

easySWASH™ Directions for Use

“The innovative new swash-plate levelling toolkit for the model helicopter enthusiast”

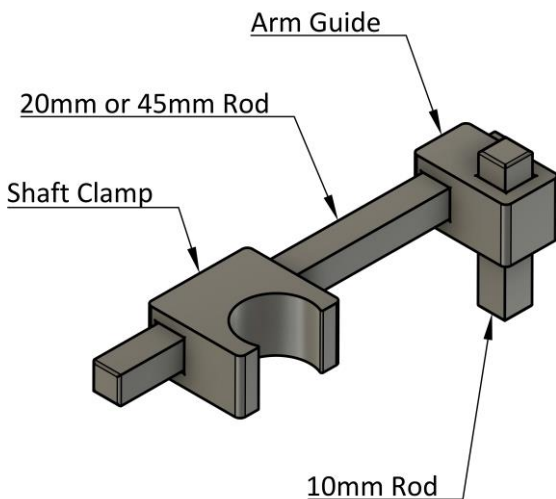


Figure 1

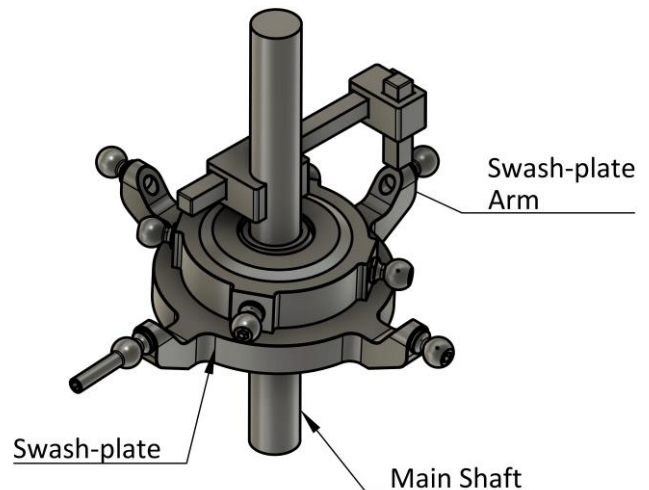


Figure 2

1. Safety Instructions

- Choke hazard – keep *easySWASH* away from children and pets!
- **Take the necessary precautions to prevent your model's blades from spinning up and potentially causing injury before making any adjustments.**
- Do not expose *easySWASH* to extreme temperatures (e.g. in a parked car in direct sunlight).

2. Usage Instructions

Before attempting to level the swash-plate, check that the model's servos are centered correctly – refer to [3. General swash-levelling considerations – servo centering](#) below.

- Assemble *easySWASH* by sliding a *Shaft Clamp* onto either the 20mm or the 45mm *Rod* and an *Arm Guide* onto the other end. Next, slide one of the 10mm *Rods* vertically into the *Arm Guide* (see [Figure 1](#) above).
- Center your transmitter sticks (assuming a linear throttle curve), set trims to zero and select a non-assisted flight mode (e.g. not “Safe”).
- Clip *easySWASH* onto your model's main rotor shaft above the swash-plate leaving a gap (see [Figure 2](#) above). It should not be necessary to remove the rotor head unless the helicopter is very small and there is not enough space between the swash-plate and the rotor head.
- Slide the *easySWASH* components along, up or down the *Rods* as required.
- Rotate your model's main shaft by turning the main gear (or the motor if direct drive).
- Adjust your servo linkages so that your swash-plate arms are just below the bottom of the vertical 10mm *Rod*.

It is recommended that you check zero-pitch after levelling the swash-plate – refer to [4. General swash-levelling considerations – zero pitch](#) below.

3. General swash-levelling considerations – servo centering

Check/adjust servo centers:

- With centered sticks (assuming a linear throttle curve), your model's servo horns should be at approximately 90 degrees.
- If the servo horns are not at 90 degrees, then use your model's flight controller settings or transmitter sub trims to adjust as necessary.
- If you experience problems then you may need to check that the servo horns have been installed on the servos in the correct position.

4. General swash-levelling considerations – zero pitch

Check/adjust zero pitch:

- With centered sticks (assuming a linear throttle curve), fold the rotor blades back so that they are next to each other.
- The tips of the blades should be level with each other and remain so whilst you rotate the main shaft through 360 degrees.
- If there is a gap between the tips of the blades that varies whilst you rotate the main shaft then this is usually because the swash-plate is not level. Attempt to level the swash-plate again.
- If there is a gap between the tips of the blades and this gap remains constant whilst you rotate the main shaft then this is usually because the swash-plate is level but has been levelled too high or too low. Adjust all three servo linkages by the same number of turns up or down and check again.

5. Other useful information

A spares bag containing the following items is also included with *easySWASH*:

- An additional *Rod* that can optionally be cut to a preferred length using standard wire cutters.
- A *T-shaped Rod* that can be inserted vertically into the *Arm Guide* (instead of one of the 10mm *Rods*) if your model's swash-plate elevator arm is a different length to the aileron arms. Alternatively, on larger models that have different length swash-plate arms, both of the supplied *Arm Guides* can be used at the same time.

It is recommended that a very small gap – a fraction of a millimeter is left between the bottom of the tool and the swash-plate arms whilst in use. This will not affect accuracy and will reduce any risk of the swash-plate arms inadvertently deflecting the tool.

Do not hesitate to contact us if you need assistance setting up your helicopter using *easySWASH* – we are model enthusiasts too and we would be happy to help!

Designed and manufactured in the United Kingdom (patent # 2110811.3). For further product information please refer to the manufacturer's product website www.easyswash.com, telephone 01883 701317 (UK office hours) or email support@buzzinnovation.co.uk.

DIRECTIONS FOR USE

easySWASH™

WARRANTY INFORMATION

Please do not hesitate to contact us if you have any queries or require any assistance relating to our products. Please telephone 01883 701 317 (UK office hours) or email support@buzzinnovation.co.uk.

THIS PRODUCT IS PROTECTED BY A LIFETIME WARRANTY

In addition to your statutory rights, the manufacturer will replace any defective items for the lifetime of the product. Product lifetime, for the purposes of this warranty, is defined as the period for which the product is being manufactured. Post and packaging costs may apply.