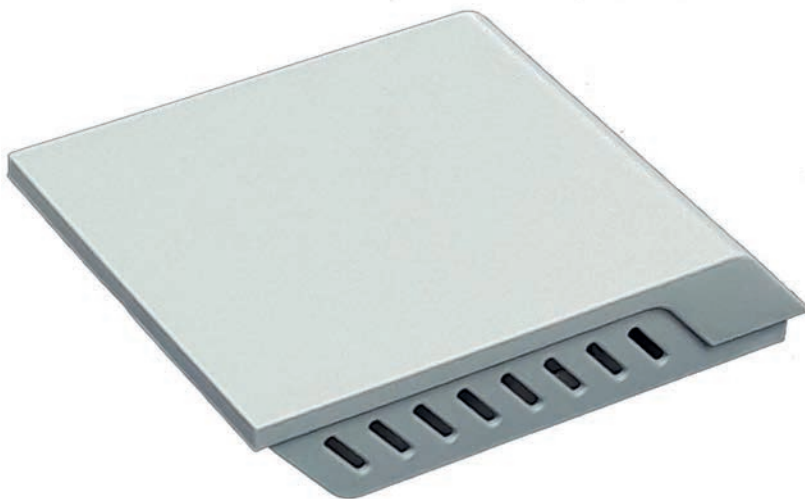


# **RIKA** **Room Sensor** AND **Wireless Room Sensor**



OPERATING MANUAL



# 1. E14404 ROOM SENSOR WITH CABLE



RIKA room sensor with cable, 5 m long

## Note

Each stove requires its own **RIKA room sensor**.



The RIKA room sensor is connected via the cable directly to the motherboard of the stove. It transmits the current room temperature to the circuit board that controls the heating power of the stove.

## Installation

## Note

Manipulation of the hardware components is only permitted by trained dealers or customer service. Improper handling of these devices results in the guarantee and warranty claims becoming void!

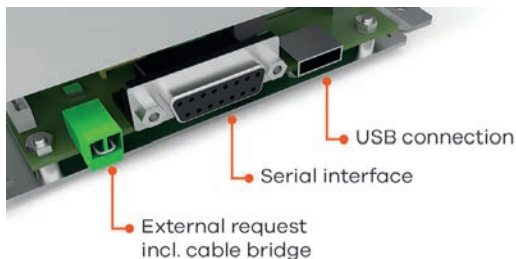


## Note

Only perform manipulations of the device when the power plug has been disconnected from the power socket and the stove has completely cooled down.



Connect the cable of the room sensor to the serial interface of the motherboard. Tighten the small screws of the plug.



Depending on the stove type, you may need to cut open the rectangular recess in the rear of the stove in order to feed the cable through. Dismantle the rear wall of your pellet stove (or the side panel, depending on stove type) as described in the operating manual. Cut through the connecting struts of the rectangle using a hacksaw blade, and use a file to remove the remnants of the struts.



After completion of the work, remount the rear wall or side panel as described in the operating manual.

Connect the stove to the power supply.

The room sensor is connected to the wall using commercially available wall plugs and screws.

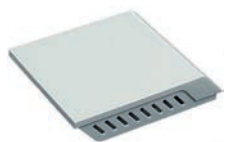
**Tip**

Install the sensor at the coolest point in the room, and as far away as possible from the stove.

Connect the stove to the power supply.

Read more under OPERATION.

## 2. E14558 WIRELESS ROOM SENSOR



RIKA wireless room sensor



RIKA receiver with cable



Mounting plate

Mounting material and 2 AAA batteries

### Note

Each stove requires its own **RIKA wireless room sensor with wireless receiver**.



The wireless room sensor transmits the current room temperature to the wireless receiver. The wireless receiver is installed in the stove and connected to the motherboard. It transmits the room temperature to the motherboard that controls the heating power of the stove.

## Installation

### Note

Manipulation of the hardware components is only permitted by trained dealers or customer service. Improper handling of these devices results in the guarantee and warranty claims becoming void!



### Note

Only perform manipulations of the device when the power plug has been disconnected from the power socket and the stove has completely cooled down.



**To open** the RIKA wireless receiver, carefully pull apart the two parts of the receiver.

**To open** the RIKA wireless room sensor, use a small screwdriver to press in the plastic ridge, and carefully pull apart the two halves.



Insert the batteries.

### Tip

Please ensure that the poles of both batteries are pointing in the same direction!



