



iTimer

Operating Manual & Installation Guide

MODELS: LS30951iTIM



Create A Scene Outdoors !

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NOTE: Available in iTIMER+ Version Only..

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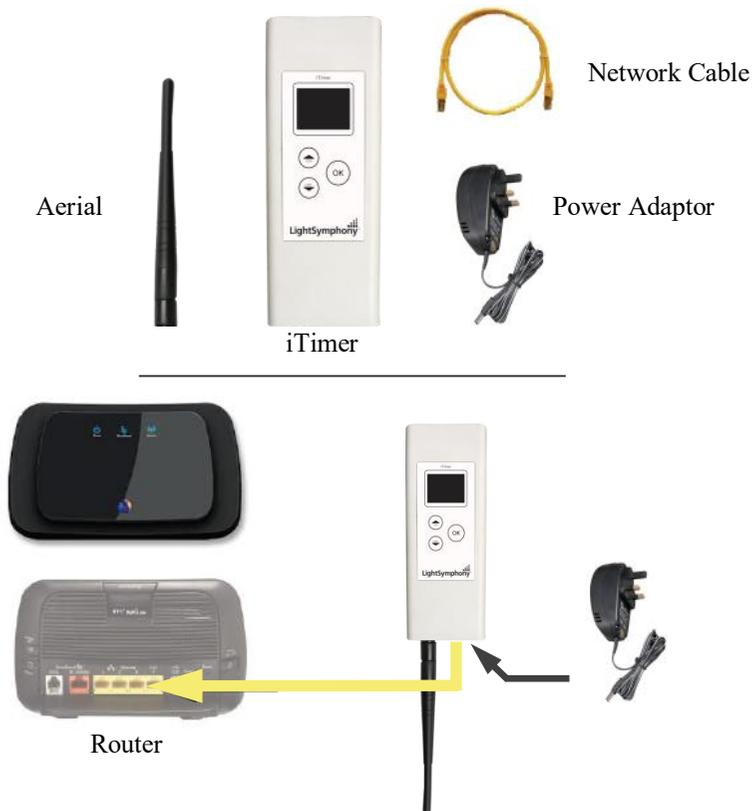
Section 1

Installation

Installation

The Light Symphony iTimer is a wireless device. This means it receives commands from the remote control and is able to send control 'messages' to the lighting control modules in the garden using its antenna only.

Connect the items below together then to a spare port on your router, as shown*.



* The Timer can work without an internet connection but will not auto-reset the clock after a power-cut. An internet connection is essential for the App and Cloud functions.

Section 1

Installation

Location

Locating the iTimer in the best position is important and the diagram below shows why. A key function of the iTimer is to ‘echo’ commands received from the remote control(s) to the garden. This creates a very reliable system because the iTimer and Lighting Control Modules don’t move, which makes the signal-path constant and therefore consistent, meaning it will *always* work!



For the iTimer’s signal to reach the outdoor ‘Lighting Control Modules’, it should be located somewhere that gives good *radio* coverage of the garden. The iTimer is not water-proof and so must be fitted indoors, but try to fit it where it has the best ‘radio-view’ to the garden i.e. with as few obstacles in the way as possible, such as buildings and walls.

Radio signals do pass through most non-metallic materials but the thicker they are the more signal is lost. As a rough guide, each standard cavity-wall will reduce the range by 50% (1000M to 500M). Radio signals do not pass easily through metallic obstacles such as reinforced concrete or garage doors, and significant range will be lost.

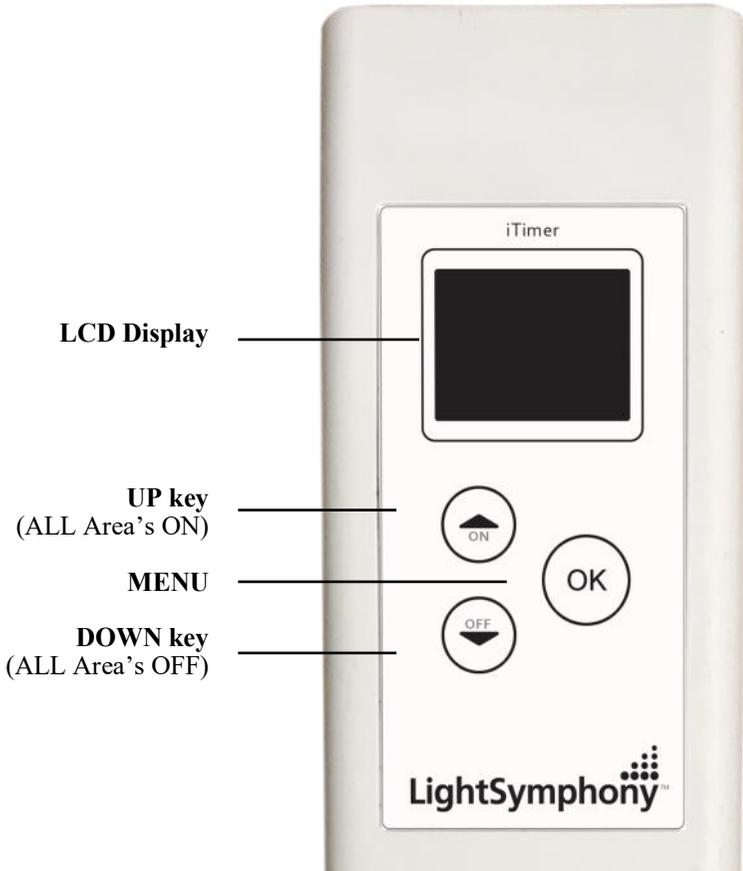
The iTimer does not need day-to-day attention, so it can be fitted in a discrete location. An example is a loft-space, since the roof usually gives a good radio-view of the front and back garden.

If ‘Repeater’ units are included in the installation, please pay special attention to the radio link between the iTimer and the repeaters, as detailed in the instructions for these units.

Section 2

Initial Setup

Front Panel



Section 2

Initial Setup

Navigating The Menu

The iTimer has many functions but all are easily configured from the simple key-pad. The list below shows all the configurable options in the order in which they are displayed;

- | | |
|----|-----------------|
| 1 | Set Time / Date |
| 2 | System Code |
| 3 | Timers (1-9) |
| 4 | PIR Timer |
| 5 | All-Off Timer |
| 6 | Dusk/Dawn Time |
| 7 | Location |
| 8 | Light Show |
| 9 | Repeater |
| 10 | Network |
| 11 | Cloud Server |
| 12 | Web Password |

To enter the menu press the navigation key “OK” once. The display will change to show



The display shows menu line 1 from the list above, use the UP and DOWN keys to move to other menu options and then press “OK” to select. After 30 seconds of no activity the display will return to the clock.

Section 2

Initial Setup

Setting the Time / Date

If the iTimer is connected to the internet the clock will auto-set. If not, it can be set manually as follows;

Display the config menu by pressing the “OK” key once. The display will change to show the options. Press “OK” key again to select the clock setup page..

SETTINGS...

- ▶ Time / Date
Timers
PIR Timer
All off Timer
Dusk / Dawn Timer

Note the flashing cursor by the hour value. Press the “OK” key to select it. The hour value will start to flash to indicate it can be changed. Use the UP and DOWN keys to set the value then press the “OK” key to return to the cursor.

SET TIME & DATE

▶ 00:15

13 Nov 2019

BACK

Step through each setting using Up/Down keys to navigate using the “▶” key until the time and date are set. When complete, navigate to the BACK position and press “OK” key to exit the set-up and return to the main display.

Section 2

Initial Setup

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Dusk / Dawn Time & Location

The iTimer includes an astronomical clock which calculates Dusk and Dawn times throughout the year. This can be useful for setting timers; for example you may like the lighting to switch on (as it gets dark) at dusk, and switch off again at 11pm. In this case, the 'on' time will automatically adjust throughout the year to match seasonal daylight hours.

Dusk and Dawn times vary slightly depending on your location. For example, sunset (dusk), in the winter months, is a few minutes earlier in the north of the country than in the South. Therefore the iTimer can be tailored to a specific location to ensure the dusk and dawn times are calculated as accurately as possible.

By default, the iTimer assumes its location is Birmingham, which will give reasonably accurate results for the whole of the UK (+/-5 minutes).

However, if you wish to improve on this, then navigate to the "Location" menu and select a town nearest to you.

Setting Location

Navigate to the 'Location' menu by pressing the "OK" key once then pressing the DOWN key until the cursor points to 'Location'. Press "OK" to select the page, shown here ...



SET LOCATION
Country: ▶ England
City : Birmingham
BACK

Press "OK" to select and edit the Country and City fields.

Lastly, navigate to BACK and press "OK" to return to the main menu.

Section 2

Initial Setup

Setting Dusk / Dawn Time

Although the iTimer calculates the precise dusk and dawn times for your location, you may prefer your lighting to come on slightly before sunset (dusk) or slightly after. Similarly, you may prefer the lights to go off just after sunrise (dawn) or just before.

You can easily modify the Dusk and Dawn times to suit your preference using the Dusk/Dawn menu.

From the clock page, navigate to the ‘Set Dusk/Dawn’ menu by pressing the “OK” key then pressing the DOWN key 4 times followed by “OK”. The display will change to show ...



ADJUST DUSK / DAWN
Dusk: 16:39 ▶ +0 mins
Dawn: 07:01 + 0mins
BACK

Use the UP / DOWN and OK keys to advance or retard the DUSK and DAWN time by as minutes as required. E.g setting Dusk time to +15minutes will add 15 minutes to the calculated dusk time, thus bringing the lighting on 15mins later. It is possible to adjust the time negatively too, to bring lighting on/off earlier than calculated.



ADJUST DUSK / DAWN
Dusk: 16:39 ▶ +0 mins
Dawn: 07:01 + 0mins
BACK

Section 3

Timer Setup

Introduction

The iTimer contains 9 powerful and independent timers. Each timer may be configured separately to control different aspects of your garden.

The timers can be used to control an individual 'Area' of your garden or the whole garden together (ALL).

It's also possible for several timers to control the *same* lighting 'Area'. For example Timer 1 can be set to switch all lights ON at Dusk and OFF at 11pm. Timer 2 can be set to switch all lights ON (again) at 4am and OFF at Dawn.

Each timer can be configured in one of three modes;

- 'Every Day' - Will operate 7 days a week
- 'Weekends' - Will only operate on Saturday and Sunday
- 'Week Days' - Will only operate Monday – Friday

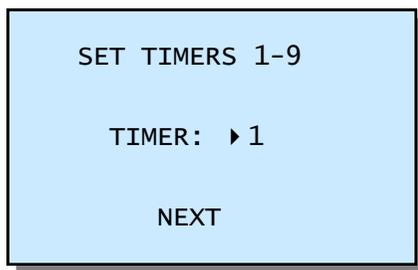
Using this feature, different lighting effects can be programmed for different times of the week.

All 9 timers are set-up in the same way, so only Timer 1 is illustrated here.

Setting Timer 1 (to 9)

Navigate to the 'Timer' menu by pressing the "OK" key once and then press the DOWN key twice then pressing "OK". The display will change to show ...

Select the Timer number you wish to edit (1-9) then navigate to the NEXT and press "OK".



Section 3

Timer Setup

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Setting Timer 1 (to 9) ...continued

First decide if this timer should control the lights 'Everyday' or only on 'Weekdays' or only on 'Weekend' days.

Next set the 'AREA' code this timer controls. e.g. Area 1 is the first button on the App or keyfob. Light Symphony has 29 usable area codes (or zones).

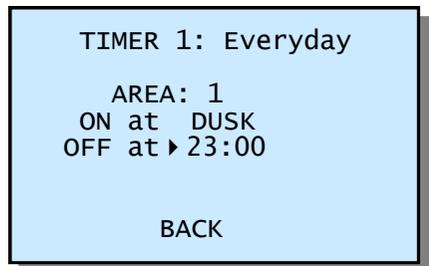
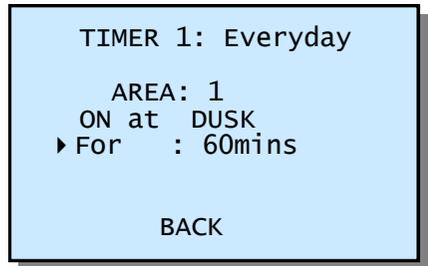
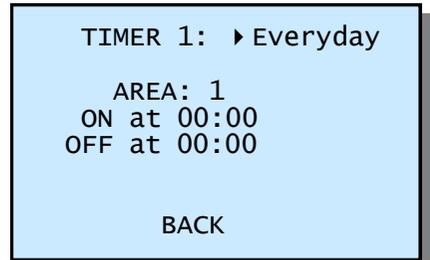
Use the UP/DOWN keys to adjust the 'On-Time' hours. You will notice as you adjust past 00 hours the time changes to show 'DUSK'. Using the Dusk setting will automatically adjust the on-time each day to suit the calculated sunset time.

As you navigate past the on-time, you'll notice the cursor allows the 'Off' field to be changed to 'For'. This is a useful feature for pond pumps and filters that need to run for a set period each day.

Lastly, navigation key to the 'Off-Time' and set to your preference. Again, you will notice as you adjust the hours past 00 the off-time changes to show "DAWN". Using the Dusk setting will automatically adjust the off-time each day to suit the calculated sunrise time. Note, setting the On and Off time the same will disable a timer.

Navigate to BACK field and press "OK" when done to store and exit the menu.

These settings will be stored even when the power is lost.



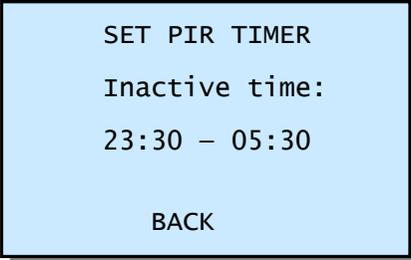
Section 3

Timer Setup

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PIR Timer

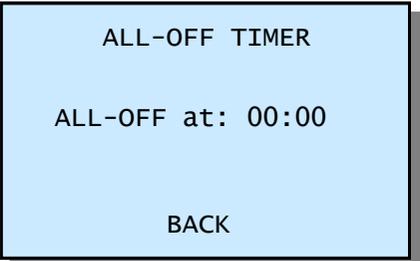
The PIR (motion sensor) Timer is a special timer to be used only in conjunction with Light Symphony's wireless PIRs. When the sensors are configured to use it, this timer will create a 'window' when they are disabled, where only motion outside this window triggers the lighting. This can be useful to reduce nuisance triggering.



```
SET PIR TIMER
Inactive time:
23:30 - 05:30
BACK
```

All-Off Timer

The All-Off Timer is a useful option to ensure any lights left on by accident are always switched off. At the pre-set time a global 'ALL OFF' command is sent.



```
ALL-OFF TIMER
ALL-OFF at: 00:00
BACK
```

Section 4

Colour Light Show

Colour Light Show

The iTimer is the control hub for Light Symphony's Colour Light Show.

The Light Show is for controlling colour RGB (red/green/blue) lights and can wirelessly synchronise the speed, timing and colour of any number of LEDs. To set-up a 'Light Show' the RGB controller(s) must be included in a lighting Area (zone).

For example: to include a RGB lighting controller in say 'Area 8', simply double-tap the RGB controller to switch it on, then press the 'Area 8' key on the remote control to store it. The RGB controller will beep and, if the LEDs were ON at the time, they will now be stored in that Area. (to remove a controller from an Area, double-tap until the LEDs are off then press the Area key).

Next, set the iTimer's Light Show to the same Area. e.g. no. 8 (see page 14).

The Light Show will run whenever Area 8 (or your chosen Area) is switched on. The light show will also be started by the remote control's 'Garden On' button or any timer set to control the same Area.

The light show will gently fade between the range of colours selected, including ALL (16 key colours), WARM (red, orange, yellow etc), COOL (blue, violet, white etc), RGB (red, green and blue only) or PASTEL.

The 'speed' of the light show can be controlled from 3 to 60 second intervals. For example, if the show is set to step every 60 seconds, the colour will change very gently over a 60 second period. Like the slow moving minute-hand on a clock, this is barely perceivable and therefore creates a very subtle and pleasing effect.

Any non-RGB lighting controllers included in the Light Show Area will not be effected by the show but will still switch on and off with the Area.

Section 4

Light Show

Colour Light Show set up

To configure the Light Show to your preference, navigate to the ‘Set Light Show’ menu by pressing the “OK” key then pressing the DOWN key seven times. Press “OK” to select show set-up page;



The Zone (Area) field sets which lights are controlled by the Light Show .e.g. no.8, as described on the previous page.

Choose a 'Speed' in intervals of 3, 5,10, 20, 30 or 60 seconds, which controls how quickly colours fade.

Select between; None (white light), All (any colour), Primes (primary colours only), Warm (reds, oranges etc), Cool (blues, violets etc) or Pastel colours.

Navigate to the BACK field and press “OK” to store and exit

Note; these settings can be adjusted via the smart phone app but the changes will not be stored.

Section 5

App / Cloud Setup

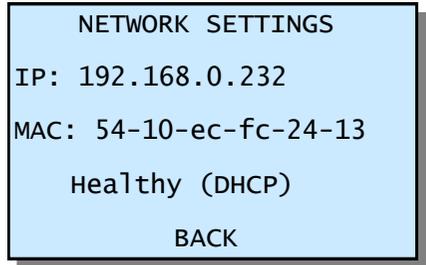
App / Cloud setup

The iTimer also acts as a gateway between the iSymphony App and the lighting controllers in your garden.

Usually no setup is required, this aspect should be plug & play. Where non-standard network configurations or security inhibit the plug&play system, the iTimer and App's settings may be edited manually.

Normally, App and iTimer must be connected to the *same* local WiFi network for the initial setup. When the App is launched it performs a network broadcast (on UDP port 10000), to discover the iTimer's IP address.

If this fails for any reason, the iTimer's IP address can be found by navigating to the Network Settings page;



If necessary, these settings can be set manually via the iTimer's web portal by browsing to its IP address, 192.168.0.232 in the above example

The default password is;

Username: **admin**

Password: **admin**

Do not adjust these settings unless you understand them!

To restore all settings and security to factory default power-on while holding the UP and DOWN keys pressed for 10 seconds.



Section 5

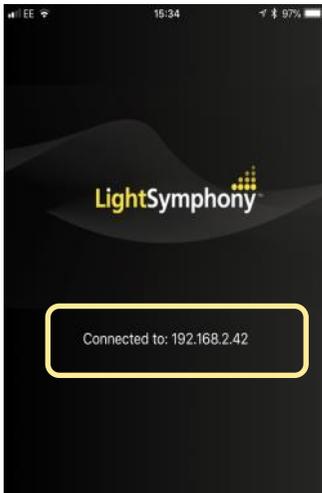
App / Cloud Setup

App / Cloud setup (cont..)

The App should also be setup free but if the iTimer's network settings have been manually adjusted then the App may also need configuring to suit. For Apple phones and tablets, the App's settings are reached from devices settings page. For Android devices it's from within the App. Both allow the IP address of the iTimer to be fixed, if required, which will override the plug&play (broadcast) auto-discovery.



On launch, the App will report the iTimer's IP address on the splash page (see below), which indicates a healthy connection. After this, it's possible to create a Cloud (4/5G) connecting using the 'cloud button, here



Section 5

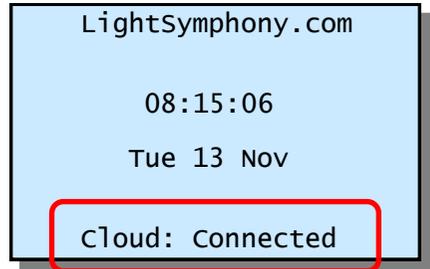
App / Cloud Setup

App / Cloud setup (cont..)

Cloud Connection

If an internet connection is available the iTimer will automatically attempt to connect to Light Symphony's cloud service. The status of this connection is shown on the clock/status page;

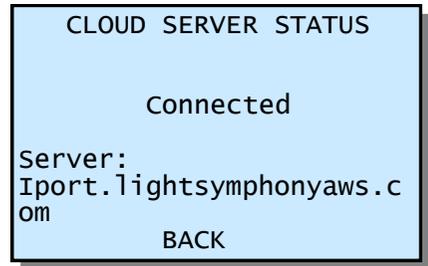
Where an Cloud account has been created using the App, the iTimer will display the status Cloud: 'Registered'



By default, the iTimer will connect to Light Symphony's cloud server at address;

`iport.lightsymphony.com`

This server should remain in service for the lifetime of the product, although no guarantees are implied for this free service. However, if it's details are changed it can be reset in the iTimer's network settings, see page 15 of this manual



Section 5

App / Cloud Setup

Section 6

Interfacing – API

Interface API

The iTimer includes an interface which allows integration to third-party home-automation systems. It includes a built-in simple IP command language, or API. This creates one-way interface, allowing commands to be sent to the iTimer, which are immediately relayed to the lighting, outside.

Any network enabled device (app or other control system) can open a socket and send one of the plain text messages detailed on the next page;

The iTimer's interface is via a 'listening' UDP socket at it's IP address on port 10001.

Multiple devices can be interfaced through one iTimer device provided the socket is not kept 'open'. The client device should open the port, send a command and then close the port immediately.

Section 6

Interfacing – API

Interface API continued

The port expects simple lower-case ASCII messages in the format detailed below;

all_on	Whole garden ON
all_off	Whole garden OFF
area_on x	Switch ON an 'area', zone or scene, depending on what was stored in the receiver
area_off x	Switch ON an 'area', zone or scene, depending on what was stored in the receiver
inten_x_d	'x' = zone number, output intensity (dim level) 'd' = intensity 1-10
start-show	Start the Light Show running (for colour LEDs)
stop_show	Stop the Light Show running
colour_x_c	'x' = zone number, 'c' = colour code 1-16

NOTES:

1. Ensure all messages are terminated with '\r\n' character
2. 'x' is the Zone number (1-29) without preceding '0'
3. 'd' is the intensity (dim) level min '1' = 10% to max '10' = 100%

Example :

Zone 2 ON "area_on 2\r\n" (note the 'space' character before the '2')

Section 7

Security

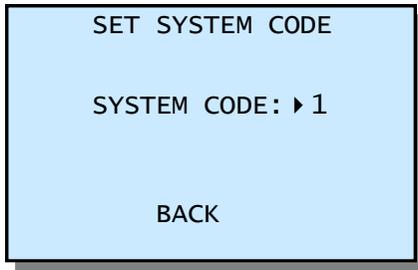
System Code

The Light Symphony system has a potential wireless range of several Kilometres (using repeater units) so it is important to avoid interference with neighbouring systems. For this reason a ‘System Code’ is employed which can be set from 1 to 32. Systems set with different codes will not interfere with each other.

The Lighting Control Modules adopt the System-Code from the remote control that is used to program them. By default the Remote control System-Code is set to 1, but can be changed by following the instructions that came with it.

If the Remote-Control and therefore Lighting Control Module’s System-Code has been changed then the iTimer must be configured to match.

Press the “OK” key to enter the ‘Set System code’ menu. The display will change;



Adjust the System Code as required then navigate to the BACK field to return to the main menu.

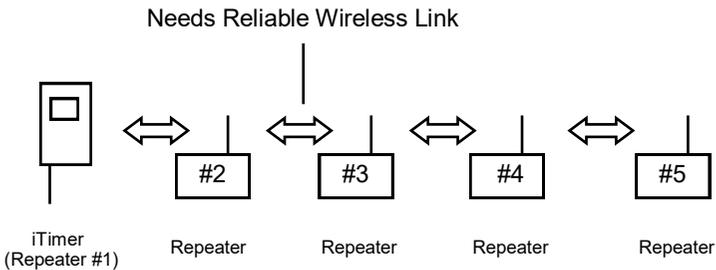
Section 7

Security

Signal Repeaters

Light Symphony allows up to 5 ‘repeaters’ to be used together to greatly increase the wireless range and reliability of the system. Each repeater will ‘echo’ wireless commands sent from any of the transmitter units such as the Remote Control, Wall Switch, PIRs etc. This ensures commands reliably reach all the Lighting Control Modules.

The iTimer includes a repeater and is usually the first repeater in the system (repeater #1). Where more repeaters are added, each must be assigned its own unique number (2 to 5). For guaranteed reliability, each repeater (including the iTimer) must be within radio range of the adjacent numbered repeater.



Failure to build a system with this wireless connectivity may prevent the repeaters from reliably relaying commands.

Extra iTimers may be installed on a system and used as repeaters, but each must be assigned a unique repeater number. The “Set Repeater” menu provides this option.



Section 7

How it works

How it works

Sometimes an understanding of how a system works can greatly assist in learning its abilities.

Light Symphony is a radio (wireless) lighting system. The remote control transmits a wireless signal when a button is pressed, which the outdoor Lighting Control Module receives and in turn switches the lighting circuit.

The remote control sends on/off command-codes from 0 to 9, which are referred to as Areas. Area code 0 is a special case and used as a master on/off for the whole garden. Each Lighting Control Module (receiver) can be configured to respond to Area codes 0 to 9 or to ignore them. This allows groups or zones of circuits to be assigned to each Area key on the remote control. By default, *all* Lighting Control Modules will respond to master on/off commands (Area 0), although this too can be changed.

The Lighting Control Modules allow two different types of system to be created. In a small garden, it makes sense to simply assign each lighting circuit to an Area key on the remote, thereby offering the client full control of each circuit. The 9 (+all) area codes provide up to 9 individual channels of control.

For larger projects, with more than 9 circuits, individual control becomes confusing, so Light Symphony allows circuits to be grouped into zones or scenes. The remote control's area keys can now be used to select sections of the garden (zones) or recall a complete lighting mood (scene). The number of controllable lighting circuits is limited only by the number of Lighting Control Modules in the system.

The system's wireless range is improved by the use of repeaters, which echo any commands received from any of the transmitters. Up to 5 repeaters may be installed each with a range of 1 Kilometre. The repeaters are assigned number codes and will echo received commands in sequence based on this code. To avoid repeaters interfering with each other and to ensure the commands are echoed by all repeaters, it's important that repeaters are each assigned a unique number and are within reliable wireless range of their adjacent numbered unit. For example, repeater #3 must be in good range of #2 and #4. Provided the repeaters are uniquely numbered they cannot interfere with each other, even if all 5 are in very close proximity.

Section 8

Trouble Shooting

<u>Symptom</u>	<u>Cause</u>	<u>Action / Remedy</u>
No lights working	No 'On' command	Lights stay off when power applied until an ON command is sent. Press Garden On using the remote control
	No Power to lights	Check 230V supply to light circuit
	No Power to Indoor Control Unit	Check Indoor Unit, LCD display is on and buttons operate as expected.
	Remote out of 'range'	Test lights without the remote control using the ON button at the iTimer.
Lights changing by themselves	'Light Show' is running Press ALL ON or ALL OFF to stop the show.	
Remote Control Handset 'Dead'	Battery low/missing/wrong	Check the red LED blinks strongly on the remote control when any button is pressed. If not check batteries are good and fitted correctly.
	Out of 'range'*	Maximum range can be under 100m indoors. To check remote, stand next to a Lighting Control Module outside.
	Radio Interference*	Other wireless equipment causing interference such as car/house alarm, police radio, mobile phone.
iPhone not working	Wifi Status or Config menu is displayed	Press "✓" key to exit menu and return to clock display

*NOTE

The remote control can be tested by watching the iTimer display while any button is pressed on the remote control. If the remote 'command' is received, the iTimer will display a message briefly. With two people, the remote's 'range' can be determined using this test.

Section 9

Safety

Safety Warnings

- The Light Symphony system is a 230 Volt system and should be installed by a qualified electrician with up-to-date knowledge of current electrical safety legislation and safe working practices.
- Installation work must be carried out to national electrical wiring regulations.
- The whole system must be powered through a suitably rated earth leakage circuit breaker and fuse / MCB, based on the total lighting load.
- The system operates with a continuous supply to all the lighting control modules and may appear 'dead' even when the supply is 'LIVE', BE CAREFUL and always isolate the supply before working on the system.
- Always isolate the power before replacing blown lamps and ensure the end-user is trained to do the same.
- Read the safety instructions that are supplied with each light fitting or any other product being installed with the system.
- All external cabling must be of 'Concentric' type if above ground.
- Buried cables must be 'Steel Wire Armoured' and at least 450mm (18") below ground.
- BURN HAZARD: Some lamps / light fittings get very hot during normal use. Be careful not to touch hot parts and keep children away.

The installation should be carried out by a qualified electrician and basic electrical knowledge is assumed. If you are not in this category or are unsure about any aspect of the installation work seek the help of a qualified installer – do not take chances, electricity can kill.

Section 10

Specifications

All Models (LS30951iTIM & LS30951iTIM+)

Supply Voltage	9VDC (regulated) 250mA via adaptor
Power Consumption	2W (250mA)
Individual Control	Unlimited lights, power permitting
Control Method	RF Low-power FM radio
Radio	434.075MHz, 25mW, Narrow Band FM
Protocol	Light Symphony
RF Range	1000Meters, line-of-sight
Weight	0.7Kg with PSU
Size	170mm x 65mm x 30mm (exc. Antenna)
Electrical Safety	Low-voltage, isolated device requiring no special electrical precautions or earth
EMC emission/immunity	EN 50081 - 1/ To EN 50082 – 1
Electrical safety	EN 60950 en 60065
Radio	EN 300-220
Ambient temperature	0°C to +40°C (operation)
Compliance	CE

App/Alexa Model Only (LS30951iTIM+)

LAN	10/100M TCP/IP
Control Protocol	Socket UDP, requiring external DHCP
Ports	UDP ports 10000 and 10001 (App) TCP port 9001 (Cloud)



Environmental Information for Customers in the European Union

European Directive 2002/96/EC requires that the equipment bearing this symbol on the product and/or its packaging must not be disposed of with unsorted municipal waste. The symbol indicates that this product should be disposed of separately from regular household waste streams. It is your responsibility to dispose of this and other electric and electronic equipment via designated collection facilities appointed by the government or local authorities. Correct disposal and recycling will help prevent potential negative consequences to the environment and human health. For more detailed information about the disposal of your old equipment, please contact your local authorities, waste disposal service, or the shop where you purchased the product.