

INSTALLING THE CONTROL UNIT:

After programming is complete, the unit can then be installed. Follow the steps below to complete the installation of your Environmental Control Center.

- 1. SET UP TERRARIUM:** Make sure that your terrarium is completely set-up and that the lights, heating/cooling devices, and humidifier/fogger is in place.
- 2. INSTALLING REMOTE TEMPERATURE/HUMIDITY SENSORS:** Before plugging anything into the Environmental Control Center, place the remote sensors 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 sensors are placed is where the Environmental Control Center 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 effects and cause eventual failure.
- 4. PLUG IN THE ENVIRONMENTAL CONTROL CENTER:** Your Environmental Control Center should already be plugged in and programmed. If you have unplugged the Environmental Control Center to move it, plug it back in now. The time of day may need to be reset. The programmed settings are stored in the memory and will not need to be reset.
- 5. PLUG IN LIGHTING, HEATING/COOLING DEVICE(S) AND HUMIDIFIER:** Finally, plug in the heating (or cooling) device to the socket labeled "Heating or Cooling." Plug the humidifier (e.g., ReptiRain® or Reptifogger™) into the socket labeled "Humidify/Dehumidify", and the remaining equipment into the timer sockets. Check to make sure that your heating/cooling device and humidifier are switched on. The installation of your Environmental Control Center is now complete!

IMPORTANT NOTES:



- DO NOT use the dimming socket (Socket 1) to control mercury vapor UVB lamps (e.g., PowerSun UV Self-ballasted Mercury Vapor lamp), compact fluorescent lamps, or rock heaters.
- The alarm function is delayed by 30 minutes when power is turned on for the first time, as well as when switching between day and night periods.
- The alarm function on Socket 3 has a 40 second delay before the alarm will be triggered.
- Heat: Make sure that your heating device (e.g., Ceramic Heat Emitter, ReptiTherm® U.T.H., 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 sensors has a great effect on temperature and humidity levels throughout your terrarium. Be sure not to place the sensors too close to the heating/cooling device. Be sure that the sensors are in a suitable location to provide the correct temperature gradient and humidity level for your animals.

ERROR MESSAGES:

In the event that the temperature or relative humidity exceeds the sensor's limits, an error code will show on the display.

- 'EE' indicates sensor failure or temperature range exceeded.
- 'LL' indicates extreme low temperature reading.
- 'HH' indicates extreme high temperature reading (over 199F). When display temp exceeds (set temp + alarm value) then power is stopped and alarm will flash.
- 'HF' indicates high temperature reading on the dimming socket, power is stopped and alarm will flash.

If an error code appears, check to see if the sensor has been moved too close to the heat source and ensure that your heating device is in good working order. 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.

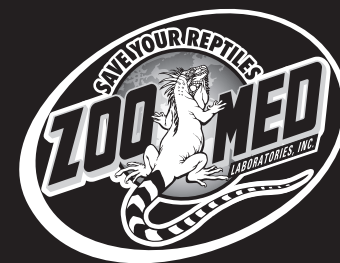
- To mute an alarm that is beeping, press any button to temporarily silence it.
- To mute all keypad and alarm tones, press and hold the power button  and the down arrow  for 6 seconds.

WARRANTY:

Zoo Med Laboratories, Inc. (Zoo Med) warrants each Environmental Control Center 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 Environmental Control Center 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.



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ENVIRONMENTAL CONTROL CENTER

COMPLETE HABITAT AUTOMATION SYSTEM



Congratulations on your purchase of Zoo Med's Environmental Control Center! 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:

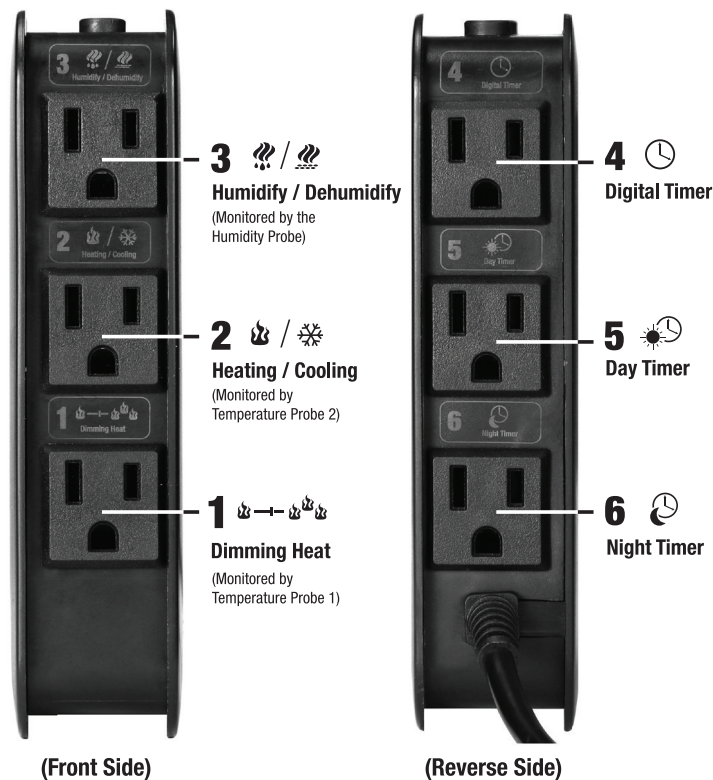
- Controls up to 1850 watts of combined lighting/heating/cooling devices.
- 2 independent temperature probes and 1 humidity probe, all with a 3m (9ft) lead.
- Programmable nighttime temperature drop feature.
- Temperature control range: Daytime 36°F to 140°F (2°C to 60°C), nighttime 36°F to 104°F (2°C to 40°C).
- Humidity control range: 15% to 95% RH (Relative Humidity).
- Built in memory stores settings in case of power failure.
- Socket 1 controls a dimmable heat source, such as an incandescent bulb or ceramic heat emitter.
- Socket 2 controls temperature by turning on heating devices in "HEAT" mode or by turning on cooling devices (e.g., fan) in "COOL" mode.
- Socket 3 controls humidity by turning on a fogger or mister in "HUMI" mode or by turning on a fan in "DEHUMI" mode to de-humidify your enclosure.
- Socket 4 is a digital timer, with up to two programmable on/off periods.
- Sockets 5 & 6 are alternating on/off timers to control your daytime and nighttime equipment.
- Alarm flashes and beeps when temperature or humidity reaches extreme high or low levels.
- The alarm function is delayed for 30 minutes when power is turned on for the first time, and when alternating between day/night periods.

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 electronics exceeding 1850 watts. Max wattage for each socket is as follows: Socket 1: 400w, Socket 2: 550w, Socket 3: 100w, Socket 4: 400w, Socket 5: 400w, Socket 6: 400w
- **DO NOT** stretch or strain wires or power cords connected to this device.
- **DO NOT** immerse any of the Environmental Control Center components in water, the two temperature probes are the only components that can be placed in water.
- Keep the programmable control unit and handset outside of cages and terrariums; only the remote sensors are to be inside the cage/terrarium.
- **DO NOT** allow heavy objects to rest on any of the Environmental Control Center components or associated cables and power cords.
- The Environmental Control Center 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 any other components.
- **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.**

Figure 1



DEFAULT SETTINGS:

The default settings for your RT-1000 are as follows:

- Socket 1: 'Day Set' 86F, 'Night Set' 70F, Alarm '30'
- Socket 2: 'Day Set' 86F, 'Night Set' 70F, Diff 3F, Alarm '30'
- Socket 3: 'Day Set' 60% RH, 'Night Set' 50% RH, Diff 3% RH, Alarm '30'
- Socket 4: '4 1 ON' 6pm, '4 1 OFF' 11pm, '4 2 ON' 4am, '4 2 OFF' 8am
- Socket 5: 'ON' at 8am, 'OFF' at 5pm
- Socket 6: 'ON' at 5pm, 'OFF' at 8am

PROGRAMMING:

Upon plugging in your new Environmental Control Center for the first time, the digital display will illuminate and show all of the symbols briefly before reverting to 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, however the time of day will need to be re-programmed. Wait until after the unit has been programmed before plugging in heating devices, cooling devices, or humidifiers.

NOTE: To change from °F to °C, hold '▲' and '▼' at the same time for 6 seconds.

- Be sure to remove the plastic tab from the battery compartment in the handset to allow the battery to charge.

A. Programming Temperature:

Socket 1 Dimming Heat: The Thermostat function on socket 1 will gradually dim a heating source to maintain the programmed temperature in your terrarium. Place the temperature probe for socket 1 near your animal's basking site. Perform the following steps to program the temperature setting of your controller:

1. Press the 'socket' button (👤) until 'socket 1' is blinking, then press the 'row' button (☰) to program the 'day set' value. Use the up '▲' or down '▼' arrow to select your daytime temperature.
2. When you are done setting the daytime temperature, press the 'row' button (☰) until 'night set' is blinking. Use the up '▲' or down '▼' arrow to set the nighttime temperature.
3. Press the 'row' button (☰) again to program the alarm, use the up '▲' or down '▼' arrow to set the alarm value. When alarm value is set to '20', then the alarm will sound when your set temperature drops by 20 degrees. For example, with 'daytime' temp set to 80F and 'alarm' value set to '20', then the alarm will sound when temperature drops to 60F or lower. To disable the alarm, set alarm value to '00'.

'Power Meter' indicates what percentage of power the heating device is receiving. When socket 1 is receiving power, the flame icon 🔥 will light up.

