

Logic2Calendar — user guide

The lights come on by themselves when the pitch is booked, and go off when the booking ends. Bookings are written on an ordinary calendar — Google Calendar, Outlook or the one on the iPhone — and there is nothing else to do.

And not only the lights: anything the installation can command — an alarm, the irrigation, the heating of the changing rooms, a dimmer, a scene — can follow a calendar. The examples are in chapter [1bis](#).

This guide is written for someone who has never seen a LogicMachine. It takes fifteen minutes to read and the configuration takes ten.

 La stessa guida in italiano: [GUIDE.md](#).

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1. What it does, concretely

Every minute the application asks itself **one question**:

«Is there a booking right now? Is it dark? Has anybody switched off by hand?»

If all three answers are yes, the lights are on. As soon as one becomes no, they go off. Plus two protections we will see later: a **maximum on-time** and a **curfew**.

Why this way of working matters. The system does not «schedule» the switching on and off in advance: it **re-checks everything every minute**. The difference shows in the awkward cases, which are the ones that cost money:

If this happens...	...the application does this
the device reboots mid-match (the lights stay on)	it touches nothing: they are already as they should be
the device is off when the booking ends	as soon as it restarts it sees there is no booking and switches off
you delete a booking while it is running	within a minute the lights go off
two adjoining bookings (17–18 and 18–19)	halfway through the lights do not blink : to the system it is one single block
somebody switches off at the wall switch	the system does not switch back on until the end of that booking

A system that «schedules» instead of re-checking would, in the **second** case of this table, leave **the lights on all night** — and nobody would notice until the bill arrives.

⚠ **One case behaves differently, and it should be known beforehand: a power cut.** If the power fails for **the whole installation** during a booking — lights included — when the power returns the application finds the lights off after having commanded them on, and **it cannot tell that apart from somebody switching off at the wall switch**. It respects what looks like a decision made by a person and **leaves them off until the end of that booking**. They come back on from the wall switch, and the next booking starts normally.

The precision is one minute. The lights come on within a few seconds of the start time, and go off within a minute of the end.

And the start time is not the booking time: it is a few minutes earlier. Whoever books the pitch from 19:00 to 20:00 wants to play for an hour, not spend the first minutes changing in the dark. That is why the application switches on **five minutes earlier** and off **five minutes later**: a 19:00–20:00 booking is lit **from 18:55 to 20:05**. Both values can be changed — see step 4, part 4. *When* — and setting them to 0 makes the lights follow the exact times.

1bis. What it can command

The name says «lights», but the application drives **any group address**: for it a load is an address to send one value to when there is a booking, and another value when it ends. Each load is a **unit** of its own, with its own calendar and its own rules (chapter 5).

With on / off — the case proven on the installation

What	How to configure it	Good to know
The lights of a pitch	daylight on « <i>Only while it is dark</i> », margin 5 and 5, both safeties filled in	it is the case the application was born for
An alarm that arms in the evening	daylight on « <i>Always</i> »; <i>At the end of the booking</i> on « Do nothing »	whoever arrives in the morning disarms it. If someone disarms it by hand, the application does not re-arm it until the next booking
Irrigation	daylight on « <i>Only while it is dark</i> » and <i>Stop anyway after</i> at 0.33 hours (twenty minutes)	it becomes «water for twenty minutes from dusk, all year round»: the start time moves by itself with the seasons
Heating or air conditioning of the changing rooms	daylight on « <i>Always</i> »; <i>Start earlier</i> at 60–120 minutes	⚠ a cold room takes hours to warm up: the margin before is there exactly for that, and goes up to 240 minutes . Remember that the margin counts for <i>Stop anyway after</i>
The hot-water boiler	daylight on « <i>Always</i> »; <i>Start earlier</i> at 60 minutes	the water is hot when the teams arrive, and the boiler does not heat at night for nobody
Ventilation	daylight on « <i>Always</i> »; <i>Finish later</i> at 30 minutes	the air keeps changing after the room has emptied
An «occupied» sign outside the door	daylight on « <i>Always</i> », margin 0 and 0	it follows the exact times of the calendar
Switched sockets and charging points	daylight on « <i>Always</i> »; <i>Stop anyway after</i> filled in	power is there only during the booking of whoever asked for it
Blinds and shutters with up/down command	daylight on « <i>Always</i> »; <i>At the start</i> 1 (down), <i>At the end</i> 0 (up)	the values depend on how the installation is wired: ask whoever did it
Inverse logic : switching something off during the event	<i>At the start</i> off , <i>At the end</i> on	for example the presence sensors of a room disabled during a conference
The building calendar	a calendar with the opening hours; one unit for each system that follows it	office heating, corridor lights, automatic doors: whoever changes the hours changes them in one place

