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# **Creating a UFH Heat and Pump Control Program in HomeMatic WebUI**

## **Programming Instructions**

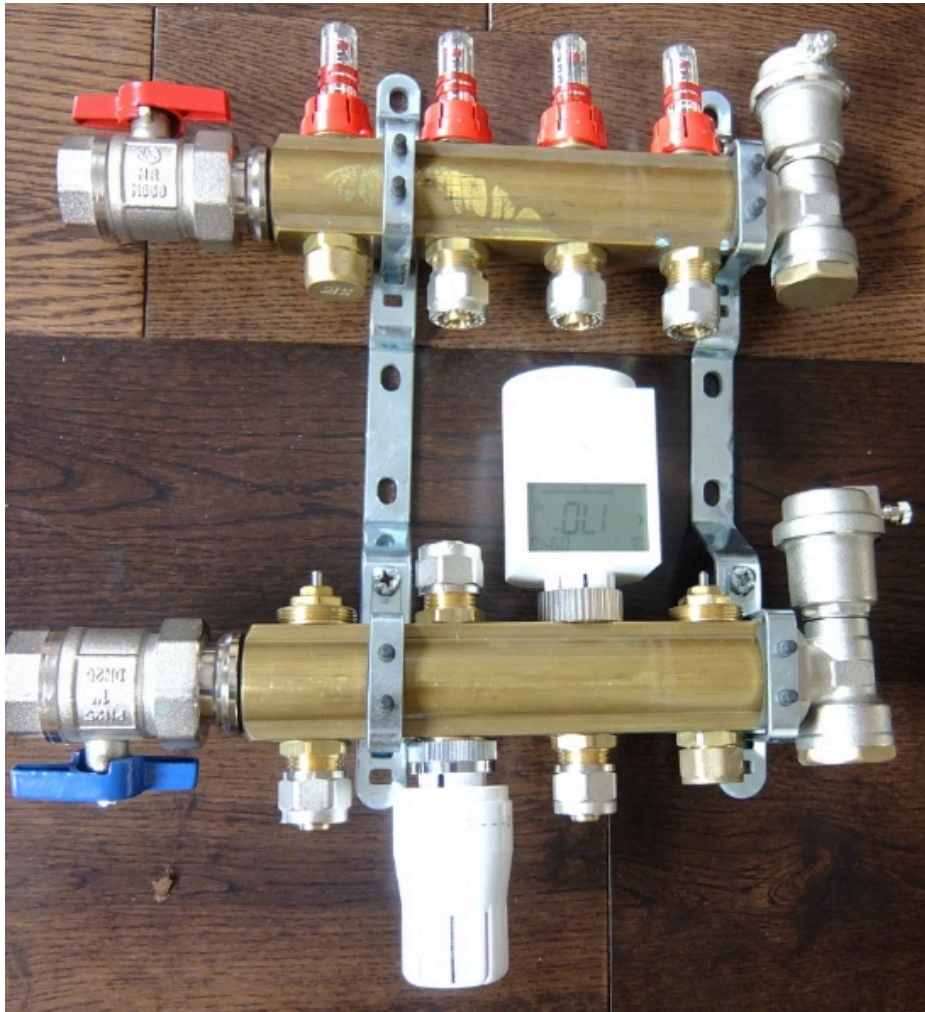
- 1. Installation**
- 2. Teach-In Radiator Thermostats**
- 3. Teach-In Wireless 4 Channel Switch**
- 4. Teach-Out Devices**
- 5. Devices Functions**
- 6. Creating the UFH Pump ON Program**
- 7. Creating the UFH Pump OFF Program**

## 1. Installation

To create a program that controls the heating zones and switches off the recirculation pump when the pre-set temperature is achieved, you will need the following:

- One HomeMatic CCU2 (s.k.u. EHC-HM01);
- One HomeMatic Radiator Thermostat per zone (s.k.u. EHC-HM02);
- One HomeMatic Wireless 4 Channel Switch (s.k.u. EHC-HM07).

