OneVue™ Sync 1 Watt Transmitter with External Antenna

Install Guide

Primex is the leading provider of solutions to automate and maintain facility compliance, increase efficiencies, enhance safety and reduce risk for enterprise organizations in the healthcare, education, manufacturing and government vertical markets. Primex delivers solutions that utilize a facility's existing network infrastructure to automate, monitor, document and report essential activities performed by facility staff. Our solutions include synchronized time, automated critical notifications and bell scheduling, and environmental and event monitoring.

Corporate Headquarters

965 Wells Street

Lake Geneva, WI 53147

Phone: 1-262-729-4853

info@primexinc.com

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SYSTEM OVERVIEW

is a multi-function system that provides digital critical notifications, synchronized time, and non-critical general messaging.

The system consists of OneVue Sync Transmitters and Notify InfoBoards that operate over the Primex 72MHz wireless radio frequency to deliver critical notifications. Remote monitoring and management is accomplished through the OneVue cloud-based software and the devices' connection to an Ethernet network.

OneVue Notify is offered as a Monitor subscription [5] or standalone non-subscription [6] system. Critical notifications and synchronized time are transmitted over the 72MHz wireless radio frequency and are not dependent on an Ethernet network or a OneVue Monitor subscription.

Critical Notifications

A Critical Notification displayed on InfoBoards is either activated by the five-button Critical Notification Panel or the integration with a third-party system. Both methods require a hardwired interface connection to the main Transmitter contact closure terminal block. The contact closure terminal block contacts are configured to be Normally Open (NO) by default and can be configured to be Normally Closed (NC). For example if configured as NO, when a closed input is received to any of the terminal inputs a critical notification event is activated for the specific input.

When a critical notification event is activated from the main Transmitter, the event is immediately transmitted over the 72MHz wireless radio frequency and the event is received by all InfoBoards and Repeater Transmitters. When the All Clear event is activated, the InfoBoards display the All Clear event for a specified number of minutes and then return to displaying synchronized time and non-critical events. Time, date, and general messaging are non-critical events. InfoBoards can also display a scheduled countdown prior to the start of a period and function as a code blue and elapsed timer.

Preset critical notification events

Each InfoBoard stores a critical notification profile that contains the five critical notification event types. By default, these events are preset by Primex.

Primex default presets are shown below.

- Event 1: Lockdown. Color: Red, Mode: Flashing, Scroll: 0 (none)
- Event 2: Evacuate. Color: Blue, Mode: Flashing, Scroll: 0 (none)
- Event 3: Weather. Color: Yellow, Mode: Flashing, Scroll: 2
- Event 4: Lockout. Color: White, Mode: Constant, Scroll: 2
- Event 5: All Clear. Color: Green, Mode: Constant, Display Duration: 5 minutes

Synchronized Time

Notify InfoBoards display synchronized time when not displaying an active critical notification event. The main Transmitter receives time updates from either from a GPS or NTP time source. Once the main Transmitter receives a time update, it sets its internal clock and then transmits its received time over the 72MHz wireless radio frequency, which is received by the InfoBoards and Repeater Transmitters. A Repeater Transmitter transmits received time to the InfoBoards within its range. As a result, all InfoBoards display the same, precise synchronized time.

When using GPS as its time source, the main Transmitter searches for a GPS signal every second for a time update. When using NTP as a time source, by default it connects to the facility's Ethernet network every 5 minutes to obtain a time update.

A Transmitter's synchronized time transmit schedule is dependent upon the model, as detailed below.

- **1 Watt Transmitter with an internal antenna:** Transmits (broadcasts) a time signal continuously, 24 hours a day.
- **1, 5, or 30 Watt Transmitter with an external antenna:** Transmits a time signal 24 hours a day ONLY between the 39th to the 6th minute of each hour, and changes to a standby mode and does NOT transmit a time signal during the 7th to the 38th minute of each hour (per FCC requirements). This transmit schedule can only be adjusted by Primex when necessary for additional compliance with FCC requirements.

By default, InfoBoards receive time from a Transmitter or can be configured to receive time daily from a NTP time source over an Ethernet connection.

- When configured to receive time from a Transmitter, an InfoBoard's receiver turns on to search for a Transmitter time signal every 10 minutes on the 5's (5, 15, 25, 35, 45, 55 minutes) of the hour to receive a time update.
- When configured to receive time from a NTP time source, an InfoBoard connects daily, at a system scheduled time, to a NTP server to receive a time update.

OneVue Notify Monitor subscription feature overview

This solution is the premier solution that provides remote monitoring and management through the OneVue cloud-based application. Unique to this solution, all devices connect to OneVue over an Ethernet network to send their current status to and download settings from OneVue.

- **Transmitter monitoring**

  OneVue monitors the check-in status received from Transmitters and their last check-in. By default, a Transmitter checks-in to OneVue every 5 minutes to report its current operating status, logged events, NTP time accuracy, and download setting updates. When configured to receive NTP time, during each check-in a Transmitter connects to a NTP server to receive a time update.

  When a time sync failure or hardware error status is received or it has not checked-in for longer than its Unresponsive Timeout (default 3 check-ins), the Transmitter is set to an Alarm state and OneVue generates an alert to notify staff.

- **InfoBoard monitoring**

  OneVue monitors the check-in status received from InfoBoards and their last check-in. Daily, at a system scheduled time, InfoBoards check-in to OneVue and transmit their current operating status and logged events. When configured to receive NTP time, during each check-in an InfoBoard connects to a NTP server to receive a time update.

  When a time sync failure status is received or it has not checked-in for longer than its Unresponsive Timeout (default 3 days), an InfoBoard is set to a Warning state. Reports provide an automated notification to alert staff when an InfoBoard is in a Warning state and needs attention.

- **Customize the Preset Critical Notifications**

  InfoBoards store a critical notification profile that contains the five critical notification event types. By default, these events are preset by Primex. Events can be customized with a OneVue Notify Monitor subscription and each InfoBoard requires an Ethernet connection. When customized, InfoBoards download the OneVue critical notification profile that replaces the Primex preset notification events. By default an InfoBoard downloads setting changes every 5 minutes, which is set in its Config Change Interval setting.

- **Manage Transmitter settings**

  Once a Transmitter has connected to OneVue, you can remotely manage its settings from OneVue. Each Transmitter has a unique profile where you can view and manage its settings.

  A Transmitter's transmit schedule and FCC settings are configured from the ODC app. It's recommended to consult with Primex Technical Support before updating these settings from the ODC app.

- **View Transmitter and InfoBoard event history**

  During each check-in to OneVue, Transmitters and InfoBoards send all logged events to OneVue. Event history can be viewed and downloaded at anytime.

- **Configure InfoBoard display and device settings**

  What's displayed on your InfoBoards is set from the InfoBoard Group assigned to each InfoBoard. From the profile of an InfoBoard, you will set its assigned InfoBoard Group and other settings specific to the InfoBoard.

- **Configure InfoBoards to operate as a Scheduled Countdown Timer**

  InfoBoards can also operate as a Scheduled Countdown Timer to display a countdown to begin before the start of a school period. Countdown events are set from the Bell/Timer Schedule assigned to the InfoBoard Group.

- **Configure InfoBoards to operate as a Code Blue Timer**

  An InfoBoard can operate as a Code Blue Timer with its integration to an existing code blue system. A code blue event is activated from the code blue system and the code blue event is displayed on the InfoBoard. An end user can halt (stop) a code blue event from the three-button Timer Control Switch. When not in an active code blue event, the InfoBoard displays synchronized time and general messaging.

- **Configure InfoBoards to operate as an Elapsed Timer**

  InfoBoards can operate as an Elapsed Timer with both count up and count down options. The three-button Timer Control Switch allows a user to start, pause, stop, and reset the count events, and set an event to begin at a specific time increment. When not in an active count event, an InfoBoard displays synchronized time and general messaging.

  The three-button Timer Control Switch allows a user to start, stop, pause and reset the timer, and set its start time. When not in a count mode, the timer displays its synchronized time. The Timer Control Switch can simultaneously activate two connected timers for even more accurate time management.

- **Generate Reports**

  Available report types include the Transmitter Warning-Alarm State Report, Clocks-InfoBoard Warning State Report, Critical Notification Event History Report, Digital Event Report, User Report, User Role Report, and User Alert Rule Report. The School Calendar Report and School Schedule reports apply to scheduled countdown timer use.

OneVue Notify standalone feature overview

This solution only provides remote Transmitter monitoring and management, which requires a Transmitter to be connected to an Ethernet network. InfoBoard settings, which are limited with this solution, are managed locally at each device with the OneVue Device Configurator (ODC) app. Monitoring the status of an InfoBoard is completed by a visual inspection locally at the device.

- **Transmitter monitoring**

  OneVue monitors the check-in status received from Transmitters and their last check-in. By default, a Transmitter checks-in to OneVue every 5 minutes to report its current operating status, logged events, NTP time accuracy, and download setting updates. When configured to receive NTP time, during each check-in a Transmitter connects to a NTP server to receive a time update.

  When a time sync failure or hardware error status is received or it has not checked-in for longer than its Unresponsive Timeout (default 3 check-ins), the Transmitter is set to an Alarm state and OneVue generates an alert to notify staff.

- **Manage Transmitter settings**

  Once a Transmitter has connected to OneVue, you can remotely manage its settings from OneVue. Each Transmitter has a unique profile where you can view and manage its settings.

  A Transmitter's transmit schedule and FCC settings are configured from the ODC app. It's recommended to consult with Primex Technical Support before updating these settings from the ODC app.

- **View Transmitter event history**

During each check-in to OneVue, a Transmitter sends all logged critical notification events to OneVue. Event history can be viewed and downloaded at anytime.

- **Configure InfoBoard display settings**

  Displays settings are configured locally at each device with the ODC app. Settings include the Time Zone, Date, Timer color (red, green, or white), and 12- or 24 hour time format display.

- **Configure InfoBoards to operate as a Code Blue Timer**

  An InfoBoard can operate as a Code Blue Timer with its integration to an existing code blue system. A code blue event is activated from the code blue system and the code blue event is displayed on the InfoBoard. An end user can halt (stop) a code blue event from the three-button Timer Control Switch. When not in an active code blue event, the InfoBoard displays synchronized time and general messaging.

- **Generate Reports**

  OneVue report types available include a Transmitter Warning-Alarm State Report, Critical Notification Event History Report, and user reports.

SPECIFICATIONS: ONEVUE SYNC 1 WATT TRANSMITTER WITH EXTERNAL ANTENNA

Parameter	Specification
Operating Frequency Range	72MHz
Channels	49 channels available (pre-programmed prior to shipping)
Channel Bandwidth	20KHz
Maximum Transmission	1 Watt (at Transmitter)
Radio Technology	Narrowband FM
Bluetooth Technology	Bluetooth® low energy (v5) wireless technology. To allow pairing with OneVue Device Configurator (ODC) app for configuration and setting management.
User-defined Settings	Locally at device with OneVue Device Configurator (ODC) app • Time Zone, Daylight Saving Time with bypass option, NTP Servers (up to three), Transmit Schedule (power-on), Normal Transmit Schedule, Firmware, Transmit Channel, Repeater Channel OneVue software • NTP Servers (up to three), Legacy Clock Time Zone, Alarm Delay, Firmware, Unresponsive Timeout, Check-in Interval
Dimensions	17 in. L x 12 in. W x 1.7 in. D (43.2 cm x 30.5 cm 4.32 cm)
Weight	9 lb. (4.08 kg)
Power Supply	Input: 120 VAC, 50/60 Hz, 0.6 Amp. Output: 9 VDC, 1.78 Amp. 6 ft. (1.83 m) cord
Front Panel	Four LED status indicators (Power, Transmit, Caution, Error) and Bluetooth labeled push-button to pair with the Primex OneVue Device Configurator (ODC) app.
Rear Panel	DC Input: connection to supplied AC power supply Network LAN port: RJ-45 Ethernet, 10/100 Mbps, 802.3 Ethernet GPS IN port: MiniDIN 7-Pin External Antenna connector (coaxial, n-male) Dry Contact Closure Terminal Block with removable connector: for use with OneVue Notify with Critical Notifications Pinhole button: initiate manual check-in to OneVue (press and release with jewelers screwdriver or other small object) Not applicable to model: Baseboard Monitor port (MiniDIN 9-Pin)
Operating Range	32° to 122° F (0° to 50° C), non-condensing environment

Parameter	Specification
Warranty	5 Year

Canadian Notice: The manufacturer rated output power of this equipment is for single carrier operation. For situations when multiple carrier signals are present, the rating would have to be reduced by 3.5 dB, especially where the output signal is re-radiated and can cause interference to adjacent band users. This power reduction is to be by means of input power or gain reduction and not by an attenuator at the output of the device.

