

REMKO

WIRELESS REMOTE CONTROL

FOR MULTITALENT HEAT PUMP MANAGER

Operation - Technology - Spare parts



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**Read these operating instructions carefully before commissioning/
using the unit!**

**These instructions are an integral part of the unit and must always be
kept in the vicinity of the installation location or on the
unit itself.**

This operating manual is a translation of the German original.

REMKO WIRELESS REMOTE CONTROL FOR MULTITALENT HEAT PUMP MANAGER

Safety notes

Carefully read the operating instructions before commissioning the unit for service. It provides useful tips and information  as well as hazard warnings to prevent injury or material damage . Failure to follow the directions in this manual can endanger persons, the environment and the equipment itself and will void any claims for liability.

- Keep this manual close to the equipment.
- Modification of the units and components supplied by REMKO is not permitted and can cause malfunctions.
- Operating equipment or components with obvious defects or damage is not permitted.
- Do not operate units or components if there are obvious defects or signs of damage.
- Repairs may only be carried out by authorised personnel, while cleaning may be carried out by the operating company.
- The units or components are not to be exposed to any mechanical stresses, extreme levels of humidity or direct sunlight.



Environmental protection and recycling

Disposing of packaging

All products are packed for transport in environmentally friendly materials. You can make a valuable contribution to reducing waste and sustaining raw materials by only disposing of packaging at approved collection points.



Disposing of the units and their components

Only recyclable materials are used in the manufacture of the units and components. Help protect the environment by ensuring that the units or components (for example batteries) are not disposed of in household waste, but only in accordance with local regulations and in an environmentally safe manner, e.g. using authorised disposal and recycling specialists or council collection points.

Warranty

The precondition for all warranty claims is that the orderer or his customer has fully filled out the "warranty registration card" supplied with the unit, at the time when it was purchased and commissioned, and returned it to REMKO GmbH & Co. KG. The warranty conditions are listed in the "General terms and conditions". Furthermore, only the parties to a contract can conclude special agreements beyond these conditions. For this reason, please contact your contractual partner first.

Intended use

The purpose of the units is the entry and display of system parameters for the Multitalent heat pump manager. Any different or additional use is a non-intended use. The manufacturer/supplier assumes no liability for damages arising from a non-intended use. The user bears the sole risk in such cases. Intended use also includes working in accordance with the operating and installation instructions and complying with the maintenance requirements.

Transport and packaging

The units are shipped in sturdy transport packaging. Immediately check the units on delivery and make a note of any damage or missing parts on the delivery note. Inform the forwarding agent and contractual partner. Warranty claims at a later date will not be accepted.

Unit description

The wireless remote control allows the Multitalent heat pump manager to be regulated by weather conditions or room temperature.

It makes it possible for the owner to easily input and view system parameters (e.g. time, current hot water target temperature) and heating circuit parameters (e.g. heating times and desired room temperature) from their living space. This allows the heating system to be regularly monitored and optimised.

With the wireless remote control, it is also possible to make a correction to the weather-driven control system by means of a room-temperature-controlled cutout.

Operation

After inserting the batteries, the Installation menu appears once only. After adjusting the values contained on the menu, the controller is ready for operation. If the menu appears later, e.g. after a power cut, the function can simply be exited.

Installation is initiated by pressing "OK" (see the chapter "Installation").

Installation can be cancelled by pressing "Cancel".



Controls during normal operation

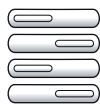
The wireless remote control is controlled with the following keys.



The rotary knob (A) can be used to toggle between the displayed menu points or to change the settings.



Pressing the Home key (B) always returns you to the standard display.



Each of the four function keys (C) stands for one of the four rows on the display. Pressing an F-key serves to select a menu item or setting.

NOTE

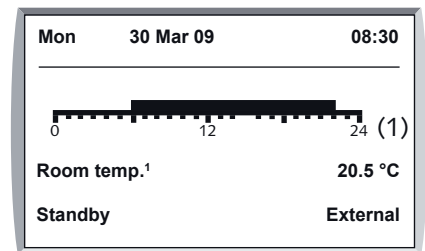
The current heating programme and hot water programme for the room controller are permanently displayed on row [2] of the Favourites menu. The associated heating circuit number of displayed in brackets. You can program all the other favourites yourself.

NOTE

Due to the tolerances of the sensors, deviations of +/- 2K (2°C) between different temperature indicators are normal. In the case of rapid temperature changes, these deviations will intermittently be higher due to the differing time response of different sensors.

Display / function keys

The standard display of the wireless remote control of the heat pump manager is comprised of four rows.



Row 1: This displays the day of the week, the date and time. By pressing the F-key you can adjust the date, time and holidays.

Row 2: Display the favourites. You can select from the currently displayed favourites with the rotary knob (A). By pressing the F-key you can adjust the Favourites or the additional indicator. The following predefined options are stored:

- Hot water programme
- Heating programme (HC number)
- Outdoor temp.
- HA temp.
- HW temp.
- Supply temp.
- Enable heating circuit
- HW demand
- Burner 1

Row 3: Room temperature indicator. Pressing the F-key allows you to adjust the selected room temperature.

Row 4: Displays the operating mode and the current situation (Heating, Reduction, Party, eco or Holiday). By pressing the F-key, you can adjust the operating mode and select the Party, Reduction, or Holiday function (this applies to all internal heating circuits).

NOTE

Deviations in the respective parameters can no longer be displayed after the wireless remote control is commissioned.

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Setting the operating mode

During normal operation, press the F-key next to "OK".

Set the desired operating mode with the rotary knob.

The selected mode is confirmed and saved by pressing the F-key next to "OK".

The action is cancelled without saving by pressing the F-key next to "Cancel".

Setting the Party, Reduction, and "Immediate Holiday" function

Pressing the F-keys next to "Party" (heating time extension) or "Reduction" (heating time interruption) selects the corresponding operating mode.

Turning the rotary knob clockwise sets the hours.

Turning the rotary knob clockwise sets the hours.

This makes it easy to quickly raise or reduce the heating temperature for the rest of the day, or to set a holiday programme starting immediately (e.g. Reduction 5 days).

Overview of the operating modes

When an operating mode is selected, it is shown on the screen. It takes effect once the setting has not been modified for 5 seconds.

You can choose from the following operating modes:

Standby / OFF (Heating OFF and Water heating OFF, Frost protection function only)

Automatic operation 1 (Heating acc. to Time programme 1; HW acc. to HW programme)

Automatic operation 2 (Heating acc. to Time programme 2; HW acc. to HW programme)

Summer operation (Heating OFF, HW acc. to HW programme).

