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PROGRAMMING INSTRUCTIONS PARAMETERS

“USER” Menu,
“ASSISTANCE” Menu,
“MANUFACTURER” Menu

RAIN STAR 260

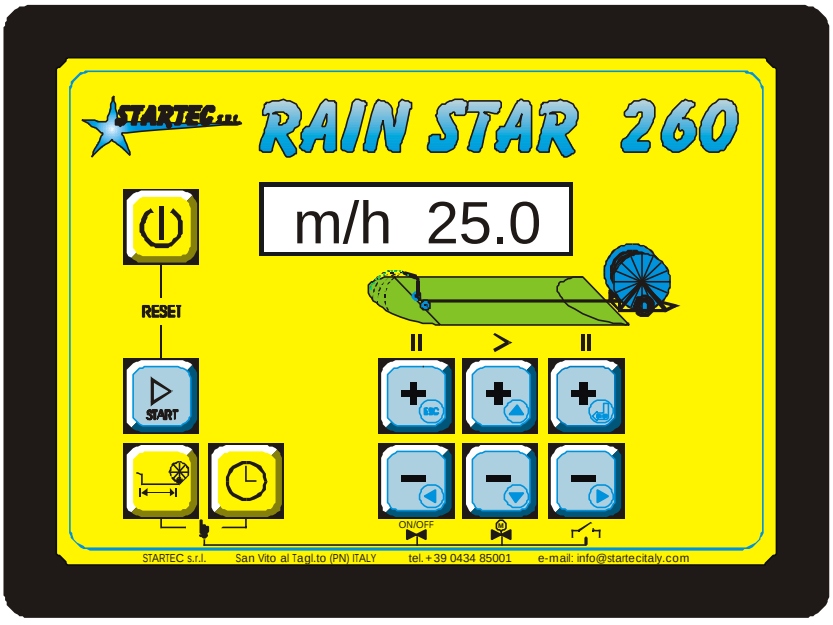

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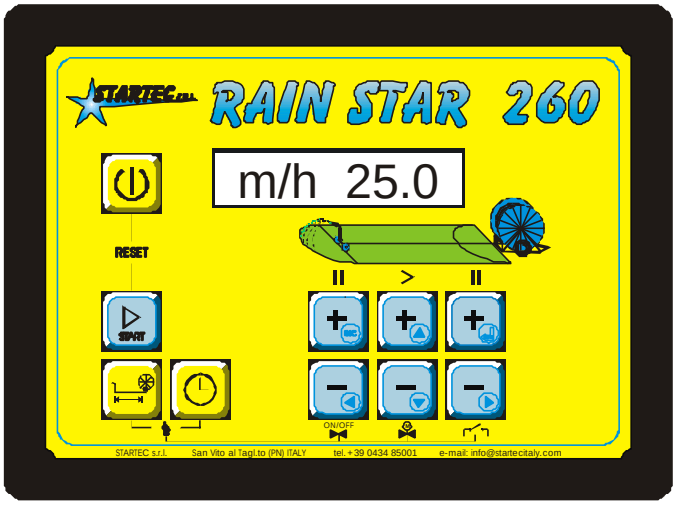
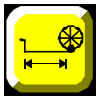
TABLE OF CONTENTS:

TABLE OF CONTENTS: 1
1. GENERAL 2
1.1 Dual functionality of the keys – Use. 2
2. USER MENU 3
Accessing the “USER” Menu 3
List of messages in the USER menu 3
Changing the language 3
Adjusting the contrast 3
Adjusting the brightness 3
Saving the changes 4
Cancelling changes 4
3. ASSISTANCE MENU 5
Accessing the “ASSISTANCE” Menu 5
Saving changes 6
Cancelling changes 6
4. MANUFACTURER MENU 7
Accessing the “MANUFACTURER” Menu 7
4.1 Selecting and loading a model 7
Saving changes 8
Cancelling changes 8
4.2 Parameters menu 8
Saving changes 9
Cancelling changes 9
Details of the Manufacturer Menu 9
Saving changes 15
Cancelling changes 15

1. GENERAL





in this manual it is referred to by using the symbol _m_

in this manual it is referred to by using the symbol _h_

1.1 Dual functionality of the keys – Use.

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.

UP ARROW
ESCAPE _ESC_ _^_, _ENTER_, ENTER

LEFT ARROW _<_, _v_ _>_. RIGHT ARROW
DOWN ARROW

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. .8.0.]` it indicates that the end has been reached in that direction, or that modification is not allowed.

