ES1501/EN1501-XL EchoStream® TapWatch® Transmitter
Installation and Operation Manual - 04590A

1 Overview

Connected to pulse-output meters being used for multi-family submetering, the ES1501 and EN1501-XL transmitters will transmit data to an RF receiver that is connected to a Data Concentrator and Communicator (DCC-5800). The ES1501 includes a replaceable battery; the EN1501-XL includes a long-life battery that is not replaceable.

1.1 Inovonics Wireless Contact Information

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

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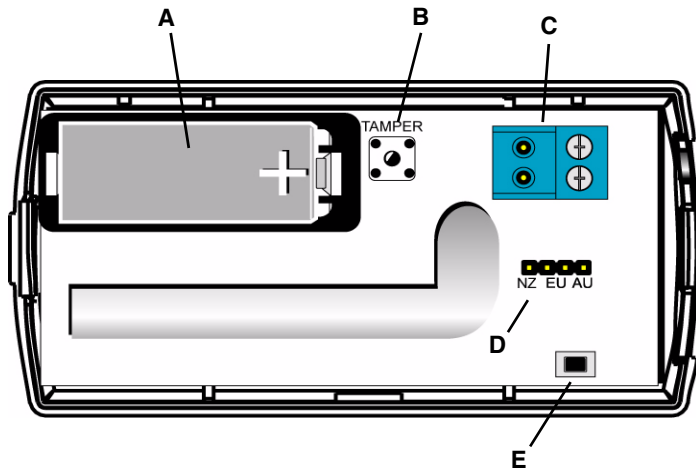- Phone: (800) 782-2709; (303) 939-9336

1.2 ES1501/EN1501-XL Components

 Figure 1 ES1501/EN1501-XL Components
A. Battery (ES1501-style battery shown) **B.** Tamper switch **C.** Removable header terminal
D. Frequency band selection pins **E.** Reset button

2 Installation and Startup

2.1 Connect Transmitter to Meter

Connect the transmitter to the meter as follows:

1. Open the housing by pressing down on the base tab near the wiring thru-hole while lifting away the cover.

2. Fully insert stripped wires into the removable header terminal.

3. Use a small Phillips screwdriver to tighten the screws that secure wires to the removable header terminal.

4. Attach removable header terminal (if removed) to the transmitter board as shown.

Note: If connecting to a meter that has polarity to its pulse output, the negative (−) should be connected to the outside terminal, closest to the corner of the board.
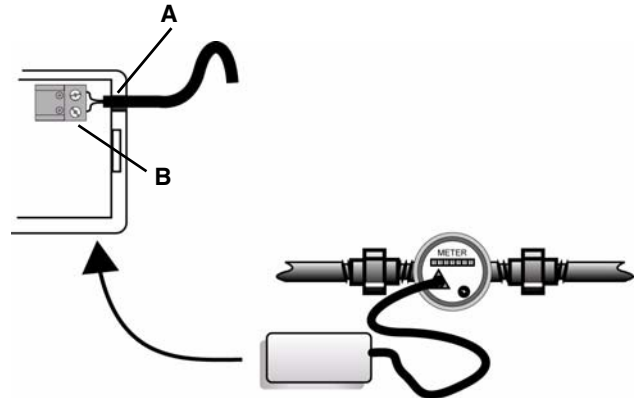

Figure 2 Connect the Transmitter to the Meter
A. Cabling thru-hole   **B.** Removable header terminal

2.2 Select Frequency Band

If you are using either transmitter anywhere except North America, you will need to select the frequency band for your geographic area. If you are using the transmitter in North America, there is no need to select the frequency band. All transmitters are set for North America by default.

Select Frequency Band on the ES1501

1. Place the selection jumper included in the accessory pack on the appropriate frequency band selection pins (Figure 1).

- Leave the jumper off the pins to select 902-928 MHz for North America.
- Place the jumper on the left two pins to select 921-928 MHz for New Zealand.
- Place the jumper on the middle two pins to select 868-869 MHz for Europe.
- Place the jumper on the right two pins to select 915-928 MHz for Australia.

Select Frequency Band on the EN1501-XL

1. Place the selection jumper included in the accessory pack on the appropriate frequency band selection pins (Figure 1).

- Leave the jumper off the pins to select 902-928 MHz for North America.
- Place the jumper on the left two pins to select 921-928 MHz for New Zealand.
- The selection marked EU is non-functional on the EN1501-XL. Do not select the middle two pins.
- Place the jumper on the right two pins to select 915-928 MHz for Australia.

2.3 Mount the Transmitter

1. Use the double-sided tape to mount the transmitter to a clean wall.

2. If installing the ES1501, the transmitter can be secured a wall with the mounting screw and anchor. Remove the battery to access the mounting screw hole; press the reset button after replacing the battery.

Note: Ensure cabling enters the housing through the access wiring thru-hole, and replace the housing (Figure 2).
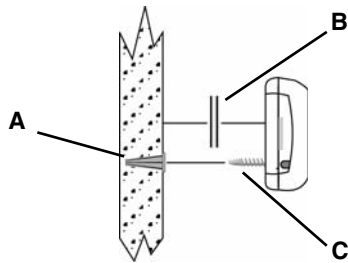

Figure 3 Mount the Transmitter
A. Anchor installed in wall   **B.** Double-sided tape
C. Mounting screw

2.4 Register the Transmitter

Note: See "Programming the PMT-Meter Pair" in TapWatch User Manual for more information.

1. Confirm that transmitter is connected to the meter.

2. Confirm that the battery is installed.

3. Go to the "Registered Meters" tab of the Site Information editor.

4. Click "Add" on the "Registered Meters" page; confirm selected building.

5. Complete the "Add New Meter To..." form when it appears.

6. Click the "Register" button.

7. When prompted, press the reset button on the transmitter; wait for confirmation.

3 Replace the Battery (ES1501 Only)

When the low battery message is received, you will need to replace the ES1501 battery.

1. Open the housing by pressing down on the base tab near the wiring thru-hole while lifting away the cover.

2. Remove the old battery, taking note of the battery orientation.

3. Insert the new battery, making sure it is aligned correctly.

4. Press the reset button.

Note: ES1501 transmitters retain programming data in non-volatile memory. They do not require reprogramming after loss of power. Install new battery and press the transmitter reset button to re-initialize the transmitter and restore programming. Its count will go to zero and the initial Meter Read count will be updated in the DCC.

4 Specifications

Dimensions: 3.57" x 1.70" x 0.85"

Operating environment: 0°- 60°C (32°- 140°F), 90% relative humidity, non-condensing

Typical battery life: ES1501: 5 years at 70 to 90°F (20 to 30°C). Higher temperatures reduce battery life. EN1501-XL: calculated battery life of 20 years at 70 to 90°F (20 to 30°C). Higher temperatures reduce battery life.

ES1501 Battery (BAT604): 3.0V lithium (DL123A) The battery is always supervised.

5 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 fourteen (14) 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.

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