

Primex XR 72MHz Synchronized Time Solution

XR Personal Series LCD Clock Troubleshooting Guide



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Primex, Inc.

Primex is a leading provider of synchronized time and environmental monitoring solutions. Our solutions automate and maintain facility compliance, increase efficiencies, enhance safety and reduce risk for organizations in the healthcare, education, manufacturing and government vertical markets.

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Personal Series LCD Clock Troubleshooting

Learn more about common troubleshooting procedures for a XR Personal Series LCD Clock.



Display is locked up and time is not updating

Model: Personal Series LCD Clock

Problem

Display appears to be locked up, which the time is visible but is not updating.

Cause

This may be due to may be due to batteries were inserted without allowing power to drain from the clock.

Solution

1. Remove the batteries, wait 10 seconds, and then re-insert the batteries

NOTE

During initialization (power on or reset) of the clock, its receiver searches until signal from a Transmitter is found, scanning rapidly through 72MHz channels. The receiver looks for a signal for 1 minute, and then switches to scanning in 30 minute intervals until its receives a signal from a Transmitter. Normal operation begins once a signal is received.

Display shows dashes and time is not displayed

Model: Personal Series LCD Clock

Problem

The clock display show dashes; time is not displayed.

Cause

This is an indication that it is not seeing a signal from the Transmitter.

Solution

1. Is this a Transmitter with an External Antenna? If yes, was the clock installed between the 7th and 38th minute of the hour? It should set at the 39th minute of the hour. You can power down the Transmitter, wait 30 seconds, and power it back on. A power cycle set the Transmitter with an External Antenna to broadcast for eight consecutive hours.

A Transmitter with an Internal Antenna continuously broadcasts its signal continuously.

2. Identify scope of clocks experiencing issue - single clock or all clocks/clocks in specific area.

Single clock: verify if the issue is due to its power supply, a signal issue at its install location, or a defective clock.

- a. Verify the clock's power supply. For battery-operated models, if the low battery indicator is visible, replace batteries using fresh superior-quality alkaline batteries with an expiration date at least 5 years past the current year.

Analog clock models: prior to inserting new batteries, stretch the battery tabs in the battery holder out slightly to apply more pressure to the battery contacts.

- b. Take the clock with the issue to known good signal area - a location where a clock is not in an error state.
- c. At the known good signal area, power on the clock and press and immediately release the button on the back of the clock - initiates a signal check.

Signal check: clock scans all channels searching for a Transmitter signal. Once the clock finds a Transmitter signal, it emits a series of beeps to indicate its signal strength.

beeping once per second each time a valid time signal is received and continues beeping for up to one minute. The clock updates to the time signal received from the Transmitter.

If the clock sets its time, this verifies there is a signal issue at its original install location.

If the clock does not set its time, it may be due to a mechanical defect.

All clocks/clocks in specific area: verify the Transmitter(s) state to identify if the cause of the issue is due to Transmitter broadcasting to the installation area is in an error state.

- a. Verify the current state of the Transmitter. If multiple Transmitters on site, start with the Master Transmitter and then proceed by verifying the other units.
- b. Is the Transmitter's red LED flashing and/or is information displayed on its front display not correct?

If yes, the Transmitter is in an error state that may result in the clocks not receiving its broadcasting signal. Resolve the issue by completing the troubleshooting topics for the Transmitter model. Once the Transmitter is in a normal state and broadcasting, clocks correct at their next scheduled update.

3. If the clocks do not set their time, it may be due to an interference at the installation area that is preventing a clock(s) from receiving a broadcasting signal.

NOTE

When certain types of electronic light ballasts become defective they may radiate broadband noise, which can interfere with wireless devices. While interference issues are unlikely with the Primex system, high levels of noise present in the 72-76MHz range could potentially cause clocks which are located far from the Transmitter and also within the close proximity of these ballasts to not receive a signal. Very limited instances have occurred in the past, which has only been found to happen when ballasts become defective.

