



EUM3000

Quick Start Guide

Version D



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Contents

1	Opening the Box	1
2	Choosing a Location	5
3	Connecting Kit Components	7
4	Testing Your EUM3000	11
5	Mounting the Antenna	13
6	Troubleshooting	17
7	Regulatory Notices	19

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Tables

Table 1	User Connectivity LED Status Displays	12
Table 2	RSSI LED Status Displays	12
Table 3	Antenna Mount Guidelines	14
Table 4	Surface Mounting Options for the Antenna	15

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Figures

Figure 1	EUM3000 Components	2
Figure 2	Connecting the EUM3000 Components	7
Figure 3	Connect the DC Power Cord to the EUM3000	8
Figure 4	Connect the AC Power Cord	9
Figure 5	EUM3000 Front Panel LEDs	11
Figure 6	Rear View of Antenna Bracket	13
Figure 7	Mounting the Antenna in the Bracket	16

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1 Opening the Box

Before you install the EUM3000, verify that your kit includes the following items:

- End user modem
- Antenna with pre-connected 3-metre cable
- Flush-mountable antenna bracket
- Two antenna-mount suction cups, two drywall plugs and two screws
- DC converter with 2-metre DC power cable
- 2-metre AC power cable
- Crossover Ethernet cable

Refer to Figure 1 for an illustration of each EUM3000 component.

Opening the Box

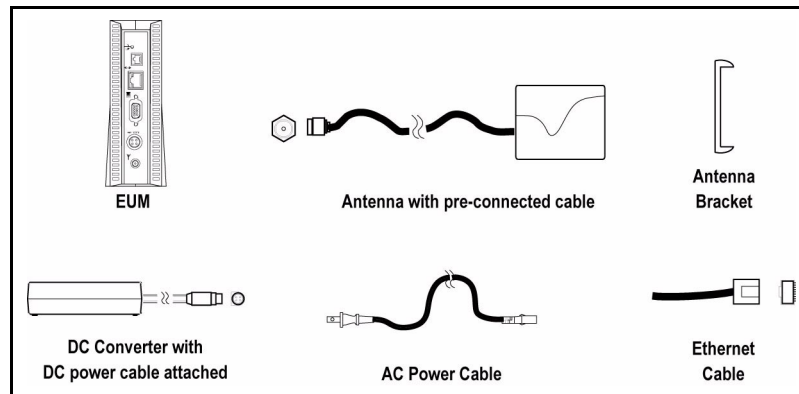


Figure 1 EUM3000 Components

NOTE: The antenna-mount suction cups, drywall plugs and screws are not shown in Figure 1.



WARNING!

Before installing or operating an EUM3000 modem, you must familiarize yourself with the contents of this guide. WaveRider assumes no liability for problems resulting from a failure to adhere to these procedures, or other recognized general safety precautions.



WARNING!

The RF connector on the EUM carries a DC voltage, and permanent equipment damage may occur without the use of a DC blocking device. For the EUM3000, the WaveRider proprietary antenna acts as a DC blocking device. Connect the antenna to the EUM unit before operating the EUM3000 system.

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2 Choosing a Location

The location of the EUM and the antenna directly affects the performance of your EUM3000 system. Before you connect all the components, follow the guidelines in this section to choose the best position for the EUM and the antenna.

To Choose the Best Location for the EUM

1. Ensure that the EUM is:
 - upright;
 - on a stable, flat surface;
 - in a position where its air vents are unobstructed.

NOTE: Avoid placing the EUM near sources of heat (such as an electric heater).

To Choose the Best Location for the Antenna

1. Ensure that the Antenna is:
 - indoors.
 - near an entrance or window.
 - as high off the floor as possible.
 - a minimum of 20 cm (8 in.) from people or animals.

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3 Connecting Kit Components

Now that you have chosen a suitable location, use the instructions in this section to connect the following components to the EUM:

- The Antenna
- Your Home Computer
- The DC converter

When you have completed the above tasks, connect the DC converter to the AC power supply.

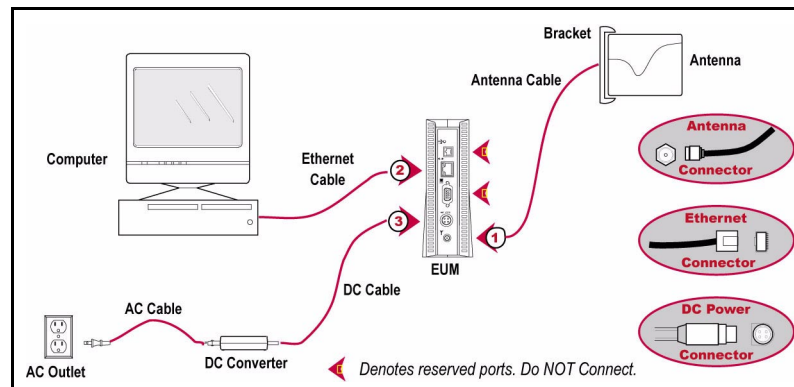


Figure 2 Connecting the EUM3000 Components

To Connect the EUM3000 Components

1. Hand-screw the antenna cable onto the corresponding connector at the back of the EUM3000 (refer to pointer 1 in Figure 2). Do not use wrenches or pliers. Do not cross-thread or overtighten.
2. If you are connecting the EUM3000 directly to your computer, attach the crossover Ethernet cable that is included with your kit to the Ethernet port on your computer and the Ethernet port on the EUM3000 (refer to pointer 2 in Figure 2). If you are connecting the EUM to your computer through a hub, use the Ethernet cable recommended by the hub manufacturer.
3. Connect the DC converter to the EUM3000. To do this, press firmly at the base of the DC connector on the power cord, and attach to the corresponding DC connector on the EUM3000 (Figure 3).

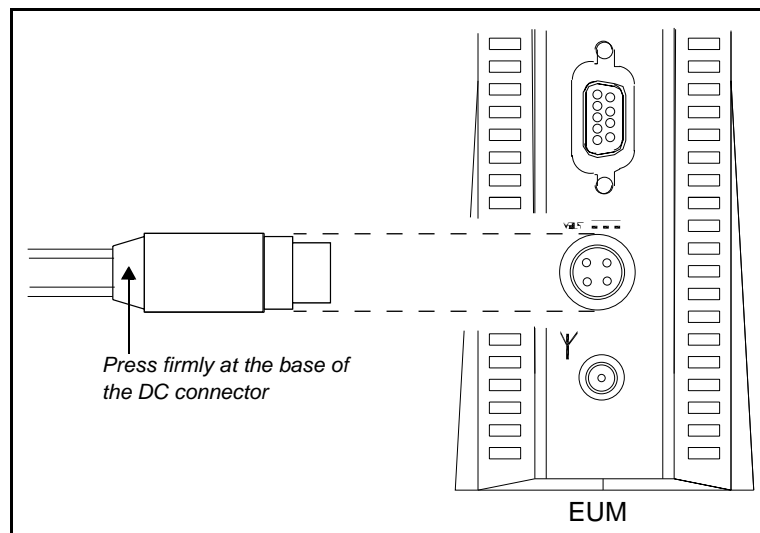


Figure 3 Connect the DC Power Cord to the EUM3000

NOTE: The DC power cable features a secure locking connector. To disconnect the cable, pull the collar back on the connector, then continue pulling to detach the DC power cable from the EUM.

Your EUM3000 uses a custom antenna cable and connector. If you need to extend this cable, contact your Wireless Internet Service Provider (WISP).

4. Connect the AC-power cord between the DC converter and an AC outlet (Figure 4). Your EUM3000 will power-up; there is no ON/OFF switch on the modem.

NOTE: WaveRider recommends that you use a power bar with surge protection (instead of connecting the AC-power cord directly to an AC outlet) to avoid potential damage to the EUM3000 components in the event of a power surge.

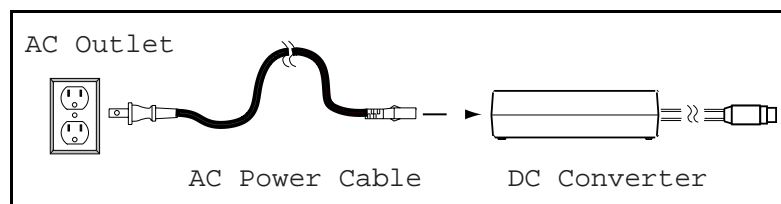


Figure 4 Connect the AC Power Cord

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4 Testing Your EUM3000

Check the the LED (Light Emitting Diode) indicators on the front of the modem to ensure that your EUM3000 is functioning properly and receiving an adequate signal.



Figure 5 EUM3000 Front Panel LEDs

To Verify Proper EUM3000 Function

1. Check the User Connectivity LED to test the link to between the EUM3000 and your computer. Refer to Table 1 for an explanation of the different User Connectivity status displays.

Table 1 User Connectivity LED Status Displays

Off	The link to your computer is not functioning.
Solid On	The link to your computer is functioning and the radio is receiving data.
Flashing	The EUM3000 is sending data.

2. Check the Received Signal Strength Indicator (RSSI) LED to ensure that the antenna is receiving an optimum signal in its current location. Refer to Table 2 for an explanation of the different RSSI LED status displays.

Table 2 RSSI LED Status Displays

Off	No signal is detected. The antenna is disconnected or is not aligned with your wireless internet service provider's antenna.
Slow Flash	The signal strength is poor.
Fast Flash	The signal strength is good.
Solid On	The signal strength is very good.

5 Mounting the Antenna

1. Thread the pre-attached antenna cable through the guides in the back of the antenna bracket, if required.

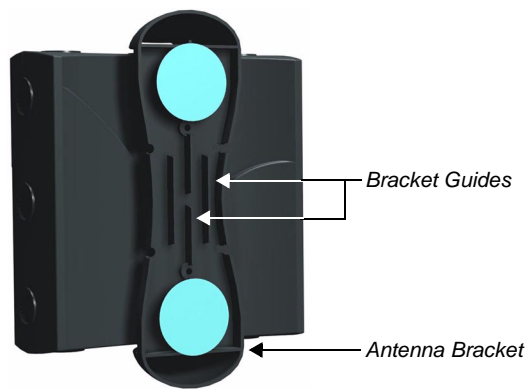


Figure 6 Rear View of Antenna Bracket

NOTE: Bending the antenna cable too sharply can degrade your EUM3000 performance. Never allow more than a 1.25 cm (0.5 in.) bend radius. If a quarter (25-cent piece) fits into the curve, the bend is acceptable.

