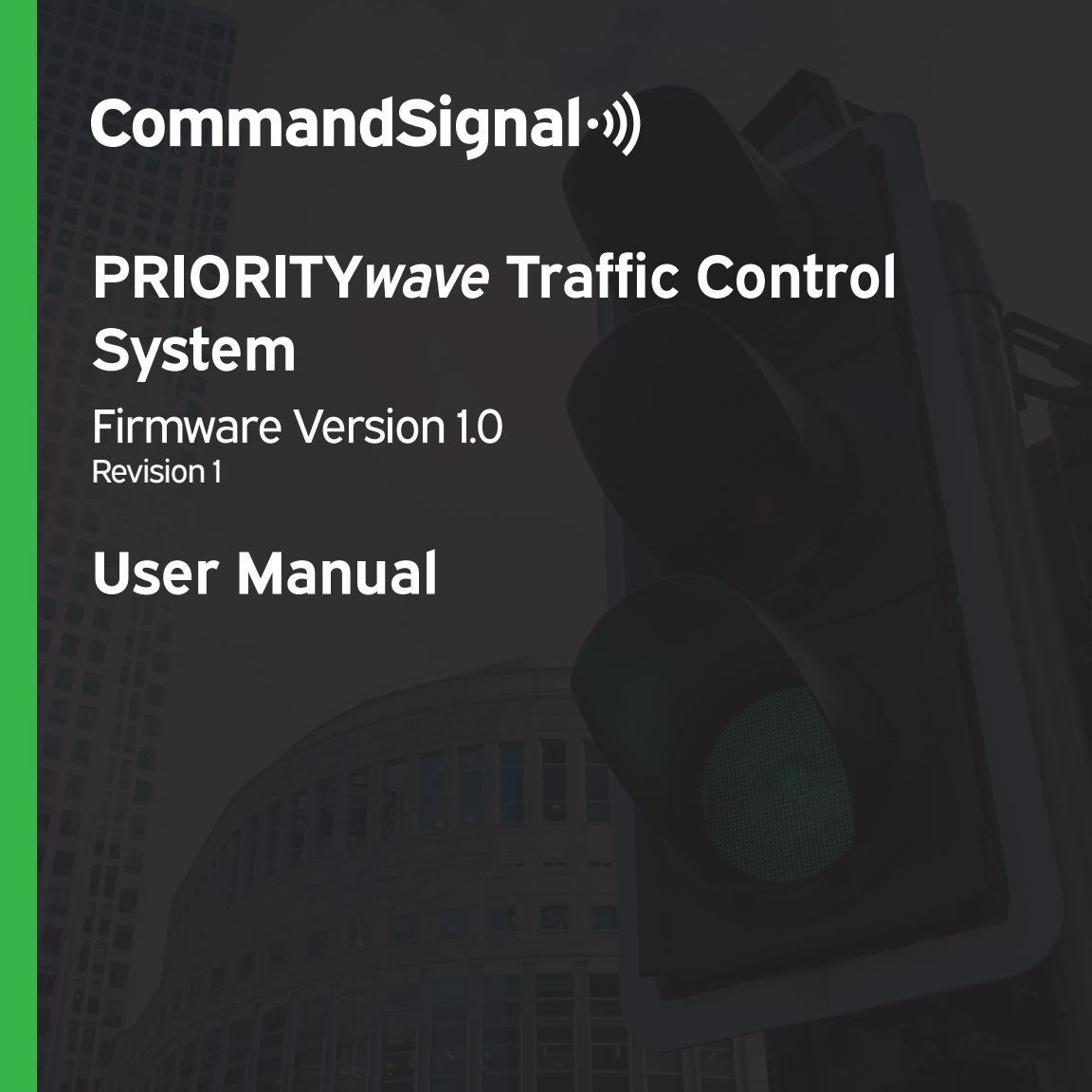


The background of the cover is a dark, grayscale photograph. On the right side, a traffic light is visible, with the green light illuminated. In the background, there are silhouettes of city buildings, including a prominent curved building with many windows. A solid green vertical bar is located on the far left edge of the image.

CommandSignal ·)))

PRIORITYwave Traffic Control System

Firmware Version 1.0
Revision 1

User Manual



Important safety notices

The PRIORITYwave Traffic Control System is designed to provide authorized personnel with a reliable wireless means of controlling traffic signals. To ensure safe and lawful operation, users must fully understand how to operate this device, and adhere to all local, state, and federal traffic control regulations.

This traffic control system is an assistive tool. It does not replace the need for active supervision. It is the sole responsibility of the operator to maintain visual awareness and control of the intersection at all times. Improper use, distraction, or failure to monitor traffic conditions can result in serious injury or death.

- ▶ Operate only within line-of-sight of the intersection.
- ▶ Do not use the system while driving or engaging in other tasks.
- ▶ Cease operation immediately if unexpected signal behavior is observed.
- ▶ Use only approved power supplies and cables.
- ▶ Do not operate the system in wet conditions unless housed in a weather-sealed enclosure, such as the included PRIORITYshield case.

System Limitations

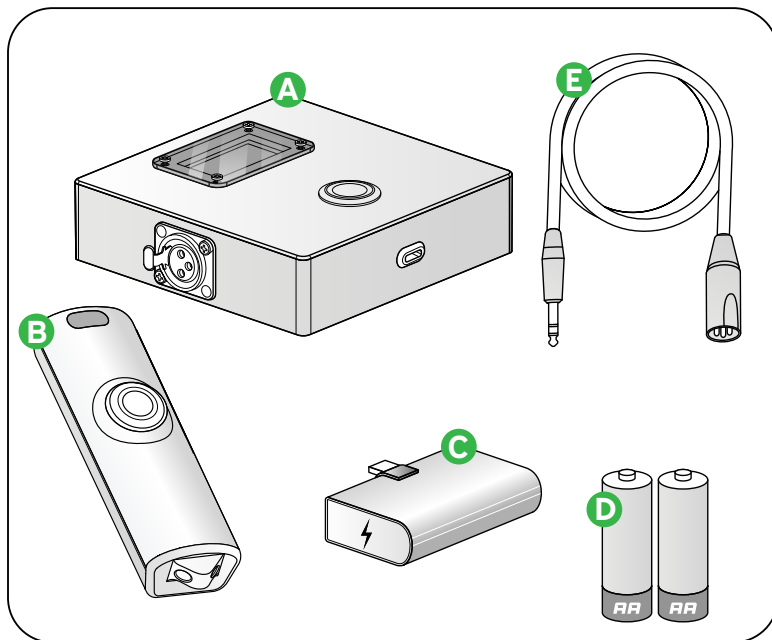
The PRIORITYwave Traffic Control System is **not** intended for:

- ▶ Use in complex intersections (diverging diamond or continuous flow) where the operator cannot see the state of all signals while operating.
- ▶ Use in intersections where there are multiple signal controllers linked or coordinated for continuous traffic flow.

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What's Included

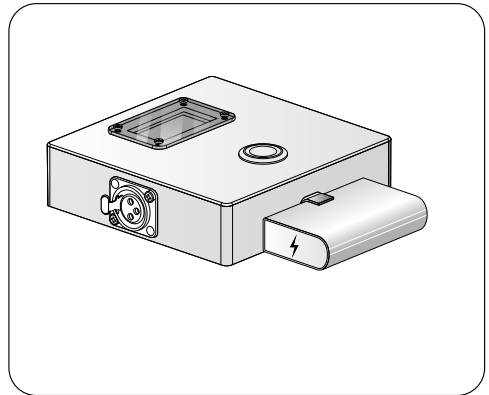
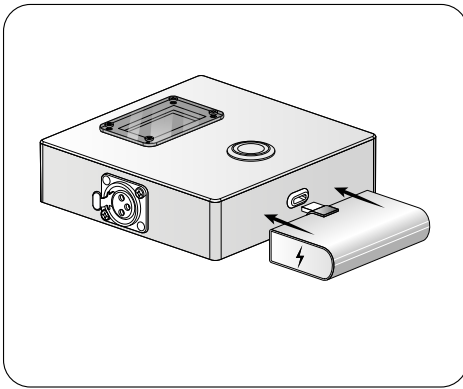


The PRIORITYwave Traffic Control System includes a wireless receiver (A), a wireless remote (B), one rechargeable battery pack (C), two AA batteries (D), and a signal connection cable (E) to connect the receiver to the traffic signal cabinet. The rechargeable battery pack includes a charging cable (not pictured).

Getting Started

The PRIORITYwave Traffic Control System comes with everything you need to get started quickly.

1. Start by removing the remote and receiver from the case and inserting the two included AA batteries into the wireless remote.
2. Insert the rechargeable battery pack into the bottom of the wireless receiver. The button ring should light up and you should see a boot up screen.



