AT&T Model SW-ATT-RPTR4, Wireless 433.92 Mhz Repeater

Product Description

The Secure Wireless Repeater shall be a “smart” device that receives and re-transmits sensor information at the frequency of 433.92 Megahertz.

The repeater shall have the capacity to learn and re-transmit the TX-ID and its status up to sixteen (16) sensors.

The repeater shall incorporate a standard Secure Wireless super-heterodyne receiver module as well as a crystal controlled transmitter module tuned to the maximum FCC allowable output level.

Power shall be derived from a local 120 VAC 50/60 Hz source. Non-rechargeable battery back-up shall be provided with a minimum standby requirement of (24) hours. The battery size shall be based on receiver power drain, transmitter standby power drain, plus the transmitter power required to send up to thirty-two transmissions per hour.

Theory of Operation

Repeater Function

Actuation of any transmitter with a frequency of 433.92 MHz shall cause the following to occur at the repeater module.

1. For unlearned transmitters the transmission shall be ignored.
2. For learned transmitters the repeater shall store the transmitter information, validate, then re-transmit exact TX-ID and condition to the central receiver. (See Basic Specifications for transmitter conditions)

Learning Transmitters

Transmitters shall be learned into the repeater by use of a “Learn Button.”

1. Push and hold the learn button for a minimum of two seconds.
    a. An integral LED indicator shall light indicating that the repeater is in the transmitter learn mode.
    b. Note
        i. If no action occurs on the repeater module within fifteen (15) seconds, the LED shall extinguish and the repeater module shall automatically exit the “Learn Mode.”

2. Transmitters shall be learned by the repeater by manual actuation of the actual transmitter (fault & restore in 2 Sec. (See list in basic specifications.)
    a. Once a transmitter is learned the integral LED indicator shall blink one (1) time verifying that the transmitter has been learned by the repeater.
    b. The repeater shall automatically exit the “Learn Mode.”
3. To learn additions transmitters, repeat Steps 1 and 2.

Determining the number of transmitters learned into the memory

1. Push and hold the “Learn Button.”
2. Continue to hold the “Learn Button.”
3. After approximately five (5) seconds the LED shall count out the number of transmitters learned by the repeater by blinking one (1) time for every transmitter leaned by the repeater.
    a. Eight (8) blinks indicates that eight (8) transmitters have been learned by the repeater

Erasing Transmitters from the memory

1. Push and hold the “Learn Button.”
2. Continue to hold the “Learn Button.”
3. After approximately five (5) seconds the LED shall count out the number of transmitters learned by the repeater by blinking one (1) time for every transmitter leaned by the repeater.
4. Approximately five (5) seconds after counting the number of transmitters learned by the repeater, the LED will blink indicating that the memory has been erased

Basic Specifications

Physical

Overall Size:	5.0 inch x 2.6 inches x 1.3 inches
Material:	High impact ABS Plastic
Color:	AT&T White

Power

Nominal Input Voltage:	120VAC, 50/60 HZ
Nominal Current:	Less than 100 milliamperes

RF Receiver

Receiver Type:	Crystal controlled
Receiving Frequency:	SW-433.92 MHz +/- 50 KHz
Internal Antenna	

Indicators:	LED indicator
Learn Mode	Lights for 15 seconds indicating that the repeater is in the learn mode
Transmitter Learn	Flashes 1 time indicating that the transmitter has been learned
Learn Mode Exit	LED extinguishes
TX Memory	LED blinks one time for each transmitter learned by the repeater—8 blinks implies 8 learned TX
Memory Erase	LED blinks 1 time approximately 5 seconds after the completion of the TX memory count
RF Detected	Flashes intermittently when any valid RF packet is detected

Switches:	Learn mode activation switch

RF Transmitter

Transmitter Type:	Crystal controlled
Transmitter Frequency:	SW-433.92 MHz +/- 25 KHz
Transmitter Range:	500 feet minimum with REC receiver unit.
Transmitter Output:	Eight transmissions with a random delay of 50 - 360ms between packets (anti-clashing)
Transmitter Reports:	Alarm 1 (fault 1) Restore 1(return to normal) Alarm 2 (fault 2) Restore 2 Status (transmitter condition) Low Battery Low Battery restore Tamper trouble Tamper restore

Environmental

Temperature:	32°F (0°C) to 120°F (49°C)
Humidity:	5 to 95% non-condensing

Accessories

Installation Kit:	One (1) retaining screw for securing the repeater into the wall socket

Listings and Approvals

FCC Part 15	QNP-433RPT4
IC (Industry Canada)	4676A-433RPT4
UL/ETL	

FCC & IC COMPLIANCE STATEMENT*

This device complies with FCC Rules and Regulations as Part 15 devices, as well as Industry Canada Rules and Regulations. Operation is subject to the following two conditions:

1. This device may not cause harmful interference.
2. This device must accept any interference received, including interference that may cause undesired operation. Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Conformité Réglementaire

Ce dispositif est conforme à la réglementation de la IC et (Partie 15) de la FCC. Son fonctionnement est soumis à deux conditions : (1) ce dispositif ne doit pas causer d'interférences nuisibles, et (2) ce dispositif doit accepter toute interférence reçue, y compris les interférences pouvant entraîner des conditions de fonctionnement indésirables.

IMPORTANT INFORMATION ABOUT RADIO DEVICES

1. AT&T radio controls provide a reliable communications link and fill an important need in portable wireless signaling. However, there are some limitations which must be observed.
2. For US installations only: the radios are required to comply with FCC rules and regulations including FCC part 15 devices. As such, they have limited transmitter power and therefore limited range.
3. A receiver cannot respond to more than one transmitted signal at a time and may be blocked by radio signals that occur on or near their operating frequencies regardless of code settings.
4. Changes or modifications to the device may void FCC compliance
5. Infrequently used radio links should be tested regularly to protect against undetected interference or fault.
6. RF signals can be affected by metal objects including metal doors or large mirrors. Care should be taken to avoid these objects during installation as they can interfere with proper operation.

WARNING: The polarity of the battery must be observed. Improper handling of lithium batteries may result in heat generation, explosion or fire which may lead to personal injuries. Replace only with the same or equivalent type of battery as indicated in the General Specifications.

Batteries should not be recharged, disassembled or disposed of in fire. Disposal of used batteries must be made in accordance with the waste recovery and recycling regulations in your area.

Notice to users in California—CR Coin Cell Lithium Battery information: This product contains a CR Coin Cell Lithium Battery which contains Perchlorate Material—special handling may apply See www.dtsc.ca.gov.hazardouswaste/perchlorate.