Document Number		DTN0012	
Title		SLM and ADL	
Approved By		JA	
Revision	Date	Prepared By	Change History
1.0	30/8/2007	AN	

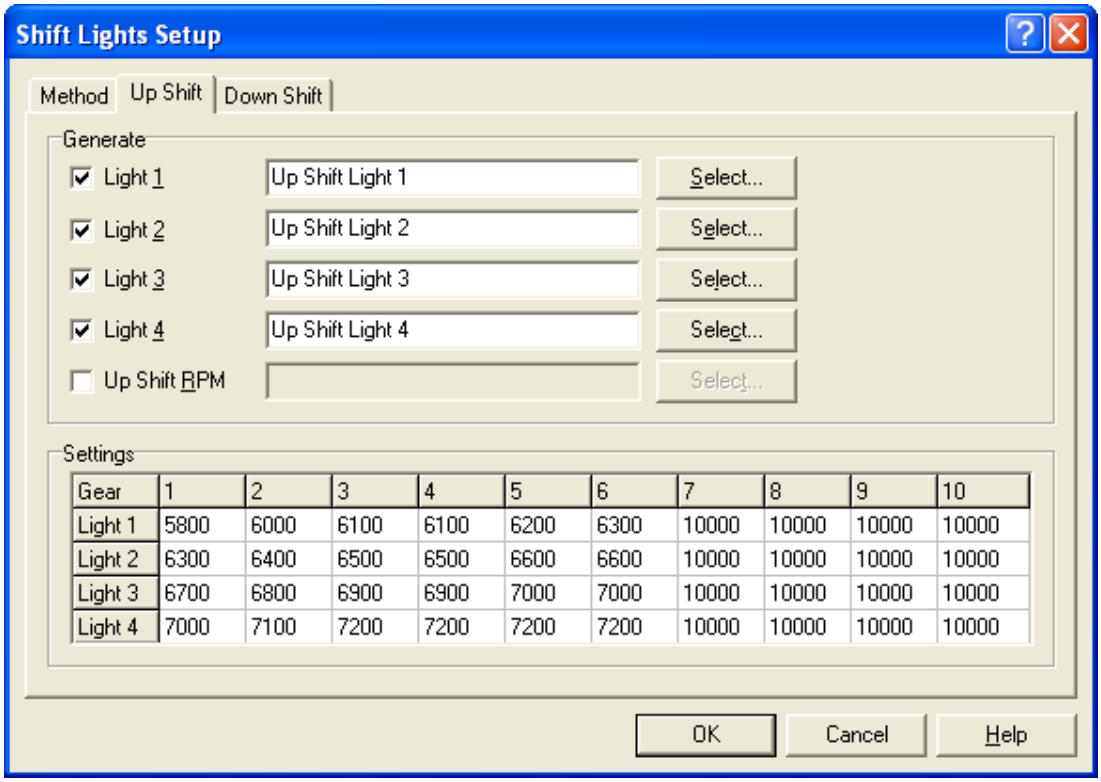
Introduction

This document outlines the method and configuration details required to connect an SLM (Shift Light Module) to an ADL, ie: ADL4 or ADL8. This method will not offer the same level of functionality as the ADL2 or ACL and SLM, but will allow the user to configure a set of Up Shift Lights (simple or gear dependant) and a Warning Light.

Shift points

The Shift Lights are configured as normal under the menu item 'Functions – Shift Lights'. Up to 4 "Up Shift Light" channels can be configured either 'simple' or 'gear dependant'. In this example we will generate 4 Up Shift Light channels that will drive 6 of the SLM's LEDs.

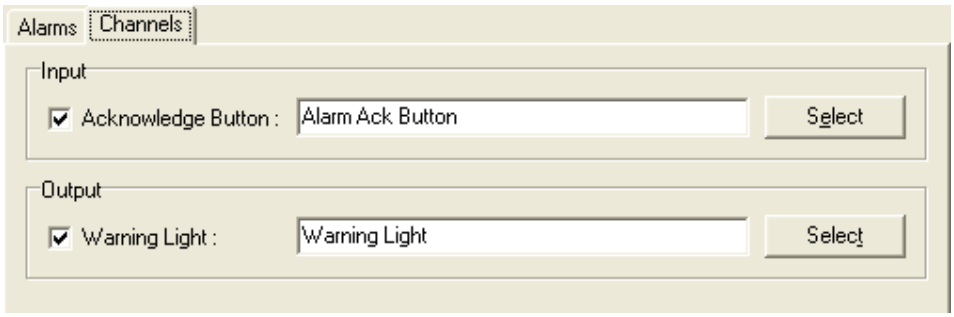
For example:



Gear	1	2	3	4	5	6	7	8	9	10
Light 1	5800	6000	6100	6100	6200	6300	10000	10000	10000	10000
Light 2	6300	6400	6500	6500	6600	6600	10000	10000	10000	10000
Light 3	6700	6800	6900	6900	7000	7000	10000	10000	10000	10000
Light 4	7000	7100	7200	7200	7200	7200	10000	10000	10000	10000

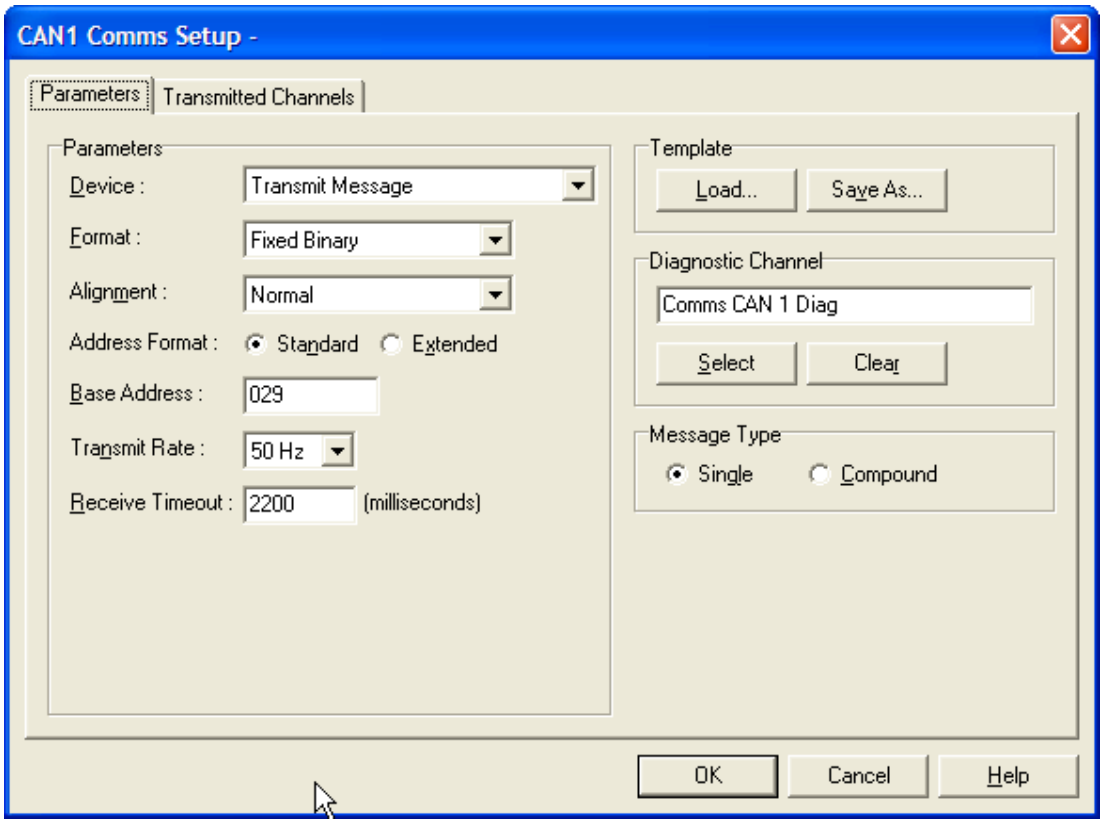
Warning Light

When configuring Warning Alarms, there is an option to generate a channel called 'Warning Light' under 'Functions – Alarms – Channels'. We can use this channel to drive the remaining 2 LEDs.



CAN Communications

The shift light and warning light channels must now be transmitted to the SLM via CAN. Go to 'Inputs – Communications' and select a blank CAN slot to use for transmission. Click on 'Advanced' and configure the Parameters as per the screen shot below:



Next go to the 'Transmitted Channels' tab to add the Up Shift and Warning Light channels. Click on 'Add' and select "Up Shift Light 1" from the list of channels.

Position

The position of the light that is activated is determined by the value of the "Offset" parameter entered when adding a channel. When looking at the SLM, the leftmost LED has an offset of 0, the next 1 and so on up to 7 for the rightmost LED.

The same Up Shift Light can be assigned to more than one position, allowing different pattens to be created. For example, lights activating left to right or from the outside to the inside.

Colour and Intensity

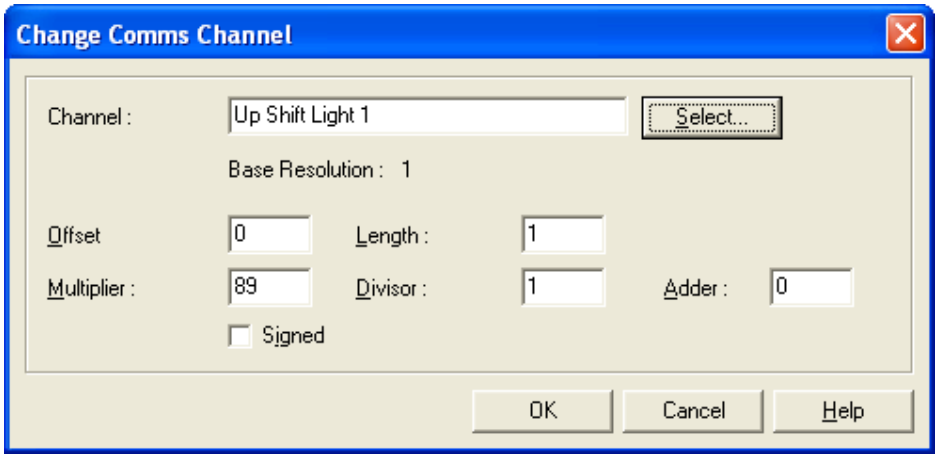
These are determined by the value of the channel that is transmitted to the SLM. The Shift Light and Warning Light channels have a value of '0' when off and '1' when active. To set the colour and intensity of the LED the 'Multiplier' is set to the appropriate value.

Colour	Value
Red	0
Orange	32
Yellow	64
Green	96
Blue	128
Cyan	160
Magenta	192
White	224

The intensity is a value scaled between 0 (off) and 31 (full brightness)

For example, the value for a Blue light at ~80% brightness would be 128 + 25 = 153

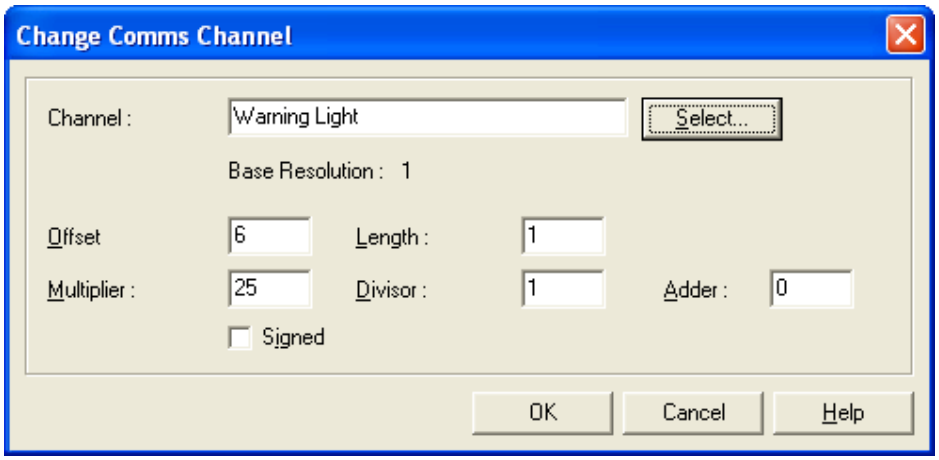
For Up Shift Light 1, set the following values for a bright yellow light:



Then add the channel for Up Shift Light 2 and transmit with an offset of 1 and so on as per the table below:

Channel	Offset	Multiplier	Colour
Up Shift Light 1	0	89	yellow
Up Shift Light 2	1	57	orange
Up Shift Light 3	2	121	green
Up Shift Light 3	3	121	green
Up Shift Light 4	4	153	blue
Up Shift Light 4	5	153	blue
Warning Light	6	25	red
Warning Light	7	25	red

Where the setup for the Warning Light is:



And 'Add' again with an offset of 7.

The final result should look like this: