

BONANZA

INSTRUCTION MANUAL



DURAFLY[®]

Duraflly Bonanza.

“Throw it and show it”

Thank you for choosing the Duraflly Bonanza. The Duraflly Bonanza is part of our hand launch and belly-landing RC plane series.

With the Bonanza you will appreciate its practicality and perfect purpose build functionality. Designed and made from lightweight EPO foam and being a small size the Duraflly Bonanza is perfect for the beginner to the seasoned flyer looking for a relaxing and enjoyable RC plane.

The build for the Duraflly Bonanza is fast with a minimal build count meaning you're in the air fast. A basic glued joint for the tail, main wing and wingtip tanks.

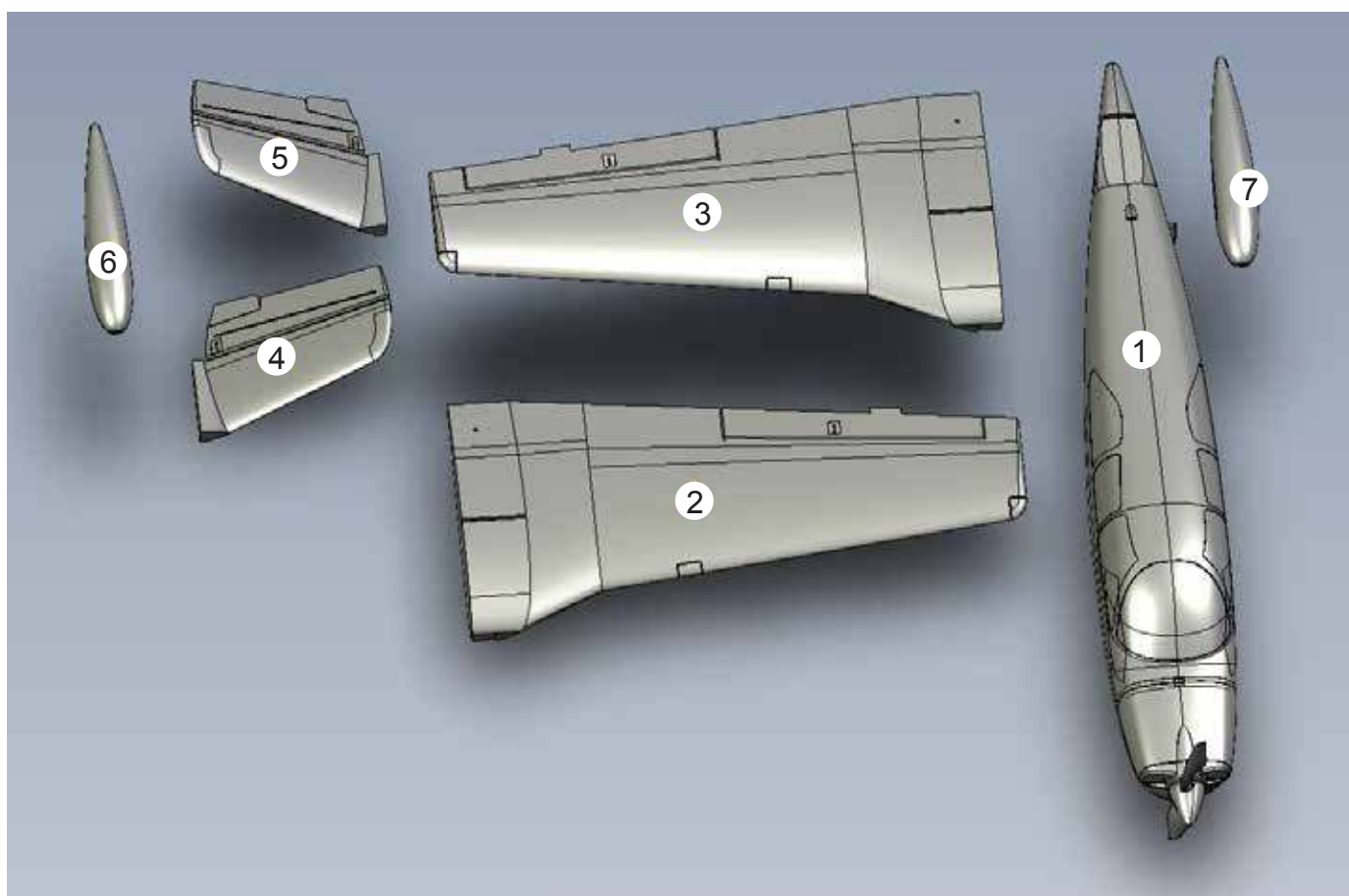
Once built and all your checks are complete and battery charged your ready for your first flight with the Bonanza!

