

**45 Class**

*2-cycle engine*

**70 Class**

*4-cycle engine*

Or Electric equivalent

# FOCKE-WULF FW - 190A

## RADIO CONTROL MODEL

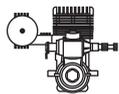


VQA0450L



VQA044G/Y

## INSTRUCTION MANUAL



46~50  
(7.45cc)



5~6

Wingspan approx.

59 in.  
(1500mm)



60~70  
(11.5cc)



6 lb.  
(2700g)

Fuselage length approx

43 in.  
(1090mm)

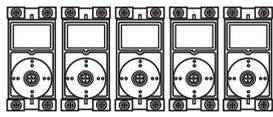
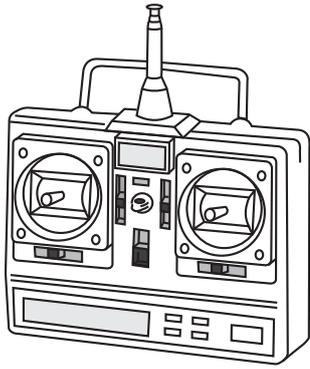
**Warning:** This radio control model is not a toy. If modified or flown carelessly it could go out of control and cause serious bodily injury or property damage.

Before flying your airplane, ensure the air field is spacious enough.

Always fly it outdoors in safe areas with no debris or obstacles.



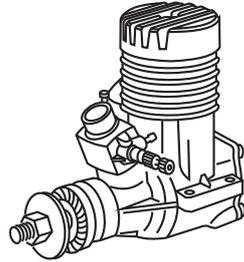
## REQUIRED FOR OPERATION (Purchase separately)



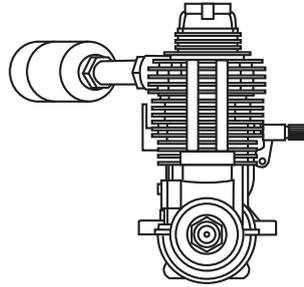
Minimum 5 channel radio for airplane with 5 servos  
 .Motor control x1 .Aileron x2  
 .Elevator x1 .Rudder x1



10.5x6 for .40 - 2 cycle engine  
 11x6 for .46 - 2 cycle engine  
 12x6 for .60 - 4 cycle engine  
 12x7 for .70 - 4 cycle engine



.46 ~ .50 - 2 cycle

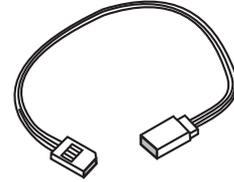


.60 ~ .70 - 4 cycle

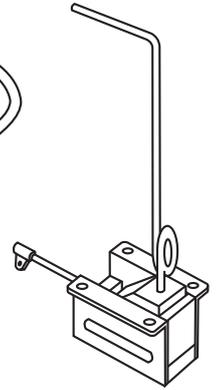


Silicone tube

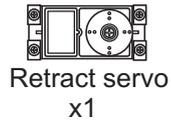
Extension for aileron servo, retract servo and power pack



Linkage Stopper x2 (for retract servo)



Retract landing gear  
 VQAR04 - 160224



Retract servo x1

## GLUE (Purchase separately)



Silicon sealer

Cyanoacrylate Glue

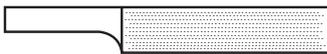


Epoxy Glue ( 5 minute type)  
 Epoxy Glue (30 minute type)

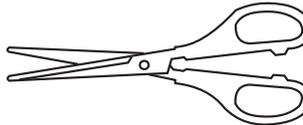
## TOLLS REQUIRED (Purchase separately)

Hobby knife 

Needle nose Pliers 

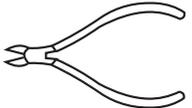
Sander 

Phillip screw driver 

Scissors 

Hex Wrench 

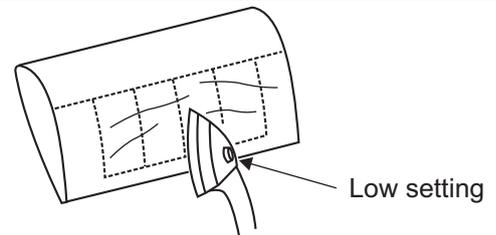
Awl 

Wire Cutters 

Masking tape - Straight Edged Ruler - Pen or pencil - Rubbing alcohol - Drill and Assorted Drill Bits

The pre-covered film on ARF kit may wrinkle due to variations of temperature. Smooth out as explained right.

\* Use an iron or heat gun. Start as low setting. Increase the setting if necessary. If it is too high, you may damage the film



Symbols used throughout this instruction manual, comprise:

 Drill holes using the stated size of drill (in this case 1.5 mm Ø)

 Take particular care here

 Hatched-in areas: remove covering film carefully

 Check during assembly that these parts move freely, without binding

 Use epoxy glue

 Apply cyano glue

 Assemble left and right sides the same way.

 Not included. These parts must be purchased separately

Read through the manual before you begin, so you will have an overall idea of what to do.

# 1- Retract landing gear / Fahwerk

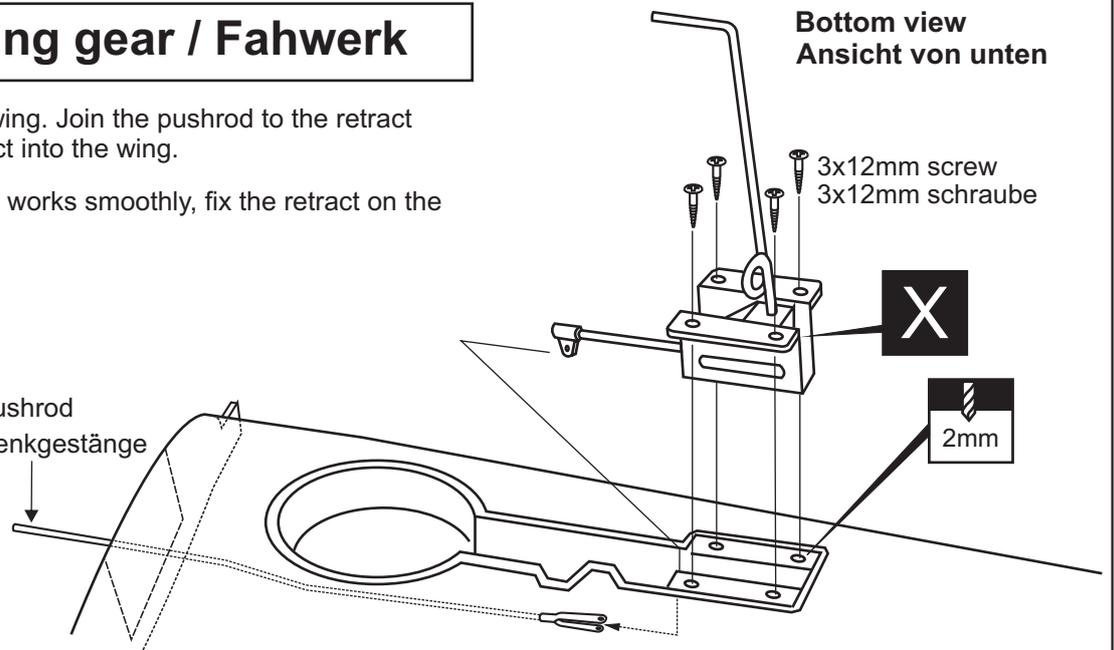
Trial fit the push rod into the wing. Join the pushrod to the retract gear arm and trial fit the retract into the wing.

After checking that the retract works smoothly, fix the retract on the wing with 3x12mm screws

**L/R**

Retract pushrod  
Fahrwerkenlenkgestänge

Steel clevis	.....2
3x12mm screw	.....8



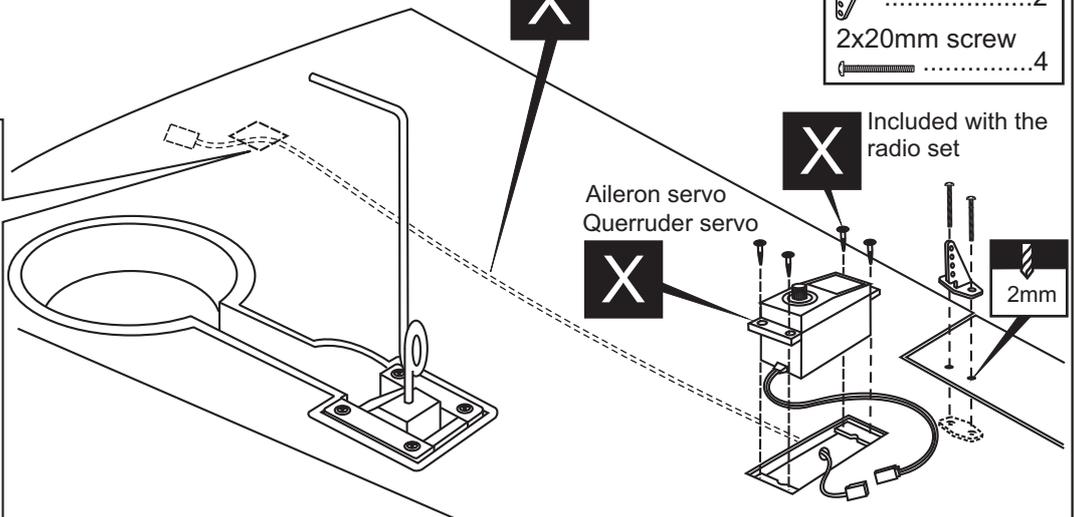
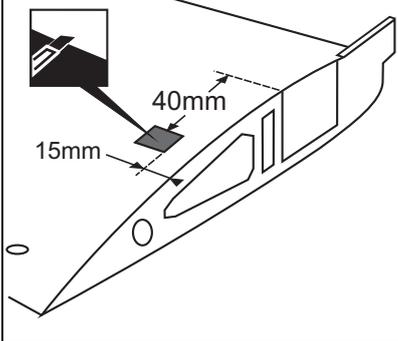
# 2- Aileron servo / Querruder servo

