

XENO

vorgesehen für den MULTIPLEX
Brushless-Antrieb # 33 2654
oder Tuning # 33 2655



BK / KIT Xeno # 214239

MULTIPLEX®

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Ersatzteile

Replacement parts

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D Sicherheitshinweise

Prüfen Sie vor jedem Start den festen Sitz des Motors und der Luftschraube - insbesondere nach dem Transport, härteren Landungen sowie Abstürzen. Prüfen Sie ebenfalls vor jedem Start den festen Sitz und die richtige Position der Tragflächen.

Akku erst einstecken, wenn Ihr Sender eingeschaltet ist und Sie sicher sind, dass das Bedienelement für die Motorsteuerung auf "AUS" steht.

Im startbereiten Zustand nicht in den Bereich der Luftschraube greifen.
Vorsicht in der Luftschraubendrehebene - auch Zuschauer zur Seite bitten!

Zwischen den Flügeln die Motortemperatur durch vorsichtige Fingerprobe prüfen und vor einem Neustart den Motor ausreichend abkühlen lassen. Die Temperatur ist richtig, wenn Sie den Motor problemlos berühren können. Insbesondere bei hohen Außentemperaturen kann dieses bis zu 15 Minuten dauern.

Denken Sie immer daran: Niemals auf Personen und Tiere zufliegen.

F Conseils de sécurité

Avant chaque décollage, vérifiez la fixation du moteur et de l'hélice, notamment après le transport, après les atterrissages violents et après un "Crash". Vérifiez également, avant chaque décollage la fixation ainsi que le positionnement de l'aile.

Ne branchez l'accu de propulsion que si vous êtes sûr que votre émetteur est allumé et que l'élément de commande moteur est en position "ARRÊT".

Ne mettez pas vos doigts dans l'hélice! Attention à la mise en marche, demandez également aux spectateurs de reculer.

Entre deux vols, vérifiez en posant un doigt dessus, la température du moteur, laissezle refroidir suffisamment avant le prochain décollage. La température est correcte si vous pouvez maintenir votre doigt ou votre main sur le moteur. Le temps de refroidissement peut varier jusqu'à 15 minutes s'il fait particulièrement chaud.

Pensez-y toujours: ne volez jamais vers ou au-dessus des personnes ou des animaux.

GB Safety notes

Before every flight check that the motor and propeller are in place and secure - especially after transporting the model, and after hard landings and crashes. Check also that the wing is correctly located and firmly secured before each flight.

Don't plug in the battery until you have switched on the transmitter, and you are sure that the motor control on the transmitter is set to "OFF".

When the model is switched on, ready to fly, take care not to touch the propeller. Keep well clear of the propeller disc too, and ask spectators to stay back.

Allow the motor to cool down after each flight. You can check this by carefully touching the motor case with your finger. The temperature is correct when you can hold your finger on the case without any problem. On hot days this may take up to 15 minutes.

Please keep in mind at all times: don't fly towards people or animals.

I Note di sicurezza

Prima di ogni decollo controllare che il motore e la eliche siano fissati stabilmente - specialmente dopo il trasporto, atterraggi duri e se il modello è precipitato. Controllare prima del decollo anche il fissaggio e la posizione corretta delle ali.

Collegare la batteria solo quando la radio è inserita ed il comando del motore è sicuramente in posizione "SPENTO".

Prima del decollo non avvicinarsi al campo di rotazione della eliche. Attenzione alla eliche in movimento - pregare che eventuali spettatori si portino alla dovuta distanza di sicurezza!

Tra un volo e l'altro controllare cautamente con le dita la temperatura del motore e farli raffreddare sufficientemente prima di ogni nuovo decollo. La temperatura è giusta se si possono toccare senza problemi. Specialmente con una temperatura esterna alta questo può durare fino a 15 minuti.

Fare attenzione: Non volare mai nella direzione di persone ed animali.

E Advertencias de seguridad

Compruebe antes de cada despegue que el motor y la hélice estén fuertemente sujetados, sobretodo después de haberlo transportado, de aterrizajes más fuertes así como después de una caída. Compruebe igualmente antes de cada despegue que las alas estén bien sujetas y bien colocadas.

Conectar la batería, cuando la emisora esté encendida y Usted esté seguro que el elemento de mando para el motor esté en "OFF".

No meter la mano en la zona inmediata a la hélice cuando el avión esté a punto de despegar. ¡Cuidado con la zona de la hélice! ¡Pedir a los espectadores que se aparten!

Entre los vuelos hay que comprobar cuidadosamente la temperatura del motor con el dedo y dejar que el motor se enfríe antes de volver a despegar. La temperatura es correcta, si puede tocar el motor sin problemas. Sobretudo en el caso de temperaturas del ambiente muy altas, esto puede tardar unos 15 minutos.

Recuerde: No volar nunca hacia personas o animales.

Examine your kit carefully!

MULTIPLEX model kits are subject to constant quality checks throughout the production process, and we sincerely hope that you are completely satisfied with the contents of your kit. However, we do ask you to check all the parts (referring to the Parts List) **before** you start construction, as **we cannot exchange components which you have already modified**. If you find any part is not acceptable, we will readily correct or exchange it once we have examined it. Just send the component, with adequate postage pre-paid, to our Model Department; please be **sure** to include the purchase receipt and the **returns form** (included in the kit) **completed in full**. We are constantly working on improving our models, and for this reason we must reserve the right to change the kit contents in terms of shape or dimensions of parts, technology, materials and fittings, without prior notification. Please understand that we cannot entertain claims against us if the kit contents do not agree in every respect with the instructions and the illustrations.

Caution!

Radio-controlled models, and especially model aircraft, are by no means playthings. Building and operating them safely requires a certain level of technical competence and manual skill, together with discipline and a responsible attitude at the flying field. Errors and carelessness in building and flying the model can result in serious personal injury and damage to property. Since we, as manufacturers, have no control over the construction, maintenance and operation of our products, we are obliged to take this opportunity to point out these hazards and to emphasise your personal responsibility.

Additional items required for the "Xeno":

MULTIPLEX radio control components for the Xeno:

	RX-6-SYNTH IPD receiver	35 MHz A / B- band	Order No. 5 5876
	alternatively:	40 / 41 MHz	Order No. 5 5877
or	MULTIPLEX RX-7-DR light M-Link	2.4 GHz	Order No. 5 5810
	Tiny MG servo, two required	(2 x elevon)	Order No. 6 5122

Battery charger:

MULTIcharger LN-3008 EQU

for LiPo, Lilo and LiFe batteries, 2S to 3S, and
NiMH / NiCd batteries with 4 to 8 cells

Order No. 9 2540

Xeno power set

Contents:

Himax 2212-1180 motor, BL-20 S-BEC speed controller, 8 x 5"
folding propeller, taper collet, driver and 35 mm Ø spinner, canopy,
motor fairing, CFRP extension shaft, plastic parts, small items

Order No. 33 2654

Xeno TUNING power set

Contents:

Himax 2816-1220 motor, BL-30 S-BEC speed controller, 9 x 6"
folding propeller, taper collet, driver and 35 mm Ø spinner, canopy,
motor fairing, CFRP extension shaft, plastic parts, small items

Order No. 33 2655

Flight battery: Li-BATT BX 3/1-950

Order No. 15 7118

Receiver battery, glider version: 4 AA cells, S or W format

Not in MPX range

Tools:

Scissors, balsa knife

Note: please remove the illustration pages from the centre of the instructions.

Specification:

Wingspan:	1245 mm
All-up weight, glider, approx.:	550 g
All-up weight, electric, approx.:	650 / 690 g Standard / Tuning
Wing area:	32 dm ²
Wing loading min.:	17.2 g/dm ² glider, 2.03 g/dm ² electric, 21.5 g/dm ² electric (Tuning version)
RC functions:	Aileron, elevator (delta mixer), throttle

Like every aircraft, the airframe strength of the Xeno has its limits. Extreme dives and senselessly violent manoeuvres can result in the loss of the model. Please note: in such cases we are not prepared to exchange the model. We urge you to fly gently at first, and work your way gradually towards the aeroplane's limits. The Xeno is designed to accept our Tuning (upgrade) power set, but is only capable of withstanding the loads on the airframe if built exactly according to the instructions, and if flown in an undamaged state.

Please note: the model is subjected to the most severe loads when dived with the propeller folded.

