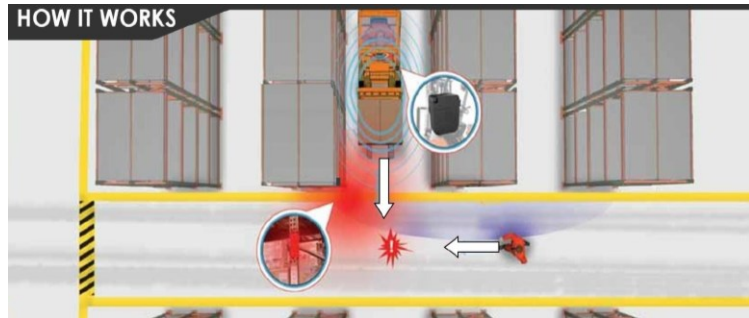




A. System overview - The SafeSpot™ collision avoidance system alerts workers to the potential for a vehicle collision around blind spots and corners.



The image at the right shows the Controller box, alarm Warning Light strips, and the Tag, respectively.



The Controller box and light strips mount to a vertical beam (typically a warehouse rack). There are two lights to allow viewing from 2 directions. The transmitting Tag mounts to a forklift or vehicle. When the Tag is detected by the controller box, the warning light will flash until the Tag is no longer detected. The detection distance is factory set to detect a Tag around 25 feet away from the Controller.

You can set the detect range manually as described below. You can also set the Warning Lights to flash or steady ON. The user can also select a different output device.

B. Initial Installation

1. Warning Lights – Mount the Warning Light strips slightly below eye level where pedestrians can see them more easily. Light strips should be installed facing two directions.

See image on back of sheet. Prepare LED Light Strips prior to mounting.

1. Connect the light strips together. To do this: determine how much wire you need between light strips. Cut desired length from the supplied 10' (3m) cable. Strip and install cable between LED Strips. **Red tape indicates positive terminal.** Connect red to red and black to black.

2. Connect the set of lights to the light controller box. To do this, use remaining wire to connect to one of the LED strips. Insert the red wire from the connector wire in the same hole as the other red

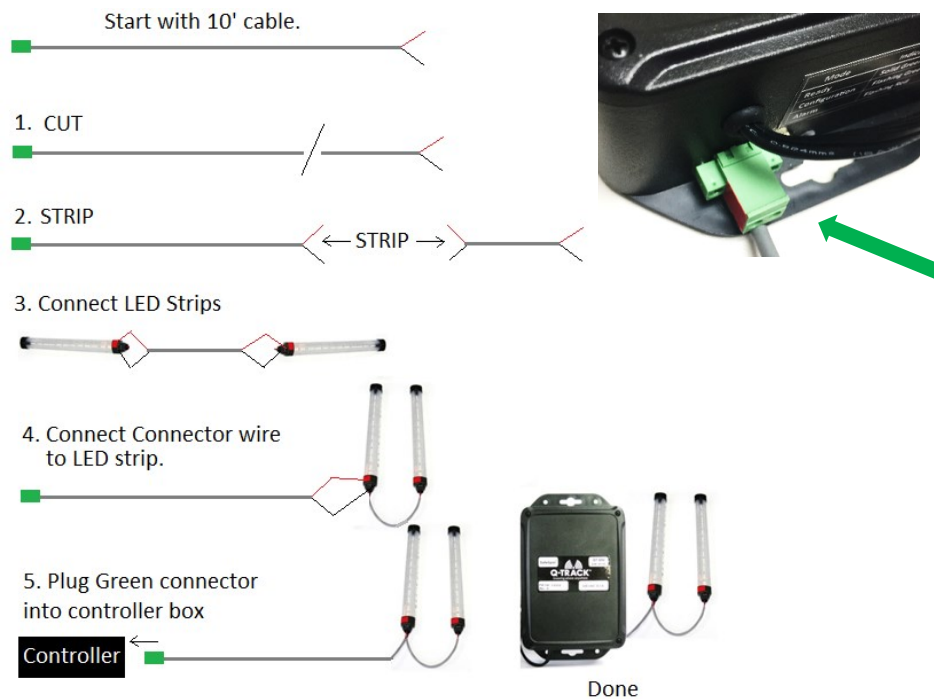
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wire from the LED strip. Tighten screw to secure both red wires into LED strip. Then insert the black connector wire in the same hole as the other black wire from the LED strip. Tighten screw to secure both black wires into LED strip.

To install the light strips, peel the clear protective strip from the Velcro and attach Velcro to beam or post.

If additional wire length is needed, use 2 conductor 22 ga (0.65mm) jacketed cable meeting UL 2596 or EU Low Voltage Directive 2006/95/EC.

Plug in and screw down the green connector to the bottom of the Controller.



Q-Track Corp. FCC ID: VJ3-QT-644-TAG. This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) the device must accept any interference received, including interference that may cause undesired operation. Caution: Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Q-Track Corporation; Model: QT-644; IC: 10503A-TXTAG644.

This device complies with Industry Canada license-exempt RSS standard(s). 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. This product meets the applicable Industry Canada technical specifications.

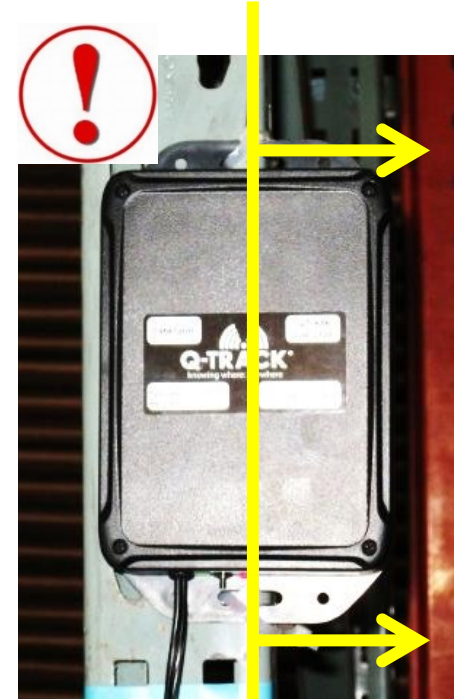
Cet appareil est conforme à Industrie Canada une licence standard RSS exonérés (s). Son fonctionnement est soumis aux deux conditions suivantes: 1. Cet appareil ne doit pas provoquer d'interférences 2. Cet appareil doit accepter toute interférence reçue, y compris les interférences pouvant provoquer un fonctionnement indésirable de l'appareil. Ce produit est conforme aux spécifications d'Industrie Canada.



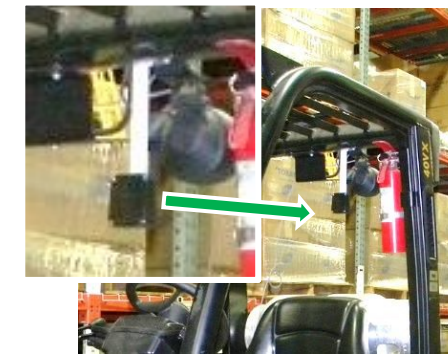
2. Controller - **IMPORTANT: For best system accuracy, offset the Controller as far to the right from the post as possible. Don't mount the Controller with metal behind its right half. Q-Track label must be upright.**

- Locate the Controller near available power. The Controller is supplied with a 9' (2.7m) cord.
 - Mount on a vertical metal beam, rail, or post as shown with user-supplied screws or cable ties. Offset brackets are included in case ambient noise causes false alarms.
 - Mount at target height of 7'
 - Do not wrap wires around unit.
- Note:** The Controller is fully insulated so a grounded outlet is not necessary. The power cord features a NEMA 1-15P Polarized plug.

3. Tag - Tags are required on every vehicle in the protected area. You must use the supplied mounting bracket to mount the Tag.



OFFSET FROM METAL 



To mount the Tag, select a clear area near the top rear of the vehicle and use a screw to secure the Tag mounting bracket. In most cases, a bolt from an existing light can be used.

Important! The Tag nameplate MUST face to the front of the vehicle.

The Tags must be wired to the vehicle power system such that the Tag is powered ONLY WHEN THE VEHICLE IS ON. The Tag has no on/off switch – The Tag should always be on when the vehicle power is on. The supply voltage is 10 VDC to 24 VDC @ 150 mA. The RED lead is positive. There is a switch and LED indicator on the top of the Tag – if the Tag is on, the LED will light only when you press the switch.

C. Initial System Power Up and Test – After following the steps above the Safe Spot system is now ready to power up and test.

Power the vehicle off (Tag will be off). Plug the Controller into a wall socket. The green status LED should light. Now turn on the power for the Tag vehicle. Press the button on the Tag -- its LED should light only as long as the button is pressed (confirms tag is on).

The controller is factory-set to trigger (ALARM) when the Tag is brought to within about 25 feet (the warning lights should flash red and the LED on the bottom of the controller should light red). Separate the controller and tag by more than about 25 feet, and the warning lights should stop flashing.

Move the tag back and forth from about 25 feet to turn the Warning Lights on and off a few times to convince yourself how the system is responding.

If this works and you are satisfied with the trigger distance, then the Safe Spot is ready to go.

D. Reconfiguring the Trigger Range and Warning Light modes.

1. Configuring the Trigger Distance – The trigger distance has been factory set to approximately 25 feet. We have found 25 feet to be an optimal distance but you can change it if you wish. The maximum range is about 40 feet, but you may find the accuracy somewhat less. In this case you may have to experiment with several settings to get the response you need. The Safe Spot can also be set to trigger at as little as 20 feet. If you try to set it to less than 20 feet, it will revert to 20 feet. We have found 20 feet to be the minimum distance that gives the driver and the pedestrian sufficient time to react

2. Procedure for Reconfiguring the Trigger Distance

a. IMPORTANT! For tamper prevention, this procedure must be performed within 5 minutes of power-up. If a change is needed after that time, you must restart the power-up timer by unplugging and re-plugging the Controller.

b. Power the Tag-equipped vehicle and move it to the desired alarm distance (between 20 and 40 feet).

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c. Press and hold the button at the bottom of the Controller. After about 5 seconds, the green status LED will cycle through slow green flashing to fast green flashing. Release the button while fast flashing green, then press and release it one more time. *If the light does not flash, unplug the unit and try again. You may have to hold the button longer*



The Controller is now calibrated to the desired distance and the status LED will be lit solid green again. The tag should now be sitting right at the trigger threshold.

The Warning Lights should start blinking RED when the Tag moves within range. **IMPORTANT! Test this by moving the vehicle to all possible avenues of approach and ensure the light triggers. If the light fails to trigger in any direction, you MUST calibrate the system to longer distances to assure that it always triggers at the minimum distance for each avenue of approach.**

3. Light Configuration – You can configure the Warning Lights to either flash or stay on constantly when triggered. The factory default is flashing. If you prefer the warning lights stay constant on, follow this procedure:

a. Plug in the Controller. Make sure the rest of this procedure is completed before the 5-minute turn-on timer expires.

b. Move the Tag close enough to trigger the Controller (ALERT mode).

c. Press and hold the button until the status LED flashes fast red (about 5 seconds).

d. Release the button, then briefly press it one more time. The warning lights will turn off for about 5 seconds, then turn back on solid.



You can repeat this procedure to alternatively make the Warning Lights flash again.

4. Additional Lights and Alarms – The green jack for the Warning Lights can support a maximum of 4 warning lights, or other customer load, to a maximum of ½ amp. Q-Track offers an audible siren.

E. Troubleshooting – The status LED on the bottom of the Controller unit is helpful in determining what the unit is doing.

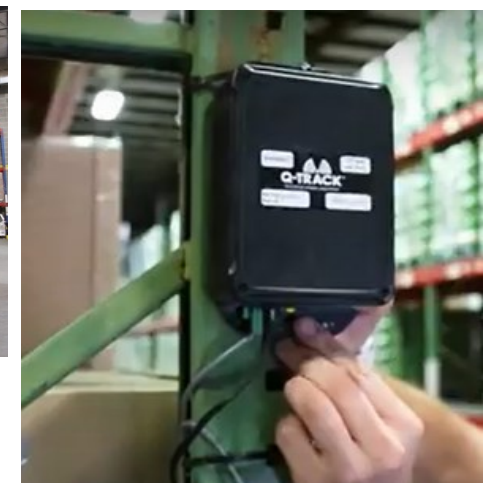
- No light – the Controller is unpowered.
- Solid Green – Controller in normal operation, waiting for trigger event
- Solid Red – Controller in ALARM mode (triggered).
- Flashing Fast Green – Controller in distance configuration mode. Press button one more time to set trigger distance.
- Flashing Fast Red – controller in warning light configuration mode. Press button one more time to set Warning Light to flashing or solid.

Problems you may encounter:

1. Status LED not lit: The Controller is not powered on. Check the AC power supply.
2. Status LED solid red, but Warning Lights not lit. Wiring problem to the Warning Lights. Either open-circuited or connected in reverse. Check red to positive and black to negative.
3. System Alarms, but Tag not turned on. Another source is triggering the controller. Plug the Controller into an AC socket that is far away and try again. Contact Q-Track and describe the problem further.

Factory RESET: If you attempt to change the configuration of the distance trigger or the warning light, and believe the settings may have become scrambled, you can RESET the Controller to its factory settings: Unplug the Controller. While pressing the button, plug in the Controller and wait 15-17 seconds before releasing the button. (Be sure green light is on when button is released). The Controller is now in as-shipped configuration.

F. Example Installation



Customer Support: 256-489-0075