

# TECHNICAL & SERVICE MANUAL



STB0810C1    STB0811C1  
STB1010C1    STB1023C1  
STB1020C1    STB1123C1  
STB1220C1    STB0823H1

FILE NO.

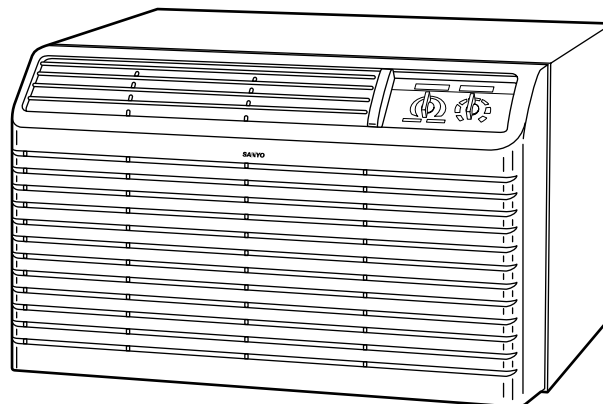
Destination: U.S.A.

## SANYO 26" THROUGH THE WALL AIR CONDITIONERS & HEAT PUMP

COOLING ONLY MODEL	
Model No.	Product Code No.
STB0810C1-S	1 851 005 66
STB1010C1-S	1 851 005 65
STB1020C1-S	1 851 005 68
STB1220C1-S	1 851 005 67

COOLING & ELECTRIC HEATING MODEL	
Model No.	Product Code No.
STB0811C1-S	1 851 005 69
STB1023C1-S	1 851 005 51
STB1123C1-S	1 851 005 70

HEAT PUMP MODEL	
Model No.	Product Code No.
STB0823H1-S	1 851 005 52



STB0810C1    STB0811C1  
STB1010C1    STB1023C1  
STB1020C1    STB1123C1  
STB1220C1    STB0823H1

## IMPORTANT!

### Please Read Before Starting

This air conditioner meets strict safety and operating standards. As the installer or service person, it is an important part of your job to install or service the system so it operates safely and efficiently.

**For safe installation and trouble-free operation, you must:**

- Carefully read the INSTRUCTION MANUAL and INSTALLATION INSTRUCTIONS attached to each air conditioner before beginning.
- Follow each installation or repair step exactly as shown.
- Observe all local, state, and national electrical codes.
- Pay close attention to all warning and caution notices given in this manual.

This symbol refers to a hazard or unsafe practice which can result in severe personal injury or death.

This symbol refers to a hazard or unsafe practice which can result in personal injury or product or property damage.

#### If Necessary, Get Help

These instructions are all you need for most installation sites and maintenance conditions. If you require help for a special problem, contact our sales/service outlet or your certified dealer for additional instructions.

### SPECIAL PRECAUTIONS

#### WARNING

#### When Wiring

**ELECTRICAL SHOCK CAN CAUSE SEVERE PERSONAL INJURY OR DEATH. ONLY A QUALIFIED, EXPERIENCED ELECTRICIAN SHOULD ATTEMPT TO WIRE THIS SYSTEM.**

- All wiring must conform to local electrical codes.
- Each unit must be properly grounded with a ground (or earth) wire or through the supply wiring.
- DO NOT, under any circumstances, cut or remove the third (ground) prong from the power cord plug.
- DO NOT use an adapter Plug or extension cord.
- DO NOT use a damaged power cord, plug, or wall outlet. Replace them immediately.
- DO NOT change the internal wiring or any part of the system.
- DO NOT turn the air conditioner on and off by plugging and unplugging. Use the Operation switch.

#### When Transporting

Be careful when picking up and moving the air conditioner. Get a partner to help, and bend your knees when lifting to reduce strain on your back. Sharp edges or thin aluminum fins on the air conditioner can cut your fingers.

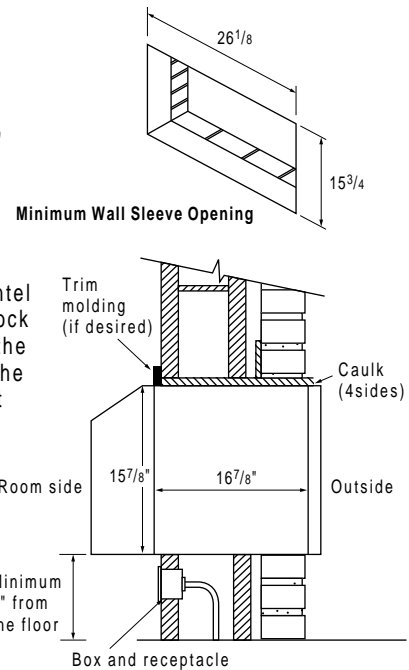
### When Installing

#### Place of Installation

- If possible, install the unit in a shady location.
- Install it at a spot where optimum air circulation can be obtained. No chairs or other obstructions are allowed in front of the air conditioner.
- Keep enough space from any outside obstruction (wall, bush, etc.).

#### Dimension of Wall Opening

Wall opening of 26-1/8" x 15-3/4" is required



- As a safety measure, it is recommended that two people install the unit.
- Hold the unit securely, and be careful not to drop any parts if the air conditioner is being installed on an upper floor of a multistory building.

#### When Servicing

- Turn the power OFF at the main power box (mains) before opening the unit to check or repair electrical parts and wiring.
- Keep fingers and clothing away from any moving parts.
- Clean up the site after you finish, remembering to check that no metal scraps or bits of tools have been left inside the unit being serviced.

#### Others



CAUTION

- Ventilate any enclosed areas when installing or testing the refrigeration system. Escaped refrigerant gas, on contact with fire or heat, can produce dangerously toxic gas.
- Confirm upon completing installation that no refrigerant gas is leaking. If escaped gas comes in contact with a stove, gas water heater, electric room heater or other heat source, it can produce dangerously toxic gas.

## HOW TO USE THIS MANUAL

This manual is designed to help service personnel to understand basic functions, operation and possible troubles and their remedies on SANYO 26" Through The Wall Air Conditioner. You can use this manual both as a reference to find specific information about the capacity, construction of the unit, and as a source of information to help you set up and maintain the air conditioner. Please use this manual to make your work easier, keep the air conditioner functioning well, and keep your customer satisfied.

**Please read IMPORTANT ! precautional information on the previous page before you start actual work.**

## SANYO 26" THROUGH THE WALL A/C MODEL IDENTIFICATION

SANYO 26" Through The Wall Air Conditioner is identified by a model number. Cooling or heating capacity, electrical information and special features included on the air conditioner are indicated on the model number.

**Example**

**STB 1023C1**

<p><u>Type</u> _____</p> <p>STB : SANYO 26" Thru the wall</p> <p><u>Capacity</u> _____</p> <p>08 : 8,000 BTU/h class 10 : 10,000 BTU/h class 11 : 11,000 BTU/h class 12 : 12,000 BTU/h class</p>	<p>STB</p> <p>10</p> <p>23</p> <p>C1</p>	<p><u>Development Flag</u></p> <p><u>Type</u></p> <p>C : Cooling H : Heat Pump</p> <p><u>Electric Heater Size</u></p> <p>0 : No Electric Heater 1 : 1.2 kW 3 : 3.4 kW</p> <p><u>Power Supply</u></p> <p>1 : 60Hz 115 V 2 : 60Hz 230 / 208 V</p>
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**NOTE**

To identify the correct model number of your air conditioner, you must find the nameplate. The name plate is usually located in front of electric component box (behind the grille). First, remove the grille to access the electric component box.

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# 1. OPERATING RANGE

## ■ COOLING ONLY MODEL

Models **STB0810C1 STB1010C1 STB1020C1 STB1220C1**

	Temperature	Indoor Air Intake Temp.	Outdoor Air Intake Temp.
Cooling	Maximum	95°F D.B. / 71°F W.B.	115°F D.B.
	Minimum	67°F D.B. / 57°F W.B.	67°F D.B.

## ■ COOLING & ELECTRIC HEATING MODEL

Models **STB0811C1 STB1023C1 STB1123C1**

	Temperature	Indoor Air Intake Temp.	Outdoor Air Intake Temp.
Cooling	Maximum	95°F D.B. / 71°F W.B.	115°F D.B.
	Minimum	67°F D.B. / 57°F W.B.	67°F D.B.
Heating	Maximum	80°F D.B. / 67°F W.B.	————
	Minimum	— D.B. / — W.B.	————

## ■ HEAT PUMP MODEL

Model **STB0823H1**

	Temperature	Indoor Air Intake Temp.	Outdoor Air Intake Temp.
Cooling	Maximum	95°F D.B. / 71°F W.B.	115°F D.B.
	Minimum	67°F D.B. / 57°F W.B.	67°F D.B.
Heating	Maximum	80°F D.B. / 67°F W.B.	75°F D.B. / 65°F W.B.
	Minimum	— D.B. / — W.B.	17°F D.B. / 15°F W.B.

## 2. SPECIFICATIONS

### 2-1. Unit Specifications

Models **STB0810C1 STB1010C1 STB1020C1 STB1220C1**

Model Number			STB0810C1	STB1010C1	STB1020C1	STB1220C1
Voltage (V)			115	115	230 / 208	230 / 208
<b>Performance</b>			<b>COOLING</b>			
Cooling Capacity	BTU/h		8,200	10,200	9,700 / 9,500	11,500 / 11,300
Air Flow....Hi	CFM (CMM)		270 (7.65)	270 (7.65)	270 (7.65)	270 (7.65)
Dehumidification	Pints/h		2.0	2.7	2.6	3.2
<b>Electrical Rating</b>						
Available voltage range	V		104 ~ 126		253 ~ 187	
Cooling	Amperes	A	8.3	10.6	5.0 / 5.3	6.1 / 6.6
	Watts	W	940	1,200	1,140 / 1,110	1,350 / 1,330
	Power factor	%	98	98	99 / 100	96 / 97
	EER	BTU/hW	8.7	8.5	8.5 / 8.5	8.5 / 8.5
Starting amperes	A		43	53	30	34
Recommended Circuit Protection	A		15	15	15	15
Plug Type			Parallel	Parallel	Tandem	Tandem
<b>Features</b>						
Controls / Temperature control			Mechanical / Thermostat			
Control unit			_____			
Timer			_____			
Fan speeds			2	2	2	2
Airflow direction (Indoor)	Horizontal		Manual			
	Vertical		Manual			
Air filter			Washable			
Air exhaust			Yes			
Compressor			Rotary (Hermetic)			
R22-Amount charged at shipment	OZ		20.1	28.2	23.3	28.2
Refrigerant control			Capillary tube			
Operation sound	Indoor : Hi / Lo	dB-A	57 / 55	60 / 57	60 / 57	60 / 57
	Outdoor : Hi / Lo	dB-A	63 / 60	68 / 64	68 / 64	68 / 64
<b>Dimensions &amp; Weight</b>						
Unit dimensions (Refer to page 7)	Height	In	15-3/4			
	Width	In	25-15/16			
	Depth	In	21-1/2			
Package dimensions	Height	In	18-5/16			
	Width	In	29-1/8			
	Depth	In	24-11/16			
Weight	Net	lbs	82	90	89	93
	Shipping	lbs	93	101	100	104
Shipping volume	Cuft		7.62			

DATA SUBJECT TO CHANGE WITHOUT NOTICE.

Remarks: Rating conditions are:

Cooling : Indoor air temperature 80°F D.B. / 67°F W.B. Heating : Indoor air temperature 70°F D.B.  
 Outdoor air temperature 95°F D.B. / 75°F W.B. Outdoor air temperature 47°F D.B. / 43°F W.B.



Parallele  
115V  
15AMP

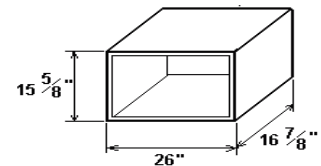


Tandem  
230/208V  
15AMP



Perpendicular  
230/208V  
20AMP

Wall Receptacles



Wall Sleeve Dimension

Models **STB0811C1 STB1023C1 STB1123C1 STB0823H1**

Model Number			STB0811C1	STB1023C1	STB1123C1	STB0823H1
Voltage (V)			115	230 / 208	230 / 208	230 / 208
<b>Performance</b>			<b>COOLING &amp; ELECTRIC HEATING</b>			<b>HEAT PUMP</b>
Cooling Capacity	BTU/h		8,000	9,500 / 9,300	11,300 / 11,000	8,000 / 7,800
Heat pump Capacity	BTU/h		—	—	—	7,500 / 7,400
Electric Heating Capacity	BTU/h		4,040	11,250 / 9,200	11,250 / 9,200	11,250 / 9,200
Air Flow....Hi	CFM (CMM)		250 (7.08)	250 (7.08)	250 (7.08)	250 (7.08)
Dihumidification	Pints/h		2.0	2.6	3.2	2.0
<b>Electrical Rating</b>						
Available voltage range		V	104 ~ 126	253 ~ 187		
Cooling	Amperes	A	8.3	5.0 / 5.3	6.0 / 6.5	4.2 / 4.5
	Watts	W	920	1,120 / 1,090	1,330 / 1,310	940 / 920
	Power factor	%	96	97 / 99	96 / 97	97 / 98
	EER	BTU/hW	8.7	8.5 / 8.5	8.5 / 8.5	8.5 / 8.5
Starting amperes		A	43	30	34	25
Heat pump	Amperes	A	—	—	—	4.0 / 4.3
	Watts	W	—	—	—	880 / 870
	COP	W / W	—	—	—	2.5 / 2.5
Electric Heater	Amperes	A	12.0	15.5 / 14.2	15.5 / 14.2	15.5 / 14.2
	Watts	W	1,350	3,550 / 2,930	3,550 / 2,930	3,550 / 2,930
	Element	kW	1.22	3.4	3.4	3.4
Recommended Circuit Protection		A	15	20	20	20
Plug Type			Parallel	Perpendicular		
<b>Features</b>						
Controls / Temperature control			Mechanical / Thermostat			
Control unit			—			
Timer			—			
Fan speeds			2	2	2	2
Airflow direction (Indoor)		Horizontal	Manual			
		Vertical	Manual			
Air filter			Washable			
Air exhaust			Yes			
Compressor			Rotary (Hermetic)			
R22-Amount charged at shipment		OZ	20.1	23.3	27.2	28.2
Refrigerant control			Capillary tube 3			
Operation sound	Indoor : Hi / Lo	dB-A	57 / 55	60 / 56	60 / 56	57 / 55
	Outdoor : Hi / Lo	dB-A	64 / 61	68 / 62	68 / 62	64 / 61
<b>Dimensions &amp; Weight</b>						
Unit dimensions (Refer to page 7)	Height	In	15-3/4			
	Width	In	25-15/16			
	Depth	In	21-1/2			
Package dimensions	Height	In	18-5/16			
	Width	In	29-1/8			
	Depth	In	24-11/16			
Weight	Net	lbs	82	89	95	90
	Shipping	lbs	93	100	106	101
Shipping volume		Cuft	7.62			

DATA SUBJECT TO CHANGE WITHOUT NOTICE.

## 2-2. Major Component Specifications

Models **STB0810C1 STB1010C1 STB1020C1 STB1220C1**

Model Number		STB0810C1	STB1010C1	STB1020C1	STB1220C1
<b>Controller PCB</b>					
Part No.		_____			
Controls		_____			
Control circuit fuse		_____			
<b>Compressor</b>					
Type		Rotary (Hermetic)	Rotary (Hermetic)	Rotary (Hermetic)	Rotary (Hermetic)
Compressor model ( Parts code No. )		C-1R62H2D ( 80663842-S )	C-R80H2C ( 80680342-S )	C-R76H6K ( 80677946-S )	C-R95H6C ( 80695246-S )
Source		115V 1-phase 60Hz	115V 1-phase 60Hz	230-208V 1-phase 60Hz	230-208V 1-phase 60Hz
Nominal output W		625	800	750	950
Compressor oil ... Amount cc		SUNISO 4GSD-T....350	SUNISO 4GSD-T....350	SUNISO 4GSD-T....350	SUNISO 4GSD-T....450
Coil resistance (at 77°F) Ω		C-R: 1.010 C-S: 5.996	C-R: 0.639 C-S: 2.410	C-R: 2.288 C-S: 5.385	C-R: 1.886 C-S: 0.639
Safety device Type		External protector	External protector	External protector	External protector
Overload relay		MRA98869-9200	MRA98748-9200	MRA98735-9201	MRA99038-9201
Operating temp. Open °F		293±9	302±9	311±9	293±9
Close °F		156±20	156±20	156±20	156±20
Operating amp.(at 77 °F)		Trip in 6 to sec.at 30.5A	Trip in 6 to 16 sec. at 40A	Trip in 6 to 16 sec. at 24A	Trip in 6 to 16 sec. at 24A
Run capacitor μF		25	35	20	22.5
VAC		400	400	400	400
<b>Fan &amp; Fan Motor</b>					
Fan Type Indoor (Dia. / Depth) In		Centrifugal (Dia 7-3/32 : Depth 3-17/32)			
Outdoor (Dia. / Depth) In		Puropeller (Dia 12-19/32 : Depth 3-3/8)			
Fan motor model ... Q'ty		KFC6S-91A1P...1		KFC6S-91A6P...1	
Source		115V 1-phase 60Hz		230-208V 1-phase 60Hz	
No. of poles ... rpm, High (V)		6...1,110(115V)		6...1,080(208V) 1,100(230V)	
Nominal output W		90		90	
Coil resistance (at 68°F) Ω		BLU-BLN: 16.59 BLU-YEL: 7.84 BLU-PNK: 17.19		WHT-BLN: 60.10 WHT-BLN: 33.46 WHT-PNK: 59.31	
Safety device Type		Thermal protector		Thermal protector	
Operating temp. Open °F		248±9		248±9	
Close °F		171±27		171±27	
Run capacitor μF		16		4	
VAC		220		440	
<b>Heat Exch. Coil</b>					
Evaporator Coil		Aluminum plate fin / Copper tube			
Rows		2	2	2	3
Fins per inch		19.5	19.5	19.5	15.9
Face area ft²		1.049	1.049	1.049	1.049
Condenser Coil		Aluminum plate fin / Copper tube			
Rows		2	3	3	3
Fins per inch		18.1	14.1	14.1	18.1
Face area ft²		1.075	1.075	1.075	1.075

DATA SUBJECT TO CHANGE WITHOUT NOTICE.



Models **STB0811C1 STB1023C1 STB1123C1 STB0823H1**

Model Number	STB0811C1	STB1023C1	STB1123C1	STB0823H1
<b>Controller PCB</b>				
Part No.	_____	_____	_____	851-0-5171-660-00
Controls	_____	_____	_____	POW-STBH
Control circuit fuse	_____	_____	_____	_____
<b>Compressor</b>				
Type	Rotary (Hermetic)	Rotary (Hermetic)	Rotary (Hermetic)	Rotary (Hermetic)
Compressor model ( Parts code No. )	C-1R62H2D ( 80663842-s )	C-R76H6K ( 80677946-S )	C-R95H6C ( 80695246-S )	C-1R65H6W ( 80665146-S )
Source	115V 1-phase 60Hz	230-208V 1-phase 60Hz	230-208V 1-phase 60Hz	230-208V 1-phase 60Hz
Nominal output W	625	750	950	650
Compressor oil ... Amount cc	SUNISO 4GSD-T....350	SUNISO 4GSD-T....350	SUNISO 4GSD-T....450	SUNISO 4GSD-T....350
Coil resistance (at 77°F) Ω	C-R: 1.010 C-S: 5.996	C-R: 2.288 C-S: 5.385	C-R: 1.886 C-S: 0.639	C-R: 3.311 C-S: 3.529
Safety device: Type	External protector	External protector	External protector	External protector
Overload relay	MRA98869-9200	MRA98735-9201	MRA99038-9201	MRA99082-9201
Operating temp. Open °F	293±9	311±9	293±9	293±9
Close °F	156±20	156±20	156±20	156±20
Operating amp.(at 77 °F)	Trip in 6 to sec.at 30.5A	Trip in 6 to 16 sec. at 24A	Trip in 6 to 16 sec. at 24A	Trip in 6 to 16 sec. at 16.5A
Run capacitor μF	25	20	22.5	22.5
VAC	400	400	400	400
<b>Fan &amp; Fan Motor</b>				
Fan Type Indoor (Dia. / Depth) In	Centrifugal (Dia 7-3/32 : Depth 3-17/32)			
Outdoor (Dia. / Depth) In	Puropeller (Dia 12-19/32 : Depth 3-3/8)			
Fan motor model ... Q'ty	KFC6S-91A1P...1	KFC6S-91A6P...1		
Source	115V 1-phase 60Hz	230-208V 1-phase 60Hz		
No. of poles ... rpm, High (V)	6...1,110(115V)	6...1,080(208V) 1,100(230V)		
Nominal output W	90	90		
Coil resistance (at 68°F) Ω	BLU-BLN: 16.59 BLU-YEL: 7.84 BLU-PNK: 17.19	WHT-BLN: 60.10 WHT-BLN: 33.46 WHT-PNK: 59.31		
Safety device Type	Thermal protector	Thermal protector		
Operating temp. Open °F	248±9	248±9		
Close °F	171±27	171±27		
Run capacitor μF	16	4		
VAC	220	440		
<b>Heat Exch. Coil</b>				
Evaporator Coil	Aluminum plate fin / Copper tube			
Rows	2	2	3	3
Fins per inch	19.5	19.5	15.9	14.1
Face area ft²	1.049	1.049	1.049	1.049
Condenser Coil	Aluminum plate fin / Copper tube			
Rows	2	3	3	3
Fins per inch	18.1	14.1	18.1	14.1
Face area ft²	1.075	1.075	1.075	1.075

DATA SUBJECT TO CHANGE WITHOUT NOTICE.

