REV	Description	Date	Appr.
A	Initial release	5-13-09	
B	Wind and solar regulator notes updated.	6-2-09	
C	Rotate terminal blocks, remove wire duct.	6-4-09	BJ
D	Move NetRS+timer, more term. blocks, add BOM	11-13-09	BJ
E	Shorten board, remove velcro, coax plug, black wire. Regulator P/N's new. Removed UNAVCO assembly sheet (former sheet 2).	6-23-11	
F	Timer location dimensioned, separate dwg for Solar Only board.	1-14-12	
G	Add diodes to solar/wind circuits, breakers to aux. battery circuits, heat pad connectors. Remove timer. Add drilling sheet 2, BOM now sheet 3.	5-8-13	

BILL OF MATERIALS

1 23" x 16" x 1/2" board, HDPE-lite face, HDPE closed cell foam core
Order from The Cutting Board Factory
2 3/8" crimp ring terminals, 3M 123-38-NB
1 Vinyl coated loom clamp, 3/4" opening, e.g. McMaster-Carr 8863T16
1 Solar regulator, Flexcharge NC30L12-M-UNVTC.
Standard Flexcharge LVD settings (~11.0V OFF, ~12.9V ON)
UNAVCO-spec temperature compensation for Deka gel batteries.
Order with 13" integral leads (no screw terminals).
1 Wind regulator (optional), Flexcharge NC25A12-M-UNVTC
UNAVCO-spec temperature compensation for Deka gel batteries.
Order with 16" integral leads (no screw terminals)
2 Screwless end stop, Wago 249-116
10 Separator plate, Wago 281-327
32 2-conductor thru terminal block, Wago 281-601
64 Terminal markers, colored as shown, Wago 209-501
16 Insulated jumper, Wago 281-402
6 Shottky diodes, Vishay 80SQ045
1 Slotted carrier DIN rail, 15" length, Wago 210-162
5 30 amp DC breaker, AB 1492-SP1C300
1 10 amp DC breaker, AB 1492-SP1C100
for load circuit (yellow wires)
2 Weatherpack 2-position shroud, WPS-2
4 Weatherpack 14 gage socket crimp contacts, WPF-15
4 Weatherpack 14 gage cable seals, WPS-GRA
52" 14AWG red wire, Polar Wire AUF-14-RED
48" 14AWG black wire, Polar Wire AUF-14-BLK
40" 14AWG orange wire, Polar Wire AUF-14-ORG
24" 14AWG blue wire, Polar Wire AUF-14-BLU
14" 14AWG yellow wire, Polar Wire AUF-14-YEL
12" 14AWG purple wire, Polar Wire AUF-14-PUR
LOT wood screws, phillips drive, varying lengths
Screws must NOT protrude from underside of board

NOTES:

1. See Sheet 1 for wiring, regulator, and terminal block layout.
2. See Sheet 2 for drilling template
3. Screws must NOT protrude from underside of board.
4. GPS receiver is elevated from board with four 1/4" thick standoffs.

Polar Permanent GPS Station
"Full" Electronics Board
4 Solar, 2 Wind, 1 Main + 3 Aux Battery Banks

UNAVCO, Inc.
POLAR SERVICES
6350 Nautilus Dr., Boulder CO 80301
303-381-7500, 303-381-7451 fax

Part Number	Rev
PPS-DC-007	G

Drawing: S. White
Engineering: S. White
Approval:
Date Modified: May 8 2013
SHEET 3 OF 3