

# C-Nav<sup>TM</sup>

## C-Nav7050 Quick Start Guide

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## Release Notice

This is the November 2020 release of the C-Nav7050 Quick Start Guide.

## Revision History

0	11/1/2020	Initial Release	R. Morton
Revision	Date	Description	Author

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This device complies with Part 15 Subpart B Class B of the FCC Rules. Operation is subject to the following two conditions:

1. This device may not cause harmful interference, and
2. This device must accept any interference received, including interference that may cause undesired operation.

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### **Use of this Document**

This Quick Start Guide is intended to be used by someone familiar with the concepts of GNSS Sensor hardware installation and rack mounted equipment in a marine environment. Revisions to this Quick Start Guide can be obtained on our website [www.oceaneering.com/cnav](http://www.oceaneering.com/cnav) or by contacting C-Nav Support: [cnavsupport@oceaneering.com](mailto:cnavsupport@oceaneering.com)

## Table of Contents

C-Nav7050 Quick Start Guide.....	1
Table of Contents.....	5
List of Figures .....	5
List of Tables .....	5
Manual Organization .....	6
Conventions .....	6
Section 1 - Overview.....	7
Introduction .....	7
Supplied Equipment .....	7
Optional Equipment.....	7
Section 2 – Installation.....	8
Section 3 - Operation.....	9

## List of Figures

Figure 1: C-Nav7050 Interconnection Diagram.....	8
Figure 2: C-Nav7050 Front Panel .....	9
Figure 3: Receiving Data .....	9
Figure 4: Not Receiving Data.....	10

## List of Tables

Table 1: Supplied Equipment.....	7
Table 2: Optional Equipment .....	7

## Manual Organization

This section describes how the manual is laid out. It gives one or two sentence descriptions about each major section.

[Section 1 - Overview](#) (Page 7) gives a brief overview of the purpose of this document.

[Section 2 – Installation](#) (Page 7) provides guidance on how the C-Nav7050 works.

[Section 3 - Operation](#) (Page 9) provides guidance on operating the C-Nav7050.

## Conventions

Arial font is used for plain text in this document.

*Arial italic* font is used for settings names.

“Arial quoted” font is used for settings values.

**Arial Bold** font is used for button names.

***Arial Bold Italic*** font is used for menu items.

[Arial Blue](#) font is used for cross-references.

[Arial Blue Underline](#) font is used for hyperlinks.

*Arial red italic* is used for typed commands.



This symbol is used for warnings in which failure to take heed may cause severe injury or death.



This symbol is used to caution the user that the improper installation and use of this product may damage this product and/or other devices connected to it.

Important notes are displayed in shaded text boxes

***Please note:***

Such note boxes display important information that should not be ignored.

## Section 1 - Overview

### Introduction

This Quick Start Guide is intended to familiarize the user with the basic setup of the C-Nav7050 only. The supplied USB Thumb Drive (P/N 7CNG002-0) includes the C-Nav7050 User Guide. The C-Nav7050 consists of supplied equipment ([Table 1](#)) and optional equipment ([Table 2](#)), depending on the customer's preferences.

### Supplied Equipment

1	C-Nav7050 1U Rack Mount Unit w/ IALA/Dual UHF (P/N CNV7050RM1U19B)
2	6ft DC Power Supply Cable w/ Neutrik XLR Plug
3	USB Thumb Drive (P/N 7CNG002-0)

