

RDI 75kHz Long Ranger Deployment

Project: Endeavour Ridge "Sea Breeze-Fluxmeter" Year 2

Serial Number: 3868

Cruise: 2004-22

Platform: CCGS John P. Tully (Capt. John Anderson)

Station: ER04 N3

Deployment Date: 1131, 11 July 2004 PDT

Position: 47° 57.520' N, 129° 05.582' W

Depth on Sounder: 2120m

Recovery Date: 1507, 20 July 2005 PDT

Deployed 6 m above bottom with Aanderaa CM 20m above and microcat below

Parameters

Ensemble Interval	01:00:00.00
Bin Size	8m
Number of Pings	50
Number of Bins	64
Observations	u,v,w velocity, echo intensity correlation, percent good, pitch, roll, heading, battery
Ambiguity Velocity	125cm/s
Water Profiling Mode	Mode 1, Narrow Band
Time	Pacific Standard
Start Time	2030, 10 July 2004 PST
Power	High

PlanADCP v.2.01 (2002) output:

PlanADCP (Basic): Workhorse Long Ranger 75 kHz [Dpl1]

BackToSC Settings View Help

ADVANCED settings changed. CAUTION: Not enough battery packs for the deployment.

Advanced

Cell Size 8.00m

First Cell 15.51m

Max Range 700.00m

Last Cell 519.51m

Proposed Setup:

Deployment Duration: 365 days

Ensemble Interval: 01:00:00

Salinity: 35 ppt

Temperature: 2 °C

Water Pings: 50

Number of Depth Cells: 64

Depth Cell Size: 8 m

Deployment Consequences:

First Cell Range: 15.51 m

Last Cell Range: 519.51 m

Max Range: 700.00 m

Standard Deviation: 1.11 cm/s

Ensemble Size: 1428 bytes

Storage Required: 12.51 MB

Power Usage: 1884.07 Wh

Battery Pack Usage: 4.2

Notes

PST

CAP NUM

PlanADCP (Advanced): Workhorse Long Ranger 75 kHz [Dpl1]

BackToSC Settings View Help

CAUTION: Not enough battery packs for the deployment.

Basic Expert

Environmental Setup:

Transducer Depth: 2100 m

Salinity: 35 ppt

Magnetic Variation: 0 °

Temperature: 2 °C

Deployment Timing Setup:

Duration: 365 days

Ensemble Interval: 01:00:00.00

Ping Int. (Auto): 00:00:10.00

☐ Ping Immediately After Deployment

First Ping Date and Time:

10-Jul-2004 08:30:00 PM

Profiling Setup:

Pings Per Ensemble: 50

Number of Depth Cells: 64

Depth Cell Size: 8 m

Deployment Consequences:

First Cell Range: 15.51 m

Last Cell Range: 519.51 m

Max Range: 700.00 m

Standard Deviation: 1.11 cm/s

Ensemble Size: 1428 bytes

Storage Required: 12.51 MB

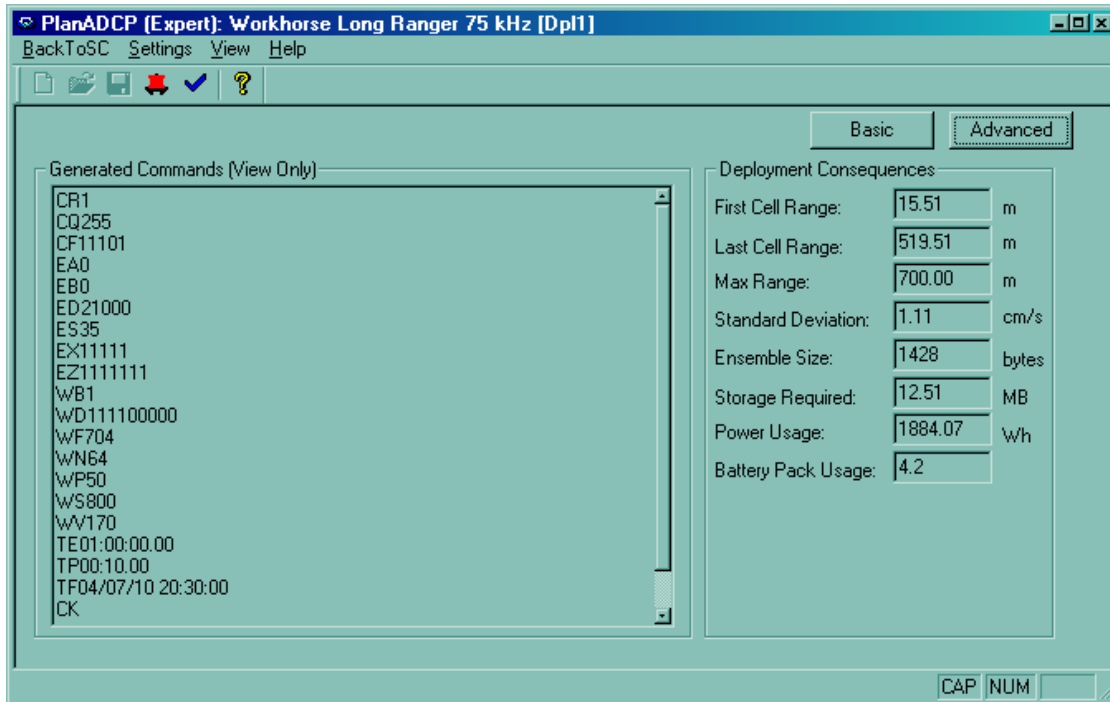
Power Usage: 1884.07 Wh

Battery Pack Usage: 4.2

Notes

PST

CAP NUM



PREDEPLOYMENT TEST

[BREAK Wakeup A]

WorkHorse Broadband ADCP Version 16.21

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

WP = 00086 ----- Pings per Ensemble (0-16384)

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

WV = 050 ----- Mode 1 Ambiguity Vel (cm/s radial)

TE = 01:00:00.00 ----- Time per Ensemble (hrs:min:sec.sec/100)

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

TP = 00:10.00 ----- Time per Ping (min:sec.sec/100)

TS = 04/07/10,19:54:20 --- Time Set (yr/mon/day,hour:min:sec)

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

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

ED = 21000 ----- 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;PhgCyc;Binry;Ser;Rec)

CK ----- Keep Parameters as USER Defaults
CR # ----- Retrieve Parameters (0 = USER, 1 = FACTORY)
CS ----- Start Deployment

>TS? **Time set**

TS = 04/07/10,19:56:12 --- Time Set (yr/mon/day,hour:min:sec)

>PS0 **Instrument detail**

Instrument S/N: 3868

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 = +4.916395E-11

c2 = -1.141992E-06

c1 = +1.040860E+00

Offset = -1.108503E+01

Temp Sens Offset: -0.38 degrees C

CPU Firmware: 16.21 [0]

Boot Code Ver: Required: 1.13 Actual: 1.13

DEMODO #1 Ver: ad48, Type: 1f

DEMODO #2 Ver: ad48, Type: 1f

PWRTIMG Ver: 85d3, Type: 5

Board Serial Number Data:

5E 00 00 02 FB AE 44 09 DSP727-2001-06F

DD 00 00 02 48 76 5C 09 HPI727-3007-00A

6A 00 00 02 FB AC E1 09 TUN727-1005-06X

D1 00 00 02 FB 91 19 09 CPU727-2000-00H

91 00 00 03 01 94 45 09 REC727-1004-06X

D4 00 00 02 48 99 23 09 HPA727-3009-00A

>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
Receive Loop-Back.....PASS
Wide Bandwidth.....***FAIL***
Narrow Bandwidth.....***FAIL***
RSSI Filter.....PASS
Transmit.....***FAIL***

SENSOR TESTS:

H/W Operation.....PASS
>PC2

Press any key to quit sensor display ...

Heading Pitch Roll Up/Down Attitude Temp Ambient Temp PRESSURE
152.860 6.240 -2.420 Down 17.610C 16.080C 287.8 kPa
>RS
RS = 022,039 ----- 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...
27 23 29 24

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

>CZ

Powering Down

>TS040710201132
>CZ

Powering Down

>>>>> Function starting 07/10/04 20:12:58 >>>>>

[BREAK Wakeup A]
WorkHorse Broadband ADCP Version 16.21
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>CR1
[Parameters set to FACTORY defaults]
>CQ255
>CF11101

```

>EA0
>EB0
>ED21000
>ES35
>EX11111
>EZ1111111
>WB1
>WD111100000
>WF704
>WN64
>WP50
>WS800
>WV170
>TE01:00:00.00
>TP00:10.00
>TF04/07/10 20:30:00
>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 3868_ filename
>cs

