

Anytronics : Anylight Outstations

Single Button Outstation

1.0 Introduction

The Anylight single button outstation is one of a range of remote outstations manufactured by Anytronics which are compatible with their Anylight interface cards normally fitted inside a dimming pack. The outstations communicate with the interface card over a simple two wire interface and generate the command codes accepted by these interface cards in order to control Channel levels and recall stored Preset scenes.

The single button outstation can be configured to act as a Channel toggle switch, as a Preset switch or to produce a variety of 'Timed On' Periods on individual Channels or Presets.

This outstation can be supplied with LED illumination to enable its location to be determined easily in the dark.

Key Features of single button outstation

- Single patress fitting outstation
- Optional back illuminated facia for nigh time visibility
- Channel / Preset addressing set on panel back
- Communication with Anylight interface card over two wire interface
- Channel / Preset address range 1-64
- Panel can be configured to provide one of the following
 - Channel toggle control (with optional memory feature)
 - Preset control (with optional raise and lower feature)
 - Channel 'Timed on' commands
 - Preset 'Timed on' commands

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2.0 Installation

The outstation can be installed in a standard UK single phase box. Only two low voltage data connections are required back to the A and B buss terminals on an Anylight interface card, and these connections can be made with either polarity. Multiple outstations may be wired in parallel across the A and B buss connections with either polarity. It is important to ensure that one A and one B connection is made from each outstation back to the interface card. Do not wire the outstations in series, or they will not work. A suitably wired outstation is shown in the photo overleaf.

Do not earth or make any other connection to these outstations.

Outstation Addressing

Each outstation can address a single Channel or Preset address from 1-64. The Channel or Preset address is set by using the Address bcd switch and switches 1,2 of the adjacent four way DIL switch. There is potential confusion here between the outstation address setting on the bcd switch of 0-F and the resultant interpreted Channel or Preset addresses at the interface card of 1-16. To try to overcome this, a lookup table is shown below with address setting shown in the left column, and the resultant Channel or Preset addresses shown in the table.

rotary control address setting	Sw1 Off resultant address	Sw1 On resultant address	Sw1 Off resultant address	Sw1 On resultant address
0	1	17	33	49
1	2	18	34	50
2	3	19	35	51
3	4	20	36	52
4	5	21	37	53
5	6	22	38	54
6	7	23	39	55
7	8	24	40	56
8	9	25	41	57
9	10	26	42	58
A	11	27	43	59
B	12	28	44	60
C	13	29	45	61
D	14	30	46	62
E	15	31	47	63
F	16	32	48	64

Note the effect of positions 1 and 2 of the four way DIL switch beside the bcd address switch in adding 16 or 32 to the selected address.

A further layer of address checking takes place at the interface card which might only have a valid Channel address range of 1-8, or 1-32. In this case, addresses are usually 'rolled over' so that an address of 9 is interpreted as an address of 1 in an eight channel interface (Anylight 8). This rollover feature can be disabled at the interface card however (see installation instructions).

3.0 Operation

The mode of operation of the outstation is selected by a combination of DIL switch settings on DIL switches 3 and 4 beside the address bcd switch and on the two DIL switches marked x and y beside the time period bcd switch.

DIL switch 4 selects between Channel or Preset operation. If this switch is off, the outstation will control an individual channel. If this switch is set to on, the outstation will control a Preset which may consist of any number of controlled Channels.

The smaller two way DIL switch labelled with positions y and x control the type of Channel or Preset operation provided by pressing the panel button.

Sw 4	Sw y	Sw x	Panel Button function	Section
Off	Off	Off	Channel Toggle	3.1
Off	On	Off	Channel Timed On /Off	3.2
Off	Off	On	Channel Timed Up/Down	3.3
Off	On	On	Channel Timed Off	3.4
On	Off	Off	Preset control	3.5
On	On	Off	Preset Timed In/Off	3.6
On	Off	On	Preset Timed In/Out	3.7
On	On	On	Preset Timed Off	3.8

Commands described in sections 3.2-3.4 and 3.6-3.8 provide for action over a timed period. The Timed Period for the sent command is set by the right hand bcd rotary control thus :-

