

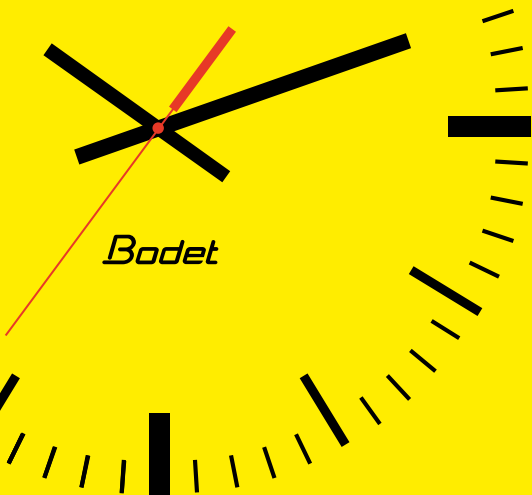


**Bodet**

# Our airport solutions

TIME DISPLAY  
SYNCHRONISATION / DISTRIBUTION

  
MADE IN FRANCE



# Synchronise every moment

Bodet is a French family company founded in 1868. It has earned a reputation for its expertise in time management, building on its primary activity of tower clock restoration as Bodet Campanaire. Over the years, the company has expanded its time precision know-how to apply it to sports scoreboards, industrial clocks, sound systems, as well as time and attendance management. Thus, alongside Bodet Campanaire, the entities Bodet Sport, Bodet Time and Kelio were founded.

Now managed by the fifth generation of the Bodet family, the company continues to grow both in France and internationally, focussing on innovation to create a range of high-tech products designed and manufactured in France. Continuing in this vein, Bodet Time products are used to provide time synchronisation and time display in many airports throughout the world.

Bodet Time also provides telephone assistance in many languages. Our technical experts help our clients set up the products and perform functional and technical software updates.

MADE IN FRANCE





# Customised support for Airport

**Time information is a critical data point in the airport sector.  
It is not simply a matter of displaying the time, but rather distributing a reliable,  
precise and secure time to a set of devices.**

Time precision is relied upon to coordinate operations across the airport network, to orchestrate departures and arrivals and to anticipate delays. A single time reference must be deployed across all devices on the IT network to achieve synchronisation, particularly clocks, computers, ticket machines, boarding desks, video surveillance systems, radio communications and telephones.

As specialists in time synchronisation and time distribution, Bodet Time meets the specific requirements of airports by providing time servers and clocks designed for the airline sector.

## **TIME SERVERS**

The Netsilon range of time servers enables to organise all air traffic via the PTP protocol or to synchronise all devices on the IT network with the NTP protocol.

## **CLOCKS**

Whether analogue or digital, for indoor or outdoor use, specifically designed to withstand impacts and weather conditions, legible by day and night whatever the reading distance, Bodet Time clocks deliver reliable, accurate and identical time information.



# In an airport, time is critical

In an airport facility, it is vital to have a reliable, accurate time display that is identical across all devices. It is an absolute requirement for ensuring good time management, equipment reliability and staff timekeeping. It reduces stress for passengers by making it clear how much free time they have before boarding – time that they will often use to make a few last-minute purchases in duty-free shopping.

Reliable, accurate and secure time management and time synchronisation is essential.

**Time synchronisation ensures efficient internal organisation**, which organises flight take-off and landing schedules. It also ensures staff efficiency as well as the smooth operation of all devices across different terminal buildings connected to the same IT network: control computers, security systems, video surveillance systems and clocks.



To meet these specific requirements, Netsilon time servers are connected to a satellite reference time source. They distribute secure time information via PTP and NTP protocols.



Synchronised clocks ensure accurate, identical time information for all airport personnel and passengers alike. Designed to meet the exclusive requirements of airports, they provide optimum legibility wherever they are positioned.

**Any number of NTP clocks can be installed throughout the entire station and connected to the existing network cabling. They are known for their ease of installation and commissioning.** Connected to the NTP time distribution of the airport, the clocks integrate the SNMP supervision function, which allows the reporting of anomalies. This automatic feedback reduces airport maintenance costs significantly.



