

## EE5000 EchoStream® Wireless Repeater

### Installation and Operation Manual - 05029D

#### 1 Overview

EE5000 repeaters receive, decode and retransmit signals at enhanced power from Inovonics Wireless nodes. They act as range expanders for any valid Inovonics Wireless transmission, including signals from other repeaters. Repeaters can be layered as necessary, allowing Inovonics Wireless systems to scale from small commercial sites to complete campuses consisting of several buildings. For applications that require a weatherproof enclosure, the EE5000 may be placed in the Inovonics weatherproof plastic housing, part number ACC640.

**Note:** The ACC640 waterproof plastic housing has not been tested to the EN50131-1 standard.

#### 1.1 Inovonics Wireless Contact Information

If you have any problems with this procedure, contact Inovonics Wireless technical services:

- E-mail: support@inovonics.com
- Phone: (800) 782-2709; (303) 939-9336

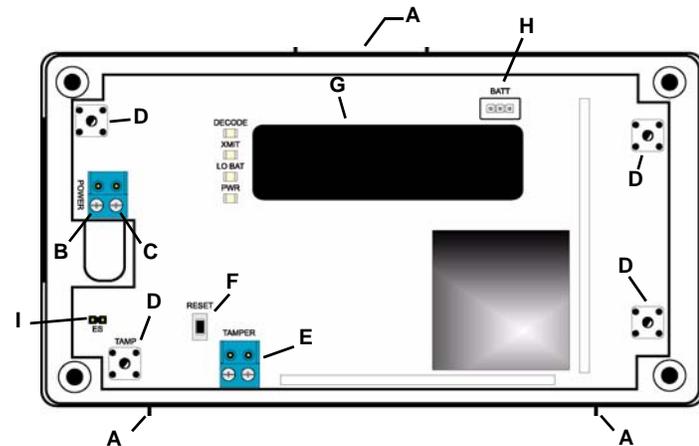


Figure 1 EE5000 Components

- |                         |                         |                                    |
|-------------------------|-------------------------|------------------------------------|
| A Housing release tabs  | B Power                 | C GND connection                   |
| D Housing tamper button | E Tamper terminal block | F Reset button                     |
| G Backup battery        | H Battery connector     | I Enable EchoStream selection pins |

#### 2 Connect Power Cabling

Before beginning startup, power must be connected to the repeater. To connect power to the repeater:

1. Use a small screwdriver to press the housing release tab on the top or bottom of the repeater (Fig. 1); separate the housing.
2. Connect power cabling to the Vs and GND connections (Fig. 1).
  - Wire should be two-conductor 20AWG (or larger) stranded-tinned copper with PVC insulation rated to 300 volts at 26°C (80°F). Wire length should not exceed 30 meters (98 feet).

#### 3 Connect Battery Power

The repeater is shipped with a fully-charged backup battery. You will need to connect the battery:

1. Plug the connector cable from the backup battery into the battery connector (Fig. 1).

#### 4 Connect the Tamper Terminal Block

**Note:** The external tamper input has not been tested to the EN50131-1 standard.

An external tamper switch can be wired to the tamper terminal block if desired. When activated, an external tamper switch will send an alarm message similar to that sent by the housing tamper button.

#### 5 Enable EchoStream Select

To meet ETSI requirements, Inovonics has developed a new line of EE 868MHz-only products. These new 868MHz-only products are compatible with older systems that include EchoStream select products. If you are using any ES products in your current system, you will need to enable EchoStream select compatibility on this new 868MHz-only product.

To enable/disable EchoStream select compatibility:

1. To enable compatibility with ES products, place a selection jumper on the enable EchoStream selection pins (Fig. 1).
2. If no ES products are used in your system, remove the selection jumper from the EchoStream selection pins (Fig. 1).

#### 6 Register the Repeater

Although the repeater is functional upon startup, Inovonics Wireless strongly recommends you register it using your receiver, network coordinator or control panel. Inovonics Wireless recommends all repeaters be supervised.

#### 7 Grade 2 Requirements

To meet European Grade 2 requirements, the following procedures must be performed:

##### 7.1 Secure the Housing

There are two screw tabs on the bottom of the housing and one screw tab on the top; all three must be used to secure the housing.

To secure the housing:

1. Open the housing
2. Drill out the three screw holes on the housing base: two on the bottom of the housing, one on the top.
3. Use the three 6 x 1/4 screws included in your accessory pack to secure the housing.

##### 7.2 Cover the Indicator Lights

The indicator lights must be disabled, so that operation cannot be determined externally.

To cover the indicator lights:

1. Open the housing.
2. Apply black electrical tape over the light-holes on the inside of the housing.
3. Close the housing.

#### 8 Mount the Repeater

**Caution:** Mount the repeater in a location removed from metal. Metal objects (duct work, wire mesh screens, boxes) will reduce RF range.

1. Use the provided anchors and screws to mount the repeater in a location accessible for future maintenance.
  - In large installations, repeaters should be mounted so that every transmitter has multiple transmission paths to the serial receiver or network coordinator. This kind of redundancy preserves system integrity in the event of temporary interruptions of any transmission path in the system.
  - For maximum efficiency, repeaters should be mounted with as few obstacles as possible between it and the receiver, network coordinator or control panel.
2. Perform a walk test, activating each transmitter assigned to the repeater and ensuring an appropriate response.

#### 9 Specifications

**Housing:** 165 mm x 89 mm x 25 mm

**Weight:** 204 g (7.14 oz)

**Operating environment:** -10° to 60°C (14° to 140°F), 90% relative humidity, non-condensing

**Power requirement:** 12 to 16.5 VAC or VDC; 200 mA maximum current consumption

**Battery capacity:** 1800 mAh @ 3.7 typical

**Back-up battery life:** 24 hours

**Operating frequency:** 868-869 MHz

**Tamper:** Type B, fixed device

**Battery charger operating environment:** -10° to 40°C (14° to 104°F)

**Accessories:** ACC640: weatherproof plastic enclosure for outdoor installations;

BA850: replacement lithium-ion battery assembly

**EE5000 Compliance:** EN50131-1 Security Grade 2; EN50130-5 Environmental class II

**Certification:** Telefication B.V.

#### 10 Warranty/Disclaimer

**Caution:** Changes or modifications to this unit not expressly approved by Inovonics Wireless Corporation may void the installer's authority to operate the equipment as well as the product warranty.

Inovonics Wireless Corporation ("Inovonics") warrants its products ("Product" or "Products") to conform to its own specifications and to be free of defects in materials and workmanship under normal use for a period of thirty-six (36) months from the date of manufacture. Within the warranty period, Inovonics will repair or replace, at its option, all or any part of the warranted Product. Inovonics will not be responsible for dismantling and/or reinstallation charges. To exercise the warranty, the User ("User", "Installer" or "Consumer") must work directly through their authorized distributor who will be given a Return Material Authorization ("RMA") number by Inovonics. Details of shipment will be arranged directly through the authorized distributor.

This warranty is void in cases of improper installation, misuse, failure to follow installation and operating instructions, alteration, accident or tampering, and repair by anyone other than Inovonics.

This warranty is exclusive and expressly in lieu of all other warranties, obligations or liabilities, whether written, oral, express, or implied. There is no warranty by Inovonics that Inovonics product will be merchantable or fit for any particular purpose, nor is there any other warranty, expressed or implied, except as such is expressly set forth herein. In no event shall Inovonics be liable for an incidental, consequential, indirect, special, or exemplary damages, including but not limited to loss of profit, revenue, or contract, loss of use, cost of down time, or interruption of business, nor any claim made by distributor's customers or any other person or entity.

This warranty will not be modified or extended. Inovonics does not authorize any person to act on its behalf to modify or extend this warranty.

This warranty will apply only to Inovonics Products. Inovonics will not be liable for any direct, incidental, or consequential damage or loss whatsoever, caused by the malfunction of Product due to products, accessories, or attachments of other manufacturers, including batteries, used in conjunction with Inovonics Products.

**Note:** E-mail support@inovonics.com for a copy of the CE Declaration of Conformity.