



**FRY FACTORY**  
FISH INCUBATION SYSTEMS



Started by **nature** ...  
... perfected by **fry factory**

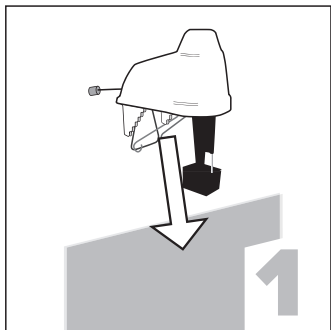
## **User Manual / Instructions / Assembly**

### **Box contents:**

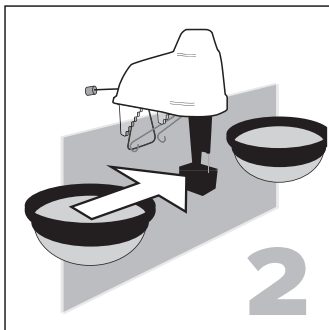
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- 1 x Fry Factory head/motor unit, white.
- 1 x levelling device, white.
- 2 x Fry Factory nets/baskets, black.
- 1 x power supply box containing: 5v power supply, 4 plug adapters (USA, European Union, United Kingdom, and Australia).
- User Manual.

## Basic setup instructions:



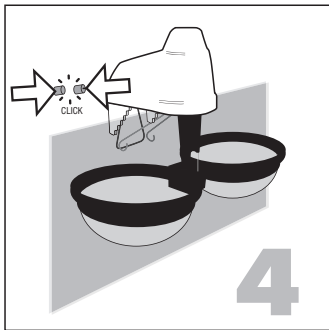
Clip Fry Factory head/motor unit onto your aquarium/hatching tank.



Hook on Fry Factory nets, 1 on each side of the black Net Saddle, inside your tank.



Push the white leveling device in from the back of Fry Factory along the top of the metal clip. Pull white leveling device out, to lower the nets into the water. Push the white leveling device in, to lift the nets out of the water.



Attach power supply to Fry Factory and switch on. After approximately 50 seconds, the nets will move down and then up in the water. Your Fry Factory is now ready to hatch eggs.

## Detailed Instructions:

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1. Carefully remove your Fry Factory from its box.
2. Fry Factory has a metal clip on its base to hold it firmly onto your hatching tank. The triangle outer part of the clip should be placed on your tank first, then stretch the 2 inside wire legs over your tank wall (Note: the metal clip will be damaged if stretched more than 1.18 inch/3cm). Push the white levelling device in from the back of Fry Factory along the top of the clip. Push Fry Factory down onto the rim of your tank.
3. Remove Fry Factory nets from the box and hook 1 on each side of the black Net Saddle, inside your tank. They will clip gently into place.
4. Do not let the nets come in contact with the walls or any other object in the tank. This will cause the device to fail, resulting in death of eggs and damage to Fry Factory.
5. It is very important that the nets sit in the water at the right height. The correct height is with the bottom of the black net rim just out of the water. Only the clear netting should be in the water. Your Fry factory has a white, height adjusting tool on its base. Pull the tool out gently, to lower the nets into the water. Push the tool in to lift the nets out of the water. You can also remove the tool and push Fry Factory down onto the rim of the tank and change the water level to the correct height, by adding water to or draining water from the tank.
6. Take the power supply out of the box. Select the correct plug and pin unit for your country. Slide the plug and pin unit onto the power supply until it clicks into position. Plug the power supply into the wall socket (DO NOT SWITCH ON). Plug the other end of your power supply into the Fry Factory.
7. Switch the power on and wait for approximately 50 seconds. Watch the nets move down and up again in the water. Your Fry Factory is now ready to hatch eggs.
8. When you are ready to move your fry to a tank for growing on, at (approximately day 16 to day 18), switch off power to Fry Factory. Lift up the rim on the net, opposite to the clip, holding the net in position. The net will come loose and you can move your fry in the net, to their new tank.
9. Never place any other fish, shrimp or snail in the nets, with hatching eggs or fry as these other animals can kill or eat the eggs and fry.

## (DON'Ts)

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1. The metal clip, holding Fry Factory onto the tank wall, will be damaged if stretched over more than 1.18 inch/3cm of glass). Stretching the clip can cause the nets to touch the side in the tank. This action may damage Fry Factory and/or cause eggs to die.
2. Do not wet or submerge white head/motor unit or any part of Fry Factory other than the nets. The motor unit and circuit board can fail if they are exposed to moisture.
3. Do not operate white head/motor unit of Fry Factory under a tank hood, lids or in any humid environment. The motor unit and circuit board can fail if exposed to moisture from excessive humidity.
4. Do not place air stones or cause any other splashing under the nets. This will cause the motor unit and circuit board to fail due to exposure to moisture. Fry Factory has been designed to work without bubbling air under the nets. Bubbling air or splashing water under and around the nets will **NOT** increase the survival of eggs and fry.
5. Do not operate Fry Factory without nets attached. Doing so will damage Fry Factory.
6. Do not operate Fry Factory with nets out of the water. Doing so will damage Fry Factory.
7. Do not place anything but eggs and fry in Fry Factory nets. The nets cannot support anything except eggs and fry. Malfunction and damage to your Fry Factory will occur if anything other than eggs and fry are placed in the nets. Note: 1 single, very small piece of gravel is enough to kill eggs and fry as it rubs against them during the hatching process.
8. Do not put a lid or cover over the nets. Lids are not required if Fry Factory nets are positioned in the water correctly, your fry will not jump out. Weighing the nets down with lids will damage Fry Factory. If the nets sit too low in the water fry can swim or jump out.
9. Do not leave the nets in the water when not using Fry Factory. The nets will foul with algae and other unwanted material which will cause eggs not to hatch, as the fouling prevents water flow, oxygen flow and tumbling. The extra drag/weight on the nets can cause damage to Fry Factory.
10. Do not operate Fry Factory in direct sunlight or put nets in the direct sunlight when cleaning and drying between hatching batches of eggs. Sunlight will age the nets prematurely.

Failure to use Fry Factory in accordance with the above directions will void the Aquarium Innovations warranty.

# Tips/Helpful Hints

## My eggs don't hatch, why?

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1. Eggs are infertile (this is the main reason why eggs don't hatch). Infertile eggs should be removed as soon as possible to stop the spread of fungus and other parasites. Dead eggs and fry can easily cause water quality problems in the hatching tank, resulting in loss of the whole batch of eggs or fry.
2. Poor water quality
  - There must be 0 ppm Ammonia (**use test kit to check your water**). Rotting infertile eggs or filtration that has not been adequately cycled in advance of the start of hatching can cause poor water quality.
  - There must be 0 ppm Nitrite (**use test kit to check your water**). Rotting infertile eggs or filtration that has not been adequately cycled in advance of the start of hatching can cause poor water quality.
  - Your target pH for African Cichlid eggs is 8.4 but pH should not be less than 7.4 or higher than 9.4 when hatching (**use test kit to check your water**).
  - GH should not be less than 100 ppm (6dH) or higher than 300ppm (17dH) when hatching African Cichlid eggs (**use test kit to check your water**).
  - Nitrate should be low or 0 ppm (**use test kit to check your water**).
3. Temperature - Your target temperature for African Cichlid and Catfish eggs is 77F (25°C). The eggs will still hatch at temperatures between 68F (20°C) and 90F (32°C) but the numbers of hatched fry will be lower the further the temperature moves away from 77F (25°C). There will be mass mortalities of eggs and fry if the temperature is lower than 68F (20°C) or higher than 90F (32°C).
4. Parasitic attack.  
African cichlid eggs leak yolk out of a pin hole in them and die. The cause of this is parasite attack. If the eggs are not treated quickly with Praziquantel they will all die.

African cichlid eggs elongate, fry appears to lose blood supply, head and tail may twist up away from egg. Likely cause of this is parasite attack. If the eggs are not treated quickly with Praziquantel they can all die.

Praziquantel can be bought from your local fish shop. It has many different brand names – ask your fish shop sales team for help or read the ingredients section on the parasite cure bottles in your local fish shop.

You can safely treat your hatching tank with the recommended dose of Praziquantel at the same time you start hatching eggs.

In an emergency when eggs are being attacked by parasites. Add 1 quarter of crushed tablet to infected eggs, by sprinkling over the surface of the water in the net. Then add the recommend dose to the tank housing the nets.

**(DO NOT ADD PRAZIQUANTEL TO A NET OR TANK HATCHING CATFISH EGGS, THE EGGS OR FRY MAY DIE).**

- Remove anything that is not an egg or fry from the hatching nets. The smallest piece of sand or snail shell can damage or kill the eggs and fry during the hatching process.
- Do not place any other fish, shrimp, snail or animal in the hatching nets or tank with eggs or fry as these other animals will kill or eat the eggs and fry.

**NOTE: Fry Factory has been designed for the breeder wanting to mass produce fry. Fry Factory should only be operated in a dedicated hatching tank. If there are any fish, shrimp, snails or other animals in the hatching tank, they may bite the eggs or fry through the nets. This may lead to injury or death of the eggs or fry.**

### **My fry are missing tails and eyes.**

There is an older fry loose in the hatching tank biting the fry through the net. Catfish, shrimp, snails and other animals can also do this. Do not allow another animal to be in your hatching tank with your eggs and fry.

You have combined eggs of different ages but if the first batch of cichlid eggs is more than 3 days older than the second batch of eggs you put with it, the older fry will bite off the tails and eyes of the younger fry. In some cases the older fry will eat all of the eggs and younger fry.

### **How many cichlid eggs can I hatch in each net?**

This depends on the size of the eggs. The maximum number of hatch-able eggs per net has not been determined yet. Let us know what your record number of successfully hatched eggs is!

Experiments we have conducted indicate the following numbers per net are possible:

Small sized eggs	e.g., <i>Nimbochromis venustus</i> , <i>Pseudotropheus acei</i> , <i>Cyrtocara moorii</i> .	1000 per net.
Medium sized eggs	e.g., <i>Metriaclima lombardoi</i> , <i>Aulonocara</i> sp, <i>Labeotropheus fuelleborni</i>	500 per net.
Large sized eggs	e.g., <i>Cyphotilapia frontosa</i> , <i>Tropheus moorii</i> , <i>Petrochromis</i> sp.	250 per net.

## **Hatching catfish eggs.**

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*Synodontis multipunctatus* (cuckoo catfish) can be hatched on their own or with sacrificial cichlid eggs (the cuckoo catfish will eat the cichlid eggs).

Catfish species like Bristlenose and other L Numbers can be hatched easily using your Fry Factory. Place the whole or pieces of the whole egg raft in a hatching net and let Fry Factory do the rest of the work. The nets will hold as many rafts of eggs as you can safely fit underwater. Infertile eggs should be removed as soon as possible to stop the spread of fungus and other parasites. Dead eggs and fry can easily cause water quality problems in the hatching tank, resulting in loss of the whole batch of eggs or fry.

## **Can cichlid and L number catfish eggs be hatched together in the same net?**

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Yes you can hatch rafts of catfish eggs in the same net as cichlid eggs so long as the eggs are of a similar age. The rafts of catfish eggs will sit on top of the cichlid eggs, this does not damage the cichlid eggs. The only difficulty you face with hatching the two very different species is water chemistry. The pH and GH must be lowered for the catfish to hatch. Approximately: a pH of 7.4 and GH of 100pm (6dH).

## **How soon after spawning can eggs be put into Fry Factory for hatching?**

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We recommend removing the eggs from the parent fish 30 minutes after spawning has finished.

## **List of suitable fish eggs FRY FACTORY will hatch.**

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- All African Mouth Brooding Cichlids.
- *Synodontis multipunctatus* (cuckoo catfish).
- Most L Number Catfish (sucker mouth cats).

## **List of untested but likely eggs FRY FACTORY can hatch.**

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- All other Mouth Brooding Cichlids (*Geophagus* sp).
- All Freshwater and Marine Mouth Brooders (*Apogonidae* sp).
- All freshwater crayfish.

## **Legal**

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- Fry Factory® is a registered trademark of Aquarium Innovations Pty Ltd
- Fry Factory® is patented in Australia and other countries by Aquarium Innovations Pty Ltd
- Copyright© Aquarium Innovations Pty Ltd. 2017
- Designed and assembled in Australia

## **Aquarium Innovations 1 Year Warranty**

### **Warranty information**

Aquarium Innovations Pty Ltd (“**Aquarium Innovations**”) is the supplier and manufacturer of the Fry Factory, which is the product to which this warranty applies. Should you have any queries about the contents of this warranty, please contact us at details for Aquarium Innovations in section 5 below.

Any separate product that is enclosed with the Aquarium Innovations product is covered by and is subject to the conditions of its own warranty.

The benefits given to you, the purchaser, under this warranty are in addition to all other non-excludable statutory rights and remedies which you have in respect of Aquarium Innovations goods under the legislation in the applicable country of purchase. This guarantee will not affect any such rights and should be read subject to the relevant legislation.

### **1.0 Terms and conditions of warranty**

Aquarium Innovations warrants to the purchaser for 1 year from the date of purchase to repair or replace goods where fault is found due to:

- a) defective material;
- b) faulty workmanship; or
- c) where the goods do not operate in accordance with the instructions for the goods provided by Aquarium Innovations.
- d) All claims for repair or replacement must be in writing sent to the place of purchase, and if the purchase took place online, via email to Aquarium Innovations’ email address listed at section 5.
- e) The original and dated Proof of Purchase (Receipt) must be supplied with all goods claims. Please also provide a copy of this warranty where possible.
- f) Once the claim is received by Aquarium Innovations, we review the particulars of the claim and contact you to progress the claim.
- g) All goods subject to a claim under this warranty should be prepared by you for transportation in the original packaging or other compatible packaging which offers the same degree of protection. You will bear the costs of claiming the warranty, and will be responsible for payment of all postage costs if the goods are required to be sent to Aquarium Innovations for assessment, repair or replacement.
- h) Where goods are repaired or replaced under this warranty, this warranty shall continue on for the remainder of the original warranty period (which commences from the date of the original purchase and terminates one year from the date of the original purchase).
- i) Where goods claimed to require repair or replacement are revealed on inspection to be in normal or working order, Aquarium Innovations will request reimbursement of all reasonable costs incurred from you.

### **2.0 Warranty exclusions**

This warranty will not apply in any of the following circumstances:

claims for repair or replacement of Aquarium Innovations goods where the fault is due to, but not limited by:

- a) misuse, neglect or abuse;
- b) fire, flood, or acts of god;
- c) normal wear and tear;



- d) accidental breakage;
- e) mains voltage fluctuation or supply problems or connection to any voltage other than what is stated in the rating plate;
- f) modification or tampering to electrical cord or plug;
- g) vermin, insects or foreign objects; or
- h) liquid spillage or submersion of goods not designed to sustain such use or duress
- l) where, upon inspection by Aquarium Innovations or its designated repairer, it is revealed that the goods are in normal working order (including but not limited to where noise or vibration is consistent with normal operation of the goods;
- j) attempted repairs or modifications by unauthorised persons;
- k) where the goods factory rating plate has been removed, altered, damaged or is rendered illegible;
- l) where goods are not installed, operated or maintained in accordance with Aquarium Innovations instructions (including the 'Important Safeguards') or specifications or this warranty;
- m) where you have or it is apparent that you have undertaken any of the actions described as 'Don'ts' in the Fry Factory instructions;
- n) replacement or repair of worn consumable items like nets and baskets or replacements of lost goods, parts or components; or
- o) any damage incurred whilst installing, transporting or moving goods;

### **3.0 Limitation on liability**

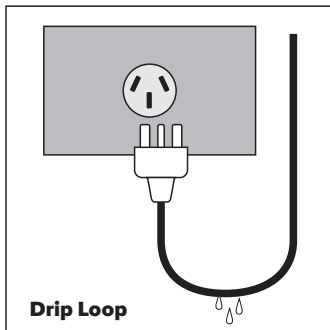
Subject to applicable local statutory rights and obligations to the contrary, (which this warranty shall not affect) to the full extent permitted by law, all express and implied warranties and conditions under statute or general law are excluded and Aquarium Innovations, where permitted, limits its liability as follows and at Aquarium Innovations' option to either:

- a) the replacement of goods or supply of equivalent goods;
- b) the repair of goods or the cost of replacing the goods or of acquiring equivalent goods.
- c) Aquarium Innovations will not be liable for any loss or damage, including consequential loss or damage either directly or indirectly, or for any incidental expenses, of any kind and in any way whatsoever.
- d) Aquarium Innovations notes that for consumers in Australia, our goods come with guarantees that cannot be excluded under the Australian Consumer Law. You are entitled to a replacement or refund for a major failure and compensation for any other reasonably foreseeable loss or damage. You are also entitled to have the goods repaired or replaced if the goods fail to be of acceptable quality and the failure does not amount to a major failure.

## 4.0 Important Safeguards

To guard against injury, basic safety precautions should be observed, including the following:

- 1 Read and follow all safety instructions and important notices in these instructions as well as on the product itself.
- 2 This appliance is not intended for use by children or infirm persons without supervision. Children should be supervised to ensure that they do not play with the appliance.
- 3 To avoid possible electric shocks, special care should be taken since water is employed in the use of aquarium equipment. For each of the following situations do not attempt repairs yourself, and the goods should be either returned to an authorized service facility for service or discarded:
  - a) if the appliance or any electrical component of the appliance (non-immersable equipment only) falls into the water or gets wet, do not reach for it;
  - b) if the appliance shows any sign of abnormal water leakage, immediately unplug it from the power source;
  - c) carefully examine the appliance after installation - it should not be plugged in if there is water on parts which are not intended to be wet; and
  - d) do not operate the appliance if it has a damaged cord or plug, or if it is malfunctioning, or dropped or damaged in any manner.
- 4 A "drip loop" (see graphic) should be arranged for each cable connecting an aquarium to a power supply. It prevents water travelling down the cable and coming into contact with the power supply.
- 5 If the plug or the socket does get wet, do not unplug the appliance. Disconnect Fry Factory from the power supply where the power supply connects onto Fry Factory, then contact a qualified electrician to examine the plug/socket for the presence of water.
- 6 Always unplug the appliance at the electrical outlet when not in use, before putting on or taking off parts, before any type of maintenance or cleaning.
- 7 Never yank the cable or pull it from the socket. Pull the plug carefully to disconnect.
- 8 Do not use the appliance for reasons other than the intended use. The use of attachments that are not recommended or sold by the manufacturer may cause the product to be unsafe. This is not recommended.
- 9 Do not install or store the appliance where it will be exposed to weather or temperatures below freezing.



- 10 Make sure any component mounted on a tank is securely installed before operating it.
- 11 Ensure input voltage is the same voltage as your local power supply.
- 12 If an extension cable is used it should have the proper rating. Care should be taken to arrange the cord so that it will not be tripped or pulled.
- 13 A.G.F.C.I (ground fault circuit interrupter) and surge protector is recommended for all electrical appliances.
- 14 Ensure your hands are dry when turning the power switch on/off and when inserting/removing the power cable from the socket.
- 15 If you are in any doubt about the electrical installation or safety of this product you must consult a qualified electrician.

This product is supplied with 4 plug adaptors. You must use the correct adaptor for your country or region. The following adaptors, which are supplied by Aquarium Innovations, are suitable for the following regions:

for use of the product in the United States of America, a 2-pin adapter is supplied;

for use of the product in the United Kingdom, a 3-pin adapter is supplied;

for use of the product in the European Union, a 2-pin adapter is supplied; and

for use of the product in Australia or New Zealand, a 2-pin adapter is supplied.

The plug should not be tampered with. Tampering with the plug invalidates the warranty offered by Aquarium Innovations with this product. For other warranty conditions, please refer to the warranty form that is enclosed with this product.

## 5.0 Aquarium Innovations' contact details

Aquarium Innovations can be contacted in Australia, via the below details:

**Aquarium Innovations Pty Ltd.**

PO Box 1004

Aitkenvale QLD Australia 4814

**Phone (Australia):** 0458 035 851

**Phone (International):** +61 458 035 851

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