



Atwood Mobile Products LLC
 1120 North Main Street • Elkhart, IN 46514
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 INTERNET: <http://www.atwoodmobile.com>

LITERATURE NUMBER **MPD 31492**

hydro flame™

**Model 1H2C
 Digital Thermostat**

**FOR STANDARD FURNACES
 & A/C SYSTEMS**



ENGLISH, FRANCAIS (et Canada)

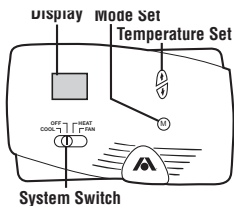
•Installation •Operation

Effective 9/21/04

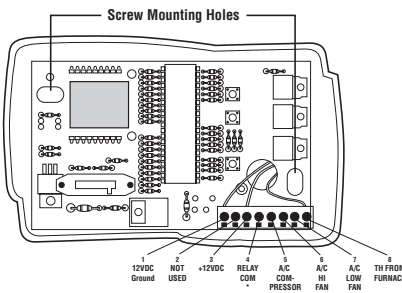
THIS THERMOSTAT HAS BEEN DESIGNED TO OPERATE STANDARD AIR CONDITIONING UNITS IN CONJUNCTION WITH A RV FURNACE.

SPECIFICATIONS

Operating Voltage 9VDC to 18VDC
 Current Consumption at 12VDC 100mA
 Operating Temp. -40F to +185F
 Room Temp. Range +55F to +90F
 Room Temp. Display Range +35F to +99F
 Thermostat Accuracy +/- 1F
 Switching Capability A/C up to 24 VAC
 (max. 2 AMPS)



*Note: Move jumper to positions 3 and 4 for RVP Unit. Discard jumper for Dometic®.



SLIDE SWITCH		SCROLL ORDER OF DISPLAYED MODES		OPERATION
LEFT	RIGHT			
COOL	OFF	HEAT	FAN	Furnace Operation
		●		Furnace cycles to satisfy set point.
COOL	OFF	HEAT	FAN	Air Conditioner Operation
●				Air conditioner automatically switches compressor and high and low speed fan when cycling to satisfy set point.
●				Air conditioner compressor and high speed fan cycle to satisfy set point.
●				Air conditioner compressor and low speed fan cycle to satisfy set point.
COOL	OFF	HEAT	FAN	Fan Operation
			●	Air conditioner fan runs at high speed to circulate air.
			●	Air conditioner fan runs at low speed to circulate air.
COOL	OFF	HEAT	FAN	Off
	●			No operation occurs.

WIRING REQUIREMENTS FOR ATWOOD THERMOSTAT

THERMOSTAT INSTALLATION

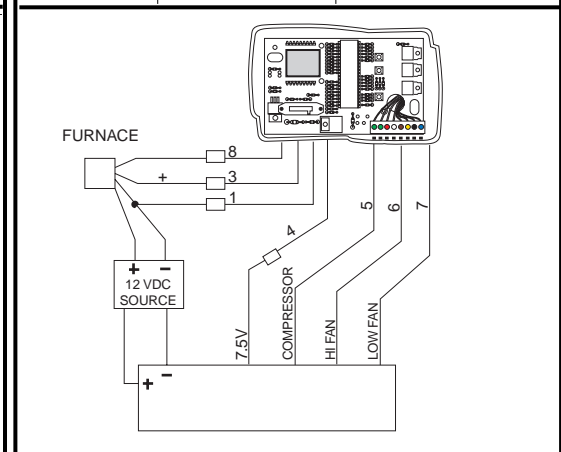
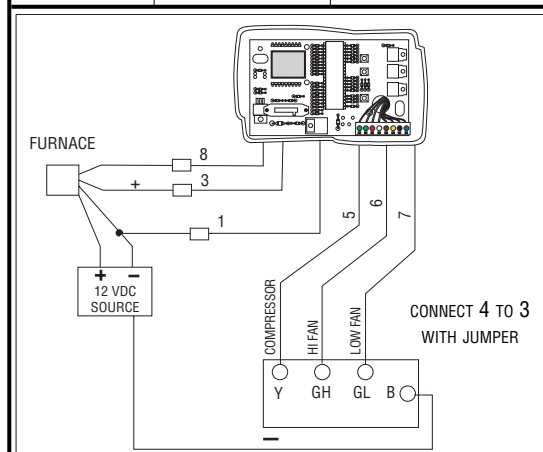
Thermostat is very sensitive. HANDLE WITH CARE AT ALL TIMES.