Compare the positions of the small DIP switches (jumpers) 1-4.

Switches 1-3 are used for defining wireless addresses, and must match in both devices.

### Tip

The standard settings can be retained. The DIP switches only need to be modified in special cases.



DIP switch no. 4 of the wireless room sensor increases the transmitter power.

■ Setting OFF - approx. 1 mW

■ Setting ON - approx. 10 mW

The ON setting is used when the distance from the transmitter to the receiver is too large, or when an obstacle negatively affects the reception signal.

### Note

When set to ON, DIP switch no. 4 on the receiver serves for a test transmission of 25 °C, and for controlled heating operation it must be returned to the OFF position.



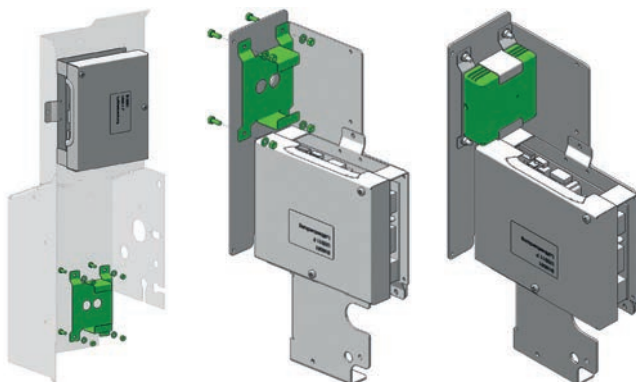
Dismantle the rear wall of your pellet stove (or the side panel, depending on stove type) as described in the operating manual.

Depending on the stove type, you have to cut out the rectangular recess at the rear of the stove either in order to feed the cable through, or to install the receiver there. In this case, cut through the connecting struts of the rectangle using a hacksaw blade, and use a file to remove the remnants of the struts.

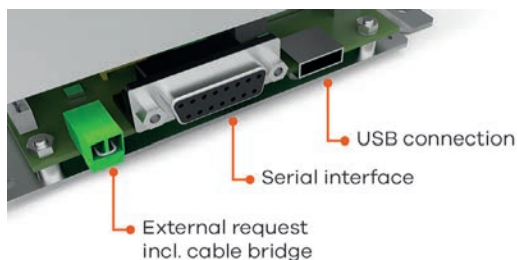


The appropriate drill holes are provided for the correct positioning of your wireless receiver on the backing plate of the motherboard. Install the mounting plate on the backing plate of the motherboard using the screws, washers and nuts included in the delivery.

### Installation example:



Slide the wireless receiver into the mounting. Connect the cable of the wireless receiver to the serial interface of the motherboard. Tighten the small screws of the plug.



After completion of the work, remount the rear wall or side panel as described in the operating manual, and connect the stove to the power supply.

After connection to the power supply, the LED display of the wireless receiver flashes green. Upon successful connection with the wireless room sensor, the display changes to continuous green, and the wireless room sensor is ready for operation.

#### Tip

The colour of the LED display on the receiver depends on the battery voltage in the sensor: green - full, orange - almost empty, red - empty.



The wireless room sensor is connected to the wall using commercially available wall plugs and screws.

#### Tip

Install the sensor at the coolest point in the room, and as far away as possible from the stove.

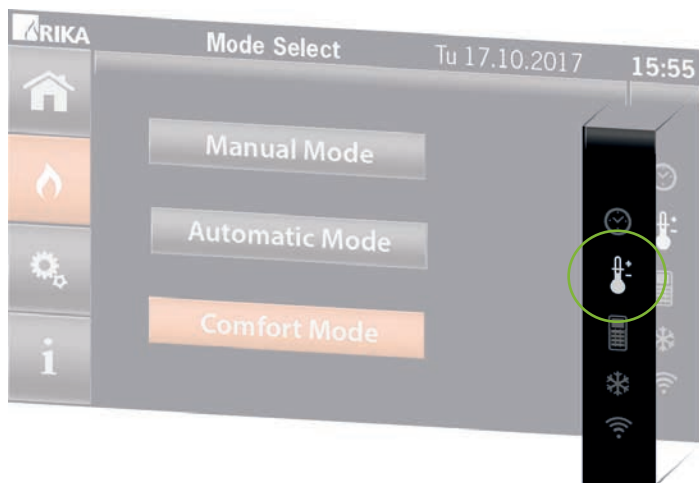


There is no difference between the operation of the room sensor and wireless room sensor, and this is described on the following pages. It is organised into operation by touch display and operation by button display, depending on the equipment of your stove.

