



CODAR Ocean Sensors, Ltd.

Spring 2010 Session - HF Radar Training Course Agenda

Monday Evening - 5/3/2010

17:00 Meet at CODAR Office, 1914 Plymouth St., Mountain View, CA 94043

18:00 - 20:00

Social Gathering at a Local Restaurant and Bar (Hosted by CODAR)

Tuesday - 5/4/2010

7:30-9:00 Breakfast (on your own)

9:30-10:00

1.1 Introductions and Course Overview

Brief self-introductions by attendees

Brief introductions of CODAR staff and Staff Intro (slideshow)

Course Overview and logistics

HF Radar and SeaSonde Terminology

Questions/Problems: How to get answers from Support

10:00-10:30

1.2 SeaSonde Overview - "What We Make and What is Measured"

Overview and Operation of a SeaSonde HF Radar Network

Differences Between SeaSonde Models -

CODAR Company Overview -

System Hardware Deployments Worldwide -

10:30-11:00

1.3 Site Selection Review

Optimizing Performance and Data Quality With Good Site Choices

Environmental Factors

Interference Issues

Frequency Selection and Permits

11:00-12:00

1.4 Introduction to the SeaSonde (Apple) Processor

Intro to Mac OS X and Apple Macintosh Computers

Standard CODAR Macintosh Installation

OS Changes with Leopard and Snow Leopard (Mac OS X 10.5.6 and 10.6.x)

Lunch (Catered by COS)

12:00-12:45

Take-Out Lunch

12:45-13:30

1.5 SeaSonde10 Release 6 Universal Software Overview

Overview

CODAR Software and File Directory

Documentation - where to Find the Answers

SeaSondeRadialSetup

Property lists

Sentinel

SeaSondeController (Monitor & Standard Controller Menus)

SeaSondeAcquisition

CSPPro

Terminal Shell Programs (SpectraAnalysis Suite)

Archivalist

13:30-14:15

1.6 SeaSonde Release6 Webserver with PC and "web-phone" compatibility

Break

14:15-14:30

14:30-15:00

1.7 System Setup, Startup and Checks for Proper Operation

Exercise: Startup of a 25MHz SeaSonde

SeaSondeController (Transmit Monitor & Advanced Controller Menu)

Sentinel (Status Window Checks)

Terminal Window (Error Message Checks)

Automated Start-up with Sentinel login

15:00-15:45

1.8 Evaluating Cross Spectra : The Basic Unit of SeaSonde Data

Definition

Description

Characteristic features and differences between systems

Unusual spectra features

Identifying "problem" features

Exercises: Using SpectraPlotterMap and DiagDisplay to Evaluate Spectra and Radial Data

15:45-16:15

1.9 Simulated Processing and Radial Site Setup Modifications

16:15-17:00

1.10 Using DiagDisplay for Setting Phases and Troubleshooting

Setting Phases From Sea Echo and Re-Processed CSS Files

Setting Phases From Pattern Measurements

Exercises: Estimating phases and Re-processing Cross Spectra

Barbecue at CODAR

17:30 - 18:30

Presentation by Don Barrick, President

The History of HF Radar and CODAR Ocean Sensors, Ltd.

Wednesday - 5/5/2010

UC Santa Cruz - Long Marine Lab La Feliz Room
Santa Cruz, CA

7:30-8:00 Breakfast (on your own)

08:30-9:30 **Travel to UCSC Long Marine Lab in Santa Cruz, CA** from CODAR Office (Transportation Provided by CODAR)

09:30-11:00

2.1 System Setup, Startup, Checks for Proper Operation, Troubleshooting -

Exercise: Setup and startup 5MHz and 25MHz SeaSondes at Long Marine Lab

SeaSondeController (Transmit Monitor & Advanced Controller Menu)

Sentinel (Status Window Checks)

Terminal Window (Error Message Checks)

Automated Start-up with Sentinel login

11:00-11:30

2.2 Hardware Overview

5MHz (separated Rx & Tx) and 25MHz (combined Rx & Tx) examples

Lunch (Hosted by CODAR)

11:30-12:30

Take-Out Lunch

12:30-13:30

2.3 5MHz and 25MHz APMs - How to Collect APM Data

Exercise: Conduct Walking APMs for 5MHz & 25MHz SeaSondes

13:30-14:00

2.4 Configuring Wave Software for Wave Processing

System limitations

Evaluating Site for Appropriateness of Wave Measurements

Configuring the Wave Parameters with RadialSiteSetup

Theory of Operation

Using Wave Display

14:00-15:00

2.5 Processing Steps for APM Data from Morning Session

15:00-16:30

2.6 Using CrossLoopPatterner and GPSTracker

Dinner Out at Santa Cruz Pier - Santa Cruz

(Hosted by CODAR)

Thursday - 5/6/2010

7:30-8:30 Breakfast (on your own)

9:00-9:30

3.1 Introduction to First Order Lines

Exercise: Using SpectraPlotterMap to Evaluate/Set First Order Lines

9:30-10:30

3.2 How to Re-Process Radial Data

RadialSiteSetup

10:30-11:30

3.3 Antenna Pattern Measurement Techniques - Review

SeaSondeController (Transponder Controller Menu)

Antenna Pattern Measurement Setup

11:30-12:15

3.4 Using Timbuktu 8.7 for Remote Control of SeaSondes

Configuring Mac computers to communicate with Timbuktu
Connecting to a Site a Control Session
Initiating an Exchange Session to Transfer files
Favorite Timbuktu Tricks
Common Problems Encountered
Timbuktu Practice (between computers)

Lunch (Hosted by CODAR)

12:15-13:30

Take-Out Lunch

13:30-14:15

3.5 Communications and File Transfers -

Combine Site File Transfers
Communications Hardware
Configuring File Transfers
Using rsync for command-line transfers
Exercise: Configuring file transfers with FileExchange and rsync

Break

14:15 -14:30

14:30-15:00

3.6 Combine Site Software Overview -

CombineSite Installation • Sentinel • FileExchange • Terminal Shell • Archivalist • CombineSiteSetup

15:00-15:30

3.7 Creating Grid Files

SeaDisplay
SDSetup
CombineSiteSetup
Exercise: Creating Grid Files for Total Vectors

15:30-16:00

3.8 How to Re-Process Total Vectors Using Alternative Parameters -

Data Troubleshooting From Total Vectors Backwards to the Problem Source

16:00-16:30

3.9 File Management and Archiving -

How to contact "Support" and what's required

- Screen shots
- Diagnostic files
- Sample data files (compressed)

The Importance of Desktop Log Files
Configuring Archivalist to Optimize Disk Space
Re-processing Data From Archives

16:30-17:00

3.10 Troubleshooting Systems with DiagDisplay and STAT files

17:00-17:30

3.11 Introduction to SeaDrift

18:00

Graduation Banquet

(Hosted by CODAR)

Course Wrap-up & Departure