## The benefits of an NTP time server: a reliable and secure time source

- **It retrieves and transmits a referential time signal** from a satellite source in a **precise, reliable and secure** manner to all the devices connected to the IT network.
- **It ensures a reliable timestamp** of each event that occurs on the network and **guarantees the precise traceability** of information for all devices.
- **It transmits a highly secure referential time source.** Unlike time sources available on the internet that create a vulnerability in the firewall, a time server **minimises the risk of cyberattacks.**

## We are trusted by



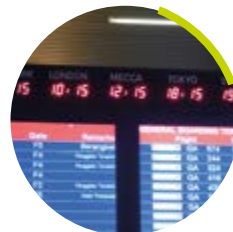
Budapest Airport  
Hungary



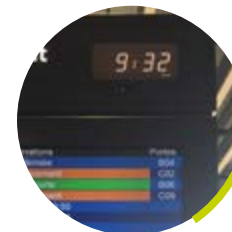
Casablanca Airport  
Morocco



Madrid Airport  
Spain



Jakarta Airport  
Indonesia



Lyon Airport  
France

# Our airport products




Connected to the existing IT network, all our clocks are synchronised with the time information distributed by a Netsilon time server. This guarantees a reliable, accurate, secure and identical time display across the entire airport.



## Analogue clocks



### Profil 900

- 3 diameters: 30, 40 and 60 cm
- Indoor or outdoor models
- 3 case colours:   
- Options: lighting, double-sided



### Profil 700

- 5 diameters: 30, 40, 50, 60, 80 cm
- Indoor or outdoor models
- Bezel: metal
- Options: lighting, double-sided, water resistant (IP65)






## Choosing a time distribution



## Digital clocks






### Style

- 9 indoor models
- Time display: 5, 7, 10 cm
- Display depending on model: hours, minutes, seconds, date, temperature
- LED colours:     



### HMT - HMS LED

- 9 outdoor models
- Time display: 10, 15, 20, 25, 45 cm
- Display depending on model: hours, minutes, seconds, date
- Anti-glare glass
- Automatic adjustment of luminous intensity
- LED colours:   



### Opalys and Cristalys

- 8 indoor models
- Time display: 7 or 14 cm
- Display depending on model: hours, minutes, date, temperature, week number, text
- Energy saving mode
- Opalys: backlit version



