

Overview

The sailboat supports remote control and data logging via XBee radio. When configured correctly, the XBee radios provides a serial interface for transmitting and receiving. This document describes the message format supported by the sailboat.

Messages

The radio interface uses an NMEA-style message format. This format uses a header and a checksum footer. The data fields are comma-delimited. The first data field is a three-digit number that indicates the message type. The following fields hold the data specific to the type. The generic message format is shown below.

```
$DALSAIL,<type>,<arg1>,...,<argn>*checksum\r\n
```

There are currently 11 different message types. They are listed below with their respective type numbers:

- 000** Message acknowledgment
- 001** Mode change
- 002** State change
- 003** Remote motor control
- 004** Way point entry
- 005** Data log configuration
- 006** GPS data log
- 007** Wind vane data log
- 008** Compass data log
- 009** Navigation status log
- 010** System reset cause

The arguments for each type of message are described below.

000 Message Acknowledgment

These messages are sent from the sailboat to acknowledge that it has received and handled commands sent to it. There is a single argument that indicates the acknowledgment status. The statuses are listed below.

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001 Mode Change

002 State Change

003 Remote Motor Control

004 Way Point Entry

005 Data Logging Configuration

006 GPS Data Log

007 Wind Vane Data Log

008 Compass Data Log

009 Navigation Status Log

010 System Reset Cause

Usage