Important note

This model is not made of styrofoam™, and it is not possible to glue the material using white glue, polyurethane or epoxy; these adhesives only produce a superficial bond which simply gives way when stressed. Please use medium-viscosity cyano-acrylate glue exclusively, preferably our Zacki-ELAPOR®, # 59 2727 - the cyano glue optimised specifically for ELAPOR® particle foam. At some points you will also need the extremely low-viscosity version of the adhesive: Zacki ELAPOR super liquid, # 59 2728.

If you use Zacki-ELAPOR® you will find that you do not need cyano kicker or activator for most joints. However, if you wish to use a different adhesive, and are therefore obliged to use kicker / activator spray, we recommend that you apply the material in the open air to avoid health problems.

1. Before assembling the model

Please check the contents of your kit before you start working on it.

You will find **Figs. 01 + 02** helpful here, along with the **Parts List**.

2. Preparing the fuselage cradle

Apply Zacki ELAPOR to the hinge leaves **22**, and push them fully into the slots in both fuselage cradle shells **20** and **21**. See **Fig. 03**

3. Trimming and joining the fuselage cradle

The wing panels fit inside the root ribs of the fuselage cradle shells **20 + 21**; you may find it necessary to compress the Elapor foam slightly with your fingers to produce a neat fit. Check very carefully **dry - without glue** - that everything fits as it should.

Fig. 04

Remove the cradle shells from the wings again.

Fit the hinge pin **41** through the hinge leaves. Apply Zacki Elapor to the root face of both wings panels, then push the wings together firmly and briskly, pressing them fully home into the root ribs of the cradle. Check immediately that the foam parts line up correctly with the plastic parts, and ensure that there are no gaps along the joint lines - especially at the nose. Leave the glued joints to cure completely before resuming work on the model.

Fig. 05

This stage is completed by carefully running Zacki Elapor super liquid along the edges between the fuselage cradle **20 + 21** and the foam, flexing the foam away from the plastic slightly to allow the glue to penetrate. Allow the glue to set hard, then withdraw the hinge pin **41** again before proceeding.

4. Completing the wings

- All joints should be completed using Zacki ELAPOR.

Trial-fit the spars **42** in the slots in the underside of both wing panels. When you are satisfied, glue them in place, taking care to apply adhesive along their full length. Wipe away excess glue immediately.

Fig. 06

Glue the left and right fin supports **28** and **29** in the recesses in the underside of both wings.

Fig. 07

Position the fin retaining clips **27** carefully, and glue them in the recesses.

Fig. 08

Glue the fin holders **26** to the left and right fins; note that the fins are identical. As you will already have noticed, the fins are very easily removed for transport.

Fig. 09

Install the swivel pushrod connectors **12, 13, 14** and **15** in the outermost hole in the elevon horns **30**. Glue the horns **30** in the elevons (elevon = combination of elevator and aileron). The row of holes must face the servo.

Fig. 10

5. Installing the servos

The model is designed for MULTIPLEX Tiny MG servos. These are robust metal-g geared servos at a reasonable price; they have been tested in the model, and are strongly recommended. You will also find that the servo leads are the correct length as standard. If you prefer to use different servos, you may need to adjust the installation wells and purchase extension leads.

Fit the servos and glue them in place with a drop of Zacki ELAPOR at each mounting lug. Deploy the servo leads along the cable duct, and route the connectors into the internal space in the fuselage cradle. Seal the cable wells with adhesive film.

Fig. 11

6. Elevon pushrods

Connect the Z-bend of the elevon pushrods **40** to the outermost hole in the servo output arms (approx. 12.5 mm from the hinge pivot axis). Set the servo output arms at right-angles to the servo case, and connect the pushrods to the swivel connectors mounted on the elevon horns. Tighten the clamping screws, and secure the nuts and screws with a drop of thread-lock fluid or glue.

Release the elevons at both ends! Fig. 12

7. Servo fairings

The final step in this stage is to install the servo fairings **31 + 32**. The fairings are simply glued in place with one or two drops of cyano glue, as they can easily be removed again at any time if required.

Fig. 13

8. Preparing the canopies

Attach the canopy latches **24 + 25** to the canopy (glider canopy **23** and / or the power canopy - included in the Power Set). Glue the latches in place with a little cyano.

Figs. 14 + 15

9. Assembling the model

Push the hinge pin **41** through the hinge leaves, holding the rod in a pair of pliers if necessary. Fit the fins **5** and allow them to snap into the retaining clips. Check the wing folding mechanism. Ensure that the canopy latch system works properly, and make any minor adjustments required.

Fig. 16

10. Installing the radio control system

There are two different versions here: glider and electric glider / glider

a. Glider:

This version requires a receiver battery consisting of four AA-size NiMH cells in the S or W format. The battery should be secured with Velcro (hook-and-loop) tape. The Centre of Gravity can be adjusted within certain limits by re-positioning the battery. If that is not sufficient, you will need to add a little lead ballast. Ensure that the receiver battery does not obstruct the canopy latches **24 + 25** when you try to engage them.

There is space for the receiver in the rear part of the fuselage cradle. Deploy the aerial in the appropriate channel in the wing. If you are using 2.4 GHz equipment, there is adequate space for the aerials towards the front.

Fig. 17

b. Electric glider with glider option:

The flight battery (Li-Batt BX 3/1 - 950, # 15 7118) should be installed in the front part of the fuselage cradle **20 + 21**, where it is retained with Velcro tape. The Centre of Gravity can be adjusted within certain limits by re-positioning the battery. If that is not sufficient, you will need to add a little lead ballast. Ensure that the receiver battery does not obstruct the canopy latches **24 + 25** when you try to engage them.

The receiver can be located adjacent to the motor, with the aerial deployed in the appropriate channel in the wing. Install the speed controller next to the flight battery. If you detect interference when you carry out a range-check, try swapping the positions of the speed controller and the receiver.

The electric glider is designed to be powered by our Power Set, # 33 2654 (45° climb performance) or the Tuning Set, # 33 2655 (vertical climb). These power sets contain everything you need, but neither is included in the kit. Installing the power system in the model takes just a few seconds: fold the model apart in the centre, place the power set inside, fold it closed again, insert the connector, and the model is **ready for launch** as a powered glider.

Fig. 18

If you wish to fly the Xeno electric glider at the slope as a pure glider, the conversion is carried out as follows:

Open the model, disconnect the motor plug, remove the power set, fold the model closed again and fit the glider canopy: job done, time to go gliding. As with the electric version, the flight battery is used to power the receiver and servos via the speed controller's BEC system. No re-trimming is required, as the power set is located virtually at the Centre of Gravity.

Fig. 19

11. Completing the power set

Assemble the power set, referring to the instructions supplied with it.

Figs. A1 - A6

12. Initial test-run

We assume that all the radio control system components have been installed and connected as shown in **Figs. 17** and **18**. Use the Velcro tape **10 + 11** to secure the components.

Check the neutral position and the travels of the elevons. Check that the servos rotate in the correct direction relative to the stick

movements, and ensure that the elevons are free-moving. Check the direction of rotation of the motor, and reverse it if necessary.

13. Settings (guideline only!):

Centre of Gravity:	approx. 220 mm (+/- 10 mm) aft of the fuselage nose
Motor thrustline:	pre-set

Fig. 20

Control surface travels:

Measured at the widest point of the elevons

Elevons

Aileron travel:	14 mm up / 16 mm down
Elevator travel:	12 mm up / 12 mm down

14. Test-flying:

For the first flight wait for a day with as little breeze as possible. The early evening is often a good time.

If you are a beginner to model flying we strongly recommend that you ask an experienced model pilot to help you for the first few flights, as learning to fly alone is very rarely successful. If you don't know any other modellers, ask your local model shop about flying clubs in the area, and go along to their flying site for help. Another useful aid for those "first difficult steps" is a flight simulator on a PC.

You can download a free simulator from the MULTIPLEX website at www.multiplex-rc.de. An interface lead for your MPX transmitter can be obtained from any model shop (Order No. # **8 5153**).

Be sure to carry out a range-check before the first flight!

Just before the flight, charge up the transmitter battery and the flight pack using the recommended procedures. Before you switch on the transmitter, ensure that "your" channel is not already in use.

Ask your assistant to walk away from the model, holding the transmitter. The transmitter aerial should be fitted but completely collapsed.

Your assistant should operate one of the functions constantly while you watch the servos. The non-controlled servo should stay motionless up to a range of about 60 m, while the controlled one should follow the stick movements smoothly and without any delay. Please note that this check can only give reliable results if the radio band is clear of interference, and if no other radio control transmitters are in use - even on different channels. If the range check is successful, repeat it with the **motor running**. There should be no more than a very slight reduction in effective radio range with the motor turning.

If you are not sure about anything, please don't risk a flight. Send the whole system (including battery, switch harness and servos) to the Service Department of your RC system manufacturer and ask them to check it.

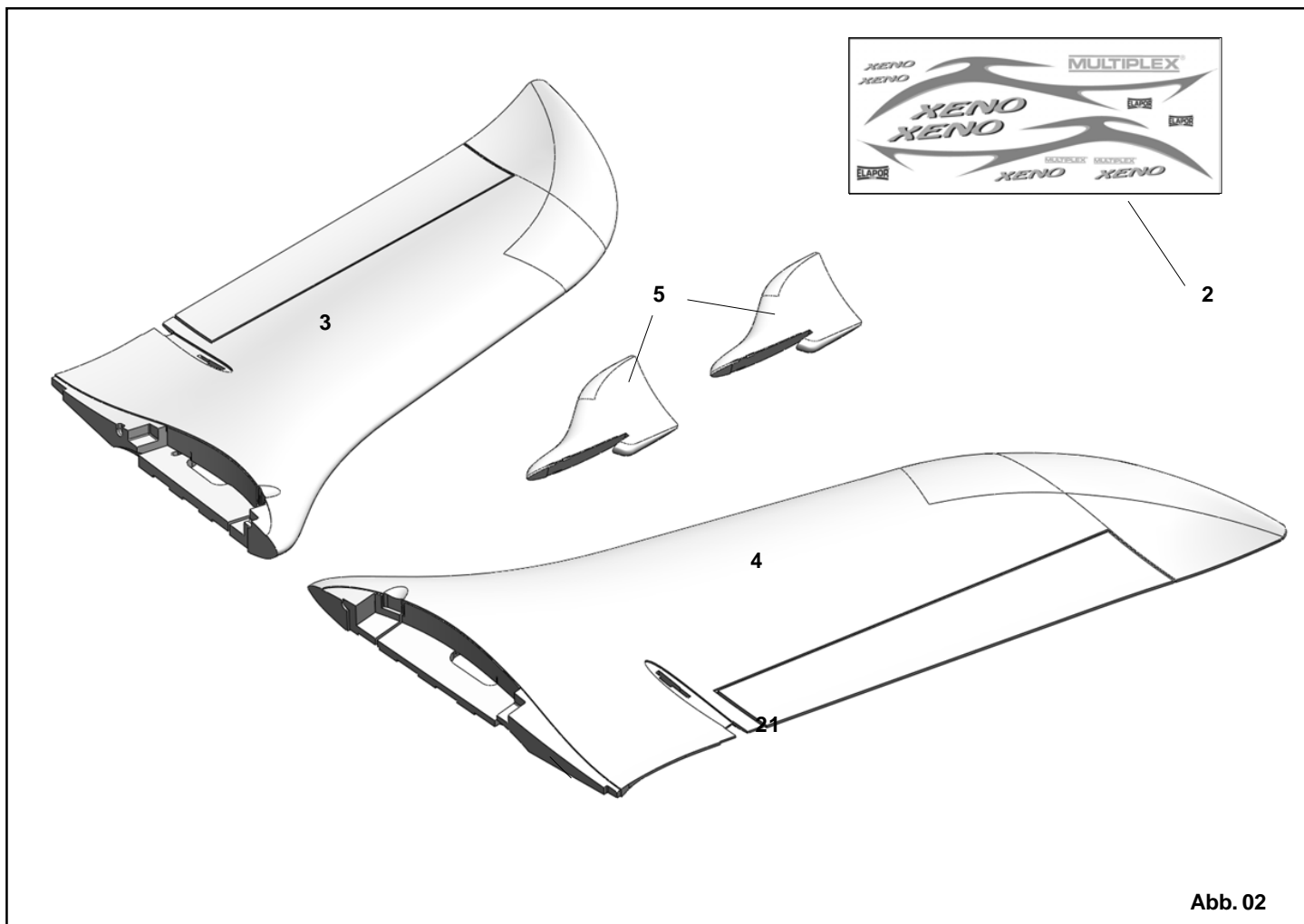
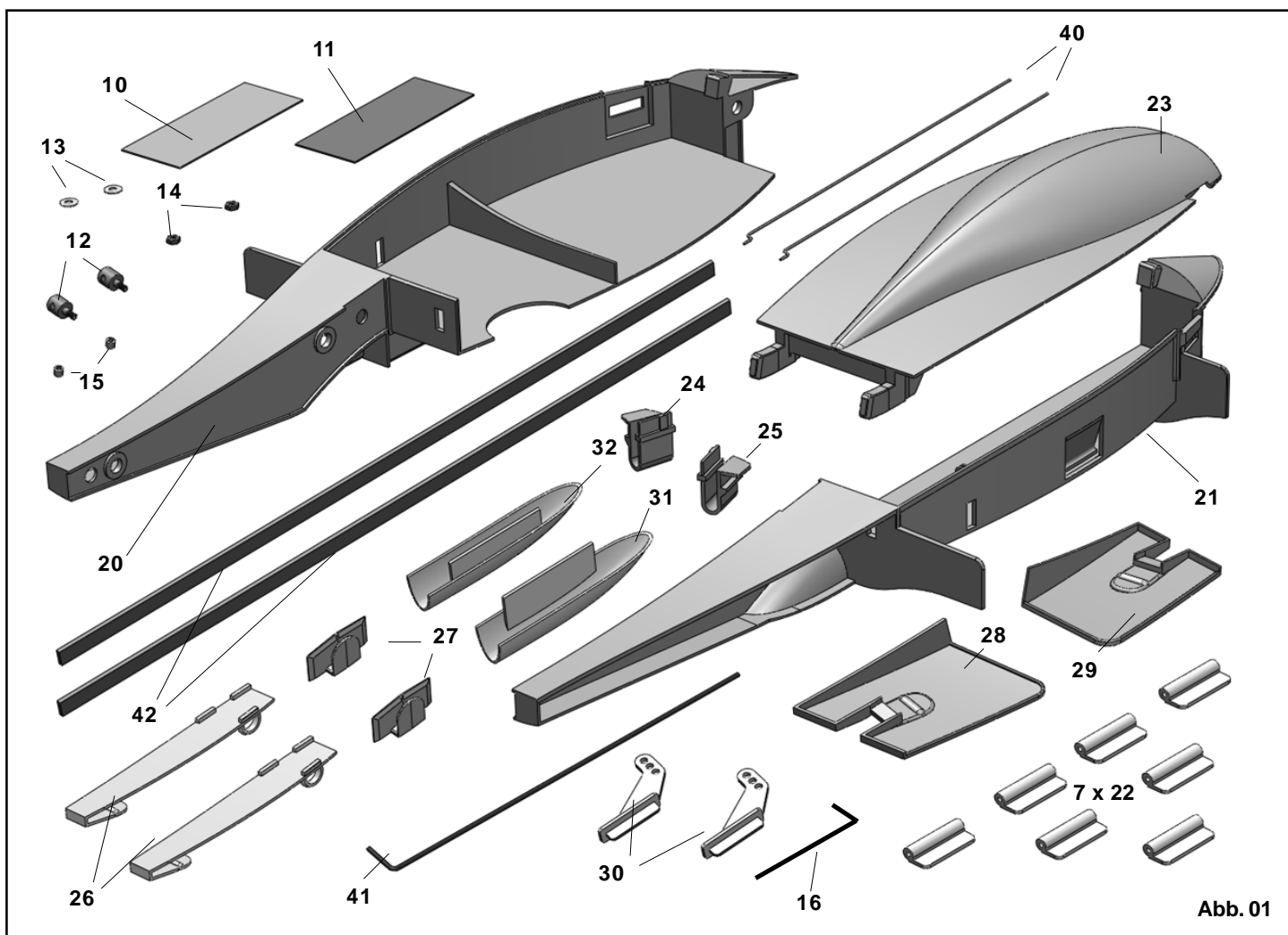
The first flight ...

