

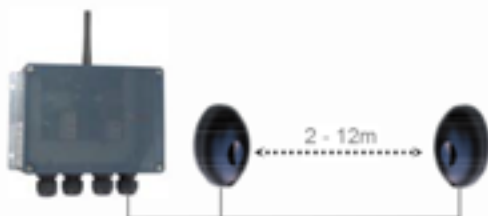
# Light Symphony

## Driveway Beam Sensor and Repeater

### Driveway Beam Sensor and Repeater

#### Features

- IP66 Tough ABS enclosure
- Invisible beam sensor
- Adjustable on-time 1-15mins
- Does not over-ride user's control
- 1000M<sup>+</sup> range
- Signal Booster (repeater)
- Dusk sensor



Part No. LS30820DBS

### Description

The wireless Driveway Sensor & Signal Repeater performs two separate functions;

1. A neat sensor which wirelessly triggers the lighting when the invisible beam is broken, which creates a reliable, nuisance-free, welcome-home effect.
2. The signal repeater echo's commands received from any of Light Symphony's other wireless transmitters. Up to 5 repeaters may be used together to extend Light Symphony's range by 1000 meters radius *each*.

### Specification

Input	-	Active IR invisible beam. Optical range 2 – 12 Meters
Enclosure	-	IP66, UV stable, ABS plastic with non-penetrating wall-mounts
	-	semi-clear lid & neoprene o-ring. Colour RAL7011
RF	-	Signal Repeater using 434.075MHz Narrow Band FM
Coding	-	Security channels 1-32
Power	-	Supply: 230VAC +/-10% 50Hz Standby <1W.
Size	-	Sensors: 50 x 75mm. Controller: 225 x 185 x 85mm
CE Compliance	-	EN 50081 – 1, To EN 50082 – 1
Range	-	1000 metre wireless range .
	-	Note* stated range is line-of-site, obstacles will reduce this.

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### Application Example

Driveway Sensor / Repeater  
Part No. LS3062006S



1KM Wireless Range



### How to use it

Not effected by wind or animals, it provides nuisance-free sensing for driveways or paths, and will wirelessly trigger any number of lighting controllers for a short time when the beam is broken.

Its on-time is adjustable from 1 to 15 minutes and includes a dusk sensor to prevent unwanted triggers in daylight hours. It will *not* interfere with the user's control, meaning that lights that have been switched on manually will not be affected.

Power and lamp savings can be achieved too, for example, by dimming the driveway lights to a lower brightness (e.g. 25%) and using this unit to trigger them to 100%.

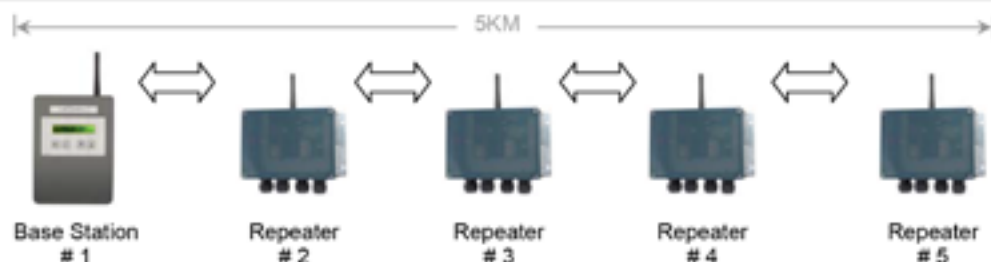
Its 1000 meter\* signal-repeater extends Light Symphony's wireless range as detailed below.

### Signal Repeating

Uniquely, Light Symphony can be scaled to suit almost any sized project with the use of a few signal repeaters. Each signal repeater will add a 1000 meters radius of extra coverage to a system. Up to 5 signal repeaters can be used together to achieve over a 5KM\* range.

Each repeater will echo commands to all other repeaters on the system. This guarantees commands are reliably relayed over the *entire* site, wherever they originate from.

To achieve this and avoid interference, all repeaters are assigned a unique ID number from 1 to 5. For reliable operation, it is important to install repeaters so that adjacent numbered units are within good wireless range of each other, as shown below;



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The unit may also be used to echo all Light Symphony commands, which considerably extends the wireless range and reliability of the system.

### REPEATER - TESTING & SET-UP

1. The adjacent to 'Learn Repeater' button (LED2) shows the Repeater's status. If it is OFF, the repeater function is disabled. If it's on the repeater function is enabled and will blink when a command is received and repeated.
2. For correct operation each repeater must be assigned a unique number from 1 to 5. Where fitted, the Base-Station is always repeater #1. Repeaters must be installed so *adjacently* numbered units are within reliable range of each other. i.e. Repeater #2 must be in reliable range of *both*, repeater #1 (base-station) and repeater #3 etc.
3. To enable the repeater and to program its number, press and hold the 'Learn Repeater No.' button for approx. 5 seconds, until LED2 flashes.
4. Next, press a number key on the remote control from 1 to 5. The unit will beep to acknowledge the code has been stored.

(To disable the repeater function, store repeater number 0 by using the "Garden Off" key on the remote.)

### REPEATER RANGE TEST

The repeater must be in good range of adjacent numbered repeaters (see 2 above) *and* the lighting it is controlling. The range can easily be tested using the 'Learn Repeater No.' button;

Each press of the 'Learn Repeater' button will alternately transmit Garden On, Garden Off commands. Use this test to confirm all Lighting Control Modules respond to the Repeater's on/off commands.

Where fitted, also check that the base-station and other repeaters are also 'seeing' the on/off commands.

The base-station can be checked by watching its LCD display. The display should show "ALL ON/OFF" each time the 'Learn Repeater' button is pressed.

Other repeaters will indicate a command has been received by blinking their Repeater LED2.

### MAINTENANCE

To prevent premature failure of the unit please take note of the following recommendations;

1. Never leave a module outdoors unless the lid is properly secured and the rubber gasket installed.
2. Ensure the 4 lid-screws are properly tightened after installation.
3. A smear of (Silicon) grease around the rubber gasket will protect it and help guarantee a long reliable life.

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### SPECIFICATIONS

Supply	220-240V AC / 50Hz, 2W
Trigger Input	12VDC Driveway Beam Sensor
Sensing Range	2 – 12M
Dusk Sensor	Adjustable level
Timed-On	1-15 Mins
Weather Resistance	IP66
Physical	185 x 122 x 78mm / 0.8Kg
Ambient Temp.	-10°C to +40°C

### INTRODUCTION

The driveway beam-sensor can wirelessly trigger a lighting zone for 1-15 minutes when a person or vehicle interrupts the invisible beam.

The sensor can either be used to switch on a lighting circuit or trigger a circuit to full brightness for a timed period.

The unit is designed for outdoor installation but take note of the safety instructions below.

It also contains a signal-repeater, which echo's wireless commands from other Light Symphony transmitters, which extends their range and reliability.

### SAFETY INSTRUCTIONS

#### **REMEMBER ELECTRICITY CAN KILL IF IN DOUBT CONSULT A QUALIFIED ELECTRICIAN**

1. Mount the unit in a safe position to avoid possible damage by mowers or other garden tools. This unit must not be buried without proper protection.
2. The unit requires connecting to a properly installed electrical supply with an EARTH.
3. The electrical supply must be protected at source by an 'Earth Leakage' circuit breaker and suitably low rated fuse (0.5A per 100W's of load).
4. Where 230V power is routed outside, national wiring regulations must be adhered to. For UK installations rugged 'Concentric' type cable is recommended above ground.
5. Where 230V power cable is buried, 'Steel Wire Armoured' cable must be used. Buried cables must be *at least* 450mm (18") below the surface.
6. BURN HAZARD: Take care not to touch hot lamps and keep children away.
7. Always isolate the electrical supply before removing the cover.

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**Ensure all cables enter the enclosure from below or have a 'drip-loop'.**

Install the Sender and Detector units facing each 2-10 meters apart at least 20cm above the ground.

### TESTING & SET-UP

1. LED3 shows the input status. It will blink when the beam is broken. It will blink briefly if it's daytime and will blink slowly if it's dusk (controlled by LUX setting and ambient light).
2. The unit can be programmed to trigger the Whole Garden (ALL) or an individual Area. The remote control (part no. LS30050WRC) is used to teach the control function. To teach the triggered Area, press and hold the "Learn Trig" button for approx. 5 seconds, until LED3 flashes.
3. Press an 'Area' key on the remote control to teach the required lighting area e.g. Area 1. The unit will beep to acknowledge the function has been stored. (use 'Garden Off' to disable the Trigger input).
4. To test the unit, carefully adjust the LUX setting fully clockwise (light), because the unit only transmits when the ambient light-level is below this setting. Set the TIME adjustment fully anti-clock-wise (1 minute).
5. Breaking the beam or briefly pressing the 'Learn Trig' button will trigger the lighting area for a short time. This allows the range and function to be confirmed.
6. Finally, adjust the LUX and TIME settings to your preference. The Test button will not work if the LUX setting is below the ambient light level. This feature enables the LUX level to be adjusted and tested. Note: the translucent lid will have little effect to the LUX setting.

### **NOTE:**

The Earth screw in the unit bonds all the metal parts to ground including the Steel Wire Armouring (via the metal chassis).

### WELCOME HOME & SAVE POWER

Where dimmable lighting is used, an impressive welcoming feature is possible by setting the driveway lighting at a lower ambient level, (e.g. 20%) and using this sensor to trigger the lighting to 100% when someone arrives. (The low-level lighting can be switched on manually or by the base-station's dusk/dawn timer).

The affect is created by setting the drive-way 'Area' at a low level when configuring the lighting controller. For example;

1. Double-tap the lighting controller's lid to switch on the drive-way lights (will also open its memory for 15 seconds).
2. Press the DIM-DOWN key on the remote control to set the desired low lighting level.
3. Press the 'Area' number button on the remote to store the Area e.g. "9". (Remote button '9' now switches the drive-way lights on & off at the dimmed level)
4. Teach the beam-sensor to trigger Area 9 by pressing and holding the "LEARN TRIG" button for 5 seconds, then pressing button '9' on the remote control. It will beep to confirm it's learnt the code.

If the lights are off, the beam sensor will switch them on. If the lights are already on and at a low level, then the beam sensor will trigger them to full brightness.

The remote control may be used to over-ride the beam sensor at any time.

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### Driveway Beam Sensor and Receiver

The unit must be installed by a qualified electrician working to national Electrical Regulations.

