

## Operating and Programming Instructions

Thursday, 25 March 2010

The iLight TC1 Timeclock is used to automate a lighting control system, turning some of the lights on and off according to the advised schedule.

1.0	Setting the Time and Date .....	2
1.1	Setting the time.....	2
1.2	Setting the date .....	2
1.3	Setting the day of the week .....	3
1.4	Reviewing the Astronomical functions.....	3
1.4.1	<i>Review of the site parameters .....</i>	<i>3</i>
1.4.2	<i>Review of the Daylight Saving Time parameters.....</i>	<i>4</i>
2.0	Timeclock Operation.....	5
2.1	Programming or Modifying Events .....	5
2.1.1	<i>Option "A" - Timed Events.....</i>	<i>6</i>
2.1.2	<i>Option "B" – Astronomical Events.....</i>	<i>7</i>
2.1.3	<i>Day or Date specific Events.....</i>	<i>7</i>
2.1.4	<i>Event Function .....</i>	<i>9</i>
3.0	Using the Timeclock to Select and Modify Scenes.....	11
3.1	Using the Timeclock to select scenes.....	11
3.2	Using the Timeclock to modify scenes .....	12



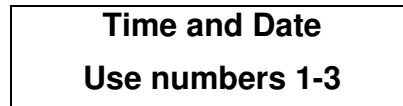
During normal operation the display on the timeclock will indicate the current time and date as shown below.



At any time whilst configuring the timeclock, pressing the ESC button several times will revert to this normal running screen. The timeclock will also revert to this normal running screen if no buttons have been pressed within 30 seconds.

## 1.0 Setting the Time and Date

From the normal running screen press “1” on the keypad. The display will change to the following



### 1.1 Setting the time

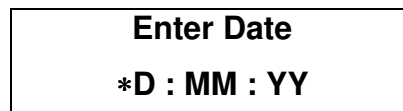
Press “1” on the keypad. The screen will change to that shown below.



Using the keypad enter the current time followed by “ent”. All six digits of the current time must be entered. Only when the “ent” button is pressed does the time entered become the clock time.

### 1.2 Setting the date

Press “2” on the keypad, the screen will change to that shown below.



Using the keypad enter the current date followed by “ent”. All six digits of the date must be entered. Only when the “ent” button is pressed does the date entered become the clock date.

## 1.3 Setting the day of the week

The clock does not automatically calculate the day for the date entered so it is necessary to ensure the day name for the date is correct.

Press “3” on the keypad, the screen will change to that shown below.

<p style="text-align: center;"><b>Enter Day</b> <b>0= Sun    6= Sat</b></p>
---

Using the keypad press a number for the current day of the week where 0 = Sunday, 1 = Monday, 2 = Tuesday, 3 = Wednesday, 4 = Thursday, 5 = Friday and 6 = Saturday

Once selected the screen will change to show the selection, you can press another numbered button if your first selection was not correct. Press “ent” to confirm the selection and return to the normal running screen.

## 1.4 Reviewing the Astronomical functions

These settings will normally have been configured at time of commissioning and should not be changed. This function can be used to verify the time of Dawn and Dusk for Astronomically timed events.

### 1.4.1 Review of the site parameters

From the normal running screen press “4” on the keypad. The display will change to the following

<p style="text-align: center;"><b>Coordinates / DST</b> <b>Use numbers 1 – 2</b></p>
--

Press “1” on the keypad

<p style="text-align: center;"><b>Latitud:N+053.80</b> <b>A for (N+) or (S-)</b></p>
--

Use the keypad to enter you latitude and then use “**A**” to select North or South before pressing “**ent**” to advance to the next screen

**Longt/d:W-002.92**  
**A for (E+) or (W-)**

Use the keypad to enter you longitude and then use “**A**” to select East or West before pressing “**ent**” to advance to the next screen

**Hr Offset: +00**  
**A for +ve or -ve**

Use the keypad to enter the difference between you location and GMT, using “**A**” to select ahead or behind GMT before pressing “**ent**” to advance to the next screen which shows you today’s Dawn time

**Dawn**            **hh:mm**  
**06:47**

Press “**ent**” to show today’s Dusk time

**Dusk**            **hh:mm**  
**19:44**

Press “**ent**” to return to the normal running screen

## ***1.4.2 Review of the Daylight Saving Time parameters***

From the normal running screen press “**4**” on the keypad. The display will change to the following

**Coordinates / DST**  
**Use numbers 1 – 2**

Press “**2**” on the keypad

**DST**  
**Press Enter**

Press “ent” on the keypad

**Enter DST start**  
**dd : mm = 30:03**

Note that on this date at one o'clock in the morning, the time will jump to two o'clock therefore any timed events between these times will not occur.

Press “ent” on the keypad

**Enter DST end**  
**dd : mm = 26:10**

Note that on this date at two o'clock in the morning, the time will jump back to one o'clock therefore any timed events between these times will occur twice.

Press “ent” on the keypad to return to the normal running screen.

## 2.0 Timeclock Operation

### 2.1 Programming or Modifying Events

The Timeclock is configured with a maximum of 255 Events that the device will action at pre-determined times, usually scene selection messages although they may include channel control messages or sequence control messages. An event can be programmed to occur daily, on a specific date only, or on selected days of the week. Event times can be absolute or relative to dawn or dusk. Un-used events will either be set to have No Action or set as Disabled.

Before attempting to make any changes to the Timeclock's programmed events it is important to be familiar with the configuration for your particular system. You should refer to the tables of Area and Scene information contained in Section 10 at the end of this manual

From the Normal running screen press “3” on the keypad.

**Events**  
**Press 1 to edit**

Then press “1” to continue

**Edit Events**  
**A or B to scroll**

Select the event to edit using the “A” and “B” scroll buttons. The “A” button allows counting up the events and “B” button allows counting down through the events.

The character that appears before the event number indicates if the event is Timed (T) or Astronomical (A)

When the event you wish to edit is reached press “ent”.

**A : Edit Time**  
**B : Dawn / Dusk**

You need to select if your event will be at a specific time or relative to Dawn or Dusk by pressing “A” or “B” on the keypad

## 2.1.1 Option “A” - Timed Events

The current time for the event will be shown on the screen.

**Enter Time**  
**14:05:00**

If the time is correct press “ent” to move onto the next screen or using the keypad modify the event time followed by “ent”. All six digits of the time must be entered.

**Enter Date**  
**01:01:01**

It is only necessary to modify the default date shown if the event is to start on a specific date in the future or occur on a specific date in the future.

If this is the case enter all six digits of the future date and press “ent” else just press “ent” only to move to the next screen as shown in Section 2.1.3.

## 2.1.2 Option “B” – Astronomical Events

The screen will now show:

**A: Dawn**  
**B: Dusk**

You need to select if your event will action around Dawn or Dusk by pressing “A” or “B” on the keypad, for example “A” for Dawn

**Dawn Time Offset**  
**A After B Before**

This is to select if the event will happen “A” after dawn or “B” before dawn, for example “A” After dawn

**Dawn Time Offset**  
**+ 00 hr 00 min**

Use the keypad to enter the hours and minutes, the time will scroll across so enter the hours first followed by the minutes, and press “ent” to confirm the time.

**Enter Date**  
**01:01:01**

It is only necessary to modify the default date shown if the event is to start on a specific date in the future or occur on a specific date in the future.

If this is the case enter all six digits of the future date and press “ent” else just press “ent” only to move to the next screen.

## 2.1.3 Day or Date specific Events

**Exact Date ? Y**  
**Press YES = 1 No = 0**

If the event is to occur only on a specific date and time in the future select “1” for Yes otherwise select “0” for No. Press “ent” after making your selection.

If you selected “No” the next screen will ask if the event is to occur at the same time every day or only on specific days (for example only on weekends).

**Every Day ? N**  
**Press YES = 1 No = 0**

If the event is to occur only on specific days select “0” for No otherwise select “1” for Yes. Press “ent” after making your selection.

If you selected “No” the next screen will ask you to select which days the event should happen on.

**SuMoTuWeThFrSa**  
**Y N N N N Y**

The “Y” or “N” under each day indicate the days on which the event will be actioned. Use the scroll “A” and “B” buttons to move between the days and the “1” and “0” buttons to change between “Y” and “N”

Once you have selected the days you wish this event to trigger on, press “ent” to move onto the next screen.

Whichever day or date options you select, the next screen requests if the event should be Enabled or Disabled. An enabled event will continue to be actioned as programmed until it is disabled. A disabled event will not trigger until it is re-enabled.

If the event is already enabled the screen will show as below,

**Event Enabled**  
**Press 0 Disable**

...or if already disabled

**Event Disabled**  
**Press 1 Enable**

Toggle between Enabled and Disabled by pressing “1” or “0” then press “ent” after making your selection.



## 2.1.4 Event Function

Having set the time / day / date of the event, the next step is to set the actual action that will occur at the programmed time.

**ACTION CHANGE? N**  
**Select Scene**

The current type of action of the event is shown on the second line of the display. The options available are:

- No Action
- Select Scene
- Set Channel to Level
- Start Sequence\*
- Stop Sequence\*
- Pause Sequence\*

\* Control of Sequences requires specific knowledge of the sequences programmed into the Timeclock (if any) and can only be entered using a computer running the iCANedit software.

Press “1” on the keypad followed by “ent” if you wish to change the action type otherwise press “ent” to continue.

Use the “A” and “B” buttons to scroll through the available action options then press “ent” to confirm the action.

If the action is not to be changed then with the screen showing:

**ACTION CHANGE? N**  
**Select Scene**

...press “ent” and go to Step 6.

If you have chosen to change the Action. Depending on the Action required different parameters have to be entered.

Selection	Parameters to enter	
No Action	None	
Select Scene	Area No	Range 0 to 255
Set Chan Level	Area No	Range 0 to 255
	Channel	Range 0 to 65535
Start Sequence*	Sequence No	Range 1 to 8
	1st Action	
Pause Sequence*	Sequence No	Range 1 to 8
Stop Sequence*	Sequence No	Range 1 to 8

\*Sequences can only be entered into the Timeclock using a computer.

Having selected to view, change action type or modify the parameters of the action the screen will show:

**A or B to scroll**  
**Select Scene**

Note that the second line will display the current action programmed for that event. If you wish to retain the existing action type and view or modify the parameters only press **"ent"**.

If you wish to change the action type use the **"A"** or **"B"** buttons on the keypad to move to the action type required. Once the action shows on the second line of the screen press **"ent"**.

*Step 7* Modify the parameters of the action by entering the required numbers. Move between parameters using the **"ent"** button.

Once all the parameters have been entered the screen will display **'Event Saved'**/ This indicates that the event has been saved to the Timeclock memory.

Press **"esc"** to return to the Normal running Screen.

**iLight**  
**22:05 Thu 22 Nov**

## 3.0 Using the Timeclock to Select and Modify Scenes

These are powerful functions and should be used carefully. To use these functions it is important to know the 'Area Number' for the area to be controlled. The timeclock will allow the selection of scenes with an area number of zero, this is a global message which effectively means all areas. Additionally, the timeclock will also allow the selection of scene zero that is the OFF scene (all channels at 0%). The selection of Area 0 and Scene 0 will turn every channel of the lighting control system to OFF!!!!

### 3.1 Using the Timeclock to select scenes

From the normal running screen press "2" on the keypad to display the screen shown below.

**Scenes**  
**Use numbers 1 – 2**

Press "1" to select a scene (or "2" to modify a scene, see section 3.2)

**Scene Select**  
**Seg 00\* Area 000**

Except on very large systems the Seg (Network Segment) value should be left as 000. To leave this as 000 press the "ent" button.

If, for example, it was required to send a scene selection message to Area 12 enter 12 using the keypad.

**Scene Select**  
**Seg 000 Area 012**

Then press "ent"

Now enter a Scene number and Fade time. For Scene 3 with a Fade Time of 2 seconds enter a 3 on the keypad followed by "ent" then a fade time value (see Fade Time Value to Time table in section 10 of this manual)

**Scene Select**  
**Scene 003 Fa 060**

To finally select the scene, press "ent" which will display the message

**SCENE SELECTED**

Press "ent" to return to the Scenes screen to enable another scene message to be sent or "esc" to return to the normal running screen.

## 3.2 Using the Timeclock to modify scenes

If you are uncertain of the scene number you wish to modify, select the scene using the procedure described in Section 2.2.5 to ascertain the correct scene number.

From the normal running screen, pressing button 2 will show:

<p style="text-align: center;"><b>Scenes</b> <b>Use numbers 1 – 2</b></p>
---

Press “2” to continue or “esc” to cancel. The screen will display the screen below.

<p style="text-align: center;"><b>Edit Scene</b> <b>Press Enter</b></p>
---

Press “ent” to allow entry of the Area Number in which the scene to be modified resides.

<p><b>Area :</b>           <b>001</b></p> <p><b>Channel:</b>       <b>00001</b></p>
---

Enter the area number followed by “ent”, then enter the channel number that you wish to initially modify. The action of entering the channel number will take you to the next screen. It is whilst this screen is displayed that the level of the channel can be changed.

<p><b>Channel:</b>       <b>023</b></p> <p><b>Change Level:</b> &lt; &gt;</p>
---

Use the “A” and “B” scroll buttons to modify the level of the selected channel. “A” will raise the level by 5% and “B” will decrease the level by 5%.

Note that you must modify the level of a channel before being able to proceed.

To modify the level of another channel in the same Area, enter the number using the keypad. Modify the level using the “A” and “B” scroll buttons.

Once all the level changes have been made press “ent”.

**Save to current**  
**Scene Yes=1 No=0**

You now have the option to save changes to the last Scene selected before changes were made, or to another Scene.

Selecting “1” will save the changes to the last selected scene and display the message

**SCENE SAVED**

Selecting “2” will display a screen into which you may enter another Scene number.

**Save to Scene**  
**Number            000**

Enter a Scene number in the range 1 to 128 followed by “ent”. This will cause the confirmation screen to be displayed:

**SCENE SAVED**

Press “esc” to return to the normal running screen.

## Fade Time Value to Time Table

Fadetime Value	Time
0	0
25	0.5 sec
50	1 sec
60	2 sec
70	3 sec
80	4 sec
90	5 sec
100	6 sec
110	7 sec
120	8 sec
130	9 sec
140	10 sec
150	20 sec
160	30 sec
170	40 sec
180	50 sec
190	1 min
191	2 min
192	3 min
193	4 min
194	5 min
195	6 min
196	7 min
197	8 min
198	9 min
199	10 min

Fadetime Value	Time
200	11 min
201	12 min
202	13 min
203	14 min
204	15 min
205	16 min
206	17 min
207	18 min
208	19 min
209	20 min
210	21 min
215	26 min
220	31 min
225	36 min
230	41 min
235	46 min
240	51 min
245	56 min
250	61 min
255	66 min







## Timeclock Event Details

Event	Action	Days	Time
e.g.	Example Area 3 Scene 5 Fade 10	S M T W T F S	18:00
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
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