ANTARES

T.460.00
Touchscreen Wifi Thermostat

Please use the following information to register and setup your thermostat.

CAUTION:
1. Turn off all electrical devices (e.g. heater, cooler) that are connected to the unit before installation and maintenance.
2. The installer must be a trained service personnel
3. Disconnect the power supply before maintenance.
4. It must be mounted on a dry clean indoor place.
5. Do not expose this unit to moisture.
6. Do not expose this unit to dipping or splashing.

Feature List
➢ Control and monitor thermostat through wifi
➢ Temperature display in ^{o}F or ^{o}C
➢ Temperature measurable range : 32 - 99°F / 0 - 40°C
➢ EEPROM stores all settings
➢ Clock in 12hr / 24 hr
➢ 6 program time on every day
➢ Energy and UV lamp usage record
➢ Defrost function
➢ Cleaning screen mode
➢ Calendar
➢ Screen lock mode
➢ Temperature calibration

Wiring
NOTE: Power supply of this thermostat is 230Vac.

Terminals	Device
L	230Vac Live
N	230Vac Neutral
NC	Normally closed output
NO	Normally open output

Pull all cables back into the wall beforehand to avoid trapping of wires. Do not use any metal conduits or cables provided with metal sheaths.
Recommend adding fuse or protective device in the live circuit.
Connection with burner, domestic boiler, air-conditioned system, zone valve with spring return:
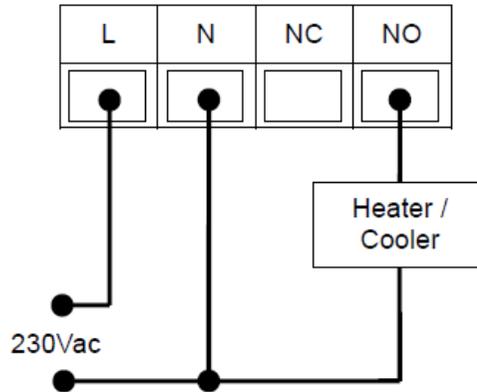
Connection to a zone valve:
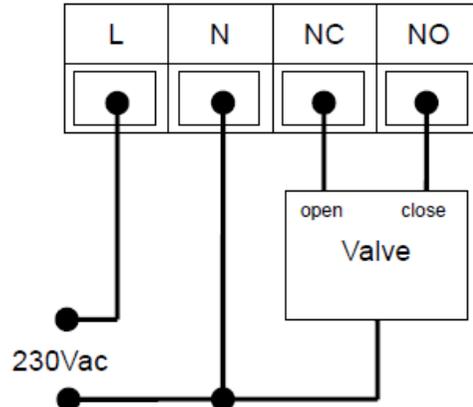
Mounting
Open the thermostat at bottom side by a flat screw driver.
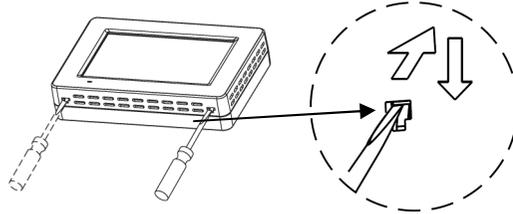
Open the thermostat:
The back cover with air slots of the thermostat at the bottom side by a flat screw driver.

i. Insert a flat screw driver into upper part of two lock holes
ii. Push gently with an up angle following by a downward force, the back cover lock snaps to detach from the hole.
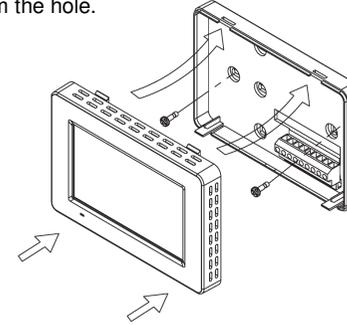
Dimension in mm
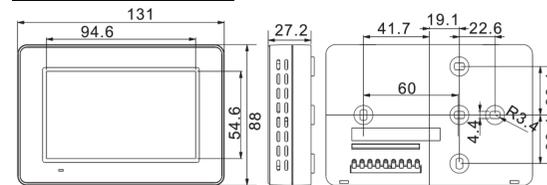
1. Base housing
   i. Adjust the base on the wall or junction box and ensure that the base is at surface level and cover the junction box comfortably.
   ii. Pull the cables out through the middle hole of the base.
   iii. If necessary, place 2 pcs of wall anchors in the wall.
   iv. Fasten the base with 2 pcs of long screws.
   v. Place the cables at the hole near the terminal block.
2. Hold the thermostat on the base.
3. Push the thermostat straight onto the base until it snaps into place.