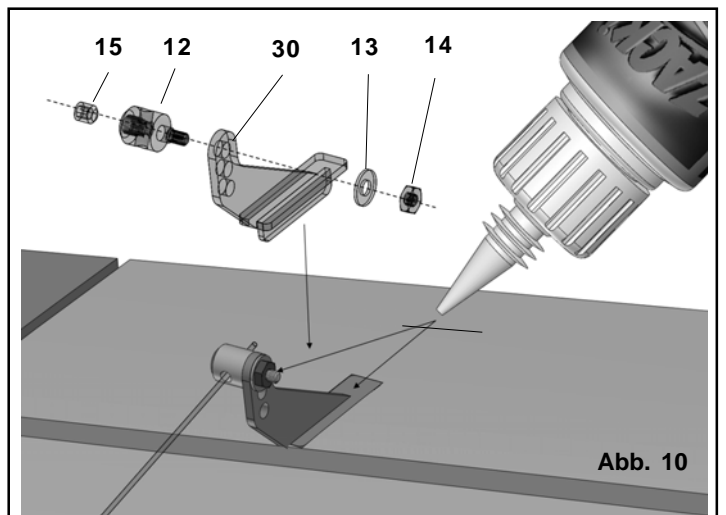
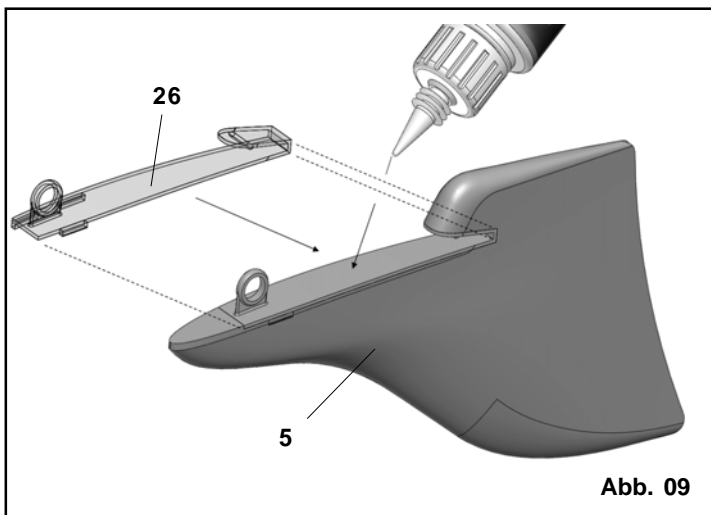
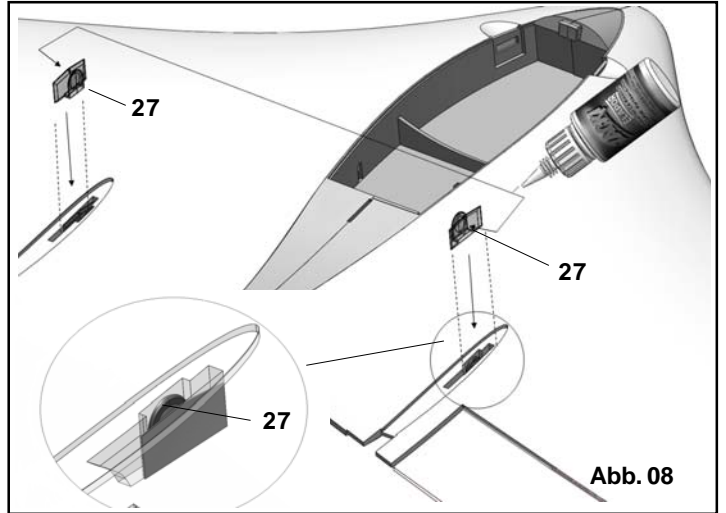
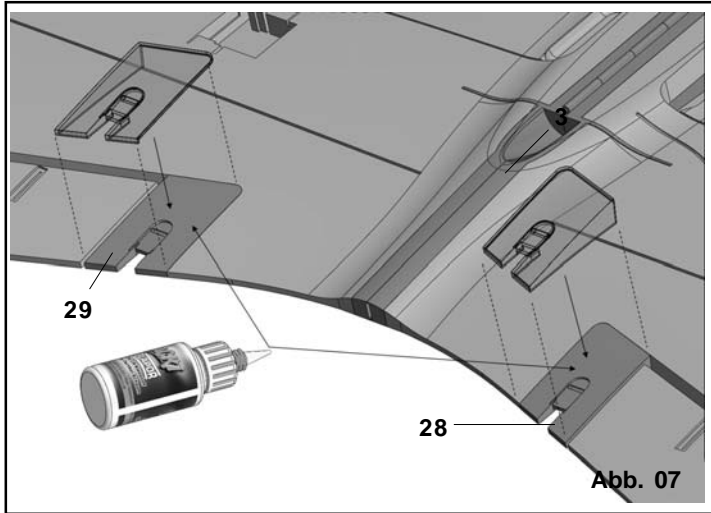
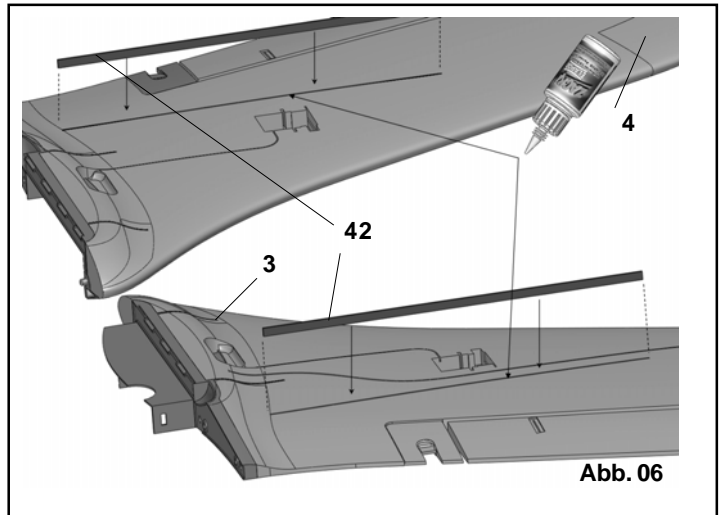
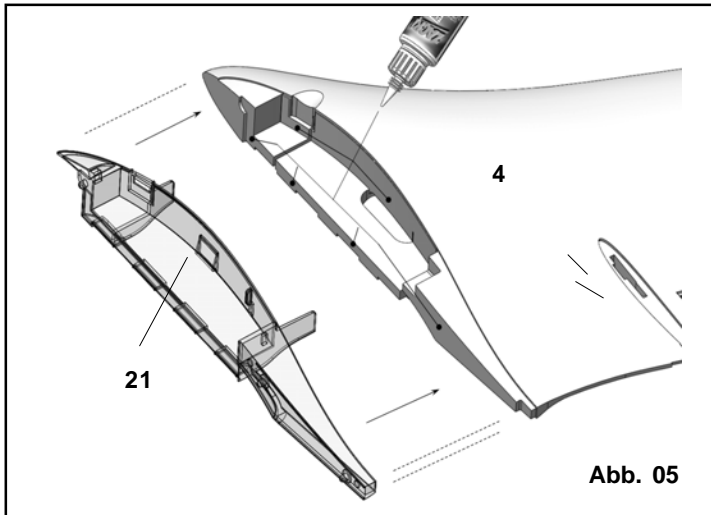
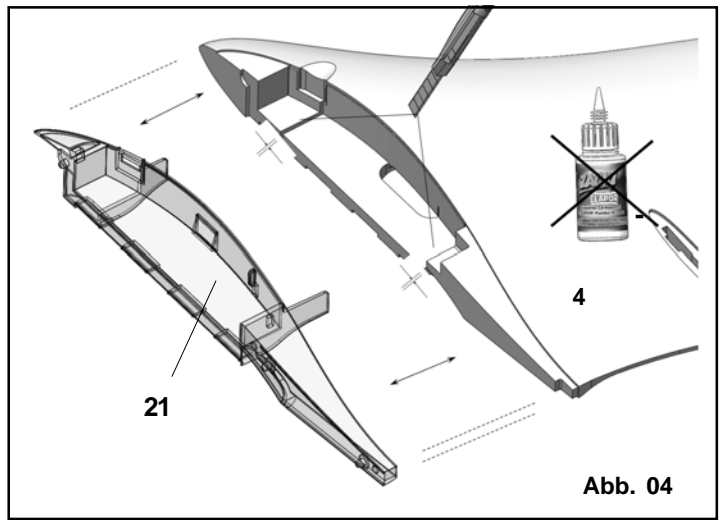
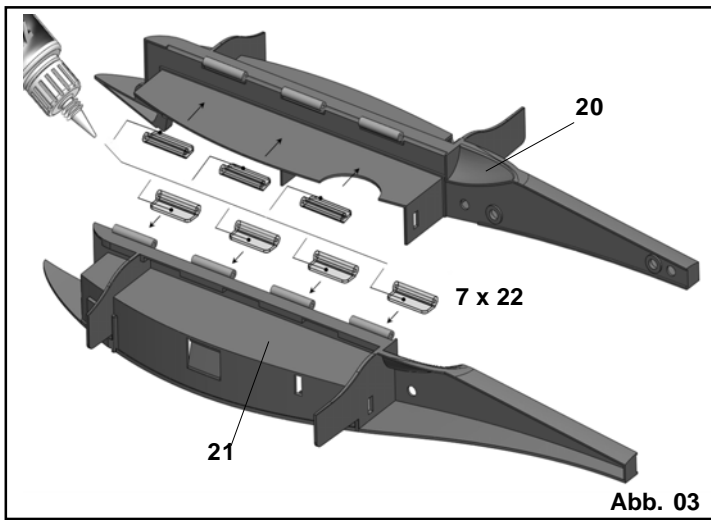
Glider:

A hand-launch directly into any breeze, with the wings level and the nose slightly down, will give you an initial idea whether the model is correctly trimmed, or whether adjustments are required.

Flying at the slope

Ridge soaring is an extremely attractive form of model flying. Soaring for hours on end in slope lift, or flying continuous aerobatics, without needing any outside aid for launching, must be one of the finest of all modelling experiences.





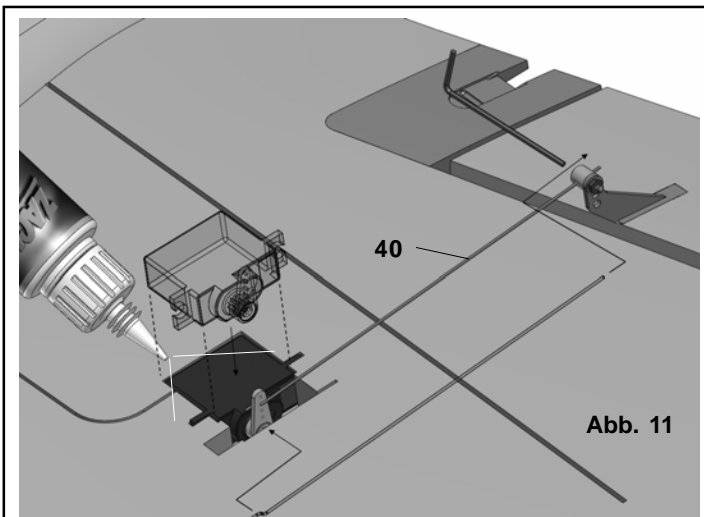


Abb. 11

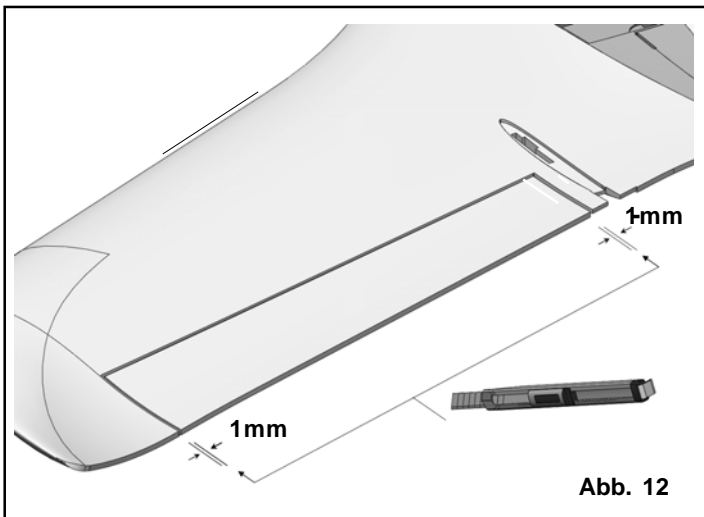


Abb. 12

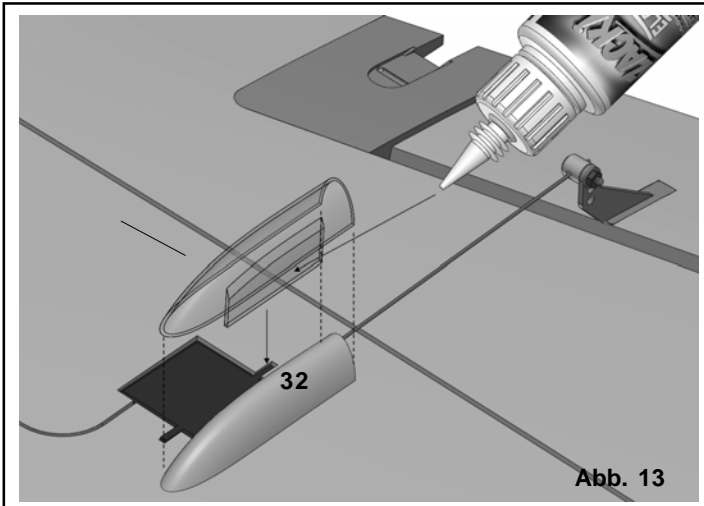


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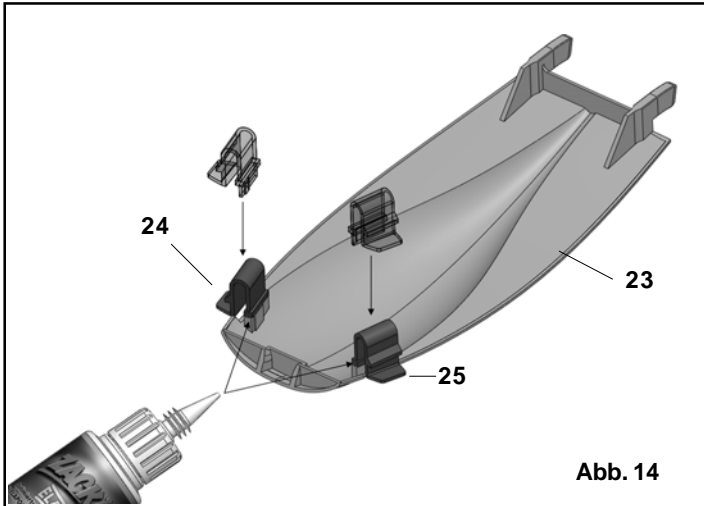


Abb. 14

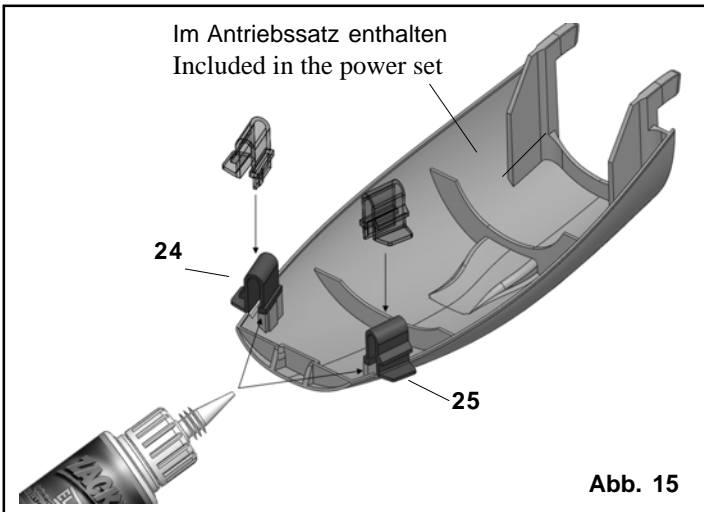


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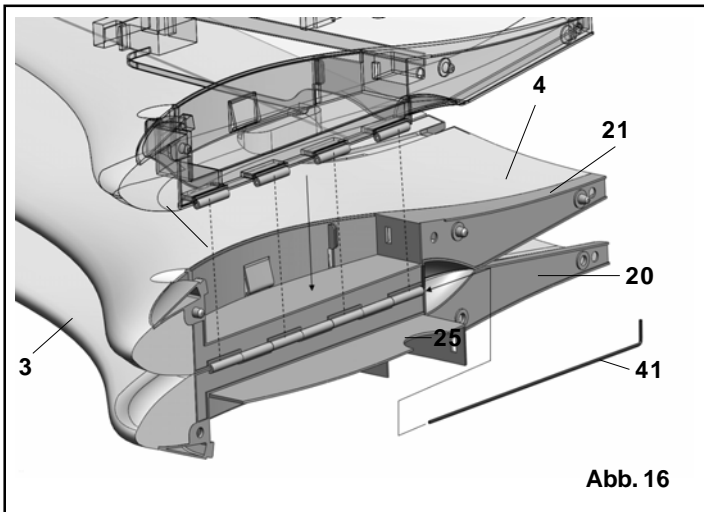


