

DIRECTION FOR USE



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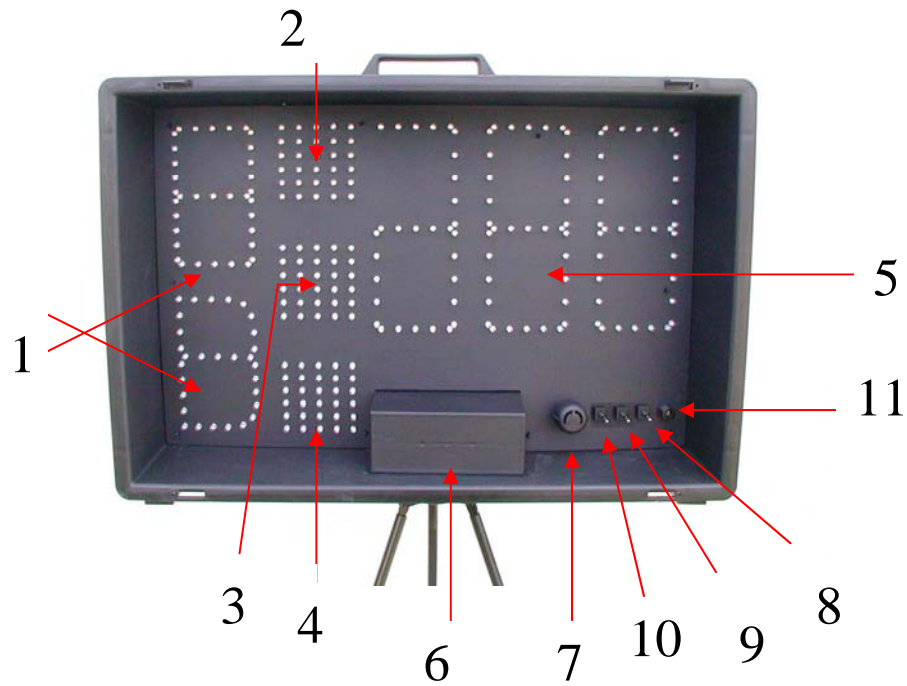
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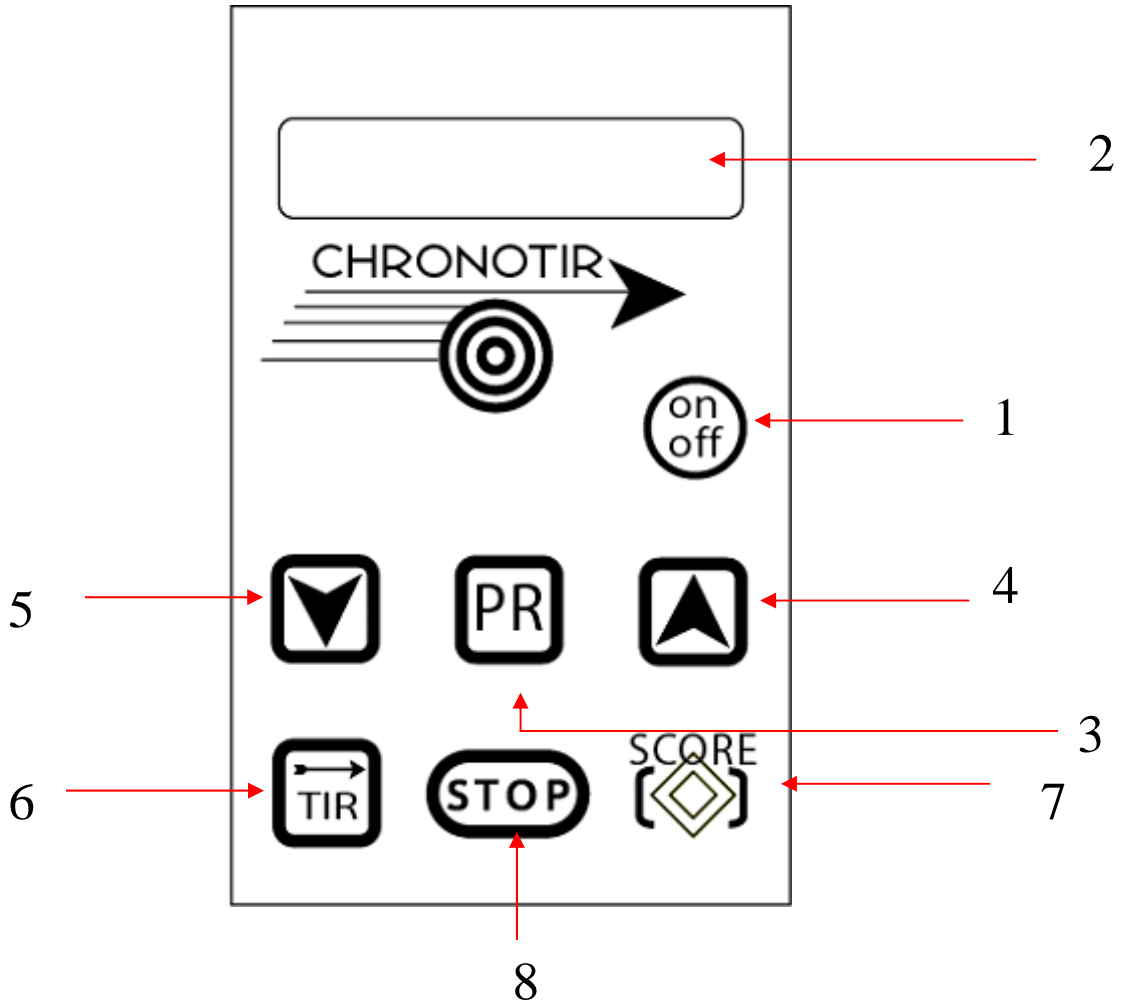
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CHRONOTIR

