TH-2005 EXCEL PROGRAMMABLE THERMOSTAT

USER MANUAL   (E-Series)

PART-1-1   CHOOSING LOCATION FOR INSTALLATION

For obtaining thermostat's best performance upon using, recommend user to follow up with precaution listed below.

(1). Place thermostat on wall inside the room approximate 1.5 meter above floor.

(2). Avoid position where temperature sensing easily interfered by ambience, such as, directly exposed to Sun-Light, too near to any Heat-Generate devices/refrigerator, right next to entrance/exit/window, etc.

(3). Prevent thermostat from installed at position that furniture may interfere air-flow, stagnant air-flow location is not suitable for installing thermostat.

(4). Keep thermostat away from high humid ambience, high humidity is hazardous to thermostat's operational duration,

(5). It's crucial, before installing thermostat, make sure house renovation is finished, no tacky painting/plaster is right on thermostat's installing position.

(6). To level thermostat prior to installation is not necessary.

PART-1-2   STRAT INSTALLATION

(1). How to open top housing
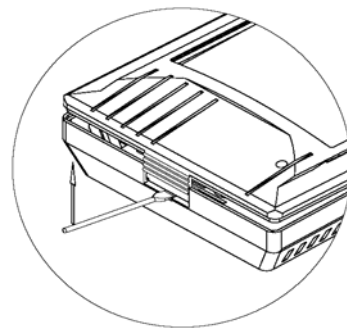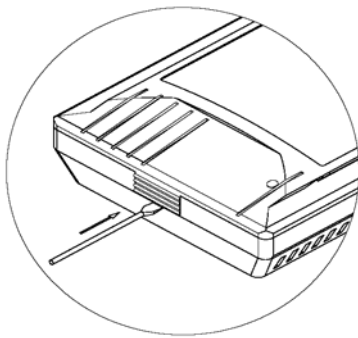
(2). How to install battery (For Battery Model only)   **2 x AA**
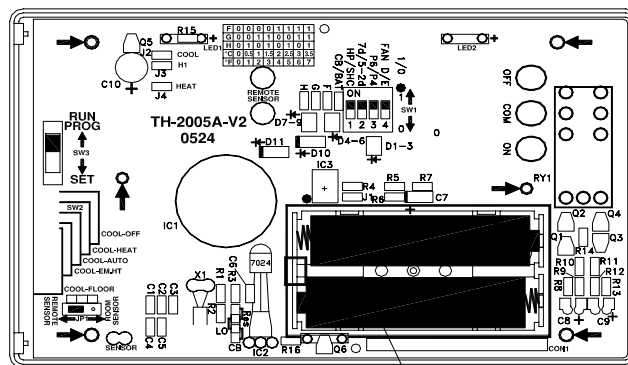
BATTERY 1.5V "AA" *2pcs

PART- 1-3-1 USER SETTING - ON SCREEN (Setting effective after adjustment,no need to press "RESET")

***** *SYSTEM SWITCH* *SWITCHED TO 'OFF" PRIOR TO FOLLOWING SETTING* *****
(FOR THF-2005-1H-B-0 & TH-2005-1H-B-0, SW3 SWITCHED TO "SET" POSITION BEFORE START SETTING)

(1).℃/℉ --- 1.Press **'SET"** to enter select.   2. Press **'OK"** to enter setting,
       3. Press '+/-'to choose setting   4. Press **OK** to confirm setting.
       5. Press **'SET'** again for next user setting.

(2).**24H/12H** --- Setting procedure same as above 5 procedures

(3).**SET DATE** ---1.Press '**SET'** to **SET DATE.**   2. Press '**OK'** to enter setting.
       3. Press '+/-'to adjust.   4. Press '**OK'** for next setting.
       5. Repeat procedure **3**.   6. Press **OK** to confirm setting.
       7. Press '**SET'** for next user setting

(4). **SET CLOCK** ---1.Press '**SET'** to **SET CLOCK**. 2. Press '**OK'** and **'+/-'** to required setting.
       3. Press **OK** to confirm setting.

(5).**DIFFERENTIAL** ---1. Press **SET** to select **'SET DIFFERENTIAL'**
       2. Press **OK** to enter setting. 3. Press **'+-'**to adjust.
       4. Press **OK** to confirm setting.   5. Press **SET** to select next **USER SETTING.**

(6).**FILTER**--- 1. Press **SET** to select **FILTER**.   2. Press **OK** to enter setting.   3. Press **'+/-'**to adjust.
       4. Press **OK** To confirm setting.   5. Press **SET** to next USER SETTING.

(7).**SET RETURN** ---1.Press **SET** to select **SET RETURN**.   2. Press **OK** to return and run.
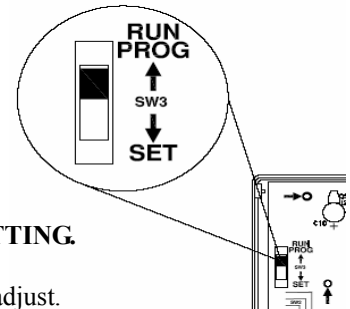
       ** Continuous to press SET can let user to select any of above 7 items and make adjustment. **

PART- 1-3-2 USER SETTING - SELECTION BY DIP SWITCH   (Press "RESET" after adjustment to effect)

(1).**SW**1：*For Entire TH-2005-Series*
Φ 1--HP/SHC ：Heat-Pump/Standard Heat & Cool
   2--7d/5-2d ：Day-Program
   3--P6/P4 ：6 or 4 Program period
   4--FAN D/E：Fan Disable/Enable
**Factory preset "SW1 *1 to 4*－*0111. on model* *THF-2005-1H-B-0 & TH-2005-1H-B-0*
          － *1110 on rest of models other than above.*

**DO NOT CHANGE SW1-1 & SW1-4 Factory Preset
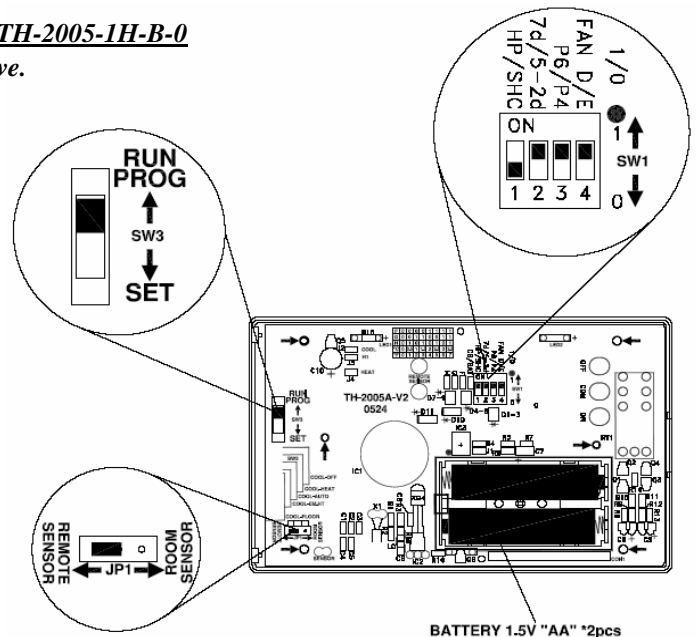   *ON MODEL THF-2005-1H-B-0 & TH-2005-1H-B-0*

Φ **System 3-minute delay start protection(operate logic as below)**
Φ **Fan 90-second delay off**

Φ**-1** When Select **SHC** Mode **Fan Operate Logic**

Under Cool Mode	Under Heat Mode
Cool→ON	**Heat→ON**
Fan →ON	**Fan→ OFF**
Fan Speed：Hi/Lo determined	
by program.	

Φ**-2** When Select **HP** Mode **Fan Operate Logic**

Under Cool Mode	Under Heat Mode
Cool→On	**Heat→On**
Fan →On	**Fan →On**
Fan Speed：Lo only.	**Fan Speed：Hi/Lo determined by program**

Φ-3 When Select **SHC** Mode **System 3-minute delay start protection operate logic**

    Under Cool Mode   Under Heat Mode
    Cool→YES   Heat→NO

Φ-4 When Select **HP** Mode **System 3-minute delay start protection operate logic**

    Under Cool Mode   Under Heat Mode
    Cool→YES   Heat→YES

Φ-5 When Select **SHC** Mode **Fan 90-Second delay off operate logic**

    Under Cool Mode   Under Heat Mode
    Cool→YES   Heat→NO

Φ-6 When Select **HP** Mode **Fan 90-Second delay off operate logic**

    Under Cool Mode   Under Heat Mode
    Cool→YES   Heat→YES

(2).**SW3**：*For THF-2005-1H-B-0 & TH-2005-1H-B-0 Only*
    RUN PROG.：Begin to run program (after setting adjustment
                completed)
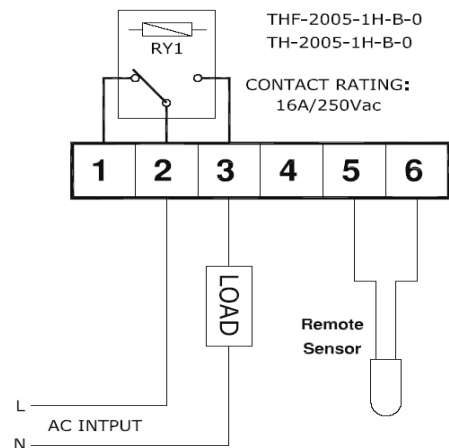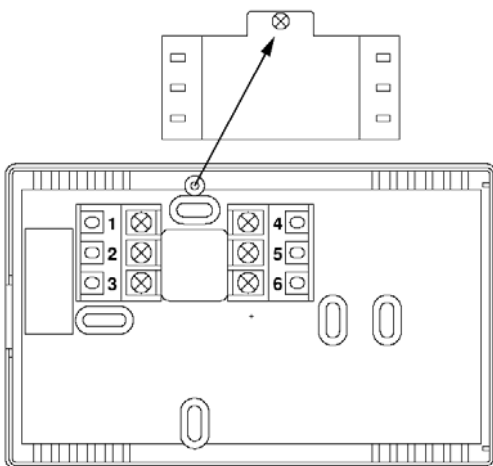   **SET**   ： User Setting (Switched to this position before
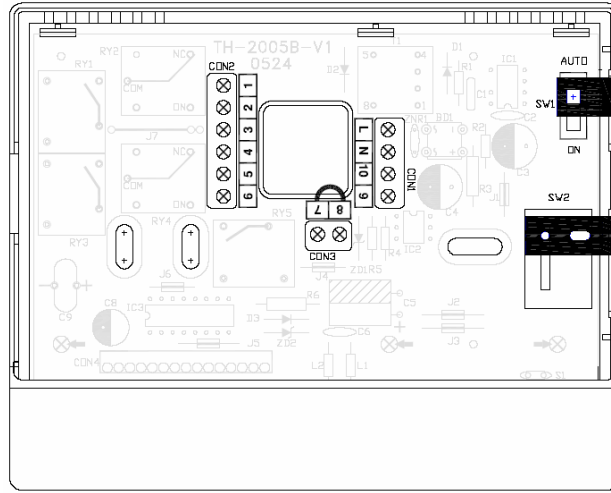   changing Factory preset)

(3).**JP1**：*For Entire TH-2005-Series*
    To select either thermostat temperature-control determinant by
   Room-Sensor (Internal Sensor) or Remote-Sensor.

PART- 1-4-1   WIRING －PART-A   For THF-2005-1H-B-0 ＆ TH-2005-1H-B-0   only.

Unscrew to take safety cover off and to proceed wiring as illustration

WINDOW CONTACT: Terminal 7 & 8 Connected by wire at manufacturing, when 『Disconnected, Heat/Cool/Fan Output will be Cut-Off.   This special made mechanism for extensional ON/OFF control purpose.   Please do not take wire off terminal 7 & 8 unless WINDOW-CONTACT Function shall be in use.

THA-2005-1H1CAF-2-0

THA-2005-1H1C1F-2-0

TH-2005-1CAF-2-0

TH-2005-1HAF-2-0
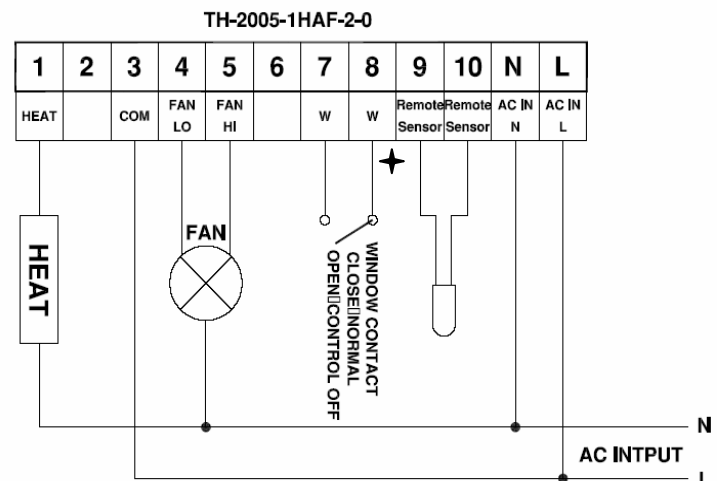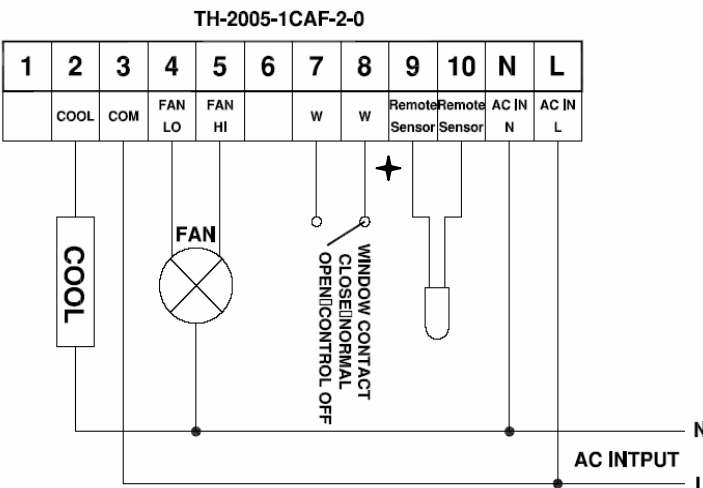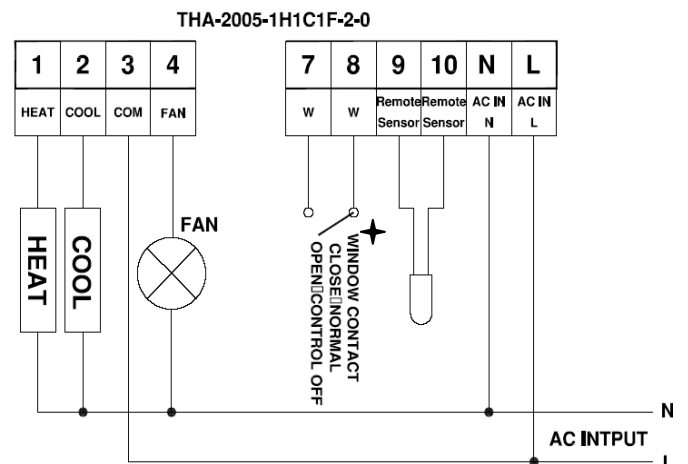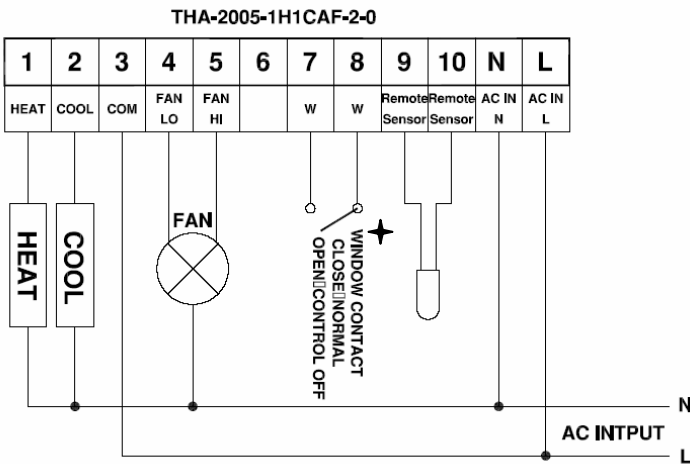
PART- 2-1   START TO PROGRAM THERMOSTAT

A. TH-2005 KEY PAD
1. | Set | key：Setting Selection
2. | +/- | key：'+' Increase or skip to next. '—' Decrease or return to previous
3. | ok | key：Press to enter setting or return to program executing.
4. | RESET | key：Reset (Thermostat shall return to its Factory-Preset if this key is pressed)

B.PROGRAM REVIEW: MOVE SYSTEM SWITCH AWAY FROM "OFF"
(1).Press **SET** to enter.
(2).Press **'+ or -'**to review each Temperature/Time Setting (Program)

D. PROGRAM SETTING: MOVE SYSTEM SWITCH AWAY FROM "OFF" AND START SETTING.
(1).**Weekdays/Weekend, Temperature and Time setting in sequence.**
   For 7-d Program
   Press **SET** to select program setting, setting starting from Mo-MORN (Monday-Morning).
   1. Press **OK** to enter Monday-Morning Temperature setting. (P1 Temp. setting))
   2. Press **'+/-'**to adjust temperature setting
   3. Press **OK** to finish Monday-Morning Temperature setting and begin Time-setting for Mo-MORN.
   4. Press **'+/-'**to adjust Time setting (for Mo-MORN, P1 Time setting)
   5. Press **OK** to complete whole Mo-MORN Temp. & Time Setting.
   6. Press **'+/-'**for next (Mo-Day) Temp. & Time setting. (P2 of Monday)
   5. Repeat procedure **1** to **5**, to complete setting of rest of programs on Monday and entire setting
     Throughout whole 7-day.

   For 5+2d Program
   Presses SET to select program setting, Monday through Friday are bound in program setting.
   1. Press **OK** to enter 1ˢᵗ Temperature\Time (P1 of 5d), Press **'+ or -'**to adjust setting.
    (Operational logic same as procedure **1** to **5** stated in 7-d Program).
   2. To adjust setting for Saturday & Sunday by same operational logic in adjusting **7d.**

<div align="center">

Mode 5+2d   P4   Factory Preset

</div>

Weekday	Time	Temperature	
Mon. ~ Fri.		Switch on heat	Switch on cooling
MORN(P1)	6:00	70°F(21°C)	75°F(24°C)
DAY(P2)	8:30	60°F(15.5°C)	85°F(29.5°C)
EVEN(P3)	4:30 PM	70°F(21°C)	75°F(24°C)
NIGHT(P4)	10:30 PM	65°F (18.5°C)	80°F(26.5°C)
Saturday	**Time**	**Temperature**	
		Switch on heat	Switch on cooling
MORN(P1)	7:00	70°F (21°C)	75°F (24°C)
DAY(P2)	8:30	70°F(21°C)	85°F (29.5°C)
EVEN(P3)	4:30 PM	70°F (21°C)	75°F(24°C)
NIGHT(P4)	10:30 PM	65°F(18.5°C)	80°F(26.5°C)
Sunday	**Time**	**Temperature**	
		Switch on heat	Switch on cooling
MORN(P1)	7:00	70°F(21°C)	75°F (24°C)
DAY(P2)	8:30	70°F(21°C)	85°F (29.5°C)
EVEN(P3)	4:30 PM	70°F(21°C)	75°F (24°C)
NIGHT(P4)	10:30 PM	65°F(18.5°C)	80°F (26.5°C)

Reminder：1. To program's logic, each day's **ending time** is at **11:59 in 12H**-Format, **23:59 in 24H**-Format,
        therefore；**do not set 12:00 PM for NIGHT(P4) nor 24:00 for NIGHT(P6).**

2. Thermostat is designed to run programs by sequential order, do not set program either "overlap"
   In time sequence, nor non-sequential Time-setting in program setting, this will lead chaos to
   Thermostat's operational logic.

Mode 7-d   P6   Factory Preset

Mon, Tue, Wed, Thu, Fri	Time	Temperature	
		Switch on heat	Switch on cooling
MORN(P1)	6:00	70°F(21℃)	75°F(24℃)
DAY(P2)	8:30	60°F(15.5℃)	85°F(29.5℃)
NOON(P3)	12:00pm	70°F (21℃)	75°F(24℃)
BREAK(P4)	2:00pm	60°F (15.5℃)	85°F(29.5℃)
EVEN(P5)	4:30pm	70°F(21℃)	75°F(24℃)
NIGHT(P6)	10:30pm	65°F (18.5℃)	80°F(26.5℃)
Saturday	**Time**	**Temperature**	
		Switch on heat	Switch on cooling
MORN(P1)	7:00	70°F(21℃)	75°F (24℃)
DAY(P2)	8:30	70°F(21℃)	75°F (24℃)
NOON(P3)	12:00pm	70°F(21℃)	75°F (24℃)
BREAK(P4)	2:00pm	70°F(21℃)	75°F (24℃)
EVEN(P5)	4:30pm	70°F(21℃)	75°F (24℃)
NIGHT(P6)	10:30pm	65°F(18.5℃)	80°F (26.5℃)
Sunday	**Time**	**Temperature**	
		Switch on heat	Switch on cooling
MORN(P1)	7:00	70°F(21℃)	75°F (24℃)
DAY(P2)	8:30	70°F(21℃)	75°F (24℃)
NOON(P3)	12:00pm	70°F(21℃)	75°F (24℃)
BREAK(P4)	2:00pm	70°F(21℃)	75°F (24℃)
EVEN(P5)	4:30pm	70°F(21℃)	75°F (24℃)
NIGHT(P6)	10:30pm	65°F(18.5℃)	80°F (26.5℃)

When choose **P4**, *NOON* and *BREAK* will vanish from screen.