```

FINAL COMMUNICATION WITH TERMINAL PROGRAM

```

[BREAK Wakeup A]
WorkHorse Broadband ADCP Version 16.21
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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 = 064 ----- Number of depth cells (1-128)
WP = 00050 ----- Pings per Ensemble (0-16384)
WS = 0800 ----- Depth Cell Size (cm)
WV = 170 ----- Mode 1 Ambiguity Vel (cm/s radial)

TE = 01:00:00.00 ----- Time per Ensemble (hrs:min:sec.sec/100)
TF = **/**/**, **:**:** --- Time of First Ping (yr/mon/day,hour:min:sec)
TP = 00:10.00 ----- Time per Ping (min:sec.sec/100)
TS = 04/07/10,20:14:39 --- Time Set (yr/mon/day,hour:min:sec)

EA = +00000 ----- Heading Alignment (1/100 deg)
EB = +00000 ----- Heading Bias (1/100 deg)
ED = 21000 ----- Transducer Depth (0 - 65535 dm)
ES = 35 ----- 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

>c?

CB = 811 ----- Serial Port Control (Baud [8=115200]; Par; Stop)

CC = 000 000 000 ----- Choose External Devices (x;x;x x;x;x x;x;SBMC)

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

CK ----- Keep Parameters as USER Defaults

CP = 0 ----- PolledMode (1=ON, 0=OFF; BREAK resets)

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

CS ----- Go (Start Pinging)

CZ ----- Power Down Instrument

>EXPERTON

Expert Mode is ON

>C?

CB = 811 ----- Serial Port Control (Baud [8=115200]; Par; Stop)

CC = 000 000 000 ----- Choose External Devices (x;x;x x;x;x x;x;SBMC)

CD = 000 000 000 ----- Serial Data Out (Vel;Cor;Amp PG;St;P0 P1;P2;P3)

CE ----- Retrieve Last Ensemble

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

CH = 0 ----- Suppress Banner

CI = 000 ----- Instrument ID (0-255)

CK ----- Keep Parameters as USER Defaults

CL = 1 ----- Sleep Enable (0 = Disable, 1 = Enable)

CM = 0 ----- RS-232 Sync Master (0 = OFF, 1 = ON)

CN = 0 ----- Save NVRAM to recorder (0 = ON, 1 = OFF)

CP = 0 ----- PolledMode (1=ON, 0=OFF; BREAK resets)

CQ = 255 ----- Xmt Power (0=Low, 255=High)

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

CS ----- Go (Start Pinging)

CX = 0 ----- Trigger Enable (0 = OFF, 1 = ON)

CY # ----- Error Status Word (0=Clear, 1=Display)

CZ ----- Power Down Instrument

>W?

WA = 050 ----- False Target Threshold (Max) (0-255 counts)

WB = 1 ----- Bandwidth Control (0=Wid,1=Nar)

WC = 064 ----- Correlation Threshold

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

WE = 2000 ----- Error Velocity Threshold (0-5000 mm/s)

WF = 0704 ----- Blank After Transmit (cm)

WI = 0 ----- Clip Data Past Bottom (0=OFF,1=ON)

WJ = 1 ----- Rcvr Gain Select (0=Low,1=High)

WL = 001,005 ----- Water Reference Layer: Begin Cell (0=OFF), End Cell

WN = 064 ----- Number of depth cells (1-255)

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

WQ = 0 ----- Sample Ambient Sound (0=OFF,1=ON)

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

WT = 0000 ----- Transmit Length (cm) [0 = Bin Length]

WU = 0 ----- Ping Weighting (0=Box,1=Triangle)

WV = 170 ----- Mode 1 Ambiguity Vel (cm/s radial)

WW = 004 ----- Mode 1 Pings before Mode 4 Re-acquire

WX = 999 ----- Mode 4 Ambiguity Vel (cm/s radial)

WZ = 010 ----- Mode 5 Ambiguity Velocity (cm/s radial)
 >WV 125
 >WV?
 WV = 125 ----- Mode 1 Ambiguity Vel (cm/s radial)
 >TF?
 TF = **/**/**, **:**:** --- Time of First Ping (yr/mon/day, hour:min:sec)
 >T/ ERR 010: UNRECOGNIZED COMMAND
 >T?
 TB = 00:00:00.00 ----- Time per Burst (hrs:min:sec.sec/100)
 TC = 00000 ----- Ensembles Per Burst (0-65535)
 TE = 01:00:00.00 ----- Time per Ensemble (hrs:min:sec.sec/100)
 TF = **/**/**, **:**:** --- Time of First Ping (yr/mon/day, hour:min:sec)
 TG = ****/**/**, **:**:** - Time of First Ping (CCYY/MM/DD, hh:mm:ss)
 TP = 00:10.00 ----- Time per Ping (min:sec.sec/100)
 TS = 04/07/10,20:15:52 --- Time Set (yr/mon/day, hour:min:sec)
 TT = 2004/07/10,20:15:52 - Time Set (CCYY/MM/DD, hh:mm:ss)
 >TF 04/07/10,20:30:00
 >tf?
 TF = 04/07/10,20:30:00 --- Time of First Ping (yr/mon/day, hour:min:sec)
 >AZ
 Pressure Offset Updated in NVRAM.
 >CS