## Basic Guidelines for Heating Vivaria

Reptiles are Ectotherms, that is they heat themselves and regulate their body temperature by means of the environment. They move in and out of hot and cool areas to maintain their preferred temperature. It is therefore important that the vivarium has a suitable temperature gradient for the reptiles to behave naturally.

The heater should be placed at one end of the vivarium in a condition that does not heat the whole of the enclosure. In this way the temperature will vary between the hot area near the heater and the cooler areas at ambient temperature. For even greater sophistication, temperatures can be varied with time so that natural warm days and cooler nights are experienced. In the past, time switches have been used to switch heaters and lights on and off.

The problem with this arrangement was that the subtle changes that occurred with the seasons were not duplicated. Unfortunately it was found that these seasonal changes were the very things that controlled important functions like reproduction.

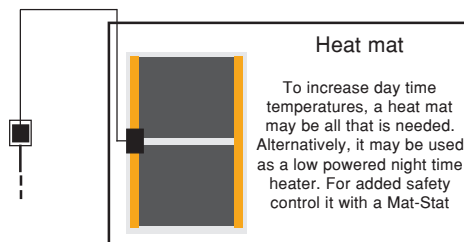Clearly what was needed was a light switch that was triggered to mimic the rising and setting of the sun.

The *HabiStat Sun & Moon Switch* does just that. Along with other *HabiStat* products, there is little to match the superb environmental control this systems offer. Indeed, even laboratory set ups costing many times the price, fail to offer the precision and value the *HabiStat* system delivers.

Site the *Sun & Moon Switch* directly under the light source that is to control it. This will usually be in a window with a good view of the sky. It need not be in direct sunlight as the diffuse light from the sky is all that is needed. Alternatively, the *Sun & Moon Switch* could be sited under a room light, if the controlled equipment is being synchronised with the level of artificial light.
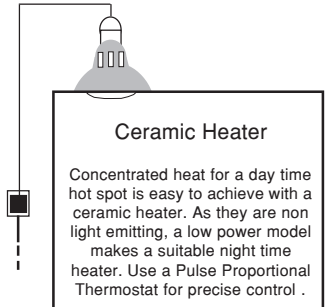
### Heat mat

To increase day time temperatures, a heat mat may be all that is needed. Alternatively, it may be used as a low powered night time heater. For added safety control it with a Mat-Stat

### Ceramic Heater

Concentrated heat for a day time hot spot is easy to achieve with a ceramic heater. As they are non light emitting, a low power model makes a suitable night time heater. Use a Pulse Proportional Thermostat for precise control .
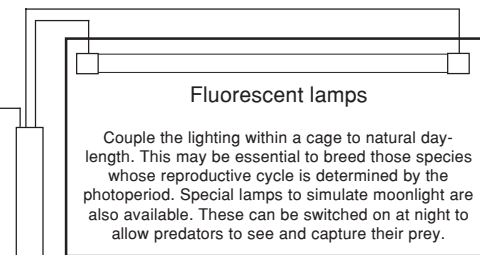
### Fluorescent lamps

Couple the lighting within a cage to natural daylength. This may be essential to breed those species whose reproductive cycle is determined by the photoperiod. Special lamps to simulate moonlight are also available. These can be switched on at night to allow predators to see and capture their prey.

## Alternative uses of the Sun & Moon Switch
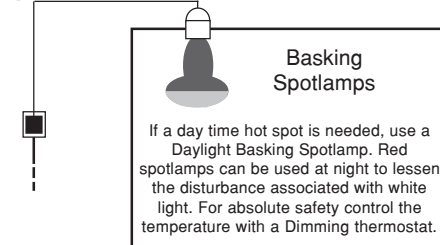
### Basking Spotlamps

If a day time hot spot is needed, use a Daylight Basking Spotlamp. Red spotlamps can be used at night to lessen the disturbance associated with white light. For absolute safety control the temperature with a Dimming thermostat.
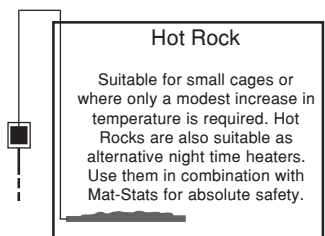
### Hot Rock

Suitable for small cages or where only a modest increase in temperature is required. Hot Rocks are also suitable as alternative night time heaters. Use them in combination with Mat-Stats for absolute safety.

### …Using the Sun & Moon Switch

The *Sun & Moon Switch* will switch one mains power line on and the other off depending on the light level. The difference between the on and off levels has been adjusted so that the unit does not flicker at the triggering point nor will it switch on and off due to minor variations in brightness.

Essentially the unit detects day and night and can therefore switch things on and off that are required during the day and night respectively. The range of items that can be switched is only limited by a maximum load of 300 watts for each channel and the imagination.