Heating/ Eco Comfort (24h heating with Comfort temperature 1, HW acc. to HW programme)

Heating/ Reduction (24h heating with Reduction temperature, HW acc. to HW programme)

NOTE

Eco Comfort switchover: occurs at ± 1 K from target room temp. to actual room temp.

Controls in operating mode

The wireless remote control used to regulate the heat pump manager is controlled in operating mode with the following keys.

Home Pressing the Home key (B) takes you from operating the controller to normal operation (standard display)

Using the rotary knob (A), you can move through the menus, move through settings/parameters, or adjust the selected value.

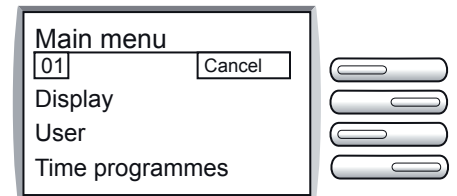
Each of the four function keys (C) stands for one of the four rows on the display. Pressing an F-key selects the adjacent menu, value or function.



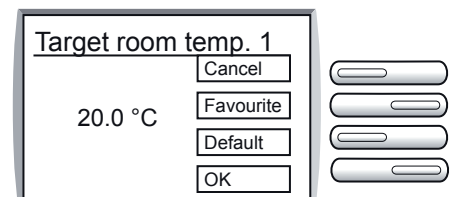
NOTE

If a parameter, a function/display or a parameter menu is not supported by the connected heating circuit controller, it is hidden or this is indicated on screen with dashes.

Display in operating mode



Display during value entry



Basic operating procedure

Home Pressing the Home key takes you to operating mode.

Move through the menu items (types of setting) with the rotary knob, e.g. Display, User, etc.

Use the corresponding F-key to select the item you chose above.

With the rotary knob, choose a sub-menu (Appliance / Consumer), e.g. System (heating appliance), Hot water, Heating circuit.

Use the corresponding F-key to select the sub-menu you chose above, e.g. Hot water.

Choose the setting/display value with the rotary knob. The current value is displayed.

Use the corresponding F-key to select the setting/display value you chose above.

Use the rotary knob to change the setting.

Select the function with the corresponding F-key. Confirm the change or cancel by pressing "Cancel", "Favourite", "Default" or "OK"

The function keys perform the following roles:

Cancel the current function without saving

Carry over setting to Favourites menu

Change setting value to factory setting

Cancel the current function and save

Next setting (e.g. time: Hour->Minute)

Previous setting (e.g. date: Month<-Year)

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Overview of the operating menus

Menus	Description	Sub-menus	Description
Display	Displays system values (e.g. sensor and target values). Adjustment is not possible. This means that operating errors in this menu are not possible.	System	All display values and settings relating to the heating appliance or the system as a whole, or which cannot be assigned to another consumer circuit.
		Hot water	All internal display values and settings of the controller, relating to water heating.
		Heating circuit 1/2	All display values and settings relating to the associated consumer circuit (even as a decentralised hot water circuit, for example).
		Solar / MF	All display values and settings relating to solar energy generation and setting the multifunction relay.
User	Summary of settings that can be adjusted by the operator.	System	All display values and settings relating to the heating appliance or the system as a whole, or which cannot be assigned to another consumer circuit.
		Hot water	All internal display values and settings of the controller, relating to water heating.
		Heating circuit 2	All display values and settings relating to the associated consumer circuit (even as a decentralised hot water circuit, for example).
Time programme	Summary of the time programmes for the heating circuits, the hot water circuit and additional functions, as applicable	Heating circuit x Prog 1	All display values and settings relating to the associated consumer circuit (even as a decentralised hot water circuit, for example).
		Heating circuit x Prog 2	All display values and settings relating to the associated consumer circuit (even as a decentralised hot water circuit, for example).
		Hot water	All internal display values and settings of the controller, relating to water heating.
Time Date	Time, date, holiday programme and data on daylight savings time	Time	Set hour
		Date	Set date
		Start holiday	Set date for start of holiday period
		End holiday	Set date for end of holiday period
		Start daylight savings	Set date for start of daylight savings time
		End daylight savings	Set date for end of daylight savings time
Service	Summary of the values for service technicians	Software number	Software number with index
		Reset user	Reset all user parameters to factory settings
		Reset specialist	Reset all specialist parameters to factory settings
		Reset time programme	Reset all time programmes to factory settings
		Communication KM	Heating appliance on the bus
		Communication MM	Mixer module on the bus
Specialist	Summary of the values which require a specialist to adjust them (installer). Values in the Specialist menu are protected by a code no. (damage/operating errors possible)!	System	All display values and settings relating to the heating appliance or the system as a whole, or which cannot be assigned to another consumer circuit.
		Heating circuit	All display values and settings relating to the associated consumer circuit (even as a decentralised hot water circuit, for example).

On the following pages you will find detailed descriptions of the different menus and their parameters.

Display menu

This menu only activates the display itself. No adjustments can be made here. The values are only shown if the sensor is connected or the values are available, otherwise "----" or nothing are displayed.

You can leave the menu by pressing "Cancel".

System

The parameters are selected using the rotary knob.
(HA = heating appliance)

Parameter	Function	Comments
Outdoor temp.	Displays the outdoor temperature	The measured outdoor temperature is smoothed for the controller. The smoothed value is displayed here.
Actual/Target HA temp.	Temperature of the heating appliance	After pressing the F-key, the target value appears. The target value corresponds to the highest temperature requested of the heating system by the consumer circuits (incl. water heating). The mixer circuits request your required temperature + heating curve distance (specialist value)
Modulation	Modulation depth of the heating appliance (bus)	Only if a modulating heating appliance is connected via a bus and is transmitting values.
Burner 1	Burner relay 1 status (On/Off)	
Burner 2	Burner relay 2 status (On/Off)	
Error	Error number; 00 = no errors	

Hot water

Parameter	Function	Comments
Actual/Target HW temp.	Current hot water temperature and current target hot water temperature depending on heating programme and operating mode	Display of the measured upper tank temperature
Lower HW temp.	Lower HW tank temperature (infeed/solar)	Lower tank temperature Only if a sensor is connected for the lower tank and the charging function is activated
HW demand	Demand for water heating On => Temperature not reached	Hot water status indicator
HW pump	Operation of hot water charging pump On => e.g. after charge pump lock	Hot water status indicator
Enable HW	Enable water heating On => Enable according to time programme	Hot water status indicator

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Heating circuit 1/2

Parameter	Function	Comments
Actual/Target room temp.	Current room temperature according to heating programme and operating mode	Room temperature and target room temperature
Actual/Target supply temp.	Current supply temperature and current target supply temperature	For mixed heating circuits only
Enable heating circuit	Heating circuit in heating mode (On/Off)	Heating circuit status indicator
Heating circuit pump	Heating circuit pump status (On/Off)	Heating circuit status indicator
R. warm-up time	Last required warm-up time with warm-up optimisation activated	Display of the last required warm-up time

Solar / MF

The following table only lists parameters for which the corresponding function has both been implemented and activated

Parameter	Function	Comments
MF1 temp.	Temperature of MF sensor 1	A sensor is allocated to each multifunction relay. The corresponding value is displayed here. In certain cases, e.g. if the functions "Solid fuel boiler" or "Collector pump" are selected, the measured value is also displayed as the Solid fuel temp. or Collector temp.
MF2 temp.	Temperature of MF sensor 2	
MF3 temp.	Temperature of MF sensor 3	
MF4 temp.	Temperature of MF sensor 4	
Actual/Target HW temp.	Temperature of upper HW tank	
Lower HW temp.	Lower HW tank temperature (infeed/solar)	

User menu

This menu contains all the settings which can be adjusted by the user of the system.

System

Parameter	Value range	Default	OV*)	Comments
Language	Depends on variant	English		Set the language for the controller
LCD contrast	(-20) - (20)	04		Set the intensity of the display
LCD brightness	Off/On	On		Switch display backlight ON/OFF
LCD status	1 - 5	1		<p>Since the display is the biggest consumer, while it is not being operated, it switches into a power-saving mode (only displaying the time and date).</p> <p>In the interests of saving even more power to increase battery life, the parameter [LCD Status] will switch off the display altogether when the controller is in certain states:</p> <ol style="list-style-type: none"> 1: Display ON 2: Display ON, with heating programme enabled 3: Display ON, if demand exists for heating 4: Display ON/OFF with time interval (10s OFF/ 5s ON) 5: Display OFF <p>If a control is operated, the display switches back on automatically.</p>

*) OV = Own values: space to enter you settings for each parameter in the system

Hot water

Parameter	Value range	Default	OV*)	Comments
1x hot water	Off/On	Off		<p>On => The tank is enabled for charging (e.g. for showering outside hot water time periods).</p> <p>Charge begins when "Target temperature 1" is fallen below by the switching hysteresis.</p>

*) for KM1/6/9 and bus code 00/01 only

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Heating circuit 2

Parameter	Value range	Default	OV	Comments
Target room temp. 1 *)	5°C - 40°C	20°C		Adjust the desired room temperature Target room temp. 1 => operates during the first enable time, Target room temp. 2 => operates during the second enable time, Target room temp. 3 => operates during the third enable time of the heating programme active for this heating circuit.
Target room temp. 2 *)	5°C - 40°C	20°C		
Target room temp. 3 *)	5°C - 40°C	20°C		
Reduction temp. *)	5°C - 40°C	15°C		Desired room temperature for nighttime heat reduction
Away temp.	5°C - 40°C	15°C		Desired room temperature during the holidays
BoB value	0K - 20K	0K		At a value >0, no burner is permitted to start up, provided that the room temperature is still above the set target room tem- perature (BoB value). This function can be influenced by external, alternative energy-producing appliances, which have a bus connection (e.g. SD3 CAN)!
Day heating threshold	----, (-5)°C - 40°C	19°C		Only applicable if the function is activated => setting "Specialist/Heating circuit/Pump function = Heating thresholds => Pump switching according to heating threshold" If the outdoor temperature measured and determined by the controller exceeds the heating threshold set here, the heating will lock, the pumps shut off and the mixers close. The heating will be enabled again if the outdoor temperature falls below the set heating threshold by 1K (= 1°C).
Night heating threshold	----, (-5)°C - 40°C	10°C		Day heating threshold => operates during heating periods Day heating threshold => operates during reduction periods "----" => Heating threshold is deactivated. The circulation pump is switched in accordance with the default function (see chapter "Circulation pump switching")

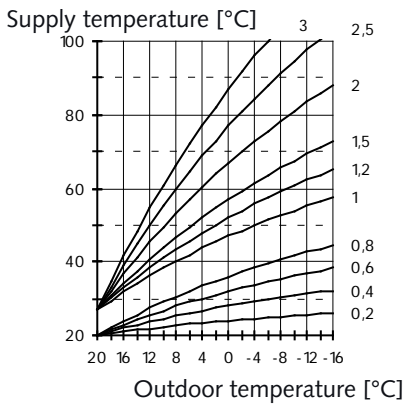


NOTE

At commissioning, check
the heating circuit curve
setting:
Setting 1.20 to 0.6

*) or depending on the function selected in the Specialist => "HC function" sub-menu
for the heating circuit, also
Const. day supply temp. (constant supply temperature, heating periods)
Const. night supply temp. (constant supply temperature, reduction periods)

Heating circuit 2 (continued)

Parameter	Value range	Default	OV	Comments
Heating curve	0.00 - 3.00	1.20		<p>The curve's slope indicates by how many degrees the supply temperature will change if the outdoor temperature rises or falls by 1 K. Information on adjustment: With cold outdoor temperatures and a low room temperature => increase heating curve (and vice-versa) With high outdoor temperatures (e.g. 16°C) and a low room temperature => correction using the target room temperature</p> <p>Heating curve diagram (adjustment aid)</p>  <p>Setting 0 => Purely room-based regulation The heating curve is best adjusted when the outdoor temperature is below 5°C. Changing the heating curve setting must be carried out in small steps and in larger time intervals (at least 5 to 6 hours), because the system must first adjust to the new values after every change in the heating curve.</p> <p>Reference values: - Floor heating S = 0.4 to 0.6 - Radiator heating S = 1.0 to 1.5</p>
Heating curve adaptation	OFF/ON	OFF		<p>Only active when the analogue room device FBR (room sensor + mode selection) and an outdoor sensor are connected. Function to automatically set the heating curve Start-up requirements: - Outdoor temperature < 8°C - Operating mode Automatic (I or II) - Duration of the reduction phase at least 6 hours</p> <p>The current room temperature is measured at the beginning of the reduction period. This temperature is used over the following 4 hours as the target value for room-based regulation. The heating curve is calculated from the values captured by the controller in this time period for the target supply temperature and outdoor temperature. If adaptation is interrupted, e.g. by a start-up unloading device or the hot water demand of an external heating circuit, the warning triangle appears on the display until the function has been successfully performed on the following day or, for example, until operation is ended by adjusting the operating mode switch. The controller's water heating and warm-up optimisation functions are blocked during adaptation.</p>

