



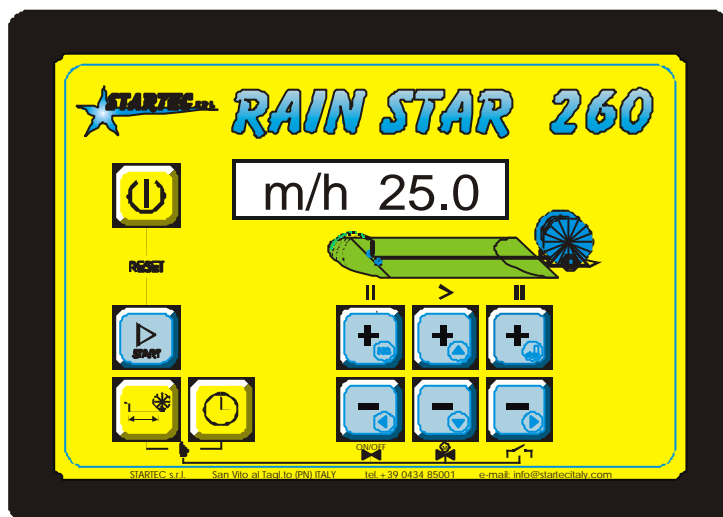
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RAIN 260 Plus

USER MANUAL

functions of the “PLUS” version
from 1 to 8 programmable **SECTORS**
MAXIMUM RUNNING TIME
INITIAL HOLDING TIME



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1. OVERVIEW

These instructions are an addendum to the RAIN 260 instructions, and relate to the supplementary features of the RAIN 260 Plus version. Please read carefully the main instructions of the RAIN 260, and use this information only for the supplementary features.

The supplementary features can be the following:

- From 1 to 8 programmable SECTORS to enable irrigation at different speeds
- MAXIMUM RUNNING TIME, which activates the automatic adjustment of rewinding speed and length of the pauses during irrigation proportionally, so that the process ends within the established time limit.
- INITIAL HOLDING TIME, to delay irrigation outset. Programmable for up to 100 hours.

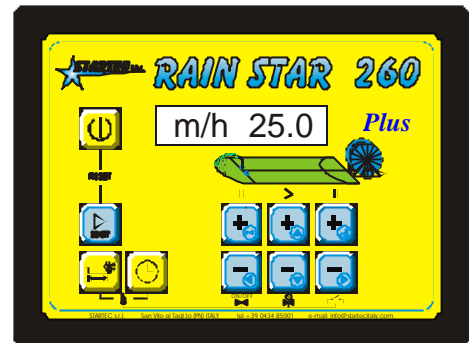
2. QUICK-START INSTRUCTIONS



in this manual it is referred to by using the symbol **m**



in this manual it is referred to by using the symbol **h**



The supplementary features must be enabled and the required number of sectors higher than 0 must be programmed in the user menu (the supplementary features aren't available with a number of sectors = 0).

The supplementary features are accessed by repeatedly pressing **m** and **h**, and the displayed data values are modified by pressing the central + and – keys.

At every new cycle, unwind tube or programme the uncoiled meters to enable RAIN 260 to assess the size of the area requiring irrigation.

2.1 Sectors

There are from 1 to 8 programmable SECTORS, to enable irrigation at different speeds in relation to the desired lengths.

When switching on the unit, the sectors which have been programmed appear in the menu; by pressing **m**, the uncoiled meters are displayed and, by repeatedly pressing **m**, it is possible to scroll down to see the length and the speed of the various sectors, starting from the active one. Any data may be customized by pressing the central + and – keys.

2.2 Maximum Running Time

The MAXIMUM RUNNING TIME feature activates the automatic adjustment of rewinding speed and length of the pauses during irrigation, so that the process ends within the established time limit.

Press **h** to view the established length of the irrigation process; if 2 or more sectors have been programmed, it is not possible to directly modify this data, as it is given by the sum of the length of the pauses and of the various sectors requiring irrigation.

To view the established time limit press **h** once again. Initially it is in INACTIVE mode [*hM INAT]. To activate MAXIMUM RUNNING TIME press the central + key. The maximum length will be activated according to the established hours and minutes. Modify the desired entry by pressing the central + and – keys.

If the MAXIMUM RUNNING TIME falls below the established length at the outset or throughout irrigation, for example if pressure is interrupted, then the new speeds and pauses are calculated proportionally.

To deactivate the MAXIMUM RUNNING TIME once it has been activated, press – until [*hM INAT] appears.

The MAXIMUM RUNNING TIME is automatically deactivated at the end of every irrigation cycle.

2.3 Initial Holding Time

INITIAL HOLDING TIME can be used to delay irrigation outset; this feature can be programmed in hours and minutes for up to 100 hours.

To view the information relating to the holding time, press **h** a third time. Initially it is in INACTIVE mode [*A INATT]. To activate the INITIAL HOLDING TIME, press the central + key. Set the desired value by pressing central + and – keys. Holding Time starts to decrease at the START. At the end of the HOLDING TIME irrigation starts off automatically.

To deactivate INITIAL HOLDING TIME once it has been activated, press the central – key until [*A INATT] appears. Every time a cycle begins the INITIAL HOLDING TIME is in INACTIVE mode.

3. PROGRAMMING the SECTORS and the SUPPLEMENTARY FEATURES

The sectors can be used and modified only if a unit equipped with the PLUS options is employed. The sectors must be enabled for users.

This part specifies how to modify the number and the data of the sectors in the menu so that they can be saved and displayed at the outset of every irrigation cycle.

Data may also be modified directly, without entering the menu. In this case the adjustments are set for the current cycle and, at the following one, the data stored in the menu are redisplayed.

SECTOR Number 0

If sector number = 0 [NumSET 0] is programmed, NO supplementary features will be performed and the keys will operate in normal mode as described in the main instructions for RAIN 260

SECTOR Number 1

If sector number = 1 [NumSET 1] is programmed, supplementary features MAXIMUM DURATION and INITIAL HOLDING TIME will be performed, by repeatedly pressing **h** and adjusting the displayed entry with the central + and – keys.

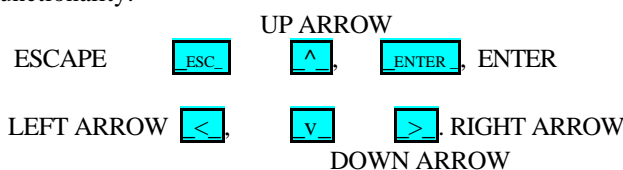
SECTOR Numbers from 2 to 8

If sector numbers from 2 to 8 and their respective data are programmed, by repeatedly pressing **h** the supplementary features MAXIMUM DURATION and INITIAL HOLDING TIME will be performed and by repeatedly pressing **m** the SECTORS features will be performed with the possibility of viewing data.

The supplementary features' entries can be modified with the central + and – keys.

3.1 Premise: double function of the + and - keys.

Keys in the **+** and **-** group have a dual function which becomes active when you access a menu.. As you may notice, these keys have a symbol depicted at lower right. This symbol indicates their dual functionality.



TASTO	FUNZIONE
ESCAPE ESC	cancel operation
ENTER ENTER	when pressed once, lets you modify the parameter You can tell when the parameter can be modified, because the * (asterisk) appears on the display - When ENTER is pressed a second time, the change is confirmed and the asterisk disappears.
FRECCIA SU ^	modifies upwards by one unit
FRECCIA DESTRA >	modifies upwards by one tenth
FRECCIA GIU v	modifies downwards by one unit
FRECCIA SINISTRA <	modifies downwards by one tenth

Note: keeping the ARROW key pressed raises the speed of increase or decrease.

During navigation through the menus, when the display shows a full row of dots along the bottom, e.g.


[B.R.I.G.H. .8.O.] it indicates that the end has been reached in that direction, or that modification is not allowed.


3.2 Access to USER Menu (User)

To access the USER menu, go through the following stages:

Note: some messages may not appear because the functions are not enabled, and some messages which are not described may appear, if enabled.







Stage	action	display	notes
1	Switch off the control unit	[]	
2	Switch on the control unit, keeping the M key pressed until the message "OK MENU" appears on the display s(after several seconds).	[STARTEC] [R.S. 260] [VER 1.18] [USR MENU] [OK MENU]	- Manufacturer's name - Model of machine - Program version - User menu - Access enabled

When the DOWN ARROW  is pressed several times, the following messages are displayed in turn:

When the UP ARROW  is pressed several times, the same messages are displayed in reverse order.



3.3 SECTORS Programming

Display the SECTORS options by repeatedly pressing the DOWN ARROW  key.

DISPLAY	DESCRIPTION
[SECTORS]	Press  key to access a sub menu with the following SECTORS options
[NumSET 1]	This entry establishes the number of sectors that require irrigation. Number of programmable sectors: 0 = with no supplementary features 1 = with Maximum Running Time and Initial Holding Time 2-8= with SECTORS, Maximum Running Time and Initial Holding Time Press  to access length and speed parameters of the various sectors. (the data in this table are all modifiable and can be scrolled either up or down):
[m 1 100.0]	This entry specifies the length of sector 1. Press  to display another entry.
[m/h1 30.0]	This entry specifies the speed of sector 1, m/h.
[m 2 100.0]	This entry specifies the length of sector 2. Press  to display another entry.
[m/h2 30.0]	This entry specifies the speed of sector 2, m/h.
[m x 100.0]	This entry specifies the length of sector x. Press  to display another entry.
[m/hx 30.0]	This entry specifies the speed of sector x, m/h.
[m 8 100.0]	This entry specifies the length of sector 8. Press  to display another entry.
[m/h8 30.0]	This entry specifies the speed of sector 8, m/h.