### 3. OPERATION BY TOUCH DISPLAY

#### Setup

If the module is correctly connected, after a few seconds this is displayed in the side information bar by means of a glowing symbol. It becomes possible to select "Comfort mode".



In the SETUP menu, temperature adjustment and power requirement can be selected.



In the INFO MENU / INPUT, the room temperature transmitted by the temperature sensor is displayed in degrees Celsius.

#### Temperature adjustment

If the room temperature displayed in the Info Menu is different from the room temperature shown on an external thermometer, a temperature adjustment can be performed in the Setup Menu. This allows the temperature of your room thermometer to be perfectly adjusted to the heating settings.

#### Power requirement

The power requirement is set to 3 as the factory default. The heating power of the stove can be adjusted here as required from level 1 (small room) to level 4 (large room).

# Heating

## The room sensor allows you to heat comfortable in Comfort Mode.

The heating power display on the home screen switches to the temperature display. You can set the desired room temperature using the plus and minus buttons.



The motherboard controls the heating power such that the set room temperature is maintained continuously.

### Note

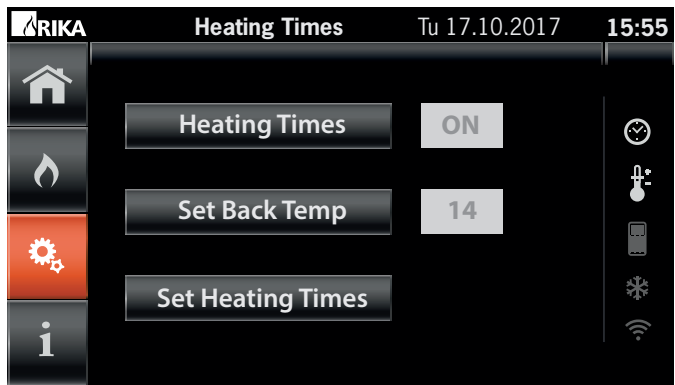
The stove must be switched on. It can only start independently in stand-by mode!



## Heating at predefined times

Switch on the heating times using the "Setup" menu. In the heating program, enter the heating times you desire, see operating manual for the touch display. Select a setback temperature.

During the heating times, the temperature set in the home menu will be maintained, while the setback temperature applies to the times in between. This allows you to very conveniently set up a night setback temperature.





## Frost protection

In addition, you can set a frost protection temperature in every operating mode. The frost protection symbol in the side information bar is active when frost protection is switched on.



### Tip

Frost protection is only maintained as long as there is a supply of pellets!



# Errors and warnings for touch display

The LED display of the wireless receiver in the stove displays various errors.

If the LED display on the receiver is flashing in alternating green and red, there are two transmitters with the same DIP switch settings within receiving range. Select another matching switch setting for the sensor and receiver. The LED display will switch to normal mode and show a continuous green.

If the LED display of the wireless receiver is flashing continuously green in a new installation, this means it cannot connect to the wireless room sensor. Check the battery in the wireless room sensor, and increase the transmitter power as described in the section on INSTALLATION.

**Note**

If the stove always heats to 25 °C, check DIP switch 4 of the wireless receiver!



If the stove display shows the warning “Room sensor signal lost”, use the button to switch operation to Manual Mode. The further procedure for operation in manual mode is described in your touch display manual.

Display on stove	Action
	<ul style="list-style-type: none"><li>■ Check the plug connection between the cable and the circuit board.</li></ul> <p>For the wireless room sensor, additionally:</p> <ul style="list-style-type: none"><li>■ Check the battery voltage of your wireless sensor. (The LED on the wireless receiver in the stove is lit red if the battery is empty.)</li><li>■ Check for factors interfering with the wireless signal. Increase the transmitter power by setting DIP switch 4 in the wireless room sensor to ON - see Installation.</li></ul>

## 4. OPERATION BY BUTTON DISPLAY

**Tip**

First switch from easy heating mode EASY to HEAT by holding down the menu button for min. 5 seconds. You should also consult your stove manual.



### Heating modes

If a RIKA room or wireless room sensor is connected, you can choose between different heating modes. You can access the menu item MODE using the I/O button, and use the plus + and minus - buttons to switch between HEAT, ROOM and AUTO.



