

## RF-Wireless

### 1. Wireless System Operation and Supervision

- The receiver responds to status and alarm signals from wireless transmitters (@ 345MHz USA; 315MHz (5700 series) and 345 MHz (5800 series) Canada) within a nominal range of 200 feet, and relays this information to the control.
- Each supervised transmitter sends a supervisory signal to the receiver every 70-90 minutes. If, after a programmed interval of time (i.e., 12 hrs), the receiver does not hear from a particular transmitter, the word CHECK will appear at the corresponding partition's keypad(s) accompanied by the zone number in question. The trouble will not prevent you from arming the panel, as long as the zone is first bypassed.
- If, within a programmed interval of time (i.e., 12 hrs), the receiver does not hear from any of its transmitters, a CHECK message will appear for the receiver. This may be an indication that the wireless receiver is not able to "hear" signals.
- The control checks the receiver connections about every 45 seconds. If the panel has lost communication with the receiver, a CHECK message will appear for the receiver. This may be an indication that the wiring to the receiver is incorrect, or that the DIP switches are not set for the correct address the receiver was assigned to in the panel.
- Two identical receivers can be used to provide either a greater area of coverage, or to provide redundant protection. Depending on the panel used.
- Any zone from 1-63 can be used as a 5700 series wireless zone. Any zone from 1-86 can be used as a 5800 series wireless zone, with the exception of zone 64 (reserved for a wireless keypad).

### 2. Wireless System Installation Advisories

- Place the receiver in a high, centrally located area for best reception. Do not place receiver on or near metal objects. This will decrease the range and/or block transmissions. Do not mount receivers or transmitters in an attic, where extreme temperatures could prevent proper operation.
- For maximum range, install the wireless receiver at least 10 feet from the Control panel or any keypads to avoid interference from the microprocessors in these units.
- If dual receivers are used:
  - (1) Both must be at least 10 feet from each other, as well as from the Control panel and remote keypads.
  - (2) Each receiver must be set to a different Device Address (01-07). The receiver set to the lower address is considered the 1st wireless receiver for supervisory purposes.
  - (3) The house IDs must be the same (applies only to 5700 series or if using a 5827/5827BD wireless keypad).
  - (4) Using two Receivers does not increase the number of transmitters the system can support (63 zones using 4281H; 86 zones using the 5881H) plus a wireless keypad).

### 3. House ID Sniffer Mode

- This mode applies only to 5700 series systems, or if you are using a wireless keypad (5827/5827BD) in a 5800 series system. 5700 series receivers respond only to transmitters set to the same House ID (01-31) that is programmed into the control panel. This prevents system interference

from transmitters in other nearby systems. Use the House ID Sniffer Mode to make sure you do not choose a House ID that is in use in a nearby system. To enter this mode, proceed as follows:

- (1) Enter your "Installer Code" + # +2 .
- (2) The receiver will now "sniff" out any House IDs in the area and display them. Keep the receiver in this mode for about 2 hours to give a good indication of the House IDs being used. Use a House ID that is **not displayed**.
- (3) To exit the Sniffer Mode, simply enter your Installer Code + OFF.

#### 4. 5700 Series Transmitter Setup

Each 5700 series transmitter has DIP switches to set both the transmitter's zone number (Transmitter ID) and the system House ID. The House ID will be the same for all transmitters and must match the House ID programmed into the system. This can be likened to a family in which everyone has the same last name (House ID), but each person has a different first name (Transmitter ID). The zone number must then be programmed into the system.

#### 5. 5700 Series Transmitter Supervision

- Each transmitter (except 5701 and 5727) is supervised by a check-in signal that is sent to the receiver at 70-90 minute intervals. If at least one check-in is not received from a transmitter within a certain period of time (Programmed in field 1\*31), the keypad will display the zone number and "CHECK."
- Each transmitter (including 5701 and 5727) is also supervised for a low battery condition, and will transmit a low battery signal to the receiver when the battery has approximately 30 days of life remaining. The keypad will display the transmitter number and "LO BAT," (or "00" and LO BAT for a wireless keypad).

