Bluetooth Installation Radio (BTIR)
Field Service Tool
User's Manual

Revision –
Copyright 2016
Zenner Performance Meters
Zenner USA

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NOTICES

Patents

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FCC Compliance

ZENNER
All that counts.

Bluetooth Installation Radio
Model 100-0023-001

FCC ID: 2ACOABTIR
CONTAINS FCCID: SQGBT900   **S/N** **7000**

See User's Manual for Patent Information

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 AND (2) THIS DEVICE MUST ACCEPT ANY INTERFERENCE RECEIVED INCLUDING THAT WHICH 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/TV technician for help.

NOTE: Changes or modifications not expressly approved by the manufacturer could void the user's authority to operate the equipment

RF Exposure

To comply with FCC RF exposure requirements, this device and the antenna for this device must be carried in a manner to ensure a minimum separation distance of 0.5 inches (10mm) or more from a person's body. This requirement can be met when the device is placed in its carry case and suspended by the belt loop at the hip. Other body worn configurations should be avoided.

Battery Notice
        These devices contain rechargeable Lithium Ion Batteries

1   Introduction

The Zenner USA Bluetooth Installation Radio (BTIR) is used by installers and field service technicians to deploy and manage Stealth Reader MIU devices such as utility meter interface units (MIUs). With a BTIR, MIUs may be easily installed, upgraded, checked, and shutdown for shipping. By following the instructions in this manual, you can get your BTIR up and running quickly and easily.

The BTIR is a rugged, waterproof radio that allows communication between Stealth Reader interface units and a Bluetooth enabled handheld device.
Your BTIR product kit includes:
- Installation Radio
- Carry Case
- USB Cable
- Car Charger USB Power Adapter

2   External Features
The BTIR is a self-contained device with no user serviceable parts. There are 3 external features for the User.

2.1   Restart switch
The Restart switch is provided to perform a soft restart of the BTIR. It is used to wake the BTIR from a "sleep" mode and/or initiate Pairing. A soft restart allows your BTIR to get a fresh start, similar to rebooting a desktop computer. To perform a soft reset, press and release the Restart button located next to the USB port.

2.2   USB Connector and Protective cover
The USB connector is USB Type B. It is used for charging only. The protective cover should remain in place at all times except while charging.

2.3   2 color LED
Red indicates the BTIR is transmitting to a Stealth MIU.
Green indicates the BTIR is receiving data from a Stealth MIU.

3   Pairing with Your Terminal device
Before the Bluetooth radio in the BTIR can operate with the terminal device it must be paired. Follow the instructions of the terminal device manufacturer for pairing information.

What you can do about pairing failures
1. Make sure Bluetooth is turned on at the hosting device.
2. Determine which pairing process your hosting device employs.
3. Turn on discoverable mode.
4. Make sure the two devices are in close enough proximity to one another.
5. Power the devices off and back on. A soft reset sometimes can resolve an issue.
6. Power down likely interferers.
7. Charge up both devices you're trying to pair.
8. Delete a device from the hosting device and rediscover it.
9. Make sure the devices you want to pair are designed to connect with each other.
4   Firmware Upgrades
4.1   Stealth Radio Firmware Upgrades
Firmware for the Stealth Radio may be upgraded over-the-air or at a factory test bench.

4.2   Bluetooth Firmware Upgrades

Firmware for the Bluetooth Radio may be upgraded over-the-air or at a factory test bench.

5   Cleaning Your BTIR

When removing mud or other debris from the BTIR, ensure that the USB protective cap is installed, then use a damp cloth for cleaning and completely dry the BTIR before use.

6   Maintaining your Battery Pack

6.1   Battery Usage

The BTIR comes with a rechargeable Lithium Ion battery pack. The battery life between charges varies with usage but typically allows up to 12 hours of operational use. The Battery is replaceable in the field but it is recommended that the entire unit be returned for quality inspection and proper disposal of the battery.

6.2   Charging the Battery

The lithium-ion battery can provide between 300-500 charge/discharge cycles. The lithium-ion battery is different from most other rechargeable batteries because charging from a partially charged battery keeps the battery in good condition. Lithium-ion batteries should be charged early and often. Fully discharging the lithium-ion battery should be avoided whenever possible. For most users, charging the battery at the end of each work day is adequate for battery care. The lithium-ion battery pack typically lasts about 2-3 years, but potentially longer if cared for properly. Li-ion batteries should be kept cool. They should not be subjected to freezing temperatures. Aging will occur much faster at high temperatures (such as a hot car) and will reduce the life of your battery.

- Only charge the battery in the BTIR through the USB port.
- Do not use or charge the battery close to a fire or inside a car in which the temperature may exceed 140°F (60°C).
- Stop charging the battery if charging is not completed within the specified time.
- The battery can be fully charged within a 32°F(0°C) to 114°F(45°C) temperature range. The charging circuit will be disabled or charging will be reduced outside of this temperature range.
- Use the battery only in the specified equipment.
- Do not charge the battery in a place where static electricity is generated, or let the battery touch something that is statically charged.

The internal Battery of the BTIR is charged through the USB port. The USB port does not transfer data and it will not be recognized by a computer. If the USB port of a computer is used for charging, set the power of the computer port to 500 mA.

If the Car charger is used for charging, plug the charger into an active receptacle, connect the USB cable to the car charger and then connect the other end of the USB cable to the BTIR. It is not recommended that the BTIR be charged by the car charger if the vehicle interior will become hot. The charging circuit will automatically shut down if the BTIR temperature is greater than 140°F (60°C).

6.3   Battery Warnings

The BTIR has an internal battery. In the event that the battery pack or the battery pack components are removed from the BTIR care must be taken in the handling of the battery pack or its components.

- Do not heat or throw the battery pack or batteries into a fire.
- Do not use or store the battery pack or batteries close to fire or inside a car in which the temperature may be over 140°F (60°C).
- Do not put the battery pack or batteries in your pocket or in a bag together with metal objects such as necklaces, hairpins, coins, or screws. Do not store the battery pack or batteries with such objects.
- Do not short circuit the (+) and (-) terminals with a metal object such as a needle, necklace or hairpin.
- Do not pierce the battery pack or batteries with a sharp object such as a nail.
- Do not hit with a hammer, step on, throw, drop or allow the battery pack or batteries to undergo other such strong shock.
- Do not disassemble or modify the battery pack or batteries.
- Do not solder the battery pack or batteries directly.
- Do not use a battery pack or batteries that is severely scarred or deformed.
- Do not use the battery with dry cells or other primary batteries, or batteries of a different package, type, or brand.
- Stop using the battery if it exhibits abnormal heat, odor, color, deformation or is in an abnormal condition.
- Keep away from fire immediately when leakage or foul odor is detected.
- If liquid leaks onto your skin or clothes, wash well with fresh water immediately.
- If liquid leaking from the battery gets into your eyes, do not rub your eyes. Wash them well with clean water and consult a doctor immediately.
- Batteries have life cycles, so if the time that the battery is powering the equipment becomes much shorter than usual, the battery life is at an end. Replace the battery with a new one.
- The battery can be stored within a -20°C to 40°C temperature range.

6.4   Recycle and Disposal Methods

Lithium ion batteries, like all rechargeable batteries are recyclable and should be recycled.

CAUTION
If your battery is damaged, or if it no longer holds a charge, dispose of it promptly and properly. Do not dispose of it along with general waste. Call your local waste disposal agency or environmental agency for advice on disposing of the battery or return it to Zenner USA.