⚠ **Two warnings, and they have to be said first.**

- **Gates and locks: not as the only control.** The application works by the minute and reads the calendar from the internet: if the internet is down it **keeps the last decision taken**. For a gate it means staying open or closed until the calendar is readable again. It is fine for *convenience* (opening the barrier at match time), **not** as the only protection of an entrance.
- **Heating is slow.** A command leaves at the right time, a room takes hours to change temperature. This is handled with *Start earlier*, not by expecting the room to be warm at the start of the booking.

With numbers — new in this version

Besides on and off, the *Command type* field can send numbers:

Command type	For example	At the start / At the end
Percentage 0-100%	a dimmer, the position of a blind	80 and 0 : the room lights at 80% during the event
Scene 1-64	the «match» scene of the pitch, the «conference» scene of a room	the scene number, as whoever programmed the installation knows it
Thermostat mode	comfort during the booking, economy outside	1 (comfort) and 3 (economy). The others: 0 auto, 2 standby, 4 protection
Decimal number	the temperature set point	21.5 and 16
Whole number 0-255	a value the installation wants as a number	whatever whoever programmed the installation tells you

The application **checks the value when you press Save**: an «80%» or a 120 on a percentage are refused, and the red message appears right under the wrong field.

 **These types are new.** On/off has been proven on the installation since day one; the numbers are proven on the test bench, and **the installer tests them on your installation at handover** — a dimmer or a scene is watched while it comes on, not taken for granted.

More — optional

Four extra things, all in part 3. *What you drive* of the card: the first is a field under the command row, the other three are **closed boxes** that open when you tick a checkbox. **If you do not use them, the unit does exactly what it does without.**

- **more addresses together**: the same calendar switches on the floodlights *and* the changing-room lights;
- **a different value depending on the event title**: a table of words — *Match = 100, Training = 60* — and a booking called «*Training U12*» sets the dimmer to 60%. Whoever books writes ordinary words;
- **a display**: the entrance shows the name of the booking in progress, and outside the hours «*Pitch free*»;
- **the end warning**: in the last minutes before the lights switch off, a lamp or a short siren on a separate address — or the floodlights themselves dimming, for example to 50% — so whoever is playing knows time is running out.

2. Before you start

You need four things. You already have the first two; the installer gives you the other two.

	What it is	Who provides it
A calendar	Google Calendar, Outlook or iCloud, where you will write the bookings	you
A computer or a phone on the same network as the device	only needed for the configuration, then no longer	you
The address of the device	something like 192.168.0.11	the installer
The group address of the lights	something like 1/1/21: it is the «phone number» of the lights on the installation	the installer

Advice: use a calendar dedicated to bookings, not your personal one. Everything in it switches the lights on — including the dentist appointments.

Important calendar requirement. LogicMachine must be able to read the .ICS feed **directly over the Internet, without an interactive login or authentication step**. This does not mean the calendar has to be public in the same way on every service: with **Google Calendar** use the **Secret address in iCal format**; with **Apple iCloud** enable **Public Calendar**; with **Outlook / Microsoft 365** use the **published ICS link**. Treat the .ICS link as a confidential key: whoever has it can read the calendar bookings.

2bis. Installing the application, and the licence

This part is done by the installer, once. Whoever uses the application every day can skip it.

Installing

The application arrives as a single file ending in `.ipk`. On the LogicMachine:

1. **App Store** → **Install from file**;
2. in the **Package file** field choose the `.ipk` file;
3. the **Signature file** field is left **empty**, and you tick «*Allow to install package without signature*».

