

BTX 6220 WP



Installation and User Manual

This document is concerning the following product : BTX6220WP, ref: 915791.



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

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Electrical and mechanical safety standards

- *Installation and maintenance of this equipment should only be carried out by qualified and authorized personnel.*
- *Since BT6000 scoreboards are connected to a 110/240VAC supply, they must be installed in compliance with standard IEC 364.*
- *Indoor use (protected against mechanical shocks according to DIN18032.3 Standard).*
- *The 110/240VAC supply line for the shot clock panel must include a neutral/phase circuit breaker, rapidly accessible. This circuit breaker must be switched off during maintenance operations.*
- *The installation must be completed before the equipment can be powered up.*
- *It is prohibited and dangerous to immerse the scoreboard in to water or clean it with a water jet.*
- *Installation ground connection as per EE or EN (earth/earth or earth/neutral) power supply diagram.*
- *Bodet shall not be held responsible for any use not in compliance with these instructions.*
- *Any modification to the product shall void the warranty.*

I - Checking the supplied equipment

The kit is made of the BTX6220 WP scoreboard.

The keyboards are not included in the commercial reference of the scoreboard. They have their own references.

The keyboards are delivered in a storage case.

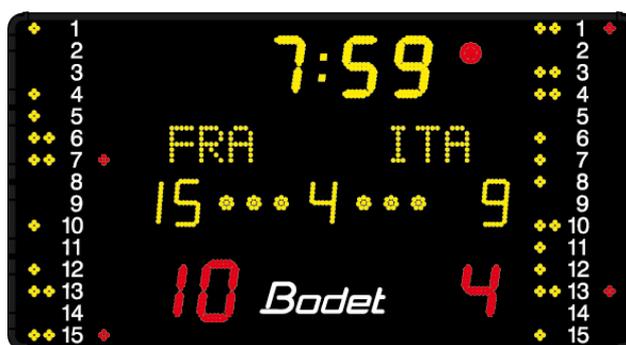
- BT6000 main keyboard:

Delivered with a power adapter.

A secondary keyboard can be connected to this keyboard along with a start/stop hand-switch and a shot clock keyboard.

- Secondary keyboard fouls/points:

Powered by the main keyboard BT6000.



BTX6220 WP



Main keyboard BT6000



Secondary keyboard

Maximum distance for HF communication between the keyboard and the shot clock panels is 100 metres.

Make a provision for an electric outlet or an extension cord to allow for the recharging of the keyboard battery if its level were to become insufficient (full charge autonomy > 8 hours).

II - Description of the BTX6220 WP

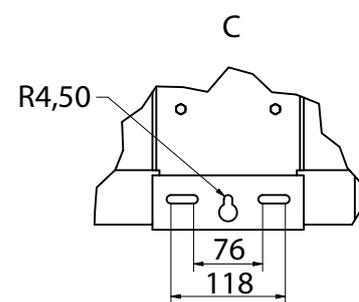
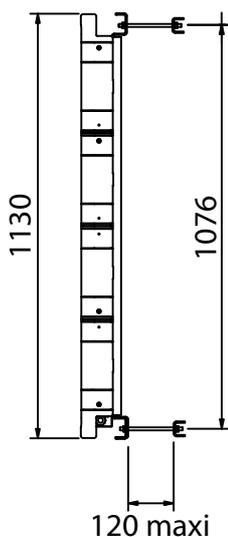
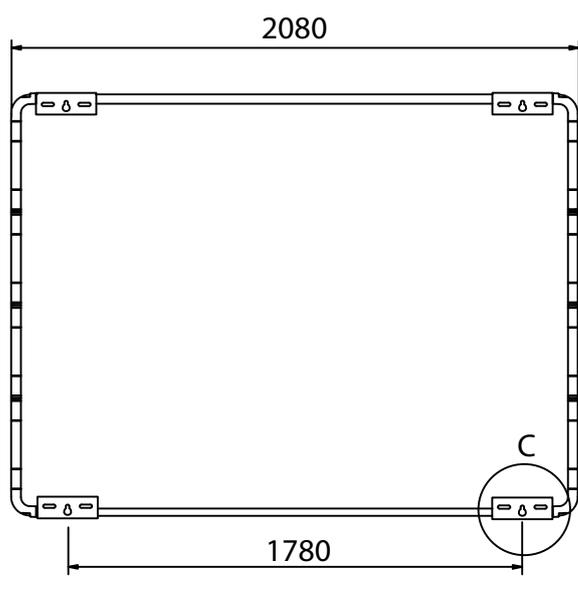
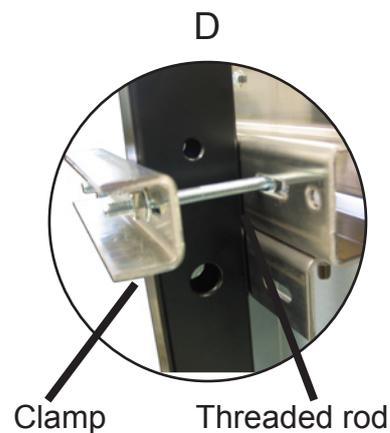


Designation	Label
Game clock - minutes-seconds (1/10 of second display during the last minute of the game). Countdown timer between periods.	A
Game clock stopped indicator. Cluster lights up when the clock is stopped and between periods.	B
Number of the current period (E for Extra time).	C
Scores from 0 to 999 HOME/VISIT.	D & D'
Penalties indicators	E & E'
3 Time-out indicators HOME/VISIT (blinks when the timer is counting down). Reset of the time-out indicators at the end of each period.	F & F'
Programmable teams' names.	H & H'
Individual fouls HOME/VISIT.	K & K'

III - Mechanical installation of the BTX6220 WP

1/ Mount the casing on 2 posts using the 4 clamps and the threaded rods (D).

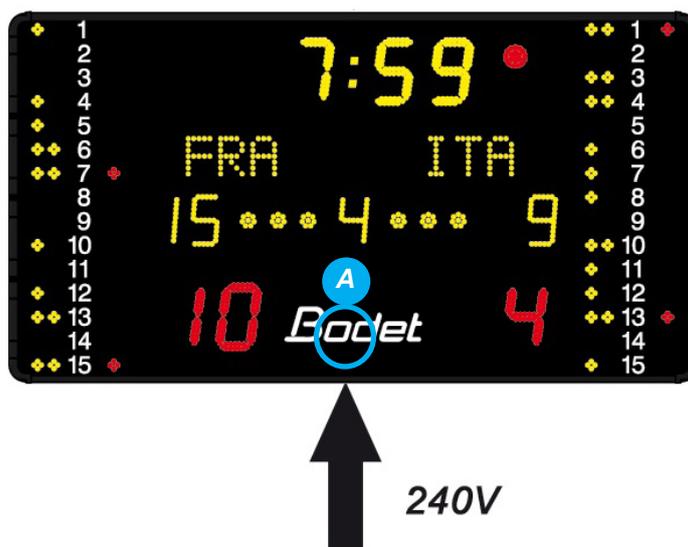
2/ Proceed to the wiring of the panel.



Tear drop holes for wall mounting with $\varnothing 8$ screws and wall anchors

Note: to mount the scoreboard to a wall use the 4 tear drop holes C).

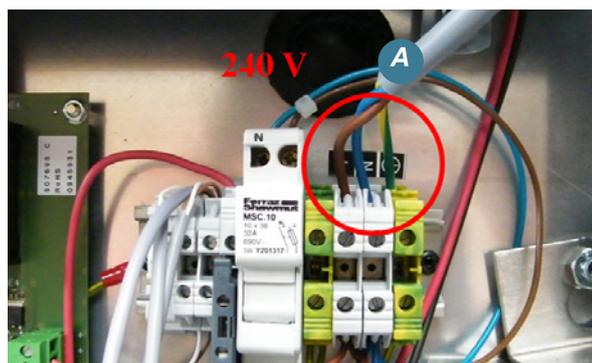
IV - Electric connection of the BTX6220 WP



Most of the BTX6220 WP cabling is done at the factory. These instructions deal with the cabling to be done during the installation at the customer site.

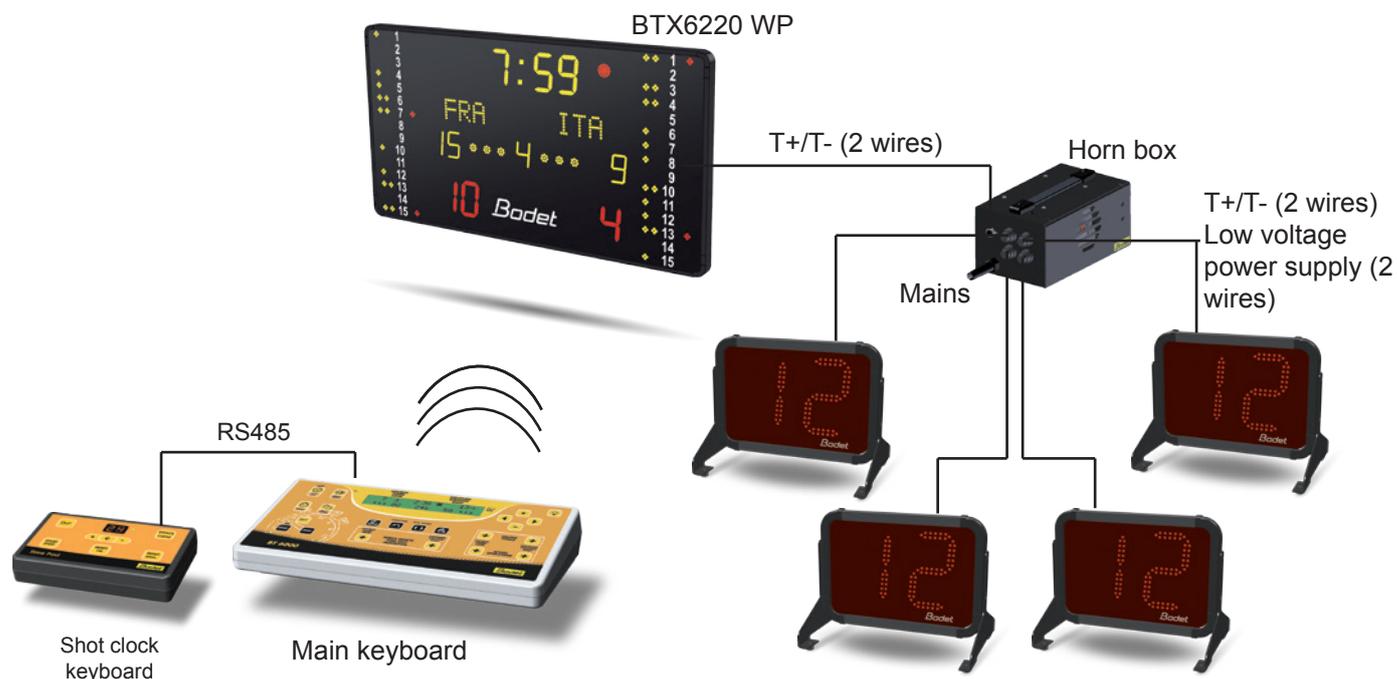
1/Open all the access doors.

2/Connect the 240V + earth power cable to the terminal block of the BTX6220 WP(A). (the power cable (3x1,5²) is not supplied by BODET).

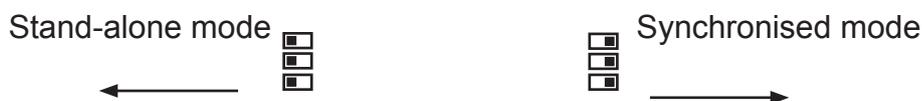


V - Installation diagram

1/ Synchronised mode



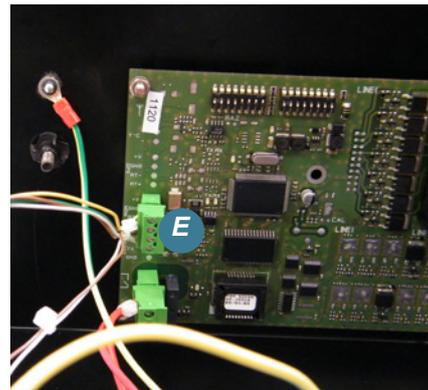
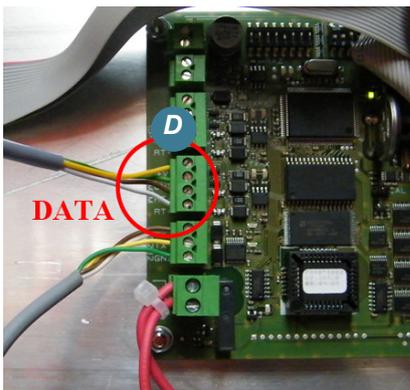
Note : the 3 dips of the shot clock keyboard can be set to select the operating mode:



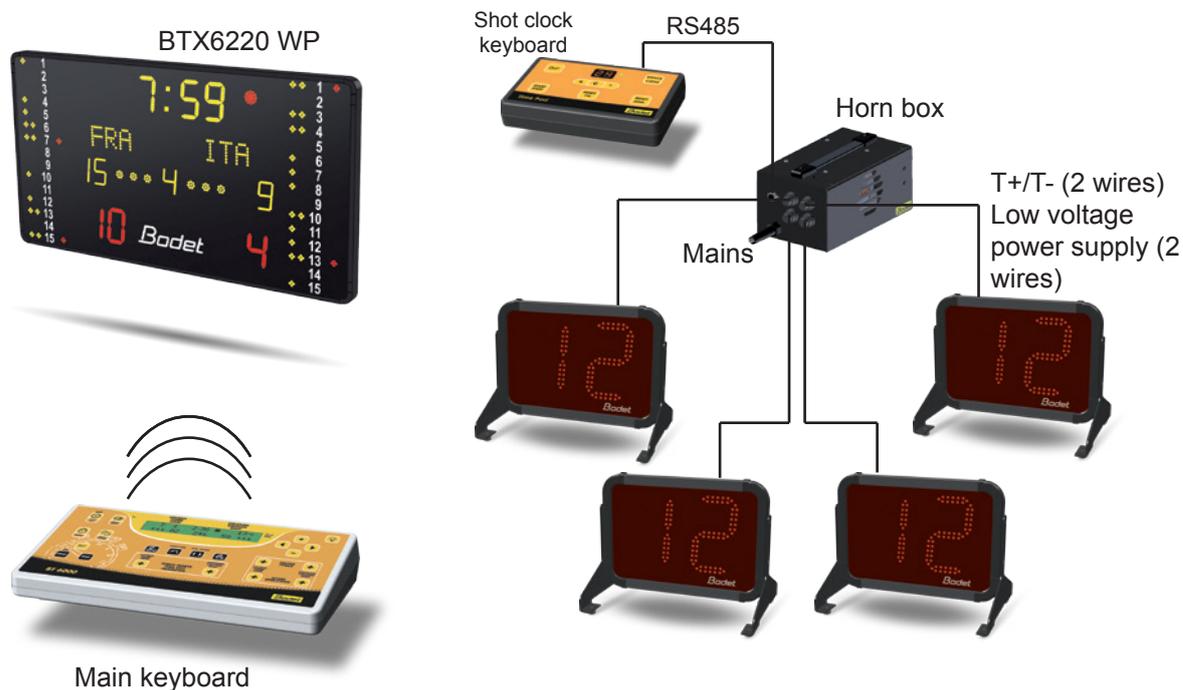
Installation of the horn box:

It is possible to synchronise the BT6002 WP and the main scoreboard BT6000 (game clock and 30 sec shot clock stop simultaneously).

- 1/ Open up the black box.
- 2/ Disconnect the 4 wires and remove the DIN (A) connector. Replace it by the cable gland.
- 3/ Feed the Data cable (2 wires) coming from the main scoreboard (D) through the gland and connect it on the terminal block (E) (white wire RT+ and brown wire RT-) of the electronic card inside the black box.
- 4/ Close the black box.
- 5/ Connect the BTX6002WP 30 sec shot clocks to the (B) plugs of the black box.
- 6/ Connect the power cord to (C).



2/ Stand-alone mode



Note : the 3 dips of the shot clock keyboard can be set to select the operating mode:

Stand-alone mode 

 Synchronised mode

Installation of the horn box :

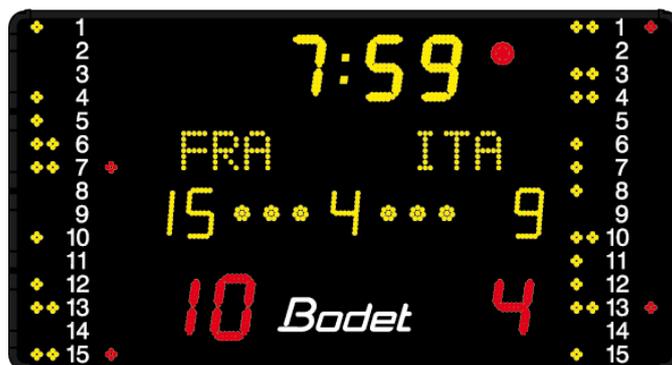
The 30sec shotclock keyboard operates then independently.

- 1/ Connect each BTX6002 WP to the black box in (B).
- 2/ Connect the 30 sec shot clock keyboard to (A) of the black box: RS485 communication.
- 3/ Connect the power cord to (C).

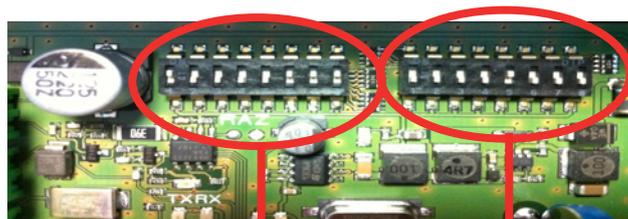


VI - Dips setting

BTX6220WP



Central panel card:



First DIP bank

Second DIP bank

First DIP bank:

- Dips 1 to 4 are used for the factory setting of the panel.

Dip 1	Dip 2	Dip 3	Dip 4
on ↑	on ↑	off ↓	off ↓

- Dips 5 to 7 are used to set the panel number (if several panels are to be controlled on the same site, each panel needs to have its own number).
- Dip 8 is in the position ON.

Pannel number	Dip 5	Dip 6	Dip 7
1	off ↓	on ↑	on ↑
2	on ↑	off ↓	on ↑
3	off ↓	off ↓	on ↑
4	on ↑	on ↑	off ↓
5	off ↓	on ↑	off ↓
6	on ↑	off ↓	off ↓

Second DIP bank :

- Dips 1 to 3 are used to determined the installation number.
- Dips 4 to 8 are not used.

Installation number	Dip 1	Dip 2	Dip 3
1	off ↓	on ↑	on ↑
2	on ↑	off ↓	on ↑
3	off ↓	off ↓	on ↑
4	on ↑	on ↑	off ↓
5	off ↓	on ↑	off ↓
6	on ↑	off ↓	off ↓

Individual fouls panel:

DIPs setting on 20-module left card:

Row 1								Row 2							
Dip 1	Dip 2	Dip 3	Dip 4	Dip 5	Dip 6	Dip 7	Dip 8	Dip 9	Dip 10	Dip 11	Dip 12	Dip 13	Dip 14	Dip 15	Dip 16
on ↑	on ↑	off ↓	on ↑	off ↓	off ↓	off ↓	on ↑	off ↓	on ↑	on ↑	off ↓				

DIPs setting on 20-module right card:

Row 1								R 2							
Dip 1	Dip 2	Dip 3	Dip 4	Dip 5	Dip 6	Dip 7	Dip 8	Dip 9	Dip 10	Dip 11	Dip 12	Dip 13	Dip 14	Dip 15	Dip 16
off ↓	off ↓	on ↑	on ↑	off ↓	off ↓	off ↓	on ↑	off ↓	on ↑	on ↑	off ↓				

Penalties card panel:

Row 1								Row 2							
Dip 1	Dip 2	Dip 3	Dip 4	Dip 5	Dip 6	Dip 7	Dip 8	Dip 9	Dip 10	Dip 11	Dip 12	Dip 13	Dip 14	Dip 15	Dip 16
on ↑	off ↓	on ↑	on ↑	off ↓	off ↓	off ↓	on ↑	off ↓	on ↑	on ↑	off ↓				

BTX6002



	Row 1								Row 2							
Mode	Dip 1	Dip 2	Dip 3	Dip 4	Dip 5	Dip 6	Dip 7	Dip 8	Dip 9	Dip 10	Dip 11	Dip 12	Dip 13	Dip 14	Dip 15	Dip 16
Synchronised	on ↑	on ↑	on ↑	off ↓	on ↑	off ↓	on ↑	on ↑	off ↓	off ↓	off ↓	off ↓	off ↓	off ↓	off ↓	off ↓
Standalone	on ↑	on ↑	on ↑	off ↓	on ↑	on ↑	on ↑	on ↑	off ↓	off ↓	off ↓	off ↓	off ↓	off ↓	off ↓	off ↓



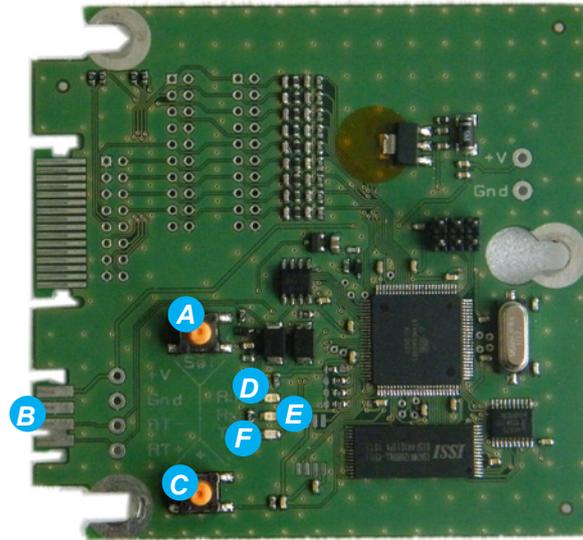
	Row 1								Row 2							
Mode	Dip 1	Dip 2	Dip 3	Dip 4	Dip 5	Dip 6	Dip 7	Dip 8	Dip 9	Dip 10	Dip 11	Dip 12	Dip 13	Dip 14	Dip 15	Dip 16
Synchronised	on ↑	on ↑	on ↑	off ↓	on ↑	on ↑	on ↑	on ↑	off ↓	off ↓	off ↓	off ↓	off ↓	off ↓	off ↓	off ↓
Standalone	on ↑	on ↑	on ↑	off ↓	on ↑	on ↑	on ↑	on ↑	off ↓	off ↓	off ↓	off ↓	off ↓	off ↓	off ↓	off ↓

Horn box



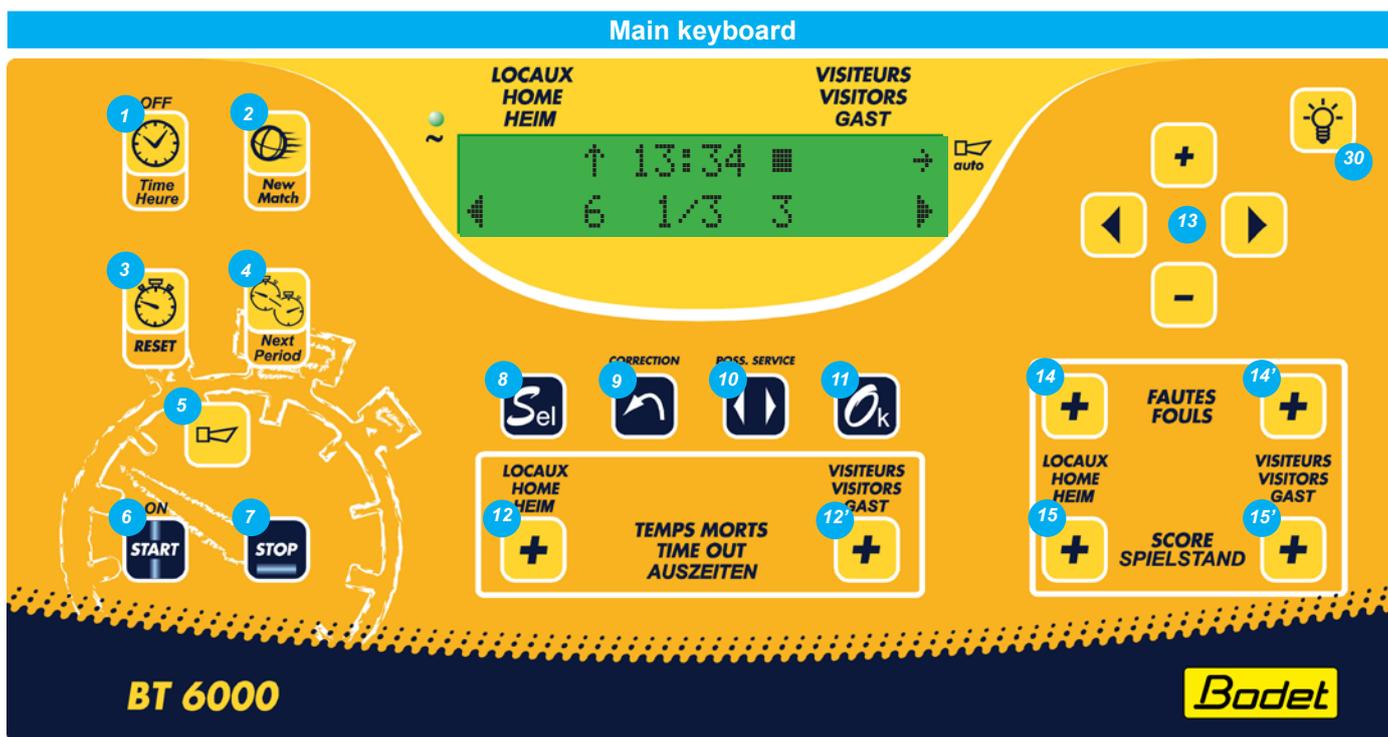
Row 1								Row 2							
Dip 1	Dip 2	Dip 3	Dip 4	Dip 5	Dip 6	Dip 7	Dip 8	Dip 9	Dip 10	Dip 11	Dip 12	Dip 13	Dip 14	Dip 15	Dip 16
on ↑	on ↑	on ↑	off ↓	on ↑	on ↑	on ↑	on ↑	off ↓	off ↓	off ↓	off ↓	off ↓	off ↓	off ↓	off ↓

Alpha card configuration:



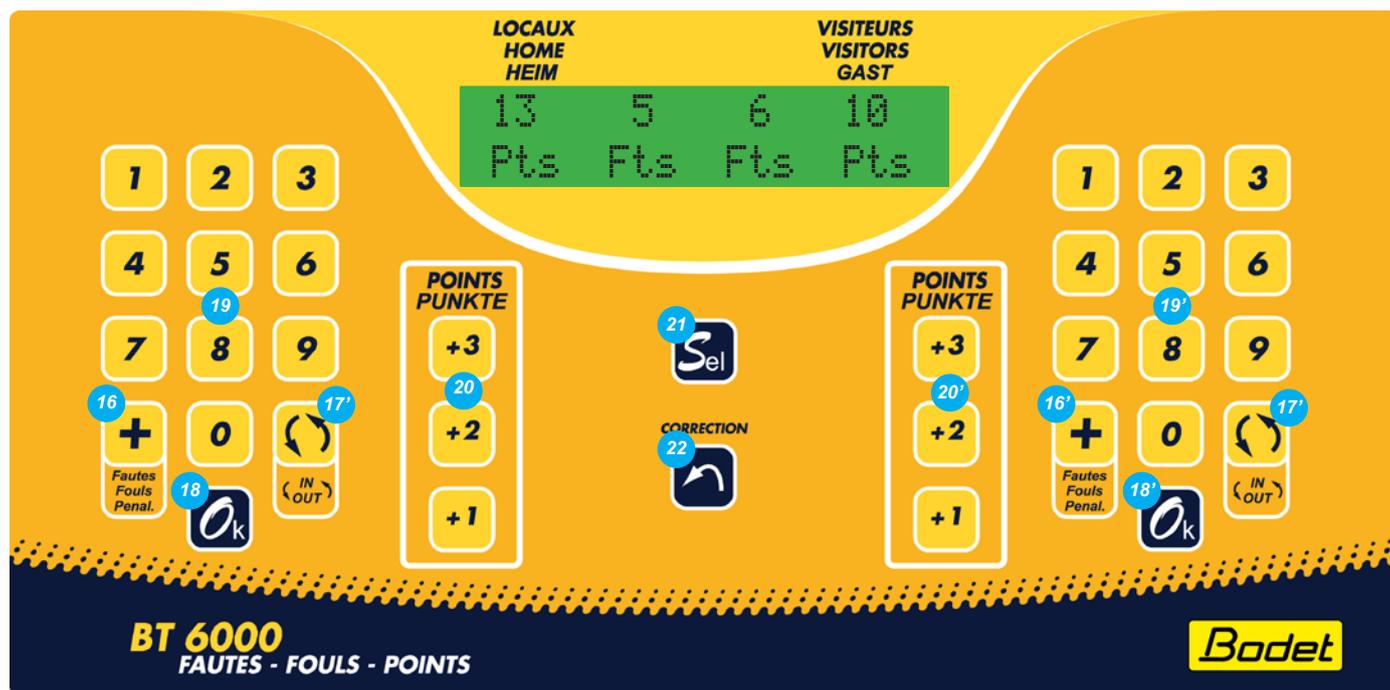
- A** Button «Sel»: used to get in the technician menu (press for 3 sec.) and to go to the next menu.
- B** Connector: +V (5V) / Ground / RT-
- C** Button «+»: used to get in the current technician menu or to change the value of the parameter.
- D** Led «RUN» (green, blinking): indicates that the card is powered and that the software is working.
- E** Led «Rx» (green): indicates that the card just received a data frame.
- F** Led «Tx» (yellow): indicates that the card just sent a data frame.

VII - Use of the main keyboard



Designation	Label
Pressing this key toggles between Game clock display or Time of Day clock display	1
Starts a new match when pressed for more than 3 sec.	2
Game clock reset: reloads the values programmed for the beginning of the match (the clock must be stopped) without resetting the scores and fouls..	3
Go to next period..	4
Turn ON or OFF the horn. The horn will sounds as long as this key is pressed.	5
Starts the game clock	6
Stops the game clock.	7
Gives acces to the settings menu.	8
Correction mode: Pressing this key once causes the display to blink. After the corrections have been made, press the key once to return to the normal mode.	9
Unused.	10
While in match mode: starts a new match if pressed for more than 3 sec. Stettings menu: validates the settings and exit this menu and return to the match mode.	11
Assign the Home/Visit. time-outs. The time-out timers stop automatically when reaching 0 or when these keys are pressed.	12 & 12'
Menus browsing keys. At the start of a sport: pressing the + and - modifies of the game time (in minutes).	13
Assign Home/Visit. 20 sec. penalties.	14 & 14'
Add one point to the Home/Visit. teams' Score (these keys are inactive when a secondary keyboard is connected).	15 & 15'
Adjustment of the scoreboards luminosity.	30

VIII - Use of the secondary keyboard



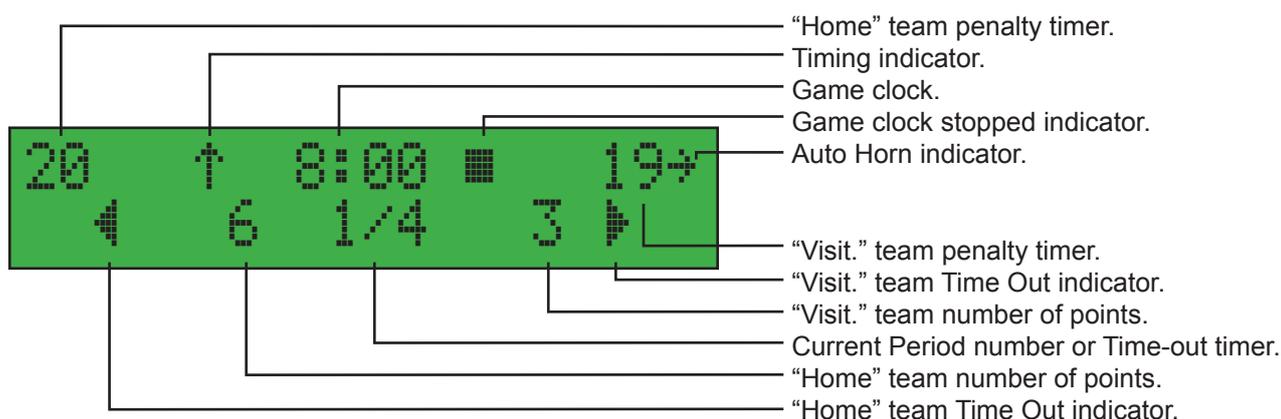
Designation	Label
Assignment of a personal foul Home/Visit.	16 & 16'
Unused.	17 & 17'
Validation of a penalty.	18 & 18'
Numerical keypad to enter the player's number.	19 & 19'
Unused.	20 & 20'
Unused.	21
Correction mode: Pressing this key once causes the display to blink. After the corrections have been made, press the key once to return to the normal mode.	22

IX - Operation

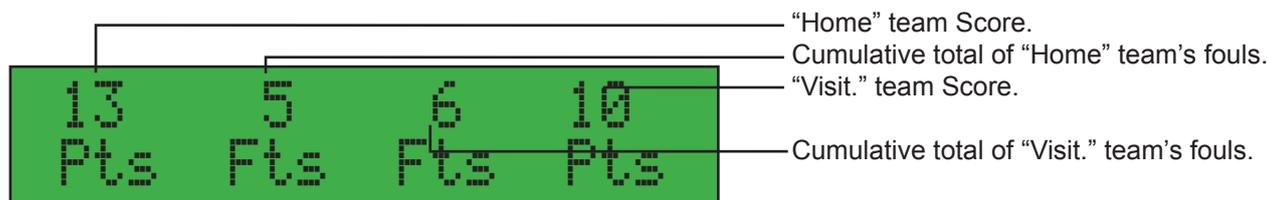
Sport Type	Designation
Water-Polo 1:4 x 8min+Tfs	4 periods of 8 mn game - RESET of gma clock at the end of each period - 2 mn Rest Time - 60 secondes Time Out per période - Automatic horn.
Water-Polo 2:4 x 8min	4 periods of 8 mn game - RESET of gma clock at the end of each period - 2 mn Rest Time - 60 secondes Time Out per période - Automatic horn.

All these parameters can be modified with the specific program for each type of configuration.

Main keyboard display



Secondary keyboard display



Between periods

- The Time-out indicators are reset.
- If programmed, count-down of the Rest Time (displayed instead of game clock). The game clock stopped indicator is ON.

Nota: Rest Times timer can be stopped during the count-down by pressing on the "Start/Stop" key and Time Outs by using the corresponding "Time Out" key. At the end of the the countdown the game clock does not restart automatically, it must be restarted with the "Start/Stop" key.

Sport paramaters menu

The pre-recorded basic configuration of each sport can be modified. Select and validate a sport and a rule type. To enter the setting menu of the sport press the SEL (8) for 3 sec.:

- Modify the value of each parameter with the + and - keys (13) .
- To go to the next parameter press the ► key (13).
- To go back to the previous parameter press the ◀ key (13).
- Press the OK key (11).

Type 1	Type 2	Parameters	Description
Shot timer duration : 30 sec	30 sec	1 to 99 sec.	Time left for a team having the possession of the ball to attempt a goal
Period number / Game : 4	4	1 to 9	Selection of the number of periods
Period duration / Game : 8 min	8 min	1 to 90 min.	Selection of the duration of the periods.
Half time duration : 5 min	5 min	0 to 90 min.	Selection of the duration of the Half Time Break if different from 5. If = 0, no automatic Half Time.
Auto time break duration : 2 min	2 min	0 to 90 min.	If = 0, no automatic timing. If > 0, the scoreboard will automatically countdown the programmed duration at the end of the period. Press "Stop" to stop the countdown.
Horn before time brk end : 5 sec	5 sec	0 to 999 sec.	If = 0, Auto horn disabled If > 0, a brief honking of the horn to signals that the end of a rest time is near. (between periods or half time).
Extra time duration : 3 min	3 min	0 to 90 min.	Selection of duration of the Extra time periods. If = 0, no Extra time.
Individual foul number : 3	3	1 to 3	Selection of the maximum number of personal fouls before exclusion.
Penalty duration : 20 sec	20 sec	0 to 60 sec.	Selection of the duration of the penalties (in sec/player).
Time out duration : 60 sec	60 sec	0 to 99 sec.	Selection of the duration of the Time Outs
Auto horn time out end : Yes	Yes	Yes or No	If Yes, horn starts automatically at the end of each timeout.
Horn before time out end : 10 sec	0 sec	0 to 99 sec.	If = 0, auto horn disabled. Si > 0, a brief honking of the horn to signals that the end of a time out is near.
Keep display result : 30sec	+30 sec	10 to 60 sec. by steps of 10 sec.	Selection of the time during which the last period data will stay displayed if the automatic rest time is not programmed.
Horn duration : 5 sec	5 sec	0 to 5 sec	If = 0, auto horn disabled. If > 0, limits the duration of the horn blowing to reduce the noise level.