Scroll button	Change button	Display	Description
		MODE	Display to access the selection screen for heating mode
	I/O	HEAT ROOM AUTO	Display of previous heating mode set (HEAT, ROOM or AUTO)
+ / -		ROOM AUTO HEAT	By pressing the plus or minus button once or several times, you can select the heating mode.
(HEAT, ROOM or AUTO)			
	I/O	MODE	This saves the selected heating mode.
MENU			By pressing the MENU button once or several times, you can return to the standard display.

**ROOM**

You enter the temperature that the stove should maintain. When the current room temperature is one degree Celsius below this value, the stove is lit. When it is one degree Celsius higher, heating is stopped. ROOM MODE thus consistently maintains the desired room temperature.

**AUTO**

In addition to the set temperature, it is possible to program up to two heating times. Between these heating times, a selected setback temperature is maintained.

You have the option of defining two consistent activation times and two deactivation times for the entire week. The stove heats equally every day during the defined time periods.

You can also set two time periods for each individual day, during which the preset temperature should be maintained. The daily settings override the weekly settings.

**Note**

First set the time and date in the stove as described in the operating manual!



# Heating in ROOM mode

## Stove switched off

Button	Display	Description
	ROOM OFF	Standard display when stove is switched off in "ROOM" mode. When the stove is switched off, the desired room temperature can be adjusted within the range 5-28 °C.
+	ROOM 25	When the plus button is pressed, the temperature is increased by 1 °C.
-	ROOM 23	When the minus button is pressed, the temperature is reduced by 1 °C.

## Switch stove on

Button	Display	Description
I/O	IGNIT	When the I/O button is pressed, the stove is started, provided that the temperature is below the desired room temperature.
	START	This is displayed by "IGNIT" (ignition), which is replaced by START after successful ignition.
	ROOM 23	After completion of the start phase, the display shows ROOM together with the desired room temperature you have selected.
	ROOM 23	Standard display when stove is switched on
+	ROOM 24	When the plus button is pressed, the temperature is increased by 1 °C.
-	ROOM 22	When the minus button is pressed, the temperature is reduced by 1 °C.
	STOP STANDBY	When the desired room temperature is reached, the stove automatically switches itself off and goes to STANDBY mode.  As soon as the temperature falls below the desired temperature, the stove starts again.

## Switch stove off by pressing the I/O button

Button	Display	Description
I/O	STOP ROOM OFF	When the I/O button is pressed, the display briefly shows STOP and then changes to ROOM OFF.

### Note

The stove will now not start again automatically, but has to be started again by pressing the I/O button.



# Heating programming

For operation in AUTO mode, you can set individual heating times. You can perform the setup under the menu item TIME.

## Weekly heating times

You can save two heating times which are the same for every day of the week. Heating times are already set up as factory default, however these can be changed as desired by pressing the (+)/(-) button. Each time you press the button, the time changes in increments of 10 minutes.

### Tip

There must be at least one hour between the times for switching on and switching off, and between the end of the first heating time and the start of the second! The control system does not permit non-compliant input.



Scroll button	Change button	Display	Description
		TIME	Display to access the time programming
	I/O	TIME SET	Display to access the time programming for the current date and time
MENU		TIME AUTO	Display to access the heating programming.
	I/O	DAY	
	-	WEEK	Return to DAY by pressing the plus button
	I/O	ON1 6:00	Display of the first start time
	+ / -	ON1 06:10	Chang of the time in 10 minute increments
MENU		OFF1 12:00	Display - End of the first heating time
MENU		ON2 14:00	Display of the second start time
MENU		OFF2 18:00	Display - End of the second heating time
MENU		WEEK	Display to access the weekly heating program
MENU		TIME AUTO	By repeatedly pressing the MENU button, you get back to the standard display.

If you use the plus buttons to set the ON time too close to the OFF time, the latter is automatically extended so that the interval of one hour is ensured.

If you use the minus buttons to set the OFF time to the same time as the ON time, the heating time is ignored by the control system. There will then be only one heating time per day.

If you use the plus buttons to set the OFF time for the first heating time too close to the ON time for the second heating time, the latter is automatically extended so that the interval of one hour is ensured.

The programming of the weekly heating program is automatically imported into the daily heating program.

Daily heating times

You can save two separate heating times for each day of the week. The daily heating times entered override the weekly programming on these days. Because of the weekly programming, heating times are already set up, however these can be changed as desired by pressing the plus and minus buttons.

Scroll button	Change button	Display	Description
		TIME	Display to access the time programming
	I/O	TIME SET	Display to access the time programming for the current date and time
MENU		TIME AUTO	Display to access the heating programming.
	I/O	DAY	Display to access the daily heating program
	I/O	MO	Display for the first day of the week (Monday)
	I/O	ON1 6:00	Display of the first start time
	+ / -	ON1 06:10	Chang of the time in 10 minute increments
MENU		OFF1 12:00	Display - End of the first heating time
MENU		ON2 14:00	Display of the second start time
MENU		OFF2 18:00	Display - End of the second heating time
MENU		MO	Display for the first day of the week (Monday)
MENU		TU	Display for the second day of the week (Tuesday)

Proceed in the same manner for each further day of the week until SU (Sunday).

MENU		SU	Display to confirm programming of the last day of the week
MENU		DAY	Display to access the daily heating program
MENU		TIME AUTO	By repeatedly pressing the MENU button, you get back to the standard display.

# Heating in AUTO mode

## Stove switched off

Setting the room temperature during the heating time

Scroll button	Change button	Display	Description
		AUTO OFF	Standard display when stove is switched off in "AUTO" mode. When the stove is switched off, the desired room temperature can be adjusted within the range 10-28 °C.
+		On – T 25	When the plus button is pressed, the display to access the room temperature control appears.
	I/O	On – T 25	To set the desired room temperature, the I/O button must be pressed.
	+	On – T 26	When the plus button is pressed, the temperature is increased by 1 °C.
	-	On – T 24	When the minus button is pressed, the temperature is reduced by 1 °C.
	I/O	AUTO OFF	The selected room temperature is saved.

Setting the setback temperature between the heating times

Scroll button	Change button	Display	Description
		AUTO OFF	Standard display when stove is switched off in "AUTO" mode. When the stove is switched off, the desired setback temperature can be adjusted within the range 5-20 °C.
-		Off – T 20	When the minus button is pressed, the display to access the setback temperature control appears.
	I/O	Off – T 20	To set the desired setback temperature, the I/O button must be pressed.
	+	Off – T 21	When the plus button is pressed, the temperature is increased by 1 °C.
	-	Off – T 19	When the minus button is pressed, the temperature is reduced by 1 °C.
	I/O	AUTO OFF	The selected setback temperature is saved.

Switch stove on

Button	Display	Description
I/O	IGNIT	When the I/O button is pressed, the stove is started, provided that the temperature is below the desired room temperature, and the current time is within a heating time. This is displayed by "IGNIT" (ignition), which is replaced by START after successful ignition.
	START	
	AUTO 21	After completion of the start phase, the display shows AUTO together with the desired room temperature you have selected.
	STOP	When the desired room temperature or the end of the programmed heating time is reached, the stove automatically switches itself off and goes to STANDBY mode.
	STANDBY	
		As soon as the temperature falls below the desired temperature or a new heating time starts, the stove starts again.

The room and setback temperature are set in the same manner as described for when the stove is switched off.

Switch stove off by pressing the I/O button

Button	Display	Description
I/O	STOP AUTO OFF	When the I/O button is pressed, the display briefly shows STOP and then changes to AUTO OFF.

Note

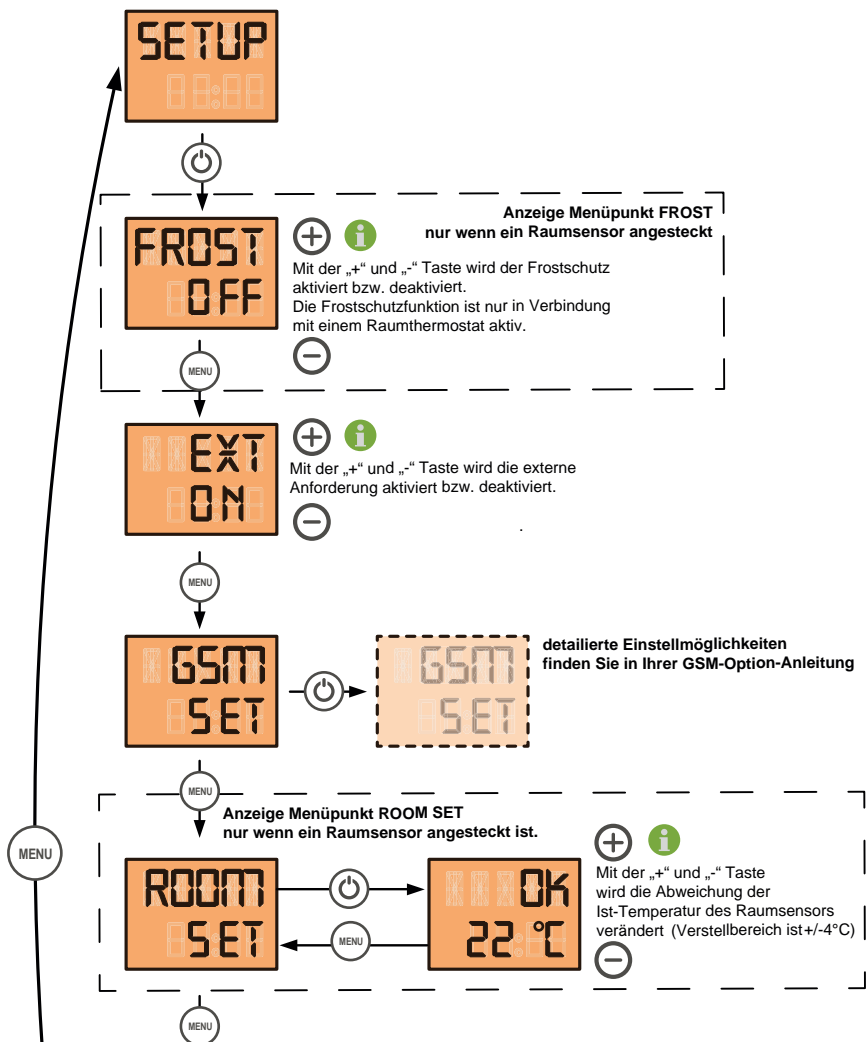
The stove will now not start again automatically, but has to be started again by pressing the I/O button.





# Setup

In the Setup menu item, you have settings options for frost protection and temperature adjustment. These are described in your stove manual.



## Frost protection

You can use the plus and minus buttons to switch the frost protection on (FROST ON) and off (FROST OFF). When the current room temperature is 8 °C, the stove is lit. When it is 13 °C, heating is stopped. The stove thus continuously keeps the room frost-free.

### Tip

Frost protection is only maintained as long as there is a supply of pellets!



## Temperature adjustment

If the temperature displayed in the Info Menu is different from the temperature shown on a thermometer, a temperature adjustment of four degrees plus or minus can be performed in the SETUP menu. This allows the temperature of your room thermometer to be perfectly adjusted to the heating settings.

## Errors and warnings for button display

The LED display of the wireless receiver in the stove displays various errors.

If the LED display on the receiver is flashing in alternating green and red, there are two transmitters with the same DIP switch settings within receiving range. Select another matching switch setting for the sensor and receiver. The LED display will switch to normal mode and show a continuous green.

If the LED display of the wireless receiver is flashing continuously green in a new installation, this means it cannot connect to the wireless room sensor. Check the battery in the wireless room sensor, and increase the transmitter power as described in the section on INSTALLATION.

### Note

If the stove always heats to 25 °C, check DIP switch 4 of the wireless receiver. For controlled heating, switch 4 must be in the OFF position.



### Warnings in the display:

If the connection to the room sensor is interrupted, after approx. 10 minutes a warning is shown on the display in moving text: "ROOM SENSOR SIGNAL LOST". The stove switches to standby. When the connection with the room sensor is restored, the warning automatically disappears and the mode previously set continues.

While the "ROOM SENSOR SIGNAL LOST" warning is displayed, the room sensor can be switched off by pressing the I/O button. The stove switches to "HEAT" mode, and the further procedure for operation in manual mode is described in your stove manual.

### Action to be taken when errors are displayed:

- Check the plug connection between the cable and the circuit board.

For the wireless room sensor, additionally:

- Check the battery voltage of your wireless room sensor. (The LED on the wireless receiver in the stove is lit red.)
- Check for factors interfering with the wireless signal. Increase the transmitter power by setting DIP switch 4 in the wireless room sensor to ON - see Installation.



**RIKA Innovative Ofentechnik GmbH**

Müllerviertel 20

4563 Micheldorf / AUSTRIA

Tel.: +43 (0)7582/686 - 41, Fax: -43

**E-Mail: [verkauf@rika.at](mailto:verkauf@rika.at)**

**[www.rika.at](http://www.rika.at)**