Bottom view / Ansicht von unten

Aileron extension cord  
Servoverlängerungskabel

Plastic control horn	.....2
2x20mm screw	.....4

Top view / Ansicht von Oben



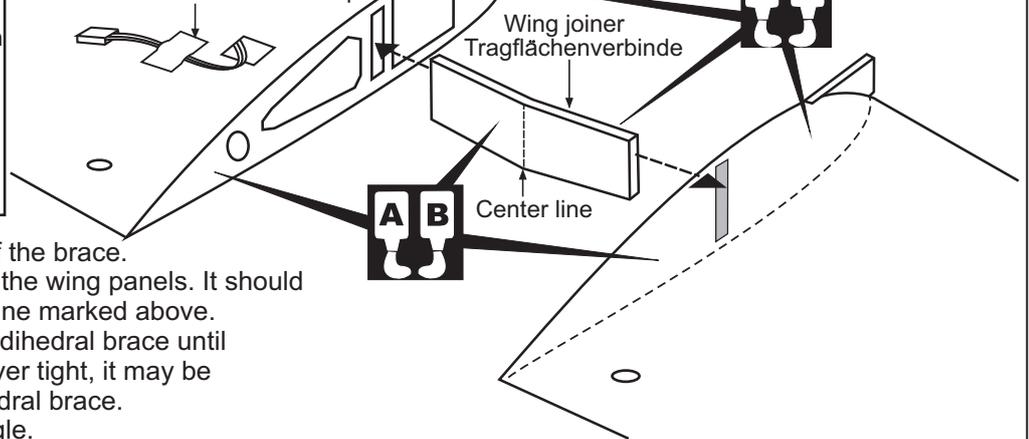
# 3- Joining the wing / Fläche

Top view / Ansicht von Oben

Use epoxy glue to bury the opening  
Nehmen Sie Epoxykleber, um die Tragflächen fest miteinander zu Verbinden und streifen Sie den herausquellenden Kleber nach dem Verbinden mit einem fusselfreien Tuch SOFORT ab!



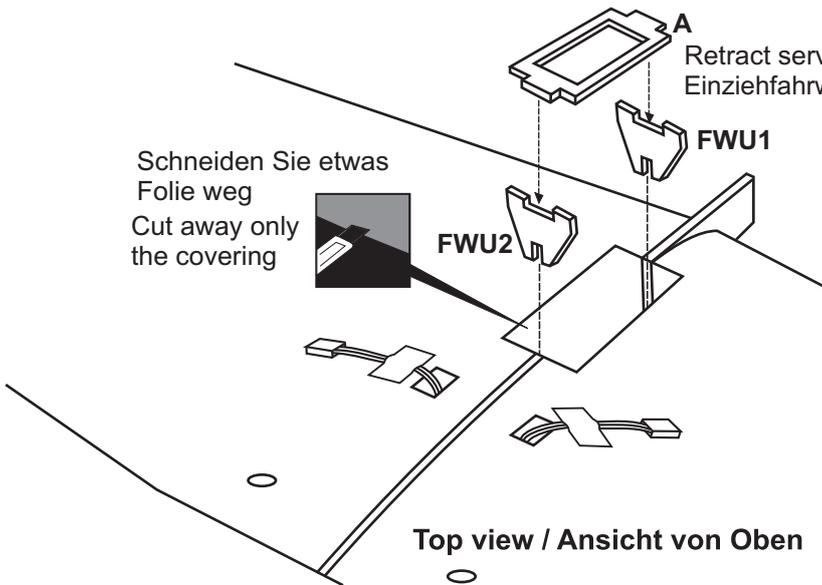
Secure one end of the aileron extension cord with adhesive tape



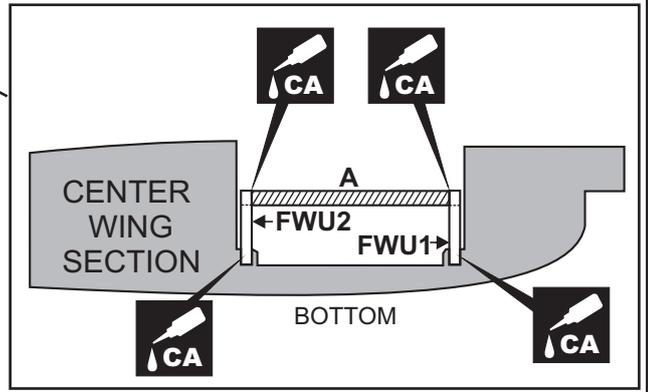
- 1- Using a pencil, mark the center of the brace.
- 2- Trial fit the wing joiner into one of the wing panels. It should insert smoothly up to the center line marked above.
- 3- Slide the other wing half onto the dihedral brace until the wing panel meet. If the fit is over tight, it may be necessary to lightly sand the dihedral brace.
- 4- Check for the correct dihedral angle.
- 5- Mix approximately 30 minute epoxy and apply a generous amount of epoxy into the wing joiner cavity of one wing half.
- 6- Coat one half of the dihedral brace with epoxy up to the center line. Install the epoxy-coated side of the dihedral brace into the wing joiner cavity up to the center line, marking sure that the "V" of the dihedral brace is positioned correctly
- 7- Do the same way with the other wing half.
- 8- Carefully slide the wing halves together, ensuring that they are accurately aligned. Firmly press the two halves together, allowing the excess epoxy to run out. Clear off the excess epoxy.

## 4- Servo mount / Servohalterung

Schneiden Sie etwas Folie weg  
Cut away only the covering

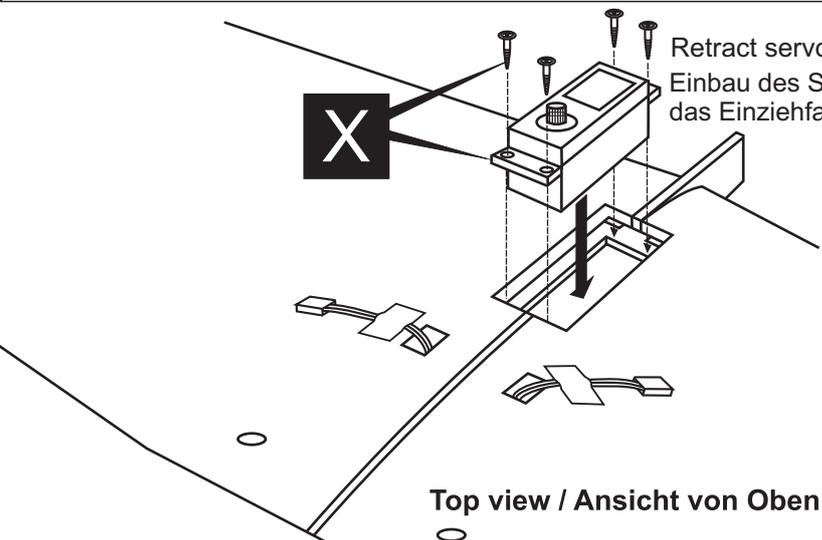


Retract servo mount (plywood A,B,C)  
Einziehfahrwerk servohalterung

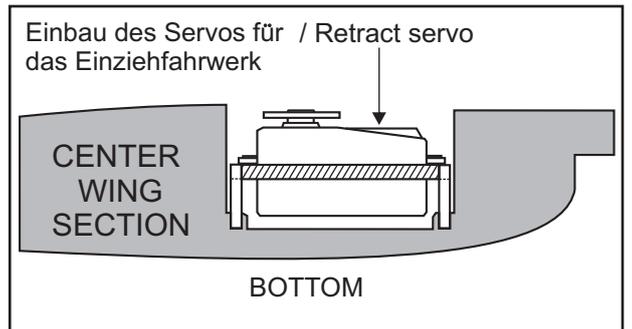


## 5- Retract servo / Einziehfahrwerk servo

Install the retract servo onto the retract servo mount and secure it in place with four screw (included with radio set).



