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

STATION NAME: ORCA 1 OPERATOR: BOTT, EAGAR, GOLDBERG, PARKER, INDERMARCO
MONTH: 5 DAY: 24 YEAR: 2002 ARRIVAL TIME (local): 2:00 pm
SENSOR TYPE: Guralp 3-3 Sensor S/N: 157.304-42 T3Z06
Handheld GPS Site LOC: Lat: 43.397.73 Lon: W 120.561.76 Elev: 1317
POWER: Batt-1: 12.88 Batt-2: 12.85 Solar panel output (~18V): 2.0 V

Connect cables:
\(1\) Build power system
\(2\) Connect Q330 (Onet) to bale
\(3\) Q330 (GPS) to GPS
\(4\) power to Q330
\(5\) Cite to Cite (console)

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

Cite > CiteBeta > Cms > CLoning
> Select file to clone (STS2 HLS01) or Guralp (HLG01)
> Station names
> Click "Palm overrides 330" in dropdown
> Check "Edit/Verify"
> IP Addresses: Un-Check "Edit/Verify"
> Save/Reboot
> Station Names > DP4 > New (Enter Station Name in ALL CAPS, up to 3 characters)
> Confirm that Station is same as sensor clone name (e.g. HLG01)
> Save/Reboot
> Views (from dropdown) > Data Recording > DP3
> 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") CH1: -9 CH2: -1 CH3: 6
Set Duration = 10 and click Center A command if any channel > 15 (Guralp); > 25 (STS-2) and click Refresh a

Views > Quickview (waveform monitor) > channel 1, 2, 3 > Start: Write down Max Min Midpoint (click "stop" to record values)
CH1: 29 56.8 9746 589.9 52 CH2: 910 2245 470.4 CH3: 52.3 16984 444.7 7

Views > System
Last GPS Lock: 01/09/2009
Phase Error: -0.0000
Clock Quality: 25.70 (ms)
Input volts: 15.60 V
Q330 Software Version: 1.89

Status > GPS (confirm GPS lock)
GPS Time: 22:55:21
GPS Date: 01/05/2007
Lat: 43.397.239
Lon: W120.561.76
Elev: 1320

Status > Data Port Txf > Data4
Packet Buffer: 2.10.319 (in increasing? (refresh))
Status > Data Port Txf > Data4
Packet Buffer decreases to zero? Yes Packets Sent: 1029
[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: 105

Commands > Make Dcfile. add station name (STA) to default filename. Conf-YMDY-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): 4:15 pm

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

STATION: 06/22/07  Day: 24  Year: 2007  ARRIVAL TIME (local): 11:34
Q330 S/N: 1006  OLD BALER S/N: 06297  NEW BALER S/N: 05873
SENSOR MASS POSITION: Views > Sensors > Boom Positions
1:  
2:  
3:  
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: 06/22/07  DP4 *Station: 06/22/07
[DP3 Station should match program (HLP?? 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: 12/22 12:00:00
Phase error: +2 000 000
Clock quality: 32 000 s  Frequency (Hz): 60
Input volts: 13.05
Temperature: 23°C
Last Boot: 02/07 09:27 17:27:59
Last Resync: 09/27 09:27 17:28:19

Satellites viewed: 11  Satellites used: 5
Date: 06/22/07
Time: 12:10:00
Date: 06/22/07
Time: 12:10:00

Calibration and Waveform Monitor

Cmds > Calibration: CURATION bar: 240 s (wrongly labeled “min” on Clie), SETTLING bar: 5 min, TRAILER bar: 1 min
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; STOPS: 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 2 3 4 5 6 7 8 9 10 11

Max 1394 1493 844 664 6 122.5 1809 92 110160 318 497 13
Min 1378 47

Microseisms visible? (check if yes)

Status > Data Port (off) > Data4 *Packet Buffer increasing? (press Refresh) YES
Cmds > Baler > Send command to baler (Baler should turn on, with packets being sent)

Status > Data Port (off) > Data4 *Packet Buffer (Decreases to zero)? Packets Sent: 2425490

Status > General > Total Resync: 08
Commands > Make Datafile (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): 12:10

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

STATION: ORO61  Month: 10  Day: 06  Year: 2007  ARRIVAL TIME (local): 1145L
Q330 S/N: 1000  OLD BALER S/N: 05373  NEW BALER S/N: 05200
SENSOR MASS POSITION: > Views > Sensors *Boom Positions
1: 10  2: 26  3: 25
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: 10  2: -4  3: -3

> Views > Data Recording > DP3 *Station: HLG01  > DP4 *Station: ORO61
[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: 133 mn
Phase error: 0
Clock quality: 00 Lock from CH
Input volts: 14.25
Temperature: 10C
Last Boot: 20070810195737
Last Resync: 20070810195758

> Views > System: Turn GPS ON. Status > GPS
Locked? Y
Satellites viewed: 12  Satellites used: 12
Time: 185203
Date: 081007
Latitude: 93.3921937
Longitude: 120.5612350
Elev (m): 1317.8

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Calibration and Waveform Monitor

☐ > Cmds > Calibration: DURATION bar: 240 s (wrongly labeled “min” on Clie); SETTLING bar: 6 min.; TRAILER bar: 1 min
☐ > 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; IStart.
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 - 5369 - 8933 781.0 CH 2 35966 2875 13478.4 CH 3 - 330530 - 639616 78240.3
[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 > Data Port Txr > Data4 *Packet Buffer Y 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: 4922951
☐ > Commands > Baler Cmds > !Turn Off Baler (wait for slow green blink = idle)
☐ > Swap out Baler
☐ > Status > Data Port Txr > Data4 *Packet Buffer Y Increasing?
☐ > Cmds > Baler > !Send command to baler (Baler should now be on)
☐ > Status > Data Port Txr > Data4 *Packet Buffer Y Decreases to zero?  Packets Sent: 49223689

Ĉ > Status > General *Total Resync: 109
Ĉ > 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): 1205

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

STATION: 06/24 Month: 5 Day: 21 Year: 2008 ARRIVAL TIME (local): 9:00
OPERATOR: 1:00 2:00 3:00 POWER: BATT-1: 14.23 BATT-2: 14.32
Q330 S/N: 1000 OLD BALER S/N: 025200 NEW BALER S/N: 05262
SENSOR MASS POSITION: > Views > Sensors > Boom Positions
1: -9 2: 2 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: _______ 2: _______ 3: _______

> Views > Data Recording > DP3 Station: HLG-O3 > DP4 Station: 06064
[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: 177 000 0000
Phase error: 8 0 0 0
Clock quality: 0D 0A 09 09 09
Input volts: 11 2 5 5
Temperature: 13 C
Last Boot: 2008-02-07 05:23:48
Last Resync: 2008-02-07 05:23:48

> Views > System: Turn-GPS ON. Status > GPS
Locked? [Y]
Satellites viewed: 12 Satellites used: 5
Time: 16:04:55
Date: 21//05/2008
Latitude: 43.3593033
Longitude: 129.5612517
Elev (m): 1331.8

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 or -18 db STS2; STEP POLARITY: Positive
☐ > Cmds > Calibration > CALIBRATE CHANNELS: Select all 3 channels; START: 1 minute; IStart.
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 -937 -2042 502 1 CH 2 -4531 -2765 9632 2 CH 3 -2497 39 -3836 13 2393 47
Microseisms visible? [X] (check if yes)

☑ > 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: 902 7528
☑ > Commands > Baler Cmds > ITurn Off Baler (wait for slow green blink = idle)
☑ > 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: 902 7528
[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: 110
> Commands > Make Doccfile (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): 9:26

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

Horizontal components drift a lot!
HLP Q330 DEMOBILIZATION SHEET (v1) (last revised 20080716 MJF)

STATION: OR061 Month: 07 Day: 22 Year: 2004 ARRIVAL TIME (local): 2:35
OPERATOR: EGERS, BURL BUNES, ALIER POWER: BATT-1: 12.87V BATT-2: 12.97V
Q330 S/N: 0600 OLD BALER S/N: 05262 NEW BALER S/N: N43.39222
SENSOR MASS POSITION: > Views > Sensors * Boom Positions
1: 9 2: 7 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: 9 2: 7 3: -1

> Views > Data Recording > DP3 * Station: HLG01 > DP4 * Station: OR061
[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: 128 minutes
Phase error: 0.993907
Clock quality: 0.05 lock, Pae266 (n)
Input volts: 12.12V
Temperature: 34°C
Last Boot: 2008-02-07 05:25:28
Last Resync: 2008-02-07 05:25:46

> Views > System: Turn GPS ON. Status > GPS
Locked? [ ]
Satellites viewed: 17 Satellites used: 8
Time: 21:48:18
Date: 22/07/2004
Latitude: -43.392245
Longitude: 120.5612483
Elev (m): 1311.3

Calibration: Data Dump prior to calibration

_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: !Select all 3 channels; START: 1 minute; !Start.

Sit Quietly for ~18 min and note small start time here: 3:52 PM

Status > Data Port Txfr > Data4 * Packet Buffer [ ] Increasing? (press Refresh)
_cmds > 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: 14407061 14408668

Demobilize Station

Sensor

If sensor is a 3T: lock masses with power on; then disconnect breakout box

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: Crayla 3T Serial #: F3204
Enter assumed declination from installation (as written on sensor pad): 15.5° W

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: 0°

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 #: 1000

Disconnect batteries; cover terminals with plastic caps or tape

Disconnect solar panels and GPS; enter GPS serial #: 15730172

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