RBRvirtuoso Dwave Checkout Sheet

Mooring number: 1123 D Site name: Wellfleet Deep

Date: 09/18/2019 Operator: J. Borden

Information

Model#: Dwave Serial#: 55025

Firmware 1.400

Battery Voltage: 12.04

Parameter: pressure

Setup

✓ **Clock set** @ 09/18/2019 15:04:26 UTC

Start logging: 09/15/2019 1800 UTC

End logging: 12/02/2019 2300 UTC

Sampling regime: Continuous

Measurement speed: __ Period __ Rate _____

Sampling regime: Tide

Tide sampling

Measurement speed: __ Period __ Rate _____

Tidal averaging duration: _____

Tidal measurement period: _____

Sampling regime: ✓ Wave

Wave sampling

Measurement speed: __ Period ✓ Rate 4hz

Wave burst length (samples): 4096

Wave measurement period: 00:30:00

Instrument altitude (m): 0.41

Mean depth of water (m): 2m

Wave bandwidth (Hz): 0.0010 - 0.5935 hz

Wave periods (s): 1.84 to 1021.0

Memory required: 45%

Battery required: 39% (using batteries from 11234 deployment recovery scheduled for some time in Oct

✓ **Enable (Start logging)**

Recovery

Sensor time: 19:14:16 11/21/2019

Actual time: 19:14:22

Battery voltage: 11.75

Fouling comments: MUD IN SENSOR PORT

RBRvirtuoso Dwave Checkout Sheet

Mooring number: 1123C Site name: Wellfleet Deep

Date: 6/20/2019 Operator: Martin

Information

Model#: RBR Virtuoso DIwave Serial#: 55025 10m

Firmware 1.400

Battery Voltage: new lith. 12.82V

Parameter: pressure, dDar

Setup

_____ **Clock set** @ time OK 13:07:21 6/20/2019 UTC

Start logging: 6/20/2019 12:00:00 UTC

End logging: 12/2/2019 11:00:00 UTC

Sampling regime: __Continuous

Measurement speed: __ Period __ Rate _____

Sampling regime: __Tide

Tide sampling

Measurement speed: __ Period __ Rate _____

Tidal averaging duration: _____

Tidal measurement period: _____

Sampling regime: ✓ Wave

Wave sampling

Measurement speed: __ Period ✓ Rate 4Hz

Wave burst length (samples): 4096

Wave measurement period: 00:30:00

Instrument altitude (m): 0.41 m * was 0.1

Mean depth of water (m): 2m

Wave bandwidth (Hz): 0.0010 to 0.52135 Hz

Wave periods (s): 1.84 to 1024.00 sec

Memory required: 98%

Battery required: 80%

new desiccant, orings

✓ **Enable (Start logging)**

Recovery

Sensor time: 09/17/19 18 35 40

Actual time: 09/17/19 18 35 40

Battery voltage: 11.95 ✓

Fouling comments: muddy

1837 stop

055025_20190917_1437.rsk
to
1173C_dwav.rsk

RBRvirtuoso Dwave Checkout Sheet

Mooring number: 1123B Site name: WFLFLEET DEEP

Date: 3-18-19 Operator: EM

Information

Model#: RBR VIRTUOSO Serial#: 055025

Firmware 1.400

Battery Voltage: 12.4

Parameter: WAVES

Setup

__✓__ **Clock set** @ 3-18-19 16:37:30

Start logging: 3-19-19 12:00:00

End logging: 9-2-19

Sampling regime: __Continuous

Measurement speed: __ Period __ Rate _____

Sampling regime: __Tide

Tide sampling

Measurement speed: __ Period __ Rate _____

Tidal averaging duration: _____

Tidal measurement period: _____

Sampling regime: ✓ Wave

Wave sampling

Measurement speed: __ Period ✓ Rate 4Hz

Wave burst length (samples): 4096

Wave measurement period: 00:30:00

Instrument altitude (m): .41

Mean depth of water (m): 2M

Wave bandwidth (Hz): .0010 TO .5435

Wave periods (s): 1.84 TO 1024 SEC

Memory required: 100%

Battery required: 85%

✓ **Enable (Start logging)**

Recovery

Sensor time: 16:29:15 6/19/2019 UTC

Actual time: 16:29:14 6/19/2019 UTC

Battery voltage: 11.91 V

Fouling comments: very clean

---

downloaded 1GB
ran entire time

RBRvirtuoso Dwave Checkout Sheet

Mooring number: ~~1119~~ 1116 - B ? Site name: SEDFlux - ~~Thompsons Beach~~ STONE HARBOR ?

Date: 11/20/18 Operator: Borden

Information

Model#: RBR Dwave Serial#: 55125

Firmware 1.40

Battery Voltage: 12.89

Parameter: Pressure (dbar)

Setup

✓ **Clock set** @ 2018-11-20 20:15:00

Start logging: 2018-12-3 00:00:00

End logging: 2019-05-20 00:00:00

Sampling regime: __Continuous

Measurement speed: __ Period __ Rate _____

Sampling regime: __Tide

Tide sampling

Measurement speed: __ Period __ Rate _____

Tidal averaging duration: _____

Tidal measurement period: _____

Sampling regime: ✓ Wave

Wave sampling

Measurement speed: __ Period ✓ Rate 4 hz

Wave burst length (samples): 4096

Wave measurement period: 00:30:00

Instrument altitude (m): 0.15

Mean depth of water (m): 2.5 m

Wave bandwidth (Hz): 0.0010 - 0.4405 hz

Wave periods (s): 2.27 - 1024

Memory required: 100%

Battery required: 85%

✓ **Enable (Start logging)**

Recovery

Sensor time: 15 55 30 / 03-05-19

Actual time: 15 55 29

Battery voltage: 11.97

Fouling comments: Sensor pretty clogged w/ sand

---

stop recording
3/5/19 15 56 45

RBRvirtuoso Dwave Checkout Sheet

Mooring number: 1106D Site name: DITCH FAR

Date: 3/15/18 Operator: NOWACKI

Information

Model#: RBR Virtuoso Serial#: 055025

Firmware 1.400

Battery Voltage: 12.83

Parameter: Pressure (dbar)

Setup

✓ **Clock set** @ 2018-03-15 15:17:03

Start logging: 3/20/2018 8:00:00 AM

End logging: 9/4/2018 6:30:00 AM

Sampling regime: __Continuous

Measurement speed: __ Period __ Rate _____

Sampling regime: __Tide

Tide sampling

Measurement speed: __ Period __ Rate _____

Tidal averaging duration: _____

Tidal measurement period: _____

Sampling regime: ✓ __Wave

Wave sampling

Measurement speed: __ Period ✓ Rate 4Hz

Wave burst length (samples): 4096

Wave measurement period: 00:30:00

Instrument altitude (m): 0.15

Mean depth of water (m): 1

Wave bandwidth (Hz): 0.0010 - 0.7407

Wave periods (s): 1.35 - 1024

Memory required: 100%

Battery required: 86%

✓ **Enable (Start logging)**

Recovery 6/27/2019

Sensor time: 6/29/2018 15:21:27

Actual time: 15:21:30

Battery voltage: 12.01 V

Fouling comments: Lg clump of sediment in press. port. (see photos)

6/29/18
15:22:02 - stop logging

Download file. → 055025_20180629-1122.rsk
1.16 GB

RBRvirtuoso Dwave Checkout Sheet

Mooring number: 1106 Site name: DITCH FAR

Date: 10/20/2017 Operator: D NOWACKI

Information

Model#: RBRvirtuoso Serial#: 655025

Firmware 1.400

Battery Voltage: 12.86

Parameter: Pressure (dbar)

Setup

✓ **Clock set** @ 2017-10-20 18:52:50

Start logging: 10/21/2017 08:00:00

End logging: 4/7/2018 06:00:00

Sampling regime: __Continuous

Measurement speed: __ Period __ Rate _____

Sampling regime: __Tide

Tide sampling

Measurement speed: __ Period __ Rate _____

Tidal averaging duration: _____

Tidal measurement period: _____

Sampling regime: ✓ Wave

Wave sampling

Measurement speed: __ Period ✓ Rate 4Hz

Wave burst length (samples): 4096

Wave measurement period: 00:30:00

Instrument altitude (m): 0.1

Mean depth of water (m): 1

Wave bandwidth (Hz): 0.6016 — 0.7194

Wave periods (s): 1.39 — 1024

Memory required: 100%

Battery required: 86%

✓ **Enable (Start logging)**

Recovery

Sensor time: _____

Actual time: _____

Battery voltage: _____

Fouling comments: _____

RBRvirtuoso Dwave Checkout Sheet

Mooring number: 1106 Site name: DITCH FAR

Date: 8/3/2017 Operator: S. SUTTLES

Information

Model#: RBR VIRTUOSO D|WAVE Serial#: 055025

Firmware 1.400

Battery Voltage: 12.77 V

Parameter: Pressure

RBR upgrade memory to 60M rdgs

Setup

✓ **Clock set** @ 8/3/2017 18:02:08 UTC

Start logging: 8/15/2017 08:00:00 AM

End logging: 1/30/2018 05:30:00 AM

Sampling regime: __Continuous

Measurement speed: __ Period __ Rate _____

Sampling regime: __Tide

Tide sampling

Measurement speed: __ Period __ Rate _____

Tidal averaging duration: _____

Tidal measurement period: _____

Sampling regime: ✓ Wave

Wave sampling

Measurement speed: __ Period ✓ Rate 4 Hz

Wave burst length (samples): 4096

Wave measurement period: 00:30:00

Instrument altitude (m): 0.10

Mean depth of water (m): 0.5

Wave bandwidth (Hz): 0.001 - 1.0870

Wave periods (s): 0.92 - 1024

Memory required: 100 %

Battery required: 86 %

✓ **Enable (Start logging)**

Recovery

Sensor time: 2017/10/20 14:39:37

Actual time: 2017/10/20 14:39:40

Battery voltage: 11.93

Fouling comments:

had trouble connecting - had to modify port
so 30-pin connector could insert properly