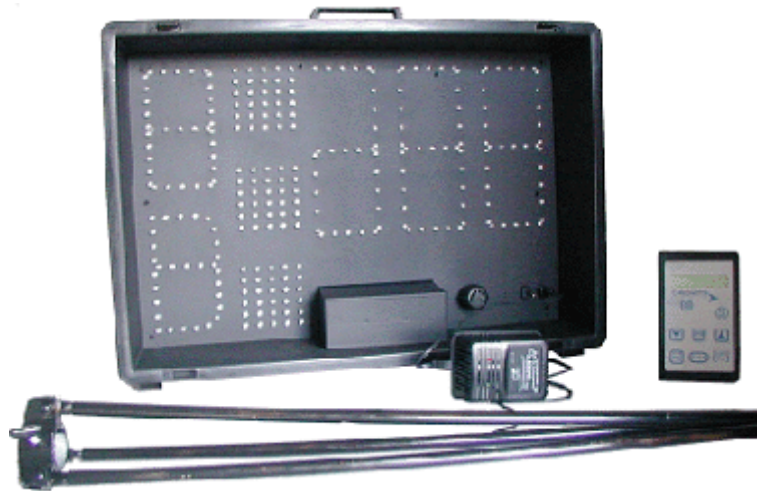


- 1 ♦ Rhythms display (AB or CD)
- 2 ♦ Red light
- 3 ♦ Yellow light
- 4 ♦ Green light
- 5 ♦ Launching time display
- 6 ♦ Supplying battery
- 7 ♦ Warning sound
- 8 ♦ On/Off
- 9 ♦ Luminous and sound level adjustment
- 10 ♦ Sound signal On/Off
- 11 ♦ Battery charger plug

REMOTE



- ❶ On/Off
- ❷ Display
- ❸ Programming order
- ❹ Increasing incrementation and rhythms display and start duel
- ❺ Decreasing incrementation and rhythms display and start duel
- ❻ Flight launching
- ❼ Scoring order
- ❽ Emergency stop



MATERIAL DELIVERED

A CHRONOTIR marker contents:

- The proper CHRONOTIR marker, fit out with its battery type NP 7-12 in watertight lead
- a tripod support
- a battery charger
- a remote, fastened inside the marker cover.

*Nota : Only one remote is enough to use simultaneously many markers.
Therefore, a marker can be delivered without any remote.*

FUNCTIONS

CHRONOTIR is an independent equipment that assures the management and security of the FITA archery competitions.

Its operation is in accordance with the FFTA and FITA procedures that govern these competitions.

CHRONOTIR make 4 functions:

- Generation and management of the luminous and sound signals
- Rhythms display (AB – CD)
- Launching time progress display
- Duels management for the last phase.

These functions are automated but the referee can intervene at any time by action the remote. Many markers can be settled simultaneously according to the number of archer; just one remote will pilot them.

CHARACTERISTICS

Weight : 9,200 Kg
Display dimensions : 600 x 400
Marker height : 1, 35 m
Range : ~ 20 hours
Reach : 100m at 150m

INSTALLATION

CHRONOTIR must be brought into service only after the battery is fully loaded.
 The installation includes the following steps :

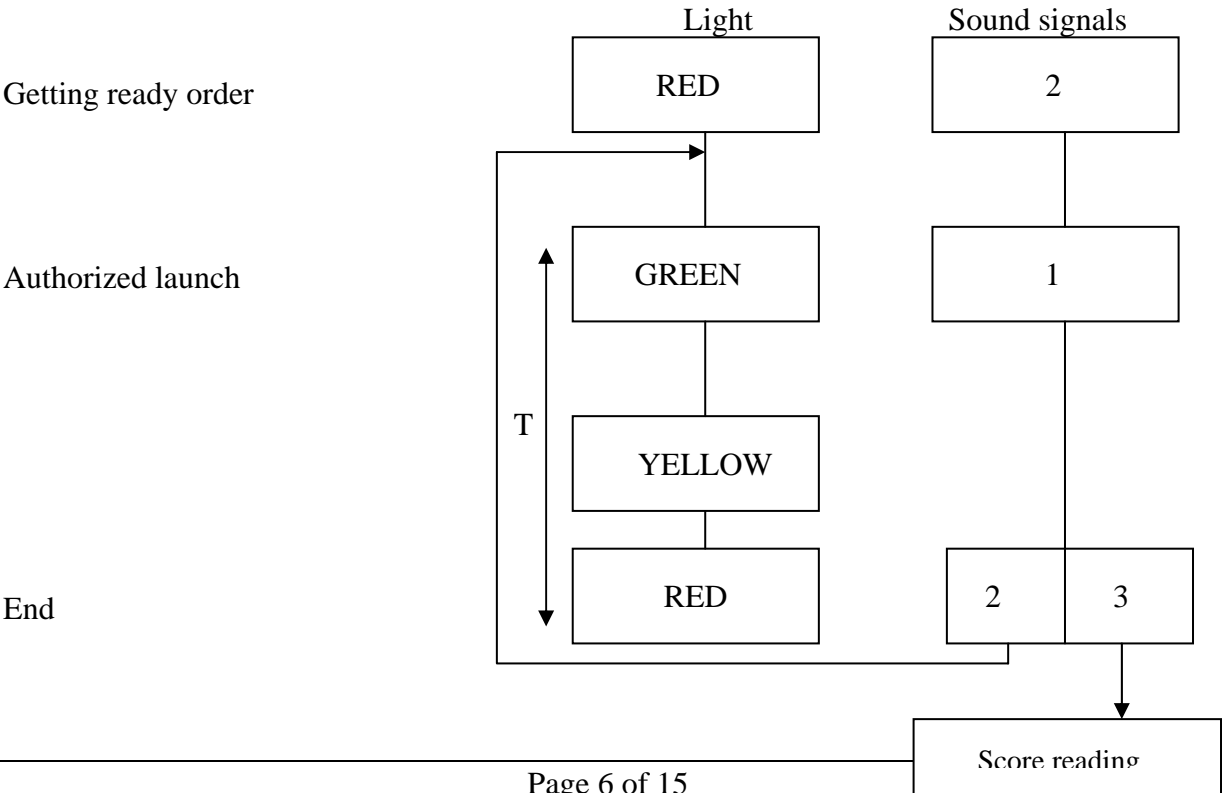
- Put the marker on the right place on its tripod, tighten binding screw .
- Remove the cover.
- Switch on the marker (switch ON/OFF on ON).The red light starts.
- Choose the required level of the sound signals and the lights luminous intensity :
 - Lever on top for the outside competitions
 - Lever at the bottom for the inside competitions
- Choose the functioning with or without sound signals:
 - Lever on top for the sending out of sound signals
 - Lever at the bottom for the marker to be mute

The marker got then the « security » position, the red light will still be working and will forbid any launch until the order is given.
 In case many markers are used simultaneously, each one of these operations must be repeated for each marker.

