Integration Note

Manufacturer:	Electronic Solutions, Inc.
Model Number(s):	**R2D7 Serial Interface for RP60 motor**
Minimum Core Module Version:	
Document Revision Date:	2/11/2013

Overview and Supported Features

The **g!** system supports the Electronic Solutions R2D7 serial interface adapter to control the RP60 series of motor controls. The RP60 comes in multiple versions that can control projector screens and shade systems from Hunter Douglass, Silent Gliss, Goelst, Somfy and others. Multiple RP60's may be bussed together using 4-conductor phone cable behind a single R2D7 serial interface.

The ESI R2D7/RP60 system supports the following features:

Various Motors Supported: The ESI R2D7/RP60 system supports different types of motors for various installation scenarios, see http://www.elec-solutions.com for full details.

Positions: The ESI R2D7/RP60 system supports momentary up and down, as well as full open and close position programming.

Installation Overview

1. During the rough-in phase, pull power and control wiring as needed for the particular set of motors installed. Refer to ESI documentation for details.
2. During the rough-in phase, pull a Cat5 cable from the location of the R2D7. See **Connection Diagram**.
3. Configure and program the shade/projector motors to standard procedures prior to programming the RP60 motor controllers.
4. Configure the RP60 motors according to typical ESI procedures. See **Configuration Details**.
5. Connect the R2D7 to the **g!** system electrically.
6. Configure the **g!** system for the R2D7. See **g! Configuration Details**.

Any feature not specifically noted as "supported" is not supported.

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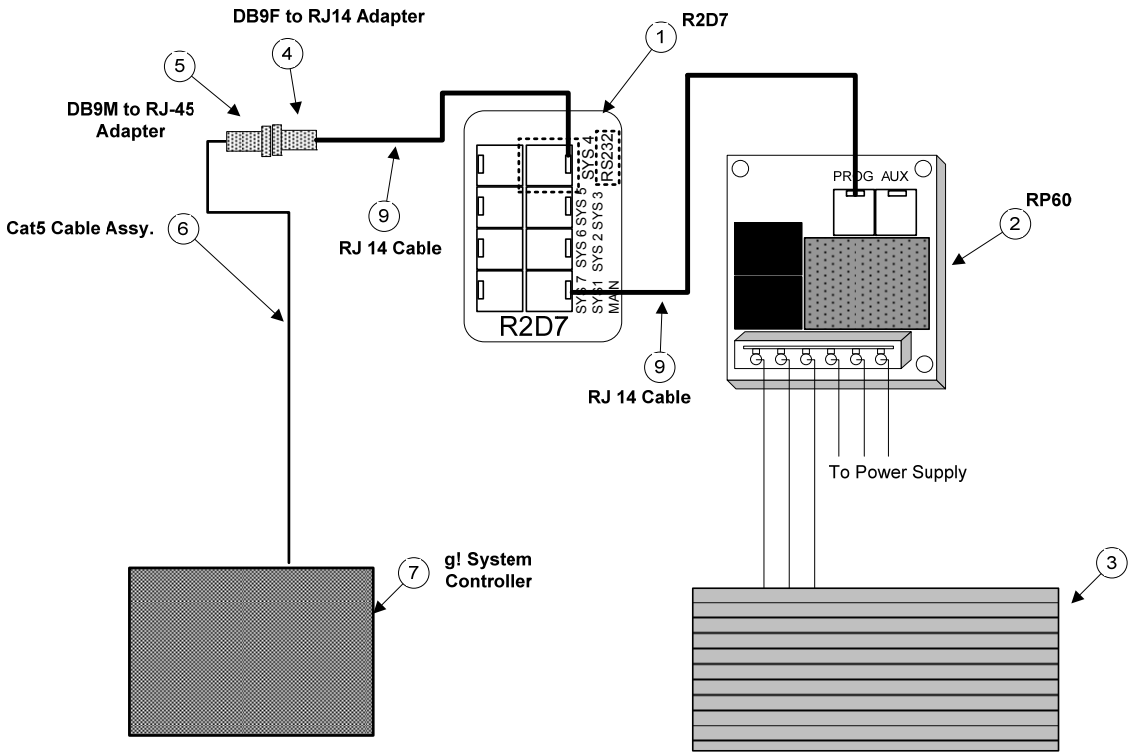
CONNECTION DIAGRAM

Note: Wiring from your RP60 to the individual shade systems may vary depending on your model of RP60. Please see Electronic Solutions documentation for full shade wiring details.

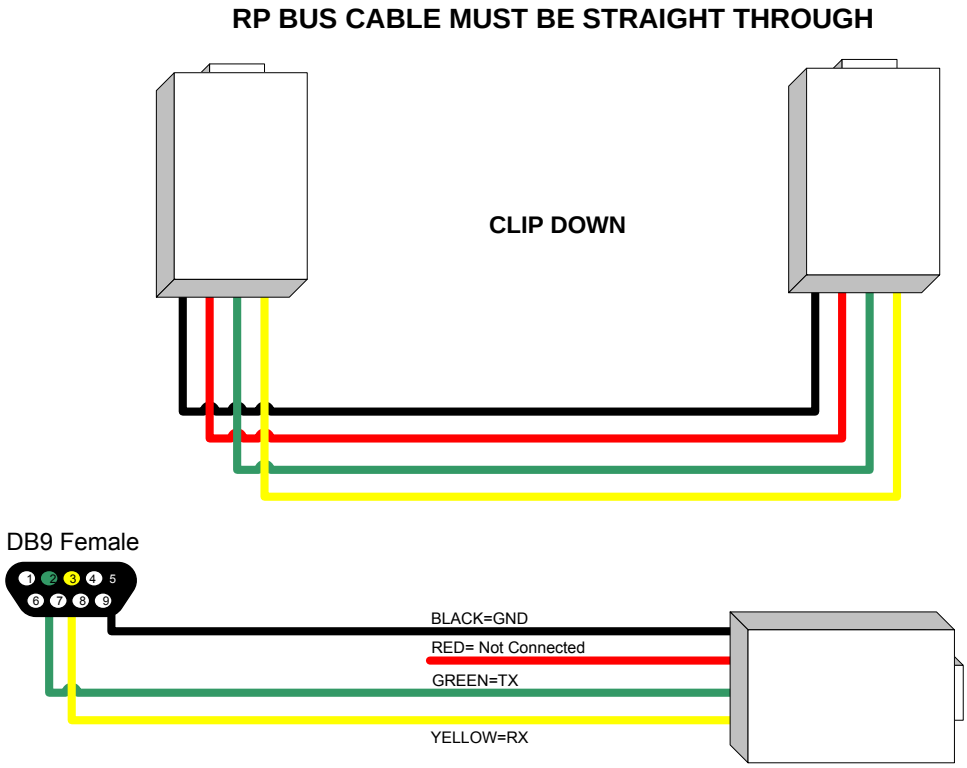


Note: Additional RP60's can be daisy chained together by connecting additional phone cabling from the Aux port of the 1st RP60 to the in port on the 2nd RP60, and so forth. Total RP Bus length should not exceed 100 feet without the use of repeaters. See Electronic Solutions documentation for details.

BILL OF MATERIALS

#	Device	Manufacturer	Part Number	Protocol	Connector Type	Notes
1	E2D7 Serial Interface	Electronic Solutions, Inc.	E2D7	RP Bus	RJ14	
2	RP60 Motor Control Interface	Electronic Solutions, Inc.	RP60 (Various Models)	RP Bus	RJ14 (Control) Wire Terminal (Shades)	Select correct RP60's for your Shade Systems
3	Shade Motor	Various	Various	Various	Wire terminal to Various	18/3 or other for particular install
4	DB9F to RJ14 Adapter	Electronic Solutions, Inc.	RS232 Adapter	RS-232	RS-232	HAI21A05-1also works with std. flipped cable
5	DB9M to RJ45 Adapter	ELAN	HA-CB-307	RS-232	DB-9 Male X RJ-45 Female	
6	Cat5 Cable Assy.	Installer	N/A	RS-232	RJ-45 Male X RJ-45 Male	Must terminate all 8 conductors
7	g! System Controller	ELAN	Various (e.g. HC12)	IP	RJ-45 Female	

WIRING DETAILS



CONFIGURATION DETAILS

The R2D7 supports 7 System Ports and a single RS-232 Port for potential control of a large number of shades with different Motor Controller combinations behind a single Serial connection. Each System Port can support up to 60 RP60 Main Channel ID's, which can include multiple motors responding on a single channel ID (if multiple shades are desired to be controlled as a single unit). Wireless RP60 motors may expand this number even higher; see Electronic Solutions documentation for details.

Prior to integration with **g!**, you must wire and configure all your RP60 Motor Controllers per standard Electronic Solutions procedures. Each RP60 unit must be programmed with appropriate Main Channel ID so they will respond and communicate with the R2D7, and all motor controls must be calibrated with the appropriate start and stop points.

Note that it may be desirable to have the R2D7 programmed with the motors assigned to groups such as "Theater" or "All" for control of multiple shades from a single control in **g!**.

g! CONFIGURATION DETAILS

Shades are configured in the **g!** system as lighting devices. Follow the typical steps to add a Communication Device, and then add an ESi R2D7 Interface, as listed in the table below.

Next, add individual RP60 Units as lighting devices. Add one RP60 Unit for each channel that is being used in your shade system, and set the correct System (R2D7 System Port) and ID (RP60) of the shade or shades being controlled.

Finally, all RP60's controlled by **g!** must have Momentary Motor Action enabled. After adding all RP60 units to the R2D7 Interface select the Electronic Solutions R2D7 Interface and click on the Initialize RP60's button. This will send the appropriate bit to all RP60's communicating with **g!**.

The user interface for shades is then created by creating a Virtual Keypad or by creating a Custom Tab.

If you build a virtual keypad, use the RP60 units to access the shades.

If you use a custom tab, then add either a Custom Controls:

- The Shade Preset allows you to position the shade at the top, bottom and the preset, but will not allow momentary control of the shade. The Shade Preset provides feedback, showing when the shade is up, down or at the preset.
- The Shade 3 Button allows you to position the shade at the top, bottom and the preset, and it also allows you momentary control of the shade. The Shade 3 Button does not provide feedback indicating the shade's current position. Note that your RP60 may be programmed to "Latch" after a momentary control is held down for more than 1.5 seconds.
- Button (Toggle) or Light Toggle Control can be used to toggle between Full Open and Full Close.
- Button (Momentary) can be used with Event Maps for strict momentary control of shades. Note that your RP60 may be programmed to "Latch" after a momentary control is held down for more than 1.5 seconds.

In the tables, the following items appear:

- o "<Select>" Select the desired item from the list (or drop-down) in the Configurator.
- o "<User Defined>", etc. Type in the desired name for the item.

Devices	Variable Name	Setting	Comments
Communication Devices	**Name**	<User Defined> (Default: **New Device**)	
	Type	**Serial Port**	
	Communication Type	**Standard Connection**	
	Location	<User Defined> (Not Required)	
	COM Port	<Select>	
Lighting Interfaces	**Name**	<User Defined>	
	Device Type	**Electronic Solutions R2D7**	
	Location	<User Defined> (Not Required)	
	COM Device	<Select> (Default: **New Device**)	
Lighting Devices	**Name**	<User Defined>	
<Individual Shade Motors>	**Device Type**	**Electronic Solutions RP60**	
	Location	<User Defined> (Not Required)	
	System	<Select> (1-7)	Must match R2D7 System Port
	Device ID	<Select>	Must match ID programmed into motor "Main Channel"
Lighting Interfaces		Electronic Solutions R2D7	Following addition of all RP60's, return to the R2D7 Interface and click Discover Devices
			This will enable Momentary Motor Action (Required) for all motors.

COMMON MISTAKES

1. Using standard phone cable with flipped ends for your RP Bus. RP Bus phone wiring must be pin to pin (straight through).