Display shows low Battery indicator

Model: Personal Series LCD Clock

Symptoms

Clock display shows low battery indicator.

Problem

Low battery level.

Battery life is impacted by its backlight setting.

- Backlight set to Off - estimated battery life up to 8 years
 - Backlight set to Low: (8 hours per day - Battery Life : 3.98 years)
 - Backlight On Time: High (8 hours per day - Battery Life : 3.98 years)
 - Backlight Off provides the longest life for the batteries.
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Analyze

Verify low battery indicator is present.

If low battery indicator is present, replace its batteries.

NOTE

During initialization (power on or reset) of the clock, its receiver searches until signal from a Transmitter is found, scanning rapidly through 72MHz channels. The receiver looks for a signal for 1 minute, and then switches to scanning in 30 minute intervals until its receives a signal from a Transmitter. Normal operation begins once a signal is received.

Solution

- Replace batteries.
-

Signal indicator is flashing

Model: Personal Series LCD Clock

Symptoms

Clock display is showing a flashing signal indicator.

Problem

The clock has not received a time signal from the Transmitter for three days.

Analyze

1. Verify the Transmitter(s) is not in an error state. After the error state is resolved, the Transmitter should be powered down and powered back on to allow it to resynchronize with its time source. Refer to the Transmitter model Troubleshooting topics.
 2. Other conditions that may be the cause of a signal loss.
 - Did the Transmitter lose power?
 - Did the Transmitter lose its time source?
 - Was the clock moved beyond the signal range of the Transmitter?
 - Was there a recent change in reception due to electrical interference, which may include faulty ballast for florescent lighting?
 - Has there been recent renovations in the site area?
-

Signal test fails

Model: Personal Series Clock

Symptom

- Initiated validating its signal by pressing the button on the back of the clock and clock it not emitting the expected beeps.
 - Pushing and IMMEDIATELY releasing the button located on the back of the clock initiates the clock to validate its signal. The clock scans all channels looking for a Transmitter signal. Once the clock finds a channel with a Transmitter signal, it emits a series of beeps. The clock beeps each time a valid time signal is received, which should be once per second. The beeping continues for one minute.
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Problem

This may be due to the clock is not receiving a signal from a Transmitter or the batteries are defective.

Analyze

1. Is the Transmitter a 1 Watt with an External Antenna or a 5 Watt or 30 Watt Transmitter? If yes, was the clock installed between the 7th and 38th minute of the hour? It should set at the 39th minute of the hour. You can also power the down the Transmitter, wait 30 seconds, and power back on. A power on, power down forces the Transmitter to broadcast for eight consecutive hours.

A Transmitter with an Internal Antenna continuously broadcasts is signal.
 2. Replace the 4 Cell batteries using fresh superior-quality alkaline with an expiration date with an expiration date at least 5 years past the installation Date. Another option is to replace with batteries from a clock that is operating correctly, which would validate if cause is not the batteries.
 3. Verify the Transmitter(s) is not in an error state. The time not being correct on multiple clocks is normally due to a Transmitter has lost its time source connection (GPS or NTP). After the error state is resolved, the Transmitter should be powered down and powered back on to allow it to resynchronize with its time source. Refer to the Transmitter model Troubleshooting topics.
 4. If the Transmitter is not in an error state, there is also a potential the clock is experiencing interference and not allowing the clock from receiving a broadcasting signal. Move the clock to an area where other clocks are set to the correct time. This task should isolate the issue to either a defective clock or signal issue.
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Support

To obtain additional technical documentation for Primex products, visit the Support area on our website at www.primexinc.com

You may require Technical Support when you have questions about product features, system configuration, or troubleshooting. Support services are delivered in accordance with your organization's support agreement, end user licenses 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 offer 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 inquiries.

When contacting Primex Technical Support

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

When you contact Primex Technical Support, please have the following information available:

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

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