#### 6. 5700 Series Transmitter Battery Life

- Batteries in the wireless transmitters may last about 2 years for 5700 series transmitters, depending on the environment, usage, and the specific wireless device being used. External factors such as humidity, high or low temperatures, as well as large swings in temperature, may reduce the actual battery life in a given installation. The wireless system can identify a true low battery situation, thus allowing the dealer or user of the system time to arrange a change of battery and maintain protection for that given point within the system.
- Button type transmitters should be periodically tested by the user for battery life (ex. 5701).
- After replacing a low or dead battery, activate the transmitter and enter the Security Code + OFF to clear its memory of the "Low Battery" signal.

7. For 5700 series transmitters, each response type uses a certain range of zone numbers. Each range of zone numbers is indicated below:

- **Zone Type Trans/Zone #**

Entry/Exit Burg .....	1 through 47 *
Perimeter Burg.....	1 through 47 *
Interior Burg .....	1 through 47 *
Fire.....	32 through 47 * (5775)
24 Hour Panic .....	48 through 63 *
silent or audible) .....	48 through 55 ** (5706)
Day/Night Burglary .....	62 or 63 *** (5701)
24 Hour Auxiliary .....	1 through 47 *

\* Note that zones 1-63 can be used, but have the following limitations:

1. Transmitters set for zones 48-55 will transmit once every 12 seconds while the zone is faulted. Transmitters set for zones 56-63 will transmit once every 3 seconds while faulted. These two ranges of zone numbers could adversely affect transmitter battery life.

2. Transmitters set for an ID of 32 through 47 will have a 3 minute lock-out between transmissions. Use this last range of zone ID numbers for sensors protecting frequently used doors or windows to conserve battery life.

\*\* Transmitter IDs 48 through 55 have highest signal priority.

\*\*\* Transmitter IDs 62 and 63 are unsupervised to allow removal of the 5701 off premises -- signal priority is lower than that of fire, but higher than burglary.

Model	Product	Zone Num	Description
5701	Panic Transmitter	62 or 63	<ul style="list-style-type: none"> <li>• Programmable for either silent or audible 24 hour alarm.</li> </ul>
5706	Photoelectric Smoke Detector	48-55 low battery	<ul style="list-style-type: none"> <li>• One piece smoke detector with built in transmitter.</li> <li>• Built-in UL Listed 85 dB piezo electric alarm sounder and audible warning.</li> </ul>
5711	Slimline Door/Window Transmitter	1-63	<ul style="list-style-type: none"> <li>• Can be used with any closed or open circuit sensor.</li> </ul>
5715WH	Universal Transmitter	1-63	<ul style="list-style-type: none"> <li>• DIP switch selectable for fast response, and open or closed sensor usage.</li> <li>• Has a tamper protected cover.</li> </ul>
5716 5716WM	Door/Window Transmitter	1-63	<ul style="list-style-type: none"> <li>• Can be used with any open or closed circuit sensor.</li> <li>• Features a built-in reed switch.</li> <li>• 5716WM includes magnet.</li> </ul>
5742	Audio Discriminator	1-63	<ul style="list-style-type: none"> <li>• For use in unoccupied areas to detect the sound of shattering glass when a window is broken.</li> </ul>
5743	Dual Technology Glassbreak Detector	1-63	<ul style="list-style-type: none"> <li>• Detects the sound <i>and</i> shock of breaking glass and requires the presence of <i>both</i> to initiate an alarm condition.</li> </ul>
5775	PIR Detector	32-47	<ul style="list-style-type: none"> <li>• Dual element passive infrared detector with built-in selectable pulse count.</li> <li><i>Note:</i> There is a 3 minute lock-out between fault transmissions to conserve battery life.</li> </ul>
5727	Wireless Keypad	House ID	<ul style="list-style-type: none"> <li>• Can be used to turn the burglary protection on and off</li> <li>• Features the same built-in panic functions as wired keypads.</li> <li>• Must be assigned to a partition.</li> <li>• Identified as Zone "00" (on wired keypads) when it transmits with a low battery.</li> </ul>
5827BD	Wireless Keypad	House ID	<ul style="list-style-type: none"> <li>• Same features as above plus:</li> <li>• Requires use of 5800TM Module (must be enabled in Device Programming).</li> <li>• Can indicate system status via its 3 LEDs and sounder.</li> <li>• House ID must be set.</li> </ul>
5799	Magnets		<ul style="list-style-type: none"> <li>• Package of 8 magnets for use with 5716 transmitters</li> </ul>

#### 5800 Series Transmitter Setup

5800 series transmitters have built-in serial numbers that must be "learned" by

the system. 5800 series transmitters (except 5827 described separately) do not have DIP switches.

