

# XTIM

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# Avitron Kidz

## INSTRUCTION MANUAL



**To read imperatively before use**  
**Some adjustments are required during first flight.**

# 6 +

***THANK YOU FOR PURCHASING AVITRON***  
***The first bionic bird !***

- Ultra light weight 9.20 g
- Rechargeable Ultra long life LiPo battery included
- Full Electronic protection of the battery by PCM
- Charge on USB port with cord included
- Charging time: 20 min
- 50 flights autonomy with one single charge
- Wings flapping time: 5 or 10 seconds (programmable)
- Flying distance up to 100 meters (depending of gliding distance)
- Adjustable tail angle for fast or slow flights
- Launching with included launcher or by hand
- Auto start of flapping wings by G-sensor
- Gliding at the end of flight
- Body made of elastic foam, totally impact proof
- Replaceable wings, available as spare parts.



*WARRANTY : This product is warranted against defects in material and workmanship under normal use for thirty (30) days from the date of purchase (Keep your purchase receipt).*

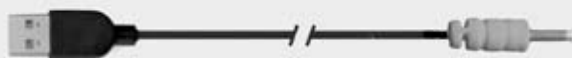
*For any questions regarding this product, please contact our customer service by email at :*

**[contact@mybionicbird.com](mailto:contact@mybionicbird.com).**

*You can find video instructions at **[www.mybionicbird.com](http://www.mybionicbird.com)**.*

**PARTS INCLUDED :**

1 AVITRON



1 USB cord for charging



One Launcher with rubber band



1 bag of aluminum tape pieces  
to balance wings

**BATTERIES :**

Avitron (onboard) : 50 mAh Li-Polymer (20C,800mA) - included

No extra batteries required.

**PATENT :**

France 0855430 date 08/05/08 and 0901629 date 3/04/09

PCT FR2009/051560

**WARNING :**

This product complies with the following standard: DEEE (WEEE) directive 2002/96/EC.



**Users should keep and retain this manual for future reference.**

Keep the packaging since it contains important information.

Keep name and address.

**SAFETY PRECAUTIONS :**

Not suitable for children under 36 months, small parts may be swallowed.

Do not play next to an animal or a person.

Do not use near electrical lines or during a storm.

Do not fly AVITRON near electrical lines, trees, buildings and any other obstacles.

Keep away from water.

Never fly or follow AVITRON in the streets.

Keep AVITRON away from face and eye.

Never put your fingers close to AVITRON when it moves.

Always use the USB charger included in this equipment.

**WARNING :**

**CHOKING HAZARD- Small Parts  
Not for children under 3 years.**

**BATTERY CAUTIONS :**

Works with 1 rechargeable LI-PO (lithium Polymer) battery (included).

Rechargeable batteries are only to be charged by an adult.

Do not throw the battery into the fire.

The supply terminals are not to be short-circuited.

Batteries are only to be replaced by an adult.

Only use the battery charger provided with the box to charge the LI-Po battery in AVITRON.

**DEEE :**

When this appliance is out of use, please remove all batteries and dispose of them separately. Bring electrical appliances to the local collecting points for waste electrical and electronic equipment. Do not throw in domestic refuse.

**PRODUCT SPECIFICITIES :**

Length :	6,69"
Wingspan :	12,90"
Weight :	9,20g
Type of flight:	Free flight
Lancement :	Rubber band launcher or by hand
Rechargeable battery pack :	Li-poly 50 mAh
Charger :	USB cord included
Flight Duration :	5 or 10 seconds by preset
Charge time :	20 min
Flying distance :	up to 100 yards
Unloaded motor speed :	53,000 RPM
Full loaded motor speed :	35,000 RPM
Wing flapping speed :	up to 17 flaps/sec.
Wing amplitude :	55°
Ratio weight/wing area :	3,22 g/dm <sup>2</sup>
Maximum static thrust :	9 g
Skill level :	Beginner

# **INSTRUCTION MANUAL**

## **MANUFACTURER NOTES:**

\*The suitcase packing must be kept and used to store and carry the product in good conditions. This will increase product lifespan a lot.

\* Never pack the bird in the box with wings in high position. If they happen to be in high position, start another flapping time and stop them (by the switch) in lower position.

**NEVER TRY TO MOVE WINGS MANUALLY !**

\*This product was tested for a lifespan of hundreds of cycles in flight; however it remains a high technology product that should be handled with care when not flying. Avoid seizing it by the wings or tail, do not put heavy items upon it, proceed gently also when replacing wings (if required).

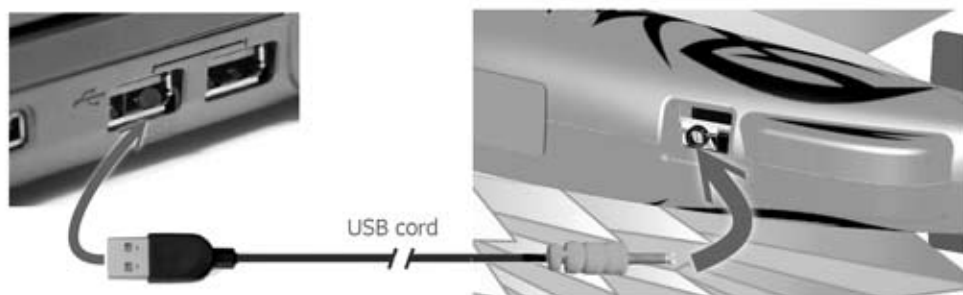
\*It is strongly recommended not to let very young children handle the bird, or pick it up from the ground after a flight!

## **I - UNPACKING YOUR AVITRON**

Check your product is complete as described on page 2.

## **II - CHARGING AVITRON FOR ITS FIRST USE**

It requires a computer with a USB port. Plug the USB cord (supplied) into the USB port of the computer on one side, and into the bird connector on the other (picture 1).



Picture 1

The LED inside the connector (computer side) will turn off, indicating that the charge process has started. When Avitron is fully charged (about 20 minutes), the LED will light on again.

You must then unplug the cord from the bird and the computer.

Never forget the bird on charge when it's been over for a long time.

It may damage the LiPo battery inside

NB: The bird has to be switched off prior to charge.

**You are ready to fly your AVITRON !**

### III- FLYING YOUR AVITRON



#### Conditions of use:

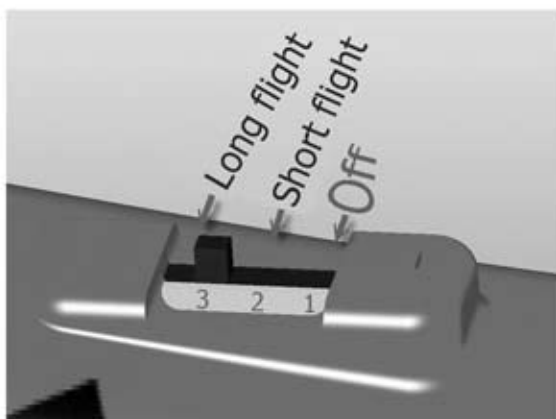
- Indoor use should be restricted to very big rooms such as gymnasiums, big halls, with a very high ceiling. Do not use at home.
- Outdoor use requires adapted weather conditions, ideally no wind at all (recommended for beginner, and compulsory to balance wings, see below), and no rain. It requires an open area all around you without trees or obstacles where the bird could perch. At least a circle of 30 meters radius for a 5 seconds flight. Always start with a short flight (see below how to set the flying time) to check the covered distance from obstacles.
- A light wind is acceptable, with the condition to have an even bigger open area around.
- It is strictly forbidden to play near a road, or water, where it could fall by accident.

#### A : Turn on / flying time preset

Switch the bird ON using the switch located on top of the body. Doing so, you will also select the desired flying time, short or long, as indicated below.

This switch has 3 positions (see picture 2):

- 1- Maximum backward : Bird is OFF
- 2- Middle position: Bird ON, short flight (Wings will flap during 5 seconds)
- 3- Maximum forward: Oiseau ON, long flight (Wings will flap during 10 seconds).



Picture 2

When the bird is ON, a blue LED will light on inside the body indicating it is ready to fly. For the first flight, always choose the position 2 (short flight). Then, you can try a long flight, when you are confident that the open area is big enough. Note that the bird will fly double the distance (and up to 100 meters) when preset for a long flight.

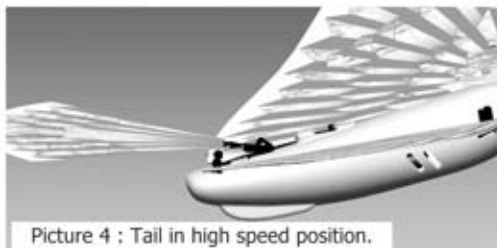
## B - Adjusting the tail

The tail angle is adjustable (4 notches), making possible to adjust the speed of Avitron. To change the notch, just push or pull on the base of the tail.

\* For indoor flights, in a confined space, or for slow flights: set the tail in a high position (choose the notch n° 3, starting from the bottom, among the 4 possible positions). (see picture 3)



\* For flights, in a big space or for fast flights: adjust the tail in a low position (using the notch 1 or 2). (See picture 4)  
Knowing that :  
Notch 2 is more stable.  
Notch 1 is for highest speed but requires wings adjustment (see below).



**Warning :** When picking up the bird after landing, always check that the tail hasn't moved to another notch. If so, set it back again.

## C- Flying AVITRON

\* Launching: Use the rubber band launcher included, hang the rubber band up to the hook located under the bird body, then pull gently on it (about 20 cm) aiming up (at least 45° from horizon). Then throw the bird like with a slingshot. (see picture 5)

\* Once in the air, at the top of its trajectory, the wings will start to flap automatically, and the bird will fly like a real bird during the preset time.

\* After the wings has stopped, it will glide down to the ground.

Pick it up from the ground and launch it again the same way.