⚠ **A red warning will appear**, and that is normal: it only says the package does not carry the signature of the device manufacturer. The installation succeeds all the same.

There is nothing else to do: no text to paste, no script to enable. The package brings the working part with it, and the LogicMachine starts it by itself — after a reboot too, and after a power cut.

If that device already had an earlier version installed by hand, that piece **stays**: the application notices, stands aside and writes it in the log. To move to the new version it has to be deleted by hand from *Scripting* → *Resident* — it is called `calendar_lights`.

The licence

The application is valid for **one** LogicMachine. On first opening, at the top of the page there is a box with:

- **the fingerprint of this device**, a line like `lm:9999999999999999`, with a **Copy** button;
- a field in which to **paste the licence** we will send you.

The round is this, and it is three messages:

1. you copy the fingerprint and send it to us;
2. we reply with a file of a few lines;
3. you open it, copy the whole content, paste it into the field and press **Save the licence**.

Right after saving, the box turns **amber** and says «*this state was worked out by the page: the cycle will confirm it on its next pass, within a minute*». That is not a problem, and it is written on purpose: what really verifies the signature is the cycle that does the work, not the page you are looking at. **Within a minute** the box disappears by itself and the rest of the application appears.

⚠ **If the box is still amber after two minutes**, that is information, not a whim: it means the cycle could not confirm. Press *Diagnostic report* at the bottom of the page and send it to us.

Until there is a licence, the application commands nothing — and for that reason it **does not even show the units**: configuring an installation that nobody will run would make you believe you had finished. You see only the licence box and, at the bottom, the diagnostic report. It does not touch the loads, so it does no harm. It says so at the top of the page, and it writes it in the log.

⚠ **If the box says «Licence not verifiable»**, the field for pasting is not there — and that is not a fault. It means this controller cannot verify **any** licence at all: either the application was copied by hand instead of installed with the package, or `opnssl` does not answer. A new licence would change nothing, so we are not asking you for one. **The fingerprint stays in sight**, and that is exactly what we need: send it to us and let us know. In the meantime the application **keeps working**.

To replace or remove the licence, at the bottom of the page there is a *The licence* box with two buttons: **Replace the licence** (reopens the field to paste another one) and **Remove the licence** (asks for confirmation). It sits at the bottom and not at the top for a precise reason: the licence box at the top **appears only when there is something to do**, so with a working licence it is hidden — and that is exactly the moment you want to replace it.

Removing the licence stops the application commanding anything, but **the units' configuration and the calendar are not touched**. If the package carried one inside, that one applies again on the next pass.

If you replace the **LogicMachine** the licence is no longer valid: the fingerprint is the processor's, and it changes with the device. The page says so in plain words («*this licence is signed for another device*»); you need to ask us for a new one, and it is enough to send us the new fingerprint.

3. Step 1 — get the calendar link

The application reads the calendar from a **special link** that every calendar knows how to generate. It is not the link used to share a calendar with a person: it is a technical address that **ends in .ics**.

Google Calendar

1. open Google Calendar **from a computer**: that is where this item lives;
2. **Settings** (the cog at the top right) → **Settings**;
3. in the left column, click **the name of the calendar** with the bookings;
4. scroll down to «**Integrate calendar**»;
5. copy «**Secret address in iCal format**» — it ends in `/basic.ics`.

Outlook / Microsoft 365 — path not verified yet

Calendar → **Share** → **Publish calendar** → choose «**Can view all details**» → copy the **ICS** link.

Apple iCloud

Click the share icon next to the calendar name → turn on **Public calendar** → copy the link. It starts with `webcal://`: that is fine, we convert it.

 **Why Outlook says «not verified yet».** The Google and Apple paths have been **actually used** on a real calendar. The Outlook one has not: it comes from Microsoft's documentation, and vendors rename menus without warning. The format of the link, however, is the same for all three, so **the application reads them anyway**: if the menu is called something else, look for an item that talks about *sharing* or *publishing* and an address ending in `.ics`. The same warning appears inside the application.

 **Do not copy the «Add calendar» link** — the one containing `cid=`. It is for something else and the application refuses it, and tells you so.

4. Step 2 — open the application

Open the browser and go to the address of the device. In the list of applications you will find **Logic2Calendar**: the icon is a calendar with a clock.

The page opens like this:

- **at the top** there is a status line with a dot. Green and «*The cycle is running*» means the system is working;
 - **on the left** the list of units;
 - **in the middle** the card of the selected unit;
 - **at the top right** the language selector and the **Close** button, to go back.
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5. Step 3 — create the first unit

What a unit is: a calendar that drives a load, with its own rules.

The big pitch is a unit. The small pitch is **another** unit, with its own calendar and its own lights. The boiler is a third. Each goes its own way: if one has a problem, the others keep working.

Press + **Add a unit** on the left. An empty card appears with four numbered parts and, at the bottom, a closed row called **Advanced**. They are filled in from top to bottom; *Advanced* is usually not even opened.

Two things apply to the whole card:

- next to every field there is a «?»: press it and the explanation appears under the field. The explanations in this guide are the same;
- in the list on the left each unit says **in one sentence** what it is doing — *Booking in progress*, *No booking right now*, *Somebody adjusted it by hand: we leave it alone for another 20 minutes* — with a coloured pill: green **On**, grey **Off**, blue **By hand**, red **To finish**. On a phone the list is folded into a button with the name of the open unit: tap it to choose another one.

6. Step 4 — the fields, one by one

1. The unit

Field	What to write	If you leave it empty
Name of this unit	whatever you call it: <i>Big pitch</i> , <i>Pitch 2</i> , <i>Boiler</i>	the unit is called «unit 1»: it works, but in the list and in the log you cannot tell which one it is

2. The calendar

Field	What to write	If you leave it empty
Calendar address (.ics)	the link copied in step 1	the unit does not work and the page says so: it is the only really mandatory field, together with <i>Command address</i>

Right below there is the **Check the calendar** button: press it. It is the application's report, and it tells you four things on the spot — **whether the calendar can be read**, **how many bookings** it found in the coming hours, **which is the next one**, and **which events it discarded**, with the reason.

Always do it, and do it again whenever something does not add up: it is the first place to look. A wrong link discovered now costs ten seconds; discovered on the evening of the match it costs a phone call.

3. What you drive

At the top there is **the command row**: four fields side by side.

Field	What to write	If you leave it empty
Command address	the group address that switches on and off, for example 1/1/21. It is the same one the wall switch uses	the unit does not work : it is the only place the application writes to
Command type	«On / off» for lights, alarms, pumps, boilers. The others are for a dimmer, a scene, a thermostat: see chapter 1bis	On / off
At the start	the value to send when the booking begins. With <i>On / off</i> leave it empty . With the other types: the number, for example 80 for a dimmer at 80% — with a percentage, a % sign appears next to it	on (or 100 for a percentage). For a scene, a thermostat or a number it must be written
At the end	as above, for when the booking has ended	off (or 0 for a percentage)

Under the row, and then:

Field	What to write	If you leave it empty
Other addresses, same value	if the same calendar must drive more groups — the floodlights and the changing-room lights — the other addresses, separated by a comma: 1/1/22, 1/1/23. They get the same value at the same moment. Manual intervention is watched on the command address only	only the command address is driven
Status address (optional)	the address on which the installation replies saying whether the lights are really on	the command one is used. That is perfectly fine — you only lose the ability to notice a command that does not arrive
At the end of the booking	«Send the end value» almost always. «Do nothing» is for a load that a person switches off: an alarm that arms in the evening and that whoever arrives disarms in the morning	Send the end value

If you do not know what a «group address» is: it is the number that identifies a circuit on the installation, like 1/1/21. Whoever wired the installation gives it to you. It is the same one that answers when you press the wall switch.

If you leave the status address empty, after saving a yellow warning will appear: «Command and status are the same group address». **It is not an error and there is nothing to correct** — it only says what you lose: the system cannot notice a command that leaves but does not reach the lights, because the address answers with what the system itself wrote to it.