2. USER MENU

Accessing the "USER" Menu

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***] [***-----***] [***OK MENU***]	- Manufacturer's name - Model of machine - Program version - User menu - Access enabled

List of messages in the USER menu

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

POS	DISPLAY	MEANING
1	[***LANG ENG***]	- Displays the language used for messages
2	[***CONTR 90***]	- Adjustment for contrast of the display
3	[***BRIGH 80***	Adjustment for brightness of the display back-lighting

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

Changing the language

In this menu it is not possible to change the language.

Adjusting the contrast

Per modificare il contrasto seguire le seguenti fasi:

STAGE	ACTION	DISPLAY	NOTE
1	Press the arrow keys _v_ and _^_ till the display shows	[***CONTR 90***]	
2	Press the _ENTER_ key	[***CONTR*90***]	The asterisk appears, changes are enabled
3	Press _^_ or _>_ to increase the value by a unit or a tenth respectively at a time Press _v_ or _<_ to reduce the value, by a unit or a tenth respectively at a time.	[***CONTR*92***] [***CONTR*79***]	Higher value means more contrast Maximum value 99. Minimum value 0
4	Press _ENTER_ to confirm the value for contrast	[***CONTR 79***]	
5	Press _v_ or _^_ to carry on moving through the menu for making any other changes. Press the _START_ key to save the changes you have made, or press the _ESC_ key to cancel all the changes (see § Saving changes or Cancelling changes). This stage takes you out of the menu.		

Adjusting the brightness

To modify the brightness, go through the following stages:

STAGE	ACTION	DISPLAY	NOTE
1	Press the arrow keys _v_ and _^_ till the display shows	[***BRIGH 80***]	
2	Press the _ENTER_ key	[***BRIGH*80***]	The asterisk appears, changes are enabled

3	Press _^_ or _>_ to increase the value by a unit or a tenth respectively at a time - Press _v_ or _<_ to reduce the value by a unit or a tenth respectively at a time	[***BRIGH*92***] [***BRIGH*79***]	Higher value means more brightness. Maximum value 99 Minimum value 0
4	Press _ENTER_ to confirm the value for brightness.	[***BRIGH 79***]	- The asterisk disappears.
5	Press _v_ or _^_ to carry on moving through the menu for making any other changes. Press the _START_ key to save the changes you have made, or press the _ESC_ key to cancel all the changes (see § Saving changes or Cancelling changes). This stage takes you out of the menu.		

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 _START_ key. Press the START _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
1	Press the SCAPE _ESC_ key. Press the ESCAPE _ESC_ key again	[***CANC CHN***] [***CH N SAV***]	- requests CANCel CHaNges - the CHanges are Not SAVed.

Once this operation is completed, the Rain Star 260 exits from the Menu and starts to work

The Rain Star 260 uses the metric system.

3. ASSISTANCE MENU

Accessing the "ASSISTANCE" Menu

To access the ASSISTANCE Menu, follow the same procedure as for the MANUFACTURER Menu, keying "111" or other preset password.
This gives access to the entire User menu and some functions which have been enabled on the Manufacturer menu.
Access the ASSISTANCE menu as follows:
Note: some options will not be displayed if they are not enabled.

FASE	ACTION	DISPLAY	NOTE
1	Switch off the control unit	[ ]	
2	Switch on the control unit, keeping the _m_ and _h_ keys pressed until the Display prompts for a password	[**STARTEC**] [**R.S.260**] [**VER 1.18**] **[--------]** **[PWD ---**]	- Manufacturer's name - Model of machine - Program version - If the password is not entered within 5 seconds by pressing a +/- key, the machine goes into working mode
3	Press the Initial Pause _+_ or _-_ keys to display the 1st digit.	[***PWD 1--***]	e.g. password = 111
4	Press the Speed _+_ or _-_ keys to display the 2nd digit.	[***PWD -1-***]	e.g. password = 111
5	Press the Final Pause _+_ or _-_ keys to display the 3rd digit.	[***PWD --1***]	e.g. password = 111
6	Press the _START_ key	[***MN ASSIS***]	- Menu Assistance
7	Displayed a few seconds after releasing the _START_ button	[***OK MENU***]	- access to the menu enabled
8	Displayed in the event of password error	[***ERR PWD***]	- Password error. Repeat procedure for stage 1
9	Pressing the _v_ key appears	[***VLV OUTL***]	Position of the valve for stopping work
10	Press the _v_ cursor key again to scroll through the following menu options		