Locate thermostat 48" to 54" above floor on an INTERIOR wall. Pick a dry area where air circulation is good. EXTERIOR wall location must have a 3/4" spacer between thermostat and exterior wall.

1. Be sure all electrical power has been disconnected from the air conditioner, furnace and the power supply.
2. Do not install the thermostat where there are unusual heating conditions: such as direct sunlight, heat producing appliances (television, radio, wall lamp, etc.) or a furnace or air conditioner supply register.
3. ATTACHING THE WALL THERMOSTAT. Separate the thermostat body from the sub-base by gently squeezing the top and bottom, connecting wiring per requirements. Attach thermostat sub-base to the wall at desired mounting location.

THERMOSTAT TERMINAL # (L-R)	WIRE FROM FURNACE FUNCTION	WIRE FROM A/C FUNCTION
1	-12vdc ground	
2	not used	not used
3 & 4	+12vdc	
5		Compressor
6		High Fan
7		Low Fan
8	Furnace Control	

THERMOSTAT TERMINAL # (L-R)	WIRE FROM FURNACE FUNCTION	WIRE FROM A/C FUNCTION
1	-12vdc ground	
4		7.5 vdc
3	+12vdc	
5		Compressor
6		High Fan
7		Low Fan
8	Furnace Control	



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LITERATURE NUMBER **MPD 31493**

hydro flame™

Model 2H2C
Two Stage Furnace
Digital Thermostat



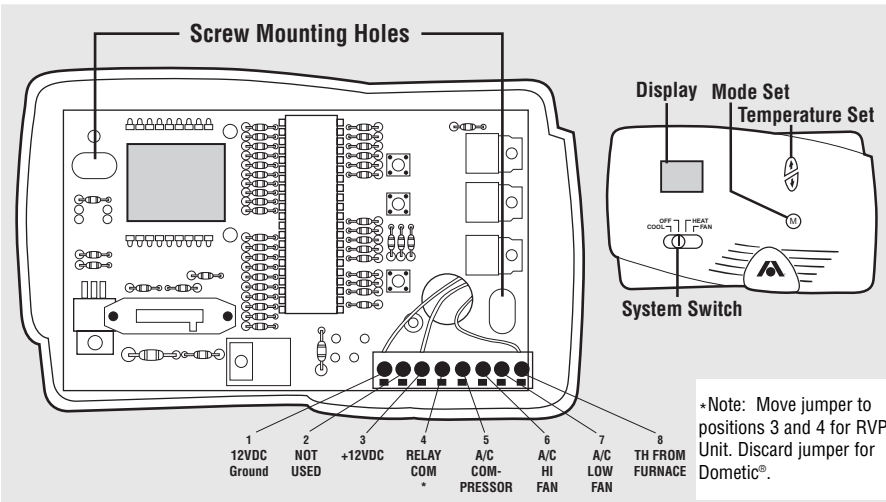
FOR TWO STAGE FURNACE

ENGLISH, FRANCAIS (et Canada)

•Installation •Operation

Effective 9/21/04

THIS THERMOSTAT HAS BEEN DESIGNED TO OPERATE STANDARD AIR CONDITIONING UNITS IN CONJUNCTION WITH AN EXCALIBUR 2-STAGE FURNACE.



THERMOSTAT INSTALLATION

Thermostat is very sensitive. **HANDLE WITH CARE AT ALL TIMES.** Locate thermostat 48" to 54" above floor on an **INTERIOR** wall. Pick a dry area where air circulation is good. **EXTERIOR** wall location must have a 3/4" spacer between thermostat and exterior wall.

1. Be sure all electrical power has been disconnected from the air conditioner, furnace and the power supply.
2. Do not install the thermostat where there are unusual heating conditions: such as direct sunlight, heat producing appliances (television, radio, wall lamp, etc.) or a furnace or air conditioner supply register.
3. **ATTACHING THE WALL THERMOSTAT.** Separate the thermostat body from the sub-base by gently squeezing the top and bottom. Pull wires through access hole in base plate. Attach thermostat sub-base to the wall at the desired mounting location. Mount the sub-base to the wall before connecting the wires.

