

1100XHE ENCRYPTED HIGH POWER WIRELESS RECEIVER

Installation Guide

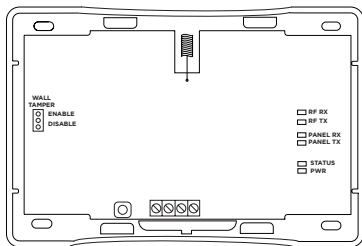


Figure 1: 1100XHE Encrypted High Power Wireless Receiver

DESCRIPTION

The 1100XHE Encrypted High Power Wireless Receiver provides up to 100 wireless zones for XR150 Series panels and up to 500 wireless zones for XR550 Series panels. The 1100XHE features 128-bit AES encryption.

The 1100XHE provides two-way, supervised communication using 900 MHz frequency hopping-spread-spectrum technology.

The 1100XHE contains additional transmit and receive amplifiers to enable 1100 Series operation at greater distances or harsh building environments. The additional gain introduced by this amplification may inhibit proper communication with 1100 Series transmitters located within 4 ft of the receiver.

This distance may be 8 ft when using the 1122 PIR or 9000 Series Wireless Keypads.

The 1100XHE is equipped with a case and wall tamper.

Compatibility

- XR150/XR550 Series Panels
- Encryption requires panel Version 183 or higher

What is Included?

- One 1100XHE Encrypted High Power Wireless Receiver
- Hardware Pack



1

PROGRAM THE PANEL

Refer to the panel programming guide as needed.

1. Reset the panel.
2. At a keypad, enter **6653** (PROG) to access the **PROGRAMMER** menu.
3. In **SYSTEM OPTIONS**, program a **HOUSE CODE** between 1 and 50. See *House Code Explained* for more information.
4. At the **1100 ENCRYPTION** prompt, select **ALL** to only add encrypted wireless devices to the system. Select **BOTH** to allow both encrypted and non-encrypted wireless devices to be programmed.
5. The default passphrase appears at **ENTER PASSPHRASE**. Press **CMD** to keep the default. Press any select key or area to change the passphrase and enter an 8-character hexadecimal string (0-9, A-F).
6. In **ZONE INFORMATION**, enter a **ZONE NAME** and press **CMD**.
7. Select the **ZONE TYPE** and press **CMD**.
8. At **NEXT ZN?**, select **NO**.
9. Select **YES** when **WIRELESS?** displays.
10. Enter the eight-digit **SERIAL#** and press **CMD**.
11. Enter the **SUPRVSN TIME** and press **CMD**.
12. At the **NEXT ZN?** prompt, select **YES** to finish programming or select **NO** for additional programming options.

2

MOUNT THE 1100XHE

Select a Location

When selecting a location to mount the 1100XHE, keep in mind that the receiver should be centrally located between the 1100 Series transmitters used in the installation. The 1100XHE can be mounted up to 500 ft (150 m) from the panel using 22 AWG or 1000 ft (300 m) using 18 AWG. Be sure to mount the receiver away from large metal objects because it may impair the receiver's performance. Do not use shielded wire between the panel and receiver.


Mount the 1100XHE

1. Remove the cover from the plastic housing.
2. Use the included #6 screws to secure the 1100XHE to the wall. See Figure 2 for mounting hole locations.

3

WIRE THE 1100XHE

Connect the red, yellow, green, and black wires to the **PANEL** terminal on the 1100XHE and connect the other to the **XBUS** terminal on the panel. See Figure 2.

 **Note:** The receiver can't operate if it's connected to the keypad bus.

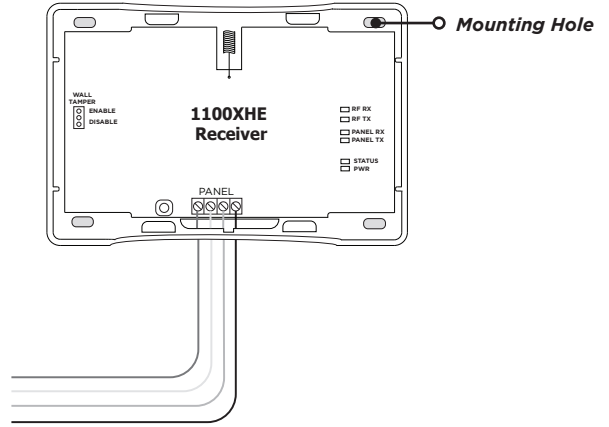
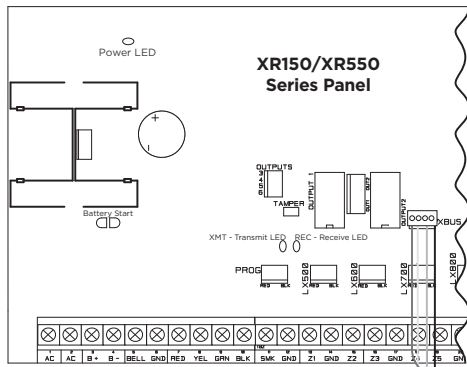


