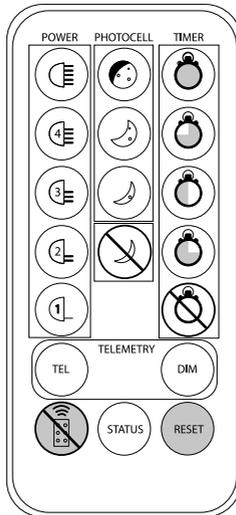


VARIO2 REMOTE CONTROL INSTRUCTIONS



Control features

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VARIO1 Products

Alternative Remote Instructions required - Please contact Raytec.

VARIO2 Remote – Quick Set Up Instructions

1. At power up, the unit enters programming mode:

SOLID GREEN: Power Applied

FLASHING GREEN: Remote control IR receiver problem (Max VRC distance is 8m (26ft))

FLASHING AMBER: Indicates the unit is in programming mode (Programming Mode Only)

SOLID AMBER: Indicates that a valid command is being received from the remote (Programming Mode Only)

FLASHING RED: Voltage supply problem detected

SOLID RED: Illuminator fault detected

All functions of the remote control and buttons are available in Programming Mode.

Note: If a PIN has been set the unit will not enter programming mode on power up (refer to section 10 for more details).

Programming mode will automatically be disabled after 7 days or until the user actively disables the programming mode or 30 minutes after any press of the manual buttons

VARIO2 Hybrid: Programming mode automatically disabled after 4 weeks

2. If required: Adjust Power

Press 5 for 100% power, 4 for 80%, 3 for 60%, 2 for 40% and 1 for 20% power.

Factory Default = 100%

3. If required: Adjust Photocell Sensitivity. Press:

Top Button for Low Sensitivity: 25 Lux On 50 Lux Off

2nd Button for Medium Sensitivity: 10 Lux On 30 Lux Off

3rd Button for High Sensitivity: 5 Lux On 15 Lux Off

Bottom button to disable photocell

Factory Default = Medium Sensitivity

4. Telemetry Input - General Wiring of Remote Switch or Input

VARIO2 unit's factory set to turn on/off automatically from Photocell. Orange and Purple Telemetry input wires are joined to mimic volt-free input (dry contact). Separate the wires to use with remote switch or input. These wires accept both volt-free input or TTL.

Factory Default = Telemetry wires joined

VARIO2 POE (not premium): Telemetry input not available, Illuminator will automatically be controlled by the photocell

VARIO2 Hybrid: Telemetry input / TEL / DIM functions operate differently (factory default = telemetry wires not joined) Please see the VARIO2 Hybrid Illuminator Instructions

Volt-free input: Non-Polarity Sensitive. Short circuit = Light on

TTL input: Orange = TTL +ve, Purple = TTL -ve (GND)

0V = Light On, 3V = Light Off

4a. TEL

Select this option to turn lamp on/off remotely from a remote input or switch.

This is the factory default setting.

4b. DIM

Select DIM to dim lamp remotely from an input or switch. First input reduces power. Second input continues to dim the light. Further input activation will cause the power to be reduced further until it reaches its lowest output. Once at its lowest, lamp will start to brighten. Further input activation will cause the power to be increased until it reaches its highest output.

4c. TIMER

Press and release TEL – then select required period of time for unit to stay on after Telemetry Input. Timings associated with each button shown in section 4 of main instructions. To cancel Timer function press Timer, Disable.

VARIO2 POE (Not Premium): Timer not available

VARIO2 Hybrid: Timer only available in White Light mode

5. To turn LED Status Indicators on and off – Press STATUS button. (This command can be performed in both Programming and Operating mode)

6. To restore all factory settings press RESET button. Defaults shown in section 6. This button must be pressed continuously for **4 seconds** to activate function.
7.  Press this button to disable programming mode and enter Operating mode. Button must be depressed for at least **4 seconds**. Only do this when you are happy with the set-up and installation of your unit.
8. Security PIN set (See section 10 of this guide for more details): Use the remote if you want to set a security PIN on your illuminator . VARIO2 Hybrid: PIN function not available

1. LED Status Indicators, Using the Remote and Operating Modes

There are two multi-coloured LEDs, visible on the base of the VARIO2 illuminator. The LEDs provide important operating and status information. The Infra-Red receiver for the Remote-Control commands is also on the base of the unit – and the Remote Control should be pointed in **this** direction during programming. Most functions respond immediately to pressing the required button – however three functions require the button to be held for 4 seconds continuously to avoid accidental programming: 1. Restore Factory Default, 2. Disable Remote Control Set-up and 3. PIN Function. The Remote Control is designed to operate at distances up to 8 metres.

The status information provided by each of these LEDs differs depending on which of the two operating modes the VARIO2 illuminator is in: (A) Programming **OR** (B) Normal Operating.

VARIO2 Hybrid: These illuminators have different LED indicators and feedback. Please refer to the VARIO2 Hybrid Illuminator Instructions.

1A. Programming Mode

On powering up the illuminator, it automatically enters programming mode to allow the user to adjust set-up and operation. The programming mode automatically times out after 7 days or until the user actively disables the programming mode (see 'Disable Remote Control Set-up' (section 7)), or 30 minutes after any press of the manual buttons on the illuminator.

VARIO2 Hybrid: Programming mode automatically disabled after 4 weeks

During Programming mode, the LEDs indicate the following status:

- SOLID GREEN: Power Applied
- FLASHING GREEN: Remote control IR receiver problem (Max VRC distance is 8m (26ft))
- FLASHING AMBER: Indicates the unit is in programming mode (Programming Mode Only)
- SOLID AMBER: Indicates that a valid command is being received from the remote (Programming Mode Only)
- FLASHING RED: Voltage supply problem detected
- SOLID RED: Illuminator fault detected

All functions of the Remote Control are available in Programming Mode.

1B. Normal Operating Mode

During Operating Mode, the status LEDs give the following feedback:

- SOLID GREEN: Power Applied
- FLASHING GREEN: Remote control IR receiver problem (Max VRC distance is 8m (26ft))
- FLASHING RED: Voltage supply problem detected
- SOLID RED: Illuminator fault detected

VARIO2 Hybrid: Voltage supply problem detected indicated by SOLID AMBER

The only functions of the Remote Control available during Operating Mode is LED Status Indicators Enable/Disable (see section 5), entering a PIN (see section 10) or disabling manual buttons (if done at the same time as disabling the remote).

Factory Default: On initial power-up, illuminator automatically defaults into programming mode. Programming mode automatically disabled after 7 days or until the user actively disables the programming mode or the unit times out 30 minutes after any press of the manual buttons on the illuminator.

VARIO2 Hybrid: Programming mode automatically disabled after 4 weeks

2. Power Adjust

The power output of the VARIO2 illuminator can be adjusted between 5 pre-set levels. To select the required light intensity, use the buttons shown.

Factory default = 100% power.



100% of maximum



80% of maximum



60% of maximum



40% of maximum



20% of maximum

3. Photocell Sensitivity

There are three pre-defined levels to set the lux level threshold at which the photocell turns the VARIO2 illuminator on/off. To select the required sensitivity level, use the buttons below.

**Factory default = Medium Sensitivity:
10 Lux On, 30 Lux Off**



25 Lux On, 50 Lux Off



10 Lux On, 30 Lux Off



5 Lux On, 15 Lux Off



Photocell disabled

IMPORTANT NOTE:

When the Photocell is disabled:

- **VARIO2 / VARIO2 POE Premium:** The illuminator will turn on/off from a telemetry input, regardless of ambient lighting conditions.
- **VARIO2 POE (not premium):** The illuminator is permanently on
- **VARIO2 Hybrid:** the illuminator is permanently on in either White Light or IR mode depending on how the illuminator has been set

4. Wiring of Remote Switch or Input (Telemetry Input)

VARIO2 is supplied with a pair of Telemetry Input Wires – Orange and Purple – which are designed to be used with a remote switch or input from an alarm system, PIR detector, control room, Video Management system or camera output. The input signal can be volt-free or TTL.

Volt-free input: Non Polarity Sensitive.Short circuit = Light On

TTL input: Orange = TTL+ve, Purple = TTL -ve (GND)
0V = Light On, 3V = Light Off

As a default, the Telemetry Input wires (Orange & Purple) are wired together when shipped from the factory to simulate a volt free input so the unit automatically turns on/off via the photocell. Any remote input or switch should be connected to these wires. Snip the end of the cable and then use the two-core cable as normal.

VARIO2 POE (not premium): Telemetry input not available, Illuminator will automatically be controlled by the photocell

VARIO2 Hybrid: Telemetry input/TEL/DIM functions operate differently (factory default = telemetry wires not joined). Please refer to the VARIO2 Hybrid Illuminator Instructions

Under normal operating conditions, a Telemetry Input will activate the unit only at night provided that the Photocell detects low light conditions. However, if the photocell is disabled, a Telemetry Input will activate the unit regardless of ambient light conditions.

The remote input can be used in conjunction with the illuminator in three different ways as described below:

1.TEL or 2.DIM or 3.TEL+TIMER. The mode of operation is selected by using the Remote Control.

Note: 3

TEL + TIMER not available on VARIO2 POE (Non Premium) products.

4a. Telemetry – TEL (Remote Switching)



The TEL button should be selected if the illuminator is to be turned on/off using a remote switch or input.

The TEL input can be used in various ways:

1. Turn the light on (night) and off (day) automatically via the photocell. This is the standard factory setting – and no further action is required
2. Turn the light on and off from a remote switch or input
3. Used in conjunction with the Timer Function to turn the light on for a pre-defined period of time. (See section 4c below).

Factory Default = Telemetry TEL Enabled.

See detailed wiring instruction - section 4.

4b. Telemetry - DIM (Remote Dimming)



The remote dimming feature allows the brightness of the VARIO2 illuminator to be controlled remotely using the telemetry input wires. Use the DIM button to select this function.

When the DIM function is selected, a telemetry input (Telemetry input wires joined) will vary the brightness up and down. When the telemetry input is first applied, it will dim the light until the input stops (orange and purple wires no longer joined), the illuminator will then stay at that brightness level. Further telemetry input will continue to dim the light to its lowest output. Once it hits its lowest setting, it will start to brighten again. A further input will then continue to brighten the light further to its highest output or until the input stops.

Note: Repeated input activation of the telemetry wires continues to dim or brighten the illuminator repeatedly.

Please note that Remote Dim is disabled by pressing TEL button (see 4a above). After setting a specific light level using the DIM function, if Telemetry-TEL is enabled, the last power level set when using the DIM function will be remembered and used by the system – unless a new power adjust button is selected.

Factory Default = Telemetry DIM Disabled.

See detail on Telemetry input wires - section 4

VARIO2 POE (Non Premium): Using the DIM function on the remote will just cycle the power up and down continuously, until the user presses the TEL button. (Brightness adjustment as per VARIO2 / VARIO2 POE Premium is not possible.)

4c. Timer Function

The timer function allows the VARIO2 illuminator to be triggered ON via a telemetry input and remain on for a pre-defined period of time. There are four pre-defined times and a timer disable function. To select timer function, first press and release Telemetry TEL button, then secondly press duration of timer required as shown below. Factory Default = Timer Disabled

If you wish to cancel timer period and have the unit operate under standard telemetry conditions, press Timer Disabled.



30 minutes



10 minutes



3 minutes



1 minute



Timer disabled

Note: The timer only functions when the Telemetry Input Wires are used with a remote switch; alarm system; PIR detector, etc and a closed circuit input signal is received. The light will come on and stay on. When the input signal stops the light will remain on for the time set by the timer.

If the telemetry wires are permanently joined the timer does not function.

VARIO2 POE (Non Premium): Timer function not available.

VARIO2 Hybrid: Timer only available in White Light mode

5. LED Status Indicators - Enable/Disable



The LED Indicators on the base of the Illuminator provide important operating and status information. (See section 1 for information on LED status indicator system).

This status indicator function can be switched on and off by pressing the STATUS button. This is the only button that has two states. It is possible for this function to be enabled/disabled even if programming mode has been disabled so the status of the lamp can be checked at any time.

This button can also be used to set a PIN (see section 10 for more information).

Factory default = LED Status Indicators Enabled.

6. Restore Factory Default Settings & Stored Memory

 Once the VARIO unit has been programmed, the settings will be stored in non-volatile (stored) memory. These settings are saved and reloaded if the illuminator experiences loss of power. If you wish to restore the unit back to its original factory default settings, this can be achieved when the unit is in programming mode by pressing the RESET button. To activate this feature, the button must be pressed continuously for at least **4 seconds**. This is to avoid the possibility of activating this feature accidentally.

Note: Restoring to factory settings is not possible if a PIN has been set.

The factory default settings are:

- Power Set to 100% of Maximum
- Photocell set to Medium Sensitivity Level:
10 Lux On, 30 Lux Off
- Timer Disabled
- Telemetry -TEL Enabled
- Telemetry Input wires soldered together for automatic photocell operation of unit (VARIO2 POE Non Premium - No Telemetry wires, photocell activates automatically)
- Telemetry -DIM Disabled
- LED Status Indicators Enabled
- Programming Function Enabled for 7 days
VARIO2 Hybrid: Programming Function Enabled for 4 Weeks

7. Disable Remote Control Set-up



The security features implemented in the VARIO2 illuminator and VARIO2 remote control are designed to ensure that the system cannot be programmed by unauthorized personnel. The system is automatically in programming mode once the illuminator is powered up. Once the installer/user has finished programming the settings of the VARIO2 illuminator, they can choose to lock-in these settings by pressing the 'Disable Remote Set-up' button.

To disable the remote control, continuously press the 'Disable Remote Control' button for 4 seconds. When the remote control is disabled, and the illuminator is in Operating mode the RHS LED indicator is Off. After 7 days of continuous power the illuminator will automatically disable the remote and change to Operating mode.

Please note: To enable programming mode again after remote set-up has been disabled, the VARIO2 illuminator must be powered off (for at least 10 seconds) then on again - the illuminator will then automatically re-enter programming mode.

(If a PIN security code has been set, further actions are required to enable programming mode – Please refer to the illuminator Instruction Guide)

We would normally recommend disabling remote set-up once you have finished programming an individual VARIO2 illuminator and are satisfied that it is delivering the required operating performance. This will help to avoid tampering and the possibility of receiving commands when programming other units in close proximity.

8. Disable Manual Buttons



The manual buttons can be disabled using the remote. Once the illuminator is put into Operating mode if the disable remote control Set Up button is pressed again and held for 4 seconds the manual buttons will be disabled. When completed this is shown by both indicator LEDs flashing RED.

Note: This command can only be used within 5 minutes of the illuminator being put into Operating Mode using the Remote Control. (If the Manual Buttons are already Disabled, both LEDs will flash RED immediately).

VARIO2 Hybrid: illuminators do not have manual buttons.

9. Control Feature Combinations

The following features can be altered / adjusted when programmed or used together:

	Power Adjust	Timer	Photocell Sensitivity	Remote Dim	LED Status Indicator
Power Adjust					
Timer					
Photocell Sensitivity					
Remote Dim					
LED Status Indicator					

Note:

VARIO2 POE (Non-Premium): Timer not available.

VARIO2 Hybrid: Timer only available in White Light mode

10. PIN Function - Security Feature

For extra security VARIO2 allows a PIN (Personal Identification Number) to be set for each illuminator using the Remote Control buttons.

For full details on how to set-up a PIN and the additional security features it gives please refer to your Illuminator Instruction Guide.

VARIO2 Hybrid: PIN function not available

11. Mechanical Details and Battery Information

Dimensions: 40 x 87 x 7.5 mm

Weight: 10g

Battery: CR2025

12. VARIO Remote Control Troubleshoot

(see Illuminator instructions for troubleshooting of illuminator)

Ensure all tests are undertaken by a qualified, trained engineer. Ensure safe working practices are followed at all times.

Troubleshoot

- Ensure no other strong Infra-Red source is pointing at the remote receiver which is on the bottom of the unit.
- Ensure that there is a clear line of site between the unit and remote with no possible obstructions.
- In extreme sunlight conditions, distance between the unit and remote may need to be reduced.
- If you are attempting to use Remote Control for a function only available in programming mode, ensure the unit is in programming mode first (RHS LED FLASHING AMBER) (You may need to press the status button first to enable the LED indicators) If not in programming mode, re-power VARIO2 illuminator. Turn power off for at least 10 seconds and then power on.
- If the unit has a PIN set, you will need to use the PIN number to change to programming mode. You cannot enter programming mode by power cycling only when a PIN is set. If you don't know the PIN number, you will need to perform a full re-set (Please refer to the illuminator instruction Guide).

- Check battery on remote (CR2025). Test 3-volt battery and replace if necessary.
- Ensure battery has clean contacts.
- Remote failure, test with new remote.

If the remote is still not delivering the required performance, please contact Raytec for further assistance on +44 (0)1670 520055 or +1 613 270 9990 for Americas.

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The Raytec logo features the word "rayTEC" in a bold, lowercase sans-serif font, with a registered trademark symbol (®) to the upper right of the "C". The logo is positioned on a light gray background that includes a large, curved, abstract shape on the left side.

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