The three options. At the bottom of part 3 there are three boxes, each with a checkbox. **Tick it and the box opens; untick it and the fields inside are emptied** (the bar at the bottom shows it, and *Undo* puts them back). When you reopen the card, an option you are using is already ticked and open.

Option	What you write	Example
A different value depending on the event title	a table: the words in the <i>If the title contains</i> column, the value in <i>At the start send</i> . One row per rule; + Add a row to add one, the x to remove it. The first matching row wins, upper and lower case do not matter; for every other event the <i>At the start</i> value applies	<i>Match</i> → 100, <i>Training</i> → 60
A warning before the end	How many minutes before the end (1 to 60); then one of two ways: Value to send to the load — floodlights dropping to half say time is running out — or Or switch on this address , an on/off object that is 1 during the last minutes (a lamp, a short siren). If you fill in the address, it wins. The warning looks at when the load will really stop : the curfew and <i>Stop anyway after</i> count too	5 minutes, value 50
Write the booking title on a display	Display address , a 14-character text object: during a booking it shows the title, with accented letters losing their accent. When free, show : what it writes outside bookings (empty: the display is cleared)	1/1/50, <i>Pitch free</i>

4. When

Every field in this part can be left empty, and empty means «no limit». But the two safeties are worth filling in: see the next step.

How much daylight matters is not a drop-down but **three boxes side by side**: click the right one.

Box	When to choose it
Only while it is dark	the lights of a pitch: they come on when really needed and use less energy. Also irrigation, which then starts at sunset. This is the recommended one
The whole booking, if it falls in the dark	the lights come on from the first minute, even if it is still light, as long as part of the booking is after sunset

Box	When to choose it
Always — do not look at the sun	an alarm , a boiler , a gate : they only follow the calendar. Not for the lights of a pitch

Field	What it is for	Recommended value
Start earlier (minutes)	how many minutes before the start the lights come on, so whoever arrives does not find the pitch dark. With 5, a booking from 19:00 is lit from 18:55	5
Finish later (minutes)	how many minutes they stay on after the end, to leave the pitch with some light. With 5, a booking until 20:00 goes off at 20:05	5

Below, under the heading **The safeties**:

Field	What it is for	Recommended value
Stop anyway after (hours)	⚠ this is a safety : see step 5	4
Never active from / Never active until	⚠ this is a safety : see step 5	23:30 and 06:00

Three things to know about the «Start earlier» and «Finish later» fields. 1. **they also count towards the maximum on-time**: one booked hour with 5 and 5 makes **one hour and ten minutes** of running time, so a 4-hour cap cuts ten minutes earlier than you would expect; 2. **the curfew wins**: if a booking ends at 23:25 and the curfew is at 23:30, the tail stops at 23:30. The safety sits above the convenience, always; 3. **two nearby bookings become one**. With 5 and 5, a 19:00–20:00 booking and a 20:10–21:00 booking touch, and to the system they are **one single block**: the lights do not go off during the ten minutes in between — which is what you want — but **whoever switches off at the wall switch during the first one also keeps the 20:10 group off**, until 21:05. If the two teams are different, tell them, or put 0 in these two fields.

The maximum accepted value is **240 minutes** — four hours, what it takes to warm up a changing room. It is there to stop a 5 that became a 500, which would be eight extra hours of floodlights every evening.

Advanced

At the bottom of the card there is a closed row, **Advanced**: click it to open it. Next to the title it says how many settings it holds and **which ones differ from usual** — so, even closed, it hides nothing odd.

Field	What it is for	Recommended value
Wait before believing somebody took over (seconds)	the lights take a moment to answer. Within these seconds of a command of ours, a difference is not taken for somebody touching the switch	10
Earlier in the evening (minutes)	if the pitch goes dark before sunset — trees, a hill, a roof — write for example –20 : the lights come on twenty minutes earlier	0, then adjust by watching
Later in the morning (minutes)	the same the other way round: 20 means the lights stay on twenty minutes longer after sunrise	0
Latitude / Longitude	only needed to know when it gets dark	usually empty : the device provides them. If it says « <i>the device does not know it</i> » under the field, write them yourself — you find them by holding your finger on the spot in a phone map

If the device does not know where it is, «Advanced» opens by itself and after saving a yellow warning appears saying that without latitude and longitude **the lights will stay off**. In that case write the two numbers by hand: it is the only warning on this page that, if ignored, keeps the pitch dark.

