



Illuminator 2

User Manual

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1. Introduction

1.1 Overview

The Illuminator 2 is an integrated floodlight control and facility monitoring system. It controls floodlights, monitors sensors, generates alarms, and logs activity. The system is configured and monitored via a standard web browser — locally by direct cable connection, or remotely via internet or SMS.

The Illuminator 2 is a configuration of the Halytech Spider 2 hardware platform. It includes all control software, hardware, and a 4G LTE mobile module. No additional software is required.

1.2 What's in the Box

Item	Included
Illuminator 2 main unit	✓
Mobile whip antenna — 4G 5dB, 5m cable, SMA	✓
Mobile puck antenna — low-profile IP67, 3m cable, SMA	✓
LAN cable (for initial setup)	✓
Connectors (+ resistors/diodes)	✓

Note: The Illuminator 2 is IP-20. It must be installed inside a suitable distribution board or protected indoor enclosure — no enclosure is supplied.

Note: The Illuminator 2 needs a 16-24V DC power supply, rated 3A or more. The unit can draw up to 3A while the backup battery is flat. The power supply is not included. Use the Halytech Spider power supply, or an equivalent. A 12V SLA battery is optional. It keeps the unit running during a mains outage.

Note: External intermediate relays are required to drive floodlight contactors — these are not supplied. Your preferred electrical wholesaler can supply these.

Note: Installation typically involves mains wiring. The Illuminator 2 should be installed by a qualified electrician.

1.3 Typical Applications

- Sports fields
 - Parks
 - Tennis courts
 - Community halls
 - Clubhouses
 - Public toilets
-

2. System Overview

2.1 Floodlight Control

The Illuminator 2 provides two operation modes for each light scenario. Each scenario can use a different mode on different days of the week.

Timer Mode

In Timer Mode, individual on and off times are set for each day of the week. The Illuminator automatically turns lights on and off at the configured times. Useful for lighting with a regular, predictable pattern — lighted paths, clubhouse interiors, security lighting.

Club Controlled Mode

In Club Controlled Mode, authorised users (clubs) can turn lights on and off themselves within an allowed time window set by the administrator. This is the most commonly used mode for floodlit sports facilities.

Administrator: The administrator (Club #1) has complete control at all times. The administrator can:

- Turn any light scenario on or off at any time, without a turn-off delay
- Override any command issued by a normal user
- Set the allowed time window for each light scenario
- Grant or restrict access rights for each normal user
- Temporarily close a scenario (e.g. wet field) so that only the administrator can control it

Normal users: Up to 49 normal users can be configured. Each user is assigned:

- A 4-digit PIN
- Access rights specifying which light scenarios they can control

Normal users control lights by sending SMS commands to the Illuminator, or by entering commands on the optional numeric keypad. Administrators can also control lights via the web interface.

Control takeover: If a user activates a scenario already controlled by another user, they take over control — the previous user's session ends and billing transfers to the new user. A user

cannot turn off lights currently controlled by another user; they receive a message advising the lights are now controlled by another club.

Turn on delay: A configurable delay in seconds staggers control activation, preventing large current draws when multiple controls turn on simultaneously.

Turn off delay: A configurable delay in minutes keeps lights on after a user's off command. Useful for non-LED lights requiring warm-up time. This delay is not applied when the administrator turns lights off outside the normal user control period.

Auto-off: Lights turned on by normal users are automatically turned off at the end of the allowed control period. Lights turned on by the administrator remain on until the administrator turns them off.

SMS and Keypad Command Format

Lights are controlled by sending a command in the following format — by SMS, or by entering it on the optional keypad:

ppppAL

Where:

- pppp — 4-digit PIN
- A — action: 1 = ON, 0 = OFF
- L — one or more light scenario IDs, entered as adjacent digits (e.g. 2, 23, 456)

Examples:

Command	Meaning
234516	PIN 2345, turn ON scenario 6
234506	PIN 2345, turn OFF scenario 6
7777123	PIN 7777, turn ON scenarios 2 and 3
7777023	PIN 7777, turn OFF scenarios 2 and 3

All valid commands are acknowledged with a response SMS. Invalid commands generate an error response — if a help contact is configured, their name and number are appended to the response.

2.2 Controls

The Illuminator 2 has 8 relay outputs (CN1–CN8) for switching floodlights and other equipment.

Spec	Value
Number of outputs	8 (CN1–CN8)
Contact type	Voltage-free latching relay
Rating	30V / 1A — low voltage/low current loads only*

Controls can be activated by:

- Web browser (Lights page)
- SMS command
- Optional numeric keypad

* Do not connect directly to mains loads, contactors, or motors. For **DC** inductive loads, such as relay coils, fit the supplied flyback diode across the load, at the coil. Flyback diodes work on DC only. **Do not fit them on AC loads.**

Dimming installations: The Illuminator output rating (30V, 1A) is suitable for direct connection to the control input of third-party dimming modules — no intermediate relay required.

Contactor installations: Intermediate relays must be used between the Illuminator outputs and the contactor coils. Supported relay coil voltages are 12V to 24V AC or DC. Fit protection diodes across any DC-powered relay coils — do not fit diodes on AC coils.

2.3 Inputs

The Illuminator 2 has 8 native inputs (IN1–IN8) for advanced use — electricity monitoring, sensors, and alarms. Inputs are for advanced use only; they are not required for basic floodlight control.

Spec	Value
Number of inputs	8 (IN1–IN8)
Connectors	Two multi-pole screw terminal connectors
Terminals per input	2 screw terminals
Maximum wire size	1.5mm ²
Galvanic isolation	None — all negative terminals share a common ground

Each input can be configured to one of the following modes:

Mode	Description
Switch	Voltage-free contact. Active state = terminals shorted. Must be stable for at least 3 seconds to register.
Analogue	Monitors industrial sensors (voltage, current, temperature, pressure, etc.). Supports 0–2.5V, 0–5V, 0–10V, 4–20mA, 0–20mA ranges. 12-bit resolution.
Counter	Pulse input from a pulse-output electricity meter. Each counter input INx is directly associated with output CNx — the Illuminator uses pulse counts to calculate electricity consumption (kWh) for the period CNx is on. Up to 10Hz. Rolls over at 999,999.999.
Event	Records pulse occurrences. Minimum pulse width 100ms. Rolls over at 999,999.999.
Disabled	Input removed from all reports and menus.

Input names are user-defined (e.g. "Pump OK", "Tank Level").

2.4 Alarms

The Illuminator 2 supports up to 8 alarms. Each alarm monitors an input or system value and sends notifications when triggered.