Socket 2 Heat/Cool Mode: In HEAT mode, the controller will turn on heating devices (e.g., heat lamps, under tank heaters, ceramic heat emitters) when the temperature in your terrarium drops below the programmed temperature setting. In COOL mode, the controller will turn on a cooling device (e.g., Zoo Med's ReptiCooler) when the temperature in your terrarium rises above the programmed temperature setting.

Figure 2

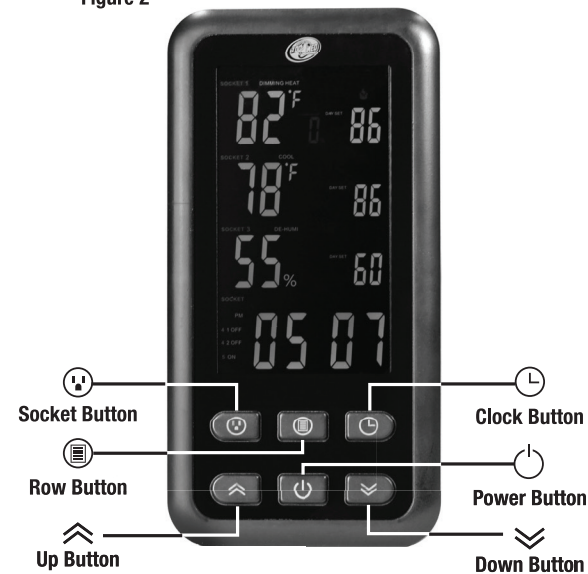
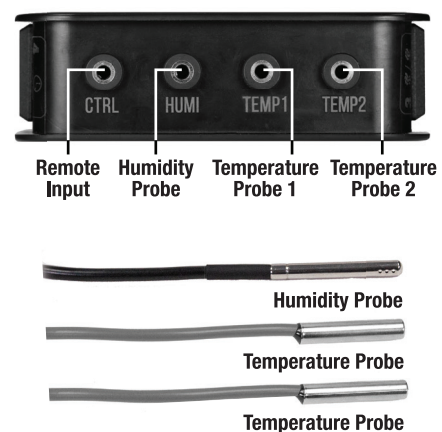


Figure 3



1. To switch between HEAT and COOL mode, press the 'socket' button (👤) until 'socket 2' is blinking, press the 'row' button (☰), then press the up '▲' or down '▼' arrow.
2. Once HEAT or COOL mode is chosen, press the 'row' button (☰) until 'Day Set' is blinking. Use the up '▲' or down '▼' arrow to program your daytime temperature.
3. After setting the daytime temperature, press the 'row' button (☰) again until 'Night Set' is blinking; use the up '▲' or down '▼' arrow to program your desired nighttime temperature. A nighttime temperature drop can be used to simulate natural day/night temperature changes, stimulate breeding behavior, and save energy.
4. Press the 'row' button (☰) again to program the 'Diff' value; this is the difference in temperature that can be programmed to allow for natural temperature fluctuations in your animal's enclosure. For example, if your 'Day Set' value is 80°F and your 'Diff' value is '05', then your heating/cooling device will be allowed to change by ±5°F before turning on again. If your 'Day Set' value is 80°F and your 'Diff' value is '15', then your heating/cooling device will be allowed to change by ±15°F before turning on again.
5. Pressing the 'row' button (☰) once more will allow you to program the alarm. For example, in HEAT mode, if your alarm setting is '30' and 'Day Set' is 80F, then the alarm will alert you when the temperature drops by 30 degrees and reaches 50F. In HEAT mode, the alarm will alert you when the temperature drops by the number of degrees you have in your 'alarm' value. In COOL mode, the alarm will alert you when the actual temperature exceeds the programmed temperature by the number of degrees in the 'alarm' field.
6. When socket 2 is receiving power, the flame 🔥 or snowflake icon ❄️ will light up. If the flame or snowflake icons are not lit, then the heating/cooling source is not currently on.

B. Programming the Humidity Setting:

Socket 3 HUMI/DEHUMI Mode: The Hygrostat function of your Environmental Control Center will turn humidifiers on and off to maintain the optimum humidity level in your terrarium. Zoo Med's ReptiRain® Automatic Misting Machine (Item# HM-10) and Zoo Med's Repti Fogger™ (Item# RF-10) are ideal humidifiers for terrariums. Alternatively, a fan can be used to lower the humidity when set in 'Dehumidify' mode. Perform the following steps to program the humidity setting of your controller:

1. Press the 'socket' button (👤) until 'socket 3' is blinking, press the 'row' button (☰), then press the up '▲' or down '▼' arrow to select between 'HUMI' (humidify) or 'DEHUMI' (de-humidify) mode.
2. Press the 'row' button (☰) until 'Day Set' is blinking, then press the up '▲' or down '▼' arrow to set the daytime humidity.
3. When you are done setting the daytime humidity, press the 'row' button (☰) again to set the nighttime humidity, indicated by a flashing 'Night Set'; use the up '▲' or down '▼' arrow to choose your desired humidity.
4. Press the 'row' button (☰) again to program the 'Diff' value; this is the difference that can be programmed to allow for natural humidity fluctuations in your animal's enclosure. For example, if your 'Day Set' value is 80% and your 'Diff' value is '05', then your relative humidity will be allowed to change by ±5% before turning back on again.
5. After programming the 'Diff' value, pressing the 'row' button once more will allow you to program the alarm. In HUMI mode, the alarm will alert you when the humidity drops below your alarm set point. For example, in HUMI mode, if your 'Day Set' value is 70% and your alarm value is '20', then the alarm will alert you when the relative humidity drops by 20% and reaches 50% relative humidity. In DEHUMI mode, the alarm will alert you when the humidity rises above your alarm set point. For example, in DEHUMI mode, if your 'Day Set' value is 70% and your alarm value is '10', then the alarm will alert when the relative humidity exceeds your 'Day Set' by 10% and reaches 80% relative humidity. When the alarm is triggered, the LCD display will flash and beep. To turn off the alarm function, set alarm value to '00'.

C. Programming the Timers (Sockets 4, 5, 6)

Sockets 4, 5, and 6 are digital timers to operate any type of equipment that you want controlled during a set time period (UVB lights, supplemental LED lighting, Under Tank Heaters, misting machines, etc.).

Socket 4 Timer: Socket 4 has two separate on/off periods that you can program throughout the day or night (e.g., if you want your misting/fogging system to run for 5 minutes at 7am and for 5 minutes at 7pm). These separate on and off periods are indicated on the LCD screen by '4 1 ON/OFF' and '4 2 ON/OFF' (see figure 4).

1. Press the 'socket' button (👤) until 'socket 4' is blinking, then press the 'row' button (☰). Press the up '▲' or down '▼' button to set the hour when your device will turn on, press the 'row' button (☰) once more to set the minutes. AM or PM will be indicated right above '4 1 ON'. Pressing the 'row' button (☰) again will light up '4 1 OFF' to program when you want the timer to turn off.
2. To program the second on/off period for socket 4, press the 'socket' button (👤) until 'socket 4' is blinking then press the row button (☰) until '4 2 ON' appears.
3. Press the up '▲' or down '▼' button to set the hour when your device will turn on, press the 'row' button (☰) to set the minutes. AM or PM will be indicated right above '4 2 ON'. Pressing the 'row' button (☰) again will light up '4 2 OFF' to program when you want the timer to turn off.

NOTE: If you want only one on/off period for socket 4, set '4 1 ON' and '4 2 ON' as the same values, program '4 1 OFF' and '4 2 OFF' as the same values as well, now only one on/off period will occur in a 24hr period. (ex. '4 1 ON' and '4 2 ON' set for 8am, '4 1 OFF' and '4 2 OFF' set for 5pm will give you one on/off event that will begin at 8am and turn off at 5pm).

Socket 5 & 6 Timer: Sockets 5 & 6 are alternating day and night timers which means that only one at a time will be on and the other will be off. To program these, you will only need to program the "ON" time as the element will turn off when the other socket turns on. For example: If you want a daytime heat lamp to run from 8:00 AM until 9:00 PM, you will program Socket 5 to come "ON" at 8:00 am, and socket 6 to come "ON" at 9:00 pm. Plugging a daytime heat lamp into socket 5 and a night time lamp into Socket 6 will turn the daytime lamp on at 8:00 am and off at 9:00 pm, AND turn on a nighttime heat lamp at 9:00pm and off at 8:00 am. To program, press the 'socket' button (👤) until socket 5 is blinking, then press the 'row' button (☰). Press the up '▲' or down '▼' button to set the hour when your device will turn on, press the 'row' button (☰) once more to set the minutes. AM or PM will be indicated right below Socket 5. To program socket 6, the nighttime timer, press the 'socket' button (👤) until socket 6 is blinking, then follow the same instructions above for programming socket 5.

Setting the Clock: Pressing the clock button (🕒) will allow you to set when your 'daytime' period starts (indicated by 'day from' on the LCD) and when your 'nighttime' period starts (indicated by 'night from'). For example, setting your 'daytime' period to begin at 7am and your 'nighttime' period to begin at 6pm will tell the Environmental Control Unit to allow your heating device's nighttime temperature drop to occur after 6pm, if you have them programmed. AM/PM will be indicated on the left side of the LCD when setting your Day/Night schedule, press the up '▲' or down '▼' button to set the hours and minutes. Press the clock button (🕒) again to set the current time of day, using the up '▲' or down '▼' button to set the hours and minutes.

On-Screen Display



Figure 4