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Heating circuit 2 (continued)

Parameter	Value range	Default	OV	Comments
Room influence	00 - 20	10		<p>The room sensor influence is only active when the analogue room device FBR (room sensor + mode selection) is connected.</p> <p>The HA temperature is increased by the set value if the desired room temperature is fallen below by 1K. => High values will result in rapid regulation with large variations in HA temperature.</p> <p>- - - => Purely weather-based regulation 0 => Purely weather-based regulation *) 20 => Purely room-temperature-based regulation</p>
Room sensor adj.	(-5.0)K - (5.0)K	0.0K		In the case of room-temperature-based regulation, the measurement can be corrected (adjusted) using this setting value, if a measuring error occurs in the connected room sensor.
Warm up opt.	Off, Outdoor temp., Room temp.	Off		<p>Warm-up optimisation activates the function to automatically bring forward the start of the heating period. Example: Heating programme 6:00am – 10:30pm OFF: at 6:00am the heating in the property is switched on. ON: based on the weather and the current room temperature, the heating is switched on early enough to ensure that the property reaches the set target room temperature at 6:00am.</p> <p>00 => no bringing forward the start of heating 01 => brought forward based on the weather 02 => brought forward based on the room temperature Warm-up optimisation only takes place if the reduction period of the heating circuit is at least 6 hours.</p>
Max. warm-up time	0:00 - 3:00 [h]	2:00 [h]		<p>Bringing the start of heating forward by the maximum amount is only active if "Warm-up optim. = Outdoor temp. or Room temp". The start of heating is brought forward by no more than this amount.</p>
Reduction opt.	0:00 - 3:00 [h]	0:00 [h]		<p>Automatic optimisation of the locking of the burner at the end of the set heating period. During the set heating period before the heating ends (for the last heating period only), the burner is no longer started if it is not already in operation. Function prevents the heating appliance from heating up for a short period at the end of the heating period.</p>
PC enable	0000 - 9999	0000		Code no. to allow access to the heating circuit data via PC "0000" => access is blocked.

*) Special function for room influence = 0

If there is a one-off demand for heating during the night reduction period, the heating circuit pump continues to run until the next heating period (see chapter Circulation pump switching).

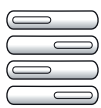
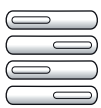
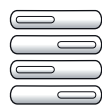

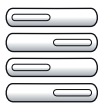
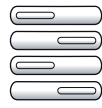
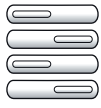

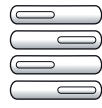

Time programmes menu

All time programmes can be set in this menu.

Adjusting a time programme

Parameter	Comments
Programmes with the controller at its maximum configuration	
Heating circuit x Prog 1	1st heating programme
Heating circuit x Prog 2	2nd heating programme
Hot water	Programme for hot water charging

Adjusting a time programme works as follows:


 Press the "Time programme" F-key	 Select the block with F-key [OK] => „06:00 -- 08:00“, „16:00 -- 22:00“, --:-- --:--„	 Select the next time using the F-key [==>]
 Choose the desired time programme using the rotary knob => e.g. "Heating circuit x Prog 2"	 Select Time with the F-key [==>] => „06:00 -- 08:00“, „16:00 -- 22:00“, --:-- --:--„	 Use the F-key [OK] to save the new programme
 Use the F-key (in this case the second key down) to select the time programme => "Heating circuit x Prog 2" "Monday"	 Adjust the time with the rotary knob => „06:00 -- 08:00“, „17:00 -- 22:00“, --:-- --:--„	 Use the F-key [Cancel] to leave the block without saving
 Use the rotary knob to choose the day of the week or block => e.g. "Mon - Fri" (Monday - Friday)		

Heating circuit

Heating programme 1 => Factory setting:

Mon to Fri: 6:00am to 10:00pm

Sat and Sun: 7:00am to 11:00pm

	Heating period 1	Heating period 2	Heating period 3
Mon			
Tues			
Wed			
Thurs			
Fri			
Sat			
Sun			


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Heating circuit (continued)

Heating programme 2 => Factory setting:

Mon to Fri: 6:00am to 8:00am, 4:00pm to 10:00pm

Sat and Sun: 7:00am to 11:00pm


 Heating period 1	Heating period 2		Heating period 3	
Mon				
Tues				
Wed				
Thurs				
Fri				
Sat				
Sun				

Hot water

Factory setting:

Mon to Fri: 5:00am to 9:00pm

Sat and Sun: 6:00am to 10:00pm

 Heating period 1	Heating period 2		Heating period 3	
Mon				
Tues				
Wed				
Thurs				
Fri				
Sat				
Sun				

Time/Date menu

Various values (parameters) are summarised here for the user, in order to provide quick access.

Parameter	Function	Comments
Time (hh:mm)	Set hour, F-key [==>], hh:mm, set minutes	<p>(Not with a time master or DCF in the system) The clock may lose up to 2 minutes each month (if necessary, please correct the time). If a DCF receiver is connected, the correct time is always displayed. Time master for all controllers If one controller in the heating system has been set as a time master (to provide the time for all controllers, see Specialist/System) or if a DCF (radio time receiver) is installed in the system, the option to enter the time is hidden on all the other controllers. A maximum of one time master can be set on the bus.</p>
Date (dd. Month yy)	Set year, F-key [<==], set month, F-key [<==], set day	Please set the year and month first. Then the correct number of days in the month is calculated for the selected values.
Start holiday (dd. Month yy)	Set date for start of holiday period	<p>Holiday function Please do not enter the date of your departure as the start date, but rather the first full day of the holiday (the heating will be switched off on this day). Please do not enter the date of your return as the end date, but rather the last day on which the heating should be switched off. When you arrive home, your residence and the water for your shower should already be warm. Cancel the holiday function => e.g. if you arrive home prematurely, by pressing the Programme key.</p>
End holiday (dd. Month yy)	Set date for end of holiday period	
Start daylight savings (dd. Month)	Set date for start of daylight savings time	<p>Automatic daylight savings switchover The current day of the week is calculated automatically. You can check this using the freely selectable additional indicator on the standard display => setting to "Day of the week". The automatic daylight savings switchover is made possible by entering the date. The default setting is for central European time zones. It need only be changed if legislation is passed to change the date on which daylight savings takes effect. The earliest date on which the switchover will take place must be set. The controller will carry out the switch change on the Sunday following the set date at 2:00 or 3:00 in the morning. If you do not want the switchover to take place, please set the Stop month to the Start month and the Stop day to the Start day.</p>
End daylight savings (dd. Month)	Set date for end of daylight savings time	

REMKO WIRELESS REMOTE CONTROL FOR MULTITALENT HEAT PUMP MANAGER

Service menu

Values (parameters) are summarised here in order to enable quick access for customer service.

Parameter	Comments
Software number XXX.XX	Software number with index (please provide if you have any problems/questions about the controller)
Reset user	Reset all user parameters to factory settings
Reset specialist (only with code no.)	Reset all specialist parameters to factory settings
Reset time programme	Reset all time programmes to factory settings
Communication KM	Heating appliance on the bus
Communication MM	Mixer module on the bus

Specialist menu

These settings for use by specialists can only be modified after entering the code no.

The code number is entered as follows:

⚠ CAUTION
Setting these values wrongly could lead to malfunctions and damage to the system.



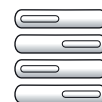
Set the first figure with the rotary knob.



Set the third figure with the rotary knob.



Select the next figure using the F-key [==>]



Select the next figure using the F-key [==>]



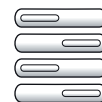
Set the second figure with the rotary knob.



Set the fourth figure with the rotary knob.



Select the next figure using the F-key [==>]



Save the code number with the F-key [OK]

System

Parameter	Value range	Default	OV	Comments
Change code	0000 - 9999	0000		This is where you can change the default code number [0000] => protection against unauthorised access.
Bus code 1	(00), 01-15	01		<p>Bus code 1 (=> Heating circuit number)</p> <p>The heating circuits are numbered sequentially, starting with "01". Heating circuit numbers must not be assigned more than once. However, please set the exact same heating circuit numbers in replacement controllers as were used in the controller which was replaced.</p> <p>During commissioning, each wireless remote control must first be taught in with the corresponding HF-CAN. After setting the bus code, the wireless remote control goes into registration mode. For registration to work, the HF-CAN must also be in registration mode (see HF-CAN installation instructions).</p> <p>The display of the wireless remote control displays the selected bus code and the field strength.</p> <p>If ("--") is shown for the field strength, there is no HF-CAN within range and in registration mode.</p> <p>Sufficient reception quality is guaranteed in a range from 0 to (- 80) dBm.</p> <p>If the field strength indicator is < (- 80) dBm, e.g. (- 96) dBm, check the installation position of the HF-CAN and the position of the wireless remote control and modify as necessary. If it is not possible to obtain a better connection, you can test to determine whether the field strength is still sufficient for the exchange of data to occur. For more instructions, see the "HF-CAN installation instructions"</p>

*) With an appropriate KM only

REMKO WIRELESS REMOTE CONTROL FOR MULTITALENT HEAT PUMP MANAGER

System (continued)

Parameter	Value range	Default	OV	Comments
Min limit *)	00 = On 01 = Off 02 = Permanent	00		<p>HA minimum limit (not in cascade operation) Reduces condensate formation in the HA when demand for heat is low. Shut-off of the HA takes place in all cases at the earliest when HA minimum temperature (HA1 min temp.) + Hysteresis (5K) is reached.</p> <p>00 = minimum limit on heating curve The HA switches on once the temperature falls below that required by the consumers.</p> <p>01 = minimum limit if demand exists for heating If demand exists for heating (pump enabled), the HA maintains at least the set minimum temperature HA1 min temp.</p> <p>02 = permanent minimum limit (24h) The HA maintains the set minimum temperature (HA1 min temp.) for at least 24h.</p>
Hysteresis *)	5 - 20K	5K		<p>Function to optimise heating appliance operation at various levels of demand.</p> <p>After the burner is switched on, the effective switching hysteresis is reduced linearly from the set hysteresis to the minimum hysteresis (= 5K) during the hysteresis period "Hyst. period".</p> <p>Low heat transfer In this case, the hysteresis which is set higher is effective. This prevents short runtimes and frequent synchronising of the burner.</p> <p>High heat transfer In the case of extended burner operation (high heating load), the hysteresis is automatically reduced to 5K. This prevents the heating appliance from heating up to unnecessarily high temperatures.</p>
Hysteresis period *)	0 - 30 min	10 min		
Clock inhibition *)	0 - 30 min	0 min		
Burner 2 hyst. *)	2K - 20K	2K		<p>Idle time of the second burner stage</p> <p>Hysteresis for second burner stage Switches on the 1st burner stage if the temperature of the heating appliance falls below the target temperature. Switches off the 1st burner stage if the target temperature is exceeded by the HYSTERESIS.</p> <p>Switches on the 2nd burner stage - after the 1st burner stage starts - and the temperature falls below the target by 5K (= start the idle time / enable 2nd burner stage) - and the idle elapses</p> <p>Switches off the 2nd burner stage if the target temperature is exceeded by the HYSTERESIS.</p> <p>Switches the 2nd burner stage back on if the temperature of the heating appliance falls below the target temperature. Switches off the 1st burner stage when the 2nd stage is enabled after the target temperature has been exceeded by [HYSTERESIS + BURNER 2 HYST.]</p>

*) With an appropriate KM only

Hot water *)

Parameter	Value range	Default	OV	Comments
Charge pump lock	Off/On	On		The charge pump is only switched on once the HA temperature has exceeded the tank temperature by 5K. It is switched off when the HA temperature falls below the tank temperature. This prevents cooling of the tank by the HA at the beginning of water heating.
PPO	HW partial priority, On, Off, PPO all	HW partial priority		<p>Pump parallel operation</p> <p>HW partial priority: the heating circuits are locked during water heating. The mixers close and the heating circuit pumps switch off. The mixer circuits are enabled again once the HA has reached the hot water target temperature + HA target increase [HW temp. + HA HW temp.]. The mixer circuits lock again if the HA temperature falls below the enable temperature by the amount of the switching hysteresis [HW hysteresis].</p> <p>On => pump parallel operation: Only the direct heating circuits are locked during water heating. The mixer circuits continue to be heated. The water heating is extended with this function.</p> <p>Off => hot water priority mode: the heating circuits are locked during water heating. The mixers close and the heating circuit pumps switch off.</p> <p>PPO all => pump parallel operation also for the direct heating circuit: all heating circuits continue to be heated during water heating. The water heating is extended with this function. If the HA temperature exceeds the maximum supply temperature of the direct heating circuit by 8K, the heating circuit pump of this circuit is switched off (overheating protection). The heating circuit pump switches on again if the HA temperature falls below the temperature [maximum supply temperature + 5K].</p>
HA HW temp.	0K - 50K	20K		<p>Target increase during HW mode)</p> <p>Heating appliance target temperature during water heating = Hot water target temperature + HA HW temp.</p> <p>The HA must be operated at an increased temperature during water heating so that the hot water temperature in the tank can be reached with the heat exchanger!</p>

*) Only with KM and bus code 00/01

REMKO WIRELESS REMOTE CONTROL FOR MULTITALENT HEAT PUMP MANAGER

Heating circuit 1/2

Parameter	Value range	Default	OV	Comments
HC function	Default, Const. supply temp.	Default		<p>Heating circuit function selection Default => default heating circuit Const. supply temp. => regulation based on fixed supply temperatures</p> <p>During the heating periods (see heating programme), the heating circuit is operated with set fixed supply temperature [Day supply temp.]; during reduction periods on the other hand, it is operated accordingly with set fixed supply temperature [Night supply temp.]. These parameters appear after selecting [Const. supply temp.] in the User menu under Heating circuit.</p>
HCP operation	Default, Heating limits, Time prog. only, Continuous operation	Default		<p>Pump operating mode The circulation pumps are shut off if there is no heating requirement. Mixers are closed at the same time => "The heating circuit is shut off". (Switch on with 1K hysteresis)</p> <p>Default => default circulation pump switching</p> <ul style="list-style-type: none"> - Room-based regulation OFF: Room temperature > Set room target value + 1K - Weather-based regulation during heating mode OFF: Outdoor temperature > Set room target value - Weather-based regulation during reduction mode (Room influence =0) OFF: The switching off takes place during the transition to reduction mode. After switching on, the pump runs continuously. ON: Room temperature < Room target value (Room influence = "--") OFF: Target supply temperature < 20°C. <p>Heating limits => pump switching based on heating limits</p> <ul style="list-style-type: none"> - Heating period OFF: Outdoor temperature < Set day heating limit - Reduction period OFF: Outdoor temperature < Set night heating limit <p>Time prog only => pump switching based on heating programme</p> <p>Heating period: pump is ON; heating circuit is free Reduction period: pump is OFF; heating circuit is locked</p> <p>Continuous operation The pump runs 24hrs a day! The heating circuit is continuously free.</p>

Heating circuit (continued)

Parameter	Value range	Default	OV	Comments
Max supply temp.	20°C - 110°C	55°C		<p>The calculated target supply temperature for the heating circuit is limited by the set maximum supply temperature (overheating protection).</p> <p>The heating circuit pump for the direct heating circuit is only switched off if the HA temperature exceeds the set maximum supply temperature by 8K. The heating circuit pump is switched back on again if the HA temperature falls below the temperature [maximum supply temperature + 5K]!</p>
Min supply temp.	10°C - 110°C	18°C		<p>The calculated target supply temperature for the heating circuit is increased to the set minimum supply temperature (e.g. for air heating).</p>
Frost protection temp.	----;(-15)°C – (5)°C	5°C		<p>If the outdoor temperature falls below the programmed value, the system switches into frost protection mode (pumps switch on). "----" Frost protection function is deactivated!</p>
Outdoor temp. delay	0:00 - 24:00	1:00		<p>The outdoor temperature delay selected must take the building design into account. Because a change in outdoor temperature subsequently impacts the room temperature, for a building of heavy construction (thick walls), a long delay must be selected. For a building of lightweight construction (in which the walls do not store heat), the delay should be set to (0 hrs).</p>
Curve distance	0K - 50K	0.0K		<p>Heating curve distance The required HA temperature for a mixer circuit is calculated by adding the calculated target temperature for the heating circuit supply to the heating curve distance. The heating curve distance equalises sensor tolerances and heat losses as far as the mixer.</p>
Demand requirement	Off/On	On		<p>Enable the circuit On => The heating circuit can be used with higher-level functions (e.g. cooling function of a heating appliance to protect against overheating; heat dissipation in service mode) as a heat sink/consumer. The heating circuit is heated to the set maximum supply temperature for the duration of the function.</p>
I-controller	Off, 3:00am - 0:15am	Off		<p>Integrated controller part (e.g. 30 min) If there is a difference in room temperature of 1K for the set period, the supply temperature is increased by the value "Room sensor influence". Usual value: "30 min".</p>

REMKO WIRELESS REMOTE CONTROL FOR MULTITALENT HEAT PUMP MANAGER

General mode of operation

Heating circuit regulation

Weather-based regulation

The set heating curve is used to determine the boiler or supply temperature appropriate to the measured outdoor temperature, such that with a properly configured heating system in the reference room, approximately the set room target temperature value is achieved.

=> The precise setting of the heating curve is extremely important for weather-based regulation.

The circulation pump is regulated based on the weather. The circulation pump is switched on when there is demand for heating and in frost protection mode.

Room sensor influence

The current room temperature can be factored into the calculation of the required supply temperature by installing a room temperature sensor. The influence factor (parameter list) can be set between 0 (regulation purely based on the weather) and 20 (room temperature-based regulation with only a slight influence from the outdoor temperature). In the position "----" room temperature-based regulation is deactivated. The positions "----" and "0" show differences for demand-oriented circulation pump switching.

Water heating

The hot water programme of the control module affects Hot water target temperature I of the connected main controller. The hot water programme of the main controller is a separate programme.

Frost protection function

The frost protection mechanism prevents the heating system from freezing by automatically switching on heating mode.

Outdoor frost protection sensor

If the measured outdoor temperature drops below the set

frost protection temperature, the room target temperature for the corresponding heating circuit is set to 5°C. The heating circuit is enabled:

- Pumps are switched on
- Request for heat is sent to the boiler

"----" => Outdoor frost protection sensor is deactivated
The function is cancelled if the outdoor temperature climbs above the set frost protection temperature by 1K.

Frost protection via the room sensor

If the room temperature drops below 5°C, the frost protection function is activated. The room target temperature for the corresponding heating circuit is set to 5°C. The heating circuit is enabled:

- Pumps are switched on
- Request for heat is sent to the boiler

EEPROM check

Every 10 minutes, an automatic check is performed to determine that the settings values of the controller are within the specified limits. If a value is found to be outside of the limits, then it is replaced by the associated default value. Error 81 appears in the Favourites line on the standard display to indicate that a value exceeded the permissible range. In this case, the user should check the key settings of the controller. The warning symbol goes out after the unit is restarted (RESET).

Circulation pump switching

Heating demand-dependent switching

Demand-dependent circulation pump switching shuts down the circulation pumps if there is no demand for heating. At the same time, the mixers are closed.

Condition for shutdown:

Room temperature-based regulation

The room temperature exceeds the set target value.

Weather-based regulation

The outdoor temperature exceeds the target room temperature value or the target supply temperature value by 20°C.

NOTE

If the room sensor influence is "0", after a one-off demand for heating during the reduction period, the pump runs continuously.

Pump lag

When the circulation pumps are shut down, there is a lag period of 5 minutes, if the burner was switched on in the last 5 minutes before the pump shutdown.

Pump seizing protection

The controller effectively prevents the pumps from seizing due to extended shutdown periods. The integrated protection function switches on all pumps, which have not been run in the past 24 hours, daily at 12:00pm for 5 seconds.

Mixer seizing protection

If the mixer has not moved for 24 hours, it is fully opened once at approx. 3:00am. During this time, the heating circuit pump is switched off. The maximum supply temperature is monitored. The process is cancelled if maximum supply temperature – 5K.

Troubleshooting and customer service

General troubleshooting information

If the system does not operate correctly, first check the cabling in the controller and controller components.

The wireless remote control must be registered properly with a field strength between 0 and (-80) dBm. Bus connection (see Service menu)

In control panels on connection to the mixer => Communication MM = On

In control panels on connection to the heating appliance => Communication KM = On

In the boiler controller on connection to the control panel => Displays the room temperature and hides the current target room temperature

“----” (see “Display/Heating circuit”)

In the mixer expansion controller on connection to the boiler controller => Displays the outdoor and the boiler temperature (see “Display/System”) on the control panel => Displays the room temperature and hides the current target room temperature “----” (see “Display/Heating circuit”)

Restart / Reset

Restart

1. Remove the battery and turn the rotary knob.
2. Refit the battery. Use the F-key [4] [Continue] to ignore or cancel the message “Bus code assigned”.

Reset

1. For individual parameters using F-key [3] = [Default]
2. For the menus User, Specialist or Time programmes, this can be selected via the Service menu, e.g. “Reset time programme” menu item, then adjusting the value from Off to On with the rotary knob and the pressing the F-key [4] = [OK]. The unit restarts.
3. For the unit as a whole (incl. all parameters), remove battery and turn the rotary knob. When reinserting the battery, hold down the Home key.

The units and components are manufactured using state-of-the-art production methods and tested several times to verify their correct function. However, if malfunctions should occur, please check the functions as detailed in the list below. Please inform your dealer if the unit is still not working correctly after all function checks have been performed!

Malfunctions

Error	Possible cause	Checks	Remedial measures
Pumps do not switch off	Operating mode / settings changed	Check operating mode / settings	Check operating mode => Default (☀ set?). Check “HCP OPERATION” setting value (default 00).
Pumps fail to switch on	Operating mode / time and heating programme / pump switching / heating thresholds / room temperature-based regulation changed	Check operating mode / time and heating programme / pump switching / heating thresholds / room temperature-based regulation	Check operating mode => Default (☀ test). Check time and heating programme => Heating period Check pump switching => Type of pump switching Default => Outdoor temperature > Room target temperature? Heating thresholds => Outdoor temperature > Valid heating limit? Room-temperature-based regulation => Room temperature > Target temperature + 1K Additional test with the relay test function of the controller.
Error number 81	Change in the tank of the controller (e.g. due to EMC)	Check all settings values	Check all settings values, then restart!
Other error numbers	Error caused by boiler or mixer controller	Check the meaning of these error in the corresponding error tables	Look up the meaning in the boiler error tables

REMKO WIRELESS REMOTE CONTROL FOR MULTITALENT HEAT PUMP MANAGER

Error indication by code

Only the error with the highest priority is displayed.

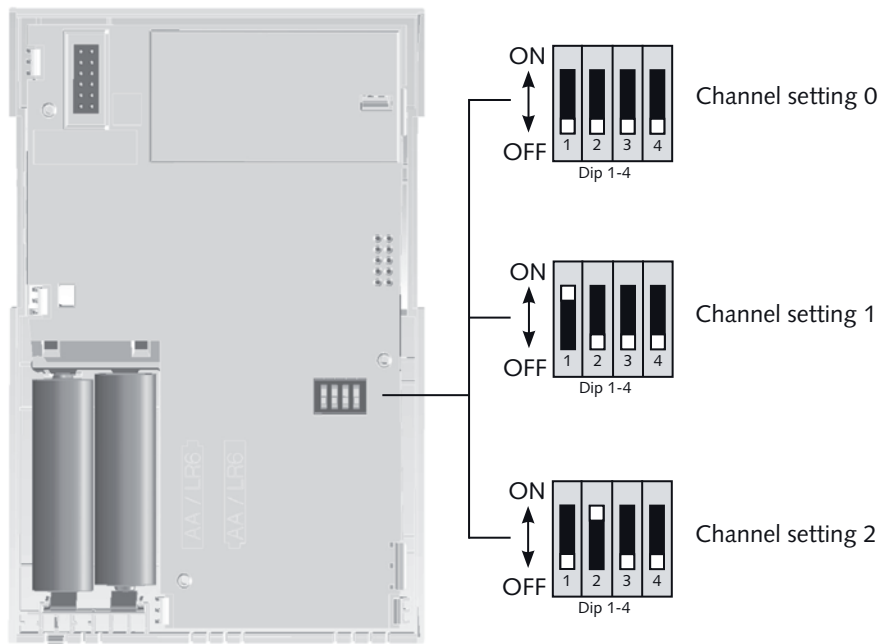
- The message "Error" appears on the standard display and the error number in the Favourites line.
The error can be rotated out of view and rotated back into view on the display => see Favourites.
- In the Display menu, at the end of the System sub-menu the parameter Error appears, which displays the latest error.