Spec	Value
Number of alarms	Up to 8
SMS recipients per alarm	Up to 3 phone numbers
Email recipients per alarm	Up to 2 email addresses
SMS retry	Up to 3 attempts per number before moving to the next; maximum 9 SMS per alarm
Acknowledge window	30 minutes — unit waits for the alarm to be reset before proceeding to the next number

Alarm SMS format: `Location: SMS text (Send 'RST ALx' to reset)`

Illuminator 2 outputs are exclusively under the control of the lighting scenario system — they cannot be used as alarm outputs.

If an alarm is reset while its trigger source is still active, a new alarm sequence will not start until the trigger source goes inactive.

2.5 Logger

The Illuminator 2 incorporates a non-volatile solid-state data logger. All records are date/time stamped to 1-second resolution.

Spec	Value
Capacity	100,000 records
Storage	Non-volatile solid-state memory
Time resolution	1 second
Time sync	Automatic via NTP
Download format	CSV

What is logged:

- Input changes
- Control output changes
- Alarm activations and resets
- SMS transmissions and outcomes

- SMS command reception
- Numeric keypad activity
- Email transmissions and outcomes
- System messages

Usage report (separate from raw history): The Lights page provides a separate floodlight usage report — on/off events, duration, and user. Stores the most recent 10,000 events. Downloaded as CSV.

Automatic email reports: The Illuminator can send scheduled email reports to up to 3 recipients. Reports are sent overnight and contain a CSV file of logged data. The maximum interval between reports is configurable — reports are sent daily if lights were used, and unconditionally when the maximum interval is reached.

2.6 Local Display and Keypad

Spec	Value
Display	16-character × 2-line alphanumeric LCD with backlight
Keypad	Single black button

The LCD shows inputs, outputs, alarms, signal strength, and network parameters — no computer required. Press the button to cycle through the LCD screens.

Mobile signal display: Format `L4 Signal: 70%` — letter/number prefix indicates modem type; percentage is signal strength.

Signal level	Threshold	Action
Excellent	≥75%	No action required
Good	≥50%	No action required
Acceptable	≥40%	No action required
Poor	<40%	Reposition antenna — connection may be unreliable

2.7 Connectivity

Feature	Detail
4G LTE	Built-in mobile module with SMA antenna connectors. Nano SIM (push-release tray).
Ethernet (LAN)	RJ-45 connector. Easy Connect for direct PC connection — device acts as DHCP server.
WiFi	IEEE 802.11 b/g/n hotspot/access point mode. SSID: <code>192.168.10.1_Spider2_[serial]</code> . Password printed on label.
Default IP (Easy Connect)	<code>192.168.0.188</code>
Default IP (WiFi)	<code>192.168.10.1</code>
SMS	Inbound and outbound. Control commands, alarm notifications, remote access initiation.
Email	Alarm notifications and automatic reports via SMTP.
Remote browser access	Requires a SIM with a public dynamic IP address . Not every carrier offers one. Each carrier uses its own APN name for this — on Telstra it is <code>telstra.extranet</code> . Initiated via SMS command — Illuminator emails a browser link to the nominated address.

2.8 Illuminator Central

Illuminator Central is an optional cloud-based subscription service for centralised management of multiple Illuminator 2 units.

Feature	Detail
Management	Centralised club and field management across any number of Illuminators
Reporting	Aggregated usage reports
Independence	Illuminators continue operating independently when Illuminator Central is unreachable

Illuminator Central is an optional subscription — contact Halytech for details.

3. Installation

3.1 Mount the Unit

The Illuminator 2 is IP-20 — it must be installed inside a suitable distribution board or protected indoor enclosure. It is not suitable for outdoor or exposed installation.

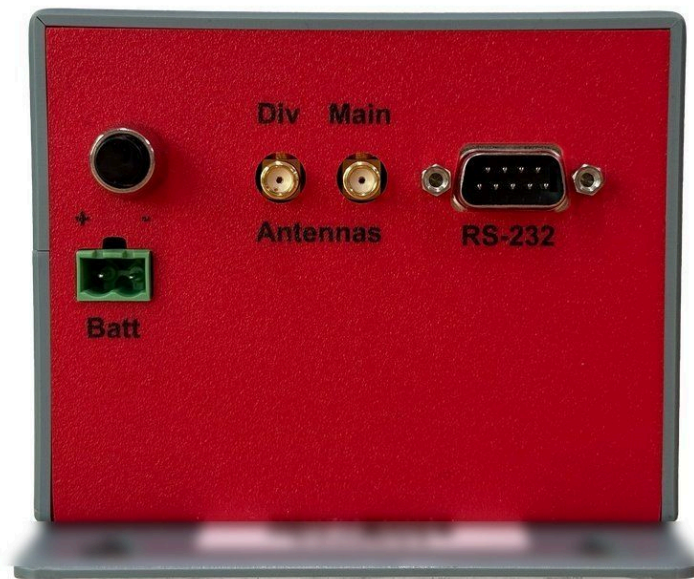
Spec	Value
Dimensions	200mm (H) × 110mm (W) × 90mm (D)
Weight	650g (approx)
Enclosure material	Polymer
IP rating	IP-20
Mounting	Keyhole wall mount — keyhole centres: 79mm (W) × 178mm (H)

1. Select a mounting location inside a distribution board or protected enclosure — accessible for wiring and maintenance.
2. Mark fixing points to suit the keyhole mount centres.
3. Fix the unit to the mounting surface.

Note: Installation typically involves mains wiring. The Illuminator 2 should be installed by a qualified electrician.

3.2 Connect the Antennas

Both antenna SMA connectors are on the **bottom** of the unit.



1. Connect the mobile whip antenna cable to the **Main** SMA connector.
2. Connect the mobile puck antenna cable to the **Div** SMA connector.
3. Mount both antennas outside any metal enclosure — antennas must not be installed inside metal enclosures.

Antenna	Description
Mobile whip (Main)	4G 5dB, 5m cable, SMA — wall or pole mount bracket included
Mobile puck (Div)	Low-profile IP67, 3m cable, SMA — diversity antenna

Hand-tighten SMA connectors only. Using tools to tighten SMA connectors may damage the connector and void the warranty.

3.3 Install the SIM Card

Caution: Do not insert or remove the SIM card while the unit is powered on.

The Illuminator 2 requires a nano SIM with an active data plan and SMS capability.

Remote access: Remote browser access needs a SIM with a **public dynamic IP address**. Not every carrier offers one — check whether your carrier provides it. Each carrier uses its own APN name for this. On Telstra it is `telstra.extranet`. A standard SIM sends SMS commands and email reports only.

1. If the SIM has a PIN set, disable it before installation — insert it into an Android phone and disable the PIN. The Illuminator 2 cannot prompt for a PIN; connection will fail if one is active.
2. Place the nano SIM into the tray with the **contacts facing up**.
3. Push the tray closed.



Important — iPhone users: If you use an iPhone to disable the SIM PIN, turn iMessage off before you insert the SIM. Keep it off until you remove the SIM. If iMessage is active on the SIM number, SMS sent to that number may go to the iPhone as an iMessage instead of arriving at the Illuminator. See section 8.8 for details.

3.4 Connect Power

Observe correct polarity when connecting the power supply and battery.

The Illuminator 2 has two power connectors:

Connector	Label	Connection
Charger input	CHG	24V DC power supply — 16–24V DC
Battery	Batt	Optional 12V SLA battery — backup power during mains outage

1. Connect the 24V DC power supply to the **CHG** connector.
2. If a backup battery is used, connect the 12V battery to the **Batt** connector.



The unit has no ON/OFF switch. It will start operating as soon as power is applied.

Power supply: The Illuminator can draw up to 3A when the backup battery is flat. The power supply must cater for this. A single supply can feed both the Illuminator and any DC intermediate relay coils, if it is sized for both.

3.5 Connect Controls

Relay outputs are on two 8-way screw terminal connectors labelled **CN1–CN8**. Each output uses two screw terminals. Maximum wire size: 1.5mm².

The relay contacts are **voltage-free** — an external power supply is required to drive any connected loads (relay coils, dimming module inputs, etc.).

Spec	Value
Outputs	8 (CN1–CN8)
Contact type	Voltage-free latching relay
Rating	30V / 1A — low voltage/low current loads only*
Terminals per output	2 screw terminals
Maximum wire size	1.5mm ²

* Do not connect directly to mains loads, contactors, or motors. For **DC** inductive loads, such as relay coils, fit the supplied flyback diode across the load, at the coil. Flyback diodes work on DC only. **Do not fit them on AC loads.**

Dimming Installations

Connect the CN terminal pair directly to the control input of the third-party dimming module — no intermediate relay required. The Illuminator output rating (30V, 1A) is suitable for direct connection to most dimming module control inputs.

Contactors Installations

Intermediate relays must be used between the Illuminator outputs and the contactor coils. Your preferred electrical wholesaler can supply these.

- Supported relay coil voltages are **12V to 24V AC or DC**
- If relay coils are **DC-powered**, fit the supplied protection diodes across each coil — connect the diode stripe (cathode) end to the positive side of the coil
- **Do not** fit diodes on AC relay coils

A single supply can feed both the Illuminator and all intermediate relay coils, if it is sized for both.

3.6 Connect Inputs (Advanced Use Only)

Inputs are for advanced use — electricity monitoring, sensors, and alarms. If inputs are not required, skip this section.

Inputs are on two multi-pole screw terminal connectors labelled **IN1–IN8**. Each input uses two screw terminals. Maximum wire size: 1.5mm².

Note: There is no galvanic isolation between inputs — all negative terminals share a common ground.

Switch, Counter, and Event Inputs

Connect field wiring directly to the two input terminals. No external components are required.

Analogue Inputs

The native input range is 0–2.5V DC. External resistors scale common field signal ranges into this window. The following resistors are supplied with the Illuminator:

Sensor range	Resistor Rx	Resistor Ry	Notes
0–2.5V	None	None	Direct connection
0–5V	1kΩ ¼W metal film	1kΩ ¼W metal film	Voltage divider
0–10V	3.3kΩ ¼W metal film	1kΩ ¼W metal film	Voltage divider
4–20mA	120Ω ¼W across terminals	—	Current-to-voltage
0–20mA	120Ω ¼W across terminals	—	Current-to-voltage

Configure the input type and calibration in the web interface — see §4.6.

3.7 Numeric Keypad (Optional)

An optional numeric keypad allows floodlight control from the field without a mobile phone. The keypad uses the same command format as SMS commands.

Spec	Detail
Cable	9m supplied, DB9 connector at Illuminator end
Connection	DB9 connector into Keypad connector on Illuminator
Power	Illuminator provides all power and communications
Weatherproofing	Not weatherproof — must be installed in a protected location

Installation notes:

- Keep the cable as short as possible and route it away from other wiring to minimise interference in electrically noisy environments
- Do not coil excess cable — cut the unterminated end to length
- Some cables may have a green wire in place of blue, or yellow in place of white

Connect the unterminated end of the cable to the numeric keypad screw terminal block according to the wiring diagram in the keypad documentation.

The Illuminator will automatically recognise the keypad on power-up. For keypad operation, see §7.4.

4. System Configuration

This section covers all configuration required before the Illuminator 2 is put into service. Configuration is performed through the web interface using a laptop or PC.

4.1 Connecting for the First Time

Connect to the Illuminator 2 with a web browser. There are two ways in, by cable or by WiFi.

First, turn the LCD backlight on. If it is off, press and hold the black button until it turns on. That starts both the WiFi and the LAN port. The Illuminator 2 never sleeps, but a browser cannot connect while the backlight is off.

Option A — Easy Connect (LAN cable)

1. Connect the supplied LAN cable between your laptop's Ethernet port and the **LAN** port on the Illuminator.
2. Open a browser and navigate to `192.168.0.188`. The unit also shows its own address on the LCD — press the black button until you see it.

Note: The Illuminator 2 login page should open. If the browser shows an error page instead, see §8.8.

Option B — WiFi

1. Press the black button briefly until the LCD shows the WiFi screen:

```
Wi-Fi STATUS
Enabled 4:05
```

The countdown is the time the WiFi has left.

2. On your laptop or tablet, open its WiFi settings. Look for a network named `192.168.10.1_Spider2_[serial]`, where the serial is the unit's serial number. The factory-set password is printed on the label on top of the unit.
3. Open a browser and navigate to the address at the start of the network name, `192.168.10.1`.

Note: The WiFi times out. Press and hold the black button again to restart it.

Note: The Illuminator 2 login page should open. If the network does not appear in your WiFi list, if the password is rejected, or if the browser shows an error page, see §8.8.

Then log in. From here the two options are the same.

Log in with the default administrator credentials:

Field	Default value
Username	user
Password	changeme

Important: Change the username and password before the unit goes into service — see §4.5.

After login, the **Lights** page is displayed.

4.2 Entering Change Setup

After login, click **CHANGE SETUP** to enter configuration mode.

Note: Entering Change Setup mode disables logging and alarm generation, and resets all active alarms. Exit as soon as configuration is complete.

Change Setup exits automatically after 10 minutes of inactivity.

You can also click **VIEW SETUP** at any time to inspect the current settings without making changes.

4.3 Location and Lighting Setup

1. In Change Setup, click **Change Location and Lighting Setup**.

2. Enter or update the following fields:

Field	Description
Location name	Up to 16 characters — included at the start of every SMS and email to identify the unit. Must be unique across all Illuminator units on the same system.
Turn on delay	Seconds between sequential control activations. Staggers startup to reduce current surge when multiple contactors energise at once.
Turn off delay	Minutes lights remain on after a user's off command. Allows warm-up time for non-LED lights. Not applied when the administrator turns lights off outside the user control period.
Maximum on time	Maximum number of minutes lights can remain on per user session. Lights turn off automatically after this period. Set to 0 to disable.
Cost per kWh	Electricity cost in \$/kWh — used when counter inputs are connected to electricity meters. Set to 0 if electricity monitoring is not required.
Help contact	Name and contact number appended to SMS responses for invalid commands — e.g. Jo Smith on 0414-222-333 .

3. Click **Save**.

4.4 Date and Time

1. In Change Setup, click **Change Date/Time**.
2. Confirm or update the displayed date and time.
3. Select the correct timezone for the installation location.
4. Enable **daylight saving** if the installation is in a daylight saving region.
5. Enable **NTP** and enter the NTP server address — this keeps the clock accurate without manual adjustment.
6. Click **Save**.

Note: The Illuminator 2 is the only Spider 2 family product that uses daylight saving — always enable it if the site observes it. NTP must always be enabled.

4.5 Username and Password

Two access levels are supported:

Level	Default username	Default password	Permissions
Administrator	user	changeme	Full access — view and change all settings, control all scenarios
Normal user	user	user	View only — no configuration changes

Important: Change both usernames and passwords before the unit goes into service. Factory defaults are well known and provide no security.

Sessions time out after 10 minutes of inactivity.

To change credentials:

1. In Change Setup, click **Change User / Password**.
2. Enter new usernames and passwords.
3. Click **Save**.

4.6 Configuring Inputs

This section applies only if inputs are being used for electricity monitoring, alarms, or sensors. If inputs are not required, skip to §4.7.

1. In Change Setup, click **Change Input Setup** (or **Input Setup**).
2. For each input in use, set the input type:

Mode	Use
Switch	Voltage-free contact — active when terminals are shorted
Analogue	Industrial sensor (voltage, current, temperature, pressure). Supports 0–2.5V, 0–5V, 0–10V, 4–20mA, 0–20mA.
Counter	Pulse input from an electricity meter. INx is directly associated with CNx — calculates kWh consumption while CNx is on
Event	Records pulse occurrences — minimum pulse width 100ms
Disabled	Remove from all reports and menus

3. Enter a descriptive name for each active input (e.g. `Field 1 kWh`, `Pump OK`).

4. For Counter and Analogue inputs, set measurement units, scan period, and minimum change to log.
5. Enable **System Monitor** logging (battery voltage, charger status, system temperature) if required.
6. Enable **Modem signal logging** if required — useful for diagnostics at sites with intermittent coverage.
7. Click **Save**.

Note: Inputs are labelled **IN1–IN8** on the Illuminator 2. Switch inputs must be stable for at least 3 seconds to register.

Calibrating Counter Inputs

Perform this step after configuring the input type as Counter.

1. In Change Setup, select the input from **Select Input to Calibrate**.
2. Enter the pulse weight — e.g. enter for a meter producing 10 pulses/kWh.
3. Optionally enter the current meter reading to synchronise the Illuminator counter with the physical meter.
4. Click **Set** to save. Click **Read** to verify the stored value. Click **Done** when finished.

Best practice: Calibrate while the associated light is off so the meter reading does not change during the process.

Counter rollover: 999,999.999.

Calibrating Analogue Inputs

2-point calibration (recommended):

1. In Change Setup, select the input from **Select Input to Calibrate**.
2. Follow the on-screen steps. The two calibration points must be at least half the sensor range apart.
3. Click **Save**.

Manual calibration:

Calibrated value = Scaler × Raw Value + Offset. Enter Scaler and Offset directly.

4.7 Network Configuration

In Change Setup, click **Change Network Settings**.

Easy Connect

Setting	Use
Enabled	Direct PC connection — factory default. Disable once the Illuminator is on a network.
Disabled	Use when the Illuminator is connected to a LAN.

LAN settings

Field	Description
IP address	The Illuminator's IP address on the local network. Also shown on the LCD.
Network mask	Subnet mask for the local network.
Gateway	IP address of the router providing internet access. Required for email and remote access via LAN.
Primary DNS	Primary DNS server IP. Required for email and remote access via LAN.
Secondary DNS	Secondary DNS server IP. Used if the primary does not respond.

Obtain IP address, gateway, and DNS values from your network administrator.

Note: IP address and mask can also be changed with the black button — see §8.2.

To connect the Illuminator to a LAN:

1. Disable **Easy Connect**.
2. Set the **IP address** to a unique address on the local network.
3. Set the **Network mask**.
4. Set the **Gateway** and **DNS** addresses.
5. Click **Save** and exit Change Setup.

6. Reconnect the LAN cable.

WAN settings (4G LTE)

The key setting is the **Access Point Name (APN)** — confirm the correct value with your carrier or SIM provider before commissioning.

Remote access: Remote browser access (GPRS) needs a separate APN, and a **public dynamic IP address** on the SIM. Not every carrier offers a public dynamic IP address — check whether yours provides it. Each carrier uses its own APN name for this. On Telstra it is

```
telstra.extranet.
```

Test Network button

After saving network settings, click **Test Network** to confirm the mobile connection is active. The LCD shows the result — a successful test confirms the APN is correct and the SIM is registered.

Send Test SMS

To confirm SMS delivery, enter a phone number and click **Send Test SMS**. A test message will be sent to the nominated number.

4.8 Email Configuration

In Change Setup, click **Change E-mail Settings**.

Field	Description
SMTP mail server	Hostname or IP address of the email relay server.
My email address	The "From" address used in all outgoing emails. Must be valid and acceptable to your mail host.
Test email address	Address used when sending a test email with the black button.
SMTP authentication	Leave Disabled unless your mail server requires it. If required, select Enabled and enter credentials.

Note: Carrier-provided SMTP servers (Telstra, Optus, Vodafone) are generally no longer supported for third-party use. Use your organisation's mail server or a dedicated relay

service (e.g. SMTP2GO).

After saving, test the email configuration with the black button — see §8.4.

4.9 Automatic Email Reports

The Illuminator can send scheduled email reports to notify recipients of light usage activity.

