

# XT SERIES WIRELESS INSTALLATION QUICK START GUIDE

## 1. SYSTEM INFORMATION

Before installing any equipment, complete the following section.

Account Number \_\_\_\_\_  
Address \_\_\_\_\_  
Phone Number \_\_\_\_\_  
Panel IP Address \_\_\_\_\_  
Gateway IP Address \_\_\_\_\_  
Subnet Mask \_\_\_\_\_  
Programming Port \_\_\_\_\_  
Installation Date \_\_\_\_\_

## SYSTEM COMPONENTS

The system package includes the following components:

- One XT30 or XT50 Control Panel with 340 or 349 enclosure
- One 40 VA Transformer
- 7060 LCD Keypad
- One 1100D series wireless receiver or internal wireless receiver of the XT50
- 1100 Series wireless Transmitters
- If needed 1100R-W Wireless Repeater
- At least one 12 VDC 7 Ah System Battery

## REFERENCE INFORMATION

### System Grounding

Connect a 14 AWG or larger wire from XT30 or XT50 panel terminal 4 to a Cold Water Grounding Block. Do not connect to an electrical ground, conduit, sprinkler or gas pipes, or to a telephone company ground. Do not connect AC ground to this grounding block.

### System Wiring

All wiring must be in accordance with NEC, ANSI, and NFPA 70. Use non-shielded 22 AWG wire for short wire runs from the panel. Use non-shielded 18 AWG wire for longer wire runs from the panel. It is recommended that strain reliefs be used in all locations where wires exit an enclosure and conduit is not used.

### Reference Documents

As needed during installation, refer to the included wiring diagrams, any documents included with the system components, the XT30/XT50 Series Installation Guide (LT-0980), XT30/XT50 Series Programming Guide (LT-0981), 505-12 Installation (LT-0453), 7060 Keypad Installation (LT-0883), 1100D Installation (LT-0692), and any documentation included with the system components.

### Current Draw

Combined current draw from Auxiliary (Terminal 7), Smoke (Terminal 11) must not exceed 500 mA in order to support powered devices powered by the control panel. A separate power supply is needed to support devices beyond 500 mA. Use the 505-12 DC output J6 for additional auxiliary powered devices up to a maximum of 5 A.

## 2. INSTALL THE ENCLOSURE

### Select a Location

Choose a location that is away from metal and electrical equipment. If you choose to use the XT50 with built-in wireless receiver make sure to locate the control panel where the receiver will have a clear path between the panel and wireless transmitters. Do not place the panel with built-in receiver in an area where the receiver will have poor signal reception from the wireless transmitters. Make sure to walk test and survey the system prior to mounting the control panel.

### Mount the Enclosure

Prior to mounting and as needed, open any enclosure knockouts. Mount the 340 or 349 Enclosure in a secure, dry place to protect the components from damage due to tampering or the elements. It is not necessary to remove the pre-mounted components when installing the enclosure. Make sure all wiring in the XT30 or XT50 Control Panel Enclosure is routed neatly and securely to keep the wiring off of the panel and power supply components.

## 3. BATTERY CONNECTION

The control panel comes with a red and black battery harness. Connect the positive (red) battery lead to terminal 3 and the negative (black) battery lead to terminal 4. Do not reverse polarity as this will cause panel damage. Terminal 4 is also used for the panels Cold Water Earth Ground.

**Caution:** Observe polarity.

## 4. CONNECT WIRELESS ANTENNA TO PANEL

The XT50 Wireless Antenna terminal block is located at the top right corner of the circuit board. The antenna installs through a small opening in the top of the enclosure and is attached to the panel using the right terminal. The left terminal is not used.

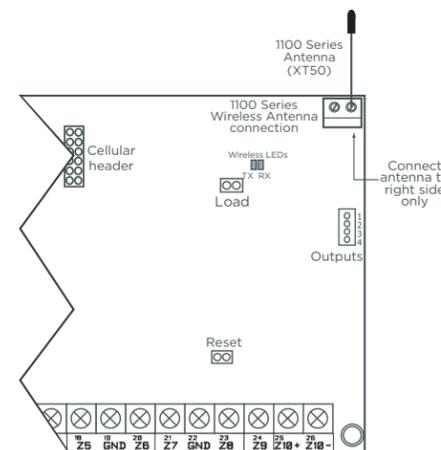


Figure 1: Wireless Antenna

## 5. INSTALL AN EXTERNAL 1100D WIRELESS RECEIVER

### Select a Location

Choose an optimum location to mount the receiver. The 1100D Wireless Receiver is typically mounted at a distance not to exceed 500 feet away from the panel enclosure (use 18 AWG 4 conductor non-shielded wire). A location should be selected that will be centrally located between the 1100 Series transmitters used in the installation. Install the receiver away from large metal objects. Mounting the receiver on or near metal surfaces impairs performance. When selecting the proper mounting location and operation, refer to the LED Survey Operation section of the specific installation guide for the transmitter being installed.