## 2-3. Other Component Specifications

Models **STB0810C1** **STB1010C1** **STB1020C1** **STB1220C1**  
**STB0811C1** **STB1023C1** **STB1123C1** **STB0823H1**

Room Thermostat			YTB-2U136	YTB-2U358
Model			STB1020C1 STB0810C1 STB1220C1 STB1010C1	STB0811C1 STB1023C1 STB1123C1
Openrating temp.	Cold	°F	ON: 65 / OFF: 61±3 (Diff: 4 Deg)	
	Warm	°F	ON: 90 / OFF:86	

PTC Thermister (for compressor start up)			PTH491A04AR470N500	
Model			STB0810C1 STB0811C1	
Resistance	at 77°F	Ω	47±30%	

Relay (Heater)			VC20A-115-S	VC20A-230-S
Model			STB0811C1	STB1023C1 STB1123C1
Coil rating			AC115V , 60Hz	AC208/230V , 60Hz
Contact rating			AC265V , 22A	AC265V , 22A

Electoric Heater Ass'y			AH-H06S	AH-H10S
Model			STB0811C1	STB1023C1 STB0823H1 STB1123C1
Heater Element	Rating		1.22 kW , 115V	3.4 kW , 230V
	Resistance	Ω	9.5±1.5% (at 68°F)	13.6±1.5% (at 68°F)
	Watt Dinsty	w/in <sup>2</sup>	8.9	13.2
	Dimension	In	Dia 3/8 , Leng 36	Dia 3/8 , Leng 36
Heater Thermo.	Type		CS-7L	
	Openrating temp	°F	OFF : 122±5 / ON : 95±9	
Fuse	Type		SF-152U	
	Openrating temp	°F	306±5	

Power Trnsformer			ATR-J64ULN2	
Model			STB0823H1	
Rating	Primary		AC220V , 60Hz	
	Secondary		AC19V , 0.3A	

Thermister (Room sensor)			PBC-41E-S29	
Model			STB0823H1	
Resistance	at 32°F	kΩ	15±5%	

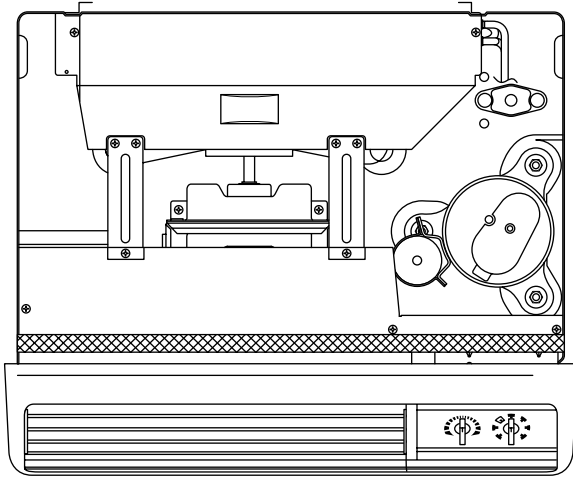
Thermister (Outdoor coil)			PBC-41E-S14	
Model			STB0823H1	
Resistance	at 32°F	kΩ	15±5%	

4-way Valve (Solenoid coil)			CHV-01AQ503UA1(Coil) / CHV-01U1(Valve)	
Model			STB0823H1	
Coil rating			AC208/230V (60Hz) , 6W	

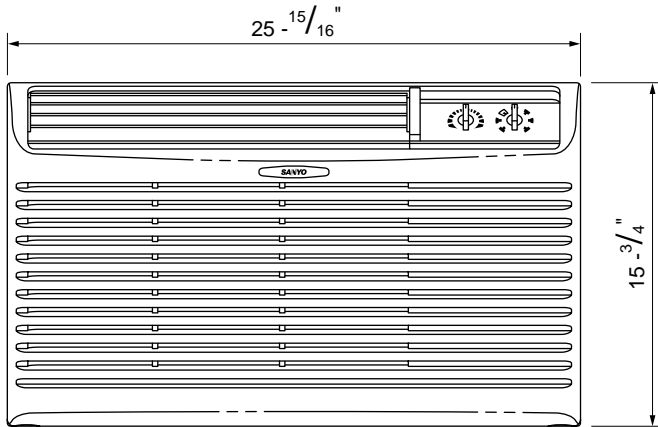
### 3. DIMENSIONAL DATA

Models    STB0810C1    STB1010C1    STB1020C1    STB1220C1  
               STB0811C1    STB1023C1    STB1123C1    STB0823H1

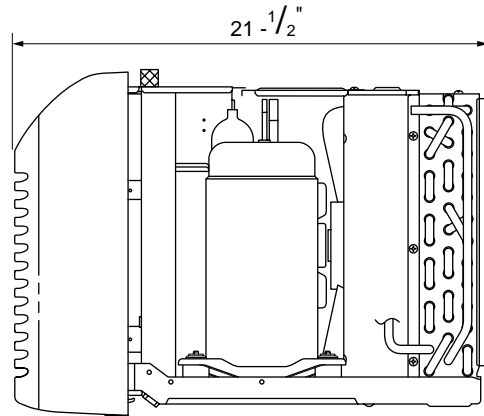
■ Unit Dimension



Top view



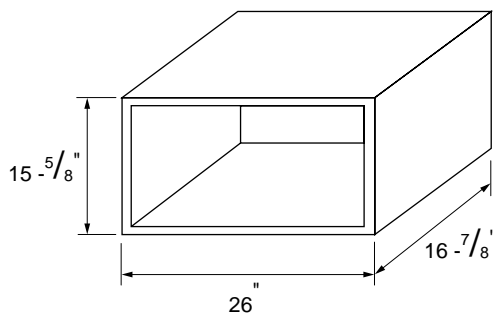
Front view



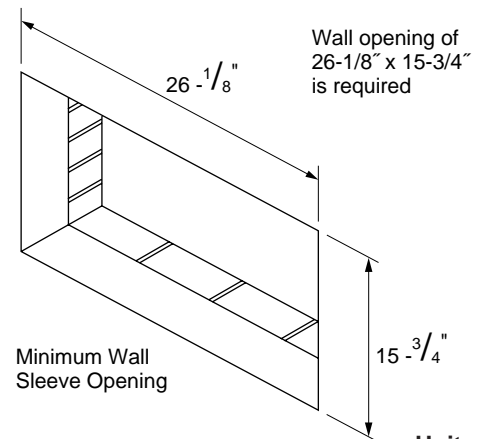
Side view

Unit : inch

■ Wall Sleeve Dimension



■ Dimension of Wall Opening

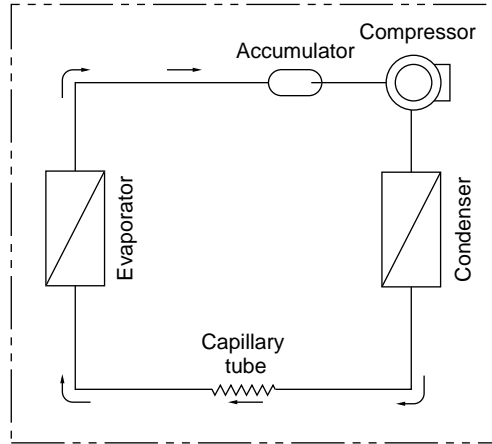


Minimum Wall Sleeve Opening

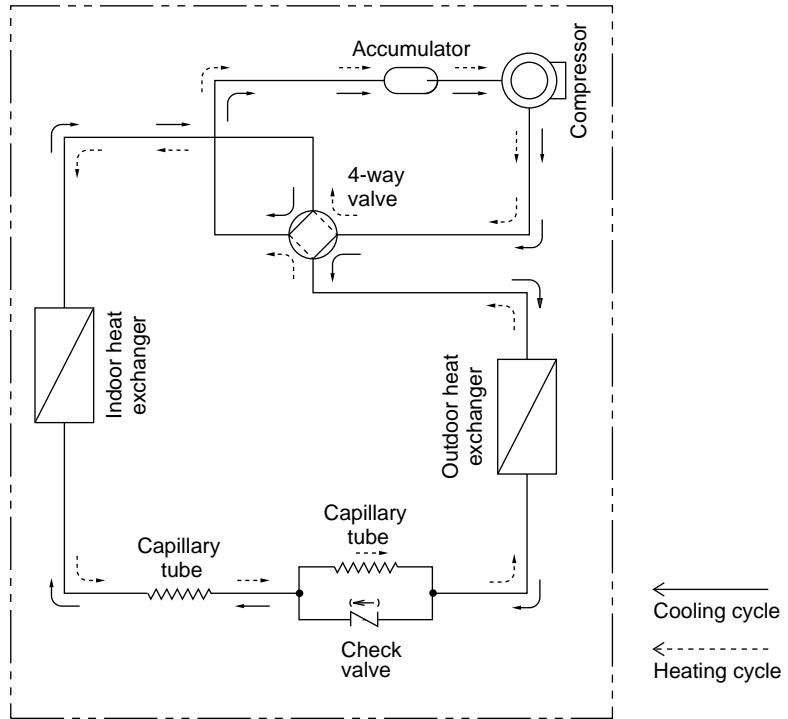
Unit : inch

# 4. REFRIGERANT FLOW DIAGRAM

Models **STB0810C1** **STB1010C1** **STB1020C1** **STB1220C1**  
**STB0811C1** **STB1023C1** **STB1123C1**



Model **STB0823H1**



# 5. PERFORMANCE DATA

## 5-1. Cooling Capacity

Model **STB0810C1**

115 V Single phase 60 Hz

RATING CAPACITY		8,200 BTU/h						
AIR FLOW RATE		270 CFM						
EVAPORATOR		CONDENSER						
ENT. TEMP. °F (°C)		OUTDOOR AMBIENT TEMP. °F(°C)						
W.B.	D.B.		67 (19.4)	75 (23.9)	85 (29.4)	95 (35.0)	105 (40.6)	110 (43.3)
59 (15.0)		TC	8,260	7,900	7,540	7,180	6,750	6,210
		CM	0.60	0.65	0.70	0.75	0.79	0.84
	70 (21.1)	SHC	6,260	6,100	5,940	5,780	5,580	5,350
	73 (22.8)	SHC	7,310	7,150	6,990	6,830	6,630	6,210
	77 (25.0)	SHC	8,260	7,900	7,540	7,180	6,750	6,210
	80 (26.7)	SHC	8,260	7,900	7,540	7,180	6,750	6,210
	84 (28.9)	SHC	8,260	7,900	7,540	7,180	6,750	6,210
88 (31.1)	SHC	8,260	7,900	7,540	7,180	6,750	6,210	
63 (17.2)		TC	9,350	8,480	8,090	7,710	7,250	6,670
		CM	0.62	0.67	0.72	0.77	0.81	0.86
	70 (21.1)	SHC	5,170	5,010	4,840	4,680	4,490	4,260
	73 (22.8)	SHC	6,220	6,060	5,890	5,730	5,540	5,310
	77 (25.0)	SHC	7,270	7,110	6,940	6,780	6,590	6,360
	80 (26.7)	SHC	8,320	8,160	7,990	7,710	7,250	6,670
	84 (28.9)	SHC	8,860	8,480	8,090	7,710	7,250	6,670
88 (31.1)	SHC	8,860	8,480	8,090	7,710	7,250	6,670	
67 (19.4)		TC	9,430	9,020	8,610	# 8,200	7,710	7,090
		CM	0.64	0.69	0.74	0.79	0.84	0.89
	70 (21.1)	SHC	4,050	3,890	3,730	3,570	3,380	3,150
	73 (22.8)	SHC	5,100	4,940	4,780	4,620	4,430	4,200
	77 (25.0)	SHC	6,150	5,990	5,830	5,670	5,480	5,250
	80 (26.7)	SHC	7,200	7,040	6,870	6,720	6,530	6,290
	84 (28.9)	SHC	8,250	8,090	7,920	7,770	7,580	7,090
88 (31.1)	SHC	9,300	9,020	8,610	8,200	7,710	7,090	
70 (21.1)		TC	10,000	9,560	9,130	8,690	8,170	7,520
		CM	0.66	0.71	0.76	0.82	0.86	0.91
	73 (22.8)	SHC	3,970	3,820	3,660	3,500	3,320	3,090
	77 (25.0)	SHC	5,020	4,860	4,710	4,550	4,370	4,140
	80 (26.7)	SHC	6,070	5,910	5,760	5,600	5,420	5,190
	84 (28.9)	SHC	7,120	6,960	6,810	6,650	6,470	6,240
73 (22.8)		TC	10,610	10,150	9,670	9,130	8,540	7,950
		CM	0.67	0.73	0.78	0.84	0.89	0.94
	77 (25.0)	SHC	3,850	3,690	3,530	3,360	3,170	2,970
	80 (26.7)	SHC	4,900	4,740	4,580	4,400	4,220	4,020
	84 (28.9)	SHC	5,950	5,790	5,630	5,450	5,260	5,070
	SHC	7,000	6,840	6,680	6,500	6,310	6,120	

TC : Total Cooling Capacity (BTU/h)

SHC : Sensible Heat Capacity (BTU/h)

CM : Compressor Input (kW)

Rating conditions (#Mark) are

Outdoor Ambient Temp. 95°F (35°C) D.B.

Indoor Air Intake Temp. 80°F (26.7°C) D.B. / 67°F (19.4°C) W.B.

Model **STB1010C1**

115 V Single phase 60 Hz

RATING CAPACITY		10,200 BTU/h						
AIR FLOW RATE		270 CFM						
EVAPORATOR		CONDENSER						
ENT. TEMP. °F (°C)		OUTDOOR AMBIENT TEMP. °F(°C)						
W.B.	D.B.		67 (19.4)	75 (23.9)	85 (29.4)	95 (35.0)	105 (40.6)	110 (43.3)
59 (15.0)		TC	10,280	9,830	9,380	8,940	8,390	7,730
		CM	0.80	0.87	0.93	1.00	1.06	1.13
	70 (21.1)	SHC	7,220	7,000	6,790	6,580	6,320	6,020
	73 (22.8)	SHC	8,270	8,050	7,840	7,630	7,370	7,070
	77 (25.0)	SHC	9,320	9,100	8,890	8,680	8,390	7,730
	80 (26.7)	SHC	10,280	9,830	9,380	8,940	8,390	7,730
	84 (28.9)	SHC	10,280	9,830	9,380	8,940	8,390	7,730
88 (31.1)	SHC	10,280	9,830	9,380	8,940	8,390	7,730	
63 (17.2)		TC	11,630	10,550	10,070	9,590	9,010	8,290
		CM	0.82	0.89	0.95	1.02	1.09	1.15
	70 (21.1)	SHC	6,130	5,910	5,700	5,490	5,240	4,930
	73 (22.8)	SHC	7,180	6,960	6,750	6,540	6,290	5,980
	77 (25.0)	SHC	8,230	8,010	7,800	7,580	7,330	7,030
	80 (26.7)	SHC	9,280	9,060	8,850	8,630	8,380	8,080
	84 (28.9)	SHC	10,330	10,110	9,900	9,590	9,010	8,290
88 (31.1)	SHC	11,030	10,550	10,070	9,590	9,010	8,290	
67 (19.4)		TC	11,730	11,220	10,710	# 10,200	9,590	8,820
		CM	0.85	0.92	0.98	1.05	1.12	1.19
	70 (21.1)	SHC	5,000	4,780	4,570	4,360	4,110	3,810
	73 (22.8)	SHC	6,050	5,830	5,620	5,410	5,160	4,860
	77 (25.0)	SHC	7,090	6,880	6,670	6,460	6,210	5,910
	80 (26.7)	SHC	8,140	7,930	7,720	7,510	7,260	6,960
	84 (28.9)	SHC	9,190	8,980	8,770	8,560	8,310	8,010
88 (31.1)	SHC	10,240	10,030	9,820	9,610	9,360	8,820	
70 (21.1)		TC	12,430	11,890	11,350	10,810	10,160	9,350
		CM	0.87	0.94	1.01	1.08	1.15	1.22
	73 (22.8)	SHC	4,900	4,690	4,480	4,280	4,040	3,740
	77 (25.0)	SHC	5,950	5,740	5,530	5,330	5,090	4,790
	80 (26.7)	SHC	7,000	6,790	6,580	6,380	6,140	5,840
	84 (28.9)	SHC	8,050	7,840	7,630	7,430	7,190	6,890
73 (22.8)	88 (31.1)	SHC	9,100	8,890	8,680	8,480	8,240	7,940
		TC	13,190	12,620	12,030	11,350	10,630	9,880
		CM	0.89	0.97	1.04	1.11	1.18	1.26
	77 (25.0)	SHC	4,760	4,550	4,340	4,100	3,860	3,610
	80 (26.7)	SHC	5,810	5,600	5,390	5,150	4,900	4,650
84 (28.9)	SHC	6,850	6,650	6,440	6,200	5,950	5,700	
88 (31.1)	SHC	7,900	7,700	7,490	7,250	7,000	6,750	

TC : Total Cooling Capacity (BTU/h)

SHC : Sensible Heat Capacity (BTU/h)

CM : Compressor Input (kW)

Rating conditions (#Mark) are

Outdoor Ambient Temp. 95°F (35°C) D.B.

Indoor Air Intake Temp. 80°F (26.7°C) D.B. / 67°F (19.4°C) W.B.

Model **STB1020C1**

230 V Single phase 60 Hz

RATING CAPACITY		9,700 BTU/h						
AIR FLOW RATE		270 CFM						
EVAPORATOR		CONDENSER						
ENT. TEMP. °F (°C)		OUTDOOR AMBIENT TEMP. °F(°C)						
W.B.	D.B.		67 (19.4)	75 (23.9)	85 (29.4)	95 (35.0)	105 (40.6)	110 (43.3)
59 (15.0)		TC	9,770	9,350	8,920	8,500	7,980	7,350
		CM	0.76	0.82	0.88	0.94	0.97	1.00
	70 (21.1)	SHC	6,980	6,780	6,580	6,380	6,140	5,860
	73 (22.8)	SHC	8,030	7,830	7,630	7,430	7,190	6,910
	77 (25.0)	SHC	9,080	8,880	8,680	8,480	7,980	7,350
	80 (26.7)	SHC	9,770	9,350	8,920	8,500	7,980	7,350
	84 (28.9)	SHC	9,770	9,350	8,920	8,500	7,980	7,350
88 (31.1)	SHC	9,770	9,350	8,920	8,500	7,980	7,350	
63 (17.2)		TC	11,060	10,030	9,570	9,120	8,570	7,890
		CM	0.78	0.84	0.90	0.97	1.00	1.02
	70 (21.1)	SHC	5,890	5,690	5,490	5,290	5,050	4,760
	73 (22.8)	SHC	6,940	6,740	6,540	6,340	6,100	5,810
	77 (25.0)	SHC	7,990	7,790	7,580	7,390	7,150	6,860
	80 (26.7)	SHC	9,040	8,840	8,630	8,440	8,200	7,890
	84 (28.9)	SHC	10,090	9,890	9,570	9,120	8,570	7,890
88 (31.1)	SHC	10,490	10,030	9,570	9,120	8,570	7,890	
67 (19.4)		TC	11,150	10,670	10,180	# 9,700	9,120	8,390
		CM	0.80	0.87	0.93	1.00	1.03	1.06
	70 (21.1)	SHC	4,760	4,560	4,360	4,160	3,930	3,650
	73 (22.8)	SHC	5,810	5,610	5,410	5,210	4,980	4,700
	77 (25.0)	SHC	6,860	6,660	6,460	6,260	6,030	5,750
	80 (26.7)	SHC	7,910	7,710	7,510	7,310	7,080	6,800
	84 (28.9)	SHC	8,960	8,760	8,560	8,360	8,130	7,850
88 (31.1)	SHC	10,010	9,810	9,610	9,410	9,120	8,390	
70 (21.1)		TC	11,820	11,310	10,800	10,280	9,670	8,890
		CM	0.83	0.89	0.96	1.03	1.06	1.09
	73 (22.8)	SHC	4,670	4,470	4,280	4,090	3,860	3,580
	77 (25.0)	SHC	5,720	5,520	5,330	5,140	4,910	4,630
	80 (26.7)	SHC	6,770	6,570	6,380	6,190	5,960	5,680
	84 (28.9)	SHC	7,820	7,620	7,430	7,240	7,010	6,730
73 (22.8)		TC	12,550	12,000	11,440	10,800	10,110	9,400
		CM	0.84	0.92	0.98	1.05	1.09	1.12
	77 (25.0)	SHC	4,530	4,340	4,140	3,920	3,690	3,450
	80 (26.7)	SHC	5,580	5,390	5,190	4,970	4,740	4,500
	84 (28.9)	SHC	6,630	6,440	6,240	6,020	5,790	5,550
	SHC	7,680	7,490	7,290	7,070	6,840	6,600	

TC : Total Cooling Capacity (BTU/h)

SHC : Sensible Heat Capacity (BTU/h)

CM : Compressor Input (kW)

Rating conditions (#Mark) are

Outdoor Ambient Temp. 95°F (35°C) D.B.