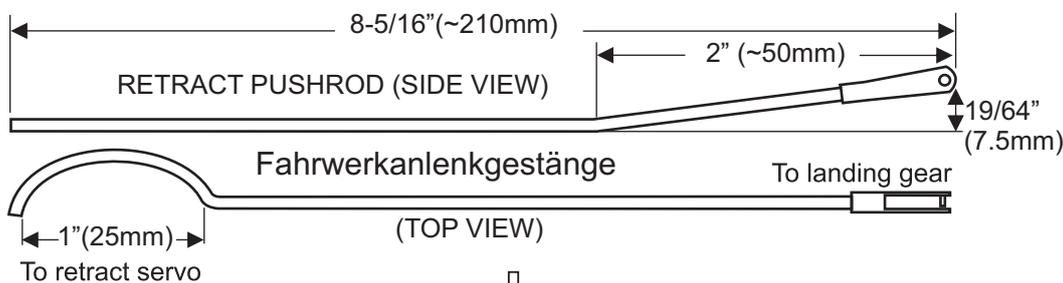
Retract servo  
Einbau des Servos für  
das Einziehfahrwerk



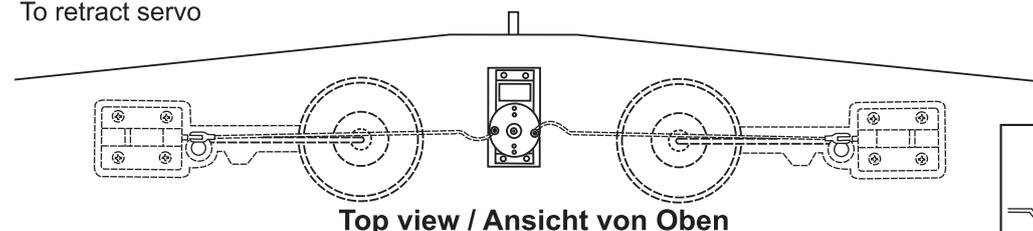
Einbau des Servos für / Retract servo  
das Einziehfahrwerk

## 6- Linkages / Ruderanlenkung

Instruction how to build in the retracting landing gear  
(This Gear is OPTIONAL)



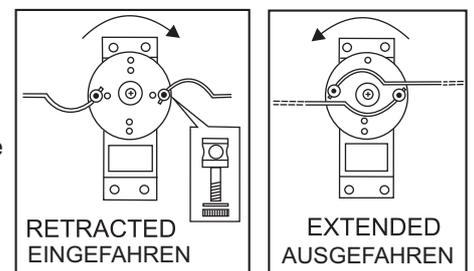
Einbauhilfe bei Anbringen eines  
Einziehfahrwerks (Optional  
bestellbar; nicht im Baukasten  
enthalten!)



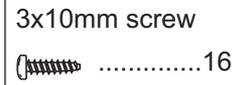
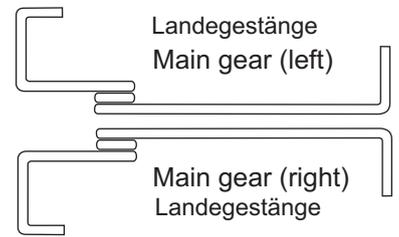
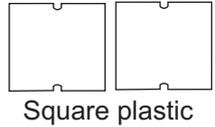
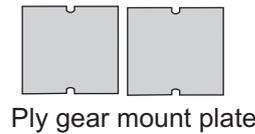
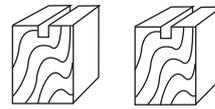
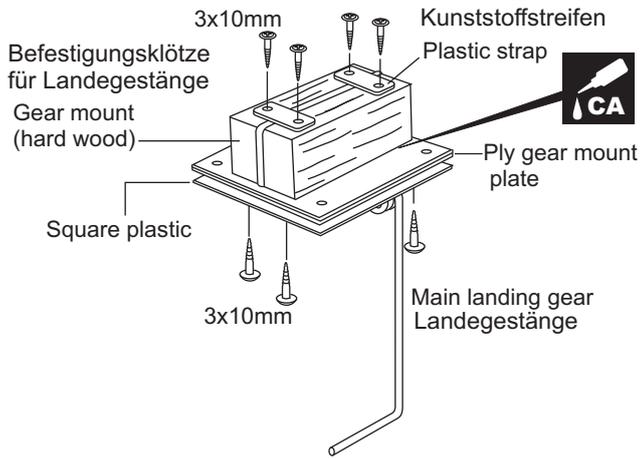
Top view / Ansicht von Oben

With the retract and retract servo in the retracted position, mark the position where each of the pushrod will attach to the servo arm, a small piece of masking tape works well for this. Cut off the excess length each rod.

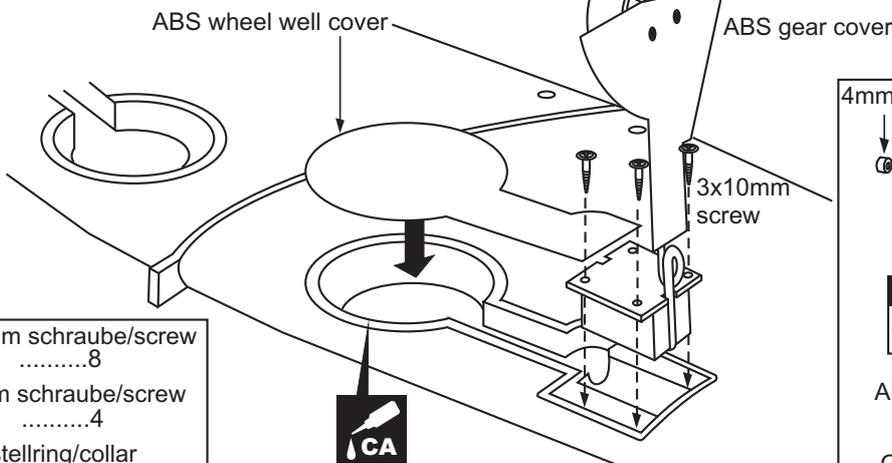
Link the servo and retract gear arm with push rod. Be sure to adjust the stroke so that the landing gear locks in both up and down position.



## 7- Fixed gear / Landegestänge

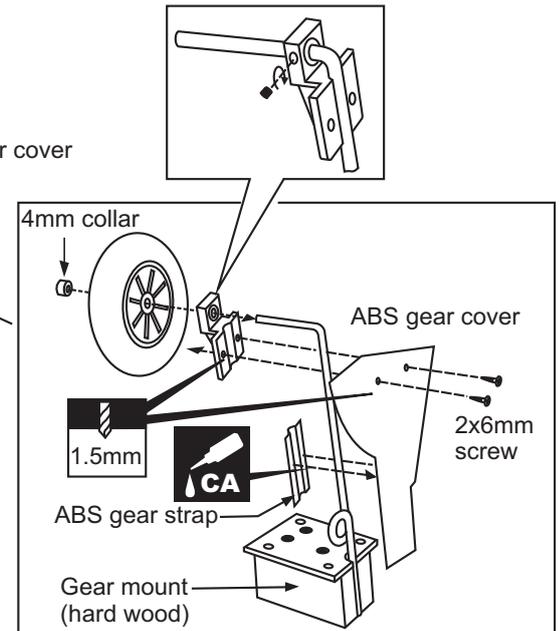


## 8- Fixed gear / Landegestänge



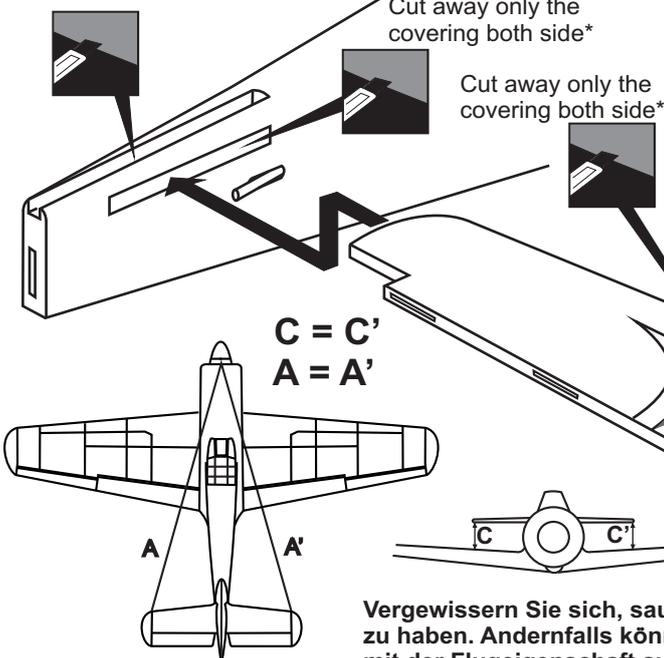
- 3x10mm schraube/screw .....8
- 2x6mm schraube/screw .....4
- 4mm stelling/collar .....2

Bottom view / Ansicht von unten



## 9- Horizontal stabilizer / Höhenruder

Schneiden Sie etwas Folie weg  
Cut away only the covering\*



1-Trial fit the horizontal stabilizer in place . Check the alignment of the horizontal stabilizer. When you are satisfied with the alignment, use a pencil to trace around the top and bottom of the stabilizer where it meets the fuselage.

2-Remove the horizontal stabilizer from the fuselage. Using the sharp hobby knife, carefully cut away the covering inside the lines which were marked above.

3-Spread epoxy (30 minute) onto the top and bottom of the horizontal stabilizer along the area where the covering was removed and to the fuselage where the horizontal stabilizer mounts.