Mounting the Antenna

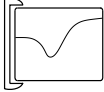
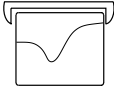
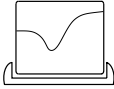
Your EUM3000 Kit includes suction cups, drywall plugs, and screws to allow a variety of mounting options:

Table 3 Antenna Mount Guidelines

Suction Cups	Use on flat, smooth surfaces, such as glass, plastic, laminates or metal. Remove all grease, oil and grit before attaching suction cups.
Drywall Plugs	Use on all commercial drywall and other plaster surfaces. For a secure grip, drill the smallest hole possible for the drywall plug.
Screws	Use on hardwood surfaces.

2. Insert the suction cups or screws into the base of the antenna bracket and mount onto the desired surface.

Table 4 Surface Mounting Options for the Antenna

<p>Side Mount</p> 	<p>Mount the antenna on a wall, window, window frame, or solid furniture.</p>
<p>Top Mount</p> 	<p>Hang the antenna from a ceiling or the shelf of a bookcase.</p>
<p>Bottom Mount</p> 	<p>Mount the antenna on solid furniture (a desk or shelf) or on a window sill.</p>



WARNING!

The EUM3000 has been designed and manufactured to meet FCC RF exposure standards for mobile transmitting devices. To comply with these standards during normal operation, WaveRider recommends maintaining a minimum distance of 20 cm (8 inches) between the antenna and human beings or animals.

3. Position the antenna in the bracket according to one of the configurations illustrated in Figure 7. Click and lock the antenna in place. For maximum signal reception, ensure that

Mounting the Antenna

the concave surface of the antenna points toward the WISP antenna and the **TOP** marker on the opposite side points up.

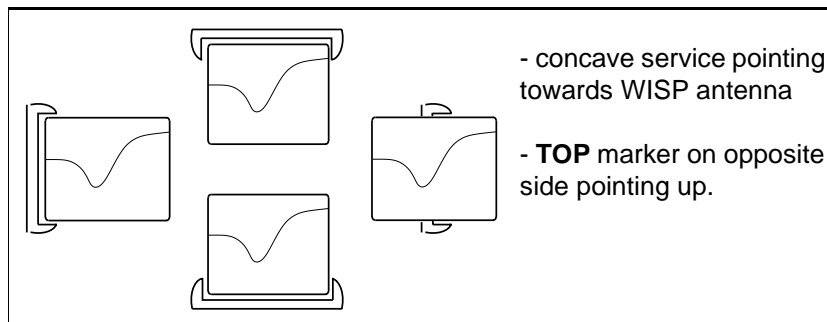


Figure 7 Mounting the Antenna in the Bracket

NOTE: The location, position and orientation of the EUM3000 affects the strength and stability of your Internet connection. Pointing the antenna at buildings or other obstacles often impedes communications, but some surfaces may provide desirable 'signal bounce'. For optimal reception, try various positions before fix-mounting your antenna.

6 Troubleshooting

Q: I cannot receive a signal, regardless of where I place my antenna. What should I do?

A: Move the antenna outside, and check the received signal strength indicator (RSSI) LED on the EUM3000 modem.

- If you are receiving a strong signal, then your modem and antenna are both functioning properly. To improve your reception indoors, choose a better antenna location (see *Choosing a Location*, on page 5, and *Mounting the Antenna*, on page 13).
- If no signal is detected, your EUM3000 is either not functioning properly, or you may require a special outdoor antenna to receive an adequate signal from your location. For more information, contact your WISP.

Q: I have found a great location for my antenna, but the cable included with the kit will not reach between my modem and antenna. Can I use a longer cable?

A: Yes. Contact your WISP for more information.

Q: My EUM3000 keeps shutting off automatically. How can I prevent this?

A: Your unit may be overheating due to inadequate ventilation. Lightly touch the casing of your EUM3000. If the casing is hot, find a new location where the EUM can stand upright and away from other

Troubleshooting

objects that may block airflow through its vents. If these measures have no effect, discontinue using the EUM3000, and contact your WISP.

7 Regulatory Notices

Industry Canada

The EUM3000 has been designed and manufactured to comply with IC RSS-210.

The IC certification number for the EUM3000 is TBD (certification pending).

Federal Communications Commission

The EUM3000 has been designed and manufactured to comply with FCC Part 15.

The FCC ID for the EUM3000 is OOX-LMS3000 (certification pending).

Interference Environment

Operation of the EUM3000 is subject to the following conditions:

- This device may not cause harmful interference.
- This device must accept any interference received, including interference which might cause undesirable operation.



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