System Setting
In normal mode, press SYSTEM to enter system mode.
User may set the system used by pressing SYSTEM. It follows the sequence as below:

HEAT→ COOL→ OFF→ HEAT	
HEAT MODE	Heating appliances will be activated when the room temperature is lower than the setting temperature.
COOL MODE	Cooling appliances will be activated when the room temperature is higher than the setting temperature.
OFF MODE	Neither heating nor cooling will be activated at any temperature.

When room temperature is below 0 ^{o}C / 32 ^{o}F, temperature display will keep at 0 ^{o}C / 32 ^{o}F.
When room temperature is above 40 ^{o}C / 99 ^{o}F, temperature display will keep at 40 ^{o}C / 99 ^{o}F.
When heating/cooling is On, ① will be shown on the screen.

Program Mode
Press PROGRAM/OVERRIDE to select program mode.

PROGRAM→OVERRIDE→ PERMANENT OVERRIDE→ PROGRAM→…	
PROGRAM	Setting temperature will change according to program schedule.
OVERRIDE	Program schedule is temporarily disabled. User may adjust the setting temperature. This setting temperature will maintain until the next program time is met. OVERRIDE mode will resume to PROGRAM mode automatically at that time.
PERMANENT OVERRIDE	Program schedule is disabled. User may adjust the setting temperature. This setting temperature will maintain until user change to PROGRAM mode.

To modify program schedule:
1. Press PROG will show the Program Main screen.
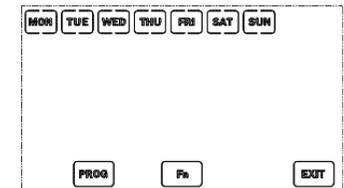
2. Press MON – SUN to select the day to make program adjustments.
3. Press PROG will enter Program Modification screen.

4. Select the Program number and adjust the program time and temperature accordingly.
5. Press Fn in Program Modification screen can disable the program number displayed, program

time and temperature will become "--:--".
(Press Fn again can enable a disabled program)
6. Press CONFM after all changes are made and resume to Program Main screen.
7. Press another day to make program change or press EXIT to quit.

Program Copy function helps user to copy a program to another day:
1. Press PROG to enter Program Main screen.
2. Press MON – SUN to select the source program.
3. Press Fn will show Copy-to screen. Select the days to copy from the source program. (Multiple days can be selected.)

4. Press CONFM.

Setup Mode

There are 9 settings in the setup mode:
1. Wifi connection
   A. When thermostat is offline
      i. Wifi connection On/Off
      ii. Wifi SSID for commissioning
      iii. Wifi Pin for commissioning
   B. When thermostat is online
      i. Wifi connection On/Off
      ii. Wifi IP address
2. Calendar *(when thermostat is offline)*
3. 12 / 24 hour selection
4. ^oC / ^oF display selection
5. Span and differential selection
6. Temperature Calibration
7. Short / long delay selection
8. DST (Daylight Saving Time) selection
9. Screen lock selection

To enter setup mode, press and hold SYSTEM for 5 seconds.
In setup mode, press EXIT to discard changes made to the current setting and exit setup mode. Press CONFM to apply changes and proceed to the next setting.

Wifi Connection
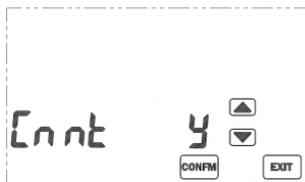
Enter Setup mode by holding SYSTEM for 5 seconds.

Option	Description
Y	Select "Y" to enable wifi connection if thermostat is to be configured as online. After router login information is setup, login information will be stored inside thermostat. If thermostat is powered Off, thermostat will try to connect to the same router when it is powered On again. Blue LED will be either flashing or constant On depends on online status
n	Select "n" will disable the wifi connection with router. Router login information will be stored even connection is disconnected. Blue LED will always Off.
r	This option is only available when router login is set. Select "r" will delete the login information stored inside the thermostat.