When you take the parts out of the protective packaging you will see the small assemblies have been completed for you.

The main fuselage has the motor, ESC and servos all pre-installed. Also, you will find the spinner and propeller are pre-installed. (For your own safety please check the pre-installation of the propeller assembly for security and balance)

(PLEASE REMOVE THE PROPELLER WHEN SETTING UP YOUR MODEL)

The wings have the servos and ball linked control surfaces already pre-installed.



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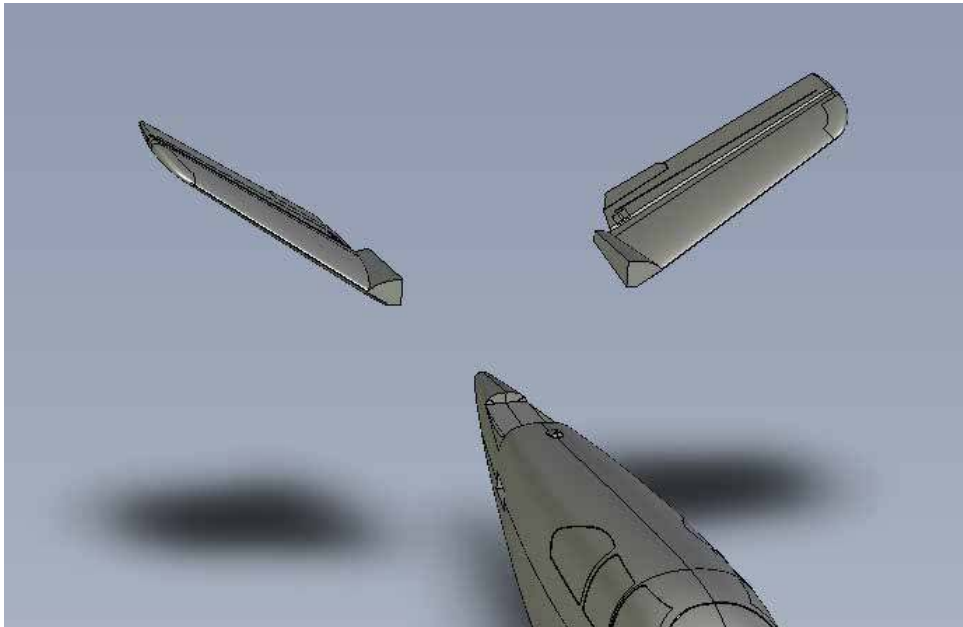
(Also included is the required hardware and plastic wing support and metal wing spar.)

SPECIFICATIONS:

- Wingspan - 950mm (37.5")
- Length - 670mm (25.6")
- Flying weight - 540g
- Motor - 28mm 1300kv Brushless Outrunner motor
- ESC - 20A Electronic Speed Controller
- Servos - 9g Servos with Ball link connections
- Propeller - 7"x5" 2 bladed propeller
- Battery - 1100~2200mah Lipo battery
- CoG position - 80mm (+/- 5mm)

Now let's get to the build.