Type of error	Code	Cause	Required action
Communications error	E 90	Addr. 0 and 1 on bus	Bus codes 0 and 1 may not be used simultaneously
	E 91	Bus code assigned	The set bus code is already being used by another device
	E 241	No communication with HA	Check range from HF-CAN
Internal error	E 81	EEPROM error. The invalid value has been replaced by the default value	Check parameter values!
Sensor error (break/short-circuit)	E 67	Collector sensor 2	Contact specialist dealer
	E 68	Collector sensor 1	Contact specialist dealer
	E 69	Supply sensor, HC2	Contact specialist dealer
	E 70	Supply sensor, HC1	Contact specialist dealer
	E 75	Outdoor sensor	Contact specialist dealer
	E 76	Tank sensor	Contact specialist dealer
	E 77	Boiler sensor	Contact specialist dealer
	E 78	Collector sensor	Contact specialist dealer
	E 79	Sensor, multifunction relay 1	Contact specialist dealer
	E 80	Room sensor, HC1	Contact specialist dealer
	E 83	Room sensor, HC2 / Lower buffer sensor / Swimming pool sensor	Contact specialist dealer
E 84	Humidistat	Contact specialist dealer	
Message	W 85	Battery needs changing	Insert new batteries

Installation

Assembly

1. Secure the base to the wall.
2. Setting the channel:
On the back of the wireless remote control the channel (0 – 2) must be set, while the batteries are removed.
The setting must match that on the HF-CAN.
3. Insert the batteries.
4. Snap the top of the controller into place; to do so, position/hook in the left-hand side so it is centred and then pivot the right-hand side down onto the base using light pressure and engage.



Disassembly

1. Lift the upper section off the base on the right-hand side.
2. Unscrew the base from the wall.

The dimensions of the unit are: 147mm x 97mm x 32mm
The mounting holes are suited for fitting to a switch box
A cable feedthrough is provided.

Commissioning

The following steps must be followed when commissioning:

1. Read this manual carefully before commissioning.
2. Fit the controller (see chapter "Installation").
3. Wait until the message Installation appears on the display.
4. Start installation with the F-key [4] = OK.
5. Set the value with the rotary knob.
6. Press F-key [4] = OK => Saves the value and moves to the next value.
7. Continue until installation is complete => Standard display
8. Set the Programme switch to the desired operating mode, e.g. Automatic 1 (see chapter "Operation/Mode selection")

BUS CODE (heating circuit number):

The heating circuits are numbered sequentially, starting with "01". Heating circuit numbers must not be assigned more than once. Please only use "00" for replacement controllers (see chapter "System bus"). For information on registration, see chapter "Specialist menu".

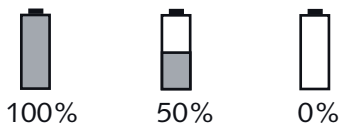
In the Commissioning menu, all values must be entered successively – without interruption!

Values	Required action
English	Set language, then "OK"
Set time	1. Hour then "==" 2. Minute then "OK"
Set date	1. Year then "<==" 2. Month then "<==" 3. Day then "OK"
Bus code (see chapter System bus)	Enter number for heating circuit: 00-15 => Default 01, then "OK"
Registration	Registration on the HF-CAN

REMKO WIRELESS REMOTE CONTROL FOR MULTITALENT HEAT PUMP MANAGER

Changing the battery

If the battery symbol shown below displays 0%, the battery should be changed within the next week.



System bus

Heating system bus system

This controller can be expanded modularly by connecting additional modules to the integrated bus. As supplied, the system can be used to control the following components of a heating system

- 1-8 Heating appliances (modulating or switching)
- 1-15 Mixed weather-based heating circuits
- 0-15 Room controller (digital or analogue)
- 1 Solar energy system (2 collectors, 2 tanks)
- 1 Solid fuel boiler

The different components are simply connected to the system bus. The modules register with the system automatically and search for their communication partners using the set bus code (heating circuit number or boiler number).

Bus code

On mixer controllers and control panels

The bus code (00-15; parameter in the Specialist menu) is a means of numbering the system's heating circuits. Each control module and each mixer module contains the number of the associated heating circuit, in the form of a bus code.

- Heating circuit numbers (00-15) must not be assigned twice.
- Heating circuit numbers 00 and 01 must not both be used at the same time.
- The heating circuits are numbered sequentially, starting with "01".
- Please only use heating circuit number 00 for replacement controllers, if "00" has been used in the replaced controller.

Preassigned numbers

Heating circuit 1 → 01



NOTE

After setting all bus codes, the heating system must be fully powered down once.

Technical data

Radio frequency	MHz	868,0 - 868,6
Max. transmission power	mW	4
Supply voltage		2x LR6 alkaline cell
Power consumption	mA	0,15
Protection category in accordance with EN 60529	IP	40
Protection class according to EN 60730		III
Permitted ambient temperature during operation	°C	0 - 50
Permitted ambient temperature in storage	°C	-20 - +60
Permitted humidity, non-condensing	R.H. in %	95

The range is approx. 300 m in the open air, i.e. the range if there is visual contact between the transmitter and receiver. However, in real-world conditions, there are walls, ceilings, etc. between the transmitter and the receiver, which reduces range accordingly.



NOTE

Although the product only emits relatively weak radio signals, these can still cause malfunctions to life-sustaining systems (e.g. medical devices).



NOTE

Radio signals from unrelated devices, e.g. cordless telephones or mobile phones can impair the transmission of the wireless remote control and the receiver.

Notes

A series of 18 horizontal light green bars, stacked vertically, providing a space for writing notes. Each bar is uniform in color and width, and they are separated by small gaps.

Notes

A series of 18 horizontal light green bars, stacked vertically, intended for writing notes. Each bar is a solid, uniform light green color and spans most of the width of the page.

REMKO INTERNATIONAL

*... and also right in your neighbourhood!
Take advantage of our experience and advice*



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Consultation

Thanks to intensive training, our consultants are always completely up-to-date when it comes to technical expertise. This has given us the reputation of being more than just an excellent, reliable supplier: REMKO, a partner that helps you find solutions to your problems.

Sales

REMKO offers not just a well established sales network both nationally and internationally, but also has exceptionally highly-qualified sales specialists. REMKO field staff are more than just sales representatives: above all, they must act as advisers to our customers in air conditioning and heating technology.

Customer Service

Our units operate precisely and reliably. However, in the event of a fault REMKO customer service is quickly on the scene. Our comprehensive network of experienced dealers always guarantees quick and reliable service.

