



ETN-24-SUPER-PROG

(US Program - Celsius)

Owner's Manual

Installation and Operating Instructions



Please read this manual carefully before installation and use.

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1. Options and Accessories

- Hand held remote control with weekly program.
- External sensor option:
 - RS01 for remote temperature sensing (1 required)
 - RS02 for average temperature sensing (2 required)



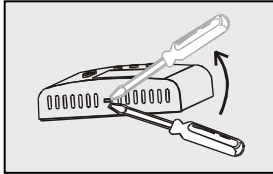
For details on where to purchase accessories, please contact **Meitav-tec** for your nearest location or visit our web site at **www.meitavtec.com**

2. Installation Instructions

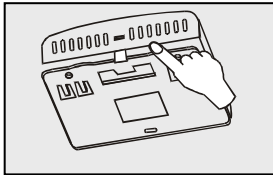


It is very important to find the right place to install the thermostat.

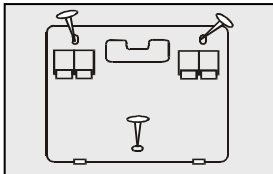
Please make sure to follow all the installation instructions in order to get an accurate reading of the temperature.



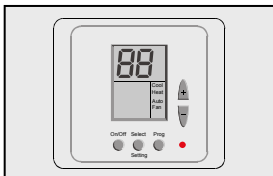
Separate the front panel from back panel by depressing the tongue located in the top of the thermostat.



Pull the back panel out.



Line the back panel up against the wall or flat surface. Install three screws as required.



Make electrical connections as shown on enclosed electrical wiring diagram. (Next page)

Install the cover to the back panel; first the two tabs on the bottom and then the top tongue. Push until tight against the wall.

3. Wiring Connections



Rc-Rh - If one transformer is in use, Rc-Rh must be shorted - (Default from Factory)

Table 3.1 - Connections for all applications

Terminal	Function ETN	HC11	HC22	HP21	HP32
RC	24Vac RED (Bridged to RH)	N/A	N/A	N/A	N/A
RH	24Vac RED (Bridged to RC)	+	+	+	+
C	24VAC Common from transformer	+	+	+	+
W1 B/O	Heating 1 st Stage / Heat Pump	+(heat element)	+(heat element)	+(heat pump)	+(heat pump)
W2	Heating 2 nd Stage	N/A	+	+	+

T	External Sensor (option)	+(option)	+(option)	+(option)	+(option)
T	External Sensor (option)	+(option)	+(option)	+(option)	+(option)
Y2	Cooling 2 nd Stage	N/A	+	N/A	+
G	Fan	+	+	+	+
Y1	Cooling 1 st Stage	+	+	+	+

+ Connect terminal

N/A – Not Applicable (not in use)

4. DIP Switch Configuration



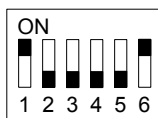
Before making any changes disconnect power to the main board.

Table 4.1 – DIP Switch Selection

Switch	Function		ON	OFF	Default
1	Internal Sensor Control		X		ON
	External sensor control			X	
2	Heat Pump (HP)		X		OFF
	Heat - Cool (HC)			X	
3	In HC mode: (Switch 2 OFF)	Electrical Heat		X	OFF
		Oil/Gas Heat	X		
	In HP mode: (Switch 2 ON)	Heat Pump in COOL		X	OFF
		Heat Pump in HEAT	X		
4	3 minutes compressor delay			X	OFF
	Without delay (for test only)		X		
5	Internal Sensor Control			X	OFF
	External sensor control		X		
6	Internal Sensor Control		X		ON
	External sensor control			X	



Use this table together with the illustration above showing the switch configuration.



Default DIP switch configuration:

5. External sensor connection - option



The external sensor must be Meitav-tec type.



Before making any changes disconnect power to the main board.

Table 5.1 - N.TC. Sensor: Temperature ~ Resistance Characteristics

Temp °C	7.2	10.0	12.8	15.6	18.3	21.1	23.9	26.7	29.4	32.2
Res. k	115.8	100.9	88.1	77.1	67.7	59.6	52.5	46.4	41.2	36.6



The default from factory is **INTERNAL SENSOR**.

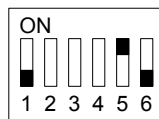
To switch to temperature readings from an **EXTERNAL SENSOR**:

1. Disconnect power to the thermostat.
2. Move DIP switches 1,5 and 6 as shown in the picture below

Switch 1 - OFF

Switch 5 - ON

Switch 6 – OFF



3. Connect the temperature sensor to T-T terminals.
4. Reconnect power to the thermostat.



The wire length for the sensor can be up to 30 meters (100 feet) with standard cable.



If the distance is greater than 30 meters (100 feet) then it **MUST** be shielded.

6. Operating Manual

6.1 Turning the thermostat On/Off

- Press the “On/Off” button to turn the thermostat ON or OFF - the words "ON" or "OFF" will appear on display.

6.2 Adjusting Temperature

In Cool mode:

- Press the “+” or “-” buttons – “COOL” will appear on display and the set-point temperature for cooling will flash.
- Adjust the set-point temperature for cooling using the “+” or “-” buttons.
- Wait until display returns to normal.

In Heat mode:

- Press the “+” or “-” buttons – “Heat” will appear on display and the set-point temperature for heating will flash.
- Adjust the set-point temperature for heating using the “+” or “-” buttons.
- Wait until display returns to normal.

In Fan mode or in auto change-over mode (2 set-points):

- Press the “+” or “-” buttons – “COOL” will appear on display and the set-point temperature for cooling will flash.
- Adjust the set-point temperature for cooling using the “+” or “-” buttons.
- Wait 3 seconds – “HEAT” will appear on display and the set-point temperature for heating will flash.
- Adjust the set-point temperature for heating using the “+” or “-” buttons.
- Wait until display returns to normal.

6.3 Mode, Auto Fan

- Press the “Select” button – “UnLo” and the actual mode will appear on display.
 - Using the “+” and “-” buttons switch between:
 - o Cool – “Cool” will appear on display
 - o Heat – “Heat” will appear on display
 - o Cool/Heat – auto change over – Both “Cool” and “Heat” will appear on display
 - o Fan Only – Fan will appear on display
 - Press the “Select” button again – “Fan” or “Auto Fan” will appear on display.
 - Using the “+” and “-” buttons switch between:
 - o Fan on (Auto fan off) – the fan will work continuously – “Fan” will appear on display.
 - o Auto fan* – the fan will work when there is demand for cool or heat – “Auto Fan” will appear on display.
- *Auto Fan is not available when the mode is set to “Fan only” mode.
- * In Heat mode, with Oil/Gas heat configuration (i.e., furnace):
- AUTO FAN - Fan will never be activated.
- FAN ON - The Fan will work continuously.
- Press the “Select” button again to return to normal display.

6.4 Lock/Unlock the buttons

Use the Lock option to prevent users from making unwanted changes.

When the thermostat is locked, the “Select” button and the “+” and “-” buttons do not work.

The display will alternate between “Loc” and real time clock.

- Make sure both temperature set-points are **different than 10°C**.
- Lock the buttons - Press and hold the “Select” button (20 seconds) until “Loc” appears on display.
- Unlock the buttons - Press and hold the “Select” button again (20 seconds) until “UnLo” will appear on display. Wait until display returns to normal.

6.5 Programming

The thermostat is a 5-1-1 programmable; weekdays Monday through Friday, Saturday and Sunday both have individual programs.

There are four program events per day: 1-Wake, 2-Day, 3-Return, 4-Sleep

Switch between Programmable/Non Programmable configurations

The ETN-24-Super –Prog (U.S Program-Celsius) is a Programmable thermostat by default. To switch to a Non Programmable configuration the remote control MUST be used (see instructions below).

Programming defaults from the factory.

Monday to Friday	1 (Wake)	2 (Day)	3 (Return)	4 (Sleep)
Start time	6:30 AM	8:00 AM	5:30 PM	10:00 PM
Set-point for cool	25°C	29°C	25°C	28°C
Set-point for heat	21°C	17°C	21°C	17°C

Saturday	1 (Wake)	2 (Day)	3 (Return)	4 (Sleep)
Start time	7:30 AM	12:30 PM	6:00 PM	11:30 PM
Set-point for cool	24°C	23°C	22°C	25°C
Set-point for heat	21°C	21°C	21°C	18°C