Connect the Radiator Thermostats to the return manifold:



Then, connect Channel 1 of the HomeMatic Wireless 4 Channel Switch to the recirculation pump. You can connect the Channel 1 to replace the old room thermostat connectors – if in doubt, please seek professional advice from a qualified electrician.

## 2. Teach-In the Radiator Thermostats (registering them with the CCU2)

First insert the batteries into the Radiator Thermostat housing. The display shows INS and a rotating sun - wait until the pin fully retracts into

the housing (the rotating sun symbol disappears); screw in the Radiator Thermostat onto the valve and press the middle button - the display shows ADJ, meaning the device is memorising the closing point (0% valve opening). Once completed, the display reverts to normal state.

You are now ready to teach-in your device:

- a. Go to the WebUI and press the Teach-In button. The following screen appears

Teach-in devices	
BidCoS -RF (Radio)	<p>BidCoS-RF - Variant 1: Direct teaching-in</p> <p><b>Teach-in mode 55 s active</b> <b>Start teach-in mode</b></p> <p>To activate teach-in mode, click "Start teach-in mode". Teach-in mode remains activated for 60 seconds. Meanwhile, please activate the teach-in mode of the HomeMatic device you want to teach-in as well. The remaining time for teaching-in will be displayed. You will find further information in the operating manual of the corresponding devices.</p>
	<p>BidCoS-RF - Variant 2: Teaching-in with serial number</p> <p>Serial number <input type="text"/></p> <p><b>Teach-in device</b></p> <p>Please enter the serial number and click on the button "Teach-in device".</p> <p><b>Please note:</b> Not every BidCoS-RF device does support teaching-in via serial number.</p>
BidCoS -Wired	<p>BidCoS-Wired - Variant 1: Automatic teaching-in</p> <p>Please start the teach-in mode directly on the device. The device will then be taught-in to the CCU automatically. Further information on the teach-in mode is provided in the respective operating instructions.</p>
	<p>BidCoS-Wired - Variant 2: Search devices</p> <p><b>Search devices</b></p> <p>Please click on the button "Search devices" The CCU will then automatically teach-in all new HomeMatic Wired devices.</p>

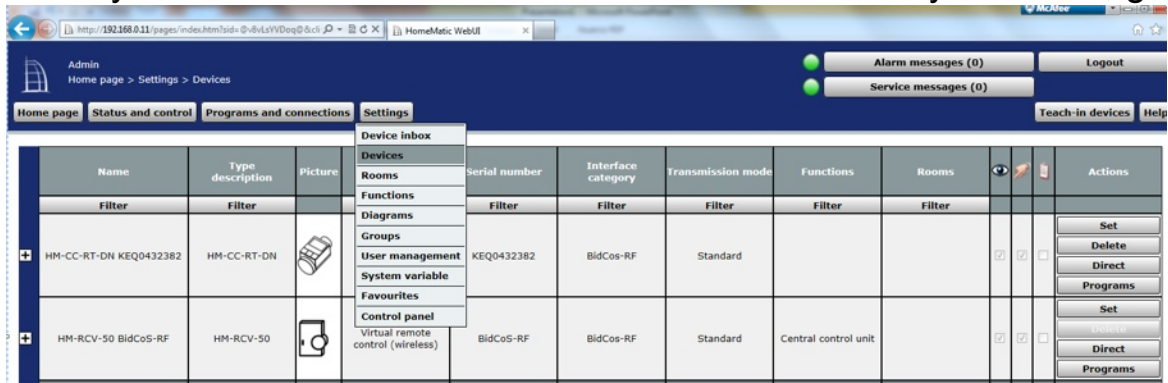
Back
Inbox (0)

- b. Go to the Radiator Thermostat and press-and-hold (for more than 3 sec) the central button (with radiator symbol). The display changes to show a countdown from 30; once a connection is made with the CCU2, the countdown disappears and the normal screen is restored to the Radiator Thermostat screen. In the WebUI, the Inbox button changes to show you have a new device discovered:

Teach-in devices	
BidCoS -RF (Radio)	<p>BidCoS-RF - Variant 1: Direct teaching-in</p> <p><b>Teach-in mode 21 s active</b> <b>Start teach-in mode</b></p> <p>To activate teach-in mode, click "Start teach-in mode". Teach-in mode remains activated for 60 seconds. Meanwhile, please activate the teach-in mode of the HomeMatic device you want to teach-in as well. The remaining time for teaching-in will be displayed. You will find further information in the operating manual of the corresponding devices.</p>
	<p>BidCoS-RF - Variant 2: Teaching-in with serial number</p> <p>Serial number <input type="text"/></p> <p><b>Teach-in device</b></p> <p>Please enter the serial number and click on the button "Teach-in device".</p> <p><b>Please note:</b> Not every BidCoS-RF device does support teaching-in via serial number.</p>
BidCoS -Wired	<p>BidCoS-Wired - Variant 1: Automatic teaching-in</p> <p>Please start the teach-in mode directly on the device. The device will then be taught-in to the CCU automatically. Further information on the teach-in mode is provided in the respective operating instructions.</p>
	<p>BidCoS-Wired - Variant 2: Search devices</p> <p><b>Search devices</b></p> <p>Please click on the button "Search devices" The CCU will then automatically teach-in all new HomeMatic Wired devices.</p>

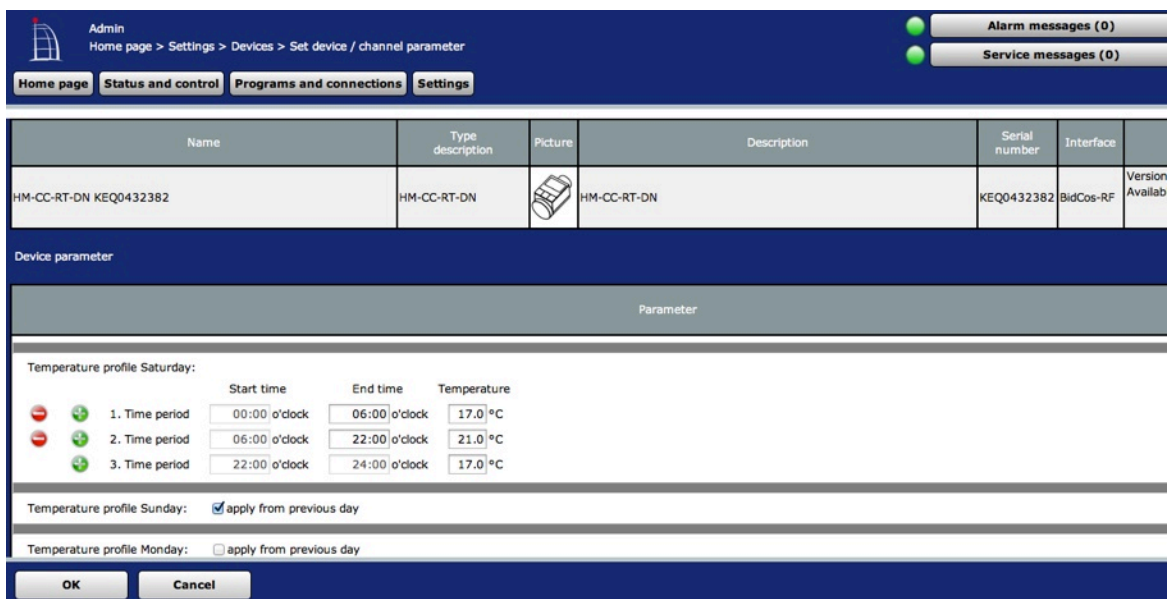
Back
Inbox (1)

