

Phone: 206 310-5416

## **AN02 - Using the AC1-ZW or DC1-ZW with the Cooper Aspire RF Wireless Control System**

The Cooper Aspire RF wireless control system provides highly capable Z-Wave™ controllers that can be used to control the RS Scene Automation AC1-ZW and DC1-ZW shade motor controllers. This application note describes how to use our devices with the Cooper Handheld Controller or Table Top Controller, but it is possible to use our devices with any network of devices bearing the Z-Wave™ logo.

### **How the Aspire RF Wireless Control System works**

The Aspire RF Wireless Control System user guide can be found here:

[http://www.cooperwiringdevices.com/ASPIRERF/pdf/RF\\_UserManual.pdf](http://www.cooperwiringdevices.com/ASPIRERF/pdf/RF_UserManual.pdf)

Both the Handheld and the Tabletop Controller provide a menu interface for setup. The top level menu shows Devices, Scenes, Events, Settings and the Away menus. The AC1-ZW or DC1-ZW must first be installed using the Devices menu. Scenes provide the ability to group shades and set intermediate stops. The Event menu will allow shades to be scheduled to move from one position to another based on a scheduled time. Up to 32 events may be scheduled. The Settings menu is used to customize preferences. The Away menu can be used to help make your home look occupied by not only turning on and off the lights but raising and lowering window shades.

After a network is created and the automated calibration procedure is performed, the buttons function in the following manner:

- On the Handheld Controller there is a 10 button number pad labeled 1-9 and 0. These buttons are used to select scenes. The Tabletop Controller has eight buttons to select favorite scenes. The favorite scenes are the default screen for the Tabletop Controller. Scenes may also be selected on either controller from the Scenes menu. Both devices support up to 64 scenes.
- Pressing the OK button after a scene has been selected will move a shade or group of shades to an assigned position.
- Pressing the ALL ON or All Off button briefly will move all shades open or closed that have been configured to do so under the Devices->Configure->Location->Device->All Switch menu.

The Aspire controllers allow the user to set configuration parameters. These parameters can be set under the:

Devices->Configure->Location->Devices->Parameters menu.

By default parameter 11 is set to 0. In this state the shades will behave as follows:

When a shade is in motion, pressing the same button twice has no effect.

Pressing the opposing button in the same group will reverse the direction of movement.

If parameter 11 is set to 1 then the shades will behave as follows:

When a shade is in motion, pressing the same button twice has no effect.

Pressing the opposing button in the same group will stop movement.

Tilt-only shades or horizontal blinds with tilt can be controlled once the appropriate configuration parameters have been set.

## Step 1: Planning the installation

The key to making the process easy is to plan the installation before performing the programming steps. Filling out the following table can make this process simple.

SCENE	SHADE/POSITION	SHADE/POSITION	SHADE/POSITION	SHADE/POSITION	SHADE/POSITION
1					
2					
3					
4					
5					
6					



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In each column, write the shade name or number, and the position you want the shade to go when that Scene is selected. Note that you can have a maximum of 64 rows in the table, since up to 64 scenes are supported.

As an example:

SCENE	Scene Name	SHADE/POSITION	SHADE/POSITION	SHADE/POSITION	SHADE/POSITION
1	Late Morning	LIVING1/20%	LIVING2/60%	KITCHEN/100%	
2	Open All	LIVING1/100%	LIVING2/100%	KITCHEN/100%	
3	Morning1	FAMILYRM/100%			
4	Afternoon	FAMILYRM/40%			
5					
6	Morning2	BEDROOM/100%			

The example would function in this way:

When Scene2 is selected both the living room shades, as well as the kitchen shades would fully open. When Scene1 is selected they will move to their intermediate stop positions of 20%, 60% and 100% respectively.

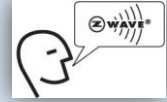
When Scene4 is selected, the family room shade would move to the 40% position. When Scene3 is selected, this shade would fully open. When Scene 6 is selected, the bedroom shade would fully open.

The table shows graphically what shades are grouped and what positions they will travel to when the Scene is selected. We highly recommend using this method for installation planning.

## Step 2: Initializing the shade controller

*This step is only performed as a precaution if the AC1-ZW or DC1-ZW has been previously used and set up with a different network or shade. It is optional.*

- a) Go to the first AC1-ZW or DC1-ZW which you will be programming.
- b) Remove power from the unit.
- c) Press and hold the Z button while reapplying power to the unit. This sets the unit back to its factory default configuration. The LED should blink several times.



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- d) Select the Devices->Uninstall Menu.
- e) Press the Z button on the AC1-ZW or DC1-ZW. This procedure removes the unit from any previous network it may have been joined with.

## Step 4: Join the shade controllers to the Z-Wave™ network

- a) Select the Devices->Install Menu.
- b) Press the Z button on the AC1-ZW or DC1-ZW.
- c) Name the Device as prompted.
- d) Repeat for all devices

## Step 5: Run the automatic calibration sequence

Assuming that the shade is already installed properly, run the automated calibration sequence for each AC1-ZW or DC1-ZW by pressing and holding the OPEN and CLOSE buttons on the unit simultaneously for 5 seconds. The calibration sequence should run automatically. **This step MUST be performed prior to the next step.**

## Step 6: Associate the shade controllers to the Scene buttons

- a) Create each scene in sequence using Scene->Create->Scene name and then enter the name
- b) Select the Shades and shade position % for all of the shades listed

Example:

For Scene1 "Late Morning". Scene->Create-> enter each letter for "Late Morning". Select shade Living1 and set percentage to 20%. Set Living2 to 60% and Kitchen to 100%.

## Step 7: Repeat for all other Scenes

Move to the next scene and repeat step 6. This procedure can of course be performed in several different ways, but using the table and this "cookbook" approach should make it easy to complete a simple installation.