### Mount the Receiver

**Caution:** Remove all AC and battery power from the panel before installing or connecting any modules, cards, or wires.

1. Squeeze both sides of the device to gently separate the cover from the base.
2. Secure the receiver to the wall in the desired location installing the supplied screws in the mounting hole locations as shown in Figure 2.
3. Snap the cover back on the unit. The panel immediately recognizes the 1100D Receiver if the panel is programmed with a house code.

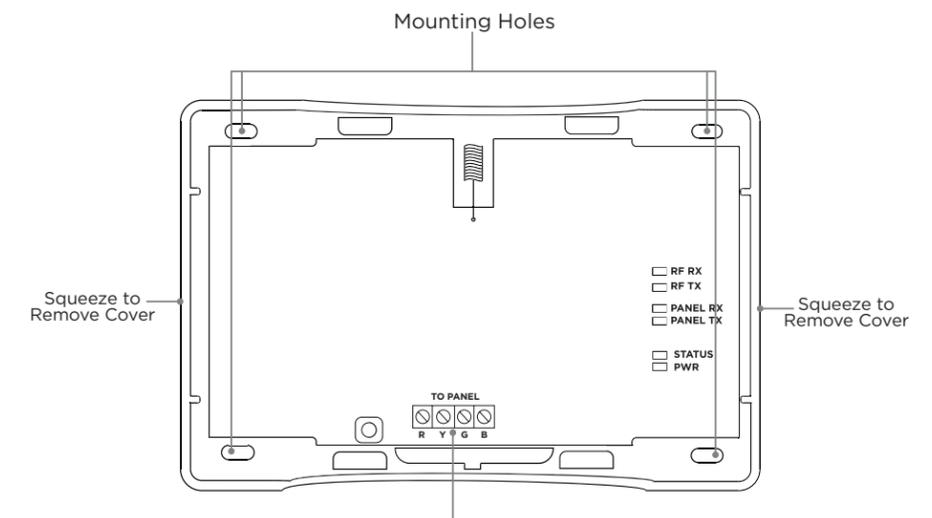


Figure 2: 1100D Series Mounting Holes

## Keypad Bus Wiring

The 1100D Wireless Receiver easily interfaces with the XT30/XT50 Series panels using the keypad bus.

## Harness Connection

Refer to Figure 3, the panel programming guide and use the following steps to connect the panel and receiver:

1. Using a 4-wire harness, connect from the 1100D Wireless Receiver header (see Figure 3) to the panel keypad bus terminals 7, 8, 9, and 10. Observe wire colors when connecting to the terminals.
2. In System Options, program the House Code (1-50). In Zone Information, program the wireless zones.

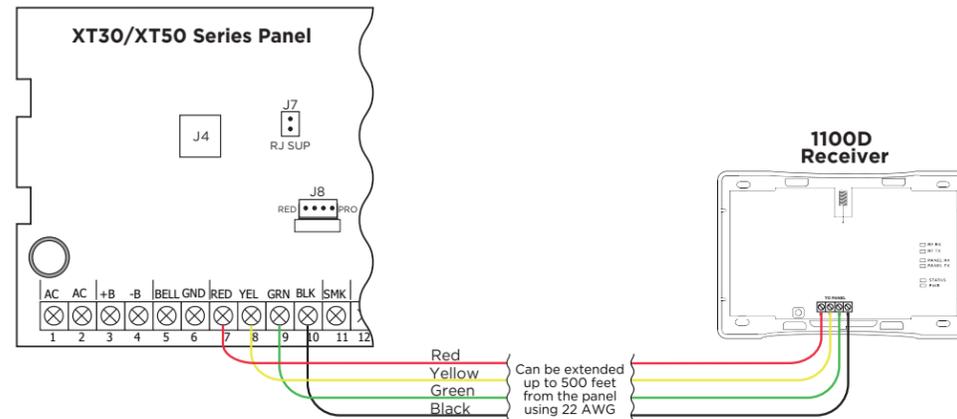


Figure 3: 1100D Series Wiring

## 6. 1100D RECEIVER OPERATION

The 1100D receiver automatically sends the panel house code to wireless transmitters when the unique transmitter serial number is programmed into the panel. The house code identifies the panel, receiver, and transmitters to each other. The receiver only listens for transmissions using the specified house code and/or programmed transmitter serial number.

