

BUILDING INSTRUCTIONS**CHRISTEN EAGLE II**

For electric power and three Li-Po cells

This model requires a four-function radio control system

Introduction

The GRAUPNER model of the CHRISTEN EAGLE II is a detailed scale version of the full-size aerobatic aircraft.

The model components are supplied with the flamboyant colour scheme already applied, and the machine can be completed in a very short time. The recommended COMPACT brushless motor is simply fixed to the motor mount using two screws. The Li-Po battery is installed in the underside of the fuselage under a battery cover with quick-release latches. The model features "full-house" controls for scale aerobatics, and looks totally convincing in the air.

The CHRISTEN EAGLE II is a small-scale electric-powered RC power model aircraft, and is suitable for young persons of 14 years and over. Young people less than 14 years old may safely operate the model under the supervision of an adult.

Caution: this model is not a toy!

If you are not familiar with powered model aircraft of this type, please ask an experienced modeller to help and advise you, as any aeroplane is capable of causing injury if you try to operate it without knowing what you are doing. Please bear your own safety and health in mind at all times when working on this model.

Important safety notes

You have acquired a kit which can be assembled into a fully working RC model when fitted out with suitable accessories. However, we as manufacturers have no control over the way you build and operate your RC model aircraft, nor how you install, operate and maintain the associated components, and for this reason we are obliged to deny all liability for loss, damage or costs which are incurred due to the incompetent or incorrect use and operation of our products, or which are connected with such operation in any way. Unless otherwise prescribed by binding law, the obligation of the GRAUPNER company to pay compensation, regardless of the legal argument employed, is excluded. This includes personal injury, death, damage to buildings, damage due to loss of business or turnover, interruption of business or other direct or indirect consequent damage whose root cause was the operation of the model.

The total liability in all cases is limited to the amount of money which you actually paid for the model.

This model is built and flown at the sole and express responsibility of the operator. The only way to avoid injury to persons and damage to property is to handle and operate the model with the greatest care and consideration at all times.

According to the new regulation of §103 Paragraph 3 of the LuftVZO (German Aviation Approvals Office), **all** model aircraft - whether slow-flyer, park-flyer, glider, or model aircraft propelled by any form of power plant - must be insured before the model is operated. It is therefore essential to take out special third party insurance covering the operation of RC models. If you are not sure about this, please enquire at your local model shop, where the staff will be glad to advise you.

These safety notes must be kept in a safe place. If you ever dispose of the model, be sure to pass them on to the new owner.

Guarantee conditions

The guarantee covers replacement of any parts which can be shown to exhibit manufacturing faults or material defects within the guarantee period of 24 months from the initial date of purchase. No other claims will be considered. Cost of transport, packing and freight are payable by the purchaser. We accept no liability for damage in transit. When you send the product to GRAUPNER, or to the approved Service Centre for your country, you must include a clear and concise description of the fault together with the invoice showing the date of purchase. The guarantee is invalid if the component or model fails due to an accident, incompetent handling or incorrect usage.

The following points are important and must be observed at all times:

- This model is not suitable for young persons under 14 years of age. Young people under this age may safely operate the model, but only under the supervision of an adult or guardian.
- **All** model flyers **must behave in such a way** that there is no danger of them **endangering or adversely affecting** public safety and order, and especially other people and property.
- The operator of the model **must** be in full possession of his or her bodily and mental faculties. As with car driving, operating a model aircraft under the influence of alcohol or drugs is not permissible under any circumstances.
- If you have any questions regarding the safe operation of your RC model aeroplane, please turn to your local model shop in the first instance, as the staff will be pleased to help you.
- Radio-controlled model aircraft are extremely demanding and potentially dangerous objects, and require a high level of expertise, skill and responsibility from the operator.
- In legal terms our models are classed as aircraft, and as such are subject to legal regulations and restrictions which must be observed at all times. Our brochure "Modellflugrecht, Paragraphen und mehr" (Model Aviation Law, Legal Requirements and more) is available under Order No. 8034.01, and contains a summary of all these rules. Your local model shop should have a copy which you can read. There are also Post Office regulations concerning your radio control system, and these must be observed. Refer to your RC system instructions for more details.
- A radio-controlled model aircraft can only work properly and fulfil your expectations if it is built very carefully and in accordance with the building instructions. If you wish to avoid injuring people and damaging property it is essential to be careful and painstaking at all stages of building and operating your model. Nobody would climb into a full-size aircraft and try to fly it without undergoing training beforehand, and model flying is a skill which also needs to be learned. We suggest that you ask an experienced model flyer for help, or join a model club or flight training school. Your

