Digital Touch Screen Room Thermostat

HY01RF Manual

Preface

HY01RF/MRF (with-wire /radio frequency / multi-channel RF) series are room thermostats with 7 days programmable function. This system can completely control the boiler or heating system according to the program preset when out of the factory or set by the customers themselves. The controller with electricity supplied by the batteries can be put any where in the ordinary room, which makes the work and life of the installers and the customers become more simple and comfortable. For **HY01RF** model, the receiver of this device is connected directly with the hang boiler or the other heating systems. The transmitter adopts special radio signal and receiver communication with characteristics of strong wall penetration, stable communication, no interference and low electric consumption. The **HY01MRF** model can control independently different temperature in the maximum4 rooms by the multi-channel RF. The damager of radialization to the body is lower than using the radiogram or TVset.

This product has the following characteristics

1) Heating control

2)programming function of 5 +2 weeks (advanced settings, you can select 6 +1 and 7-day programming function also can cancel the programming function),It has 6 setting times for a day

3) 2 sets of permanent programs (factory setting program and self-setting program)

4) Large LCD display

5) The **deadzone** temperature difference adjustable between off and on;

6) Allowable to calibrate the temperature display;

7) antifreeze temperature;

8) Suitable for the control and energy saving of wall mounted boilers, condensation boilers and individual household mearsuring heating system;

9) It can realize the function of one receiver controlling many sub-devices and many rooms at the same time;

10) Display adjustable between ℉ and ℃

11)Only need 2 size AA 1.5V batteries for the power supply;.

12)Three transmission modes for selection, i.e. wired, wireless or multi-channel transmission.

13)Fast and Simple installation.
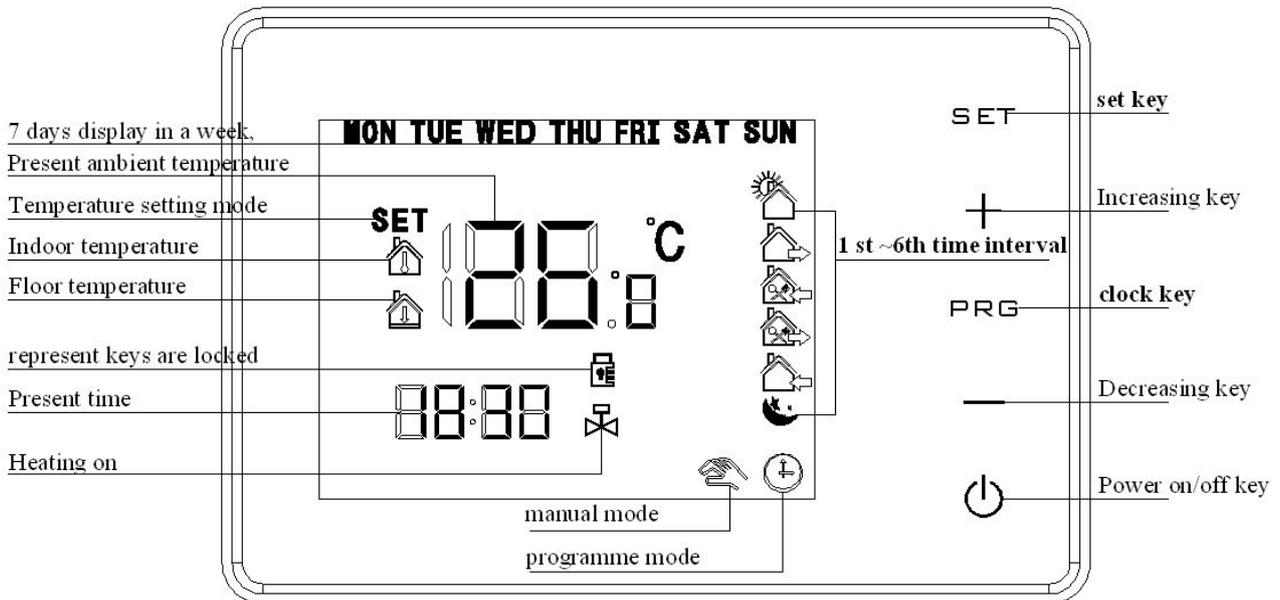
Fig.1

Display screen symbols (Fig1)