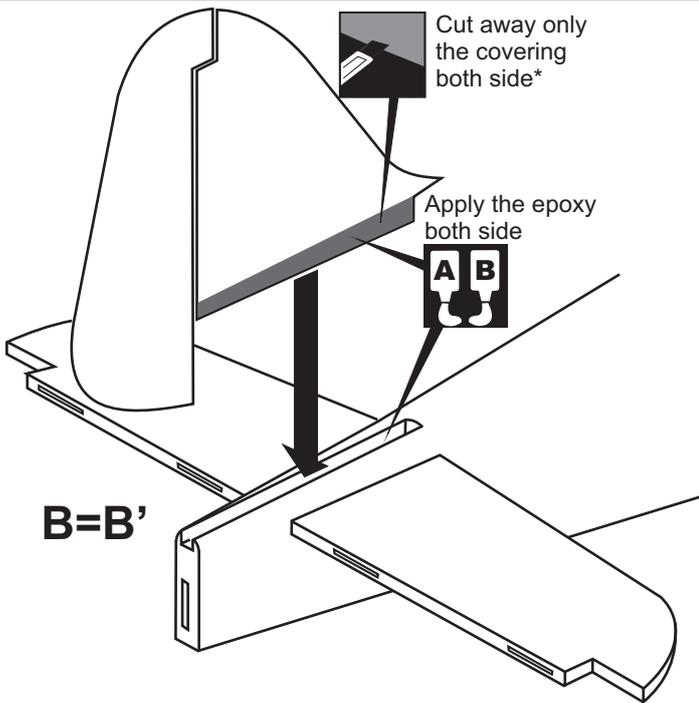
4-Install the horizontal stabilizer into the fuselage and adjust the alignment as described in step 1. Allow the epoxy to cure before proceeding to next step.

**Securely glue together. If coming off during flight, you lose control of your air plane!**

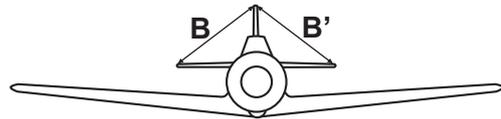
Vergewissern Sie sich, sauber geklebt zu haben. Andernfalls können Probleme mit der Flugeigenschaft auftreten!

**WARNING:** Please do not clean off the excess epoxy on the wing with strong solvent or pure alcohol, only use kerosene to keep the colour of your model not fade.

## 10- Vertical stabilizer / Höhenleitwerk



- 1-Trial fit the vertical stabilizer in place . Check the alignment of the vertical stabilizer. When you are satisfied with the alignment, use a pencil to trace around the right and left of the stabilizer where it meets the fuselage.
- 2-Remove the vertical stabilizer from the fuselage. Using the sharp hobby knife, carefully cut away the covering inside the lines which were marked above.
- 3-Spread epoxy (30 minute) onto the right and left and bottom of the vertical stabilizer along the area where the covering was removed and to the fuselage where the vertical stabilizer mounts.
- 4-Install the vertical stabilizer into the fuselage and adjust the alignment as described in step 1. Allow the epoxy to cure before proceeding to next step.

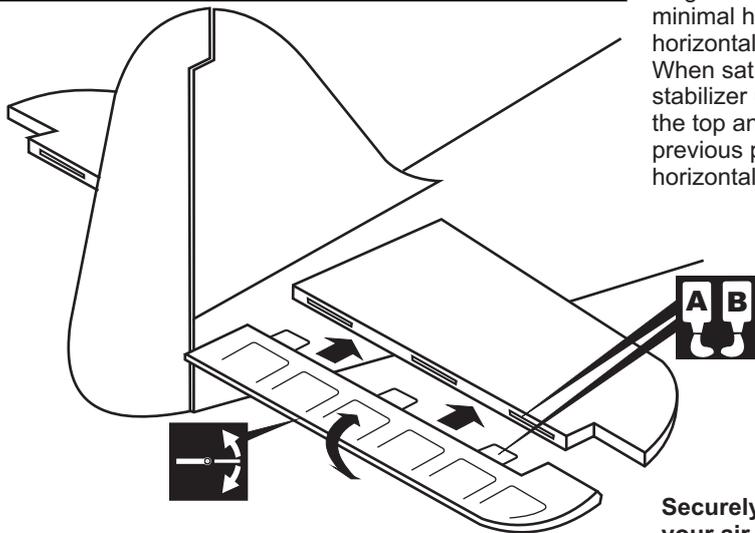


**Vergewissern Sie sich, sauber geklebt zu haben. Andernfalls können Probleme mit der Flugeigenschaft auftreten!**

**Securely glue together. If coming off during flight, you lose control of your air plane!**

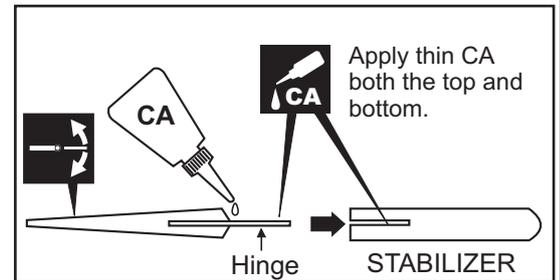
**\* WARNING: When removing any covering from the airframe, please ensure that you secure the cut edge with CA or similar cement. This will ensure the covering remain tight.**

## 11- Elevator / Höhenruder



Apply a thin layer of machine oil or petroleum jelly to only the pivot point of the hinges on the elevator, then push the elevator and its hinges into the hinge slots in the trailing edge of the horizontal stabilizer. There should be a minimal hinge gap and the end of the elevator should not rub against the horizontal stabilizer.

When satisfied with the and alignment, hinge the elevator to the horizontal stabilizer using 5 minute epoxy. Make sure to apply a thin layer of epoxy to the top and bottom of both hinges and to inside the hinge slots. Repeat the previous procedures to hinge the second elevator to the other side of the horizontal stabilizer.

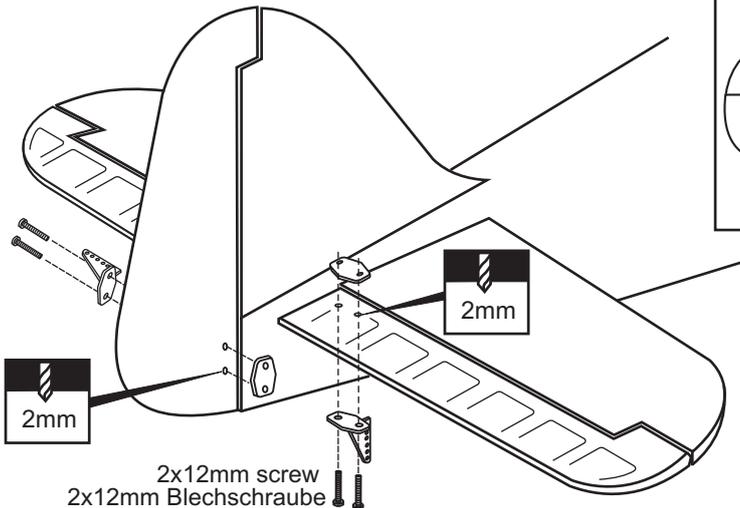


**Securely glue together. If coming off during flight, you lose control of your air plane!**

## 12- Control horn / Ruderhorn

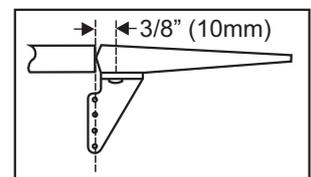
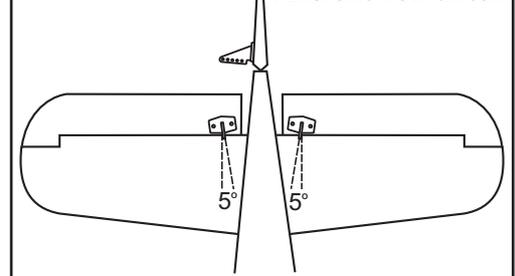
Plastic control horn

-  ..... 3
- 2x12mm screw
-  ..... 6



Bottom view

Ansicht von unten

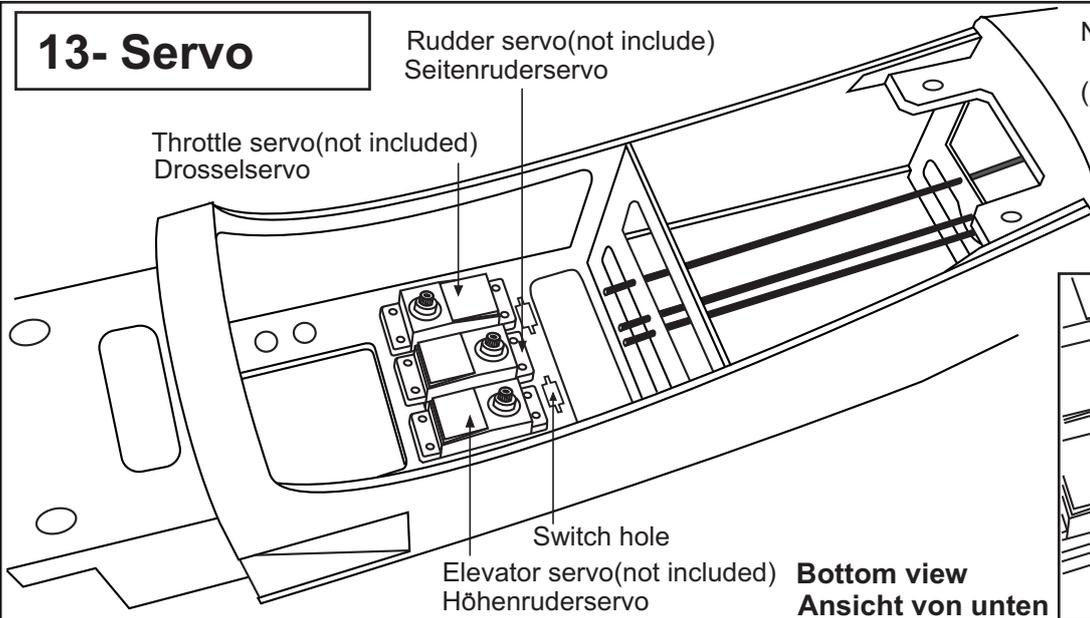


# 13- Servo

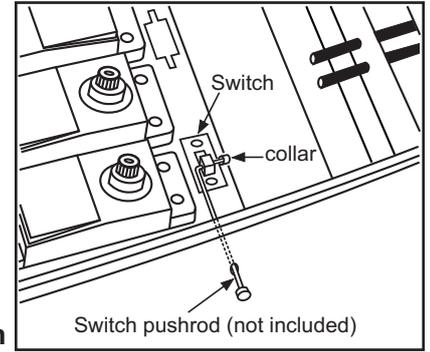
Rudder servo(not include)  
Seitenruderservo

