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

STATION NAME: QF-113 OPERATOR: hinges, S. Mothought, C. Matt
MONTH: QW YEAR: 2007 ARRIVAL TIME (local): 11:00
SENSOR TYPE: Gyralc SENSOR SN: 3M 94
Q330 SN: 0806 BALE SN: 55274 5 GPS SN: Q260197
Handheld GPS Station: Lat: 11° 12.27' N 11° 12.30' W Elev: 1168 m
POWER: batt-1 12.8V batt-2 12.8V Solar panel output (-18V) 19.04

CONNECT CABLES:
1. Build power system
2. Connect Q33 station to bale
3. Q33 station to GPS
4. Cite to Q33 station

[WARNING: Q330 does not supply power to Cite, cable draws continuous power. Disconnect cable from Cite when not in use.]

Cite > Q330 Beta > Cite > Cloning
- Select file to clone (STS2 or Gurlac HLG01)
- Station names
- Click "Palm overrides "330" in dropdown
- Check "Edit/Verify"

Send
- Station names: DP4 New Name (in ALL CAPS, up to 5 characters)
- Save/Reboot
- Views (from dropdown) > Data Recording > DP4
- Confirm that Station: is same as sensor clone name (e.g. HLG01)
- Views (from dropdown) > Data Recording > DP4
- Confirm that station name and sample rates are correct

CONNECT SENSOR TO Q330. Verify that sensor configuration matches sensor type.

UNLOCK SENSOR. For Guralp, to unlock from Cite, 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: 1 CH 2: 1 CH 3: 0
- 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 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21

CH 1 2 3 4 5 6 7 8 9 10 11

> Status > GPS (confirm GPS lock)
- GPS Time: 7:15:20
- GPS Date: 2007-05-21
- Lat: 11° 12' 13' 13' 11' 12' 11' 12' 13' 14' 15' 16' 17' 18' 19' 20' 21' 22' 23' 24' 25' 26' 27' 28' 29' 30' 31' 32' 33' 34' 35' 36' 37' 38' 39' 40' 41' 42' 43' 44' 45' 46' 47' 48' 49' 50' 51' 52' 53' 54' 55' 56' 57' 58' 59' 60'
- Lon: 11° 12' 13' 13' 11' 12' 11' 12' 13' 14' 15' 16' 17' 18' 19' 20' 21' 22' 23' 24' 25' 26' 27' 28' 29' 30' 31' 32' 33' 34' 35' 36' 37' 38' 39' 40' 41' 42' 43' 44' 45' 46' 47' 48' 49' 50' 51' 52' 53' 54' 55' 56' 57' 58' 59' 60'
- Elev: 1167 19 8

> Status > Data Port TxF > Data Rate
- Packet Buffer: 10 (select increase?) (refresh)
- Baler cmd: 1 Turn on Baler or "Send bale cmd". Check bale is on solid green light
- Status > Data Port TxF > Data Rate: Packet buffer decreases to zero? Packets Sent: 2085

[Note: If the Q330 does not transfer data to the Baler try switching 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 Attention button once to turn Baler on and check that data transferred]

> Status > General > Total Resyncs: 1

> Commands: Make Docfile. add station name (STA) to default filename, Conf-yrMoDy-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): 11:00

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

STATION: ORIO3  Month: 10  Day: 6  Year: 2007  ARRIVAL TIME (local): 5:10 p.m.
Q330 S/N: 986  OLD BALER S/N: 05287  NEW BALER S/N: 05385
SENSOR MASS POSITION: > Views > Sensors * Boom Positions
1: 6  2: -17  3: -15
Use Center A to recenter if any CH > +/-15 for Guralp; > +/-25 for STS-2. Check here X
Continue with Center A command (and update) until all channels are < +/-15 or 25.
Enter final mass positions: 1: 6  2: 13  3: 4

> Views > Data Recording > DP3 *Station: HLG01 > DP4 *Station: ORIO3
[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: 8 mins ago
Phase error: 0.000002
Clock quality: 00 lock, Form (H)
Input volts: 14.10 V
Temperature: 13 C
Last Resync: 2007-06-20 19:54:50

Calibration and Waveform Monitor

> Views > System: Turn GPS ON. Status > GPS
Locked? [X]
Satellites viewed: 12  Satellites used: 6
Time: 00:15:19
Date: 07/10/2007
Latitude: 42.8277350
Longitude: 118.1057133
Elev (m): 1665.3 m

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

CH 1 665 98 142.8  CH 2 1010 765 75.7  CH 3 2810 1240 136.9
Microseisms visible? [X] (check if yes)

> Status > Data Port Txfr > Data4 *Packet Buffer X Increasing? (press Refresh)
> Commands > Baler > Send command to baler (Baler should turn on, with packets being sent)
> Status > Data Port Txfr > Data4 *Packet Buffer (Decreases to zero)?  Packets Sent: 9351005
> Commands > Baler > !Send command to baler (Baler should now be on)
> Status > Data Port Txfr > Data4 *Packet Buffer X Decreases to zero?  Packets Sent: 9351153
[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 Resyncs: 108
> 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): 5:25

*PLEASE NOTE GENERAL STATE OF THE STATION AND ANY SPECIAL PROBLEMS IN SPACE BELOW*
HLP Q330 SERVICE SHEET (v6) (Last revised 06/22/07 DEJ)

STATION: OR103  Month: 5  Day: 18  Year: 2008  ARRIVAL TIME (local): 16:50
OPERATOR: James Laken che  POWER: BATT-1: 13.5  BATT-2: 13.5
SENSOR MASS POSITION: > Views > Sensors *Boom Positions
1: -9  2: 8  3: -14

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:  2:  3:  

> Views > Data Recording > DP3 *Station: HLG01  > DP4 *Station: OR103
[DP3 Station should match program (HLG?? for Guralp, HLS?? for Streckelsen), DP4 Station should match station name]

> Views > System: (use Refresh to Update)
Last GPS Lock: 53 min ago
Phase error: 2 usec
Clock quality: 0-D no off, frozen (X)
Input volts: 13.35
Temperature: 29°C
Last Boot: 2006-05-08 12:50:11
Last Resync: 2006-05-08 12:50:31

> Views > System: Turn GPS ON. Status > GPS
Locked...[ ] Fixed 3-D
Satellites viewed: 17  Satellites used: 12
Date: 18/05/2008
Time: 23:59:11
Latitude: 42.8279683
Longitude: 118.1058317
Elev (m): 1473.3 m

Calibration and Waveform Monitor

☐ > Cmds > Calibration: DURATION bar: 240 s (wrongly labeled "min" on Cie); SETTLING bar: 6 min.; TRAILER bar: 1 m
☐ > Cmds > Calibration > Waveform > STEP, AMPLITUDE bar: -24 db Guralp or -18 db STS2; STEP POLARITY: Positive
☐ > Cmds > Calibration > CALIBRATE CHANNELS: Select all 3 channels; START: 1 minute; STOP...

Sit Quietly for 12 min and note local start time here: ________________

Click Stop, then O.K. when finished.

> Views > Quickview (waveform monitor) > chan 1.2.3 > Start: Write down Max Min Midpoint (click "stop" to record values)

CH 1  -35  -47  77.3  CH 2  -259  -637  30.6  CH 3  195  -199  104.2

Microseisms visible? [ ] (Check if yes)

☑ > Status > Data Port Txf > Data4 *Packet Buffer: ✔ Increasing? (press Refresh)
☑ > Cmds > Baler > iSend command to baler (Baler should turn on, with packets being sent)
☑ > Status > Data Port Txf > Data4 *Packet Buffer (Decreases to zero)? Packets Sent: 411880
☑ > Commands > Baler Cmds > iTurn Off Baler (wait for slow green blink = idle)
☑ > Swap out Baler
☑ > Status > Data Port Txf > Data4 *Packet Buffer: ✔ Increasing?
☑ > Cmds > Baler > iSend Command to baler (Baler should now be on)
☑ > Status > Data Port Txf > Data4 *Packet Buffer: ✔ Decreases to zero? Packets Sent: 912124

(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 Alt button once to turn Baler on and check that data transferred.)

> Status > General > Total Resyncs: 109
> 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): 17:15

"PLEASE NOTE GENERAL STATE OF THE STATION AND ANY SPECIAL PROBLEMS IN SPACE BELOW"
All normal at station. Very small amount of moisture in bottom of action padder. Tarp will need replacing soon.
HLP Q330 SERVICE SHEET (v8) (last revised 20080716 MJF)

STATION: OR103 Month: 04 Day: 10 Year: 2002 ARRIVAL TIME (local): 15:42
SENSOR MASS POSITION: Views Sensors Boom Positions

1: 22 2: -10 3: 3: -1

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: -1 2: -5 3: -1

Views Data Recording DP3 Station: HLG01 DP4 Station: OR103

[DP3 Station should match program (HLG?? for Guralp, HLS?? for Strekeisen). DP4 Station should match station name]

Views System (use refresh to update)

Last GPS Lock: 0 min ago
Phase error: -0.00012
Clock quality: 90 lock
Input volts: 13.5V
Temperature: 27C
Last Boot: 2008-06-28 10:50:11
Last Resync: 2008-06-28 10:50:31

Views System Turn GPS On. Status GPS

Locked? Y
Satellites viewed: 11 Satellites used: 10
Date: 10/06/2008
Time: 9:25:09
Latitude: 118.777367
Longitude: 108.105942
Elev (m): 1573.8

Calibration, Recheck of Sensor Mass Positions, and Waveform Monitor

Cmds Calibration DURATION bar: 6 min (if running Q330Beta V1.44t); SETTLING bar: 6 min; TRAILER bar: 5
Cmds Calibration Waveform STEP AMPITUDE bar: -24 db Guralp or -16 db STS2; STEP POLARITY: Positive
Cmds Calibration CALIBRATE CHANNELS: Select all 3 channels; START: 1 minute; !Start

Sit Quietly for ~18 min and note local start time here:

Views Sensors Use Center A to recenter if any CH > +/-15 for Guralp; > +/-25 for STS-2. Check here

Enter final mass positions: 1: 2: 3:

WAVEFORM MONITOR Views Quickview chn1,2,3 Start Enter Max Min Midpoint (click stop to record values)

CH 1 -0.28 -1.571 1.17 CH 2 -1.433 -1.54 -1.45 CH 3 -2.75 -3.43 -1.14.5
Microseism? Y Microseism? Y

Status Data Port Txr Data4 Packet Buffer Y Increasing? (press Refresh)
Cmds Baler Send command to baler (Baler should turn off, with packets being sent)
Status Data Port Txr Data4 Packet Buffer (Decreases to zero)? Packets Sent 108 7048
Cmds Baler Send command to baler (Baler should now be on)
Status Data Port Txr Data4 Packet Buffer Y Decreases to zero? Packets Sent 102 47 2 62

(Note: If the Q330 does not transfer data to the Baler by 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 Att button once to turn Baler on and check that data transferred.

Status General Total Resyncs 109
Cmds 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): 15:55

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

Small amount of water in Action Packer added dirt to vault pile replaced tarp
HLP Q330 DEMOBILIZATION SHEET (v1) (last revised 20080716 MJF)

OPERATOR: Helgi
NEW BALER S/N: 
SENSOR MASS POSITION: > Views > Sensors *Boom Positions
1: 14  2: 1  3: 13
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: 2: 3:

> Views > Data Recording > DP3 *Station: HLC 01  > DP4 *Station: OR 103
[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: [00:04:49]  Phase error: 0.000.002
  Clock quality: 09 LOCK, 99204 (4h)
  Input volts: 12.35V
  Temperature: 23°C
  Last Resync: 2009-06-25 20:47:03

> Views > System: Turn GPS ON. Status > GPS
  Locked? [V]  Satellites viewed: 8  Satellites used: 6
  Time: 4:00 00:53
  Date: 06/03/09
  Latitude: 42.82771
  Longitude: 118.105733
  Elev (m): 1666.8

Calibration

[V] > Cmds > Calibration: DURATION bar: 6 min (if running Q330Beta V1.44); SETTLING bar: 6 min; TRAILER bar: 5
[V] > Cmds > Calibration > Waveform > STEP. AMPLITUDE bar: 24 dB Guralp or -18 dB STS2; STEP POLARITY: Positive
[V] > Cmds > Calibration > CALIBRATE CHANNELS: Select all 3 channels; START: 1 minute; IStart.
Sit quietly for ~18 min and note local start time here: 1:07

[V] > Status > Data Port Txf > Data4 > Packet Buffer [V] Increasing? (press Refresh)
[V] > Cmds > Baler > !Send command to baler (Baler should turn on, with packets being sent)
[V] > Status > Data Port Txf > Data4 > Packet Buffer (Decreases to zero)?  Packets Sent: 1511
[V] > Commands > Baler Cmds > !Turn Off Baler (wait for slow green blink = idle)

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DEMOBILIZE STATION

SENSOR
☐ If sensor is a 3T: lock masses with power on; then disconnect breakout box
GURALP UNLOCK PROCEDURE: from Clic: Views: > Sensor. Set duration = 10 sec. > Lock A.
Can also use buttons on breakout box to Lock.
NB: If station uses a Q330 (and only then!), may need to connect AUX power cable to breakout box first.
☐ 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: STGURALP  Serial #: TSM94
☐ Enter assumed declination from installation (as written on sensor pad): 15° 46' 54"
☐ 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 Streckeisen). Enter orientation: N-3
If measured orientation does not appear to be correct, double check measurement and confirm with at least one other team member!

DATACLLOGGER
☐ Disconnect power box
☐ Disconnect datalogger (all cables); enter serial #: ________
☐ Disconnect batteries; cover terminals with plastic caps or tape
☐ Disconnect solar panels and GPS; enter GPS serial #: 02267192

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