HLP RT-130 Station Installation (v8) (last revised 20080731 DEJ)

STATION: NV012  Month: 9  Day: 5 Year: 2008 ARRIVAL TIME (local): 11:00 a.m.
OPERATOR: [Name]  Ph D
POWER: BATT-1: 12.8 V  BATT-2: 12.8 V solar panel output (-18V): 16.72
Handheld GPS Vault Loc. Lat: N 41° 41' 33"  Lon: W 119° 11' 10" Elev: 1799 ft

Connect cables:
1) Build power system
2) RT-130 (GPS) to GPS
3) Check solar panel output and enter above
4) Sensor to RT-130 (CH1-3)
5) power to RT-130
6) Clie to RT-130 (comm)

>PF_C-130 -> Work with Configuration (Refer to Configuration Sheet for RT-130 in back of service binder)
>Work with Configuration > Load > HLP generic (or other HLP file); (or) > New > Name: HLP OR???
>Edit configuration file (stn name, datalogger and sensor serial #s, etc) then SAVE...
>Send to DAS...
>Confirm (optional): Upload from DAS and confirm that parameters have been correctly set in RT-130...

>Cliet PFC-130 -> Control -> RAM -> Clear
Control -> Reset DAS
Control -> Format Disk -> 1 Format Disk -> 2

Verify that sensor configuration matches sensor type.

If Guralp: Connect Sensor to RT130.

If STS2: Do not connect Sensor to RT130 until masses are unlocked!

Unlock sensor
STS2 UNLOCK: turn locking screws counterclockwise to stop; connect sensor cable from datalogger to enable power.
GURALP UNLOCK: On the breakout box press the "enable" and "unlock" buttons simultaneously on the breakout box, hold for 7 seconds, and release. "BUSY" LED light will go solid (unlocking phase), then flash (centering phase), then go out.

STS-2 MASS CENTER: Push mass center button from breakout box if any channel > +/- 2.5 V. If necessary, repeat at frequent intervals until masses come in range. Record voltage at breakout box, vault open.

Mass position voltages: CH1: 0.14 CH2: 2.7 CH3: 1.1

Seal up sensor vault

Record GPS location of vault. (Use averaging, if available.)

Final Mass Centering: (Note: Some Guralps cannot be centered with the Clie. In such cases, press "enable" and "centre" buttons simultaneously on the breakout box, hold for 7 seconds, and release. "BUSY" LED light will flash, then go out.)

From Clie: Control -> Aux. Ctrl -> Aux. Ch. If any CH > +1.5V (Guralp) or +2.5V (STS2), touch center 1-3 (and update) until all CH < +/- 1.5 V or 2.5 V. Final mass position voltages: CH1: 1.6 CH2: 0.7 CH3: 0.7

WAVEFORM MONITOR: Control -> Monitor -> View: Record Midpoint(M) and Range(R)

CH1: M-12.25 R 4.13 CH2: M-17.58 R 8.78 CH3: M-21.52 R 7.55

START ACQUISITION: Control -> Status -> Start Acq.

DAS Status: use Update to Refresh
Time: 2008-07-29 20:25:31
Acq: 566 acq.
Events: 0
RAM: 81 of 43524 L Increasing?
Disk1: 0 of 19500 (Current)
Disk2: 0 of 19500 (Current)
Temperature: 110.4°F
Power: 13.6 mW 3.3 KV 0.0 c/yr
Ch: 125 DS: CC

GPS Status: GPS
Time: 2008-07-29 20:27:43
Sec since LL: 00:00:20:00
Phase Diff (us): 0
Mode: Cycle
Status: a1/a2 SVs: 10
Lat: N 41° 36', 724V
Lon: W 119° 10', 2442
Alt(m): 1801

DEPARTURE TIME (local): 

PLEAS NOTE ANY SPECIAL PROBLEMS BELOW ON THIS SHEET

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Need rebar and zip ties to hang solar panels.
HLP RT-130 SERVICE SHEET (v4) (last revised 20080716 MJF)

STATION: 15/04/12  Month: 04  Day: 05  Year: 2008  ARRIVAL TIME(local): 11:45
OPERATOR: 15/04/12  DAS S/N: 9444  POWER: BATT-1: 14.4V  BATT-2: 13.4V
Voltage CH 1: -2.1V  CH 2: -1.1V  CH 3: -1.4V
Use Center 1-3 to center if any CH > +/-1.5 volts Guralp; > +/-2.5 volts STS-2. Check here
Continue with center command (and update) until all channels are < +/- 1.5 V (Guralp); 2.5 V (STS2)
Enter final mass position voltages: CH 1: -1.4V  CH 2: -1.1V  CH 3: -1.4V

DAS Status: Control -> Status: (use Update to Refresh)
Acq: Data Ready
Events: 1149
RAM: 2655 44 800  Increasing?
Disk1: 148 1920 (Current)
Disk2: 600 1350 (Current)
Temperature: 26.8°C
Power: 122 23.3W
Ch: 1 2 3 DS: CC

GPS Status: GPS
Sec since LL: 0
Phase Diff.(us): -1 143
Mode: C-cycle
Status: Locked SV's: 10
Lat: 41.36.9245
Lon: W 119.10.28.45
Alt(m): 1801

CALIBRATION: Control -> Aux. Cntrl -> Test 1-3:..... Wait quietly for 18 min.

STOP ACQUISITION: Control -> Status -> Stop Acq: Wait until disk is no longer in use, update status screen then
remove and record time here: 2008:12:53:19:00:12

 Remove disk(s) and label with station ID, date, disk #, & final data amount (in Mb)
Once disks are removed 2 (circle one or both). Install new disk(s): Confirm that correct disk has been removed by checking
disk content: Control -> Status: disk1/disk2.

IMPORTANT NOTE: Disk 1 must be current once acquisition starts. If changing both disks, then insert disk1 first, and
leaving disk2 slot empty, dump RAM to disk1 (Control -> RAM -> Dump RAM), then insert disk2 and proceed.

ROUTINE SERVICE
Control -> RAM -> Clear  Control -> Reset DAS  Control -> Format Disk 1  Control -> Format Disk 2

REPLACEMENT (record details and new S/N below!)
Control->Status->GPS Status: (confirm lock?)
Configuration: Load new parameters only after GPS lock
Control -> RAM -> Clear
Control -> Reset DAS
Control -> Format Disk 1 & 2

WAVEFORM MONITOR: Control -> Monitor -> View: Record Midpoint(M) and Range(R)
CH 1: M E700 R 46z CH 2: M E61 R 45z CH 3: M E700 R 45z
Microseism? Y Microseism? Y Microseism? Y

START ACQUISITION: Control -> Status -> Start Acq
DAS Status: use Update to Refresh
Time: 2008:253:19:07:03
Acq: Data Ready
Events: 3
RAM: 2655 44 800  Increasing?
Disk1: 148 1920 (Current)
Disk2: 600 1350 (Current)
Temperature: 26.8°C
Power: 122 23.3W
Ch: 1 2 3 DS: CC

GPS Status: GPS
Sec since LL: 0
Phase Diff.(us): 1 143
Mode: C-cycle
Status: Locked SV's: 10
Lat: 41.36.9245
Lon: W 119.10.28.45
Alt(m): 1800

DEPARTURE TIME(local): 12:15

*PLEASE NOTE GENERAL STATE OF THE STATION AND ANY SPECIAL PROBLEMS IN SPACE BELOW*
INSTALLED REBAR/SOLAR PANEL
HLP RT-130 DEMOBILIZATION SHEET (v4) (last revised 20090904 MJF)

STATION: NV 12 Month: 7 Day: 15 Year: 2001 ARRIVAL TIME(local): 2:45 pm

Voltage CH 1: ______ CH 2: ______ CH 3: ______
Use Center 1-3 to recenter if any CH > +/-1.5 volts Guralp; > +/-2.5 volts STS-2. Check here____
Continue with recenter command (and update) until all channels are < +/- 1.5 V (Guralp); 2.5 V (STS2)
Enter final mass position voltages: CH 1: ______ CH 2: ______ CH 3: ______

DAS Status: Control -> Status: (use Update to Refresh)
Time: __________ Accurate? Y / N
Acq: __________
Events: __________
RAM: __________
Disk1: [14 38 α 371] √ Increasing?
Disk2: __________ (Current)
Temperature: __________
Power: ________
Ch: ________ DS: ________

GPS Status: GPS
Time: __________ Sec since LL: __________
Phase Diff.(us): __________ Mode: __________
Status: __________ SV's: __________
Lat: __________
Lon: __________
Alt(m): __________

Sensor was already removed.

CALIBRATION: Control -> Aux. Cntrl -> Test 1-3:......Wait quietly for 18 min..____

STOP ACQUISITION: Control -> Status -> Stop Acq: Wait until disk is no longer in use, update status screen then remove and record time here: 2:55 pm

☑ Remove disk(s) and label with station ID, date, disk #, & final data amount (in Mb)

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DEMOBILIZE STATION

SENSOR
☐ If sensor is a 3T: lock masses twice with power on using breakout box; confirm masses pegged; disconnect breakout box (NB: May need to connect AUX power cable to breakout box first, or use HCU with power cable)
☒ If sensor is an STS2: disconnect breakout box; lock masses with power off
☒ Confirm alignment of sensor with vault alignment line. If not aligned, enter misorientation value: ______
☐ Remove sensor; enter sensor information: Type: ______ Serial #: ______
☐ Enter assumed declination from installation (as written on sensor pad): 16°E
☒ Confirm Brunton compass declination is set to same value as that written on pad
☐ Measure orientation of vault alignment line (N-S for Guralp; E-W for Streckheisen). Enter orientation: E-W

If measured orientation does not appear to be correct, double check measurement and confirm with at least one other team member!

DATALOGGER
☒ Disconnect power box
☐ Disconnect datalogger (all cables); enter serial #: "9441"