Indoor Air Intake Temp. 80°F (26.7°C) D.B. / 67°F (19.4°C) W.B.

Model **STB1220C1**

230 V Single phase 60 Hz

RATING CAPACITY		11,500 BTU/h						
AIR FLOW RATE		270 CFM						
EVAPORATOR		CONDENSER						
ENT. TEMP. °F (°C)		OUTDOOR AMBIENT TEMP. °F(°C)						
W.B.	D.B.		67 (19.4)	75 (23.9)	85 (29.4)	95 (35.0)	105 (40.6)	110 (43.3)
59 (15.0)		TC	11,590	11,080	10,580	10,070	9,460	8,710
		CM	0.92	0.99	1.06	1.14	1.21	1.28
	70 (21.1)	SHC	7,880	7,620	7,370	7,130	6,830	6,480
	73 (22.8)	SHC	8,930	8,670	8,420	8,180	7,880	7,530
	77 (25.0)	SHC	9,980	9,720	9,470	9,230	8,930	8,580
	80 (26.7)	SHC	11,030	10,770	10,520	10,070	9,460	8,710
	84 (28.9)	SHC	11,590	11,080	10,580	10,070	9,460	8,710
88 (31.1)	SHC	11,590	11,080	10,580	10,070	9,460	8,710	
63 (17.2)		TC	13,110	11,890	11,350	10,810	10,160	9,350
		CM	0.94	1.02	1.09	1.17	1.24	1.31
	70 (21.1)	SHC	6,790	6,530	6,280	6,040	5,740	5,390
	73 (22.8)	SHC	7,840	7,580	7,330	7,090	6,790	6,440
	77 (25.0)	SHC	8,890	8,630	8,380	8,140	7,840	7,490
	80 (26.7)	SHC	9,940	9,680	9,430	9,190	8,890	8,540
	84 (28.9)	SHC	10,990	10,730	10,480	10,230	9,940	9,350
88 (31.1)	SHC	12,040	11,780	11,350	10,810	10,160	9,350	
67 (19.4)		TC	13,220	12,650	12,070	# 11,500	10,810	9,950
		CM	0.97	1.05	1.13	1.21	1.28	1.35
	70 (21.1)	SHC	5,650	5,400	5,150	4,900	4,620	4,260
	73 (22.8)	SHC	6,700	6,450	6,200	5,950	5,670	5,310
	77 (25.0)	SHC	7,750	7,500	7,250	7,000	6,720	6,360
	80 (26.7)	SHC	8,800	8,550	8,300	8,050	7,770	7,410
	84 (28.9)	SHC	9,850	9,600	9,350	9,100	8,810	8,460
88 (31.1)	SHC	10,900	10,650	10,400	10,150	9,860	9,510	
70 (21.1)		TC	14,020	13,410	12,800	12,190	11,460	10,540
		CM	1.00	1.08	1.16	1.24	1.32	1.39
	73 (22.8)	SHC	5,550	5,300	5,050	4,810	4,530	4,190
	77 (25.0)	SHC	6,600	6,350	6,100	5,860	5,580	5,230
	80 (26.7)	SHC	7,650	7,400	7,150	6,910	6,630	6,280
	84 (28.9)	SHC	8,700	8,450	8,200	7,960	7,680	7,330
73 (22.8)		TC	14,880	14,230	13,560	12,800	11,980	11,140
		CM	1.02	1.11	1.19	1.27	1.35	1.43
	77 (25.0)	SHC	5,380	5,140	4,890	4,620	4,330	4,040
	80 (26.7)	SHC	6,430	6,190	5,940	5,670	5,380	5,090
	84 (28.9)	SHC	7,480	7,240	6,990	6,720	6,430	6,140
	SHC	8,530	8,290	8,040	7,770	7,480	7,190	

- TC : Total Cooling Capacity (BTU/h)
- SHC : Sensible Heat Capacity (BTU/h)
- CM : Compressor Input (kW)

Rating conditions (#Mark) are

Outdoor Ambient Temp. 95°F (35°C) D.B.

Indoor Air Intake Temp. 80°F (26.7°C) D.B. / 67°F (19.4°C) W.B.



Model **STB0811C1**

115 V Single phase 60 Hz

RATING CAPACITY		8,000 BTU/h						
AIR FLOW RATE		250 CFM						
EVAPORATOR		CONDENSER						
ENT. TEMP. °F (°C)		OUTDOOR AMBIENT TEMP. °F(°C)						
W.B.	D.B.		67 (19.4)	75 (23.9)	85 (29.4)	95 (35.0)	105 (40.6)	110 (43.3)
59 (15.0)		TC	8,060	7,710	7,360	7,010	6,580	6,060
		CM	0.59	0.64	0.68	0.73	0.79	0.85
	70 (21.1)	SHC	5,970	5,810	5,650	5,490	5,300	5,070
	73 (22.8)	SHC	6,940	6,780	6,620	6,460	6,270	6,040
	77 (25.0)	SHC	7,910	7,710	7,360	7,010	6,580	6,060
	80 (26.7)	SHC	8,060	7,710	7,360	7,010	6,580	6,060
	84 (28.9)	SHC	8,060	7,710	7,360	7,010	6,580	6,060
		SHC	8,060	7,710	7,360	7,010	6,580	6,060
63 (17.2)		TC	9,120	8,270	7,900	7,520	7,070	6,500
		CM	0.61	0.65	0.70	0.75	0.81	0.87
	70 (21.1)	SHC	4,960	4,800	4,630	4,470	4,290	4,050
	73 (22.8)	SHC	5,930	5,770	5,610	5,450	5,260	5,030
	77 (25.0)	SHC	6,900	6,740	6,580	6,420	6,230	6,000
	80 (26.7)	SHC	7,870	7,710	7,550	7,390	7,070	6,500
	84 (28.9)	SHC	8,650	8,270	7,900	7,520	7,070	6,500
		SHC	8,650	8,270	7,900	7,520	7,070	6,500
67 (19.4)		TC	9,200	8,800	8,400	# 8,000	7,520	6,920
		CM	0.62	0.67	0.72	0.77	0.84	0.90
	70 (21.1)	SHC	3,920	3,750	3,600	3,440	3,250	3,020
	73 (22.8)	SHC	4,890	4,730	4,570	4,410	4,220	3,990
	77 (25.0)	SHC	5,860	5,700	5,540	5,380	5,200	4,970
	80 (26.7)	SHC	6,830	6,670	6,510	6,350	6,170	5,940
	84 (28.9)	SHC	7,800	7,640	7,480	7,330	7,140	6,910
		SHC	8,780	8,610	8,400	8,000	7,520	6,920
70 (21.1)		TC	9,750	9,330	8,900	8,480	7,970	7,340
		CM	0.64	0.69	0.74	0.80	0.86	0.92
	73 (22.8)	SHC	3,840	3,680	3,530	3,370	3,190	2,970
	77 (25.0)	SHC	4,810	4,660	4,500	4,350	4,160	3,940
	80 (26.7)	SHC	5,790	5,630	5,470	5,320	5,130	4,910
	84 (28.9)	SHC	6,760	6,600	6,440	6,290	6,110	5,880
		SHC	7,730	7,570	7,420	7,260	7,080	6,850
73 (22.8)		TC	10,350	9,900	9,430	8,900	8,340	7,750
		CM	0.65	0.71	0.76	0.82	0.88	0.95
	77 (25.0)	SHC	3,720	3,570	3,410	3,230	3,040	2,860
	80 (26.7)	SHC	4,690	4,540	4,380	4,200	4,020	3,830
	84 (28.9)	SHC	5,660	5,510	5,350	5,180	4,990	4,800
		SHC	6,640	6,480	6,320	6,150	5,960	5,770

TC : Total Cooling Capacity (BTU/h)

SHC : Sensible Heat Capacity (BTU/h)

CM : Compressor Input (kW)

Rating conditions (#Mark) are

Outdoor Ambient Temp. 95°F (35°C) D.B.

Indoor Air Intake Temp. 80°F (26.7°C) D.B. / 67°F (19.4°C) W.B.

Model **STB1023C1**

230 V Single phase 60 Hz

RATING CAPACITY		9,500 BTU/h						
AIR FLOW RATE		250 CFM						
EVAPORATOR		CONDENSER						
ENT. TEMP. °F (°C)		OUTDOOR AMBIENT TEMP. °F(°C)						
W.B.	D.B.		67 (19.4)	75 (23.9)	85 (29.4)	95 (35.0)	105 (40.6)	110 (43.3)
59 (15.0)		TC	9,570	9,160	8,740	8,320	7,820	7,200
		CM	0.74	0.80	0.86	0.92	0.96	1.01
	70 (21.1)	SHC	6,700	6,500	6,300	6,100	5,860	5,580
	73 (22.8)	SHC	7,670	7,470	7,270	7,070	6,840	6,550
	77 (25.0)	SHC	8,640	8,440	8,240	8,040	7,810	7,200
	80 (26.7)	SHC	9,570	9,160	8,740	8,320	7,820	7,200
	84 (28.9)	SHC	9,570	9,160	8,740	8,320	7,820	7,200
88 (31.1)	SHC	9,570	9,160	8,740	8,320	7,820	7,200	
63 (17.2)		TC	10,830	9,820	9,380	8,930	8,390	7,720
		CM	0.76	0.83	0.88	0.95	0.99	1.03
	70 (21.1)	SHC	5,690	5,490	5,290	5,090	4,850	4,570
	73 (22.8)	SHC	6,660	6,460	6,260	6,060	5,830	5,540
	77 (25.0)	SHC	7,630	7,430	7,230	7,030	6,800	6,510
	80 (26.7)	SHC	8,600	8,400	8,200	8,000	7,770	7,480
	84 (28.9)	SHC	9,580	9,370	9,170	8,930	8,390	7,720
88 (31.1)	SHC	10,270	9,820	9,380	8,930	8,390	7,720	
67 (19.4)		TC	10,930	10,450	9,980	# 9,500	8,930	8,220
		CM	0.79	0.85	0.91	0.98	1.02	1.07
	70 (21.1)	SHC	4,640	4,440	4,240	4,040	3,810	3,530
	73 (22.8)	SHC	5,610	5,410	5,210	5,020	4,790	4,500
	77 (25.0)	SHC	6,580	6,380	6,180	5,990	5,760	5,470
	80 (26.7)	SHC	7,550	7,350	7,150	6,960	6,730	6,450
	84 (28.9)	SHC	8,530	8,320	8,130	7,930	7,700	7,420
88 (31.1)	SHC	9,500	9,300	9,100	8,900	8,670	8,220	
70 (21.1)		TC	11,580	11,080	10,570	10,070	9,470	8,710
		CM	0.81	0.87	0.94	1.01	1.05	1.10
	73 (22.8)	SHC	4,550	4,350	4,160	3,970	3,740	3,460
	77 (25.0)	SHC	5,520	5,330	5,130	4,940	4,710	4,440
	80 (26.7)	SHC	6,500	6,300	6,100	5,910	5,690	5,410
	84 (28.9)	SHC	7,470	7,270	7,080	6,880	6,660	6,380
88 (31.1)	SHC	8,440	8,240	8,050	7,860	7,630	7,350	
73 (22.8)		TC	12,290	11,760	11,200	10,570	9,900	9,210
		CM	0.83	0.90	0.96	1.03	1.08	1.13
	77 (25.0)	SHC	4,410	4,220	4,020	3,800	3,570	3,340
	80 (26.7)	SHC	5,380	5,190	5,000	4,780	4,540	4,310
	84 (28.9)	SHC	6,360	6,160	5,970	5,750	5,520	5,280
88 (31.1)	SHC	7,330	7,140	6,940	6,720	6,490	6,250	

TC : Total Cooling Capacity (BTU/h)

SHC : Sensible Heat Capacity (BTU/h)

CM : Compressor Input (kW)

Rating conditions (#Mark) are

Outdoor Ambient Temp. 95°F (35°C) D.B.

Indoor Air Intake Temp. 80°F (26.7°C) D.B. / 67°F (19.4°C) W.B.

Model **STB1123C1**

230 V Single phase 60 Hz

RATING CAPACITY		11,300 BTU/h						
AIR FLOW RATE		250 CFM						
EVAPORATOR		CONDENSER						
ENT. TEMP. °F (°C)		OUTDOOR AMBIENT TEMP. °F(°C)						
W.B.	D.B.		67 (19.4)	75 (23.9)	85 (29.4)	95 (35.0)	105 (40.6)	110 (43.3)
59 (15.0)		TC	11,380	10,890	10,400	9,900	9,300	8,560
		CM	0.90	0.98	1.04	1.12	1.19	1.26
	70 (21.1)	SHC	7,610	7,360	7,110	6,860	6,570	6,210
	73 (22.8)	SHC	8,590	8,330	8,080	7,830	7,540	7,180
	77 (25.0)	SHC	9,560	9,300	9,050	8,800	8,510	8,160
	80 (26.7)	SHC	10,530	10,280	10,020	9,780	9,300	8,560
	84 (28.9)	SHC	11,380	10,890	10,400	9,900	9,300	8,560
88 (31.1)	SHC	11,380	10,890	10,400	9,900	9,300	8,560	
63 (17.2)		TC	12,890	11,680	11,150	10,620	9,980	9,190
		CM	0.93	1.00	1.07	1.15	1.22	1.29
	70 (21.1)	SHC	6,610	6,350	6,100	5,850	5,560	5,200
	73 (22.8)	SHC	7,580	7,320	7,070	6,820	6,530	6,170
	77 (25.0)	SHC	8,550	8,290	8,040	7,790	7,500	7,150
	80 (26.7)	SHC	9,520	9,270	9,010	8,770	8,470	8,120
	84 (28.9)	SHC	10,490	10,240	9,990	9,740	9,450	9,090
88 (31.1)	SHC	11,470	11,210	10,960	10,620	9,980	9,190	
67 (19.4)		TC	13,000	12,430	11,870	# 11,300	10,620	9,770
		CM	0.96	1.03	1.11	1.19	1.26	1.33
	70 (21.1)	SHC	5,550	5,290	5,040	4,800	4,510	4,160
	73 (22.8)	SHC	6,520	6,260	6,020	5,770	5,480	5,130
	77 (25.0)	SHC	7,490	7,240	6,990	6,740	6,450	6,100
	80 (26.7)	SHC	8,460	8,210	7,960	7,710	7,430	7,070
	84 (28.9)	SHC	9,430	9,180	8,930	8,690	8,400	8,040
88 (31.1)	SHC	10,410	10,150	9,900	9,660	9,370	9,020	
70 (21.1)		TC	13,770	13,180	12,580	11,980	11,260	10,360
		CM	0.98	1.06	1.14	1.22	1.30	1.37
	73 (22.8)	SHC	5,450	5,200	4,950	4,710	4,430	4,080
	77 (25.0)	SHC	6,420	6,170	5,920	5,680	5,400	5,050
	80 (26.7)	SHC	7,390	7,140	6,890	6,650	6,370	6,020
	84 (28.9)	SHC	8,360	8,110	7,870	7,630	7,340	6,990
73 (22.8)		TC	14,620	13,980	13,320	12,580	11,770	10,950
		CM	1.00	1.09	1.17	1.25	1.33	1.41
	77 (25.0)	SHC	5,290	5,040	4,790	4,520	4,230	3,940
	80 (26.7)	SHC	6,260	6,020	5,770	5,490	5,200	4,910
	84 (28.9)	SHC	7,230	6,990	6,740	6,460	6,170	5,880
	SHC	8,200	7,960	7,710	7,430	7,140	6,850	

TC : Total Cooling Capacity (BTU/h)

SHC : Sensible Heat Capacity (BTU/h)

CM : Compressor Input (kW)

Rating conditions (#Mark) are

Outdoor Ambient Temp. 95°F (35°C) D.B.

Indoor Air Intake Temp. 80°F (26.7°C) D.B. / 67°F (19.4°C) W.B.

Model **STB0823H1**

230 V Single phase 60 Hz

RATING CAPACITY		8,000 BTU/h						
AIR FLOW RATE		250 CFM						
EVAPORATOR		CONDENSER						
ENT. TEMP. °F (°C)		OUTDOOR AMBIENT TEMP. °F(°C)						
W.B.	D.B.		67 (19.4)	75 (23.9)	85 (29.4)	95 (35.0)	105 (40.6)	110 (43.3)
59 (15.0)		TC	8,060	7,710	7,360	7,010	6,580	6,060
		CM	0.61	0.66	0.70	0.75	0.80	0.85
	70 (21.1)	SHC	5,980	5,810	5,650	5,490	5,300	5,070
	73 (22.8)	SHC	6,950	6,790	6,630	6,470	6,270	6,040
	77 (25.0)	SHC	7,920	7,710	7,360	7,010	6,580	6,060
	80 (26.7)	SHC	8,060	7,710	7,360	7,010	6,580	6,060
	84 (28.9)	SHC	8,060	7,710	7,360	7,010	6,580	6,060
88 (31.1)	SHC	8,060	7,710	7,360	7,010	6,580	6,060	
63 (17.2)		TC	9,120	8,270	7,900	7,520	7,070	6,500
		CM	0.62	0.67	0.72	0.77	0.82	0.87
	70 (21.1)	SHC	4,960	4,800	4,640	4,480	4,290	4,060
	73 (22.8)	SHC	5,940	5,770	5,610	5,450	5,260	5,030
	77 (25.0)	SHC	6,910	6,750	6,580	6,430	6,240	6,000
	80 (26.7)	SHC	7,880	7,720	7,560	7,400	7,070	6,500
	84 (28.9)	SHC	8,650	8,270	7,900	7,520	7,070	6,500
88 (31.1)	SHC	8,650	8,270	7,900	7,520	7,070	6,500	
67 (19.4)		TC	9,200	8,800	8,400	# 8,000	7,520	6,920
		CM	0.64	0.69	0.74	0.80	0.85	0.90
	70 (21.1)	SHC	3,920	3,760	3,600	3,450	3,260	3,030
	73 (22.8)	SHC	4,890	4,730	4,570	4,420	4,230	4,000
	77 (25.0)	SHC	5,870	5,700	5,550	5,390	5,200	4,970
	80 (26.7)	SHC	6,840	6,680	6,520	6,360	6,170	5,950
	84 (28.9)	SHC	7,810	7,650	7,490	7,330	7,150	6,920
88 (31.1)	SHC	8,780	8,620	8,400	8,000	7,520	6,920	
70 (21.1)		TC	9,750	9,330	8,900	8,480	7,970	7,340
		CM	0.66	0.71	0.76	0.82	0.87	0.92
	73 (22.8)	SHC	3,850	3,690	3,530	3,380	3,200	2,970
	77 (25.0)	SHC	4,820	4,660	4,510	4,350	4,170	3,950
	80 (26.7)	SHC	5,790	5,630	5,480	5,320	5,140	4,920
	84 (28.9)	SHC	6,760	6,610	6,450	6,300	6,110	5,890
73 (22.8)		TC	10,350	9,900	9,430	8,900	8,340	7,750
		CM	0.67	0.73	0.78	0.84	0.90	0.95
	77 (25.0)	SHC	3,730	3,570	3,410	3,240	3,050	2,860
	80 (26.7)	SHC	4,700	4,550	4,390	4,210	4,020	3,830
	84 (28.9)	SHC	5,670	5,520	5,360	5,180	5,000	4,810
	SHC	6,640	6,490	6,330	6,150	5,970	5,780	

TC : Total Cooling Capacity (BTU/h)

SHC : Sensible Heat Capacity (BTU/h)

CM : Compressor Input (kW)

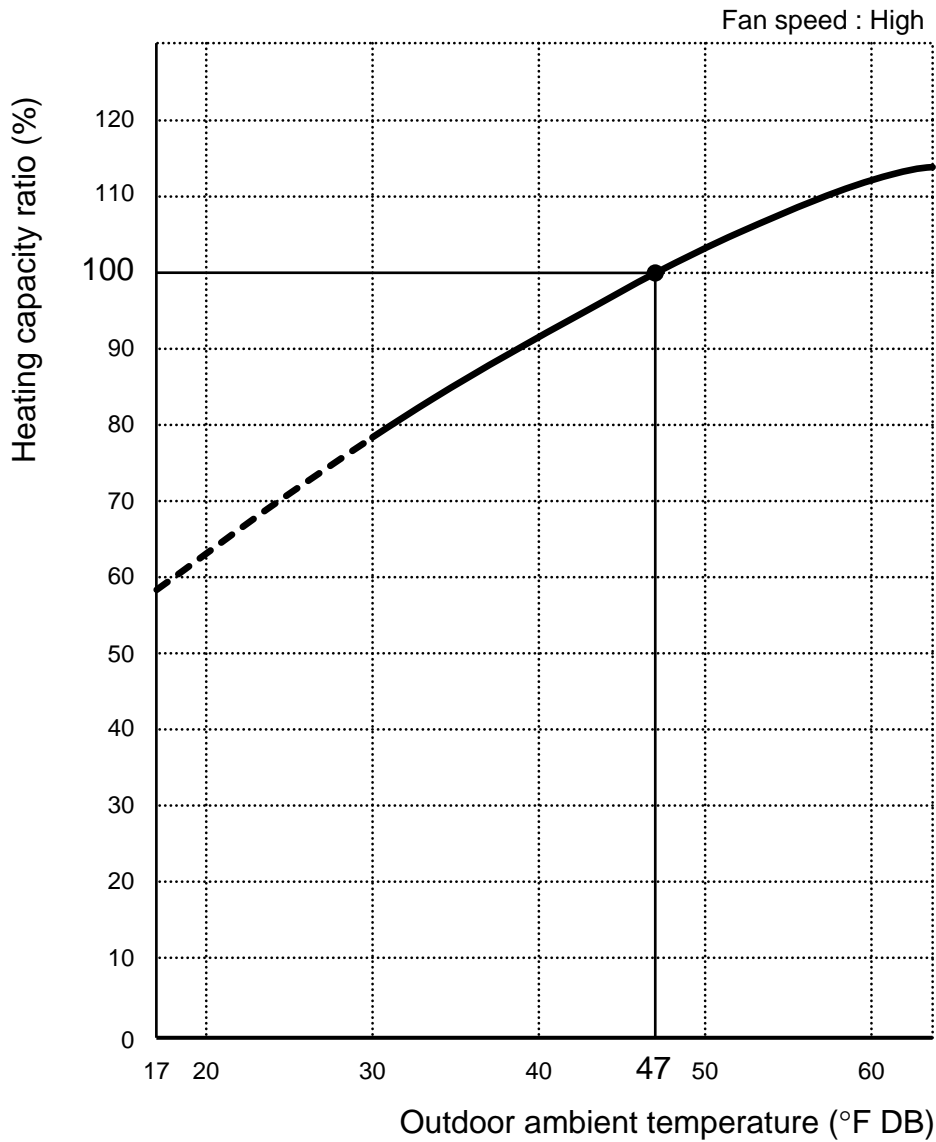
Rating conditions (#Mark) are

Outdoor Ambient Temp. 95°F (35°C) D.B.

Indoor Air Intake Temp. 80°F (26.7°C) D.B. / 67°F (19.4°C) W.B.

## 5-2. Heating Capacity (Heat pump Performance)

Model STB0823H1



### NOTE

- 1) ● ... Point of rating condition

Black dot in the chart indicates the following rating condition.

Indoor: 70°F (21.1°C) D.B.

Outdoor: 47°F (8.3°C) D.B. / 43°F (6.1°C) W.B.

- 2) Above characteristics indicates heat pump heating operation, which does not include electric heater operation.
- 3) Because this air conditioner heats a room by drawing in the heat of the outside air (heat pump system), the heating efficiency will fall off when the outdoor temperature is very low, which consequently makes the room temperature decrease. At this time, heat is provided by the electric heater instead of heat pump. See page 44 for detail.

## 6. ELECTRICAL DATA

### 6-1. Electrical Characteristics

Cooling only models
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Model **STB0810C1**

		Outdoor Unit		Complete Unit
		Fan Motor	Compressor	
Performance at		115V 1-phase 60Hz		
Rating Conditions	Running Amps. A	1.26	7.04	8.3
	Power Input kW	0.145	0.795	0.94
Full Load Conditions	Running Amps. A	1.26	8.34	9.6
	Power Input kW	0.145	0.935	1.08

Model **STB1010C1**

		Outdoor Unit		Complete Unit
		Fan Motor	Compressor	
Performance at		115V 1-phase 60Hz		
Rating Conditions	Running Amps. A	1.26	9.34	10.6
	Power Input kW	0.145	1.055	1.20
Full Load Conditions	Running Amps. A	1.26	11.04	12.3
	Power Input kW	0.145	1.255	1.40

Model **STB1020C1**

		Outdoor Unit		Complete Unit
		Fan Motor	Compressor	
Performance at		230 / 208V 1-phase 60Hz		
Rating Conditions	Running Amps. A	0.61 / 0.64	4.39 / 4.66	5.0 / 5.3
	Power Input kW	0.142 / 0.132	0.998 / 0.978	1.14 / 1.11
Full Load Conditions	Running Amps. A	0.61 / 0.64	4.99 / 5.26	5.6 / 5.9
	Power Input kW	0.142 / 0.132	1.118 / 1.098	1.26 / 1.23

Model **STB1220C1**

		Outdoor Unit		Complete Unit
		Fan Motor	Compressor	
Performance at		230 / 208V 1-phase 60Hz		
Rating Conditions	Running Amps. A	0.61 / 0.64	5.49 / 5.96	6.1 / 6.6
	Power Input kW	0.142 / 0.132	1.208 / 1.198	1.35 / 1.33
Full Load Conditions	Running Amps. A	0.61 / 0.64	6.29 / 6.96	6.9 / 7.6
	Power Input kW	0.142 / 0.132	1.428 / 1.438	1.57 / 1.57

Rating Conditions : Indoor Air Temperature 80°F (26.7°C) D.B. / 67°F (19.4°C) W.B.  
 Outdoor Air Temperature 95°F (35°C) D.B.  
 Full Load Conditions : Indoor Air Temperature 90°F (32.2°C) D.B. / 73°F (22.8°C) W.B.  
 Outdoor Air Temperature 110°F (43.3°C) D.B.

**Cooling & electric heating models**

Model **STB0811C1**

		Outdoor Unit		Complete Unit
		Fan Motor	Compressor	
Performance at		115V 1-phase 60Hz		
Rating Conditions	Running Amps. A	1.26	7.04	8.3
	Power Input kW	0.145	0.775	0.92
Full Load Conditions	Running Amps. A	1.26	8.34	9.6
	Power Input kW	0.145	0.945	1.09

Model **STB1023C1**

		Outdoor Unit		Complete Unit
		Fan Motor	Compressor	
Performance at		230 / 208V 1-phase 60Hz		
Rating Conditions	Running Amps. A	0.61 / 0.64	4.39 / 4.66	5.0 / 5.3
	Power Input kW	0.142 / 0.132	0.978 / 0.958	1.12 / 1.09
Full Load Conditions	Running Amps. A	0.61 / 0.64	4.99 / 5.26	5.6 / 5.9
	Power Input kW	0.142 / 0.132	1.128 / 1.088	1.27 / 1.22

Model **STB1123C1**

		Outdoor Unit		Complete Unit
		Fan Motor	Compressor	
Performance at		230 / 208V 1-phase 60Hz		
Rating Conditions	Running Amps. A	0.61 / 0.64	5.39 / 5.86	6.0 / 6.5
	Power Input kW	0.142 / 0.132	1.188 / 1.178	1.33 / 1.31
Full Load Conditions	Running Amps. A	0.61 / 0.64	6.29 / 6.86	6.9 / 7.5
	Power Input kW	0.142 / 0.132	1.408 / 1.408	1.55 / 1.54

Rating Conditions : Indoor Air Temperature 80°F (26.7°C) D.B. / 67°F (19.4°C) W.B.  
 Outdoor Air Temperature 95°F (35°C) D.B.

Full Load Conditions : Indoor Air Temperature 90°F (32.2°C) D.B. / 73°F (22.8°C) W.B.  
 Outdoor Air Temperature 110°F (43.3°C) D.B.

**Heat pump model**

Model **STB0823H1**

**COOLING**

		Outdoor Unit		Complete Unit
		Fan Motor	Compressor	
Performance at		230 / 208V 1-phase 60Hz		
Rating Conditions	Running Amps. A	0.61 / 0.64	3.59 / 3.86	4.2 / 4.5
	Power Input kW	0.142 / 0.132	0.798 / 0.788	0.94 / 0.92
Full Load Conditions	Running Amps. A	0.61 / 0.64	4.29 / 4.46	4.9 / 5.1
	Power Input kW	0.142 / 0.132	0.948 / 0.918	1.09 / 1.05

Rating Conditions : Indoor Air Temperature 80°F (26.7°C) D.B. / 67°F (19.4°C) W.B.  
 Outdoor Air Temperature 95°F (35°C) D.B.

Full Load Conditions : Indoor Air Temperature 90°F (32.2°C) D.B. / 73°F (22.8°C) W.B.  
 Outdoor Air Temperature 110°F (43.3°C) D.B.

**HEATING**

		Outdoor Unit		Complete Unit
		Fan Motor	Compressor	
Performance at		230 / 208V 1-phase 60Hz		
Rating Conditions	Running Amps. A	0.61 / 0.64	3.39 / 3.66	4.0 / 4.3
	Power Input kW	0.142 / 0.132	0.738 / 0.738	0.88 / 0.87
Full Load Conditions	Running Amps. A	0.61 / 0.64	4.09 / 4.51	4.7 / 5.2
	Power Input kW	0.142 / 0.132	0.898 / 0.888	1.04 / 1.02

Rating Conditions : Indoor Air Temperature 70°F (21.1°C) D.B.  
 Outdoor Air Temperature 47°F (8.3°C) D.B. / 43°F (6.1°C) W.B.

Full Load Conditions : Indoor Air Temperature 80°F (26.7°C) D.B.  
 Outdoor Air Temperature 75°F (23.9°C) D.B. / 65°F (18.3°C) W.B.



# 6-2. Electrical Wiring Diagrams

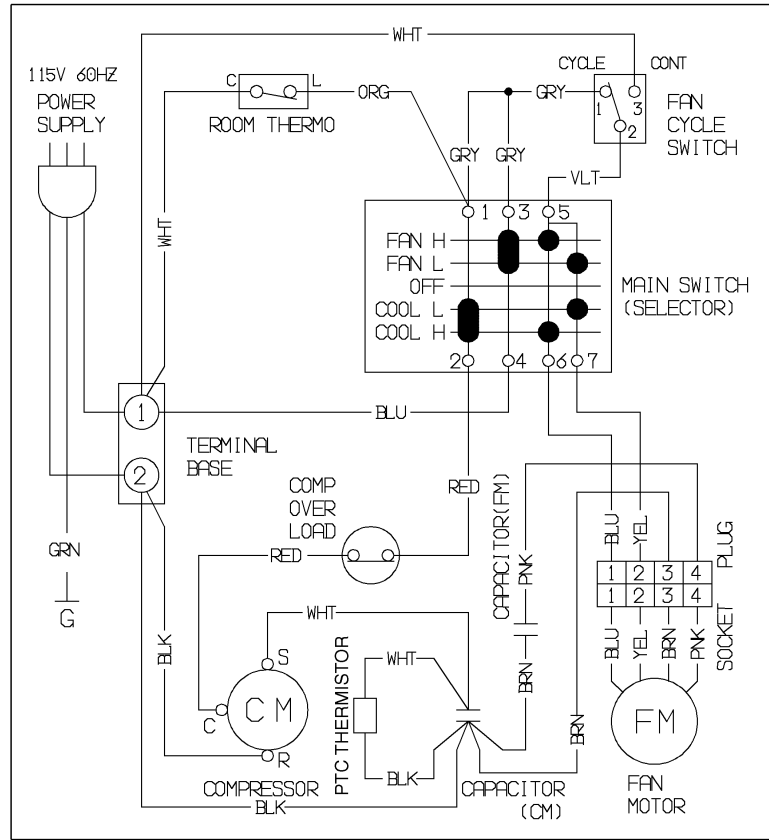


**WARNING**

To avoid electrical shock hazard, be sure to disconnect power before checking, servicing and/or cleaning any electrical

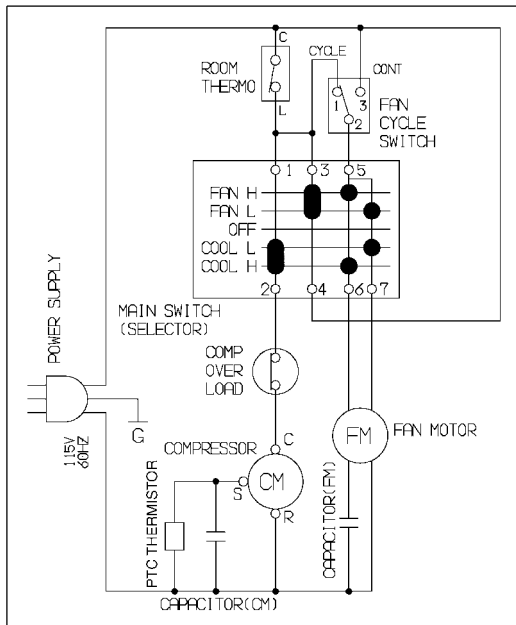
Models STB0810C1 STB1010C1

## ELECTRICAL WIRING DIAGRAM



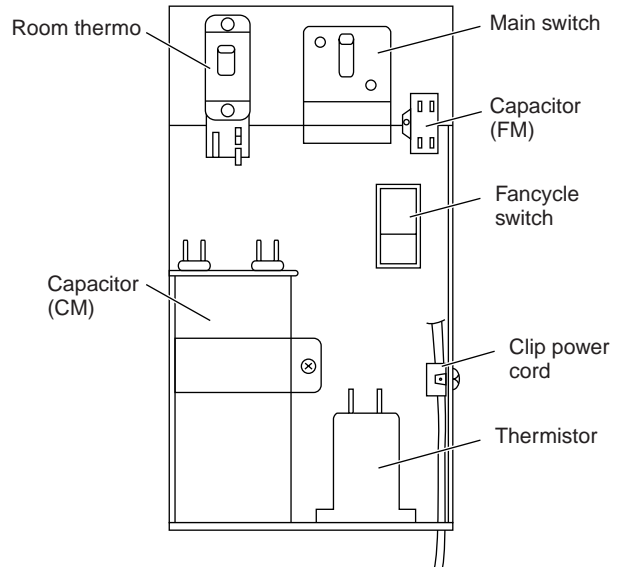
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## SCHEMATIC DIAGRAM



8512-5253-60600-0

## LAYOUT FOR ELECTRIC PARTS



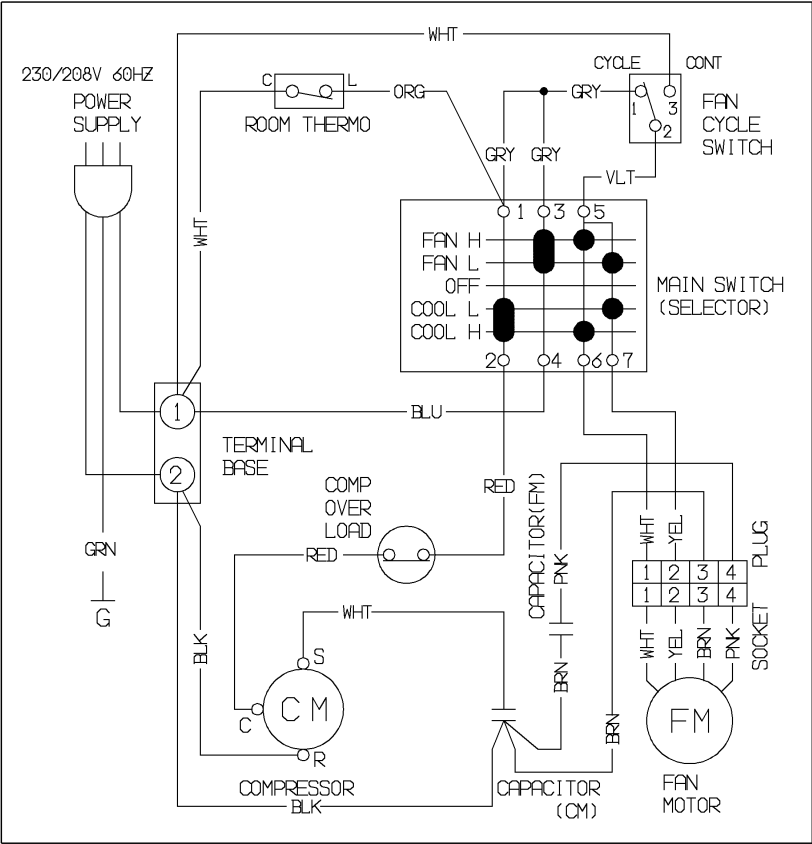


**WARNING**

To avoid electrical shock hazard, be sure to disconnect power before checking, servicing and/or cleaning any electrical parts.

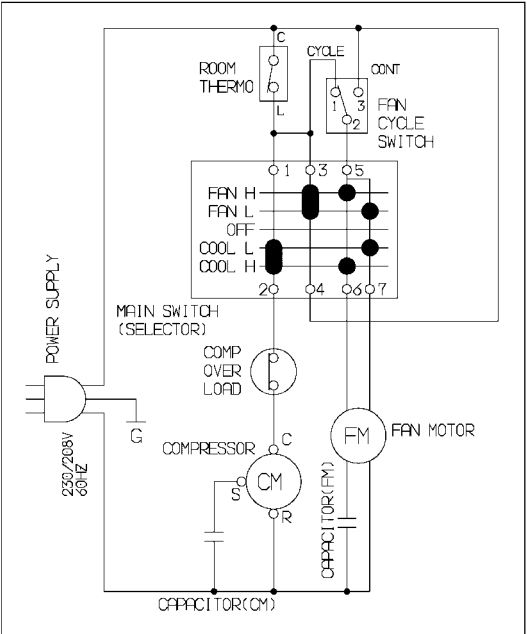
Models **STB1020C1** **STB1220C1**

### ELECTRICAL WIRING DIAGRAM



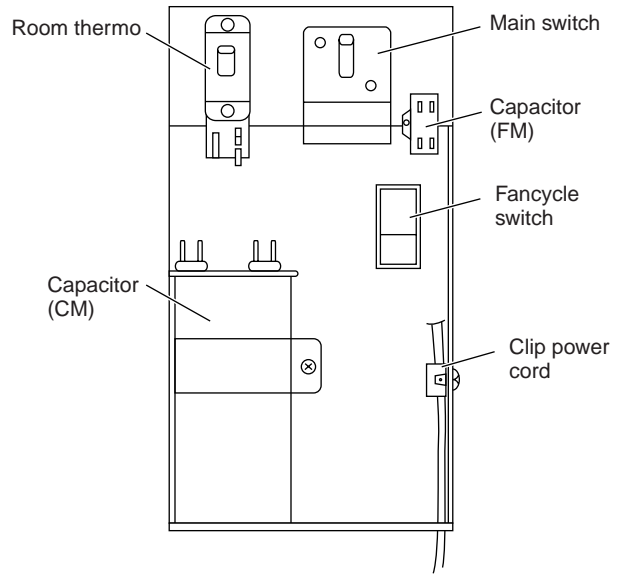
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### SCHEMATIC DIAGRAM



8512-5253-60800-0

### LAYOUT FOR ELECTRIC PARTS



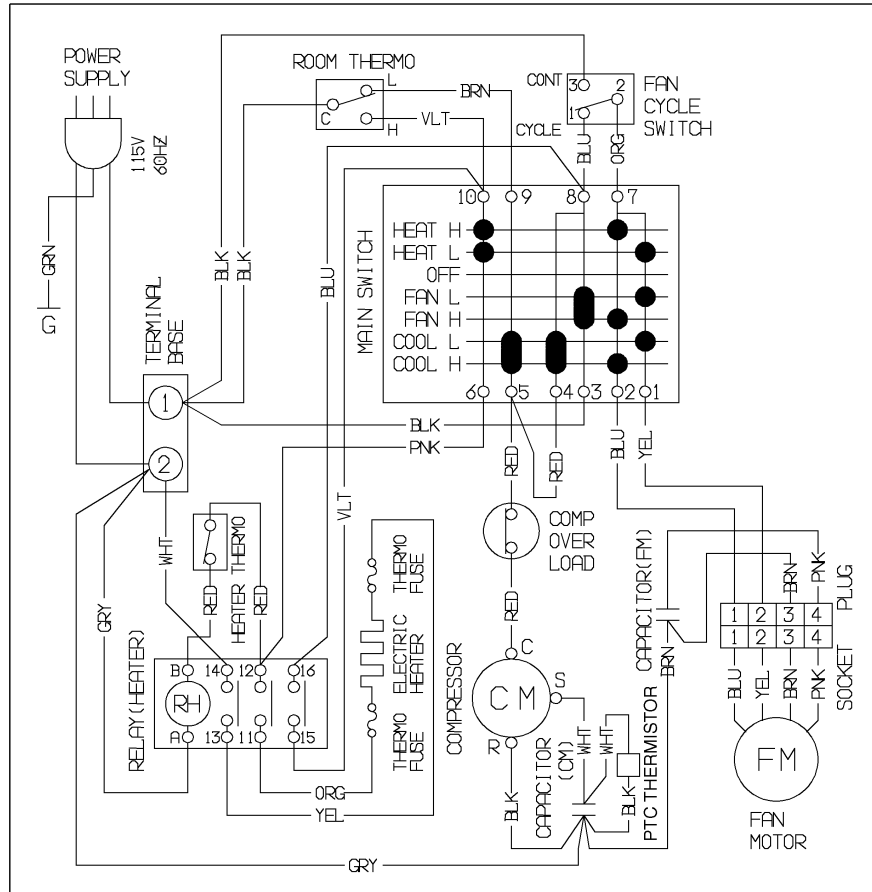


**WARNING**

To avoid electrical shock hazard, be sure to disconnect power before checking, servicing and/or cleaning any electrical parts.

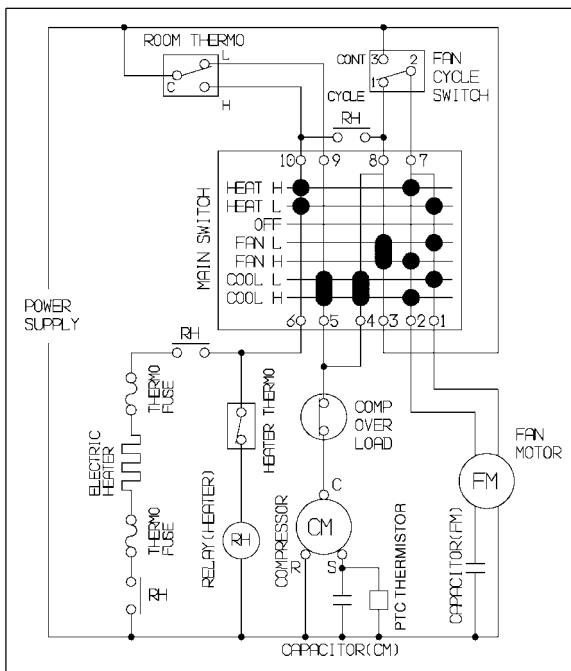
Model **STB0811C1**

### ELECTRICAL WIRING DIAGRAM



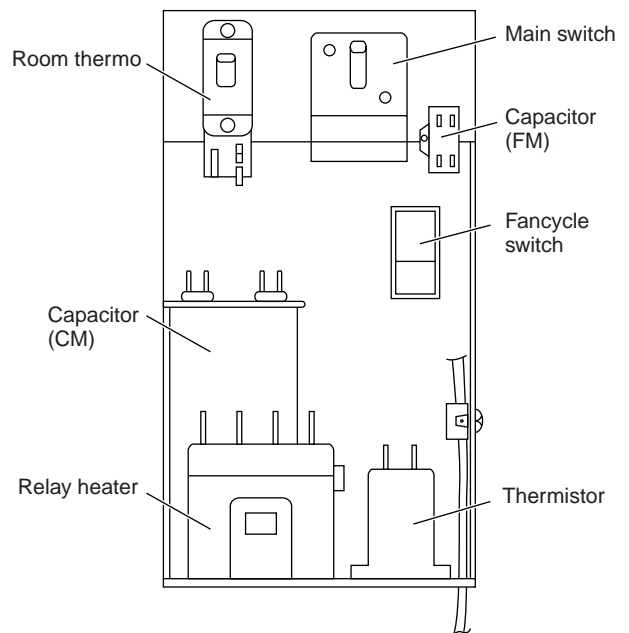
8512-5253-60300-0

### SCHEMATIC DIAGRAM



8512-5253-60900-0

### LAYOUT FOR ELECTRIC PARTS



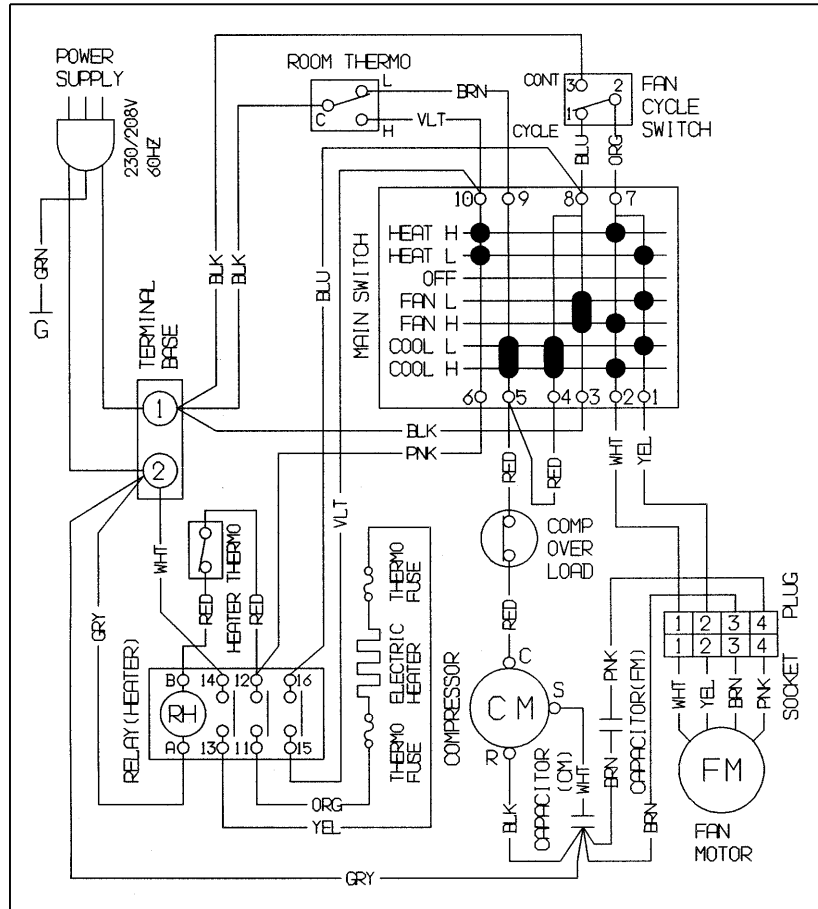


**WARNING**

To avoid electrical shock hazard, be sure to disconnect power before checking, servicing and/or cleaning any electrical parts.

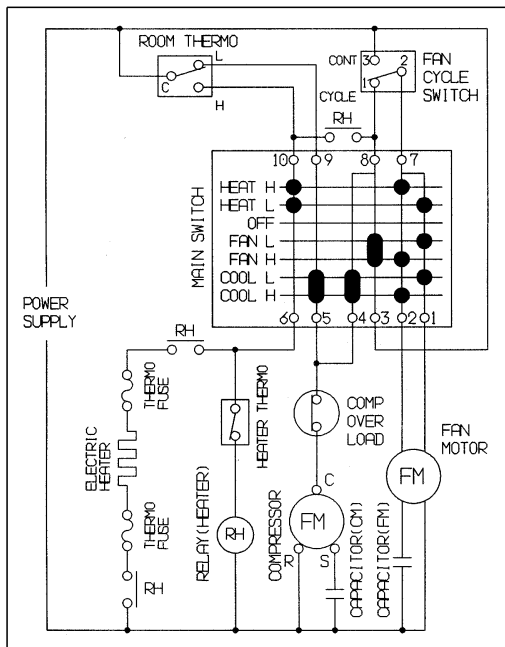
Models **STB1023C1** **STB1123C1**

### ELECTRICAL WIRING DIAGRAM



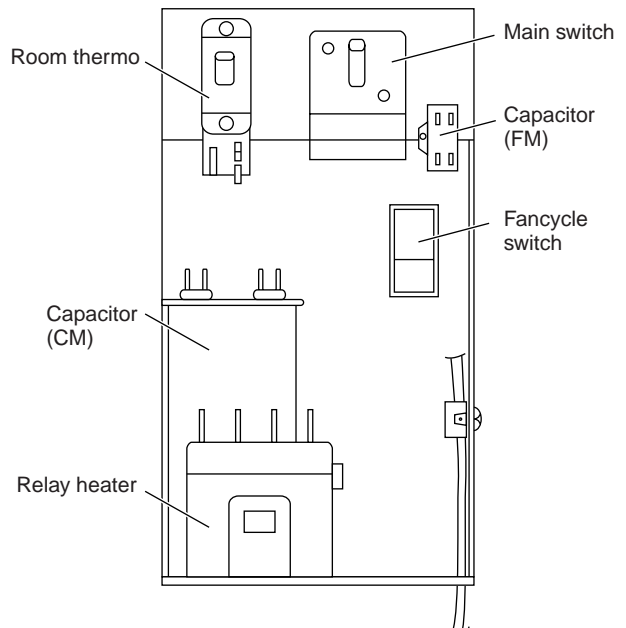
8512-5253-59200-0

### SCHEMATIC DIAGRAM



8512-5253-59300-0

### LAYOUT FOR ELECTRIC PARTS

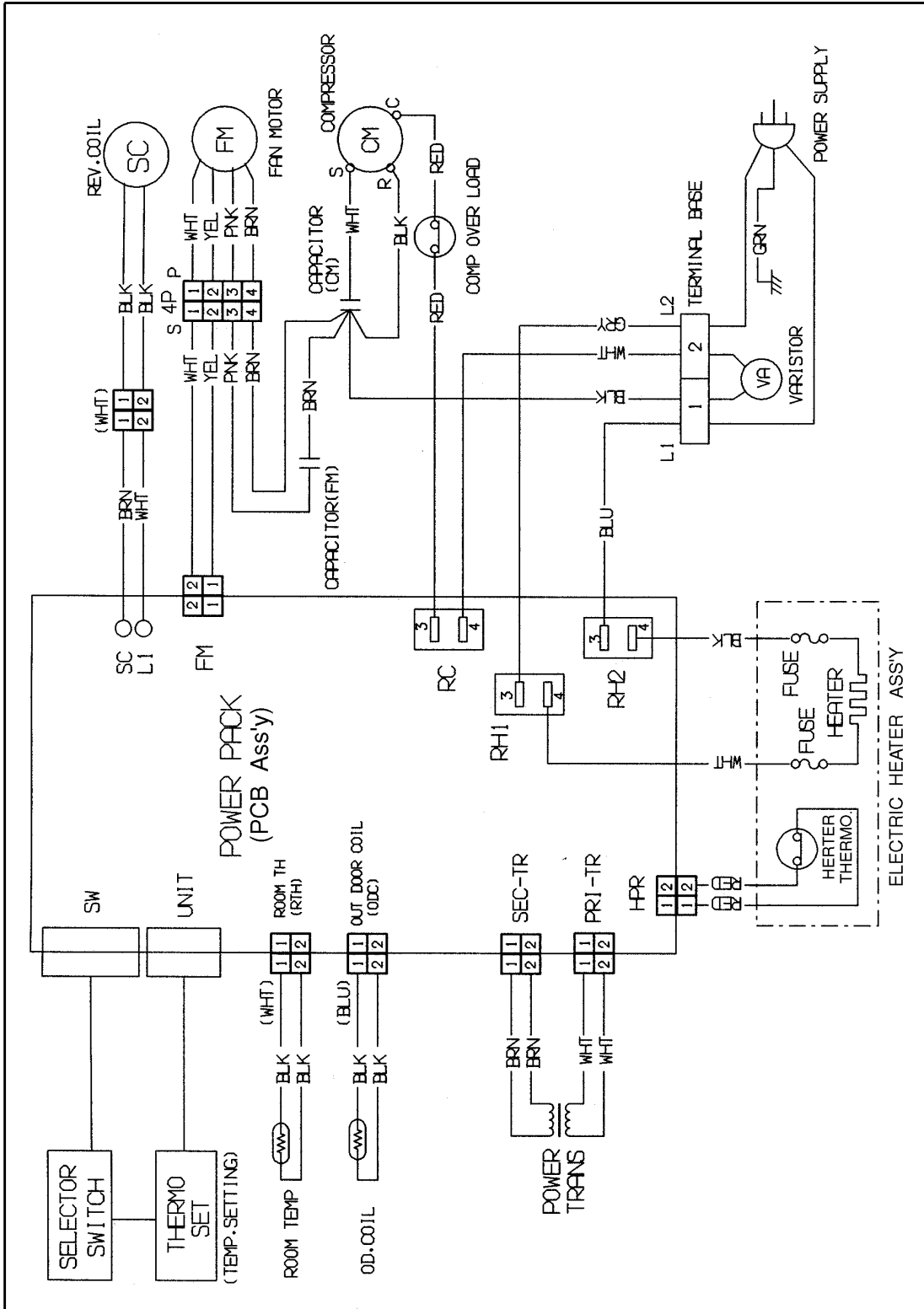




**WARNING**

To avoid electrical shock hazard, be sure to disconnect power before checking, servicing and/or cleaning any electrical parts.

ELECTRICAL WIRING DIAGRAM



8512-5253-59900-0

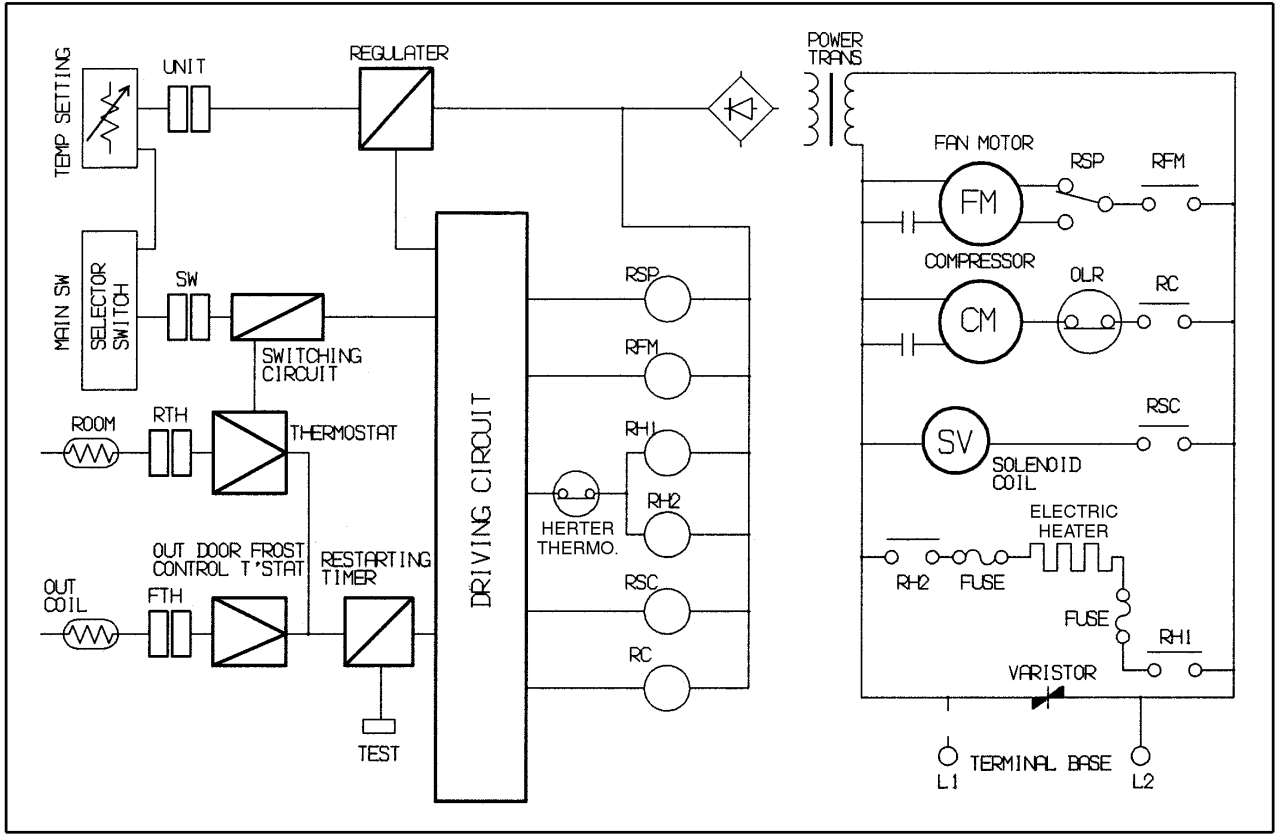


**WARNING**

To avoid electrical shock hazard, be sure to disconnect power before checking, servicing and/or cleaning any electrical parts.

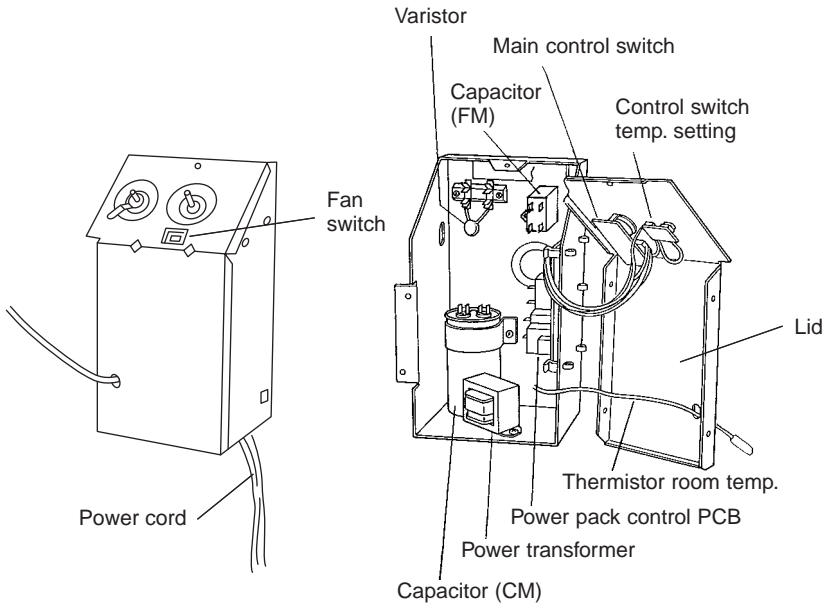
Model **STB0823H1**

### SCHEMATIC DIAGRAM



8512-5253-60500-0

### LAYOUT FOR ELECTRIC PARTS

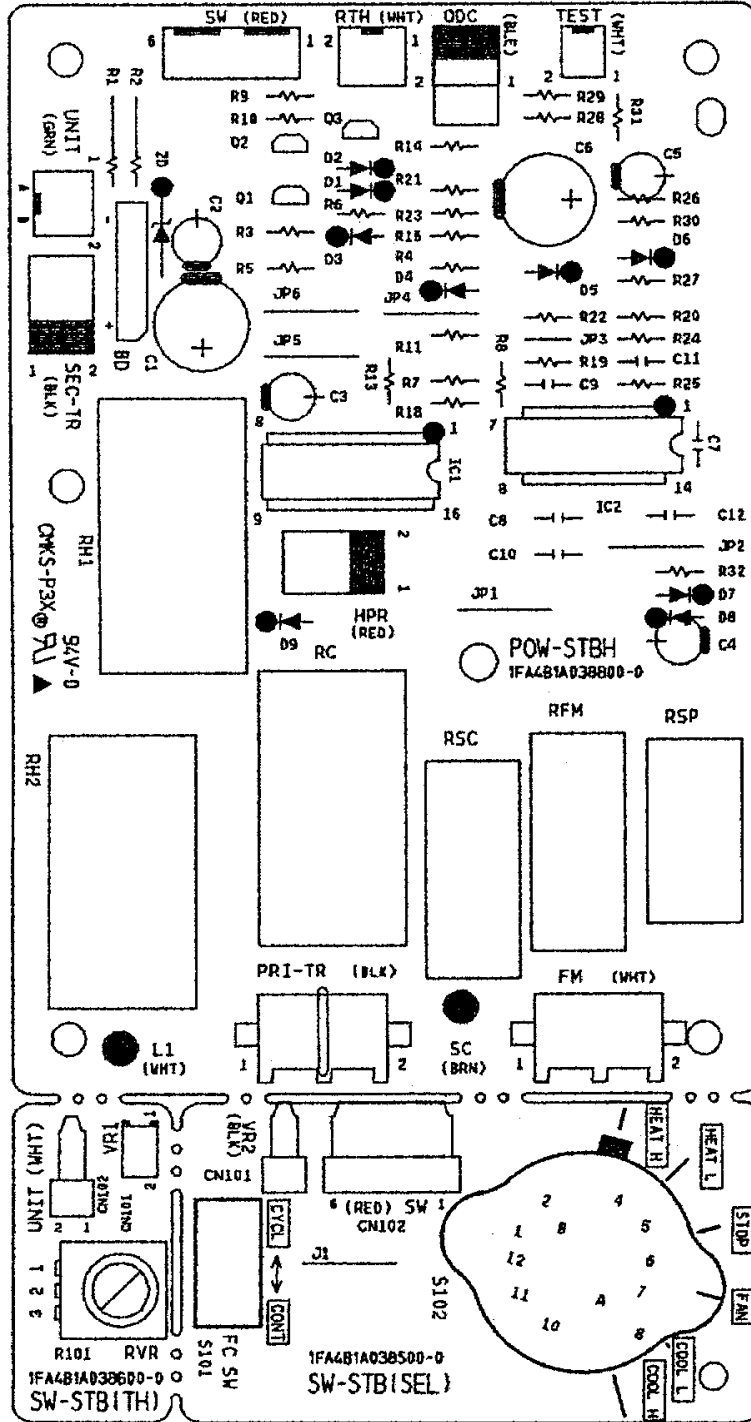


**BEFORE OPENING THE BOX**

**AFTER OPENING THE BOX**

# 6-3. P.C.B. Ass'y (Printed Pattern)

POW-STBH (For model STB0823H1)



8510-5171-660-00-0

## 7. TROUBLESHOOTING

### 7-1. Check before and after troubleshooting



#### **WARNING**

Hazardous voltage can cause **ELECTRIC SHOCK** or **DEATH**. Disconnect power or turn off circuit breaker before you start checking or servicing.

#### 7-1-1. Check power supply.

- Check that voltage is in specified range ( $\pm 10\%$  of the rating).
- Check that power is being supplied.

#### 7-1-2. Check lead wires and connectors.

- Check that coating of lead wires is not damaged.
- Check that lead wires and connectors are firmly connected.
- Check that wiring is correct.



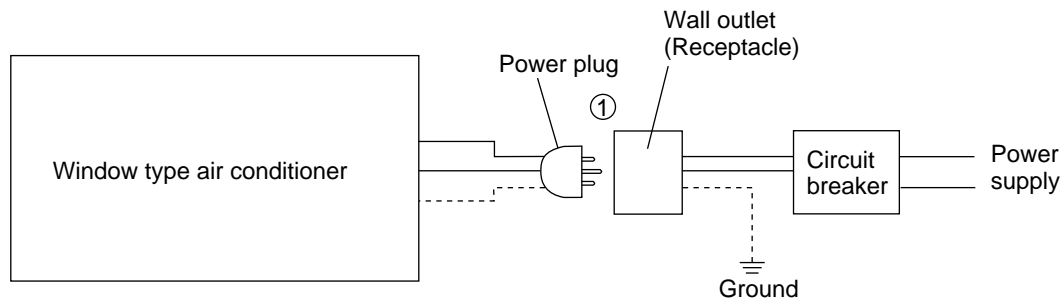
## 7-2. Air conditioner does not operate.

### 7-2-1. Circuit breaker trips (or fuse blows).

A. When the circuit breaker is set to ON, it is tripped soon. (Resetting is not possible.)

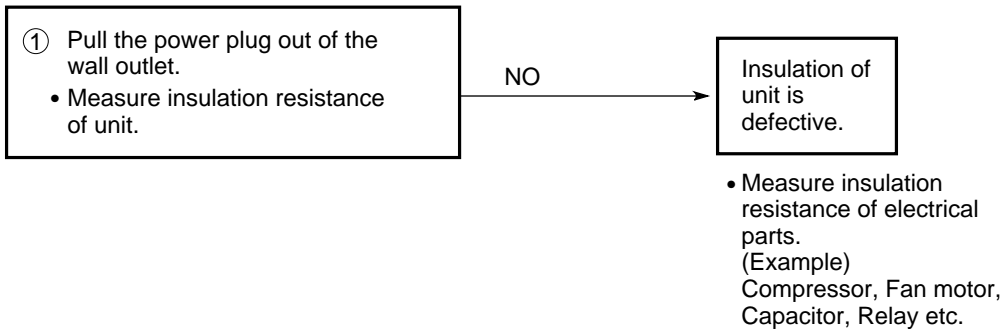
- There is a possibility of ground fault.
- Check insulation resistance.

If resistance value is  $2M\Omega$  or less, insulation is defective ("NO").



**WARNING**

\* Set circuit breaker to OFF.

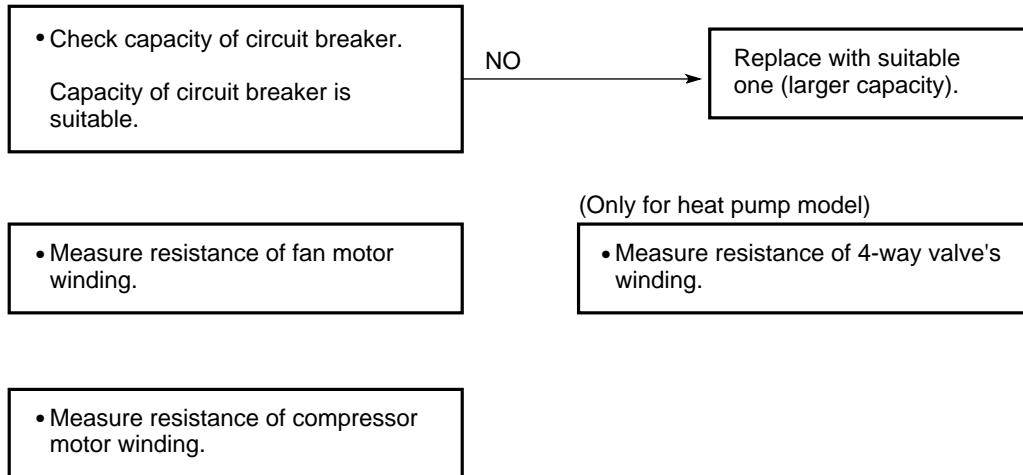


### NOTE

1. If any poorly insulated part is found, exclude that part from circuit with other parts properly connected, and then measure insulation resistance of entire air conditioner again to locate defective part.
2. Replace defective part with new one.

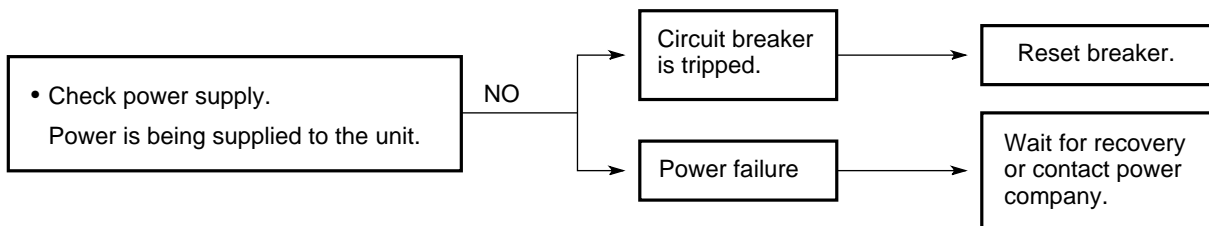
**B. Circuit breaker trips in several minutes after turning the air conditioner on.**

- There is a possibility of short circuit.

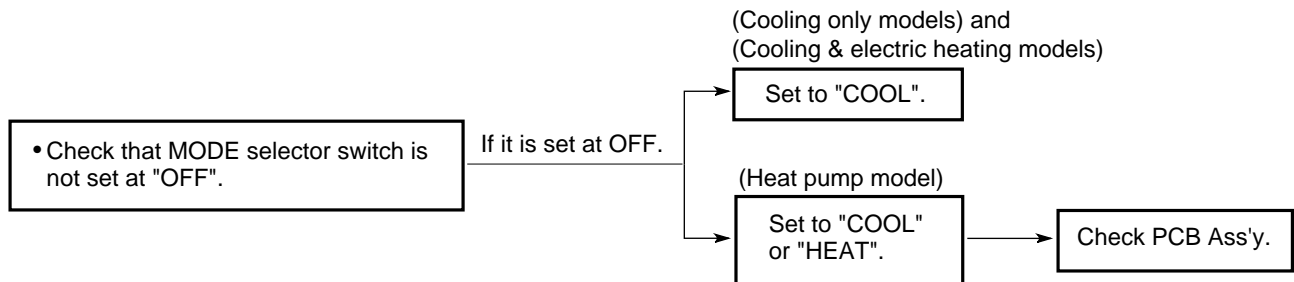


**7-2-2. Neither fan motor nor compressor motor runs.**

**A. Power is not supplied.**

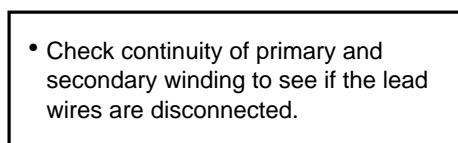


**B. Check "MODE selector" on the control panel.**



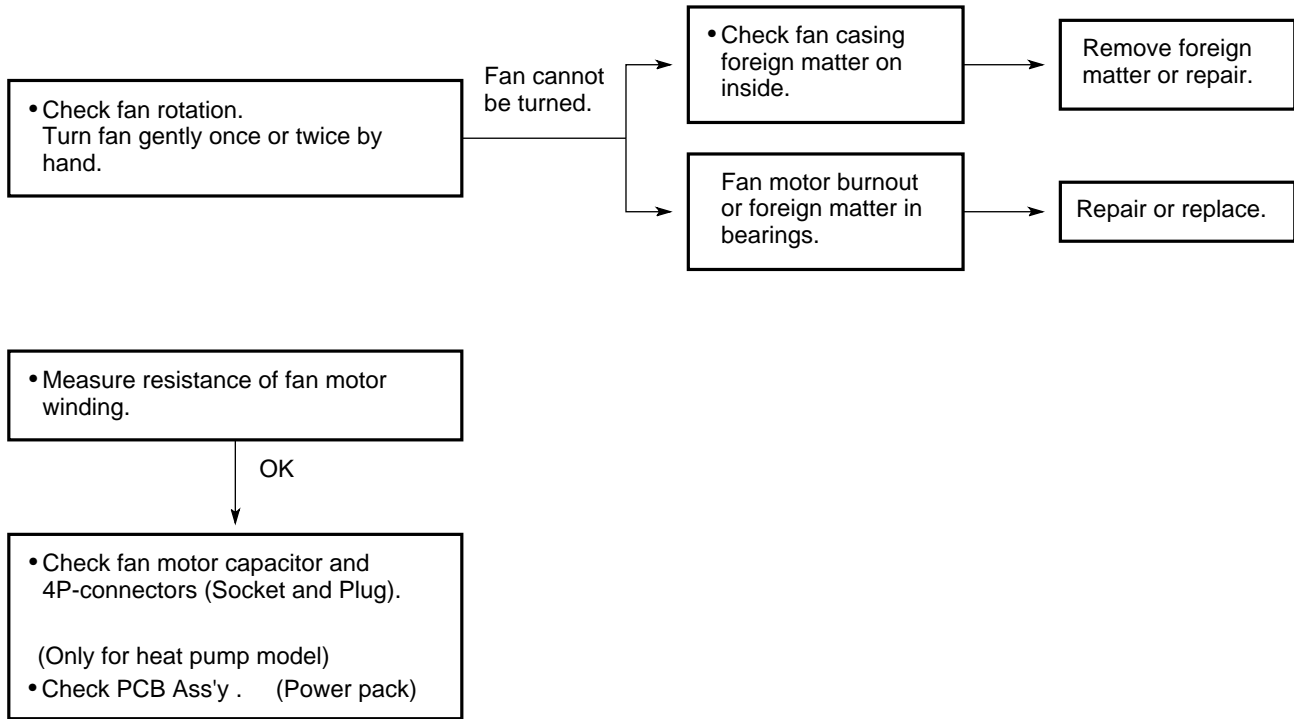
**C. Check transformer.**

(Only for heat pump model)



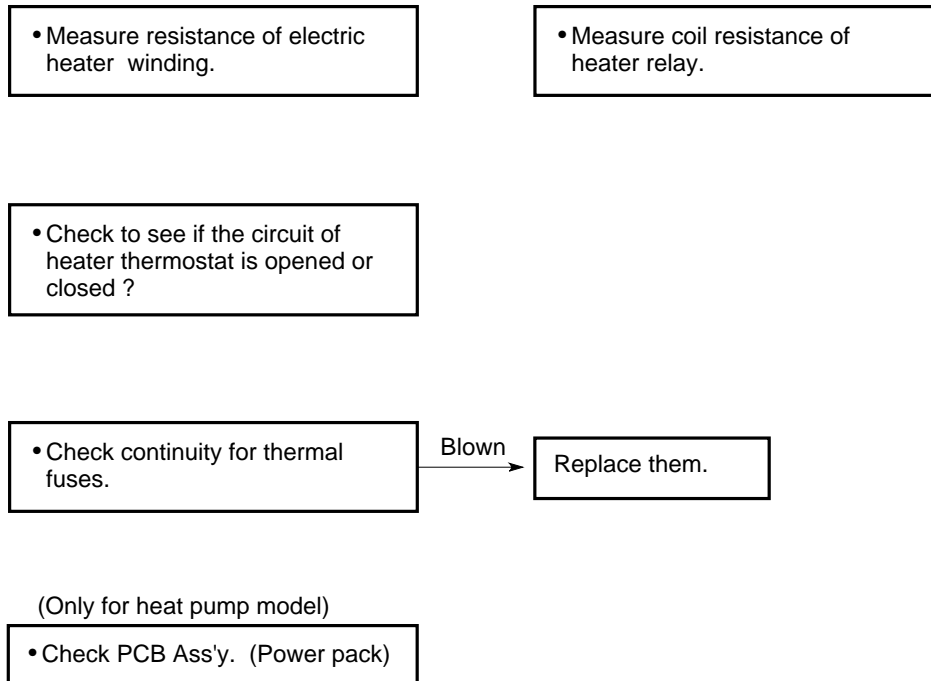
### 7-3. Some part of air conditioner does not operate.

#### 7-3-1. Only fan does not run.



#### 7-3-2. Electric heater does not work.

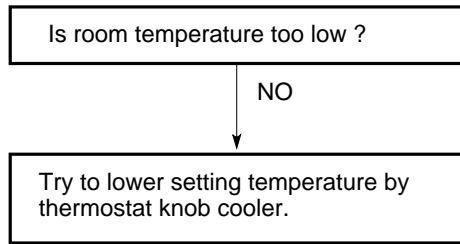
Both for (cooling & electric heating models) and (heat pump model)



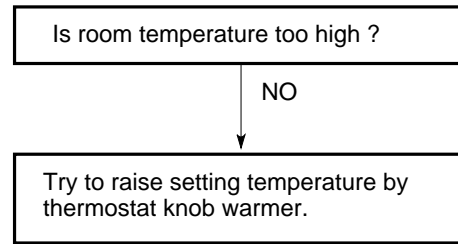
### 7-3-3. Only compressor unit does not run.

#### A. Check setting temperature.

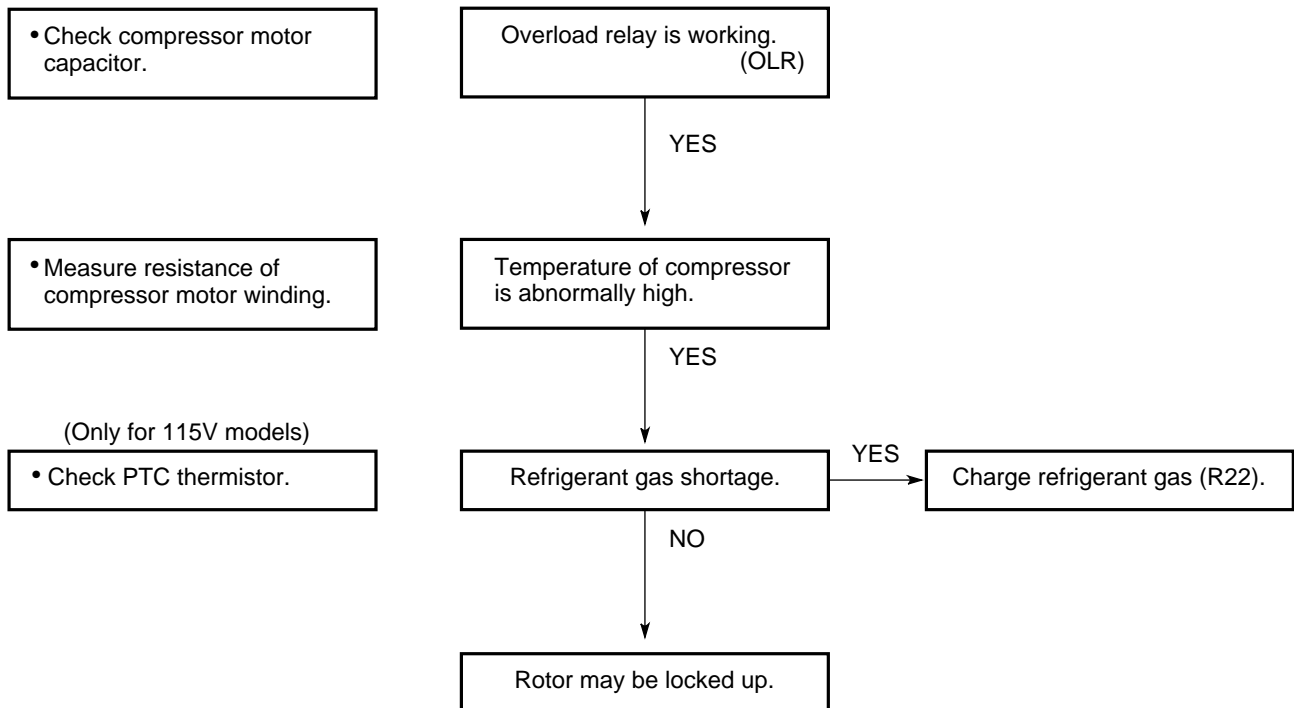
##### COOL mode



##### HEAT mode (Only for heat pump model)



#### B. Check compressor and electrical parts.



#### CAUTION

##### Cooling only models

##### Cooling & electric heating models

- If the unit is turned off during cooling, DO NOT restart it immediately, as this can damage it. Wait at least 3 minutes or so before starting it again.

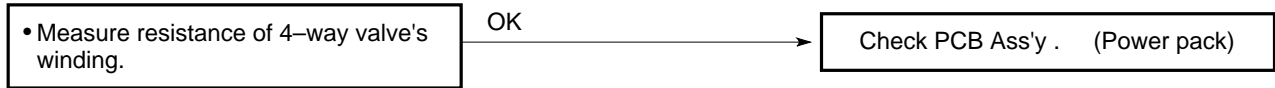
##### Heat pump model

- The compressor does not start up immediately even when the MODE selector switch is set to COOL or HEAT (It starts operating in about 3 minutes).
- This is because rough 3-minute timer is built into the heat pump model in order to protect the compressor. When operation is started up or restarted, the fan operation begins immediately but the compressor starts operating after about 3-minute lag.

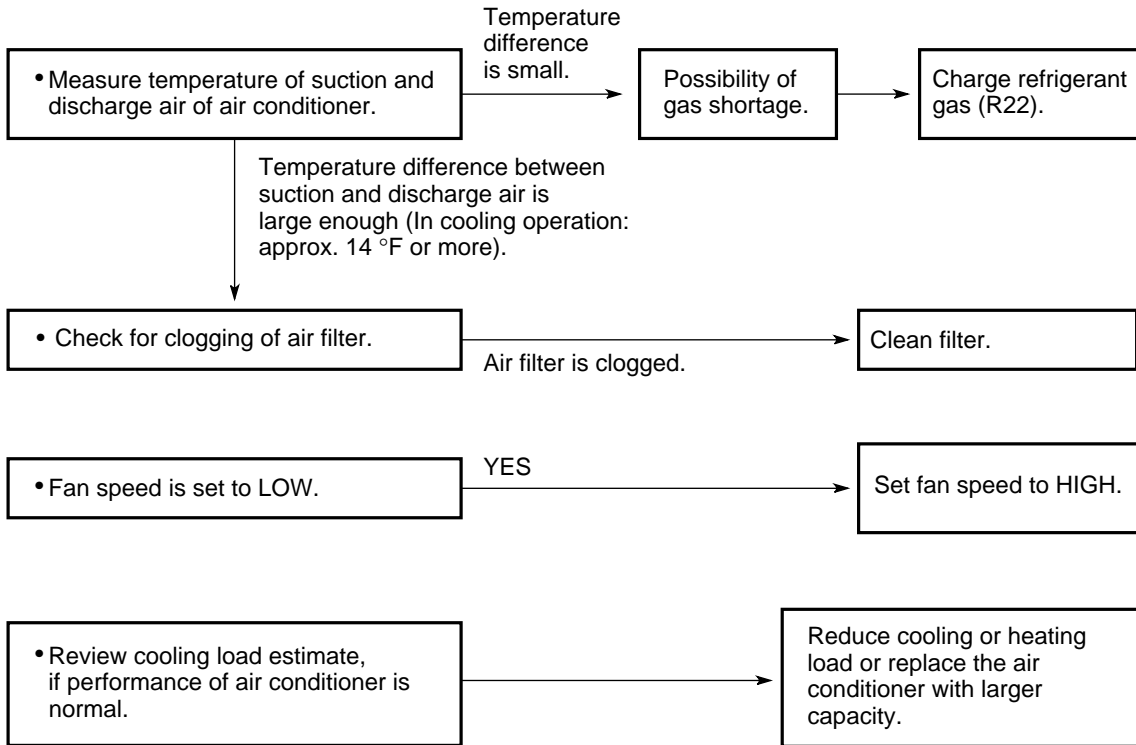
## 7-4. Air conditioner operates, but abnormalities are observed.

### 7-4-1. Operation does not switch from HEAT to COOL (or COOL to HEAT).

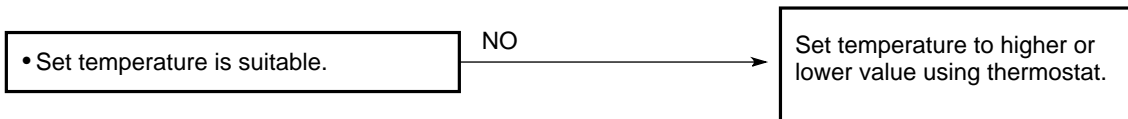
(Only for heat pump model)



### 7-4-2. Poor cooling or heating.



### 7-4-3. Excessive cooling or heating.



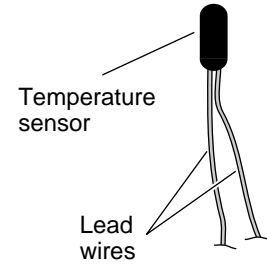
## 7-5. If a sensor is defective. (Only for heat pump model)

### 7-5-1. Room temp. thermistor (RTH) is defective.

#### A. Open

When thermistor opens, the air conditioner will be in the following conditions as the controller tries to detect extremely low room temperature.

- a) In Cooling mode: The air conditioner soon stops and will not start again. (Thermo.OFF)  
Compressor does not run.
- b) In Heating mode: The air conditioner continues to operate. (Thermo.ON)  
(Heat pump) Electric heater does not stop.  
As a result, the room becomes too warm.



**Thermistor Structure**

#### B. Short

When thermistor is short, the air conditioner will be in the following conditions as the controller tries to detect extremely high room temperature.

- a) In Cooling mode: The air conditioner continues to operate. (Thermo.ON)  
Compressor does not stop.  
As a result, the room becomes too cold.
- b) In Heating mode: The air conditioner soon stops and will not start again. (Thermo.OFF)  
(Heat pump) Neither compressor nor electric heater runs.

**NOTE** Definition of Open or Short Circuit of Sensor (Thermistor)

Open... A lead wire is broken or disconnected or the circuit inside the temperature sensor is open .

Short... The protective cover of a lead wire has been damaged, and the exposed wire is touching another metal part, or both lead wires have become exposed and are touching each other. Alternatively, the circuit inside the temperature sensor is closed.

# 8. CHECKING ELECTRICAL COMPONENTS

## 8-1. Measurement of Insulation Resistance

- The insulation is in good condition if the resistance exceeds  $2M\Omega$ .

### 8-1-1. Power Cord and Unit

Clamp the grounding prong of the power plug with a lead clip of the insulation resistance tester and measure the resistance by placing a probe on either of the two power blade. (Fig. 1)

Then, also measure the resistance between the grounding prong and other power blade. (Fig. 1)

### 8-1-2. Measurement of Insulation Resistance for Electrical Parts

Disconnect the lead wires of the desired electric part from terminal plate, switch, capacitor, etc. Similarly disconnect the connector. Then measure the insulation resistance. (Figs. 2 to 3)

Refer to Electric Wiring Diagram.

**NOTE**

If the probe cannot enter the poles because the hole is too narrow then use a probe with a thinner pin.

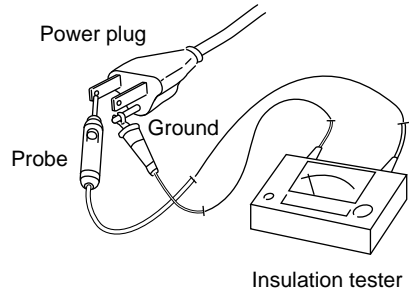


Fig. 1

**NOTE**

The shape of the power plug may differ from that of the air conditioner which you are servicing.

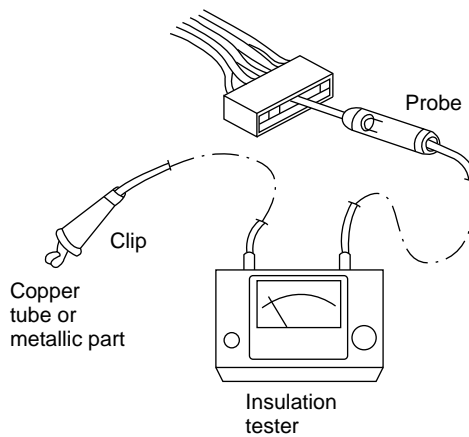


Fig. 2

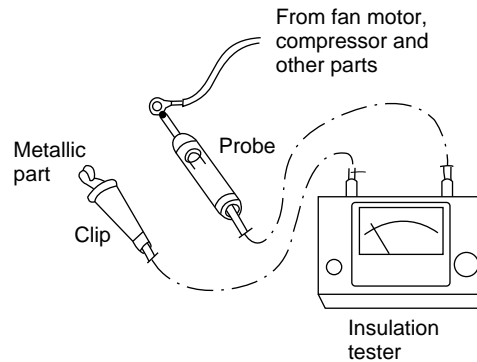


Fig. 3

## 8-2. Checking Motor Capacitor

Remove the lead wires from the capacitor terminals, and then place probes on the capacitor terminals as shown in Fig. 4. Observe the deflection of the pointer, setting the resistance measuring range of the multimeter to the maximum value.

The capacitor is "good" if the pointer bounces to a great extent and then gradually returns to its original position.

The range of deflection and deflection time differ according to the capacity of the capacitor.

## 8-3. Checking Fan Motor Winding

Referring to the electrical diagram, disconnect fan motor connectors, and measure the resistance between each lead wire with a multimeter.

The multimeter should be set in the X1 range. If the fan motor is hot, allow a few minutes until it gets cooled down.

When the resistances between each lead wire are those listed in "2-2. Major Component Specifications" the fan motor should be normal.

## 8-4. Checking Compressor Motor Winding

Checking compressor motor winding can be done in the similar manner.

Remove the terminal cover of the compressor motor, setting the resistance measuring range of the multimeter to "X1 $\Omega$ " and check the continuity between each pair out of the 3 terminals as shown in Fig. 5.

Refer to "2-2. Major Component Specifications" for coil resistance.

## 8-6. Checking Thermistor

(Only for heat pump model)

Unplug the 2P connector connected to PCB Ass'y and measure the resistance of the thermistor with a multimeter, which is set in the X1 k $\Omega$  range.

If the thermistor is normal, the multimeter should read approximately 15k $\Omega$  at 32°F.

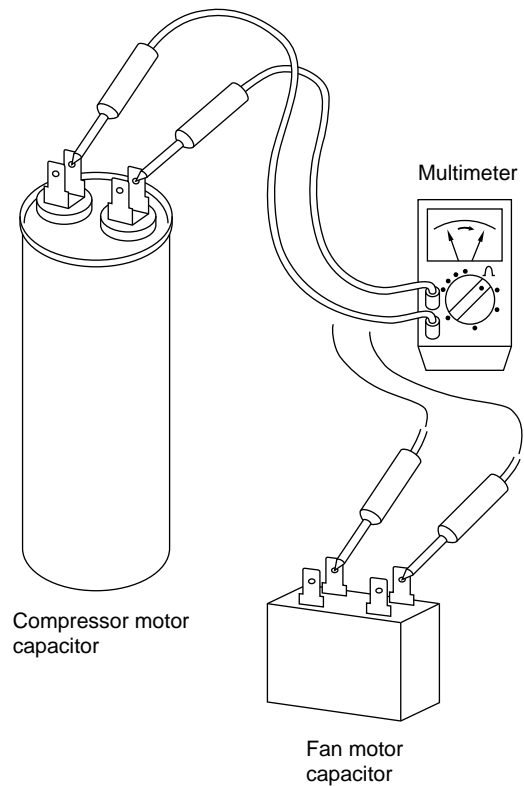


Fig. 4

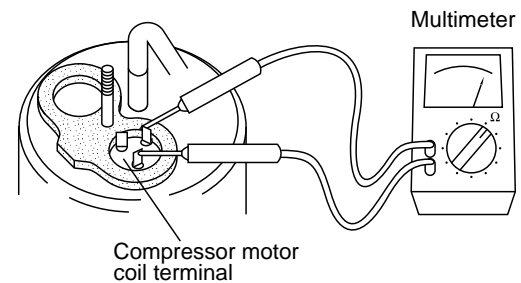


Fig. 5



# 9. DISASSEMBLY PROCEDURE

## 9-1. Removing Front Grille

- 1) Pull the bottom part of the front grille toward you. (Fig. 1-①)
- 2) Lift up and unhook the grille to remove it. (Fig. 1-②)

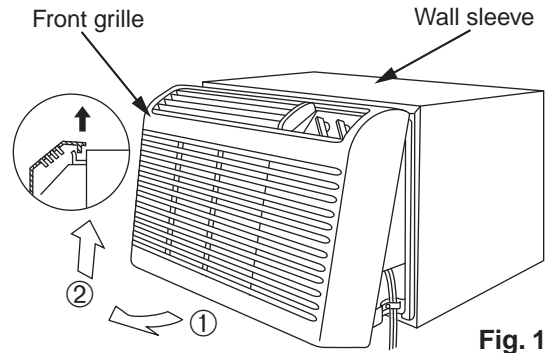


Fig. 1

## 9-2. Removing Wall Sleeve

- (1) While supporting the bottom part of the unit, pull it out of the wall sleeve. (Fig. 2)

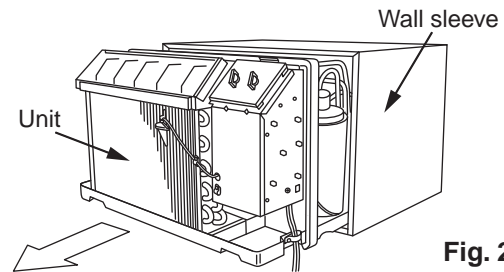


Fig. 2

## 9-3. Removing Electrical Component Box

- (1) Remove knobs and the control panel from the electrical component box. (Fig. 3)

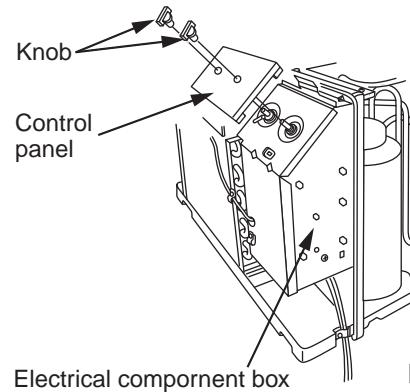


Fig. 3

- (2) Remove the screws holding the lid of the electrical component box, and also remove the wire clamp holding the lead wires. (Fig. 4)

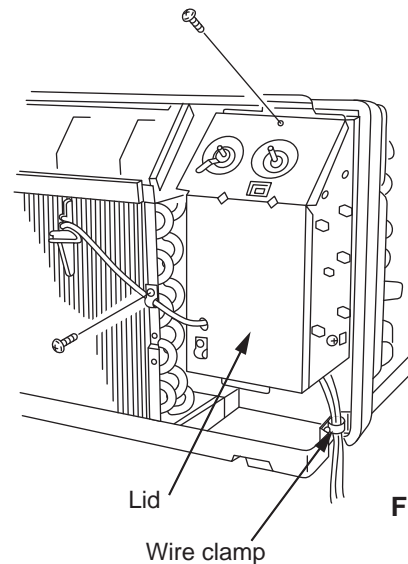


Fig. 4

(3) Remove the following screws. (Fig. 5)

- ① 2 screws holding the component box
- ② 2 screws holding the ventilator knob
- ③ 1 screw holding the power supply cord

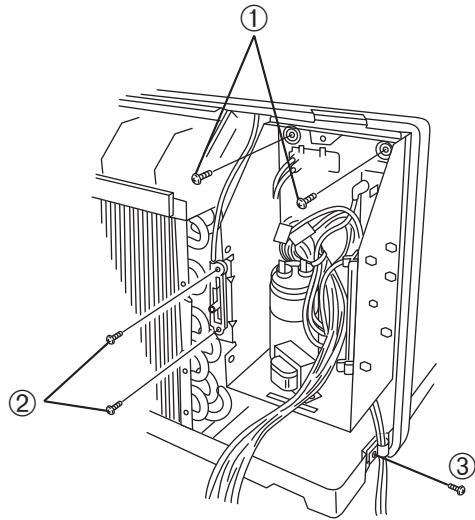


Fig. 5

(4) Disconnect the wiring connectors and lead wires connecting the following electrical parts in the electrical component box.(Fig. 6)

- Compressor motor capacitor
- Fan motor capacitor

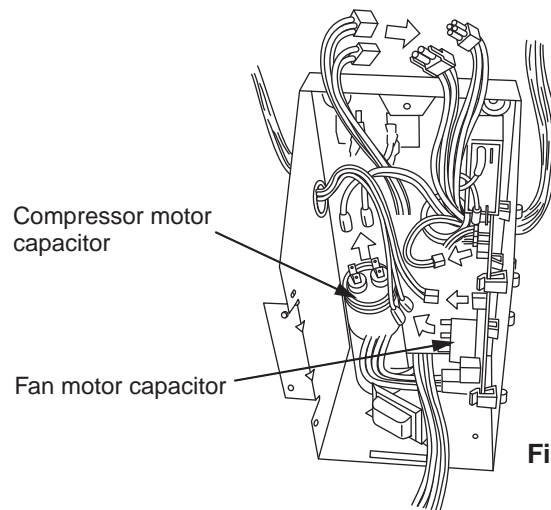


Fig. 6

## 9-4. Removing Electric Heater

(1) Remove the 6 screws holding the top cover plate. (Fig. 7)

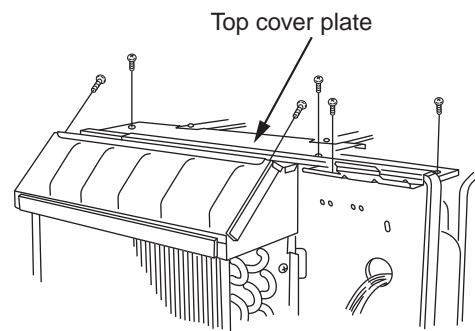


Fig. 7

(2) Remove the 5 screws holding the blade Ass'y. (Fig. 8)

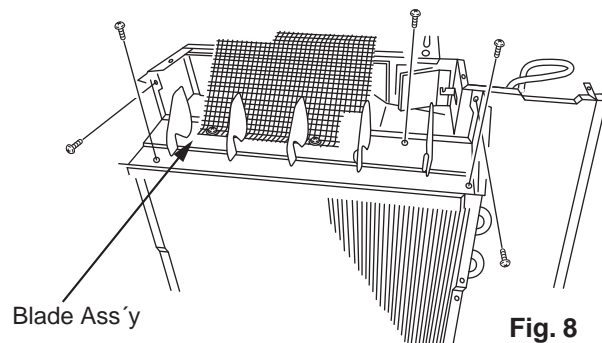


Fig. 8

(3) Lift the electrical heater up out of the unit. (Fig. 9)

(4) Remove the 4 screws holding the electric heater and take off the evaporator's casing plate. (Fig. 10)

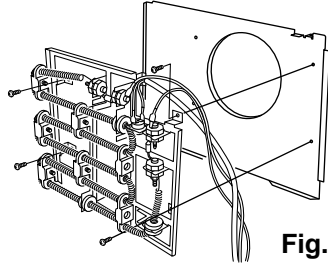


Fig. 10

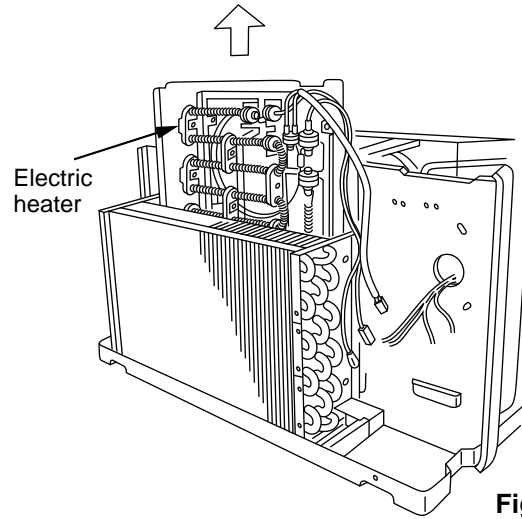


Fig. 9

## 9-5. Removing Blower Wheel

(1) Remove the electric heater.

Refer to "9-4. Removing Electric Heater."

(2) Loosen the bolt holding the blower wheel on the motor shaft. (Fig. 11)

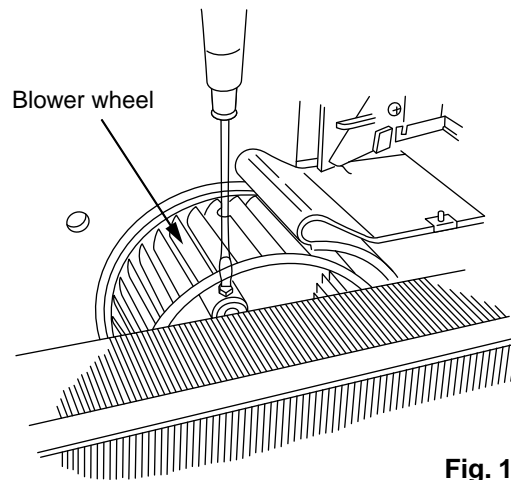


Fig. 11

(3) Remove the blower wheel from the unit. (Fig. 12)

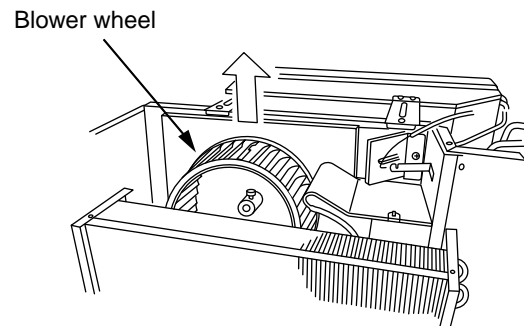


Fig. 12

## 9-6. Removing Evaporator

(1) Remove the top cover plate and blade Ass'y.

Refer to "9-4. 1) and 2) Removing Electric Heater."

(2) Remove the screws holding the evaporator. (Fig. 13)

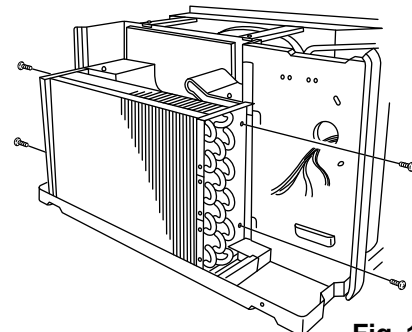
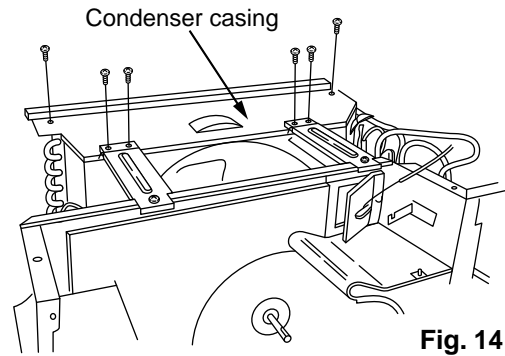


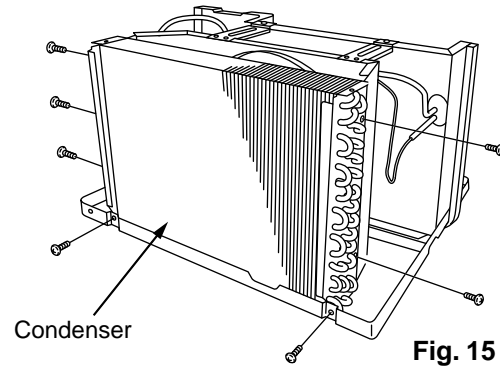
Fig. 13

## 9-7. Removing Condenser

- (1) Remove the screws holding the condenser casing.  
(Fig. 14)

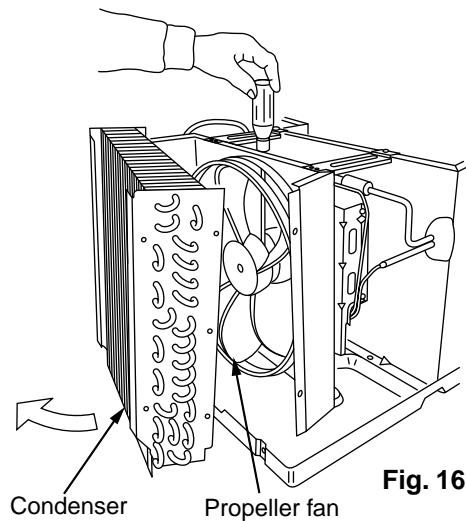


- (2) Remove the screws holding the condenser.  
(Fig. 15)
- (3) Hold the lower part of the condenser with both hands and tilt slightly, then lift up carefully to avoid distorting the copper tube.

