



*femo*



*Operating instructions:*

***Apus<sup>4</sup>***

*made in Germany*

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## Preface

We congratulate you and thank you for choosing a high-performance flight model from Femo. Our flight models are manufactured in the `Prepreg-autoclave-technology` in Germany. Both the strength values and the surface quality are unique. The completion of the models relates only to the installation and connection of the receiver and the receiver battery. The entire harness is already installed. In order to ensure safe use, Please read this manual carefully.

Further information about our products and application or operating questions can be obtained from:

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### Safety instructions

Check the device after unpacking. Do not use in case of transport damage. Report the damage in writing, otherwise the warranty claim is void. The appliance must be used in accordance with the enclosed operating instructions.

#### Fire Hazard!

There is a risk of fire for lithium-ion batteries.

#### Danger of injury!

As soon as the drive is under current, there is a risk of injury due to sudden rotation of the propeller.

### Warranty

We provide a 24-month warranty on this product. All other claims are excluded. This applies in particular to claims for damages caused by failure or malfunction. We assume no liability for personal injury, damage to property and its consequences arising from our delivery or work (except in case of gross negligence or intent), because we cannot control the handling and application.



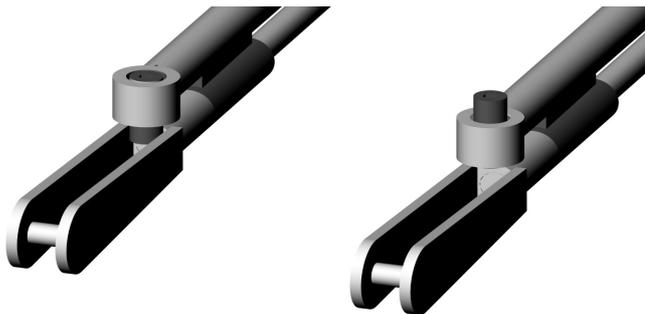
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## 1. Assembly

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The center of gravity is measured at the root rib, 60-70mm behind the nasal strip and is predetermined with the motor-snout.

First, holes for the outputs of the receiver antenna/antennas must be installed. The receiver is inserted into the wingunit. And should be mounted as far back as possible to have enough space for the motor-snout plugs and cables. The semi-automatic rudder connections facilitate the connection of elevator and rudder. When the fuselage is set, the rods are pushed onto the glass fibre rods. The grub screw locks (Left image) when you turn it on or opens ( right image) when turnig out. The technique requires some practice.



The Assembly before flying is carried out in the following way:

1. Put on the elevator wings.
2. Check that the grub screws of the rudder connections are open. Fix the rods and push them with the fuselage.
3. By moving the elevator and rudder Manually push the linkage to the stop and use the grub screw to lock.
4. Fix the fuselage screw (do not tighten) check the correct position of the tail section by looking over the main wing section, then tighten the screw.
5. Connect the nose, attach it and screw it tightly.



## 2. Motor Unit

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The e-nose has the following components installed.

- Hacker A20 XL
- Speed Controller YEP 30Ah
- Nanotech Lipo 1000mAh 11.1V max.40C
- Aeoronaut Cam Carbon 8x7"
- Femo `Versatzmitnehmer and Spinner`

Please observe the operating and maintenance instructions of the respective manufacturer.

The speed controller with BEC is already programmed.

Before inserting the Lipo, hold the receiver cable in the flight direction above and insert the Lipo, then plug it in and fully push it up to the light stop. Do not push the receiver cable. Only when the lipo is in the correct position can the nose be easily and without any effort.

The Apus is ideal for the `Flitschen`. If necessary, the `Flitschen`-hook is screwed into the thread in the front part of the glider's nose. Tighten the screwing of the nose and tail tightly. Now the Apus can be raised on the rubber. The start is with ailerons on speed position. At the first start-up attempts should be started with a slightly drawn elevator.



### 3. Rudder Settings and Servos

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All servos are already installed in Femo flight models. The main wing rudders are guided by RDS systems. The entire deflection is inside. In case of a servo damage this can be exchanged via a prepared servo cover!

Please reduce the servo at your control first, then set the middle position. Then raise the servo again to get the necessary rudder swings. In order not to burden the servo unnecessarily, we recommend to prevent servo movements starting from the rudder during transport and storage. Our area scissors are ideal for this purpose. In the current versions, KSTX08 v 3.0 is installed these servos can be directly be operated with 2s lipos.

When using the e-nose and the nose of the glider, it is advisable to create two model memories. Since the centre of gravity is not 100% identical due to the nasal change.

#### **Settings**

+ means "flap/rudder Down"

- means "flap/rudder up"

ELEV = Elevator

AILE = Aileron

RUDD = Rudder

#### **Rashes max.:**

AILE: -12/+6 (measured outside)

ELEV: -5/+5

RUDD: -12/+12

ELEV neutral: parallel to the hull

#### **Speed:**

AILE: -1,5mm

Snapflap AILE: +2,5mm

#### **Thermal:**

AILE:+1,5mm

#### **Landing configuration:**

QRAILÖE: -12mm

ELEV: -2mm



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#### **4. Operation:**

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The flight model is to be operated on a suitable flight ground. In order to ensure safe operation, pre-flight inspection is to be carried out before each flight.

The following points should be checked and fulfilled:

1. Correct assembly.
2. Fixed seat of all components.
3. All rudders are free-of-charge.
4. Correct model memory and rudder occupancy.
5. Correct center of gravity.
6. Power supply sufficient.

#### **5. Cleaning and care:**

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In order not to damage the surfaces, aggressive detergents such as acetone should not be used. Alcohol or commercial vehicle paint cleaning and care products are suitable. The carbon fiber surface is temperature insensitive to 90 °c, however it is recommended to protect the model from direct sunlight as the model can heat up very strongly and the electronics can get damaged.