Press CONFM to proceed to next step.
If thermostat is Offline (Blue LED flashing):
1. Display will show the ID screen with a 6-digit number. This ID number is the SSID of thermostat with prefix "T.460.00". (For example if the LCD shows "5E7549", search for a Wifi Access Point on a computer or mobile device, "T.460.00-5E7549" access point will be available.) Press CONFM

2. Display will show a 5-digit Pin number, this number is the password required to establish wifi connection between the thermostat and computer/mobile device. For example if LCD shows "Pin12345", the password is "Pin12345", note the capital letter, password is case sensitive.

For more details about Wifi connection,

please see Wifi Connection Guide section.

If thermostat is Online (Blue LED stays On):
● Display will show the IP screen. The IP number shows on screen is the last set of number in an IP address. The preceding 3 sets of IP address is the same as the IP address of router / access point.

Blue LED Off	Wifi connection disabled
Blue LED flashing	Wifi enabled, wifi status is offline or wifi connection experienced an error
Blue LED On	Wifi enabled, online

● Changes made on the thermostat or on web portal will be synchronised periodically.

Disconnect Wifi connectivity:
1. Press and hold SYSTEM key for 5 seconds.
2. When the screen displays "Cnnt", select **"n"**(no) and press CONFM. Thermostat will go offline after a few seconds. Blue LED will turn off when thermostat is offline.

Reconnect an Access Point
Thermostat will memorize the wifi setup settings even powered off. After power up, if "Cnnt" screen is set as "Y", thermostat will try to reconnect to the same Access Point automatically. The connection will take about 1 minute.
If thermostat is offline ("Cnnt" screen set as "n"), press and hold SYSTEM key for 5 seconds, "Cnnt" screen set as **"Y"**, thermostat will try to reconnect to the same Access Point automatically.

If a new Access Point setup is desired, first reset login information by the following steps:
3. Press and hold SYSTEM key for 5 seconds.
4. When the screen displays "Cnnt", select **"r"**(reset) and press CONFM. Thermostat will go offline if it is online originally.
   (Note: "r" option is not available if Access Point / router login information was not set.)
To connect to a new Access Point, follow section 3 "Setup AP/router settings on thermostat".

Set Calendar
NOTE: If thermostat is online, Set Calendar screen will not be available, calendar adjustment is not needed. Thermostat will retrieve the date automatically when it is configured to online.
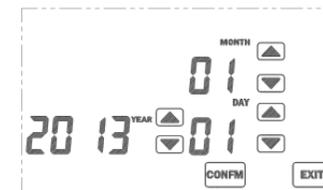
Press ▼ / ▲ to change year, month and day accordingly.
Press CONFM to apply changes and proceed to the next setting.

12/24 Hour
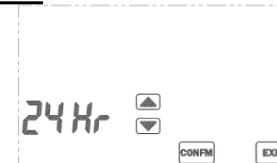
Press ▼ / ▲ to switch between 12 and 24 hour mode.
Press CONFM to apply changes and proceed to the next setting.

^oC / ^oF Selection

Press ▼ / ▲ to switch between ^oC or ^oF temperatuire unit.
Press CONFM to apply changes and proceed to the next setting.

Span Selection

"P" represents span setting, the temperature hysteresis when demand is met or demand is fulfilled. The selectable values are 0.5℃(1℉) / 1.0℃(2℉) / 1.5℃(3℉). Smaller value will result in faster heating/cooling response but more system cycling. Bigger value will result is slower system response and less system cycling. The default span setting is 0.5^oC / 1^oF.

Press ▼ / ▲ to change the values. Press CONFM to apply changes and proceed to the next setting.

Temperature Calibration
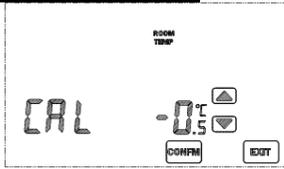
This thermostat is calibrated at factory, calibration is generally not needed. However if a calibration is desired, press ▼ / ▲ to offset the temperature measurement. The range of offset is -3.0 to +3.0°C / -6.0 to +6.0°F.

Short/Long Delay Selection

Press ▼ / ▲ to select between short or long minimum off time for heat. This selection does not affect cooling.
Press CONFM to apply changes and proceed to next setting.
Select Long minimum off time for compressor heat to prevent short cycling of system; Otherwise select Short minimum off time for faster system response.
"SdLY" represents short delay. "LdLY" represents long delay.