1. In Change Setup, click **Reports**.
2. Configure:

Field	Description
Recipients	Up to 3 email addresses
Maximum days between reports	0–15 days. 0 = send every day regardless of activity. Non-zero = send daily if lights were used; send unconditionally when the maximum interval is reached.

3. Click **Save**.

Note: Reports are sent overnight. Each report is attached as a CSV file named `(first 8 characters of Location)_ddmmyy.csv` — spaces in the location name are replaced with hyphens.

4.10 Setting Up Light Scenarios

Each light scenario has independent on/off times and operation mode configured per day of the week.

1. On the **Lights** page, click the value in the **Today's Times** column for the scenario you want to configure.
2. For each day of the week, set the On time, Off time, and operation mode:

Mode	Behaviour
Club Controlled	Normal users can control the scenario during the On–Off window
Timer	Scenario turns on and off automatically at the specified times

3. Click **Save**.

Time entry rules:

Entry	Meaning
0:00–0:00	No operation allowed that day
0:00–24:00	All day
Off time earlier than On time	Spans midnight — e.g. 19:00–03:00 = 7:00 PM to 3:00 AM next day

Note: Club Controlled and Timer modes can be mixed — different days of the week can use different modes within the same scenario.

Closing a scenario:

To prevent all user access to a scenario (e.g. during a maintenance period):

1. On the **Lights** page, select **Closed** for the scenario.
2. Click **Save**.

Only the administrator can control a closed scenario. Closing a scenario does not affect user PINs, access rights, or scheduled times. To re-open, select **Open** and click **Save**.

4.11 Managing Clubs and Users

1. Click **Clubs** in the navigation menu.
2. The **View Clubs** screen displays all clubs, their PINs, and scenario access rights.
3. To add or modify a user, click **Change** on the relevant row.
4. Enter or update:

Field	Description
Club abbreviation	Short name — used in SMS responses and on the Lights screen
Club name	Full club name
PIN	4-digit PIN used for SMS commands and numeric keypad control. Set to 0000 to delete the user.
Scenario access	Select which light scenarios this user can control

5. Click **Save**.

Rules:

- Club #1 is the administrator — administrator access to all scenarios cannot be restricted.
- Up to 49 normal users.
- To delete a user, set their PIN to .
- PINs and access rights can be changed at any time.

4.12 Setting Up Alarms

The Illuminator 2 supports up to 8 alarms. Each alarm monitors an input or system value and sends SMS and/or email notifications when triggered.

1. In Change Setup, click **Change Alarm 1** (through **Change Alarm 8**).
2. Configure:

Field	Description
Name	Descriptive name for the alarm
Trigger source	Any input (IN1–IN8) or system monitor value, or DISABLED
Trigger condition	ON/OFF for switch inputs; above/below/rate-of-change for analogue
SMS text	Text sent in the alarm SMS (included in: <code>Location: SMS text (Send 'RST ALx' to reset))</code>)
Phone numbers	Up to 3 phone numbers — SMS sent in sequence if not acknowledged
Email addresses	Up to 2 email addresses
Acknowledge time	0–60 minutes (default 30) — time to wait for acknowledgement before moving to next number

3. Click **Save**.

Important: Set the trigger source to **DISABLED** for all unused alarms.

SMS retry behaviour:

- Up to 3 send attempts per phone number before moving to the next number.
- After all attempts to the last number fail, sending stops.
- Maximum 9 SMS transmissions per alarm event.

Resetting alarms:

- Click the alarm on the **Alarms** page.
- Click **Reset All** at the bottom of the Alarms page to reset all active alarms.
- Send `RST ALx` (where x = alarm number 1–8) via SMS.
- Send `RST ALL` via SMS.

Note: If the trigger source is still active when an alarm is reset, a new alarm sequence will not start until the trigger source goes inactive first.

4.13 Save Settings

Save the current configuration to disk before leaving the site. This allows settings to be restored if the unit is replaced or reset.

1. In Change Setup, click **Save Setup to Disk**.
2. Save the file to a known location — label it with the site name and date.

To restore settings:

1. In Change Setup, click **Restore Setup from Disk**.
2. Browse to the saved settings file.

Warning: Loading settings from disk overwrites all current settings.

4.14 Exit Change Setup

Click **EXIT CHANGE SETUP** at the bottom of the Change Setup page. Logging and alarm generation restart immediately.

4.15 Commissioning Checklist

Before leaving site, confirm the following:

- Mobile signal $\geq 40\%$ (check the LCD) — $\geq 50\%$ good, $\geq 75\%$ excellent
- Correct timezone selected, daylight saving enabled if required
- Location name set and unique
- Username and password changed from factory defaults
- Light scenarios configured for each field — On/Off times and mode set per day of week
- Clubs and users configured — PINs and access rights set
- APN confirmed and mobile data connection active (use Test Network button)
- SMS operation confirmed (use Send Test SMS)
- Email operation confirmed (use the black button test email — see §8.4)
- Automatic reports configured and recipients confirmed (if required)
- Alarms configured and tested (if required)
- Inputs configured and showing expected readings (if inputs in use)

- Settings saved to disk
-

5. Normal Operation

5.1 The Lights Page

The **Lights** page is the primary operating screen. It is displayed automatically after login.

The page shows every configured light scenario with the following columns:

Column	Description
Scenario	Name of the light scenario
Today's Operation	Operating mode for today (see table below)
Today's Times	Scheduled On/Off times for today
State	Current ON/OFF state
Club	Club currently controlling the scenario (if any)

Today's Operation values:

Value	Meaning
Closed	Scenario closed by administrator — no user access
None	Scenario open but no access is scheduled for today
Club Controlled	Normal users can control the scenario during the time shown in Today's Times
Timer	Scenario turns on and off automatically at the scheduled times

5.2 Administrator Control

Administrators can control any scenario at any time from the Lights page, regardless of the current schedule or scenario state.

To turn a scenario on or off:

1. On the **Lights** page, click **ON** or **OFF** for the scenario.
2. Click **Save**.

To open or close a scenario:

1. On the **Lights** page, select **Open** or **Closed** for the scenario.
2. Click **Save**.

Note: Closing a scenario does not delete user PINs, access rights, or scheduled times. The turn-off delay (configured in §4.3) does not apply when an administrator turns off lights outside the user control period.

5.3 Alarms Page

The **Alarms** page shows all configured alarms and their current state.

Active alarms display a numerical status code indicating the current stage of the SMS sending sequence:

Code	Meaning
1–3	Attempting SMS 1, 2, 3 to the 1st phone number
4–6	Attempting SMS 1, 2, 3 to the 2nd phone number
7–9	Attempting SMS 1, 2, 3 to the 3rd phone number
10	Maximum attempts reached — no further sending; waiting for reset
RST	Alarm acknowledged — trigger source still active; waiting for it to go inactive

Resetting alarms from the web interface:

- Click the active alarm on the **Alarms** page to reset it.
- Click the **Reset All** link at the bottom of the page to reset all active alarms at once.