Go to your Inbox and click “Done” on the device line. In your Menu, go

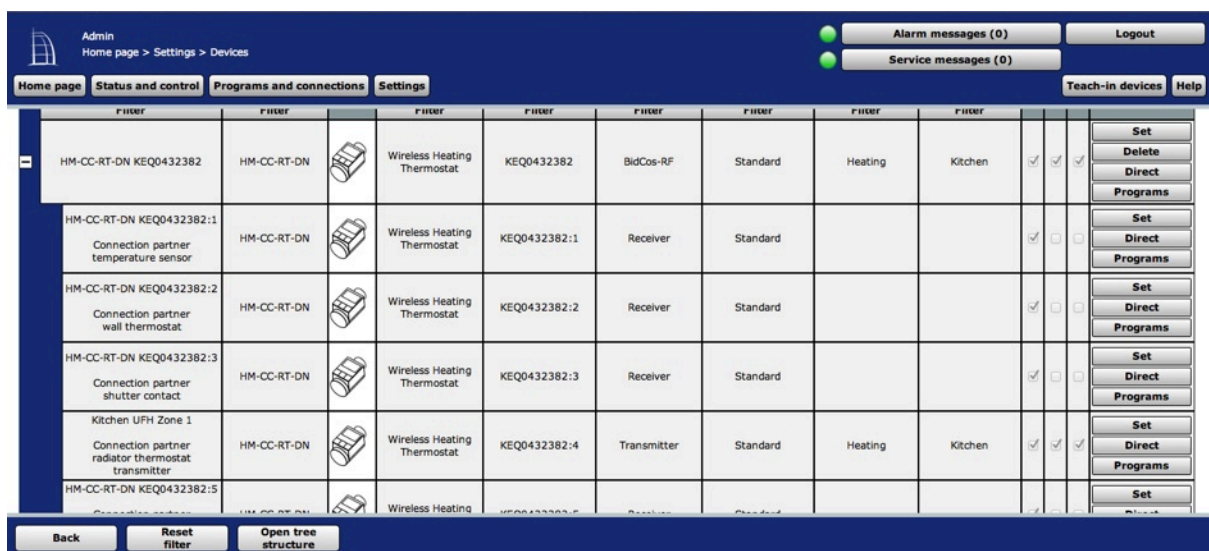


to Settings --> Devices to display all devices;

- c. Enter your Heating Program: Click on the Set button to enter your daily heating program for the zone:



Note: once done, click OK to return to the Devices Screen. Expand the Radiator Thermostat device by clicking the + sign. The following channels are available:





We will use Channel 4 = Connection Partner for Radiator Thermostat Transmitter for our program. Double-click the channel to rename it to *Kitchen UFH Zone 1*, assign it to one/many room(s) and to one/many function(s).

### 3. Teach-In the Wireless 4 Channel Switch.

Repeat the same with the Wireless 4 Channel Switch: after clicking Teach-In button in WebUI, press and hold first button on the Wireless 4 Channel Switch. The LED flashes red twice to confirm connection with the CCU2:

Admin

Home page > Settings > Devices

Alarm messages (0)

Logout

Service messages (0)

Teach-in devices

Help

Home page

Status and control

Programs and connections


Settings

Name	Type description	Picture	Description	Serial number	Interface category	Transmission mode	Functions	Rooms				Actions
Filter	Filter		Filter	Filter	Filter	Filter	Filter	Filter				
HM-CC-RT-DN KEQ0432382	HM-CC-RT-DN		Wireless Heating Thermostat	KEQ0432382	BidCos-RF	Standard	Heating	Kitchen	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<div>Set</div> <div>Delete</div> <div>Direct</div> <div>Programs</div>
HM-LC-Sw4-PCB JEQ0569559	HM-LC-Sw4-PCB		Wireless Switch Actuator 4-channel, PCB	JEQ0569559	BidCos-RF	Standard	Heating Light	Bathroom Bed room Children's room 1 Children's room 2 Utility room Kitchen Living room Home office	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<div>Set</div> <div>Delete</div> <div>Direct</div> <div>Programs</div>
HM-RCV-50 BidCos-RF	HM-RCV-50		Virtual remote control (wireless)	BidCos-RF	BidCos-RF	Standard	Central control unit		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<div>Set</div> <div>Delete</div> <div>Direct</div> <div>Programs</div>

### 4. Teach-Out the devices (deregistering them with the CCU2)

In the event you need to deregister a device, proceed as follows: in WebUI, go to the device and press the “Delete” button – you will get a window like this:

Delete and reset device



Do you really want to delete the device 'HM-LC-Sw4-PCB JEQ0569559'?

