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

STATION: DR128  Month: 9  Day: 6  Year: 2008  ARRIVAL TIME (local): 10:55 am
OPERATOR: 
Handheld GPS Vault Loc: Lat: N 42° 51' 59"  Lon: W 118° 15' 56"  Elev: 1291 m

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

> PFC_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...

> Check that GPS has locked: Control -> Status -> GPS (to assure correct RT130 time before resetting DAS)

Clique -> PFC_130 -> Control -> RAM -> Clear
Control -> Reset DAS: 1
Control -> Format Disk -> 1... Format Disk -> 2...

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| 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 "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: 2 3 4  CH2: 1 4  CH3: -2 1 |

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| Seal up sensor vault |
| Record GPS location of vault. (Use averaging, if available.) |

Final Mass Centering: (Note: Some Guralps cannot be centered with the Clique. 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 Clique: Control -> Aux. Cntrl -> Aux. Ch. If any CH > +/-1.5 V (Guralp) or +/-2.5 V (STS-2), touch center 1-3 (and update) until all CH < +/- 1.5 V or 2.5 V. Final mass position voltages: CH1: 2 3 4  CH2: 1 4  CH3: -2 1

WAVEFORM MONITOR: Control -> Monitor -> View: Record Midpoint(M) and Range(R)
CH1: M 9.45 m  R 0.31
CH2: M -9.45 m  R 5.64
CH3: M -12.94  R 13.55
Microseism?  Check
Microseism?  Check
Microseism?  Check

START ACQUISITION: Control -> Status -> Start Acq.
DAS Status: use Update to Refresh
Time: 2008-08-25 19:11:11
Acq.: Start ON
Events: 5
RAM: 5 M 4532 ksec  Increasing?
Disk1: 00:15:46 (Current)
Disk2: 00:15:46 (Current)
Temperature: 29.9°C
Power: 18.4 W
Ch: 105

GPS Status: GPS
Time: 2008-08-25 19:11:11
Sec since LL: 00:00:08
Phase Diff.(us): 0
Mode: cycle
Status: fixed  SVs: 10
Lat: N 42° 15' 0.57"
Lon: W 118° 10' 46.13"
Alt(m): 1299

DEPARTURE TIME (local): 12:30

***** PLEASE NOTE ANY SPECIAL PROBLEMS BELOW ON THIS SHEET *****
HLP RT-130 SERVICE SHEET (v4) (last revised 20080716 MJF)

STATION: D8  Date: 09 Year: 2008 ARRIVAL TIME: 16:38

Voltage CH 1: 0.5 CH 2: 1.3 CH 3: -3.4
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: 0.5 CH 2: 0.6 CH 3: 0.1

DAS Status: Control -> Status: (use Update to Refresh)
Acq: Start on
Events: 95
RAM: 914 of 4352 KB X Increasing?
Disk1: 42 of 1350 KB X (Current)
Disk2: 0 of 1950 KB (Current)
Temperature: 39.5C
Power: 12.8 in 3.3 bhp
Ch: 123 DS: CC

GPS Status: GPS
Sec since LL: 0
Phase Diff.(us): +3
Mode: Cycle
Status: Locked SV's: 9
Lat: N42°15.4078 Lom: W12°40.6513
Alt(m): 1289

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:

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

Once disks are removed(3) 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 -125 R 949 CH 2: M 353 R 525 CH 3: M -477 R 945
Microseism? Y Microseism? Y Microseism? Y

START ACQUISITION: Control -> Status -> Start Acq:
DAS Status: use Update to Refresh
Acq: Start on
Events: 2
RAM: 914 of 4352 KB X Increasing?
Disk1: 0 of 1350 KB X (Current)
Disk2: 0 of 1950 KB (Current)
Temperature: 39.5C
Power: 12.8 in 3.3 bhp
Ch: 123 DS: CC

GPS Status: GPS
Sec since LL: 0
Phase Diff.(us): 0
Mode: Cycle
Status: Locked SV's: 8
Lat: N42°15.4078 Lom: W12°40.6513
Alt(m): 1289

DEPARTURE TIME (local): 16:55

*PLEASE NOTE GENERAL STATE OF THE STATION AND ANY SPECIAL PROBLEMS IN SPACE BELOW*
HLP RT-130 DEMOBILIZATION SHEET (v2) (last revised 20080716 MJF)

STATION: OR128  Month: 09  Day: 14  Year: 2009  ARRIVAL TIME (local): 5:40 AM
Voltage CH 1: -0.1  CH 2: +0.1  CH 3: +0.1
Use Center 1-3 to center if any CH > +/-1.5 volts Guralp; > +/-2.5 volts STS-2. Check here.
Continue with centering 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)
Acq: 3387
Events: 3387
RAM: 11-44 4352 1 0 0 0 0 0 0
Disk1: 16674 1 0 0 0 0 0 0 0 0
Disk2: 0 0 0 0 0 0 0 0 0 0
Temperature: 29.4 C
Power: 12.9 in, 3.3 V, 0.0 ohms
Ch: 123  DS: CC

GPS Status: GPS
Sec since LL: 0
Phase Diff.(us): 0
Mode: 0
Status: lock
SVs: 11
Lat: N 42°15.6779
Lon: W 116°40.6515
Alt(m): 1278

CALIBRATION: Control -> Aux. Ctrl -> Test 1-3......Wait quietly for 18 minutes.

STOP ACQUISITION: Control -> Status -> Stop Acq: Wait until disk is no longer in use, update status screen then remove and record time here: 4:17 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 with power on; disconnect breakout box
☐ 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: STS 2  Serial #: 69231
☐ 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 Streekheisen). 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 #: 9464
☐ Disconnect batteries; cover terminals with plastic caps or tape
☐ Disconnect solar panels and GPS; enter GPS serial #: 2341

*PLEASE NOTE GENERAL STATE OF THE STATION AND ANY SPECIAL PROBLEMS IN SPACE BELOW*