Some transmitters, such as the 5816 and 5817, can support more than one "zone" (referred to as loops or inputs). On the 5816 for example, the wire connection terminal block is loop 1, the reed contact is loop 2. Each loop must be assigned a different zone number and learned separately.

For button transmitters ( wireless "keys"), such as the 5803 and 5801, you must assign a unique zone number to each individual button used on the transmitter. Each button on the transmitter also has a pre-designated loop or input number, which is automatically displayed when learned.

**5800 Series Transmitter Supervision**

Except for some transmitters that may be carried off-premises (5802, 5802CP, 5803, 5827, and 5827BD), each transmitter is supervised by a check-in signal that is sent to the receiver at 70–90 minute intervals. If at least one check-in is not received from each supervised transmitter within a programmed time period (i.e., 12 hrs.), the "missing" transmitter number(s) and "CHECK" will be displayed. The supervision for a particular transmitter that may be carried off the premises (5801, 5802MN) may be turned off by learning it as a "UR" (Unsupervised RF) type, as described later.

5800 series transmitters have built-in tamper protection and will cause a "CHECK" condition to be annunciated if covers are removed, provided that it is programmed that way on the pane.

**5800 Series Transmitter Input Types**

All of the transmitters described have one or more unique factory assigned loop inputs. Each of the inputs requires its own programming zone (e.g., a 5803's three button inputs require three programming zones).

Transmitters can be learned as one of the following types:

Type	Description
"RF" (Supervised RF)	Sends periodic check-in signals, as well as fault, restore, and low battery signals. The transmitter must remain within the receiver's range.
"UR" (Unsupervised RF)	Sends all the signals that the "RF" type does, but the control does not supervise the check-in signals. The transmitter may therefore be carried off-premises.
"BR" (Unsupervised Button RF)	These send only fault signals. They do not send low battery signals until they are activated. The transmitter may be carried off-premises.

**5800 Series Transmitter Battery Life**

- Batteries in the wireless transmitters may last from 4-7 years, depending on the environment, usage, and the specific wireless device being used. External factors such as humidity, high or low temperatures, as well as large swings in temperature may all reduce the actual battery life in a given installation. The wireless system can identify a true low battery situation, thus allowing the dealer or user of the system time to arrange a change of battery and maintain protection for that given point within the system.
- Some transmitters (e.g., 5802, 5802CP, and 5803) contain long-life but non-replaceable batteries. At the end of their life, the complete unit must be replaced (and a new serial number learned by the control).
- Button type transmitters (ex. 5801, 5802, 5802CP & 5803) should be periodically tested by the user for battery life.

Model	Product	Learn As Input Type	Description
5801	Wireless Panic Transmitter	UR or RF	<ul style="list-style-type: none"> <li>• Has four pushbuttons, each with a unique input (loop) code.</li> <li>• Programmable responses (e.g., Panic, Arm–Stay, Arm–Away, Disarm, etc).</li> <li>• For arming/disarming functions, button must be assigned to a user code when "adding a user."</li> </ul>
5802  5802CP	Pendant (Personal Emergency Transmitter)  Belt Clip (Personal Emergency Transmitter)	BR Only	<ul style="list-style-type: none"> <li>• Has single pushbutton.</li> <li>• Usually be programmed for response type of 24Hr. Audible or 24 Hr. Silent (other zone responses are possible).</li> <li>• Contains a non-replaceable battery. At the end of the battery's life, the entire unit must be replaced.</li> <li>• If using for arming/disarming, the button must be assigned to a user code when "adding a user."</li> </ul>
5802MN	Miniature (Personal Emergency Transmitter)	UR or RF	<ul style="list-style-type: none"> <li>• Has single pushbutton.</li> <li>• Usually programmed for a response type of 24 Hr. Audible or 24 Hr. Silent (other zone responses are possible).</li> <li>• If using for arming/disarming, the button must be assigned to a user code when "adding a user".</li> </ul>
5803	Wireless Key Transmitter	BR Only	<ul style="list-style-type: none"> <li>• Has three pushbuttons, each with a unique input (loop) code.</li> <li>• Programmable responses (e.g., Arm–Stay, Arm–Away, Disarm, etc.).</li> <li>• Contains a non-replaceable battery. At the end of the battery's life, the entire unit must be replaced.</li> <li>• If using for arming/disarming, the button must be assigned to a user code when "adding a user."</li> </ul>
5806 5807	Wireless Photoelectric Smoke Detectors	RF	<ul style="list-style-type: none"> <li>• One piece smoke detectors with built in transmitter.</li> </ul>

