

## OUTDOOR SPLIT-SYSTEM AIR CONDITIONER

**MODELS: 10, 12, 13 AND 14 SEER  
1 PHASE - 1.5 TO 5 TONS**

### TABLE OF CONTENTS

<b>HOW YOUR AIR CONDITIONER WORKS</b> . . . . .	<b>2</b>
<b>SYSTEM OPERATION</b> . . . . .	<b>2</b>
SETTING THE THERMOSTAT . . . . .	2
COOLING CYCLE . . . . .	3
<b>TO MAXIMIZE OPERATING EFFICIENCY</b> . . . . .	<b>3</b>
HEATING CONSERVATION . . . . .	3
COOLING CONSERVATION . . . . .	3
<b>CARE OF SYSTEM</b> . . . . .	<b>3</b>
COIL CARE . . . . .	3
CARE OF FAN MOTORS . . . . .	4
FILTER CARE . . . . .	4
OUTDOOR UNIT FINISH . . . . .	4
CLEARANCES . . . . .	4
COOLING SEASON . . . . .	4
SERVICE CALLS . . . . .	4
PARTS INFORMATION . . . . .	4
EXTENDED PROTECTION PLANS . . . . .	4



# Congratulations . . .

On your purchase of one of the most versatile comfort conditioning systems available in the industry today. This high efficiency system has been precision designed, manufactured of high quality materials and has passed many vigorous inspections and tests to ensure years of satisfactory service.

This booklet is meant to increase your understanding of your system, tell you how to operate it efficiently and how to obtain the greatest measure of comfort at the lowest operating expense. Please read this booklet thoroughly.

We appreciate your interest in our product and your decision to purchase our system. Enjoy your comfort.

This high efficiency air conditioning system has been precision engineered, manufactured of high quality materials, and has been passed many rigorous tests and inspections to ensure years of satisfactory service. That's why you can rely on efficient, trouble-free operation.

Your system is fully automatic. Set the thermostat and forget it. And it's automatically protected from damage by voltage fluctuations or excessive heating or cooling demands.

Your split system air conditioner consists of two units - one installed outdoors and one installed indoors. The indoor unit may be installed in a basement, attic, or crawl space.

## HOW YOUR AIR CONDITIONER WORKS

If your hand is wet and you blow on it, it feels cool because some of the moisture is evaporating and becoming a vapor. This process requires heat. The heat is being taken from your hand, so your hand feels cool.

That's what happens with an air conditioner. During the cooling cycle, your system will remove heat and humidity from your home and will transfer this heat to the outdoor air.

## SYSTEM OPERATION

Your thermostat puts full control of the comfort level in your home at your fingertips.

**DO NOT** switch your thermostat rapidly "On" and "Off" or between "Heat" to "Cool" This could damage your equipment. Always allow at least 5 minutes between changes.

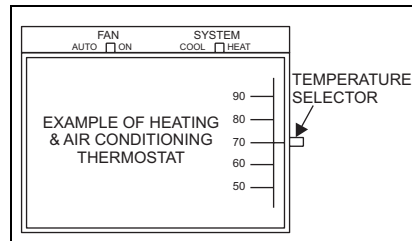


FIGURE 1: Typical Thermostat

## SETTING THE THERMOSTAT

**System Off** - On stand by: No heating, cooling, or blower air. Set system switch to "Off" and fan switch to "Auto".

**Fan Only** - On moderate days, usually during spring and fall, when neither heating nor cooling is required, you may want to run only the fan to ventilate, circulate and filter the air in your home or building. Set the system switch to "OFF" and the fan switch to "ON". Be sure to return the switches to their original positions for normal operation.

**Cooling** - To operate the air conditioner, set system switch to "Cool", fan switch to "Auto", and the temperature selector lever to the desired temperature. For a cooler temperature, set lever to lower number. For less cooling, set lever to higher number.

**Heating** - To operate the furnace for heat, set system switch to "Heat", fan switch to "Auto", and the temperature selector lever to the desired temperature. For a higher temperature, set lever to higher number. For a lower temperature, set the lever to a lower number.

**Continuous Air Circulation** - Regardless of whether heating or cooling the home: Set fan switch to "On", system switch to either "Heat" or "Cool" and the temperature selector lever to the desired temperature. This provides continuous air filtering and more even temperature distribution to all conditioned spaces. The sound level within the home/building will also remain relatively constant.

To operate a Programmable/Electronic thermostat: Refer to its User's Manual.

Set your thermostat for heating or for cooling. Then set it for the desired temperature. Find the temperature that is most comfortable for you, and then leave your thermostat alone. **Manually moving the thermostat up or down to extreme settings will not speedup temperature changes.** Avoid moving the thermostat up during heating - particularly where a demand type electric meter is installed and electric furnace is installed for heating. This will increase your operating cost substantially.

## CAUTION

The main power to the system must be kept "ON" at all times to prevent damage to the outdoor unit compressor. If necessary, the thermostat control switch should be used to turn the system "OFF". Should the main power be disconnected or interrupted for 8 hours or longer, DO NOT attempt to start the system for 8 hours after the power has been restored to the outdoor unit. If heat is needed during this 8 hour period, use emergency heat.

## COOLING CYCLE

Switch your thermostat to cool. Select a comfortable thermostat temperature setting, typically between 75 and 80°. Comfort sensations vary with individuals. The lower the indoor temperature desired, the greater will be the number of hours your unit must operate.

Set your thermostat 2 or 3°F below normal several hours before entertaining large groups during hot weather. People give off considerable heat and moisture.

On an extremely hot day, the indoor temperature may rise 3 to 6°F above the thermostat setting. Properly selected equipment does not have the capacity to maintain a constant indoor temperature during the peak load. Over-sizing your system to handle this peak load isn't practical because the oversized system would operate much less efficiently at all other conditions.

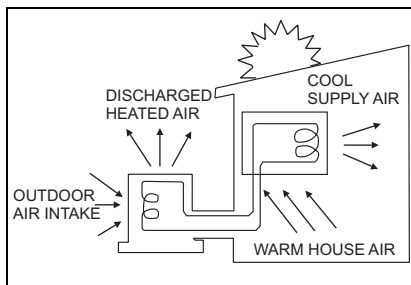


FIGURE 2:

## TO MAXIMIZE OPERATING EFFICIENCY

### HEATING CONSERVATION

For the most efficient operation, keep storm windows and doors closed all year long. They not only help insulate against heat and cold, but they also keep out dirt, pollen and noise.

Closing drapes at night, keeping fireplace dampers closed when not in use, and running exhaust fans only when necessary will help you to retain the air you have already paid to heat.

Keep lamps, televisions, or other heat producing sources away from the thermostat. The thermostat will sense this extra heat and will not be able to maintain the inside temperature to the desired comfort level.

### COOLING CONSERVATION

To comfortably cool your home, your air conditioner must remove both heat and humidity. Don't turn your system off even though you will be away all day. On a hot day, your system may have to operate between 8 to 12 hours to reduce the temperature in your home to a normal comfort level.

Keep windows closed after sundown. While the outdoor temperature at night may be lower than indoors, the air is generally loaded with moisture which is soaked up by furniture, carpets, and fabrics. This moisture must be removed when you restart your system.

The hotter the outside temperature, the greater the load on your system. Therefore do not be alarmed when your system continues to run after the sun has set on a hot day. Heat is stored in your outside walls during the day and will continue to flow into your home for several hours after sunset.

Use your kitchen exhaust fan when cooking. One surface burner on "HIGH" requires one ton of cooling. Turn on your bathroom exhaust fan while showering to remove humidity. However, exhaust fans should not be run excessively. It would decrease efficiency by removing conditioned air.

You can also help your system in the summer by closing drapes or blinds and by lowering awnings on windows that get direct sunlight.

## CARE OF SYSTEM

**IMPORTANT:** The Owner/user should not attempt to disassemble the equipment nor perform the periodic maintenance unless he or she is experienced and qualified to

## ⚠ WARNING

*Turn off the electrical power at the main disconnect for both the indoor heating unit and the outdoor unit before attempting any maintenance operations.*

A periodic inspection, cleaning, lubrication and adjustment of your air conditioning system is available from your dealer. Be sure to ask him about this service.

For those who prefer to do-it-yourself, follow the instructions below to care for your system.

Document and retain in your records, the following information:

Model Number: \_\_\_\_\_

Serial Number: \_\_\_\_\_

Date Installed: \_\_\_\_\_

Installing Dealer: \_\_\_\_\_

This information will be useful if the unit requires service from a qualified technician.

### COIL CARE

Keep the outdoor unit free of loose snow, foliage, grass clippings, leaves, paper, and any other material which could restrict the proper air flow in and out of the unit. The coil may be vacuumed to remove any debris from between the fins. However, don't knock ice off the outdoor unit's coil surface following an ice or severe snowstorm. The blows could mash the coil fins shut (blocking air passage), or break the refrigerant tubing allowing the refrigerant to escape.

If the coil becomes excessively dirty, turn the main disconnect switch to "OFF" and wash the coil with your garden hose. Avoid getting water into the fan motor and control box. Flush dirt from base pan after cleaning the coil.

## CARE OF FAN MOTORS

Some fan motors are provided with lubrication ports. Inspect your indoor and outdoor units to determine whether or not lubrication ports are provided.

The fan motor is shipped with an oil supply which will last for several years under normal operating conditions. After this time, each motor bearing should be oiled with 10-15 drops (approximately 1/4 teaspoon) of SAE 20 non-detergent electric motor oil or automobile oil. DO NOT use definite purpose oils such as sewing machine, cleaning, rust preventative, cutting, household, etc.

**Table 1:** Schedule For Re-lubrication

Running Hours Per Day	Environment	
	Normal	Dirty
0-8	Every 5 Years	Every 4 Years
9-16	Every 4 Years	Every 3 Years
17-24	Every 3 Years	Every 2 Years

**NOTE:** DO NOT OVER OIL

## FILTER CARE

Inspect the air filter(s) at least once a month. If they are dirty, wash reusable filters with a mild detergent per manufacturer's recommendations. Replace disposable filters with new filters.

Install the clean filters with air flow" arrow in the same direction as the air flow in your duct. Filters should be clean to assure maximum efficiency and adequate air circulation. Drapes, furniture or other obstructions blocking your supply and return air grilles will also decrease efficiency.

## OUTDOOR UNIT FINISH

If you wish to maintain the finish of the outdoor unit, it can be polished with car wax. It is recommended the unit be cleaned with soap and water prior to waxing.

**Table 2:** Troubleshooting Guide

PROBLEM	CHECK	ACTION TO TAKE	FAULT CODE (On Thermostat)
No Heat or Cooling	1. Thermostat for proper settings.	Set thermostat to proper setting.	—
	2. Circuit breakers and fuses.	Reset circuit breakers - Replace blown fuses.	—
	3. Check outdoor unit for dirty coil. (Cooling)	Clean coil, see "Coil Care" section.	2
	5. Indoor unit for dirty filter. (Heating)	Clean or replace, see "Filter Care" section	2
Wet on Floor or in Furnace	Condensate drain and "P" trap	Remove blockage, usually mold or fungus.	—
After completing the checks and actions above, turn thermostat to "OFF" for 10 seconds and attempt restart. Wait 5 minutes. If system does not start, call qualified service person.			

## CLEARANCES

The minimum clearances shown below must be maintained should any patio or yard improvements be done around the outdoor unit.

TOP 60"	SIDES 10"
REAR 10"	FRONT* 24"

\* Service access panel.

## COOLING SEASON

1. Switch thermostat to OFF position.
2. Do not switch to cooling or auto until electrical power has been reestablished for 8 hours if the power was off more than 8 hours.

## SERVICE CALLS

There are a few instances where you can avoid unnecessary service calls. (See Troubleshooting Guide above). Some models provide fault codes. The flashing light on the system thermostat is capable of providing you with time and money saving information. The fault code numbers listed can be handled by taking the corrective action indicated. Call qualified service person if displaying fault code numbers not listed.

## PARTS INFORMATION

Replacement parts are available from local contractor/dealers or the nearest distribution center.

## EXTENDED PROTECTION PLANS

Special warranty packages are available through your contractor/dealer. These packages reduce the potential cost of service calls following the first year of operation on your cooling or heating/cooling system.