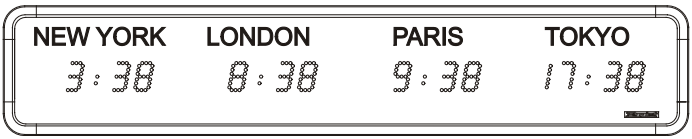
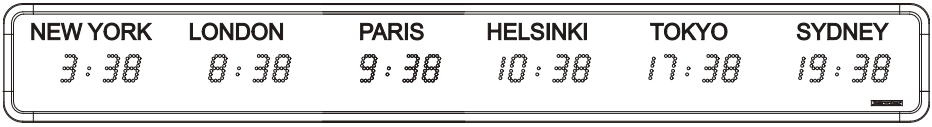
WORLD STYLE

Multi time-zone clock





Quartz independent or radio

Irig B / Afnor receiver

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605418 K

Upon receipt, always check the product for damage during shipment. If any is found, you may file a damage claim with the carrier

Table of contents

1 - CHECKING THE EQUIPMENT SUPPLIED

On receipt, check carefully that the product you received fits with what you have ordered :

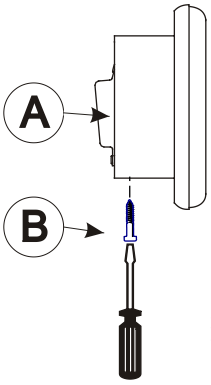
- World Style Clock model : 3, 4, 5 or 6 cities.
- Clock version: Quartz independent or IRIG B/AFNOR coded time receiver.
- Text sticker marking for each city.
- Colour of diodes (red, yellow, green, blue).
- If you have chosen an option: DCF synchronisation antenna, ceiling bracket or double sided bracket.

2 - ELECTRICAL SAFETY STANDARDS

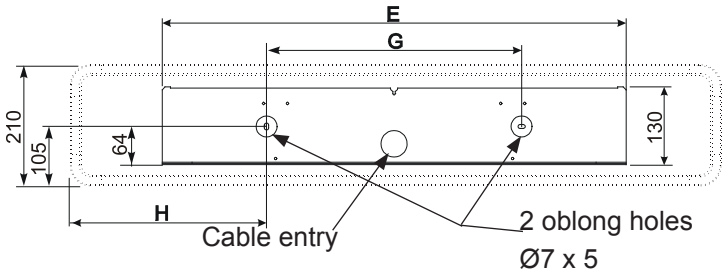
- Installation and maintenance of this equipment should only be carried out by qualified personnel.
- Since the World Style clock is connected to a mains power supply, its installation must comply with standard IEC 364 (NFC 15.100 for France).
- Indoor assembly (IP 41).
- The power supply for this clock should include a max. 6A live neutral circuit breaker, which can be quickly accessed upstream of the power line, live/neutral interlocked. This circuit breaker must be switched off during maintenance.
- This equipment should be fixed in place before switching on.
- Connection of the earth on the installation according to diagram EE or EN (earth/earth or earth/neutral).
- This product should be installed in a residential, commercial or light industrial environment.

Bodet accepts no responsibility for any use not in compliance with these instructions.
Any modification to the product will invalidate the guarantee

3 - WORLD STYLE CLOCK INSTALLATION

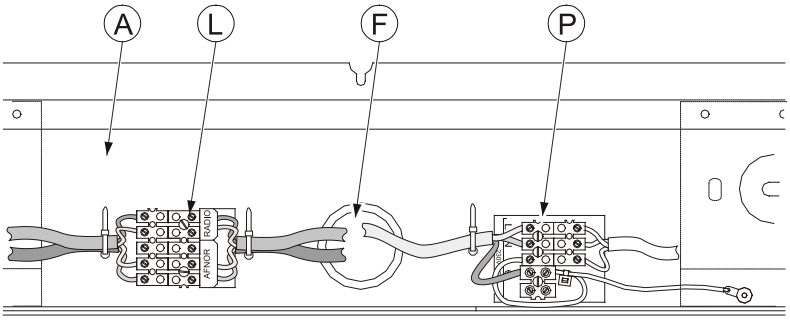


Before deciding on the location, ensure good legibility of the clock with regard to the angle of reading (120o) and possible reflections of light. This clock is intended for installation indoors.