**WARNING:** The electronic circuit will be off during 10 seconds after he has stopped flapping the wings. This delay must be over before to launch it again, or the wings will not flap.



Picture 5 : Launching the bird

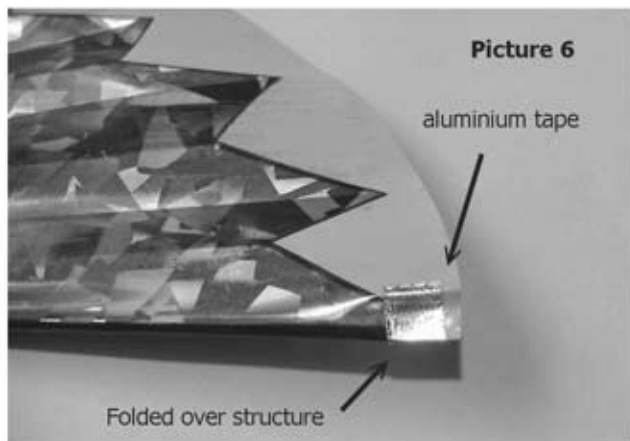
### C- Flying AVITRON (continuation)

- \* Launching by hand: It is possible also to throw Avitron by hand. It will work the same way, with the condition to throw it fast enough.
- \* Low power battery: You can launch Avitron this way as many times as the battery charge will last (about 50 flights totally). When the battery becomes weak, the flapping speed of wings will decrease flight after flight. Finally, the bird LED will light off. You must then charge it again like explained in chapter I.

### D- Unstable flight - Adjusting the wings

From the very first flight, it is essential to check the wings balance, to adjust it if needed. To do this, it needs to fly outdoor without any wind, and set the tail on notch 2 (average speed). If while flying, you notice an unbalanced flight such as immediately when launched, the bird turns to one side in small circles and go directly to the ground (big unsteadiness). Then you will have to trim the wings.

A bag with small pieces of aluminium tape (ballast) is supplied with your Avitron. You must ballast opposite wings to the turning side you observed. If the bird tends to turn to the right, add some weight to the left wing: Take one of the aluminium tape piece and stick it near the tip of the right wing, folding over the wing structure, as shown on picture 6.



If the bird tends to turn to the left, add the tape on the right wing same way. Try flying the bird again, and if necessary, add another tape upon first one. Repeat process until you get a straight flight or a slight turn to the other side than observed first. Your Avitron is now balanced and its performance is optimized.

NB: - Avitron is pre-balanced in factory, there may be some tape already stuck on one wing. If a wing already have too much ballast, choose to remove a tape on this wing rather than to add one on the opposite wing.

- Flying with tail set in a high position may require a different wing adjustment. In order to fly the bird with tail in high position in a confined space and keep a precise control, it is recommended to do a very precise wing adjustment with the tail in that position.

### **E - Battery protection :**

The electronic protection on the LI-PO battery prevents it from irreversible damage. It operates (by cutting off the power) in the following 2 cases :

- A short-circuit
- When the battery discharges below 2.5 Volts.

This happens inevitably when you forget to switch off your Avitron, and the battery keeps on discharging slowly for hours. Then, the body LED will switch off (even though the power switch is still ON). You just need to charge Avitron again to reactivate the battery. During charge, the bird LED will start lighting again).

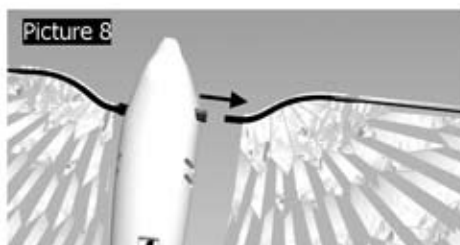
**WARNING:** if AVITRON doesn't light up, whatever the switch position, try to charge it. (Probably the battery protection system has been activated)

### **VII - REPLACING THE WINGS**

If a wing is broken, you can replace it by a spare wing purchased on our website.

Lift the tail to the maximum notch. Pinch one side of the wing, at the back of the wing where the wing is clipped to the round knob, and take it off the knob (as shown on picture 7). Then detach the front of the wing like so hold the wing structure firmly and pull it out so that it comes out the slot (picture 8).

It is not necessary to change both wings, when just one is broken.



Take the new wing and ensure to select the right wing for the right side of the bird and the left wing for the left side of the bird. Start by inserting the wing structure in the slot, you should hear a "clac" which means that the wings is correctly inserted (Picture 8).

Clip the back of the wing to the round knob, underneath the tail (picture 7).

### **VIII - REPLACEMENT OF OTHER PARTS**

If ever the foam body or other parts were destroyed, please feel free to contact our customer's service at : [contact@mybionicsbird.com](mailto:contact@mybionicsbird.com) to get replacement parts and instructions on how to replace them.

**WARNING :** To preserve the Li-poly battery as long as possible, we suggest that you NEVER let the bird discharge completely, when not in use. Charge the bird a few minutes and turn it OFF before putting it away.