System Slide Switch				SCROLL ORDER OF DISPLAYED MODES	OPERATION
LEFT	RIGHT				
COOL	OFF	HEAT	FAN	Scroll Order of Displayed Modes	Furnace Operation
		•		AU	Furnace automatically switches between high and low BTU valve and high and low speed fan when cycling to satisfy set point.
		•		HI	Furnace high BTU valve and high speed furnace fan cycle to satisfy set point.
		•		LO	Furnace low BTU valve and low speed furnace fan cycle to satisfy set point.
		•		HF	Furnace fan runs at high speed to circulate air. Air conditioner fan does not run.
		•		LF	Furnace fan runs at low speed to circulate air. Air conditioner fan does not run.
COOL	OFF	HEAT	FAN	Scroll Order of Displayed Modes	Air Conditioner Operation
•				AU	Air conditioner automatically switches compressor and high and low speed fan when cycling to satisfy set point.
•				HI	Air conditioner compressor and high speed fan operate to satisfy set point.
•				LO	Air conditioner compressor and low speed fan operate to satisfy set point.
•				HF	Air conditioner fan runs at high speed to circulate air. Furnace fan does not run.
•				LF	Air conditioner fan runs at low speed to circulate air. Furnace fan does not run.
COOL	OFF	HEAT	FAN	Scroll Order of Displayed Modes	Fan Operation
			•	HI	Air conditioner fan and furnace fan run at high speed to circulate air.
			•	LO	Air conditioner fan and furnace fan run at low speed to circulate air.
COOL	OFF	HEAT	FAN	Scroll Order of Displayed Modes	Off
	•			OF	No operation occurs.

Specifications

Operating Voltage 9VDC to 18VDC
 Power Consumption 100mA
 Operating Temperature -40F to +185F

Room Temperature Range +55F to +90F
 Room Temperature Display Range .. +35F to +99F
 Thermostat Accuracy +/- 1F

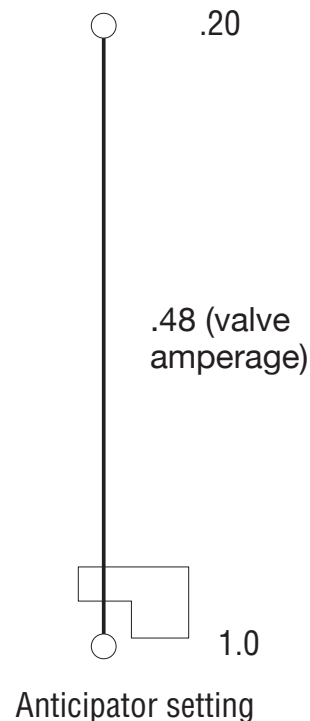
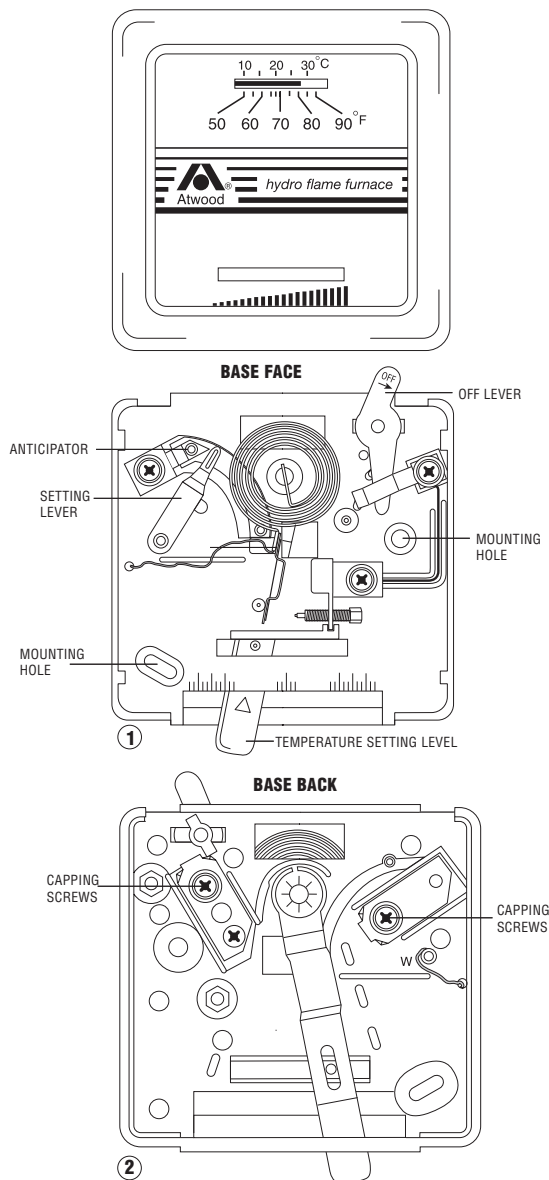
Mechanical Thermostat - HEAT ONLY

