



XeOS
Technologies Inc.

DirectionFinder User Manual

VHF BEACON DIRECTION FINDER



Version 1.3
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Shipped From



Contact Us

Email: support@xeostech.com
Phone: (902) 444 7650
Fax: (902) 444 7651
Website: www.xeostech.com

Version History

Version No.	Date	Description
1.0	Sep 2015	Initial document
1.1	Oct 2015	Added mechanical drawings
1.2	Oct 2015	Added antenna assembly, channel scan
1.3	Sep 2017	Document overhaul

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Overview

The Xeos Technologies DirectionFinder combines an R-1000 Telemetry receiver and a directional Yagi antenna into a single handheld unit for locating VHF emitting beacons, such as the XMB. The directional nature of the antenna allows users to locate their beacon based on the volume of pulses coming from the receiver.

General Description

Prior to deployment, the XMB is programmed to emit a pulse on one of four selectable frequencies between 154.585 MHz and 160.785 MHz. The XMB will emit a 1 to 4 second pulse at the selected frequency when it has surfaced. Once the user is within range to pick up the signal on the direction finder, the relative volume of the pulse is used to pin-point the direction of the beacon.

Components

The DirectionFinder comes with the following components:

- Yagi Uda directional antenna
- R-1000 Telemetry receiver w/ rechargeable batteries
- BNC connector
- Charging cable with European adapter
- Audio jack adapter

R1000 Manual

The manual for the R-1000 Direction Finder radio can be found [here](#).

Setup

Assembly

Assembling the antenna is simple, just unfold the unit.

To setup the Direction Finder, first make sure that the batteries are charged and the R-1000 can be turned on. Turn the R-1000 off and connect the BNC connector from the R-1000 to the Yagi directional antenna. Then, fit the R-1000 into the holding slot at the bottom of the antenna.



Figure 1: BNC Connectors



Figure 2: Receiver Slot

Quick Start

To begin using the Direction Finder, follow these steps:

1. Power up the R-1000 by turning the PWR/VOL knob to the right
2. Press the MEMO button
3. Select a preprogrammed channel using the DIAL
4. You can exit this mode and manually enter a frequency by pressing CLEAR
5. Holding the Antenna perpendicular to the ground, begin scanning the horizon
6. If you are within range of the VHF beacon, you will hear a pulse. The relative volume of this pulse indicates its direction

Manual Channel Selection

The user can also manually enter frequencies into the R-1000.

1. Power up the R-1000 by turning the PWR/VOL knob the the right
2. Press the CLEAR button
3. Enter your desired frequency using the numpad and press ENT

Adjusting Gain

At long distances, make sure to adjust the GAIN knob fully clockwise to compensate for a weak signal. As you approach the transmission point of the beacon, adjust the GAIN knob counter-clockwise.

R-1000 controls

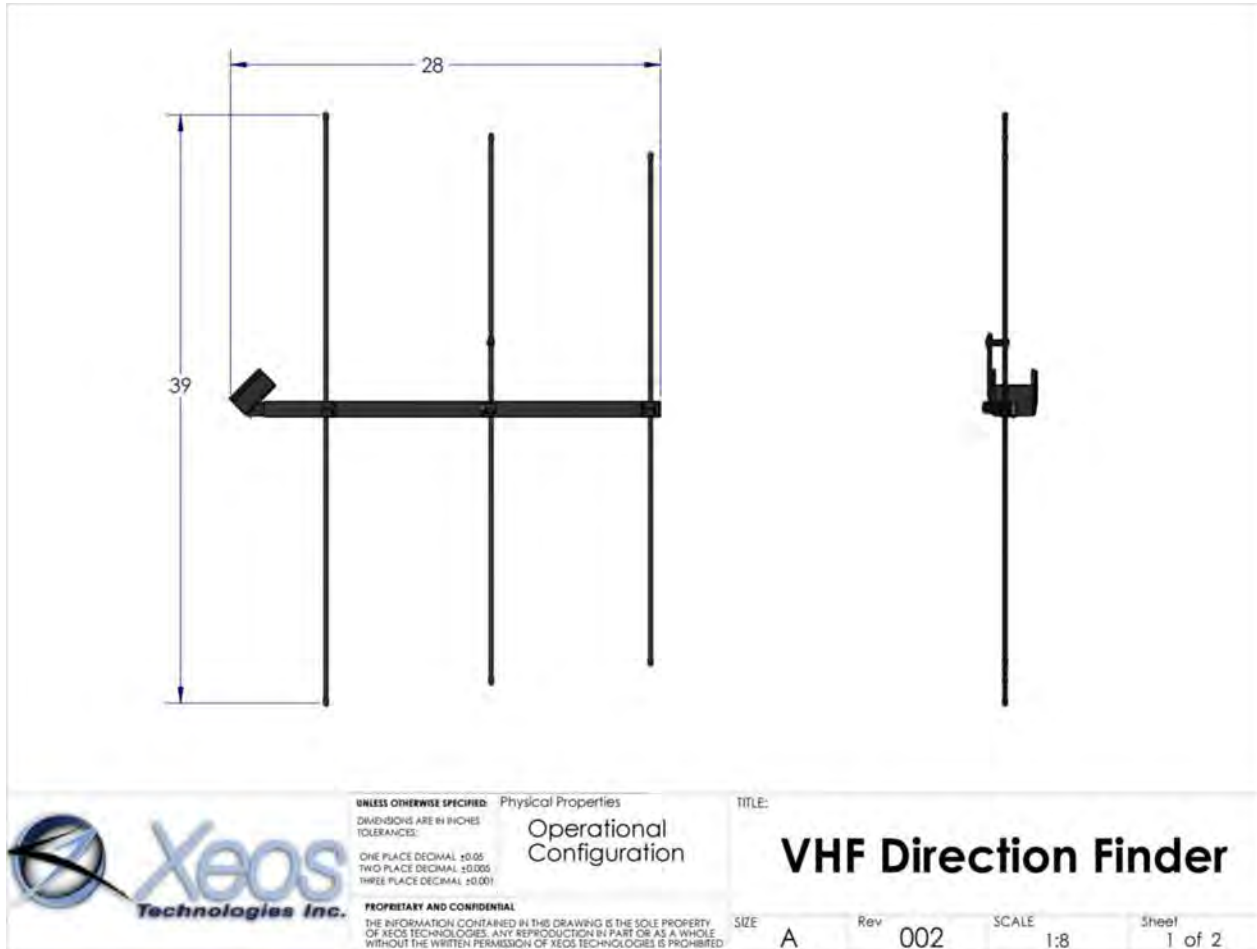
Use the **LAMP** button to illuminate the R-1000's buttons and display in low-light. For additional information regarding the R-1000, see the R-1000 user manual.

Specifications


Frequency Range: 154 MHz to 162 MHz


Mechanical Drawings

Antenna: Operational



Antenna: Storage



	<p>UNLESS OTHERWISE SPECIFIED: Physical Properties DIMENSIONS ARE IN INCHES TOLERANCES: ONE PLACE DECIMAL ±0.05 TWO PLACE DECIMAL ±0.005 THREE PLACE DECIMAL ±0.001</p>	<p>Storage Configuration</p>	<p>TITLE: VHF Direction Finder</p>
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Warranty, Support and Limited Liability

Xeos Technologies Inc. warrants the Direction Finder to be free of defects in material or manufacturing for a period of one year following delivery. Liability is limited to repair or replacement of the defective part and will be done free of charge.

LIMITED WARRANTY: Xeos Technologies Inc. warrants that the product will perform substantially in accordance with the accompanying written materials for a period of one year from the date of receipt.

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