Fixing holes position of wall mounting plate			
Lengths in mm	H	G	E
3 cities	176,5	420	773
4 cities	260	520	1040
5 cities	279,5	826	1307
6 cities	374	826	1574

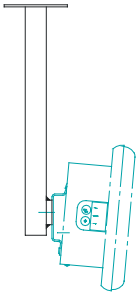
D



3.1 - Wall support installation :

Having loosened screw (B), unhook the clock from its wall bracket, then remove the connectors.
Fix bracket (A) to the chosen location on the wall after threading the cables through the cable carrier (F).

3.2 - Ceiling bracket installation :



The ceiling hanging adjusts to bracket (A) in the same way as when wall hanging. Warning: do not forget to first put the cables through the conduit on the bracket before fixing.
Having loosened screw (B), unhook the clock from its wall bracket, then remove the connectors.
Fix bracket (A) to the chosen location on the wall after threading the cables through the cable carrier (F).

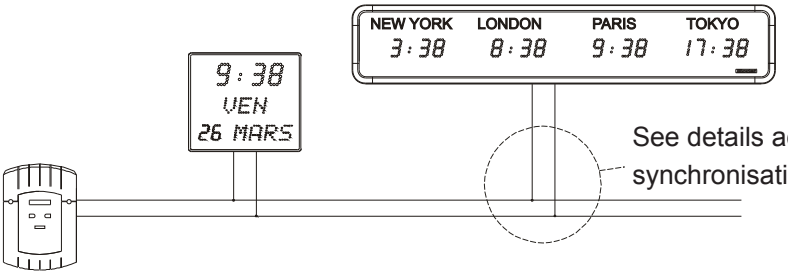
4 - ELECTRICAL CONNECTIONS

4.1 - Power supply

- Remove the black protective cover on the terminal block (P).
- Connect the 230 Volts 50/60 Hz mains power supply (depending on the model) to the terminal block (maximum wire cross section 1.5 mm² with 5 mm bare).
- Replace the protective cover. Block the wires with cable clips.

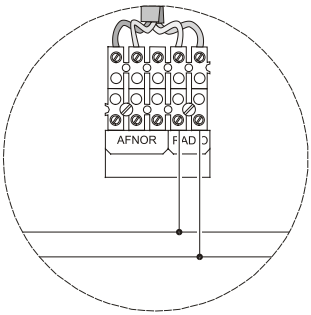
N.B. : *The mains supply unit for this display must include a max. 6A live/ neutral interlocked circuit breaker.* ***This circuit breaker must be switched off during maintenance.***
The electronic card for each display is protected by a 0.8A 250 V fuse (F1). The world clocks have been designed for a mains power supply of 230 Volts ± 10 % (depending on the model). For example, 230 V clocks will work equally well in countries where the nominal mains voltage is 220 Volts or 240 Volts.

4.2 - External synchronisation

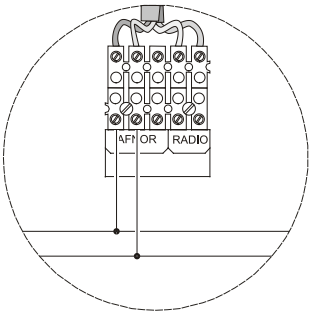


See details according to the synchronisation type

The clock can be synchronised via a radio antenna or an IRIG B/AFNOR network.



• With a DCF radio antenna or DCF output on MIC GPS : connect the 2 wires of the antenna or the Mic GPS to the radio input of the world clock. (Refer to the diagram on page 4 ref. L)
Refer to the radio antenna instructions for positioning the antenna.

