

DETERMINATION DU SEXE AVEC LA TEMPERATURE:

La température d'incubation détermine non seulement la vitesse de développement mais également, pour de nombreuses espèces de reptiles, le sexe.

Plusieurs cas :

- 1/ Chez beaucoup de tortues une température élevée produit des femelles, et une température modérée produit des mâles. Une température "moyenne" peut produire théoriquement 50 % de mâle et 50 % de femelles.
- 2/ Chez certains crocodiles et lézards, comme par exemples les Eublepharis macularius (gecko léopard), phelsuma (gecko diurne), une température élevée va produire plus de mâles que de femelles.
- 3/ Pour d'autres espèces, des températures basses ou élevées provoquent la naissance de femelles, alors que des températures moyennes favorisent la naissance de mâles...

LA DIAPAUSE:

Certaines espèces ont besoin durant le stade embryonnaire d'une variation des conditions climatiques. Cette période est appelée diapause. C'est une période de temps pendant laquelle le développement de l'embryon va stagner, même si les conditions environnementales sont adéquates (température, hygrométrie). Pour que l'embryon sorte de sa diapause il faut un changement climatique. Cela peut-être un changement de température vers le froid (17-22 °), ou vers le chaud (30-33°). C'est un phénomène courant chez certaines tortues et caméléons.

Par exemple EWERT (1991) reportait les faits suivants : pour l'espèce Kinosternum scorpioides : une diapause de 30 jours à 18-22,5°C, et pour Kinosternum Baurii, 10 jours à 30°C. De même SCHMIDT (1986) reportait une diapause de 45 à 60 jours à 12-18° pour le caméléon Furcifer lateralis.

Pour les œufs de phelsuma la température doit fluctuer entre 24 et 32° pendant les dix premiers jours après la ponte, puis être relevée à 28°.

Faites des recherches pour savoir si vos œufs ont besoin d'une diapause. Toutefois, cela concerne une minorité d'espèce.

QUELQUES NOTIONS EN VRAC:

- Le manque d'humidité provoque un ralentissement de la croissance de l'embryon.

- Les œufs des geckos diurnes pondus accroché à une feuille sont incubés à l'air libre (on coupe la feuille) ou sur du coton.

- A quelle fréquence doit-on vérifier les œufs ? La fréquence dépend de l'expérience de l'éleveur et du type d'œuf. Pour certains ce sera tous les deux ou trois jours, pour d'autres une fois par semaine. Pour certains œufs nécessitant une faible hygrométrie, ce sera une fois par quinzaine. Vous pouvez contrôler la quantité d'eau avec un hygromètre du type Egg-Control®.

- Comment ré-humidifier les œufs ? En général, on fait glisser l'eau dans un coin du récipient et on évite de verser l'eau sur les œufs. Toute la vermiculite va rapidement se trouver humidifiée, mais la partie en contact avec les œufs ne le sera que raisonnablement.

- Certains œufs sont enterrés par les femelles, comme pour les tortues ou les caméléons, lors de la ponte. Vous pouvez les laisser tels quel. Pour les œufs qui sont en grappe, ne tentez pas de les séparer. Posez-les simplement sur le substrat.

- Les œufs préfèrent l'obscurité plutôt que la lumière. La lumière artificielle est peu gênante si elle est limitée dans le temps. La lumière naturelle est à éviter.

- Doit-on laisser les nouveaux nés dans leur coquille lors de l'éclosion ? Oui. Certains reptiles y restent quelques minutes, d'autres plusieurs jours.

INSTRUCTIONS:

Congratulations on your purchase of Reptiles-planet's REPTI INCUBATOR. The following instructions will assist you with the programming and setup of this unit.

FEATURES:

1. Digital controller with LED display and LED heat indicator light.
2. Pulse proportional thermostat for stable temperature regulation.
3. Temperature control range from 15°C to 40°C;
4. Rigid 160 W heating system;
5. Programmable temperature alarm;
6. Built in memory stores setting in case of power failure.
7. Multiple water reservoirs molded into incubator base.
8. Quiet fan spreading the heat evenly throughout the incubator.
9. Accuracy of the thermostat 0.1 °

Your new REPTI INCUBATOR is made with a state-of-the-art pulse proportional thermostat. Instead of simply turning the heater on and off based on the temperature set point, the pulse proportional thermostat supplies power as needed in a series of electrical pulses to maintain a constant temperature inside the incubator. This conserves energy and prevents against high and low temperature cycles associated with traditional on/off type thermostats.

