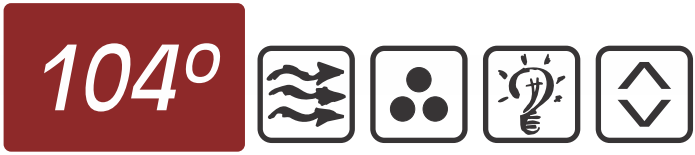
6230Y SERIES

OWNERS OPERATION GUIDE



SpaGuts.com™

new guts for old spas

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IMPORTANT SAFETY INSTRUCTIONS
READ AND FOLLOW ALL INSTRUCTIONS

! **DANGER** To reduce the risk of injury, do not permit children to use this product unless they are closely supervised at all times.

! **WARNING -** RISK OF CHILD DROWNING. Extreme caution must be exercised to prevent unauthorized access by children. To avoid accidents, ensure that children cannot use a spa or hot tub unless they are supervised at all times.

! **DANGER** To reduce the risk of injury to persons, do not remove suction fittings.

▶ Spa location must accommodate sufficient drainage of water around the base of the structure, as well as the power source compartment.

▶ Prolonged immersion in water that is warmer than normal body temperature can result in a dangerous condition known as HYPERTHERMIA. The causes, symptoms, and effects of hyperthermia may be described as follows: Hyperthermia occurs when the internal temperature of the body reaches a level several degrees above the normal body temperature of 98.6BF. The symptoms of hyperthermia include dizziness, fainting, drowsiness, lethargy, and an increase in the internal temperature of the body. The effects of hyperthermia include (1) unawareness of impending hazard, (2) failure to perceive heat, (3) failure to recognize the need to exit spa, (4) physical inability to exit spa, (5) fetal damage in pregnant women, (6) unconsciousness resulting in danger of drowning. WARNING The use of alcohol, drugs or medication can greatly increase the risk of fatal hyperthermia in hot tubs and spas.

! **DANGER -** RISK OF ELECTRICAL SHOCK. Install at least 5 feet (1.5m) from all metal surfaces. (A spa may be installed within 5 feet of metal surfaces if each metal surface is permanently connected by a solid copper conductor attached to the wire connector on the terminal box that is provided for this purpose. Refer to NEC and local codes in effect at the time of installation.)

▶ A pressure wire connector is provided on the control box to permit connection of a solid copper bonding conductor between this point and any equipment, metal enclosures of electrical equipment, metal water pipe, or conduit within 5 feet (1.5m) of the unit as needed to comply with local requirements.

▶ Bond accessible metal to the dedicated connector on the equipment grounding bus, bond the equipment ground bus to the local common bonding grid as part of the installation in the form of (1) a reinforced concrete slab for support, (2) a ground plate provided beneath the hot tub or spa, or (3) a permanent ground connection that is acceptable to the local inspection authority.

! **DANGER** RISK OF ELECTRICAL SHOCK. Do not permit any electrical appliance, such as a light, telephone, radio, or television, within 5 feet (1.5m) of a spa or hot tub.

To reduce the risk of injury:

▶ The water in a spa or hot tub should never exceed 104°F (40°C). Water temperatures between 100°F (38°C) and 104°F (40°C) are considered safe for a healthy adult. Lower water temperatures are recommended for extended use (exceeding 10-15 minutes) and for young children.

▶ Excessive water temperatures have a high potential for causing fetal damage during the early months of pregnancy. Pregnant or possibly pregnant women should limit spa or hot tub water temperatures to 100°F(38°C).

Before entering the spa or hot tub, the user should measure the water temperature with an accurate thermometer.

The use of alcohol, drugs, or medication before or during spa or hot tub use may lead to unconsciousness with the possibility of drowning.

Persons suffering from obesity or with a medical history of heart disease, low or high blood pressure, circulatory system problems, or diabetes should consult a physician before using a spa or hot tub.

Persons using medication should consult a physician before using a spa or hot tub since some medication may affect heart rate, blood pressure, and circulation.

For Units with a GFCI (Ground Fault Circuit Interrupter)

This appliance is provided with a ground-fault-circuit-interrupter located on the control box. Before each use and with the unit operating, push the test button. The unit should stop operating and the reset button should appear. Push the reset button. The unit should now operate normally. If the interrupter does not perform in this manner, a ground current is flowing indicating the possibility of electrical shock. Disconnect the power, or unplug from receptacle, until the fault has been identified and corrected.

For Cord and Plug Connected Units

Connect to a grounded, grounding type receptacle only. NEVER connect the spa to an extension cord.

Do not bury the cord.

WARNING To reduce the risk of electrical shock, replace damaged cord immediately.

For Permanently Installed Units

A terminal marked “G” or “ground” is provided in the wiring box located inside the equipment compartment. To reduce the risk of electric shock, connect the terminal or connector to the grounding terminal of your electrical service or supply panel with a continuous green insulated copper wire in accordance with National Electric Code Table 250-95 and any other local codes in effect at the time of the installation.

For Permanently Installed Units not Provided with an Internal Disconnecting Method

The electrical supply for this product must include a suitably rated switch or circuit breaker to open all ungrounded supply conductors to comply with Section 422-30 of the National Electric Code, ANSI/NFPA 70 1987. The disconnecting means must be readily accessible to the tub occupant but installed at least 5 feet (1.5m) from the tub water.

For Units with Gas Heaters

WARNING - Do not install indoors. This unit uses a gas heater that requires proper ventilation and is intended for outdoor use only.

For UL Listed Equipment Assemblies

Install at least 5 feet (1.5m) from tub water using nonmetallic plumbing. Install blower no less than 1 foot (305mm) above the maximum water level to prevent water from contacting electrical equipment. Install in accordance with the installation instructions.

To reduce the risk of drowning from hair and body entrapment, install a suction fitting(s) with a marked flow rate in gallons-per-minute that equals or exceeds the flow rate marked on the equipment assembly.

INTRODUCTION

Congratulations on your new purchase. This Control System is constructed of the finest materials and assembled under the strictest quality control standards. With proper care and maintenance your system will provide you with many years of reliable performance.

The following pages contain information concerning the operation and care of your system.

LIGHT CONNECTION



HEATER ACTIVE





Note: Your system may differ from the photos above, although the basic operation and configuration will be the same.

POWER-UP & BREAKER SETTINGS

Boot up display sequence (Each parameter is displayed for 2 seconds)



Lamp test
All the segments and LEDs light up.



Software number
Software Part Number



Software Revision
Revision of the Software



Low-level selection
Low-level selected from Low-level menu

It's important to specify the current rating of the GFCI used to ensure safe and efficient current management (and reduce nuisance GFCI trippings).



It's important to specify the current rating of the GFCI used to ensure safe and efficient current management (and reduce nuisance GFCI trippings).
*Press and hold **Filter** button until you access the breaker setting menu.*



The values displayed by the system correspond to 0.8 of the maximum amperage capacity of the GFCI
Use **Up / Down** button to select the desired value. The value can be modified typically from 10 to 48 AMP.



Then press **Filter** button to set breaker rating. This table shows typical settings of **b** for different GFCI ratings. Select the one that matches your breaker.

GFCI	b
60 Amp	48 Amp
50 Amp	40 Amp
40 Amp	32 Amp
30 Amp	24 Amp
20 Amp	16 Amp

NOTE: If all installed components do not operate or only one component can be operated at a time it may be caused by this setting. Set breaker size accordingly to allow components to run.

Changing System Low-Level Program Configuration

Although every system has been factory set, in certain cases when servicing or replacing a unit in the field, it may be necessary to set a new pre-determined low-level program configuration. Follow these simple steps to re-enter the low-level programming using the spaside control.



Press and hold the **Pump 1** key for 30 seconds

Note: DO NOT let off the button until 30 seconds has passed and L## is displayed. You will see other values displayed prior that are to be ignored during this programming process.

The spaside display will show **L##** where "##" represents the previous configuration number registered in the system.

Use the Temp **Up/Down** key to choose the new desired low-level configuration number and press the **Filter** key to confirm the selected configuration (**refer to the configuration selection chart below).**

If the **Filter** key is not pressed within 25 seconds, the unit will exit this menu without changing any settings.

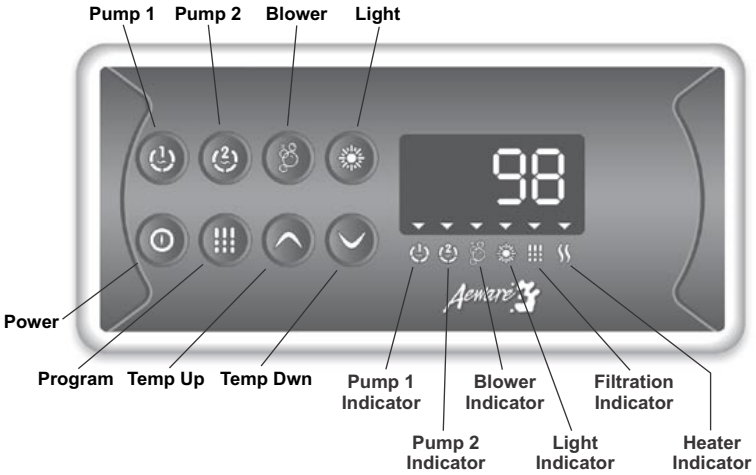
Low-Level Configuration Number Chart

Model #	Prog #	Pump 1	Pump 2	Blower	Circ Pump	CP Function
6230	**10***	**2 SPD**	**1 SPD**	**1 SPD**	**NO**	**No Circ Pump**
6230 w /CP	11	2 SPD	1 SPD	1 SPD	YES	Always on
6230 w /Clean CP	12	2 SPD	1 SPD	1 SPD	YES	Thermostat Controlled

*** Default Setting**

If at power-up of the system and spaside display shows the following message: , it means that all low-level configurations have been downloaded, but no configuration number has been chosen.

SPASIDE CONTROL OPERATION



Pump 1 - Press once to turn on low speed. Press a second time to turn pump to high speed (with a dual-speed pump). A third time turns pump off.

A built-in timer automatically turns the pump off after 20 minutes unless manually deactivated first.

The "Pump 1" indicator lights up when Pump 1 is on. With dual-speed pump, indicator will flash when Pump 1 is on at low speed.

Pump2 - Press once to turn on pump on, press a second will turn the pump off ***unless Two speed pump***. Two speed pump functions as Low, High, Off

A built-in timer automatically turns the accessory off after 20 minutes unless manually deactivated first.

The "Pump 2" indicator lights up when Pump 2 is on.

Blower key - Press Blower key to turn blower on. Press Blower Key again to turn off.

A built-in timer automatically turns the accessory off after 20 minutes unless manually deactivated first.

The "blower" indicator lights up whenBlower is on.

Light - Press once to turn light on. Press Light key a second time to turn light off.

A built-in timer automatically turns the light off after 2 hours unless manually deactivated first.

The "Light" indicator lights up when light is on.

Temp Up - Use Up key to raise the temperature Set Point. The temperature setting will be displayed for 5 seconds to confirm your new selection.

The "Set Point" icon indicates that the display shows the desired temperature, NOT the current water temperature!

Temp Down - Use Up key to lower the temperature Set Point. The temperature setting will be displayed for 5 seconds to confirm your new selection.

The "Set Point" icon indicates that the display shows the desired temperature, NOT the current water temperature!

FEATURES & PROGRAMMING FILTRATION

Power Key - This key provides access to:

Manual Economy Mode - When active this mode forces the system to maintain a temperature 20F° less than the set temperature. The display will toggle between "Eco" the clock and the water temperature. Press the power button again to disable economy mode.

Eco = **Economy mode active**
noE = **Economy mode not active**

FILTER/PROGRAM Key: A quick press of the Filter key will allow you to display the clock. A long press of 5 seconds will allow you to enter the program menu. In the program menu, the following parameters can be set: the clock, the filter cycles or the purge cycles, the economy mode and the temperature units. While you are in the program menu, use the up or down keys to adjust the parameters and use the Filter key jump to the next parameter.

Note: Changes will be saved after the confirmation of the last parameter only. If there is no key press for 10 seconds, the system will exit the program menu without saving the changes.



Setting the Clock: Enter the programming menu by pressing and holding the **FILTER** key for 5 seconds. The current time will be displayed with the hours flashing.

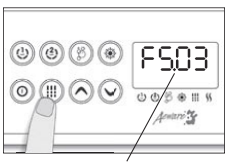
Press the **UP** or **DOWN** key to adjust the hours accordingly making sure the **PM** indicator is set properly.



Press the **PROGRAM** key to advance to changing the minutes

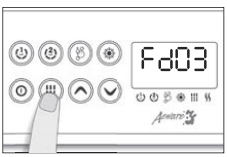
Press the **UP** or **DOWN** key to adjust the hours accordingly making sure the **PM** indicator is set properly.

** PM indicator*



Setting the Filter Cycle: Enter the programming menu by pressing and holding the **FILTER** key for 5 seconds. The current time will be displayed with the hours flashing. If adjusting the clock is necessary do it now, otherwise press the **FILTER** key repeatedly until F5## is displayed. "F5" represents FILTER START "##" represents the start time hour.

**PMindicator*

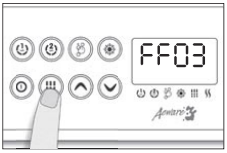


Press the **UP** or **DOWN** key to adjust the hours accordingly making sure the **PM** indicator is set properly.

Press the **FILTER** key until Fd## is displayed. "Fd" represents FILTER DURATION "##" represents the run time for the filter cycle in hours.

0 = No Filtration
24 = Continuous Filtration

PROGRAMMING FILTRATION (cont.)



Setting the Filter Cycle Frequency: - Enter the programming menu by pressing and holding the **FILTER** key for 5 seconds. The current time will be displayed with the hours flashing. If adjusting the clock is necessary do it now, otherwise press the **FILTER** key repeatedly until FF## is displayed. "FF" represents FILTER FREQUENCY "##" represents the number of cycles per day, **1 - 4** cycles per day.

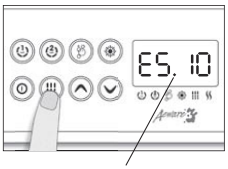
Press the **UP** or **DOWN** key to adjust the cycles as required.



Setting the Economy Mode: Enter the programming menu by pressing and holding the **FILTER** key for 5 seconds. The current time will be displayed with the hours flashing. If adjusting the clock is necessary do it now, otherwise press the **FILTER** key repeatedly until EP## is displayed. "EP" represents ECONOMY PROGRAM "##" represents cycle enabled or not

1 = On / Cycle Enabled
0 = OFF / Cycle Disabled

Press the **UP** or **DOWN** key to adjust the setting as required.



*PMindicator

Setting the Economy Start Time: Enter the programming menu by pressing and holding the **FILTER** key for 5 seconds. The current time will be displayed with the hours flashing. If adjusting the clock is necessary do it now, otherwise press the **FILTER** key repeatedly until ES## is displayed. "ES" represents ECONOMY START, "##" represents hour the cycle starts

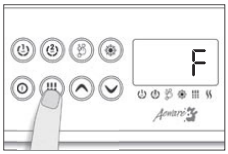
Press the **UP** or **DOWN** key to adjust the setting as required paying close PM indicator.



Setting the Economy Duration: Enter the programming menu by pressing and holding the **FILTER** key for 5 seconds. The current time will be displayed with the hours flashing. If adjusting the clock is necessary do it now, otherwise press the **FILTER** key repeatedly until Ed## is displayed. "Ed" represents ECONOMY DURATION, "##" represents the active time in hours.

Press the **UP** or **DOWN** key to adjust the hours as required

0 = No Economy
24 = Continuous Economy



Changing the Temperature Readout: Enter the programming menu by pressing and holding the **FILTER** key for 5 seconds. The current time will be displayed with the hours flashing. If adjusting the clock is necessary do it now, otherwise press the **FILTER** key repeatedly until F or C is displayed.

Press the **UP** or **DOWN** key to adjust as required

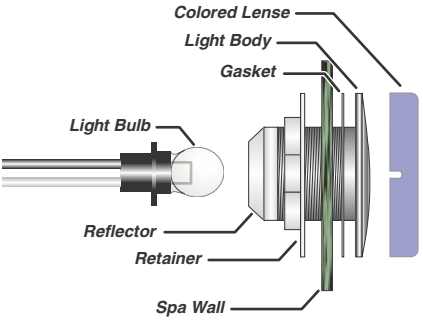
F = Farenheit
C = Celcius

SPA LIGHT (optional)

Your control may contain a high intensity, low voltage light to enhance nighttime use.

This illustration shows how and where to find the bulb for replacement. It also shows the mounted spa light with a replacement (colored) lens. Colored lenses will further the enhancement of the light. Simply snap on or off to change the mood of your spa.

(Spa light housing & lens are optional)



OPERATIONAL CONSIDERATIONS

The following describes situations you may encounter and situations to be aware of.

WARM WEATHER CONDITIONS

Since your spa will normally be expected to maintain warm to hot water to be ready for your use, a great deal of attention has been directed to the ***energy conservation*** detail of insulation so as to keep electrical costs down. This ***energy conservation efficiency*** may be achieved by extensive insulation of the skirt, plumbing and spa shell, and in some climates full foam insulation may have been provided.

This ***energy conservation*** feature may cause an inconvenience during warmer times of the year. During warm periods of the year, the temperature within the equipment compartment can elevate to a point that the pump will automatically turn off for a short period of time (15-30 minutes) to allow the pump to cool down before automatically restarting. This cool down feature will not harm your spa but serves only to protect the pump from damage and as an indicator that it is too hot. To minimize this occurrence, refrain from using your Hydrotherapy Jets for prolonged periods of time during warm seasons.

The jet pump chosen for your spa has been specifically sized for *maximum performance* and your Hydrotherapy enjoyment.

FILTRATION SYSTEM

Please refer to your Spa Manufacturer's owner's manual regarding the operation, maintenance and cleaning of your filtration system.

Dirty or clogged filters can cause flow restrictions and you may experience difficulty in reaching and/or maintaining desired heat levels.

WINTERIZING

When freezing weather and/or power losses are expected, contact your local spa dealer for freeze protection or winterizing recommendations for both the spa and the equipment system. Freeze related damage is not covered by the warranty.

FREEZE PROTECTION (BUILT-IN)

SMART WINTER MODE** - This mode will automatically activate any time the temperature falls below 55°F inside the main control box. An on-board sensor detects the temperature inside the box and determines which mode of protection is required to keep the spa from freezing.

This mode will be active for a minimum of 24-hours. In this mode the system will automatically turn on the pump(s) and/or blower for a minimum of (1) minute to prevent freezing. The “Filter Cycle” indicator will “Flash” while this mode is active. No user interaction is required, system will resume normal operation once the freeze hazard has passed.

Dsl argnl _jgw	Rf c **Smart Winter Mode** consists of starting all the pumps for one minute at various intervals based on the ***ambient temperature under the spa skirt.***				
	?nnpmv Msrqgbc Ambient Temperature	?nnpmv, Rck ncp_rspc sl bcp spa skirt, taken at 6” from the spa pack.	Rck ncp_rspc rnl NA@ Inside Control Box	B_l ecpJct cj	Awajc every…
	2/ ´D <	41°F >	55°F >	None	n/a
	10´D	41°F	55°F	Low	2 hours
	05´D	32°F	46°F	Medium	1 hour
	01´D	26.6°F	41°F	High	30 minutes
	: 01´D	< 23°F	37°F	Severe	15 minutes
Bsp rqnl	Rf qn npmrcarcb c k mbc u qji ` c rnl dmp k dj dk sk rnd02 f nspq				
K ck mpw	K mbc npmrcarcb ` wml ` m_pb k ck mpwgj rf c ct cl r nd_ nmu cpmsr_ec, (L mr Pcqcrr_ ` jc				
Jmemmp_ppmu	Dgjrcp_ppmu mpjmem ` jgj i q,				

***** = Control system must be installed under the skirt of a portable spa and protected from the elements for this feature to function properly. Improper installations can cause erratic operation.***

CHEMICAL WATER TREATMENT

Your dealer is familiar with local water conditions and which chemicals are compatible with the water and are designed specifically for your spa. This is the best person to advise you on proper water quality management.

Equipment failure caused by improper water chemistry will not be covered under warranty.

ERROR INDICATION



An internal hardware error has been detected in the spapack

Contact your local dealer



Temperature sensor malfunction

This error will occur when a problem with the temperature sensor exists. Contact your local spa dealer



Water has exceeded 108F at the temperature sensor.

The heater, pump and accessory will be deactivated until the water cools. Be sure to check the actual water temperature with an accurate thermometer.

DO NOT ENTER SPA WATER!!



The spa water has exceeded 119F at the high-limit sensor.

The heater will deactivate while the pump and accessory will still operate. The blower (if equipped) can be activated to help cool the water. Water must be below 119F and power must be reset to clear the "HL" error

DO NOT ENTER SPA WATER!!

1. A dirty spa filter can also cause a restricted flow of water, be sure the filter is cleaned regularly and ensure all water shutoff valves are open.

2. If the system has been operating normally until now, the pump may be overheating the spa. Refer to "Programing Filtration" on page 18 and reduce the duration and/or number of cycles per day.

3. If you've eliminated items 1 & 2 as problems, the high-limit sensor may have malfunctioned.

Contact your local spa dealer



The system did not detect any water flow while the main pump was running.

- Make sure that the low-level programming has been properly set, with or without circulation pump (depending on your system configuration)
- Make sure water valves are open and that water level is high enough
- Check and remove anything obstructing the filter
- With heater pump ON the pressure switch must be a CLOSED circuit



Pressure/Flow Switch systems ONLY: Pressure/flow switch is not opening when system expects it to be open

- Make sure that the low-level programming has been properly set, with or without circulation pump (depending on your system configuration)
- With heater pump OFF the pressure switch must be a OPEN circuit



No low-level configuration software has been downloaded into the system.



Temperature inside the spa skirt is too high, causing the internal temperature in the spa pack to go above normal limits .

TROUBLESHOOTING

The following describes situations and possible solutions to common problems you may encounter as a spa owner.

NOTHING OPERATES

Main Breaker is OFF - Set to On.
Sub-Panel Breaker Off - Set to On.
Power switch in Off position - Set to On.
Component(s) not plugged in - Plug in components.
Power cord not plugged in - Plug in power cord.
Over-Temperature Protection On - Refer to page 9

NO, LOW OR SURGING WATER FLOW

Air Lock in Plumbing System - "Bleed" the system.
Restricted Flow - Insure that the water shut-off valves are open and that suction fittings are not blocked by debris.
Dirty Filter - Clean or replace filter.
Low Water Level - Increase water level to recommended level.

NO LOW SPEED PUMP OPERATION

Low Level Programming Incorrect - Contact your local dealer.
Over-Temperature Protection On - Refer to page 9
Pump Not Plugged-In - Plug in the Pump.

NO JETS OR BLOWER OPERATION

Blower or Pump Not Plugged-In - Plug in the Blower or Pump.
Over-Temperature Protection On - Refer to page 9

NO THERAPY JET OPERATION

Water Shut-Off Valves are Closed - Open Shut-Off valves.
Dirty Filter - Clean or replace filter.
Jets Not Properly Adjusted - Adjust Jets
Diverter Valve Not Properly Adjusted - Adjust diverter valve
Thermal Overload Tripping - Check for restricted flow of water.
Over-Temperature Protection On - Refer to page 9

WATER LEAKS

Spa Overfilled - Adjust water level.
Too Many People in the Spa - Adjust water level.
Drain-Valve Left Open - Close drain valve.
Couplings or Unions Loose - Tighten or contact your local dealer.
Pump Seal Leaking - Contact your local dealer.
Plumbing Connections Leaking - Contact your local dealer.
Water Leaking from Spaside Control - Contact your local dealer.
Water in Air Blower Plumbing - Contact your local dealer.

NO HEAT

Temperature Not Set Correctly - Adjust Set Point.
Over-Temperature Protection On - Refer to page 9
Current Limiting On - 120V Systems will not heat if High-Speed or Blower is on. Contact your local dealer.
No Power - Reset breaker at service panel.
Low Water Flow - Clean or Replace filter.

HIGH HEAT

Temperature Sensor Not in Dry-Well - Place sensor in dry-well.
Temperature Set Too High - Adjust Set Point.
High Ambient Temperature - Remove spa cover.

GFCI TRIPS OCCASIONALLY

Lightning or Electrical Storm, Power Surge, Extremely Humid Conditions, or Radio Frequency Interference - Reset GFCI.
NOTE: GFCI must be properly grounded and bonded.

GFCI TRIPS IMMEDIATELY

Defective Component - Contact a qualified service technician or the factory for assistance.

NO LIGHT OPERATION

Light Bulb Defective - Replace bulb or contact your local dealer.
Reflector has Fallen Off - Replace reflector or contact your local dealer.
Light Not Plugged-In - Plug in the Light.

NOTES

Use this section to jot down any information you may need at a later date.

Dealer: _____ **Date of Install:** _____

Contact: _____ **Phone:** _____

Address: _____

City: _____ **State:** ___ **Zip:** _____

Notes: _____

SYSTEM DATA LABEL

The system data label is located on the control box. This label is very important and contains information you will need to establish your electrical service. The voltage and amperage ratings are shown on the bottom of the label. Product, Model, Serial and Code numbers are also shown on the label.

Note: *This information will be necessary if you should ever have to request warranty or any other type of service.*