Mode	Short Delay	Long delay
Heat mode	5-10sec	4-5 min
Cool mode	4-5 min	4-5 min

DST (Daylight Saving Time)

Press ▼ / ▲ to enable/disable DST (summer time) function. The clock will advance or retreat automatically on the switch days. DST begins on the last Sunday in March and ends on the last Sunday in October. When the clock is advanced, DST icon will be shown on screen.

If DST switch time or date does not match your local practice, you need to adjust the clock manually
A. If thermostat is Offline:
  1. Disable DST feature
  2. Set the clock manually by pressing CLOCK
B. If thermostat is Online:
  1. Disable DST feature
  2. Press CLOCK to adjust the timezone

Screen Lock Selection

Press ▼ or ▲ to enable (ON) or disable (OFF) the security lock. If it is enabled, user is required to input a 4-digit password.

Press ▼ or ▲ on the left to change the password. P1 indicates that the 1st digit password (read from the left) is selected. Press ▼ or ▲ on the right to select the digit.
After setting all 4 digits, press CONFM to activate the security mode. Do not set the password as 8888, 8888 is a special function to restore all thermostat setting to default. Please keep the password in a safe location, there is no way to disable the screen lock until a correct password is entered.

When security mode is activated, "🔒" is shown on the LCD and all keys are disabled except SYSTEM.

Disable the Screen Lock
1. Press SYSTEM and enter the correct password.
2. If the password is correct, the security lock will be disabled. Otherwise, it remains locked.

View Calendar
1. Press the current weekday to view the current date.
2. Press EXIT to exit.

Clock Setting
(Normally clock adjustment is not needed. Thermostat will retrieve the time automatically when it is configured to online. Time zone setting must be adjusted accordingly.)
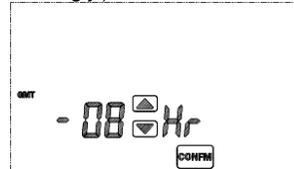
1. Press CLOCK to enter the clock setting mode.
2. Press ▼ or ▲ to adjust the Time zone (GMT, Greenwich Mean Time) setting (-12 to +13 hours). Press CONFM to save the setting.
(The following screen will not show if thermostat is online.)

3. Hour adjustment screen is shown. Press ▼ or ▲ to change the hour. Press CONFM to save the setting.
4. Minute adjustment screen is shown. Press ▼ or ▲ to change the minute. Press CONFM to save the setting and exit the clock setting mode.

Clean Screen Mode
1. Press CLEAR to enter the clean screen mode.
2. The screen will show a 20-second countdown immediately after key is pressed.
3. During countdown, all keys are disabled.
4. When countdown reaches zero, press EXIT to exit clean screen mode or press CLEAR to repeat the countdown.

Usage
This thermostat can record the UV and energy usage. These counters count hourly. Each count is 4-digit long (0~9999).
- UV usage starts counting when thermostat is powered on.
- Energy usage starts counting when the heater / cooler is turned on.

When the count reaches the set limit, the corresponding usage icon will show on screen as a reminder.

View Usage:
1. Press USAGE to enter the usage mode.
2. UV and energy counter (in hours) are shown respectively by pressing USAGE.

3. Press CLEAR to clear the current counter records if necessary.
4. Press EXIT to exit the usage mode.

Adjusting Usage limit:
1. Press and hold USAGE for 3 seconds during the usage mode.

2. Press ▼ or ▲ to change the limit time (0~9999 hours).

3. Press CONFM to save the setting.
4. Press EXIT to exit the limit setting.

Defrost
When the room temperature is below 5°C / 41°F, Heater will turn On and Cooler will turn Off.
"❄"defrost indicator will be shown on the screen.

Wifi Connection Guide
Procedures to connect to internet:
1. Create a user account at World Excel web portal (**http://www.worldexcel-wifi.com/**) or mobile app.
2. Register thermostat at web portal / mobile app
3. Setup AP/router settings on thermostat
4. Control and monitor on web portal / mobile app

─── Using Mobile Apps ───
(If using web portal is prefered, jump to "Using Web Interface" section.)

Mobile apps for Andriod:

Mobile apps for iOS:

1. Create a user account:
1. Open mobile apps.

2. Click on "Register Here" to create a user account.
3. Create a new user account with a valid email address. An email with login password will be sent to you. If you do not receive an email, try to look for the email in your "spam" folder.

