PUBLIC LIGHTING CONTROL SOLUTIONS

For quick optimization, scalable and appreciated by users

You never thought to earn as much ...

www.bh-technologies.com
EDITORIAL

CONTROL THE SWITCHING ON AND OFF OF PUBLIC LIGHTING

OPTIMIZE POWER CONSUMPTION

Public lighting is a source of significant operational expenditure for local authorities. The power consumption for street lighting ensures the safety of users, representing over 40% of the electricity consumption of Commons. Optimize workflow, reduce the illumination period represent sources of gains. Illuminate the city, it is above all addressing the needs of daily migrations in the winter, at the beginning or end of the day, when natural lighting is lacking.

Users operate in a complex environment with multiple interactions. The crowd in the street pedestrians, cyclists, motor vehicles. The trajectories are undecided and very surprising.

The good illumination improve reception and the reaction to avoid the accident is vital for the safety of all.

When the majority of us have returned home, the traffic is more fluid, more predictable, lighting is less necessary. It could be reduced. Some rural communities have even chosen to be switched off 11 p.m 23:00 and 5 a.m.

Since its creation, BH Technologies has innovated to offer solutions for the needs of public lighting.

The urban environment is complex between 6 a.m and 9 p.m. This represents 25% of the annual lighting time. What about the remaining 75% ? BH Technologies has the answers to treat the entire night.

The daylight control is for all lights of the city, old and new, whatever the technology. At a time when every kilowatt consumed is not a potential source of energy, our solutions can save up to an hour of lighting per night. So it is close to 10% that can be saved per year across the city without changing!

Illuminate the city as late as possible to take maximum advantage of natural lighting, switch it off before the sun rises, take into account the weather, synchronize the switching to avoid dangerous contrasts, offer flexible switching solutions reliable, adjust lighting as needed, are most of the challenges that BH Technologies readings, always with the same principles: implementation of simplicity, reliability and service quality.

*Light at the right time is the first brand of good management!*
**ENLIGHTEN AT THE RIGHT TIME**

Turn on at the right time, for using natural light at maximum, to not waste energy. How many lights are on while it is yet daylight and that their light projected on the ground is useless?

Turn right on all the bright spots of the city, it is often earn up 400 hours of lighting per year, without affecting the visual comfort of the users.

The photocell incorporates ambient light of the district to trigger the lighting, which involves problems of measurement and drift over time related to positioning or sensor aging.

The astronomical clock follows the seasons rhythms to propose appropriate commutations every day of the year. Its algorithm will be specific enough to offer minimal signal duration without affecting visual comfort.

Only Radiolite calculates the trajectory of the sun each day and includes the duration of twilight seasonally. The precision and stability of Radiolite make the best answer to control the lighting time, without further intervention.

Did you know?

Night moves from East to West the ground speed of 1200 km / h. The accuracy of the calculation algorithm, and location are critical to the switchings and adapted to each country. The ephemeris identify the moments when the center of the Sun crosses the horizon, at sunrise as at bedtime, and the sky is still too bright to light the city. Products based on the ephemeris do not achieve a minimum spark duration, even if they can be programmed offsets.

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**THE BENEFITS OF SOCIO-ASTRONOMICAL CALCULATIONS**

The socio-astronomical calculation was invented by BH Technologies to reflect the fact that the triggering times are more critical in winter, the peak hours, than summer when the days are longer.

This patented algorithm, developed specifically for street lighting, combines several parameters to optimize the switching on and off: the place, date, time, angular calculating the position of the sun and sociological data on the attendance of the City.

We turn off earlier and later in the winter, when night comes during periods of high traffic and where the weather is bad, (school exit and offices, commuting, etc.). Conversely, when the night comes later, when everyone went home, the environment is more readable, and we can afford to further reduce the lighting time.

The socio-astronomical calculation is a specific response to the specific needs of public lighting. All Radiolites are equipped.
NO ENERGY SAVINGS WITHOUT SYNCHRONIZATION!

To be specific, an astronomical calculation needs the location information (obtained by the IGN code or precise GPS coordinates), date and time for switching the lighting precisely depending on the season.

If the astronomical clock is not on time, will be potential and will not search for a minimum ignition duration without affecting the safety of local residents.

All Radiolite are made on time permanently, either by the transmitter France Inter Longwave or by GPS satellites. They have the same time and therefore commute together on a single site.

Then it becomes possible to minimize the operating times of lighting, turning the limit of visual perception without creating dangerous contrasts between neighborhoods.

All non radio-synchronized clocks installed outside strongly derived due to thermal variations. It is common to find drifts of 30 minutes per year!

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**INFRALUX, A UNIQUE PHOTOCELL, FOR THE VERY CHANGEABLE WEATHER AREAS**

To complete its range and handle the most extreme cases, BH Technologies has developed Infralux, bringing an original response by measuring the brightness in the infrared, for a more accurate result, drift-free and suitable for areas with very changeable weather.
THE CUT LIGHTING AT NIGHT

Cut the lights at night environment is often seen as the first step to reduce energy bills.

While offering innovative solutions to do, BH Technologies draws attention to the consequences of such a decision:

- Cut the lights causes a total loss of service and the impact on user safety must be taken into account. The ability to easily turn on the lights incident must be considered.
- The responsibility of the Mayor may be brought, and it must follow legal procedures, especially regarding user information and consulting people before committing.
- BH Technologies has developed a range of solutions to best meet in each case:
  - Radiolite offers differentiated programmable cuts on the week, or year.
  - Elum-M selectively cutting the lights a powered side all night network.
  - Elum-P off the festive illuminations fueled by the public lighting network the desired times.
  - Through centralized remote control, cuts times can be maximized, because we know that we can relight the critical zone incident.

All night Radiolites offer cuts, precise, synchronous and programmable.

Intelligent lighting cut will reduce the annual consumption of 30 to 50% without changing the installation. This measure could be considered in certain areas, in addition to a lowering of power over the rest of the city.

EXCLUSIVE RADIOLITE XP

The ability to easily turn on the lights incident must be considered.

For example, if the ignition is scheduled at 21:52 is one night break is scheduled at 22:00, the scheduled ignition time is less than 15 minutes, Radiolite will not switch.

QUARTER OF UNNECESSARY HOUR, QUARTER HOUR SAVED!

In summer, if the programmed cut occurs from 10 p.m., it is likely that the twilight switching switches on lighting a few minutes before the scheduled extinction. The lamps do not have time to heat and illuminate the site, it is not necessary to turn on for too long. The lamps consume and wear unnecessarily.

Radiolite XP has integrated this problem and does not turn on the lights if their expected operating period is less than 15 min in the evening as in the morning.

With this original and programmable function of unnecessary quarter hour Radiolite brings additional innovation to the command public lighting.

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CENTRALIZED REMOTE CONTROL IN REAL TIME. 
TIMING AND TRACKING WEATHER!

Centralized remote control in real time Xylos combines the advantages of the order by cell, incorporating the vagaries of the weather, with the precision and synchronization of the astronomical clock.

A single cell analysis InfraLux ambient brightness and controls a radio transmitter sending the firing order to all cabinets simultaneously.
The ignition is delayed clear day evenings and advanced when the weather is cloudy. The switches are ideal.
The original synchronization system may also give way to a controlled synchronization between the neighborhoods: downtown denser and busier be easily switched on a few minutes before the periphery.

Monitor the switching times and control the annual operating time

THE ADVANTAGES:

- Sending commands from a central point to all or part of the cabinets of the city.
- Remote control in real time: orders are executed within a few seconds of their programming.
- Intelligent management of night cuts, by neighborhood, by period, depending on events.
- Immediate ignition of the whole city or neighborhood incident.
- Easy programming from a single point, for continuous optimization of lighting control process.

- Creation of areas for optimization switches for more savings. May for example decide to cut the lights 15 minutes before the normal time between May 21 and July 20 in the early morning, when the city was still deserted.

- Earnings 15 hours 6000 light points to a further saving of € 2,000 over 12 months.

- Control via web orders can be given remotely by any PC connected to the internet.
- Shedding solution “Ecowatt” to reduce electricity consumption at times of peak consumption.
- Safe ignition when not taking orders. The calculations of socio-astronomic manage automatically the illuminations.
- Scalable solution from socio-astronomical clocks Radiolite XP: we can start controlling the lighting in socio-astronomical mode and enslave a radio transmitter thereafter. Just then install a transmitter and change the antennas in cabinets.
MULTI-BUSINESS APPLICATIONS, TO BUILD A SMART CITY.

The ripple control Xylos is not limited to lighting. It can control all city facilities.

From the same system you can program the operation of all electrical systems in the city:

- Festive illuminations
- Highlighting monuments
- Light scenarios
- Load shedding heaters
- Sprinkler bans
- Cutoff fountains
- Manage sports fields depending workouts

SAVE THE SWITCHING TIMES AND CONTROL THE ANNUAL OPERATING DURATION.

Minimize ignition term often carries a continuous optimization to find the ideal setting without compromising the comfort of users.

It is as such important to measure the impact on the annual duration of ignition, a priori but also in posteriori to validate that the system of command meets the expectations and to retouch so necessary adjustment.

BH Gate associated with portal LUCEnergie saves switching times of any control product to validate the relevance or impact of its programming.

BH Gate parameter XP Radiolite or remote power controllers, to adapt even better operation.

But BH Gate done more to help you build Smart City ! It is a true scalable platform that allows you to monitor consumption and reassemble data for the town of tomorrow!
UPGRADE YOUR INSTALLATION WITH A SINGLE PRODUCT!

Daylight control
local socio-astronomical
to the cabinet

Centralized radio control

Radiolite XP
socio-astronomical mode

Radiolite XP
radio mode

Upgrade your installation with the hardware installed,
Radiolite XP with you!
HOW TO BUILD A SOLUTION CONTROL AND SUPERVISION OF PUBLIC LIGHTING?

**SUPERVISION**
Performance monitoring
Park surveillance
Remote programming

**ORDER**
Independent to the cabinet

**MIGRATION**
Transmitter addition and change antennas
Radiolite of XP

**Enlighten at the right time**
Switch to the optimum moment in the evening as the morning, with synchronization of your entire city.

**Check your programming**
Oversee your park, check the operation of your systems and monitor your performance and the annual operating time.

**Check out real-time**
Evolving to a radio system that takes into account the weather, while keeping synchronism.

We have the answers to accompany you towards the optimization and the supervision of the functioning of your street lighting.
## SELECTION GUIDE

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* * Antenna and length cable to choose
100 000 Radiolite® in France

200 radio systems in France

2.4 million light points managed by Radiolite in France

50% common equipped in France

15 ans Opérating without the intervention on Radiolite®