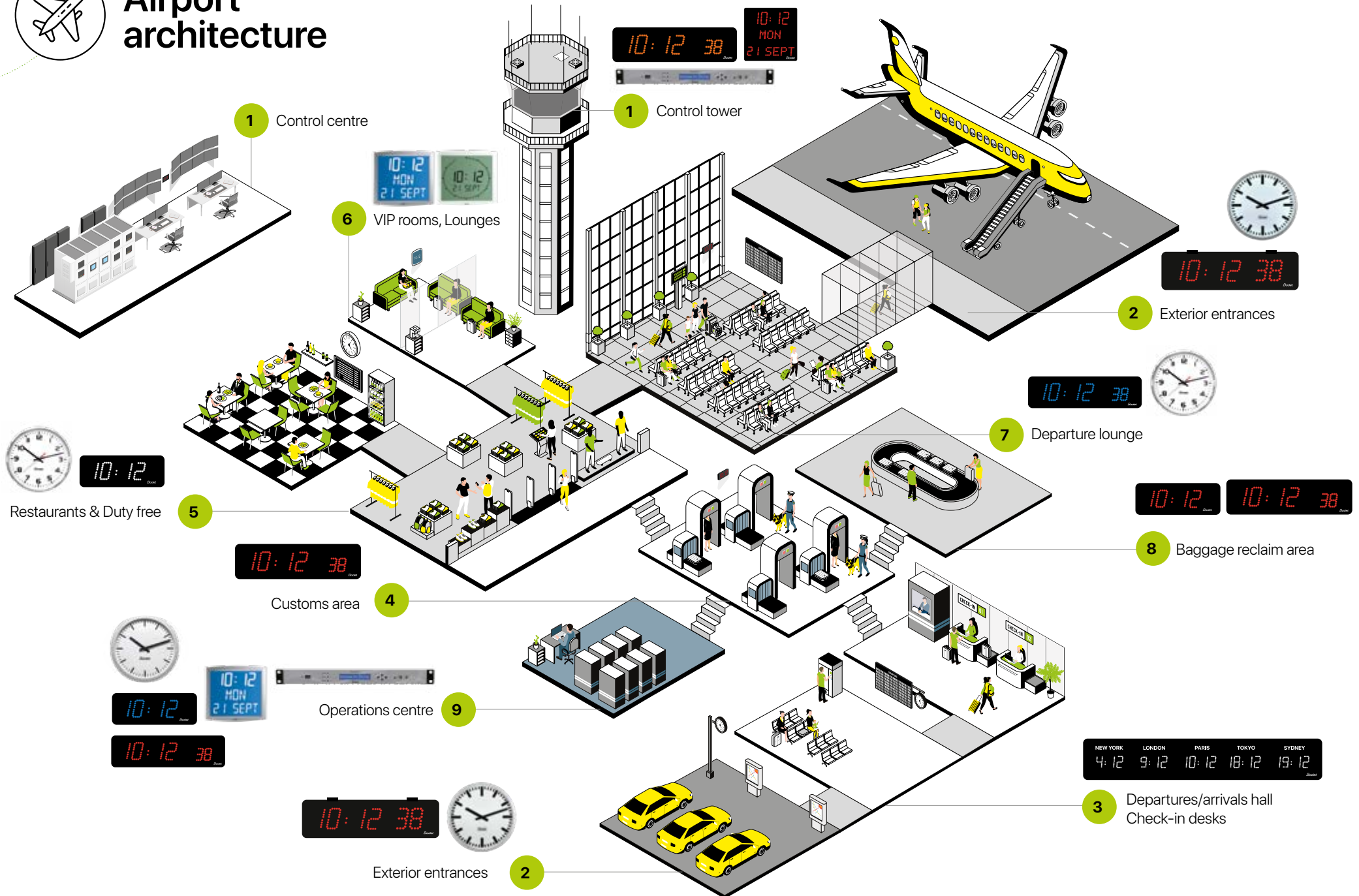
## Time servers



### Netsilon

- Satellite synchronisation: GPS, GLONASS, Beidou, Galileo
- Time base: TCXO, OCXO, OCXO HQ
- Notification and supervision: SNMP, Email, Syslog
- Input and output protocols: NTP, PTP, IRIG
- User-friendly web interface with remote server setup



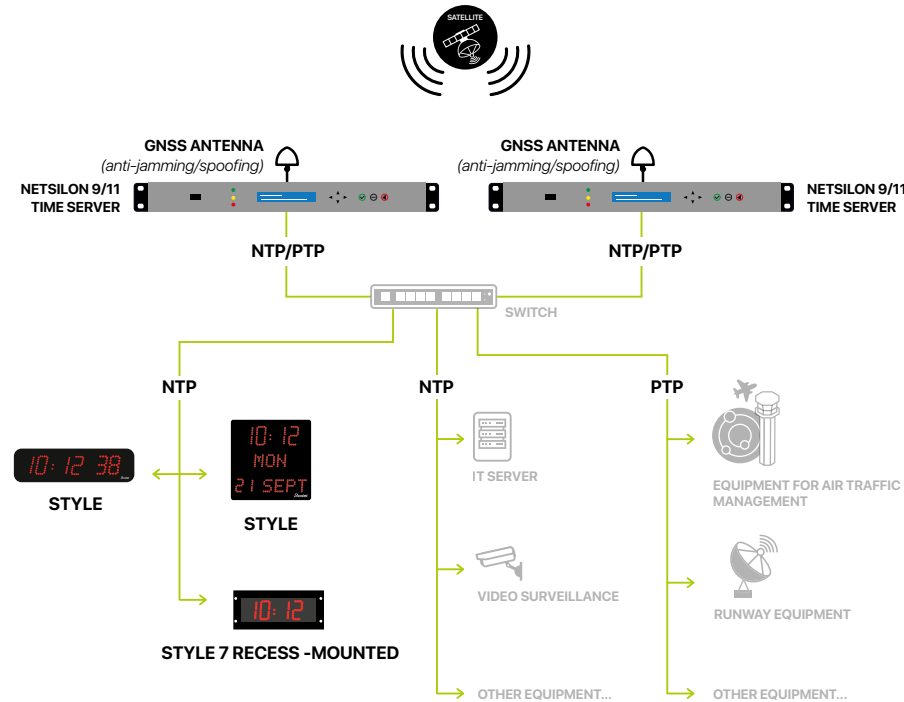




# Airport installation example

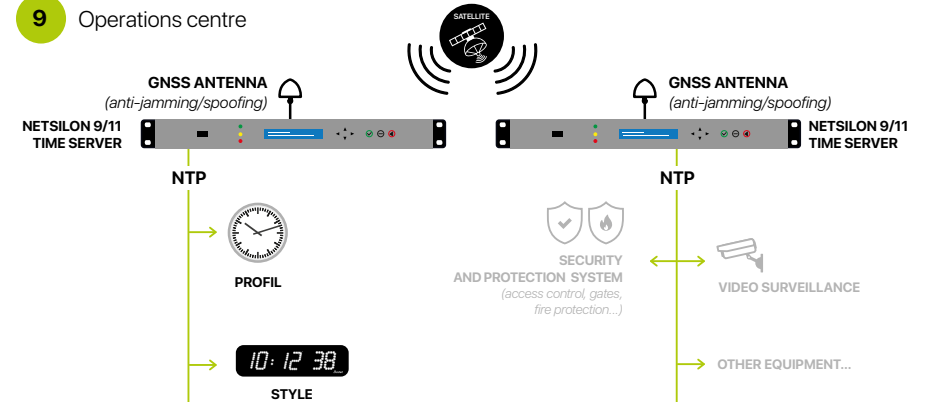
## AIR TRAFFIC

### 1 Tower and control centre

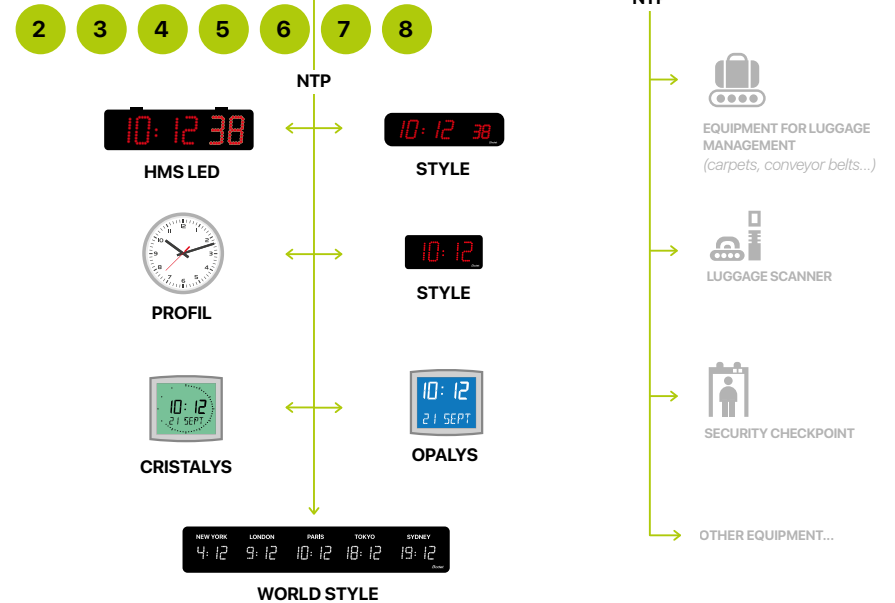


## AIRPORT OPERATIONS

### 9 Operations centre



## PASSENGER AREA





# The benefits of synchronised time distribution

1

## **Control tower: accurate, reliable and secure time information across all devices in the airport**

Unlike the risks involved in sourcing time data from the internet, a Netsilon time server retrieves a secure reference time using its own antenna (GNSS or radio).

Indeed, it redistributes the UTC time across all air traffic control devices in an accurate and identical way using the PTP protocol. Its ultra-precise OCXO HQ oscillator, combined with a sustainable design make Netsilon the essential equipment for orchestrating flight departures and arrivals without interruption.

