

STN715W

Instruction Manual

THERMOSTAT QUICK REFERENCE

Thermostat Applications Guide

Description	
Gas or Oil Heat	Yes
Electric Furnace	Yes
Heat Pump (No Aux. or Emergency Heat)	Yes
Heat Pump (with Aux. or Emergency Heat)	No
Multi-stage Systems	Yes
Heat Only Systems	Yes
Heat Only Systems - Floor or Wall Furnaces	Yes
Cool Only Systems	Yes
Millivolt	No

Power Type

18 to 30 VAC, 50/60 Hz
for hardwire (common wire)

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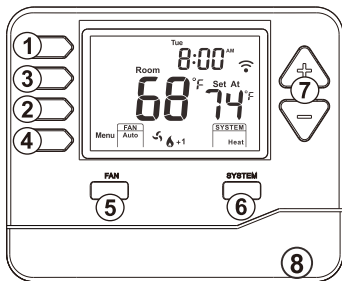
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A trained, experienced technician must install this product.

Carefully read these instructions. You could damage this product or cause a hazardous condition if you fail to follow these instructions.

THERMOSTAT QUICK REFERENCE

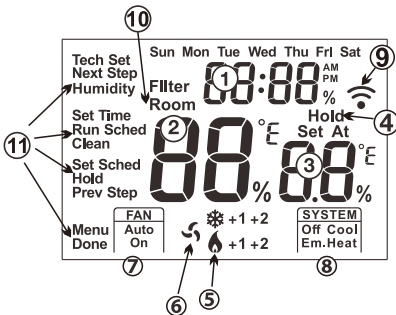
Getting to know your thermostat



- ① Next step Buttons
- ② Program Buttons
- ③ Set time Buttons
- ④ Menu Buttons
- ⑤ Fan Buttons
- ⑥ System Buttons
- ⑦ option Buttons
- ⑧ Front door (Use the finger bevel on the lower portion of the thermostat to open the easy access)

THERMOSTAT QUICK REFERENCE

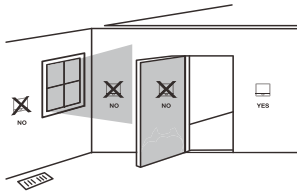
Getting to know your thermostat



- ① Days of the week and time
- ② Indicates the current room temperature
- ③ Displays the user selectable setpoint temperature
- ④ Hold is displayed when thermostat program is permanently overridden.
- ⑤ **System Operation Indicators:** The compressor delay is active if these are flashing.
- ⑥ Fan operating state
- ⑦ Show fan mode
- ⑧ Display system mode
- WIFI connection symbol
(It is displayed when the WIFI is connected properly, and blinks when the wifi is not connected)
- ⑨
- ⑩ Filter change reminder
- ⑪ Show button option

Wall Locations

The thermostat should be installed approximately 4 to 5 feet above the floor. Select an area with average temperature and good air circulation.



Installation Tip

Pick an installation location that is easy for the user to access. The temperature of the location should be representative of the building.

Do not install thermostat in locations:

- Close to hot or cold air ducts
- That are in direct sunlight
- With an outside wall behind the thermostat
- In areas that do not require conditioning
- Where there are dead spots or drafts (in corners or behind doors)
- Where there might be concealed chimneys or pipes

INSTALLATION TIPS

SUBBASE INSTALLATION



Caution: Electrical Hazard

Failure to disconnect the power before beginning to install this product can cause electrical shock or equipment damage.

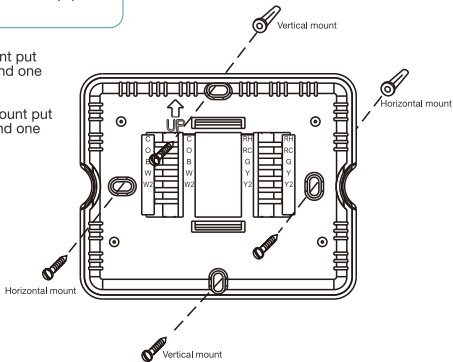
For vertical mount put one screw top and one screw bottom.

For horizontal mount put one screw left and one screw right.



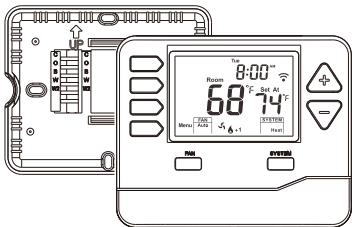
Mercury Notice:

All of our products are mercury free. However, if the product you are replacing contains mercury, dispose of it properly. Your local waste management authority can give you instructions on recycling and proper disposal.



Mount Thermostat

Align the 4 tabs on the subbase with corresponding slots on the back of the thermostat, then push gently until the thermostat snaps in place.





Caution: Electrical Hazard

Failure to disconnect the power before beginning to install this product can cause electrical shock or equipment damage.



Warning:

All components of the control system and the thermostat installation must conform to Class II circuits per the NEC Code.

Wiring

1. If you are replacing a thermostat, make note of the terminal connections on the thermostat that is being replaced. In some cases the wiring connections will not be color coded. For example, the green wire may not be connected to the **G** terminal.
2. Loosen the terminal block screws. Insert wires then retighten the terminal block screws.
3. Place nonflammable insulation into the wall opening to prevent drafts.

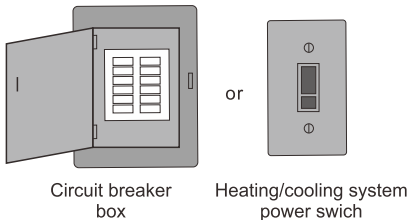


Installation Tip

Do not overtighten terminal block screws, as this can damage the terminal block. A damaged terminal block can keep the thermostat from fitting on the subbase correctly or cause system operation issues.

Max Torque = 6in-lbs.

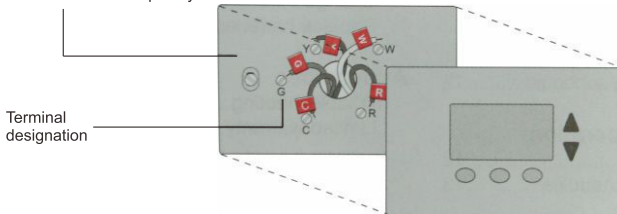
1 Turn Off the Power of Your Heating/Cooling System



2 Remove Old Thermostat-(If Any)

Remove the old thermostat , but leave the wallplate with wires attached.

Do not remove wallplate yet



WIRING

3 Label Wires with Tags

Label the wires using the supplied wire labels as you disconnect them.

Wiring Labels

Apply these wiring labels to each wire with the appropriate terminal designation as you remove it from the existing thermostat.

B	B	Y2	Y2	C	C	E	E	F	F
G	G	H	H	L	L	O	O	P	P
R	R	RC	RC	RH	RH	T	T	U	U
V/VR	V/VR	W	W	W1	W1	W2	W2	W3	W3
X	X	X1	X1	X2	X2	Y	Y	Y1	Y1
AUX	AUX								

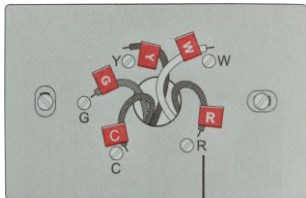
Étiquettes de fils

Lorsque vous retirez les fils des bornes du thermostat existant, collez ces étiquettes sur chaque fil correspondant à la lettre de la borne.

Rótulos para los cables

Coloque estos rótulos, con la designación de las terminales, en cada cable al remover los cables del termostato actual.

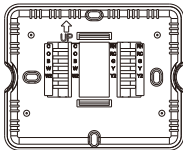
Wire Labels



Terminal designation

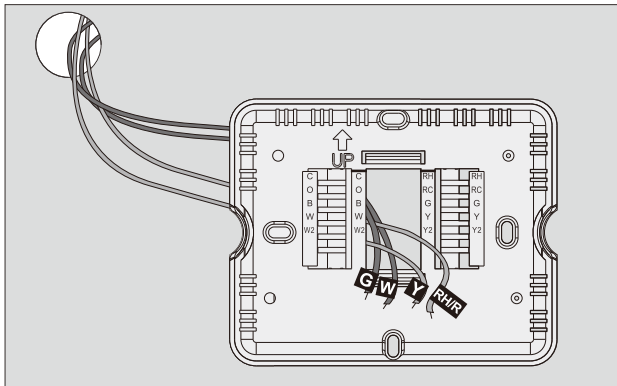
4. Remove the old wall panels

Remove the old wall panels so that the new ones can be installed.



