

## MODEL TH110A-SP-P (120 V)

### SUMMARY

#### ◆ OPTIONS SELECTION

At the back of the thermostat, there are three selection switches to set at your preferences.

⇒ Temperature in °C or °F, time in 12 or 24 hours and Early Start function.

#### ◆ TO SET TIME AND DAY

Press on DAY, HOUR and MIN buttons to adjust time and day.

#### ◆ TO RECORD THE ☼ (COMFORT) SETPOINT TEMPERATURE

Select chosen setpoint temperature by using ▲ or ▼ button. Press on ☼ button (2 to 3 seconds) until icon appears on display.

#### ◆ TO RECORD THE ☾ (ECONOMY) SETPOINT TEMPERATURE

Select chosen setpoint temperature by using ▲ or ▼ button. Press on ☾ button (2 to 3 seconds) until icon appears on display.

#### ◆ TO RECORD THE 🏠 (VACATION) SETPOINT TEMPERATURE

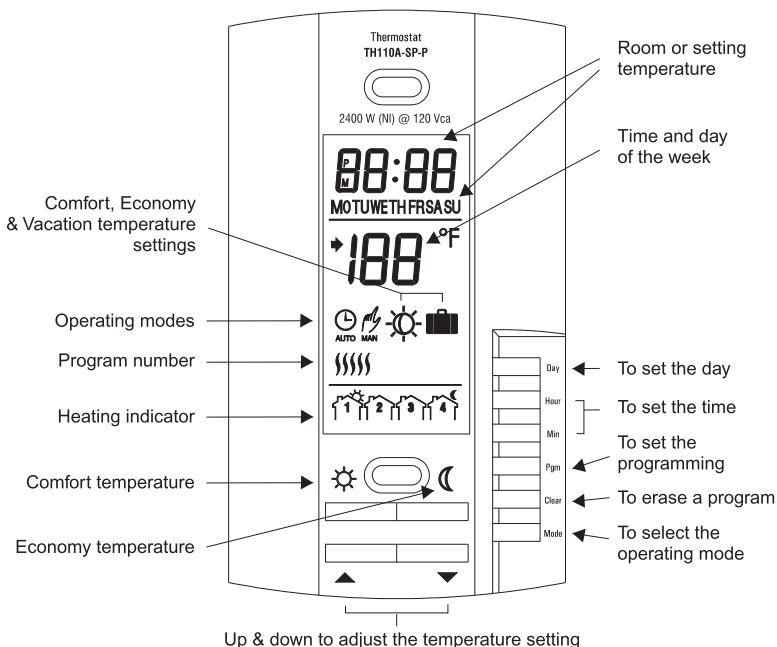
To program the Vacation temperature, select the desired degree using the ▲ ▼ buttons and press on the ☼ and ☾ buttons simultaneously until the 🏠 icon is displayed (app. 3 seconds).

#### ◆ OPERATING MODES

To select an operating mode, use MODE button.

**AUTO:** Runs the program. ▲ or ▼ shows temperature setting and can override temporarily your programming up to the next program.

**MAN:** Maintains the selected temperature. ▲ or ▼ changes the temperature setting.



## INSTALLATION

**NOTE :** The "Problems and Solutions" section at the end of this user's guide will help you to correct your problems during the installation.

This thermostat has been designed to operate with any installation which has a RESISTIVE load not exceeding 2400 W (20 A) @ 120 VAC such as electric baseboards, radiant ceilings and floors, electric convectors, etc. It is not compatible with a low voltage controller used by a central heating system.

Electricians or experienced technicians should install the thermostat.

This thermostat is designed to be used with a self-protected heating system equipped with thermal cut off and circuit breaker.