All specifications are subject to change without notice.

Transmitter LED status indicators

The four LED indicators identify the Transmitter's current state and signify warnings and errors. When first powered on all LEDs turn on for two seconds. When in Bluetooth pairing mode, the Power LED is solid green and the Transmit LED flashes.

Status Indicator	LED light	What it means
Power	Green Illuminated Solid	Powered on.
Transmit (Main Transmitter & Repeater Transmitter)	Green Illuminated Solid	Actively transmitting.
Transmit (Main Transmitter only with external antenna)	Green Flashing	In standby mode and is not transmitting. Standby mode is activated by the hourly minute transmit schedule set by the factory. A Transmitter with an external antenna transmits a time signal from the 39th to the 6th minute of each hour and changes to a standby mode during the 7th to the 38th minute of each hour. Each hour it transmits is based on its Normal Transmit schedule.
Transmit	Off	In no-transmit mode and is not transmitting. No-transmit mode is activated during the hour(s) it is not set to transmit per its Normal Transmit schedule.
Transmit (Repeater Transmitter only)	Green Flashing	Receiving a signal from the main Transmitter. Repeaters alternate from transmitting to receiving every few seconds, LED rotates from Green Illuminated Solid to Green Flashing.

Status Indicator	LED light	What it means
Caution	Yellow Illuminated Solid	Transmitter is in the Caution state due to a condition below. • **Time Sync Failure:** Transmitter failed to receive a valid time signal from its time source (GPS or NTP). Verify the Transmitter time source connection. For NTP use, verify its Ethernet connection and NTP Server settings. An external NTP Server requires network port 123 to be open. • **Bad Output Power**: Transmitter is not transmitting at the appropriate power level. • **PLL Diagnostics:** Transmitter having trouble locking onto a channel and cannot broadcast time or events. • **VSWR Errors:** Transmitter antenna error from either the antenna position or cabling. • **No GPS in 48 Hours:** Transmitter has not received time from its time source for more than 48 hours. • **No PPS in 48 Hours:** Transmitter time has not been synchronized by 1PPS (1 pulse per second) for more than 48 hours. • **GPS Cable Break:** Transmitter has detected an error with the GPS connection; either due to a line break, water ingress, or the cable length is greater than 200 ft. (60.9 m).
Error	Red Illuminated Solid	Transmitter is in the Error state due the condition below. • **When in an Error state, the Transmitter has NEVER established a valid time signal and is using its internal Real Time Clock (RTC).** Transmitter does not transmit a time signal to the system devices when in this Error state. During first-time configuration, it can take up to 10 minutes for the Transmitter to connect to its time source and receive a valid time signal.

SPECIFICATIONS: GPS RECEIVER

A GPS Receiver draws time information from the U.S. Government Satellites, providing the system with Coordinated Universal Time (UTC).

- Mounted to rooftop, pole, or window (not a Low-E glass window).
- GPS Receiver sends UTC time to the Transmitter via the NMEA 0183 standard protocol.
- GPS cable. A specially designed low-resistance cable to extend the distance between GPS Receiver and Transmitter.
  Total cable length cannot exceed 200 ft. (60.96 m).

Parameter	Specification
Cable	10 ft. (3.05 m) cable supplied. 50 ft. (15.24 m), 100 ft. (30.48 m), and 200 ft. (60.59 m) extensions available.
Dimensions	2.5 in. W x 0.75 in. (6.35 cm x 1.91 cm)
Mounting Bracket	3.5 in. W x 1.4 in. H x 4.5 in. D (8.89 cm x 3.56 cm x 11.43 cm). Included for rooftop or window mounting.
Weight	0.75 lb. (.34 kg)
Operating Range	-32° to 158° F (-35° to 70° C)

INSTALL 1 WATT ONEVUE SYNC TRANSMITTER WITH EXTERNAL ANTENNA

Leveraging the precision of GPS satellite or Network Time Protocol (NTP) time, 72MHz Transmitters wirelessly synchronize time for analog and digital clocks, timers and other Repeater Transmitters throughout a facility.

Installation overview

1. Install external components, including external antenna and GPS Receiver.
2. Mount Transmitter.
3. Establish Transmitter connections and power on.
4. Configure Transmitter with OneVue Device Configurator (ODC) app.
5. Install additional system devices.

Before you begin installation

- For a system with more than one Transmitter, first configure and install the main Transmitter and verify it received a valid time signal and then configure Repeater Transmitters. When all Transmitters are configured and installed, you can then configure and install the system clocks or InfoBoards.
- Do not install system clocks and other devices until Transmitter and its components are installed and configured; powered on, time source configured and valid time signal received, and fully operational.
- Review all installation requirements and identify the installation location of the Transmitter and system components.
- Review all Safety Instructions and Warnings.
- Inspect system components to verify packaging includes all supplied parts for each system component and verify no damage has occurred during shipping.

Installation requirements

When planning the system installation of a Transmitter with an external antenna, Primex recommends taking into consideration the below guidelines. Location is extremely important to ensure the best operation of your system.

1 Watt Transmitter with External Antenna location requirements

Location and mounting of a Transmitter with an external antenna must meet all of the following requirements.

- Multi-story building: locate the main Transmitter on the top floor; significantly improves coverage to the lower floors due to the "umbrella" pattern of transmission.
- Transmitter mounting location: a minimum of 4 ft. (1.2 m) above the floor.
- Transmitter shelf mounting: 18 in. L x 3 in. W x 16.5 in. (45.72 cm x 7.63 cm x 41.91 cm) mounting shelf available from Primex.
- Transmitter enclosure clearance: located in an area that allows for required clearance.
  Enclosure dimension: 2 in. H x 17 in. W x 12 in. D (5.08 cm x 43.18 cm x 30.48 cm). Required wall area is 24 in. W x 18 in D (60.96 cm x 45.72 cm).
- AC power: located within 5 ft. (1.5 m) from a 120 VAC electrical outlet. 10 AMP dedicated service recommended.
  AC power supply (supplied): Input 120 VAC, 50/60 Hz, 0.6 Amp. Output 9 VDC, 1.78 Amp. 6 ft. (1.83 m) cord.
- Ethernet connection (OneVue Monitor and NTP time source): located in close proximity to an Ethernet port.

- Environment: located in an indoor controlled environment that is 32° to 122° F (0° to 50° C) and a non-condensing humidity environment.

External Antenna location requirements

Location and mounting of an external antenna must meet all of the following requirements.

- Located within 100 ft. (30.48 m) from Transmitter. LMR 400 cable cannot exceed 100 ft. (30.48 m). The system is attenuated to the 100 feet (30.4 m) of cable; typically figure between 80 to 85 ft. (24.38 to 25.90 m) of usable cable length.
- Located at a minimum of 15 ft. (4.5 m) clear from the radius of other antennas.
  Supplied external antenna: radial dimension is 5.1 ft. W x 5.3 ft. H (1.5 m x 1.61 m). 9 ft. (2.7 m) and antenna mast with 1.24 in. (3.17 cm) galvanized conduit.
- Located at least 10 ft. (3 m) from normal traffic areas.
- Located within 10 ft. (3 m) from earth ground.
- Cannot be placed on or directly adjacent to walls or metal structures.
- Cannot be located near television receiving antennas.
- Cannot be mounted indoors or in enclosed areas.
- Cannot be mounted to pre-existing antenna towers. If this is desired, contact Primex prior to installation.
- 5 or 30 Watt Transmitter in healthcare facility: external antenna must be located a minimum of 30 ft. (9 m) away from any window or other glass openings. If hospital paging link receiver is located on roof, Primex is required to be supplied the frequency prior to installation.

Required tools and equipment to install external antenna

To following tools and equipment below are required to install a Transmitter with an external antenna.

- Hammer drill
- Power drill
- 3/4 inch concrete drill bit, 18 in. (45.7 cm) long
- Penetrating mount only: 5/8 inch concrete drill bit, 18 inch (45.7 cm) long
- 1/2 inch wrench
- 3/4 inch (1.9 cm) deep well socket with ratchet
- 10 inch (25.4 cm) adjustable wrench
- Phillips screwdriver
- Flat head screwdriver
- Lineman's pliers
- Shears/scissors
- Silicone caulk; required to seal cabling/ground penetration
- External antenna ground to building (#6 gauge cooper)
- Transmitter ground to building (#6 gauge cooper)
- Transmitter rack (recommended)

GPS Receiver mounting requirements

GPS Receiver location

- Must be mounted where it has a "clear view of the sky" to receive a GPS signal 24 hours a day.
- Typical mounting locations include the inside of a window (not a Low-E glass window), to an exterior pole, or on a rooftop.

- Must be kept away from large metal objects.
- GPS Receiver and cable must be mounted above any potential standing water, snow depth, leaves or other obstructions and is protected from the weather.

GPS cable

- 10 ft. (3 m) GPS cable supplied. Extension cables available from Primex.
- Maximum total distance of the GPS cable to the Transmitter cannot exceed 200 ft. (60.96 m).
- GPS cable located outdoors: cable routing to the inside of the building requires 2 in. (5 cm) minimum conduit and weatherhead. The use of a GelWrap splice enclosure is strongly recommended.
- GPS and extension cables connections must be weatherproofed.
- Supplied Ferrite Bead is required to be attached to the GPS cable to prevent electromagnetic interference (EMI) between the Transmitter and GPS Receiver. Ferrite Bead should be located no greater than an inch from the end of the GPS cable – as near as possible to the Transmitter GPS IN input connection.

Required tools and equipment to install GPS Receiver

The following tools and equipment are required to complete installation.

- Standard or hammer drill
- 5/8 inch concrete drill bit, 18 in. (45.7 cm) long
- Silicone caulk for GPS cable penetration
- Phillips screwdriver
- Slotted/Flat Head screwdriver

Step 1: Assemble ground plane omnidirectional antenna

1. After removing the antenna from the shipping box, inspect all contents to ensure all parts are on hand and no damaged has occurred during shipping.
2. Screw the three radials into the base of the antenna.
3. Assemble the U-bolt on the base of the antenna. The mast is to be aligned with the top of the mast channel.

Radiator

Mast
NOTE: align mast with top of mast channel

Radial
(1 of 3)

Mast Channel

U-Bolt
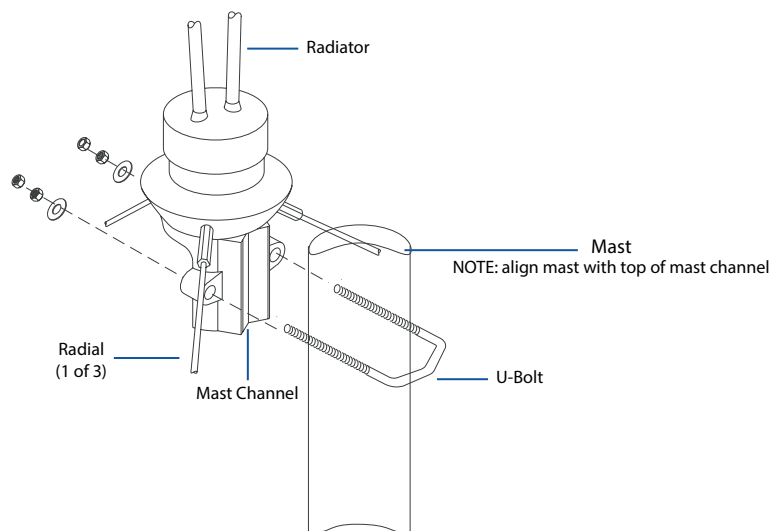
Step 2: Assemble antenna mast

The Antenna Mast has two sections secured by a hex bolt during shipment. The two sections include a 5 ft. x 1.25 in. (1.52 m x 2.54 cm) rigid galvanized conduit and a 5 ft. x 1 in. (1.52 m x 3.17 cm) rigid galvanized conduit.