WHAT IS A THERMOSTAT?

- It is an ON/OFF switch controlled by a bi-metal coil which opens and closes an electrical contact by sensing changes in the ambient temperature.
- With its contacts close, it supplies power to the time delay relay which in turn closes a contact that sends power to the blower motor.
- Normally, the thermostat contacts are closed if the blower is running.

- The hydro flame thermostat is equipped with a heat anticipator which allows one to adjust the length of the heating cycles. A furnace should cycle 5-6 times an hour.
 - a. The anticipator is set at 1.0 on all hydro flame thermostats. If you want to shorten the heating cycle, move anticipator to a lower amp setting. You should not set lower than .48 which is the amperage rating of the gas valve. Setting any lower could burn out the anticipator wire.

Note: Heat anticipator adjustments are not covered under warranty.



Heat/cool thermostats are being used in conjunction with air conditioners and our furnace. The warranty, installation instructions and diagnostic information is provided by the manufacturer of the thermostat. However, if you need to isolate a furnace problem or a dual thermostat problem, bypass the furnace wires at the thermostat. If the furnace ignites and heats, you have a thermostat problem. If the furnace does not run, the problem is in the furnace, and you should consult the trouble shooting guides in the back of this manual.

THERMOSTAT LOCATION

- It should be on an inside wall 48"-54" above the floor on an inside wall.
- It should not be near areas of extreme heat or cold.
- It should not be located directly across from a heat duct.
- If installed on an outside wall, a 3/4" spacer must be used behind legs of thermostat. This will allow the thermostat to sense the air temperature and not the temperature of the wall.
- A minimum of 22 gauge wire should be used to connect the thermostat to the furnace. We recommend 18 gauge stranded wire.



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hydro flame Thermostat **TROUBLE SHOOTING GUIDE**

Effective: 8/10/98

Guides are only intended for use on Atwood® products by service technicians who have successfully completed Atwood® training. This guide should be used in conjunction with the appropriate Instruction Manual provided with the product and any applicable Industry Standards. This is not intended to be a complete list. Please direct questions concerning service of Atwood® products to 866-869-3118 option 5 before proceeding.

CAUSE	SOLUTION
BLOWER DOES NOT RUN	
Temperature selector out of place -----	Re-set to desired position
Thermostat wires broken or disconnected -----	Not covered under warranty.
Heat anticipator burned out -----	Dead short (not covered under warranty). Repair short and then replace thermostat.
	Faulty relay drawing more than 1 amp. Replace relay and thermostat. Covered under warranty.
No continuity through thermostat with contacts closed and switch on. -----	Replace thermostat.
Continuity through thermostat with contacts closed and switch on. -----	<ul style="list-style-type: none"> • Check and reestablish power to thermostat • Reset tripped circuit breaker. • Correct poor ground. • Correct any loose wires. • Replace defective relay. • Replace defective motor.
FURNACE DOES NOT CYCLE PROPERLY	
Furnace cycles too quickly -----	Move anticipator to a higher amp setting to lengthen cycle. NOT covered under warranty.
	Thermostat located too close to a heat duct. Move thermostat or duct outlet. NOT covered under warranty.
High temperature variance -----	Move anticipator to a lower amp setting to shorten cycle. NOT covered under warranty.

Note: When the anticipator is set properly and the heating system has operated for a few hours, the furnace should cycle 5-6 time per hour.