### PARTS INCLUDED

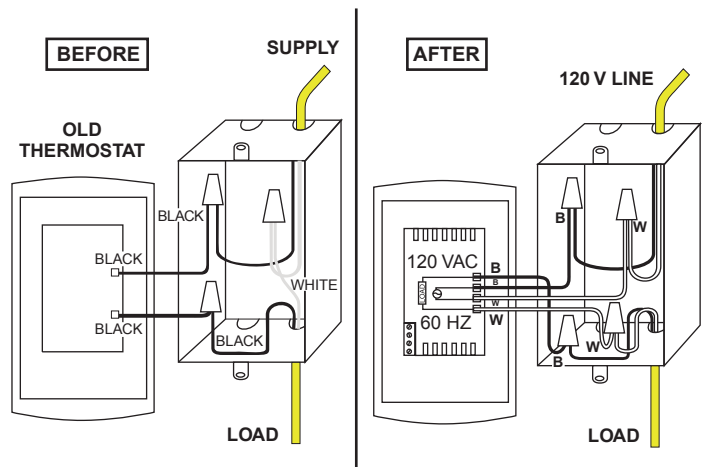
- One (1) TH110A-SP-P (120 VAC) thermostat
- Two (2) 6-32 screws
- Four (4) solderless connectors (for copper wire)

**TURN OFF POWER OF THE HEATING SYSTEM AT THE MAIN POWER PANEL TO AVOID ELECTRICAL SHOCK.** Keep air vents of the thermostat clean and free from obstructions.

### 1) Connecting wires and mounting thermostat

Connect the rear thermostat wires to the 120 V LINE and to the load using solderless connectors for copper wires. See schematic diagram.

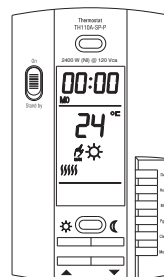
Push the excess wire back into the electrical box to prevent interference with the thermostat. Secure the thermostat using two (2) 6-32 screws. Once the thermostat is properly installed, return power to heating system.



**NOTE :** All cables and connections must conform to the local electrical code.

**WARNING:** Special CO/ALR solderless connectors must be used when connecting with aluminum conductors.

### Power-up



Set the On/Stand by switch to On.

When power is applied for the first time, the display must show the time 00:00, the room temperature and the Manual mode icon (🔌). Other information might show up on the display if installation is defective or does not comply with the instructions.










**NOTE :** The On/Stand by switch set to Stand by will place the thermostat in sleep mode. Ideal for summertime.

## OPERATING MODES

The TH110A-SP-P has two (2) operating modes.




### MANUAL ( )

This mode allows you to maintain a constant temperature in the room.

- 1- To activate this mode, press on Mode button to display the  icon.
- 2- Set the desired temperature using the   buttons or select the pre-programmed ,  or  settings.  
(To select the  setting, press on  and  simultaneously.)

### AUTOMATIC ( )

This mode executes your own programming.

To activate this mode, press on Mode button to display the  icon. The  or  icon indicates which temperature setting is used. Also, the icon of the program number will be shown.

### Memory back-up

In the event of a power failure, an internal circuit will maintain the programming and the time. But only the time could have to be set if power failure is more than 2 hours.

### Early Start function







The thermostat is providing a built-in function enabling it to calculate the optimum time to start the heating system to achieve the desired temperature setting at the programmed time. This function could start the heating system as early as 6 hours prior to the programmed time. To enable this function, set the switch E.S. to "ON" at the back of the thermostat.

## PROGRAMMING














### Programming the time and day

- 1- Set the time using the Hour and Min buttons.
- 2- Set the day using the Day button.

### Programming the Comfort, Economy and Vacation settings





The Comfort , Economy  and Vacation  settings respectively represent the temperatures that you wish to have during the day , at night or while you are away at work , or while you are away for an extended period .

### To program your settings

- a) To program the Comfort temperature, select the desired degree using the   buttons and press the  button until the  icon is displayed (app. 3 seconds).
- b) To program the Economy temperature, select the desired degree using the   buttons and press the  button until the  icon is displayed (app. 3 seconds).
- c) To program the Vacation temperature, select the desired degree using the   buttons and press on the  and  buttons simultaneously until the  icon is displayed (app. 3 seconds).
- d) Press the Mode button to exit this function and return to the normal operating mode.