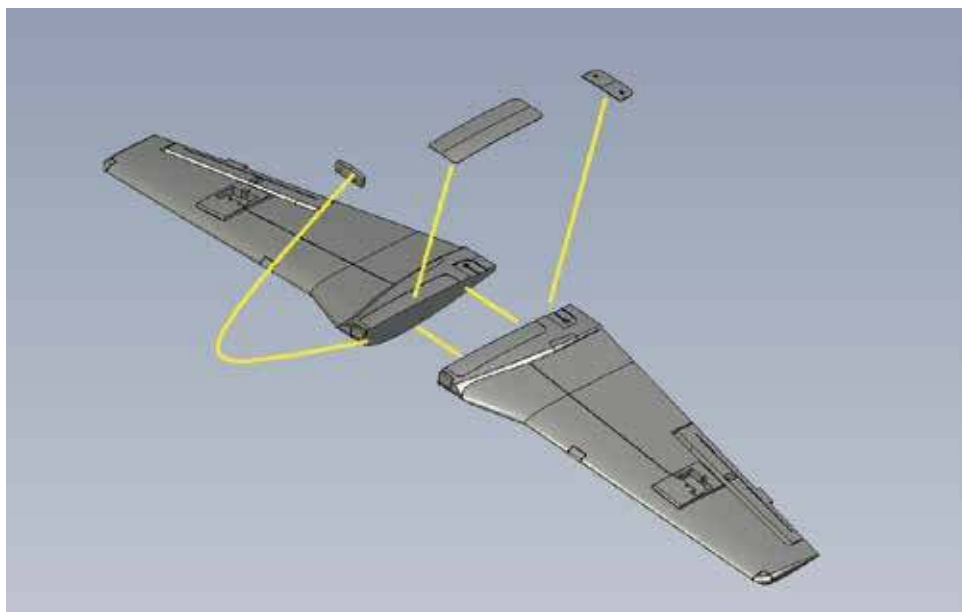
Step 1. - Glue the tail surfaces to the fuselage.



Please ensure the tail surfaces fit flush and are aligned to the fuselage, please make sure the fit is even and at the same level. Please dry fit these parts and make sure you are satisfied with the fit and alignment prior to gluing these surfaces.

For this glue joint you can use a standard medium CA glue or foam contact cement. Once this joint has been glued set it aside for the glue to cure.

■ Step 2. – Main wing



Please use a servo tester or your Transmitter and bound receiver to check the servo alignment for your aileron servos. If by chance they are not adjusted correctly please adjust to suit.

Using the supplied metal wing spar, please make sure you dry fit the spar with the left and right main wing sections to make sure they fit flush and you have the correct dihedral on the wing.

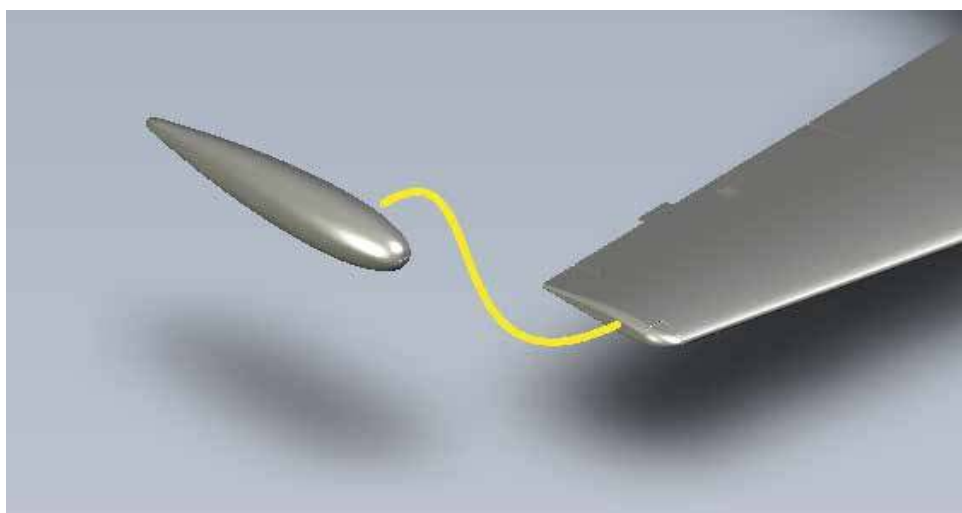
Once you are happy with the fit please glue the main wing together with either medium CA glue or foam contact cement.

Please glue in place the front wing plastic attachment piece and the rear plastic support for the wing screws.