**Note:** When setting up a wireless system, it is recommended to program zones and connect the receiver before installing batteries in the transmitters.

When a receiver is installed, powered up, or the panel is reset, the supervision time for transmitters is reset. If the receiver has been powered down for more than one hour, wireless transmitters may take up to an additional hour to send a supervision message unless tripped, tampered, or powered up. This operation extends battery life for transmitters. A missing message may display on the keypad until the transmitter sends a supervision message.

When any wireless zone programming is changed in the panel, receiver zone programming is updated when exiting panel programming. During the update, all wireless zones display as normal for approximately one minute, regardless of the actual state of the wireless device(s).

## 7. TRANSMITTER SURVEY LED OPERATION

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 for the transmitters and the wireless receiver. Follow the directions below to test communication of the wireless transmitters:

1. Remove the transmitter's cover.
2. Hold the transmitter in the 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.

## 8. IF 1100R REPEATER IS NEEDED:

### Select a Location

Mount the 1100R on a flat surface. The 1100R Wireless Repeater is typically mounted between the 1100 Series Receiver and the 1100 Series transmitter(s) that are out of range. Locate as far from the 1100 Receiver as needed to provide the required system range. Install the repeater away from large metal objects. Mounting the repeater on or near metal surfaces impairs performance. If the repeater is powered from an auxiliary power supply, mount the repeater away from the metal power supply enclosure. If the repeater is powered from the optional Model 376L plug-in power supply, locate the repeater near a wall outlet not controlled by a switch. When selecting the proper mounting location of a repeater, refer to the LED Survey Operation section to confirm communication with the 1100 Receiver.

### Tamper Switches

The 1100R is equipped with a case tamper and a wall tamper. A two position header is provided to disable the wall tamper. To disable the wall tamper, place the jumper across the two pins of the header. If wall tamper is required, place the jumper over just one pin for storage.

### Mounting the Receiver

1. Insert a small screwdriver and lift, as discussed in *Mount the Receiver*, to remove the cover.
2. Secure the receiver to the wall ensuring that the wall tamper switch makes proper contact with the wall. Use the supplied screws in the mounting hole locations as shown in Figure 2.
3. Snap the cover back on the unit after observing LED operation.

## External DC Plug-in Power Supply

When using the optional Model 376L plug-in DC power supply, use the following steps to connect the power supply:

1. Connect the Black wire with White stripe to the positive terminal on the 1100R and the Black wire to the negative terminal. See Figure 4.
2. Mount the 1100R near a wall outlet.

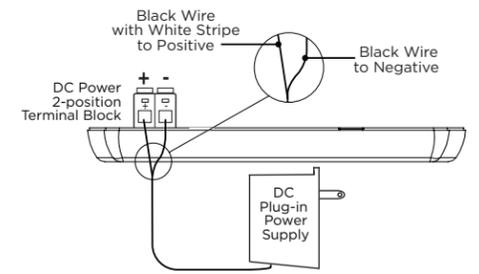


Figure 4: DMP 376L Wiring

In addition to powering the repeater, the DC plug-in power supply also charges the back-up battery. The 376L plug-in DC power supply must be located within 100 feet of the repeater using 22 AWG wire or 250 feet using 18 AWG wire.

## Optional Powering from External 12 VDC Power Supply

The 1100R can be powered from a 12 VDC power supply such as a DMP Model 505-12. In addition to powering the repeater, the power supply also charges the back-up battery of the repeater. If the DC power source is removed, the power failure is indicated as an open condition on the repeater zone.

Use the following steps to connect the power supply:

1. Using 22 AWG wire, connect the J3 DC Power 2-position Terminal Block to the J6 terminal on the 505-12 power supply PCB. See Figure 5.
2. Observe positive and negative polarity on all connections.

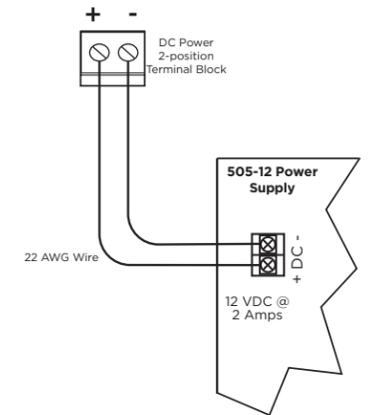


Figure 5: 1100D Series Mounting Holes

## Primary Power Loss Indication

When the 1100R is used with the XT Series or XTL Series a zone trouble indication for the repeater zone occurs within three minutes of a loss of primary power.

When used with the XR150/XR550 Version 206 or higher, a power loss indication is displayed at the keypad as -ACPWR for the repeater zone. This occurs within three minutes but a zone trouble report to the Central Station receiver is delayed for one hour.

## Rechargeable Battery

The 1100R rechargeable battery is used to provide up to 24 hours of backup battery power when AC power is not available. The battery is intended for backup power only and not to operate the 1100R Repeater on a daily basis. If the battery is low, or not plugged into the J4 battery connector, a low battery condition is indicated for the repeater zone.

## 9. COMPLETE INSTALLATION

After system power-up, perform the following steps to set the panel up for remote programming.

1. Reset the panel using the reset jumper. Remove the jumper and store it on one J16 pin for future use.
2. At the 7060 Keypad set to Address #1, enter **6653** and press **CMD**.
3. At the **INITIALIZATION** menu press any top row Select key.
4. Answer **YES** to all Initialization options.
5. Panel is now ready to be programmed. See panel programming guide.
6. Press **CMD** until **STOP** displays.

 **Note:** The information entered is **NOT SAVED** until you run the **STOP** routine.

7. At the **STOP** menu press any top row Select key to save the programming.
8. The system is now ready to program using Remote Link™

## 10. CONNECT THE TRANSFORMER AND AC POWER

Do not plug power cord into dedicated outlet not controlled by a switch until all devices are connected to the panel.

 **Note:** Never share the transformer output with any other equipment

## 11. ZONE LAYOUT

Zones 1-10 are located directly on the XT30/XT50 Control Panel. Zones 1 through 9 each terminate with 1k Ohm EOL resistors. Zone 10 terminates with 3.3k Ohm EOL resistors.

## 12. WIRING

See Figures 6 and 7 that illustrate the XT30/XT50 wireless wiring details.

## 13. WALK TEST

### About the Walk Test

The XT30/XT50 panel provides a walk test feature that allows a single technician to test all the protection devices connected to zones on the system. Conduct the Walk Test within 30 minutes of resetting the panel. The Walk Test automatically ends if no zones are tripped for 20 minutes. **TEST IN PROGRESS** displays at all keypads. When five minutes remain, **TEST END WARNING** displays. If any areas are armed the Walk Test does not start and **SYSTEM ARMED** displays.

### Conduct the Walk Test

Reset the control panel by momentarily placing a jumper on J16 then wait one minute. From the keypad, enter the code **8144**. The keypad displays **WALK TEST**. If the system is monitored and the communication type is DD or NET, the system sends a System Test Begin report to the central station. All programmed zones are included in the test.

- **STD** (Standard Walk Test) - Select **STD** to Walk test zones. All programmed zones are included in the test.
- **WLS** (Wireless Check-in Test) - Select **WLS** to automatically test 1100 Series wireless transmitter communications. Includes all wireless devices except key fobs and transmitters programmed for a supervision time of 0 (zero).

 **Note:** For the XT30, Wireless Check-in Test operation only displays when connected to 1100D Wireless Receiver Version 105 or higher.

- **PIR** (Wireless PIR Walk Test) - The PIR Walk Test allows the installer to verify the 1126 operation. When enabled, the 1126 LED flashes each time motion is detected for up to 30 minutes. This is a local test only and no messages are sent to the Central Station.

### Trip Counter for Walk Test (STD)

Displays the number of zone trips during the Walk Test.

- Each time a selected zone trips, the keypad buzzes and the bell rings for two seconds.
- Each time a FI, FV, or SV zone trips, a Sensor Reset occurs.

**END** - Press the Select key directly below **END** to stop the Walk Test. When the Walk Test ends or a 20 minute time-out expires, a final Sensor Reset occurs. The System Test End message is sent to the receiver along with Verify and Fail messages for each zone under test. Faulted zones then display on the keypad.

### Trip Counter For DMP Wireless Check-in Test (WLS)

Displays the number of wireless zones that automatically communicate a supervisory check-in message.

- The number of zones that check in. (XX in the example).
- The total number of wireless zones programmed for supervision that should check in. (ZZ in the example).