5 Separate Wallplate from New Thermostat

Mount the new wallplate using the included screws and anchors.



Drill 3/16-in. holes for drywall

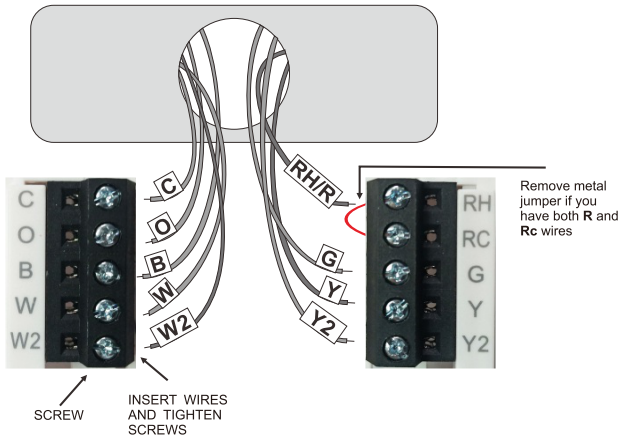
Drill 3/16-in. holes for plaster

WIRING

6 Connect Wires

Simply match wire labels.

If labels do not match letters on the thermostat, check "Alternate Wiring (Conventional Systems)" on page 9 and connect to terminal as shown (see notes, below).

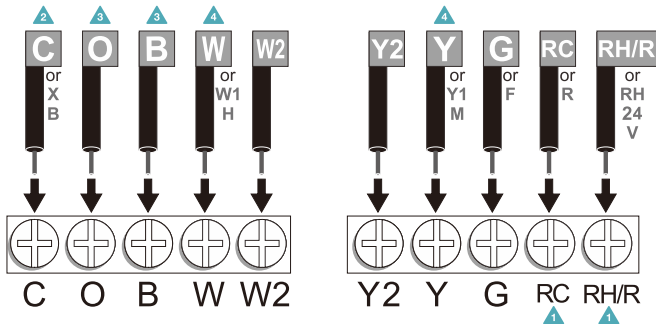


Terminal	2 Heat 2 Cool Conventional System
RC	Transformer power (cooling)
RH	Transformer power (heating)
C	Transformer common
B	Reversing valve / configerable terminal
O	Reversing valve / configerable terminal
G	Fan relay
W	First stage of heat
Y	First stage of cool
Y2	Second stage of cool
W2	Second stage of heat

WIRING

Alternate Wiring (Conventional Systems)

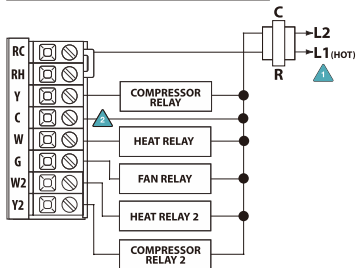
If labels do not match letters on the thermostat, check the chart below and connect to terminal as shown here (See notes, below).



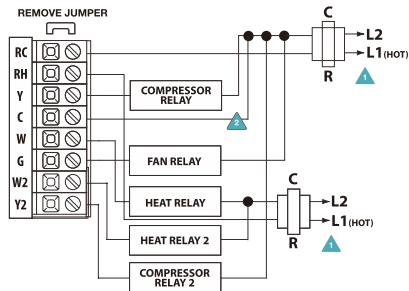
- 1 If wires will be connected to both **RC** and **RH/R** terminals, remove metal jumper.
- 2 If there has **C** or **X** wire available then you can connect with **C** terminal, if there is no **C** or **X** wire then no need to connect with C terminal.
- 3 If you have a **heat pump** without auxiliary/backup heat connect **O** or **B**, not both. If you do not have a **heat pump**, do not connect **B**. Wrap bare end of wire with electrical tape.
- 4 Place a jumper (piece of wire) between **Y** and **W** if you are using a heat pump without auxiliary/backup heat