Figure 2: Wiring The 1100XHE to the Panel

ADDITIONAL INFORMATION

1100XHE LED Operation

The six labeled LEDs on the 1100XHE PCB display wireless receiver operation and activity. See Figure 2 for LED locations and Table 1 for LED indications.

House Code Explained

The house code identifies the panel, receiver, and transmitters to each other. The 1100XHE automatically sends the specified house code to wireless transmitters when transmitter serial numbers are programmed into the panel. The 1100XHE only listens for transmissions using the specified house code or the programmed transmitters' serial numbers.

LED	INDICATIONS
RF RX	Flashes yellow to indicate data is being received from a transmitter.
RF TX	Flashes green to indicate data is being sent to a transmitter.
PANEL RX	Flashes yellow to indicate data is being received from a panel.
PANEL TX	Flashes green to indicate data is being sent to the panel.
STATUS	Solid red to indicate memory is being uploaded. Turns off when complete.
PWR	Solid green to indicate there is power to the wireless receiver.

Table 1: 1100XHE LED Indications

LED Survey Operation for 1100 Series Transmitters

1100 Series transmitters provide a survey operation that allows one person to confirm that each transmitter is communicating with the wireless receiver or panel to easily determine the best location. Follow the directions below to test communication of the wireless transmitters:

1. Remove the transmitter's cover.
2. Hold the transmitter in the exact desired location.
3. Press the tamper switch to send data to the wireless receiver and determine if communication is confirmed or faulty.

✓ **Confirmed:** If communication is confirmed, the survey LED turns on when data is sent to the wireless receiver and off when acknowledgment is received.

✗ **Faulty:** If communication is faulty, the LED remains on for several seconds or flashes multiple times in quick succession. Relocate the transmitter or the wireless receiver until the LED confirms clear communication. Proper communication between the transmitter and wireless receiver is verified when for each press or release of the tamper switch, the transmitter's LED blinks immediately on and immediately off.

Programming Zones

Refer to the panel XR150/XR550 Series Programming Guide (LT-1232) for complete wireless programming information. When any wireless input zone for a particular address is programmed, the 1100XHE responds to the panel for this address. Other devices, such as keypads or hardwired zone expanders, cannot use this address. Zones connected directly to the panel cannot be wireless. See Table 2 for designated zone numbers.

ZONE NUMBERS	DESIGNATIONS
400-449	1144 Wireless Key Fobs
450-479	Slow Response Outputs (15 sec.)
480-499	Fast Response Outputs (1 sec.)
500-599	Wireless Devices (XR150)
500-999	Wireless Devices (XR550)

Table 2: Zone Number Designations

Transmitter Supervision Time

For UL Listed installations, program the transmitter supervision time in panel zone programming as listed in the following table. Refer to the panel programming guide for complete wireless programming information.

<i>UL Listing</i>	<i>Listed Accessories</i>	<i>Supervision Time</i>
UL 268 Smoke-Automatic Fire Detectors	1100R Repeater 1164 Wireless Synchronized Smoke Detector	3
UL 365 Police Station Connected Burglar Accessory	1100R Repeater 1103 Universal Transmitter	60
UL 521 Heat Detectors for Fire Protective Signaling Systems	1100R Repeater 1183-135F, 1183-1353R Heat Detector	3
UL 609 Local Burglar Alarm Units and System Accessory	1100R Repeater 1103 Universal Transmitter	60
UL 634 Connections and Switches for use with Burglar Alarm Systems Accessory	1100R Repeater 1101, 1102, 1103, 1106 Universal Transmitters	60
UL 636 Holdup Alarm Units and Systems Accessory	1142 Two-Button Holdup Transmitter	60
UL 639 Intrusion Detection Units Accessory	1100R Repeater 1127W, 1127C PIR Motion Detectors	60
UL 864 Fire Protective Signaling Systems	1100R Repeater 1103 Universal Transmitter	3
UL 985 Household Fire Warning System Accessory	1100R Repeater 1135 Wireless Sounder 9060, 9063 Wireless Keypads	240
UL 1023 Household Burglary System Units Accessory	1100R Repeater 1101, 1102, 1103, 1106 Universal Transmitters 1127W, 1127C PIR Motion Detectors 1135 Wireless Sounder 1142 Two-Button Holdup Transmitter 9060, 9063 Wireless Keypads 9862 Wireless Graphic Touchscreen Keypad	60
UL 1076 Proprietary Burglar Alarm Units Accessory	1100R Repeater 1103 Universal Transmitter 9862 Wireless Graphic Touchscreen Keypad	60
UL 1610 Central Station Burglar Alarm Units Accessory	1100R Repeater 1103 Universal Transmitter 1135 Wireless Sounder 9060, 9063 Wireless Keypads 9862 Wireless Graphic Touchscreen Keypad	60
UL 2075 Gas and Vapor Detectors and Sensors	1184 Wireless Carbon Monoxide Detector	240