2. Register thermostat:
1. After a user account is created, login with your user account. Click on "Config" icon. Then select "Add Device"

Config icon

2. Type in the serial number and entry code provided. This information can be found on the base housing of thermostat or top left corner of this manual. Enter the thermostat location, such as "Living room"/"Bedroom"/… for easy management when you have multiple thermostats. Press "Add" when finished.

3. If more than one thermostat is added, you may select the thermostat with the "Menu" icon.
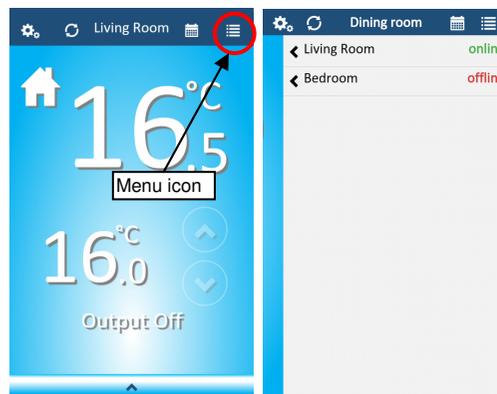
Menu icon

3. Setup AP/router settings on thermostat:
1. Power up thermostat. Press and hold

SYSTEM key for 5 seconds.

2. When the screen displays "Cnnt" (connect), select "Y" (yes) and press CONFM (confirm).
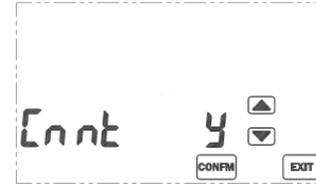
3. Display will show the ID screen with a 6-digit number. This ID number is the SSID of thermostat. For example below, SSID is T.460.00-FE76C5.
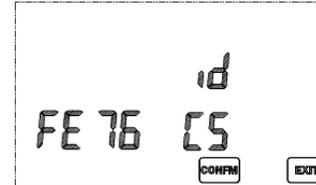
4. Press CONFM, display will show a 5-digit Pin number, this number is the password required to establish wifi connection between thermostat and computer/mobile device. For example below LCD shows the password is "Pin12345".

5. The blue LED of thermostat should now flash that indicates it is in provisioning mode ready for wifi connection setup.

6. On your mobile, search for wireless LAN network. Look for the network with SSID mentioned in step 3. Connect to this network.
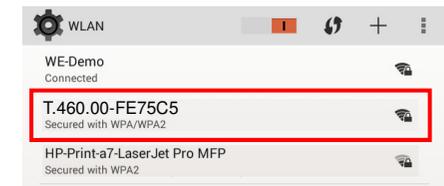
7. Type in the password "PinXXXXX" in step 4. Note the letter case of "Pin", password is case sensitive.

8. After wifi connection is established, open a web browser. On the address bar, type in the address "192.168.1.1" and press Enter.

9. On the webpage, choose the access point / router that will contact to internet. Press "Refresh" button if the desired access point is not listed.

10. Type in the password of the access point/router. Press "OK".

11. Browser will show the "Setting STATION Mode Network Successful". Thermostat will connect to the AP/router and Blue LED will become

constant On and the clock will be adjusted automatically after around 20-30 seconds.

12. If the time does not match, press CLOCK and select the GMT setting of your country. Press CONFM.

4. Control and moniter on mobile app:

1. Open mobile app.

2. Login with your user account.

3. All registered thermostats will be listed on the dashboard page. Press on "Menu" icon to select which thermostat to be controlled. If thermostat is offline, changes and settings are not allowed.
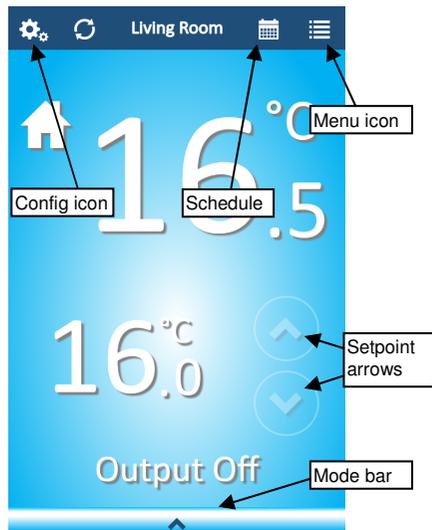
4. Press the setpoint arrows to adjust setting temperature. Setpoint cannot be modified at Off mode and Program mode. To adjust operating mode, press on "Mode" bar at the bottom. Select the operating mode and press "Confirm" after setting is done.
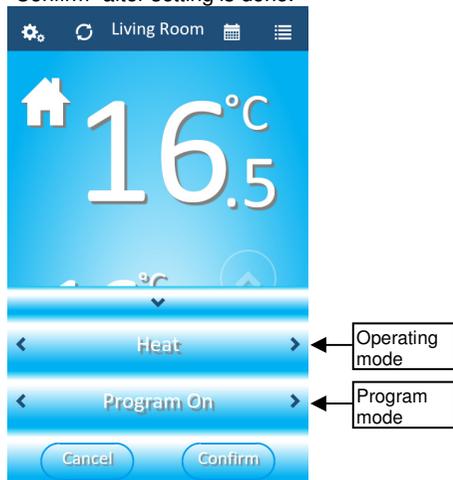
5. For programmable thermostat, setting temperature adjustment is only available at Override/Permanent Override mode.

6. More settings can be changed by pressing on "Config" icon.

Note: Change of temperature unit will initialise setting temperature and program schedule to default settings.

7. To review program schedule, click on "Schedule" icon. Click the tab of other days to review program schedule on each day.
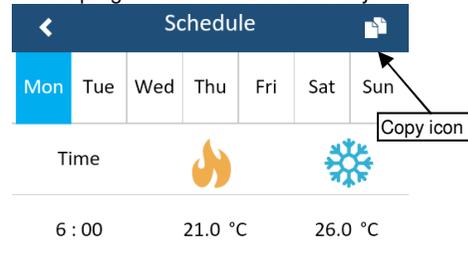
8. To modify program schedule, click on the time slot you wish to modify. Click "Save changes" when modifications are completed.
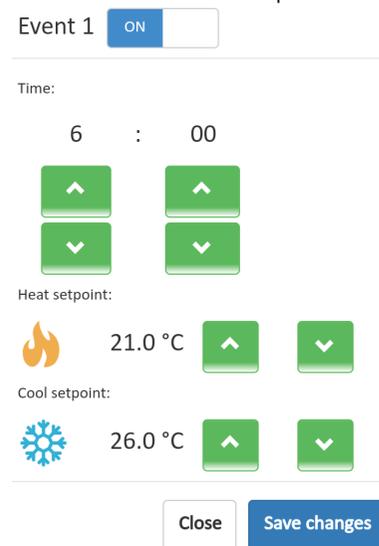
Note: For models with Auto mode, Heat setpoint and Cool setpoint must be separated by a deadband in Auto mode, if the setting violates this requirement, thermostat will adjust the cool setpoint automatically.

9. To copy the program schedule of a day to another day, first select the source program, then press "Copy" icon. Select the days to copy. Press "Save changes".
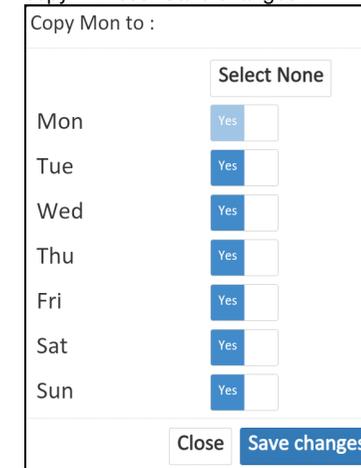
———— Using Web Interface ————
(This section is not needed if thermostat is setup through mobile app already)

1. Create a user account:

1. Open a web browser, type **http://www.worldexcel-wifi.com/** on the address bar. Press ENTER.
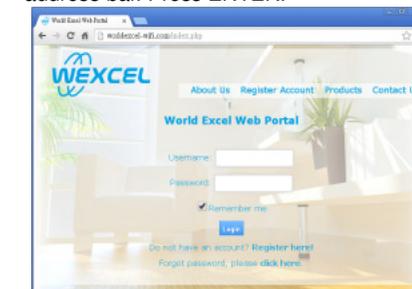
2. Click on "Register Account" to create a user account.
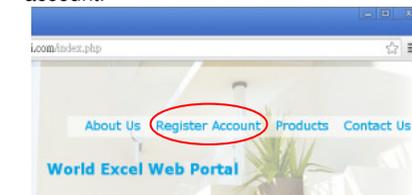
3. Create a new user account with a valid email address. An email with login password will be sent to you.