- 1 Power supply
- 2 Optional 24 VAC common connection when thermostat is used in battery power mode

Typical 2H/2C System: 1 Transformer

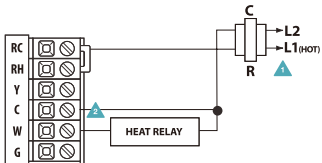


Typical 2H/2C System: 2 Transformer

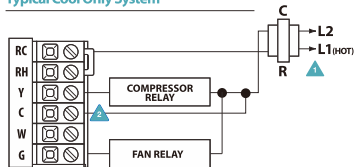


WIRING

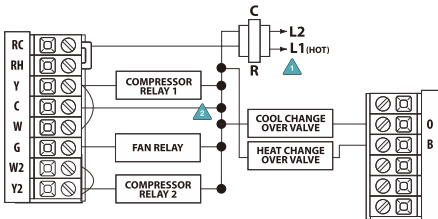
Typical Heat-Only System



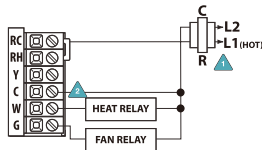
Typical Cool Only System



Typical 2H/2C Heat Pump System w/o Aux.



Typical Heat Only System With Fan



1. Press MENU button
2. Press and hold **TECH Set** button for 3 seconds. This 3 second delay is designed so that homeowners do not accidentally access the installer settings.
3. Configure the installer options as desired using the table below.
4. Use the  or  keys to change settings and the NEXT STEP or PREV key to move from one step to another. Note: Only press DONE key when you want to exit the Technician Setup options.

Tech Setup Steps		LCD Will Show	Adjustment Options	Default
Filter Change Reminder	This feature will flash a reminder in the display after the elapsed run time to remind the user to change the filter. A setting of "OFF" will disable this feature.	OFF SE FL	You can adjust the filter change reminder from OFF to 2000 hours of runtime in 50 hour increments.	OFF
Room Temperature Calibration	This feature allows the installer to change the calibration of the room temperature display. For example, if the thermostat reads 70° degrees and you would like it to read 72° then select +2.	Set At CAL 0°F	You can adjust the room temperature display to read 4° above or below the factory calibrated reading.	0
Minimum Compressor On Time	This feature allows the installer to select the minimum run time for the compressor. For example: a setting of 4 will force the compressor to run for at least 4 minutes every time the compressor turns on, regardless of the room temperature.	OFF ON AN	You can select the minimum compressor run time from "off", "3", "4", or "5" minutes. If 3, 4, or 5 is selected, the compressor will run for at least the selected time before turning off.	OFF

TECHNICIAN SETUP

Tech Setup Steps	LCD Will Show	Adjustment Options	Default
Compressor Short Cycle Delay	The compressor short cycle delay protects the compressor from short cycling. This feature will not allow the compressor to be turned on for 5 minutes after it was last turned off.	ON OF CO Selecting "ON" will not allow the compressor to be turned on for 5 minutes after the last time the compressor was switched off. Select "OFF" to remove this delay.	ON
Cooling Swing	The swing setting often called "cycle rate", "differential" or "anticipation" is adjustable. A smaller swing setting will cause more frequent cycles and a larger swing setting will cause fewer cycles.	dF CO 0.5 °F The cooling swing setting is adjustable from 0.2° to 2° . For example: A swing setting of 0.5° will turn the cooling on at approximately 0.5° above the setpoint and turn the cooling off at approximately 0.5° below the setpoint.	0.5
Heating Swing	The swing setting often called "cycle rate", "differential" or "anticipation" is adjustable. A smaller swing setting will cause more frequent cycles and a larger swing setting will cause fewer cycles.	dF HE 0.4 °F The heating swing setting is adjustable from 0.2° to 2° . For example: A swing setting of 0.5° will turn the heating on at approximately 0.5° below the setpoint and turn the heating off at approximately 0.5° above the setpoint.	0.4