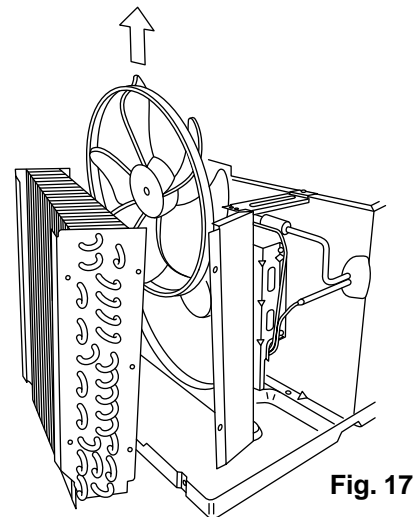


## 9-8. Removing Propeller Fan

- (1) Remove the condenser.  
Refer to "9-7. Removing Condenser."
- (2) Loosen the bolt holding the propeller fan on the motor shaft.  
(Fig. 16)

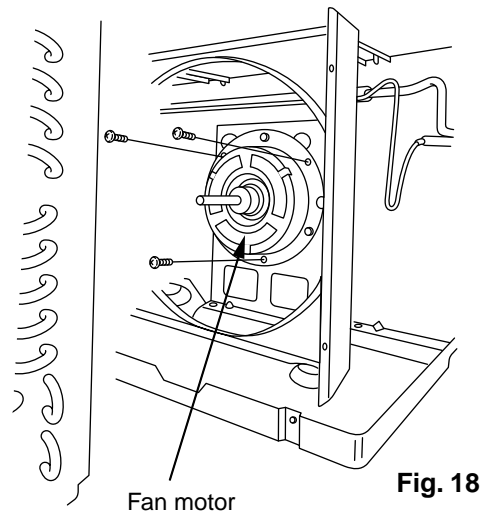


- (3) Remove the propeller fan from the motor shaft.  
(Fig. 17)



## 9-9. Removing Fan Motor

- (1) Remove the condenser.  
Refer to "9-7. Removing Condenser."
- (2) Remove the propeller fan.  
Refer to "9-8. Removing Propeller Fan."
- (3) Remove the 3 screws of the fan motor mounting plate. (Fig. 18)



**Fig. 18**

# 10. FUNCTION

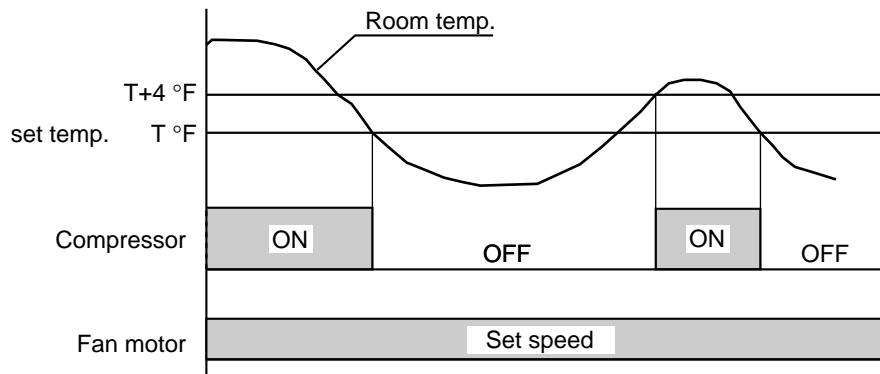
## 10-1. Room Temperature Control

Room temperature control is obtained by cycling the compressor ON and OFF.

<b>Cooling Only Model</b> Models <b>STB0810C1 STB1010C1 STB1020C1 STB1220C1</b>
--

### ■ Cooling

- Thermo. ON : When the room temperature rises above  $T + 4^{\circ}\text{F}$  ( $T^{\circ}\text{F}$  is set temperature).  
Compressor → ON
- Thermo. OFF : When the room temperature falls below set temperature  $T^{\circ}\text{F}$ .  
Compressor → OFF

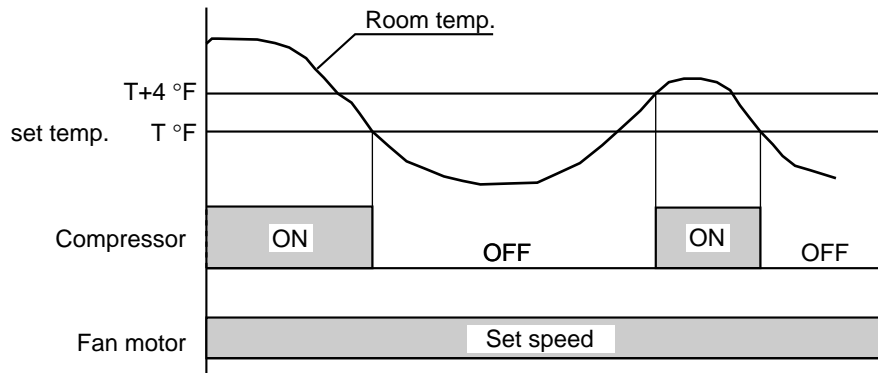


## Cooling & Electric Heating Model

Models **STB0811C1** **STB1023C1** **STB1123C1**

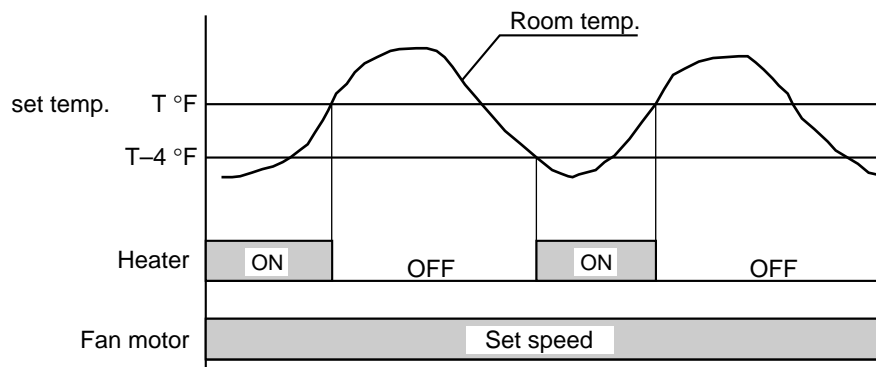
### ■ Cooling

- Thermo. ON : When the room temperature rises above  $T + 4^{\circ}\text{F}$  ( $T^{\circ}\text{F}$  is set temperature).  
Compressor  $\rightarrow$  ON
- Thermo. OFF : When the room temperature falls below set temperature  $T^{\circ}\text{F}$ .  
Compressor  $\rightarrow$  OFF



### ■ Heating

- Heater ON : When the room temperature falls below  $T - 4^{\circ}\text{F}$  ( $T^{\circ}\text{F}$  is set temperature).  
Heater  $\rightarrow$  ON
- Heater OFF : When the room temperature rises above set temperature  $T^{\circ}\text{F}$ .  
Heater  $\rightarrow$  OFF

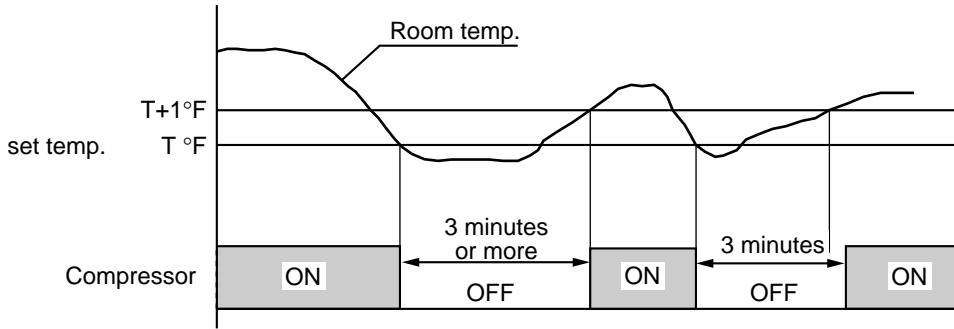


## Heat Pump Model

Model **STB0823H1**

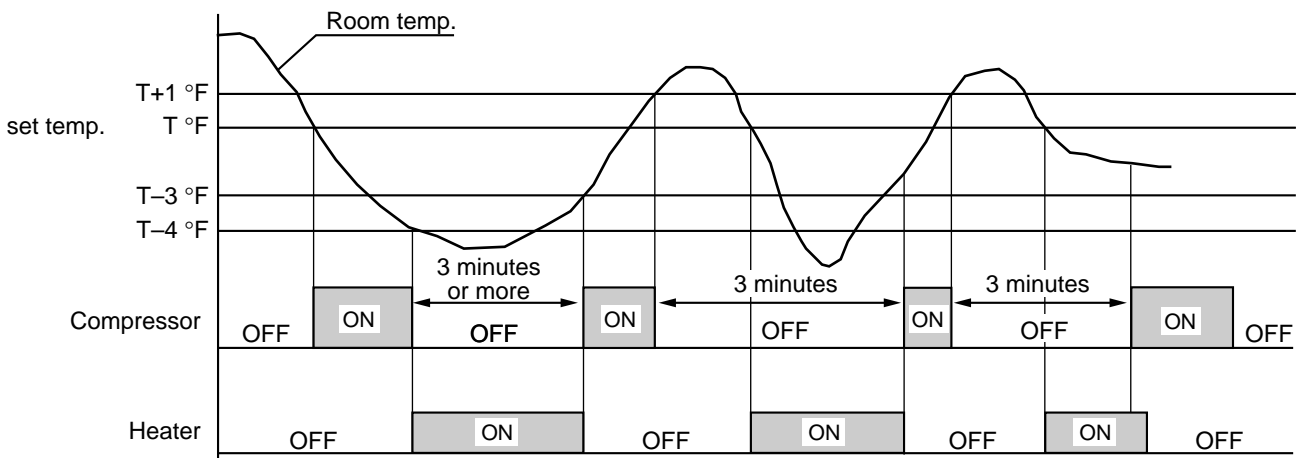
### ■ Cooling

- Once the compressor **stops**, it will not start running again for about 3 minutes.
- Thermo. ON : When the room temperature rises above  $T + 1^{\circ}\text{F}$  ( $T^{\circ}\text{F}$  is set temperature).  
Compressor  $\rightarrow$  ON
- Thermo. OFF : When the room temperature falls below set temperature  $T^{\circ}\text{F}$ .  
Compressor  $\rightarrow$  OFF



### ■ Heating (Except during defrosting operation)

- Once the compressor **stops**, it will not start running again for about 3 minutes.
- Thermo. ON : When the room temperature falls below  $T^{\circ}\text{F}$  ( $T^{\circ}\text{F}$  is set temperature).  
Compressor  $\rightarrow$  ON
- Thermo. OFF : When the room temperature rises above  $T + 1^{\circ}\text{F}$ .  
Compressor  $\rightarrow$  OFF
- Changeover to Heater ON : When the room temperature falls below  $T - 4^{\circ}\text{F}$ , the unit turns off heat pump operation and electric heater comes on instead of compressor.
- Changeover to Heat pump : When the room temperature rises above  $T - 3^{\circ}\text{F}$ , the unit resumes heat pump operation and compressor comes on instead of electric heater.



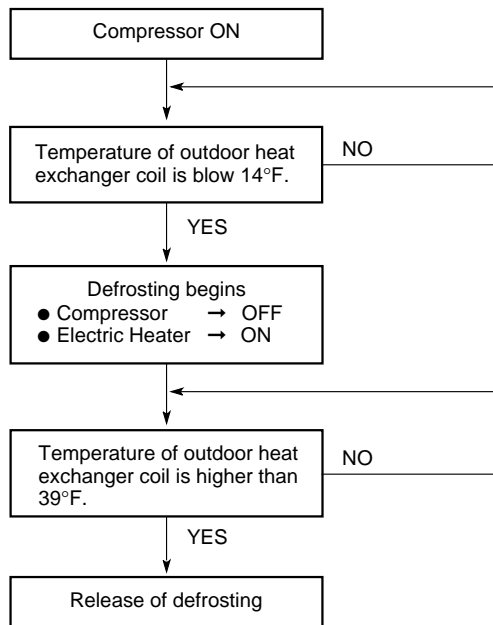


## 10-2. Defrosting Operation (Heating)

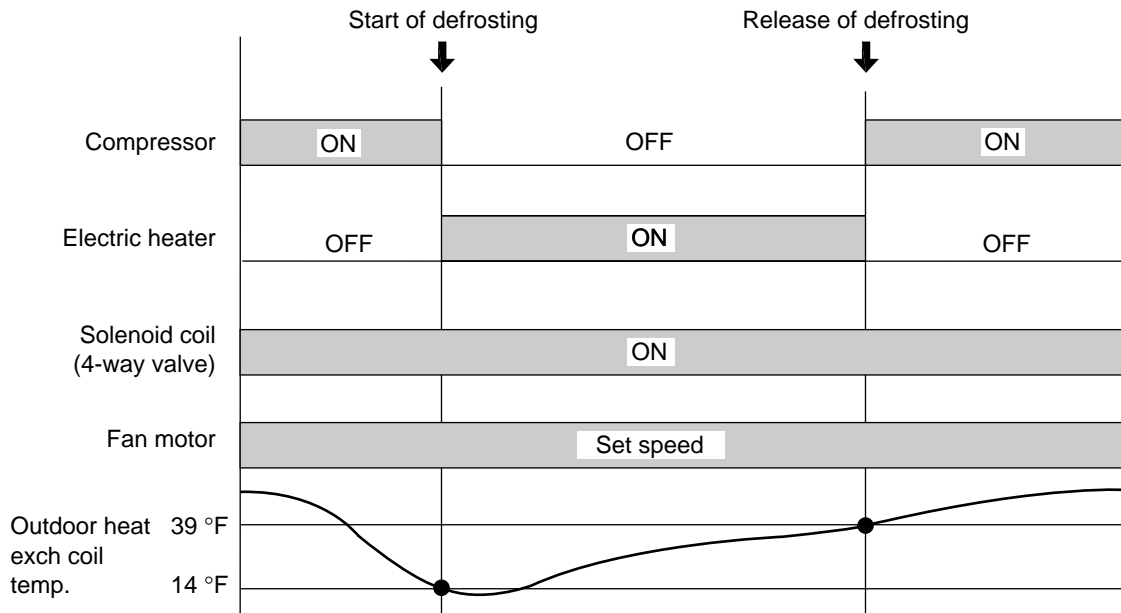
### Heat Pump Model

Model **STB0823H1**

#### ■ Defrosting Flowchart



#### ■ Defrosting Mode Timing Chart



#### **NOTE**

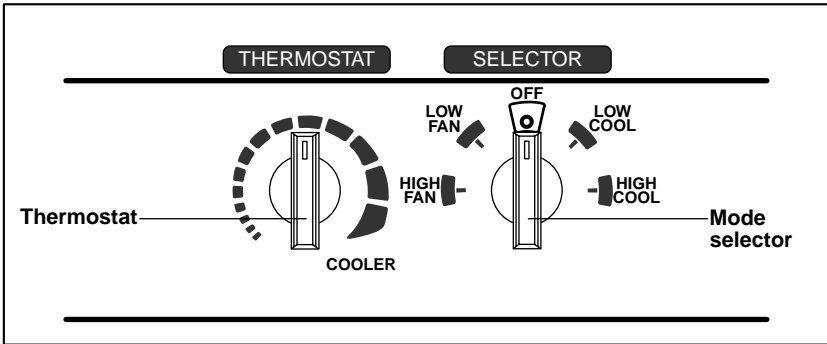
Once the air conditioner enters defrosting mode, it will not release defrosting until the outdoor heat exchanger coil temperature rises above 39°F. During this period, heat is provided by electric heater instead of by the heat pump.

# APPENDIX

## Control Panel

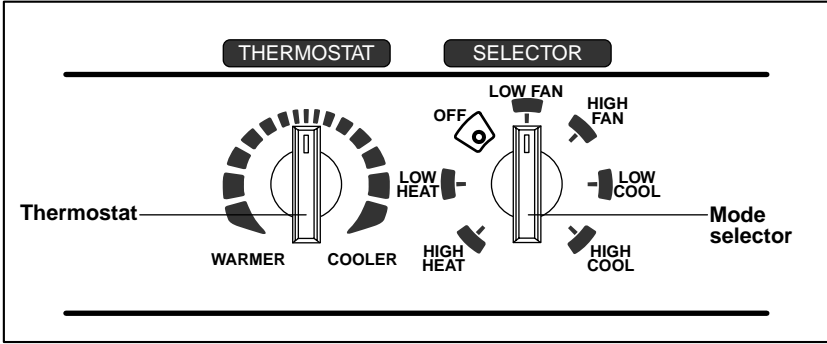
### ■ Cooling Only Model

Models **STB0810C1 STB1010C1 STB1020C1 STB1220C1**



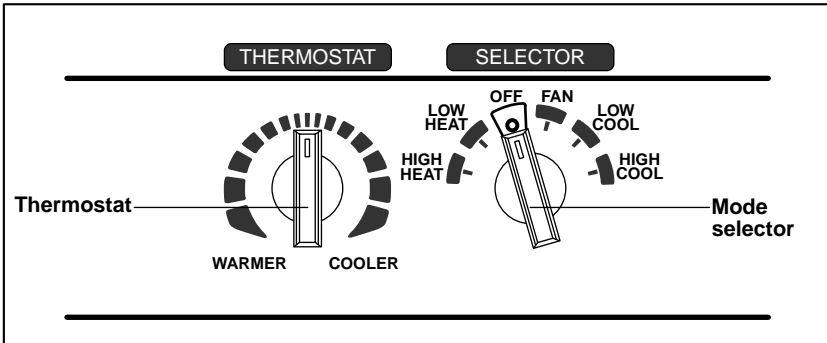
### ■ Cooling & Electric Heating Model

Models **STB0811C1 STB1023C1 STB1123C1**



### ■ Heat Pump Model

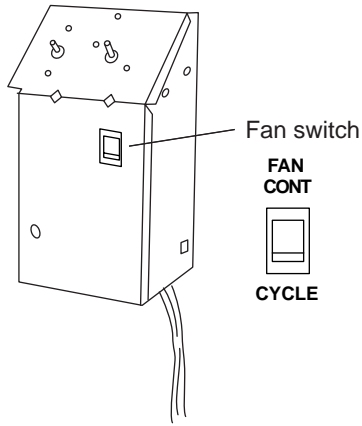
Model **STB0823H1**



# Fan Switch

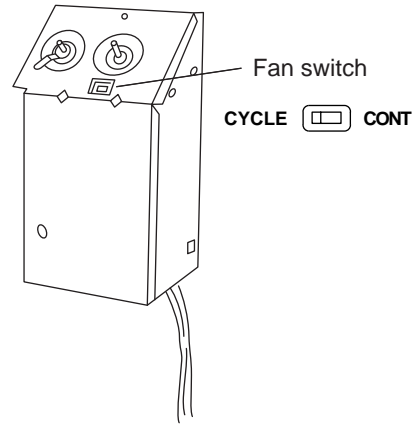
The location of Fan Switch differ according to models.

When set to CYCLE, fan operation synchronizes with that of compressor's (or heater's) thermo ON and thermo OFF, thereby saving power. When set to CONT, fan continues to operate regardless of thermo ON or thermo OFF condition.



Cooling Only Model

Cooling & Electric Heating Model



Heat Pump Model

For Parts or Service Contact  
SANYO HVAC SERVICE CENTER  
SANYO Fisher Service Company  
1165 Allgood Road, Suite 22, Marietta, GA 30062 U.S.A.  
300 Applewood Crescent, Concord, Ontario, L4K 5C7, CANADA