Most uses will include switching on and off heaters and lights that are only required either during the day or night. One of the major advantages of the *Sun & Moon Switch* is that the natural day/night cycle is duplicated including the seasonal variations of long day length summers and short day length winters.

Reptiles that are active at night are just as dependent upon external heat sources as their day active relatives. The major difference being they are often able to cope with temperatures that are a little lower. The *Sun & Moon Switch* will switch on these secondary heaters and at the same time it will switch off the higher but still necessary day time heaters and brighter lights.

The *Sun & Moon Switch* can be used to switch on special lights that are designed for use at night. *Red Basking Spotlamps* are an example. Here red light is used to create a hot spot without the distractions white light would pose for night active creatures. The special fluorescent lamps designed to stimulate moon light are another example.

Many night active creatures need to see their prey and cannot hunt in complete darkness. Ordinary lights are, however, too bright and are avoided. The subdued light is just right to allow night active predators to spot their prey but not so bright that their natural photoperiod is confused. This means essential synchronisation involving the photoperiod are left intact, so the animal behaves and breeds normally.
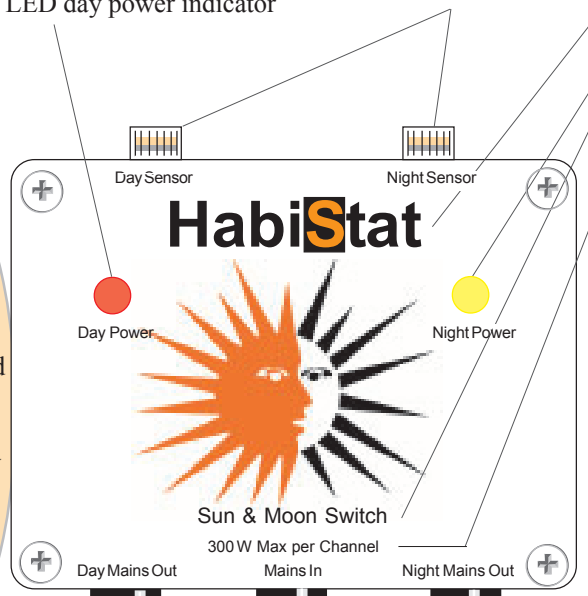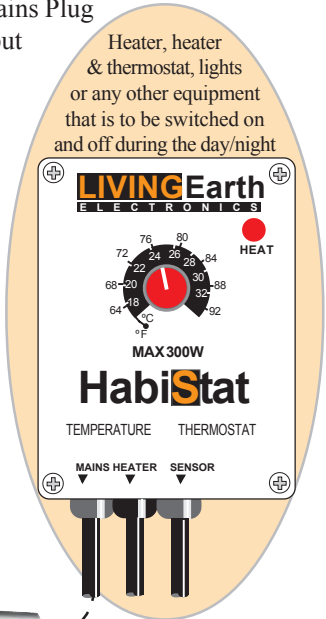
- **Electronic, light activated switches for mains equipment.**
- **Switches up to 300 watts per channel when the light levels change.**
- **Used in sophisticated management of environmental heating and lighting.**

- Light Sensors
- Red LED day power indicator

- A fully specified HabiStat instrument that meets all current standards
- Yellow LED night power indicator
- Two electronic switches that turn the power on and off when exposed to light and dark.
- 300 watts per channel at 230 V, 50 Hz AC
- Fitted Mains Plug and Output Sockets for ease of use.

All leads are supplied at a useful length. This allows for the maximum flexibility. As the leads must not be cut, they can be tidied with cable ties and this will accommodate any extra wire. The long wires mean virtually any cage can enjoy the benefits of HabiStat control. This brings unparalleled choice, convenience and safety.

Heater, heater & thermostat, lights or any other equipment that is to be switched on and off during the day/night

Day Sensor    Night Sensor

## HabiStat

Day Power    Night Power

Sun & Moon Switch

300 W Max per Channel

Day Mains Out    Mains In    Night Mains Out

**LIVING Earth**
E L E C T R O N I C S

HEAT

MAX 300W

## HabiStat

TEMPERATURE    THERMOSTAT

MAINS HEATER  SENSOR

The fitted three pin plug is for connection to the domestic mains. It is supplied with a 3 amp fuse which must be replaced with one of the same value if it blows.

The three pin sockets are the power outputs from the switches. Plug in whatever equipment is to be switched on and off but do not exceed the 300 watt per channel limit.

## Guarantee

Thank you for buying this HabiStat electronic thermostat. Used in accordance with the instructions this unit will give many years service. There are no user serviceable parts in this unit, so **please do not open it**. Any tampering including the cutting of any wire, will render the guarantee void. This thermostat is guaranteed for one year from the date of purchase against faulty parts and workmanship. In the unlikely event of failure, return it to our distributor, Herp Shop, with a **receipt or proof of purchase** and details of the fault. Herp Shop will ensure your unit is returned to full working order. No liability is accepted other than for the repair or replacement of a faulty product. Statutory rights are not affected