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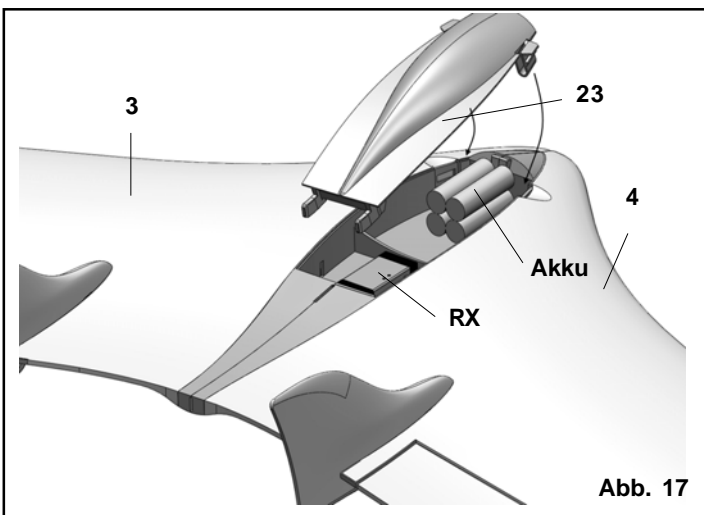


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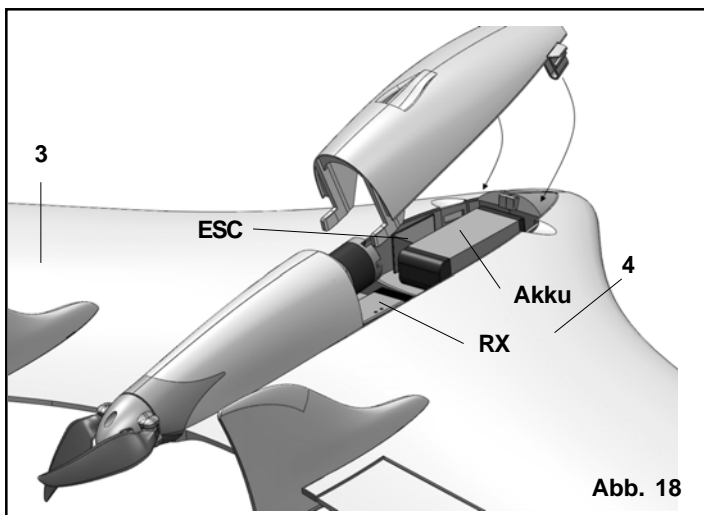


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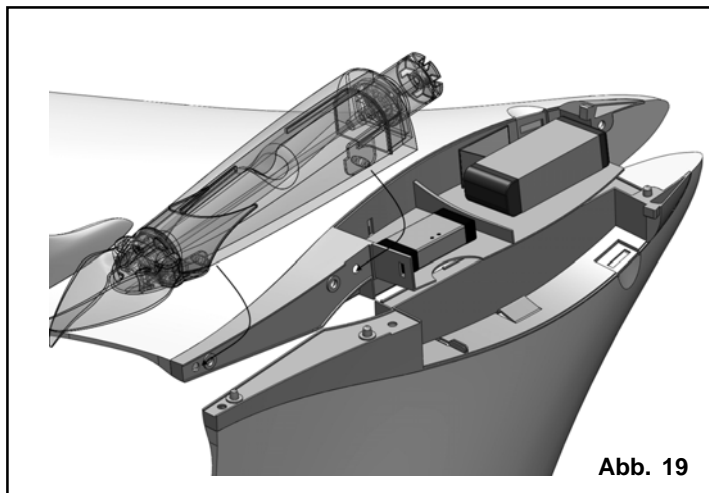


Abb. 19

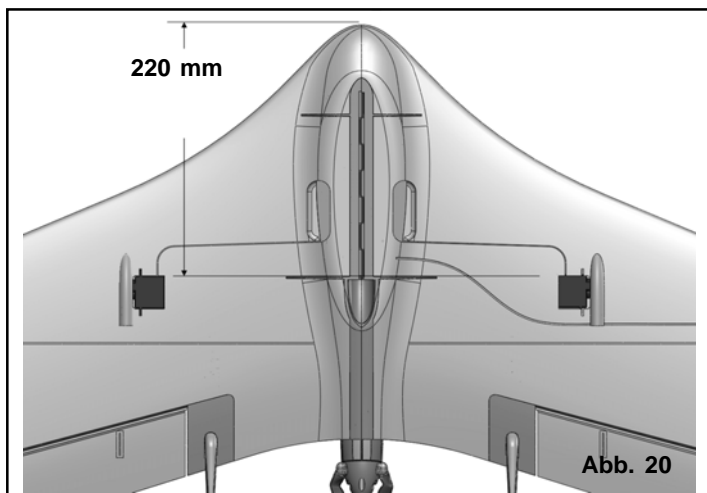


Abb. 20

- D** - Übersicht für den Zusammenbau der Antriebssätze # 332654+ # 332655 - Material nicht im Baukasten enthalten!
F - Illustrations pour l'assemblage du kit de propulsion #332654+#332655 - Matériel non compris dans le kit !
GB - Overview of the power set assembly, # 33 2654 / # 33 2655 - parts not included in the kit!
I - Installazione dei set motorizzazione # 33 2654 / 33 2655 - Materiale non contenuto nella scatola di montaggio!
E - Visión general de la instalación de los kits de propulsión #332654 #332655 - ¡Materiales no incluidos en el kit!

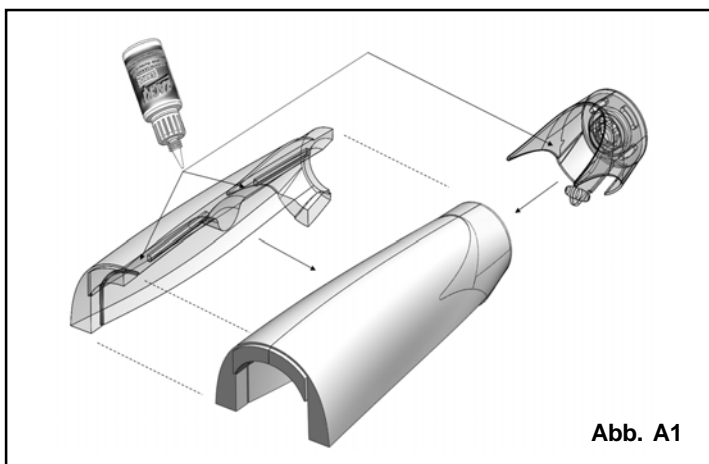


Abb. A1

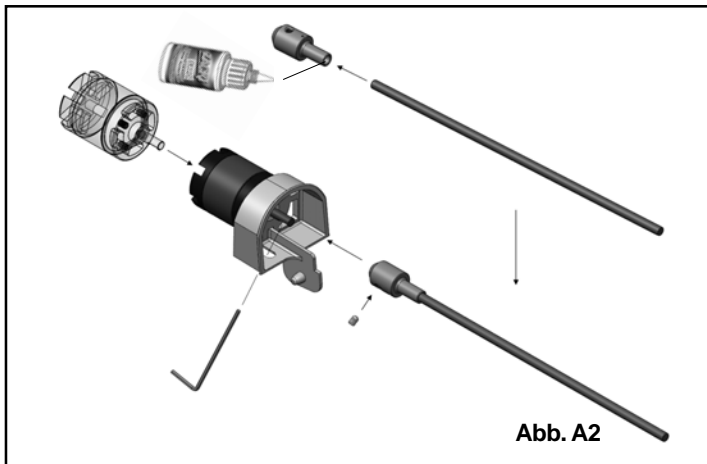


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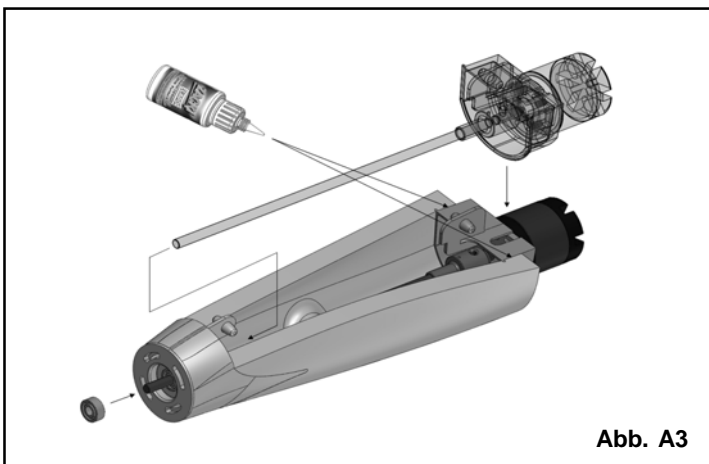


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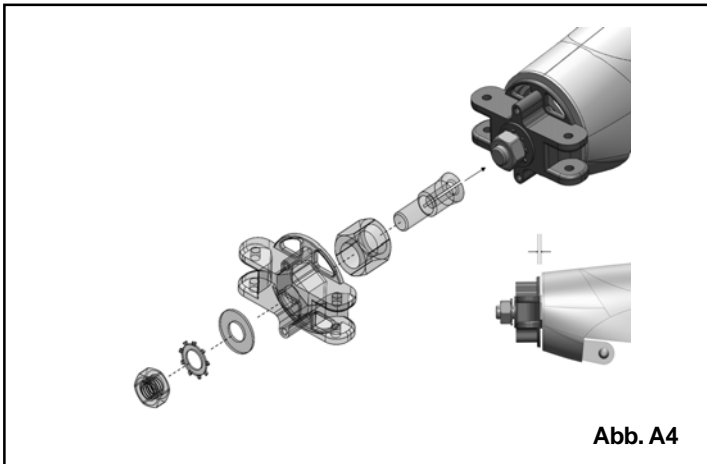


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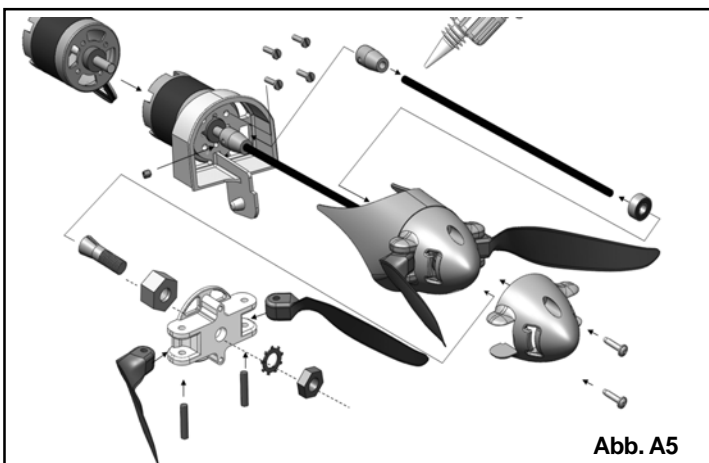


Abb. A5

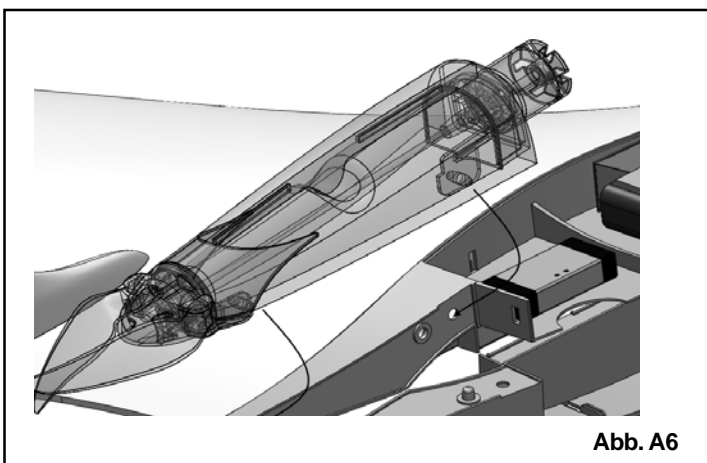


Abb. A6

But take care - there are dangers for your model lurking at the slope. Firstly, in most cases landing is much more difficult than at a flat field site. It is usually necessary to land in the lee of the hill where the air is turbulent; this calls for concentration and a high-speed approach. A landing on the slope face, i.e. right in the slope lift, is even more difficult. Here the trick is to approach slightly downwind, up the slope, and flare at exactly the right moment, just before touch-down.

Electric flying

The electric-powered version gives you the highest possible level of autonomy. The model should be launched with the motor turning, but not running at full-throttle; this applies in particular to the Tuning version. At a flat field site one battery charge will give about eight to ten climbs to a good height prior to an extended gliding phase. At the slope you can use the motor to guard against the dreaded downdraught (sudden loss of lift, forcing you to land the model at the foot of the hill). But aerobatics are also great fun with the Xeno: rolls, inside and outside loops and inverted flight are well within its capabilities.

15. Gilding the lily - applying the decals

The kit is supplied with a multi-colour decal sheet **2**. Cut out the individual name placards and emblems and apply them to the model in the position shown in the kit box illustration, or in an arrangement which you find pleasing.

16. Safety

Safety is the First Commandment when flying any model aircraft. Third party insurance should be considered a basic essential. If you join a model club suitable cover will usually be available through the organisation. It is your personal responsibility to

ensure that your insurance is adequate (i.e. cover for powered model aircraft).

Make it your job to keep your models and your radio control system in perfect order at all times. Check the correct charging procedure for the batteries you are using. Make use of all sensible safety systems and precautions which are advised for your system. An excellent source of practical accessories is the MULTIPLEX main catalogue, as our products are designed and manufactured exclusively by practising modellers for other practising modellers.

Always fly with a responsible attitude. You may think that flying low over other people's heads is proof of your piloting skill; others know better. The real expert does not need to prove himself in such childish ways. Let other pilots know that this is what you think too. Always fly in such a way that you do not endanger yourself or others. Bear in mind that even the best RC system in the world is subject to outside interference. No matter how many years of accident-free flying you have under your belt, you have no idea what will happen in the next minute.

We - the MULTIPLEX team - hope you have many hours of pleasure building and flying your new model.

MULTIPLEX Modellsport GmbH & Co. KG
Product development and maintenance



Klaus Michler

Xeno Parts List

Part No.	Description	Material	Dimensions
No. off			
1	1	KIT building instructions	Paper, 80 g/m ²
2	1	Decal set	Printed adhesive film
3	1	L.H. wing panel	Moulded Elapor foam
4	1	R.H. wing panel	Moulded Elapor foam
5	2	Fin	Moulded Elapor foam
Small items			
10	3	Velcro tape, "hook"	Plastic
11	3	Velcro tape, "loop"	Plastic
12	2	Swivel pushrod connector	Metal
13	2	Washer	Metal
14	2	Nut	Metal
15	2	Socket-head grub screw	Metal
16	1	Allen key	Metal
Plastic parts			
20	1	L.H. fuselage cradle shell	Inj. moulded plastic
21	1	R.H. fuselage cradle shell	Inj. moulded plastic
22	7	Hinge leaf	Inj. moulded plastic
23	1	Glider canopy	Inj. moulded plastic
24	1	L.H. canopy latch	Inj. moulded plastic
25	1	R.H. canopy latch	Inj. moulded plastic
26	2	Fin holder	Inj. moulded plastic
27	2	Fin retaining clip	Inj. moulded plastic
28	1	L.H. fin support	Inj. moulded plastic
29	1	R.H. fin support	Inj. moulded plastic
30	2	Glue-fitting horn	Inj. moulded plastic
31	1	L.H. servo fairing	Inj. moulded plastic
32	1	R.H. servo fairing	Inj. moulded plastic
Wire and rod			
40	2	Pre-formed pushrod, one Z-bend	Metal
41	1	Hinge wire with L	Metal
42	2	Wing spar	CFRP flat strip

