

# FlexiDim™ Compact

## Installation, Setup and User Guide





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# 1 Introduction

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**FlexiDim™ Compact** is simple, fast and cost-effective to install and setup. This guide describes the system components, the correct connections and the cable types required, followed by a step-by-step explanation of the installation and setup processes.

It is essential that the Installer of this system takes some time to read this guide and to become familiar with the concepts of this system, and also with the key differences between **FlexiDim™** and a conventional lighting installation.

The User may skip to Chapter 3 onwards, covering Programming and Support.

In particular, please pay attention to any items appearing in the Errors and Omissions section (Appendix C); it is advisable to read this section in advance in order to be aware of any changes required during the installation process. Whilst efforts are always made to keep errors and omissions to an absolute minimum, manufacturing mistakes do occasionally occur and JCL apologises in advance for any entries in this section.

As with any other electrical installation, it is important that the current, relevant Wiring Regulations are adhered to when installing the **FlexiDim™** system.

The system is designed to be installed by a qualified Electrician or other competent person working to current regulatory standards.

For further advice or for an explanation of anything that is unclear, please contact JCL as follows:

Freephone: 0800 3896395

Email: [support@jclighting.com](mailto:support@jclighting.com)

## FlexiDim™ Information Pack

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This will have been included with the **FlexiDim™ Compact** system components supplied by JCL. If any of the following items are missing from the pack, please contact JCL immediately.

### Contents

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- **FlexiDim™ Compact** Installation, Setup and User Guide
- Spare fuses
- Labels pack

## 2 Installation Instructions

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### Simplifying Installation

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The **FlexiDim™ Compact** system has been designed with the installer in mind. Therefore:

- Connections for mains cabling are clearly marked, well spaced and accept up to 2.5 mm<sup>2</sup> cable.
- Switches connect using flexible low voltage, low cost 4 core alarm cable.
- Configuration is simple and straight forward, with no links or Switch settings to worry about. Subsequent changes to the system are quick and easy for the end user to understand and implement.
- The location of the **FlexiDim™ Compact** Dimmer Module is flexible, allowing the unit to be installed in the location that is most convenient for wiring to the light fittings that it controls.
- **FlexiDim™ Compact** controls both conventional tungsten lighting and low voltage tungsten lighting between 0% and 100% in smooth 1% increments.
- **FlexiDim™ Compact** can also control wall sockets for lighting use, although these should be fitted using a socket which is visibly different in order to prevent the unintended connection of non-lighting appliances such as vacuum cleaners, televisions, etc. For example, many installers use 3-pin round sockets for this purpose.
- **FlexiDim™ Compact** is programmed using simple sequences of button presses.

### Terminology

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The following explains the most commonly used **FlexiDim™** terms:

#### *Lighting Channel (or Lighting Circuit)*

A Channel (or Lighting Channel) comprises one or more lights that are wired together and controlled by **FlexiDim™** as a single entity. An example of this would be four low voltage downlights wired together in a bathroom ceiling. Grouping lights that would always be controlled together in to a single circuit provides an efficient use of dimming equipment. **FlexiDim™ Compact** controls up to 8 Channels and there is no limit to the number of lights that can

comprise a Channel (provided that the Channel's rated capacity of 400 W is not exceeded), subject to an overall rating of 2400 W for the system.

### Basic operation

In order to maintain familiar light switch behaviour, **FlexiDim™** Switch Plates each incorporate three buttons whose default behaviour is as follows:

**On/Off** This switch toggles lights between on and off in the same manner as a conventional light switch.

**Up** Manually increases the levels on the lights in the same manner as a conventional dimmer switch.

**Down** Manually decreases the levels on the lights in the same manner as a conventional dimmer switch.

Any or all of the Channels can be programmed to be controlled by the On/Off and Dimming buttons.

### Scene

A Scene is a description of the light level for one or more Channels, including the transition time from the current light level to the new light level (fade time). Eight different fade times are available ranging from instantaneous to 10 seconds.

Scenes can be created for any of the (four or) eight Scene buttons on the Switch Plates.

Two examples of Scenes are presented here:

#### Scene name: "Cooking"

- Channels: Main Ceiling downlights  
Breakfast Area downlights  
Hob spotlights
- Level: 100% (i.e., fully on)
- Time: 1.5 (i.e., from the current level to off over 1.5 seconds)

#### Scene name: "Evening Dinner"

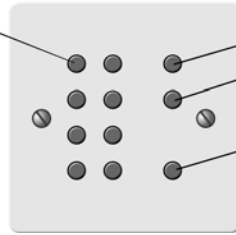
- Channels: Table pendant
  - Level: 50%
  - Time: 2 seconds
- (plus...)*
- Channels: Over cupboard uplights
  - Level: 25%
  - Time: 5 seconds

See below for an illustration of a **FlexiDim™** Switch Plate layout and its button functions. Switch Plates are available with either 4 or 8 Scene buttons.

The Buttons on the left apply *Scenes*

The Buttons on the right work like a dimmer switch

The Scene Buttons turn on some of the lights with preset levels of brightness



Brighter  
Darker

On/Off

The On/Off and Dimmer Buttons usually operate all the lights in a room



## Components of the FlexiDim™ Compact System

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### Switches

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The Switches in a **FlexiDim™** system do not control mains power directly; instead, they send messages to the Dimmer Module. The supply to the Switches is 12 V and, as a result, these Switches can be installed in places a conventional mains switch would be unsafe and prohibited, such as a bathroom.

Note: It is still recommended that Switches are not placed in locations where the user can reach them whilst in a bath, shower or similar environments as the switches themselves are not waterproof.

The cabling required to the Switches of a **FlexiDim™** system is low voltage using either Category 5 or (provided that cable runs are less than 100 m) 4-core burglar alarm type cables.

The **FlexiDim™ Compact** system supports up to two Switch Plates. Each Switch Plate consists of either 4 or 8 user-definable Scene buttons, as well as the standard Dim Up, Dim Down and On/Off buttons (see illustration above).

### Dimmer Module

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The **FlexiDim™ Compact** Dimmer Module ‘listens’ to messages from the Switch(es), interprets the required Scene changes and sends the relevant commands to the affected lighting channels. A switch on the side of the Dimmer Module places the system into Programming Mode, allowing the user to set up or change Scenes as required.

**FlexiDim™** regulates the mains supply to the lighting Channels using a technique called *hard fired, leading edge phase control*. In plain language, this means that the light is switched on somewhere between the start and end of each half cycle of the mains supply, and switched off again at the end of each half cycle. By controlling the exact point of switching to within a few millionths of a second, very precise control is obtained over light levels and the way these levels change from one value to another.

Each Channel of the Dimmer Module is identical and can control a load of 400 W, however there is a limit of 2400 W for the overall Dimmer Module (8 Channels). Given a typical mix of light fixtures, the overall rating of a Dimmer Module is unlikely to be reached in a domestic setting but larger circuits can be split across two Channels if required.

See Figure 2 above.

## FlexiDim™ Dimensions and Environmental Limits

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### *Case Dimensions*

260mm high x 190mm wide x 90mm deep

Wall mounted, cable access from rear.

### *Switch Plates*

90mm x 90mm x 2mm

Fitted in standard UK single wall box (35mm deep).

### *Case clearance required at installation*

Top and bottom      50mm

Sides                      50mm

### *Environmental Conditions – all components*

0°C to 40°C, 0% to 90% humidity non condensing

### *Supply voltage*

220-240V 50Hz AC, 6W (plus lighting load)



## Mains Wiring

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Unlike a traditional lighting installation, where the mains wiring progresses from one ceiling rose to the next with the switch cabling interrupting the live circuit to the lamp, a centralised dimmer needs slightly different wiring. In many ways, the wiring required is more logical.

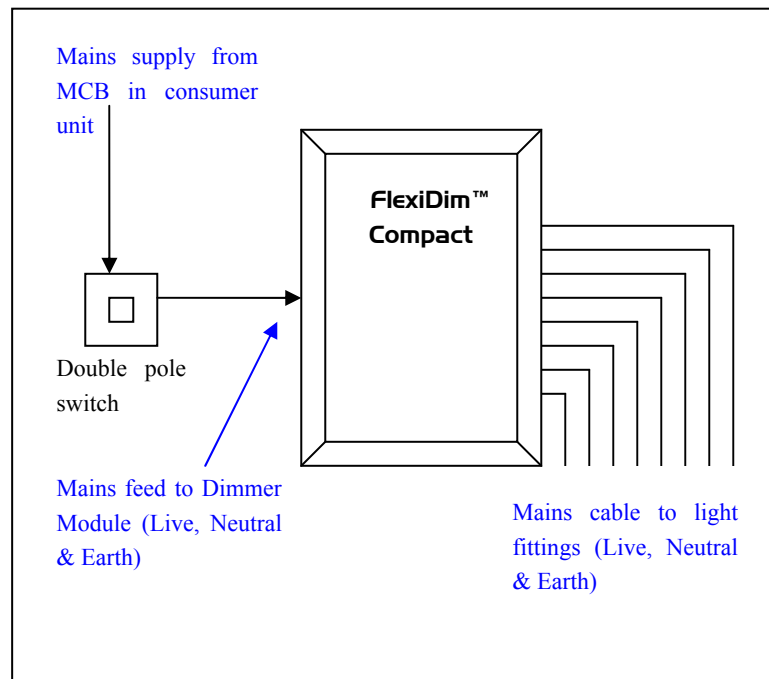
Mains power is fed from the consumer unit to the Dimmer Module via an appropriate MCB (miniature circuit breaker). The rating chosen will be determined by the type of lights connected to the Module, but 6 A circuits are typical unless several powerful halogen lamps are being connected, in which case 10 A MCBs should be used.

Each of the Channels to be controlled is then cabled from the Dimmer Module to the light fittings. See illustration below.

- **Note that the Dimmer Module must be connected via a switched spur accessible by the end user.**
- **This is essential to allow isolation of the Dimmer Module for servicing or for bulb changing.**

As with conventional light switches, there is the possibility that someone could activate a light whilst a lamp is being changed. The electrical supply to the lighting circuit should therefore always be switched off when changing a bulb.

Additionally, the nature of the dimming circuit means that a voltage will exist across a blown (open circuit) bulb, even if the channel is at 0% brightness. Whilst this is unlikely to cause direct harm, accidental contact with the circuit could cause a fall from a chair/ladder and subsequent injury.



Dimmer Module mains wiring

A clear, self adhesive label is provided for the switched spur. This is marked “FlexiDim Power Supply.”

## Low Voltage Wiring

Samples of suggested low voltage cable are provided in Appendix B at the end of this guide, along with both the RS Components ( [www.rswww.com](http://www.rswww.com) ) and the Maplin Electronics ( [www.maplin.co.uk](http://www.maplin.co.uk) ) part numbers.

For runs of 100 m or less, 6-core burglar alarm cable is satisfactory and has the advantage of flexibility and low cost. For runs of more than 100 m, Category 5 (unshielded) cable should be used.

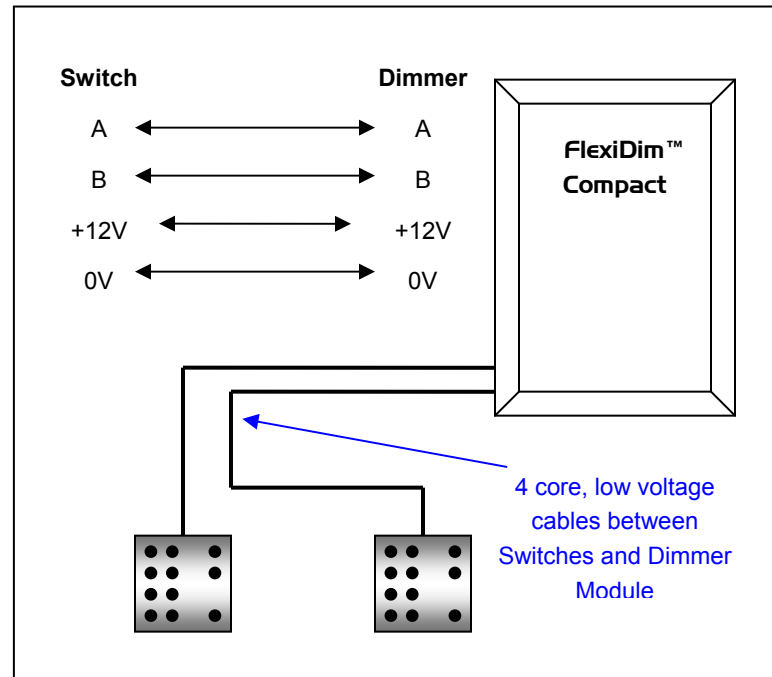
If 6-core burglar alarm cable is chosen, use one conductor for the +12 V supply, another for 0 V (ground), and two for signal connections (A & B). Two conductors are not used.

When using Category 5 cable, a signal connection (A & B) must be connected using the two conductors of a twisted pair. This is because the proximity of the

two conductors of a twisted pair is important in cancelling noise on long cable lengths. The +12 V and 0 V connections should use a pair each.

Each Switch requires a low voltage cable to the Dimmer Module. There is a 12 V supply, 0 V and a signal pair (A & B).

Screw-terminal plugs are provided at the Switch to assist in assembly and removal.



Switch to Dimmer Module wiring

## Initial Power-up and Testing

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Check all cabling, in particular the polarity of the +12 V and 0 V connections to the switches. Also check that the mains wiring is securely terminated in the Dimmer Module and the Earth connections to the case cover are attached.

The following steps will test the entire installation. All units are tested prior to dispatch, therefore, provided that the wiring has been thoroughly checked, the system will work first time. If at any point the expected result cannot be achieved, please call JCL for advice.

- 1** Ensure that the Programming Switch is in the Up (Run) position.
- 2** Switch on the supply to the system.  
All lights should remain off.
- 3** Press the On/Off button on each Switch Plate.  
All lights should switch on immediately and dim to off over approximately 1 second.
- 4** Switch the lights on, and then press and hold the Dim Up and Dim Down buttons.  
All lights should increase and decrease in brightness.
- 5** Scene buttons 1-4 are factory set as follows:

Scene 1:

75% brightness on all 8 circuits, Fade time of 2 seconds.

Scene 2:

50% brightness on all 8 circuits, Fade time of 2 seconds

Scene 3:

25% brightness on all 8 circuits, Fade time of 2 seconds

Scene 4:

10% brightness on all 8 circuits, Fade time of 2 seconds

Press each of the first 4 Scene buttons in turn and check that the lights change as described by the factory settings for that Scene.

- 6** Change the Programming Switch on the side of the Dimmer module to the down (Program) position.  
All eight lights should switch to 50% brightness.  
Place the Programming Switch back into the Up (Run) position (the lights will remain on at 50% and can be turned off using the On/Off button).

## 3 Setup and User Instructions

This, and the subsequent chapters, explain how to Program and use your **FlexiDim™ Compact** lighting control system.

### Operating Modes

**FlexiDim™ Compact** has two Operating Modes:

- Programming Mode

This Mode is used for system setup, Scene creation, etc.

- Run Mode

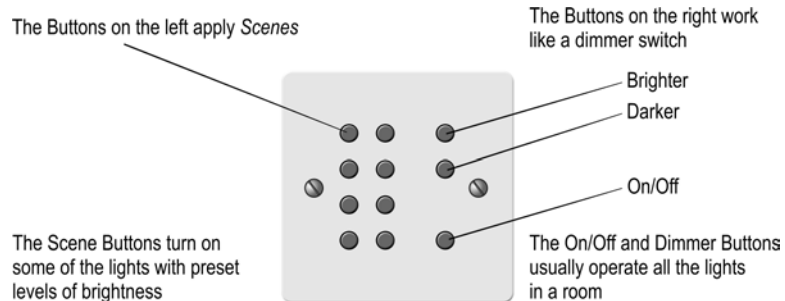
This Mode is used for normal operation and use. Once the system has been set up, copy and modify operations can also be performed in Run Mode.

Switching between Programming and Run Mode is achieved by moving the Programming Switch on the side of the **FlexiDim™ Compact** case to either the up (Run Mode) or down (Programming Mode) position.

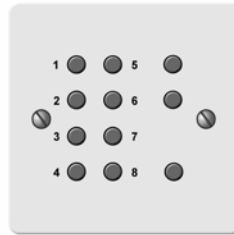
Switching **FlexiDim™** into Programming Mode will turn all the lights on the system on at 50%. Note that switching back to Run Mode will leave the lights in their last position in Programming Mode from which point they can be switch off or changed using the normal Switch Plate operation.

### FlexiDim™ Switch Plates

**FlexiDim™** Switch Plates are available in either 4-Scene or 8-Scene configurations (the picture below shows an 8-Scene Switch Plate). They all feature On/Off and Dimmer Buttons which are designed to operate together like a conventional dimmer switch. Pressing On/Off turns on the main lights in the room, which can then be dimmed. Pressing On/Off again turns off all the room lights.



In addition to the On/Off and Dimming buttons are the Scene buttons (either 4 or 8 depending on which type of Switch plate has been chosen). The Switch Buttons are numbered (but not labelled) as shown below.



**FlexiDim™ Compact** has either one or two Switch Plates per system.

## Terminology

The following explains the most commonly used **FlexiDim™** terms:

### **Lighting Channel (or Lighting Circuit)**

A Channel (or Lighting Channel) comprises one or more lights that are wired together and controlled by **FlexiDim™** as a single entity. An example of this would be four low voltage downlights wired together in a bathroom ceiling. Grouping lights that would always be controlled together in to a single circuit provides an efficient use of dimming equipment. **FlexiDim™ Compact** controls up to 8 Channels and there is no limit to the number of lights that can comprise a Channel (provided that the Channel's rated capacity of 400 W is not exceeded), subject to an overall rating of 2400 W for the system.

### **Scene**

A Scene is a description of the light level for one or more Channels, including the transition time from the current light level to the new light level (fade time). Eight different fade times are available ranging from instantaneous to 10 seconds.

Scenes can be created for any of the (four or) eight Scene buttons on the Switch Plates.

Two examples of Scenes are presented here:

#### **Scene name: "Cooking"**

- Channels: Main Ceiling downlights  
Breakfast Area downlights  
Hob spotlights
- Level: 100% (i.e., fully on)

- Time: 1.5 (i.e., from the current level to off over 1.5 seconds)

**Scene name: “Evening Dinner”**

- Channels: Table pendant
- Level: 50%
- Time: 2 seconds

*(plus...)*

- Channels: Over cupboard uplights
- Level: 25%
- Time: 5 seconds

**Basic Switch Operation**

In order to maintain familiar light switch behaviour, **FlexiDim™** Switch Plates each incorporate three buttons whose default behaviour is as follows:

**On/Off** This switch toggles lights between on and off, in the same manner as a conventional light switch.

**Up** Manually increases the levels on the lights in the same manner as a conventional dimmer switch.

**Down** Manually decreases the levels on the lights in the same manner as a conventional dimmer switch.

Any or all of the Channels can be programmed to be controlled by the On/Off and Dimming buttons.

**Transition (or Fade) Time**

Transition Time is the time taken for a Channel (or Channels) of light to reach the new brightness level.

**FlexiDim™ Compact** offers the choice of 8 different transition times as follows:

- 1 0 seconds (instantaneous)
- 2 0.5 seconds
- 3 1 second
- 4 1.5 seconds
- 5 2 seconds
- 6 2.5 seconds
- 7 5 seconds
- 8 10 seconds

## 'Out of the Box' Functionality

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**FlexiDim™ Compact** is supplied with certain 'factory' settings. These are useful for both the installer and the user, allowing them to check that all of the channels are working (and wired as expected), and that each of them can be dimmed.

In Run Mode, these can be seen using the Switch Plate buttons as follows:

- On/Off
  - ▶ First press (On)  
Switches all Channels on instantaneously
  - ▶ Second press (Off)  
Switches all Channels off with a transition time of 1.5 seconds
- Dim Up / Dim Down  
Dims all the Channels up (or down)  

N.B. You cannot Dim lights up from the Off setting; a light must be already on in order to be Dimmed Up or Down (i.e., you cannot switch lights on using the Dimming Buttons, however, you can switch them off in this manner).
- Scene 1  
Turns all the Channels on at 75% brightness
- Scene 2  
Turns all the Channels on at 50%
- Scene 3  
Turns all the Channels on at 25%
- Scene 4  
Turns all the Channels on at 10%

## 4 On/Off and Dim Up / Dim Down Programming

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Note that this Chapter is only concerned with the On/Off and Manual Dimming elements of the **FlexiDim™ Compact** system and not Scene Programming (covered in Chapter 5).

### Introduction

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With a **FlexiDim™ Compact** lighting control system, it is not necessary for each of the Channels to be controlled in the same way by the On/Off and Dimming Buttons.

For example, in a kitchen there may be 8 Circuits (or Channels) of lighting as follows:

- 1. Main Ceiling downlights
- 2. Breakfast Area downlights
- 3. Over Cupboard uplights
- 4. Under Cupboard downlights
- 5. Hob spotlights
- 6. Alcove downlights
- 7. Breakfast Table pendant
- 8. Back door (external) light

You may decide that whilst the Off function of the On/Off Button should turn off all of the Channels, the On function of the On/Off button will only switch on the Main Ceiling downlights, the Breakfast Area downlights and the Alcove downlights. The remaining Channels will only be turned on via the use of lighting Scenes.

The following steps allow the operation of the On/Off and Manual Dimming buttons to be set for each lighting Channel and Switch Plate.

### Programming

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#### Step 1 Select Programming Mode

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Place the Programming Switch in the Down (Programming Mode) position.

All lights will switch on to 50% brightness.

## Step 2 Program the On/Off Operation

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Press the On/Off button.

**Note** that at any time during On/Off button programming, pressing one of the Scene buttons will return this process to Step 1 without saving any changes.

All the lights will flash.

- If the lights are flashing between 25% and 50%, the Switch is set for Off/On operation.
- If the lights are flashing between 50% and 100%, the Switch is set for On/Off operation.

The difference between On/Off or Off/On operation is explained as follows:

### Off/On operation:

If the lights are at a mid brightness as the result of a Scene being selected, the next press of the On/Off button will result in the Off function. This is similar to standard light switch behaviour such that if the lights are on, the next function of the on/off switch is to turn them off.

### On/Off operation:

If the lights are at a mid brightness as the result of a Scene being selected, the next press of the On/Off button will result in the On function.

Whether you choose On/Off or Off/On operation is purely a matter of choice based on the behaviour you would like to see when the On/Off button is used after a Scene has been selected.

- To change between Off/On and On/Off operation, toggle between the Dim Up and Dim Down buttons:
  - ▶ Press the Dim Up button to change to On/Off operation.
  - ▶ Press the Dim Down button to change to Off/On operation.

Once the desired On/Off or Off/On functionality has been selected, press the On/Off button to move to the next Step of setup.

This selects the first Channel on the system for Transition Time Programming.

### Step 3 'On' and 'Off' Functions, Fade Time and Manual Dimming

Now the following functions are set for each Channel in turn:

- On transition time (or exclude Channel from being switched on by the On/Off button)
- Off transition time (or exclude Channel from being switched off by the On/Off button)
- Enable/Disable Manual Dimming for this Channel

#### 3.1 On Function and Fade On Time

The selected Channel now shows its Fade On time by fading on at the currently selected rate and then switching off abruptly. We are only concerned with the Fade On time at present. If the selected Channel is not changing and is permanently off, it is currently programmed not to be turned on by the On/Off button.

Use the Dim Up and Dim Down buttons to cycle through the different Fade times available. The Dim Up button increases the Fade time and the Dim Down button decreases it.

8 different Fade times are available for selection as follows:

- 1 0 seconds (instantaneous)
- 2 0.5 seconds
- 3 1 second
- 4 1.5 seconds
- 5 2 seconds
- 6 2.5 seconds
- 7 5 seconds
- 8 10 seconds

In addition, the Channel can be programmed not to be turned on by the On/Off button (excluded).

#### Excluding the Channel from the On Function

To exclude the Channel completely from the On function of the Switch Plate, use the Dim Down button to switch the Channel off (keep pressing it until the Channel is switched off). When the Channel is fully off, it is no longer selected to be turned On by the On/Off button (for example, because it is not one of the main lights in the room).

Press the On/Off button when you are happy with the selections covered in this Step and **FlexiDim™** will automatically move on to the next Step.

### 3.2 'Off' Function and Fade Time

The selected Channel now shows its Fade Off time by fading off at the currently selected rate and then switching on abruptly. We are only concerned with the Fade Off time at present. If the selected Channel is not changing and is permanently on, it is currently programmed not to be turned off by the On/Off button.

Press the Dim Up button to increase the time taken for this Channel to turn Off, and press the Dim Down button to decrease the time taken for this Channel to turn Off.

As before, there are 8 different Fade times available, ranging from 0 seconds to 10 seconds, as well as the ability to program the Channel not to be turned off by the On/Off button (excluded).

#### Excluding the Channel from the Off Function

To exclude the Channel completely from the Off function of the Switch Plate, use the Dim Up button to switch the Channel fully on. When the Channel is fully on, it is no longer selected to be turned Off by the On/Off button.

Press the On/Off button when you are happy with the selections covered in this Step, and **FlexiDim™** will automatically move on to the next Step.

### 3.3 Enable / Disable Manual Dimming

The selected Channel can now be enabled or disabled for Manual Dimming (Manual Dimming simply means using the Dim Up and Dim Down buttons – as opposed to preset Scenes - to adjust the brightness of lights).

The Channel will fade on and off continually (if the Channel is not changing, then it is not currently selected for Manual Dimming).

Press the Dim Up button to enable Manual Dimming for this Channel.

Press the Dim Down button to disable Manual Dimming for this channel.

Press the On/Off button when set correctly.

#### Step 4 Repeat Step 3 for the other Channels

---

The next Channel will now be selected and Step 3 (3.1 to 3.3) is repeated for each of the Channels on the **FlexiDim™** system.

When Step 3 has been carried out for all Channels, the changes are saved automatically by **FlexiDim™**, and all the Channels will switch on at 50% brightness to show that this stage of programming is complete.

#### Step 5 Checking On/Off and Manual Dimming Programming

---

When all the lights switch back to 50% (indicating that this stage of programming is complete), it is advisable to check your settings.

Place the Programming Switch on the **FlexiDim™** case in to the Run Mode (Up) position

Test your settings by pressing the On/Off button on the Switch Plate and verify the following:

- All the Channels selected for On should come on when you press the On button, and they should each come on with their chosen Fade times
- All Channels that were enabled for Manual Dimming should change brightness when the Dim up and Dim Down buttons are used
- Pressing the Off button should turn off all the Channels that were selected for Off with their chosen Fade times.

If any of the settings are found to be incorrect or unsatisfactory, they can be easily changed by putting **FlexiDim™** back into Programming Mode and cycling around the steps described above making the required changes.

#### Copying Settings to a Second Switch Plate

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If your **FlexiDim™** system has two Switch Plates, then you can choose to have both of them set up with the same On/Off and Manual Dimming settings, or you can set them each up differently.

To set the second Switch up differently from the first, simply follow each of the Steps 1-5 above for the second Switch Plate.

If both Switches are to have the same On/Off and dimming behaviour, then **FlexiDim™** allows you to copy functionality from one Switch Plate to the other.

- Put **FlexiDim™** into Programming Mode

- Go to the Switch plate that you wish to copy the settings to (the second Switch Plate) ■
- Press and hold the Dim Down button for approximately 15 seconds until all the lights on the system dim down and then come back up to 50% (this indicates that the copy operation has been successful) ■
- Put **FlexiDim™** into Run Mode ■
- You can verify that the settings have copied successfully by testing the On/Off and Dimming buttons on the second Switch Plate ■

### Summary of On/Off and Dimming Programming Steps

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- 1 Switch to Programming Mode
- 2 Select the required On/Off operation
- 3 Set On, Off and Dimming for each Channel in turn
- 4 Check the Settings

## 5 Scene Programming

---

### Step 1 Select Programming Mode

---

Put **FlexiDim™** into Programming Mode (with the Programming Switch in the down position)

All lights will switch on to 50% brightness.

### Step 2 Select the Scene Button

---

Select the Scene Button that you wish to program by pressing it.

Channel 1 now shows its Fade time by fading on and off at the currently selected rate. If the selected Channel is not changing and is permanently off it is currently programmed not to be affected by this Scene.

### Step 3 Set the Channel's Fade Time

---

Use the Dim Up button to increase the Fade time for the selected Channel, and use the Dim Down button to decrease it.

Within a preset Scene, the Channel's Fade On and Fade Off times are the same, as they indicate the time taken for the Channel to reach its preset brightness, regardless of whether this is through increasing (for example from the Off setting) or decreasing (for example, from a brighter Scene) its light level.

8 different Fade times are available for selection as follows:

- 1 0 seconds (instantaneous)
- 2 0.5 seconds
- 3 1 second
- 4 1.5 seconds
- 5 2 seconds
- 6 2.5 seconds
- 7 5 seconds
- 8 10 seconds

In addition, the Channel can be programmed not to be affected by the Scene.

### **Excluding the Channel from the Scene**

To exclude the selected Channel from the Scene, decrease the transition time (using the Dim Down button) until the Channel goes off and stays off. Once off, the Channel is no longer included in the Scene. To re-include it, use the Dim Up button to switch it on and increase to the desired transition time.

Once the Fade times are correctly set, press the On/Off button to move to the brightness setting for the Channel.

### **Step 4 Set the Channel's Brightness**

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The Channel's brightness is very simply set using the Dim Up and Dim Down buttons to achieve the desired light level.

Once the Brightness level is correctly set, press the On/Off button to move to the next Channel.

Note that if a Channel is excluded from a Scene, it is still necessary to press the On/Off button at this stage in order to move on to the next step (**FlexiDim™** will cycle through all the programming steps even for excluded Channels).

### **Step 5 Repeat 3-4 for all Channels**

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Repeat Steps 3 and 4 for all of the other Channels

Once all of the Channels have been programmed for the Scene, the lights will all switch to 50% brightness to show that the programming for this Scene is complete.

### **Test the Scene**

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You can test the Scene by putting **FlexiDim™** into Run Mode (Programming Switch in the up position), and pressing the Scene button on the Switch Plate.

To make any changes, start from Step 1 above, using the On/Off button to skip between each of the programming steps.

### **Quick Reference – Scene Programming**

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- Programming Mode
- Select the Scene Button to program
- Set Channel Fade and Brightness
- Next Channel
- Run Mode, test Scene

## Copy a Scene

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If your **FlexiDim™** system has 2 Switch Plates, it is possible to copy a Scene to a button on your second Switch Plate. You can also copy a Scene to another button on the same Switch Plate.

- Make sure that **FlexiDim™** is in Run Mode.
- Invoke the Scene to be copied by pressing its button on the Switch Plate that it has been set up on.
- Press and hold the Scene button that you wish to save the Scene to (either on the same or the second Switch Plate).
- Whilst holding the required Scene button, press and hold the On/Off button for approximately 10 seconds.
- When the Scene has been copied to the new button, all the lights will switch off and then switch back on to the settings of the Scene you have just copied. This indicates that the copy operation has been successful.

## 6 Programming Hints and Short Cuts

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This section contains a few useful hints and short cuts designed to make the programming of your **FlexiDim™** system quicker and easier.

### Adjusting Scenes in Run Mode

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The brightness of any of the Channels in any Scenes can be adjusted in Run Mode without needing to switch **FlexiDim™** into Programming Mode.

The only thing you will need to know in order to do this is which lights comprise which Channels in your FlexiDim™ system (you will have learned this information during the setup process since the system cycles through each Channel in turn).

#### Adjust the brightness of a Channel within a Scene

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- Ensure **FlexiDim™** is in Run Mode.
- Select the Scene you wish to adjust.
- Press and hold the Scene button (i.e., one of buttons 1 - 8) corresponding to the Channel number that you wish to adjust.
- Use the Dim up or Dim Down buttons to adjust the Channel's brightness (whilst still holding down the Channel button).
- Repeat for any other Channels whose brightness you wish to adjust.

#### Save the Changes

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Changes are saved in the same manner as Copying a Scene (described above)

- Press and hold the Scene button
- Now press and hold the On/Off button for approximately 10 seconds until the lights switch off and then return to the Scene you have saved

### Hints and Tips

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#### Copy and Modify existing Scenes to save time

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When you plan the Scenes for your **FlexiDim™** system, make a note of those Scenes that are similar in terms of the Channels included in them, or the Fade times or the Brightness levels.

Then when programming these similar Scenes copy and modify the first one that you set up rather than starting from scratch each time you program a new Scene.

### **Reset FlexiDim™ to its 'Factory Presets'**

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If at any time you wish to abandon all the settings you have made to FlexiDim™, you can reset the entire system as follows:

- Put FlexiDim™ into Programming Mode
- Press and hold the Dim Up button until for approximately 15 seconds until all the lights dim to 25% and then come back up to 50%
- The system has been reset to its 'out of the box' settings described in Chapter 3.

### **Keep a List of all the Lighting Channels**

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A FlexiDim™ Compact system has up to 8 Channels of lighting, and it is a wise idea to keep a list of the lights that comprise each of the Channels on your system as well as the number of each Channel on the system (1-8).

You can find this information out from the person that installed your system, or through the cycling through of each Channel during setup.

Once you have this list, it is useful for making any changes to Channels with in Scenes as you will need to know the number of a Channel in order to adjust it.

### **Remember Consistent Behaviour during Programming**

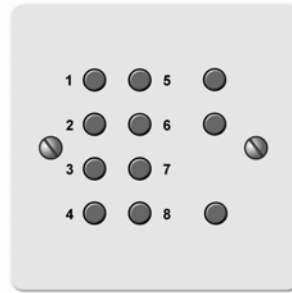
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You will probably have noticed that during programming, the On/Off button is used in a similar manner to a 'return' or 'OK' button between each stage of programming.

Similarly, between each stage of Programming, all the Channels will switch on to 50%, and after a successful Scene copy, the lights dim and then return to the Scene that was copied.

Remembering this sort of consistent behaviour is extremely useful during setup and programming and also helps build confidence in the user when familiar and expected behaviour is encountered as expected.

## A Setting Switch Plate LED Colour and Brightness



### Single Colour LED

To set the brightness of the LED in the switch plate:

- 9** Press and hold buttons 1 and 4 together for 5 seconds. This will put the switch plate LED into programming mode. Release buttons 1 and 4.
- 10** Press button 1 once to commence brightness setting.
- 11** Use the dim up and dim down buttons to set the LED to your preferred brightness.
- 12** Once you have reached the required brightness setting, press the On/Off button once to save.
- 13** To change the brightness at any time, start again at step 1.

### Colour Programmable LED

To set the colour and brightness of the LED in the switch plate:

- 1** Press and hold buttons 1 and 4 together for 5 seconds. This will put the switch plate LED into programming mode. Release buttons 1 and 4.
- 2** Press button 1 for the red colour component and use the dim up and down buttons to adjust the amount of this colour used.
- 3** Press button 2 for the green colour component and use the dim up and down buttons to adjust the amount of this colour used.
- 4** Press button 3 for the blue colour component and use the dim up and down buttons to adjust the amount of this colour used.

- 5 Once you have achieved the required colour and brightness setting, press the On/Off button once to save.
- 6 To change the colour or brightness at any time, start again at step 1. Note that it is not necessary to go through all the colours to make changes; once in programming mode, simply press the button that corresponds to the colour or brightness to be adjusted.

#### *Colour Mixing hints*

Any colour can be created by mixing Red Green and Blue proportions.

The following are some simple hints for LED colour mixing:

- red + green = yellow
- red + blue = magenta / pink
- green + blue = cyan / light blue
- red + green + blue = white

## B In the Event of Failure...

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**FlexiDim™** is designed to be trouble-free to install and use, however there is always the possibility of component failure in any complex piece of electronic equipment.

### Installer

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Before assuming that a **FlexiDim™** system component has failed, check the obvious things such as cabling and power. In particular, the polarity of the A & B connections on the data cables is important. Obviously, the polarity of 12V and 0V is important as a reversed connection here may cause component damage.

The post installation tests, described in the previous sections, will have identified the part of the system that is causing the problem. The order of the tests is important, as some tests rely on the correct functioning of previously tested components.

The most common problem at installation will be blown fuses, probably caused by loose wires or strands of a cable shorting to an adjacent connector or to earth. Spare Channel fuses are supplied with the system.

- Before changing a fuse, double check the wiring.
- In the event of a suspected defective unit, call JCL using the Freephone number on the first page of this guide. Please have the Serial Number (printed on the Dimmer Module) to hand.

Do not be offended by any of the basic questions asked about the nature of the fault; JCL's primary concern is to get the system working in the shortest possible time, and these questions are designed to reach the fastest and simplest resolution to the problem. This process is also designed to avoid any time delays involved in sending out a replacement unit when this may not be necessary.

### User

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There are no user serviceable parts within the **FlexiDim™** system.

- In the event of a problem, call JCL using the Freephone number shown on the first page of this manual. Please have the Serial Number (printed on the Dimmer Module) to hand.

## Defective Unit Replacement Process

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In the event that your **FlexiDim™ Compact** unit does need to be replaced, JCL will dispatch the replacement unit by overnight courier. Wherever possible, this will be arranged with pre-10.30am delivery (although the courier needs to be booked before 5pm to guarantee a pick-up in time for next day delivery).

If no account is held with JCL, a debit or credit card number will be required to secure dispatch of the replacement unit. Note that the card will not be charged, provided that the defective unit is returned to JCL within 10 working days. An address label will be provided so that the defective unit can be returned via any Post Office, and the box that the replacement unit comes in should be re-used for this purpose.

**The FlexiDim™ Dimmer Module should only be replaced by an electrician or other competent person.**

## Changing a bulb

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Before changing a light bulb, or any other device, controlled by the **FlexiDim™** system, it is important for your own safety to switch off the power supply to the Dimmer Module that controls that light (or device).

This is important for two reasons:

- Although the lights may look to be 'off', and even if the Channel has 0% brightness set, the nature of a dimming circuit means that a residual voltage will be present even when there is no bulb present or the bulb is blown.
- Since any light may be controlled from any Switch Plate, it is possible for someone else in the property to operate a light without realising that you are changing a bulb.

Either of the above presents a risk of electric shock if you accidentally touch the live parts of the light fitting whilst changing the bulb.

- If you have any doubts about the location of the Switches controlling the Dimmer Module, please consult your electrician or call JCL for advice.

## C Suggested Cable Suppliers and Part Numbers

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### RS Components ([www.rswww.com](http://www.rswww.com))

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#### 6 Core alarm cable

- 100m reel 365-587
- 500m reel 365-616

#### 32/0.2 cable

- Red 100m reel 356-763
- Black 100m reel 356-729
- Red 500m reel 358-646
- Black 500m reel 358-573

### Maplin Electronics ([www.maplin.co.uk](http://www.maplin.co.uk))

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#### 6 Core alarm cable

- 100m reel PB71N

#### 24/0.2 cable (alternative to 32/0.2)

- Red 100m reel CK78K
- Black 100m reel CK73Q

## D Errors and Omissions

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This section details any errors that need to be attended to during the installation process.

None.