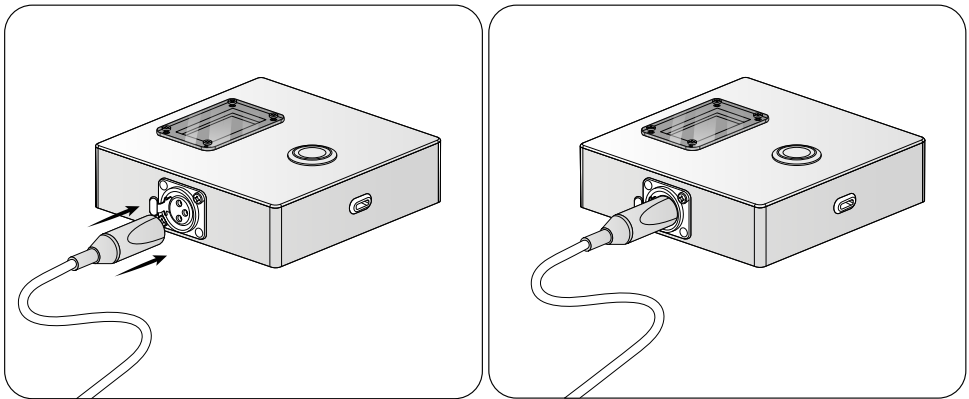
The system was purposefully designed without an internal battery so you can swap out batteries easily when one dies, giving you the freedom to continue managing traffic for as long as you need.

 The rechargeable battery can be recharged using the included USB cable.

Getting Started

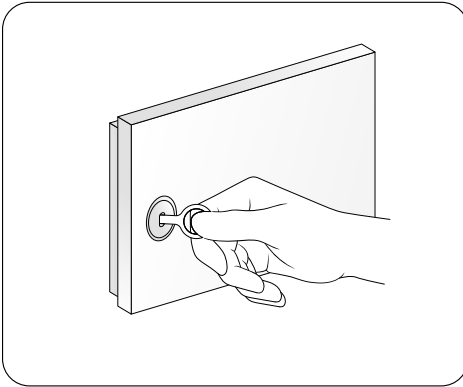
Note: You can use any 5V USB-C battery pack (or power adapter) to provide power for the receiver. You may need to enable your battery pack's trickle charge mode (if equipped) due to how little power the receiver uses.

3. Connect the 3-pin signal connection cable to the receiver. Insert into the port until you hear a click.

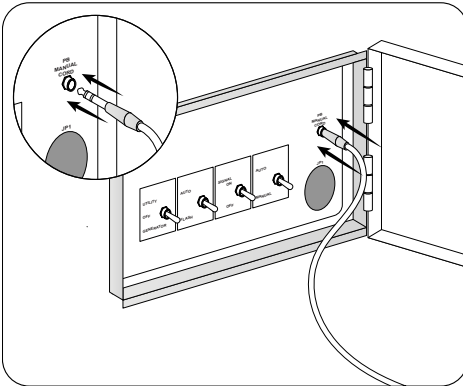


The signal connection cable uses a locking design to ensure it stays securely plugged in. To disconnect the cable, press the silver tab on the port while simultaneously pulling the cable away from the receiver.

Getting Started

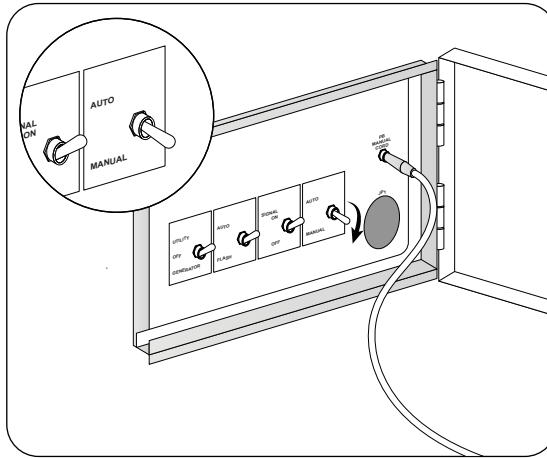


4. Locate the traffic control cabinet at the intersection. Open the police access panel on the front of the cabinet.



5. Inside the access panel, insert the other end of the signal connection cable into the port labeled "PB Manual Cord" or "Push Button".

Getting Started

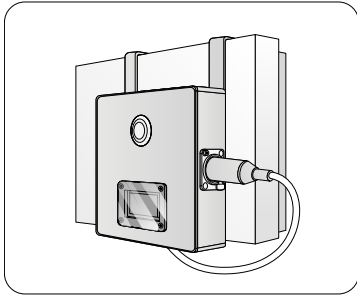


6. Switch the signal mode to “Manual” or “Hand Control” to begin controlling the traffic signal with your remote.

i When switching to manual mode, signal timing will immediately stop and will no longer automatically advance when there are vehicles waiting or pedestrians requesting to cross. The current cycle will be held indefinitely.

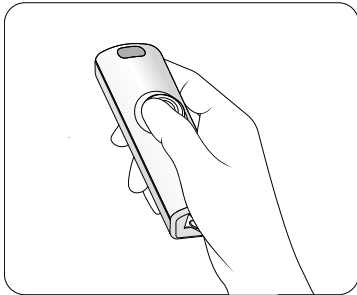
! When you are done directing traffic, ensure you restore the signal mode to “Auto”.

Getting Started



7. Close the access panel door, and using the included hooks, hang the receiver on the outside of the panel door for best wireless reception.

Alternatively, you can set the receiver on the top of the cabinet or use the included PRIORITYshield weatherproof case in inclement weather.



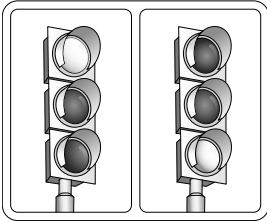
To use the case, plug in the battery pack and signal connection cable. Unscrew the waterproof port housing on the back of the case. Feed the signal connection cable through the port, and screw back on the port's housing. Securely close the case and place on top of the cabinet. Your system is now weatherproof!

8. To advance signals to the next phase, press and release the button on the wireless remote.

The green LED indicator on the button will light up.

On the receiver, the green LED ring will flash rapidly upon receipt of a valid command and emit an audible “click”. You can use this cue for assurance that your command was received.

A note about traffic signal phases



Traffic signal operations vary from one intersection to another. Each intersection is programmed with its own specific set of signal phases, which determine how traffic flows in different directions. These phases can include vehicle movements, pedestrian crossings, protected turns, and more.

When using the PRIORITYwave Traffic Control System at a new intersection, it's critical to observe and learn the signal behavior before attempting active control.

Take time to understand:

- ▶ The order of phases (e.g., which movements go first, which follow)
- ▶ The timing of pedestrian walk and clear intervals
- ▶ How long each phase typically lasts

i Each time you begin operating at a new intersection, **assume nothing** – observe multiple full cycles before attempting to control the signal. Learn the “rhythm” of that specific intersection.

i Emergency vehicles utilizing preemption devices will take priority over manual control. Your signal may change automatically to give responding vehicles the right of way, but will return to manual control after they pass.

A note about traffic signal phases

In most cases, if a pedestrian phase is active, the intersection will not proceed to the next vehicular phase until the pedestrian clearance interval has completed. This is especially common for crosswalks that conflict with turning traffic or span multiple lanes.

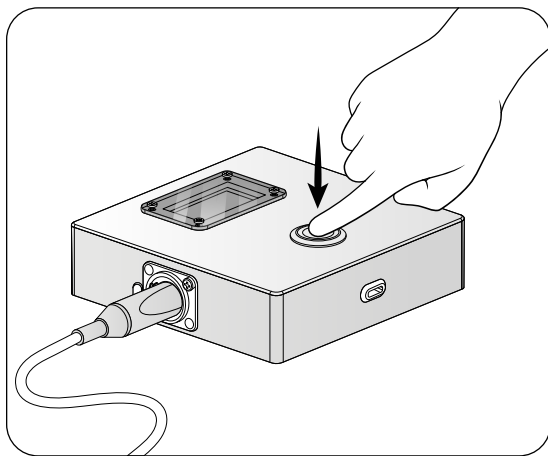
This means:

- ▶ Even if vehicles appear to be stopped, the signal may still be holding for a pedestrian countdown to finish.
- ▶ Prematurely commanding a phase change may have no effect until the clearance time expires.
- ▶ You may observe a brief delay before your commanded movement is serviced. This is normal.

In most cases, a green light in one direction is accompanied by a walk signal for pedestrians crossing in that same direction. Pressing the remote button once while the green/walk phase is active will initiate the pedestrian clearance interval (flashing hand), during which the vehicle signal remains green. Once the clearance time has fully elapsed, pressing the remote button again will trigger the yellow and then red phase, allowing the next direction to receive a green light.

Signal controllers are designed to safely manage all programmed phases, regardless of manual inputs. Your PRIORITYwave system interfaces with the signal controller's standard manual control, but it does not override pedestrian or safety timers. Understanding the local phasing logic helps ensure smooth, safe, and predictable operation.

Navigating the receiver menus



The green LED ring on the receiver is also used as a button to navigate the menus of the receiver.

To open the menu, press and hold the button until the menu appears (about 1 second).

To advance to the next menu option, simply press and release the button.

To select the highlighted menu option, press and hold the button (about 1 second).

You will see a progress bar at the bottom of the screen as long as you hold down the button, indicating progress towards selecting the item. Hold the button until the checkmark appears, and then release the button to select that menu item.



Manual control (wired mode)

In the event that your remote batteries die or you lose your remote, you can enable manual control mode (a.k.a wired mode) and use the button on your receiver to send signal advance commands.

To enter Manual Mode:



- Open the menu by pressing and holding the button until the menu appears (about 1 second).
- “Manual Control” should be the first item highlighted. Press and hold the button to select it (about 1 second).



The screen will display a message about being in Manual Mode. To advance the signals, simply press and release the button on the receiver.

To return to Wireless Mode:



- Open the menu by pressing and holding the button until the menu appears (about 1 second).
- “Wireless Control” should be the first item highlighted. Press and hold the button to select it (about 1 second).

Pairing a new remote

The PRIORITYwave Traffic Control System arrives already paired with the accompanying remote for your convenience. In the event that you lose or damage your remote, you can pair a new remote with your receiver.

To pair a new remote with your receiver:



- ▶ Open the menu by pressing and holding the button until the menu appears (about 1 second).
- ▶ Press and release the button until "Learn Remote" is highlighted. Press and hold the button to select it (about 1 second).



- ▶ When "Learning Remote" appears on the screen, press the button on the wireless remote. You will have 30 seconds to do this before the receiver will exit learn mode.

When successfully paired, you will see a "Remote Paired" message, and then will be returned to the home screen. You can now use this remote with your receiver.



When a new remote is paired, the receiver will no longer respond to commands from the old remote. A receiver can only be paired with one remote at a time.

Rotating the display

If you are not using the included hooks to hang the receiver on the exterior of the access panel door, the screen will be shown upside down. You can rotate the display of your receiver if you regularly interact with the menus while the device is not hanging.

To rotate the screen of your receiver:



- ▶ Open the menu by pressing and holding the button until the menu appears (about 1 second).
- ▶ Press and release the button until “Rotate Display” is highlighted. Press and hold the button to select it (about 1 second).

The screen will rotate. Follow the same steps again to rotate it back.



Your screen rotation preference will be saved to the receiver's internal memory and will remain set until changed again.

Other menu options



Keep Display On will prevent the display from going to sleep when checked. To check the option, press and hold the menu button.



Button LED will enable the green button ring LED when checked, and will disable it when unchecked.



If the **Keep Display On** option is unchecked, the display will dim after a minute of inactivity, and then go to sleep after two minutes of inactivity to conserve the battery. The LED ring will remain on (if checked), and the system will remain ready for commands.



System Info will display the current firmware version and support e-mail address.

Other menu options



Reboot will reboot the receiver.



Factory Reset will clear all settings and paired remotes. You will need to re-pair your remote to use wireless mode.



Exit will close the menu.

Troubleshooting

What's Happening?	What To Do
Receiver will not turn on	Check your USB-C battery bank and ensure it is charged. You may need to enable "trickle charge" mode so that it provides power to low-current devices.
Remote will not turn on	Check the AA batteries, try replacing them. The LED indicator at the top of the remote should light up when you press the button.
Remote is not sending commands to the receiver.	If power is not the issue, try re-pairing your remote to your receiver. If it is paired correctly, ensure you are within range of the receiver.
Receiver is not advancing the signals.	Ensure that "Manual" is switched on in the access panel. Ensure your cables are securely plugged into the ports. Ensure you hear an audible "click" from the receiver. If you do not, contact support.
The receiver is displaying an error code	Contact support. You may still be able to use the receiver in Manual Mode.

Warranty Information

CommandSignal warrants that this product will be free from defects in materials and workmanship under normal use for a period of one (1) year from the original date of purchase.

During the warranty period, if a defect arises due to manufacturing or materials, we will, at our discretion:

- Repair the product at no charge, using new or refurbished parts
- Replace the product with a new or equivalent item

Accidental Damage

We understand things happen in the field. If your unit is damaged due to accidental drops, water ingress, physical abuse, or other non-warranty causes, we offer affordable repair or replacement services for a flat fee. Contact us for an estimate and turnaround time.

This Warranty Does Not Cover:

- Cosmetic wear (scratches, scuffs, fading)
- Damage caused by misuse, abuse, modification, or unauthorized repair
- Loss or theft of the product
- Normal wear-and-tear consumables (e.g., batteries, fuses)

To request warranty service:

- Contact us at support@commandsignal.com with your purchase details and a description of the issue.
- We may request photos, serial numbers, or other diagnostics.
- If service is required, we'll issue instructions for return or replacement.

Support

If you have any questions, improvement suggestions, or need product support, feel free to call, text, or e-mail us!

7 days a week
8am-8pm MST

 **(801) 900-3525**

 **support@commandsignal.com**