

Effingham Inlet DEPLOYMENT RECORD

Project Name: EF04-E Start Date: Sept 19/09 End Date: mid Sept
 Mooring Name: EF04-E Station Name: EF04
EF04-E-2

Geog. Desc.: Effingham Inlet Narrows Tide: Franklin River + 2.0m.
 Latitude: 49° 03.861' Longitude: 125° 09.106'
 Water Depth: 107m datum Ice Thickness: _____
 Magnetic decl: _____ Time Zone: PDT Anchor Type: 2 wheels 1409 lbs.
 Date: May 19, 2009 Time Anchor Dropped: _____ Date: _____
 Remarks: - EF04-E was deployed and recovered after 8hrs and redeployed as EF04-E-2* see notes for details

RECOVERY RECORD

Date: Sep. 23, 2009 Time Anchor Released: 0804 PDT
 Remarks: _____

INSTRUMENTS (Start at TOP)

Type	Serial #	Depth	Time in	Time Out	Notes
300 kHz	8943	100m			Alu hsg. + extern
uCat	5306	32m			pump
uCat	5307	72m			pump
uCat	5310	102.5			pump

*No Argos

Diag. = 5337

Release	Serial	R Code	Arm Code	Freq	On/Off	B0	B1	Aux Codes
AR861	734	1655	16B4	1649				
Pinger 1	Type	Serial	Pinger 2	Type	Serial	Battery Volt		
Helle	1/4x27	7816	Helle	1/4x27	8763	14.7/21.9		

FLOTATION

Type	Serial #	Size	Colour
SS30	3014	30"	yellow
8Viny cluster			
ADCP frame			orange

Type	Serial #	Size	Colour

Data Entry by:

Mooring: EF04-E
UCats X 3
Serial
5306 - Pump
5307 - Pump
5310- Pump

Battery Calculations:

Sampling Time:
 $3.33s + (2.27 * (NAVG - 1))$
 $3.33s + (2.27 * (4 - 1)) = 10.14s$

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 (**NAVG=4**). How long can it be deployed?

Sampling time = 3.33 seconds + 2.27 seconds * (**NAVG** - 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=190509
HHMMSS=000500 //(UTC)
OUTPUTSAL=Y
OUTPUTSV=Y
FORMAT=1
NAVG=4
PUMPINSTALLED=N
SAMPLENUM=0
INTERVAL=600

REFPRESS= x (x = pressure at which the instrument is at...only used if there is no pressure sensor installed)

STORETIME=Y

TXREALTIME=N

STARTDDMMYY=190509

STARHHMMSS=160000

STARTLATER

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

Project: _____

Serial Number: 8943

Cruise: 2009-43

Platform: TULLY

Station: EF04-E

Deployment Date: Sept 20, 2009

Position: _____

Depth on Sounder: _____

Recovery Date: mid Sept

Parameters

Ensemble Interval	30 min
Bin Size	4
Number of Pings	250
Number of Bins	30
Observations	0.47 cm/s Standard Deviation
Ambiguity Velocity	1.75 m/s
Water Profiling Mode	WB1 ← changed
Time	UTC
Start Time	Sept 20, 2009 @ 1600 UTC
Power	2 x packs = 900 watts

EF04-E
8943

This mooring was resurfaced to change the WB0 command to WB1 after some investigation.

PlanADCP (Advanced) : [Dpl1]
BackToSC Settings View Help

Basic Advanced Expert

Environmental Setup:	Profiling Setup:	Deployment Consequences:
Transducer Depth: 100 m	Pings Per Ensemble: 250	First Cell Range: 6.11 m
Salinity: 32 ppt	Number of Depth Cells: 30	Last Cell Range: 122.11 m
Magnetic Variation: 0 °	Depth Cell Size: 4 m	Max Range: 145.14 m
Temperature: 5 °C	Mode: 1	Standard Deviation: 0.47 cm/s
		Ensemble Size: 754 bytes
		Storage Required: 5.18 MB
		Power Usage: 867.05 Wh
		Battery Pack Usage: 1.9

Deployment Timing Setup:

Duration: 150 days

Ensemble Interval: 00:30:00.00

Ping Int (☒ Auto): 00:00:07.20

☐ Ping Immediately After Deployment

First Ping Date and Time:

20-May-2009 16:00:00

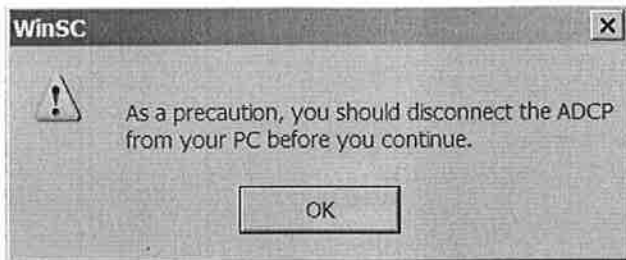
Notes

EF04-E (redo) NOTE: We brought this mooring back up to the surface to change the WB0 to WB1.
8943
Start: May 20, 2009 @ 1600 UTC

Workhorse Sentinel: 300 kHz/ Long Range/ 2 Battery Packs/ Memory: 96 MB

CR1
CF11101
EA0
EB0
ED1000
ES32
EX11111
EZ1111111
WA50
WB1
WD111100000
WF176
WN30
WP250
WS400
WV175

TE00:30:00.00
TP00:07.20
TF09/05/20 16:00:00
CK
CS



>>>>> Function starting 05/20/09 01:07:21 >>>>>

[BREAK Wakeup A]
WorkHorse Broadband ADCP Version 16.28
RD Instruments (c) 1996-2005
All Rights Reserved.
>RR
Recorder Directory:
Volume serial number for device #0 is a4ae-2016

E01VV000 000 129492 05-20-09 1:06:54a r a [2]

Bytes used on device #0 = 129492
Volume serial number for device #1 is c497-71b7

No files found.

Bytes used on device #1 = 0
Total capacity = 1086271488 bytes
Total bytes used = 129492 bytes in 1 files
Total bytes free = 1086140416 bytes

>RY
Please start your host now

>>>>> Function starting 05/20/09 01:07:55 >>>>>

[BREAK Wakeup A]
WorkHorse Broadband ADCP Version 16.28
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>TS090520010758
>CZ

Powering Down

>>>>> Function starting 05/20/09 01:08:03 >>>>>

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[BREAK Wakeup A]

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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 = 0176 ----- Blank After Transmit (cm)

WN = 025 ----- Number of depth cells (1-128)

WP = 00080 ----- Pings per Ensemble (0-16384)

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

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

TE = 00:10:00.00 ----- Time per Ensemble (hrs:min:sec.sec/100)

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

TP = 00:07.50 ----- Time per Ping (min:sec.sec/100)

TS = 09/05/20,01:08:06 --- Time Set (yr/mon/day,hour:min:sec)

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

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

ED = 00850 ----- Transducer Depth (0 - 65535 dm)

ES = 33 ----- 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 = 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

Press any key to continue

RF ----- Recorder Space used/free (bytes)

RY ----- Upload Recorder Files to Host

>TS?

TS = 09/05/20,01:08:08 --- Time Set (yr/mon/day,hour:min:sec)

>PS0

Instrument S/N: 8943

Frequency: 307200 HZ

Configuration: 4 BEAM, JANUS

Match Layer: 10

Beam Angle: 20 DEGREES

Beam Pattern: CONVEX

Orientation: UP

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

Pressure Sens Coefficients:

c3 = +1.952969E-85

c2 = +5.688914E-08

c1 = +1.251074E-01

Offset = -1.660338E+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: 4

Board Serial Number Data:

15 00 00 00 93 A0 32 09 DSP727-2001-04G

B4 00 00 00 82 B8 DE 09 REC727-1000-04E

A7 00 00 00 93 B8 75 09 PIO727-3000-00C

6F 00 00 00 93 B0 07 09 CPU727-2000-00J

>PA

PRE-DEPLOYMENT TESTS

CPU TESTS:

RTC.....PASS

RAM.....PASS

ROM.....PASS

RECORDER TESTS:

PC Card #0.....DETECTED

Card Detect.....PASS

Communication.....PASS

DOS Structure.....PASS

Sector Test (short).....PASS

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.....***FAIL***
```

>PC2

Press any key to quit sensor display...

All Sensors are Internal Only.

Heading	Pitch	Roll	Up/Down	Attitude Temp	Ambient Temp	PRESSURE
51.91ø	-26.69ø	-24.90ø	Up	11.06øC	9.89øC	4.3 kPa
52.04ø	-26.69ø	-24.90ø	Up	11.07øC	9.87øC	6.7 kPa
52.18ø	-26.69ø	-24.90ø	Up	11.07øC	9.88øC	2.9 kPa
52.33ø	-26.69ø	-24.90ø	Up	11.06øC	9.87øC	5.7 kPa >RS

RS = 001,1035 ----- 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...

[illegible]

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

Powering Down

>>>>> Function starting 05/20/09 01:09:27 >>>>>

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[BREAK Wakeup A]

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>AZ

Pressure Offset Updated in NVRAM.

>CZ

Powering Down

>>>>> Function starting 05/20/09 01:09:37 >>>>>

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[BREAK Wakeup A]

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>RE ErAsE erasing...

Recorder erased.

>CZ

Powering Down

>>>>> Function starting 05/20/09 01:10:00 >>>>>

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[BREAK Wakeup A]

WorkHorse Broadband ADCP Version 16.28

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>RR

Recorder Directory:

Volume serial number for device #0 is a4ae-2016

No files found.

Bytes used on device #0 = 0

Volume serial number for device #1 is c497-71b7

No files found.

Bytes used on device #1 = 0

Total capacity = 1086271488 bytes

Total bytes used = 0 bytes in 0 files

Total bytes free = 1086271488 bytes

>

[BREAK Wakeup A]

WorkHorse Broadband ADCP Version 16.28

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>CR1

[Parameters set to FACTORY defaults]

>CF11101

>EA0
>EB0
>ED1000
>ES32
>EX11111
>EZ1111111
>WA50
>WB1
>WD111100000
>WF176
>WN30
>WP250
>WS400
>WV175
>TE00:30:00.00
>TP00:07.20
>TF09/05/20 16:00:00
>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 8942_
>cs

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

Project: _____

Serial Number: 8943

Cruise: 2009-40

Platform: TULLY

Station: EF04-E

Deployment Date: May 19/09

Position: _____

Depth on Sounder: _____

Recovery Date: mid Sept.

OLD

Parameters

Ensemble Interval	10 min
Bin Size	4
Number of Pings	80
Number of Bins	25
Observations	
Ambiguity Velocity	0.40 cm/s.
Water Profiling Mode	WBO
Time	UTC
Start Time	May 18/2009 @ 1800 UTC
Power	2x external pack w/ alum hsg.