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 230V, 50HZ, grounded outlet.
- Do not stretch or strain the power cord connected to this service.
- Do not allow heavy objects to rest on any of the REPTI INCUBATOR components or power cord.
- Do not immerse any of the REPTI INCUBATOR components in water.
- Do not allow direct water contact with the REPTI INCUBATOR.
- Do not operate the unit with a damaged cord, plug, or other component.
- Do not alter or modify this product. Contact an electrician if you are unsure that the electrical connection.

PROGRAMMES:

Programming the REPTI INCUBATOR is very simple:

1. Plug in the device
2. the device will consequently display the ambient temperature.
3. Press "SET" button for a brief moment.
4. Press on + or - to adjust the desired temperature for the incubation of your eggs.
5. Press "SET" button to store your setting, and quit.

Upon programming the temperature setting on your REPTI INCUBATOR, the temperature inside the REPTI INCUBATOR may rise above the set point during the initial heating cycle and stabilization period. After a short time, the temperature will drop and stabilize at the set point. Do not place eggs inside REPTI INCUBATOR until after the temperature has stabilized at the set point.

Your REPTI INCUBATOR should be placed in a room with a stable temperature that is lower than the desired temperature inside the REPTI INCUBATOR. Avoid rooms with large temperature fluctuations. Do not place the REPTI INCUBATOR near a window or in direct sunlight.

Functions	Factory setting	Name
Adjust [Set] the power output of the device, as a percentage (by default 15%).	15 %	HU
Adjust [Set] the operating limits of the device, in degrees (default 10-40 °).	20 %	HD
Operating limit Low	10	LS
Operating limit High	40	HS
Adjust [Set] the safety limits of the device	0	CA
Set an alarm to alert you if the temperature is too low	0	AL
Set an alarm to alert you if the temperature is too high	0	AH

SETTING THE POWER OF THE DEVICE (HU) AND ITS "HEATING PRESERVATION" (HD)

When it's too hot in the summer and you are afraid of a sudden change of the temperature in the incubator, the parameters HU, and HD should be reduced. If it is during the winter, and you placed your incubator in a very cold room and it barely reaches the required temperature, then you will need to increase the parameters HU, and HD.

Our advice: Avoid changing these settings, because:

-The incubator is very precise, even in the summer.

-during the winter: having a power of 160 W, it is one of the most powerful incubators on the market. Avoid for example to put it in a garage at 10 °. Install it in a heated room.

-by changing this parameter you can endanger your eggs.

CHANGING THE "TOLERANCE"

This parameter is called [marked] "CA" in the incubator's menu.

You can add a tolerance if you want a change in the regulation of the temperature. This parameter is set by default to "0", meaning that the incubator is set to have maximum precision, with a minimum variation of temperature.

CHANGING THE OPERATING LIMITS

These parameters are called LS and HS in the incubator's menu.

This parameter should not be changed. For the reptiles, a range of 10 to 40 ° covers normally all needs.

SETTING THE ALARM

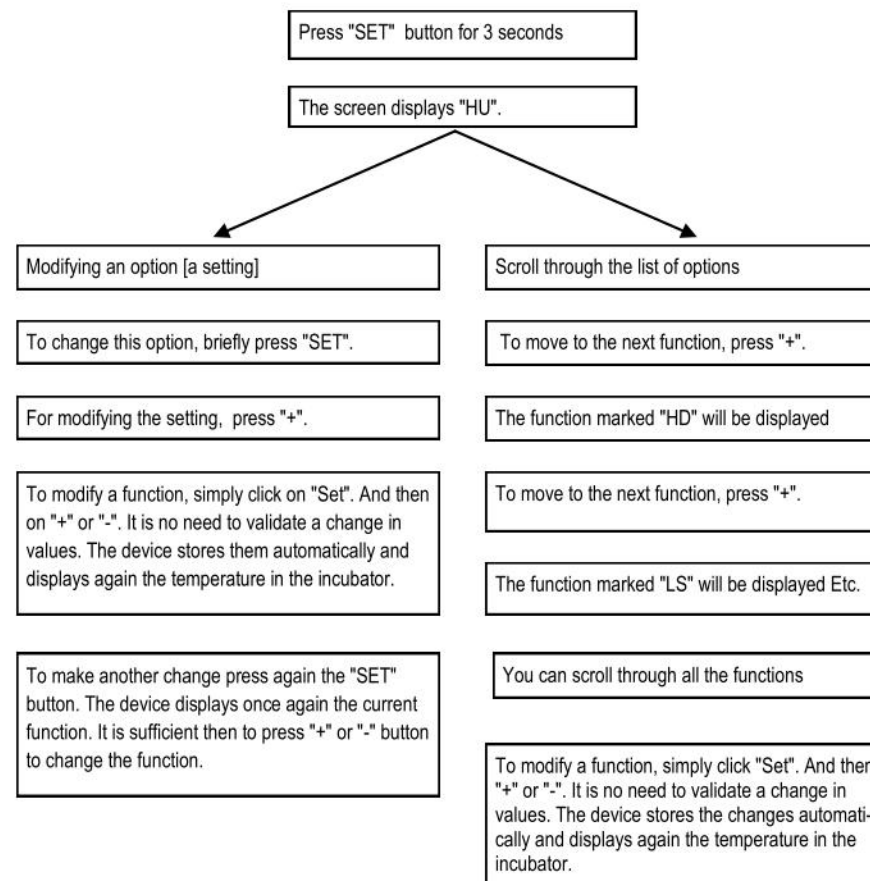
This parameter is called [These parameters are called] AL and AH in the incubator's menu. Most reptiles' eggs are incubated at about 30 °C. During the summer, if the temperature in your home exceeds this temperature, it might be useful to set an alarm. We recommend you to set this parameter (AH) on "2", as an one-time variation of + 2 ° is not harmful for eggs. But remember that it is possible for the alarm to start ringing when you open the lid to observe your eggs or to add water. This can be unpleasant.