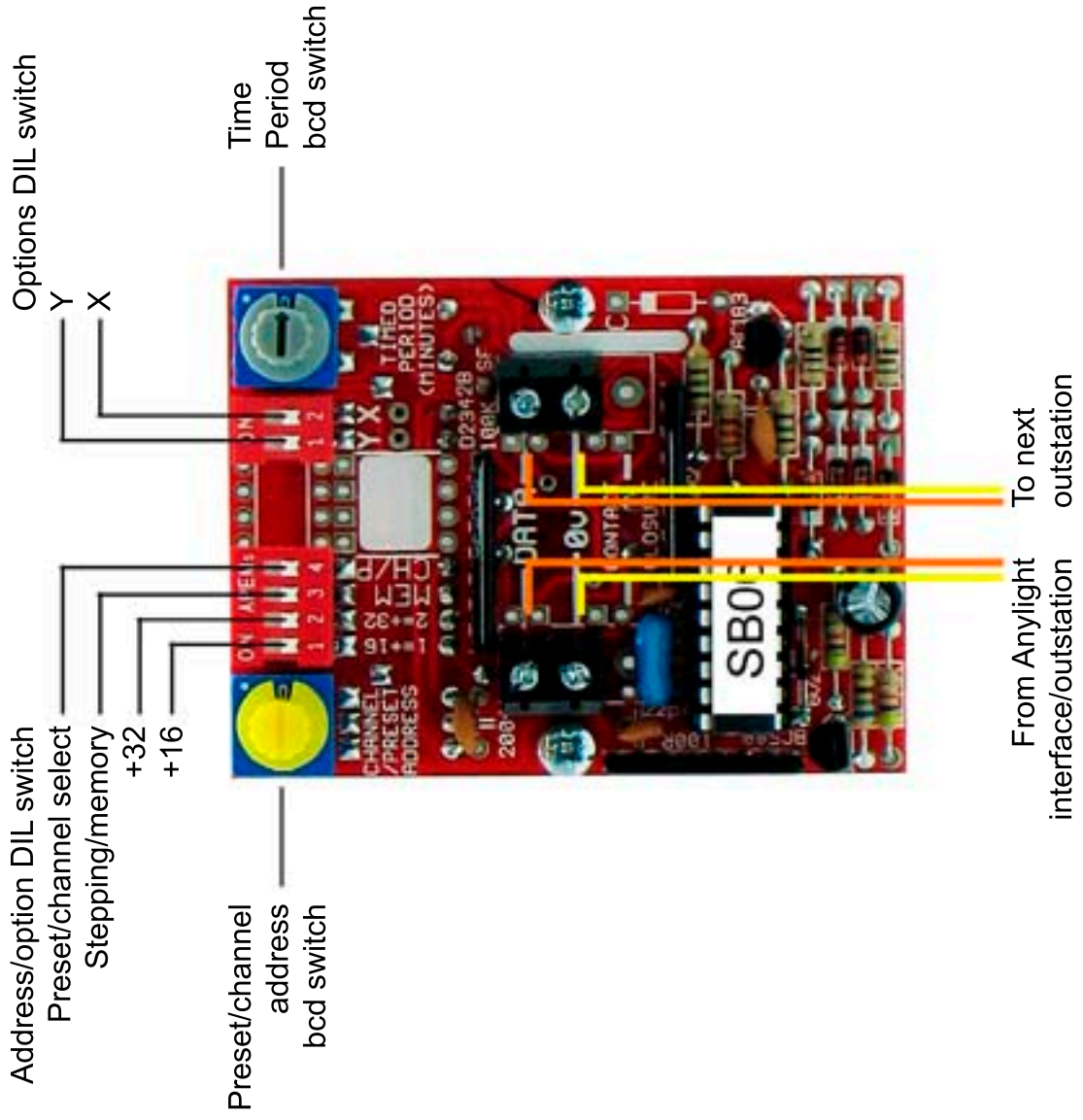
Setting	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
Period (Min)	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15

Timing periods lasting from 0 (immediate action) to 15 minutes start from when the outstation sends the command to the Anylight interface card. Timing periods work on a channel by channel basis and may be extended by the arrival of fresh Timed On period commands for a channel, or cancelled by manual commands arriving from other outstations. Manually commanded step changes in level during timing periods do not affect operation (so the user can adjust channel level), and channels will still obey the stored timer command at the end of the timing period. Manually commanded up/down/on/off changes in channel level will cancel any timing period on that channel.

3.1 Channel Toggle operation

Channel toggle operation matches the functionality available from other Anylight panels with Channel Toggle buttons. The Toggle button can be made to produce different results according to how it is operated, and this can take a little getting used to. At their simplest, the button can be single clicked to alternately fade the channel on and off at the fade rate which is set by the four way DIL switch on the Anylight interface. A double click however will override this fade period setting and make the change happen at the fastest speed. Be aware though that a much slower double click might look like two single presses to the outstation, in which case the Channel may start to turn on, then turn off instead.

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If the Channel toggle button is held down, (rather than pressed and released) the Channel level will be slowly ramped up or down on alternate presses, giving direct control of the Channel dimming level.

For Channels that are set to switching (rather than dimming) operation at the interface card, the Channel level cannot be faded or ramped up or down, and so the corresponding outstation Channel button will only behave like a toggle switch. As a result, whether it is single or double clicked, or held down to ramp the Channel levels, in practice the Channel will only toggle between full on and off.

Channel Memory : DIL switch 3

This feature of remembering the previous channel level is available on all outstation Channel buttons. It is selected by setting position 3 of the DIL switch to ON. As the toggle button operation can be confusing enough on its own, the use of this feature with toggle buttons is not recommended for beginners.

With this feature engaged, a Channel's level can be ramped up or down to the desired illumination as explained above by holding down the outstation button until the required level is reached. Assuming that the user ramps up to the required level, a single click will now fade the level down to zero, but the previous level of illumination will be held in memory. A further single click on the button will reinstate the remembered level at the set fade rate, or a double click at the fastest fade rate. In this way the button can be used to toggle a Channel's level between zero and the memorised level (or else between full on and the memorised level), removing the need to hold down the button to obtain normal illumination levels.

This feature is obviously of no value for channels set to switching only.

3.2 Channel Timed On/Off Period

When the panel button is pressed, the addressed channel is turned full on for the specified period after memorising the initial channel level. Further Timed Channel On Period commands extend the 'On' period. When the timer period expires the channel is turned Off.

A period command of 0 switches the channel Off immediately and clears the timer.

3.3 Channel Timed Up/Down Period

This option duplicates the action of Channel switches with memory, but for a specified period only. If the Channel level is initially zero, when the button is pressed the level ramps up to the Channel's memorised level for the commanded period. If the level is initially above zero, it rises to full on for the commanded period. Further commands received during the timer period extend the period, but don't change the levels further. When the timer period expires the channel returns to its initial level.

If channel timer not running, a Period command of 0 restores the original channel levels. If channel timer already running, will clear Timer and restore channel levels to zero if timer running from command in sections 3.2, 3.4, 3.6 or 3.8, or return channel to original value if from command in section 3.3 or 3.7.

3.4 Conditional Timed Off Channel Period

The Channel level must be above zero at the time the command is received for this command to be accepted. Receipt of the command does not immediately affect the channel level (unless the selected timer period is zero), but when the timer period expires the channel is turned Off. The timer period can be extended by further Timed Channel Period commands.

A Period command of 0 switches channel Off immediately and clears timer.

3.5 Preset switch

Preset control operation matches the functionality available from other Anylight panels with Preset buttons. The Preset button can be made to produce different results according to how it is operated. A single press and release (or 'single click') operation will call up the stored Preset settings for the addressed Preset. The levels corresponding to this Preset will fade in over the period set by the four way DIL selection switch on the Anylight Interface card, ie over 2.5, 5, 10 or 20 seconds.

Alternatively a 'double click' on the button will bring in the Preset levels at the fastest rate. Even if a single click operation has been started, a subsequent 'double click' will override this and bring in the Preset at the highest speed.

If DIL switch 3 is set to on, then pressing and holding a Preset button will ramp the levels of the lights in that Preset alternately up or down for fine adjustment of the light levels on the included channels.

3.6 Preset Timed In/Off Period

When the button is pressed, Channels included in the addressed Preset quickly fade to the memorised Preset levels and remain there for the specified period. Further Timed Preset On Period commands can extend this period. All Channels included in the Preset are switched off at the end of the timer period, regardless of their starting state.

A period command of 0 immediately switches all Preset channel Off and clears timers.

3.7 Preset Timed In/Out Period

Whatever the current channel level, if it is part of the addressed Preset and no timer is running on that channel, it goes to the Preset level for the specified period, then returns to the original level. The period can be extended by fresh presses on the button.

Period command of 0 does nothing if Timers are not running. If Timers are running, values saved for the end of the timer period are output to Preset channels and timers cleared. (ie if timer running from command in sections 3.2, 3.4, 3.6 or 3.8 channels are extinguished. If running from command in section 3.3 or 3.7, returns to the initial level.

3.8 Preset Conditional Timed Off Period

Pushing the button will establish a 'Timed Off Period' for each Channel included in the addressed Preset only if that channel's level is above zero. The Period can be extended on receipt of further (Preset or Channel) commands to keep channel active for longer. Channel is extinguished after period expires.

Used to ensure that Channels included in the Preset which are on will be turned off a set period after the button is pressed.

Period command of 0 switches all included Preset channels Off and clears timers.

4.0 Checking outstation operation

Set all the DIL switches to off, the Timer period to 1 and the bcd address switch for a Channel powering lights which are visible from the outstation. Assuming that the outstation is correctly wired and that the Channel address is correctly set, you should be able to control the lights with the Toggle action button. After studying the tables on page 3, change the DIL switch settings to produce the function you require and test its operation.

Suggestions for troubleshooting Anylight installations are included in the Anylight interface installation notes.