**END** - Select **END** to stop the Wireless Check-in Test. When the test ends or a 20-minute time-out expires, normal wireless zone processing returns. If all transmitters check-in, both numbers will match within three minutes. If a transmitter has multiple zones (1101, 1114, etc.), all zones will be included in the counts. Failed wireless zones will then display on the keypad.

### Test End Warning

When no zones have been tripped and five minutes remain on the 20 minute Walk Test timer, the keypad displays **TEST END WARNING** and the keypad tones. If no additional test zone trips occur, the test ends and a final Sensor Reset automatically occurs. The System Test End message is sent to the receiver along with Verify and Fail messages for each zone under WALK test. Faulted zones then display on the keypad.

### Failed Zones Display

Each zone that did not trip at least once during the Walk Test displays on the keypad that initiated the test. Any Fire (FI) Panic (PN) or Supervisory (SV) 24-hour zone that is faulted at the end of the Walk Test displays a trouble condition for that zone regardless of the message programmed for the open or short condition of the zone and a zone trouble is sent to the receiver. Press the **CMD** key to display the next failed zone.

For the Wireless Check-in Test, failed wireless zones display only on the keypad. Zone Verify/Fail reports are not sent to the central station receiver for the wireless checkin test.

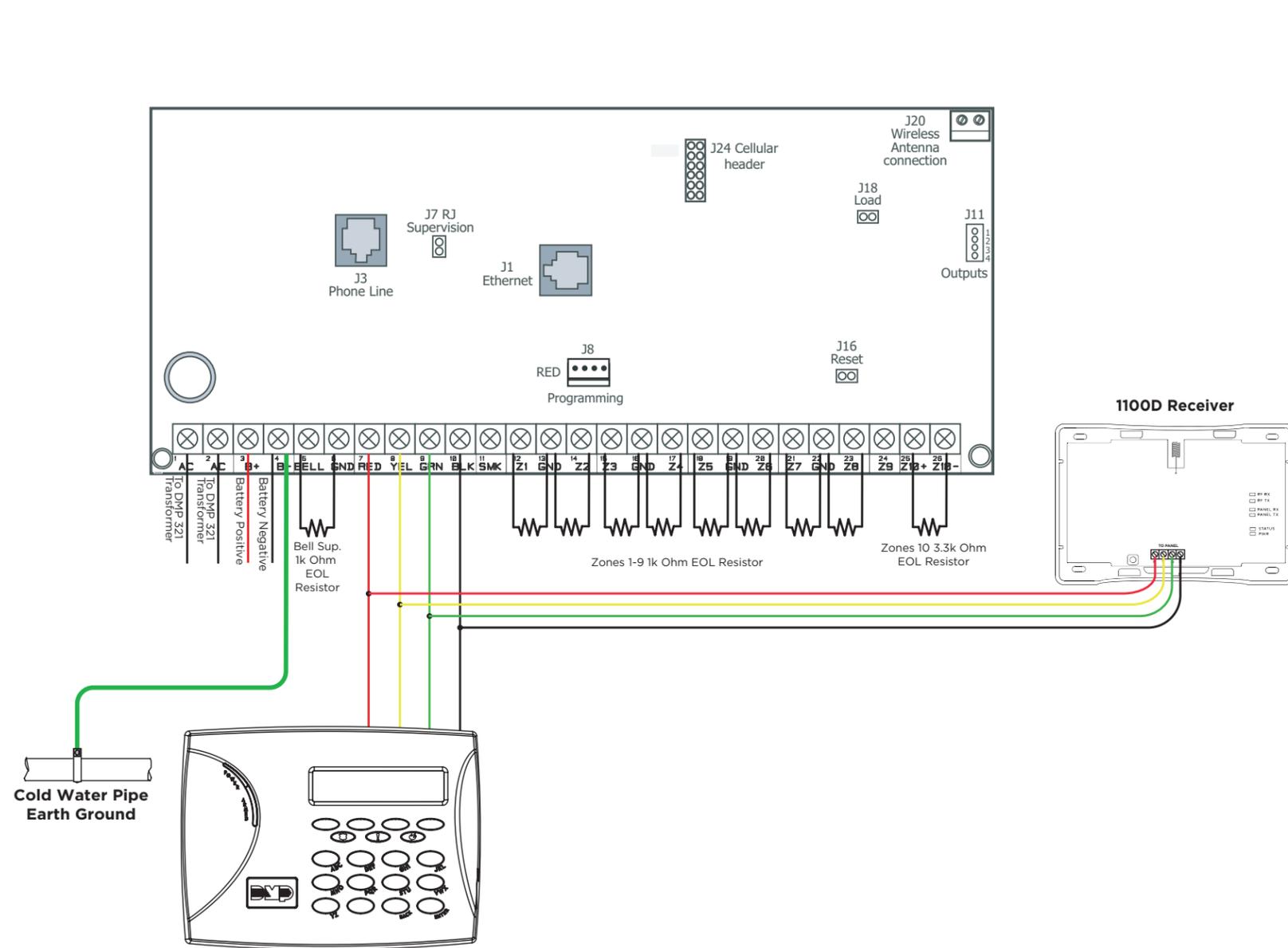


Figure 6: XT30 Application

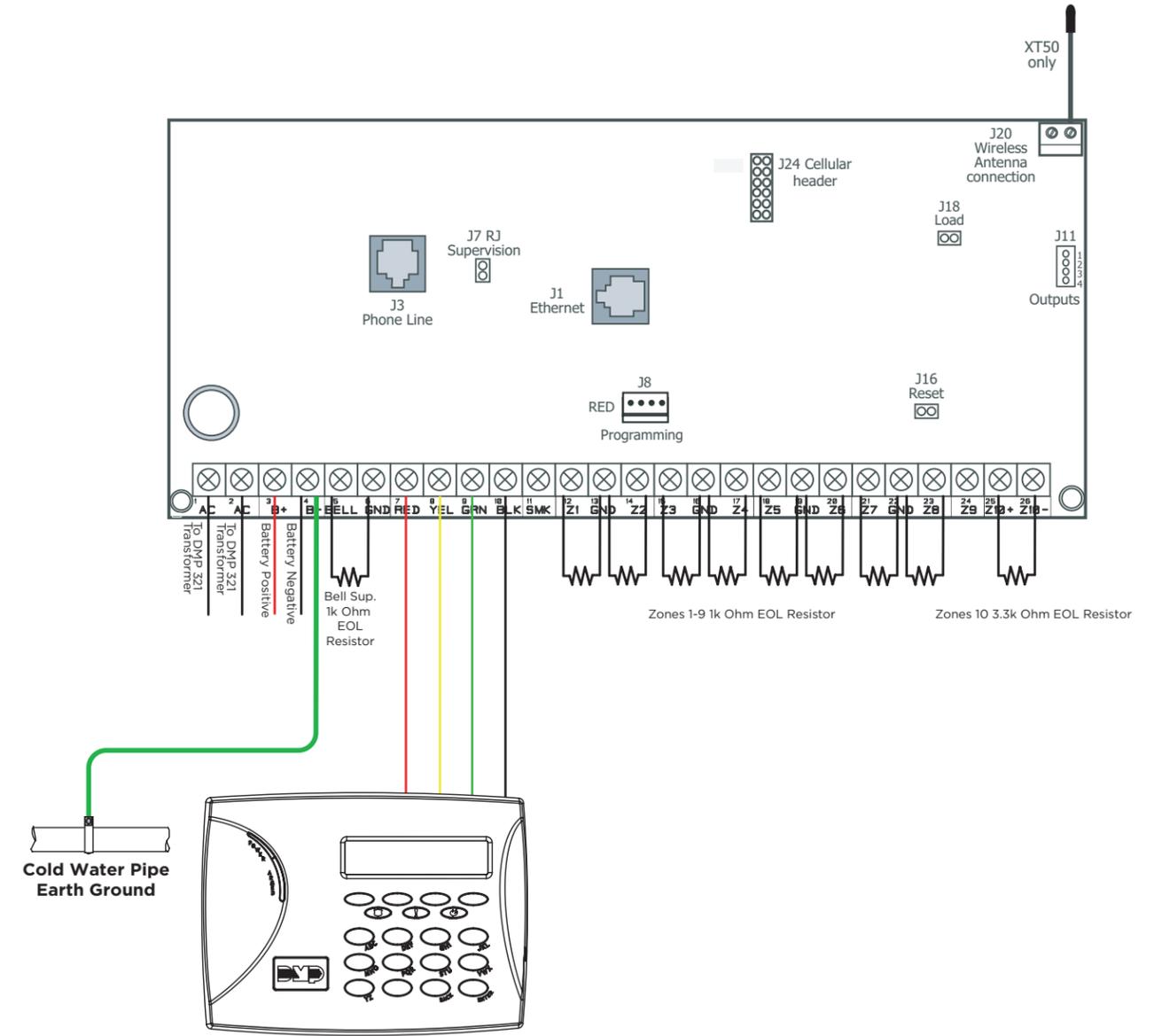


Figure 7: XT50 Application