DISPLAY	*DESCRIPTION*
[***VLV YES***] o [***VLV NO***]	Valve for starting/stopping work: ACTIVE or INACTIVE.
[***WI O:OO***]	Waiting start Irrigation. The waiting time, in hours and minutes, can be set by using the second function of the H key.
[***SECTORS***]	If it is enabled, it permits the management of irrigation up to 8 different speeds (sector irrigation). With more than 0 sectors, it is possibile to set the maximum running time of irrigation.
[***NoSTP mO***] o [***STOP mO***]	No Stop at metres = 0. Rewinding continues until the signal from the End Rewind sensor (the display may show negative metres). Or, STOP at metres = 0. Rewinding stops when the machine indicates m. of pipe = 0.
[***OUTPUTS***]	Management of output sources: OU1, OU2 and OU3 (the last one appears on RAIN V.03 boards and following models).
[***INPUTS***]	Management of input sources: IA1, IA2, IA3 and 4-20mA. Reminder: the inlets IA1, IA2, IA3 are activated when they are switched to ground through a signal or a contact.
[***UM METRI***] or [***UM FEET***]	Units of Measurement: decimal METRIc system.or, Imperial (US) measuring system.
[***LANG ITA***] , [***LANG FRA***] , [***LANG ENG***] or [***LANG GER***]	Language used for display.

	[***SWOF O'***]	Setting of minutes for the auto-SWitchOFf of the machine after the end of irrigation.
	[***GSM ON***] or [***GSM OFF***]	Enables and disables the GSM function, if present
	[***CONTR 90***]	Adjustment for CONTRast of the display.
	[***BRIGH 80***]	Adjustment for BRIGHtness of the display back-lighting.
11	Pressing the up arrow _^_ again displays the last messages in reverse order.	

Saving changes

Save changes in the Rain Star 260 memory as follows:

- see “saving changes” at the end of chapter 2

Once complete, the unit reboots and displays the message [***RE-START***] .

Cancelling changes

To cancel one or more changes, proceed as follows:

- see “cancelling changes” at the end of chapter 2

Once complete, the unit reboots and displays the message [***RE-START***] .

4. MANUFACTURER MENU

Accessing the "MANUFACTURER" Menu

To access the MANUFACTURER Menu, follow the procedure described in the following stages:
Note: some messages may not appear because the functions are not enabled.

STAGE	ACTION	DISPLAY	NOTE
1	Switch off the control unit	[ ]	
2	Switch on the control unit, keeping the _m_ and _h_ keys pressed until the Display shows the message "MENU"(after several seconds) and prompts for a password	[***STARTEC***] [***R.S.260***] [***VER 1.18***] [***PWD ---***]	- Manufacturer's name - Model of machine - Program version - If the password is not entered within 5 seconds by pressing a +/- key, the machine goes into working mode
3	Press the Initial Pause _+_ or _-_ keys to display the 1st digit.	[***PWD 2--***]	e.g. password = 222
4	Press the Speed _+_ or _-_ keys to display the 2nd digit.	[***PWD -2-***]	e.g. password = 222
5	Press the Final Pause _+_ or _-_ keys to display the 3rd digit.	[***PWD --2***]	e.g. password = 222
6	Press the _START_ key	[***MN MANUF***]	- MeNu MANUFacturer
7	Displayed a few seconds after releasing the _START_ button	[***OK MENU***]	- access to the menu enabled
8	Displayed in the event of password error	[***ERR PWD***]	- Password error. Repeat procedure for stage 1

4.1 Selecting and loading a model

9	Press the _>_ cursor key, the following is displayed	[***CMOD 17***]	- e.g. model code in position 17
10	Press the _v_ cursor key, the following is displayed	[***STARTEC***]	- e.g. constructor name
11	Press the _^_ cursor key to return to the previous screen	[***CMOD 17***]	- e.g. model code in position 17
12	Press _ENTER_	[***CMOD* 17***]	- The asterisk is displayed, enabling changes
13	Press _h_. The model corresponding to position 17 is displayed	[***S400X125***]	- e.g. STARTEC model with 400 m length, 125 mm diameter tube
14	- Press the _^_ or _v_ cursor keys to scroll through the entire list of your models and default STARTEC models - Press the _>_ or _<_ cursor keys to skip 10 positions	[***S500X100***]	- irrigator model
15	Displayed if no keys are pressed	[***CMOD* 17***]	- Model position
16	Press _ENTER_ to load the parameters for the selected model	[***R MO OK***]	- Parameters successfully loaded
17	Press the _<_ cursor key to check if the data for the selected model has been loaded. Use the cursor keys to scroll through the menu options	[***VLV SCAR***]	- the first menu option is displayed
18	If all changes are correct, ***Save changes,*** otherwise ***Cancel changes.***		

Saving changes

Save changes in the Rain Star 260 memory as follows:
- see “saving changes” at the end of chapter 2

Once complete, the unit reboots and displays the message [***RE-START***] .