3

## **Departures/arrivals hall check-in counters: display the local time and time in the destination country for synchronised travel**

Ready for take-off, passengers will be wondering what the local time is at their destination. Likewise, arriving after a long flight and with a significant time difference, passengers often lack a time reference between their country of origin and arrival.

The World Style helps passengers to find their bearings. It is perfectly suited to arrivals lounges and displays the time in three to seven different cities.

It shows the local time as well as the time in cities with airport connections, all time data being automatically synchronised with the different time zones.

2

## **Exterior entrances: a precise time display at each entrance, identical throughout the whole airport**

As essential reference for both employees and travellers, clocks at airport entrances are the main reliable and accurate element for displaying the international reference time.

Like all clocks installed within the airport, the entrance clocks are linked to the IT network and use the same secure time reference transmitted by the time server.

Designed for outdoor use, the Profil 700 analogue range has a time display that is quick and easy to read from up to 80 m away.

4

## **Customs areas: optimised time traceability for customs operations**

An unavoidable step in the journey, the customs service monitors data and uses IT systems to record the entry and exit of each passenger.

It is essential to make an accurate and reliable timestamp for each operation.

Netsilon time servers ensure reliable timestamping of each event that occurs on the network and provides precise traceability for all network devices, including passport scanners and passenger transfers.

Often used in customs areas, the Style 5 and Style 7S clocks are understated, accurate and luminous, while they broadcast a time readable at any moment in these crowded areas.





## The benefits of an effective time display

5

### Restaurants & Duty free: accurate time information for optimum shopping time

Time to spare before a flight?

This is the perfect opportunity for passengers to make a few purchases in duty-free shopping and visit the restaurant. Precise time synchronisation and a clearly legible time display allow passengers optimum shopping and eating time, and ensure they arrive punctually at the boarding gate.

7

### Departure lounges: reliable, precise and accurate time information prior to departure

When installed in the departure lounge, the countdown to boarding begins. So how to fill the time left before departure? There are many possibilities – it just depends how much time you have left before the gate call.

Style 10S clocks show passengers how much time they have left before boarding. With 10 cm high digits and LED display, they are quick and easy to read from up to 40 m away. The ideal time reference for departure lounges.

6

### VIP rooms, Lounges: high-end information delivery for business class

VIP rooms and lounges are waiting areas that provide optimum comfort for VIP passengers. Since they are used to stay in airport transit areas, they optimise their travel time by working on their ongoing projects.

These passengers appreciate a simple, accurate and understated display showing essential information such as the time, date, week number, day and ambient temperature. The Cristalys Ellipse and Opalys Date LCD clocks fit perfectly into these privileged waiting areas.

8

### Baggage reclaim areas: an easily legible time reference

Once landed, navigated long corridors and passed through customs, comes the wait to reclaim baggages.

Time reference is essential for passengers who are waiting in baggage reclaim halls. The Style indoor clocks provide optimum legibility from up to 40 m away.

9

### Operating centre: Coordinating operations in real time with a correct and synchronised time

Within an airport, the main challenge is to distribute a secure, reliable, accurate and identical time to the three main areas of an airport: planes, baggage reclaim areas and passenger areas.

At the heart of the computer network, time servers control the time synchronisation of the different NTP equipment: Passenger Information System (PIS), gates and customs scanners, flight information display system (FIDS), and so on.

A redundancy installation is recommended to ensure continuous and accurate time synchronisation. If the time reference is lost, the secondary Netsilon 9 time server takes the primary time server (Netsilon 11) over, thus ensuring an uninterrupted service.



# Bodet Time, service included!

As specialist in time management,  
Bodet Time also guarantees:

- Pre-sales support
- Tailor-made product offer:  
from synchronisation to time display
- Products made in France & CE certified
- FAT and SAT tests on request
- Extended warranty on request
- Tailor-made trainings for customers
- Hotline assistance in France, and internationally

## Synchronise every moment

***Bodet***



**bodet-time.com**

1 Rue du Général de Gaulle  
49340 Trémentines, FRANCE

**EXPORT**

export@bodet-timesport.com

Tel. +33 (0)2 41 71 72 33