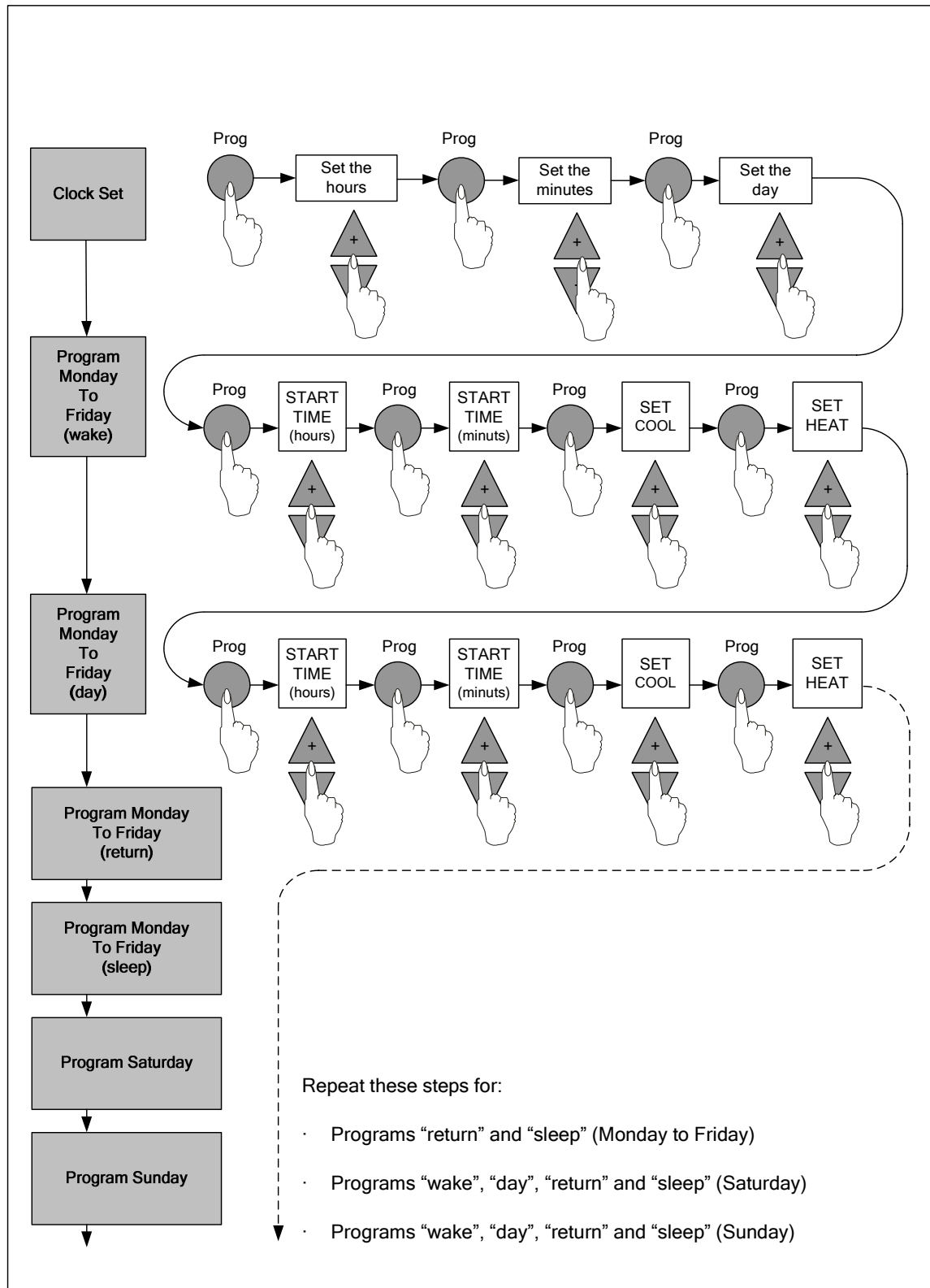
Sunday	1 (Wake)	2 (Day)	3 (Return)	4 (Sleep)
Start time	7:30 AM	12:30 PM	6:00 PM	11:30 PM
Set-point for cool	24°C	23°C	22°C	25°C
Set-point for heat	21°C	21°C	21°C	18°C



Important:

- While modifying the program you can quickly switch between days by pressing the “On/Off” button.
- Press the “Select” button to exit the program.
- If no key is pressed for 30 seconds, the thermostat will return to normal display.