Saving the changes

To save the changes which you have made to the Rain Star 260's memory:

STAGE	ACTION	DISPLAY	NOTE
1	Press the START  key. Press the START  key again	[CHN SAVE] [SAVES CH]	Requests SAVE CHaNges SAVES the CHanges

Once this operation is completed, the Rain Star 260 exits from the Menu and goes to the stage of

Cancelling changes

To cancel the changes which you have made:

STAGE	ACTION	DISPLAY	NOTE
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1	Press the SCAPE ESC key. Press the ESCAPE ESC key again	[<i>CANC CHN</i>] [<i>CH N SAV</i>]	- requests CANCel CHaNges - the CHanges are Not SAVed.
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Once this operation is completed, the Rain Star 260 exits from the Menu and starts to work

4. SECTOR IRRIGATION

Sector irrigation enables the irrigation of different segments at different speeds (sectors from 1 to 8).

The number preceding the entry specifies the sector number. Number 1 is the first to be irrigated and, therefore, the most distant sector from the irrigator.

The user menu should be employed to directly programme the sectors which will be used, as well as for setting possible speed and length values. In this way, this data will be displayed at the beginning of every irrigation cycle, and could then be adjusted at every single irrigation cycle for occasional variations.

When the device is switched on, the display shows the sectors which have been programmed in the menu. Press **m** to display the coiled meters; repeatedly press **m** to scroll in sequence the length and speed of the various sectors. Any data can be adjusted by pressing the central + and – keys.

We suggest to uncoil the tube or to programme the uncoiled meters before pressing **h**.

The sectors are activated either by pressing **h** or at the START phase, in relation to the length of uncoiled tube.

If the length of the uncoiled tube is greater than the sum of the lengths of the programmed sectors, then the last sector will automatically be extended.

If the uncoiled tube is shorter than the sum of the lengths of the programmed sectors, then the sectors will be activated starting from sector number 1 along the whole length of the uncoiled tube. Any sectors exceeding the length of the tube will not be considered.

Afterwards it will be possible to modify the data regarding the length and speed of the various active sectors. It will not be possible to directly modify the total meters of the uncoiled tube, which will be recalculated as the sum of the meters of the various active sectors.

When rewinding the tube, the meters are decreased from the total length and also from the current sector, starting from sector 1. When the meters belonging to a sector are completed, the speed of the following sector is automatically regulated and so forth.

At the Rewinding End sensor's signal, the final pause will be accomplished and the cycle will be completed.

Once the rewinding phase is concluded, if the tube has been extended, the irrigation will continue at the same speed of the last sector until the Rewinding End sensor's signal.

In case of deactivation, at the following outset it will be possible to resume the previous cycle. This may be avoided by performing a RESET.

At every new cycle, the display will show the sector configuration and the pauses which have been previously set on the menu at START mode.

In this way, the occasional modifications made by the operator and any possible automatic adjustment due to the established irrigation time limit will be omitted.

5. MAXIMUM RUNNING TIME OF THE IRRIGATION CYCLE

The MAXIMUM RUNNING TIME feature can be used to activate the automatic modification of the speed and length of the pauses during irrigation so as to complete the cycle within the established time limit.

Press **h** to view the established length of the irrigation process; if 2 or more sectors have been programmed, it is not possible to directly modify this data, as it is given by the sum of the length of the pauses and of the various sectors requiring irrigation.

To view the MAXIMUM RUNNING TIME in HOURS and MINUTES press **h** once more.

Initially it is in INACTIVE mode [*hM INAT].

To activate MAXIMUM RUNNING TIME press the central + key. The maximum length will be activated according to the established hours and minutes. Modify the desired entry by pressing the central + and – keys.

If MAXIMUM RUNNING TIME is higher than the established time limit, the irrigation follows with the programmed parameters.

If MAXIMUM RUNNING TIME falls below the established length at the outset or throughout irrigation, for example if pressure is interrupted, then the new speeds and pauses are calculated proportionally. The new assessment of the parameters is carried out automatically during irrigation, when an automatically determined error is recognised.

To deactivate the MAXIMUM RUNNING TIME feature once it has been activated, press – until [*hM INAT] appears. The MAXIMUM RUNNING TIME is automatically deactivated at the end of every irrigation cycle.

6. INITIAL HOLDING TIME IRRIGATION

The INITIAL HOLDING TIME feature can be used to delay irrigation outset; this feature can be programmed in hours and minutes for up to 100 hours.

To view the information relating to holding time, press **h** a third time. Initially it is in INACTIVE mode [*A INATT]. To activate INITIAL HOLDING TIME, press the central + key. Regulate the desired entry by pressing central + and – keys. HOLDING TIME starts to decrease at the START. The display shows A followed by hours and minutes. At the end of the HOLDING TIME, irrigation starts off automatically.

To deactivate the INITIAL HOLDING TIME once it has been activated, press the central – key until [*A INATT] appears.

Every time a cycle begins the INITIAL HOLDING TIME feature is in INACTIVE mode and, therefore, if desired, it must be activated before the START.

During the HOLDING TIME and before starting irrigation, the HOLDING TIME can be modified.