When you are done, a bar appears at the bottom saying **how many changes** you have made and which ones. Press **Save**.

7. Step 5 — the two safeties

They are the fields under *The safeties*, in part 4, and they deserve a step of their own: **they are what protects the bill if something goes wrong in a way nobody foresaw.**

Stop anyway after (hours)

After so many hours the lights go off **by themselves**, whatever the calendar says. Four hours is a reasonable value for a pitch.

What it is really for: it also covers the faults we have not imagined. If somebody accidentally writes a booking from 20:00 to 20:00 the next day, this line switches off after four hours instead of after twenty-four.

⚠ **The hours are counted from the real switch-on, margin included.** With 5 minutes before and 5 after, the four hours start five minutes before the start written on the calendar: a four-hour booking is cut five minutes before the end. If that is a nuisance, put **4.5** instead of 4.

⚠ **When this safety cuts, the lights stay off until the end of that booking** — they do not come back on the minute after. That is deliberate: otherwise they would switch on and off every other minute for the whole evening.

Never active from / until

A time window in which the lights **never come on**, not even if there is a booking. For example from **23:30 to 06:00**.

It is perfectly fine for the window to cross midnight: that is the normal case, and it is handled.

⚠ **If you leave them empty the application does not stop you: two empty boxes mean «no limit».** It warns in yellow only when **both** safeties are empty: with one filled in, nobody will remind you of the other. That is why this chapter exists. If the club really does have matches until late, set them wide — for example 01:00 → 05:00: wide still protects, empty does not.

8. Step 6 — prove that it works

Five minutes, and it is proven **on the real installation**.

1. in *How much daylight matters* click the **«Always»** box and **Save** — so you do not have to wait for sunset. ⚠ **Remember to put it back as it was at point 6:** in the list on the left that unit carries a yellow **«Always»** pill for as long as it is like that, on purpose, so you do not forget;
2. on the calendar create a booking that **starts in two minutes** and lasts ten;
3. go back to the page and look at the list on the left: **within a minute or two** the unit's pill turns to green **ON**;
4. **look at the real lights.** It is the only proof that counts;
5. delete the booking: within a couple of minutes the pill goes back to **OFF** — the deletion takes about ten seconds to show up, then the next check is needed;
6. **put «Only while it is dark» back and Save.** Check that the yellow **«Always»** pill has disappeared from the list.

If nothing happens at point 3, wait another minute: the calendar takes about twenty seconds to publish a change just made. If after two minutes nothing has changed, go to the chapter *If something is wrong*.

9. Everyday use

There is no everyday use. From here on you only work on the calendar, from the phone or the computer:

- **booking:** you create an event with a start and an end time. The title does not matter; write the name of whoever booked — unless the unit has the display (it shows it) or rules on the title: then *«Training U12»* may mean dimmer at 60%;
- **moving or extending:** you edit the event. The lights follow within a minute;
- **cancelling:** you delete the event. If the booking was running, the lights go off within a minute;

- **switching off by hand:** the wall switch always works and **wins**. The lights stay off until the end of that booking, then the system starts commanding again. ⚠ If two bookings are **adjoining**, it lasts until the end of the block: whoever switches off at 17:30 between a 17–18 and an 18–19 also keeps the 18 group off. It is the choice that does not switch the lights back on over somebody who is still on the pitch. ⚠ And «adjoining» counts the **margin minutes**: with 5 before and 5 after, two bookings separated by **ten minutes or less** are already one single block.

⚠ **Book a few minutes in advance.** A booking created thirty seconds before its start can switch the lights on a minute late: the calendar takes about twenty seconds to make it visible.

10. How to read the page

You do not need to open it often. When you do, three things tell you everything.