To modify the Program to your own needs simply follow the steps of the following chart:



6. Technician Settings

To offset the Room temperature readings- when needed:

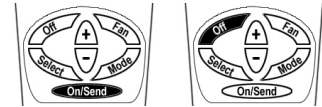
- Adjust the set-point temperature for cooling to 10°C.
- Wait until display returns to normal.
- Press and hold the “Select” button (5 sec.) –“Offs” and the OFFSET temperature will appear on display (a number between –6...+6). The offset is used to calibrate the measured Room temperature- when needed.
- Adjust the Offset for Room temperature readings using the “+” and “-” buttons between –6°C and +6°C (default = 0°C).
- Press the “Select” button again to return to normal display.

7. RT08 - Hand Held Remote Control - Option

The remote control is Infrared; the remote must be pointed at the thermostat to operate. Every time you change parameters in the Remote Control, you must send it to the thermostat by pressing the “On/Send” button.

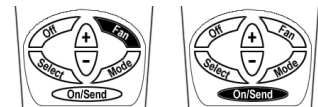
7.1 Turning the thermostat ON or OFF and Update information

- Press the “On/Send” button to turn the thermostat ON and/or update information.
- Press the “Off” button to turn the thermostat OFF and update information.



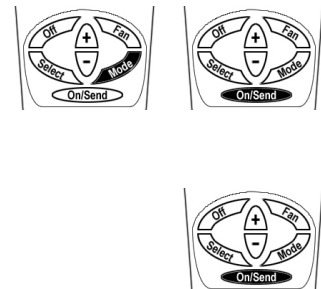
7.2 Auto Fan ON or OFF

- Press the “Fan” button to change between:
 - Auto Fan OFF 
 - Auto Fan ON 
- Press the “On/Send” button to send information to thermostat.



7.3 Modes

- Press the “Mode” button to change between:
 - Cool 
 - Heat 
 - Auto change-over 
 - Fan only 
- Press the “On/Send” button to send information to the thermostat.



7.4 Temperature Set Point

In Cool Mode:

- Press the “+” or “-” buttons - “COOL” and set-point temperature for cooling will flash.
- Using the “+” and “-” buttons, adjust the set-point temperature for cooling.
- Press the “On/Send” button to send the information to the thermostat.



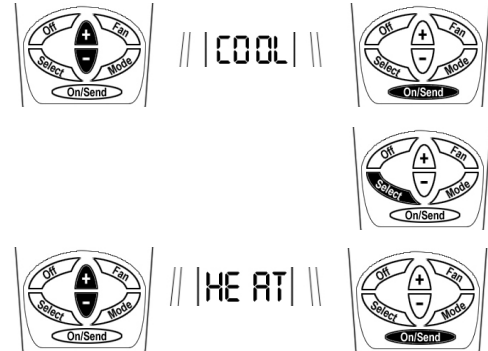
In Heat Mode:

- Press the “+” or “-” buttons - “HEAT” and set-point temperature for heating will flash.
- Using the “+” and “-” buttons, adjust the set-point temperature for heating.
- Press the “On/Send” button to send the information to the thermostat.



In Fan mode and in Auto Change-over mode:

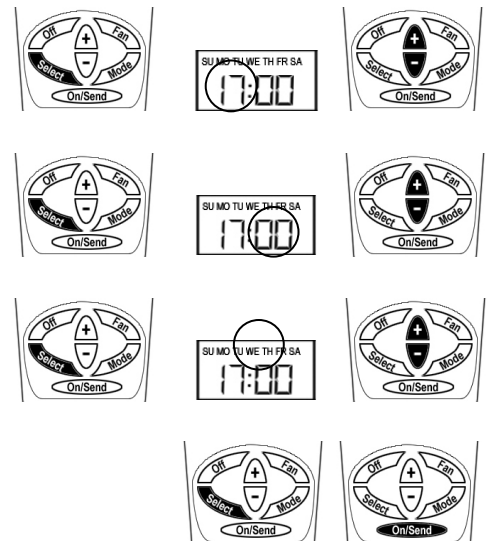
- Press the “+” or “-” buttons - “COOL” and set-point temperature for cooling will flash.
- Using the “+” and “-” buttons, adjust the set-point temperature for cooling.
- Press the “Select” button – “HEAT” and set-point temperature for heating will flash.
- Using the “+” and “-” buttons, adjust the set-point temperature for heating.
- Press the “Select” button again or Press the “On/Send” button to send the information to the thermostat.



The thermostat keeps a minimum differential of at least 1 degree between Heat set and Cool set (Heat is always less than Cool).

7.5 Real Time Clock and Day

- Press the “Select” button – “CLOCK SET” will flash.
- Press the “+” or “-” buttons - the hours will flash.
- Adjust the hours using the “+” and “-” buttons.
- Press the “Select” button again – the minutes will flash.
- Adjust the minutes using the “+” and “-” buttons.
- Press the “Select” button again – the weekday will flash.
- Adjust the day using the “+” and “-” buttons.
- Press the “Select” button again to exit the program or Press “On/Send” button to send the information to the thermostat.



7.6 Programming

Set the Program times and Temperature settings for the week:

- The thermostat is 5-1-1 programmable: weekdays (Monday to Friday), Saturday, and Sunday can be programmed differently.
- 4 program events per day: 1 (Morning), 2 (Day), 3 (Evening), 4 (Night)



The program can be set away from the thermostat and can be sent later on.

To send the program to the thermostat, follow the steps below without adjusting times and temperatures. Only press the “On/Send” button each time the word **SEND flashes on display (point the remote control to the thermostat)**



The Remote control is used to enable / disable the thermostat Programmability.

To switch between Programmable and Non Programmable Configuration follow these steps:

- Press and hold the “Select” button of the remote for 3 seconds - the word "program" will flash on display.
- Press the “Select” button 3 more times until the "Timer icon" flashes.
- Using the "+" and "-" buttons switch between a "Clear icon" (Disable) and "shaded icon" (Enable).
- The word "send" will flash on display.
- Point the remote control to the thermostat and press the “On/Off” button to send the information.

Programming Procedure

- To enter programming, press and hold the **SELECT** button for three seconds - **“PROGRAM”** (flashing) and the days Mon-Fri will appear on display.
- Press the “+” or “-” buttons, **“PROGRAM 1”** and **“START”** (flashing) will appear on display.
- Press the “+” or “-” button - the hours will flash.
- Adjust the hours using the “+” and “-” buttons.
- Press the “Select” button - the minutes will flash.
- Adjust the minutes using the “+” and “-” buttons.



- Press the “Select” button again – “COOL” (flashing) and the set-point temperature for cooling will appear on display.
- Adjust the set-point temperature for cooling using the “+” and “-” buttons.



- Press the “Select” button again – “HEAT” (flashing) and the set-point temperature for heating will appear on display.
- Adjust the set-point temperature for heating using the “+” and “-” buttons.



The controller keeps a safety differential of at least 1 degree between Heating set point and Cool set point (Heat is always less than Cool).



After selecting the heating set point, you cannot reduce the cooling set point less than the heating set point.

Continue with the rest of the program

- Press the “Select” button again - “PROGRAM 2” and “START” (flashing) will appear on display.
- Press the “+” or “-” buttons and adjust the hours, minutes and temperature, **the same way as in PROGRAM 1**
- Press the “Select” button again - “PROGRAM 3” and “START” (flashing) will appear on display.
- Press the “+” or “-” buttons and adjust the hours, minutes and temperature, **the same way as in PROGRAM 1**
- Press the “Select” button: “PROGRAM 4” and “START” (flashing) will appear on display.
- Press the “+” or “-” buttons and adjust the hours, minutes and temperature, **the same way as in PROGRAM 1**.
- “SEND” will flash, press the “On/Send” button to send the information to thermostat.



- “PROGRAM” (flashing) and “SA” (Saturday) will appear on display.
- Set programming for Saturday **the same way as programming MON to FRI.**

- “SEND” will flash; press the “On/Send” button to send the information to thermostat.



- “PROGRAM” (flashing) and “SU” (Sunday) will appear in display.
- Adjust the programming for Sunday **the same way as programming MON to FRI.**



- “SEND” will flash; press the “On/Send” button to send the information to the thermostat.

- The TIMER will flash; using the “+” or “-” buttons, select TIMER ON or OFF.



- If you changed between TIMER ON (programmable) or OFF (non-programmable), “SEND” will flash.

- Press the “On/Send” button to send the information to the thermostat.



- If you did not change between them, press the “Select” button to exit programming.



