

DEPLOYMENT RECORD

Project Name: Juan de Fuca Start Date: May 2008 End Date: Sep. 2008
 Mooring Name: JF2E-L Station Name: JF2E

Geog. Desc.: Pillar Pt. Tide: +1m Becher Bay
 Latitude: 48° 15.162' Longitude: 124° 09.717'
 Water Depth: 150m datum Ice Thickness:
 Magnetic decl: Time Zone: Anchor Type: 2 wheels 1500 lbs
 Date: May 2, 2008 Time Anchor Dropped: 1047 PDT Date:
 Remarks:

RECOVERY RECORD

Date: Nov. 14, 2008 Time Anchor Released: 1626 PDT
 Remarks: - recovered without incident

INSTRUMENTS (Start at TOP)

Type	Serial #	Depth	Time in	Time Out	Notes
<u>WH130</u>	<u>7592</u>	<u>140m</u>	<u>1845 UTC</u>		
<u>Nortek</u>	<u>2661</u>	<u>144m</u>			<u>RS-422</u>
<u>SBE 37</u>	<u>5308</u>				<u>10 Pumped</u>

Argos 3733

Rug

Release	Serial	R Code	Arm Code	Freq	On/Off	B0	B1	Aux Codes
<u>AR 861</u>	<u>739</u>	<u>1655</u>	<u>1689</u>	<u>1689</u>				
Pinger 1	Type	Serial	Pinger 2	Type	Serial	Battery Volt		
<u>RJE</u>	<u>1/2 x 27</u>	<u>/</u>	<u>/</u>	<u>/</u>	<u>/</u>	<u>6.3</u>	<u>/</u>	

FLOTATION

Type	Serial #	Size	Colour
<u>Floaterc 1500mx</u>	<u>45"</u>	<u>Orange</u>	

Type	Serial #	Size	Colour

Data Entry by:

RDI 75/150/300/600kHz Long Ranger/Workhorse Deployment

Project: Juan de Fuca

Serial Number: 7592

Cruise: 2008-32

Platform: TULLY

Station: DF2E-L

Deployment Date: May 2/08

Position: _____

Depth on Sounder: _____

Recovery Date: Nov. 14, 2008

Parameters

Ensemble Interval	
Bin Size	4 m
Number of Pings	
Number of Bins	40
Observations	
Ambiguity Velocity	1.75 m/s
Water Profiling Mode	WBO WJ2E BW
Time	
Start Time	May 2/08 @ 2000 UTC
Power	High

Note - change all stainless hardware to
Titanium next deployment.

PlanADCP (Advanced) : [Dpl3]

BackToSC Settings View Help

Basic Advanced Expert

Environmental Setup:

Transducer Depth: m

Salinity: ppt

Magnetic Variation: °

Temperature: °C

Deployment Timing Setup:

Duration: days

Ensemble Interval:

Ping Int(☒ Auto):

☐ Ping Immediately After Deployment

First Ping Date and Time:

Profiling Setup:

Pings Per Ensemble:

Number of Depth Cells:

Depth Cell Size: m

Deployment Consequences

First Cell Range: m

Last Cell Range: m

Max Range: m

Standard Deviation: cm/s

Ensemble Size: bytes

Storage Required: MB

Power Usage: Wh

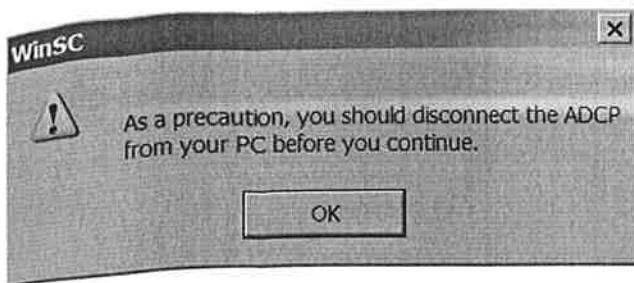
Battery Pack Usage:

Notes

JF2E-K
7592 with 2 packs installed (same pack as 75kHz)
Start: May 2, 2008 @ 2000 UTC

Workhorse Sentinel: 150 kHz/ High Res./ 2 Battery Packs/ Memory: 64 MB

CR1
CF11101
EA0
EB0
ED1450
ES34
EX11111
EZ1111111
WA50
WB0
WD111100000
WF352
WN40
WP84
WS400
WV175
TE00:15:00.00
TP00:10.71
TF08/05/02 20:00:00
CK
CS



>>>>> Function starting 05/01/08 22:51:32 >>>>>

[BREAK Wakeup A]
WorkHorse Broadband ADCP Version 16.28
RD Instruments (c) 1996-2005
All Rights Reserved.
>TS080501225135
>CZ

Powering Down

>>>>> Function starting 05/01/08 22:51:41 >>>>>

[BREAK Wakeup A]
WorkHorse Broadband ADCP Version 16.28
RD Instruments (c) 1996-2005
All Rights Reserved.
>DEPLOY?

Deployment Commands:

RE ----- Recorder ErAsE
RN ----- Set Deployment Name

WD = 111 100 000 ----- Data Out (Vel,Cor,Amp; PG,St,P0; P1,P2,P3)

WF = 0352 ----- Blank After Transmit (cm)

WN = 040 ----- Number of depth cells (1-128)

WP = 00050 ----- Pings per Ensemble (0-16384)

WS = 0400 ----- Depth Cell Size (cm)

WV = 175 ----- Mode 1 Ambiguity Vel (cm/s radial)

TE = 00:15:00.00 ----- Time per Ensemble (hrs:min:sec.sec/100)

TF = **/**/**,****.*** --- Time of First Ping (yr/mon/day,hour:min:sec)

TP = 00:18.00 ----- Time per Ping (min:sec.sec/100)

TS = 08/05/01,22:51:43 --- Time Set (yr/mon/day,hour:min:sec)

EA = +00000 ----- Heading Alignment (1/100 deg)

EB = +00000 ----- Heading Bias (1/100 deg)

ED = 01450 ----- Transducer Depth (0 - 65535 dm)

ES = 34 ----- Salinity (0-40 pp thousand)

EX = 11111 ----- Coord Transform (Xform: Type,Tilts,3 Bm,Map)

EZ = 1111111 ----- Sensor Source (C,D,H,P,R,S,T)

CF = 11101 ----- Flow Ctrl (EnsCyc;PngCyc;Binry;Ser;Rec)

CR # ----- Keep Parameters as USER Defaults

CS ----- Retrieve Parameters (0 = USER, 1 = FACTORY)

----- Start Deployment

>SYSTEM?

System Control, Data Recovery and Testing Commands:

AC ----- Output Active Fluxgate & Tilt Calibration data
AF ----- Field calibrate to remove hard/soft iron error
AR ----- Restore factory fluxgate calibration data
AX ----- Examine compass performance
AZ ----- Zero pressure reading

CB = 811 ----- Serial Port Control (Baud; Par; Stop)
CP # ----- Polled Mode (0 = NORMAL, 1 = POLLED)
CZ ----- Power Down Instrument

FC ----- Clear Fault Log
FD ----- Display Fault Log

OL ----- Display Features List

PA ----- Pre-Deployment Tests
PC1 ----- Beam Continuity
PC2 ----- Sensor Data
PS0 ----- System Configuration
PS3 ----- Transformation Matrices

RR ----- Recorder Directory
RF ----- Recorder Space used/free (bytes)
RY ----- Upload Recorder Files to Host

>TS?

TS = 08/05/01,22:51:46 --- Time Set (yr/mon/day,hour:min:sec)

>PS0

Instrument S/N: 7592

Frequency: 153600 HZ

Configuration: 4 BEAM, JANUS

Match Layer: 10

Beam Angle: 20 DEGREES

Beam Pattern: CONVEX

Orientation: DOWN

Sensor(s): HEADING TILT 1 TILT 2 DEPTH TEMPERATURE PRESSURE

Pressure Sens Coefficients:

c3 = -1.490503E-144

c2 = -5.656558E-08

c1 = +5.733202E-01

Offset = +4.809336E+01

Temp Sens Offset: -0.19 degrees C

CPU Firmware: 16.28 [0]

Boot Code Ver: Required: 1.13 Actual: 1.13

DEMOMD #1 Ver: ad48, Type: 1f

DEMOMD #2 Ver: ad48, Type: 1f

PWRTIMG Ver: 85d3, Type: 5

Board Serial Number Data:

43 00 00 03 B4 CB B8 09 TUN727-1005-05A

D2 00 00 00 8D 85 C4 09 REC727-1004-05A

DB 00 00 00 7E A7 BA 09 CPU727-2000-00J

D2 00 00 00 D8 57 46 09 DSP727-2001-05G
13 00 00 00 7E 9B 2E 09 HPI727-3007-00A
CC 00 00 00 7E 9C F3 09 HPA727-3009-02A
>PA

PRE-DEPLOYMENT TESTS

CPU TESTS:

RTC.....PASS
RAM.....PASS
ROM.....PASS

RECORDER TESTS:

PC Card #0.....NOT DETECTED
PC Card #1.....DETECTED
Card Detect.....PASS
Communication.....PASS
DOS Structure.....PASS
Sector Test (short).....PASS

DSP TESTS:

Timing RAM.....PASS
Demod RAM.....PASS
Demod REG.....PASS
FIFOs.....PASS

SYSTEM TESTS:

XILINX Interrupts... IRQ3 IRQ3 IRQ3 ...PASS
Wide Bandwidth.....PASS
Narrow Bandwidth.....PASS
RSSI Filter.....PASS
Transmit.....PASS

SENSOR TESTS:

H/W Operation.....PASS

>PC2

Press any key to quit sensor display ...

All Sensors are Internal Only.

Heading	Pitch	Roll	Up/Down	Attitude Temp	Ambient Temp	PRESSURE
19.33ø	1.89ø	3.47ø	Down	18.46øC	16.36øC	3.9 kPa

>RS

RS = 020,041 ----- REC SPACE USED (MB), FREE (MB)

>PC1

BEAM CONTINUITY TEST

When prompted to do so, vigorously rub the selected beam's face.

If a beam does not PASS the test, send any character to the ADCP to automatically select the next beam.

Collecting Statistical Data...

34 37 32 34

Rub Beam 1 = PASS

Rub Beam 2 = PASS
Rub Beam 3 = PASS
Rub Beam 4 = PASS

>CZ

Powering Down

>>>>> Function starting 05/01/08 22:53:22 >>>>>

[BREAK Wakeup A]
WorkHorse Broadband ADCP Version 16.28
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>AZ

Pressure Offset Updated in NVRAM.

>CZ

Powering Down

>>>>> Function starting 05/01/08 22:53:29 >>>>>

[BREAK Wakeup A]
WorkHorse Broadband ADCP Version 16.28
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>RE ErAsE erasing...
Recorder erased.

>CZ

Powering Down

>>>>> Function starting 05/01/08 22:54:24 >>>>>

[BREAK Wakeup A]
WorkHorse Broadband ADCP Version 16.28
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>RR
Recorder Directory:
Volume serial number for device #1 is c497-71b7

No files found.

Bytes used on device #1 = 0
Total capacity = 63680512 bytes
Total bytes used = 0 bytes in 0 files
Total bytes free = 63680512 bytes

>

[BREAK Wakeup A]
WorkHorse Broadband ADCP Version 16.28
RD Instruments (c) 1996-2005
All Rights Reserved.

>CR1

[Parameters set to FACTORY defaults]

>CF11101

>EA0

>EB0

>ED1450

>ES34

>EX11111

>EZ1111111

>WA50

>WB0

>WD111100000

>WF352

>WN40

>WP84

>WS400

>WV175

>TE00:15:00.00

>TP00:10.71

>TF08/05/02 20:00:00

>CK

[Parameters saved as USER defaults]

>The command CS is not allowed in this command file. It has been ignored.

>The following commands are generated by this program:

>CF?

CF = 11101 ----- Flow Ctrl (EnsCyc;PngCyc;Binry;Ser;Rec)

>CF11101

>RN JF2EL

>cs

Mooring: JF2E-L

UCats x 3

5308 (PUMPED)

Battery Calculations:

Sampling Time:

$$3.33s + (2.27 * (NAV G - 1))$$

$$3.33s + (2.27 * (4 - 1)) = 10.14s$$

Example 1: A standard MicroCAT (no external power option) with pressure sensor is set up to sample autonomously every 10 minutes (6 samples/hour), taking 4 measurement per sample (**NAV G=4**). How long can it be deployed?

$$\text{Sampling time} = 3.33 \text{ seconds} + 2.27 \text{ seconds} * (\text{NAV G} - 1) = 10.14 \text{ seconds}$$

Sampling current consumption = 0.020 amps * 10.14 seconds = 0.2 amp-seconds/sample

In 1 hour, sampling current consumption = 6 * 0.2 amp-seconds/sample = 1.2 amp-seconds/hour

Pump current consumption = 0.13 amp-seconds/pulse

In 1 hour, pump current consumption = 6 * 0.13 amp-seconds/pulse = 0.78 amp-seconds/hour

Quiescent current 10 microamps = 0.01 mA

In 1 hour, quiescent current consumption = 0.01 mA * 3600 seconds/hour = 0.036 amp-seconds/hour

Total current consumption / hour = 1.2 + 0.78 + 0.036 = 2.02 amp-seconds/hour

Capacity = (5 amp-hours * 3600 seconds/hr) / (2.02 amp-seconds/hour) = 8910 hours = 371 days = 1.02 years

Number of samples = 8910 hours * 6 samples/hour = 53460 samples

S>OUTPUTSAL=Y

S>OUTPUTSV=Y

S>FORMAT=1

S>NAV G=4

S>PUMPINSTALLED=Y

S>SAMPLENUM=0

S>INTERVAL=600

S>STORETIME=Y

S>TXREALTIME=N

S>STARTDDMMYY=020508

S>STARTRHHMMSS=200000

start time = 02 May 2008 20:00:00

S>DS

□SBE 37-SM

S>DS

SBE37-SM V 2.6b SERIAL NO. 5308 01 May 2008 23:03:20

not logging: received stop command

sample interval = 600 seconds

samplenum = 32554, free = 158096

do not transmit real-time data

output salinity with each sample

output sound velocity with each sample

store time with each sample

number of samples to average = 4

serial sync mode disabled

wait time after serial sync sampling = 30 seconds

internal pump is installed

temperature = 16.36 deg C

S>DDMMYY=010508

S>HHMMSS=235240

S>DS

SBE37-SM V 2.6b SERIAL NO. 5308 01 May 2008 23:52:41

not logging: received stop command

sample interval = 600 seconds

samplenum = 32554, free = 158096

do not transmit real-time data

output salinity with each sample

output sound velocity with each sample

store time with each sample

number of samples to average = 4

serial sync mode disabled

wait time after serial sync sampling = 30 seconds

internal pump is installed

temperature = 16.36 deg C

S>QS

□□SBE 37-SM

S>DS

SBE37-SM V 2.6b SERIAL NO. 5308 01 May 2008 23:52:48

not logging: received stop command

sample interval = 600 seconds

samplenum = 32554, free = 158096

do not transmit real-time data

output salinity with each sample

output sound velocity with each sample

store time with each sample

number of samples to average = 4

serial sync mode disabled

wait time after serial sync sampling = 30 seconds

internal pump is installed

temperature = 16.35 deg C

S>OUTPUTSAL=Y

S>OUTPUTSV=Y

S>FORMAT=1

S>NAVG=4

S>PUMPINSTALLED=Y

S>SAMPLENUM=0

S>INTERVAL=600

S>STORETIME=Y

S>TXREALTIME=N

S>STARTDDMMYY=020508

S>STARTRHHMMSS=200000

start time = 02 May 2008 20:00:00

S>DS

SBE37-SM V 2.6b SERIAL NO. 5308 01 May 2008 23:53:51

not logging: received stop command

sample interval = 600 seconds

samplenum = 0, free = 190650

do not transmit real-time data

output salinity with each sample

output sound velocity with each sample

store time with each sample

number of samples to average = 4

serial sync mode disabled

wait time after serial sync sampling = 30 seconds

internal pump is installed

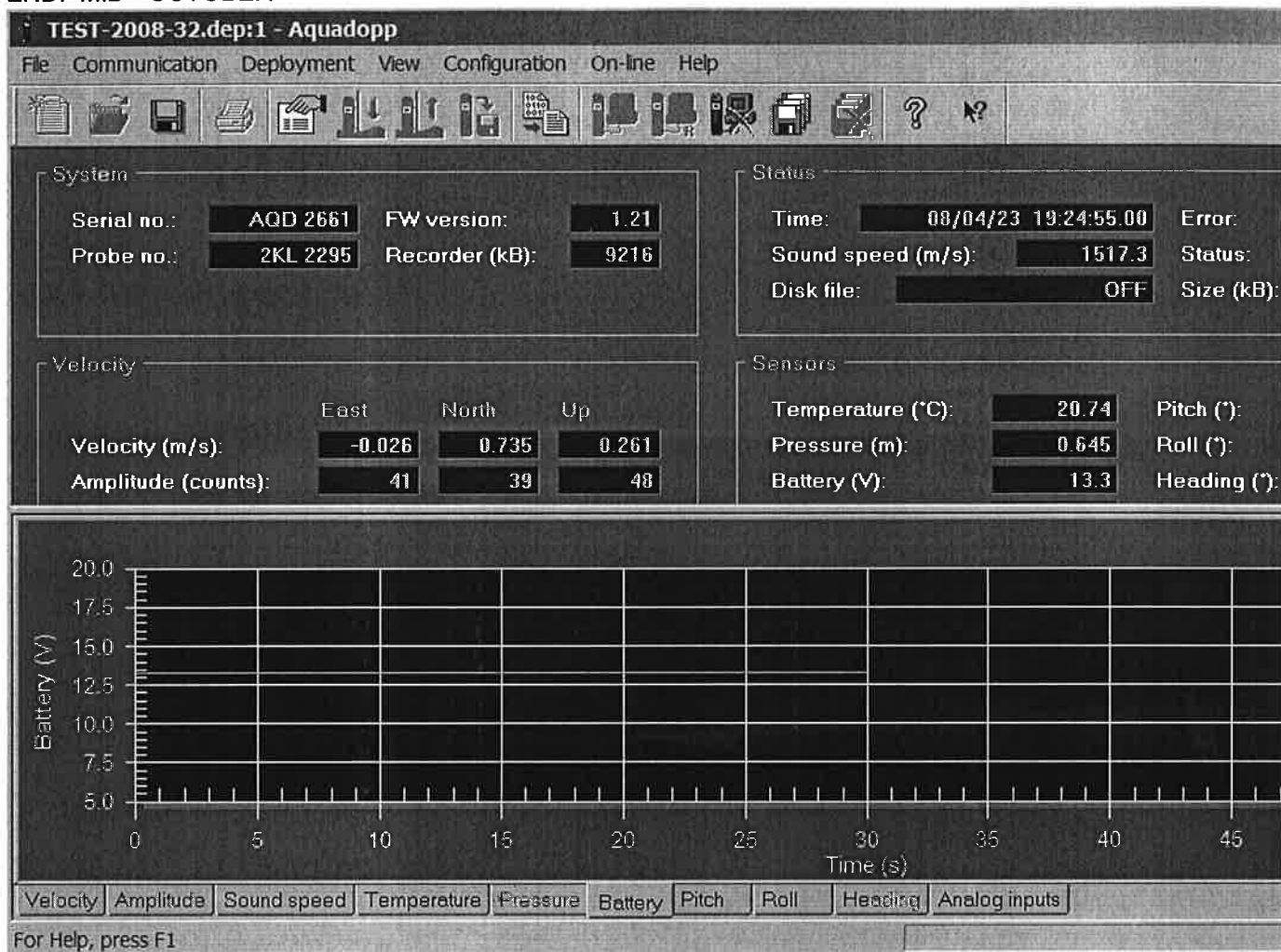
temperature = 16.29 deg C

S>STARTRLATER

start time = 02 May 2008 20:00:00

□

JF2E-L
SERIAL: 2661
START:
END: MID - OCTOBER



Deployment : JF2E-L
Current time : 2008-04-23 19:29:00
Start at : 2008-04-25 12:00:00
Comment:
JF2E-L
2661
Start: 2008-04-25 @ 1200UTC End: Mid Oct

Measurement interval (s) : 1800
Average interval (s) : 120
Blanking distance (m) : 0.37
Diagnostics interval(min) : 1440
Diagnostics samples : 20
Measurement load (%) : 4
Power level : HIGH

Compass upd. rate (s) : 5
Coordinate System : ENU
Speed of sound (m/s) : MEASURED
Salinity (ppt) : 32
File wrapping : OFF

Assumed duration (days) : 180.0
Battery utilization (%) : 90.0
Battery level (V) : 13.4
Recorder size (MB) : 9
Recorder free space (MB) : 9.000
Memory required (MB) : 0.5
Vertical vel. prec (cm/s) : 1.5
Horizon. vel. prec (cm/s) : 1.0

Aquadopp Version 1.23
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