Throttle servo(not included)  
Drosselservo

NOTE: Place of servos may be change depend of engine  
(Four-stroke or two-stroke engine)

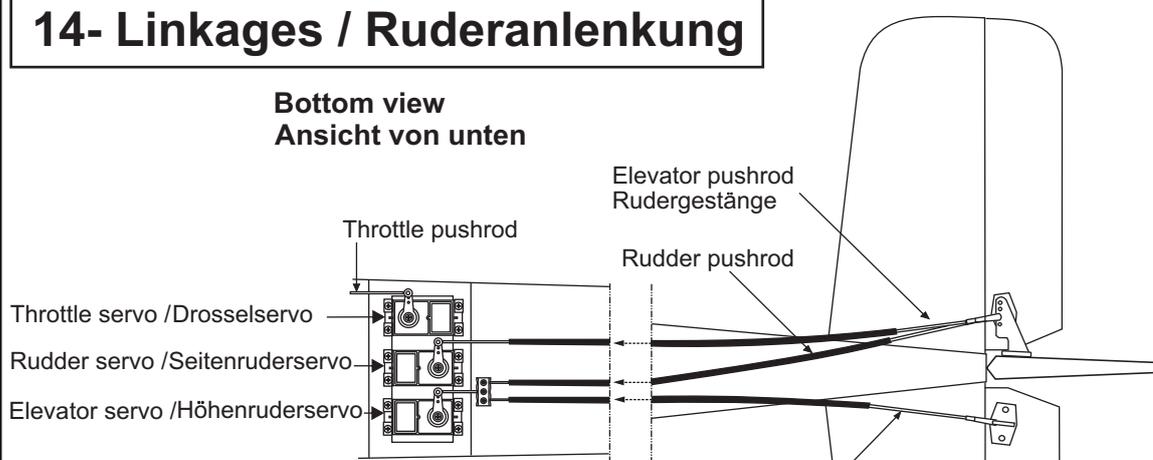


## Switch installation

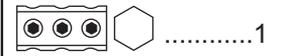


# 14- Linkages / Ruderanlenkung

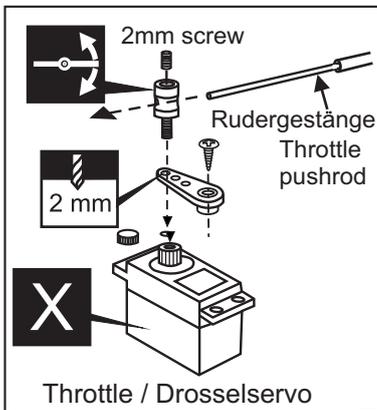
**Bottom view**  
**Ansicht von unten**



Connector  
Gestängeanschluss

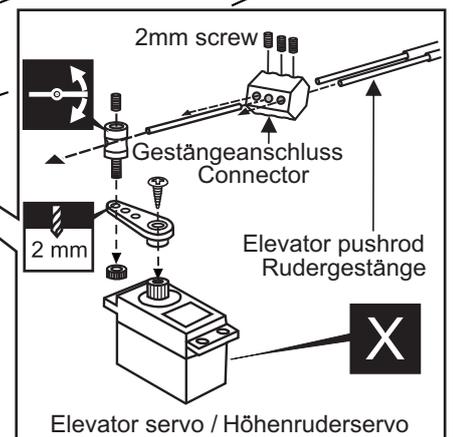


Connector  
Gestängeanschluss



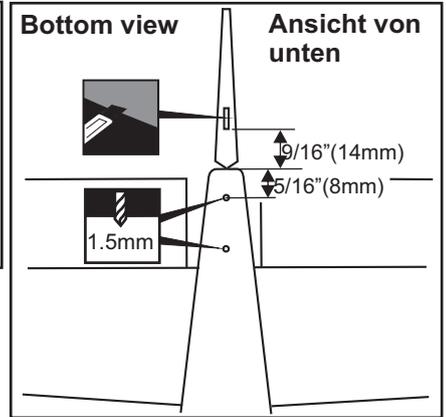
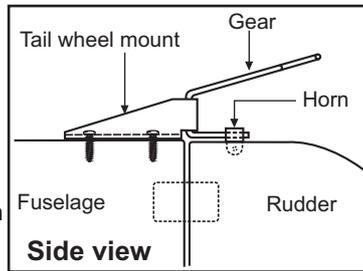
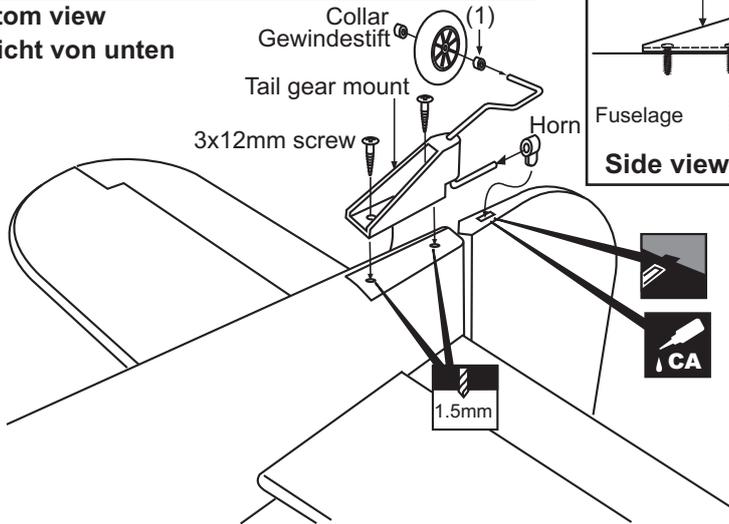
Elevator pushrod  
Rudergestänge

Rudder pushrod



# 15- Tail wheel / Spornrad

Bottom view  
Ansicht von unten

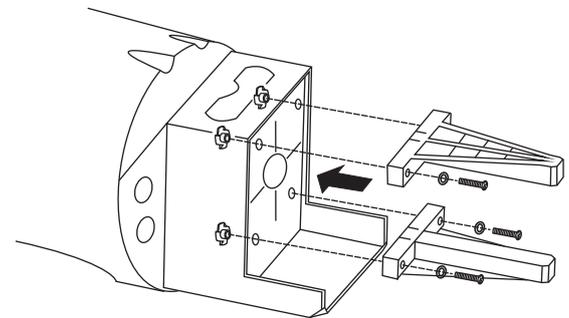
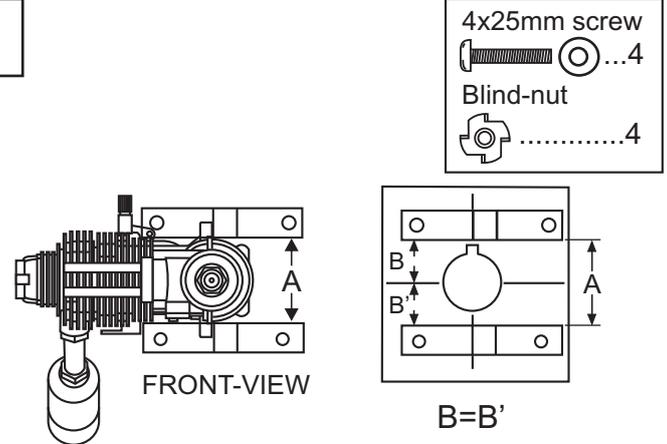
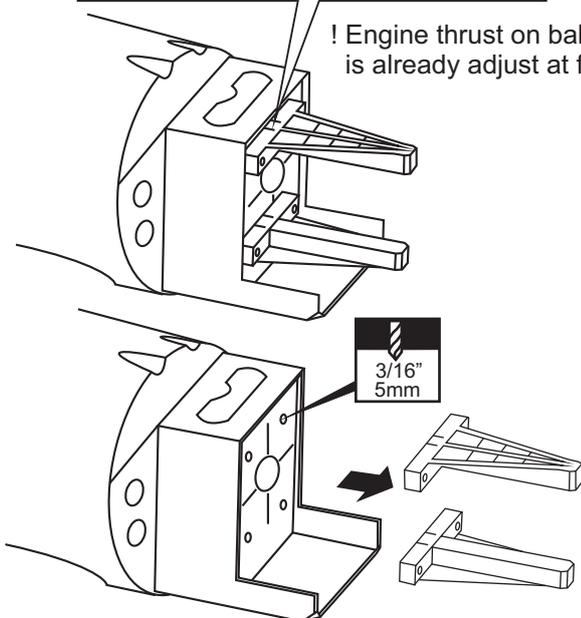


(1) Piece of fuel tube (not included)  
NOTE: Check the wheel turns freely.

# 16- Engine mount / Motorträger

! Align the mark on both engine mount beams with the mark on the fuselage

! Engine thrust on balk head is already adjust at factory

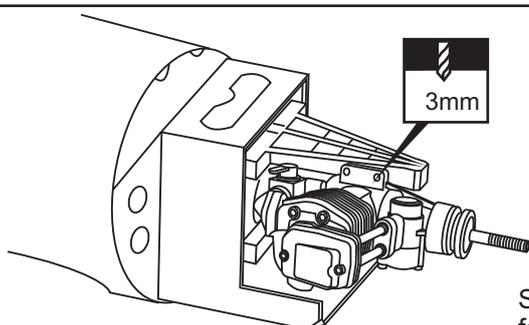


Attach the engine mount beams onto the fire-wall so the distance between of two engine mount beams is "A".  
Secure the engine mount beams onto the fire-wall with litter CA glue.  
Using a pencil or felt tipped pen, mark the fire wall where the four holes are to be drilled.  
Carefully remove the engine mount beams and drill a 3/16"(5mm) hole through the fire-wall at each of the four marks made above.  
Insert the blind-nut onto each of the four holes make above.  
Reposition the engine mount beams on to the fire-wall and secure them with four 4x25mm screw.

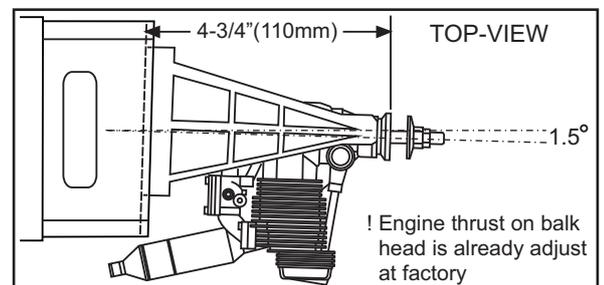
# 17- Engine / Motoreinbau

Position the engine onto the engine mount beams so the distance from the prop hub to the end of engine mount beams is 4-3/8" (110mm).

3x25mm screw  
...4  
.....4



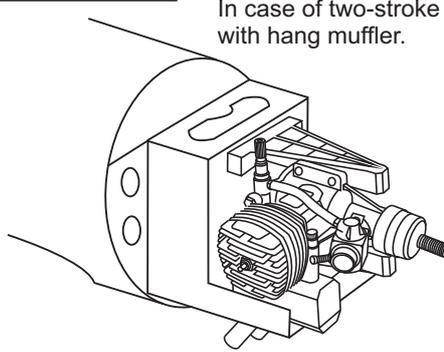
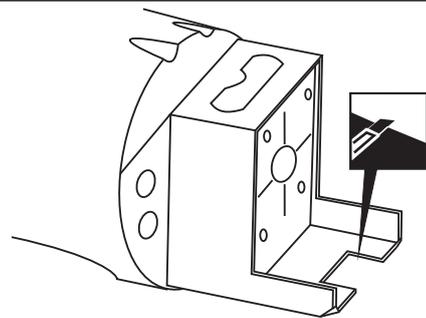
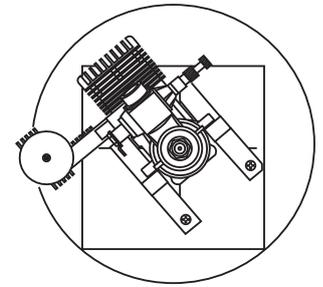
Secure the engine with four 3x20mm screw



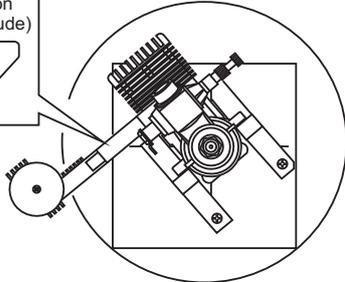
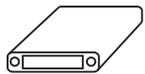
# 18- Engine / Motor 2-Takt

IN CASE OF TWO-STROKE ENGINE

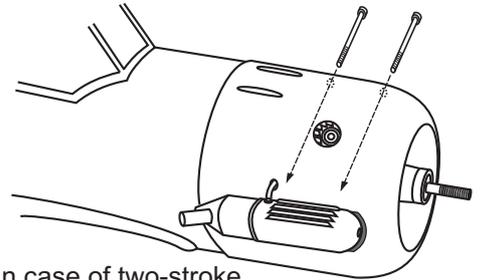
In case of two-stroke engine with hang muffler.



Silencer extension adaptor (not include)



In case of two-stroke engine with the silencer extension adapter.



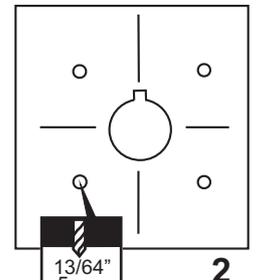
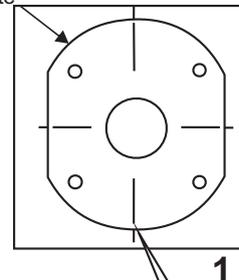
In case of two-stroke engine with side silencer.

Secure the engine with four 3x25mm screw

# 19- Electric motor/Elektromotor

Plywood motor mounting plate (2pcs)

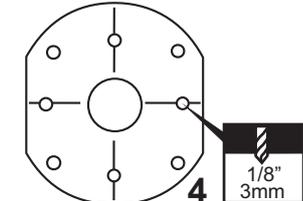
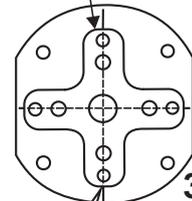
FRONT-VIEW



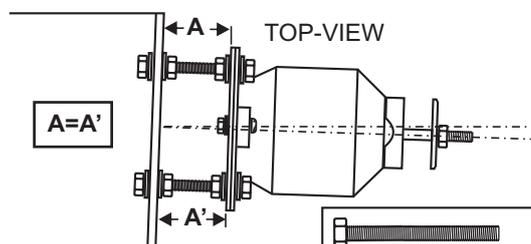
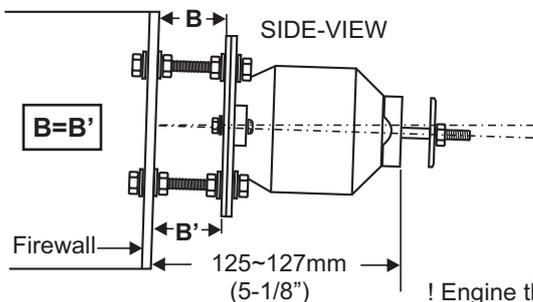
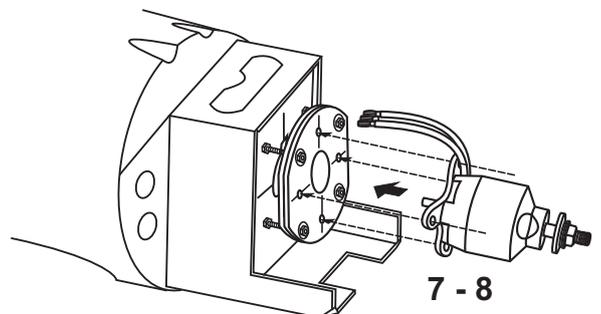
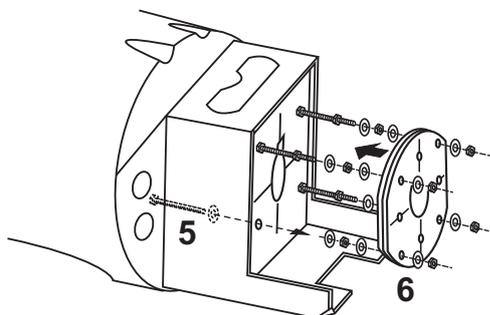
- Using a plywood motor mounting plate as a template, mark the fire wall where the four holes are to be drilled (1).
- Remove the plywood motor mounting plate and drill a 13/64"(5mm) hole through the fire-wall at each of the four marks marked (2).
- Using an aluminum motor mounting plate as a template, mark the plywood motor mounting plate where the four holes are to be drilled (3).
- Remove the aluminum motor mounting plate and drill a 1/8"(3mm) hole through the plywood at each of the four marks marked (4).
- Push the four 5x70mm bolts through the fire-wall as shown (5).
- Reposition the plywood motor mounting plate (2pcs) and secure it in place with eight 5mm nuts and washers (6).  
Note: B=B'(Side-view) and A=A'(Top-view)
- Attach the aluminum motor mounting plate on to the motor and secure it in place with four screws ( included with motor set) (7).
- Attach the motor on to the plywood motor mounting plate and secure it in place with four 3x15mm (1/8x19/32") screws(8).

! Align the mark on the plywood motor mount with the mark on the fuselage.

Aluminum motor mounting plate



! Align the mark on the plywood motor mount with the center lines on aluminum motor mount.

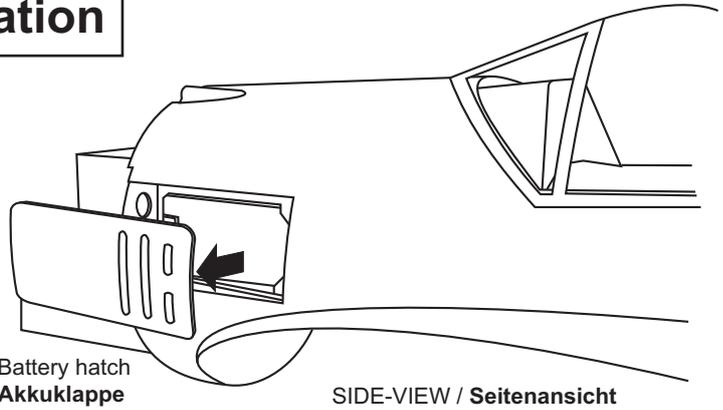
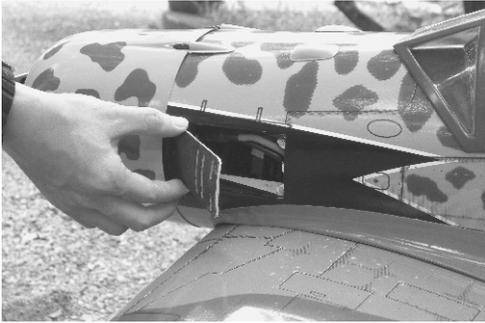


! Engine thrust on balk head is already adjust at factory

- 5x70mm.....4
- 5mm nut.....12
- 5mm washer...16
- 3mm screw/nut...4

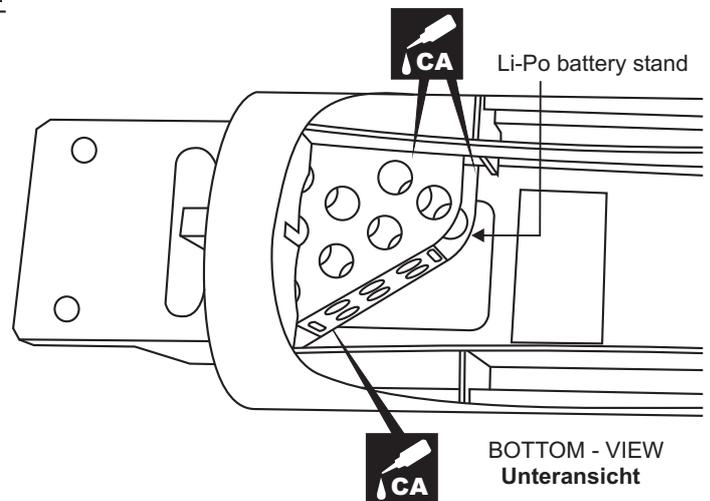
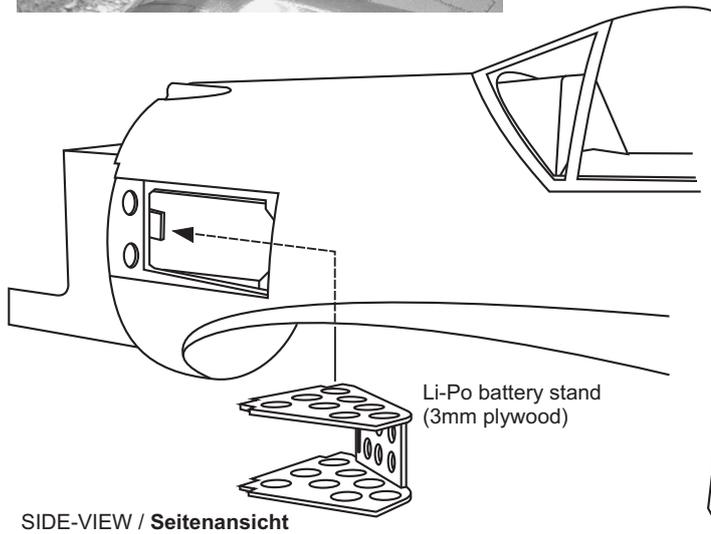
## 20- Li-Po battery stand installation

- 1** Remove the magnetic battery hatch out of the fuselage.

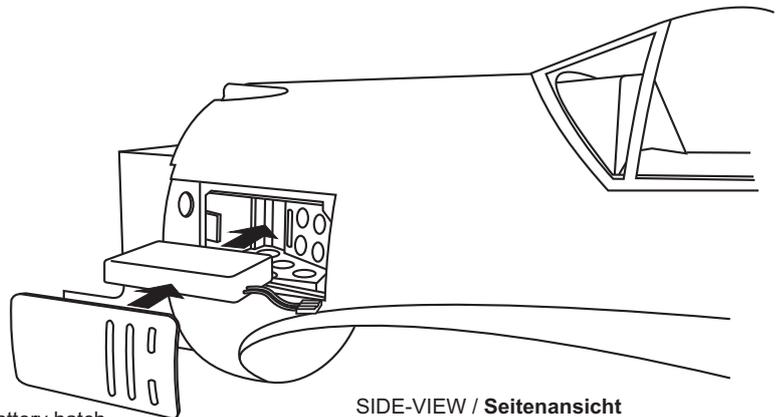


- 2** Put the battery stand into the fuselage as show (left).

Secure the battery stand to the fuselage using the CA glue (below).

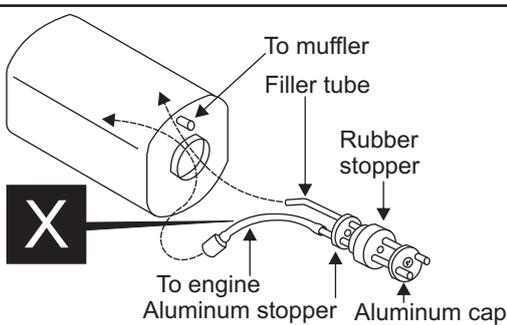


- 3** Install the Li-Po battery into the battery area to ensure that they will not shift during flight.

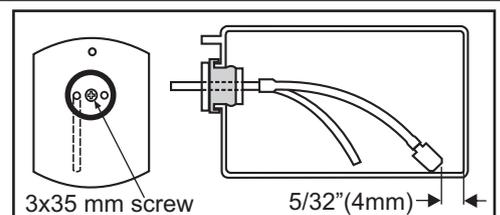
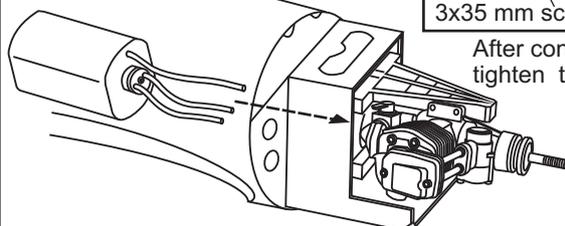


Again, put the magnetic battery hatch in place.

## 21- Fuel tank / Kraftstofftank



Push the fuel tank forward until there are no gaps between the tank and firewall.

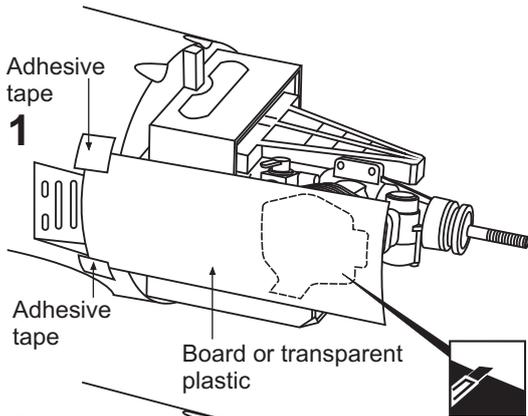


After confirming the direction . Insert and tighten the screw.

## 22- Cowling / Motorhaube

2.5x10mm  
screw

 .....4



1

Attach the board or transparent plastic on the side of the fuselage with the adhesive tape as show.

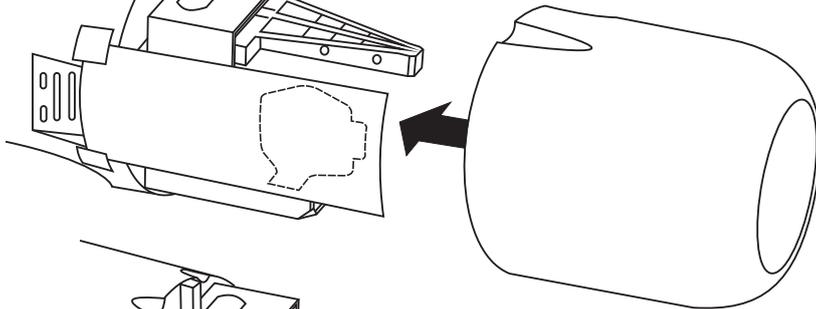
Using a pencil or felt tipped pen trace around the engine head where it meet the cowl. Cut the opening the board or transparent plastic for the engine head as marked above.

Remove the engine and insert the cowl onto the fuselage so the distance from the fire wall to the front of the cowl is 4-3/4"(110mm).

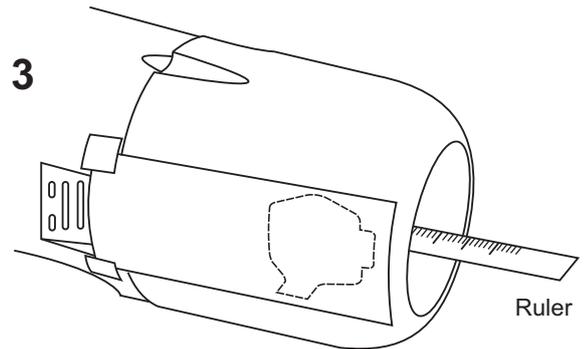
Using a pencil or felt tipped pen trace around the inside of the engine head hole on the board or the transparent plastic made in step 1. This mark will serve as the guides for cutting the engine head hole on the cowl in next step.

2

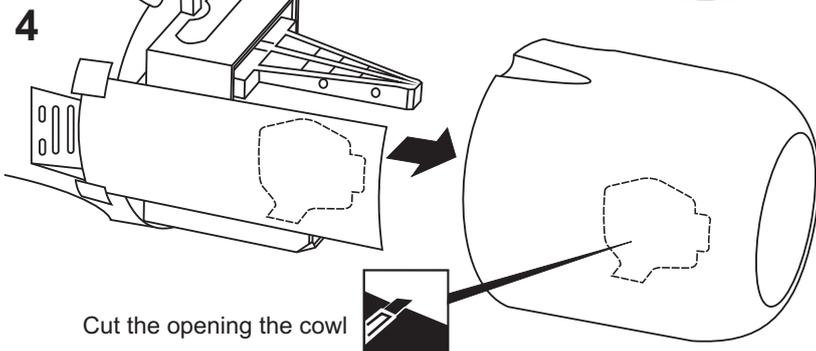
Cut the opening the board or the transparent plastic.



3

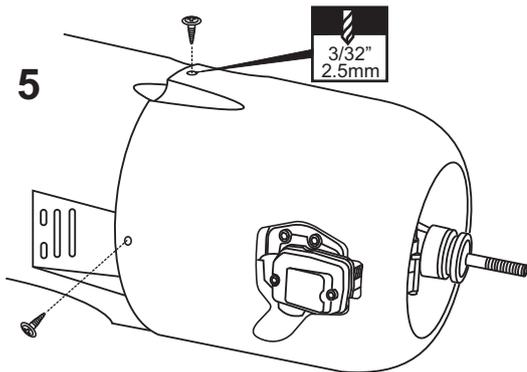


Ruler



Cut the opening the cowl

Remove the cowl from the fuselage and carefully cut the opening for the engine head through as marked above. Do the same way with the hole for needle-valve.



5

3/32"  
2.5mm

Reposition the engine onto the engine mount beams and secure it with four 3x25mm screw.

Again, insert the cowl onto the fuselage and secure it in place with four 2.5x10mm screw.

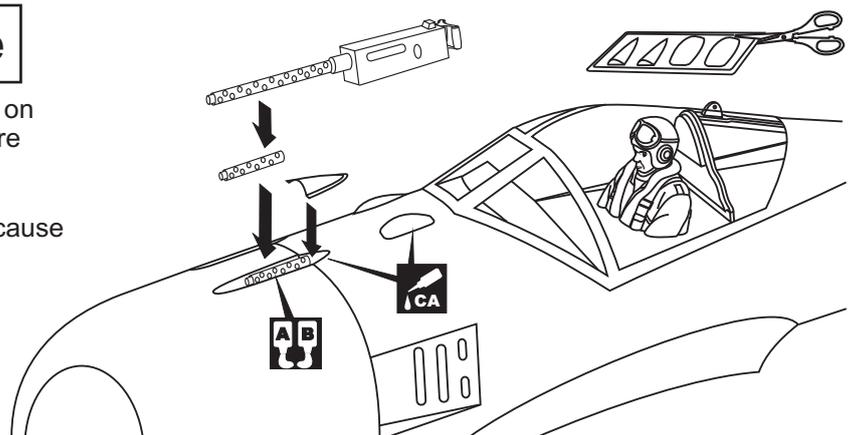
NOTE: Do the same way in case of two-stroke engine.

## 25- ABS parts / ABS Teile

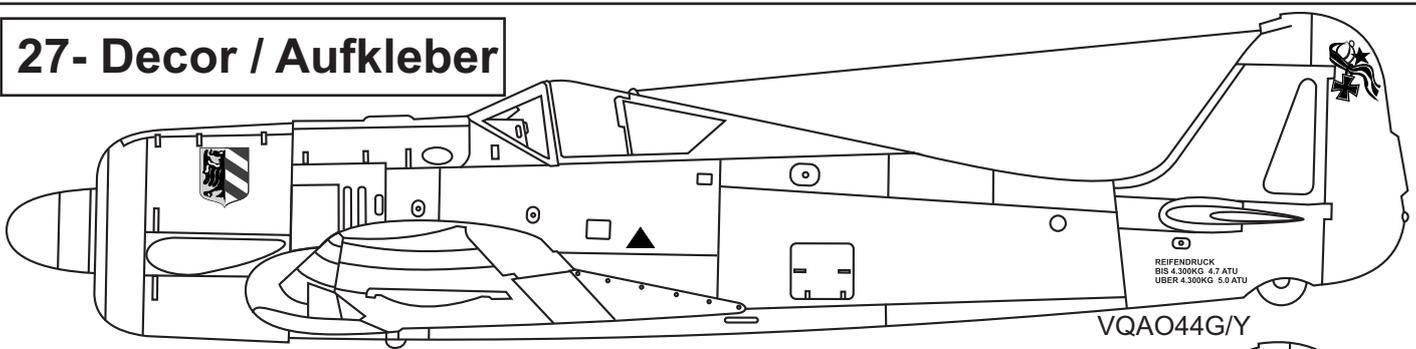
Use 150 grit sandpaper to "rough up" the surface on the bottom of the slots of cowl where the gun-barre meets the cowl.

Mix a small amount of 5minute epoxy to glue the gun-barres onto the cowl.(do not use CA glue because it will make the gun-barres and the cowl white).

Install the other gun-barres onto the leading edge of the wing.



## 27- Decor / Aufkleber



Note: Cut out the stickers and apply them in the proper area. Do not peel the backing paper off all at once.

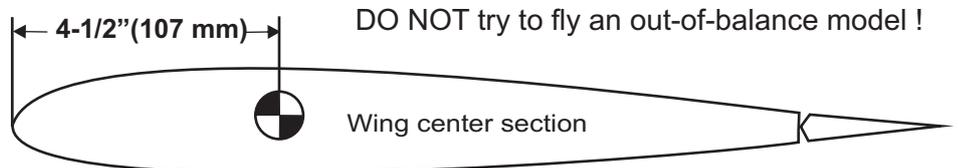
Peel off one corner of the backing and cut off with scissors. Arrange sticker on model and when satisfied adhere the corner without backing.

Carefully peel back the rest of the backing while at the same time adhering the rest of the sticker.

Try not to make air bubbles, if there are some, carefully puncture sticker (center of bubble) but not model surface with the tip of the knife or sharp pin and squeeze out the air. At curves stretch sticker and apply a little heat so that no creases occur. Cut off the excess that is produced.



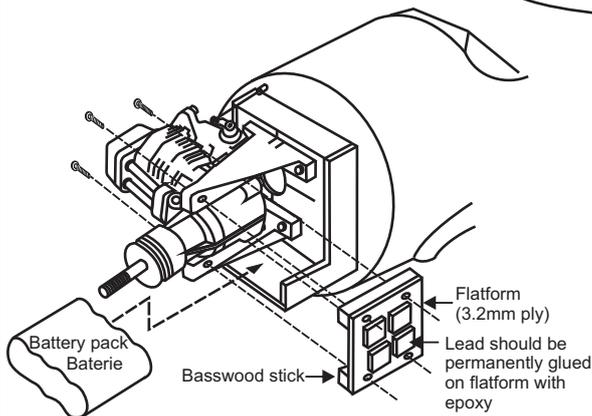
## 28- Balance Schwerpunkt



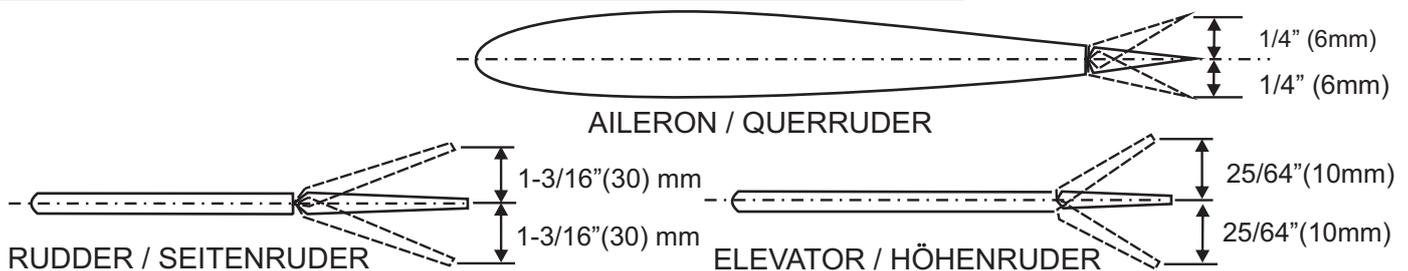
To get the correct C.G., Several strips of lead weight were required in the nose of this model .  
IMPORTANT: Recheck the C.G. After the weight has been installed.

**Securely install the battery, ensuring it will not come loose or rattle during flights.**

**Setzen Sie den Empfänger und das Akku-Pack fest ein und gehen Sie sicher, dass sich diese während des Fluges nicht lösen oder wackeln.**



## 29- Control surface / Ruderausschläge



IMPORTANT: Flying your model at these throws will provide you with the greatest chance for successful first flights. If, after you have become accustomed to the way the Fw-190 flies, you would like to change the throws to suit your taste that is fine. However, too much control throw could make the model difficult to control, so remember, "more is not always better".

### WARNING

Do not put in a large-than recommended engine. A bigger engine does not necessarily mean better performance.

**IMPORTANT:** Please do not clean your model with pure alcohol, only use liquid soap with water or use glass cleaner to clean on surface of your model to keep the colour not fade.

All details are subject to change without notice !

**Technische Änderungen und Irrtümer vorbehalten !**