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VANTAGECONTROLS.COM   EQUINOX INTEGRATION GUIDE
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Manufacturer:	Qmotion	Widget:	Shade
Model Number/s:	QIS	Aliases:	None
Driver Version:	v. 9 or higher	Widget Category:	Shades/Blinds
DC Version:	v. 3.5 or higher	Connection Type:	Serial (RS-485)*

I. Overview

As part of its Premier Partner Program, Vantage Equinox products support the Qmotion QIS for control of the shades in your InFusion Project. After setting up the Qmotion in Design Center, the Equinox Shade Widget user interface for control of the Qmotion Shades automatically appears in the EQ41 and EQ73 in-wall touch screens and on mobile devices installed with the Equinox App (available for iPhones, iPads, iPods, and Android products).

> *see Installation Steps section for information about Vantage RS-485 stations.

II. Features Supported / Not Supported

Feature	EQ40	EQ41, EQ73 & EQApp
Open/ Close / Stop Full control over open, close, and stop for all shades	🟧	✅
Position Control Set the shades to specific positions	🟧	✅
Visual Feedback Graphic presents the position of every shade	❌	✅
Group Control Configure and control a shade group or individual shades	🟧	✅
Configure Presets Set up to four user-defined presets for each group.	❌	✅

✅ **Supported**   🟧 **Task Only Support**   ❌ **Not Supported**

III. Links

Manufacturer's Website: http://www.qmotionshades.com/

IV. Notes

While it is possible to set up shade groups on the shades themselves this is not necessary. It is recommended that you set up the desired groups in Design Center and leave the "Generate Groups" option checked. (See section XIV for more information on group creation).

V. Installation Steps

Please contact Qmotion for instructions on shade installation. See section VIII for instructions on setting lower limits through Design Center Diagnostics.

The Qmotion connects to the InFusion controller via RS-485 with an RJ-45 connector on one end that connects to the Qmotion power and communications panel. Pin 1 is for "+", pin 2 is for "-", and pins 6, 7, and 8 are for ground (but only one is needed).

Pin 1 "+"   Pin 2 "-"   Pin 8 "GND"
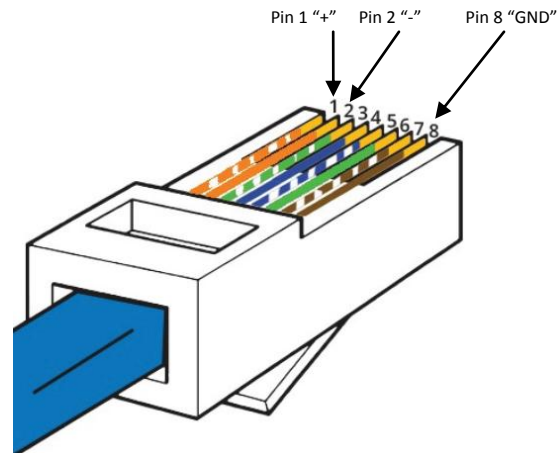
The RJ-45 should then be connected to the input of the QMotion power and communications panel.

OUTPUT (To shades)   INPUT (To Controller)
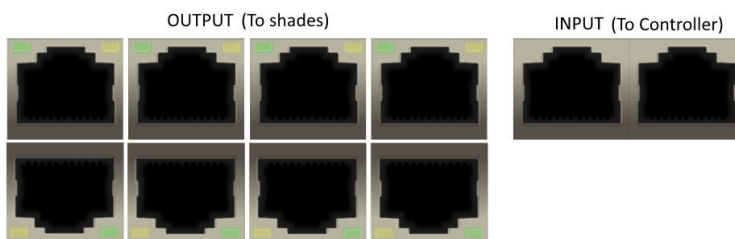
QIS shades ARE NOT compatible with the Vantage RS-485 station. If a station is wanted or needed, you will need to use an RS-232 station with an RS-485 adapter, both are pictured below. We recommend the B&B converter with a null modem attached for two way communication.

RS-232 Station: http://dealer.vantagecontrols.com/products/category.php?category=a0M800000049qPYEAY
Converter: http://www.bb-elec.com/Products/Serial-Connectivity/Serial-Converters/Port-Powered-RS-232-to-RS-422-485-Converters/485SD9TB.aspx
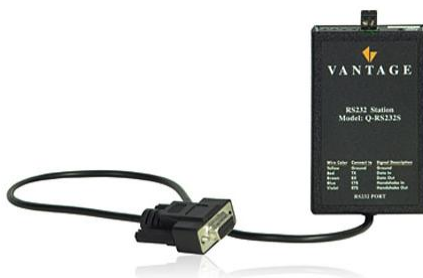
VI. Design Center Setup
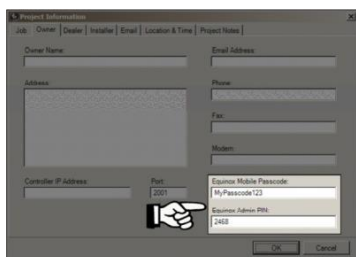
Follow these instructions to add the Qmotion to your Design Center project and configure its settings appropriately.
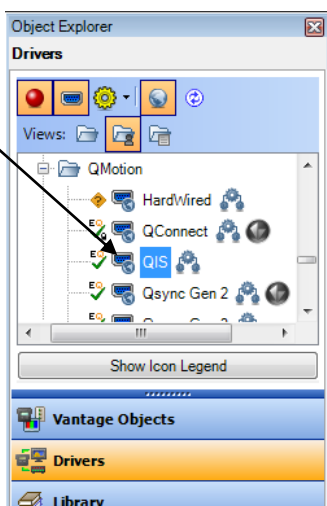
1. **Project Settings** – Click on *Settings | Project Information| Owner* (tab). Fill out the *Equinox Mobile Passcode:* (alpha/numeric), and the *Equinox Admin PIN:* (numeric).

2. **Add Qmotion QIS** – In the *Object Explorer*, select *Drivers* and drag or double click the driver to add it to the project.

   TIP: The Qmotion is added to the room currently selected when double clicking.

3. **Name the Qmotion** – In the *Object Editor*, name the Qmotion and give it a user-friendly display name also.

4. **Set the Area** – Set the area for each shade. Also, set the area for the system.

5. **Add a port** – Add a new RS-485 port. This will correspond to the port that you connected the Qmotion to on the InFusion controller.

6. **Add Groups** – Add the number desired groups. When the controller is programmed the driver will automatically set up Qmotion shade groups exactly how they appear in Design Center. (See section XIV for more information on group creation.)

7. **Setup Group** – In the Object Editor, fill in the information for each group.
   a. Enter the *Name*
   b. Select the desired *Orientation* and *Type* to reflect the appearance of the shade.

8. **Add Shades** – Add the number of shades you have in each group. If a shade is controlled through multiple groups, add that shade in both groups using the same *Shade ID*

9. **Setup Shade** – In the *Object Editor,* fill in the information for each shade in the desired group.
   a. Enter the *Name*
   b. Enter the *Shade ID* for each shade on the system. This is a 16 digit hexadecimal number. (See section VII.)
   c. Select the desired *Orientation* and *Type* to reflect the appearance of the shade.

VII.Getting the Shade ID

After following the steps in section VI above (except entering the *Shade ID*), program the system. Under the *System* menu open *Diagnostics*. In the Diagnostics window select *Host Commands* under the *Diagnostics* menu. At the bottom of the Host window select the Controller number to match the physical controller then set the *Log* to On. To get the Shade ID either power-cycle the shade or pull the shade down at least 6 inches. In the Diagnostics window you should see either "Qmotion Shade ID: xxxxxx" or "Shade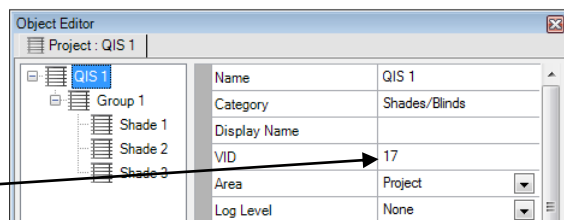 ID xxxxxx could not be found". The 16 character shade ID can be copied and pasted into the *Shade ID* field shown in step 9b above. Repeat the power-cycle or pull for each shade. Once all the Shade ID's have been entered into Design Center do a full program to the Controller.
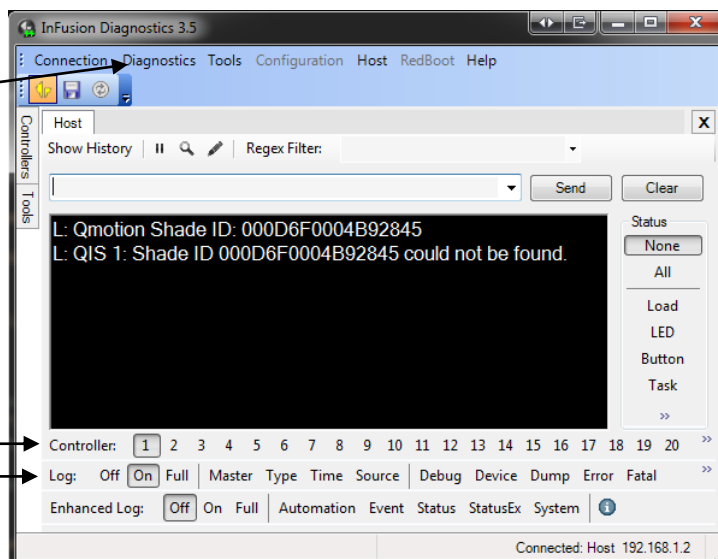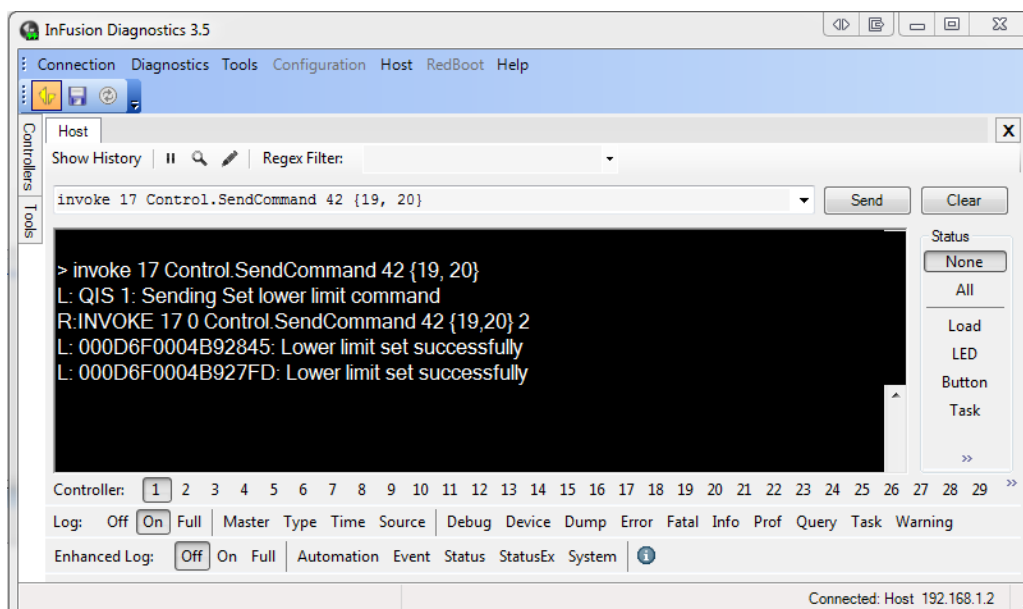
VIII.Setting Shades' Lower Limits

Before you can set the shades' lower limits all shades need to be configured with their *Shade ID* on the Infusion system using the instructions in sections VI and VII.

Pull down each shade you are setting the limit on to the desired lower limit (the shade may try to go back up so hold it in place a few seconds until it stops). Open the *Host Commands* diagnostic window, as explained in section VII above, and set the *Log* to On. In the command window, at the top of the Host diagnostic window just under 'Show History', type "invoke <QIS VID> Control.SendCommand 42 {<Shade/GroupVID>}". The QIS VID will be the VID of the top-level QIS Object and the Shade/Group VID is the VID of the shade or group of shades you are setting the lower limit for. You can type in multiple VID numbers separated by a comma. For example "invoke 17 Control.SendCommand 42 {19, 20}" will set the lower limit of Shade VIDs 19 and 20 with the top-level VID of 17. If a group VID is entered, all shades in that group will have their lower limit set. Group '0' is a pre-defined group for all shades connected to the RS-485 bus. So "invoke 17 Control.SendCommand 42 {0}" will set the lower limit of all shades. If the lower limit was successfully set you will see the following message in the diagnostic window for each shade: "<shade ID>: Lower limit set successfully"

Change lower limit to specified mm value:

Steps are very similar to setting limit to current position as discussed in the previous paragraph. Type: "invoke <QIS VID> Control.SendCommand 43 {<mm distance value from mounting of shade>, <Shade/GroupVID>, <Shade/GroupVID, …>}" into diagnostics. An example of setting shades' 19 and 20 lower limits to 500mm:invoke 17 Control.SendCommand 43 {500, 19, 20}

Upper Limits:

Same as lower limits except for the number value after SendCommand. For setting current position as upper limit use 44. For setting upper limit to a mm value us 45. An example of setting upper limit to current position for shades 19 and 20: invoke 17 Control.SendCommand 44 {19, 20}

IX.Equinox 40 Setup

The Equinox 40 has no native shade widget support for use with the Qmotion. However, EQ40 (and keypad button) control may be accomplished through Design Center tasks. See Design Center Procedure Table in section XV.

## X. Add Additional Equinox Devices and Program Controller

To use the Qmotion with the Equinox Shade widget, simply add and name any EQ 73 or EQ 41 (from *Vantage Objects | Touchscreens* in the *Object Explorer* pane) in their respective areas in your Design Center project. (For the Equinox mobile app, no object needs to be added.) No additional Design Center setup is required.

Connect to the InFusion Controller. Configure the devices. After the devices are configured, do an Update or Full Program. The devices should now be operational.

## XI. Equinox Widget Navigation

Once a Qmotion Shade is added to the project, the Shade widget will normally appear on the EQ73, EQ41, and Equinox Apps. If the widget is not visible, go to Profile Settings and select the widget to make it visible. Note that if the Shade widget is already on the Equinox device, but the Qmotion Shade is not visible; go to the widget's Edit Mode (see below) to toggle the shade to make it visible.

The following screen shots, taken from a typical EQ73 device, show the basic navigation for full Equinox widgets on the EQ41, EQ73, and Equinox App, among the three widget views: **Dashboard**, **Full Screen**, and **Edit Mode**. Refer to the "Equinox Apps Widget Install" document on Vantage's website for more detailed information.
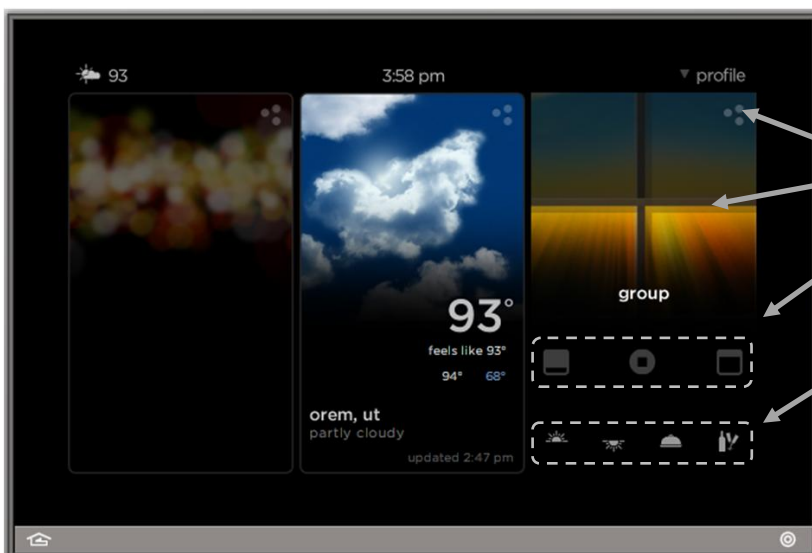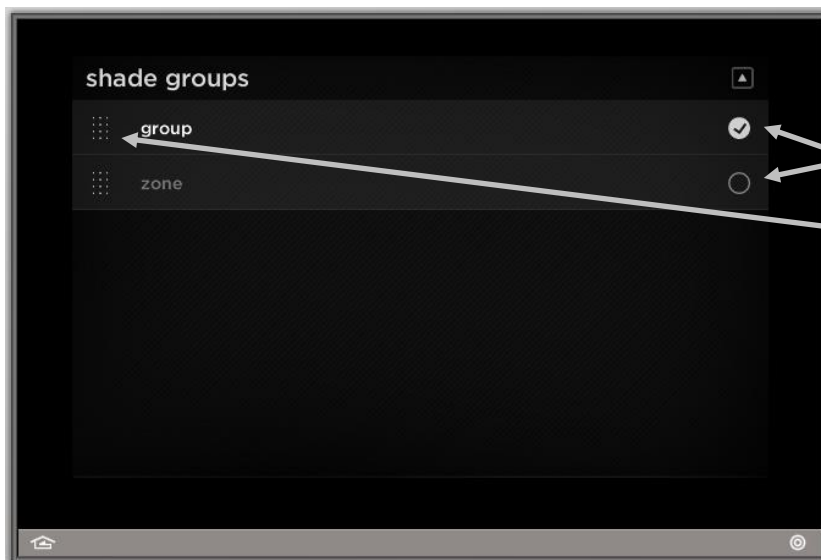

Dashboard View of the Qmotion in the Shade Widget

Press to enter Full Screen Widget

See current group or zone position

Shade Group controls

User assigned presets
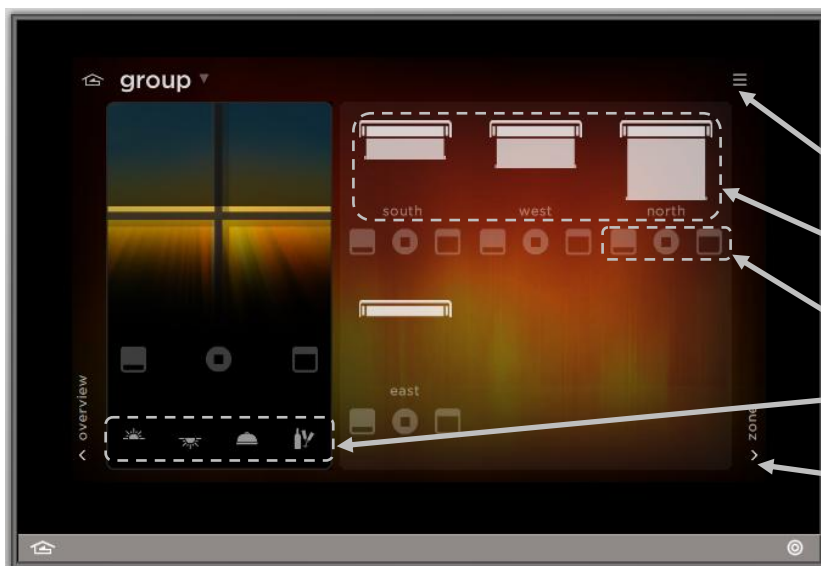
Full Screen View of the Qmotion in the Shade Widget

Enter edit mode

See individual shade positions

Control individual shades

Press and hold to set presets

Swipe or press to switch between groups

Edit Mode View for Shade Widget

Toggle Inclusion/exclusion in widget

Hold and drag up/down to change the order

Equinox App Licensing Note

Install the Equinox App (search for Vantage Equinox) on your iOS or Android devices. A valid license is needed for each Equinox device connected to a Vantage System. Licenses are available via Controller SD cards for up to 5 (EQ-APP-5), 10 (EQ-APP-10), or unlimited (EQ-APP-X) quantities of Equinox devices. Also, each EQ73 station adds one more license (EQ73TB-T1). Ensure Step 1 of the *Design Center Setup* was completed, as the Equinox App will not run without the Equinox Mobile Passcode. Launch the App, and follow the on-screen prompts in the Setup Wizard.

XII. Connection Diagram Example
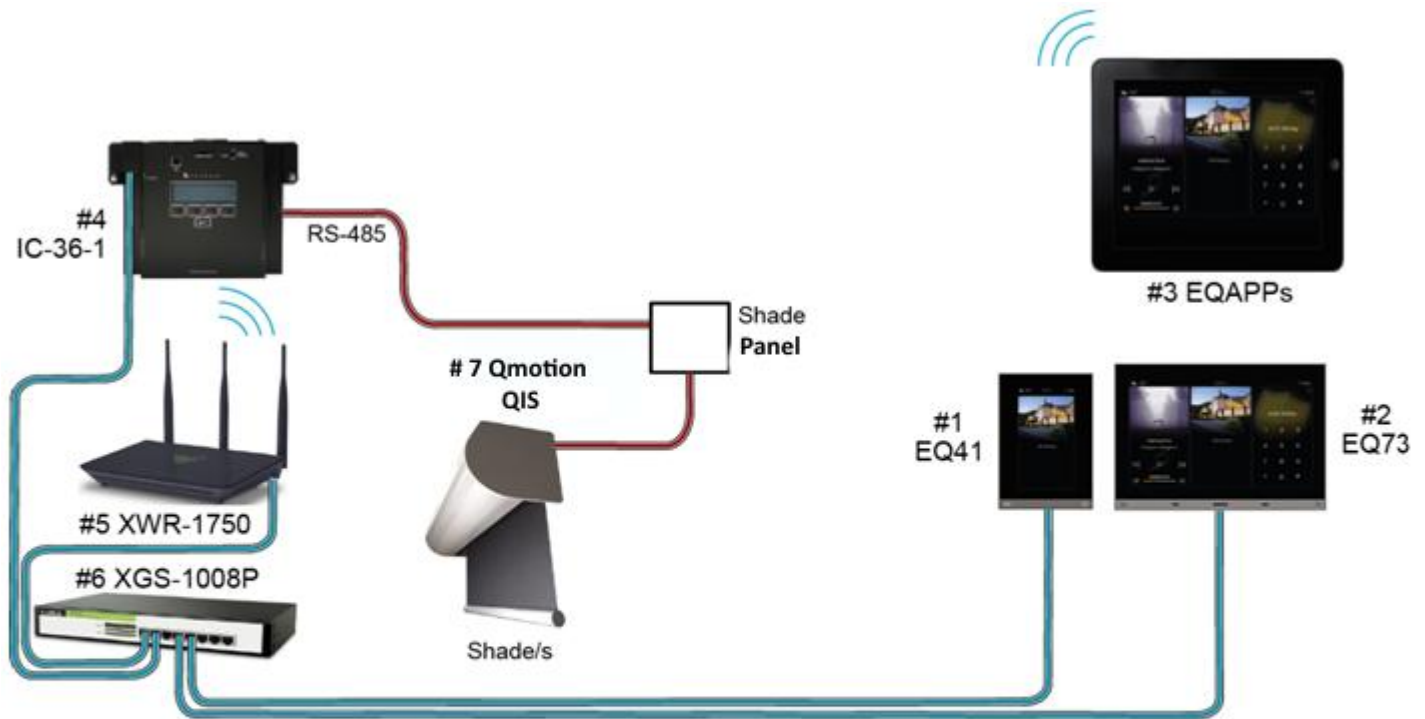
XIII. Bill of Materials Example

#	Device	Manufacturer	Part Number	Protocol	Connector Type	Notes
1	EQ41	Vantage	EQ41TB-TI	Ethernet w/PoE	Cat 5 (RJ45)	
2	EQ73	Vantage	EQ73TB-TI	Ethernet w/PoE	Cat 5 (RJ45)	
3	EQ Mobile Apps	Vantage	EQ-APP-5/10/X	WiFi	N/A	
4	Infusion Controller	Vantage	IC-36-1	Ethernet	Station bus / Cat 5	
5	Wireless Router	Luxul	XWR-1750	Ethernet / WiFi	Cat 5 (RJ45)	
6	Gigabit Switch w/PoE	Luxul	XGS-1008P	Ethernet w/PoE	Cat 5 (RJ45)	
7	Shade/Blind Controller Interface	Qmotion	QIS	RS-485	Cat 5 (RJ45)	

XIV. Tech Notes

Things to Know / Gotchas

- ❖ To determine the *Shade ID* for each shade you will need to look in diagnostics. (See section VII)
- ❖ It is recommended to do a full program after adding or deleting shade objects.
- ❖ By default QIS shade groups will be setup as they are in Design Center. The shade group ID will be the position number of that group in Design Center. For each group in Design Center, the group ID will be cleared on the shades before the group is setup so any groups that have been setup by other means using the same group ID will be cleared and overwritten. It is recommended to setup all groups in Design Center, but if you are setting up groups outside of Design Center (not for Vantage control), set the group ID's to be higher than the position number of any of the groups in Design Center. Optionally, but not recommended, you could uncheck the *Generate Groups* option in the top-level QIS driver which would cause the driver to not clear or create any groups. Unchecking the *Generate Groups* option could cause the group shade control and animation on Equinox to not work correctly.

XV. Design Center Task Procedure Table

The following table shows the most common procedures that are available for programming Design Center tasks with Qmotion Shades. Tasks can be assigned to keypad buttons and Equinox scenes.

Available Task Procedures		
Category	**Folder**	**Procedure**
Shades/Motors	Shades	Close Blind
		Open Blind
		Set Blind Position
		Stop Blind