> **NOTE**
>
> 1 Watt Transmitter with external antenna only: Non-penetrating mounting kit only includes the 5 ft. x 1.25 inch rigid galvanized conduit section.

1. Loosen and remove the hex bolt.
2. Remove the 5 ft. x 1 in. (1.52 m x 3.17 cm) rigid galvanized conduit section.
3. Insert the 5 ft. x 1 in. (1.52 m x 3.17 cm) rigid galvanized conduit section into the 5 ft. x 1.25 in. (1.52 m x 2.54 cm) rigid galvanized conduit section in reverse as shipped - to attain a combined antenna mast length of 9 ft. (2.74 m).
4. Align the sections fastening holes and secure sections together using the supplied hex bolt and nuts.

Step 3: Secure antenna to mast

1. Attach and fasten the antenna channel side base to the top of the 1 inch rigid galvanized conduit section.
2. Use a 1/2 inch wrench to tighten the nuts on both of the U-bolts, both evenly and securely. To ensure it's secure, tighten the second nut to the first nut.

Step 4: Route antenna LMR 400 coaxial cable

1. Drill a 1 in. (2.54 cm) hole through an exterior wall of the building that is in close proximity to the antenna installation location.
2. Roll out the LMR 400 cable to prevent kinks from developing during routing.
3. Route the LMR 400 cable female connector from the Transmitter installation area to the outside installation location of the antenna, leaving enough cable for two 1 ft. (0.30 m) diameter coils at the base of the antenna mast.
4. Form and secure two 1 ft. diameter (305 mm) loops in the LMR 400 cable at the base of the mast for lightning protection.
5. Connect the LMR 400 cable to the antenna.

Step 5: Mount antenna mast

There are three available mounting methods. Installation is dependent upon the mounting kit supplied with the system.

> **NOTE**
>
> Mounting the antenna mast may require two people.

The Non-Penetrating Antenna Kit is designed for mounting a ground plane omnidirectional antenna when mounting to the side of a structure is not practical. The overall footprint of the frame is 29 inches x 35 ½ inches (73.66 cm x 88.9 cm).

> ### 🗒 NOTE
>
> Installation requires six 8 in. x 8 in. x 16 in. concrete blocks (not supplied).

The kit is supplied with the following parts. If any of these items are missing, please contact Primex.

Description	Qty
Rigid galvanized conduit mast	5 ft. x 1.25 inches (1.52 m x 3.17 cm)	1
Tripod leg: 27 in. (2.54 cm) each in length	3
Frame rail (long):34 ¾ in. (88.26 cm)	2
Frame rail (short): 28 ¼ in. (71.75 cm)	4
Grounding Clamp	1
Long carriage bolt	1
Short carriage bolt	11
Flat washers	12
Lock nuts	12

Assemble non-penetrating antenna roof mount

1. Verify the kit contents.
2. Assemble the outer frame by laying the two long frame rails parallel to each - approximately 30 in. (76.2 cm) apart.
3. Insert a short carriage bolt from the bottom at each frame rail end, pointing skyward (4 total).
4. Connect the two long frames rails by placing the two short frame rails on top of the four protruding bolts to form a rectangle. Make sure the square holes in the short tail "sides" are directly opposite each other.
5. Place a washer and nut on each of the four bolts and finger tighten.
6. Position the tripod within the four-sided frame.
7. Secure the three tripod legs to the inside of the frame by inserting three short bolts, from the inside and placing the washer and nut on the outside of the frame.
8. Drop the bottom of the mast (end with hole) through the top of the tripod collar.
9. Place the remaining two short rails parallel to each other, separated by the bottom of the mast.
10. Align the hole at the bottom of the mast, with the two square holes in the short frame rail sides.
11. Insert the long bolt and connect the frame rails to the mast.
12. From the underside of the frame, insert the four remaining short bolts upward and connect the inner short tails to the frame.
13. Tighten all nuts to secure.
14. Use six 8 in. x 8 in. x 16 in. concrete blocks to ballast the antenna mounting. Blocks are to be placed from rail to rail on each side of the mast; three blocks per side with a single block placed on each end and one in the middle.

Overall footprint: 29 in. x 35 1/2 in. (73.66 cm x 90.17 cm)

Tripod Collar

Concrete block placement

27 in. (68.58 cm)

Concrete block placement

Concrete block placement

34 3/4 in. (88.26 cm) Frame Rail (long)

28 1/4 in. (71.75 cm)

8 in. x 8 in. x 16 in. concrete blocks to ballast the antenna mounting.
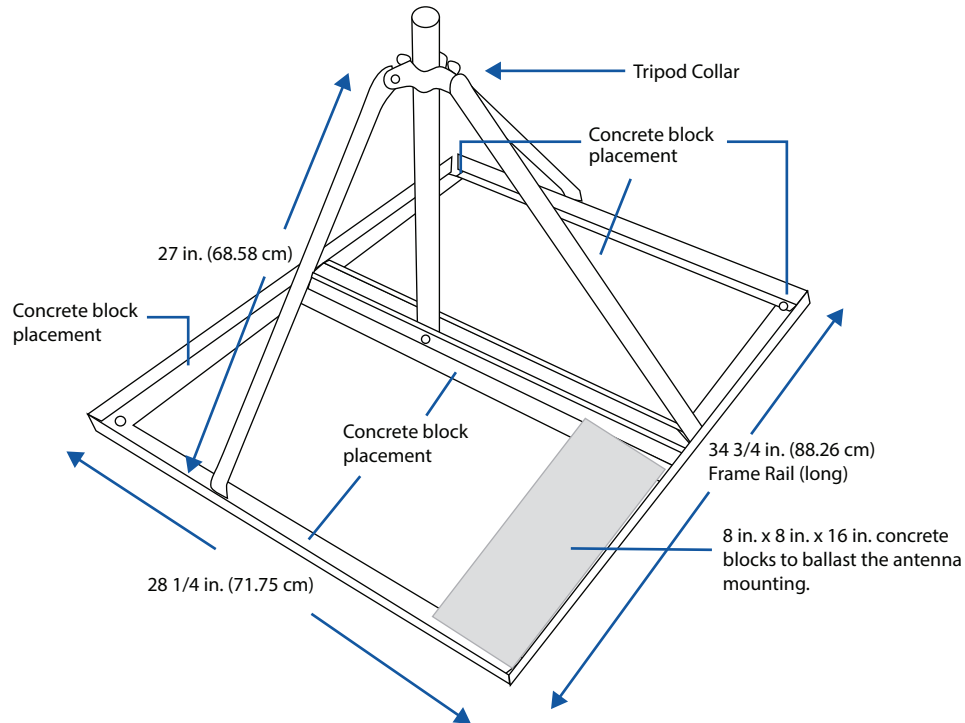
PENETRATING ANTENNA KIT

The penetrating antenna kit contains the materials required to mount the antenna to a wooden pole or masonry wall. A 5/8 in. (1.58 cm) diameter mounting hole is required and the maximum diameter of the pole or wall thickness is 14 in. (35.56 cm).

The kit is supplied with the following parts. If any of these items are missing, please contact Primex.

| Description	Qty
Rigid galvanized conduit section: 5 ft. x 1.25 in.	1
Rigid galvanized conduit insert: 5 ft. x 1 in.	1
Antenna mounting clamp	2
Hex head bolt: 1/2 in.	2
Bolt washer: 1/2 in.	8
Lock washer: 1/2 in.	8
Hex nut: 1/2 in.	8

Mount antenna with penetrating antenna kit

📝 **NOTE**

The recommended diameter of the pole or the wall thickness should not exceed 14 in. (35.56 cm).

1. Verify the kit contents.
2. Assemble both clamps, as shown below, tightening the hex nuts to a torque of approximately 45 ft-lbs.
3. Remove the nut and washer from the 14 inch threaded rod.
4. Drill a 5/8 in. hole through the top of an exterior wall.
5. Insert the 14 in. threaded rod through the hole in the wall. If the thickness of the wall is greater than 10 in. a longer rod may be required. Different lengths of rod are available at hardware stores. If a longer threaded rod is needed, use a 5/8"-11 threads per inch rod.
6. Place the nut and metal plate over the rod.
7. Tighten the square nuts to an approximate torque of approximately 55 ft-lbs.
8. Drill a second 5/8 in. (1.59 cm) hole 2.5 ft. (0.76 m) directly below the first hole.
9. Ensure both clamps are vertically aligned, as shown below
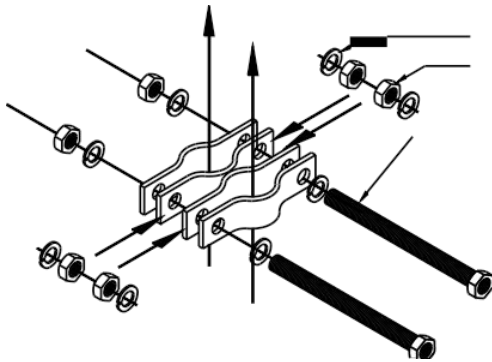
10. Repeat Steps 4 through 6.
11. Connect the LMR 400 cable to the antenna. Be sure the connection is tight.
12. Insert the mast into the clamps.
13. Tighten both clamps evenly and securely.
14. Install a Gelwrap splice enclosure over the connection between the LMR400 cable and antenna. Secure Gelwrap to mast using common electrical tape or cable ties.
15. Next, route the antenna cable.

POLE MOUNT KIT

The antenna pole mount kit is designed for the purpose of mounting the antenna to round or angled tower legs.

• The clamps can be used on round tower legs that measure from 1.25 in. to 3.25 in. (3.17 cm to 8.25 cm) OD or on angled tower legs that measure up to 3 in. (7.62 cm) on a side.
• The center section of each clamp is welded to provide mechanical stability and all parts are hot-depped galvanized steel.

The kit is supplied with the following parts. If any of these items are missing, please contact Primex.

Description	Qty
Rigid galvanized conduit section: 5 ft. x 1.25 in.	1
Rigid galvanized conduit section: 5 ft. x 1 in.	1
X style clamp	2
U-clamp	4
1/2 inch all thread bolt	4

Description	Qty
1/2 inch lock washer	16
1/2 inch hex nut	16

Mount antenna using a pole mount antenna kit

1. Verify the kit contents.
2. Assemble both clamps, tightening the hex nuts to an approximate torque of approximately 45 ft-lbs.
3. Tighten half of one clamp two feet below the top of the pole. Use a 3/4 inch wrench to do this and be sure to tighten the clamps both evenly and securely.
4. Using a 3/4 inch wrench, tighten half of the other clamp a few in. below the top of the pole. Be sure to tighten the clamps both evenly and securely.
5. Connect the LMR 400 cable to the antenna. Be sure the connection is tight.
6. Insert the mast into the clamps. The bottom of the mast should be a minimum of 2 inches below the bottom clamp.
7. Using a 3/4 inch wrench, tighten all nuts on both clamps.
8. Next, route the antenna cable.

Pole/Tower Legs (Not Supplied)

Mast

Clamp

Clamp

22 in. (55.88 cm) DISTANCE BETWEEN CLAMPS
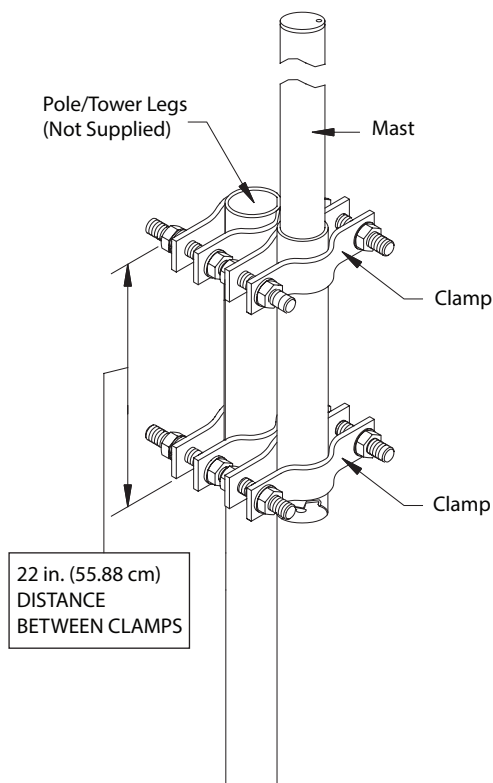
Step 6: Ground antenna mast

The National Electrical Code (NEC) requires that every antenna installation be grounded. Also many areas have local antenna grounding codes. Be sure that you are familiar with local grounding and other antenna regulations and codes.

1. Secure the ground clamp (supplied) around the antenna mast.

2. Insert and tighten the #6 gauge wire (supplied) in the ground clamp.
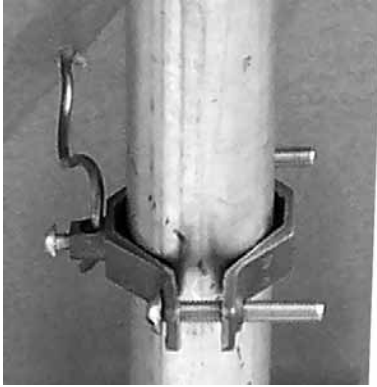

> 🗋 **NOTE**
>
> Cut the wire off at the necessary length. The remainder of the wire will be used to ground the Transmitter.

3. Connect the other end of the #6 gauge wire to a verified building/earth ground.

Step 7: Install GPS Receiver

A GPS Receiver is required when a Transmitter is set to use GPS as its time source.

GPS Receiver kit components

Part	Quantity
Mounting bracket	1
GPS 18 LVC and connector	1
M3 x 0.5 x 6 mm pan head screws	2
#6 x 3/8 sheet metal screw	3
Suction cups	3
U-bolt with nuts for mounting on 1 in. (2.54 cm) pole	1

GPS Receiver install location guidelines

Determine a suitable location for the GPS Receiver unit. Location is extremely important to ensure the best operation of the system.

- GPS Receiver must be mounted where it has a "clear view of the sky" to receive a GPS signal 24 hours a day.
- Typical mounting locations of the GPS Receiver unit include the inside of a window (not a Low-E glass window), to an exterior pole, or on a rooftop.
- GPS Receiver unit should be kept away from large metal objects.
- GPS Receiver unit and cable must be mounted above any potential standing water, snow depth, leaves or other obstructions and is protected from the weather.
- Maximum total distance of the GPS cable to the Transmitter cannot exceed 200 ft. (60.96 m).
- If the GPS cable is located outdoors, the use of a GelWrap splice enclosure is strongly recommended.

Mount GPS Receiver

1. Verify the kit contents, and the install location meets the installation requirements.
2. From the outside of the building, route the GPS cable.
3. Assemble and mount the GPS Receiver unit to either the inside of a window (not Low-E glass) or to an outside pole or rooftop. The mounting location is required to have a clear view of the sky.

> 📝 **NOTE**
>
> Be sure to follow local building code requirements when attaching the GPS unit to the inside of a window. Clean the windowpane before using the suction cups for attachment.

LVC & Connector

U-Bolt

LVC & Connector

Suction Cup

#6 x 3/8 Sheet Metal Screw

M3 x 0.5 x 6 mm PH Screw

Mounting Bracket

M3 x 0.5 x 6 mm PH Screw

Window Mount
Warning: Glass must NOT be Low-E

Pole Mount
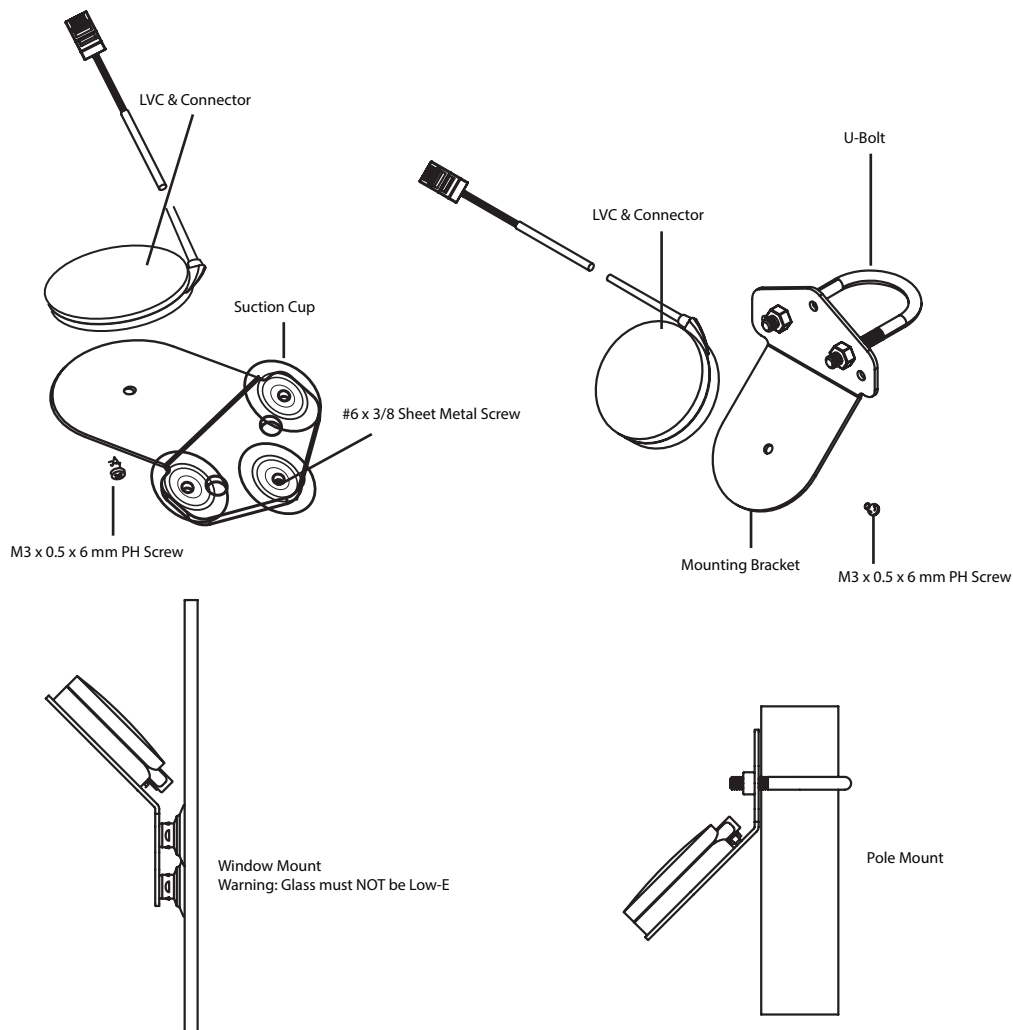
4. Route GPS cable and connect to Transmitter GPS connection.

Step 8: Weatherproof and secure antenna cabling

During this step, you will weatherproof and secure the cabling, verify all connections are secure, and caulk any exterior holes.

1. Weatherproof the antenna connection using GelWrap kit supplied.

2.	Secure the GPS cable and LMR 400 cable to the building and mast.

3.	Leave a drip loop where both cables enter the building to prevent water from entering the building.

4.	Use UV resistant zip ties to secure the cables to the mast and building.

> ⚠ **WARNING**
>
> Do not zip tie the GPS cable to the LMR 400 cable. These two cables must be 2 in. (5.08 cm) apart at all times, with the exception of the point where they enter into the building.

5.	Verify all nuts and bolts in the mounting hardware are secure.

6.	Caulk all exterior holes.

7.	Secure and tie wrap all indoor cables.
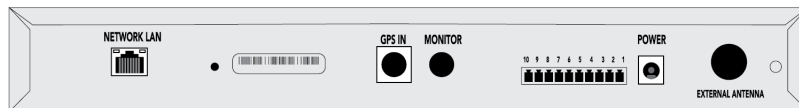
Step 9: Ground Transmitter

1.	Connect and tighten the terminal ground lug (supplied) on the Transmitter.

2.	Insert and tighten #6 gauge wire (supplied) into the Transmitter terminal ground lug.

3.	Connect other end of wire to a verified building/earth ground source.

Step 10: Mount Transmitter and establish connections

1.	Mount Transmitter.

	Verify all install requirements are met.

2.	Attach External Antenna.

	Connect the LMR 400 cable to the Transmitter "External Antenna" port, located on the backside of the Transmitter.

3.	Establish an Ethernet connection (NETWORK LAN). Required for NTP time source and OneVue Monitor configuration.

	Insert a network cable into the RJ-45 Ethernet port/Network LAN port. Plug the other end into a network Ethernet jack.

4.	Connect GPS time source

	Supplied Ferrite Bead is required to be attached to the GPS cable to prevent electromagnetic interference (EMI) between the Transmitter and GPS Receiver. Ferrite Bead should be located no greater than an inch from the end of the GPS cable – as near as possible to the Transmitter GPS IN input connection.

	a.	Attach the Ferrite Bead to the GPS cable within an inch from the end of the GPS cable.

	b.	Snap the ferrite choke closed. Be careful not to pinch the cable.

	c.	Using the supplied zip ties, secure a zip tie at each end of the ferrite choke to prevent it from slipping around the cable.

	d.	Plug GPS cable into the Transmitter "GPS IN" connection.

5.	Connect AC power.

	Connect the supplied AC power supply into the Transmitter AC power input. Plug the two-prong plug into a 120 VAC wall outlet.

Step 11: Critical Notification Event hardwired interface

During this step, wire the critical notification input source to the Transmitter contact closure terminal block. Additional details provided below.

Notify Critical Notification interface configuration

Critical Notifications are triggered by an end user from the five-button Critical Notification Panel or by a third-party system hardwired to the main Transmitter's industry standard contact closure panel.

The critical notification events displayed on InfoBoards are commonly be defined by your facility's emergency response plan. By default these events are preset by Primex and can be customized with a OneVue Notify Monitor subscription. A customization is defined as a change made to the Primex preset characters displayed by InfoBoards during a critical notification event.

To customize the preset events displayed on InfoBoards, see topic Customize preset critical notification events [41]. A customization requires validation of the hardwired interface and thorough testing must be performed.

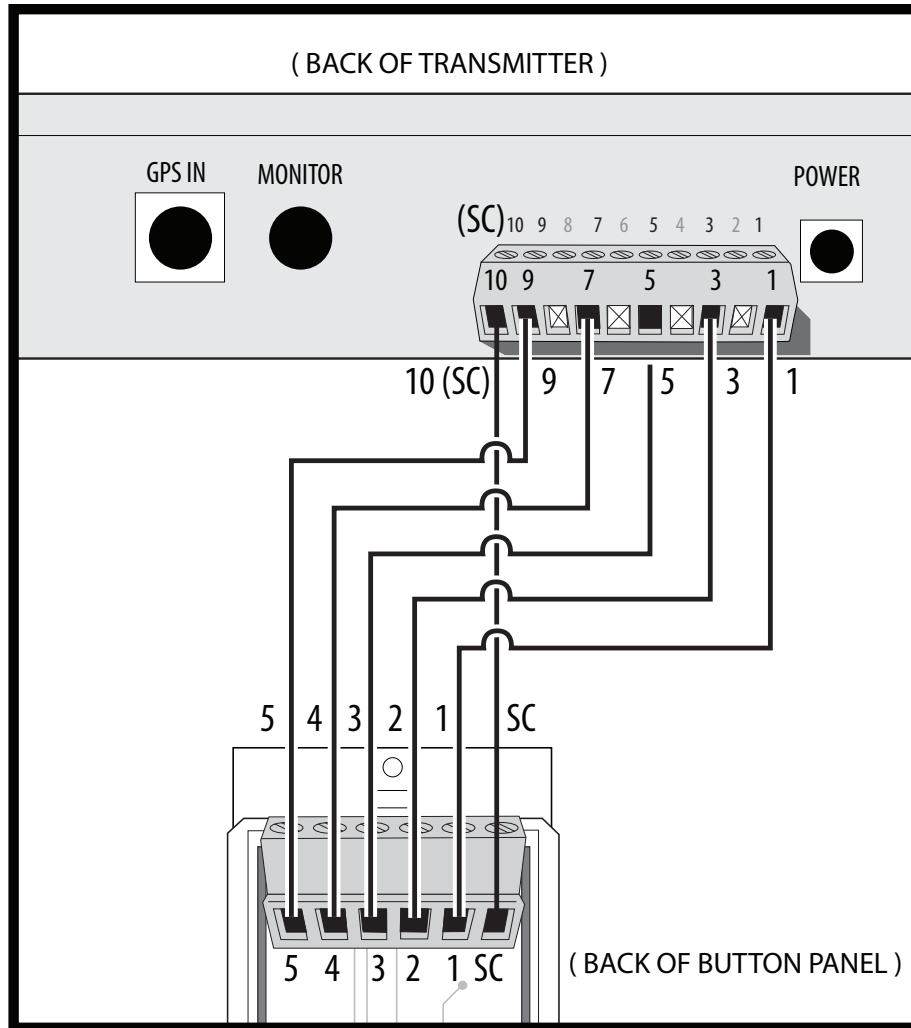**Critical Notification Panel interface requirements**

The Critical Notification Panel requires a hardwired interface between its dry contact terminal block and the main Transmitter's dry contact closure terminal block. This interface provides the activation of critical notification events displayed on Notify InfoBoards.

- A Critical Notification Panel has five individually controlled contact closure switches and one common ground. Each switch corresponds to the panel's five buttons that change the state of each switch. A switch state change is activated from a momentary button push, which triggers an input state change to the Transmitter dry contact closure terminal block over the hardwired interface. An input state change activates the corresponding event number that is immediately transmitted over the 72MHz wireless radio frequency. When an InfoBoard receives an event number, it displays the corresponding event number description stored locally on the InfoBoard.
- The main Transmitter supports up to two parallel Critical Notification Panel interfaces. Each interface requires a single cable run between the Critical Notification Panel and the main Transmitter contact closure terminal block.

Wired interface specifications: Critical Notification Panel and OneVue Sync Transmitter

Wire Color*	Panel Position (L to R)	Transmitter Position (L to R)	Activates Preset Event
Green	5	9	All Clear
Gray	4	7	Lockout
Yellow	3	5	Weather
Blue	2	3	Evacuate
Red	1	1	Lockdown
Black	SC	10	n/a (common ground)

* Per Primex supplied interface cable wiring color specifications. Isolate any non-used wires.

(BACK OF TRANSMITTER)

GPS IN   MONITOR   POWER

(SC) 10 9 8 7 6 5 4 3 2 1
10 9   7   5   3   1

10 (SC)   9   7   5   3   1

5   4   3   2   1   SC

5   4   3   2   1 SC   (BACK OF BUTTON PANEL)

Last Step: Configure Transmitter with the ODC app

The last step is to configure the Transmitter with the OneVue Device Configurator (ODC) app. A Transmitter will not operate until it's configured.

OneVue Sync Transmitters can be configured for OneVue Monitor or for Standalone use. To receive remote support services from Primex, OneVue Monitor configuration is required. For Transmitters that are part of a OneVue Monitor subscription, they must be configured for OneVue Monitor use.

CONFIGURE TRANSMITTER WITH ODC APP

For a new system deployment or when adding or replacing a OneVue Sync Transmitter, the Transmitter is required to be configured onsite with the OneVue Device Configurator (ODC) app. A Transmitter will not operate until it is configured.

The ODC app is available for both iOS and Android mobile devices. Download the app from the App Store or Google Play™ store. Search for Primex OneVue Device Configurator.

Once you download the app, the app guides you through the entire process. The app configures a Transmitter over the Bluetooth pairing connection between your mobile device and the Transmitter.

> **❶ IMPORTANT**
>
> For a system with more than one Transmitter, first configure and install the main Transmitter and verify it received a valid time signal and then configure Repeater Transmitters. When all Transmitters are configured and installed, you can then configure and install the system clocks or InfoBoards.

How does it work?

The ODC app and a OneVue Sync Transmitter wirelessly communicate over a Bluetooth pairing connection. During this connection, the Transmitter settings are entered into the app and the settings are then wirelessly downloaded to the Transmitter.

- **Bluetooth pairing connection**
  OneVue Sync Transmitters are equipped with a wireless Bluetooth radio component that is activated from its front panel Bluetooth pairing button. When the pairing button is pressed and released, the Transmitter becomes discoverable and the ODC app searches for and then pairs with the Transmitter to establish a wireless Bluetooth connection.
- **Two configuration options available: OneVue Monitor or Standalone**
  OneVue Sync Transmitters can be configured for use with OneVue Monitor or as a Standalone device. To receive remote support services from Primex, OneVue Monitor configuration is required. There is no cost associated with OneVue Monitor and is the configuration method recommended by Primex.

What's the difference between OneVue Monitor and Standalone configuration?

The primary difference is that Primex remote support services are provided with OneVue Monitor configuration. This is due to the Transmitter reports its status and events to OneVue over the facility's network and its settings can be viewed and managed from OneVue. This allows Primex to investigate and provide remote support for service incidents.

- OneVue Monitor Configuration (Connect to OneVue) [26]
  In addition to providing remote support services, provides access to OneVue features. Features include managing device settings, alerts, reports, and over-the-air (OTA) firmware updates.
- Standalone Configuration [34]
  Transmitter settings are viewed and updated onsite, locally at the Transmitter from the app and its status is monitored locally from its front panel LED status indicators.

Examples of when Standalone Configuration would be acceptable include during construction and the facility's network is not active, its install location does not have access to an available network port, or remote support services are not required.

When configured as Standalone, at anytime the Transmitter can changed to OneVue Monitor from the app.

Configure Transmitter for OneVue Monitor use

Learn how to configure a OneVue Sync Transmitter, with the OneVue Device Configurator (ODC) app, that will be managed and monitored from OneVue. Be sure to complete the steps in the order as they appear below.

For a system with more than one Transmitter, first configure and install the main Transmitter and verify it received a valid time signal and then configure Repeater Transmitters. When all Transmitters are configured and installed, you can then configure and install the system clocks or InfoBoards.

Step 1: Verify configuration requirements are met

- **Transmitter:** all external components are installed (external antenna, GPS Receiver). All connections are established and Transmitter is powered on.
- **App log in access:** your OneVue user profile is assigned to the Account Admin or Network Admin role.
- **Network connection**: OneVue Network Requirements [44] are met (network port and firewall requirements).
- **OneVue Network Profile:** you have the option to assign the Transmitter to a OneVue wired network profile or create a new network profile. For a Non-DHCP network, an IPv4 address required.
- **NTP time source:** NTP Server IP address or URLs (up to three allowed).
  The main Transmitter requires connection to wired Ethernet network. If the Ethernet network is a Non-DCHP network, the IPv4 network settings are required during configuration.
  Port UDP 123 is required to be open for use with an external Network Time Protocol (NTP) Server. The use of an internal an NTP Server is also supported.

Step 2: Download ODC app or verify app is up to date

Get the Primex OneVue Device Configurator (ODC) app from the Apple App Store or Google Play store. If you already have the app, turn on automatic updates or check for updates.

Mobile device requirements

- Apple iPhone or iPad: iOS version 11 or later
- Android phone or tablet: running version 5.0 or later

> ❗ **IMPORTANT**
>
> Before you configure a device, be sure your mobile device:
>
> - Battery life is 25% or greater
> - Bluetooth is enabled
> - Connected to Wi-Fi or mobile connection

Step 3: Configure Transmitter with ODC app

1. From your mobile device, open the **OneVue Device Configurator (ODC) app** .

2. Select **Connect to OneVue**.
3. Enter your **OneVue username > select Next > enter your password** > select **Log In**.
4. Select the **OneVue account** the Transmitter is to be added to.

   If your user login is associated with more than one OneVue account, the account selection option is displayed.
5. Set the Transmitter into **Bluetooth discoverable mode**.

   From the Transmitter front panel, **press and release the Bluetooth pairing button**. The Transmitter is discoverable for the next two minutes (Power LED is illuminated and Transmit LED flashes).
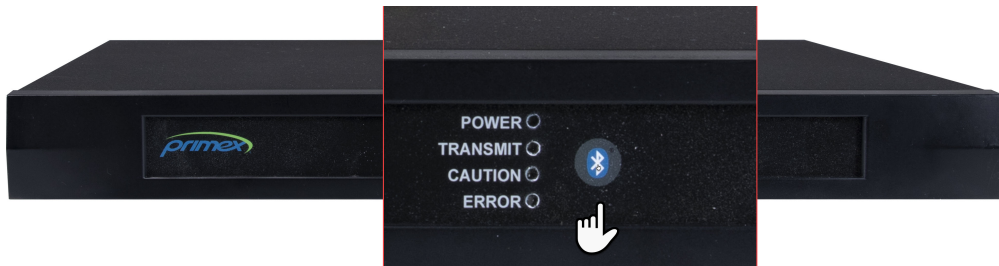
6. From available devices, select the **Transmitter**. If multiple devices are listed, verify the 12-character MAC address located on the Transmitter back panel.

   If the Transmitter is not listed, select the app **Refresh** icon.
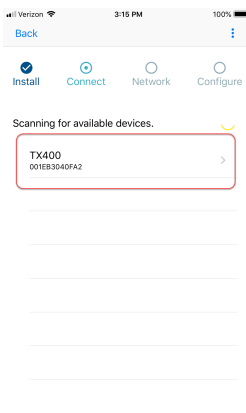
7. Configure its **Network**: select an existing network or enter a new network > select **Continue**.

   If a Non-DHCP network (static IP address), select DHCP off and enter the IPv4 settings.
8. Verify its **Device Details**.

   Serial No: unique 12-character MAC Address discoverable on the facility's network. The MAC address is printed on a label located on the Transmitter's back panel.

   Model: identifies the Primex device model. All OneVue Sync Transmitters are identified by Transmitter (TX400).

   Tx Mode: identifies the Transmitter hardware configuration. Indicates if 1, 5, or 30 Watt and internal or external antenna.

9. Enter a **Name** for the Transmitter.
    Uniquely identifies the Transmitter and should identify its install location, which allows the device to be located when service is required.

10. Verify the **Call Sign** (preset by Primex).
    A Transmitter is registered and licensed to operate over the 72MHz radio frequency with the Federal Authority having jurisdiction (U.S.: FCC/ Canada: ISED). Primex files the license application with the authority having jurisdiction on behalf of the system owner. The FCC/ISED license includes the Call Sign and the effective and expiration date. Once issued the system owner is responsible for maintaining the license.

    - **If the license was issued and received at the time of shipment:** Primex configures the licensed Call Sign.
      Under penalty of FCC/ISED compliance laws: DO NOT edit a configured Call Sign without authorization from Primex or system owner.
    - **If the license was NOT available at the time of shipment:** Primex configures the Transmitter with a temporary Call Sign. A temporary Call Sign is identified by "WT & the owner's phone number".
      If configuration is completed with a temporary Call Sign, it's required to be updated to the licensed Call Sign. The Call Sign can be updated directly from the app. Optionally, contact Primex to request a Transmitter Call Sign update.

11. Configure its **Time Settings**.
    - **Main Transmitter only**
      Time Zone: set to the install location.
      Time source: app detects GPS or NTP (Ethernet connection) time source.
        - **When GPS connection is detected:** displays GPS Time Received.
        - **When GPS connection is not detected or a Repeater Transmitter:**
          OneVue monitor configuration: displays the OneVue account NTP Server settings. If NTP Servers are to be different, update the settings. When updated, the NTP settings are saved to the Transmitter profile and the OneVue account NTP settings are not updated.
          Standalone configuration: enter up to three NTP Server IP Addresses/URLs.
    - **Repeater Transmitter only (time settings do to not apply)**
      Time Zone: Repeater Transmitter receives a time from the main Transmitter.
      Time source: displays Repeater detected, using main Transmitter time.

12. Configure its **RF Settings**.
A dynamic setting: displays RF Channel when configuring a main Transmitter and displays Receive Channel when configuring a Repeater Transmitter (advanced setting Repeater Transmit Channel).

- **Main Transmitter only**
RF Channel: is set to the channel number the Transmitter transmits its time signal and events on, which is then received by the system devices.

> ⚠ **WARNING**
>
> DO NOT change RF Channel without authorization from Primex or system owner.

- **Repeater Transmitter only**
When the Repeater Transmit Channel setting (advanced setting) is set to a number (not Off), the app automatically changes the RF Channel setting to Receive Channel.
A Repeater Transmitter searches for and receives time and event signals from this channel, and then re-transmits the signals that are then received by system devices within its wireless RF range.
1. Select **Advanced**.
2. From the **Repeater Transmit Channel**, change from Off to a Channel Number as described below.
Set to a Channel Number the Repeater Transmitter is to transmit (broadcast) its time signal on. To avoid interference, set to a number that is less than or greater than 2 channels from another Transmitter.

CONFIGURATION EXAMPLE
System with Main Transmitter and two Repeater Transmitters.
Main Transmitter   RF Channel: 1   Repeater Transmit Channel: Off
Repeater Transmitter (A)   Receive Channel (RF Channel): 1   Repeater Transmit Channel: 4
Repeater Transmitter (B)   Receive Channel (RF Channel): 1   Repeater Transmit Channel: 7

13. Optional settings, select **Advanced**.
    Critical Notification Defaults (Preset 1 through 5)

    This setting only applies to the OneVue Notify system (InfoBoards).

    - Sets the main Transmitter's contact closure terminal block inputs, which activates the five critical notification events (1 through 5).
      Default is Normally Open (NO) and when a checkbox is not selected the Preset (contact closure input) is set to Normally Closed (NC).
    - Normally Open (NO) is required when integrated with the Notify Critical Notification Panel.
    - Settings may be required to be changed when integrated with a third-party system that activates critical notification events.

    > ⚠ **CAUTION**
    > The settings below (Startup Continuous Transmit and Normal Transmit) should only be changed when requested or approved by an authorized Primex support technician.

    Startup Continuous Transmit

    The number of hours the Transmitter continuously transmits a time signal after a power-up (on). During a system install, this allows other system devices to receive a time signal at the time of installation.

    Normal Transmit

    The schedule the Transmitter transmits (broadcasts) a time signal from a start hour to end hour based on a 24 hour time period.

    - **1 Watt Transmitter with an internal antenna and Repeater Transmitter**
      By default, set to transmit 24 hours a day (0 to 0).
    - **Transmitter with an external antenna only (specific minute transmit schedule set by the factory)**
      1, 5, or 30 Watt Transmitters with an external antenna ONLY transmit a time signal between the 39th to the 6th minute for each hour set in its Normal Transmit schedule and changes to a standby mode and does NOT transmit a time signal during the 7th to the 38th minute of each hour. This setting is set by the factory and cannot be changed.
      For example, when its Normal Transmit schedule is set to 24 hours, each day at 12:39 AM it starts transmitting and at 1:06 AM it stops transmitting and from 1:07 AM to 1:38 AM it is in standby mode and does not transmit a time signal. Then for each hour it starts to transmit again at the 39th minute of the hour and ends at the 6th minute and from the 7th to the 39th minute of the hour is in standby mode. This sequence will repeat each hour.

    > ⚠ **WARNING**
    > The firmware setting is only to be configured or updated when instructed by Primex Technical Support.

14. Select **Save**.
    Settings are downloaded to the Transmitter and initiates its first-time check-in to OneVue.

15. Verify the **Transmitter checked-in to OneVue**. It may take up to two minutes to check-in.

Log in to **OneVue** > go to **Devices** > **Transmitters** > verify its **Last Check-in**.

16. From the front of the Transmitter, verify it is not in a **Caution** or **Error** state.
The four LED indicators identify the Transmitter's current state and signify warnings and errors. When first powered on all LEDs turn on for two seconds. When in Bluetooth pairing mode, the Power LED is solid green and the Transmit LED flashes.

Status Indicator	LED light	What it means
Power	Green Illuminated Solid	Powered on.
Transmit (Main Transmitter & Repeater Transmitter)	Green Illuminated Solid	Actively transmitting.
Transmit (Main Transmitter only with external antenna)	Green	In standby mode and is not transmitting.
	Flashing	Standby mode is activated by the hourly minute transmit schedule set by the factory. A Transmitter with an external antenna transmits a time signal from the 39th to the 6th minute of each hour and changes to a standby mode during the 7th to the 38th minute of each hour. Each hour it transmits is based on its Normal Transmit schedule.
Transmit	Off	In no-transmit mode and is not transmitting. No-transmit mode is activated during the hour(s) it is not set to transmit per its Normal Transmit schedule.
Transmit (Repeater Transmitter only)	Green	Receiving a signal from the main Transmitter.
	Flashing	Repeaters alternate from transmitting to receiving every few seconds, LED rotates from Green Illuminated Solid to Green Flashing.
Caution	Yellow Illuminated Solid	Transmitter is in the Caution state due to a condition below. **Time Sync Failure:** Transmitter failed to receive a valid time signal from its time source (GPS or NTP). Verify the Transmitter time source connection. For NTP use, verify its Ethernet connection and NTP Server settings. An external NTP Server requires network port 123 to be open. **Bad Output Power**: Transmitter is not transmitting at the appropriate power level. **PLL Diagnostics:** Transmitter having trouble locking onto a channel and cannot broadcast time or events. **VSWR Errors:** Transmitter antenna error from either the antenna position or cabling. **No GPS in 48 Hours:** Transmitter has not received time from its time source for more than 48 hours.

Status Indicator	LED light	What it means
		• **No PPS in 48 Hours:** Transmitter time has not been synchronized by 1PPS (1 pulse per second) for more than 48 hours. • **GPS Cable Break:** Transmitter has detected an error with the GPS connection; either due to a line break, water ingress, or the cable length is greater than 200 ft. (60.9 m).
Error	Red Illuminated Solid	Transmitter is in the Error state due the condition below. • **When in an Error state, the Transmitter has NEVER established a valid time signal and is using its internal Real Time Clock (RTC).** Transmitter does not transmit a time signal to the system devices when in this Error state. During first-time configuration, it can take up to 10 minutes for the Transmitter to connect to its time source and receive a valid time signal.

Configure Transmitter for Standalone use

This topic provide the steps to configure a Transmitter for standalone use. Standalone use indicates a Transmitter will be not monitored from OneVue. Be sure to complete the steps in the order as they appear below.

For a system with more than one Transmitter, first configure and install the main Transmitter and verify it received a valid time signal and then configure Repeater Transmitters. When all Transmitters are configured and installed, you can then configure and install the system clocks or InfoBoards.

Step 1: Verify configuration requirements are met

Before you begin, verify the requirements below are met.

- **Transmitter:** all external components are installed (external antenna, GPS Receiver). All connections are established and Transmitter is powered on.
- **NTP time source:** NTP Server IP address or URLs (up to three allowed).
  The main Transmitter requires connection to wired Ethernet network. If the Ethernet network is a Non-DCHP network, the IPv4 network settings are required during configuration.
  Port UDP 123 is required to be open for use with an external Network Time Protocol (NTP) Server. The use of an internal an NTP Server is also supported.

Step 2: Download ODC app or verify app is up to date

Get the Primex OneVue Device Configurator (ODC) app from the Apple App Store or Google Play store. If you already have the app, turn on automatic updates or check for updates.

Mobile device requirements

- Apple iPhone or iPad: iOS version 11 or later
- Android phone or tablet: running version 5.0 or later

❗ **IMPORTANT**

Before you configure a device, be sure your mobile device:

- Battery life is 25% or greater
- Bluetooth is enabled
- Connected to Wi-Fi or mobile connection

Step 3: Configure Transmitter

1. Open the **ODC** app.

2. Select **Standalone Configuration**.
3. Select **CONFIGURE DEVICE**.
4. Set the Transmitter into Bluetooth discoverable mode.

    From the Transmitter front panel, **press and release the Bluetooth pairing button**. The Transmitter is discoverable for the next two minutes (Power LED is illuminated and Transmit LED flashes).
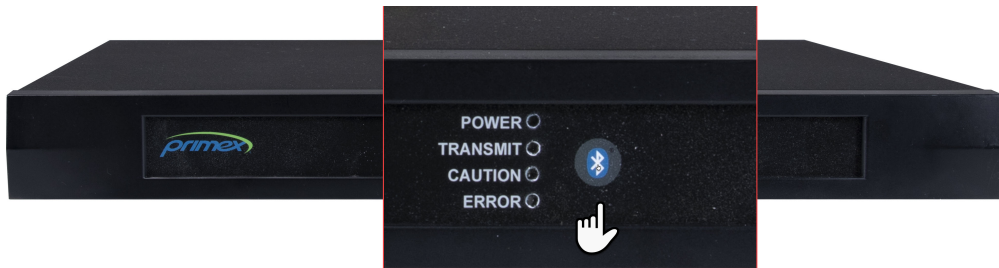
5. From available devices, select the **Transmitter**. If multiple devices are listed, the device can be identified by its 12-character MAC address located on its back panel.

    If the Transmitter is not listed, select the app Refresh icon.
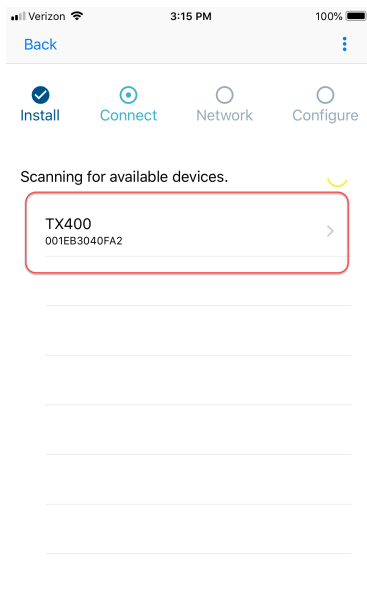
6. Confirm its network setting (DHCP ON by default) > select **Continue**.

    For a Non-DHCP network, deselect DHCP On and enter the network settings.

7. Verify its **Device Details**.

    Serial No: unique 12-character MAC Address discoverable on the facility's network. The MAC address is printed on a label located on the Transmitter's back panel.

    Model: identifies the Primex device model. All OneVue Sync Transmitters are identified by Transmitter (TX400).

    Tx Mode: identifies the Transmitter hardware configuration. Indicates if 1, 5, or 30 Watt and internal or external antenna.

8. Enter a **Name** for the Transmitter.

    Uniquely identifies the Transmitter and should identify its install location, which allows the device to be located when service is required.

9. Verify its **Call Sign** (preset by Primex).

    A Transmitter is registered and licensed to operate over the 72MHz radio frequency with the Federal Authority having jurisdiction (U.S.: FCC/ Canada: ISED). Primex files the license application with the authority having jurisdiction on behalf of the system owner. The FCC/ISED license includes the Call Sign and the effective and expiration date. Once issued the system owner is responsible for maintaining the license.

    - **If the license was issued and received at the time of shipment:** Primex configures the licensed Call Sign.

      Under penalty of FCC/ISED compliance laws: DO NOT edit a configured Call Sign without authorization from Primex or system owner.

    - **If the license was NOT available at the time of shipment:** Primex configures the Transmitter with a temporary Call Sign. A temporary Call Sign is identified by "WT & the owner's phone number".

      If configuration is completed with a temporary Call Sign, it's required to be updated to the licensed Call Sign. The Call Sign can be updated directly from the app. Optionally, contact Primex to request a Transmitter Call Sign update.

10. Configure its **Time Settings**.

    - **Main Transmitter only**

      Time Zone: set to the install location.

      Time source: app detects GPS or NTP (Ethernet connection) time source.

      - **When GPS connection is detected:** displays GPS Time Received.

      - **When GPS connection is not detected or a Repeater Transmitter:**

        OneVue monitor configuration: displays the OneVue account NTP Server settings. If NTP Servers are to be different, update the settings. When updated, the NTP settings are saved to the Transmitter profile and the OneVue account NTP settings are not updated.

        Standalone configuration: enter up to three NTP Server IP Addresses/URLs.

    - **Repeater Transmitter only (time settings do to not apply)**

      Time Zone: Repeater Transmitter receives a time from the main Transmitter.

      Time source: displays Repeater detected, using main Transmitter time.

11. Configure its **RF Settings**.
    A dynamic setting: displays RF Channel when configuring a main Transmitter and displays Receive Channel when configuring a Repeater Transmitter (advanced setting Repeater Transmit Channel).

    - **Main Transmitter only**
      RF Channel: is set to the channel number the Transmitter transmits its time signal and events on, which is then received by the system devices.

      ⚠ **WARNING**

      DO NOT change RF Channel without authorization from Primex or system owner.

    - **Repeater Transmitter only**
      When the Repeater Transmit Channel setting (advanced setting) is set to a number (not Off), the app automatically changes the RF Channel setting to Receive Channel.
      A Repeater Transmitter searches for and receives time and event signals from this channel, and then re-transmits the signals that are then received by system devices within its wireless RF range.
      1. Select **Advanced**.
      2. From the **Repeater Transmit Channel**, change from Off to a Channel Number as described below.
         Set to a Channel Number the Repeater Transmitter is to transmit (broadcast) its time signal on. To avoid interference, set to a number that is less than or greater than 2 channels from another Transmitter.

CONFIGURATION EXAMPLE
System with Main Transmitter and two Repeater Transmitters.
Main Transmitter
RF Channel: 1
Repeater Transmit Channel: Off
Repeater Transmitter (A)
Receive Channel (RF Channel): 1
Repeater Transmit Channel: 4
Repeater Transmitter (B)
Receive Channel (RF Channel): 1
Repeater Transmit Channel: 7

12. Optional settings, select **Advanced**.
    Critical Notification Defaults (Preset 1 through 5)

    This setting only applies to the OneVue Notify system (InfoBoards).

    - Sets the main Transmitter's contact closure terminal block inputs, which activates the five critical notification events (1 through 5).
      Default is Normally Open (NO) and when a checkbox is not selected the Preset (contact closure input) is set to Normally Closed (NC).
    - Normally Open (NO) is required when integrated with the Notify Critical Notification Panel.
    - Settings may be required to be changed when integrated with a third-party system that activates critical notification events.

    ⚠ **CAUTION**
    > The settings below (Startup Continuous Transmit and Normal Transmit) should only be changed when requested or approved by an authorized Primex support technician.

    Startup Continuous Transmit

    The number of hours the Transmitter continuously transmits a time signal after a power-up (on). During a system install, this allows other system devices to receive a time signal at the time of installation.

    Normal Transmit

    The schedule the Transmitter transmits (broadcasts) a time signal from a start hour to end hour based on a 24 hour time period.

    - **1 Watt Transmitter with an internal antenna and Repeater Transmitter**
      By default, set to transmit 24 hours a day (0 to 0).
    - **Transmitter with an external antenna only (specific minute transmit schedule set by the factory)**
      1, 5, or 30 Watt Transmitters with an external antenna ONLY transmit a time signal between the 39th to the 6th minute for each hour set in its Normal Transmit schedule and changes to a standby mode and does NOT transmit a time signal during the 7th to the 38th minute of each hour. This setting is set by the factory and cannot be changed.
      For example, when its Normal Transmit schedule is set to 24 hours, each day at 12:39 AM it starts transmitting and at 1:06 AM it stops transmitting and from 1:07 AM to 1:38 AM it is in standby mode and does not transmit a time signal. Then for each hour it starts to transmit again at the 39th minute of the hour and ends at the 6th minute and from the 7th to the 39th minute of the hour is in standby mode. This sequence will repeat each hour.

    ⚠ **WARNING**
    > The firmware setting is only to be configured or updated when instructed by Primex Technical Support.

13. Select **Save**.
    Settings are downloaded to the Transmitter.

14. From the front of the Transmitter, verify it is not in a **Caution** or **Error** state.

    If in a Caution state, to determine the cause refer to topic Troubleshoot: Transmitter Caution status with ODC app.

    The four LED indicators identify the Transmitter's current state and signify warnings and errors. When first powered on all LEDs turn on for two seconds. When in Bluetooth pairing mode, the Power LED is solid green and the Transmit LED flashes.

Status Indicator	LED light	What it means
Power	Green Illuminated Solid	Powered on.
Transmit (Main Transmitter & Repeater Transmitter)	Green Illuminated Solid	Actively transmitting.
Transmit (Main Transmitter only with external antenna)	Green Flashing	In standby mode and is not transmitting. Standby mode is activated by the hourly minute transmit schedule set by the factory. A Transmitter with an external antenna transmits a time signal from the 39th to the 6th minute of each hour and changes to a standby mode during the 7th to the 38th minute of each hour. Each hour it transmits is based on its Normal Transmit schedule.
Transmit	Off	In no-transmit mode and is not transmitting. No-transmit mode is activated during the hour(s) it is not set to transmit per its Normal Transmit schedule.
Transmit (Repeater Transmitter only)	Green Flashing	Receiving a signal from the main Transmitter. Repeaters alternate from transmitting to receiving every few seconds, LED rotates from Green Illuminated Solid to Green Flashing.
Caution	Yellow Illuminated Solid	Transmitter is in the Caution state due to a condition below. • **Time Sync Failure:** Transmitter failed to receive a valid time signal from its time source (GPS or NTP). Verify the Transmitter time source connection. For NTP use, verify its Ethernet connection and NTP Server settings. An external NTP Server requires network port 123 to be open. • **Bad Output Power**: Transmitter is not transmitting at the appropriate power level. • **PLL Diagnostics:** Transmitter having trouble locking onto a channel and cannot broadcast time or events. • **VSWR Errors:** Transmitter antenna error from either the antenna position or cabling.

Status Indicator	LED light	What it means
		• **No GPS in 48 Hours:** Transmitter has not received time from its time source for more than 48 hours. • **No PPS in 48 Hours:** Transmitter time has not been synchronized by 1PPS (1 pulse per second) for more than 48 hours. • **GPS Cable Break:** Transmitter has detected an error with the GPS connection; either due to a line break, water ingress, or the cable length is greater than 200 ft. (60.9 m).
Error	Red Illuminated Solid	Transmitter is in the Error state due the condition below. • **When in an Error state, the Transmitter has NEVER established a valid time signal and is using its internal Real Time Clock (RTC).** Transmitter does not transmit a time signal to the system devices when in this Error state. During first-time configuration, it can take up to 10 minutes for the Transmitter to connect to its time source and receive a valid time signal.

CUSTOMIZE PRESET CRITICAL NOTIFICATION EVENTS

The critical notification events displayed on InfoBoards are commonly be defined by your facility's emergency response plan. By default these events are preset by Primex and can be customized with a OneVue Notify Monitor subscription. A customization is defined as a change made to the Primex preset characters displayed by InfoBoards during a critical notification event.

About InfoBoard critical notifications events

InfoBoards store a critical notification profile that contains the five critical notification event types. When customized, InfoBoards download the OneVue critical notification profile that replaces the Primex preset profile. By default an InfoBoard connects to OneVue (over your facility's Ethernet network) to download setting changes every 5 minutes, which is set in its Config Change Interval setting.

Preset critical notification events

Each InfoBoard stores a critical notification profile that contains the five critical notification event types. By default, these events are preset by Primex.

Primex default presets are shown below.

- Event 1: Lockdown. Color: Red, Mode: Flashing, Scroll: 0 (none)
- Event 2: Evacuate. Color: Blue, Mode: Flashing, Scroll: 0 (none)
- Event 3: Weather. Color: Yellow, Mode: Flashing, Scroll: 2
- Event 4: Lockout. Color: White, Mode: Constant, Scroll: 2
- Event 5: All Clear. Color: Green, Mode: Constant, Display Duration: 5 minutes

Before you begin

- Verify the main Transmitter's contact closure terminal block input configuration, which may either be wired to a Critical Notification Panel or third-party system. A customization to the events must represent the hardwired configuration between the Transmitter and its event input source.
- All InfoBoards require an Ethernet connection.
- Event number 5 (All Clear) must be hardwired to only activate the All Clear event. It can never be hardwired to activate any other type of event. Event number 5 has a unique setting to allow the event to be displayed for specified number of minutes and then ends automatically. If your emergency response plan identifies an All Clear event as a different term, the preset can be updated.
- If events are activated from a Critical Notification Panel, the button label affixed to the panel must be updated. Primex provides an Avery 6871 PDF label template. Avery 6871 labels are required (not supplied).
- Testing of the customization must be performed. Primex recommends testing during off hours and building occupants should be notified to avoid unnecessary occupant response.

Step 1: Update critical notification panel label

This step is only required if events are activated from the 5-button critical notification panel.

During this step, you will download the template and print a customized button label for the panel.

1. Download the Avery label template.
   Go to **OneVue Help** > select **OneVue Notify Critical Notifications** > **Product Manuals & Documentation** > download the **Critical Notification Panel Label Template (Avery 6871)**.

2. From the template, enter each **event's characters**.

◀ Event 1 Text	◀	◀	◀	◀	◀
◀ Event 2 Text	◀	◀	◀	◀	◀
◀ Event 3 Text	◀	◀	◀	◀	◀
◀ Event 4 Text	◀	◀	◀	◀	◀
◀ All Clear	◀	◀	◀	◀	◀

3. Print the label. From the file, select **Print** > select **Actual Size** > select **Landscape**.

Print

Printer: Lexmark E352dn   [Properties] [Advanced]   Help ?

Copies: 1 ▲▼   ☐ Print in grayscale (black and white)
                ☐ Save ink/toner ⓘ

Pages to Print
◉ All
○ Current page
○ Pages   1
▶ More Options

Comments & Forms
Document and Markups ▼
[Summarize Comments]

Document: 11.0 x 8.5in

Page Sizing & Handling ⓘ
[Size] [Poster] [Multiple] [Booklet]
○ Fit
◉ Actual size ①
○ Shrink oversized pages
○ Custom Scale: 100 %
☐ Choose paper source by PDF page size
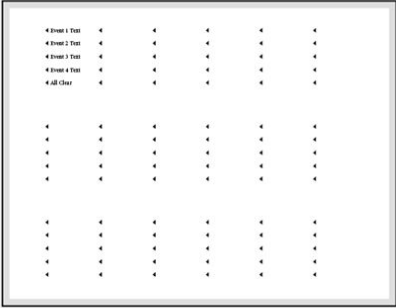
11 x 8.5 Inches

☐ Print on both sides of paper

Orientation:
○ Auto portrait/landscape
○ Portrait
◉ Landscape ②

4. Affix the **customized label** over the existing label.
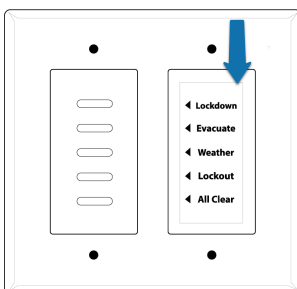
Step 2: Update OneVue critical notification profile

This step is required for use with the critical notification panel or a third-party integration.

During this step you will update the OneVue critical notification profile that is downloaded to each InfoBoard.

1. Go to **Admin** > select **Edit - your account name**.
2. From the **Critical Notification Events** section, update the event (characters) and additional settings if applicable.

Critical Notification Events

Event 1	Lockdown
Scroll Speed	0
Color	Red
Mode	Flashing
Event 2	Evacuate
Scroll Speed	0
Color	Blue
Mode	Flashing
Event 3	Weather
Scroll Speed	0
Color	Yellow
Mode	Flashing
Event 4	Page in Process
Scroll Speed	2
Color	White
Mode	Flashing
Event 5	All Clear
Scroll Speed	0
Color	Green
Mode	Constant
Display Duration	1

Event (1 - 5): sets the characters displayed during the event.

Scroll Speed: sets the speed of the characters during the event, higher the number the faster the speed.

Color: sets the digit color during the event.

Mode sets if the digits are flashing or constant during the event.

Event 5 only (All Clear) Display Duration: sets the number of minutes the event is active. Once it ends, InfoBoards return to displaying synchronized time and non-critical events.

Event number 5 (All Clear) must be hardwired to only activate the All Clear event. It can never be hardwired to activate any other type of event. Event number 5 has a unique setting to allow the event to be displayed for specified number of minutes and then ends automatically. If your emergency response plan identifies an All Clear event as a different term, the preset can be updated.

3. Select **Save**.

   InfoBoards download the update (OneVue critical notification profile) during their next connection to OneVue. By default InfoBoards connect to OneVue every 5 minutes to download setting updates.

Step 3: Test customized critical notification events

Testing must be performed from the event input source; either the Critical Notification Panel or a third-party system. It's very important the customized events are displayed on the facility's InfoBoards.

Critical Notification Panel testing

It's recommended to have a MiniBoard at the location of the Critical Notification Panel. It can serve as a testing device and also provide a visual confirmation of an activated Critical Notification Event.

1. From the Button Panel activate each event individually.
2. Verify the system InfoBoards display each event for the panel button activated.

ONEVUE NETWORK REQUIREMENTS

The information below provides the details required to allow Primex network-enabled devices to communicate over a facility's network to OneVue. Details include device Wi-Fi, PoE, and Ethernet network communication protocols, and network port and firewall requirements.

Network communication protocols

The OneVue platform is designed, developed, and managed in-house, allowing Primex to control the user experience and provide the highest level of reliability and security.

To support the myriad of network security and protocol standards in today's business environment, Primex network-enabled devices offer an array of options for secure network connectivity. This ensures our customers can use and leverage our full line of products without adding costly additional IT infrastructure.

Power over Ethernet (PoE) and Ethernet specifications

- Power over Ethernet (PoE): Compliant with IEEE 802.3af standard
- Ethernet:10/100 Mbps
- Network Communication Protocols: Hypertext Transfer Protocol Secure (HTTPS)/TLS
- IP Addressing: Dynamic Host Configuration Protocol (DHCP), static IP addressing
- Data Packet Size: typically less than 5 kilobytes (kB)

Network port requirements

Primex Ethernet, PoE, and Wi-Fi enabled devices communicate to OneVue over a facility's network using the Hypertext Transfer Protocol Secure (HTTPS) protocol. OneVue client and device data is encrypted in transit and all sensitive data is encrypted at rest. An outbound HTTPS connection is established by each device and once complete the IP address is released.

The following ports must be open to allow for outgoing OneVue device communication from the facility network.

- **Port TCP 443:** required to be open to allow Hypertext Transfer Protocol over TLS/SSL (HTTPS) communication with OneVue and Wi-Fi, Power over Ethernet (PoE)/Ethernet enabled devices.
- **Port UDP 123:** used by Wi-Fi, Power over Ethernet (PoE)/Ethernet devices to access an external NTP Server. Port is required to be open for use with external Network Time Protocol (NTP) Servers. Use of internal NTP Servers is also supported.

Network firewall requirements

The OneVue platform runs on the Amazon Web Services (AWS) cloud infrastructure. Organizations with network firewalls in place must proactively allow outbound network communication and file downloads through specific OneVue Domains and URLs. The files downloaded include the Sync device clock list, Notify device schedules, and device setting updates.

OneVue is a high-availability (HA) platform that may change IP addresses at anytime, therefore OneVue does not support the use of firewall IP address filtering.

If the firewall support wildcards:

Domain filters	*.primexonevue.com
	us-east-1-production.s3.amazonaws.com
URL filters	https://*.primexonevue.com
	https://us-east-1-production.s3.amazonaws.com

If the firewall does not support wildcards:

Domain filters	console.primexonevue.com
	deviceapi-alt.primexonevue.com
	deviceapi.primexonevue.com
	onevueapi.primexonevue.com
	us-east-1-production.s3.amazonaws.com
URL filters	https://console.primexonevue.com
	https://deviceapi-alt.primexonevue.com
	https://deviceapi.primexonevue.com
	https://onevueapi.primexonevue.com
	https://us-east-1-production.s3.amazonaws.com

Email, text (SMS), and voice communication

OneVue generates email, text (SMS), and voice notifications. Be sure to add **support@primexonevue.com** to your email program's safe senders list. Text and voice alert notifications are sent from phone number (608) 709-7043.

SAFETY, REGULATORY, AND WARRANTY INFORMATION

Primex OneVue Sync Transmitter models: TX400, TX4001NR, TX4005EM, TX40030EM

Safety Instructions and Warnings

Some of the following information may not apply to your particular product model; however, as with any electronic product, precautions should be observed during installation, operation, and maintenance.

- Never operate the Transmitter without the antenna being properly connected to the Transmitter. Operating the Transmitter without an antenna can lead to permanent damage of the Transmitter and poses a safety risk.
- Do not touch an internal or external antenna while broadcasting. Touching an external antenna could result in a skin burn or other injuries.
- Standard acceptance procedures must be followed prior to operating this equipment in the proximity of life support systems.
- Do not operate the Transmitter outdoors, in wet areas where there is standing water, or in areas where there is condensation or the risk of condensation. Use in any of these environments will damage the device and void the warranty.
- Do not open the Transmitter to alter the internal elements in any way. This will void the warranty and could lead to unsafe conditions, malfunction, and violations of FCC U.S. / ISED Canada regulations.
- Do not use a metal ladder during installation of the external antenna.
- During external antenna installation, be sure to wear shoes with rubber soles and heals and wear protective clothing with long sleeves and rubber gloves.
- Do not install an external antenna on a wet or windy day when lighting or thunder is in the area or near power lines. Power lines, telephone lines, and guy wires look the same. As a precaution please assume any wire can electrocute you.
- The installation, maintenance, or removal of an external antenna requires qualified, experienced personnel. The installation instructions are written for such installation personnel.
- External antenna systems should be inspected once a year by qualified personnel to verify proper installation, maintenance, and condition of equipment.

Primex disclaims any liability or responsibility for the results of improper or unsafe installation practices.

Federal Communications Commission (FCC) / ISED Canada (IC)

Primex OneVue Sync Transmitter models: TX400, TX4001NR, TX4005EM, TX40030EM

License Requirements

- Operation of the Transceiver requires a FCC U.S./ISED Canada operating license, which must be obtained prior to operation.
- FCC licenses must be renewed every 10 years and the ISED Canada licenses must be renewed annually.
- As a service, Primex will file the license application if the system owner desires it. A system owner that does not want Primex to file for the original site license will be required to complete a waiver form, file the required application, and receive a valid license from the FCC U.S./ISED Canada prior to use. If you have any questions or need any assistance, please contact Primex Technical Support.
- Primex requires a copy of the licenses in order to complete the factory presets.

Product Compliance

- This device complies with Part 90 and Part 15 of the FCC rules and RSS-119 of ISED Canada.
  5 and 30 Watt Transmitter: ISED Canada 4256A-FM72 (TX/RX/LED). The term "IC." before the certification/ registration number signifies only that the ISED Canada technical specifications were met.
- Operation of this device is subject to the following two conditions:
  (1) This device may not cause harmful interference.
  (2) This device must accept any interference, including interference that may cause undesired operation.
- Changes or modifications to any part of the Primex system components not expressly approved by Primex could void the system owner's FCC U.S./ISED Canada authority to operate the equipment.

Radio Frequency (RF) Exposure

- 1 Watt Transmitter: To comply with FCC U.S./ISED Canada RF exposure requirements for mobile transmitting devices, the Transmitter is only to be used or installed in locations where there are at least 35 cm separation distance between the antenna of the Transmitter and all persons.
- 5 and 30 Watt Transmitter: To comply with FCC OET65 and ISED Canada RF exposure requirements, the antenna is only to be used or installed in locations where the following antenna separation guidelines exist when the Transceiver is in operation. Distance above roofline is for direct line of sight only. Distance Above Roofline: 8.95 ft. (2.72 m).

Radio Standards Specifications (RSS)

Primex OneVue Sync Transmitter models: TX400, TX4001NR, TX4005EM, TX40030EM

This device complies with ISED Canada licence-exempt RSSs.

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.

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.

The device meets the exemption from the routine evaluation limits in section 2.5 of RSS 102 and compliance with RSS-102 RF exposure, users can obtain Canadian information on RF exposure and compliance.

Le dispositif rencontre l'exemption des limites courantes d'évaluation de routine dans la section 2.5 de RSS 102 et la conformité à l'exposition de RSS-102 RF. Les utilisateurs peuvent obtenir l'information canadienne sur l'exposition à la RF et la conformité avec celle-ci.

This equipment should be installed and operated with a minimum distance of 35 centimeters between the radiator and your body.

Cet équipement devrait être installé et utilisé avec une distance minimum de 35 centimètres entre le radiateur et votre corps.

5 YEAR LIMITED WARRANTY

Warranty applies to: 72MHz OneVue Sync Transmitters, GPS Receiver, ClassicSync Transmitters (XR and 14000 Series), and 72MHz Analog Clocks, Digital Clocks and Timers.

Primex, Inc. warrants this product to be free from defects in materials and workmanship for a standard of five (5) years from the date of purchase. All product accessories, including external antennas and kit components, wireless tone generator, wireless data receiver, and UPS backup, are warranted for a period of one (1) year against material or manufacturing defects from the date of purchase. Primex, Inc. will at its sole option, repair or replace any components that fail in normal use. Such repairs or replacements will be made at no charge to the customer for replacement parts. The customer will be responsible for any transportation costs.

THIS WARRANTY DOES NOT COVER

(1) Physical damage to this product; (2) Product failure or damage caused by improper installation, lack of periodic maintenance, improper or abnormal use, misuse, neglect or accident (3) Damage caused by another device or software used with this product (including, but not limited to, damage resulting from use of non-Primex brand or approved parts, consumables or accessory items); (4) Problems arising from anything other than defects in materials or workmanship; and (5) Consumables or other items requiring periodic maintenance or replacement with ordinary wear and tear, including, but not limited to, product batteries and cables. This warranty is VOID if this product has been altered or modified in any way (including, but not limited to, attempted warranty repair other than by Primex or an authorized service partner).

LIMITATION OF LIABILITY

The warranties and remedies contained herein are exclusive and in lieu of all other warranties express or implied or statutory, including any liability arising under any warranty or merchantability or fitness for a particular purpose, implied, statutory or otherwise. In no event shall Primex, Inc. be liable for any incidental, special, indirect or consequential damages, whether resulting from the use, misuse or inability to use this product or from defects in the product. Some states do not allow this exclusion or limitation of incidental or consequential damages so the above limitations or exclusion may not apply to you.

TO OBTAIN WARRANTY SERVICE

If, after following the instructions in the product manual, you are certain the product is defective, contact Primex Technical Support to assist with troubleshooting the issue. If the issue cannot successfully be resolved and the product is under warranty, a RMA (Return Material Authorization) will be generated. The RMA form will be provided via email with detailed instructions for the return. All merchandise returned must be shipped to Primex, Inc. Attn: Returns Dept., N3211 County Road H, Lake Geneva, WI 53147. Primex, Inc. retains the exclusive right to repair or replace the unit at its sole discretion. Such shall be your sole exclusive remedy for any breach of warranty.

TECHNICAL SUPPORT

You may require technical support when you have questions about product features, installation and configuration, or troubleshooting. Support services are delivered in accordance with your organization's support agreement, end-user license agreements, and warranties, either with a Primex Certified Sales and Service Partner or directly with Primex.

Support through Primex Certified Sales and Service Partners

Ensuring our customers experience excellent service is of utmost importance to Primex. Our network of Certified Sales and Service Partners offers technical support services for Primex products.

If you have purchased Primex products or have a service agreement with a Primex Partner, they are your primary contact for all Technical Support inquires.

When contacting Technical Support

Make sure you have satisfied the system requirements specified in the product documentation. Also be at the computer or device on which the problem occurred, in case it's necessary to replicate the problem.

Please have the following information available:

- Customer ID/Account Name
- Problem description/error messages
- Device hardware information
- Troubleshooting performed

Primex Technical Support

Hours: 7:00 AM to 7:00 PM CT, Monday through Friday

Phone: 1-262-729-4860

Email: service@primexinc.com

Web: www.primexinc.com/support