FUNCTIONNING

QUOTE

A flight launching occurs according to the following instruction :



The time granted to set the pace is generally extended to 20 sec.
 The yellow light generally lasts around 30 sec.
 The launching time period (T) depends on the number of arrows to launch.
 Generally it is 40 sec. per arrow.

CONFIGURATION SETTING

To be able to launch one or many flights, the following actions are required :

- Switch on the remote (ON/OFF button)
 the marker(s)' lights switch on one after the other, the rhythms A next C
 and the launching time 120 show up during 3 sec . B D

Then a sound signal is produced.

Those signals indicate that the marker is linked to the remote and that the functions altogether are working.

The remote displays: LAUNCHING TIME – 120 sec.

Program the launching flight parameters.

1) Launching parameters

When switching on the remote, the settings are the followings:

- time granted to get ready to launch (20 sec)
- launching time : 120 sec, corresponding to 3 arrows flight
- yellow light period : 30 sec

Those 3 periods of time can be modified;

The notice board on page 7 gives an example with a presentation at 10 sec, 150 sec and 20 sec for the 3 periods mentioned below.


The possible settings amplitude are the following:

- PRE-LAUNCHING: from 0 to 40 sec – Step: 5 sec
- LAUNCHING: from 40 to 360 sec – Step: 10 sec
- YELLOW: from 0 to 40 sec – Step: 5 sec

2) Rhythms parameters

Successive press-studs on  or  enables to display successively

A C Off.
 B → D










The use of the rhythm parameter leads to its displaying on the available marker(s).
 If there's no action on the button  these information obliterate in 4 minutes.

TIMES PARAMETRIZING EXAMPLE

LAUNCHING TIME = 160 s

PRE LAUNCH= 10 s


YELLOW= 20 s

Parameters	Actions on the remote	Remote display	Marker(s) display
	Initial state	Launching time: 120 s	-
Launching time	1 press stud on 	Launching time: 120 s Twinkles	-
	4 press stud on  step incrementation 10 sec	Launching time: 160 s Twinkles	
	1 press stud on  (Update)	Information updated then : Launching Time : 160 s	Times programmed show up
Time to set the pace	2 press stud on 	PRE LAUNCH 20 s twinkles	-
	2 press stud on  step incrementation : 5 sec	PRE LAUNCH 10 s Twinkles	
	1 press stud on  (Update)	Information updated then Launching Time: 160 s	Times programmed show up
Yellow light	3 press stud on 	YELLOW: 30 s Twinkles	-
	2 press stud on  Step incrementation :5 sec	YELLOW : 20 s Twinkles	-
	1 press stud on  (Update)	Information updated then Launching time : 160 s	Times programmed show up

LAUNCHING MANAGEMENT

FLIGHT EXECUTION

After having set the configuration, a flight can be ordered by the referee.

This flight progress can be obtained by a press stud on  that will provoke the following actions:

- The marker produces 2 sound signals calling to set the pace, the light keeps being red.
- The programmed rhythm displays on the marker.
- The pre-launching time displays and strikes on the marker and on the remote.

At the end of pre-launching time:

- The marker produces a sound signal and the green light switches on, allowing the launch
- The launching time programmed displays, and then it strikes on the marker and on the remote

Once the launching time left reaches the « YELLOW »time programmed:

- The yellow light switches on.

AT THE END OF THE LAUNCHING TIME PROGRAMED:

- a) Launch with rhythms display:

At the end of the first launch:

- the marker produces 2 sound signals, the red light switches on.
- a flight identical to the previous one is re-launched for the following designed archers.

⇒ the rhythm display is inverted : $\begin{matrix} A \\ B \end{matrix} \rightarrow \begin{matrix} C \\ D \end{matrix}$ or $\begin{matrix} C \\ D \end{matrix} \rightarrow \begin{matrix} A \\ B \end{matrix}$

At the end of the second launch:

- The marker produces **3 sound signals, the red light starts.**
- The launching time programmed displays on the remote.


The archers can collect their results. After the 3 sound signals the rhythms that indicate the next sequence shooters start, as well as the programmed launching time.


b) Launch without rhythms display:

- the scoring order function is automatically generated.

Note: Every scoring order is preceded during 10Sec by the following display on the remote:
"SCORE IN xxSec"


⇒**If all the archers finish** their launch before the launching time required expires, the referee can stop the flight execution by pressing

◆ A press-stud on  immediately orders the next flight (2 sound signals – red light detailed account of launching time)

◆ A press-stud on  gives the order to collect immediately the scores (3 sound signals – red light)

EMERGENCY STOP

In case of major incident

A press-stud on  allows to interrupt a flight in progress, in case of incident.

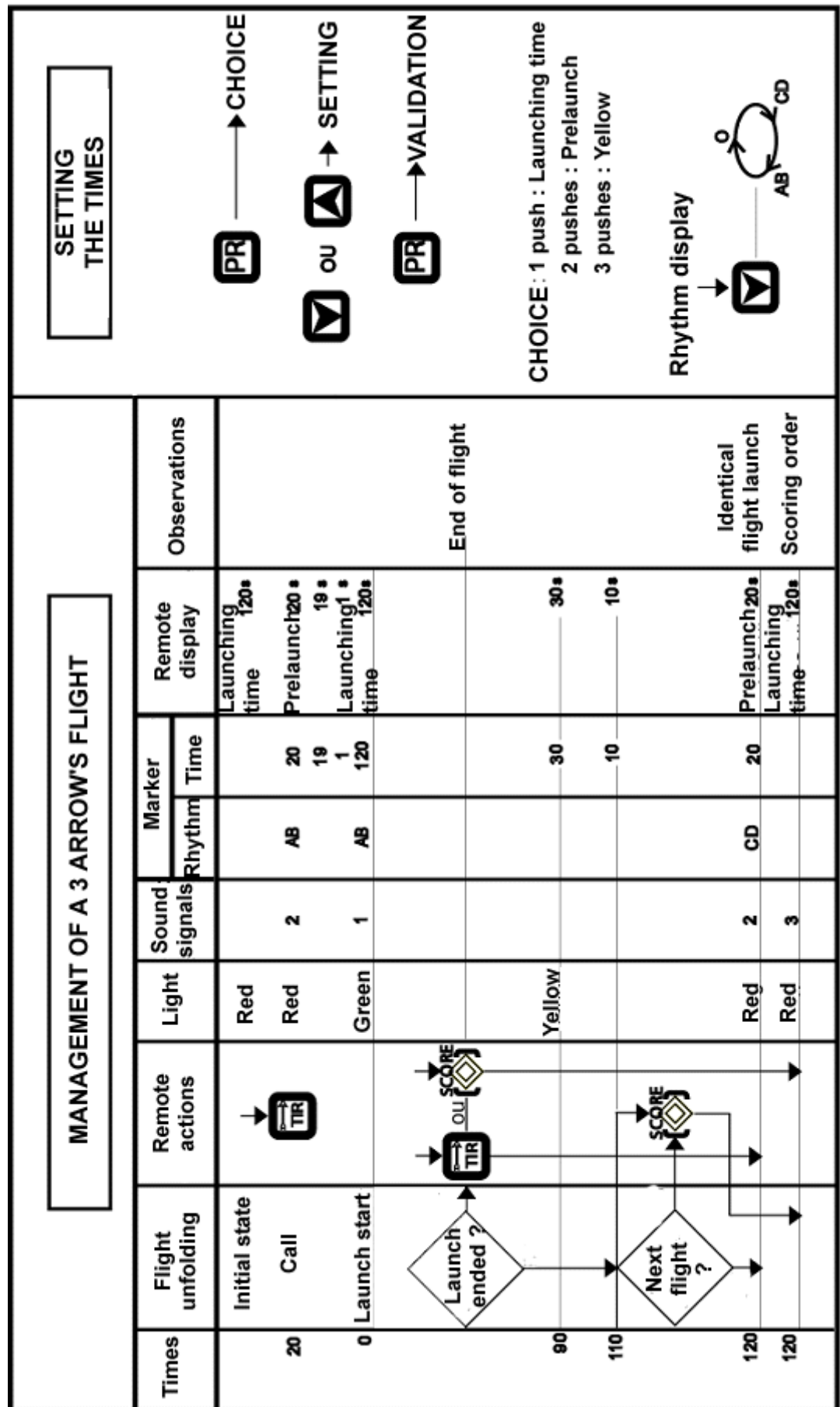
This action leads to :

- the immediate start of the red light
- a prolonged sound signal
- the extinction of the rhythm and time displayed on the marker.

***This action does not alter the programmed parameters of the sequence in process.
The time at which the incident occurred is still registered on the remote display.***

WARNING : To re-launch the broken flight (40 sec. per lasting arrow) it is essential to restart the launching time, otherwise a complete flight will be re-launched .

The following graph resumes the different possibilities offered to the referee.



DUEL MANAGEMENT

INDIVIDUAL DUEL SEQUENCE EXECUTION (Optional extra)

CHRONOTIR integrates the duels management that is used in many competitions last phases.


The activation of this option is made by the DUEL INDIVIDUAL parameter ; we get it with 4 press-stud on  the values are the followings

- PRE-LAUNCH 10sec
- LAUNCHING TIME 40sec
- YELLOW 0sec

These values can be modified (see page 8)

This management is made with the 2 markers that each manage a competitor

The choice of the 1st launcher is made with  and , the launching time displays on the marker appointed to him.

The duel setting off is made by a press-stud on  that will provoke the following actions:

-The marker of the 1st launcher produces 2 sound signals to set the pace, the light keeps being RED.

-The pre-launching time displays then deducts on the marker and the remote.

At the end of the pre-launching time:

-The marker of the 1st launcher produces a sound signal and the GREEN light starts, allowing the launch.

-The launching time programmed displays then deducts on the marker and the remote.

When the launching time left reaches the YELLOW time programmed:


-The YELLOW light starts.

REMARK: If YELLOW= 0 the yellow light never displays



⇒ At the end of the launching time programmed:

*If no action has been made on the remote:


-The red light starts and the launching time displays on the 2nd marker **without sound signals.**


- A press stud on  leads immediately to the next flight execution, **the green light directly starts with sound signals if the horn parameter is in ON**, then the launching time deduction starts again.


Note: If **the horn parameter is in off**, the change to green light is no more signalled by horn, except for the 1st change to green light according to the pre-launch deduction.



- Each new action on the  key immediately activates a new launch execution, alternating launcher to another, until an action on the  key.

⇒ ACTION ON THE REMOTE DURING A DUEL SEQUENCE:


- A press-stud on  during the duel sequence will make the **red light start with no sound signal**. This function is used to enable the display of launched arrow's worth.

- At this moment, a press-stud on  provokes immediately the same actions as at the end of the launching time programmed.

- During the DUEL sequence, a press-stud on  re-launch immediately the next flight (**green light-without sound signals**), then the launching time deduction starts again.

- A press stud on  gives the order to pick up the scores (**3 sound signals-red light**) then launching time displays. This action leads to the re-start of the DUEL sequence .The next press stud on  will allow a new DUEL sequence, that will begin with an order to set the pace.

TEAM DUEL SEQUENCE EXECUTION (Optional extra)

The access to this option is made through the TEAM DUEL PARAMETER that we get by 4 press-stud on , the values will be the following:

- PRE-LAUNCH 10sec
- LAUNCHING TIME 180sec
- YELLOW 0sec

These values can be modified (see page 8)

This management is made with the 2 markers that each manage a competitor

The choice of in INDIVIDUAL DUEL and TEAM is made by the  and  key.

This option globally functions the same way as for the individual duel.

-The launching time left for each team is stored and keeps being displayed, with the red light switched on during the unfolding of the other team's launch.

-The deduction resumes at every change to green, allowing alternatively the launch of each team.

FUNCTIONNING SECURITY

The link between the marker(s) and the remote is permanently checked.

In case that link is cut, the designed marker becomes yellow.

In order to assure the security to set the pace, it is necessary to switch off the remote during a prolonged stop between two launching sequences (lunch break, for example). The ORANGE then RED lights will start successively on the markers, which will indicate that the marker received the order to be in "security" mode

The marker keeps being red whatever its distance to the remote.

Remark:

In case of an unexpected press stud on ON/OFF on the remote during a launching sequence:

-the remote switches off, its parameters are reinitiated

-the marker(s) continue(s) the unfolding of the sequence then end(s) with an EMERGENCY STOP signal. During the starting of the remote the markers adjust their parameters automatically.

MAINTENANCE - STORAGE

The battery must be recharged after using CHRONOTIR. It can stay permanently plugged to the charger between two uses.

CHRONOTIR must be stored in a dry place.

CHRONOTIR can be used during rainy days without any risk for the material as well as the user.

It is recommended to remove the cover during storage. This precaution is essential after using it during rainy weather.