2. Register thermostat on web portal:

1. After a user account is created, login with your user account at www.worldexcel-wifi.com. Click "Add Device" on top right menu.

2. Type in the serial number and entry code provided. This information can be found on the base housing of thermostat or top left corner of this manual. Enter the thermostat location, such as "Living room"/"Bedroom"/… for easy management when you have multiple thermostats. Press "SUBMIT" when finished.

3. After thermostat is added, it will be shown on the Home screen, with a red icon indicates thermostat is offline. (Icon turns green when online.)

Offline icon (red)

3. Setup AP/router settings on thermostat:

1. Power up thermostat. Press and hold SYSTEM key for 5 seconds.

2. When the screen displays "Cnnt" (connect), select "Y" (yes) and press CONFM (confirm).
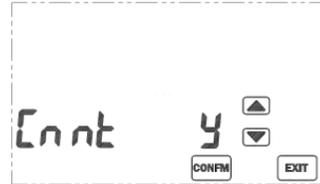
3. Display will show the ID screen with a 6-digit number. This ID number is the SSID of thermostat. For example below, SSID is T.460.00-5E7549.
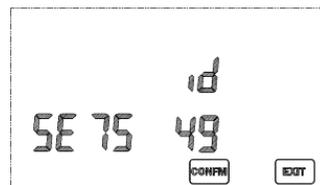
4. Press CONFM, display will show a 5-digit Pin number, this number is the password required to establish wifi connection between thermostat and computer/mobile device. For example if LCD shows "Pin12345", the password is "Pin12345".

5. The blue LED of thermostat should now flash

that indicates it is in provisioning mode ready for wifi connection setup.

6. On a computer with wifi, search for wireless LAN network. Look for the network with SSID mentioned in step 3. Connect to this network.
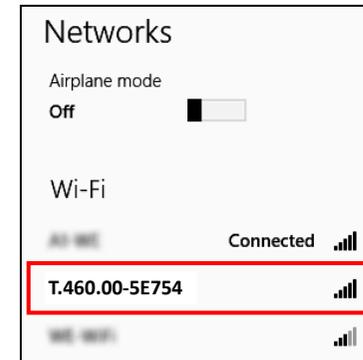
7. Type in the password "**PinXXXXX**" in step 4. Note the letter case of "**Pin**", password is case sensitive.
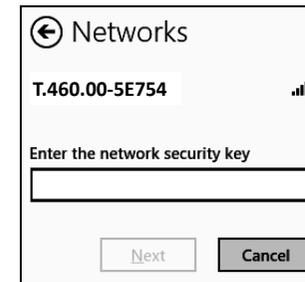
8. After wifi connection is established, open a web browser. On the address bar, type in the address "**192.168.1.1**" and press Enter.

Note: If your computer is connected to both your router and the thermostat at the same time, open 192.168.1.1 may access the login page of your router instead of the thermostat. In this case, please disconnect the connection

between computer and router first.

9. On the webpage, choose the access point / router that will contact to internet. Press "Refresh" button if the desired access point is not listed.

10. Type in the password of the access point/router. Press "OK".

11. Browser will show the "Setting STATION Mode Network Successful". Thermostat will connect to the AP/router and Blue LED will become constant On and the clock will be adjusted automatically after around 20-30 seconds.

12. If the time does not match, press CLOCK and select the GMT setting of your country. Press CONFM.
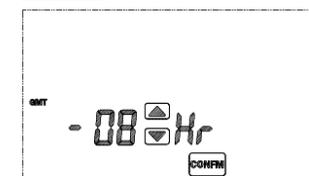
4. Control and moniter on web portal:

1. Open a web browser, type **http://www.worldexcel-wifi.com/** on the address bar. Press ENTER.

2. Login with your user account.
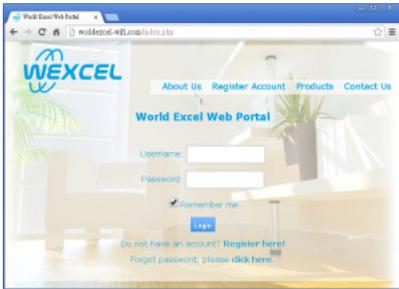
3. All registered thermostats will be listed on the dashboard page.