Resetting alarms via SMS:

- Send `RST ALx` (where x = alarm number 1–8) to reset a specific alarm.
- Send `RST ALL` to reset all active alarms.

Note: If the trigger source is still active when an alarm is reset, a new alarm sequence will

not start until the trigger source goes inactive first.

5.4 Inputs Page

The **Inputs** page shows the current readings for all enabled inputs. This is for monitoring only — input configuration is done in Change Setup (see §4.6).

The page shows readings at the time the page was loaded. Refresh the page to get the latest values.

5.5 Usage Report Download

The usage report covers floodlight activity — on/off events, duration, which user activated each session, and optionally electricity consumption if meter inputs are configured.

Note: The usage report is separate from raw History data. It stores the most recent 10,000 events.

1. Click **Report** in the navigation menu.
2. Enter the date and time of the first record to include and the number of days the report should span.
3. Click **Get Report** — the browser downloads a CSV file.

The CSV file can be opened in a spreadsheet application for analysis or printing.

5.6 History Download

The History page provides access to the raw logged data — input changes, output changes, alarm events, SMS activity, and system messages. This is for diagnostics and detailed records.

1. Click **History** in the navigation menu.
2. Set the **End Date** and **End Time** for the period of interest.
3. Enter the **Number of records** to retrieve.
4. Select a format and direction, then click **Get History** — the browser downloads a CSV file.

The logger stores up to 100,000 records in non-volatile memory.

5.7 Checking Mobile Signal

Signal strength is shown on the LCD and updated every 5 seconds. Format: `L4 Signal: 70%` — the letter/number prefix indicates the modem type; the percentage is signal strength. `??` or `-` indicates no coverage, no SIM, or the modem is not responding.

Signal level	Threshold	Action
Excellent	≥75%	No action required
Good	≥50%	No action required
Acceptable	≥40%	No action required
Poor	<40%	Reposition antenna — connection may be unreliable

5.8 Remote Access

Remote access allows the Illuminator's web interface to be reached from any internet-connected browser without a local network connection. It needs a SIM with a **public dynamic IP address**. Not every carrier offers one — check whether your carrier provides it before you order the SIM. Each carrier uses its own APN name for this. On Telstra it is `telstra.extranet`.

Note: Remote access uses the administrator PIN set in the Clubs page (Club #1 PIN). Ensure this is set before attempting remote access.

To initiate a remote session:

1. Send the following SMS to the Illuminator's phone number:

```
pppp GPRS n,yourEmailAddress
```

Part	Description
pppp	Administrator PIN (Club #1 PIN)
n	Number of minutes to hold the session open (10 recommended)
yourEmailAddress	Email address to receive the browser link

Example:

2. The Illuminator sends an acknowledgement SMS.
3. The Illuminator sends an email to the nominated address containing a browser link.
4. Open the email and click the link — the Illuminator login page opens in the browser.
5. Log in with the administrator username and password.
6. The Lights page is displayed. Operate as normal.
7. To end the session, log out from the **About** page.

Note: SMS commands sent to the Illuminator while a remote session is active are ignored. If a command is not acknowledged within approximately 1 minute, wait for the remote session to end and try again.

Note: Alarms are registered and logged normally during a remote access session. However, alarm SMS notifications are not sent until the remote session ends.

5.9 About Page

The **About** page displays the Illuminator's software version and Halytech contact details.

To view the About page, click **About** in the navigation menu. To log out of the current session, click **Logout** on the About page.

6. Advanced Operation

6.1 Electricity Monitoring

The Illuminator 2 can track electricity consumption per lighting circuit when pulse-output electricity meters are connected to the input terminals.

Requirements:

- Each electricity meter must be connected to the input with the same number as its associated control output — the meter for CN1 goes to IN1, the meter for CN2 goes to IN2, and so on.
- The lighting scenario must use a single Illuminator control output.

Setup:

1. Connect the pulse output of each electricity meter to the matching input terminals (the meter for CN1 goes to IN1, the meter for CN2 goes to IN2, etc.).
2. In Change Setup, click **Input Setup**.
3. For each metered input, set the input type to **Counter** and the units to **kWh**.
4. Calibrate each counter input — enter the pulse weight and optionally set the counter to match the current physical meter reading (see §4.6).
5. In **Change Location and Lighting Setup**, enter the electricity cost per kWh in the **Cost per kWh** field.

Once configured, the usage report includes an additional column showing electricity consumption per session.

Best practice: Calibrate counter inputs while the associated lights are off to ensure the meter reading does not change during calibration.

6.2 System Monitor

The Illuminator 2 includes a built-in system monitor that can log battery voltage, charger status, system temperature, and modem signal strength to the history log.

To enable system monitor logging:

1. In Change Setup, click **Input Setup**.
2. Enable the **System Monitor** logging options as required:

Parameter	Description
Battery voltage	Voltage at the Batt connector — monitors battery state
Charger status	Indicates whether the charger is active or in float mode
System temperature	Internal enclosure temperature
Modem signal	Signal strength at the time the unit connects to send a report — useful for diagnosing intermittent coverage

3. Click **Save**.

System monitor values are logged at the same scan period as other analogue inputs and appear in the History download.

6.3 Dimming

The Illuminator 2 supports dimming installations where a third-party dimming interface device is used between the Illuminator output and the luminaire drivers.

The Illuminator provides a **voltage-free contact closure** to the dimming device control input — the same relay output used for contactor installations. No additional configuration is required in the Illuminator; the dimming device interprets the contact closure and generates the appropriate dimming signal (0–10V, DALI, or other) for the luminaires.

Wiring: Connect the CN terminal pair directly to the control input of the dimming module. No intermediate relay is required.

Note: Dimming interface devices are not supplied by Halytech. They are sourced and installed by the electrician as part of the lighting installation. Refer to the dimming module manufacturer's documentation for wiring and configuration of the dimming device itself.

6.4 Control Takeover

If a user activates a scenario that is already controlled by another user, they take over control automatically. The previous user's session ends and any usage billing transfers to the new user.

A user cannot turn off lights that are currently controlled by another user — they will receive an SMS advising that the lights are now controlled by another club.

The administrator can override any user at any time.

7. SMS Commands

SMS commands allow users and the administrator to control lights and query system status from any mobile phone — without internet access or a web browser.

