

DEPLOYMENT RECORD

Project Name: Juan de Fuca Start Date: Sept 15/07 End Date: mid May/08
 Mooring Name: JF2C-K Station Name: JF2C

Geog. Desc.: Juan de Fuca Mid-Channel Tide: +2m Victoria
 Latitude: 48°21.474' Longitude: 124°12.802'
 Water Depth: 183m datum Ice Thickness:
 Magnetic decl: Time Zone: PDT Anchor Type: 3 wheels 2105 lbs
 Date: Sep 18, 2007 Time Anchor Dropped: 0832 PDT Date:
 Remarks:

RECOVERY RECORD

Date: May 1, 2008 Time Anchor Released: 0956 PDT
 Remarks: some trouble opening window (arming)
RT661 #153*

INSTRUMENTS (Start at TOP)

Type	Serial #	Depth	Time in	Time Out	Notes
WH75	8746	173m	0830 PDT		*very aggressive corrosion at 1727 UTC May 1/08
RCM 11	39	175.75m			
SBE37	5308	177m			Pumped

Argos 3733

Rel Win.

FR1+2 FR2

Release	Serial	R Code	Arm Code	Freq	On/Off	B0	B1	Aux Codes
RT661	153	6484	6451	B000	6452/6453			
Finger 1	Type	Serial	Finger 2	Type	Serial	Battery Volt		
RJE	1/2 x 21	052700	—	—	—	6.3V		

FLOTATION

Type	Serial #	Size	Colour
45"	1500m Foam	Float	
	+ Frame		Orange

Type	Serial #	Size	Colour

Data Entry by:

RCM 11 Deployment SheetInstrument Serial: 39#ofChannels: 6Recording Interval: 30DSU ID: 12364Project: JF2CFile ID: 39-JF2C-K**Pressure Sensor:**

Type: _____

Range: 60 MPa = 6800 mSerial#: 730**Conductivity Cell:**

Type: _____

Range: NOT INSTALLED

Serial#: _____

Temperature Sensor:

Type: _____

Range: _____

Serial#: _____

Doppler Current Sensor:

Type: _____

Serial#: _____

Max Depth: 6800 m**First Record:**

Channel 1	652
Channel 2	0
Channel 3	0
Channel 4	951
Channel 5	0
Channel 6	32
Channel 7	—
Channel 8	—

Date: Sept 18/07 Time: 0230 UTC

OK PIMS

Bat @ deployment
was 9.75 VdcBat @ recovery
was 6.04 Vdc**Last Record:**

Channel 1	0652
Channel 2	76
Channel 3	625
Channel 4	733
Channel 5	0
Channel 6	32
Channel 7	—
Channel 8	—

Date: May 1/08 Time: 2031← may not be on
the DSU (its full)**NOTES:**

upon recovery the pressure case near the seg1
was severely corroded. Instrument was still in good
shape though.

9489 records but expected 10885 cp

PlanADCP (Advanced) : [JF2CK]

BackToSC Settings View Help

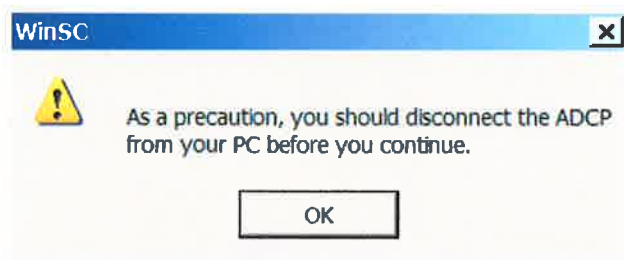
CAUTION: Not enough battery packs for the deployment.

Basic Advanced Expert

Environmental Setup:		Profiling Setup:		Deployment Consequences	
Transducer Depth:	180 m	Pings Per Ensemble:	48	First Cell Range:	12.85 m
Salinity:	34 ppt	Number of Depth Cells:	45	Last Cell Range:	188.85 m
Magnetic Variation:	0 °	Depth Cell Size:	4 m	Max Range:	431.69 m
Temperature:	7 °C			Standard Deviation:	2.16 cm/s
Deployment Timing Setup:				Ensemble Size:	1054 bytes
Duration:	270 days			Storage Required:	13.03 MB
Ensemble Interval:	00:30:00.00			Power Usage:	1828.99 Wh
Ping Int(☒ Auto):	00:00:37.50			Battery Pack Usage:	4.1
☐ Ping Immediately After Deployment First Ping Date and Time: 18-Sep-2007 12:00:00		Notes:			
		JF2C-K 8746 4 BATTERY PACKS, 64Mb MEM START Sept 18, 2007 @ 1200UTC			

Workhorse Long Ranger: 75 kHz/ High Power/ High Res./ 4 Battery Packs/ Memory: 256 MB

NUM



>>>>> Function starting 09/18/07 01:10:00 >>>>>

>>>>> Function starting 09/18/07 01:10:49 >>>>>

[BREAK Wakeup A]
 WorkHorse Broadband ADCP Version 16.28
 RD Instruments (c) 1996-2005
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 >TS070918011052
 >CZ

Powering Down

>>>>> Function starting 09/18/07 01:10:59 >>>>>

[BREAK Wakeup A]
 WorkHorse Broadband ADCP Version 16.28
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 >AZ
 Pressure Offset Updated in NVRAM.
 >CZ

Powering Down

>>>>> Function starting 09/18/07 01:11:06 >>>>>

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

>CZ

Powering Down

>>>>> Function starting 09/18/07 01:11:22 >>>>>

[BREAK Wakeup A]
WorkHorse Broadband ADCP Version 16.28
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>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 = 0704 ----- Blank After Transmit (cm)

WN = 062 ----- Number of depth cells (1-128)

WP = 00051 ----- Pings per Ensemble (0-16384)

WS = 0800 ----- Depth Cell Size (cm)

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

TE = 00:30:00.00 ----- Time per Ensemble (hrs:min:sec.sec/100)

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

TP = 00:35.29 ----- Time per Ping (min:sec.sec/100)

TS = 07/09/18,01:11:24 --- Time Set (yr/mon/day, hour:min:sec)

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

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

ED = 04900 ----- Transducer Depth (0 - 65535 dm)

ES = 32 ----- 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)

Press any key to continue

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

CK ----- Keep Parameters as USER Defaults

CR # ----- Retrieve Parameters (0 = USER, 1 = FACTORY)

CS ----- 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 = 411 ----- 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

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PC2 ----- Sensor Data
PS0 ----- System Configuration
PS3 ----- Transformation Matrices

RR ----- Recorder Directory
Press any key to continue

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

>TS?
TS = 07/09/18,01:11:48 --- Time Set (yr/mon/day,hour:min:sec)
>PS0
  Instrument S/N: 8746
    Frequency: 76800 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 = -5.261075E-85
    c2 = -3.642870E-08
    c1 = +5.679115E-01
    Offset = -1.537050E+01

Temp Sens Offset: -0.23 degrees C

  CPU Firmware: 16.28 [0]
  Boot Code Ver: Required: 1.13 Actual: 1.13
  DEMOD #1 Ver: ad48, Type: 1f
  DEMOD #2 Ver: ad48, Type: 1f
  PWRTIMG Ver: 85d3, Type: 5

Board Serial Number Data:
  4D 00 00 00 93 A4 D0 09 HPA727-3009-00A
  DD 00 00 00 93 A2 BA 09 CPU727-2000-00J
  61 00 00 00 86 94 CD 09 DSP727-2001-06G
  8D 00 00 00 93 B6 9D 09 REC727-1004-06A
  99 00 00 00 D8 68 CB 09 HPI727-3007-00A
  30 00 00 00 86 5B 3F 09 TUN727-1005-06A
>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.....***FAIL***
  Narrow Bandwidth.....PASS
  RSSI Filter.....PASS
  Transmit.....PASS
SENSOR TESTS:
  H/W Operation.....***FAIL***

```

Press any key to quit sensor display ...

Heading	Pitch	Roll	Up/Down	Attitude Temp	Ambient Temp	PRESSURE
322.89ø	-28.38ø	24.82ø	Up	20.85øC	19.92øC	0.4 kPa
322.22ø	-28.38ø	24.82ø	Up	20.85øC	19.91øC	-7.9 kPa
321.13ø	-28.38ø	24.82ø	Up	20.85øC	19.91øC	0.3 kPa
321.18ø	-28.38ø	24.82ø	Up	20.86øC	19.94øC	-13.7 kPa

RS = 000,061 ----- REC SPACE USED (MB), FREE (MB)

BEAM CONTINUITY TEST

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

[illegible]

25 23 30 31
25 23 30 31
25 23 30 31
25 23 30 31
25 23 30 31
25 23 30 31
25 23 30 31
25 23 30 31
25 23 30 31
25 23 30 31
25 23 30 31
25 23 30 31
25 23 30 31
25 23 30 31
25 23 30 31
25 23 30 31
25 23 30 31
25 23 30 31
25 23 30 31
25 23 30 31

Rub Beam 1 = PASS
Rub Beam 2 = PASS
Rub Beam 3 = PASS
Rub Beam 4 = PASS

>CZ

Powering Down

>>>>> Function starting 09/18/07 01:13:54 >>>>>

[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
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>CR1
[Parameters set to FACTORY defaults]
>CQ255
>CF11101
>EA0
>EB0
>ED1800
>ES34
>EX11111
>EZ1111111
>WA50
>WB0
>WD111100000
>WF704
>WN45
>WP48
>WS400
>WV175
>TE00:30:00.00

>TP00:37.50
>TF07/09/18 12:00:00
>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 JF2CK
>cs

Mooring: JF2C-K
UCats X 2
Serial
5308

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?

Sampling time = 3.33 seconds + 2.27 seconds * (**NAV G** - 1) = 10.14 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

Command Summary:

DDMMYY=XXXXXX
HHMMSS=XXXXXX //(UTC)
OUTPUTSAL=Y
OUTPUTSV=Y
FORMAT=1
NAV G=4
PUMPINSTALLED=Y
SAMPLENUM=0
INTERVAL=600
STORETIME=Y
TXREALTIME=N
STARTDDMMYY=180907
STARTHHMMSS=160000
STARTLATER