NO:	symbols	represent
1	⏱	programme mode，in this case, the thermostat automatic operates according to the set time interval and temperature value. Programme mode：one week can be divided into two kinds of periods, they are "Monday to Friday" and "Saturday to Sunday ", It's a 5+2 programme mode.Every period can be divided into 6 time interval:
2	✍	manual mode，control the heating equipment according to the current manual setting temperature 。
3	🜨	Heating on

4	88:88	Present time
5	🔒	represent keys are locked , press " + " and " — " at the same time for over 3 seconds to lock the operation panel. At the keys locked state, press " + " and " — " at the same time for over 5 seconds to unlock the operation panel
6	188.8 ℃	Present ambient temperature
7	🏠	Indoor temperature
8	🏠	Floor temperature
9	**SET**	Temperature setting mode
10	**MON TUE WED THU FRI SAT**	7 days display in a week,， and only the present day is displayed.
11	℃ ℉	Celsius degree or Fahrenheit degree
12	🔋	Battery conditions
13	🏠🏠🏠🏠🌙	**1 st ~6th time interval**
14	✋ 🕐	Temporary manual mode, at programme mode,press " + "or" — "to adjust the value, it will automatic enter into temporary manual mode, the temporary setting value will not be stored into the programme mode. For example, if the thermostat is working at programme mode,and its comfortable temperature is 20℃ during 17:00 and 22:00, then the user decrease the temperature to 18℃ at 19:00, so the thermostat's setting temperature will become 18℃, but it will recover the programme mode after 22:00 ,and the value will be 20℃ too during 17:00~22:00

Operation Key

NO:	symbols	represent
A	**SET**	**set key**：short press it to switch programme mode to manual mode. At programme mode, press " + "**or**" — " to adjust the value, it will automatic enter into temporary manual mode
B	+	Increasing key
C	PRG	**clock key**：short pressing is setting clock,long pressing is setting programme **Keys locked/unlocked**：press " + "**and** " — " at the same time for 3 seconds
D	—	Decreasing key
E	⏻	Power on/off key

Product Specifications

- ❖ Power: **twoAA* 1.5V alkaline batteries**
- ❖ Display accuracy：**0.5℃or1℉**
- ❖ Probe sensor：**NTC(10k)1%**
- ❖ Contact capacity：**5A/250V ;16A/250V;**
- ❖ Working environment temperature：**0~50°C/32~122°F**
- ❖ Range of temperature adjustment：**5~35°C/41~95°F**
- ❖ Range of temperature display：**0~40°C/32~104°F**
- ❖ Output: **Switch relay**

- ❖ Insulating condition: **Normal environment**
- ❖ Running program: Set per 1 week as a cycle
- ❖ Frequency：**433MHZ（RF/MRF）**
- ❖ Wireless transmission distance：Indoor **16/50M**，outdoor **200M**
- ❖ Installation: Wall mounted or on battery seat
- ❖ Size(mm)：**130*90*27**

Scope of Control Applications

1. Control of wall-mounted boiler
2. Control of Thermal Actuator or electromagnetic valve

3. Control of water pump;
4. Ventilation contro

Run Mode

Factory Preset Mode

Interval	Monday to Friday	the default value	Saturday and Sunday	the default value
1st	06:00-08:00	20° C	06:00-08:00	20° C
2nd	08:00-11:30	10° C	08:00-11:30	20° C
3rd	11:30-13:30	18° C	11:30-13:30	20° C
4th	13:30-17:00	10° C	13:30-17:00	20° C
5th	17:00-22:00	20° C	17:00-22:00	20° C
6th	22:00-06:00	18° C	22:00-06:00	18° C

