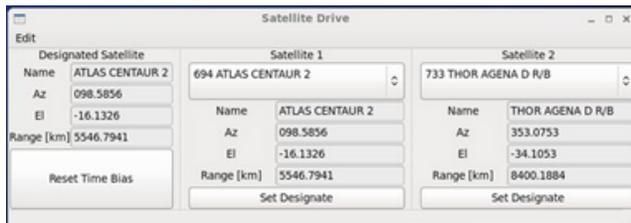
Remote Drive Via Ethernet



Star (Sidereal) Drive



Satellite Drive



Planet Drive

