HLP Q330 Station Installation (Last revision 05/21/2007 DEJ)

STATION NAME: AGR041
OPERATOR: \text{ROTFA M. FOCHS, HOLLOWAY, S. MAGGS}

MONTH: 10  DAY: 8  YEAR: 2007  ARRIVAL TIME (local): 9:30 AM

SENSOR TYPE: Guralp 3T  SENSOR S/N: T3H5724
Handheld GPS Sta Loc: Lat: 43.733333 N  Lon: 121.512000 W  Elev: 1290 M
POWER: BATT-1: 12.89  BATT-2: 12.89
Solar panel output (-18V): 20.7

Connect cables:
1) Build power system
2) Connect Q330 (Qnet) to baler
3) Q330 (GPS) to GPS
4) Power to Q330
5) Cable to Q330 (console)

[Warning: Q330 does not supply power to Clie, and cable draws continuous power. Disconnect cable from Clie when not in use.]

\text{Clie >Q330Beta >_cmds >cloning}

- Select file to clone (STS2 (HLS01) or Guralp (HLS01))
- Station names
- Click "Palm overrides 330" in dropdown
- Check "Edit/Verify"
- IP Addresses: Un-Check "Edit/Verify"
- Send
- Station Names > DP4 > New (Enter Station Name in ALL CAPS, up to 5 characters)
- Save/Reboot

- Views (from dropdown) > Data Recording > DP3
- Confirm that Station: is same as sensor clone name (e.g. HLS01)
- Views (from dropdown) > Data Recording > DP4
- Confirm that station name and sample rates are correct.

\text{Connect Sensor to Q330. Verify that sensor configuration matches sensor type.}

\text{Unlock sensor. For Guralp, to unlock from Clie: Views: > Sensor. Set duration = 10 sec. > Unlock A.}

> Views > Sensor (click "refresh"): Mass Positions (V*10 < 15 (Guralp); < 25 (STS-2))
Voltage (*10) CH 1: -4  CH 2: -7  CH 3: +5
Set Duration = 10 and click Center A command if any channel > 15 (Guralp); > 25 (STS-2) and click Refresh

> Views > Quickview (waveform monitor) > chan1,2,3 > Start: Write down Max Min Midpoint (click "stop" to record values)

CH 1: 17500 22820 918.5
CH 2: 6741 7301 2312.5
CH 3: 22749 7871 3869.7

> Views > System
Last GPS Lock: 8 min
Phase Error: 0.000022
Clock Quality: 3P Lock (T)
Input Vols: 12.45 V
Last Boot: 2007-10-08 12:35:12
Q330 Software Version: 1.89

> Status > GPS (confirm GPS lock)
GPS Time: 13:52:19
GPS Date: 08/19/2007
Lat: 43.733333
Lon: 121.512000
Elev: 1290 M

> Status > Data Port Txf > Data4
Packet Buffer: 2/29/12
(increasing? (refresh))

> Commands > Make Dofile. add station name (STA) to default filename, Conf-YmMoDi-Q330-STA, and delete "Conf_" from start of filename (or filename will be too long for station names 4 or more characters in length.)

DEPARTURE TIME (local): 11:35 am

*PLEASE DETAIL SPECIAL PROBLEMS ON BACK OF THIS SHEET, AND NOTE BELOW*
HLP Q330 SERVICE SHEET (Last revised 06/22/07 DEJ)

STATION: OR041  Month: 5  Day: 21  Year: 2008 ARRIVAL TIME (local): 9:10
OPERATOR: LONG/WEATHER  POWER: BATT-1: 11.4  BATT-2: 11.4
Q330 S/N: 393  OLD BALER S/N: 05671  NEW BALER S/N: 05413
SENSOR MASS POSITION: > Views > Sensors > Boom Positions
1: __________  2: __________  3: __________
Use Center A to center if any CH > +/-15 for Guralp; > +/-25 for STS-2. Check here __________
Continue with Center A command (and update) until all channels are < +/- 15 or 25.
Enter final mass positions: 1: __________  2: __________  3: __________

> Views > Data Recording > DP3 *Station: __________  > DP4 *Station: __________
[DP3 Station should match program (HLG?? for Guralp, HLS?? for Streckeisen), DP4 Station should match station name]

> Views > System: (use Refresh to Update)
Last GPS Lock: __________
Phase error: __________
Clock quality: __________
Input volts: __________
Temperature: __________
Last Boot: __________
Last Resync: __________

> Views > System: Turn GPS ON. Status > GPS
Locked? __________
Satellites viewed: __________  Satellites used: __________
Time: __________
Date: __________
Latitude: __________
Longitude: __________
Elev (m): __________
Calibration and Waveform Monitor

☐ > Cmds > Calibration: DURATION bar: 240 s (wrongly labeled "min" on Clie); SETTLING bar: 6 min.; TRAILER bar: 1 m
☐ > Cmds > Calibration > Waveform > STEP, AMPLITUDE bar: 24 db Guralp, 18 db STS2; STEP POLARITY: Positive
☐ > Cmds > Calibration > CALIBRATE CHANNELS! Select all 3 channels; START: 1 minute; !Start
Sit Quietly for 12 min and note local start time here: __________
Click Stop, then O.K. when finished.

