

**2WAYS2 RADIO  
CONTROL FOR  
SYSTEM100 HYDRO  
STD2 TECHNICAL  
MANUAL**

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# 1 INTRODUCTION

The Radio remote-control manages the functioning of the stove/boiler and monitors the state of operation in real time. The main characteristics are:

- Remote Control of the system with battery supply
- Room Thermostat embedded
- Parameters management of the control board



## Warnings:

The system works on the radio band ISM 433,92MHz. The transmission and receiving distance can be reduced in case of a noisy environment: other devices as wireless headphones, video sender, toys or other devices could influence in the performances of the system.

Check the presence of such instruments and make sure to turn them off in order to avoid electromagnetic waves pollution.

If more remote controls are nearby, it is necessary to associate the remote control with a specific stove/boiler (see section 3, Settings Menu).

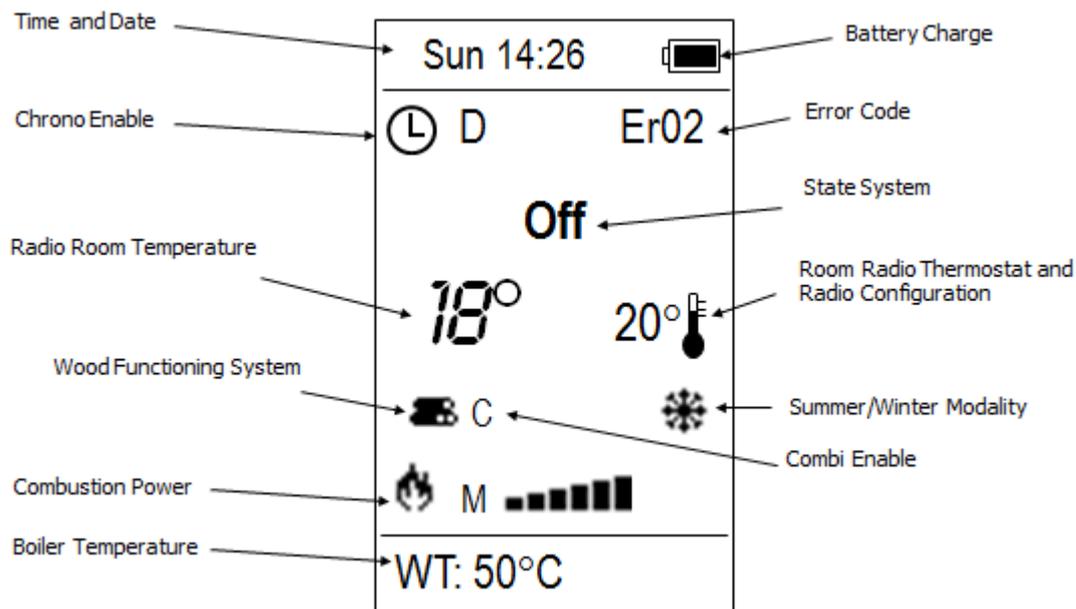
## 2 CONTROL PANEL

### 2.1 THE KEYS

Key	Function	Description
	<b>On/Off</b>	Ignition and Extinguishing of the boiler/stove by pushing the button for 3 seconds
	<b>Unlock</b>	System Unlock by pushing the key for 3 seconds
<b>ESC</b>	<b>Esc</b>	Menu exit function
<b>SET</b>	<b>Set</b>	Enter in Submenu, modify and save data
	<b>Thermostat Modify</b>	Radio Room Thermostat modification
	<b>Scroll Menu and Submenu</b>	Scroll Submenu and Menu
	<b>Sleeping Mode</b>	By pushing the button when the display is on the main frame, the remote control will continue to work, but the display will switch off. To switch on the display push the button again.
	<b>Standby Mode</b>	By pushing the button for 3 seconds when the main frame is displayed ,it is possible to switch off completely the remote control and thus reduce the battery consumption. This feature is to be used in case of prolonged non-use of remote control. If the function is activated, the system uses the room probe connected to the Controller.  To switch on the remote control push the button  twice.

### 2.2 THE DISPLAY

Pushing the button  the display turns on and the main frame appears.



#### -Errors:

- Er01:** Error Safety High Voltage 1. Also with the system Off.
- Er02:** Error Safety High Voltage 2. Only if the Combustion Fan is On.
- Er03:** Extinguishing for exhaust under temperature.
- Er05:** Extinguishing for exhaust over temperature.
- Er06:** Pellet Thermostat open (backfire in the brazier)
- Er07:** Encoder Error. No Encoder signal.
- Er08:** Encoder Error. Combustion Fan regulation failed.
- Er11:** Real time clock error, day and time not correct due to prolonged absence of power supply
- Er12:** Extinguishing for Ignition failed.
- Er15:** Lack of voltage supply.
- Er17:** Air Flow Regulator error.

- Er18:** Run out of pellet
- Er23:** Boiler probe or Buffer probe open
- Er25:** Error Engine cleaning Brazier
- Er39:** Air Flow Regulator Sensor broken.
- Er41:** Minimum air flow in Check Up not reached.
- Er42:** Maximum air flow Up reached (**F40**).
- Er44:** Open door error.
- Er47:** Auger Encoder error, no Encoder signal.
- Er48:** Auger Encoder error: auger speed regulation failed.
- Er52:** I/O I2C Module error
- Er57:** Test 'Forced Draught High' in Check Up fail (**FL70**)
- Service:** It notifies that the planned hours of functioning (parameter **T66**) is reached. It is necessary to call for service.

**-Other messages:**

**Prob:** Visualization of the state of temperature probes. The message displayed in Check-Up indicates that the red temperature on one or more probes is equal to the minimum value (0°C) or maximum (it depends on probe considered). Check that the probes aren't open (0°C) or in short-circuit (maximum value of the temperature scale).

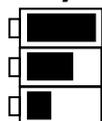
**Clean:** This message notifies that the planned hours of functioning (parameter **T67**) is reached. It is necessary to clean the stove or boiler.

**Block-Ignition:** The message appears if the system is turned off during Ignition (after Preload) by an external device: the system will stop only when it goes in Run Mode.

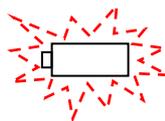
**Door:** The message notifies that the door is open.

**Cleaning On:** Periodic Cleaning in progress.

**-Battery Charge Level:**



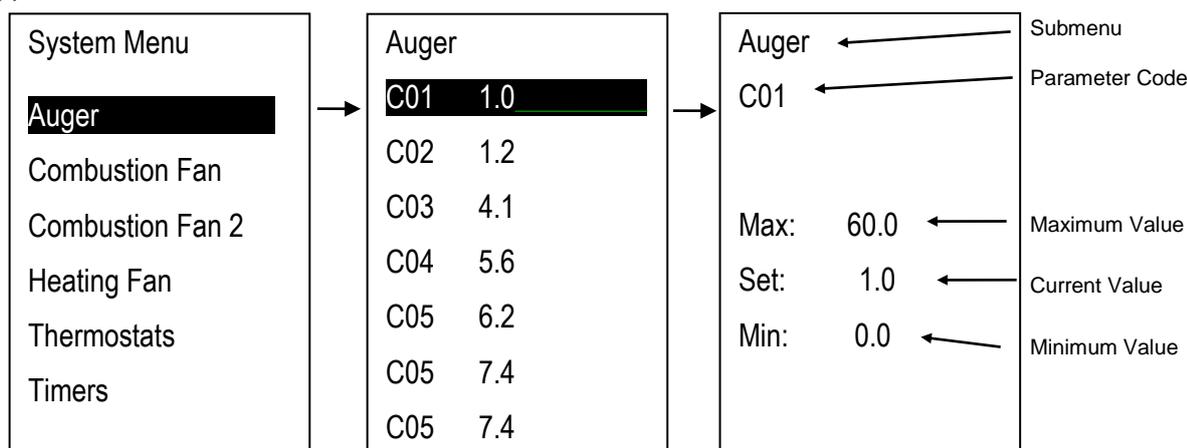
- Maximum battery charge
- Battery charge at 2/3
- Battery charge at a 1/3



Battery discharged; replace the battery as soon as possible. The image blinks.

### 3 THE MENU

To enter the Menu press the **SET** key on the remote control. The Submenu list or the parameter list will appear with the current set value:



The storage of a new value is associated to the transmission to the control board; if it fails the message *'Transfer not successful'* appears. In this case try to modify again the parameter's value.

### 3.1 MAIN THERMOSTAT MODIFICATION

Use the buttons  $\wedge$   $\vee$  to change the Radio Room Thermostat value (it is possible only if it has not been disabled in the specific Menu). The value can be modified using the same buttons, save data occurs automatically at the exit of Menu or pushing **SET** key.



### 3.2 USER MENU

MENU	DESCRIPTION								
<b>Combustion Management</b>	<b>Power</b> It allows to modify the combustion power of the system in Pellet mode. It can be set in automatic or manual mode. In the first case, the system chooses the combustion power. In the second case, the user selects the desired power. On the left side of the display is signalled the combustion modality ( <i>A</i> =automatic combustion, <i>M</i> =manual combustion) and the working power level of the system.								
	<b>Recipe</b> Menu to select the combustion recipe. The maximum value is the number of recipes visible to the user (parameter <b>P04</b> ). If <b>P04</b> =1 the Menu is not visible.								
	<b>Auger Calibration</b> It allows to modify the default value of the Auger's speed and On Times. The values are in the range $-7 \div 7$ . The default value is 0.								
	<b>Fan Calibration</b> It allows to modify the default value of the Combustion Fan speed. The values are in the range $-7 \div 7$ . The default value is 0.								
<b>Heating Management</b>	<b>Boiler Thermostat</b> It allows to modify the value of the Boiler Thermostat. You can choose the minimum and maximum values by setting the corresponding thermostats <b>T26</b> and <b>T27</b> .								
	<b>Buffer tank Thermostat</b> It allows to modify the value of the Buffer tank Thermostat. It will be visible only if you select a plumbing plant including a Buffer Probe ( <b>P26</b> =2, 3, 4).								
	<b>Heating Power</b> It allows to change the power of the fan heating. This menu is visible only by setting an output configurable to 6 and <b>A04</b> =0. You can set the management of the heating system in automatic or manual mode.								
	<table border="1"> <thead> <tr> <th>Heating</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>OFF</td> <td>Heating fan is stopped (it is possible only if <b>P95</b>=0)</td> </tr> <tr> <td>1–Power user number</td> <td>Power is adjusted manually from 1 to the maximum number of power user (parameter <b>P03</b>)</td> </tr> <tr> <td>Auto</td> <td>Power is adjusted automatically according to the value of the parameter <b>P06</b></td> </tr> </tbody> </table>	Heating	Description	OFF	Heating fan is stopped (it is possible only if <b>P95</b> =0)	1–Power user number	Power is adjusted manually from 1 to the maximum number of power user (parameter <b>P03</b> )	Auto	Power is adjusted automatically according to the value of the parameter <b>P06</b>
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<b>Stove Room Thermostat</b> It allows to modify the value of the Local Room Thermostat. It is visible only if a configurable input is set as Room Probe.									
<b>Summer-Winter</b> The user may select between Summer-Winter mode.									
<b>Chrono</b> Menu to select the Chrono Program modality and to set the time of Ignition/Extinguishing of the boiler/stove. For more details please see section 3.2.1.									
<b>Monitor</b> This Menu shows some System data of interest									
<table border="1"> <thead> <tr> <th>Display</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>Exhaust T.</td> <td>Exhaust temperature [°C]</td> </tr> </tbody> </table>	Display	Description	Exhaust T.	Exhaust temperature [°C]					
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	Stove Room T.	Room Temperature detected by the board [°C] (visible only if an input is set as Room Probe)	
	Buffer T.	Buffer tank Temperature [°C] (visible only if <b>P26</b> =2, 3, 4)	
	Pressure	Water Pressure [mbar]	
	Air Flow	Air Flow [cm/s]	
	Fan	Combustion Fan speed [RPM] (visible only if <b>P25</b> =1, 2)	
	Auger	Auger working time [s] (visible only if <b>P81</b> =0)	
	Recipe	Current combustion recipe [nr] (visible only if <b>P04</b> >1)	
	Product Code	Product Code: 537	
	FSYSI01000060.0.0	Control board firmware code and version	
	FSYSC02000032.0.0	Remote Control firmware code and version	
<b>Manual Load</b>	The procedure activates the pellet manual loading with activation in continuous modality of the Auger motor. The loading stops automatically after 600 seconds. The system must be OFF for the function can be activated		
<b>Cleaning Reset</b>	Menu to reset the 'System Maintenance 2' function. It is visible only if <b>T67</b> >0.		
<b>Settings</b>	<b>Thermostat Management</b> Menu to set the Radio Room thermostat functioning.		
	<i>Thermostat Status</i>	<i>Description</i>	
	Enabled	The Radio Room Thermostat is used by the system	
	Disabled	The system uses the thermostats of the control panel and, on the main frame of the display, the value and the image of the thermostat will disappear.	
	<b>Radio Standby</b> Menu to completely switch off the remote control and lower the battery consumption		
	<i>Description</i>		<i>Display</i>
	Push the <b>SET</b> button to enable the Standby mode. To turn on the radio again, first push the  key and then the  button twice. If the function is activated, the system uses the room probe connected to the control board. This feature is to be used in case of prolonged non-use of the radio terminal.		<div style="border: 1px solid black; padding: 10px; text-align: center;"> Standby Radio   <div style="background-color: black; color: white; padding: 5px; display: inline-block;">Enable</div> </div>
	<b>Time and Date</b> Menu to set time and date.		
	<i>Description</i>	<i>Keys</i>	<i>Display</i>
	Select hours, minutes, year, month and day	^ v	Time and Date 16:45 Thursday 07/02/2016
	Enter editing	SET	
	Modify the value	^ v	
	Save	SET	
	Exit	ESC	
	<b>Radio Test</b> This Menu is used to test the connection between the radio terminal and the control board, thereby verifying the level of the electromagnetic pollution. The Terminal Radio enters in continuous transmission and counts the correct and failed answers. The quality of the signal depends on the number of the errors.		
<b>Change Code</b> Code changing allows matching the remote control with a specific board, so that a remote control is matched only with a specific stove or boiler (thus permitting the coexistence of different systems in the same area). In order to change the code: <ul style="list-style-type: none"> <li>• select a code</li> <li>• enter the Learn Menu of the control board and push the set key</li> <li>• push the <b>SET</b> button on the terminal radio and verify the result of the operation</li> </ul>			
<b>Contrast Setting</b> This Menu allows setting the display contrast			
<i>Description</i>	<i>Keys</i>	<i>Display</i>	
Modify the value	^ v	Set Contrast  +  15 -	

	Save	<b>SET</b>	
	Exit	<b>ESC</b>	
	<b>Key Tone</b> Menu to enable or disable the key tone.		
	<b>Language Selection</b> Menu to change the language. The highlighted language is the one currently set.		
<b>System Menu</b>	Menu to enter in the Technical Menu. It is protected by password: the <b>default password is 0000</b> . Push <b>SET</b> to enter in editing mode, <b>^</b> and <b>v</b> to increase or decrease the selected digit. Push <b>SET</b> to save the digit and pass to the next. Push <b>ESC</b> to cancel the digit or exit from Menu. If the password is right, the first menu screen appears.		
	<i>Menu</i>	<i>Description</i>	
	<b>Auger</b>	Auger Menu	
	<b>Combustion Fan</b>	Combustion Fan Menu	
	<b>Exhaust Fan 2</b>	Exhaust Fan 2 Menu	
	<b>Heating Fan</b>	Heating Fan Menu	
	<b>Thermostats</b>	Thermostats Menu	
	<b>Extinguishing Th</b>	Extinguishing Thermostats Menu	
	<b>Timers</b>	Timers Menu	
	<b>Enables</b>	Enables Menu	
	<b>Air Flow Sensor</b>	Primary Air Regulator Menu	
	<b>Counters</b>	Counters Menu	
	<b>Outputs' Test</b>	Outputs' Test Menu	
	<b>Restore Default Value</b>	Menu to restore the parameters' values set by the manufacturer	

### 3.2.1 CHRONO MENU

Menu to set the system ignition/extinguishing times.

#### 3.2.1.1. CHRONO MODALITY

To turn on the system by chrono, select the modality after the programming the ignition/extinguishing times

<i>Description</i>	<i>Keys</i>	<i>Display</i>
The current modality is highlighted and blinks		Modality
Select the favourite modality	^ v	Chrono Modality
Cancel the changes and restore the old modality	<b>ESC</b>	Disable
Save the new setting	<b>SET</b>	Daily
Exit from Menu	<b>ESC</b>	Weekly
		<b>Week-End</b>

#### 3.2.1.2. CHRONO PROGRAMMING

Choose the type of programming to set (after making the programming it is necessary to select the desired mode from the Modality Menu to turn on/off the system by Chrono):

- *Daily*: Select the day of week and program the system ignition/extinguishing times; for each day there are 3 time slots.



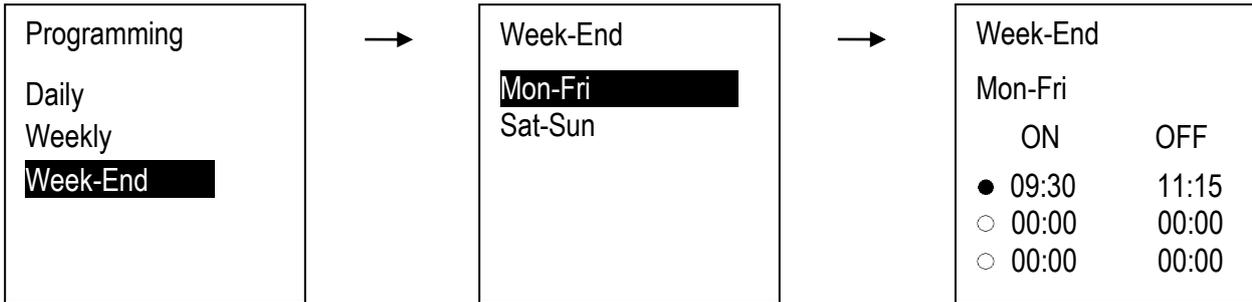
*Program across midnight*

Set the hour of extinguishing of a day at 23:59 and set the hour of ignition for the next day at 00:00.

- *Weekly:* Program the times to switch on and off the system (there are 3 time slots).



- *Week-End:* Choose between 'Monday-Friday' and 'Saturday-Sunday'. There are 3 time slots for each period.



The three types of programming are stored separately: if for example the Daily modality is set, the other modalities are not changed.

<i>Program Chrono</i>	<i>Keys</i>
After choosing the favourite program:	
Select the programming time	^ v
Enter in modify mode (the selected time blinks)	<b>SET</b>
Modify the timers	^ v
Save program	<b>SET</b>
Enable a program (● appears) or disable it (○ appears)	⏻
Exit	<b>ESC</b>