Tech Setup Steps	LCD Will Show	Adjustment Options	Default	
Cooling Fan Delay	The cooling fan delay setting will delay the fan from coming on in cool mode and keep it running after the compressor shuts off for a short time to save energy in some systems.	FAN OF DL	You can set the cooling fan delay to OFF, 15, 30, 60 or 90 seconds. If 15, 30, 60, or 90 is selected the fan will not turn on for that many seconds when there is a call for cool and will run for that many seconds after satisfying a call for cool.	OFF
Heating Temperature Setpoint Limit	This feature allows you to set a maximum heat setpoint value. The setpoint temperature cannot be raised above this valve.	HEL 90°F	Use the  or  key to select the maximum heat setpoint. Range 41°F - 90°F	90°
Cooling Temperature Setpoint Limit	This feature allows you to set a minimum cool setpoint value. The setpoint temperature cannot be lowered below this value.	COL 41°F	Use the  or  key to select the minimum cool setpoint. Range 41°F - 90°F	41°

TECHNICIAN SETUP

Tech Setup Steps	LCD Will Show	Adjustment Options	Default
F° or C°	Select F for Fahrenheit read out or select C for Celsius read out.	 °F for Fahrenheit °C for Celsius	F°
12 or 24 Hour Clock	You can select either 12 or 24 hour clock setting.	 Use the  or  key to select 12 or 24 hour clock.	12 Hour Clock
Fan Operation	Select GAS for systems that control the fan during a call for heat. Select ELEC to have the thermostat control the fan during a call for heat.	 Gas or Elec	GAS

Tech Setup Steps		LCD Will Show	Adjustment Options	Default
Program Options	You can configure this thermostat to have a 7 day program, a 5+1+1 program or nonprogrammable.		Use the  or  key to select 7d for 7 day, 5d for 5+1+1, or 0d for non-programmable.	7d
Display Light	The backlight can be configured in 2 different modes, Light the backlight when any key is pressed and hold it for 15 seconds, or to keep the backlight on for a long time.		OF:Light the backlight when any key is pressed and hold it for 15 seconds ON:keep the backlight on for a long time.	OF
Humidify	You can select whether to display the current environment humidity		OF:The current environment humidity cannot be displayed on the home screen ON:On the home screen, press the Humidify key to display the current ambient humidity	OFF
Factory Default Reset	This step changes all Settings to the factory defaults.		Press +/- to select ON, then press Next Step to restore factory Settings	OF

Set Time

1. Press the **MENU** button
2. Press **SET TIME**
3. Day of the week will be flashing. Use the or key to select the current day of the week.
4. Press **NEXT STEP**
5. The current hour is flashing. Use the or key to select the current hour. When using 12-hour time, make sure the correct a.m. or p.m. choice is selected.
6. Press **NEXT STEP**
7. Minutes are now flashing. Use the or key to select current minutes.
8. Press **DONE** when completed.

Set Program Schedule

1. Select **HEAT** or **COOL** using the system key.
Note: Heat and cool need to be programmed separately.
2. Press **MENU** (If menu does not appear first, press **RUN SCHED**).
3. Press **SET SCHED**. **Note:** Monday will be displayed Time will be flashing.
Use  or  to make your time selection
4. Press **NEXT STEP**.
5. The set-point temperature will be flashing. Use  or  to set the temperature you want.
6. Press **NEXT STEP**. will be displayed Time will be flashing.
Use  or  to make your time selection
7. Press **NEXT STEP**. The set-point temperature will be flashing.
Use  or  to set the temperature you want.
8. Set the remaining programming as described in step 6.7 above

Programming

Default Program

This thermostat is pre-programmed for energy saving operation. The default program is below:

Factory Default Program				
Day of the Week	Events	Time	Setpoint Temperature (Heat)	Setpoint Temperature (Cool)
Weekday	Wake 	6 a.m.	70° F (21° C)	75° F (24° C)
	Leave 	8 a.m.	62° F (17° C)	83° F (28° C)
	Return 	6 p.m.	70° F (21° C)	75° F (24° C)
	Sleep 	10 p.m.	62° F (17° C)	78° F (26° C)
Saturday	Wake 	8 a.m.	70° F (21° C)	75° F (24° C)
	Leave 	10 a.m.	62° F (17° C)	83° F (28° C)
	Return 	6 p.m.	70° F (21° C)	75° F (24° C)
	Sleep 	11 p.m.	62° F (17° C)	78° F (26° C)
Sunday	Wake 	8 a.m.	70° F (21° C)	75° F (24° C)
	Leave 	10 a.m.	62° F (17° C)	83° F (28° C)
	Return 	6 p.m.	70° F (21° C)	75° F (24° C)
	Sleep 	11 p.m.	62° F (17° C)	78° F (26° C)

