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

STATION NAME: OR055 OPERATOR: Entire group
MONTH: 05 DAY: 05 YEAR: 2007 ARRIVAL TIME (local): 0805 AM
SENSOR Type: Guralp SENSOR S/N: T34428
Q330 S/N: 454 BALEER S/N: 08558 GPS S/N: 124023
Handheld GPS Sta Loc: Lat: 43.57582 Lon: 119.70325 Elev: 1345
POWER: BATT-1: 12.75 BATT-2: 12.68 Solar panel output (~18V): 20.4

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

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

Ctie > Q330Beta > Cmds > 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”
> Send
>
> Station Name > 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 Ctie: 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: -3 CH 2: -11 CH 3: 1
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: 54.0 79.2 72.3 CH 2: -89.47 104.239 739.54 95.5689 382.914 2009.4

Views > System
Last GPS Lock: 9:51
Phase Error: 1.64
Clock Quality: 05 Lock Pacer
Input volt: 12.9
Last boot: 09/26/04 19:04
Q330 Software Version: 1.08

Status > GPS (confirm GPS lock)
GPS Time: 16:41:04
GPS Date: 05/01/2007
Lat: 43.575828
Lon: 119.703262
Elev: 1345

Status > Data Port Txr > Data4
Packet Buffer: 40/1524 (Increasing? (refresh))

Cmds > Baler cmd > Turn on Baler: = “Send baler cmd”. Check baler is on (solid green light): 2
Status > Data Port Txr > Data4. Packet Buffer decreases to zero: a) Packets Sent: 2116
[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: 251

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): 10:15 AM

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

STATION: OREGON Month: 06 Day: 27 Year: 00 ARRIAL TIME (local): 9:15
OPERATOR: Steven, Plec POWER: BATT 1: 12.32 BATT 2: parallel
Q330 S/N: 43+ OLD BALEN S/N: OSS 52 NEW BALEN S/N: OS 384
SENSOR MASS POSITION: > Views > Sensors > Boom Positions
1: 0 2: 4 3: 19
Use Center A to recenter if any CH > +/- 15 for Guralp; > +/- 25 for STS-2. Check here NOT recommended.
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.O1 > DP4 Station: O55
[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: 07:34:32
Phase error: 0.000000 0.5
Clock quality: 07: locked, Preset (H)
Input volts: 12.3 V
Temperature: 18 C
Last Boot: 2005-06-06 16:05:44
Last Resync: 2005-06-06 16:22:52

Calibration and Waveform Monitor
✓ > Cmds > Calibration: DURATION bar: 240 s (wrongly labeled 'min' on C18); SETTLING bar: 6 min; TRAILER bar: 1 min
✓ > Cmds > Calibration > Waveform > STEP: AMPLITUDE bar: 24 dB Guralp or -12 dB STS2; STEP POLARITY: Positive
✓ > Cmds > Calibration > CALIBRATE CHANNELS: Select all 3 channels; START 1 min before ISERT.
Sit Quietly for 12 min and note local start time here: 9:35
Click Stop, then OK when finished.

> Views > Quickview (waveform monitor) > chan 1,2,3 > Start: Write down Max Min Midpoint (click 'stop' to record values)

CH1 82 46.0 CH2 -27 -40.6 38.7 CH3 50 54 45.5
✓ 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 13/16 9/17
✓ Commands > Baler Cmds > Turn Off Baler (wait for slow green blink = idle)
✓ Swap out Baler
✓ Status > Data Port Txr > Data4: "Packet Buffer ✓ Increasing"?
✓ Cmds > Baler > Send command to Baler (Baler should now be on)
✓ Status > Data Port Txr > Data4: "Packet Buffer Decreases to zero"? Packets Sent

[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 Attention button once to turn Baler on and check that data transferred.]

> Status > General > Total Resync
> Commands > Make Docfile (A bug here means you should delete "Conf.\.
station name to end of the remaining default filename and click OK. Check to name is correct)

DEPARTURE TIME (local): 10:15

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

Originally used Baler # 05384 as swapout, but turned out not to be clean (lode cat). Following those instructions, did not work. Therefore tried a different Baler # 05384 and this one was clean – worked with first try. Repeated quick damper procedure 2 times to be certain...
HLP Q330 SERVICE SHEET (Last revised 06/22/07 DEJ)

Q330 S/N: 434  OLD BALER S/N: 05384  NEW BALER S/N: 05362
SENSOR MASS POSITION: > Views > Sensors * Boom Positions
1: 8  2: 13  3: -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: HLG01 > DP4 *Station: OR055
[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: 0 mins ago
Phase error: 0
Clock quality: BAD lock (6)
Input volts: 24 V
Temperature: 12 C
Last Boot: 2007-08-30 10:26:11
Last Resync: 2007-08-30 10:28:04

> Views > System: Turn GPS ON. Status > GPS
Locked? [ ]
Satellites viewed: 9  Satellites used: 9
Time: 20:59:46
Date: 07/10/2007
Latitude: 43.5491067
Longitude: 119.7632850
Elev (m): 1339.7 m

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Calibration and Waveform Monitor  - skip

[] > 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 1406 833 141.1  CH 2 2273 1785 113.3  CH 3 2178 1341 177.3

Microseisms visible? X (check if yes)

[ ] > Status > Data Port Txfr > Data4 *Packet Buffer X 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: 33224600
[ ] > Commands > Baler Cmds > !Turn Off Baler (wait for slow green blink = idle)
[ ] > Swap out Baler

[ ] > Status > Data Port Txfr > Data4 *Packet Buffer X Increasing?
[ ] > Cmds > Baler > !Send command to baler (Baler should now be on)
[ ] > Status > Data Port Txfr > Data4 *Packet Buffer X Decreases to zero?  Packets Sent: 3322589

[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 or more, ending in Baler shutdown. Press Attn button once to turn Baler on and check that data transferred.]

[] > Status > General *Total Resyncs: 253
> 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*
HLP Q330 SERVICE SHEET (v6) (Last revised 06/22/07 DEJ)

STATION: **OROS**  Month: 5  Day: 20  Year: 2008  ARRIVAL TIME(local): 07:45
Q330 S/N: **434**  OLD BALER S/N: **05362**  NEW BALER S/N: **05548**
SENSOR MASS POSITION: > Views > Sensors * Boom Positions
1: -26 2: 13 3: 20  (Guralp)
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: 7 3: 5

> Views > Data Recording > DP3 *Station: **HLO1**  > DP4 *Station: **OROS**
[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: 4 min ago
Phase error: 2.2 m/sec
Clock quality: 0-D lock, frozen (hp)
Input volts: 13.05
Temperature: 15°C
Last Boot: 2007-08-30 10:28:11
Last Resync: 2007-08-30 10:28:04

> Views > System: Turn GPS ON. Status > GPS
Locked? [ ] Fixed 3-D
Satellites viewed: 12  Satellites used: 9
Time: 14:56:32
Date: 2008/08/20
Latitude: 43.5490 56.7
Longitude: 119.7632 28.3
Elev (m): 1335.3

Calibration and Waveform Monitor

- Cms > Calibration: DURATION bar: 240 s (wrongly labeled "min" on Clie); SETTLING bar: 6 min.; TRAILER bar: 1 m
- Cms > Calibration > Waveform > STEP: AMPLITUDE bar: -24 dB Guralp or -18 dB STS2; STEP POLARITY: Positive
- Cms > 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.

CH 1: 1734 1776 240.1 25 1: 595 1304 275.8 1: 2144 633 161.8
Microseisms visible? [ ] (check if yes)

- Status > Data Port Txf > Data4 *Packet Buffer: Increasing? (press Refresh)
- Cms > 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: 22833874
- Commands > Baler Cms > ITurn Off Baler (wait for slow green blink = idle)
- Swap out Baler
- Status > Data Port Txf > Data4 *Packet Buffer: Increasing?
- Cms > Baler > ISend command to baler (Baler should now be on)
- Status > Data Port Txf > Data4 *Packet Buffer: Decreases to zero?  Packets Sent: 2283417
[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 scc). 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: 253
- 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): 08:10

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

All normal at station, although many cattles in vicinity. Fence pretty loose, but no sign of incursion. Tarp in tatters + replaced. Action package dry.
HLP Q330 SERVICE SHEET (v8) (last revised 20080716 MJF)

OPERATOR: James / Carlson POWER: BATT-1: 13.4 BATT-2: 13.4
Q330 S/N: 0824 OLD BALER S/N: 05548 NEW BALER S/N: 06310
SENSOR MASS POSITION: Views > Sensors > Boom Positions
1: 0 2: -4 3: 0
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: OR055
[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: 129 min
Phase error: 0 Clock quality: C Lock, frozen 11
Input volts: 13.35 Temperature: 21.2
Views > System: Turn GPS ON. Status > GPS
Locked?: [ ] Satellites viewed: 9 Satellites used: 8
Time: 20:52:39 Date: 11/09/2008
Latitude: N43.5490933 Longitude: W119.7682650
Elev (m): 1333.5

Calibration, Recheck of Sensor Mass Positions, and Waveform Monitor
☐ 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: 1Select 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 > chan1,2,3 > Start: Enter Max Min Midpoint (click *stop* to record values)
CH 1 1932 1146 71.0 CH 2 232 67 162.5 CH 3 445 -803 192.0
Microseism? ✓ Microseism? ✓ Microseism? ✓

☐ 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: 525 3471
☐ Commands > Baler Cmds > Turn 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: 525 3655
[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 Attn button once to turn Baler on and check that data transferred.]

☐ Status > General *Total Resync: 254
☐ 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): 14:04

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

Station in good condition - add some dirt around sensor vault
HLP Q330 DEMOBILIZATION SHEET (v3) (last revised 20090904 MJF)

STATION: OR055  Month: Sep Day: 11th Year: 2009 ARRIVAL TIME(local): 12:10 AM
OPERATOR: David, Laura, Parker, Sond POWER: BATT-1: 13.5 BATT-2: 12.5
Q330 S/N: 34 OLD BALER S/N: 05394
SENSOR MASS POSITION: > Views > Sensors *Boom Positions
1: 9 2: 9 3: 16
Use Center A to recenter if any CH > +/-15 for Guralp; > +/-25 for STS-2. Check here — not recentered
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 01 > DP4 *Station: OR055
[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: 23 min ago
Phase error: 0
Clock quality: 0D Flock Frost(H)
Input volts: 13.5
Temperature: 22°C
Last Boot: 2008-07-1302:07:52
Last Resync: 2008-07-1302:08:11

> Views > System: Turn GPS ON. Status > GPS
Locked? [Y] Satellites viewed: 10 Satellites used: 9
Time: 19:17:45
Date: 11/09/2009
Latitude: N 43.5491100
Longitude: w 119.7631850
Elev (m): 1345.3 meters

Calibration
☐ > Cmds > Calibration: DURATION bar: 6 min (if running Q330Beta V1.44i); 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: 1Select all 3 channels; START: 1 minute; iStart -
Sit Quietly for ~18 min and note local start time here: 12:24 AM

☐ > Status > Data Port Txf > Data4 *Packet Buffer [Y] 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: 3679585 3
☐ > Commands > Baler Cmds > iTurn Off Baler (wait for slow green blink = idle)

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DEMOBILIZE STATION

SENSOR
☐ 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 misorientation value: N4°E
☐ Remove sensor; enter sensor information: Type: 3T Serial #: J34428
☐ Enter assumed declination from installation (as written on sensor pad): 15° 0'
☐ 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: N4°E
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 #: 434
☐ Label baler with station name and date
☐ Disconnect batteries; cover terminals with plastic caps or tape
☐ Disconnect solar panels and GPS; enter GPS serial #: 1234 00 2

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