FILENAME: 055025_20171020-1440.rsk

RBR Pressure Calibration Certificate

RBRvirtuoso D|wave s/n: 55025
Sensor rating: 10 dbar s/n: NA
Nominal accuracy: 0.05%FS (0.005 dbar)
Reference instrument: Mensor CPC6050 s/n: 41000CAM

Applied pressure, P_{app} (dbar)	Voltage ratio, V	Measured pressure, P_{meas} (dbar)	Calibration error (dbar)
10.0675	0.256470	10.0674	-0.0001
12.0002	0.295144	12.0006	0.0004
13.9997	0.334946	13.9994	-0.0003
16.0000	0.374585	15.9998	-0.0002
18.0000	0.414023	18.0001	0.0001
20.0001	0.453257	20.0003	0.0002
21.9997	0.492273	21.9997	0.0001
24.0001	0.531102	24.0003	0.0002
26.0001	0.569695	25.9996	-0.0005
27.9994	0.608089	27.9996	0.0002

Coefficients

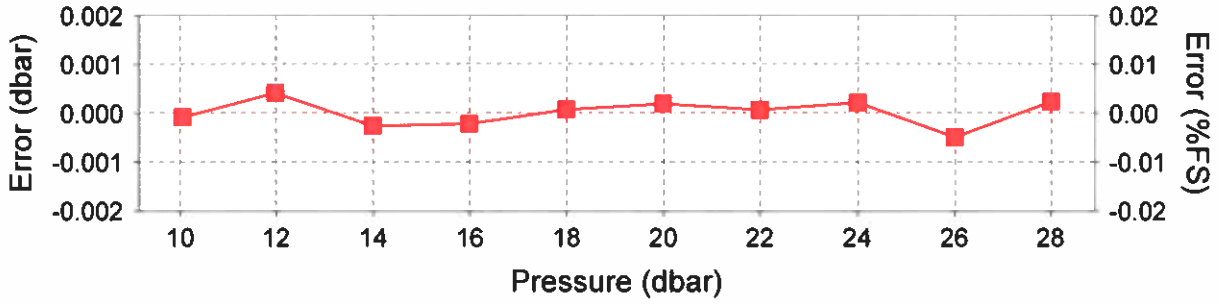
C0:	-2.03694742
C1:	48.57697337
C2:	2.17229028
C3:	0.91953523
X0(Patm):	10.068
X1:	0.00936475
X2:	0.00008562
X3:	-0.00000064
X4:	0.00012620
X5(Tcal):	24.5

$$P_{meas} = C_0 + C_1 \cdot V + C_2 \cdot V^2 + C_3 \cdot V^3$$

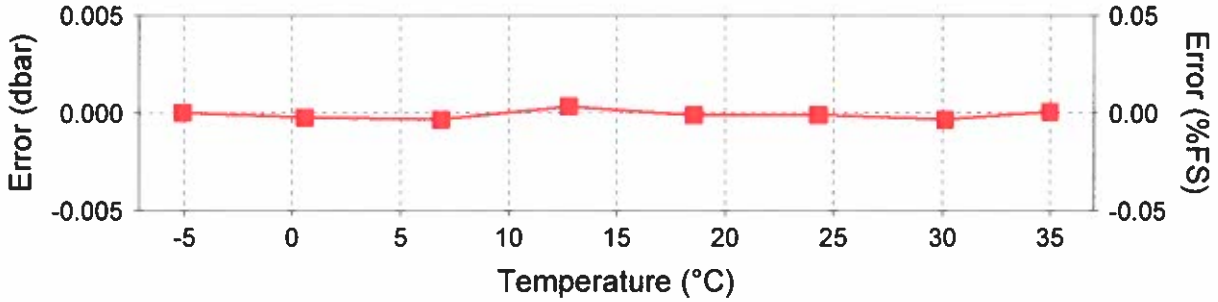
$$P_{tcor} = X_0 + \frac{P_{meas} - X_0 - X_1 (T - X_5) - X_2 (T - X_5)^2 - X_3 (T - X_5)^3}{1 + X_4 (T - X_5)}$$

Head (mm) = 512

Calibration error vs. Pressure (Tcal = 24.5°C)



Calibration error vs. Temperature (Patm = 10.01 dbar)



Calibration Date: 31/Jul/2017
Issue Date: 31/Jul/2017
File Name: 055025_20170731_1526P.rsk

Operator: dluong

Approver: sbucknor

RBR

RBR Ltd., 95 Hines Road, Unit 5, Kanata, Ontario, K2K 2M5, Canada
Tel: +1 613 599 8900 Fax: +1 599 8929 info@rbr-global.com

Packing List # 19364

Sold To: USGS Coastal and Marine Geology
384 Woods Hole Road
Woods Hole, MA 02543-1598
Att: Chris Sherwood, 916-207-2206

Ship To: USGS Coastal and Marine Geology
384 Woods Hole Road
Woods Hole, MA 02543-1598
Att: Patrick Dickhudt, 508-457-2332

Date: 01/08/2017

P.O. No.: G17PS00694

Ship Via: Federal Expr...