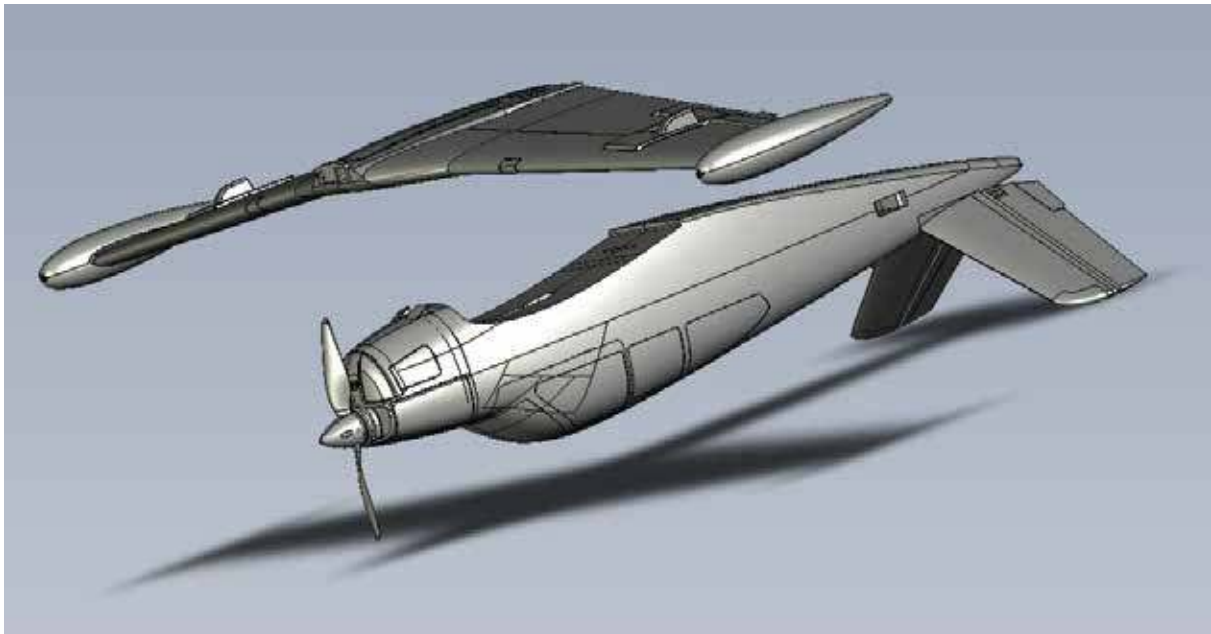
Like always before using any permanent glue make sure all the parts fit and align. Test fit the wing screws to the fuselage and make sure all sections fit correctly.

Attach the left and right wingtip tanks with medium CA glue or foam contact cement.

Once glued together please set the main wing aside for the glue to cure.



Step 3. - Main wing connection



After the glued areas have cured now its time to attached the main wing to the fuselage.

Connect the “Y-lead” servo extension to the left and right aileron servo leads. Please make sure you have connected this lead with the correct polarity.

Attach the main wing to the fuselage by aligning the two plastic dowels keying them into position, then make sure your servo wire is pulled through the corresponding hole in the fuselage. Then simply push the bottom of the wing to meet the fuselage for a flush fit. Now use the two screws to connect the wing to the fuselage.

Step 4. - Attach Ball link Controls

The Duraflly Bonanza has a unique V-tail, with all V-tails the right and left servos control the rudder and elevator separately, Using a programmable transmitter with a V-tail option this does all the inputs for you.

With the servos centered on all controls (Elevator, rudder and ailerons) attach the ball link connections with a pair of ball link pliers or similar tool. Please ensure you use just enough force for the ball link to click into place ensuring you do not damage the ball or cup.

Step 5. – Model set up

Your DuraFly Bonanza is built and now you are ready to set up the model for it's maiden flight. Using the correct battery we recommend a 1300 mah 3S Lipo battery (although you can use a battery from sizes ranging from 1100mah~2200mah.)

For safety please remove the propeller and Bind your transmitter to your receiver, plug in the servo connections to the connection points of your receiver (please be mindful of polarity)

Now connect your flight battery. Once connected you can check the rotation of the motor and operation of the servos.

You may need to adjust the ball link controls for your flying surfaces.

Check the balance of the propeller and attach the spinner backing plate, propeller, washer, propeller nut, spinner and tighten the two spinner screws.

The most important part to flying is the balance of the RC airplane. To nose or tail heavy and your model can be very uncomfortable to fly or even completely unflyable.

To aid you we have determined a Centre of Gravity (CoG) position that makes the DuraFly Bonanza perform at it' s best (see diagram below).