Delete options

Teach-out device

The device will be deleted from the HomeMatic CCU.  
Direct connections will be kept.

**Attention: The device is still linked to programs or direct connections!**

Cancel

Delete

Press the Delete button, and then briefly press the button of the device: the RED & YELLOW will flash quickly, then the GREEN one will flash once to confirm deletion. The device is now deleted from your system.

## 5. Devices' functions

The Radiator Thermostat actuator has the following channels / functions available:

- a. Channel 1: Connection Partner temperature sensor (receiver) - used for linking the actuator to an external HomeMatic sensor (like HomeMatic Differential Temperature Sensor SKU EHC-HM06);
- b. Channel 2: Connection Partner Wall Thermostat (receiver) - for use with the HomeMatic Wall Thermostat SKU-HM03;
- c. Channel 3: Connection Partner Shutter (receiver) - future function;
- d. Channel 4: Connection Partner radiator thermostat transmitter (transmitter) - used with CCU2 to create this program.
- e. Channel 5: Connection Partner radiator thermostat receiver (receiver) - used with other devices / programs where the device is used as an actuator.
- f. Channel 6: Connection Partner Button (receiver) - additional tasks.

The Wireless 4 Channel Switch has four channels available for switching ON / OFF. Rename Channel 1 to *Kitchen UFH Pump Relay*:

Admin

Home page > Settings > Devices

Alarm messages (0)

Service messages (0)

Logout

Home page






Status and control

Programs and connections

Settings

Teach-in devices

Help

HM-LC-Sw4-PCB JEQ0569559	HM-LC-Sw4-PCB		Wireless Switch Actuator 4-channel, PCB	JEQ0569559	BidCos-RF	Standard	Heating Light	<div>DECT 1.9 GHz</div> Bed room Children's room 1 Children's room 2 Utility room Kitchen Living room Home office	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<div>Set</div> <div>Delete</div> <div>Direct</div> <div>Programs</div>
Kitchen UFH Pump Relay	HM-LC-Sw4-PCB		Wireless Switch Actuator 4-channel, PCB	JEQ0569559:1	Receiver	Standard	Heating	Kitchen	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<div>Set</div> <div>Direct</div> <div>Programs</div>
Boiler Heating Relay	HM-LC-Sw4-PCB		Wireless Switch Actuator 4-channel, PCB	JEQ0569559:2	Receiver	Standard	Heating Light	Bathroom Bed room Children's room 1 Children's room 2 Utility room Kitchen Living room Home office	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<div>Set</div> <div>Direct</div> <div>Programs</div>
HM-LC-Sw4-PCB JEQ0569559:3	HM-LC-Sw4-PCB		Wireless Switch Actuator 4-channel, PCB	JEQ0569559:3	Receiver	Standard	Light		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<div>Set</div> <div>Direct</div> <div>Programs</div>
HM-LC-Sw4-PCB JEQ0569559:4	HM-LC-Sw4-PCB		Wireless Switch Actuator 4-channel, PCB	JEQ0569559:4	Receiver	Standard	Light		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<div>Set</div> <div>Direct</div> <div>Programs</div>

Back

Reset filter

Open tree structure

## 6. Creating the Under Floor Heating Pump ON Program in WebUI

In the UFH, because of the long pipe length, the heating zones have a separate re-circulation pump. We have created our heating program so now we want to create a program which will start the recirculation pump if there is a heating demand. To do this, press button *Programs and Connections* → *Programs and CCU Connections* and make the following settings:

- In the **IF** section, when Radiator Thermostat has the Valve opened to more than 7% **AND** Channel 1 of the Wireless 4 Channel Switch is OFF;
- In the **THEN** section, select the action for the Wireless 4 Channel Switch Channel to switch immediately to ON;
- Leave the **ELSE** section empty; we will create a separate program for switching off the pump;
- Save your work by pressing OK. You can edit the program at a later time if needed.