Item	Qty	Description
	6	Data Logger Model RBRvirtuoso D|wave Serial #55108, 55107, 55033, 55025, 55110, 55109 Shipped with: -Qty. 6: Set of Calibration Certificates -Qty. 2: USB: Ruskin Software, Manual -Qty. 3: Yellow TC1400 Transit Case

Business No. 104516604

RBRvirtuoso Dwave Checkout Sheet

Mooring number: 1069 Site name: SANDWICH, SURI=

Date: 5/9/2016 Operator: J. SUTTLES

Information

Model#: RBR VIRTUOSO DWAVE Serial#: 055025

Firmware 12.030

Battery Voltage: 12.14 V

Parameter: Pressure (dbar)

Setup

✓ **Clock set** @ 19:21:00 5/9/2016

Start logging: 5/9/2016 8:00:00 PM

End logging: 7/14/2016 8:00:00 AM

Sampling regime: ✓ Continuous

Measurement speed: __ Period ✓ Rate 4 HZ

Sampling regime: __Tide

Tide sampling

Measurement speed: __ Period __ Rate _____

Tidal averaging duration: _____

Tidal measurement period: _____

Sampling regime: __Wave

Wave sampling

Measurement speed: __ Period __ Rate _____

Wave burst length (samples): _____

Wave measurement period: _____

Instrument altitude (m): _____

Mean depth of water (m): _____

Wave bandwidth (Hz): _____

Wave periods (s): _____

Memory required: 67%

Battery required: 97%

✓ **Enable (Start logging)**

Recovery

- CONNECT 13:15:10 - 6/17/2016 UTC

Sensor time: 13:16:00

Actual time: 13:16:00 ✓

Battery voltage: 11.97 V

Fouling comments: CLEAN - FOULING INSIDE PRESSURE PORT, LIMITED TO FINE SAND DEPOSIT ON ONE SIDE OF THREADS, NONE ON DIAPHRAGM ITSELF

RECOVERY NOTES -

6/16/16 18:29 UTC - GPS FIX

18:30 - INSTRUMENT PICKED-UP OFF BOTTOM

18:32 - OUT OF WATER

20:17 - IN BUCKET @ MOF ~0.25m WATER IN BUCKET

6/17/16 12:30 - REMOVED FROM BUCKET

MEM USED = 51.05 MB

13:17:35 - STOP LOGGER - DOWNLOAD DATA TO → 055025_20160617_0915.rsk

TEST

RBRvirtuoso Dwave Checkout Sheet

Mooring number: ~~~~ Site name: ~~~~

Date: may 5, 2016 Operator: Ann marie uppman

Information

Model#: RBR virtuoso Serial#: 55025

Firmware 12.030

Battery Voltage: 12.94v

Parameter: (dwar)

Setup

____ **Clock set** @ 13:40:00 utc

Start logging: 10:00:00 am (5/5/16)

End logging: 8:00:00 am (5/9/16)

Sampling regime: ✓ Continuous

Measurement speed: __ Period ✓ Rate 4Hz

Sampling regime: __ Tide

Tide sampling

Measurement speed: __ Period __ Rate _____

Tidal averaging duration: _____

Tidal measurement period: _____

Sampling regime: __ Wave

Wave sampling

Measurement speed: __ Period __ Rate _____

Wave burst length (samples): _____

Wave measurement period: _____

Instrument altitude (m): _____

Mean depth of water (m): _____

Wave bandwidth (Hz): _____

Wave periods (s): _____

Memory required: 5 %

Battery required: 7 %

__✓__ **Enable (Start logging)**

Recovery

Sensor time: 15 : 21 : 28

Actual time: 15 : 21 : 30

Battery voltage: ~~11.93~~ 11.93 V

Fouling comments: _____

RBR

Pressure Calibration Certificate

RBRvirtuoso D|wave s/n: 55025
Sensor rating: 20 dbar s/n: NA
Nominal accuracy: 0.05%FS (0.01 dbar)
Reference instrument: Mensor CPC6000 s/n: 410001LR

Applied pressure, P_{app} (dbar)	Voltage ratio, V	Measured pressure, P_{meas} (dbar)	Calibration error (dbar)
10.0906	0.230947	10.0903	-0.0003
12.0000	0.270908	12.0006	0.0006
14.0000	0.312531	14.0001	0.0000
16.0001	0.353949	15.9999	-0.0002
18.0000	0.395154	17.9998	-0.0001
20.0001	0.436140	20.0000	-0.0001
22.0000	0.476898	22.0001	0.0001
24.0000	0.517427	24.0002	0.0002
26.0000	0.557718	26.0001	0.0000
28.0000	0.597771	27.9999	-0.0001
30.0000	0.637587	30.0000	-0.0001

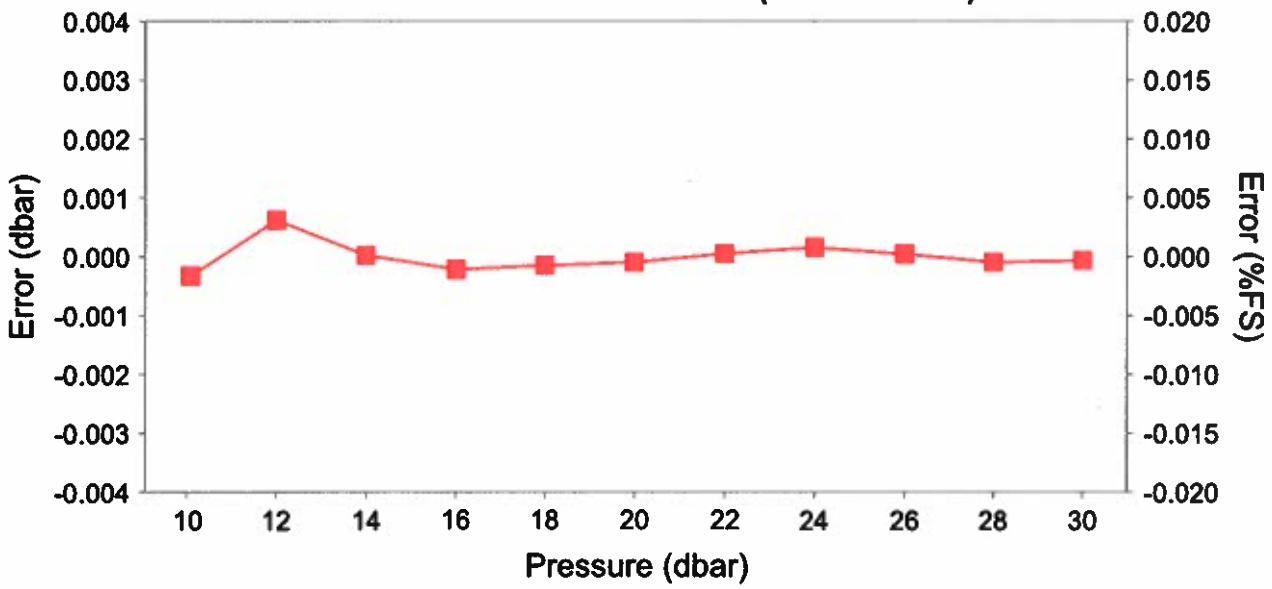
Coefficients

C0:	-0.27234942
C1:	46.58285079
C2:	2.07895230
C3:	0.94383739

$$P_{meas} = C_0 + C_1 \cdot V + C_2 \cdot V^2 + C_3 \cdot V^3$$

Head (mm) = 518

Calibration error vs. Pressure (Tcal = 22.0°C)



Calibration Date: 29/Mar/2016
Issue Date: 31/Mar/2016
File Name: 055025_20160329_1610P.rsk

Operator: dluong

Approver: sbucknor

Deployment Dates

Mooring Number 1059 Mooring Type LEAD DISK

Location Sandwich Beach - OFFSHORE Dates 1/21/2016-

Experiment name Sandwich Beach Nourishment Monitoring

Remarks / Maintenance

cc: inst. Logs

RBRvirtuoso Dwave Checkout Sheet

Mooring number: 1059 Site name: SANDWICH BEACH

Date: 1/20/16 Operator: S. SUTTLES / N. DICOSIMO

Information

Model#: RBR VIRTUOSO DWAVE Serial#: 055025

Firmware 12.020

Battery Voltage: 12.97

Parameter: Pressure (dbar)

Setup

✓ **Clock set** @ 01/20/2016 19:55:48

Start logging: 1/21/2016 12:00:00 UTC

End logging: 3/28/2016 12:00:00 UTC

Sampling regime: ✓ Continuous

Measurement speed: __ Period ✓ Rate 4 Hz

Sampling regime: __ Tide

Tide sampling

Measurement speed: __ Period __ Rate _____

Tidal averaging duration: _____

Tidal measurement period: _____

Sampling regime: __ Wave

Wave sampling

Measurement speed: __ Period __ Rate _____

Wave burst length (samples): _____

Wave measurement period: _____

Instrument altitude (m): _____

Mean depth of water (m): _____

Wave bandwidth (Hz): _____

Wave periods (s): _____

Memory required: 69 %

Battery required: 99 %

✓ **Enable (Start logging)**

Recovery

Sensor time: 1/26/2016 19:00:28

Actual time: 1/26/2016 19:00:30

Battery voltage: 11.8 V

Fouling comments: NONE - CLEAN. -

- DOWNLOAD FILENAME -

✓ 055025_20160126-1902.DSK 80.1 MB

RBRvirtuoso Dwave Checkout Sheet

Mooring number: 1051 Site name: _____

Date: 4/23/15 Operator: D. NOWACKI

Information

Model#: RBR virtuoso dwave Serial#: 055025

Firmware 12.020

Battery Voltage: 12.97v

Parameter: pressure (dbar)

Setup

✓ **Clock set** @ 23/Apr/2015 14:26:19

Start logging: 4/25/2015 8:00:00 AM

End logging: 10/12/2015 8:30:00 PM

Sampling regime: __Continuous

Measurement speed: __ Period __ Rate _____

Sampling regime: __Tide

Tide sampling

Measurement speed: __ Period __ Rate _____

Tidal averaging duration: _____

Tidal measurement period: _____

Sampling regime: ✓Wave

Wave sampling

Measurement speed: __ Period ✓ Rate 6Hz

Wave burst length (samples): 4096

Wave measurement period: 00:30:00

Instrument altitude (m): 0.2

Mean depth of water (m): 1.5

Wave bandwidth (Hz): 0.0015 - 0.5988

Wave periods (s): 1.67 - 682.67

Memory required: 100%

Battery required: 97%

✓ **Enable (Start logging)**

✓ schedule is valid - 08:00:00

Recovery

Sensor time: 19:14:08

Actual time: 19:14:11

Battery voltage: 12.020

Fouling comments: 3/4 holes blocked with mud in plastic pressure port

055025_20150713_1514.RSK

RBRvirtuoso Dwave Checkout Sheet

Mooring number: 1029c Site name: CB11

Date: 1/21/2015 Operator: S. Suttles

Information

Model#: RBR Virtuoso Dwave Serial#: 055025

Firmware 12.020

Battery Voltage: 12.8 V

Parameter: Pressure (dbar)

Setup

✓ **Clock set** @ 21/Jan/2015 23:32:30 UTC

Start logging: 1/22/2015 12:00:00 Am UTC

End logging: ~~6~~ 7/~~22~~ 7/2015 12:00:00 Am UTC

Sampling regime: __Continuous

Measurement speed: __ Period __ Rate _____

Sampling regime: __Tide

Tide sampling

Measurement speed: __ Period __ Rate _____

Tidal averaging duration: _____

Tidal measurement period: _____

Sampling regime: X Wave

Wave sampling

Measurement speed: __ Period X Rate 6 Hz

Wave burst length (samples): 4096

Wave measurement period: 00:30:00

Instrument altitude (m): 0.2

Mean depth of water (m): 2.3

Wave bandwidth (Hz): 0.0015 to 0.4680 Hz

Wave periods (s): 2.14 to 682.67 secs

Memory required: 97%

Battery required: 94%

PARAMETERS - ~~Temp~~ = N/A

X **Enable (Start logging)**

✓ check schedule enabled

Recovery

Sensor time: 17:27:35

Actual time: 5:27:30

Battery voltage: 12.06V

Fouling comments: Sed in pressure transducer

---

memory used = 67.33mb

file = C:\Pats Files\EPR\Chinchaque\10 29c
055025_20150421_1729.rsk = 810 MB

plot - 055025_20150421_1729

RBRvirtuoso Dwave Checkout Sheet

Mooring number: 1029b Site name: CB11

Date: 10/17/2014 Operator: S. SUTTLES

Information

Model#: RBRvirtuoso Serial#: 055025

Firmware 12.020

Battery Voltage: 12.93V installed new batts

Parameter: Pressure (dbar)

Setup

X **Clock set** @ 17/Oct/2014 22:45:45

Start logging: 10/18/2014 12:00:00 AM UTC

End logging: 3/19/2015 12:00:00 AM

Sampling regime: __Continuous

Measurement speed: __ Period __ Rate _____

Sampling regime: __Tide

Tide sampling

Measurement speed: __ Period __ Rate _____

Tidal averaging duration: _____

Tidal measurement period: _____

Sampling regime: X Wave

Wave sampling

Measurement speed: __ Period X Rate 6 HZ

Wave burst length (samples): 4096

Wave measurement period: 00:30:00

Instrument altitude (m): 0.2

Mean depth of water (m): 2.3

Wave bandwidth (Hz): 0.0015 to 0.4680 HZ

Wave periods (s): 2.14 to 682.67

Memory required: 89%

Battery required: 86%

X **Enable (Start logging)** Schedule enabled

Recovery

Sensor time: 1/19/2015 22:20:00

Actual time: " 22:22:00

Battery voltage: 11.87

Fouling comments: See Mooring Log

SAVE/DOWNLOAD DATA – '055025_20150119_2221.rsk'

SIZE = 869.6 MB

Deployment Dates

Mooring Number 1029

Mooring Type TC LANDER

Location CB11 NEWPORT BAY

Dates

Experiment name EPR - Chincoteague

Remarks / Maintenance

cc: inst. Logs

New batteries + desiccant 7/2/14 → Wk0

☆ Update firmware from 11.000 to 11.910
O-rings cleaned + greased

RBRvirtuoso Dwave Checkout Sheet

Mooring number: 1029 Site name: CB11 NEWPORT BAY

Date: 7-27-14 Operator: Pat. D

Information

Model#: RBRvirtuoso Dwave Serial#: 55025

Firmware 11.910

Battery Voltage: 12.64

Parameter: Pressure (dbar)

Setup

X **Clock set** @ 27/Jul/2014 17:10:00 UTC

Start logging: 8/11/2014 12:00:00 AM

End logging: 1/28/2015 11:30:00 AM

Sampling regime: __Continuous

Measurement speed: __ Period __ Rate _____

Sampling regime: __Tide

Tide sampling

Measurement speed: __ Period __ Rate _____

Tidal averaging duration: _____

Tidal measurement period: _____

Sampling regime: X Wave

Wave sampling

Measurement speed: __ Period X Rate 6 Hz

Wave burst length (samples): 4096

Wave measurement period: 00:30:00

Instrument altitude (m): 0.2

Mean depth of water (m): 2.0

Wave bandwidth (Hz): 0.0117 to 0.5051

Wave periods (s): 1.98 to 682.67

Memory required: 100%

Battery required: 70%

X **Enable (Start logging)**

Recovery

Sensor time: 22:52:46

Actual time: 22:52:45

Battery voltage: 11:35

Fouling comments: _____

---

memory used = 49.49 Mb

file = "055025_2014/015_2254"

plot = "055025_2014/015_2254"

Notes from conversation with Greg Johnson at RBR on Oct-1-2014 regarding clock drift issue with Dwave.