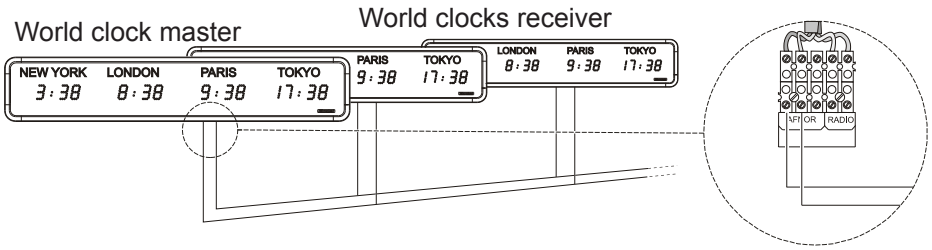


• Within an AFNOR distribution network: connect the 2 wires of the AFNOR cable to the 2 terminals labeled AFNOR. The polarity does not matter. (Refer to the diagram on page 4 ref. L).

The distributed AFNOR time signal must be the GMT hour (not the local time) without summer/ winter changeover. The summer/winter changeover is programmed in each clock.

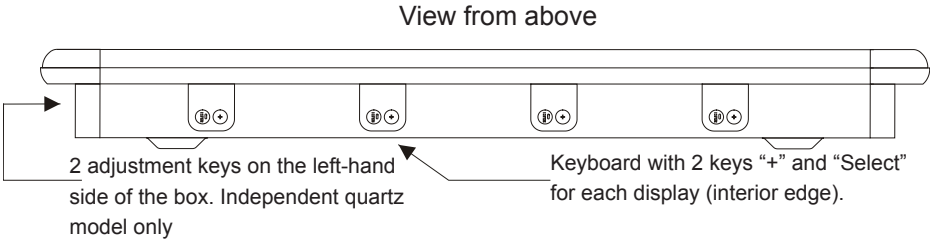
Note: A fixing hole is provided on the lefthand side of the World clock for fixing the DCF antenna. Thread the antenna cable through the hole (ref. F page 4) on the wall bracket.

4.3 - Irig B / AFNOR coded time output (Independent version)



An independent clock can synchronise another IRIG B / AFNOR receiver. Connect the 2 wires for the IRIG B/AFNOR signal to terminal block (L) on the transmitting World clock, as well as to terminal (L) on the world receiver clock.

5 - DISPLAYS AND TESTING CONFIGURATION



For models 3 to 6 cities, each display is linked to a keyboard with 2 keys “+” and “Select” to ensure programming and light intensity adjustment (4 levels). For the “radio quartz independent” clock versions an additional keyboard is positioned on the lefthand side of the box in order to adjust the time base (no keyboard for IRIG B/AFNOR coded time receiver versions).

For IRIG B/AFNOR coded time versions :
configure the coded time generator (master clock or world clock) so that it distributes GMT time. Do not programme the summer / winter time change. Carry out installation and electrical connections before setting the time.

5.1 - Setting the time :

Independent clock :

• When switched on the clock is automatically set to the correct time. With a radio antenna, the time is automatically synchronised.
The 2 keys “+” and “Select” on the lefthand side of the box are used to adjust the time displayed (Correcting the time if there is any discrepancy).
Pressing “Select”: decreases the time readout by one minute with each pressure, altering the hour readout accordingly as it goes back. Warning : wait 3 seconds to display the readout.
Pressing on “+” : increases the time readout by one minute with each pressure, altering the hour readout accordingly as it goes forwards.
Warning : wait 3 seconds to display the readout.
The second counter is reset to zero with each pressure on “+” or “Select”.

IRIG B/AFNOR receiver clock :

The readouts give the time in the corresponding city as soon as power is switched on and on reception of the time code from the master clock or World clock.

• Warning: in the event of loss of AFNOR signal, each display will operate independently for 1 hour before the readout disappears. Only the separating dots in the centre of the display remain lit, showing that the clock is still on.

• The World clock is programmed in the factory in order to configure each display according to the name of the city required (city name on sticker).

• In the event of the time or time change not agreeing, refer to paragraph B below for how to configure the displays.

5.2 - Configuration menu of displays

Each display is configured separately. Repeat programming below for the different World clock displays according to the number of cities.

• Access the configuration menu for each display : press the “Select” key and while holding it down, then press the “+” key for 3 seconds. (keyboard situated below the corresponding display).
The World clock calculates and displays the local time corresponding to the city according to the GMT time received with the summer / winter changes and the time difference programmed for each display.

5.2.1 - Selecting the summer / winter time changes :

Using the “+” key, select the zone acting as reference for the summer/winter time change dates, then confirm by pressing the “Select” key.

Reference Zone	Display
No time change	GMt
Europe time change	Eur
United States/Canada time change	USA
Programmable mode time change	PrG

or time changes at fixed dates.

Rules followed by Styles clocks to determine the summer periods :

Nota : for GMT, EUR, USA selection, see also the chapter 5.2.3 selecting the time difference (page 13).

_ G.M.T. mode : No winter / summer change.

_ Europe mode (Eur) : from the last Sunday in March to the last Sunday in October. The time change takes effect at 1 o’clock GMT. (In March at 2 o’clock local time, forward + 1 hour. In October at 3 o’clock local time, back – 1 hour).
Nota : Europe is divided in 3 hourly groups :

Continental Europe : France, Germany, Spain, ...
Western Europe : England, Ireland, Portugal, ...
Eastern Europe : Finland, Greece, ...

_ United States / Canada Mode (USA): from the second Sunday of March to the first Sunday of November. The time change takes effect at 2 o’clock, local time.

_ Programmable Mode (PrG): Every year dates for the hour change are automatically calculated according to the programming below.

a) repetitive mode :

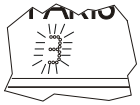
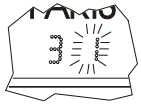
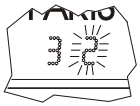
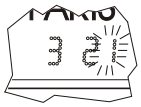
- selection of month (1 to 12) January (1) to December (12).
- selection of the day number (1 to 5) for the 1st, 2nd, 3rd, 4th or last (5) of the month)

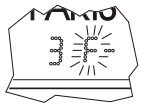
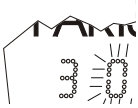
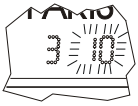
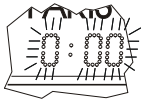
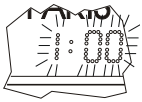
- selection of the day type (1 to 7) for Monday (1) to Sunday (7).

b) fixed date mode : input of an exact date for the summer time change and an exact date for the winter time change.

The dates are defined each year in the country concerned.
For the 2 modes –1hr in summer to winter and +1hr in winter to summer.
The time changes take effect at 2.00am local time.

Time changeover in PRG mode :

Step		Display
1	To access the configuration menu, press the “Select” key and while holding it down, then press the “+” key for 3 seconds for each keyboard situated below the display. Display (2nd digit) flashes to start up programming.	
2	Press “+” to select the time change month choice of 1 to 12 (e.g. March 3 for the Northern Hemisphere and October 10 for the Southern Hemisphere).	
3	Confirm with “Select”, the 3rd digit flashes	
4	Press “+” to select the 1st, 2nd, 3rd, 4th or last (5th) day of the week or the fixed date (F) for the time change. If choice is 1 to 5, go to the following step. If choice is F, go to step 9.	
5	Your selection of the day (the 2nd of the month) in the month flashes.	
6	Confirm with “Select”, the last digit flashes.	

Step		Display
7	Enter the type of repetitive day Monday to Sunday (1 to 7) by pressing “+” (e.g. change on the 2nd Sunday in March)	
8	Confirm with “Select”. To enter the second time change date, go back to the step 2, either go to step 13	
9	Your fix date selection (F) flashes	
10	Confirm with “Select”, flashing display of last 2 digits.	
11	Press “+” to scroll through the date changes, choice 1 to 31 (e.g. March 10)	
12	Confirm with “Select”. To enter the second time change date, go back to the step 2, either go to following step.	
13	The time difference flashes (0:00 by default).	
14	Select the time difference, -12H30 to +12H30 (in 30 minutes step), using the “+” key. Example : for Rio de Janeiro program -3 hours / GMT	
15	Confirm with the “Select” key. The program version appears.	
16	Valid, the leds test appears. Valid a last time to exit the menu.	

5.2.2 - Example of programming: programmable mode

_ Change every 2nd Saturday in February.

programme : 2 26 → February
→ 6th day = Saturday
→ 2nd Saturday in the month

_ Change every last Tuesday in November.

programme : 11 52 → November
→ 2nd day = Tuesday
→ Last = 5th as max. 5 weeks in the month

_ Change at fixed date on 12 April.

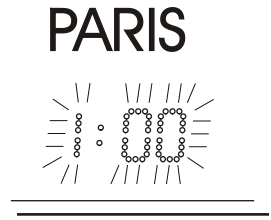
programme : 4 12 → April
→ date 12 after confirming F

NB : the change from summer time to winter time is at the end of the year (≈ October) for the Northern Hemisphere and at the beginning of the year (≈ March) for the Southern Hemisphere. For the change from winter time to summer time the months are reversed.
Refer to chapter 5.4 to know various cities programming to achieve.

5.2.3 - Selecting the time difference :

The time difference (0:00 by default) flashes. Select the time difference, -12.30H to +12.30H (in 30 minute steps), using the “+” key then confirm with the “Select” key.

Example:
for Paris program + 1 hour / GMT



5.3 - Testing

Having adjusted the time difference, display of all diodes concerned alternately with the software version no.
Press “Select” to exit the configuration menu.

5.4 - Annex for time difference

Select the reference zone for the summer/winter changes, as well as the time difference, according to the city or country for which you wish to display the local time.

These values don't take in charge the time difference for summer/winter changeover, neither for the season change according to hemispheres.

Example : At Paris in winter, the time difference is of one hour, but at Sydney it is the summer and the time difference is of 10 hours, more one hour of time difference summer/winter, that is to say, 11 hours.

CITY	Reference zone	Display	Time diff. / GMT hour
LOS ANGELES	United states / Canada		-08
MEXICO	United states / Canada		-06
CHICAGO	United states / Canada		-06
NEW YORK, TORONTO	United states / Canada		-05
BUENOS AIRES	No change		-03
RIO DE JANEIRO	Programmable mode		-03
LONDON	Europe		00
PARIS (*)	Europe		+01
HELSINKI, ATHENS	Europe		+02
JOHANNESBURG	No change		+02
MOSCOW	No change		+04
SINGAPORE (**)	No change		+08
TOKYO, SEOLE	No change		+09
SYDNEY	Programmable mode		+10
WELLINGTON	Programmable mode		+12
PARAGUAY	Fixed date (change every year)		-04
TEHERAN	Fixed date (change every year)		+3.30
BOMBAY	No change		+5.30

(*) Paris and the following cities : Frankfurt, Madrid, Stockholm, Oslo, Zurich, Milan, Amsterdam, etc

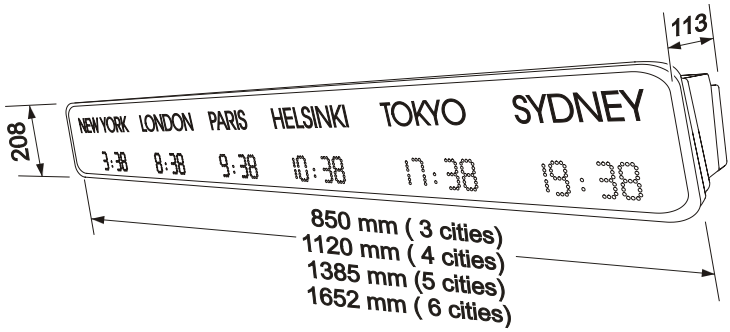
(**) SINGAPORE, and the following cities : Taipeh, Bangkok, Hong-Kong, Kuala Lumpur, Beijing (Peking), …

6 - TECHNICAL CHARACTERISTICS

	Designation	Characteristics
Power supply	Autonomy of operation :	no display without power supply
	Hour and date backup in the event of a mains power failure :	permanent, 10 year lithium battery
	Backup of other parameters :	permanent
	Power supply :	230 V ±10% 50 / 60 Hz
	Mains terminals :	1.5 to 2.5 mm² section, baring / 5 mm
	Power supply diagram :	EE or EN diagram (Earth / Earth or Earth / Neutral)
	Consumption in mA. :	3 c./120mA -4 c./160mA -5 c./200mA -6 cities/ 240mA
	Electrical insulation :	class I
	Fuses (on clock card) :	0,8 A type T
	Time base :	precision ±0.2 sec/day for 20 to 25°C (absolute with radio synchronisation)
Mechanical	Control of displays :	by tactile keyboard without opening the clock (1 keyboard per display)
	IP box :	IP 41
	Incline :	5°
	Material :	aluminium
	Colour :	black polyurethane paint
	Shape :	injected rounded corners
	Fixing bracket :	wall hanging with 2 screws or double sided bracket
	height of bracket arm :	on request
	bracket material :	steel
Options	DCF radio synchronisation : (red light diode on antenna; green light diode on DCF antenna)	2 wires without polarity, 5 m cable length supplied with antenna - 6/10 section cable – max. length 100m
	GPS synchronisation :	Via MIC GPS on 2 cables
	IRIG B / AFNOR coded time synchronisation :	2 wires without polarity 6/10 section cable

	Designation	Characteristics
Legibility	Display :	electroluminescent LED
	Legibility :	Up to 25 metres
	height of figures :	50 mm
	adjustment of diode light intensity :	on 4 levels
	colour of diodes :	red, green, blue or yellow
	anti-reflective antistatic film :	yes
	Angle of reading :	120°
Functionnality	Setting the time after a mains power failure :	Automatic
	Summer/winter time changes for time difference :	Prog, Eur, USA and GMT Mode. -12h30 +12h30
	Display :	Hours, minutes with time difference of 4 or 6 cities
T°C	Operating temperature :	0° to +40°C
	Storage temperature :	-10° to +60°C
Standards	European and French standards :	CE
	Electromagnetic compatibility directive:	89/336/CEE.
	radio-electric disturbances produced by information processing units :	NF EN 50082-1 (June 1992)
	low voltage directive :	73/23/EEC by reference to the norm EN60950
	electrical :	IEC 364 (NFC 15.100 for France)
	AFNOR (IRIG B) :	NFS 87500A
Divers	Weight :	3 cities/9 Kg - 4 cities/12 Kg - 5 cities/15 Kg - 6 cities/18 Kg
	Sizes :	See diagram.
	Name of cities or countries	Sticker, 30 mm high, max. length 250 mm

Sizes (mm) :



7 - ADJUSTING THE LIGHT INTENSITY

• Light intensity adjustment can be carried out on each display separately when the World clock is not in the configuration menu (time display).

• Pressing the “+” key a number of times enables you to select directly from 4 different levels whichever display intensity is best suited to the surrounding lighting conditions.

• Be careful that all displays have the same light intensity.

8 - BACKUP

• The World clock is fitted with a device for storing the configuration parameters even in the event of an extended power failure.

9 - PRECAUTIONS FOR USE AND MAINTENANCE

• Use an antistatic product of similar type to the one shipped in the original packaging.

• Never use alcohol, acetone or any other solvent liable to damage the casing and filter on your World clock.

• Read carefully the paragraph on electrical safety standards before carrying out.

10 - WHAT TO DO IF...?.....CHECK :

WHAT TO DO IF...?	CHECK :
• All displays disappear and only display two fixed points.	• No AFNOR reception for over one hour on all displays. Check the connection and reception of the AFNOR signal.
• One of the displays shows only 2 fixed points.	• No Irig-B/AFNOR reception. Check the corresponding display.
• The time shown on 1 or more displays is incorrect.	• Check programming in relation to the name of the city. The time signal from the time base or the AFNOR signal must be GMT and not local time. Check the time difference programmed.
• The time change was correct last year but is not correct this year.	• Check programming of the time change, (programmable mode or fixed date) as well as the programmed value.
• The light intensity on one display is different from the other displays.	• Press the “+” key on the display concerned, to obtain the same light intensity. If there is no change, have your clock checked by an authorised dealer.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