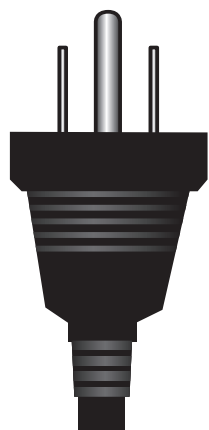


Main Power Plug



Instructions



HYGROTHERM

Humidity & Temperature
Controller in One!

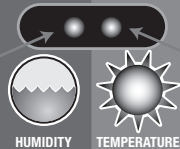
TM

ITEM# HT-10

Power Supply

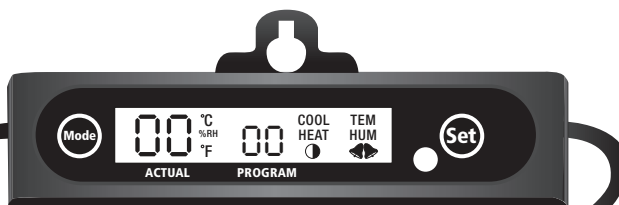


Humidity



Temperature

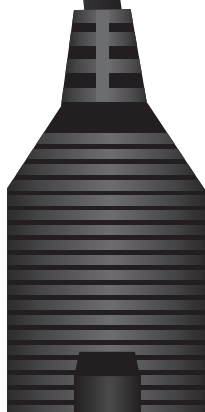
Control Unit



Socket for Humidifier



Socket for
Heater/Cooler



Temperature/Humidity
2 in 1 sensor



Congratulations on your purchase of **Zoo Med's HYGROTHERM™** Humidity and Temperature control system. The following instructions will assist you with the proper installation and operation of this unit. Please read the following instructions carefully before installing this controller. If you have any questions regarding these instructions or the proper use of this item, please contact our customer service department at zoomed@zoomed.com or by calling (888) 496-6633 (US and Canada only). Customers in other countries, please call (805) 542-9988.

FEATURES:

- Controls up to 1000 watts of combined temperature and humidity control devices.
- 2-in-1 Remote Temperature/Humidity Sensor with 5 foot cable.
- Nighttime temperature drop feature controlled by photocell.
- Temperature control range: 50°F to 122°F (10°C to 50°C).
- Humidity control range: 15% to 95% RH (Relative Humidity).
- Built in memory stores settings in case of power failure.
- Controls temperature by turning on heating devices in "HEAT" mode or by turning on cooling devices (e.g., fan) in "COOL" mode.
- Alarm flashes when temperature or humidity reaches extreme high or low levels.

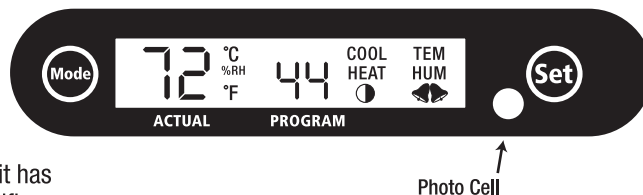
SAFETY INSTRUCTIONS:

IMPORTANT: In order to reduce the risk of fires, electric shock, or personal injury, read and save these instructions prior to operation.

- Use only with a 120 V, 60 Hz. grounded outlet.
- **WARNING – DO NOT** use this device to control any combination of heaters and humidifiers exceeding 1000 watts.
- **DO NOT** stretch or strain wires or power cords connected to this device.
- **DO NOT** immerse any of the **HYGROTHERM™** components in water. Keep the Programmable Control Unit outside of cages and terrariums; only the remote sensor is to be inside the cage/terrarium.
- **DO NOT** allow heavy objects to rest on any of the **HYGROTHERM™** components or associated cables and power cords.
- The **HYGROTHERM™** is NOT designed to control the temperature of a rock heater (use Zoo Med's ReptiTemp Rheostat instead).
- **DO NOT** operate the unit with a damaged cord, plug, or other component.
- **DO NOT** use an adapter that converts the grounded three-prong plug to a two-prong plug.
- **DO NOT** alter or modify this product. Contact an electrician if you are unsure about the electrical connection.
- **FOR INDOOR USE ONLY. NOT FOR USE OUTSIDE.**

PROGRAMMING THE CONTROL UNIT:

Upon plugging in your new **HYGROTHERM™** Humidity and Temperature control system for the first time, the digital display will illuminate and show all of the symbols for a brief moment before showing the default factory settings. After programming the control unit, the new settings will be stored in the controller's memory. In the event of a power failure, or if the unit becomes unplugged, the programmed settings will resume once power is restored. Wait until after the unit has been programmed before plugging in heating devices, cooling devices, or humidifiers.



A. Programming The Temperature Setting:

The Thermostat function of your **HYGROTHERM™** will turn heating or cooling devices on and off to maintain the optimum temperature in your terrarium. The temperature can be set in either Fahrenheit (°F) or Celsius (°C) mode. Perform the following steps to program the temperature setting of your controller:



Programming Temperature in °F



Figure 2

Programming Temperature in °C

1. The temperature control range is 50°F to 122°F (10°C to 50°C).
2. Press and release the orange "Mode" button to cycle between the three main modes (°C, %RH, °F). Each time the "Mode" button is pressed, the next setting will appear. Continue pressing the "Mode" button until either °C or °F shows next to the larger set of numbers on the left side of the display above the word "ACTUAL" (see Figure 2).
3. To adjust the temperature setting, press the orange "Set" button while in °C or °F mode. When the "Set" button is pressed, the programmed temperature will appear above the word "ACTUAL." Press the "Set" button once to change the programmed temperature one degree. Press and hold the button to increase by several degrees. If you pass the desired setting, press and hold the "Set" button to cycle through the numbers again. The controller will automatically return to the normal display about 3 seconds after the desired temperature is set, and the programmed temperature will appear above the word "PROGRAM."
4. The temperature program is now set and can be changed at any time by pressing the "Set" button while in the appropriate mode.

NOTE: While in Fahrenheit (°F) mode, the temperature limit on the LCD above the word "PROGRAM" is 99°F. If the temperature program is set to 100°F or more, the display will show "--" above the word "PROGRAM." To view the programmed temperature setting when this occurs, press and release the "Set" button and the programmed temperature will appear above the word "ACTUAL." The normal display will resume after a few seconds.

B. Programming the Humidity Setting:

The Hygrostat function of your HYGROTHERM™ will turn humidifiers on and off to maintain the optimum humidity level in your terrarium. **Zoo Med's Habbia Mist® Automatic Misting Machine** (Item# HM-10) and **Zoo Med's New Repti Fogger™** (Item# RF-10) are ideal humidifiers for terrariums. Perform the following steps to program the humidity setting of your controller:

1. The humidity control range is 15% to 95% RH (Relative Humidity).
2. Press and release the orange "Mode" button to cycle between the three main modes (°C, %RH, °F). Each time the "Mode" button is pressed, the next setting will appear. Continue pressing the "Mode" button until the letter "H" and %RH appear next to the larger set of numbers on the left side of the display above the word "ACTUAL" (see Figure 3).
3. To adjust the relative humidity setting, press the orange "Set" button and the programmed humidity setting will appear above the word "ACTUAL." Press the "Set" button once to increase the setting one percent. Press and hold the button to increase by several percentage points. If you pass the desired setting, press and hold the "Set" button to cycle through the numbers again. The controller will automatically return to the normal display about 3 seconds after the relative humidity is set, and the programmed humidity setting will appear above the word "PROGRAM."
4. The humidity program is now set and can be changed at any time by pressing the "Set" button while in the appropriate mode.

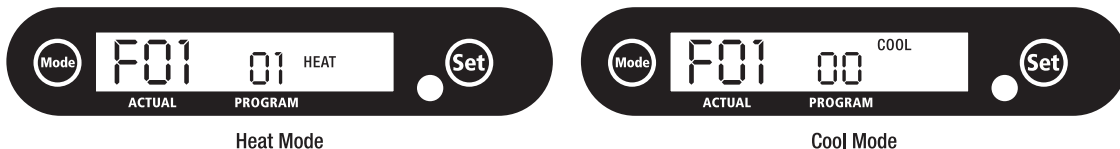
C. Additional Programming Features:

• HEAT/COOL Mode (F01) • Nighttime Temperature Drop (F02) • Temperature Alarm Setting (F03) • Humidity Alarm Setting (F04)

To enter the programming mode for the above features, press and hold the mode button (about 3 seconds) while in °C or °F mode until F01 appears on the left side of the display. If the "Mode" button is pressed while in °F mode, the Temperature Drop and Alarm settings will be programmed in °F. If the "Mode" button is pressed while in °C mode, the Temperature Drop and Alarm settings will be programmed in °C. Press and release the mode button to cycle through the four available features. The controller will automatically exit the programming mode after 10 seconds if no buttons are pressed, or after cycling through all four features.

HEAT/COOL Mode: In HEAT mode, the controller will turn heating devices (e.g., heat lamps, under tank heaters, ceramic heat emitters) on when the actual temperature in your terrarium drops below the programmed temperature setting. In COOL mode, the controller will turn on a cooling device (e.g., fan) when the temperature in your terrarium rises above the programmed temperature setting. To switch between HEAT and COOL mode, press and hold the "Mode" button until F01 appears, then release the "Mode" button. Press the "Set" button to switch between modes. When COOL mode is selected, the numbers "00" and the word "COOL" will appear on the display. When HEAT mode is selected, the numbers "01" and the word "HEAT" will appear on the display (See figure 4).

Figure 4



Nighttime Temperature Drop:

Your controller can be programmed to allow for a nighttime temperature drop to simulate natural conditions, stimulate breeding behavior, and save energy. To program a drop in nighttime temperature, press and hold the "Mode" button until F01 appears, then release. Quickly press and release the "Mode" button again and F02 will appear on the display along with the ☾ symbol (See figure 5). Press the "Set" button to program the number of degrees that the temperature will drop at night. When the setting is "00" the temperature drop feature is disabled.

Figure 5 Programming the Nighttime Temperature Drop



Alarm Settings (Temperature & Humidity):

When programmed, the alarm functions will alert you when the temperature or humidity in the terrarium is above or below the programmed settings. When the alarm is triggered, the LCD display will flash, along with the letters "TEM" or "HUM" to indicate if the alarm is for temperature or humidity.

Temperature Alarm:

Enter the programming function by pressing and holding the "Mode" button until F01 appears, then release. Press and release the "Mode" button two times until F03 appears on the display, along with the ☼ symbol and "TEM" shown above the symbol. Press the "Set" button to program the temperature change that will trigger the alarm. When the temperature rises above or falls below the programmed temperature by the set number of degrees, the alarm will activate causing the controller screen to flash. (i.e., if the temperature setting of the HYGROTHERM™ is 85°F, and the Temperature Alarm Setting is 10, the alarm will be activated if the temperature rises above 95°F or falls below 75°F). When the alarm is set to "00" it is disabled.

Humidity Alarm:

Enter the programming mode just as you did when programming the Temperature Alarm. Press the "Mode" button until F04 appears on the display, along with the ☼ symbol and "HUM" shown above the symbol (see figure 6). Press the "Set" button to program the humidity alarm just as you did for the temperature alarm. When the alarm is set to "00" it is disabled.



Programming the Temperature Alarm



Figure 6

Programming the Humidity Alarm

INSTALLING THE CONTROL UNIT:

After programming is complete, the unit can then be installed. Follow the steps below to complete the installation of your HYGROTHERM™ Humidity and Temperature control system.

- 1. SET UP TERRARIUM:** Make sure that your terrarium is completely set-up and that the heater (or cooling device) and humidifier are in place.
- 2. INSTALL 2-IN-1 REMOTE TEMPERATURE/HUMIDITY SENSOR:** Before plugging in the heating/cooling device and the humidifier, place the remote sensor in the desired location inside the terrarium. The sensor can be attached to the inside walls of your terrarium using double-sided tape or Velcro® hook-and-loop fastener. Wherever the sensor is placed is where the HYGROTHERM™ will be measuring the temperature and humidity.
- 3. MOUNT THE CONTROL UNIT:** Place the control unit in the desired location outside of your terrarium. Do not place the control unit inside the terrarium as the higher temperatures and humidity levels can have adverse affects and cause eventual failure. If you are using the Nighttime Temperature Drop feature, be sure that the photocell on the control unit is not blocked, and that it is in a location that will sense when it is light and dark.
- 4. PLUG IN THE HYGROTHERM™:** Your HYGROTHERM™ unit should already be plugged in and programmed. If you have unplugged the HYGROTHERM™ to move it, plug it back in now. The programmed settings are stored in the memory and will not need to be reset.
- 5. PLUG IN HEATING/COOLING DEVICE AND HUMIDIFIER:** Finally, plug in the heating (or cooling) device to the socket labeled "TEMPERATURE." Plug the humidifier (e.g., Repti Fogger™ or Habba Mist®) into the socket labeled "HUMIDITY." Check to make sure that your heating/cooling device and humidifier are switched on. The installation of your HYGROTHERM™ Humidity and Temperature control system is now complete!

IMPORTANT NOTES:

- **DO NOT** use to control mercury vapor UVB lamps (e.g., PowerSun UV Self-ballasted Mercury Vapor lamp), compact fluorescent lamps, or rock heaters.
- **Heat:** Make sure that your heating device (e.g., Ceramic Heat Emitter, ReptiTherm™ U.T.H. Under Tank Heater, etc.) has the ability to heat your terrarium to the desired temperature. If your terrarium does not reach the desired temperature, you may need to replace the heating device with one of higher wattage.
- **Humidity:** The relative humidity level in your terrarium can change rapidly depending on the amount of ventilation in your terrarium. Terrariums made of screen, or with large screen covers, may have a difficult time maintaining higher humidity levels. Covering portions of the screen with a suitable material may help to hold the humidity in your terrarium. Be sure not to block UVB lamps or place flammable materials close to heating devices.
- **Sensor location:** The location of the sensor has a great affect on temperature and humidity levels throughout your terrarium. Be sure not to place the sensor too close to the heating/cooling device. Be sure that the sensor is in a suitable location to provide the correct temperature gradient and humidity level for your animals.

DEFAULT SETTINGS:

To restore the default settings, press and hold the "Mode" and "Set" buttons at the same time for about 3 seconds. Note: This will erase all of your programmed settings.

ERROR MESSAGES:

In the event that the temperature or relative humidity exceeds the sensor's limits, an error code will show on the display indicated by the letter "E" followed by a number. If an error code appears, check to make sure that your heater has not malfunctioned causing extreme temperatures. Also check to make sure that your humidifier is functioning properly and that the sensor is not submerged in water or covered with condensation. When the conditions are corrected that caused the error message to appear, the control unit should resume its normal display. If the error code continues to remain under normal temperature and humidity conditions, contact Zoo Med's customer service department.

WARRANTY:

Zoo Med Laboratories, Inc. (Zoo Med) warrants each HYGROTHERM™ Humidity and Temperature control system to be free of defects in material and workmanship under normal use and service for 12 calendar months. The obligation under this warranty is limited to the repair or replacement, at Zoo Med's discretion, of the product or any part thereof, when the product is returned to Zoo Med, freight prepaid. No claim shall be allowed under this warranty if, in the opinion of Zoo Med, the HYGROTHERM™ Humidity and Temperature control system has been subject to accident or improper usage, including but not limited to: water damage, improper storage, accidental dropping, etc. This warranty is in lieu of all other warranties and representations express or implied. Please include your receipt, full name, address, phone number, and email address along with a note explaining failure when sending any product back to Zoo Med. Please allow 4 to 6 weeks for repair or replacement.

Ideal Products for use with HYGROTHERM™:



Ceramic Infrared Heat Emitter
CE-60, 100, 150 & 250



Repti Fogger™
RF-10



Habba Mist®
HM-10



Digital Thermometer With Probe
TH-24



Analog Humidity Gauge
TH-21

ZOO MED LABORATORIES, INC.

3650 Sacramento Dr.
San Luis Obispo, CA 93401 U.S.A.
Phone: 805-542-9988
Fax: 805-542-9295
E-mail: zoomed@zoomed.com

www.zoomed.com