

## PowerView™ Hub | Serial API for Home Automation Integration

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PowerView Hub Firmware Version 1.0.447 or newer

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### Overview

This document describes the serial message format required for operation of the PowerView Motorization as a home automation accessory.

PowerView Motorization consists of a PowerView Hub plus a collection of motorized shades, remotes, and other accessories. The shades are organized into Rooms within the PowerView App and stored in the PowerView Hub. A Scene is a set of one or more shades of a particular shade type, located in a single Room, that are set to customized positions. Further, the Scene defines this position of each shade. The initial setup of the PowerView system and the configuration of Scenes is accomplished using the PowerView App running on a mobile device such as an Apple iPad, iPhone or Android device.

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### RS-232 Serial Communication Specifics

#### COM Port Settings:

- 9600 baud rate
  - 1 Stop bit
  - No parity
- Each request to the Hub begins with a “?” followed by a two-character ASCII command. Each successful response from the Hub begins with a “!” followed by the same two ASCII characters.
  - All messages are terminated with a carriage return (0x0D). In this document a carriage return is designated as “<cr>”
  - Scene and Room identifiers are transmitted as an ASCII string representing an integer value ranging from zero (0) to 65535. Indexes, used for retrieving information about individual Rooms and Scenes, are also transmitted as an ASCII string representing an integer.
  - Names of Scenes and Rooms are always located as the last parameter of a response and may include spaces.
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### Getting Scene Data from the PowerView Hub

Request Scene Count: To retrieve the list of Scenes that have been configured and stored in the PowerView Hub, a request is first sent to the PowerView Hub requesting the total number of Scenes stored.

- Send to PowerView Hub: `?SC <cr>`
- Successful response from PowerView Hub: `!SC <count>`

Request Scene Object: Specific information about each individual Scene may be retrieved by sending a series of requests to the PowerView Hub. Each request includes an index within a range from one (1) to the total Scene count.

- Send to PowerView Hub: `?SO <index> <cr>`
- Successful response from PowerView Hub: `!SO <index> <scene ID> <room ID> <name>`

**Request A List of Scene Objects:** Specific information about all Scenes may be retrieved by sending a single requests to the PowerView Hub.

- Send to PowerView Hub: `?SL <cr>`
- Successful response from PowerView Hub: `ISL`  
`<scene1 ID> <roomX ID> <name1>`  
`<scene2 ID> <roomY ID> <name2>`  
`<scene3 ID> <roomZ ID> <name3>`

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## Execute a List of Scenes

A list from one (1) to 28 Scenes may be executed using a single command.

- Send to PowerView Hub: `?SE <scene ID 1> <scene ID 2> ... <scene ID 28> <cr>`
- Successful response from PowerView Hub: `ISE`

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## Getting Room Data from the PowerView Hub

**Request Room Count:** To retrieve the list of Rooms that have been configured and stored in the PowerView Hub, a request is first sent to the PowerView Hub requesting the total number of Rooms defined.

- Send to PowerView Hub: `?RC <cr>`
- Successful response from PowerView Hub: `IRC <count>`

**Request Room Object:** Specific information about each individual Room may be retrieved by sending a series of requests to the PowerView Hub. Each request includes an index within a range from one (1) to the total Room count.

- Send to PowerView Hub: `?RO <index> <cr>`
- Successful response from PowerView Hub: `!RO <index> <room ID> <name>`

**Request A List of Room Objects:** Specific information about all Rooms may be retrieved by sending a single requests to the PowerView Hub.

- Send to PowerView Hub: `?RL <cr>`
- Successful response from PowerView Hub: `!RL`  
`<room1 ID> <name1>`  
`<room2 ID> <name2>`  
`<room3 ID> <name3>`

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## Non-Acknowledgment from the PowerView Hub

If an unrecognized command or invalid data is received by the PowerView Hub, a "Non-Acknowledgement" or "NAK" is returned.

- Response from PowerView Hub: `!EE`