Cancelling changes

To cancel one or more changes, proceed as follows:
- see “cancelling changes” at the end of chapter 2

Once complete, the unit reboots and displays the message [***RE-START***] .

4.2 Parameters menu

Restarting by the 8 stage of the “accessing the manufacturer menu”

9	Pressing the _v_ key appears	[***VLV OUTL***]	Position of the valve for stopping work
10	Press the _v_ cursor key again to scroll through the following menu options		

DISPLAY	*DESCRIPTION*
[***VLV YES***] o [***VLV NO***]	Valve for starting/stopping work: ACTIVE or INACTIVE.
[***WI O:OO***]	Waiting start Irrigation. The waiting time, in hours and minutes, can be set by using the second function of the H key.
settori	If it is enabled, it permits the management of irrigation up to 8 different speeds (sector irrigation). With more than 0 sectors, it is possibile to set the maximum running time of irrigation.
[***NoSTP mO***] o [***STOP mO***]	No Stop at metres = 0. Rewinding continues until the signal from the End Rewind sensor (the display may show negative metres). Or, STOP at metres = 0. Rewinding stops when the machine indicates m. of pipe = 0.
[***ALRM mhO***] or [***NoAL mhO***]	ALaRM in the case of lack of speed during rewinding (m/h = 0). The alarm consists in the stopping of irrigation. or, "No ALarm at m/h = 0". In this case, in the event of zero speed, irrigation is not stopped but the machine remains on standby, indicating [m/h ZERO].
[***OUTPUTS***]	Management of output sources: OU1, OU2 and OU3 (the last one appears on RAIN V.03 boards and following models).
[***INPUTS***]	Management of input sources: IA1, IA2, IA3 and 4-20mA. Reminder: the inlets IA1, IA2, IA3 are activated when they are switched to ground through a signal or a contact.
[***MOT FLOW***]	Programming of sensitivity of activation of the flow valve motor in relation to the load (type of valve), and programming of the maximum time of activation of the motor itself.
[***MOT REG***]	Programming of sensitivity of activation of the regulating motor in relation to the load, and of the operational settings for regulation (duration of the regulating pulses), and programming of the maximum time of activation of the motor itself.
[***SENSORS***]	By pressing _>_ a submenu appears with the following items: SPeed SENSor applied to the irrigator: ROLLER or PINion with relative settings and tables. PreSsure sensor and its enabling (always enabled). Sensor of ReWinding End, its enabling (always enabled) and the opportunity to delay the cycle of irrigation end to let the loading of the gun cart on the irrigator.
[***UM METRI***] or [***UM FEET***]	Units of Measurement: decimal METRIc system.or, Imperial (US) measuring system.
[***LANG ITA***] , [***LANG FRA***] , [***LANG ENG***] or [***LANG GER***]	Language used for display.

	[***PWD ASST***]	Setting a new ASSisTance PassWorD (to be implemented)
	[***SYSTEM***]	Access to a sub-menu for setting several functions relating to the keypad and display, e.g. display of decimals.
	[***SWOF O'***]	Setting of minutes for the auto-SWitchOFf of the machine after the end of irrigation.
	[***GSM ON***] [***GSM OFF***]	Enables and disables the GSM function, if present
	[***CONTR 90***]	Adjustment for CONTRast of the display.
	[***BRIGH 80***]	Adjustment for BRIGHtness of the display back-lighting.
11	Pressing the up arrow _^_ again displays the last messages in reverse order.	

Saving changes

Save changes in the Rain Star 260 memory as follows:

- see "saving changes" at the end of chapter 2

Once complete, the unit reboots and displays the message [***RE-START***] .

Cancelling changes

To cancel one or more changes, proceed as follows:

- see "cancelling changes" at the end of chapter 2

Once complete, the unit reboots and displays the message [***RE-START***]

Details of the Manufacturer Menu

For navigating and for selecting the various options, use the keys as described in the paragraph "Dual functionality of the keys – Use".

[***VLV YES***] o [***VLV NO***]	Valve for starting/stopping work: ACTIVE or INACTIVE. Pressing _>_ takes you to a sub-menu with the following options:			
	[[***VLV OUTL***] o [***VLV INTK***]	Position of the valve for starting/stopping work: in OUTLET or INTAKE position. Pressing _>_ takes you to a sub-menu with the following options:		
		[***ENMA VLV***] o [***ENRU VLV***] o [***ENMU VLV***]	=>ENables Modification by the Assistance => ENables Read-only by the User => ENables Modification by the User These options enable or disable the selection of the valve position by the Assistance and the User.	
		[***V I CLOS***] [***V I OPEN***]	These options let you choose whether the Valve on the Intake should be OPEN or CLOSed at the start of irrigation.	
		[***V OUTLET***]	Pressing _>_ takes you to a sub-menu with the following options:	
			[***VOO 120 "***]	This parameter lets you set the time for which the Valve mounted on the Outlet should remain Open at the end of irrigation before reclosing (maximum programmable time is 250 seconds). Programming 0 makes the valve remain open.
		[***V INTAKE***]	Pressing _>_ takes you to a sub-menu with the following options:	
			[***VIC 7 "***]	This parameter lets you set the time for continuous activation of the Valve mounted on the Intake, before pulse activation begins, during the CLOSURE phase (maximum programmable time is 250 seconds)
			[***VIPN 0.50***]	This parameter lets you set the duration of the PULSE to the Valve mounted on the Intake, during Pulse activation (time oN), during the CLOSURE phase (maximum programmable time is 2.50 seconds).
			[***VIPF 2.50***]	This parameter lets you set the duration of the interval between one pulse to the Valve mounted on the Intake and the next, during Pulse activation (time off), during the CLOSURE phase (maximum programmable time is 2.50 seconds)

[***DPO 0"***]	this parameter for the inlet valve sets the delay time for the pressure test at the start of the irrigation cycle in order to fill the tube (maximum time settable 999 seconds)

[***WI 0:OO***]	Waiting start Irrigation. The waiting time, in hours and minutes, can be set by using the second function of the H key. Maximum waiting time settable is 99 hours 59 minutes. The waiting time can be modified and activated before each Start Irrigation. If set to 0, the parameter does not appear; if a value other than 0 is set, the programmed value is offered as default. Pressing _>_ takes you to a sub-menu with the following options:	
	[***ENMA WTI***] [***ENRU WTI***] [***ENMU WTI***]	=>ENables Modification by the Assistance =>ENables Read-only by the User =>ENables Modification by the User These options enable or disable the choice of Waiting Time before Irrigation, by theassistance or the user.

[***SECTORS***]	If it is enabled, it permits the management of irrigation up to 8 different speeds (sector irrigation). With more than 0 sectors, it is possibile to set the maximum running time of irrigation. Press _>_ key to access a sub menu with the following SECTORS options		
	[***NumSECT 0***]	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 25.0***] 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 25.0***] 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 25.0***] 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 25.0***] This entry specifies the speed of sector 8, m/h.
	[***ENMC SET***] [***ENRA SET***] [***ENMA SET***] [***ENRU SET***] [***ENMU SET***]	=>Enable Modification by the Manufacturer =>ENables Read by the Assistance =>ENables Modification by the Assistance =>ENables Read-only by the User. =>ENables Modification by the User	

[***NoSTP mO***] o [***STOP mO***]	No Stop at metres = 0. Rewinding continues until the signal from the End Rewind sensor. Or, STOP at metres = 0. Rewinding stops when the machine indicates metres of hose = 0 (ZERO). Pressing _>_ takes you to a sub-menu with the following options:	
	[***ENRA SmO***] o [***ENMA SmO***]o [***ENRU SmO***] [***ENMU SmO***]	=>ENables Read by the Assistance =>ENables Modification by the Assistance => ENables Read-only by the User => ENables Modification by the User These options enable or disable the selection of the valve position by the Assistance and the User

[**ALRM mhO**] o [**NoAL mhO**]	ALarM in the case of lack of speed during rewinding (m/h = 0). The alarm consists in the stopping of irrigation. Or, "No Alarm at m/h = 0". In this case, in the event of zero speed, irrigation is not stopped but the machine remains on standby, indicating [m/h ZERO]. Pressing _>_ takes you to a sub-menu with the following options:	
	[**DSRA mhO**]	=>DiSables Reading by the Assistance (the option does not appear on the Assistance menu)
	[**ENRA mhO**]	=>ENables Read by the Assistance
	[**ENMA mhO**	=>ENables Modification by the Assistance
	[**ENRU mhO**]	=>ENables Read-only by the User.
	[**ENMU mhO**]	=>ENables Modification by the User

[**OUTPUTS**]	Management of output sources: OU1, OU2 and OU3 (the last one appears on RAIN V.03 boards and following models). Pressing _>_ takes you to a sub-menu with the following options:		
	[**OU1 DIS**] [**OU1 ENAB**]	=> Auxiliary outlet 1 => DISabled => Auxiliary outlet 11 => ENabled. Pressing _>_ takes you to a sub-menu with the following options:	
		[**ENMA OU1**] [**ENRA mhO**] [**ENRU OU1**] [**ENMU OU1**]	=> ENables Modification by the Assistance =>ENables Read by the Assistance => ENables Read by the User =>ENables Modification by the User Pressing _v_ takes you to a sub-menu with the following options:
		[**OU1 O'**]	Programming of time of activation (up to 250 minutes) of outlet OU1for managing an Auxiliary Valve (maximum load 300 mA). Offers two options for counting time: from the start of irrigation, or before the end. Pressing _>_ takes you to a sub-menu with the following options
		[**OU1 END**] [**OU1 BIG**]	activate Auxiliary Valve 1 from the START, or before the END, of irrigation.
	[**OU2 DIS**] [**OU2 ENAB**]	=> Auxiliary outlet 2 => DISabled => Auxiliary outlet 2 => ENabled. Reminder: this outlet is not implemented by now. Pressing _>_ takes you to a sub-menu with the following options:	
		[**ENMA OU2**] [**ENRU OU2**] [**ENMU OU2**]	=>ENables Modification by the Assistance =>ENables Read-only by the User. =>ENables Modification by the User
	[**OU3 DIS**] [**OU3 ENAB**]	=> Auxiliary outlet 3 => DISabled => Auxiliary outlet 3 => ENabled. Reminder: this outlet is not implemented by now. Pressing _>_ takes you to a sub-menu with the following options:	
		[**ENMA OU3**] [**ENRU OU3**] [**ENMU OU3**]	=>ENables Modification by the Assistance =>ENables Read-only by the User. =>ENables Modification by the User

[**INPUTS**]	Management of input sources: IN1, IN2, IN3 and 4-20mA. Reminder: the inlets IN1, IN2, IN3 are activated when they are switched to ground through a signal or a contact. Pressing _>_ takes you to a sub-menu with the following options:		
	[**IN1 WIND**]	=> This function has to be implemented	
	[**IN1 STOP**]	=>Auxiliary inlet 1 => Enabled to receive a signal from the outside to give a command STOP irrigation (to be implemented).	
	[**IN1 SUSP**]	=> Auxiliary inlet 1 => Enabled to receive a signal from the outside to give a command PAUSE irrigation (to be implemented).	
	[**IN1 STAR**]	=> Auxiliary inlet 1 => Enabled to receive a signal from the outside to give a command START irrigation.	
	[**IN1 DIS**]	=> Auxiliary outlet 1 => DISabled Pressing _>_ takes you to a sub-menu with the following options:	
		[**ENMA IN1**] [**ENRU IN1**] [**ENMU IN1**]	=>ENables Modification by the Assistance =>ENables Read-only by the User. =>ENables Modification by the User

[*IN2 WIND*]	=> This function has to be implemented	
[*IN2 STOP*]	=> Auxiliary inlet 2 => Enabled to receive a signal from the outside to give a command STOP irrigation (to be implemented).	
[*IN2 SUSP*]	=> Auxiliary inlet 2 => Enabled to receive a signal from the outside to give a command PAUSE irrigation (to be implemented).	
[*IN2 STAR*]	=> Auxiliary inlet 2 => Enabled to receive a signal from the outside to give a command START irrigation.	
[*IN2 DIS*]	=> Auxiliary outlet 2 => DISabled	
	Pressing _>_ takes you to a sub-menu with the following options:	
	[*ENMA IN2*]	=>ENables Modification by the Assistance
	[*ENRU IN2*]	=>ENables Read-only by the User.
	[*ENMU IN2*]	=>ENables Modification by the User
[*IN3 WIND*]	=> This function has to be implemented	
[*IN3 STOP*]	=> Auxiliary inlet 3 => Enabled to receive a signal from the outside to give a command STOP irrigation (to be implemented). => Auxiliary outlet 3 => DISabled	
[*IN3 SUSP*]	=> Auxiliary inlet 3 => Enabled to receive a signal from the outside to give a command PAUSE irrigation (to be implemented).	
[*IN3 STAR*]	=> Auxiliary inlet 3 => Enabled to receive a signal from the outside to give a command START irrigation.	
[*IN3 DIS*]	=> Auxiliary outlet 3 => DISabled	
	Pressing _>_ takes you to a sub-menu with the following options:	
	[*ENMA IN3*]	=>ENables Modification by the Assistance
	[*ENRU IN3*]	=>ENables Read-only by the User.
	[*ENMU IN3*]	=>ENables Modification by the User
[*420 DIS*]	=> Inlet 4-20 mA => DISabled	
[*420 ENAB*]	=> Inlet 4-20 mA => ENabled. (to be implemented).	
	Pressing _>_ takes you to a sub-menu with the following options suivants:	
	[*ENMA 420*]	=>ENables Modification by the Assistance
	[*ENRU 420*]	=>ENables Read-only by the User.
	[*ENMU 420*]	=>ENables Modification by the User
		Pressing _>_ takes you to a sub-menu with the following options:

[*MOT FLOW*]	Pressing _>_ takes you to a sub-menu with the following options relating to the MOTor which operates the FLOW valve: (WARNING: alter these parameters only if you are very familiar with the characteristics of reduction motors and valves.)	
	[*FOI 4.0A*]	upper limit of current which the Flow valve motor can tolerate in the Opening phase (I max = 5 Ampere).
	[*FCI 3.0A*]	Upper limit of current which the Flow valve motor can tolerate in the Closing phase (I max = 5 Ampere).
	[*TLF 150"*]	Time Limit for activation which the Flow valve is allowed for reaching full opening or closing. If the time limit is exceeded without the action being completed, the command to the motor is cancelled and irrigation continues. The maximum programmable time is 250 seconds.

[*MOT REG*]	Pressing _>_ takes you to a sub-menu with the following options relating to the MOTor which performs the REGulation of the takeup speed. (WARNING: alter these parameters only if you are very familiar with the characteristics of reduction motors, valves and the irrigator.)	
	[*RMI 4.0A*]	Upper limit of current which the Regulating Motor can tolerate(I max = 5 Ampere).
	[*TLR 40"*]	Time Limit allowed for carrying out complete Regulation. If the time limit is exceeded without the action being completed, the command to the motor is cancelled and irrigation continues. The maximum programmable time is 250 seconds.

[*SENSORS*]	By pressing _>_ a submenu appears with the following items: SPeed SENSor applied to the irrigator: ROLLER or PINion with relative settings and tables. PreSsure sensor and its enabling (always enabled). Sensor of ReWinding End, its enabling (always enabled) and the opportunity to delay the cycle of irrigation end to let the loading of the gun cart on the irrigator.

[***SPD SENS***]	Pressing _>_ takes you to a sub-menu with the following options relating to the SPEED SEnsor attached to the irrigator: ROLLEr or PINIon.		
	[***SS ROLLE***] [***SS PINI***]	Pressing _>_ takes you to a sub-menu with the following option:	
		[SSR 100.0]	this parameter lets you input the diameter of the Roller. This dimension is expressed in millimetres with increments of 1/10 mm.
	[***TAB LAYE***]	TABle of LAYErs (applies only to the sensor mounted on the pinion). Pressing _>_ takes you to the Table of Layers with the following options (the data in this table are all modifiable and can be scrolled upwards or downwards):	
		[***LL1 448.4***]	this figure indicates at what Length Layer 1 finishes. Pressing _>_ takes you to another datum figure.
		[***PL1 16.0***]	indicates the Parameter of Layer 1, mm/imp.
		[***LL2 388.5***]	this figure indicates at what Length Layer 2 finishes. Pressing _>_ takes you to another datum figure.
		[***PL2 19.0***]	indicates the Parameter of Layer 2, mm/imp
		[***LLX 320.3***]	this figure indicates at what Length Layer X finishes. Pressing _>_ takes you to another datum figure.
		[***PLX 22.0***]	indicates the Parameter of Layer X, mm/imp
		[***LL9 0.0***]	this figure indicates at what Length Layer 9 finishes. Pressing _>_ takes you to another datum figure.
		[***PL9 36.0***]	indicates the Parameter of Layer 9, mm/imp
	[***AUTO CAL***]	AUTOmatic CALculation of the table of layers (applies only to the sensor mounted on the pinion). Pressing _>_ takes you to the parameters for the construction data of the irrigator. By suitably filling in the items listed below, you can get the table of layers filled in automatically:	
		[***LPI 500.0***]	this figure indicates the Length of the PIpe. Expressed in metres. Maximum length 1000 m
		[***DPIP 140***]	this figure indicates the Diameter of the PIPe. Expressed in millimetres. Maximum diameter 200 mm
		[***DRE 1540***]	this figure indicates the Diameter of the REel. Expressed in millimetres. Maximum diameter 2000 mm.
		[***WRE 1536***]	this figure indicates the Width of the REel. Expressed in millimetres. Maximum width 2000 mm
		[***PULR 320***]	this figure indicates the number of PULses per Revolution. Normally this is equal to the number of teeth on the rack. Maximum number 400.
		[***K1 S 2%***]	this figure indicates the percentage deformation of the pipe (Stretching). Maximum permissible 20%.
		[***K2 C 4%***]	this figure indicates the percentage deformation of the pipe (Crushing). Maximum permissible 20%.
		[***K3 F 0%***]	this figure indicates the percentage difference between the First coil and the last. Maximum permissible 20%. (not active)
		[***CALC?TAB***]	CALCulating the TABle.. Pressing _ENTER_ gives you [***CALTB*OK***]
		[***CALTB*OK***]	It displays the calculation which has been done and the table filled in with the new parameters. Press the _<_ cursor key to exit the automatic table calculator function.