Swing Setting Tip

The second stage will turn on at 2x the swing setting. The second stage will turn off when 1x the swing is reached. For example, if the swing setting is 0.5 degrees for heating and the thermostat is set at 70°F, the first stage will turn on at approximately 69.5°F. The second stage will turn on at 69°F. The second stage will turn off at 69.5°F and the first will turn off at 70.5°F. If the third stage is used, it will turn on at 68.5°F and turn off at approximately 69°F.

Features

Filter cleaning Reminder

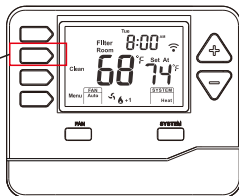
When the **Filter** is displayed on the screen, it is indicated as a filter cleaning reminder. The elapsed time can be checked by navigating to its technical setup step.

Press the **Clean** button. The elapsed time will appear on the screen.

Press the **Clean** button and hold for 3 seconds to Reset the reminders.

When the **Filter** is displayed on the screen, press the **Clean** button and hold for 3 seconds, Reset the reminders successfully Filter disappears.

&Filter runtime check button
&Filter reset reminder button



Temporary & Permanent Hold Feature

Temporary Hold: When you press + or -, the thermostat will display "Hold and Done" at the bottom of the screen. What if you don't do anything Or press Done, and this temperature setting keeps running until the next program

Permanent Hold: When you press + or -, press the Hold key at the bottom of your screen, you will see HOLD appear next to the set point temperature in the display. The thermostat will now permanently stay at this set point and can be adjusted using the + or - keys.

To Return To Program: Press the Run Schedule key at the bottom of your screen to exit temporary and permanent holds.

Features

Specifications

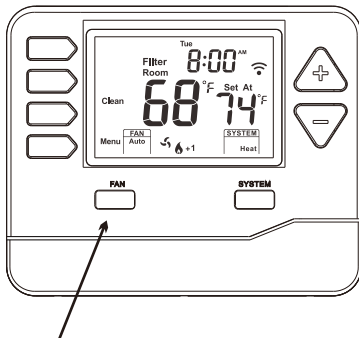
The display range of temperature	41°F to 95°F (5°C to 35°C)
The control range of temperature	44°F to 90°F (7°C to 32°C)
Load rating	1 amp per terminal, 1.5 amp maximum all terminals combined
Display accuracy	± 1°F
Swing (cycle rate or differential)	Heating is adjustable from 0.2°F to 2.0°F Cooling is adjustable from 0.2°F to 2.0°F
Power source	18 to 30 VAC, NEC Class II, 50/60 Hz for hardwire (common wire)
Operating ambient	32° to +105° (0° to +41°C)
Operating humidity	90% non-condensing maximum
Dimensions of thermostat	4.72"W x 3.86"H x 0.98"D

Setting up the WiFi connection

This WiFi thermostat works with App “SmartTherm” which is available for iOS and Android system, the users could download the App from the Apple store or Google Play.



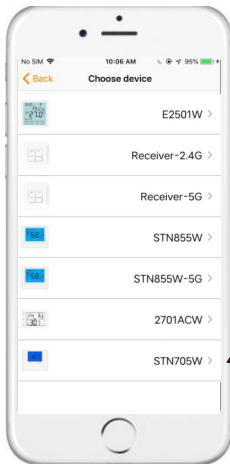
SETTING UP WIFI CONNECTION AND APP



Normal Con fig: Press and hold the FAN key for 5 seconds to display EZ and enter Normal Config mode

AP Config: After entering EZ mode, press and hold the FAN key for another 5 seconds to display AP and enter AP Config mode.

SETTING UP WIFI CONNECTION AND APP



Choose the corresponding thermostat

Then follow the operation steps of the APP

FCC Warning

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

(1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Any Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.

Instruction Manual