> Views > Quickview (waveform monitor) > chan1,2,3 > Start: Write down Max Min Midpoint (click "stop" to record values)

CH 1 __________  CH 2 __________  CH 3 __________
☐ Microseisms visible? __________ (check if yes)

☐ > Status > Data Port Txr > Data4 *Packet Buffer ___ Increasing? (press Refresh)
☐ > Cmds > Baler > !Send command to baler (Baler should turn on, with packets being sent)
☐ > Status > Data Port Txr > Data4 *Packet Buffer (Decreases to zero)?  Packets Sent: __________
☐ > Commands > Baler > !Send command to baler (Baler should now be on)
☐ > Status > Data Port Txr > Data4 *Packet Buffer ___ Increasing?
☐ > Cmds > Baler > !Send command to baler (Baler should turn on, with packets being sent)
☐ > Status > Data Port Txr > Data4 *Packet Buffer ___ Decreases to zero?  Packets Sent: __________
[Note: If the Q330 does not transfer data to the Baler try cleaning the Baler "Association" by holding the Baler Attention button until the light turns solid red (~5 sec). Release the button and then, after the light begins to flash green, press the Attention button once to shut down the Baler. Repeat the process twice more, ending in Baler's shutdown. Press Attn button once to turn Baler on and check that data transferred.]

☐ > Status > General *Total Resynchs: __________
☐ > Commands > Make Docfile (A bug here means you should delete "Conf," at the start of the default filename; append the station name to end of the remaining default filename and click OK. Check that name is correct.)

DEPARTURE TIME (local): __________

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

Failed to communicate w/ Clie

GPR 1 not on? May be not. May just be green

Tried 2nd Clie:
"Connecting to Q330: Attempting to..."
"Failed to communicate with Q330. Giving up."

Battery voltage seems to change depending on how strong the sun is shining.
went from 11.4V to 11.85V to 11.67V

Solar panel cable that goes into power box showed 20V input just before the 11.85V battery measurement was made.

Need NEW BATTERIES.

Land owner said snow & ice may well have covered the solar panel for much of the winter
we replaced the bater anyway

Tried to hold button down on bater to turn it on, but nothing happened.

No juice
HLP Q330 SERVICE SHEET (v8) (last revised 20080716 MJF)

STATION: OR041  Month: 09  Day: 12  Year: 2003  ARRIVAL TIME (local): 12:33 p
OPERATOR: Edgar + Druken  POWER: BATT-1: 13.54  BATT-2: 13.54
SENSOR MASS POSITION: Views > Sensors *Boom Positions
1: 1  2: 7  3: 1
Use Center A to recenter any CH > +/-15 for Guralp; > +/-25 for STS-2. Check here.
Continue with Center A command (and update) until all channels are < +/-15 or 25.
Enter final mass positions: 1: 5  2: 3  3: 6

Views > Data Recording > DP3 *Station: HLG01  > DP4 *Station: OR041
[DP3 Station should match program (HLG?? for Guralp, HLS?? for Streekus). DP4 Station should match station name]

Views > System: (use Refresh to Update)
Last GPS Lock: 99 min.
Phase error: 0
Clock quality: OD L0ck, Frozen (H)
Input volts: 13.2
Temperature: 19.0°C
Last Boot: 2008-05-27 15:30:27

Views > System: Turn GPS ON. Status > GPS
Locked?: ✔ Satellites viewed: 11 Satellites used: 4
Time: 19:53:33  Date: 12/09/2008
Latitude: 43.1339550  Longitude: 121.5125867  Elev (m): 1279.1

Calibration, Recheck of Sensor Mass Positions, and Waveform Monitor
☐ > Cmds > Calibration: DURATION bar: 6 min (if running Q330Beta V1.44); SETTLING bar: 6 min.; TRAILER bar: 5
☐ > Cmds > Calibration > Waveform > STEP: AMPLITUDE bar: -24 db Guralp or -18 db STS2; STEP POLARITY: Positive
☐ > Cmds > Calibration > CALIBRATE CHANNELS: ISelect all 3 channels; START: 1 minute; IStart .
Sit Quietly for ~18 min and note local start time here:  

☐ > Views > Sensors: Use Center A to recenter any CH > +/-15 for Guralp; > +/-25 for STS-2. Check here.
Enter final mass positions: 1:  2:  3: 

WAVEFORM MONITOR > Views > Quickview > chan1,2,3 > Start: Enter Max Min Midpoint (click "stop" to record values)
CH 1 532.4 1041.4 851.4  CH 2 1655.4 670.5 907.2  CH 3 490.0 451.0 1924.9