[**PRS ENAB**] [**PRS DIS**]	Opportunity to disable input of pressure sensor in case of failure. (always enabled) Pressing _>_ takes you to a sub-menu with the following options	
	[**DSRA PRS**] [**ENRA PRS**] [**ENMA PRS**] [**ENRU PRS**] [**DSRA PRS**]	=>it DiSables the Reading by the Assistance. (does not appear on assistance menu) =>ENables Read by the Assistance =>ENables Modification by the Assistance =>ENables Read-only by the User. =>ENables Modification by the User
[**END ENAB**] [**END DIS**]	Opportunity to disable input of sensor of rewinding end in case of failure. (always enabled) Pressing _>_ takes you to a sub-menu with the following options	
	[**DSRA PRS**] [**ENRA PRS**] [**ENMA PRS**] [**ENRU PRS**] [**DSRA PRS**]	=>it DiSables the Reading by the Assistance. (does not appear on assistance menu) =>ENables Read by the Assistance =>ENables Modification by the Assistance =>ENables Read-only by the User. =>ENables Modification by the User .Pressing _v_ takes you to a sub-menu with the following options
	[**WRE 0"**]	Wait Rewinding End: rewinding time in seconds after the impulde end sensor to complete the gun cart reloading process. Pressing _>_ takes you to a sub-menu with the following options
	[**DSRA PRS**] [**ENRA PRS**] [**ENMA PRS**] [**ENRU PRS**] [**DSRA PRS**]	=>it DiSables the Reading by the Assistance. (does not appear on assistance menu) =>ENables Read by the Assistance =>ENables Modification by the Assistance =>ENables Read-only by the User. =>ENables Modification by the User .Pressing _v_ takes you to a sub-menu with the following options
	[**IER 3.0"**]	Elapsing time in seconds and tenths of seconds to increase the speed of the gun cart restart.

[**UM METRE**] o [**UM FEET**]	Units of measurement: decimal metric system. or, Imperial (US) measuring system. In this case the displays will relate to the irrigation parameters (length of pipe and speed). The rest of the data in the menus remains expressed in the decimal metric system.

[**LING ITA**] o [**LING FRA**] o [**LING ING**] o [**LING TED**]	LANGuage used for displays. Activated after saving data.

[**PWD ASST**]	Setting a new Assistance password (to be implemented)

[**SYSTEM**]	Parameters relating to configuration of the user interface. Pressing _>_ takes you to a sub-menu with the following options:	
	[**MODE DIS**]	Pressing _>_ takes you to a sub-menu with the following options relating to some of the DISplays
		[**DIS METR**] o [**DIS DECM**] — these options let you choose the displays of data for length and speed with or without the decimal number.
		[**D RID RT**] o [**D STD TR**] — these options let you choose various Displays during Rapid Test and manual control. The general default is RED
		[**D ALT MM**] o [**D STD MM**] — these options let you choose various Displays during Movement of the Motors
	[**MODE KEY**]	Pressing _>_ takes you to a sub-menu with the following options relating to the functionalities of the keypad

[***I ALT SP***] o [***I STD SP***]	these options let you choose how Increments in figures for length and SPeed will be made through the keypad during work. With [***I STD SP***], Increments in the figures are as follows: the initial pause keys produce increments of hundreds; the SPeed keys produce Increments of tens; and the final pause keys produce increments of units. With [***I ALT SP***], however, the Increments are in units only, using the SPeed keys.

[***GSM OFF***] [***GSM ON***]	Enables and disables the GSM function, if present

[***SWOF O'***]	Setting the minutes for auto-SWitchOFf of the machine after the end of irrigation, for energy saving. Maximum programmable time = 99 minutes.

[***CONTR 90***]	Adjustment for CONTRast of the display: already described in the USER MENU.

[***BRIGH 80***]	Adjustment for brightness of the display back-lighting: already described in the USER MENU

Saving changes

Save changes in the Rain Star 260 memory as follows:

- see “saving changes” at the end of chapter 2

Once complete, the unit reboots and displays the message [***RE-START***] .

Cancelling changes

To cancel one or more changes, proceed as follows:

- see “cancelling changes” at the end of chapter 2

Once complete, the unit reboots and displays the message [***RE-START***] .