### Schedule programming

The TH110A-SP-P allows 4 setting changes for each day of the week. There are no pre-set programs. The programs are tailored to perfectly adapt to your life style. The principle is very simple. For each day, enter the time at which you wake up (P1), the time you leave for work (P2), the time you arrive back home (P3) and the time you go to bed (P4).

Program	Mode	Time
1		Wake-up time
2		Departure time
3		Return time
4		Bed time

For savings to be obtained, you must lower the temperature for a period of 2 to 3 times the delay required to bring the temperature back to your comfort level.

Example : *If your system takes one hour to go from your saving temperature level to your comfort temperature level, it is useless to lower the temperature for a period less than 2 to 3 hours.*



### a) To Program your Schedule

- 1- Press on PGM button to access the programming mode.
- 2- Press on Day button to select the day to be programmed. You can select all days of the week by pressing on Day button for 3 seconds.
- 3- Press on PGM button to select program 1, 2, 3 or 4.
- 4- Press on Hour and Min buttons to program the time.
- 5- When you have completed your programming, press on Mode button to exit this function.

### b) To Erase a Program :

Select the program using PGM and Day buttons, and press on Clear button. The time field displays ---:-- when the program is inactive.



**c) Example 1 :** Comfort period from 7:00 AM to 10:30 PM  
Economy period from 10:30 PM to 7:00 AM  
Identical schedule for all days of the week.

- 1- Press on PGM button to access the programming mode.
- 2- Press on Day button 3 seconds to select every day of the week.
- 3- Press on Hour button to enter 7:00 AM, Prog. 1 (  ).
- 4- Press on PGM button again to select Prog. 2 (  ), and press on Hour and Min buttons to enter 10:30 PM.
- 5- Press on Mode button to exit this function.

**d) Example 2 :** Comfort period: Monday to Friday from 6:15 AM to 8:15 AM and from 5:00 PM to 10:00 PM.  
Saturday & Sunday from 7:30 AM to 11:00 PM.





Schedule/Day	MON.	TUES.	WED.	THU.	FRI.	SAT.	SUN.
PROG. 1 	6:15 AM	6:15 AM	6:15 AM	6:15 AM	6:15 AM	7:30 AM	7:30 AM
PROG. 2 	8:15 AM	8:15 AM	8:15 AM	8:15 AM	8:15 AM	---	---
PROG. 3 	5 PM	5 PM	5 PM	5 PM	5 PM	---	---
PROG. 4 	10 PM	10 PM	10 PM	10 PM	10 PM	11 PM	11 PM

**NOTE :** *It is faster to program the same schedule for every day and then modify the exception days.*

- 1- Press on PGM button to access the programming mode.
- 2- Press on Day button 3 seconds to select every day of the week.
- 3- Press on Hour and Min buttons to enter 6:15 AM, Prog. 1 (  ).
- 4- Press on PGM button to select Prog. 2 (  ) and Hour and Min buttons to enter 8:15 AM.
- 5- Repeat step 4 to enter Prog. 3 (5:00 PM) and Prog. 4 (10:00 PM).

**NOTE :** *When making modifications, make sure you are in the right program.*

### To modify the Saturday and Sunday schedules:

- 6- Press on Day button until SA or SU is displayed.
- 7- Press on PGM button to select Prog. 1 (  ) and Hour and Min buttons to enter 7:30 AM.
- 8- Press on PGM button to select Prog. 2 (  ) and then Clear button to erase it.
- 9- Press on PGM button to select Prog. 3 (  ) and then Clear button to erase it.
- 10- Press on PGM button to select Prog. 4 (  ) and then Hour and Min buttons to enter 11:00 PM.
- 11- Press on Mode button to exit this function.

### Temporary or permanent temperature bypass

This operation allows you to temporarily modify the room temperature while you are in the Automatic mode. Simply press on ▲ or ▼ button to select the desired temperature, or the ☼ or ☾ button to select the Comfort or Econo settings you have programmed. This temperature will be maintained until the beginning of the next programmed schedule.

