

Overview

i This product is designed to be installed and maintained by professional security technicians. This product is intended for indoor use. Test this product weekly.

ISW-EN5040-T high-power repeaters receive, decode and retransmit signals from wireless nodes at enhanced power. They act as range expanders for any valid wireless transmission, including signals from other high-power repeaters. Repeaters can be layered as necessary, allowing wireless systems to scale from small commercial sites to complete campuses consisting of several buildings. The high-power repeater features jam detection, as well as case and wall tamper detection. Input power is provided by a listed Class 2 plug-in transformer 14 VAC/120 VAC-20 VA, Ault Inc. (P/N: T48141428V010G).

1.0 ISW-EN5040-T High-power Repeater LEDs

Figure 1: LEDs

1 - RECEIVE
 2 - TRANSMIT
 3 - LOW BATT (low battery fault)
 4 - POWER

Table 1: LED Activity

LED	Activity
RECEIVE	Flashes when the high-power repeater receives any recognizable RF transmission
TRANSMIT	Lit steady when the high-power repeater transmits an RF transmission
LOW BATT	Lit steady when the high-power repeater has a low battery
POWER	Lit steady when the high-power repeater receives power. The LED is green while the unit receives line power; red while it receives battery power.

i If mapped to an output and receiving power from the backup battery, the high-power repeater sends an AC loss message to the receiver or network coordinator.

2.0 Installation and Startup

2.1 Connect the Power Cables

Figure 2: Repeater Components

1 - Housing release tabs
 2 - BATT (battery connector)
 3 - Backup battery
 4 - Tamper mounting hole
 5 - Frequency Band pins
 6 - RESET button
 7 - TAMP (tamper button)
 8 - TAMPER (tamper output)
 9 - POWER - 14 VAC, 250 mA

1. Use a small screwdriver to press the housing release tab on the top or bottom of the high-power repeater.
2. Separate the housing.
3. Connect the power cabling to the Vs and GND connections using two-conductor 20 AWG (or larger) stranded-tinned copper with PVC insulation wires rated to 300 V at 26°C (80°F). Wire length should not exceed 100 m (328 ft).

Refer to *Figure 2*.

i Do not secure the Class 2 plug-in transformer (P/N: T48141428V010G) for Canadian installations.

2.2 Register the High-power Repeater

To ensure that the repeater is supervised by the system receiver, you must register its transmitter with your receiver, network coordinator or control panel. Refer to the receiver, network coordinator or control panel installation instructions for details on registering a transmitter.

i The reset bit is not sent when the repeater has a low battery. Before registering the repeater, ensure that the battery is fully charged.

2.3 Connect the Battery

The high-power repeater is shipped with a fully-charged backup battery.

To connect the battery, plug the connector cable from the backup battery into the battery connector.

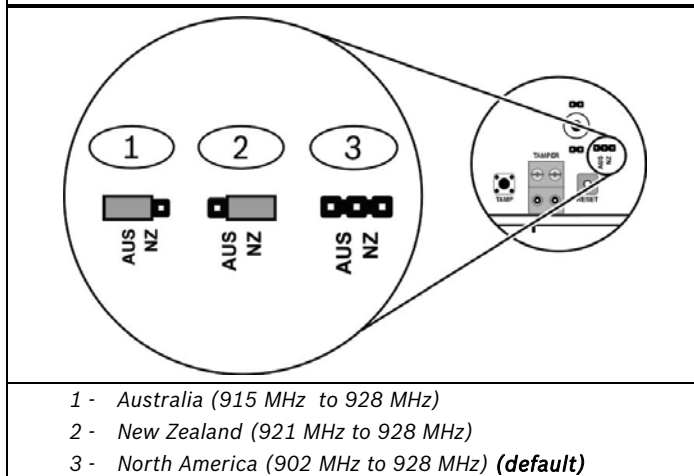
Refer to *Figure 2*.

2.4 Select the Frequency Band

Select the appropriate frequency band for your geographic area.

1. Place a selection jumper on the appropriate Frequency Band pins.
Refer to *Figure 3*.
2. Press the RESET button.

Figure 3: Frequency Band Settings



i North America is selected when the jumper is attached to only one pin. Attach the jumper to only one pin to prevent losing the jumper when selecting North America.

2.5 Mount the High-power Repeater

i Mount the high-power repeater in a location away from metallic objects. Metal objects such as duct work, wire mesh screens, and metal boxes reduce the RF range.

Use the provided anchors and screws to mount the high-power repeater in a location accessible for future maintenance.

- In large installations, mount the high-power repeater so that every transmitter has multiple transmission paths to the serial receiver or network coordinator. This redundancy preserves system integrity in the event of temporary interruptions of any transmission path in the system.
- For maximum efficiency, mount high-power repeaters with as few obstacles as possible between repeaters and the receiver, network coordinator or control panel.
- Always perform a walk test after mounting high-power repeater. The walk test activates each transmitter assigned to the high-power repeater, and ensures an appropriate response.

2.6 Enable the Wall Tamper

The wall tamper must be enabled. To enable the wall tamper, use the provided anchors and screws to attach the wall tamper switch to the mounting surface.

Refer to *Figure 2* on page 1.

i If the high-power repeater is removed from the wall, the wall tamper switch detaches from the high-power repeater, activating a tamper alarm.

3.0 Specifications

Dimensions (H x W x D):	16.5 cm x 8.9 cm x 2.5 cm (6.5 in x 3.5 in x 1 in)
Operating Temperature:	0° to +60°C (+32° to +140°F)
Humidity:	0-90% (non-condensing)
Power Requirement:	14 VAC, 250 mA
Battery Capacity:	3.7 VDC nominal, 2.15 mAh
Typical Back-up Battery Life:	24 hours
Operating Frequency:	915-928 MHz (Australia) 921-928 MHz (New Zealand) 902-928 MHz (USA)
Tamper:	Wall tamper
Accessories:	ACC640: weatherproof plastic enclosure for outdoor installations; BAT850: replacement lithium-ion battery assembly
Compatible Receivers:	ISW-EN4216R ISW-EN4204R ISW-EN7280 (ISW-EN4200)