**Table 1: Supplied Equipment**

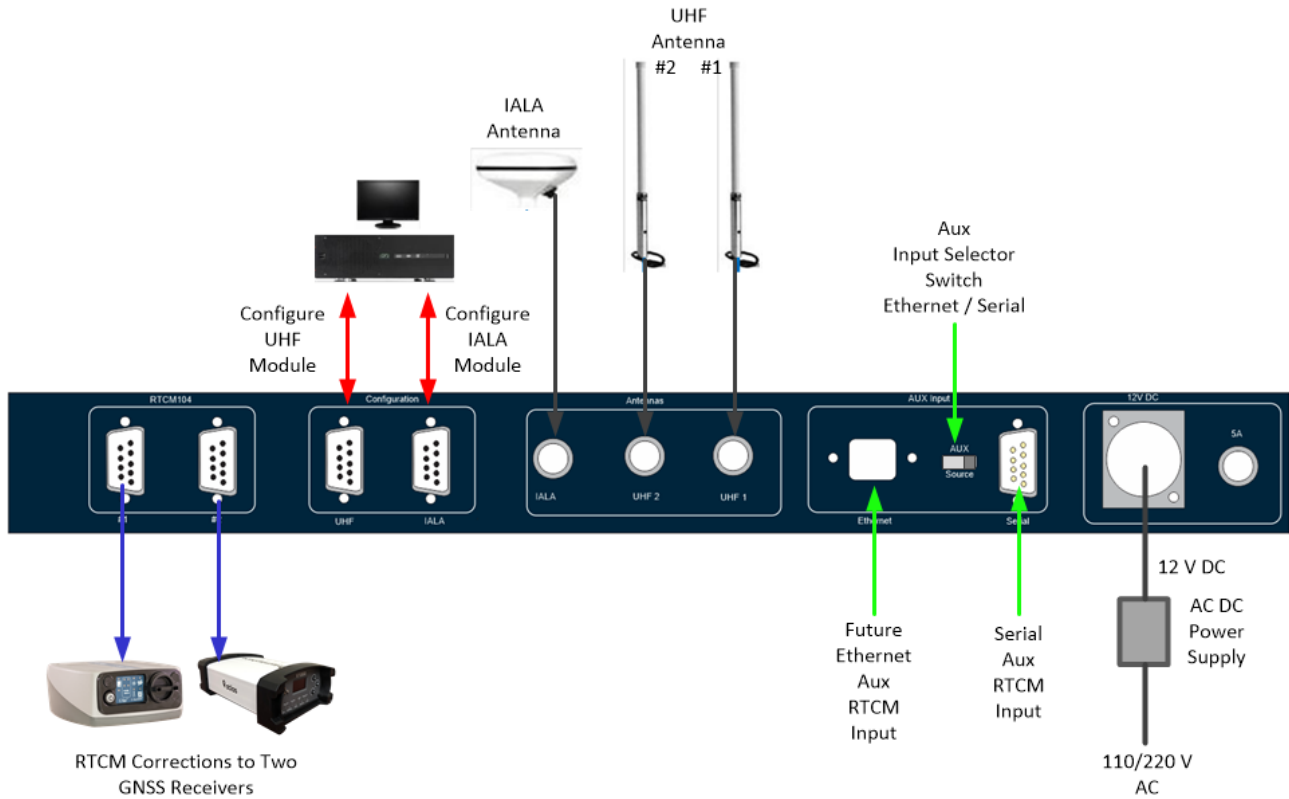
### Optional Equipment

1	A31 Antenna, GPS L1 & Beacon (P/N CNVHEM940-2088-000)
2	12" Antenna Pole (P/N CNVWES534610)
3	UHF Antenna, 460-470MHz (P/N CNVMAXMFB4605)
4	UHF Antenna Mounting Kit (P/N CNVMAXMMK4)
5	6ft Serial Cable DB9 Male-Female (P/N CNVQVSC317-06)
5	C-Nav7000/7050 12VDC PSU Kit (P/N CNV7000-PSU-12V-K)

**Table 2: Optional Equipment**

## Section 2 – Installation

This section provides guidance on hardware installation. [Figure 1](#) (Page 8) shows the rear panel of the C-Nav7050 and its connections.



**Figure 1: C-Nav7050 Interconnection Diagram**



## Section 3 - Operation

This section provides guidance on operating the C-Nav7050. [Figure 2](#) (Page 9) shows the front panel of the C-Nav7050 with its buttons, switches and indicators.



Figure 2: C-Nav7050 Front Panel

Refer to [Figure 2](#) (Page 9) for the following from left to right:

- 1) **ON/OFF** Pushing this button turns the UHF and IALA receiver modules on; this button will illuminate green. Pushing this button again turns the UHF and IALA receiver modules off; the lamp is extinguished.
- 2) **Channel Select Screen Keys:** These allow the user to select the appropriate channel for each of the two UHF receivers. When the proper UHF Receiver is selected, the user can either advance to a known channel or scan to a receiving channel. Channel selection is performed by:
  - a. Press the **Screen Key** in ½ second intervals to advance the channel manually (channel numbers only increase). An amber background on the **Screen Key** denotes that the channel is in a manual change state.
  - b. To scan a channel, press and hold the **Screen Key** for 5 seconds and release. The receiver will search for the channel that is receiving data by staying at that channel for 5 seconds before moving up to next channel if no data has been received.
  - c. If a channel is receiving data, the background of the **Screen Key** will illuminate green as seen in [Figure 3](#) (Page 9).



Figure 3: Receiving Data

- d. If a channel is not receiving data, the background of the **Screen Key** will illuminate red as seen in [Figure 4](#) (Page 10).



**Figure 4: Not Receiving Data**

- e. The C-Nav7050 controller saves channel frequencies displayed on both Screen Keys into memory after it has been left untouched for 5 minutes.
- 4) **Primary Source Selector Switch:** This four-position rotary switch selects the primary source of RTCM corrections between:
- a **UHF #1**
  - b **UHF #2**
  - c **IALA**
  - d **Aux**
- 5) **Same Source Selection Warning:** This red LED is illuminated if the user sets both the primary and secondary switches to the same position.
- 6) **Secondary Source Selector Switch:** This four-position rotary switch selects the Secondary source of RTCM corrections between:
- a **UHF #1**
  - b **UHF #2**
  - c **IALA**
  - d **Aux**
- 7) **Data Indicators:** These 3 green LEDs indicate:
- a **Top:** IALA data available
  - b **Middle:** Auxiliary data available
  - c **Bottom:** Source of auxiliary data
    - i **ON** Ethernet
    - ii **OFF** Serial
- 8) **Fallback Control Indicator:** Two green LEDs indicate if the outgoing correction stream is from the primary or secondary source.