Day display

MON

Indoor temperature

20.5 ℃

interval symbols

Present ambient temperature

locked symbols

6:38

Valve on

Present time

programme mode

（programming mode）
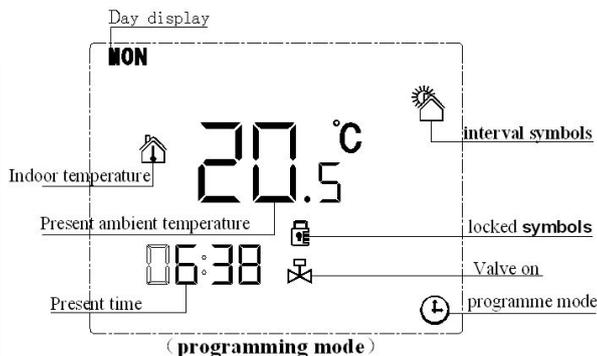
Mode	explain	printscreen
programming mode	Press "SET" to switch into programme mode（As shown in picture one） Programme illustration 5+2 programme function（advanced options contain of 6+1 and7 days programme function，you can also cancel this programme function ），that is Monday to Friday is the same setting value, and Saturday to Sunday is the same setting value。Every day can be divided into 6 time interval Setting the programme value：long press "PRG" to enter into programme setting mode, then short press "PRG"to switch，press "＋"or "—" to adjust value。	MON-FRI MON TUE WED THU FRI SET 20.5 ℃ 1st Interval SET temp 06:00 1st Interval time 1st Interval / 2nd Interval / 3rd Interval / 4th Interval / 5th Interval / 6th Interval / programme mode SAT AND SUN SAT SUN SET 15.0 ℃ 6th Interval SET temp 22:00 6th Interval time 6th Interval Symbols / programme mode
Manual Mode	Press "SET" to enter into manual mode（As shown in picture two），press "＋" or "—" to adjust value。	MON 15.0 ℃ Present ambient temperature 6:38 Present time manual mode

Temporary manual mode	at programme mode,press "+" or "—" to adjust the value, it will automatic enter into temporary manual mode	

advanced options

advanced options can be classified to two sets

1) MODE 1：

Hold down PRG and SET at the same time for 3 seconds,it will display A1-A9,then press SET to switch between these options

Displaying symbol	Option content	Press "+" or "—" to adjust value
- 1.0 A1	temperature compensation（A1）	increment:0.5°C.
1 A2	Start differential temperature（A2）	Range：1°C~5°C： 1、When the setting temperature is higher than or equal to the sum of indoor temperature and the start differential temperature, the heating equipment will turn on. 2、When the indoor temperature is higher than or equal to the sum of the setting temperature and the start differential temperature, the heating equipment will turn off.
0 A3	Keypad（A3）	0 half locked：all keys are locked except for the on-off key； 1 full locked。all keys are locked including the on-off key。
N1 A4	Sensor choice（A4）	N1：single build-in sensor； N2：single build-out sensor； N3：build-in and build-out sensor。
45 A5	high temperature protection（A5）	Range:35~70 When the lowest setting temperature is 35°C,press "—",it will display "— —", high temperature protection function is canceled; if the indoor temperature is higher than the high temperature protection value,the heating equipment will be cut off. Default value is =45°C
5 A6	low temperature protection（A6）	Range:5°C~10°C ;When the highest setting temperature is 10°C,press "+",it will display "— —", low temperature protection function is canceled; if the indoor temperature is lower than the low temperature protection value,the heating equipment will be cut off. Default value is =5°C
5 A7	setting temperature lowest limiting value（A7）	Range:1°C~10°C:

	setting temperature highest limiting value （A8）	Range:30°C~70°C
35 AB		
MON TUE WED THU FRI A9	Week programme choice（A9）	MON TUE WED THU FRI SAT SUN: represent 7days programme MON TUE WED THU FRI SAT： represent6+1 programme MON TUE WED THU FRI： represent5+2 programme "— —" represent programme is canceled

2) MODE 2：

At power off state, hold down "PRG" and "SET" and "—"at the same time for 3 seconds it will display B1-B3,then press "SET" to switch between these options

Displaying symbol	Option content	Press "+" or "—" to adjust value
1 b1	Valve control option （B1）	0 represent valve is controlled by the thermostat ； 1 represent valve is not controlled by the thermostat, it's always closed。
1 b2	Antifreezing Descaling function)function option（B2）	0 close，1 open。 Antifreezing function：when valve is continuously closed over100 hours，it will be opened for3 minutes。
0 b3	GA/GB option（B3）	0=GA：valve switch protection time is about 3 seconds; 1=GB：valve switch protection time is about 15 seconds1；GB no antifreezing function
0 b4	°C Or °F（B4）	Celsius degree or Fahrenheit degree
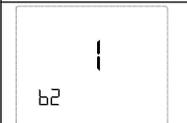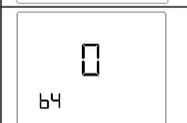
Cautions on Installation and Use:

1. To prevent the thermostat display from a high fluctuation, special treatment has been made to the program. Therefore, it is normal that the thermostat cannot immediately display the sudden change of temperature.

2. The thermostat installed on 1.5m above the ground.

3. For the thermostat installed,please take care not to install it to the wall corner, door / window side or behind the door or in such unheated area as exterior wall. Avoid hot / cold air duct, radiator, flue or thermal pipe

4. If the wireless thermostat with battery seat is placed at a position where the air ventilation is poor, the temperature displayed on the thermostat might be inconsistent to the indoor average temperature.

5. Only the professional technicians are permitted to open the transmitting and receiving box of the thermostat for installation. When installing the power supply, make sure that the power cable is well insulated.

6. To install the receiving box, please install the base plate firstly and then connect the power and signal wire correctly before installing the upper cover and fix it. The thermostat is unrepairable product. The user shall not open the internal circuit board.

7. Before installing the thermostat, make sure that the system is disconnected. The maximum voltage of the system shall meet the requirements specified in the Instruction Manual (Max. AC Voltage: 250V).

Wring Illustration

1、Wiring Terminals

Wiring Terminal	Remarks
N	AC Neutral
L	AC Live
1	NO (Normally-Open point)
2	COM (Public terminal of relay)
3	NC (Normally-Closed point)

2、Symbol Illustration

B：Wall Mounted Gas Boiler

U： Water Pump, Thermal Actuator or electromagnetic valve 3 control picture：

Fig.2: Dimensional Diagram – Length, Width, Thickness, Installing Size
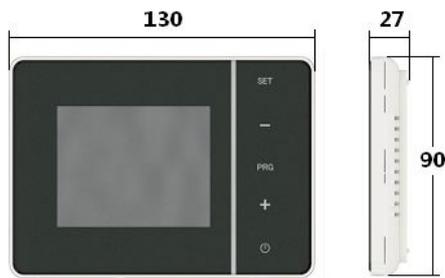
Fig.3: Control of Water Pump, Thermal Actuator or electromagnetic valve for RF model
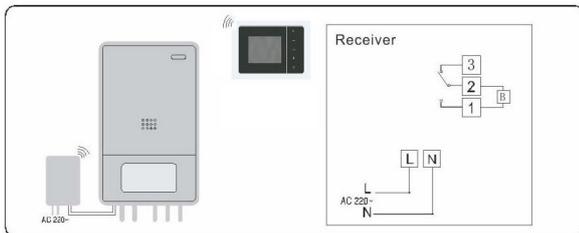

Fig.4: Control of Wall-mounted Boiler for HY01RFB mode
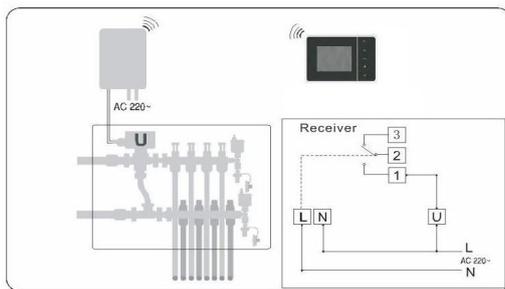
Fig.5: Control of Under Floor Heating with Wireless 4-channel for MRF mod