If you install your incubator in a very cold room (garage, basement [cellar], etc.) and if your incubator barely reaches the required temperature, it may be useful to set an alarm to warn you in case the temperature in the incubator is too low. This is why it is better to place the incubator in a heated room. So in order to alert you in case of a low limit of - 2 °, it has to be set at "2".

If the alarm rings, simply press any key to stop it.

CHANGING THE ADVANCED SETTINGS:

-press the "SET" button for 3 seconds



WARRANTY-DISCLAIMER:

REPTILES-PLANET warrants each REPTI INCUBATOR 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. REPTILES-PLANET will not held responsible for unsuccessful incubation and/or hatching of eggs. No claim shall be 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.

SIMPLIFIED GUIDE TO START THE INCUBATION OF REPTILES' EGGS

This mini-guide will help you use your Repti-Incubator. To advance your knowledge and become a "pro", you will need to buy specialized books, or meet with breeders who will share with you their experience.

Indeed, there are not many "truths" in this sector and many breeders will give you different advices than what you will find in this mini-guide. It is just a matter of experience and observation. We are going to address only the general case, and give you some useful ideas.

When you will have your first eggs, either in your vivarium, or in a nest (this can be a plastic box with a hole and vermiculite), you will need to put them into the incubator. The first thing to know is that an egg should never be turned over. Some people are marking the top of the egg with a pencil (not with ink), to see where is the top.

We recommend that you put your eggs in plastic boxes adapted to the size and the number of eggs. You will need to fill the box about halfway with vermiculite, and make holes on the side of your box. The eggs will need to be semi buried or simply placed on the vermiculite. It is best to prepare a mixture of vermiculite and water before placing the eggs in the box. The mixture should be moist, but not soggy, especially for the part coming in contact with the eggs.

The boxes need to be covered with a lid. This helps retain the humidity, and avoid looking for the babies after hatching. If your substrate is too wet, it will cause the eggs to decay. Find the right balance. If your eggs need to be incubated at a low temperature, you will need to moisten the substrate moderately (low gas exchange). On the contrary, if your eggs require a high temperature for incubation, the humidity should also be higher. The humidity rate is therefore proportional to the incubation temperature.

The temperature in the incubator will determine the duration of incubation. However, there are a few rules to be observed. If the temperature is too high, many babies will have deformities. If the temperature is too low, they will die in the egg. In general, a constant temperature (depending on the quality of the incubator) will bring the best results. The table below shows you the results of the tests carried out by the breeders.

Species	Temperature / Time	Temperature / Time	Breeder
Chinemys Reevesi	23° / 105-110 days	28° / 68-69 days	OPHORST 1987
Testudo Hermannii	25-26° / 82-83 days	29-34° / 56-58 days	EENDEBAK 1995
Basiliscus Plumifrons	24-25°/90-105 days	29-30° / 55_65 days	KOHLER 1993
Iguana Iguana	28-30° / 75-85 days	30-32°/64 à 75 days	KOHLER 1993
Uromastix acanthinurus	28° / 96-126 days	34° / 72-84 days	WILMS 1995
Liasis Childreni	28° / 54-60 days	34° / 72-84 days	DUNNST 1979

The duration of incubation will also affect the characteristics of the animals, their size, weight, their vivacity, the percent of deformations, and their lifespan. The subject is vast. If you are a beginner, we recommend that you maintain average temperatures (see the tables below).

