



MVCA2



|                      |    |
|----------------------|----|
| Installation/Wiring: | ?? |
| Programming 1:       | ?? |
| Programming 2:       | ?? |
| Testing:             | ?? |
| Total Time:          | ?? |

**DRAFT**

## Description

The 2 Dial Dimmer Wall Switch is designed to work with the Imperial system's MAMA home automation engine. Each dial can be programmed to control a single output, multiple outputs, or macros, and this in any combination. The dimmer wall switch can provide adjustable control (32 dimming steps) of dimmable lights, motorized shutters, or other adjustable devices. Set the dial to the desired position without waiting for the light intensity or shutter position to change, the system will adjust automatically including the displays on all controlling devices.

Unique to MAMA, the light intensity/shutter position can be saved by pushing and holding the dial on a dimmer wall switch. The next time the dial is pushed it will automatically set the lights/shutters to the saved intensity/position.

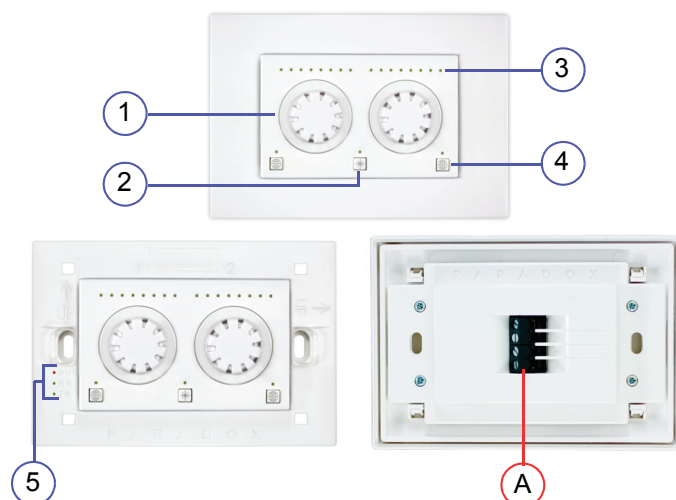
All wall switches are driven by the V32 controller's 4 wire low-voltage Multibus. This means that the high voltage wiring is not connected directly to the Wall Switch as in regular electrical systems. This also means they can be installed anywhere including wet areas or outdoors (avoiding direct sunlight, or exposure to rain/snow).

All wall switches can be duplicated with no limitation to the number of dimer wall switches that can control an output.

## Features

- 2 rotary dials with push on/off action to dim outputs, such as lights or shutters or macros (group of outputs)
- 8 LEDs per dial to display light intensity or shutter position
- 32 dimming steps
- Save light intensity level or shutter position (push dial to go to the saved position)
- Unlimited number of switches can control the same output (max 250)
- Global buttons to control an alternate device or macro
- Emergency stop for motorized shutters
- Adjust LED light intensity with Day/Night adjustment
- Copy/Paste for module duplication
- Custom designer colours available
- Remote firmware upgradeability via bus
- Programming via BabyWare software
- 4 wire connection to the Imperial Multibus with up to 900m (3000ft) distance
- Bi-directional Locate feature from module to software and vice versa
- Single gang box installation

## Overview



- 1) Output and macro control dials
- 2) Backlight button
- 3) Light intensity / shutter position LEDs
- 4) Global button
- 5) Multibus feedback LEDs

A) 4-wire Multibus connection

Related Topics

Installation / Wiring (refer to Imperial System Guide)

- System Diagrams and Wiring Tips
- Wire Gauge Selection
- Conventional vs. MAMA Wiring

Features

- Remote Firmware Upgrade
- Bi-directional Locate Feature
- Save Dimming Level / Shutter Position
- Shutter Calibration Mode
- Emergency Shutter Stop
- Global Button
- Backlight Button

Applications (refer to Imperial System Guide)

- Light Control
- Shutters
- Macros

BabyWare (refer to Imperial System Guide)

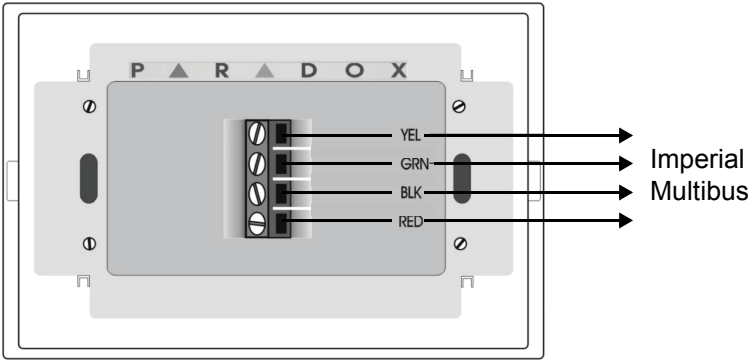
- BabyWare

Specifications

|                       |                                         |
|-----------------------|-----------------------------------------|
| Input voltage         | Typically 12Vdc (from Multibus)         |
| Multibus              | 4 wire at up to 900m (3,000ft)          |
| Current Consumption   | 80mA                                    |
| Dimensions            | 7.4cm X 11cm X 2.5cm (2.9" X 4.3" X 1") |
| Operating Temperature | -10°C to 50°C<br>14°F to 122°F          |

Wiring

Figure 20: Connecting an MVCA2



LED Feedback

| BUS       | RX          | TX          | STATUS                               |
|-----------|-------------|-------------|--------------------------------------|
| -         | Green flash | Green flash | OK (communication in progress)       |
| Red on    | -           | -           | Com fail: Short on GRN or YEL        |
|           | -           | Green on    | Com fail: too many modules           |
|           | Green on    | Green on    | Com fail: GRN and YEL lines reversed |
| Red flash | -           | -           | Bus power too low                    |
|           | Green flash | Green flash | Module locate mode                   |

Status Bar  
LEDs indicate dimmer level / shutter position

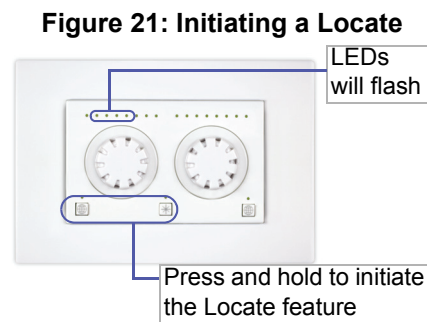


Remote Firmware Upgrade

The MVCA2 is firmware upgradeable remotely via the V32 controller's Multibus at 57.6Kbps. Using BabyWare connect to the V32 account using any of the connection methods (direct connect, IP static, or IP DNS). Right-click the desired wall switch and select Upgrade. A firmware upgrade for a single module or group of modules will take usually less than 10 minutes, which keeps system downtime to a minimum.

## Bi-directional Locate Feature

Pressing and holding the Global 1 and Backlight buttons for 3 seconds will initiate the Module Locate feature. When a Module Locate is initiated, the switch's representation in the BabyWare software will flash and the status bar's 2, 3, 4 and 5 lights flash (light 2 flashes at a different rate) to indicate that it is in locate mode. A module locate can also be initiated from the BabyWare software. From BabyWare right-click the module's representation and select Locate Physical. The dial's status bar lights will flash. We highly recommend that after pressing locate and identifying the module, open the programming page and assign the proper physical location label and the doors' labels and locations.



## Save Dimming Level / Shutter Position

Pressing the dimmer dial toggles the device's state between Off and the saved setting. To program a new default setting, set the device to the desired level, press and hold the dimmer dial button for 2 seconds. The status bar flashes to confirm the new setting.

## Shutter Calibration Mode

In order to control a shutter, you must first "teach" the dimmer dial. This is necessary to account for different shutter sizes and motor speeds. Because shutters come in different sizes, this calibration method can only be used when only one shutter is assigned to a dimmer dial. This calibration can also be performed locally at the HV8D, or using BabyWare (Q2 2009).

To calibrate a dimmer dial for a shutter:

- 1) To enter shutter calibration mode, press and hold the Global button and the dial you wish to calibrate. The shutter closes.
- 2) When the shutter reaches the bottom, press the dimmer dial. The shutter opens.
- 3) When the shutter reaches the top, press the dimmer dial. The shutter closes again.
- 4) When the shutter reaches the bottom, press the dimmer dial. The shutter opens to about 50%.
- 5) If the shutter is not at exactly 50%, adjust it manually by turning the dimmer dial one click at a time.
- 6) To save and exit, press the dimmer dial. If no action is taken for 4 minutes, the switch will exit shutter calibration mode without saving.

## Emergency Shutter Stop

If a window shutter is in motion, pressing the dimmer dial immediately stops the shutter motor. To restart the shutter, turn the dimmer dial to select a new shutter position.

## Global Button

The Global button allows dimmer dials to control two devices (or groups of devices). For example if a dimmer dial's primary function is to control the kitchen window shutters, by pressing the Global button, the dial could switch to its secondary function which could be to control all window shutters in the house. Global function could even be programmed with a completely unrelated function e.g. control the kitchen lights.

NOTE: All button and dimmer dial functions can be programmed using BabyWare software.

## Backlight Button

The backlight button allows you to manually set the dimmer button status bar intensity. NOTE: All button and dimmer dial functions can be programmed using BabyWare software.

To enter Backlight mode:

- 1) Press the backlight button. On the status bars, lights 5, 6, 7 and 8 illuminate as well as light 1 on the first status bar, signalling Day Adjust mode.
- 2) Turn the left dimmer dial to adjust status bar day intensity.
- 3) Press the backlight button. On status bar 1, light 1 turns off and light 2 turns on signalling Night Adjust mode. Night schedule must be enabled in BabyWare (Q2 2009).
- 4) Turn the left dimmer dial to adjust status bar light night intensity.
- 5) To save and exit, press the backlight button. If no action is taken for 60 seconds, the switch will exit Backlight mode without saving.

# Programming an MVCA2 Dimmer Wall Switch

For more information on programming modules, refer to “BabyWare ” in the Imperial System Guide.

1

When BabyWare is communicating with the V32 controller and a Wall Switch is connected to the Multibus, it automatically appears in the Switches display area. To view the Switches display area, click the **Switches** toggle button. Alternatively, you may wish to add a Wall Switch to BabyWare before the module is physically connected to the system. Click the **Add Item** button.

2

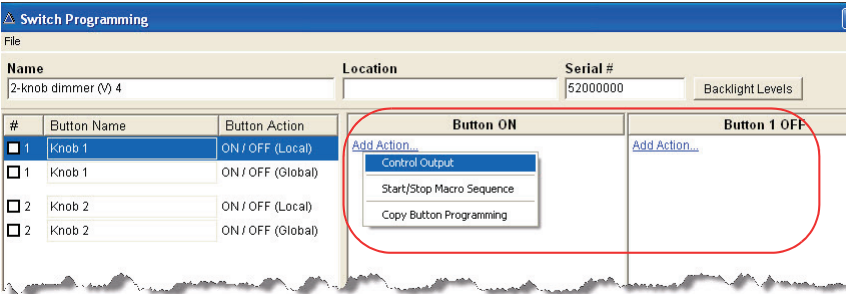
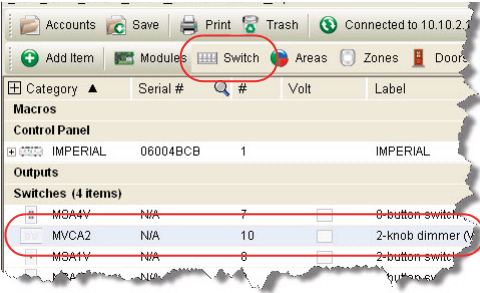
To program a Wall Switch that already appears in the system, double-click the switch's icon. The Switch Programming window opens.

4

Click **Add Action** under the Button # ON header to set an ON action for each button. Select whether the button will activate an output, start a macro, or any combination. Do the same for the button's OFF action.

5

Click the **Backlight Levels** button (Q2 2009)



**Patents:** One or more of the following US patents may apply: 7046142, 6215399, 6111256, 6104319, 5920259, 5886632, 5721542, 5287111, 5119069, 5077549 and RE39406 and other pending patents may apply. Canadian and international patents may also apply.

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