4. The status indicator will show whether thermostat is online or offline.

   Green: Online
   Red: Offline

   If thermostat is offline, changes and settings are not allowed.

5. Changes made on web portal will be synchronised to thermostat periodically.

6. To adjust setting temperature, move the slider to the left to decrease and to the right to increase.

   Setting Temperature:

   12.0 °C

   Note: Setting temperature adjustment is not available at Off mode.

7. For programmable thermostat, setting temperature adjustment is only available at Override/Permanent Override mode.

8. To change the operating mode, press on the operating mode buttons.

   Operation Mode:

   Off Heat Cool

9. Output status of heating and cooling will be shown as below:

   Output Status:

   Heat On

10. Device settings: If you would like to modify the "Location" label or temperature unit of a thermostat, click on the Settings icon.

    Bedroom
    T.460.00   Settings icon

    Device Setting
    Model:
    DeviceID: 5E7549
    Location: Bedroom

    Modify Location

    Temperature unit:
    ⦿ C ○ F

    Cancel Modify
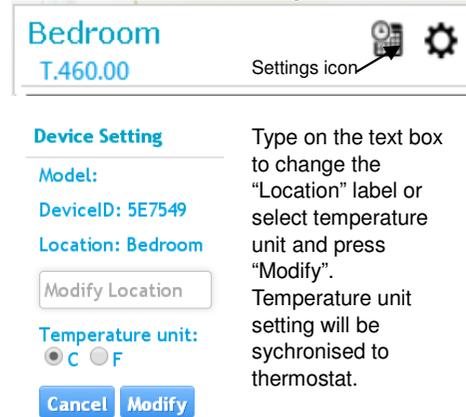
    Type on the text box to change the "Location" label or select temperature unit and press "Modify". Temperature unit setting will be sychronised to thermostat.

    Note: Change of temperature unit will initialise setting temperature and program schedule to default settings.

11. To review program schedule, click on "Schedule" icon will show the program schedule. Click the tab of other days to review program schedule on each day.

    Bedroom   Schedule icon
    T.460.00
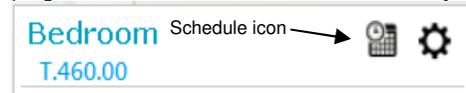
12. To modify program schedule, click on the time or temperature. Move the slider to adjust. Click "Save" when modifications are completed.

Mon	Tue	Wed	Thu	Fri	Sat	Sun

Time	Heat	Cool	
6:00 AM	21.0°C	26.0°C	⊖
8:00 AM	16.0°C	29.5°C	⊖
12:00 PM	21.0°C	26.0°C	⊖
10:00 PM	16.0°C	29.5°C	⊖

    Click on a time slot to modify   Remove button

    Heat:

    Cancel Save
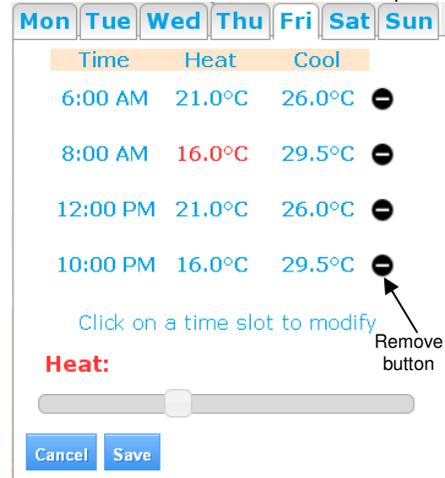
13. To disable a time slot, press "Remove" button beside the program.

14. To add a time slot, press "Add event" button at the bottom. A maximum of 6 time slots are allowed.

    Add event ⊕

15. To copy the program schedule of a day to another day, first select the source program, then select the checkboxs next to the days to copy. Press "Copy".

    Copy to:
    ☐ Mon ☐ Tue ☐ Wed ☐ Thu
    ☐ Fri ☐ Sat ☐ Sun

    Copy

    < End of manual >

Technical Data

Temperature measurement:	0-40 ^{o}C / 32-99 ^{o}F
Control temperature range:	5-35 ^{o}C / 40-95 ^{o}F
Temperature resolution:	0.5 ^{o}C / 1 ^{o}F
Relay contact voltage:	230Vac 50/60Hz
Relay contact current:	5(1)A Max

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