Model	Product	Learn As Input Type	Description
5816	Door/Window Transmitter:	RF	<ul style="list-style-type: none"> <li>Has two unique input (loop) codes: one for a wired closed circuit contact loop; the other for a built-in reed switch (used in conjunction with a magnet).</li> </ul>
5816 TEMP	Low Temperature Sensor	RF	<ul style="list-style-type: none"> <li>Transmits a fault condition when temperature drops below 45 degrees.</li> <li>Learned into the system by the internal reed switch using a magnet.</li> </ul>
5817	Multi-Point Universal Transmitter	RF	<ul style="list-style-type: none"> <li>Has three unique input (loop) codes: one for a "Primary" contact loop with programmable options; the others for two "Auxiliary" closed circuit contact loops.</li> </ul>
5818	Recessed Transmitter	RF	<ul style="list-style-type: none"> <li>Reed switch magnetic contact sensor that is easily concealed in the frame and edge of a door or window.</li> <li>Has a single unique input (loop) code.</li> </ul>
5827	Wireless Keypad	House ID	<ul style="list-style-type: none"> <li>Can be used to turn the burglary protection on and off</li> <li>Features the same built-in panic functions as wired keypads</li> <li>The keypad is identified as zone "00" on wired keypads when it transmits with a low battery .</li> </ul>
5827BD	Wireless Bi-directional Keypad	House ID	<ul style="list-style-type: none"> <li><b>(used with 5800TM Module)</b></li> <li>Operates the system similarly to wired keypads</li> <li>Can indicate system status via its 3 LEDs and sounder.</li> <li>Includes 3 panic keys.</li> <li>House ID must be set.</li> <li>Requires 5800TM Transmitter Module (must be enabled in #93 Menu Mode –Device Programming and assigned to a partition in 1*48</li> </ul>
5849	Glass Break Detector	RF	<ul style="list-style-type: none"> <li>Requires both sound and shock of breaking glass to cause alarm to be transmitted.</li> <li>Has unique input code.</li> </ul>
5890	PIR Detector	RF	<ul style="list-style-type: none"> <li>Dual element passive infrared detector/transmitter with built-in selectable pulse count.</li> <li>Has unique input code</li> <li><b>Note:</b> There is a 3 minute lock-out between fault transmissions to conserve battery life.</li> </ul>
5899	Magnets		Package of 4 magnets for use with 5816 and 5817 transmitters.

#### Check-Out Procedure for Wireless Zones

##### Go/No Go Test Mode

Before mounting transmitters permanently, conduct Go/No Go tests to verify adequate signal strength and reorient or relocate transmitters if necessary. During this mode, wireless receiver gain is reduced by 50%. Testing in this mode assists in determining good mounting locations for the transmitters and verifies that the RF transmission has sufficient signal amplitude margin for the installed system.

Do not conduct this test with your hand wrapped around the transmitter as this will cause inaccurate results.

- If a single receiver is used, the keypad will beep three times to indicate Signal reception. If two receivers are used, the keypad will beep once if the first receiver received the signal, twice if the second receiver received the

signal and three times if both receivers heard the signal (which is desirable for redundant configurations).

- If the keypad does not beep, reorient or move the transmitter to another location. Usually a few inches in either direction is all that is required.
- Mount the transmitter according to the instructions provided with the transmitter.
- Exit the mode by entering Installer Code + 1 (OFF).

#### **Transmitter ID Sniffer Mode**

When all transmitters have been installed, use the Transmitter Sniffer Mode to test that they have all been properly programmed.

1. Enter Installer Code + # 3. The keypad will display all zone numbers of wireless units programmed into the system.
2. Fault each wireless zone, causing each device to transmit. As the system receives a signal from each of the transmitters, the zone number of that transmitter will **disappear** from the display.
3. To exit the Transmitter Sniffer mode, enter the Installer Code + 1 (OFF).