Wiring Diagram

HeatPro™

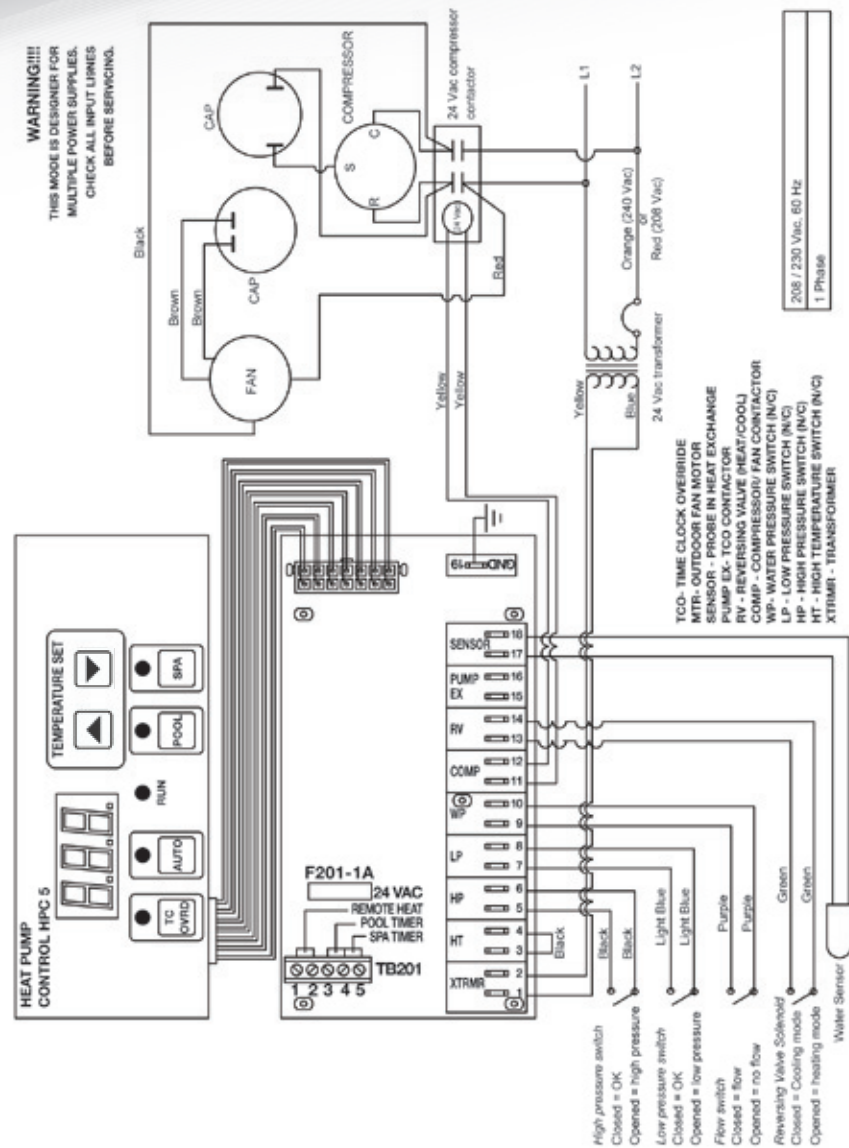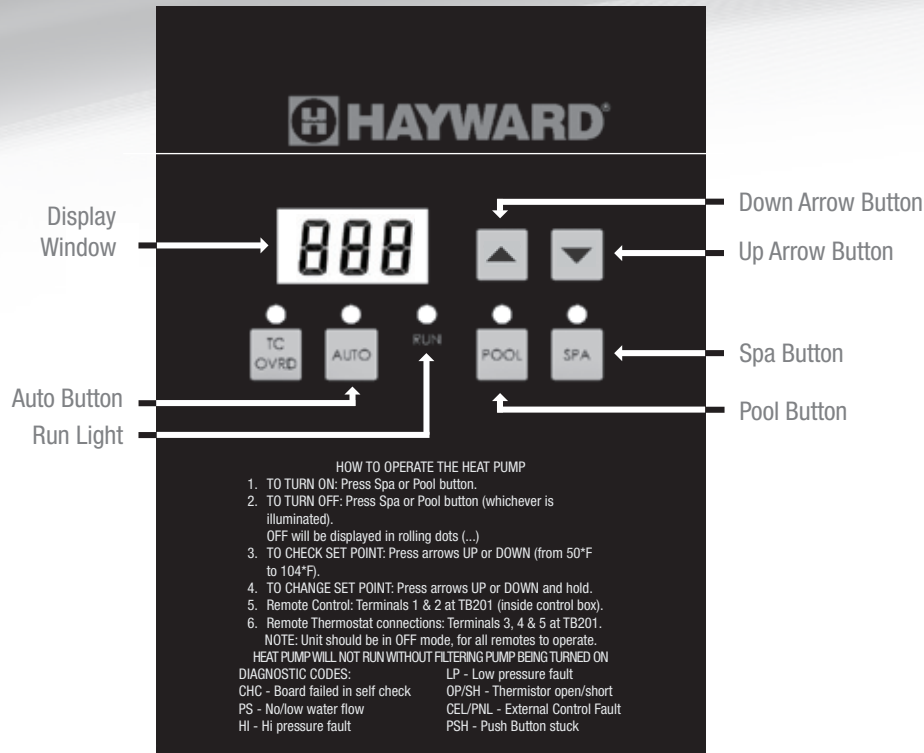## HP31204T Heat/Cool Operating Procedures Owner's Manual Addendum

Start-Up Procedures (HP31204T ONLY)

1. Apply power to the pool heater by plugging in the non-fused disconnect block or moving the circuit breaker to the "ON" position.

2. Place the pool heater thermostat in the "Standby" mode by ensuring the light above the "POOL" button (and "SPA" button for dual thermostat application) is not illuminated. If the light(s) are lit, depress the "POOL" button (and "SPA" button for dual thermostat application) to put the unit in "STANDBY" mode.

3. With the pool filter pump operating properly.

4. Push the "POOL" button to activate the unit and then set the pool Heat Pump thermostat to a temperature higher than the current pool water temperature.

   NOTE: For configuring the product for cooling mode see "Setting The Auto Function" and "Setting unit to cool only" sections later in this manual.

5. Allow 5 Minutes for the Heat Pump to start.

6. When the unit starts, confirm that air is being discharged upward from the unit and the air is cooler than the ambient air.

7. Allow the Heat Pump to operate for 10-15 minutes in order for system pressure to stabilize.

8. If Heat Pump fails to start:

   a. Check water flow
   b. Ensure that power is On
   c. Refer to Performance Monitoring Section of this Manual

Becoming Familiar with HeatPro Heat Pump Controls

Display Window
Auto Button
Run Light
Down Arrow Button
Up Arrow Button
Spa Button
Pool Button

HOW TO OPERATE THE HEAT PUMP
1. TO TURN ON: Press Spa or Pool button.
2. TO TURN OFF: Press Spa or Pool button (whichever is illuminated).
   OFF will be displayed in rolling dots (...)
3. TO CHECK SET POINT: Press arrows UP or DOWN (from 50°F to 104°F).
4. TO CHANGE SET POINT: Press arrows UP or DOWN and hold.
5. Remote Control: Terminals 1 & 2 at TB201 (inside control box).
6. Remote Thermostat connections: Terminals 3, 4 & 5 at TB201.
   NOTE: Unit should be in OFF mode, for all remotes to operate.
   HEAT PUMP WILL NOT RUN WITHOUT FILTERING PUMP BEING TURNED ON
DIAGNOSTIC CODES: LP - Low pressure fault
CHC - Board failed in self check   OP/SH - Thermistor open/short
PS - No/low water flow   CEL/PNL - External Control Fault
HI - Hi pressure fault   PSH - Push Button stuck

(HP31204T ONLY)

DISPLAY WINDOW	When power is supplied to the unit, the display will either show temperature (in degrees F or C), diagnostic code (such as "rhd"), or scrolling dots.
UP ARROW BUTTON	Raises the heat pump temperature set point.
DOWN ARROW BUTTON	Lowers the heat pump temperature set point.
POOL BUTTON	Activates the pool function of the controller.
SPA BUTTON	Activates the spa function of the controller.
RUN LIGHT	Indicates the unit is operating normally and the thermostat is making a demand for heat.
AUTO BUTTON	Activates the auto heat/cool mode to HEAT or COOL the water automatically to maintain the set point.

Control Operations

Dual Thermostat (HP31204T ONLY)

ON/OFF	This control does not have a true on/off feature. The unit uses **STANDBY** mode instead. Scrolling dots in the display indicate standby. STANDBY mode serves two functions. (1) It serves as an "off" mode, which keeps the heat pump from transferring heat into your pool water. (2) STANDBY allows a pool owner with remote controlling systems, such as Goldline, to maintain pool and spa temperatures via the remote. **NOTE: External control ONLY operates in heating function**
ENTER STANDBY MODE	If POOL mode is active (indicated by the green led over the POOL button), press the POOL button once. Rolling dots should appear on the display. If SPA mode is active (indicated by the green led over the SPA button), press the SPA button once. Rolling dots should appear on the display.
EXIT STANDBY MODE	Press either the POOL or SPA mode button.
MODE SELECTION	Select the desired mode of operation (SPA or POOL) by using the POOL / SPA buttons. A green LED above the buttons designates the active mode. When the POOL mode is active, any displays or adjustments apply only to the POOL mode. Adjustments for SPA mode must be made while the SPA button is activated. A user can switch between modes without turning the control to STANDBY first.
RUN INDICATOR LIGHT	Shows the unit is operating normally and the thermostat is making a demand for heat.
TEMPERATURE SET POINT	POOL and SPA mode range is 50-104°F (21-40°C).
ADJUST SET POINT	Continuing to hold the UP or DOWN ARROW button will adjust the set point value until the desired set point is reached. When the desired value has been reached, release the button. The new set point will flash to indicate a new value has been recognized and the display will revert back to water temperature as indicated by a steady display.

DISPLAY SET POINT	1. Press and release the UP or DOWN ARROW button once to display the current set point for 3 seconds. For help with this type of control, refer to Troubleshooting Guide with Digital Control. 2. If the AUTO mode indicator light is on press the AUTO button to disengage. 3. Program your desired temperature set point 4. Press the AUTO button to activate the automatic heat / cool function. (AUTO mode indicator will illuminate)
SET AUTO FUNCTION	"AC3" should show on the display (set at the factory). "AC" indicates that the cooling function is enabled and the "3" means that when the water temperature is 3°F above the set point, the unit will energize to cool your pool or spa. By using the UP and DOWN keys, the AC3 can be changed to values ranging from AC3 to AC9.
SET UNIT TO COOL ONLY	Engage the AUTO mode and use the up button to scroll past "AC9". You will notice that after the display of "AC9" an "ACP" (AUTO Cool Primary) will be displayed. When "ACP" is displayed, the unit will only cool the pool and will not go into the heating mode, no matter how cool the pool gets.

NOTE: The RUN light will flash during cooling cycles.

Changing Temperature Display (HP31204T ONLY)

The control will display temperatures in either degrees Fahrenheit or Celsius. To change the temperature display, place the heat pump in "Stand-By" mode so that the scrolling dots appear on the screen. Press and hold both the pool button and the down arrow button for two seconds and release. Place the heat pump back in pool or spa mode and the temperature change will be displayed. When viewing the temperature in degrees Fahrenheit only the numeric temperature is displayed, but when viewing degrees Celsius the control will display the numeric temperature followed by a lower case "c".

Lock Out Feature (HP31204T ONLY)

A lock out function is provided to keep the temperature set point from being changed. To engage this function in the pool or spa mode press the up arrow button, down arrow button and pool button at the same time and hold for 2 seconds. The control display will read "LOC" while the lock out function is engaged. To exit the lock out function in pool or spa mode press the up arrow button, down arrow button and pool button at the same time.