7.1 Lighting Control Command

Format: `ppppAL`

Part	Description	Example
<code>pppp</code>	4-digit PIN (the user's club PIN)	<code>1234</code>
<code>A</code>	Action — <code>1</code> = turn ON, <code>0</code> = turn OFF	<code>1</code>
<code>L</code>	Scenario number(s) to control — enter as adjacent digits for multiple scenarios	<code>1</code> or <code>123</code>

Examples:

Command	Effect
<code>123411</code>	Turn ON scenario 1 (PIN 1234)
<code>123401</code>	Turn OFF scenario 1 (PIN 1234)
<code>12341123</code>	Turn ON scenarios 1, 2, and 3 (PIN 1234)
<code>12340123</code>	Turn OFF scenarios 1, 2, and 3 (PIN 1234)

Note: The user must have access rights to the scenario being controlled. Access rights are configured by the administrator — see §4.11. The scenario must also be in Club Controlled mode and within the allowed time window.

Auto-off: Lights turned on by a normal user are automatically turned off at the end of the allowed time window. Lights turned on by the administrator remain on until the administrator turns them off.

7.2 Command Reference

All commands are sent as SMS to the Illuminator's phone number. Successful commands are acknowledged with a return SMS: `<Location>: OK SMS command`.

Command	Description
<code>HELP</code>	Receive a list of valid SMS commands
<code>GET ST</code>	Get current state of all inputs
<code>RST ALx</code>	Reset alarm x (x = 1–8) — e.g. <code>RST AL1</code>
<code>RST ALL</code>	Reset all active alarms
<code>ppppAL</code>	Turn scenarios on or off — see §7.1
<code>pppp GPRS n,email</code>	Initiate a remote access session — see §5.8

Command format notes:

- Commands may be sent in lower case, upper case, or a combination of both.
- Multi-word commands (e.g. `GET ST`, `RST AL1`) must have exactly one space between each word.
- SMS commands are ignored while a remote access session is active. If a command is not acknowledged within approximately 1 minute, wait for the remote session to end and retry.

7.3 SMS Responses for Failed Commands

When a lighting control command cannot be executed, the Illuminator sends an SMS explaining the reason. The response is prefaced by the programmed location name.

Response	Reason
Unauthorised access or wrong PIN, Send HELP or call <help> for assistance	PIN not recognised
Field x Too Late! Call <help> for assistance	Command sent after the allowed control time has ended
Field x Too Early! Call <help> for assistance	Command sent before the allowed control time has started
Field x No auth! Call <help> for assistance	User does not have access rights to that scenario
Field x Closed! Call <help> for assistance	Scenario is closed by the administrator
Field x in use! Call <help> for assistance	Another user is currently controlling that scenario
Field x Override! Call <help> for assistance	Administrator is currently controlling that scenario

Where <help> is the help contact name and number set in **Change Location and Lighting Setup** (see §4.3). Field x refers to the scenario number.

7.4 Numeric Keypad Commands

The optional numeric keypad uses the same command format as SMS, with one difference — the # key is required to send the command. On a mobile phone the message is sent by pressing Send; on the keypad, # takes that role.

Format: ppppAL#

Key	Function
0–9	Enter digits
*	Clear the input buffer
#	Send the command (required — command is not transmitted until # is pressed)

Feedback:

- **3 short beeps** — command accepted
- **1 long beep** — invalid command (wrong PIN, access denied, or scenario not available)

Timeout: If more than 30 seconds pass between key presses, the input buffer clears automatically.

Note: The keypad is not weatherproof — it must be installed in a protected location. See §3.7 for installation details.

8. Appendices

8.1 Front Panel Display Reference

The unit has a 16-character × 2-line LCD and a single black button. Press the button briefly to cycle through the LCD screens.

Screen	Contents
1	Sign-on screen — mobile signal strength
2	Current date and time
3	Easy Connect state
4	Current state of all light scenarios and which club is controlling each
5	Current state of all inputs
6	Battery voltage and charger status
7	System temperature
8	Alarm states AL1–AL4
9	Alarm states AL5–AL8
10	LAN IP address and subnet mask
11	Send test email (action screen — hold button >3 seconds to send)

Note: Screen 11 is an action screen, not just a display. Hold the button for more than 3 seconds to initiate the test email send — see §8.4.

8.2 Changing the IP Address via Front Panel

Use this procedure when you need to change the Illuminator's IP address and cannot connect via the web interface.

1. Press the button repeatedly until the LCD shows the IP address and mask screen:

I192.168.000.188
M255.255.255.000

2. Hold the button for more than 3 seconds. Display shows:

Change IP addr ?
192.168.000.188

3. Hold the button for more than 3 seconds again. A flashing cursor appears over the first digit.

4. Edit each digit:

- **Long press (>3 s)** — increments the digit
- **Short press** — moves to the next digit

5. After the last digit, the LCD returns to the `Change IP addr ?` prompt.

6. Press briefly. Display shows:

Change net mask?
255.255.255.000

7. Change the subnet mask if required using the same method.

8. Press briefly until the LCD shows `Save ?`

9. Hold the button for more than 3 seconds to save. The display returns to normal.

10. Power cycle the unit for the new IP address to take effect.

To cancel at any step: wait 20 seconds without pressing the button, then press briefly until the LCD shows `Cancel ?` — hold to cancel.

8.3 Enabling and Disabling Easy Connect via Front Panel

Use this procedure if Easy Connect does not activate correctly after power-up.

1. Connect the Ethernet cable between the laptop and the Illuminator.

2. Press the button until the LCD shows the Easy Connect screen. Confirm it shows `Enabled-In`
`Inactive`.

3. Hold the button (~3 s) until the LCD asks `Disable?`

4. Hold the button (~3 s) to confirm. Display shows `Disabled`.

5. Hold the button (~3 s) until the LCD asks `Enable?`

6. Hold the button (~3 s) to confirm. Display should show `Enabled-Active`, then `Enabled-In`
`use`.

7. Connect via browser.

8.4 Sending a Test Email via Front Panel

Use this procedure to verify email settings after configuration.

1. Press the button repeatedly until the LCD shows:

Send test email?

2. Hold the button for more than 3 seconds.
3. Display shows `Sending email...` while sending (up to ~30 seconds — button does not respond during this time).
4. Result is displayed as `Email sent OK!` or `Email failed!`

If the test fails, re-enter Change Setup and check network and email settings.

8.5 Technical Specifications

Specification	Value
Power	
Charger input	16–24V DC
Battery input	12V SLA
Enclosure	
Dimensions	200mm (H) × 110mm (W) × 90mm (D)
Weight	650g (approx)
Enclosure material	Polymer
IP rating	IP-20 (indoor/protected installation only)
Mounting	Keyhole wall mount — centres 79mm (W) × 178mm (H)
Controls	
Number of outputs	8 (CN1–CN8)
Contact type	Voltage-free latching relay
Output rating	30V / 1A
Inputs	
Number of inputs	8 (IN1–IN8)
Input modes	Switch, Analogue, Counter, Event, Disabled
Alarms	
Number of alarms	8
SMS recipients per alarm	Up to 3 phone numbers
Email recipients per alarm	Up to 2 addresses
Logger	
Capacity	100,000 records
Time resolution	1 second
Connectivity	

Specification	Value
Mobile	4G LTE, 2 × SMA antenna connectors
SIM	Nano SIM (push-release tray)
Ethernet	RJ-45, Easy Connect
WiFi	IEEE 802.11 b/g/n — hotspot/access point mode
Clubs (Users)	
Administrator	1 (Club #1)
Normal users	Up to 49
Light scenarios	Up to 8
Origin	Designed and manufactured in Australia

8.6 Factory Defaults

Setting	Default value
IP address (Easy Connect)	192.168.0.188
IP address (WiFi)	192.168.10.1
Easy Connect	Enabled
Web admin username	user
Web admin password	changeme
Web normal user username	user
Web normal user password	user
Administrator PIN (Club #1)	1234

Important: Change the web password and administrator PIN before the unit goes into service.

8.7 Logged Data Format

Raw history data is downloaded as a CSV file. Each record contains four fields:

1. Date (dd/mm/yy)
2. Time (hh:mm:ss)
3. Numeric event identifier
4. Text description (or the value of an analogue input)

The numeric identifier indicates the type of event. Use the table below to decode records.

Numeric ID	Range	Text	Description
32769	32769	NORML ST	Normal program start
32771	32771	MODM ON	Modem came on-line
32772	32772	MODM OFF	Modem went off-line
0 + ST#	0–7	Numeric analogue value	Analogue input log record
50 + 2×ST# + STATE	50–65	STx=y	Digital input state change
100 + 2×CNT# + STATE	100–107	CNx=y	Control output state change
200 + AL#	200–207	Alarm x	Alarm activation
280 + AL#	280–287	Almx RST	Alarm reset
300 + 10×AL# + SEQ	300–379	SMSxy OK	Alarm SMS transmission successful
500 + 10×AL# + SEQ	500–579	SMSxy NG	Alarm SMS transmission failed
700 + AL#	700–707	SMS ALxR	SMS command — reset alarm
718	718	SMS ALLR	SMS command — reset all active alarms
760	760	SMS GTST	SMS command — get status
797	797	SMS ROK	SMS command acknowledgement sent OK
798	798	SMS RNG	SMS command acknowledgement send failed
1999	1999	#####	SMS received from this number (last 8 digits)
2000 + CLUB×16 + FIELD	2000–2327	c01F02OF	Floodlight turned OFF
2500 + CLUB×16 + FIELD	2500–2827	c01F02ON	Floodlight turned ON
2998	2998	222203#	Floodlight SMS command text
2999	2999	123411#	Floodlight keypad command text

Key to variables:

Variable	Meaning
ST#	Input number (0–7; IN1 = 0)
STATE	Digital state: 0 = OFF, 1 = ON
CNT#	Control number (0–7; CN1 = 0)
AL#	Alarm number (0–7; Alarm 1 = 0)
SEQ	Alarm sequence step (0–10)
x	Alarm number (1–8; equals AL# + 1)
y	Alarm sequence number (1–9; equals SEQ + 1)
c	Control method: K = keypad, P = phone, C = computer, A = automatic
CLUB	Club (user) number
FIELD	Field (scenario) number

8.8 If You Cannot Connect

Use this if the Illuminator 2 WiFi network does not appear on your device, if the browser shows an error page instead of the login page, or if the login is refused. Check these in order.

1. The LCD backlight must be on. If it is off, press and hold the black button until it turns on. A browser cannot connect while the backlight is off.

2. On WiFi, the network must be running. If the Illuminator network is not in your device's WiFi list, the WiFi has stopped. It times out, and it also stops after a power cycle. Press and hold the black button to start it again.

3. On WiFi, the password must be right. Retype it from the label on top of the unit. If it still fails, someone has changed it and the label is out of date. Connect by LAN cable and set a new one in Change Network Settings, then Wi-Fi Settings.

4. The address must be right. By cable it is `192.168.0.188` unless someone has changed it — press the black button until the LCD shows the address the unit is using. Over WiFi it is the address at the start of the network name on the LCD, usually `192.168.10.1`.

5. By cable, give it ten seconds. Wait ten seconds, then reload the page. The laptop and the unit need that time to agree on an address.

6. By cable, the laptop must get its IP address automatically. The Illuminator acts as a DHCP server. It gives your laptop an address on its own network, so the two can talk without you setting anything. For that to work, the laptop's Ethernet adapter must be set to obtain an IP address automatically (DHCP). If DHCP is disabled, the laptop keeps its own fixed address and never reaches the unit. This is the usual cause on a laptop set up for a fixed office network.

7. Easy Connect must match how the unit is wired. Easy Connect must be enabled for a direct PC connection, and disabled where the Illuminator sits on a LAN — see §8.3.

8. If the login page opens but refuses you, check the credentials. The factory default is `user` / `changeme`. If someone has changed it, ask the system owner — see §4.5.

8.9 SIM Cards and iPhones

Read this section if you use an iPhone to disable the SIM PIN before installation.

The problem

An iPhone with iMessage turned on registers the SIM number with Apple. That registration stays in place after you move the SIM to another device. SMS sent to that number from other iPhone users then goes to the original iPhone as an iMessage. It never arrives at the Illuminator. Alarm SMS, report SMS, and SMS commands all fail while this is the case.

How to prevent it

- 1. On the iPhone, open **Settings**, then **Messages**.
- 2. Turn **iMessage** off before you insert the SIM.
- 3. Insert the SIM and disable the SIM PIN.
- 4. Remove the SIM from the iPhone.
- 5. Turn iMessage back on. It re-registers the iPhone's own number, not the Illuminator SIM number.

How to test it

Send a text message from an iPhone to the Illuminator SIM number.

Bubble colour	Meaning	Result
Green	The message went as SMS	Correct — SMS reaches the Illuminator
Blue	Apple holds the number for iMessage	SMS will not reach the Illuminator

Note: This test needs an iPhone sender. An Android phone always sends SMS, so it always shows green, even when Apple holds the number.

How to recover

Apple has an online tool that removes a number from iMessage. Search for "Apple iMessage deregister" for the current link and instructions. The process may change.



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Powered by **Spider 2**



Full specifications, downloads and support

halytech.com.au/products/illuminator-2

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