THE HUMIDITY IN YOUR INCUBATOR:

First, you must determine if your eggs have a hard or soft shell. Here are some basic concepts:

1. Hard shell:

- All crocodiles
- For the turtles, the turtles of the genus Carettochelidae, Kinosternidae, Testudinidae, and Trionychidae, some species of Emidiidae (Emidiinae) and Pelomedusidae.
- For the lizards, all Geckonidae.

2. Soft shell:

- For the tortoises, the Chelonidae, the Chelydridae, the Dermochelidae, as well as the majority of Emydidae (Batagurinae), and Pelomedusidae.

- All the lizards, except the Geckkonidae
- All the snakes.

In general, choose a humidity of 70-80% for eggs with a hard shell, and a humidity of 90-95% for soft shell eggs. This is a generality, and it depends also on the species, the substrate, and the temperature used. In general, the hard-shelled eggs need less water, and their incubation is longer.

THE TEMPERATURE IN YOUR INCUBATOR:

The eggs of Testudo (hermanni, horfieldi, graeca, etc..) are relatively robust, and should not present any difficulty concerning the incubation. The eggs should be buried slightly in the vermiculite, and incubated at 28-30 °, maintaining a humidity of 65-30%. If the temperature is lower than 30 °, you will obtain males, and above 31 °, females.

Most of the snakes need a temperature of incubation between 26 and 29 °. It is better to avoid temperatures above 30 °. Note that most Pythons require an incubation temperature of 31.5 ° or 32 ° c.

Examples of incubation temperatures commonly used:

Species	Temperature en °C
Iguana iguana	27-32
Uromastix	29-33
Uroplatus sp	28-28
Uroplatus phantasticus	23-25
Teratoscincus	26-29
Varanus SPP	26-30
Téju	27-31
Eumeces shneideri	27-28
Riopas fernandi	28
Ameiva ameiva	28-29
Dracaena guianensis	21-32
Tupinambis merianae	26-31
Varanus exanthematicus	27-30
Varanus indicus	26-34
Varanus panoptes panoptes	27-30
Varanus rudicollis	28-30
Liasis childreni	29-32
Morelia s.variegata	29-32
Python regius	29-32
Python curtus brongersmai	27-31
Elaphe guttata	25-29
Elaphe janseni	27-29
Elaphe mandarina	27-29
Elaphe o. obsoleta	25-29
Elaphe porphyracea	26-28
Elaphe taeniura	25-29
Elaphe vulpina	23-29
Lampropeltis t. campbelli	26-28
Lampropeltis t. hondurensis	26-32

DETERMINING THE SEX BASED ON THE TEMPERATURE:

The incubation temperature determines not only the speed of development but also the sex, for many species of reptiles. Examples of such cases:

- 1 / For most of the tortoises a high temperature produces females, and a moderate temperature produces males. An "average temperature" can theoretically produce 50% male and 50% female.
- 2 / For some crocodiles and lizards, as the *Eublepharis macularius* (leopard gecko), *phelsuma* (diurnal gecko), a high temperatures will produce more males than females.
- 3 / For other species, low or high temperatures cause the birth of females, while average temperatures favor the birth of male...

THE DIAPAUSES:

Certain species need a variation of the climatic conditions during the embryonic stage. This period is called diapause. It is a period of time during which the development of the embryo will stagnate, even if the environmental conditions are adequate (temperature, humidity). In order for the embryo to come out of the diapause, it is required the change of climate. This may be a change of temperature, either colder (17-22 °) or warmer (30-33 °). This phenomenon is common for some tortoises and chameleons.

For example EWERT (1991) found the following facts: for the species *Kinosternum scorpioides*: a diapause of 30 days at 18-22, 5 ° c, and for *Kinosternum Rhodohypoxis*, 10 days at 30 ° C. Also, SCHMIDT (1986) found a diapause of 45 to 60 days to 12-18 ° for the *furcifer lateralis* chameleon.

For the eggs of *phelsuma* the temperature has to fluctuate between 24 and 32 ° during the first ten days after laying of eggs, and then be increased to 28 °.

Do some research to find out if your eggs need a diapause. However, it concerns a minority of species.

