EuroLight® User Manual

Version A.4.0

Contents

1. Introduction

The SRL New Eurolight® Standard Portable traffic light includes all the benefits of the Radiolight® Portable but with additional features.

- Cableless – up to 20 signals
- Pre-programmable start-up & shut-down mode
- All Red
- All off
- Green Time Extension
- Soft Start
- Detector Nudge on/off program
- 6 Weekday and 6 Weekend max set programs available
- Pre-programmable Shut-Off and Restart for use as part time signals
- Full UTMC control when used with the SRL portable UTMC master
- Dedicated UTMC on-site commissioning engineers
- Security; T-bar locks (Standard), wrap around locks, claw locks, yellow box locks (optional extras)

For extra visibility and to access remote access monitoring, you can also subscribe to SRL Telematics.

SRL Telematics enables a more proactive approach to asset monitoring. You have everything you need to track the location, battery voltage and signal status of your SRL products simply and efficiently.

Key features include:

- Real-time location and functionality information
- Battery level reminders and alerts
- Geofencing security alerts
- Check system status
- GPS location tracking
- Speed tracking

2. Master Front Panel

2.1. Description

The front panel is very similar to the standard system, the main differences are that the green **+** and **-** buttons are before the red ones. The LCD display has 4 lines of text instead of 2 and there is a green **START** button. The systems are also pre-set to VA yes.

2.2. Diagram

2.3. Button Function

Diagram Ref	Button	Function
A	ON/OFF	Switches the controller on or off
B	Signal/Layout	Selection of signal number and system layout
C	Times/VA	Sets the Red, Green times and selects the vehicle detector settings
D	Display	Battery voltage, controller serial number and version, Signal sequence and the signal number and layout
E	All-Red	All signals go to Red
F	Manual	Program sequence stops (freezes)
G	Enter	Saves any changes that you have entered
H	Channel Down	Changes the frequency channel down
I	Channel Up	Changes the frequency channel up
J	Start	Once the system is set and ready, this button starts the signal operation
K	Radio/Test	Slave signal mode to be put in test (temporarily remove)
L	Plus	Plus used for timings etc.
M	Minus	Minus used for timings etc.
N	Channel Display	Displays channel number
O	Battery	Battery indicator (connection only)
P	Indicator	Radio activity (lack of indicator shows a clear channel)
Q	Failure	Indicates signal failure

3. Powering up the system

The green battery light (*Diagram Ref. O*) indicates correct connection of the battery.This however, doesn't give an indication of the actual battery voltage, but only confirms the proper attachment of the power supply voltage.

Manually check all battery voltages are above 13v. Once battery voltages have been confirmed the signal can be switched on by pressing the **On/Off** button. At the master controller the display shows the previously programmed number of the traffic signal and the type of traffic setup.

The other masters (slaves) controller shows what signal number it's been.

4. Selecting Channel Number

Select a clear channel number on the master or slave controller, then select the same channel number on all associated equipment by using the **Channel Up/Channel Down** buttons (*Diagram Ref. H and I*).

5. Setting the Signal number

For one of the controllers to function as the master controller the signal number must be set to "1" using the **+** and **+** buttons. Only after this can the selection for the layout be accessed by pressing the **Signal/Layout** button. The other controllers can be set to signals "2" to "20" in ascending order.

Secondary Head

To access this menu > press **Radio/Test** > use **-/+** navigate to secondary head > press **Enter**.

You can use secondary heads only for traffic phases from signal 2 upwards, the secondary head communicates with its same signal number and not the master it saves the amount of signal numbers used on your set up.

For example:
Your primary head would be set as signal 2 radio and the other head would be signal 2 secondary head.

6. Layout Programs

6.1. Standard Program

2 - Phase | One lane
2 - Phase | One lane with one junction
2 - Phase | Cross roads (parallel)
3 - Phase | Junction (rotating)
3 - Phase | One lane with 2 junctions
4 - Phase | Cross roads (rotating)

Pedestrian 2-Phase | One lane
Pedestrian 3-Phase | One lane

All the above can be made into double head capability.

To do this just press your **Signal/Layout** button a couple of times until it reads “Double head per direction” the change to **YES**. Then **Enter**.

ONCE THE SYSTEM IS SETUP, PLEASE **PRESS START.**

6.2. Standard Program

2 - Phase | One lane with 2 pedestrian crossings
2 - Phase | One lane with one junction and 3 pedestrian crossings
2 - Phase | Crossroads (parallel) with 4 pedestrian crossings
3 - Phase | Junction (rotating) with 3 pedestrian crossings
3 - Phase | One lane with 2 junctions with 4 pedestrian crossings
4 - Phase | Cross roads (rotating) with 4 pedestrian crossings

Pedestrian 2-Phase | One lane
Pedestrian 3-Phase | One lane

All the above can be made into double head capability.

To do this just press your signal/layout button a couple of times until it reads “Double head per direction” the change to **YES**. Then **Enter**.

ONCE THE SYSTEM IS SETUP, PLEASE **PRESS START.**

6.3. Special Systems

This program can be set to as many as 8 phases and up to 20 signals, this is programmed by pressing the signal/layout button between each state and changing the states using the '+' and '-' buttons. The states are:

Number of phases - ?
In phase - Number of signals - ?
In phase signal type - T= Traffic and P= Pedestrian signals

Then **Enter**.

ONCE THE SYSTEM IS SETUP, PLEASE **PRESS START.**

6.4. Multiphase Adaptive Detection System (ADS)

This program utilises the UltraLights ADS detector meaning the controller will adapt the green timings for each phase on each cycle dependent on traffic flow.

Can be set to as many as 4 phases / stages and up to 12 signals.

This program will not incorporate ped phases.

- **Number of Phases - ?**
  Total phases / stages required

- **In Phase - Number of Signals - ?**
  Total signals used in each phase / stage

- **No Part-Time Signals**
  By pressing the first **+** button this will allow setup of the part-time signals program.
  See *page 9* for more details.

- **No Evening Program**
  Like the part-time signals, this allows for a much simpler way of setting to automatically turn off and on for evenings / night, see *page 9* for more details.

- **Max Time Sets**
  For Multiphase ADS, this program is only really required in certain circumstances where there has the potential for a huge change in traffic flow.

Once the system is set up and saved with **Enter**, press **START** and the system will start to the TSRDG standard.

The max green time is set to 60 seconds default but can be raised for larger sites. The green time starts at 30 seconds and increases in 5 second increments and lowers in 1 second increments to find the optimum settings for traffic flow.

7. Mode of Control

7.1. Vehicle Actuation (VA)

Press the **Times/VA** button twice which will bring up the VA page. The following text means the following demands when in special systems.

VA00 | Cyclic vehicle actuation and maximum green time extension (VA = NO)
VA01 | Cyclic vehicle actuation and detector dependant green time extension.
VA02 | Detectors on (VA YES)
VA03 | Continuous green (traffic in this phase will stay green)

The Vehicle Actuation default is always set to **YES** or **VA02**.

7.2. Manual Control

Select Manual mode by pressing the **Manual** button, this will hold on the phase the signals is on when the manual button was pressed. Press the **Green +** button or Green - button on the front panel to change which phase you would like to go green (GRN).

7.3. All Red

Select All Red mode by pressing the **All-Red** button, this will change and hold all signals on All Red until the **All Red** button is pressed again.

8. Radio Thresholds

Depress the **Radio/Test** button and you can then use the **+** and **-** buttons to adjust the radio sensitivity between a low of 100 and a high of 105.

SPEAK TO SRL TECHNICAL TEAM BEFORE AMENDING THESE SETTINGS

9. Part - Time Signals

This allows you to program the signals to go off and on at a specific time. So, for instance the customer would only like the signals off all day and then coming on at 19:00 – 23:00 for night works.

This is set up by pressing the **Signal/Layout** button until you get to "***NO EVENING PROGRAM***" then the **+** button, this takes you to the screen saying, "***evening off – from – to***". You can then set the required time you would like the signals to go off and then back on by using the **+** and **-** buttons above and below the times. Then **Enter** to save.

10. Max Set Times

This function allows you to set up to 6 different max times for each phase for different times of day. So, if you want to use a high max into town in the morning 07:00 – 09:00, Standard timings 09:00 – 15:30, then a high max out of town for evening peak 15:30 – 17:30 then short maxes for overnight this would be a good way to optimise traffic flow.

To start you would need to press the **Signal/Layout** button until you get to ***"INPUT NUMBER OF DAY PROGRAMS***" then plus to number 5 this then gives you 5 max set programs to use then press the **Signals/Layout** button again this will take you to the program start section. Set the time of day you require each plan to become active. ***See below.***

Program 1 is always 00.00

Program	**1**	**2**	**3**	**4**	**5**
Start	00.00	07.00	09.30	15.30	17.00

Press **Signals/Layout** again this will then take to the timings for each program. You can then set the required max by using the **+** and **-** buttons then use the **Signal/Layout** button to move to the next program.
See below. Then press Enter to save.

Program	**Phase 1 (into town)**	**Phase 2 (side road)**	**Phase 3 (out of town)**	**Phase 4 (side road)**
Program 1	15	10	15	10
Program 2	50	15	25	15
Program 3	20	15	20	15
Program 4	20	15	50	15
Program 5	15	10	15	10

Then press **Enter** to save.

11. Start-Up Squence

11.1. Traffic

When the system is set (all traffic LED's are off) and you press the **START** button, the master sends a message to the other signals (finding family number). Once it's found the signals and connects it'll start "off" then all traffic goes to Amber for 3 seconds and then all Red. The system now starts the program sequence.

11.2. Traffic and Pedestrian

When the system is set (all traffic and Peds LED's are off) once you press the **START** button, Pedestrian LED's turn to RED, the master sends a message to the other signals (finding family number). Once it's found the signals, Ped still on RED and traffic "off" then all traffic goes to Amber for 3 seconds and then all Red. The system now starts the program sequence.

12. Useful Commands

Keeping the **START** button held down for 5 seconds, first show what state the system is running in.

Press **START** again shows what state the signals fail to.

First Screen	What state the systems running is
Control (Default)	Signals are running as they should.
All Off	System is running but all LED's are off,
Flashing Amber	System is running but all Amber LED's are flashing (DON'T USE).

For Example,

The system is set up and running on site and about to finish, if you want the LED's to all turn off at the same time to ready to collect, then hold the START button down for 5 seconds the screen show "in state control" press the plus button and change it show the screen shows "in state All Off"

PLEASE CHECK AND MAKE SURE THAT YOU ONLY CHANGE THE STATE OF THE SIGNALS NOT THE FAILURE STATE – FAILURE STATE SHOULD ALWAYS BE SET TO "ALL RED".

13. Failure Log

When the system is running and there's been reports of a failure, but when on site the system is running correctly, you can look at a failure log which shows how many times and which signal has failed.

Keep your finger held on the **On/Off** button and then press the **Display** button once, then release the **on/off** button.

The first screen shows the date and time, press the **Display** button again and the screen shows – signals 1 to 4 and zeros underneath, press **Display** again, and it shows signals 5 to 8 and so on. Under each signal number there's 6 Zero's (000 000). The first 3 zeros mean 'how many times a signal has had loss of communication', the second 3 zero's mean 'how many times the signal has had interference).

14. Error Codes

14.1. Critical Errors (Failure LED)

Sequence Fault	True state of the signal head doesn't match desired state of the controller. Possible causes; split in cable, water in signal head, using OLD style LED's, Old dimming unit installed. Fix error and reset controller.
Red Light Fault	Replace red LED and reset controller.
Battery Empty	Replace batteries.

14.2. Critical Errors (No Failure LED)

Communication Fault	Use the frequency scanner to check if the issue is interference related or distance. Change the frequency channel due to interference or distance problem.

14.2. Critical Errors (No Failure LED)

Green Light Defect	Replace green LED
Amber Light Defect	Replace amber LED
Detector Defect	No detector demand for 60 minutes
Battery Low	Replace battery

15. Record of Changes

The revision history of this document is shown below:

Version	Revision	Author	Description of Changes
A	1	Peter Almond	Internal draft
A	2	Nick Yardley	Preliminary Release
A	3	Nathan Chalder	ADS and Radio Threshold amended
A	4	Adam Shier	Branding Update

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