The dot at the top — it is the heartbeat of the system:

● The cycle is running	all is well
● The cycle has stopped	the system has not been checking for some minutes: call the installer
● The cycle has never run	a piece of the installation is missing

The pills in the list — what each unit is doing:

ON green	the load is on right now
OFF grey	all normal, there is nothing to switch on
NEVER RAN yellow	the unit is configured but the system has not seen it yet
TO FINISH red	a mandatory field is missing: open the card and read the warning
BY HAND blue	somebody adjusted the load by hand: the application leaves it alone until the end of that booking
ALWAYS yellow	the unit does not look at the sun: right for an alarm or a boiler, not for the lights of a pitch

The warnings in the card — two colours, two meanings:

● red	there is something preventing it from working: a mandatory field left empty or a wrong value
● yellow	it works, but there is something to know — also when both safeties are empty

Next to the dot the page also shows **the device clock**: if it is not the right time, the bookings will arrive shifted — and it is the first thing to look at if the times do not add up.

11. What the application does NOT do

Better to know beforehand. Nothing here is a fault: they are choices, and each has its reason.

It does not fight a person. If you switch the lights on by hand outside a booking, the application **leaves them on**: it does not switch them off to «put things back in order». The same goes for a dimmer **adjusted** by hand during a booking: it stays where the person put it until the end. The two safeties still apply to what the application switches on.

⚠ **With one exception, and it has to be said: the very first cycle after the installation.** Freshly installed, the application does not yet know what it commanded and what a person did, so at the first check it **aligns the load with its own decision**: a light switched on by hand outside a booking goes off within a minute. It happens once, and from that moment on the rule above applies.

It is not accurate to the second. It checks every minute: the lights come on within a few seconds of the start time and go off within a minute of the end.

It ignores three kinds of event, on purpose:

- **all-day** events — on a pitch calendar they are almost always notes (*closed for maintenance*, a holiday), and taking them for bookings would keep the lights on all night;
- **cancelled** events;
- events marked as «**free**» instead of «**busy**».

Repeats: daily, weekly, monthly and yearly. «Every Tuesday at 20:00», «the second Tuesday of the month», «the last Sunday in March», «the 15th of every month» all work. Two things are worth knowing, because they are the ones where a calendar behaves surprisingly:

- **«the 31st of every month» skips the months that have no 31st.** November, April, June, September and February produce no booking at all, and the rule picks up again the month after. They do not become «the 30th» or «the 1st of the next month»: that would be a booking on a day that is not on the calendar. For «the last day of the month, whichever it is» use the calendar's own option;
- **«every year on 29 February» only fires in leap years**, that is once every four. It is how the calendar standard says it should be read, and it is also the only reading that does not move the date by a day three years out of four.

Forms the application does **not** know how to apply — «the last working day of the month», for instance — are not guessed: the repeat is **ignored as a whole and declared** under the *Check the calendar* button. The reason is that guessing would mean switching on **every** working day instead of one.

The time zone is decided by the calendar, not by the controller. A calendar written in London and a controller installed in Italy gave, until 23 September 2026, times shifted by an hour — with no warning at all, because it is not a fault: it is a conversion made with the wrong clock. The application now reads the time zone rules the calendar carries with it, daylight saving included, and the times stay the ones written on the calendar. The *Check the calendar* button says which of the two routes it took.

If the calendar cannot be reached (internet down, Google unreachable) the application **does not switch off**: it keeps the last decision taken, limited by the two safeties. Switching off would be worse — it would bring the lights down on a pitch full of people because of a stuttering connection.

With a single group address (without the status object) the system cannot notice a command that does not reach the lights: as far as it is concerned the order went out. It works perfectly well all the same — it is only one diagnosis less.

A dimmer with an on/off status object does not show an adjustment by hand: if the status only says «on», taking the lights from 80 to 40% changes nothing for the application. With a percentage status object it does show.

The extra addresses are not checked back: the application writes to them, but watches for manual intervention on the main address only.

It does not tell a power cut from somebody taking over by hand. It is the case in the box in chapter 1: if the power fails for the whole installation during a booking, when it returns the lights stay off until the end of that booking. It is the price of the rule «whoever switches off by hand wins»: to recognise a person the system looks at whether the lights differ from how it left them, and a power cut produces exactly the same difference.