You can also switch to the Vacation setting for a prolonged absence by pressing on ☼ and ☾ at the same time. The display will show ■ icon. In that case, the derogation is permanent. To return to the normal operating mode, press on Mode button.

If you wish to immediately return to the programmed settings, press on Mode button twice.

### CHARACTERISTICS

- Model: TH110A-SP-P (120 VAC)
- Supply: 120 VAC, 50/60 Hz
- Load: 20 A maximum (resistive only)
- Power: 2400 watts (NI) @ 120 VAC
- Approvals: CSA / UL
- Display range: 0 to 60 °C (32 to 140 °F)
- Setting range: 5 to 30 °C (40 to 85 °F)
- Comfort default setting: 20 °C (68 °F)
- Econo default setting: 18 °C (64 °F)
- Vacation default setting: 10 °C (50 °F)
- Storage: -20 to 50 °C (-4 to 120 °F)

### WARRANTY

#### AUBE TECHNOLOGIES INC. ONE (1) YEAR LIMITED WARRANTY

This product is warranted against material defects and workmanship in normal use for a period of one year, from the date of the original purchase from authorized dealers. During this period, AUBE technologies inc. will repair or replace the product with a new or of equivalent quality at AUBE'S option, without charge, any product proven defective in normal use.

Warranty does not cover transportation costs. Nor does it cover a product subjected to misuse or accidental damage. This warranty does not cover the cost of installation, removal or reinstallation.

This limited warranty is in lieu of all other warranties, obligations or liabilities expressed or implied by the company. In no event shall AUBE technologies inc. be liable for consequential or incidental damages resulting from installation of this product. Some states or provinces do not allow limitations on how long an implied warranty lasts, or the exclusion or limitation of incidental or consequential damages, so the above exclusions or limitations may not apply to you. This warranty gives you specific legal rights and you may also have other rights which vary from state to state.

The defective product and the original sale receipt must be returned to the original dealer or shipped pre-paid, insured and addressed to:

**Aube technologies inc., 705 Montrichard, Iberville (Quebec),  
Canada, J2X 5K8  
www.aubetech.com  
service@aubetech.com**

If you have any questions concerning the installation or programming of this product, please call our technical assistance at (450) 358-4600 for the Montreal area or **1-800-831-AUBE** for outside area, Monday to Friday between 8:30 AM and 5:00 PM Eastern time.

### PROBLEMS AND SOLUTIONS

PROBLEMS	CAUSES	SOLUTIONS
No display	<ul style="list-style-type: none"> <li>• Circuit breaker is open</li> <li>• Power failure</li> <li>• The thermostat switch is in Stand by position</li> </ul>	<ul style="list-style-type: none"> <li>• Check 120 VAC presence at the thermostat</li> <li>• Put the switch in On position</li> </ul>
The thermostat is loosing the time but not the programming	<ul style="list-style-type: none"> <li>• Power failure more than 2 hours</li> </ul>	
Room temperature shown is wrong	<ul style="list-style-type: none"> <li>• A draft is nearby the thermostat</li> </ul>	<ul style="list-style-type: none"> <li>• Eliminate the draft</li> </ul>
Heating system always on	<ul style="list-style-type: none"> <li>• Bad installation</li> </ul>	<ul style="list-style-type: none"> <li>• Check installation</li> </ul>
The thermostat displays heating but heating system is not turned on	<ul style="list-style-type: none"> <li>• Bad installation</li> </ul>	<ul style="list-style-type: none"> <li>• Check installation</li> <li>• Check 120 VAC presence at the heating system</li> </ul>
Programs do not change as you want	<ul style="list-style-type: none"> <li>• Incorrect programming hours</li> <li>• Wrong programming mode selected</li> </ul>	<ul style="list-style-type: none"> <li>• Check actual time in AM &amp; PM as well as program times (AM is not displayed)</li> <li>• Make sure operating mode is set to AUTO</li> </ul>

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