

Modifying a HS-322 servo.

This construction information is only valid for servo type HS-322 from Hitec.

The purpose of this modification is to "mislead" the servo electronics and to change the servo into a gearbox equipped electric motor which can be electronically steered in both directions via normal servo signals.

How does it work?

A servo has a mechanical block to prevent the outgoing axis to turn more than 180 degrees. The position of this outgoing axis is picked up via a mechanically coupled potentiometer. Both this mechanical block and the potentiometer connection need to be removed.

When this modification is carried out properly, the servo will stand still when pulses are applied representing the "old" zero (middle) position. When shorter or longer pulses are applied, the servo will run either left or right continuously with a speed proportional to the length of the applied pulses.

As a cockpit builder using SimKits parts, you do not have to apply those pulses yourselves.

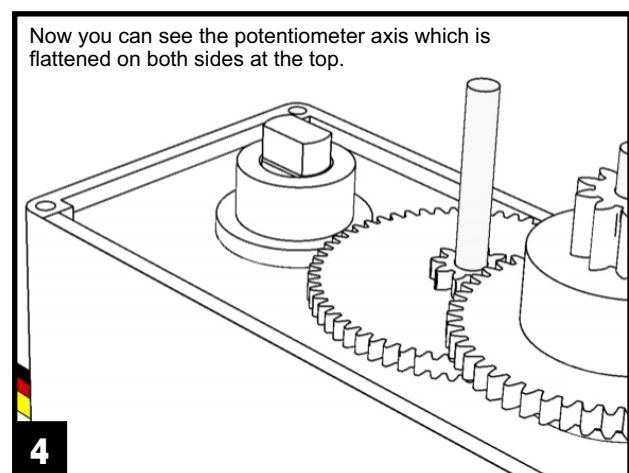
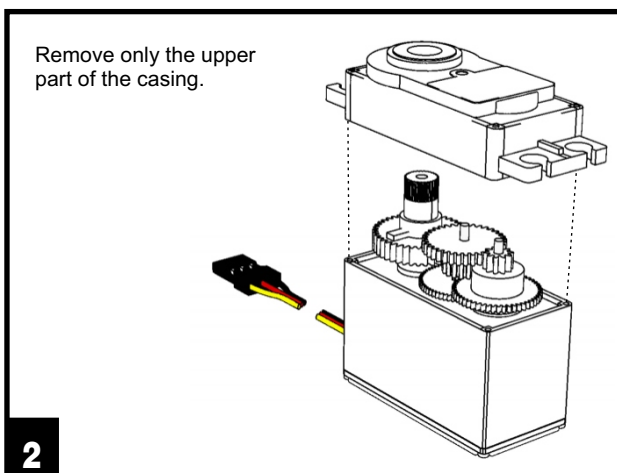
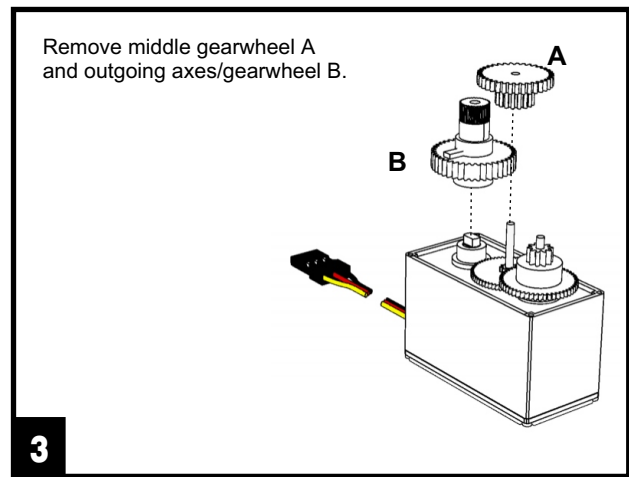
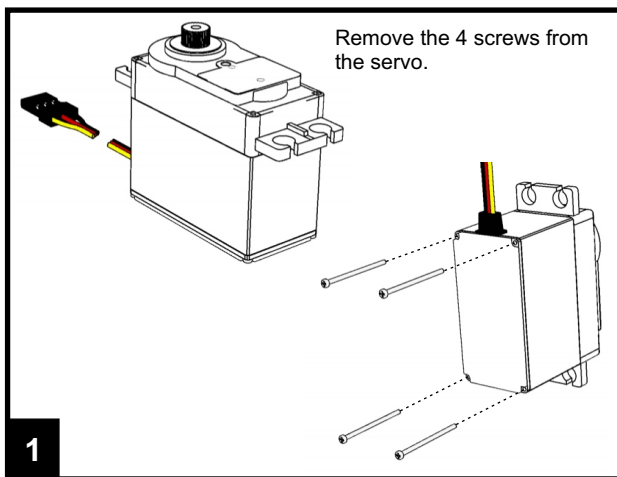
They are applied by the Central Control Unit. This explanation is merely to understand why this modification is necessary and what it does.

What else do you need?

Additionally you will need some simple tools, such as a small star-shaped screwdriver, some super glue and a hobby knife.

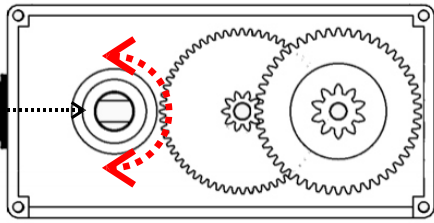
Caution!

Be very careful when using the hobby knife! You can easily hurt yourself when handling sharp objects! SimKits does not take any responsibilities for injuries and will not accept any claims referring to following the instructions below. The use of the knife and the instructions are fully at your own responsibility!



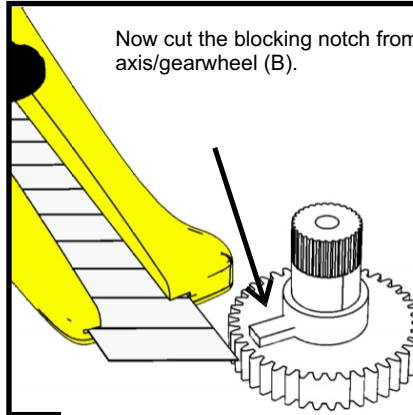
Turn the potentiometer exactly in the middle position.

5



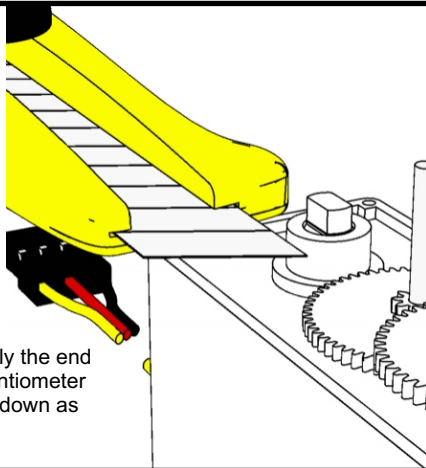
Now cut the blocking notch from the outgoing axis/gearwheel (B).

9



Cut carefully the end of the potentiometer axis as far down as possible.

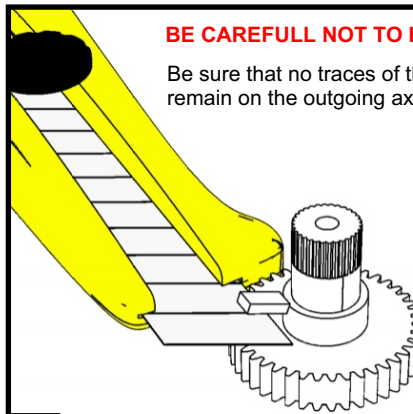
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BE CAREFULL NOT TO HURT YOURSELF!

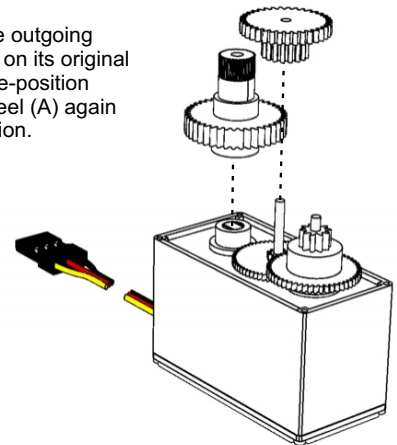
Be sure that no traces of the blocking notch remain on the outgoing axis/gearwheel.

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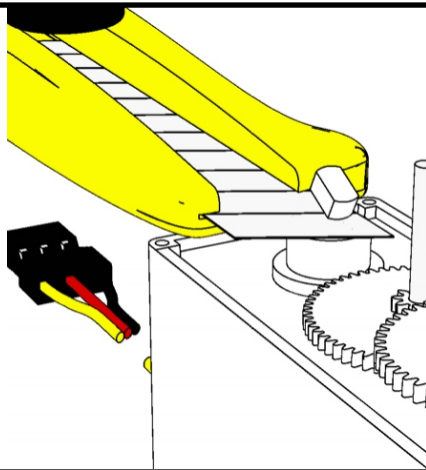


11

Now re-position the outgoing axis/gearwheel (B) on its original position and then re-position the middle gearwheel (A) again on its original position.

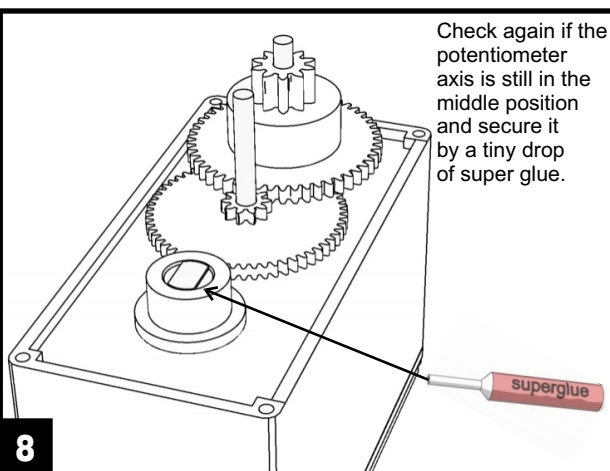


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Check again if the potentiometer axis is still in the middle position and secure it by a tiny drop of super glue.

8



Re-position the upper cover of the servo to its original position and close the servo casing with the previously removed screws. Be carefull not to damage the thread of the casing when tightening the screws!

12

