

USER'S MANUAL**VARIABLE SPEED, R-410A****IMPORTANT SAFETY INFORMATION**** WARNING:**

To avoid possible equipment damage, fire, or death, the following instructions must be observed regarding unit maintenance and operational procedures.

Please read all instructions before servicing this equipment. Pay attention to all safety warnings and any other special notes highlighted in the manual. Safety markings are used frequently throughout this manual to designate a degree or level of seriousness and should not be ignored.

WARNING indicates a potentially hazardous situation that if not avoided, could result in personal injury or death.

CAUTION indicates a potentially hazardous situation that if not avoided, may result in minor or moderate injury or property damage.

Keep this literature where you have easy access to it in the future. If a problem occurs, check the instructions and follow recommendations given. If these suggestions don't eliminate your problem, call your servicing contractor. Do not attempt to service this unit yourself!

- To achieve optimum performance and minimize equipment failure, it is recommended that periodic maintenance be performed on this unit. The ability to properly perform maintenance on this equipment requires certain mechanical skills and tools. Please consult your dealer for maintenance information and availability of maintenance contracts.
- The area around the cooling unit must be kept clear and free of combustible materials, gasoline, and other flammable vapors and liquids. Do not store or use flammable items such as paint, varnish, or strippers in the vicinity of the unit.
- Do not use this appliance if any part has been under water. Immediately call a qualified service technician to inspect the unit and to replace any part of the control system and any gas control which has been under water.
- Familiarize yourself with the controls that shut off the electrical power to the unit. If the unit needs to be shut down for an extended period of time, turn off electrical power at the circuit breaker. For your safety always turn off the electrical power before performing service or maintenance on the unit

 WARNING

- **Under no circumstances should the appliance owner attempt to install and/or service this equipment. Some local codes require licensed installation / service personnel for this type of equipment. Improper service, adjustment, or maintenance may cause explosion, fire, electrical shock or other hazardous conditions which may result in personal injury or property damage.**
- **Read these instructions thoroughly before using the equipment. Follow all precautions and warnings contained within these instructions and on the unit.**
- **Improper installation, adjustment, alteration, service, or maintenance can cause personal injury or property damage. Refer to this manual. For assistance or additional information, consult a qualified installer or service agency.**
- **Do not store or use gasoline or other flammable vapors and liquids in the vicinity of this or any other appliance.**

DO NOT DESTROY. PLEASE READ CAREFULLY & KEEP IN A SAFE PLACE FOR FUTURE REFERENCE.

ABOUT THE AIR CONDITIONER

This split system cooling unit has been designed and built to provide many years of safe and dependable comfort, providing it is properly installed and maintained. With regular maintenance, this unit will operate satisfactorily year after year. Abuse, improper use, and/or improper maintenance can shorten the life of the appliance and create unsafe hazards. A regular service and maintenance schedule should be established to ensure efficient and safe operation of the unit.

OPERATING INSTRUCTIONS

The primary control for the overall heating and cooling system is provided by the indoor thermostat. Refer to the thermostat's user manual for detailed programming instructions.

The thermostat should be mounted about 5 feet above the floor on an inside wall and not on an outside wall or other location where its operation may be adversely affected by radiant heat from fireplaces, sunlight, or lighting fixtures, and convective heat from warm air registers or electrical appliances.

The 20 SEER air conditioner is a variable speed system. Normally the compressor will operate at one of 5 speeds, each predetermined for a balance of optimum efficiency and capacity. The outdoor fan motor will also operate at multiple speeds, following the compressor.

The control will not permit the unit to operate in outdoor temperatures below 50° F. If there is a call for air conditioning when the temperature drops below this point, the outdoor unit will shut down (if running) and the indoor blower will run. After the lockout is in effect, the unit can resume cooling after the outdoor temperature rises above 55° F.

The speeds used will depend on several factors, including:

- Whether first or second stage operation is called for by the thermostat (which must be two stage-capable),
- Outdoor ambient temperature.
- The length of time the equipment has been operating during the current cycle
- The operating speed history, for both the current and the previous operating cycles.

Cooling Operation

1. Set the thermostat's system mode to COOL or AUTO and change the fan mode to AUTO. See Figure 1.
2. Set the temperature selector to the desired temperature level. The outdoor fan, compressor, and blower motor will all cycle on and off to maintain the indoor temperature at the desired cooling level.

NOTE: If the temperature level is re-adjusted, or the system mode is reset, the fan and compressor in the outdoor unit may not start immediately. A protective timer circuit holds the compressor and the outdoor fan off for approximately 5 minutes following a previous operation or the interruption of the main electrical power.

Heating Operation

1. Set the thermostat's system mode to HEAT or AUTO and change the fan mode to AUTO. See Figure 1.
2. Set the temperature selector to the desired temperature level. The optional heating equipment (furnace or electric heat) will cycle on & off to maintain the indoor temperature at the desired heating level.

Operating the AC for Automatic Cooling & Heating

1. Set the thermostat system mode to AUTO and the thermostat fan mode to AUTO. See Figure 1.
2. Set the thermostat temperature selector to the desired temperature level. The thermostat will maintain the desired temperature level by switching between either the outdoor cooling unit or the indoor heating unit (furnace or electric heat) automatically.

Operating the Indoor Blower Continuously

The continuous indoor blower operation is typically used to circulate the indoor air to equalize a temperature unbalance due to solar loads, increased occupancy loads, or mechanical equipment operation. Set the thermostat fan mode to ON (Figure 1). The indoor blower starts immediately, and will run continually until the fan mode is reset to AUTO.

NOTE: The continuous indoor blower operation can be obtained with the thermostat system mode set in any position, including OFF.

Turning the Air conditioner Off

Change the thermostat's system mode to OFF and the fan mode to AUTO (See Figure 1). **NOTE:** The system will not operate, regardless of the temperature selector setting.

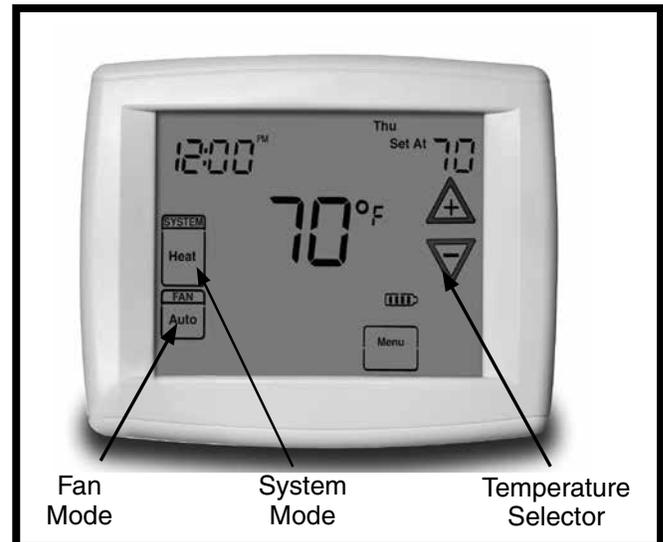


Figure 1. Digital Thermostat

AIR CONDITIONER MAINTENANCE

WARNING:

This air conditioner contains liquid and gaseous refrigerant under pressure. Installation and servicing should only be attempted by qualified, trained personnel thoroughly familiar with the equipment and safe responsible refrigerant handling procedures. Failure to comply with this warning could result in equipment damage, personal injury, or death.

WARNING:

To prevent electrical shock, personal injury, or death, disconnect all electrical power to the unit before performing any maintenance or service. The unit may have more than one electrical supply.

CAUTION:

DO NOT touch any of the internal electrical components while cleaning the unit.

Proper maintenance is important to achieve optimum performance from the air conditioner. The ability to properly perform maintenance on this equipment requires certain mechanical skills and tools. If you do not possess these skills, contact your dealer for maintenance. Consult your local dealer about the availability of maintenance contracts. Routine maintenance should include the following:

Regular Cleaning

CAUTION:

DO NOT touch any of the internal electrical components while cleaning the unit.

- The area around the unit and the vicinity of any other appliances must be kept clear and free of combustible materials, gasoline, and other flammable vapors and liquids. Do not store or use flammable items such as gasoline, paint, varnish, or strippers in the vicinity of the unit.
- Keep the outdoor unit clean. Hose off periodically and keep unit fins clear of leaves and grass clippings. **Be careful not to damage the aluminum fins.** Clean the outdoor coil and fins as necessary using a mild detergent and water. Rinse thoroughly with water. Do not use a pressure washer to clean the unit.

- Keep the outdoor unit clear of obstructions. **DO NOT** obstruct airflow with tall plants or shrubs. Check for and remove any obstructions such as twigs, sticks, etc.
- Inspect the condensate drain and outdoor coil at the beginning of each cooling season. Remove any debris.

Air Filters

WARNING:

Never operate the unit without a filter in the return air system. Dust and lint in the return air can build up on the internal components, resulting in loss of efficiency, equipment damage, and possible fire risk.

- Inspect and clean or replace air filters at the beginning of each heating and cooling season, or more frequently if required. A clogged filter could cause airflow related problems and reduce the overall efficiency of your unit. **Always replace disposable filter(s) installed in your system only with the same size dimensional filters that are being replaced.**
- Never operate the appliance without a filter installed in the return air duct. Inspect filters frequently and replace when necessary with filter of same dimensional size.

TROUBLESHOOTING

Before you call a Technician, check the following:

- Check the thermostat setting. Make sure the system mode and temperature settings are correct.
- Check the electrical panel for tripped circuit breakers.
- Check the filters for dust accumulation.
- Check the unit and make sure it is clean and not covered with grass or leaves.
- If the items above don't resolve your problems, then call your nearest service technician.

WARRANTY INFORMATION

A warranty certificate with full details is included with the equipment. Carefully review these responsibilities with your dealer or service company. The manufacturer will not be responsible for any costs found necessary to correct problems due to improper setup, improper installation, adjustments, improper operating procedure on the part of the user, etc.

Some specific examples of service calls which are not included in the limited warranty are:

- Correcting wiring problems in the electrical circuit supplying the equipment.
- Resetting circuit breakers or other switches.
- Adjusting or calibrating of thermostat.

