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

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

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

Cie >Q330Beta >Cmds >Cloning
> Select file to clone (STS2 (HiLS01) or Guralp (HLG01)
> 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. 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 Cie: Views > Sensor > Set duration = 10 sec. > Unlock A.
Views > Sensor (click “refresh”). Mass Positions (V*10 < 15 (Guralp) < 25 (STS-2))
> Voltage (V10) CH1 = 15 CH2 = 15 CH3 = 15
> Set Duration = 10 and click Center:A command if any channel > 15 (Guralp); > 25 (STS-2) and click Refresh ✓
> Views > Quickview (waveform monitor) > Chan 2,3 > Start: Write down Max Min Midpoint (click “stop” to record values)
> CH1: 16.37 14.62 25.05 24.07 15.50 12.26 CH2: 15.04 13.32 24.03 24.03 14.03 12.26
> Status > GPS (confirm GPS lock)
> Status > Data Port:TXr, TXr (Data4)
> Packet Buffer: 0 (increasing? (refresh)))
> Cmds > Baler cmd > Turn on Baler: > “Send baler cmd”. Check balers on (solid green light)
> Status > Data Port:TXr=Data4. Packet Buffer decreases to zero? > Packs Sent: 6
(Note: If the Q330 does not transfer data to the Baler try clearing the Balers “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 Resync: 0
> Commands > Make Dir file: 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): 9:30

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

OPERATOR: Steve POWER: BATT-1: 13.58 BATT-2: parallel
Q330 S/N: 990 OLD BALER S/N: 5308 NEW BALER S/N: 5156 (Station uses mod)
SENSOR MASS POSITION: Views > Sensors > Boom Positions
1: 16 2: -19 3: 20
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: 6 3: -1

Views > Data Recording > DP3 *Station: HLG01 DP4 *Station: ORG69
[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: 57 min
Phase error: 0
Clock quality: 9
Input volts: 13.35
Temperature: 19
Last Boot: 2007-06-21 03:10:41
Last Resync: 2007-06-21 03:25:53

Views > System: Turn GPS ON. Status > GPS
Locked? Yes
Satellites viewed: 9 Satellites used: 6
Time: 20:54:22
Date: 9/10/2007
Latitude: 43.30611
Longitude: 81.18223 006.7
Elev (m): 1422.8

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 STS-2; STEP POLARITY: Positive
Cmds > Calibration > CALIBRATE CHANNELS: !Select all 3 channels; START: 1 minute; lStart.
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 8753 186.6 CH 2 3525 2034 3743 CH 3 -1351 -2731 264.0
Microseisms visible? Yes (check if yes)

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: 9571327
Command > Baler Cmds > !Turn Off Baler (wait for slow green blink = idle)
Swap out Baler
Status > Data Port Txfr > Data4 *Packet Buffer Increasing?
Cmds > Baler > !Send command to Baler (Baler should now be on)
Status > Data Port Txfr > Data4 *Packet Buffer Decreases to zero? Packets Sent: 9571487
(Note: If the O330 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: 643
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*

(Tarp, fence etc. look good... but WHY was the solar panel installed right next to the sensor???
HLP Q330 SERVICE SHEET (v6) (Last revised 06/22/07 DEJ)

STATION: W8697  Month: May  Day: 26  Year: 2008  ARRIVAL TIME (local): 2:35 PM
OPERATOR: Steven  Keizer  POWER: BATT-1: 13.5V  BATT-2: 13.5V
Q330 S/N: 5778  OLD BALER S/N: 5156  NEW BALER S/N: 5896
SENSOR MASS POSITION: & Views & Sensors & Boom Positions
1: -4 2: 18 3: -1.7
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: -6 2: -4 3: 0.3

> Views > Data Recording > DP3 *Station: ufGuvh > DP4 *Station: y1v069
[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: 06:34:48
Phase error: 8
Clock quality: 1
Input volts: 1.35
Temperature: 22
Last Boot: 2008-06-05 07:57:07
Last Resync: 2008-06-05 07:57:08

> Views > System: Turn GPS ON
Status = GPS Locked?
Satellites viewed: 11  Satellites used: 1
Time: 20:45:14
Date: 06/06/08
Latitude: 47.309
Longitude: 118.279
Elev (m): 1460

Calibration and Waveform Monitor

>< Cmds > Calibration: DURATION bar: 240 s (wrongly labeled “min” on Clio); 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: ISelect 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 1356 587 139.8 CH 2 162 7 61 140.6 CH 3 1580 721 126.4

Microseisms visible? Y (check if yes)

>< Status > Data Port Tfkr > Data4 *Packet Buffer Increasing? (press Refresh)
>< Cmds > Baler > Send command to baler (Baler should turn on, with packets being sent)
>< Status > Data Port Tfkr > Data4 *Packet Buffer (Decreases to zero)? Packets Sent: 1355474
>< Commands > Baler Cmds > ITurn Off Baler (wait for slow green blink = idle)
>< Swap out Baler
>< Status > Data Port Tfkr > Data4 *Packet Buffer Decreases to zero? Packets Sent: 1355474
Note: If the Q330 does not transfer data to the Baler try clearing the Baler’s ‘Association’ by holding the Baler’s 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: 64
>< 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): 2:57 PM

*PLEASE NOTE GENERAL STATE OF THE STATION AND ANY SPECIAL PROBLEMS IN SPACE BELOW*
HLP Q330 SERVICE SHEET (v8) (last revised 20080716 MJF)

STATION: OR069  Month: Sep  Day: 15  Year: 2008  ARRIVAL TIME (local): 15:49
OPERATOR: [Name]  POWER: BATT-1: 13.4 V  BATT-2: 13.4 V
SENSOR MASS POSITION: > Views > Sensors * Boom Positions
1: 7  2: 4  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: HLG01*  > DP4 *Station: OR069*  
[DP3 Station should match program (HLG?? for Guralp, HLS?? for Streckeisen), DP4 Station should match station name]

> Views > System: (use Refresh to Update)  > Views > System: Turn GPS ON. Status > GPS
Last GPS Lock: 0 min  Locked? [ ]
Phase error: 0.000041  Satellites viewed: 11
Clock quality: 3d lock, (7)  Satellites used: 10
Input volts: 13.2
Temperature: 28 c
Last Boot: 2008-05-05 07:57:07
Last Resync: 2008-05-05 07:57:28

Time: 22:50:40
Date: 15/09/2008
Latitude: 43.9060633
Longitude: 118.2280717
Elev (m): 1443.9

Calibration, Recheck of Sensor Mass Positions, and Waveform Monitor

☐ > Cmds > Calibration: DURATION bar: 6 min (if running Q330 Beta V1.441); 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; IStart.
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 > chan 1,2,3 Start: Enter Max Min Midpoint (click "stop" to record values)
CH 1 120 -160 63.5
CH 2 2054 1839 72.3
CH 3 -639 -872 54.4
Microseism? [ ]

□ > Status > Data Port Txfr > Data4 *Packet Buffer Increasing? (press Refresh)
□ > Cmds > Baler > ISend command to baler (Baler should turn on, with packets being sent)
□ > Status > Data Port Txfr > Data4 *Packet Buffer (Decreases to zero)? Packets Sent: 11515223
□ > Commands > Baler Cmds > ITurn Off Baler (wait for slow green blink = idle)
□ > Status > Data Port Txfr > Data4 *Packet Buffer Increasing?
□ > Cmds > Baler > ISend command to baler (Baler should now be on)
□ > Status > Data Port Txfr > Data4 *Packet Buffer Decreases to zero? Packets Sent: 11515422

[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: 644*
□ > 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): 16:10

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

STATION: 48 09 06 Month: 9 Day: 19 Year: 2009 ARRIVAL TIME(local): 1430h
OPERATOR: H. Ford

Q330 S/N: 49 D OLD BALER S/N: 057438

SENSOR MASS POSITION: > Views > Sensors *Boom Positions
1: 41 2: 12

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: 41 2: 12 3: 41

> Views > Data Recording > DP3 *Station: HLC G1 > DP4 *Station: OROG1

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

> Views > System: (use Refresh to Update) > Views > System: Turn GPS ON. Status > GPS

Last GPS Lock: 25 min ago
Phase error: -600
Clock quality: 2D: locked, frozen (H)
Input volts: 15.05 V
Temperature: 2.5°C
Last Boot: 2009-09-06 23:04:33
Last Resync: 2009-09-06 23:04:33

Calibration

√> Cmds > Calibration: DURATION bar: 6 min (if running Q330Beta V1.441); 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; IStart.

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

√> 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: 1414071
√> Commands > Baler Cmds > ITurn Off Baler (wait for slow green blink = idle)

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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: 3T Serial #: E779

Enter assumed declination from installation (as written on sensor pad): S1419º
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: N21W
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 #: 999
√ Label bale with station name and date
√ Disconnect batteries; cover terminals with plastic caps or tape
√ Disconnect solar panels and GPS; enter GPS serial #: 132402041

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