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

STATION NAME: QRS433  
OPERATOR: JAMES EAGAR, ROTH, WEST COOPER, GOLDEN

MONTH: 3  
DAY: 2  
YEAR: 2007  
ARRIVAL TIME(local): ~9:30 am

SENSOR TYPE: STS-2  
SENSOR SN: 99733

Q330 S/N: 11932  
BALE S/N: 05313  
GPS S/N: 2933014

Handheld GPS Stats:  
Lat: 445608031  
Lon: -11170929  
Elev: 1381 m

POWER: Batt 1: 12.74  
Batt 2: 12.3

Solar panel output (~18V): 21.4

---------------------------------------------------------------------

Connect cables:
1. Build power system  
2. Connect Q330 (Qnet) to bale  
3. Q330 (GPS) to GPS
4. Power to Q330
5. 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 > Q330 Beta > Cmds > Cloning
   > Select file to clone (STS2 (HLS01) or Guralp (HGL01))
   > Station names
      > Click "Palm overrides 330" in dropdown
      > Check "Edit/Verify"
   > IP Address set: 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 StationID 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 Cline: Views: > Sensor. Set duration = 10 sec. > Unlock A.

Views > Sensor (click refresh): Mass Positions (V10 < 15 (Guralp); < 25 (STS-2))
  Voltage (10) CH 1: -0.07  
  CH 2: -0.20  
  CH 3: -0.45

Set Duration = 10 and click Center A command if any channel > 15 (Guralp); > 25 (STS-2) and click Refresh

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

CH 1 2335.4, 40.844  
CH 2 2335.52, -24.325  
CH 3 2335.20, -2384.40  
1393.2

Views > System
  Last GPS Lock: 0 min  
  Phase Error, C:
  Clock Quality, SD Lock (CT)
  Input volts: 11.0 V
  Last boot: 2007-05-22 19:45:35
  Q330 Software Version: 1.99

Status > GPS (confirm GPS lock)
  GPS Time: 20:02:2.9
  GPS Date: 22/06/2007
  Lat: 43.6803350
  Lon: -111.7911847
  Elev: 1382.3

Status > Data Port Txf > Data4
  Packet Buffer: 34584
  (Increasing? (refresh))

Cmds > Baler cmd > Turn on Baler; "Send bale cmd." Check bale is on (solid green light):

Status > Data Port Txf > Data4
  Packet Buffer decreases to zero: 243
[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: 119

Commands > Make DocTitle. add station name (STA) to default filename, ConfYMoDy-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):  

"PLEASE DETAIL SPECIAL PROBLEMS ON BACK OF THIS SHEET, AND NOTE BELOW"

Cap loose on vault; flooded upon arrival,1. smoothed the cap; but no gasket. If irreg. records open vault & check.
HLP Q330 SERVICE SHEET (Last revised 05/21/07 DEJ)

STATION: OB043  Month: 06  Day: 07  Year: 2007  ARRIVAL TIME (local): 15:30
OPERATOR: David
POWER: Batt-1: 13.15  Batt-2:
Q330 S/N: 1132 OLD BALER S/N: 05373 NEW BALER S/N: 06317
SENSOR MASS POSITION: > Views > Sensors > Boom Positions
1: -16  2: -32  3: -11
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.
Final enter mass positions: 1: -16  2: -7  3: -11

> Views > Data Recording > DP3 Station: HILS01  > DP4 Station: OR043
[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: 160
Phase error: 1000007
Clock quality: P lock frozen
Input volts: 12.5
Temperature: 25°
Last Resync: 4 15:56:18

> Views > System: Turn GPS ON. Status > GPS
Satellites viewed: 12  Satellites used: 6
Time: 22:36:35
Date: 07-06-2007
Latitude: 43663633N
Longitude: 1197091750W
Elev (m): 1771

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Calibration and Waveform Monitor

☑ > Cmds > DURATION bar: 240 sec (wrongly labeled "min" on Clie); SETTLING bar: 9 sec; TRAILER bar: 1 min
☑ > Calibration > Waveform > STEP. AMPLITUDE bar: -24 db Guralp or -18 db STS2; STEP POLARITY: Positive
☑ > Calibration > CALIBRATE CHANNELS: I select all 3 channels; START: 1 minute; I start.
Sit quietly for 12 min and note local start time here: [ ] Click O.K. when finished.

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

CH 1 1570 1934 430 CH 2-451 -586 64.1 CH 3 2049 -129 231.7

☑ > Status > Data Port Txfr > Data4 > Packet Buffer 4 Is Increasing? (press Refresh)
☑ > Cmds > Baler > I Send command to baler (Baler should turn on, with packets being sent)
☑ > Status > Data Port Txfr > Data4 > Packet Buffer Decreases to zero? Packets Sent: 139928
☑ > Commands > Baler Cmds > Turn Off Baler (wait for slow green blink = idle)
☑ > Swap out Baler
☑ > Status > Data Port Txfr > Data4 > Packet Buffer 4 Is Increasing?
☑ > Cmds > Baler > I Send command to baler (Baler should now be on)
☑ > Status > Data Port Txfr > Data4 > Packet Buffer Decreases to zero? Packets Sent: 1399781
[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 one more, ending in Baler shutdown. Press Attn button once to turn Baler on and check that data transferred.]

> Status > General > Total Resyns: 119
> 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): 16:05

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

All normal at site.

Baler swapped, but data baleal also read on-site (as training).
HLP Q330 SERVICE SHEET (Last revised 06/22/07 DEJ)

STATION: OR043  Month: Oct  Day: 07  Year: 2007  ARRIVAL TIME (local): 1500
SENSOR MASS POSITION: > Views > Sensors * Boom Positions
1: -21  2: 35  3: -67
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: 10

> Views > Data Recording > DP3 * Station: HLS01  > DP4 * Station: OR043 [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: 140
Phase error: -0.0
Clock quality: O clock frozen (1)
Input volts: 13.2V
Temperature: 18°C
Last Boot: 20070522 104703
Last Resync: 20070522 155618

> Views > System: Turn GPS ON. Status > GPS
Locked?...[ ]
Satellites viewed: 11  Satellites used: 4
Time: 22.06.25
Date: 07/10/07
Latitude: 43.6807366
Longitude: 119.4052133
Elev (m): 1376.0

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) > chan 1,2,3 > Start: Write down Max Min Midpoint (click “stop” to record values)

CH 1 255 3241 565.8  CH 2 3279 -587 647.1  CH 3 435 -4039 782.9
✓ Microeisms 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: 11936298
☐ > 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: 11936327

[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 button flashes 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: 115
> Commands > Make Docfile (A bug here means you should delete “Conf.” at the start of the default filenname, append the station name to end of the remaining default filename and click OK. Check that name is correct.)

DEPARTURE TIME (local): 1525

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

Portions of the PVC conduit had become exposed. Take showl next time just in case.
HLP Q330 SERVICE SHEET (Last revised 06/22/07 DEJ)

STATION: DE/43  Month: 14  Day: 22  Year: 2006  ARRIVAL TIME(local): 5:40 PM
OPERATOR: Steven, Kangley  POWER: BATT-1: 13.46, BATT-2: 13.46
Q330 S/N: 1172  OLD BALER S/N: 5226  NEW BALER S/N: 5660
SENSOR MASS POSITION: > Views > Sensors * Boom Positions
1: 81 2: 2.6 3: 0.7
Use Center A to recenter if any CH > +/-15 for Gurpal; > +/-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: 0.1 2: 1.1 3: 0.7

> Views > Data Recording > DP3 * Station: HLSO3 > DP4 * Station: 013093
[DP3 Station should match station program (HLSO?? for Gurpal, HLS?? for Streikens), DP4 Station should match station name]

> Views > System: (use Refresh to Update)
Last GPS Lock: 24 min
Phase error: 0
Clock quality: 0.5 Lock Frozen
Input volts: 13.35
Temperature: 20
Last Boot: 2007-11-12 21:47:08
Last Resync: 2007-11-12 21:47:31

Satellites viewed: 12  Satellites used: 9
Time: 00:43:25
Date: 23/12/2006
Latitude: 43.6383
Longitude: 119.7094983
Elev (m): 1369

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Calibration and Waveform Monitor

☐ > Cmds > Calibration: DURATION bar: 240 s (wrongly labeled "min" on C1e); SETTLING bar: 6 min.; TRAILER bar: 1 m
☐ > Cmds > Calibration > Waveform > STEP: AMPLITUDE bar: -24 db Gurpal 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: 165 1318 2015  CH 2: -1086 1747 1275  CH 3: 236.4 912 225.5
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: 16605375
☐ > Commands > Baler Cmds > iTurn Off Baler (wait for slow green blink = idle)
☐ > 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: 16605557
[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 Altn button once to turn Baler on and check that data transferred.]

> Status > General > Total Resyncs: 120
> 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): 12:00

*PLEASE NOTE GENERAL STATE OF THE STATION AND ANY SPECIAL PROBLEMS IN SPACE BELOW*
HLP Q330 DEMOBILIZATION SHEET (v1) (last revised 20080716 MJF)

STATION: OR043  Month: 07  Day: 23  Year: 2008  ARRIVAL TIME (local): 11:27
Q330 S/N: 1172  GURALP BALER S/N: 05 VLO  NEW BALER S/N: ______
SENSOR MASS POSITION: > Views > Sensors > Boom Positions
1. __ 2. __ -31  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: HL501 > DP4 *Station: OR043
[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: 90 min ago
Phase error: __
Clock quality: __
Input volts: ___
Temperature: __

> Views > System: Turn GPS ON. Status > GPS
Locked? ___ Satellites viewed: ___ Satellites used: ___
Time: 13:32:04 Date: 23/10/2008
Latitude: __ Longitude: __
Elev (m): 1372.5

Calibration

XX > Cmds > Calibration: DURATION bar: 6 min (if running Q330Beta V1.44t); SETTLING bar: 6 min.; TRAILER bar: 5
XX > Cmds > Calibration > Waveform > STEP, AMPLITUDE bar: -24 db Guralp or -18 db STS2; STEP POLARITY: Positive
XX > Cmds > Calibration > CALIBRATE CHANNELS: !Select all 3 channels; START: 1 minute; !Start.

Sit Quietly for ~18 min and note local start time here: 11:33

XX > Status > Data Port Txfr > Data4 *Packet Buffer X Increasing? (press Refresh)
XX > Cmds > Baler > !Send command to baler (Baler should turn on, with packets being sent)
XX > Status > Data Port Txfr > Data4 *Packet Buffer (Decreases to zero)? Packets Sent: 21, 943, 158
XX > 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 Cleo: 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.
XX If sensor is an STS2: disconnect breakout box; lock masses with power off
XX Confirm alignment of sensor with vault alignment line. If not aligned, enter misorientation value: N/A
XX Remove sensor; enter sensor information: Type: STS2 Serial #: 99733
XX Enter assumed declination from installation (as written on sensor pad): 15° 40' E
XX Confirm Brunton compass declination is set to same value as that written on pad
XX Measure orientation of vault alignment line (N-S for Guralp; E-W for Streckeisen). Enter orientation: 90°

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 #: 1172
□ Disconnect batteries; cover terminals with plastic caps or tape
□ Disconnect solar panels and GPS; enter GPS serial #: 02430014

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