MICRO BIT 6 CAPTIONS

**Birds01** Portrait of **Rob Ives** with one of his paper creations. [For the box with the Rob interview]

**Birds02-04** Some close-up views of the birds in the cage

**Birds05-08** Some phases of the building of the cage structure. The cardboard box base will include the mecanic components and the wiring. The cover of the box, done with recycled white plastic sheet, is also the base of the birds and Tweeters

**Birds09-13** Thanks to the Kitronik's All-in-one robotic board the electronic assembly does not require circuits or soldering. Here I have used a set of custom wines to connect the board to the eight servos used to animate the birds, but also a set of breadboard connectors will work as well. Note that I have fixed the controller board half inside of the base box, while the micro:bit side of the board is outside of the box. This solution makes easy to keep the micro bit visible and the system can be programmed also when the cage assembly is complete

**Birds14-18** After the components have been cut, and the birds assembled, I have added the legs with 2 mm thick metallic wire. Under the backside of every bird, I hot-glued the plywood support used by the servo to move the body.

**Birds19-22** The moving mechanism is of two types; birds are moved by micro servos to which the lever has been extended and connected to the bird plywood support through a transmission wire.

**Birds23-28** The tweeters are moved by a continuous rotation servo, similar to a DC geared motor, translating the rotation to a linear bidirectional movement to push and pull the paper tweeters. The moving paper part is kept in place glued to the Perspex support.

**Birds29** A final view of the bottom side of the cage plane with the servos and mechanisms in place.

**Birds30-35** Details of the last phase of the cage assembly

**Birds36-38** The final building: the birds’ cage hang and running