

THE DUC-1

- This add-on solution for L1 GPS installations is a perfect fit when extra-long antenna cables are needed and a simple in-line amplifier won't suffice.
- A DUC-1 consists of a DOWN converter at the GPS antenna and an UP converter at the RF input of the GPS receiver.
- The converter pair are phase locked to provide high fidelity signal transport. This technique uses the same reference for up and down conversion, which eliminates frequency error.

CABLE OPTIONS

- The DUC-1 product is optimized for generic RG-58 cable and can be used for lengths of up to 450 meters.

This guide provides the basic information you need to setup and begin using your new DUC-1. For more information or any queries please contact your sales representative.

BOX CONTENTS

The following is provided in a DUC-1 COAX Kit

- 1 DUC DOWN Converter
- 1 DUC UP Converter
- Power Supply (with either a UK, EU or USA power cord)

ADDITIONAL EQUIPMENT REQUIRED

The additional equipment listed below is needed for a basic setup:

- A Receiver
- A standard 12 V DC power outlet
- Antenna cable with TNC male connector at DUC DOWN end and BNC male connector at DUC UP end
- Antenna cable with TNC male connector for the DUC UP to Receiver

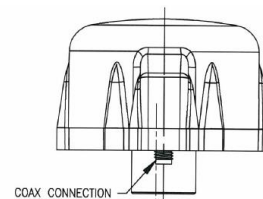
SYSTEM INDICATORS

The DUC-1 UP unit has LED indicators
Green light indicates DUC Up is powered, red light indicates an issue in COMs between DUC-1 UP and DUC-1 DOWN

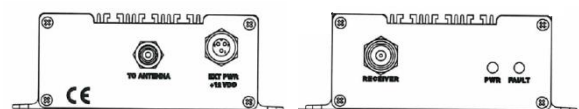
SETTING UP YOUR DUC-1

Complete the steps below to connect and power your DUC.

1. Mount the DUC-1 DOWN Converter on a secure, stable structure with an unobstructed view of the sky.
2. Using the antenna cable, connect the DUC-1 DOWN to the DUC-1 UP antenna port, which is found on the back face of the DUC-1 UP.
3. Using the antenna cable connect the DUC-1 UP receiver port (which is located on the Front of the DUC-1 UP) to the Receiver.
4. Provide 12V power through the External Power port located on the front of the DUC-1 UP unit.



DUC-1 DOWN



BACK

DUC-1 UP

FRONT

DUC QUICK START GUIDE

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SPECIFICATIONS:

| DOWN CONVERTER | |
|------------------------|--|
| Specifications | |
| Frequency: | GPS L1 |
| Gain Combined: | 35 (min) |
| Axial Rate: | 3 dB (max) |
| Noise Figure: | 2.5 dB (max) |
| Termination: | 50 Ω |
| Size and Weight | |
| Height: | 89 mm (3.5") |
| Diameter: | 114 mm (4.5") |
| Weight: | < 0.6 kg (1.3 lbs) |
| Environmental | |
| Relative Humidity: | 0-100% condensing |
| Storage Temperature: | -55°C to +85°C |
| Operating Temperature: | -40°C to +65°C |
| Altitude: | 6,096 m (20,000 ft) |
| Other | |
| Connection: | TNC, Female |
| Packaging: | Waterproof enclosure |
| Mounting: | Standard marine mount (1" - 14 / 3/4" NPT) |



| UP CONVERTER SPECIFICATIONS | |
|------------------------------|--|
| Size and Weight | |
| Dimensions: | 44 x 130 x 170 mm (1.75 x 5.12 x 6.68 in) |
| Weight: | 0.6 kg (20 oz) |
| Power | |
| Power Requirements: | 9-12 VDC via antenna bias or 12 ±10% VDC external |
| Power Consumption: | < 250 mA @ 12 VDC (Both Units) |
| Environmental | |
| Relative Humidity: | 0-95% non-condensing |
| Storage Temperature: | -50°C to +85°C |
| Operating Temperature: | 0°C to +50°C |
| Altitude: | 6,096 m (20,000 ft) |
| Other | |
| Connection: | BNC connector to downconverter, TNC to GPS receiver. |
| Indications: | Power, Fault for Downconverter Cable open or short |
| Antenna Cable Lengths (MAX.) | 450 m (1,500 ft)* (*RG-58 cable) |



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