SunpointGPS Overview

SunpointGPS is self-powered, self-contained and self-aware. It uses its own 10W solar panel and charging system to keep a 12v AGM sealed battery charged. When full this battery contains at least 3 days of operation and after a further number of cloudy days it may be more than half depleted. If this happens it simply commands the array to face south and waits for the sun.

Each day, the SunpointGPS controller moves the array in several discrete "steps" from horizon to horizon and when not actually moving it goes to sleep (powers down) and waits. This method means the unit uses less than 40/1000ths of a kWhr of it's own power a day to operate. It spends more than 95% of it's life asleep in a "powered down" configuration. When the power is tuned on initially it determines it's position and time from it's internal GPS clock, points in azimuth just ahead of the sun and waits for the sun to go by, sleeping while it waits. Then at the end of the day it will moves back east to a known EAST Reference Point, re-calibrates and goes to sleep again until just before dawn. Two additional limit switches will stop all motion should the motor somehow ignore software commands. You can restart the program at any time to recalibrate it's position. Simply remove the fuse on the POS battery terminal wire, wait a few seconds and reconnect.

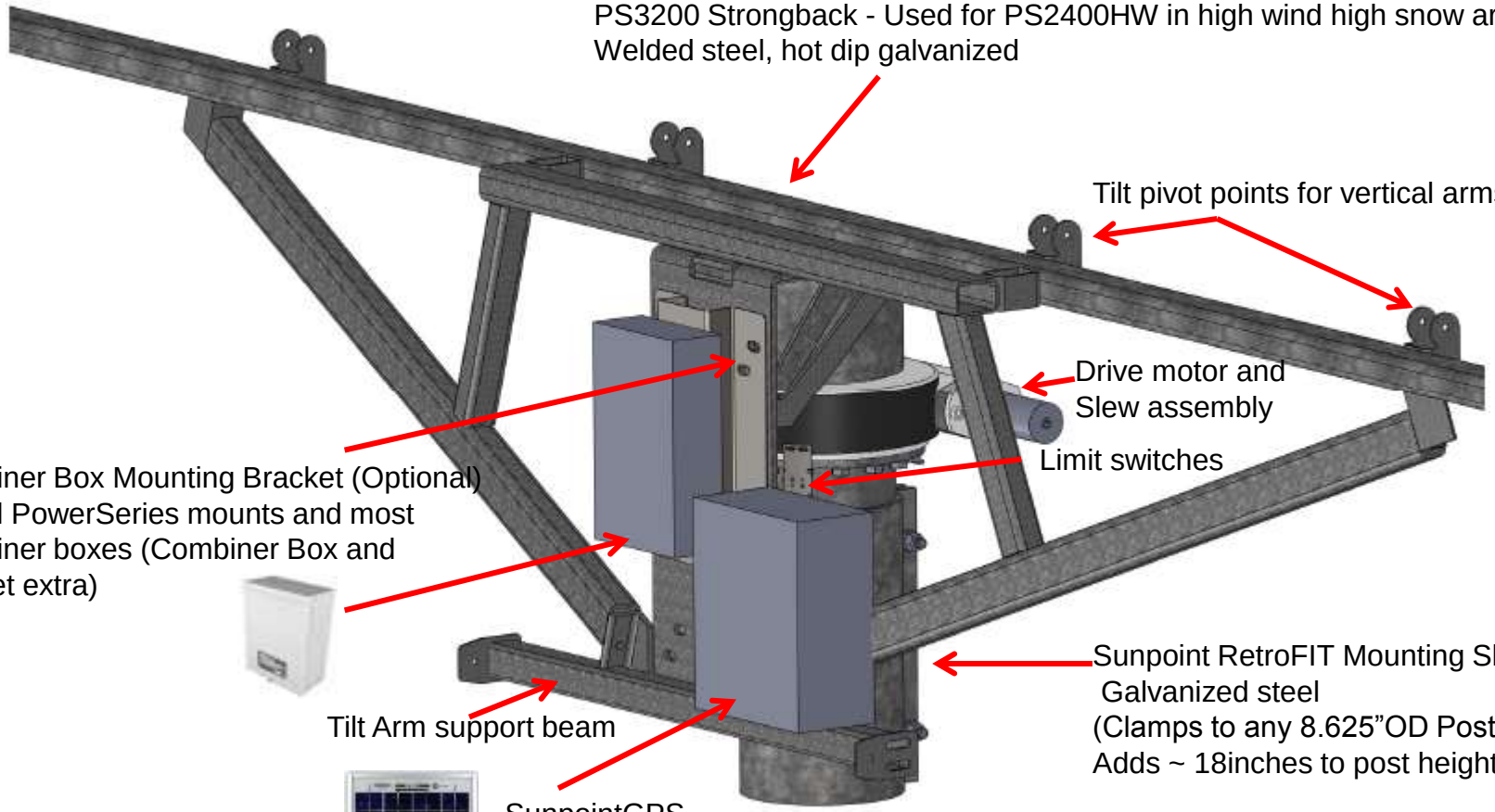
The system will restart, recalibrate it's location and pointing angles and then move to the current sun position.

NOTE
It is important to initially orient the SunpointGPS tracker facing SOUTH with the strongback main spar oriented GRID EAST WEST on the post. With this done correctly, the unit will always be able to correctly face the sun and reestablish it's location even after shutting down the unit for annual inspection. Annual inspection includes a grease check of the slew drive.

Prepared by: D Cooke, CTO

SunpointGPS Assembly

V9.3 7 Jan 2011

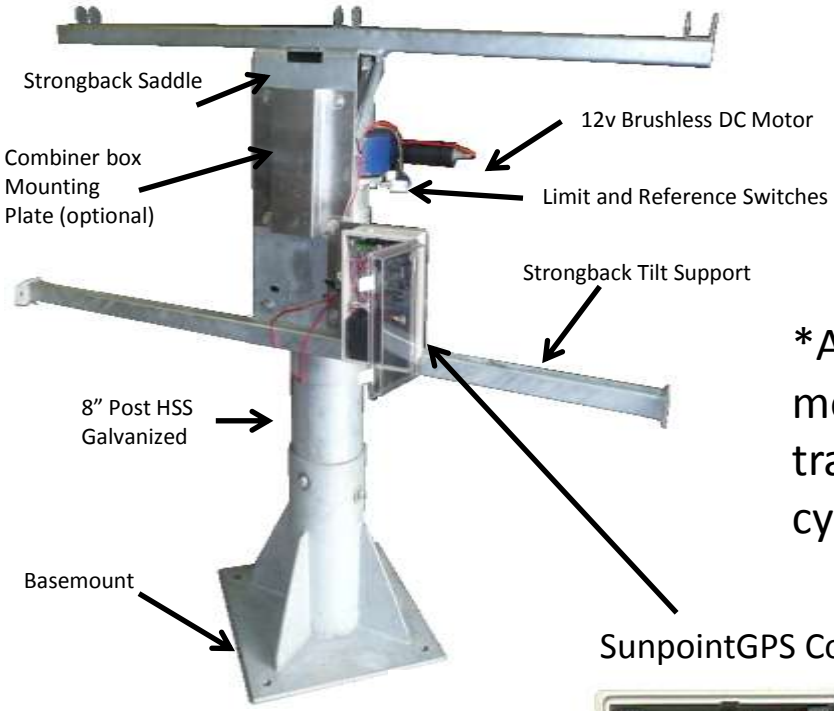


SunpointGPS
Controller Box with it’s own solar panel (mounts to all PowerSeries racking)
Self-contained charging system
Means no utility hook up or bills
Comes with mounting bracket that fits all PowerSeries mounts

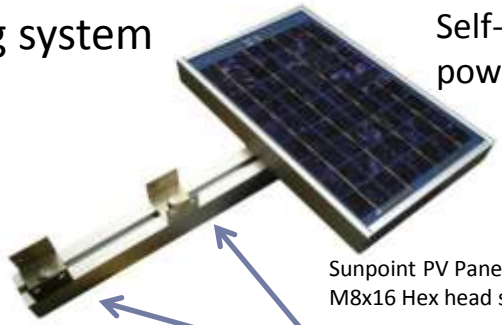
Prepared by: D Cooke, CTO

SunpointGPS Tracker

TRUE NORTH POWER NG



Add to any existing system



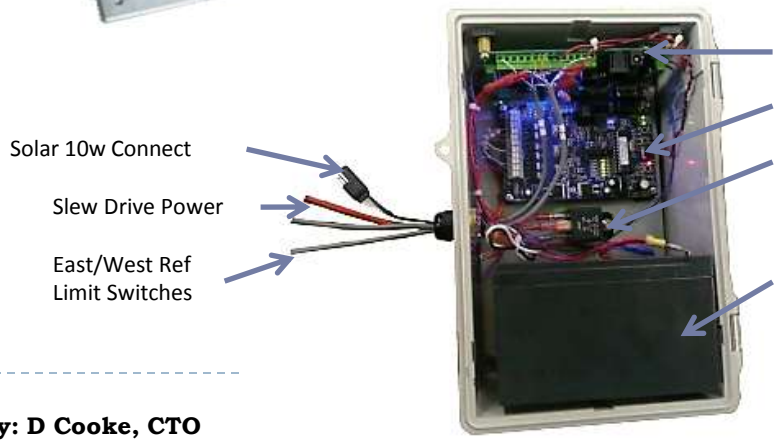
Self-contained power source

Sunpoint PV Panel mounted with M8x16 Hex head stainless bolts

Titanium Clips w M8x20mmSHCS

*Azimuth trackers produce more energy that dual-axis trackers due to lower life cycle cost.

SunpointGPS Controller



RetroFIT Mount

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* See FREE Wind News and Univ Guelph Study