It sends no notifications and makes no statistics. It switches on and off, and writes in the device log when something changes.

12. If something is wrong

What you see	What it means	What to do
The lights do not come on, the pill says OFF	the system sees no booking running	press Check the calendar : under the result it says how many events are in the file and which ones were discarded, and why
The pill says TO FINISH	a mandatory field is missing	open the card: the red warning says which one
Check the calendar answers « <i>NOT READ</i> »	the calendar link is wrong or unreachable	copy the .ics link again and verify that LogicMachine can read it without login: Google = secret iCal address; iCloud = Public Calendar; Outlook / Microsoft 365 = published ICS link
The lights come on during the day	the unit was left on « Always » — in the list it has the yellow pill	put « <i>Only while it is dark</i> » back and save

What you see	What it means	What to do
The lights come on at the wrong time	the time or the position of the device are not right	look at the device clock at the top; if the coordinates are missing, write them under <i>Advanced (Latitude and Longitude)</i>
The lights do not go off at the end of a booking	the event is longer than you think, or there is another one adjoining it	look at the calendar: two adjoining bookings are one single block
The lights stay off even though there is a booking	somebody switched off at the wall switch — or there was a power cut , which the system cannot tell apart: in both cases it respects what looks like a person's decision	switch back on at the wall switch: from then on the system starts commanding again at the next booking
The dot is red or yellow	the system is not checking	call the installer: a piece of the installation is missing
On Save a red message appears under <i>At the start</i> or <i>At the end</i>	the value does not suit the <i>Command type</i> : for example «80%» instead of 80, or 120 on a percentage	write only the number, within the limits the message shows
The dimmer does not go to the value of the rule	no word of the table is in the title, or the value does not suit the <i>Command type</i> (it happens if the type was changed without saving the rules again)	the log says so; the <i>At the start</i> value applies. Save the card again

And if none of this explains what is happening

At the bottom of the page there is the **Diagnostic report** button. It collects in one go everything the device knows about itself: the time, the position, the licence, the last cycle of every unit and the reason it decided the way it did.

Press it, then press *Copy the report*, and send it to us in an e-mail exactly as it is. You do not need to understand any of it — in fact it is made to be read by us. With that we can answer you without having to ask you ten things on the phone.

 **It does not contain your calendar link**, which is a key (chapter 13): you can send it without thinking twice.

«I wrote the event and nothing happened»

It is the most common report, and nine times out of ten the event is there but **does not count as a booking**. Press **Check the calendar** and read the line starting with «*Discarded:*» — it says exactly which case it is:

If you read...	It means	Remedy
an ALL-DAY event	an event without times is not a booking: if it were, the lights would stay on all night	redo the event with a start and an end time
an event marked « Free »	on the calendar that event declares that it does not occupy, and we respect that	open the event, set « Busy » instead of «Free»
a cancelled event	the event was cancelled, not deleted	redo it
an event without an end time	the end time is missing	put it back
« 0 events in the file »	it is the wrong calendar : that link contains nothing	compare the link in the card with the one of the calendar you wrote on
No bookings, and the reason is normal: <i>N events outside the 24 hours</i>	the events are there, but not in the coming hours — for example they are tomorrow	nothing: the system will see them in due course

If you have to call support, three pieces of information are needed: what **the dot** at the top says, what **the pill** of the unit says, and what **Check the calendar** answers. With those three, the problem is found in minutes.

13. The calendar link is a key

The .ics link you pasted into the application is **secret**: whoever has it can see all the bookings of that calendar, without a password and without an account.

- **do not send it by message, do not put it in a shared document**, do not publish it;
- if you think it has got around, **regenerate it**: it is done from the same page you copied it from — in Google Calendar, *Settings* → *Integrate calendar* — where there is the command to reset the secret address. The old link stops working immediately;

- after regenerating it **remember to paste it back into the application**, otherwise the unit stops reading the calendar (and the page tells you so).

The link gives **no power at all** over the installation: it allows the bookings to be read, not the lights to be switched on.

*For the technical side — installation, updates, measurements on the installation — there is the documentation in the **docs/** folder, meant for whoever installs.*