

GIANT CG Scale

by *Portachiavi 3D*

User manual



Dear customer, thank you for buying the Portachiavi 3D GIANT centre of gravity scale.

The centre of gravity scale, hereafter known as the scale, operates with the data obtained from four weight sensors and the measurement of the position of the glider or airplane according to the stopper and pads.

For the use of the scale a 9 V battery (type 6LR61 or equivalent) is already included, due to safety reasons the battery is not included in international shipments. The battery is located in the compartment under the scale, with a easy access without screws.

The measuring range of the scale is 5-30kg.

Use of the scale.

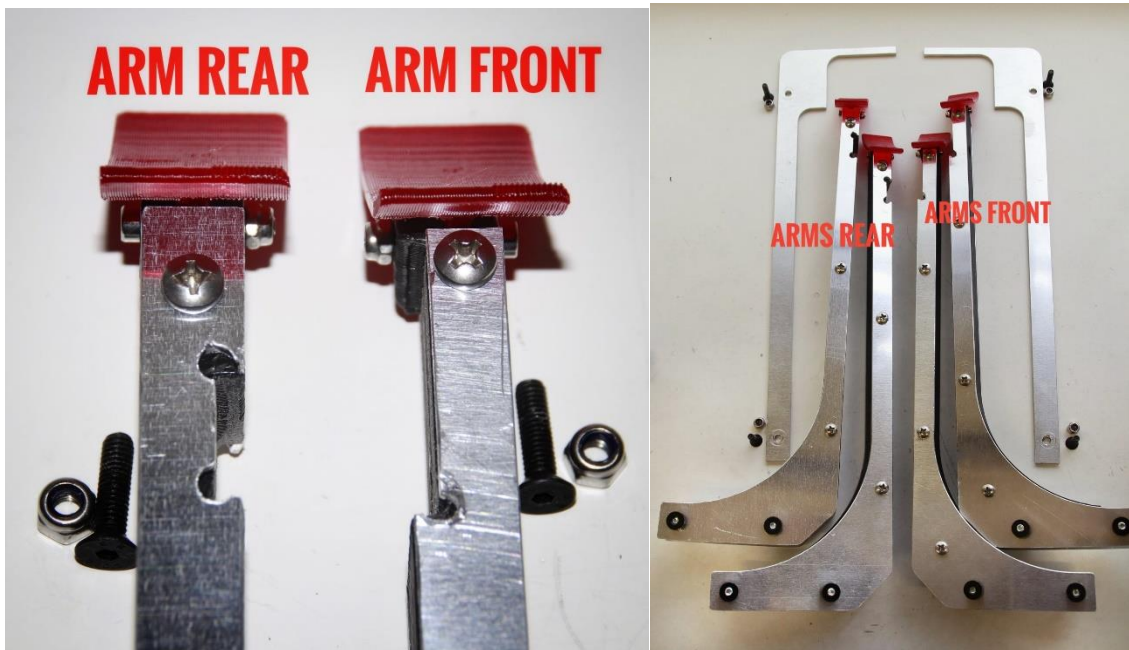
In order to use the scale switch the device on

When the display shows waiting plane, scale is ready. Place your model gently on the device and slide it lightly from left to right and forward until the leading edges stops at the pivots.

After a few seconds the display will show values every four seconds, wait until these values are stabilize and those are your current data. The display will show GR: xxxx which refers to the total weight of the model in grams and CG: xxxxxx which is the distance from the leading edge to the centre of gravity.

Sometimes the display might show an error, shown as ERR, your scale is perfect, this error is displayed when the measurement is negative, for example, if you accidentally happen to touch the scale with your hand on one of its sensors. To solve this problem, make sure that nothing is touching the sensors, turn off the device and then turn on again to reset it.

Step 1 Identify the rear and front arms.



The scale have 4 arms, two front and two rear arms.

The **front side** of CG scale are the side of **LCD screens**.



Step 2, slide the arms along the bar with rulers, now, you can adjust the arms to measure a plane, and fix the stopper on the leading edge of the plane. Every arm, have a 4 black nuts for screw and unscrew without tools, unscrew it for first slide, and fix when the scale are full mounted. The arms can be slide to make wider or narrow and adapt it to lot of gliders or airplanes.

Your scale need to be at same position as the picture, the stoppers and screens on the same side.

Now, you can fix the fooks for big planes with same method than arms, slide the fooks on the places and screw on the upper side of the scale.

The scale are ready!

Turn on the CG scale without plane and never item can't touch the arms. You can see the message: Waiting plane.

Now, its ready, put your plane on your CG Scale, with caution with flaps and check the leading edge are touch the stoppers.

Wait few seconds to the measurement are stabilized, and check the screen, the weight and CG location of your plane show on the screen.

Maintenance of your scale.

Also take care not to pull heavily on the cable connecting the scale to the LCD screen, it may be damaged.

Do not store the scale with weight or any aircraft over it, it could deform and therefore lose calibration.

Always use your scale on **flat and level surface**, and away from drafts.

Do not store the scale inside the car or expose to direct sunlight or any source of heat, this could deform it.