SOME GENERAL OBSERVATIONS (CONCEPTS):

-The lack of moisture causes a slowdown in the growth of the embryo.

-The eggs of the diurnal geckos laid on a leaf are incubated in open air (the leaf is cut off) or on cotton.

- How often must be checked the eggs? The frequency depends on the experience of the breeder and the type of egg. For some, this will be

every two to three days, for others once a week. For some eggs requiring low humidity, this should be done once per fortnight. You can control the quantity of water with a hygrometer such as Egg-Control®.

- How to re - moisten the eggs? In general, the water should be added in a corner of the container and avoid pouring it directly on the eggs. The vermiculite will retain water quickly, but the part in contact with the eggs will be reasonably wet.

- Some eggs are buried by the females, as the turtles or chameleons, while they are laying their eggs. You can leave them as they are. As for the eggs that are clustered, do not attempt to separate them. Just lay them on the substrate.

- The eggs prefer darkness rather than light. The artificial light is not very disturbing if it is limited in time. Natural light should be avoided.

- Should the new born be left in their shell after hatching? Yes, certain reptiles remain in their shell for a few minutes, others for several days.

ISTRUZIONI:

Le istruzioni la aiuteranno a programmare e impostare l'unità, leggere attentamente le istruzioni prima di usare la nuova incubatrice.

CARATTERISTICHE:

1. Controllo digitale con display LED e indicatore LED del calore.
2. Termostato proporzionale a impulsi per una regolazione costante della temperatura.
3. Range di controllo della temperatura da 10°C a 40°C
4. Elemento riscaldante rigido da 160 watt.
5. Allarme temperatura programmabile.
6. La memoria integrata conserva le impostazioni in caso di black-out.
7. Diversi serbatoi per l'acqua inseriti nella base dell'incubatrice.
8. Ventola silenziosa che sprigiona calore anche attraverso l'incubatrice
9. Accuratezza del termostato 0,1°

Il nuovo REPTI INCUBATOR è realizzato con un termostato proporzionale a impulsi assolutamente all'avanguardia. Invece di accendere e spegnere semplicemente l'elemento riscaldante sulla base del valore di temperatura impostata, il termostato proporzionale a impulso fornisce la corrente necessaria sotto forma di una serie di impulsi elettrici per mantenere una temperatura costante all'interno dell'incubatrice. In questo modo, si risparmia energia e si evitano cicli di temperatura alta e bassa tipici dei tradizionali termostati.

ISTRUZIONI PER LA SICUREZZA:

IMPORTANTE: Per ridurre il rischio di incendio, scossa elettrica o ferite personali, leggere e conservare le istruzioni prima di usare il prodotto.

Utilizzare solo con presa collegata a massa da 230V, 50Hz

Non tendere o tirare il cavo elettrico collegato all'apparecchio.

Non consentire ad oggetti caldi di venire a contatto con un qualsiasi componente del REPTI INCUBATOR o con il cavo.

Non immergere in acqua nessuno dei componenti del REPTI INCUBATOR.

Non consentire il contatto diretto con l'acqua al dispositivo di controllo del REPTI INCUBATOR.

Non far funzionare l'unità in caso di cavo o spina o altro componente danneggiato.

Non alterare o modificare il prodotto. Rivolgersi ad un elettricista in caso di dubbi sul collegamento elettrico.

PROGRAMMAZIONE DELLA TEMPERATURA:

Programmare l'INCUBATRICE REPTI è molto semplice:

1. Accendere l'apparecchio
2. L'apparecchio mostrerà la temperatura dell'ambiente
3. Premere il tasto "SET" per un momento
4. Premere + o - per regolare la temperatura desiderata per l'incubazione delle uova
5. Premere il tasto "SET" per conservare le impostazioni ed uscire

Al momento dell'impostazione della temperatura del REPTI INCUBATOR, la temperatura al suo interno può salire al di sopra del valore indicato nel corso del ciclo di riscaldamento iniziale e del periodo di stabilizzazione. Dopo poco, la temperatura scenderà e si stabilizzerà al valore impostato. Non introdurre le uova nel REPTI INCUBATOR finché la temperatura non si è stabilizzata al valore impostato.

Il REPTI INCUBATOR va posizionato in una stanza con temperatura stabile inferiore alla temperatura desiderata all'interno del REPTI INCUBATOR. Evitare stanze con ampie oscillazioni di temperatura. Non sistemare il REPTI INCUBATOR accanto a finestre o alla luce solare diretta.

IMPOSTAZIONI AVANZATE:

Descrizione delle impostazioni avanzate: