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Museum of the Bible DGUIDE

User Manual

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Introduction

The DGUIDE is a handheld, battery-powered device that produces ultra-wideband (UWB) pulses. These pulses are used to generate real-time location data. The DGUIDE leads a user to an object of interest within the overall system and provides additional information on the object. This makes the DGUIDE device an ideal solution for informational and accurate real-time location tracking.



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Regulatory

Information

FCC Notice (For US Customers):

FCC ID: 2ALMG-DGUIDE1-2

Model: DGUIDE

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

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

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/television technician to help.

Changes and modifications not expressly approved by Museum of the Bible can void your authority to operate this equipment under Federal Communications Commissions rules.



Usage Instructions

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Overview

The DGUIDE is a device that relies on ultra-wideband (UWB) pulses and time-stamp information to determine real-time location tracking data. The DGUIDE transmits UWB beacons and co-exists with other devices on a UWB network. The DGUIDE leads a user to any object of interest within the operational area using the real-time location tracking data. The DGUIDE receives power from an internal battery that can be recharged via a wireless charger. The DGUIDE devices can additionally provide information on an object of interest. This makes the DGUIDE device an ideal solution for informational and accurate real-time location tracking.



Product Specifications **museum of the Bible**

Main System Components

Micro-controller: 32-bit ARM Cortex-M7 RISC processor with FPU
RF Transceiver: Decawave DW1000 Ultra Wideband (UWB) IEEE802.15.4-2011
Sensors: Inertial, Temp/Humidity, Barometric Pressure
I/O: Micro USB
Indicators: Tri-Color LED (Red, Green, Blue)
Power: PowerStream GM383875-PCB Lithium Ion Battery (3.7V 1000mAh)
Operating Voltage: 3.3V
Temperature Range: -40 - 85C

Mechanical

Width: 4.6"
Depth: 0.83"
Height: 8.54"
Weight: 1.03 lbs

RF Characteristics

UWB IEEE802.15.4-2011

Channel: 5

Bandwidth (Values in GHz):

fM	The highest emission peak	6.7388
fL	10 dB below the highest peak	6.1414
fH	10 dB above the highest peak	6.8347
Bandwidth	Calculated: (fH - fL)	0.6933

Data Rate: 6.81Mbps

Antenna: 0 dBi Omnidirectional

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