Tail and ballink arrangement

Step 6. Rudder Set Up

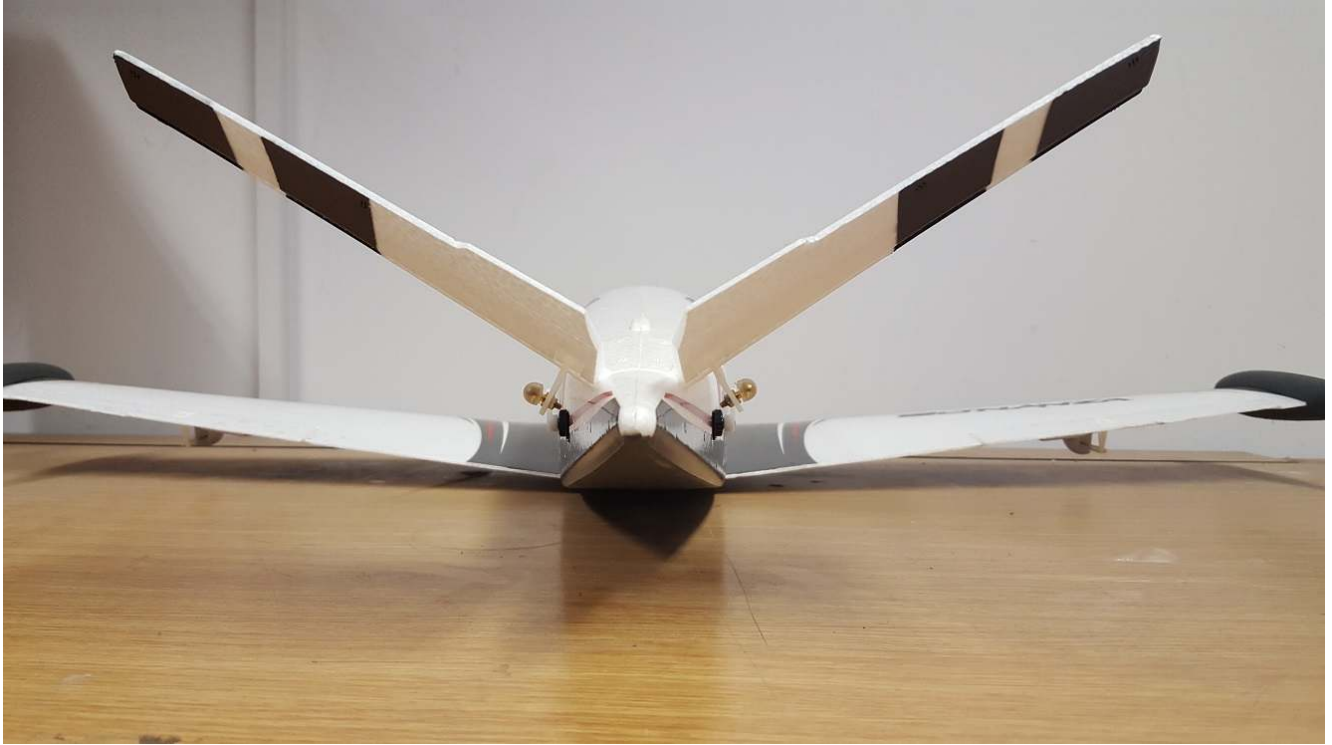


Right Rudder



Left Rudder

Step 7. Elevator Set Up



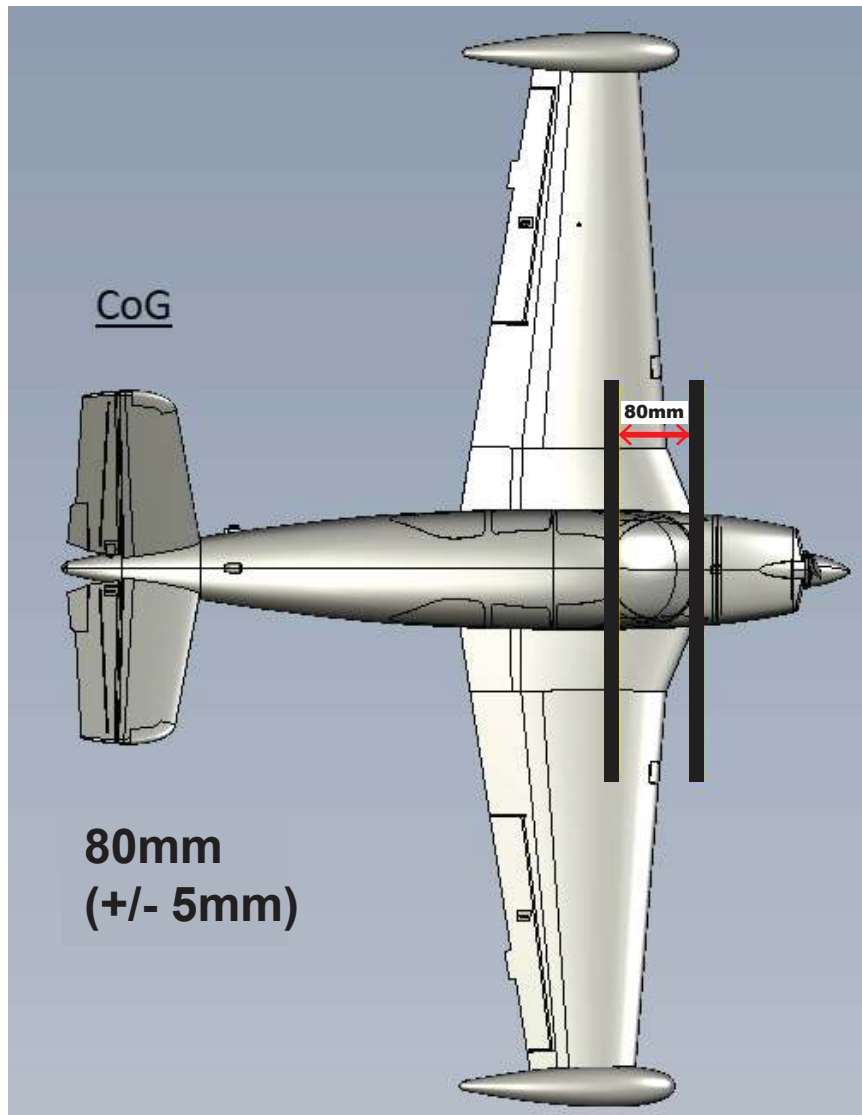
Up Elevator



Down Elevator

CoG

The CoG is 80mm (+/- 5mm) from the front wing joint back to just in front of the main wing spar. please see image below.



Of course this is our recommendation you can adjust this CoG position to suite your flying style.

Control throws – We suggest you set up the Duraflly Bonanza with 8mm each way on elevator, 8mm each way on ailerons and 12mm each way on the rudder. We also suggest you add 30% expo to the elevator control and 25% Expo to the aileron and rudder controls.

Once again this is only a guide please feel free to set up the controls that best suits you and your flying style.

Like all aircraft they all stall at a certain point and putting large throws and low expo on the elevator control can accentuate a stall very radically. If you have enough altitude nearly all stalls can be recovered.

FLYING TIPS

Before you fly please check your controls and make sure you double check!

Left is left, Right is right, up is up and down is down. With a V-tail please check the direction of the rudder and make sure left is left and right is right.

Now you're ready to "Throw it..."

The DuraFly Bonanza is a hand launched RC airplane, If you are unsure of hand launching your plane please find someone who can assist with launching your plane.

With your hand on top of the plane just behind the battery hatch apply $\frac{3}{4}$ to full throttle and underarm throw the bonanza. It only needs a gentle yet firm throw to get her in the air.

Once airborne simply climb to a safe altitude to adjust your trim to get the Bonanza Flying straight and level on $\frac{3}{4}$ throttle.

If your plane is not flying well land and adjust your Bonanza where it needs adjusting.

Once you have your Bonanza flying well it will perform like a gem. Able to fly all your moves from rolls loops to slow flybys. The Bonanza is a jackpot.

When it comes to landing line up your plane with the landing area (hopefully a flat grassed area) using your elevator to control pitch and speed, throttle to control descent, rudder for direction and ailerons to keep the wings level, then simply glide the Bonanza home.

Your maiden and the sweating is now over. Time to charge your batteries and really have fun with the Bonanza. "Throw it and Show it" please the crowds and yourself with this amazing RC plane from DuraFly.



Made in China

