



Range Extending Repeater for QMotion Roller Shades


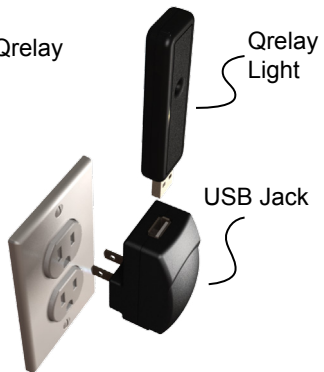
Using a Qrelay in a Project.

The intended use of the Qrelay is to extend the range of a remote, Qsync or Qconnect. Any transmitter has a limit on how far it will reliably control a shade. The Qrelay allows this distance to increase so that better results may be achieved. Qrelay will echo any command it receives from a QMotion remote.



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Locate and Power		 <p>Qrelay</p> <p>Qrelay Light</p> <p>USB Jack</p>
	<p>Locate Qrelay pointing up, as far from the floor as possible, within shades' line of sight for best results. The best position may require trial and error.</p>	<p>Plug Qrelay into the USB adaptor as shown.</p>

Examples of proper use:**1. Controlling groups of shades separated by 60 feet and 2 rooms from a Qconnect or Multi-Channel Remote.**

- a. A Qrelay can be placed halfway to outlying groups of shades from the Qconnect or Multi-Channel Remote.

2. Helping to control shades that are in a RF dead zone.

- a. Sometimes a column or other structure may be between a transmitter and a shade, causing the shade not to respond reliably. Try locating a Qrelay to the side of an obstruction, or halfway around it, to help “steer” the signal around it.

Incorrect use:**1. Placing multiple Qrelays to repeat the signal multiple times to insure all shades move.**

- a. This can cause the Qrelays to become useless, because of interference from each other.
- b. If 2 or more Qrelays are close enough to hear the original transmitting device, they will most likely try to retransmit the command at the same time. If this occurs they will drown each other out and the shade will not be able to hear the correct command and will not respond.

2. Using Qrelays to overcome difficult shade placement.

There are cases where the RF will not reach the shade, even when sent from close distance to the shade. If a shade will not respond to a hand held remote in close proximity to the shade the Qrelay will not help.

- 1. Place the remotes in the most optimal position to get the most reliable shade response. This may require moving them around multiple times.**
- 2. If there are dead spots or areas that cannot be reached by the optimal remote placement then add one Qrelay to fill the dead spot.**
- 3. Should a shade be even further than one Qrelay can manage, then add another at a distance where the signal can be received to bridge the gap between the transmitter and the shade and so forth until the shade can be reached.**
 - Try to add repeaters in a line, not in a group.
 - Try to minimize the amount of Qrelays in a project. If one or two work, adding more may be unnecessary overkill.
- 4. If the shade responds unreliably to one command, send another command 5 seconds later.**
 - If the transmitter is a Qconnect, this may be able to be programmed into the system that controls it.
- 5. Do not place the Qrelay behind refrigerators, TVs, Microwaves, or other large obstructions as they may decrease effectiveness.**

If the desired shade to move needs to have the command hop through a number of Qrelays, please consider it will take about 3 seconds per Qrelay.

FCC COMPLIANCE

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. (2) This device must accept any interference received. Including interference that may cause undesired operation.

Warning: Changes or modifications to this device not expressly approved by QMotion Incorporated could void the user's authority to operate the equipment. Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and the receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

INDUSTRY CANADA COMPLIANCE

Under Industry Canada regulations, this radio transmitter may only operate using an antenna of a type and maximum (or lesser) gain approved for the transmitter by Industry Canada. To reduce potential radio interference to other users, the antenna type and its gain should be so chosen that the equivalent isotropically radiated power (e.i.r.p.) is not more than that necessary for successful communication.

Conformément à la réglementation d'Industrie Canada, le présent émetteur radio peut fonctionner avec une antenne d'un type et d'un gain maximal (ou inférieur) approuvé pour l'émetteur par Industrie Canada. Dans le but de réduire les risques de brouillage radioélectrique à l'intention des autres utilisateurs, il faut choisir le type d'antenne et son gain de sorte que la puissance isotrope rayonnée équivalente (p.i.r.e.) ne dépasse pas l'intensité nécessaire à l'établissement d'une communication satisfaisante.

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.

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.