1. Only applies to continuous sampling with Firmware versions before 11.820.
2. Time stamp within burst (or continuous) is not synced with clock so even if clock drift appears to be small, actual time drift in data can be much larger.
3. Influenced by a number of factors so difficult to characterize drift and may vary quite a bit between instruments.
4. Drift can be as much as 2 hours per month.

Deployment Dates

Mooring Number 978

Mooring Type Strapped to pole

Location Lavallette / Marker 28

Dates 8/14/13 – 9/12/13

Experiment name Barnegat Bay

Remarks / Maintenance

AL Channel

cc: inst. Logs

RBRvirtuoso Dwave Checkout Sheet

Mooring number: 978 Site name: Markr 28

Date: 8/13/2013 Operator: NG/ZD

Information

Model#: Dwave Serial#: 55025

Firmware 11.000

Battery Voltage: 12.86

Parameter: Pressure

Setup

✓ **Clock set** @ 20:19:05

Start logging: 8/14/13 12:00:00 AM

End logging: 9/30/13 12:00:00 PM

Sampling regime: ✓Continuous

Measurement speed: __ Period ✓ Rate 6 hz

Sampling regime: __Tide

Tide sampling

Measurement speed: __ Period __ Rate _____

Tidal averaging duration: _____

Tidal measurement period: _____

Sampling regime: __Wave

Wave sampling

Measurement speed: __ Period __ Rate _____

Wave burst length (samples): _____

Wave measurement period: _____

Instrument altitude (m): _____

Mean depth of water (m): _____

Wave bandwidth (Hz): _____

Wave periods (s): _____

Memory required: 73 %

Battery required: 50 %

✓ **Enable (Start logging)**

Recovery

Sensor time: 16:27:20 9-12-13

Actual time: 16:27:23 9-12-13

Battery voltage: 11.92

Fouling comments: Housing + mount covered in barnacles. Barnacles totally over pressure port but inside of port mostly clean

58.70 MB of data

Filename: 055025_20130912_1628

RBRvirtuoso Dwave Checkout Sheet Marker 40

Mooring number: [redacted] 964 Site name: [redacted] Barnegat Bay

Date: [redacted]13 7/16/13 Operator: [redacted] Sandy B.

Information

Model#: RBRvirtuoso Dwave Serial#: 05502[redacted]5

Firmware 11.000

Battery Voltage: [redacted] 12.55

Parameter: Pressure (dBar) 0

Setup

[redacted] **Clock set** @ [redacted].75 21:55:60 - 5sec UTC

Start logging: [redacted]13 [redacted] 7/16/13 @ 21:57:40

End logging: [redacted]3 [redacted] 8/29/13 4:40:42

Sampling regime: [redacted] Continuous 6Hz

Measurement speed: __ Period [redacted] Rate [redacted]

Sampling regime: __Tide

Tide sampling

Measurement speed: __ Period __ Rate _____

Tidal averaging duration: _____

Tidal measurement period: _____

Sampling regime: __Wave

Wave sampling

Measurement speed: __ Period __ Rate _____

Wave burst length (samples): _____

Wave measurement period: _____

Instrument altitude (m): _____

Mean depth of water (m): _____

Wave bandwidth (Hz): _____

Wave periods (s): _____

Memory required: [redacted] 688

Battery required: [redacted] 468

[redacted] **Enable (Start logging)**

Recovery

Sensor time: 16:03:48

Actual time: 16:03:40

Battery voltage: 12.07

Fouling comments: Heavy fouling. Some mud in pressure port

Deployment Dates

Mooring Number 962

Mooring Type Pde on bridge

Location Rte. 72 Bridge

Dates 6/26/13 -

Experiment name Barnegat Bay, NJ

Remarks / Maintenance

cc: inst. Logs

RBRvirtuoso Dwave Checkout Sheet

Mooring number: 962 Site name: Rte. 72 Bridge, Barnegat Bay, N.

Date: 6-19-13 Operator: Pat D

Information

Model#: RBRvirtuoso Dlwave Serial#: 055025

Firmware 11.000

Battery Voltage: 12.42

Parameter: Pressure (dBar)

Setup

X **Clock set** @ 6/19/13 19:09:10

Start logging: 6/26/13 00:00:00

End logging: 8/29/13 16:40:42

Sampling regime: X Continuous

Measurement speed: __ Period X Rate 6 Hz

Sampling regime: __Tide

Tide sampling

Measurement speed: __ Period __ Rate _____

Tidal averaging duration: _____

Tidal measurement period: _____

Sampling regime: __Wave

Wave sampling

Measurement speed: __ Period __ Rate _____

Wave burst length (samples): _____

Wave measurement period: _____

Instrument altitude (m): _____

Mean depth of water (m): _____

Wave bandwidth (Hz): _____

Wave periods (s): _____

Memory required: 100%

Battery required: 68%

X **Enable (Start logging)**

Stopped logging @ 18:01

Recovery

Sensor time: 17:58:08 7/16/13

Actual time: 17:58:10 7/16/13

Battery voltage: 12.01 V

Fouling comments: covered with hairs

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file name — redo

C:\data\Barnegat\962dwave025.rsk

RBRvirtuoso Dwave Checkout Sheet

Mooring number: _____ Site name: CC Canal

Date: 5-29-13 Operator: Pat D.

Information

Model#: D|Wave Serial#: 55025

Firmware 11.000

Battery Voltage: 12.62

Parameter: Pressure (dBar

Setup

X **Clock set** @ 13:41:15 GMT

Start logging: 5/30/13 11:00:00 AM

End logging: ~~9/27/2013~~ 8/3/13 3:40:42 AM (out of memory)

Sampling regime: X Continuous

Measurement speed: __ Period X Rate 6 Hz

Instrument height = [redacted]
0.15 mab

Sampling regime: __Tide

Tide sampling

Measurement speed: __ Period __ Rate _____

Tidal averaging duration: _____

Tidal measurement period: _____

Sampling regime: __Wave

Wave sampling

Measurement speed: ___ Period ___ Rate _____

Wave burst length (samples): _____

Wave measurement period: _____

Instrument altitude (m): _____

Mean depth of water (m): _____

Wave bandwidth (Hz): _____

Wave periods (s): _____

Memory required: 100 %

Battery required: 68%

X **Enable (Start logging)**

Recovery

Sensor time: _____

Actual time: _____

Battery voltage: _____

Fouling comments: _____

RBR

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Sold To	USGS Coastal and Marine Geology 384 Woods Hole Road Woods Hole, MA 02543-1598 Att: Neil Ganju, 916-207-2206

Packing List#	14537

Date	09/05/2013

Ship To	USGS Coastal and Marine Geology 384 Woods Hole Road Woods Hole, MA 02543-1598 Att: Neil Ganju, 916-207-2206

P.O. No.	Phone
Ship Via	Federal Express

Item	Qty	Description
	1	Data Logger Model RBRvirtuoso D|wave Serial # 55025 Firmware v11.00 Depth rating 0-10m (20 dBar) Educational Discount
		Complete with:
	1	Set of Calibration Certificates
	1	L2 USB Interface Cable
	1	USB: Manual, Software v1.7.19
	1	L2 Logger Support Kit

Business No. 104516604

Prepared By:

RBR

rbr-global.com

RBR Limited, 95 Hines Road, Unit 5, Kanata, Ontario, K2K 2M5
Tel: +1 613 233 1621 Fax: +1 613 233 4100 info@rbr-global.com

Pressure Calibration Certificate

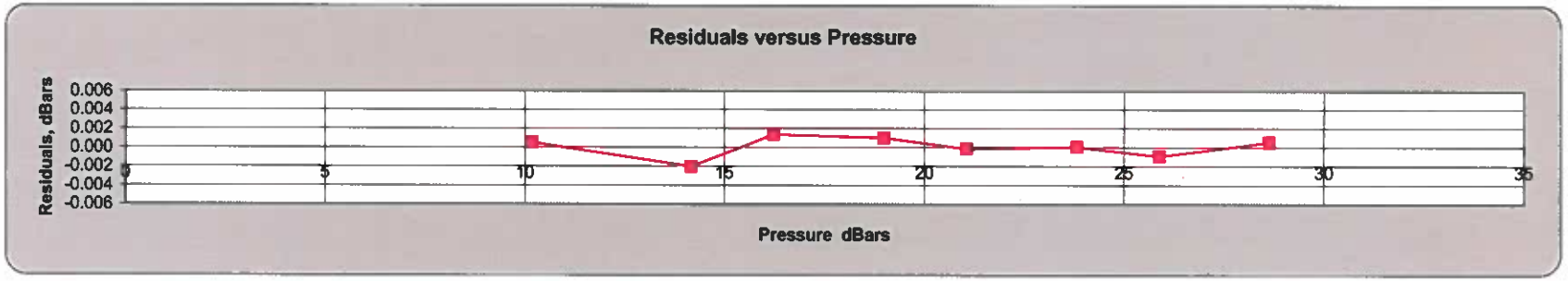
Pressure (dBar)	Logger reading	Residuals
10.1705	0.214404	0.0005
14.1567	0.297761	-0.0021
16.2248	0.340786	0.0013
18.9822	0.397687	0.0009
21.0503	0.440057	-0.0002
23.8077	0.496181	0.0000
25.8758	0.537937	-0.0010
28.6333	0.593232	0.0005

Logger Calibration Coefficients

a	0.069809566783
b	46.725310183421
c	1.471941195428
d	1.566178797046

Logger pressure=a+b*VR+c*VR^2+d*VR^3
Residual = logger pressure - Pressure

Atmos. P 10.171
Ht (cm) 15



Calibration Date: 3-May-12

Operator: