

Raytec HTTP Command Creator User Guide

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Version	Date	Who	What
1.0	22/01/2018	dnolan	Written
1.1	27/05/2020	dnolan	Added volts, ledrefv and ledstrv to status interface <i>Parameter</i> . Added <i>Index</i> to status interface.
2.0	23/02/2023	dnolan	Updates for port, HTTPS and shortcuts

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1 Introduction

The Raytec HTTP Command Creator is a tool that simplifies the process of creating a HTTP command to send to IP lamps to perform an action.

The tool is intended to replace the large HTTP API user guide and act as an interactive user guide.

The intended use, and motivation behind the Raytec HTTP Command Creator, is to provide the user with a means of creating and testing a HTTP command before exporting it to use it as part of another system.

The general workflow anticipated is as follows:

1. Update *Lamp Information* section to reflect settings of the lamp
2. Select interface and one or more parameters to build the HTTP command
3. *Send* the command to the lamp to test the behaviour is as intended
4. *Copy* the command to use it in another system.

2 System Requirements

2.1 Pre-requisites

- Windows 10 or Windows 11
- .NET framework 4.7.1

Ensure that your lamps are in **HTTP** mode or **HTTP + local** mode. If you plan on using the *group* parameter on the *Power* or *Deter* interfaces, then the lamps must be in **HTTP + local** mode for this to work.

As of Vario2 IPPoE v2.5.3 and Vario2 Hybrid IPPoE v3.5.3, the status interface can be used in **Local** mode.

If the firmware on your lamp matches or is newer than those listed below, then you can use HTTPS for more secure commands.

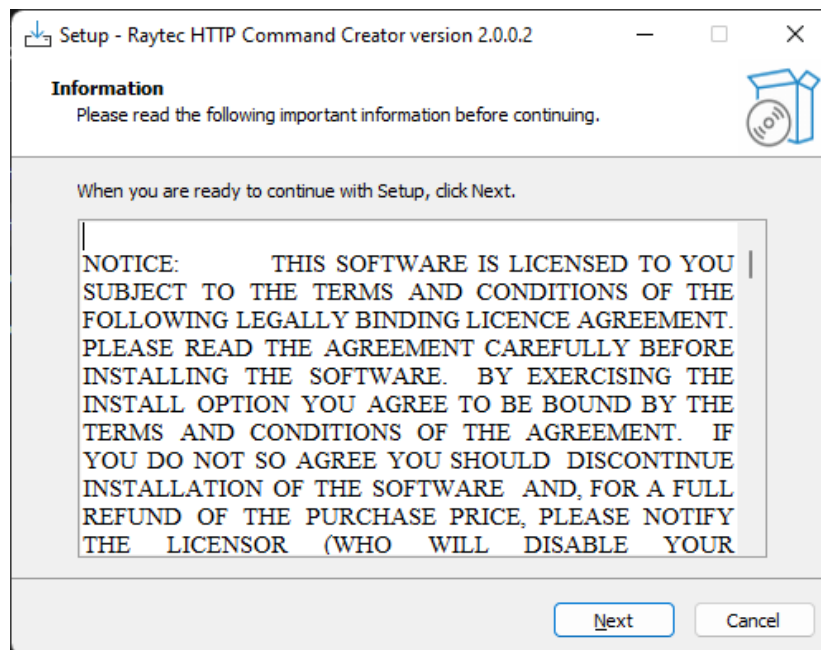
Lamp	Firmware
Vario2 IPPoE	v2.7.1
Vario2 Hybrid IPPoE	v3.6.9
Vario2 16 IPPoE	v6.2.0
Vario2 Hybrid 16 IPPoE	v7.2.0

Warning: If you opt to use HTTPS, ensure you have a valid HTTPS certificate installed on the lamp. Please see the *Raytec HTTPS Setup Guide* included with this installation package for guidance on how to do this.

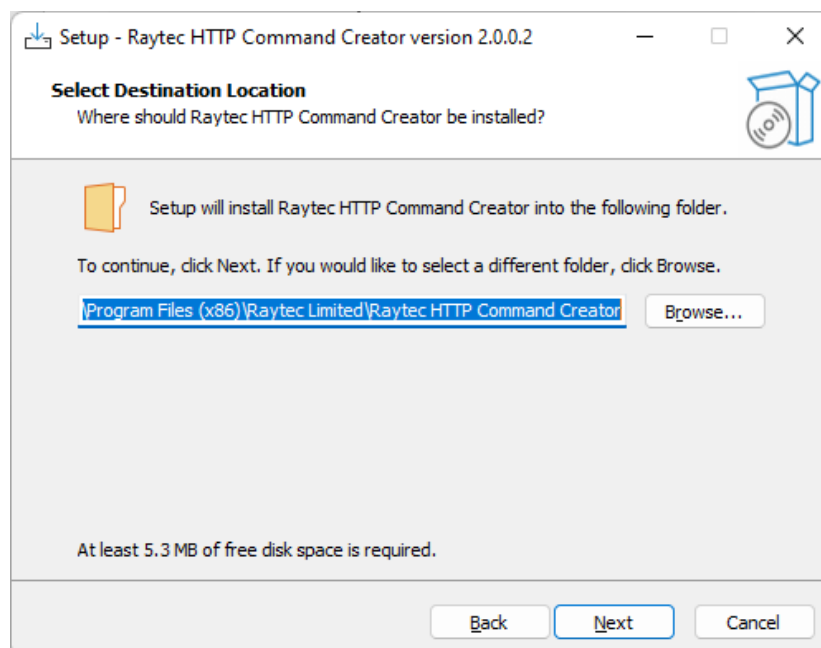
3 Installing the Raytec HTTP Command Creator

To install the Raytec HTTP Command Creator, follow the steps below:

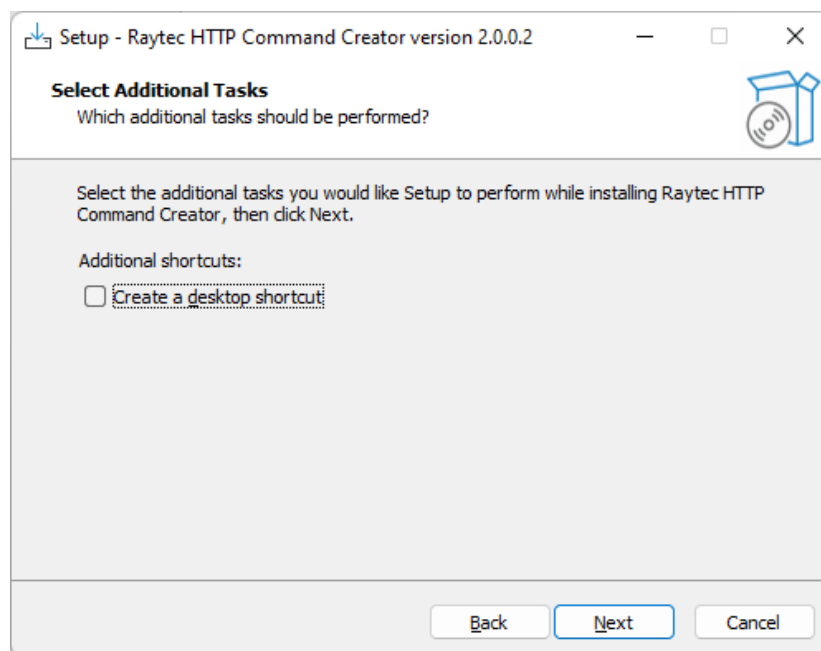
1. Run the executable *HTTPCmdCreatorInstaller_v2002.exe*, you should be presented with the following screen; after reading the software license agreement, click 'Next':



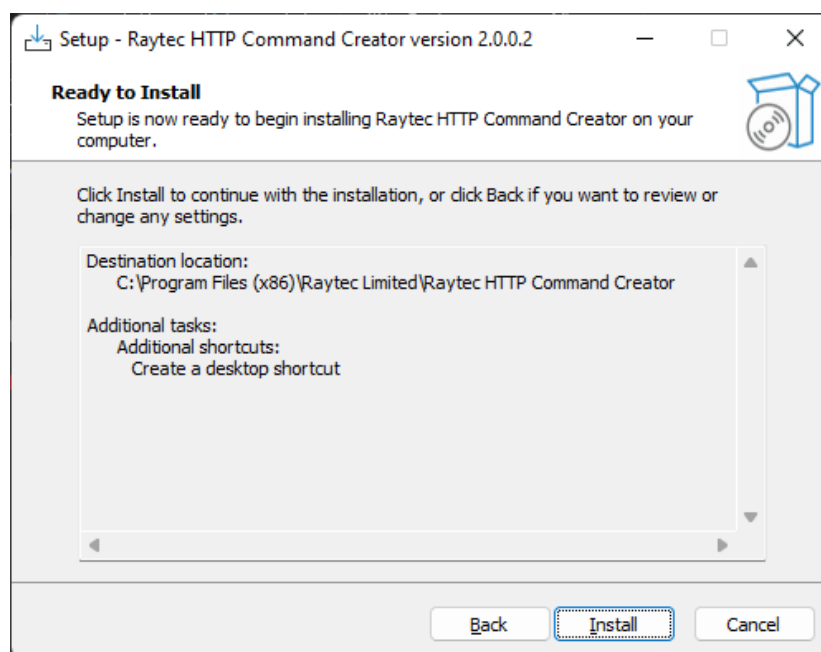
2. Select a location for the install and click 'Next'. The default location is *C:\Program Files (x86)\Raytec Limited\Raytec HTTP Command Creator*



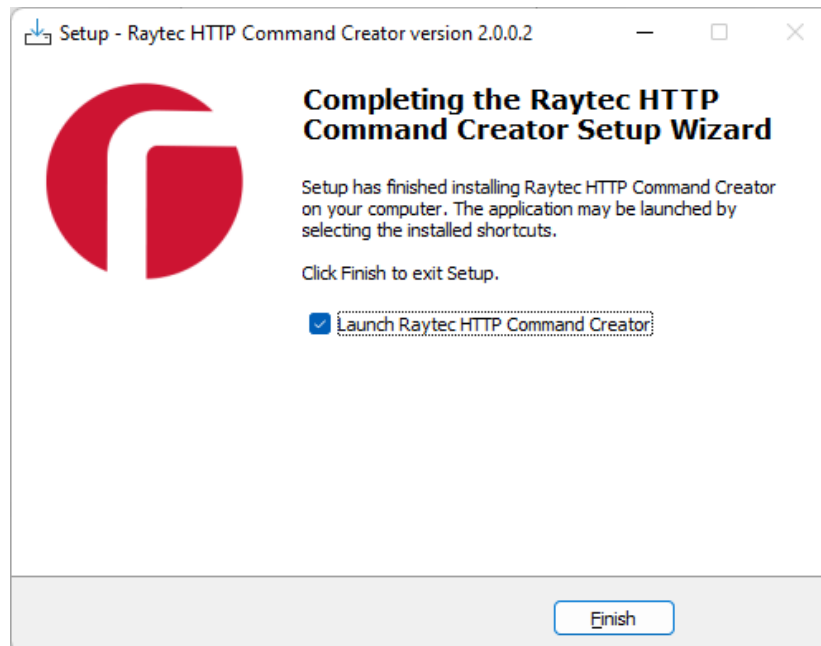
3. The installer gives you the option to create a desktop shortcut, check the box to create one or click next for the next page of the installation wizard.



4. Review your configuration, if you are happy, click *Install*, if not, use *Back* button to change settings.



5. The wizard will install the software and present the following screen when finished. You can choose to launch the Raytec HTTP Command Creator right away.

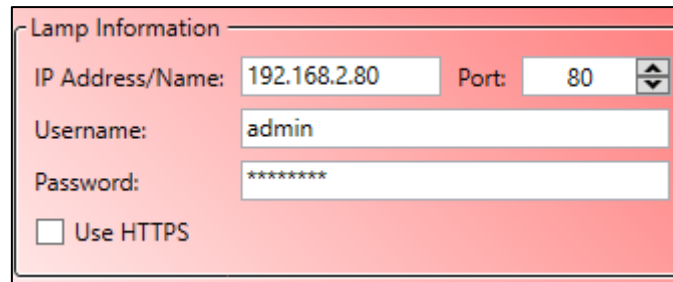


4 HTTP Command Creator User Interface

The HTTP Command Creator has three sections:

- Lamp Information
- Command
- Parameter selection

4.1 Lamp Information



Lamp Information

IP Address/Name: 192.168.2.80 Port: 80

Username: admin

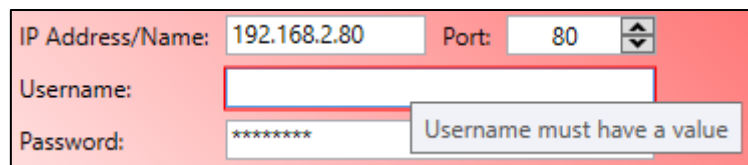
Password: *****

☐ Use HTTPS

The *Lamp Information* section allows the user to enter the IP Address/Name of the lamp and the credentials to access the lamp. As you change these values you will see the command change in the *Command* section.

Checking the “Use HTTPS” checkbox will change the port to the default HTTPS port, 443, and updates the command to start with “https://”, unchecking the checkbox then sets the port back to 80 and changes the command to start with “http://”

If there are any errors present in this section, then the field containing the error will be highlighted in red and an error will be shown in the tooltip on hovering over the control:



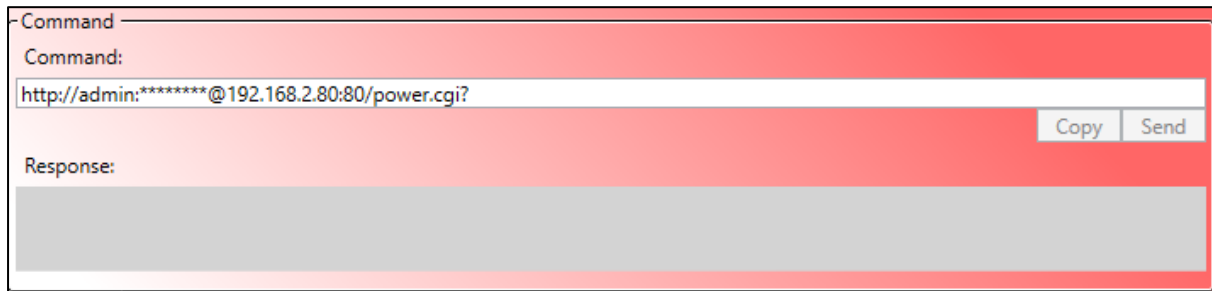
IP Address/Name: 192.168.2.80 Port: 80

Username:

Password: *****

Username must have a value

4.2 Command



Command:

`http://admin:*****@192.168.2.80:80/power.cgi?`

Copy Send

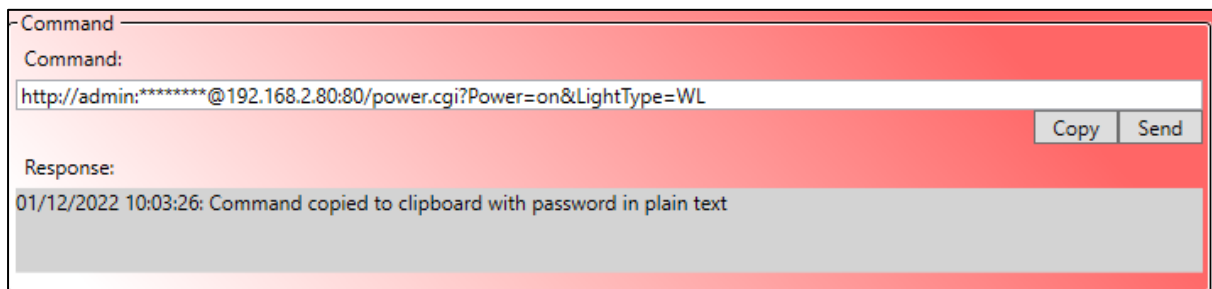
Response:

The *Command* section displays the HTTP command, this is automatically built when updating lamp information and parameters.

You can choose to *Copy* the command, so that it can be used in another program, or *Send* the command to the lamp. These buttons are disabled until a correctly formed command exists.

The Response field provides both feedback from the lamp when a command is sent and error messages associated with a failed send.

Response examples



Command:

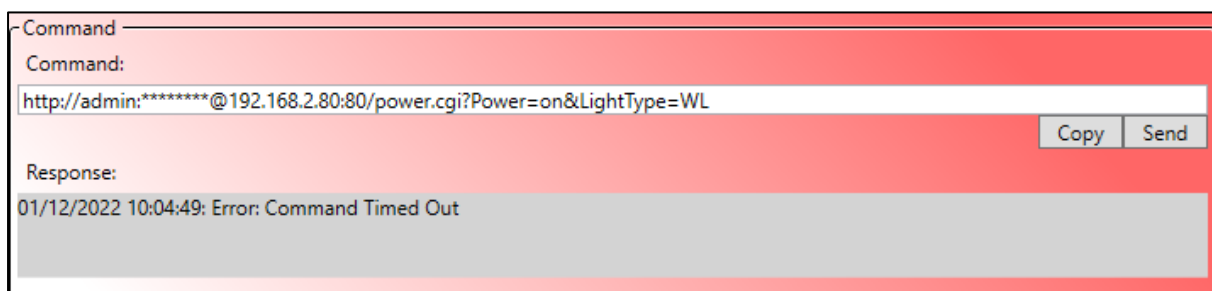
`http://admin:*****@192.168.2.80:80/power.cgi?Power=on&LightType=WL`

Copy Send

Response:

01/12/2022 10:03:26: Command copied to clipboard with password in plain text

Command copied – When you click “Copy”, the response field will give feedback on this. This response will disappear after 5 seconds.



Command:

`http://admin:*****@192.168.2.80:80/power.cgi?Power=on&LightType=WL`

Copy Send

Response:

01/12/2022 10:04:49: Error: Command Timed Out

Operation timed out – When you click “Send” but no response is received from the lamp, this error message will be returned. This response does not disappear like command copied above

Command

Command:

`http://user:*****@192.168.2.80:80/settings.cgi?PCFollow=on`

Copy Send

Response:

01/12/2022 11:11:02: Error: The remote server returned an error: (401) Unauthorized.

Unauthorised – the “user” account is not authorised to send HTTP commands using the settings interface. It is authorised to use power, deter and status however. This error also appears when you have entered a wrong username and/or password.

Command

Command:

`http://user:*****@192.168.2.80:80/power.cgi?Power=on&LightType=WL`

Copy Send

Response:

01/12/2022 11:12:23: {"Status":"Error - lamp not in HTTP mode"}

Incorrect mode – response from the lamp when it isn't in HTTP or HTTP + local mode.

Command

Command:

`https://user:*****@192.168.2.80:443/power.cgi?Power=on&LightType=WL`

Copy Send

Response:

01/12/2022 11:14:00: Error: The TLS certificate of the lamp is not trusted

Invalid HTTPS certificate – response from the lamp when the HTTPS certificate on the lamp isn't valid. This could be because of a self-signed certificate, an expired certificate or the certificate common name not matching the lamp's current IP address and/or name.

Command

Command:

`http://user:*****@192.168.2.80:80/power.cgi?Power=on&LightType=WL`

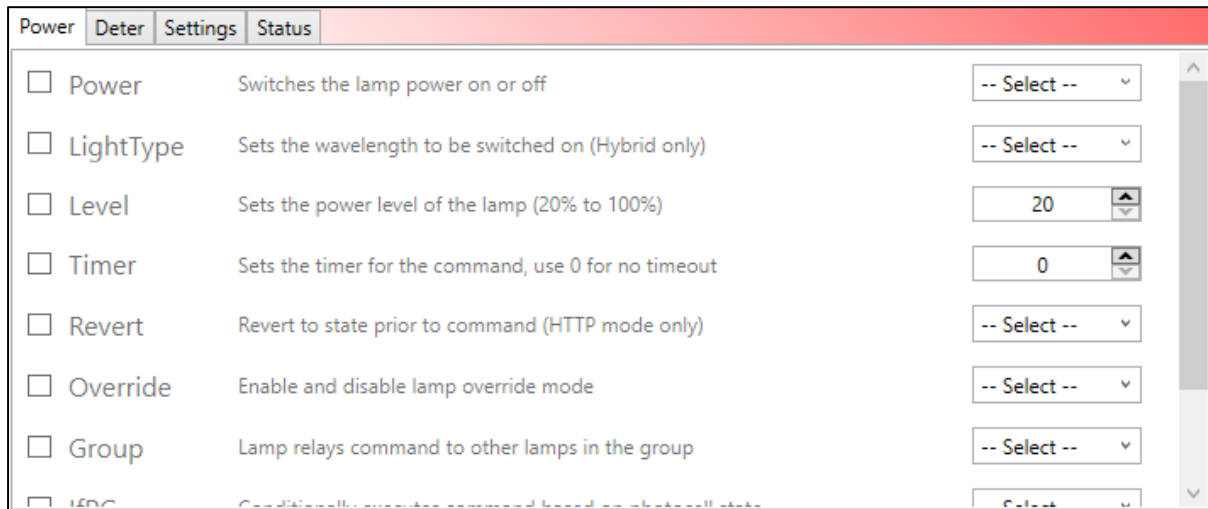
Copy Send

Response:

01/12/2022 11:13:01:
{"Status":"OK","Power":"on","Level":"50","LightType":"WL","Timer":"0","Revert":"yes","Photocell":"day","Telemetry":"inactive"}

Successful command – response from lamp starting with “Status”:“OK” followed by acknowledgement of parameters sent and defaults (where parameters weren't included in command)

4.3 Parameters



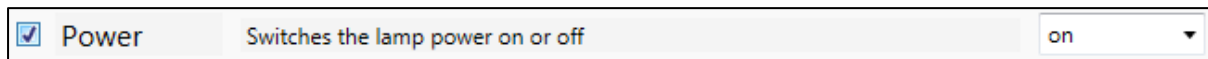
Power	Deter	Settings	Status
<input type="checkbox"/>	Power	Switches the lamp power on or off	-- Select --
<input type="checkbox"/>	LightType	Sets the wavelength to be switched on (Hybrid only)	-- Select --
<input type="checkbox"/>	Level	Sets the power level of the lamp (20% to 100%)	20
<input type="checkbox"/>	Timer	Sets the timer for the command, use 0 for no timeout	0
<input type="checkbox"/>	Revert	Revert to state prior to command (HTTP mode only)	-- Select --
<input type="checkbox"/>	Override	Enable and disable lamp override mode	-- Select --
<input type="checkbox"/>	Group	Lamp relays command to other lamps in the group	-- Select --
<input type="checkbox"/>	IFC	Conditionally executes command based on photocell state	Select

The *Parameters* section has tabs for each interface available in the HTTP API. Each tab lists the parameters associated with the interface with a small description and either a combo box or number spinner to select a value to send to the lamp for that parameter.

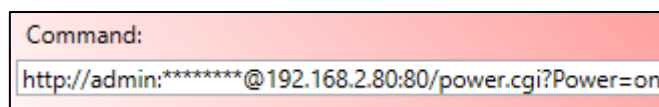
String Parameters

Each string parameter has placeholder text of “-- Select --” to begin with.

If you check the checkbox associated with the parameter, the first item will be selected in the combo box and the command will be updated.



<input checked="" type="checkbox"/>	Power	Switches the lamp power on or off	on
-------------------------------------	-------	-----------------------------------	----



Command:

```
http://admin:*****@192.168.2.80:80/power.cgi?Power=on
```

You can also use the combo box to select your desired value, this will automatically check the checkbox and the command will be updated with the parameter and selected value.


If you wish to remove the parameter from the command, simply uncheck the checkbox.

Numeric Parameters

Numeric parameters behave the same as String Parameters in that checking the checkbox places the parameter into the command and changing the value checks the checkbox.

The value of the numeric control can be changed in many ways:

- *Using the up and down arrow buttons*

<input checked="" type="checkbox"/> Level	Sets the power level of the lamp (20% to 100%)	23	
---	--	----	---

If you want to update the value by a few numbers, then using the arrow buttons is one of the quickest ways to do this.

When the minimum value is reached, the down arrow button will be disabled and when the maximum is reached, the up arrow button is then disabled.

- *Using the up and down cursor keys*

You can update the value of the selected numeric parameter using the up and down cursor keys. The behaviour is the same as above.

- *Typing the number in directly*

If you need to change the current value considerably, the quickest way to do this is to type in the number. If the value is greater than the maximum, the maximum will be set. If the number is lower than the minimum, the minimum will be set.

Notes:

When you return to a tab after using another, all values will be reset.

See appendix A for an exploded view of all interfaces, parameters and values available.

4.4 Keyboard Shortcuts

If you are familiar with using keyboard shortcuts within software, the following are available within the HTTP Command Creator:

<i>Alt-F</i>	Brings up the file menu, use <i>Alt-X</i> to close the program
<i>Alt-H</i>	Brings up the help menu, use <i>Alt-A</i> to open the About box
<i>Alt-C</i>	Copies the current command if it is valid
<i>Alt-S</i>	Sends the current command if it is valid

5 Appendices

5.1 Appendix A – Exploded Parameters

Power interface

Parameter	Type	Values
Power	String	on off
LightType	String	IR WL
Level	Number	Min - 20 Max - 100
Timer	Number	Min - 0 Max - 65535
Revert	String	yes no
Override	String	yes no
Group	String	yes no
IfPC	String	day night
IfT	String	active inactive

Deter interface

Parameter	Type	Values
Deter	String	on off
DeterPat	String	sos hi-lo wave
DeterFreq	String	slow medium fast
Level	Number	Min - 20 Max - 100
Timer	Number	Min - 0 Max - 65535
Revert	String	yes no
Override	String	yes no
Group	String	yes no
IfPC	String	day night
IfT	String	active inactive

Settings interface

Parameter	Type	Values
PCFollow	String	on off
PCAdjust	Number	Min - 5 Max - 65
TFollow	String	on off

Status interface

Parameter	Type	Values
Parameter	String	photocell telemetry pcadjust macaddress model name ipvoltage led auxoutput deterpat deterfreq ontime powertime group volts ledrefv ledstrv all
Index	Number	Min - 1 Max - 8 Use with <i>ledstrv</i>