

DEPLOYMENT RECORD

Project Name: Effingham Inlet Start Date: April 30/08 End Date: Sep. 2008
 Mooring Name: EF04-C Station Name: EF04

Geog. Desc.: Effingham Inlet Tide: +2m Franklin River
 Latitude: 49° 03.810' Longitude: 125° 09.072'
 Water Depth: 87m datum Ice Thickness: _____
 Magnetic decl: _____ Time Zone: _____ Anchor Type: 2 wheels 1440 lbs
 Date: Apr. 30, 2008 Time Anchor Dropped: 1127 PDT Date: _____
 Remarks: _____

RECOVERY RECORD

Date: Sep. 19, 2008 Time Anchor Released: 1803 PDT
 Remarks: - without incident.

INSTRUMENTS (Start at TOP)

Type	Serial #	Depth	Time in	Time Out	Notes
wh300	2275	80m	1827 UT		No internal pack + external pack both
SBE37	5303	37m	1823 UTC		ALV in cases.
SBE37	5305	67m	1824 UTC		5303 - pumped
SBE37	5307	84.5m	1827 UTC		pumped
					pumped

Release	Serial	R Code	Arm Code	Freq	On/Off	B0	B1	Aux Codes
AR861	730	1655	1680	1680				
Pinger 1	Type	Serial	Pinger 2	Type	Serial	Battery Volt		
OML	1/4 x 27	506	Helle	1/4 x 27	8822	16.3/18.6		

FLOTATION

Type	Serial #	Size	Colour
SS30	3014	30"	Yellow.
8 Vinyl ADCP Frame			Orange

Type	Serial #	Size	Colour

Data Entry by:

Note: this ADCP needs servicing @ RDI. I think the beam is failing judging by this last deployment. see 2275/eff04-C/000 file 4

PlanADCP (Advanced) : [Dpl1]

BackToSC Settings View Help

Basic Advanced Expert

Environmental Setup: Transducer Depth: 35 m Salinity: 33 ppt Magnetic Variation: 0 ° Temperature: 9 °C	Profiling Setup: Pings Per Ensemble: 75 Number of Depth Cells: 21 Depth Cell Size: 4 m Mode: 1	Deployment Consequences: First Cell Range: 6.17 m Last Cell Range: 86.17 m Max Range: 101.71 m Standard Deviation: 0.41 cm/s Ensemble Size: 574 bytes Storage Required: 14.19 MB Power Usage: 860.58 Wh Battery Pack Usage: 1.9
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Deployment Timing Setup:

Duration: 180 days

Ensemble Interval: 00:10:00.00

Ping Int(☒ Auto): 00:00:08.00

☐ Ping Immediately After Deployment

First Ping Date and Time:

30-Apr-2008 20:00:00

Notes:

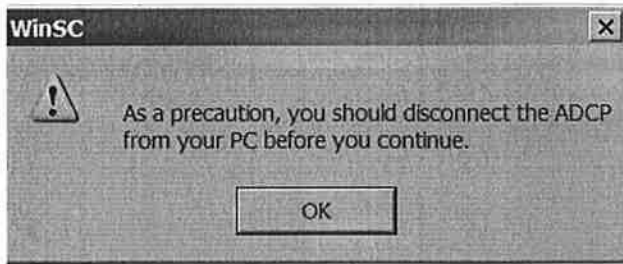
2272 - EFF04-C
 Alum Pressure case with Alum external battery pack
 No Compass Swing.
 Start: April 30, 2008 @ 2000UTC

Workhorse Sentinel: 300 kHz/ High Res./ 2 Battery Packs/ Memory: 256 MB

NOTE: My note in the "NOTES" section says 2272-eff04-C when it should be 2275*****.

CR1
 CF11101
 EA0
 EB0
 ED850
 ES33
 EX11111
 EZ1111111
 WA50
 WB0
 WD111100000
 WF176
 WN21
 WP75
 WS400
 WV175
 TE00:10:00.00
 TP00:08.00
 TF08/04/30 20:00:00
 CK
 CS

Note: I removed the memory cards from this machine.



>>>>> Function starting 04/29/08 19:39:42 >>>>>

[BREAK Wakeup A]
WorkHorse Broadband ADCP Version 16.20
RD Instruments (c) 1996-2001
All Rights Reserved.
>TS080429193944
>CZ

Powering Down

>>>>> Function starting 04/29/08 19:39:53 >>>>>

[BREAK Wakeup A]
WorkHorse Broadband ADCP Version 16.20
RD Instruments (c) 1996-2001
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 = 0176 ----- Blank After Transmit (cm)
WN = 022 ----- Number of depth cells (1-128)
WP = 00038 ----- 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 = 00:15.78 ----- Time per Ping (min:sec.sec/100)
TS = 08/04/29, 19:39:54 --- 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)

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

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 = 08/04/29,19:40:00 --- Time Set (yr/mon/day,hour:min:sec)

>PS0

Instrument S/N: 2275

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,c2,c1,offset) -0.00,0.00,0.16,-22.05

Temp Sens Offset: -0.41 degrees C

CPU Firmware: 16.20 [0]

Boot Code Ver: Required: 1.13 Actual: 1.13

DEM0D #1 Ver: ad48, Type: 1f

DEM0D #2 Ver: ad48, Type: 1f

PWRTIMG Ver: 85d3, Type: 4

Board Serial Number Data:

59 00 00 02 C9 30 61 09 DSP727-2001-04F

9D 00 00 03 01 98 83 09 REC727-1000-04A

BB 00 00 03 01 6C 43 09 CPU727-2000-00H

27 00 00 03 01 9A FB 09 PIO727-3000-04C

>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
Receive Loop-Back.....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 ...

Heading	Pitch	Roll	Up/Down	Attitude Temp	Ambient Temp	PRESSURE
171.66°	-0.82°	-0.58°	Up	20.66°C	19.59°C	6.1 kPa

>RS

RS = 019,088 ----- 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...

39 42 41 43

Rub Beam 1 = PASS

Rub Beam 2 = PASS

Rub Beam 3 = PASS

Rub Beam 4 = PASS

>CZ

Powering Down

>>>>> Function starting 04/29/08 19:41:06 >>>>>

[BREAK Wakeup A]

WorkHorse Broadband ADCP Version 16.20

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>AZ

Pressure Offset Updated in NVRAM.

>CZ

Powering Down

>>>>> Function starting 04/29/08 19:41:15 >>>>>

[BREAK Wakeup A]

WorkHorse Broadband ADCP Version 16.20

RD Instruments (c) 1996-2001

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>RE ErAsE erasing...

Recorder erased.

>CZ

Powering Down

>>>>> Function starting 04/29/08 19:41:57 >>>>>

[BREAK Wakeup A]

WorkHorse Broadband ADCP Version 16.20

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>RR

Recorder Directory:

Volume serial number for device #0 is 2e46-1ee1

No files found.

Bytes used on device #0 = 0

Volume serial number for device #1 is 065b-10ef

No files found.

Bytes used on device #1 = 0

Total capacity = 111697920 bytes

Total bytes used = 0 bytes in 0 files

Total bytes free = 111697920 bytes

>

[BREAK Wakeup A]

WorkHorse Broadband ADCP Version 16.20

RD Instruments (c) 1996-2001

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>CR1

[Parameters set to FACTORY defaults]

>CF11101

>EA0

>EB0

>ED850

>ES33

>EX11111

>EZ1111111

>WA50

>WB0

>WD111100000

>WF176

>WN21

>WP75

>WS400

>WV175

>TE00:10:00.00

>TP00:08.00

>TF08/04/30 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 EF04C

>cs

Mooring: EF04-C

UCats x 3

5303 (PUMPED)

5305 (PUMPED)

5307 (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?

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

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=300408

S>STARTHHMMSS=200000

start time = 30 Apr 2008 20:00:00

□SBE 37-SM

S>ds

SBE37-SM V 2.6b SERIAL NO. 5303 01 Jan 1980 00:04:37

logging not started

sample interval = 600 seconds

samplenum = 32509, free = 158141

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 = 19.01 deg C

S>ddmmyy=290408

S>hhmmss=203245

S>ds

SBE37-SM V 2.6b SERIAL NO. 5303 29 Apr 2008 20:32:45

logging not started

sample interval = 600 seconds

samplenum = 32509, free = 158141

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 = 18.99 deg C

S>qs

□□SBE 37-SM

S>ds

SBE37-SM V 2.6b SERIAL NO. 5303 29 Apr 2008 20:32:54

logging not started

sample interval = 600 seconds

samplenum = 32509, free = 158141

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 = 18.99 deg C

S>outputsal=y

S>outputsv=y

S>navg=4

S>format=1

S>pumpinstalled=y

S>samplenum=0

S>interval=600

S>storetime=y

?cmd S>storetime=y

S>txrealtime=y

```
S>txrealtime=n
S>startddmmyy=300408
S>starthhmmss=200000
start time = 30 Apr 2008 20:00:00
S>ds
SBE37-SM V 2.6b SERIAL NO. 5303 29 Apr 2008 20:34:18
logging not started
sample interval = 600 seconds
samplenummer = 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 = 19.00 deg C
S>startlater
start time = 30 Apr 2008 20:00:00
□
```

DDMMYY=300408
S>HHMMSS=100850
S>DDMMYY=300408
S>HHMMSS=180910
S>DS
SBE37-SM V 2.6b SERIAL NO. 5305 30 Apr 2008 18:09:12
not logging: received stop command
sample interval = 600 seconds
samplenum = 32690, free = 157960
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 = 14.34 deg C
S>QS
□□SBE 37-SM
S>DS
SBE37-SM V 2.6b SERIAL NO. 5305 30 Apr 2008 18:09:21
not logging: received stop command
sample interval = 600 seconds
samplenum = 32690, free = 157960
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 = 14.37 deg C
S>OUTPUTSAL=Y
S>OUTPUTSV=Y
S>NAVG=4
S>FORMAT=1
S>PUMPINSTALLED=Y
S>SAMPLENUM=0
S>INTERVAL=600
S>STORETIME=Y
S>TXREALTIME=N
S>STARTDDMMYY=300408
S>STARTHHMMSS=200000
start time = 30 Apr 2008 20:00:00
S>DS
SBE37-SM V 2.6b SERIAL NO. 5305 30 Apr 2008 18:10:13
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 = 14.47 deg C
S>STARTLATER
start time = 30 Apr 2008 20:00:00
□

M

MJ

MKMJMJÍJ

§ 7

SBE37-SM V 2.6b SERIAL NO. 5307 01 Jan 1980 00:08:35

```
sample interval = 600 seconds
```

do not transmit real-time data

output sound velocity with each sample

number of samples to average = 4

```
wait time after serial sync sampling = 30 seconds
```

internal pump is installed

S>DDMMYY=290408

S>DS

SBE37-SM V 2.6b SERIAL NO. 5307 29 Apr 2008 18:27:21

```
logging not started
```

```
sample interval = 600 seconds
```

```

samplenumber = 32498, free = 158152

```

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 = 17.66 deg C
```

 $S > QS$

☐☐SBE 37-SM

S>DS

SBE37-SM V 2.6b SERIAL NO. 5307 29 Apr 2008 18:27:32

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logging not started
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sample interval = 600 seconds
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```

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 = 17.64 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=300408
S>STARTHHMMSS=200000
start time = 30 Apr 2008 20:00:00
S>DS
SBE37-SM V 2.6b SERIAL NO. 5307 29 Apr 2008 18:28:30
logging not started
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 = 17.67 deg C
S>STARTLATER
start time = 30 Apr 2008 20:00:00
□