The screenshot shows the 'Admin' interface with the breadcrumb 'Home page > Programs and connections > Programs > Programming'. A navigation bar includes 'Home page', 'Status and control', 'Programs and connections', and 'Settings'. Below this is a table with columns 'Name', 'Description', 'Condition (if...)', and 'Channel select'. The first row is for 'UFH Pump ON' with the condition 'Channel status: Kitchen UFH Zone 1 when Valve position within value range more than 7 % trigger when changed' and 'Channel select'. Below the table, the 'Condition: If...' section is expanded, showing two conditions connected by 'AND': 'Kitchen UFH Zone 1 when Valve position within value range more than 7 % trigger when changed' and 'Kitchen UFH Pump Relay when Switching status: off trigger when changed'. The 'Activity: Then...' section is expanded, showing 'Kitchen UFH Pump Relay immediately Switching status: on'. The 'Activity: Else...' section is empty.

Name	Description	Condition (if...)	Channel select
UFH Pump ON		Channel status: Kitchen UFH Zone 1 when Valve position within value range more than 7 % trigger when changed	Channel select

**Condition: If...**

Device selection: Kitchen UFH Zone 1 when Valve position within value range more than 7 % trigger when changed

**AND**

Device selection: Kitchen UFH Pump Relay when Switching status: off trigger when changed

**Activity: Then...** ☒ Stop all current delays before performing the activity (e.g. retriggering).

Device selection: Kitchen UFH Pump Relay immediately Switching status: on

**Activity: Else...** ☐ Stop all current delays before performing the activity (e.g. retriggering).

## 7. Creating the Under Floor Heating Pump OFF Program in WebUI

The previous program switched the UFH recirculation pump ON when valve openings were more than 7% (i.e. there was a demand for heating, so the actuators opened the valves). Once the temperature in the room



is achieved, the valves will close and the recirculation pump works needlessly. We now create a program to switch the pump OFF. To do this, press button *Programs and Connections* → *Programs and CCU Connections* and make the following settings:

- In the **IF** section, when Radiator Thermostat has the Valve opened to less of equal to 7% **AND** Channel 1 of the Wireless 4 Channel Switch is OON;
- In the **THEN** section, select the action for the Wireless 4 Channel Switch Channel to switch immediately to OFF;
- Leave the **ELSE** section empty;
- Save your work by pressing OK. You can edit the program at a later time is needed.

Device	Model	Protocol	Function	Receiver	Standard	Heating	Light	Teach-in devices	Actions
HM-LC-Sw4-PCB JEQ0569559	HM-LC-Sw4-PCB	Wireless Switch Actuator 4-channel, PCB	JEQ0569559	BidCos-RF	Standard	Heating	Light	<input checked="" type="checkbox"/>	Set, Delete, Direct, Programs
Kitchen UFH Pump Relay	HM-LC-Sw4-PCB	Wireless Switch Actuator 4-channel, PCB	JEQ0569559:1	Receiver	Standard	Heating		<input checked="" type="checkbox"/>	Set, Direct, Programs
Boiler Heating Relay	HM-LC-Sw4-PCB	Wireless Switch Actuator 4-channel, PCB	JEQ0569559:2	Receiver	Standard	Heating	Light	<input checked="" type="checkbox"/>	Set, Direct, Programs
HM-LC-Sw4-PCB JEQ0569559:3	HM-LC-Sw4-PCB	Wireless Switch Actuator 4-channel, PCB	JEQ0569559:3	Receiver	Standard		Light	<input checked="" type="checkbox"/>	Set, Direct, Programs
HM-LC-Sw4-PCB JEQ0569559:4	HM-LC-Sw4-PCB	Wireless Switch Actuator 4-channel, PCB	JEQ0569559:4	Receiver	Standard		Light	<input checked="" type="checkbox"/>	Set, Direct, Programs