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

STATION NAME: OROHA OPERATOR: ROTH, TECHAR, (GOLDEN, PAYER, RAEMARCO)
MONTH: 5 DAY: 24 YEAR: 2007 ARRIVAL TIME (local): 5:30 pm
SENSOR TYPE: GURALP 3T SENSOR S/N:
Handheld GPS Station: Lat: 74 32 22.75 Long: -122 29 49 Elev: 1376
POWER: BATT1: 1.28 BATT2: 1.29 Solar panel output (-18V):

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

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

Cline > 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 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.

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Connect Sensor to Q330. Verify that sensor configuration matches sensor type.

Unlock sensor. For Guralp, to unlock from Cline: Views > Sensor. Set duration = 10 sec. > Unlock A.
Views > Sensor (click "refresh"): Mass Positions (V ≠ 15 (Guralp); V ≤ 25 (STS-2))
  Voltage (100) CH 1: -1 4 CH 2: -3 CH 3: 9
  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: 1139 3779 7 2952 8 CH 2: -53879 -23001 7462 7 CH 3: 44789 4 2185 4881

Views > System
  Last GPS Lock: 00000 0000 0000 0000
  Phase Error: 0.00010.
  Clock Quality: 50 lock, (7)
  Input volts: 12.90 V
  Last boot: 2000-05-29 19:04
  Q330 Software Version: 1.89

Status > GPS (confirm GPS lock)
  GPS Time: 02:13:54
  GPS Date: 25/05/2007
  Lat: 43, 43 51 62
  Lon: 120, 29 92 00
  Elev: 1376

Status > Data Port Txf > Data4
  Packet Buffer: 2321 80 (Increasing?) (refresh)

Status > Baler_cmds > Turn on Baler: "Send baler cmd". Check baler is on (solid green light):

Status > Data Port Txf > Data4
  Packet Buffer decreases to zero?: 40 Packets Sent: 1031
  [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: 79

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): 7:20

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

STATION: CR040 Month: 06 Day: 23 Year: 07 ARRIVAL TIME (local): 3:13 PM
SENSOR MASS POSITION: Views > Sensors > Boom Positions
1: 16 2: 18 3: 8
Use Center A to recenter any CH > +15 for Guralp; > +15 for STS-2. Check here
Continue with Center A command (and update) until all channels are < +15 or 25.
Enter final mass positions: 1: 0 2: 3 3: -3

Views > Data Recording > DP3 *Station: HLG01 > DP4 *Station: CR040
[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: 19h 47m 59s
Phase error: 0 Clock quality: Lock (H) Input volts: 77.53
Temperature: 31.8

Views > System: Turn GPS ON: Status > GPS Locked? [ ]
Satellites viewed: 11 Satellites used: 4
Latitude: 43.22786667 Longitude: 120.25738467
Elev (m): 137.7

Calibration and Waveform Monitor

Cmds > Calibration: DURATION bar: 240 s (wrongly labeled "min" on Cize), SETTLING bar: 0.5 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, INTERVAL: 10 min.
Sit quietly for 12 min and note local start time here: 23:16 Click Stop, then O.K. when finished.

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

CH 1 5.26 31.6 52.7 CH 2 658 292 80.3 CH 3 14 292 98 6 111.5
Microseisms visible? [ ] (check if yes)

Cmds > Data Port Txr > Data4 *Packet Buffer increasing? (press Refresh) [ ]
Cmds > Baler > Select command to baler (Baler should turn on, with packets being sent)
Cmds > Data Port Txr > Data4 *Packet Buffer Decreases to zero? Packets Sent: 672359
Cmds > Balers > Balance > Turn Off BAler (wait for slow green blink = idle)
Swap out Baler 23:06:4

Cmds > Data Port Txr > Data4 *Packet Buffer increasing? [ ]
Cmds > Baler > Select command to baler (Baler should now be on) [ ]

Cmds > Data Port Txr > Data4 *Packet Buffer Decreases to zero? Packets Sent: 6723584
(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: 90
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): 3:56 PM

*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: ORQ40 Month: 10 Day: 9 Year: 2007 ARRIVAL TIME (local): 9:10 AM
OPERATOR: WES/ASBEO POWER: BATT-1: 18.22 BATT-2: 18.22
SENSOR MASS POSITION: Views > Sensors *Boom Positions
1: 8 2: 0 3: 6
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: ORQ40
[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: 98 ma
Phase error: 2 ms
Clock quality: 0d Lock Progress
Input volts: 13.05
Temperature: 80
Last Boot: 2017 06 11 204444
Last Resync: 2017 06 11 204206

Views > System: Turn GPS ON. Status > GPS
Locked? [ ]
Satellites viewed: 11 Satellites used: 4
Time: 10:22:21
Date: 05/11/2017
Latitude: 43.7754.33
Longitude: 120.1284.68.3
Elev (m): 134.7

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; !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 1378 266 50.9 CH 2 48.75 -8.6 87.9 CH 3 3324 -569 640.3
Microseisms visible? [ ] (check if yes)

☐ > 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: 05782,02
☐ > 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: 05783,80
[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: 8
☐ > Commands > Make DDocfile (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): 09:35

*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: OR040 Month: 5 Day: 20 Year: 2008 ARRIVAL TIME (local): 11:35
OPERATOR: James Yu POWER: BATT-1: 14.2 BATT-2: 14.2
SENSOR MASS POSITION: > Views > Sensors * Boom Positions
1: 1 2: 9 3: -19
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: 2 3: -11

> Views > Data Recording > DP3 *Station: OR040
[DP3 Station should match program (HLS?? for Guralp, HLS?? for Streckeisen), DP4 Station should match station name]

> Views > System: (use Refresh to Update)
Last GPS Lock: 19 min 25 s
Phase error:
Clock quality: 0.07 loc dr. frozen (H)
Input volts: 14.1
Temperature: 20°C
Last Boot: 2007-11-17 08:03:13
Last Resync: 2007-11-17 08:03:35

Views > System: Turn GPS ON. Status > GPS
Locked? 6 Fix(3-D)
Satellites viewed: 6 Satellites used: 4
Time: 19:06:30
Date: 20/05/2008
Latitude: 43.7144750 Longitude: 124.2849383
Elev (m): 1370.1

Calibration and Waveform Monitor

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

CH 1 383 64 62 CH 2 282 -305 135 0 CH 3 1836 1435 123.1
Microseisms visible? (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: 16029538
Cmds > Baler > 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: 160297735
(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 Resync: E1
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.)
No docfile

DEPARTURE TIME (local): 12:15

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

all normal but raining heavily.
HLP Q330 SERVICE SHEET (v8) (last revised 20080716 M.J.F)

STATION: ORY040  Month: Sept  Day: 11 Year: 2008  ARRIVAL TIME (local): 17:34
OPERATOR: James Carlson  POWER: BATT1: 12.98  BATT2: 12.98
SENSOR MASS POSITION: > Views > Sensors > Boom Positions
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:  4:  5:  

> Views > Data Recording > DP3 *Station: HLG01 > DP4 *Station: ORY040
[DP3 Station should match program (HLG?? for Guralp, HLS?? for Steckel, etc.) DP4 Station should match station name]

> Views > System: (use Refresh to Update)   > Views > System: Turn GPS ON. Status > GPS
Last GPS Lock: 2.5 min
Phase error:  0
Clock quality 0 (locked, frozen, "H"
Input volts: 12.75
Temperature: 36 C
Last Boot: 2007-11-17 08:03:13
Last Resync: 2007-11-17 08:03:35

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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 0 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; > +/-15 for STS-2. Check here.
Enter final mass positions: 1:  2:  3:  4:  5:  

WAVEFORM MONITOR: > Views > Quickview > chan1,2,3 > Start: Enter Max Min Midpoint (click "stop" to record values)
CH 1 627.365 76.2 CH 2 -23 -38 82.8 CH 3 1929 872 88.3

☐ > 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: 25902484
☐ > 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: 25902467
(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: 81
☐ > 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): 17:50

*PLEASE NOTE GENERAL STATE OF THE STATION AND ANY SPECIAL PROBLEMS IN SPACE BELOW*
Station in generally good shape - add back-up wire ties to solar panel - old ones looking brittle
Replace tarp


**HLP Q330 DEMOBILIZATION SHEET (v3) (last revised 20090904 MJF)**

**STATION:** 000400  **Month:**  **Day:** 16  **Year:** 2009  **ARRIVAL TIME (local):** 1:59 PM  
**OPERATOR:** John Nieke,  **POWER:** BATT-1: 12.94  **BATT-2: 12.94**  
**Q330 S/N:**  **OLD BALER S/N:** 5885  
**SENSOR MASS POSITION:** Views > Sensors > Boom Positions  
1: 2  2: -1  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: -1  3: 5  

Views > Data Recording > DP3 > Station: HLG401 > DP4 > Station: 000400  
[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: 115 min  
Phase error: 0.00000  
Clock quality: OP Lock, Frozen (H)  
Input volts: 12.99  
Temperature: 30 C  

Views > System: Turn GPS ON. Status > GPS  
Locked? ✔  
Satellites viewed: 11  Satellites used: 6  
Time: 21:06:14  
Date: 16/09/2009  
Latitude: 43.1714920.7  
Longitude: 17.2.849276.7  
Elev (m): 1364.7  

**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; IStart.  

Sit Quietly for ~18 min and note local start time here: 2:07 - 2:25  

> Status > Data Port Txfr > Data 4 > Packet Buffer ✔ Increasing? (press Refresh)  
> Cmds > Baler > I Send command to bailer (Baler should turn on, with packets being sent)  
> Status > Data Port Txfr > Data 4 > Packet Buffer (Decreases to zero)? Packets Sent: 115 24787  
> Commands > Baler Cmds > ITurn Off Baler (wait for slow green blink = idle)  

+++++++++++++++++++++ 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:  
Remove sensor; enter sensor information: Type: 3T  Serial #: 34447  
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:  

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 #: 5855  
Label baler with station name and date  
Disconnect batteries; cover terminals with plastic caps or tape  
Disconnect solar panels and GPS; enter GPS serial #: 17340003  

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