☐ > Status > Data Port Txr > Data4 *Packet Buffer ✔ Increasing? (press Refresh)
☐ > Cmds > Baler > ISend command to baler (Baler should turn on, with packets being sent)
☐ > Status > Data Port Txr > Data4 *Packet Buffer (Decreases to zero)? Packets Sent: 9349163
☐ > Commands > Baler Cmds > ITurn Off Baler (wait for slow green blink = idle)
☐ > Swap out Baler
☐ > Status > Data Port Txr > Data4 *Packet Buffer ✔ Increasing?
☐ > Cmds > Baler > ISend command to baler (Baler should now be on)
☐ > Status > Data Port Txr > Data4 *Packet Buffer ✔ Decreases to zero? Packets Sent: 9349335
[Note: If the Q330 does not transfer data to the Baler try clearing the Baler "Association" by holding the Baler Attention button until the light turns solid red (~5 sec). Release the button and then, after the light begins to flash green, press the Attention button once to shut down the Baler. Repeat the process once more, ending in Baler shutdown. Press Attn button once to turn Baler on and check that data transferred.]

☐ > Status > General *Total Resync: 90
☐ > Commands > Make Dofile (A bug here means you should delete "Conf," at the start of the default filename, append the station name to end of the remaining default filename and click OK. Check that name is correct.)

DEPARTURE TIME (local): 12:41 p

*PLEASE NOTE GENERAL STATE OF THE STATION AND ANY SPECIAL PROBLEMS IN SPACE BELOW*
HLP Q330 DEMOBILIZATION SHEET (v3) (last revised 20090904 MJF)

STATION: 0RO41 Month: 9 Day: 18 Year: 2009 ARRIVAL TIME(local): 2:15 pm
Q330 S/N: 1313 OLD BALER S/N: 5847
SENSOR MASS POSITION: > Views > Sensors > Boom Positions

1: 16 2: 15 3: -5
- Use Center A to recenter if any CH > +/-15 for Guralp; > +/-25 for STS-2. Check here.
- Continue with Center A command (and update) until all channels are < +/-15 or 25.
- Enter final mass positions: 1: -4 2: 4 3: -6

> Views > Data Recording > DP3 *Station: HLG01 > DP4 *Station: 0RO41
[DP3 Station should match program (HLG?? for Guralp, HLS?? for Streckelsen). DP4 Station should match station name]

> Views > System: (use Refresh to Update) > Views > System: Turn GPS ON. Status > GPS
- Last GPS Lock: 0 min
- Phase error: -0.00001
- Clock quality: 2.00000 (T)
- Input volts: 13.0 V
- Temperature: 23.8°C
- Last Boot: 2008-12-03 13:45:09
- Last Resync: 2008-12-01 10:01:13
- Locked? [X]
- Satellites viewed: 11
- Satellites used: 11
- Time: 21:21:26
- Date: 18/09/2009
- Latitude: 43.733037
- Longitude: 121.5126967
- Elev (m): 12.973

Calibration
- DURATION bar: 6 min (if running Q330Beta V1.44t); SETTLING bar: 6 min.; TRAILER bar: 5
- Waveform > STEP, AMPLITUDE bar: -24 dB Guralp or -18 dB STS2; STEP POLARITY: Positive
- CALIBRATE CHANNELS: IS query all 3 channels; START: 1 minute; IStart.
- Sit quietly for ~18 min and note local start time here: 2:23

> Status > Data Port Txr > Data4 *Packet Buffer: Increasing? (press Refresh)
- Status > Baler > IS Send command to baler (Baler should turn on, with packets being sent)
- Status > Data Port Txr > Data4 *Packet Buffer (Decreases to zero)? Packets Sent: 77007308
- Commands > Baler Cmds > iTurn Off Baler (wait for slow green blink = idle)

Demobilize Station
- 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 misalignment value:
- Remove sensor; enter sensor information: Type: ________ Serial #: ________
- Enter assumed declination from installation (as written on sensor pad): 17°
- 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 Streckelsen). Enter orientation:

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

misalignment 2°

Data Logger
- Disconnect power box
- Disconnect data logger (all cables); enter serial #: ________
- Label baler with station name and date
- Disconnect batteries; cover terminals with plastic caps or tape
- Disconnect solar panels and GPS; enter GPS serial #: 12340040

*PLEASE NOTE GENERAL STATE OF THE STATION AND ANY SPECIAL PROBLEMS IN SPACE BELOW*
O1041
Sept 18, 2009 215pm John Nick Dwayne Jenny

Bat: 13.35, 13.35
Q330: 1393  Baler: 5849

Masses: 12, 15, -5
New Masses: -4, 4, -6

DP3 Station H4G001
DP4 Station O2O41

0 min
-0.00001
3D Lock (T)
13.05 V
23°C

2008-12-31 13:45:09
2009-12-31 00:01:18

GPS Locked
5V 11 5V 11
21:21:26
12/09/2009
43.3833033
121.5128967
12.97.8

calibration: 2:23 - 2:41
packets: 25007308

GPS 12340040
Sensor T341676

decalation 11°
misalignment 2°

7 Blue Panels
8 R
11 G
4 B
4 SSP
2 BSP
2 Trailer P