Table 3: Wireless Transmitter Supervision Times

LISTED COMPLIANCE SPECIFICATIONS

For applications that must conform to a National Recognized Testing Laboratory certified system, read the information below for additional information.

Commercial Fire

Transmitters must be programmed as supervised. Refer to Table 1 for specific supervision times. The maximum line impedance of the 4-wire bus is 16.2 Ohms for 1,000 feet (305 meters). The recommended wire gauge for panel to receiver connection is 22 AWG.

After all transmitters are in position, the WLS option of the panel's Walk Test must be operated and all transmitters programmed for Fire (FI) or Supervisory (SV) must show that their check-in message was received. Refer to the panel programming guide for Trip Counter for DMP Wireless Check-in Test (WLS) which describes that both numbers of the counter must match. If not and a failed wireless zone is displayed at END, decrease that transmitter's range with the receiver and perform the Wireless Walk Test again.


FCC 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 interference that may cause undesired operation.

The antenna used for this transmitter must be installed to provide a separation distance of at least 20cm (7.874 in.) from all persons. It must not be located or operated in conjunction with any other antenna or transmitter.

Changes or modifications made by the user and not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

 **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:

1. Reorient or relocate the receiving antenna.
2. Increase the separation between the equipment and receiver.
3. Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
4. Consult the dealer or an experienced radio/TV technician for help.

Industry Canada Information

This device complies with Industry Canada Licence-exempt RSS standard(s). Operation is subject to the following two conditions:

1. This device may not cause interference, and
2. this device must accept any interference, including interference that may cause undesired operation of the device.

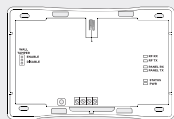
This system has been evaluated for RF Exposure per RSS-102 and is in compliance with the limits specified by Health Canada Safety Code 6. The system must be installed at a minimum separation distance from the antenna to a general bystander of 7.87 inches (20 cm) to maintain compliance with the General Population limits.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes:

1. *l'appareil ne doit pas produire de brouillage, et*
2. *l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.*

L'exposition aux radiofréquences de ce système a été évaluée selon la norme RSS-102 et est jugée conforme aux limites établies par le Code de sécurité 6 de Santé Canada. Le système doit être installé à une distance minimale de 7,87 pouces (20 cm) séparant l'antenne d'une personne présente en conformité avec les limites permises d'exposition du grand public.

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Specifications

Operating Voltage	12 VDC Nominal
Current Draw	75 mA (average), 102 mA (peak)
Frequency Range	905-924 MHz
Housing Dimensions	5.5"W x 3.75"L x 1"H
Housing Color	White
Housing Material	Flame Retardant ABS

Patents

U.S. Patent Number	7, 239, 236
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Certifications

California State Fire Marshal (CSFM)	
New York City 1100 Series Wireless (FDNY COA #6167)	
FCC Part 15: CCKPC0114R6	
Industry Canada: 5251A-PC0114R6	
Underwriters Laboratory (UL) Listed	
ANSI/UL 365	Police Station Connected Burglar
ANSI/UL 609	Local Burglar Alarm Unites and Systems
ANSI/UL 634	Connections and Switches for use with Burglar Alarm Systems Accessory
ANSI/UL 636	Holdup Alarm Units and Systems
ANSI/UL 639	Intrusion Detections Units Accessory
ANSI/UL 1023	Household Burglar Alarm System Units
ANSI/UL 1076	Proprietary Burglar Alarm Units
ANSI/UL 1610	Central Station Burglar Alarm Units
ANSI/UL 864	Fire Protective Signaling Systems
ANSI/UL 985	Household Fire Warning System



Designed, engineered, and manufactured in Springfield, MO using U.S. and global components.

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