72 4559

Dekorbogen

Planche de décoration

Decal sheet

Decals

Lámina decorativa



22 4107

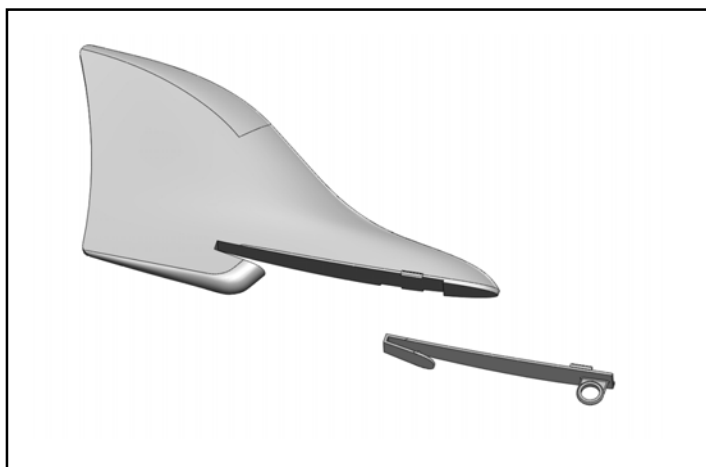
Leitwerke (1 Paar)

Gouvernes (1 paire)

Fins (pair)

Derive (1 coppia)

Estabilizadores (1 pareja)



22 4106

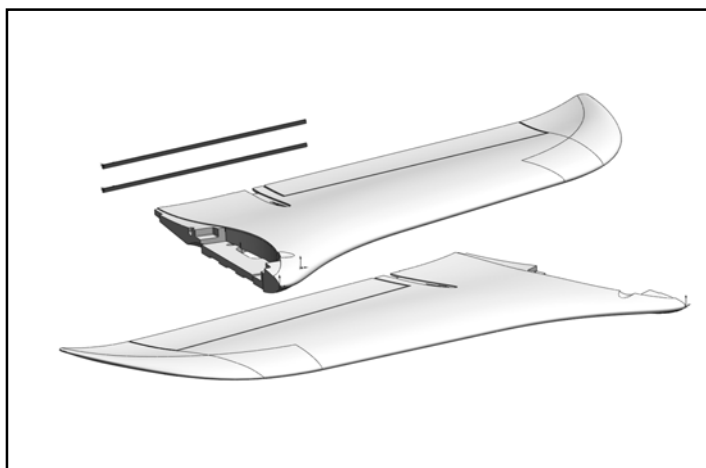
Tragflächen

Ailes

Wing panels

Semiali

Alas



22 4108

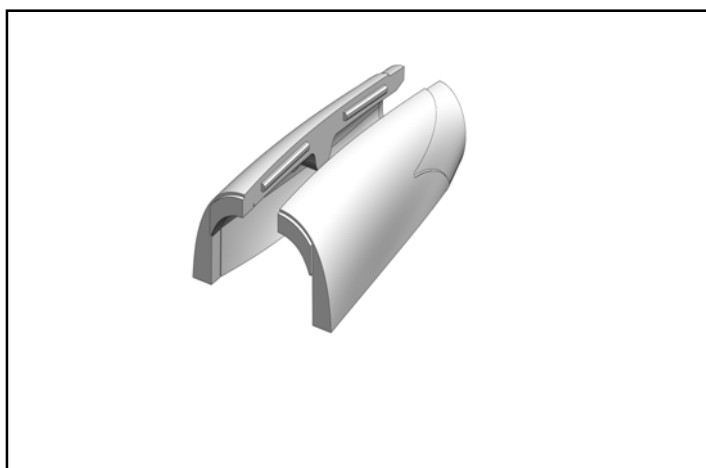
Antriebsverkleidung

Cache de propulsion

Motor fairing

Carenatura motore

Carena del motor



22 4109

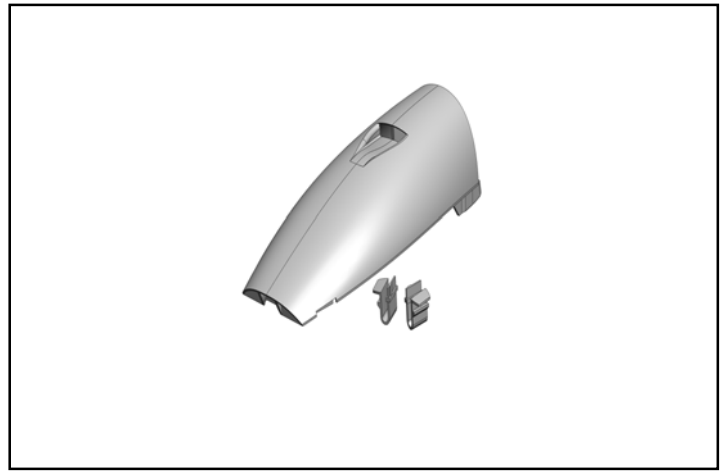
Kabinenhaube Elektroversion

Verrière pour version électrique

Canopy, electric version

Capottina versione elettrica

Cabina versión eléctrica



22 4112

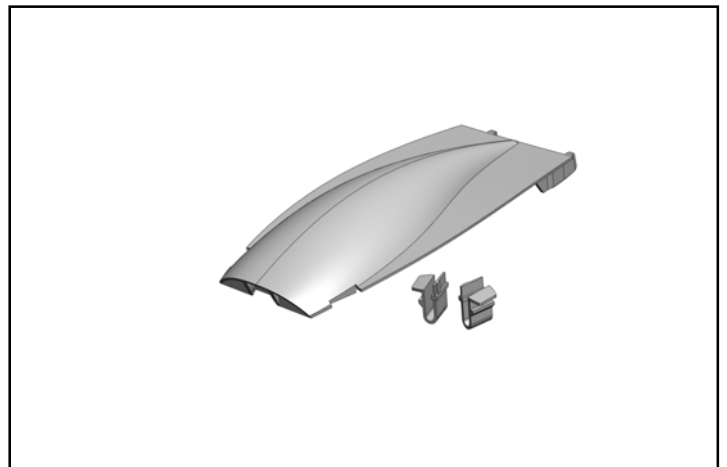
Kabinenhaube Segler

Verrière pour version planeur

Canopy, glider

Capottina aliante

Cabina velero



22 4110

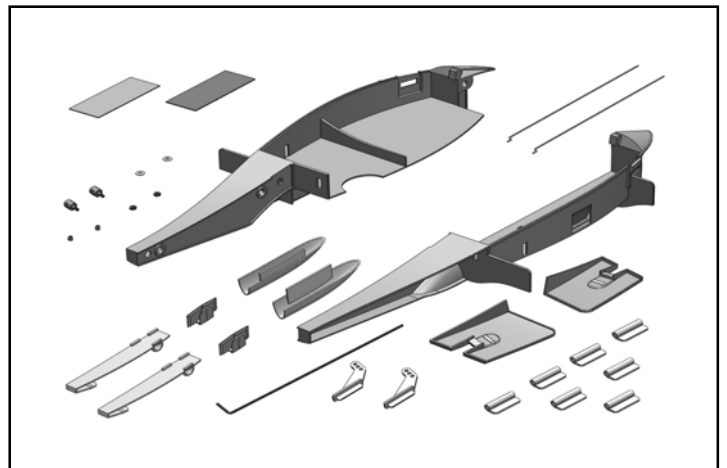
Klein- Kunststoffteile Segler

Pièces petites/plastiques

Small parts, glider

Minuteria/parti in mat. plastico aliante

Piezas pequeñas y de plástico, versión velero



22 4111

Klein- und Kunststoffteileilsatz für die Antriebssätze

Pièces petites/plastiques pour la propulsion

Small parts, plastic parts for the power sets

Minuteria/parti in mat. plastico per motorizzazioni

Piezas pequeñas y de plástico para kits de propulsión