Reminder：1. To program's logic, each day's **ending time** is at **11:59 in 12H**-Format, **23:59 in 24H**-Format.
Therefore；**do not set 12:00 PM for NIGHT(P4) nor 24:00 for NIGHT(P6)**.

2. Thermostat is designed to run programs by sequential order, do not set program either "overlap"
   In time sequence, nor non-sequential Time-setting in program setting, this will lead chaos to
   Thermostat's operational logic.

(2).**Choose specified day in week for setting or change setting.**
Press **SET** to select setting, continuous press**'+'to** desired **Day/Time. (**On LCD Display, users shall **see "REVIEW"** in Flashing**)**
1. Press **OK** to enter setting**.**
2. Press **'+ or -'**to change setting/adjust setting
3. Press **OK** to enter "review program"**.**
4. Press '+ or -'to choose desired Day/Time for next setting.

(3).**Copy (**available in 7-d mode only) - 2 methods to enter Copy mode
A. Select any day in week, and start SETTING its entire Temperature/Time of that day, upon finishing entire
Temperature/Time setting of the day, Press **OK** to confirm setting and then Press **SET** to enter **COPY MODE.**
1. Press **OK** to choose Copy Program" **FROM** (read what's flashing on LCD)"**.**
2. Press **'+ or -'**to choose a **"DAY"** as program copy basis
3. Press **OK** again to choose Copy Program **"TO** (read what's flashing on LCD).
4. Press '+ or -'to choose a "**DAY"** as program copy basis**.**
5. Press OK to confirm setting. (on top of LCD, user shall see flashing "COPY")**.**
6. Press SET to return (read flashing on LCD).
7. Press OK to run programs.

B. Continuous press "**SET"** 2 times under any Temperature/Time setting (Program) to enter **COPY MODE**, and to follow
Operational procedure listed above.

4). MANUAL – 4 functions comprised in this category. <u>**Move System switch away from "OFF"**</u>

    A. Temporary Override- Change current Temperature setting until next program's executing.

1. Press **OK** to enter, Continuous Press **SET** to desired function for setting adjusting, Press **OK** again.
2. Press **'+ or -'to** adjust Temperature. (Temp. Set in flashing)
3. Press **OK** to run **Temporary Override** function.
4. Upon **Temporary Override** is in executing, Press **OK** shall terminate its executing.

    B. Comfort Override- Change current temperature setting and hold new setting for required hours.
                Thermostat to operate by its original programmed parameter upon
                Comfort Override executing ceased.

1. Press **OK** to enter, Continuous Press **SET** to desired function for setting adjusting, Press **OK** again.
2. Press **'+ or -'to** adjust Temperature. (Temp. Set in flashing)
3. Press **OK** to select executing time of comfort-override
4. Press **'+ or -'**to adjust Time (minimum 1 hour).
5. Press **OK** to run **Comfort Override**.
6. Upon **Comfort Override** is in executing, Press **OK** shall terminate its executing.

    C. Permanent Hold Temperature- Change current temperature setting and to execute new setting
                Until it is called off.(by press OK)

1. Press **OK** to enter, Continuous Press **SET** to desired function for setting adjusting, Press **OK** again.
2. Press **'+ or -'to** adjust Temperature.(Temp. Set in flashing)
3. Press **OK** to run **Permanent Hold Temperature** function.
4. Upon **Permanent Hold Temperature** is in executing, Press **OK** shall terminate its executing.

    D. **Hold Temperature Until.(Vacation Hold)- Change current temperature setting and to execute**
                New setting until specified date.

1. Press **OK** to enter, Continuous Press **SET** to desired function for setting adjusting, Press **OK** again.
2. Press **'+ or -'to** adjust Temperature.(Temp. Set in flashing)
3. Press **OK** to select executing duration of Hold-Temperature Until. **to**
4. Press **'+ or -'**to select **Month**. Press **OK** again to adjust **Day,** Press**'+ or -'**to select **DAY.**
5. Press **OK** to run **Hold Temperature Until**.
6. Upon **Hold Temperature Until**. is in executing, Press **OK** shall terminate its executing.