local model shop and the specialist magazines are excellent sources of information. If at all possible, it is always best to join a club and fly at the approved model flying site.

- If you are flying a model aircraft for the first time we strongly recommend that you ask an experienced modeller to check the aeroplane first and be ready to help you during the first few flights.
- Be sure to use only those parts included in the kit, together with other genuine Graupner accessories and replacement parts as recommended expressly by us.
- Even if you change a single component you can no longer be sure that the system will work reliably, and such changes also invalidate your guarantee.
- **Always** read and observe the safety notes supplied with the batteries and the charger when using and charging **LiPo** batteries.
- **Never** fly the model close to high-tension overhead cables, industrial areas, residential areas, public roads, squares, school playgrounds, parks and playing fields etc.
- If there are passers-by or spectators at your flying site, make sure that they are aware of the dangers inherent in your activity before you start the motor, and insist that they keep a safe distance away - at least 5 m behind the propeller plane.
- Always keep a safe distance away from people and objects when flying; **never** fly low over people's heads, and never fly directly towards them.
- Never fly your model in protected sites, animal or plant sanctuaries or sites of special scientific interest (SSSIs).
- **Never** fly the model in adverse conditions, e.g. rain, storm or strong wind, or temperatures below -5 °C or above +35 °C.
- Before you fly the model check that the radio control system is working reliably, and that all connections are firmly seated.
- Use only matching polarised electrical connectors. The flight battery, all cables and connectors must be insulated carefully to prevent short-circuits, especially if you make them up yourself. Never combine connectors with contacts of different materials, e.g. tin-plated and gold-plated, as the connections will not be reliable in the long-term.
- The batteries must be given a full charge before the model is flown, and it is important to check the effective range of the radio control system. It is particularly important that the transmitter should be fully charged before each flying session.
- Ensure that the frequency you intend to use is not already in use by other modellers. Never fly your model if you are not certain that your channel is free. If there are other modellers in the vicinity, ask them specifically which channels they are using.
- Read and observe the instructions and recommendations supplied with your radio control system and accessories.
- Always disconnect the power system from the flight battery before carrying out any work on these components.
- When the drive battery is connected keep **well clear of the area around the propeller**, as this represents the greatest risk of accident and injury. Make sure any spectators do the same.
- Do not be tempted to exceed the recommended operating voltage. Higher voltages may cause the motor to overheat, and the electrical cables may even melt. If this should happen, the model could easily be ruined or even catch fire.
- Ensure that all the power system components are free-moving.
- Check that your servos are not mechanically obstructed at any point in their full travel.
- Dry cells and rechargeable batteries must never be short-circuited - fire hazard.
- Allow the motor and speed controller to cool off after every flight. Take care not to touch the hot parts.

- Remove the rechargeable battery if the model is to be transported, or will not be used for a long period.
- Do not subject the model to high levels of humidity, heat, cold or dirt, and never leave it in a hot car in the Summer.
- Secure the model and your RC equipment carefully when transporting them. They may be seriously damaged if they are free to slide about.
- If you have to **recover** the model after an out-landing, take care **not to risk your own life or that of others**.
- Before each flight check that all functions on the model aircraft are working correctly, and that the radio control system is in good order and operating at full range.
Note that the motor control (throttle) function on the transmitter must always be moved to the OFF position as the first stage in preparing for a flight. To avoid the danger of the electric motor bursting into life unexpectedly, always switch on the transmitter first, and only then the receiving system. The opposite applies at the end of a flight: always switch off the receiving system first, and finally the transmitter.
Check that the control surfaces follow the movement of the transmitter sticks:
- Move the aileron stick to the right, and the right-hand aileron should deflect up, the left-hand aileron down.
- When you move the rudder stick to the right, the rudder should deflect to the right.
- Pull the elevator stick back towards you, and both elevators must deflect up.
- Move the transmitter controls smoothly at all times; don't jerk the sticks about abruptly when the model is in the air.
- Please don't misunderstand the purpose of these notes. We only want to make you aware of the many dangers and hazards which can arise if you work carelessly or irresponsibly. If you take reasonable care, model flying is a highly creative, instructive, enjoyable and relaxing pastime.

Care and maintenance

- Clean the model carefully after every session.
- Clean the model and transmitter using a suitable cleaner. If you are not sure of this, ask your local model shop for advice.

Notes on building the model

- Before you start construction be sure to study the plan and read right through the instructions. We recommend that you refer constantly to the Parts List as an aid to construction. The instructions and parts list reflect the sequence of assembly. Please study the stage photos at the same time, as they contain valuable extra information.
- Bear in mind that tools can be dangerous; always be careful when handling them.
- Deploy all electrical cables in an orderly fashion, without crossing them over. Never allow a positive (+) contact to touch a negative (-) contact. Fix all cables so that there is no chance of them fouling the rotating parts of the power system; cable ties and adhesive tape are suitable methods.
- Deploy the receiver aerial as far away as possible from high-current cables (at least 3 cm).
- If you are buying a radio control system for your new model, ensure that the transmitter and receiving system are expressly stated to be suitable for use in **model aircraft**, and bear the appropriate approval stickers.
- The frequency bands used for the radio control of models are also employed by other radio transmitting and RF equipment. For this reason it is not possible to be completely sure that no interference will occur when you are flying your model.

- No licence fee is payable for using approved RC equipment to control a model aircraft on the appropriate channels in the 35 MHz band.
- For more information on this subject please contact your local telecommunications centre, or ask at your nearest model shop.
- Please note that all adhesives and cleaning agents which come into contact with the Depron surfaces must be stated specifically to be suitable for use with Styrofoam.
- Use only the recommended adhesives.

Instructions and warnings relating to the use of LiPo batteries

Please read the instruction sheet included with every battery pack for general information on the use of LiPo batteries.

General warnings

These batteries must not come into contact with fire or ashes.

The cells must not be allowed to contact fluids such as fresh water, salt water or drinks.

Avoid contact with liquids of all types.

Individual cells and batteries are by no means toys, and must never be allowed to get into the hands of children. Store cells and batteries well out of the reach of children.

Batteries must not be left within reach or in the vicinity of babies or toddlers. If a child should swallow a battery, call for a doctor or emergency medical assistance without delay.

Batteries must not be placed in a microwave oven, nor subjected to pressure: the results may be smoke and fire or worse.

Never attempt to dismantle Li-Po cells. Taking a battery apart can cause internal short-circuits, which could result in gassing, fire, explosion and other problems.

The electrolyte and electrolytic vapours are injurious to health. Avoid direct contact with the electrolyte at all costs. If the material gets in your eyes, on your skin or other part of your body, it is essential to wash the affected area immediately with copious amounts of clean water. Consult a doctor as soon as possible thereafter.

Batteries installed in a device should always be removed from the apparatus if it is not to be used again in the immediate future. Always switch off such devices after use to avoid discharging the cells to a dangerous level. Recharge the batteries in good time. Store batteries on a non-flammable, heat-resistant and non-conductive surface.

If you allow a Li-Po battery to become deep-discharged, it will inevitably be ruined, and must not be used again.

During construction

The receiving system components and control surface linkages should be installed at the appropriate stage of assembly, as it may be very difficult or even impossible to fit them later.

The building instructions

In basic terms the instructions reflect the correct sequence of assembly. The notes below are intended to explain certain additional points. All the die-cut parts should be carefully cut out of their parent sheets using a sharp balsa knife, e.g. Order No. 986. Clean up all cut edges before installing the parts.

Do trial-fit and adjust all parts before reaching for the glue bottle; some components are supplied slightly oversize to allow for trimming.

You will need a perfectly flat, straight softwood building board of adequate size to build this model, e.g. the Graupner system building board, Order No. 645, or the balsa jig board, Order No. 503.

You may wish to alter the order of assembly; this is left to your discretion.

Bear in mind that tools such as balsa knives, modelling pins, the ends of thin wire etc. are sharp or pointed, and can cause injury if not handled with due care.

Ensure that children do not have access to tools, adhesives and paints.

When using solvent-based adhesives be sure to work in a well-ventilated room.

Take waste adhesives and paints to your nearest toxic waste collection point.

An unobstructed work area of generous size is very helpful for all types of modelling activity.

If you are a beginner to modelling and are not sure about any of the more difficult processes, do ask an experienced modeller for advice and help.

Rules of behaviour

Never fly your model from a public road, path or square, or in the vicinity of buildings or high-tension overhead cables.

Don't fly your CHRISTEN EAGLE II in nature reserves, protected areas or SSSIs (Sites of Special Scientific Interest). Please have respect for the animals and plants which live in and around your flying site.

Bear in mind that trees and bushes are the living space and nesting sites of birds, and should not be disturbed unnecessarily.

Never endanger animals, spectators or other pilots.

Don't fly the model in windy conditions

Wind direction

Light breeze

Excessive wind

Pre-flight checks

If there are several modellers at your flying site, ask them at the outset which channels they are using, and ensure that you are the only one on "your" frequency before you switch your own transmitter on. "**Channel clashes**" - two transmitters on the same frequency at the same time - generate interference, and usually cause one or both models to crash. Before each flight check that all parts are properly fixed.

The model must always be held in such a way that the propeller is free to rotate, as it is capable of inflicting serious injury.

Always switch the transmitter on first, and only then the receiver.

Always switch the receiver off first, and only then the transmitter.

If you neglect this sequence, i.e. if at any time the receiver is switched on when the transmitter is at "OFF", the receiver will be completely open to other transmitters, interference etc., and this could cause the motor to burst into life unexpectedly.

Before **every** flight ensure that the radio control system is working properly and has adequate range. This means checking that the transmitter controls the model's functions at a reasonable range on the ground.

Batteries

Never use faulty or damaged cells, or batteries consisting of different cell types, mixtures of old and new cells, or cells of different makes.

Exhausted and faulty dry or rechargeable cells must **not** be discarded in the household waste. Take old batteries back to your model shop, or to your nearest specialist toxic waste disposal centre.

Tools required to build the CHRISTEN EAGLE II

Pencil (HB lead), setsquare, tape measure or metre rule, household scissors, small, sharp knife, e.g. balsa knife, Order No. 986, electric mini-drill, set of twist drills (1.0, 1.3, 1.5, 1.7, 2.0, 2.5 mm Ø), cross-point screwdriver, e.g. Order No. 810, 1.5 mm A/F allen key, flat-nose pliers, Lexan shears, Order No. 26.

Gluing different materials

The table below lists typical glued joints and the recommended adhesives. It is only a guide, and does not claim to be comprehensive.

Materials	Typical joint	Adhesive Order No.
Plastic to wood	Fuselage / wing block	UHU plus schnellfest (fast-setting epoxy) 962
Plastic to plastic	Tail panels to fuselage	UHU Styrofoam cyano-acrylate 5820
Lightweight foam to lightweight foam	Fin to tailplane	UHU Styrofoam cyano-acrylate 5820

Read and observe the instructions supplied with all adhesives! The building instructions inform you when to use particular glues. If you wish to use white spirit or other solvent as a cleaning agent, note that special safety measures are required. Read the instructions supplied with these materials.

Note

Important: it is essential to keep the model's weight to a minimum, so please be sparing at all times when applying adhesives.

Read the instructions supplied with the various glues before using a particular type on the model. You will find a range of other adhesives in the main Graupner FS catalogue.

Radio control system for the CHRISTEN EAGLE II

The following items represent the minimum equipment for this model:

- | | | |
|---|--|--------------------------|
| 1 | X-412 computer RC system, 35 MHz band | Order No. 4713 or 4713.B |
| 4 | C 1041 pico-servo | Order No. 5116.lose |

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1	R 700 micro-receiver	Order No. 3551
1	Graupner 8N-800 RX transmitter battery	Order No. 3423
2	Servo extension lead	Order No. 3935.11
2	Servo extension lead	Order No. 3935.18
1	Heat-shrink sleeving	Order No. 3391.8

We specifically recommend the use of rechargeable batteries for the transmitter, as they provide the widest margin of safety.

Please see the main GRAUPNER FS catalogue for details of battery chargers

Electric power system and accessories

Motor	Order No. 7708	COMPACT 300
Speed controller	Order No. 2873	COMPACT CONTROL 10
Flight battery	Order No. 7605.3	LiPo 350 11.1 V / 0.35 Ah BEC
or		
Flight battery	Order No. 7625.3	LiPo 1000 11.1 / V / 1.0 Ah BEC
Propeller	Order No. 2945.20.11	
Spinner	Order No. 1298.3	

RC functions

Recommended servos

	Type	Order No.	No. off
Rudder	C 1041	5116.lose	1
Elevator	C 1041	5116.lose	1
Ailerons	C 1041	5116.lose	2

Specification

Wingspan approx.	870 mm
Overall length approx.	660 mm
Wing area approx.	23.90 dm ²
Tailplane area approx.	3.30 dm ²
Total surface area approx.	27.50 dm ²
Weight approx. min.	560 g

Assembling the fuselage

Glue the fin to the tailplane, ensuring that it is at **right-angles** and **exactly central**. Use UHU plus (epoxy), UHU por or foam cyano for this. When the joint has set hard, glue the tail assembly to the rear end of the fuselage. Tip: cyano is easy to apply in small quantities if you use a syringe needle.

[Seite 11]

Installing the servos

The first step here is to stick the plastic doubler to the servo plate; peel off the backing film and apply the frame over the servo opening. Press the rubber grommets into the servo mounting lugs, and fit brass eyelets in the grommets from the underside. Place the servos in the opening in the servo plate and drill 1 mm Ø pilot-holes through the metal eyelets (alternatively you could pierce the holes with a pin). Ensure that the servo output shafts are at opposite ends, as shown in the bottom picture.

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Cut down the servo output arms for the rudder and elevator and drill out the pushrod holes to 1.3 mm Ø. Set the servos to neutral from the transmitter by connecting the system and switching it on briefly. Fit the servo output arms on the pre-formed end of the wire pushrods, fit the output arms on the servo shafts and fit the retaining screws. Hold each pushrod with a pair of flat-nose pliers and screw the clevises in or out so that the control surfaces are at neutral. Engage the clevises and push the retaining rings over them for extra security.

Motor mount

Insert the motor mount side panels in the nose bulkhead, then fit the motor bulkhead itself and the additional support. Sand the corners and edges square where necessary to obtain a snug fit, then glue the parts together securely.

[Seite 13]

Installing the motor

Fix the COMPACT 300 motor to the motor bulkhead using the screws supplied. Solder the motor wires to the three wires attached to the Compact Control 10 (speed controller), and insulate each joint with a heat-shrink sleeve. **Ensure that the motor rotates in the correct direction.**

[Seite 14]

Motor cowl

Cut out the cowl along the marked lines using Lexan shears. Tape the half-shells together on the outside, and glue them together by applying cyano on the inside.

Place the cowl loosely over the model's nose, fit the spinner backplate on the motor shaft, and adjust the position of the cowl until the spinner lines up correctly with it, with an even gap between the two (see photos). Drill 1.5 mm Ø holes through the cowl and the fuselage, and fix it to the fuselage using the screws supplied.

[Seite 15]

Undercarriage

Insert the pre-formed undercarriage unit in the slot in the underside of the fuselage, and glue the wooden retaining plate in place; you may need to sand the plate slightly to obtain a close fit.

Drill 2 mm Ø holes at the recessed point in the wheel spats, and remove any rough edges on the inside of the mouldings.

[Seite 16]

Cut four rings about 6 - 7 mm long from the plastic tube supplied, and slit them along their length to form wheel collets. Fit the wheel axle through one side of the spat, followed by a plastic collet, the wheel and another plastic collet. The axle should then protrude through the other side of the spat.

Position the wheel spat accurately, and snap the plastic saddle clamp over the undercarriage leg. Pierce pilot-holes in the spat, working through the holes in the clamp,

and fit the retaining screws to fix the spat to the wheel leg. Repeat the procedure with the other wheel spat.

[Seite 17]

Completing the wings

Glue the plastic wing locating piece to the centre of the bottom wing using UHU por or foam cyano.

Mark the centreline on the fuselage fairing, and glue it in place as shown.

[Seite 18]

Peel the backing film from the piece of foam rubber supplied, and stick it to the front face of the fuselage fairing as shown.

Place the wing on the fuselage, and align the parts carefully: the wing must be **at right-angles** to the fuselage centreline. Drill 2.2 mm Ø pilot-holes through the wing fairing and into the fuselage, and fix the wing in place using the retaining screws and washers supplied.

Stick the plastic doublers to the servo mount surrounds in the bottom wing by peeling off the backing film and applying the frames over the servo openings.

[Seite 19]

Connect extension leads (Order No. 3935.18) to the aileron servos, and secure the connections with 8 mm Ø heat-shrink sleeves, Order No. 3391.8.

Fit the rubber grommets and brass eyelets in the servo mounting lugs, as described for the fuselage-mounted servos. Run the extension leads through the cable duct (tube inside the wing) until the connectors exit the wing in the centre. Place the servos in their wells, drill or pierce 1 mm Ø pilot-holes through the metal eyelets, and fix the servos in place using the retaining screws supplied with them.

Drill out the servo output arms to 1 mm Ø, and connect the aileron pushrods to the horns and the servo output arms. Set the servos to neutral (by switching the system on briefly), then fit the output arms on the servo output shafts at right-angles to the long servo case sides. Fit the output arm retaining screws to secure them.

[Seite 20]

Drill 2 mm Ø holes at the recessed points in the wing struts, remove rough edges from the holes, and screw them to the mounting lugs already attached to the top wing. Fit the struts from the outboard side.

Drill 3 mm Ø holes in the recesses in the centre cabane, and remove rough edges from the holes. Fit the M3 screws through the wing and the cabane from the top, then fit a washer on each screw followed by an M3 nut. Take care not to over-tighten the nuts.

[Seite 21]

Caution: make sure the cabane is the right way round: the moulded-in angled struts should run upward and forward from the rear when the cabane is in position on the fuselage.

Place the top wing, complete with wing struts and cabane, on the bottom wing and the fuselage, and screw the struts to the mounting lugs on the bottom wing, again working from the outboard side. Position the cabane accurately on the fuselage and glue it in place using cyano; alternatively it can be secured using 2.2 x 5 mm self-tapping screws.

Cut out the aileron link horns to shape and length as shown, and drill 1 mm Ø holes at the marked points.

[Seite 22]

Glue the link horns to the ailerons in the appropriate position using UHU por or foam cyano.

Connect the link pushrods to the bottom aileron link horns, and adjust the clevises to set them to the correct length. Connect the clevises, secure them with plastic rings, and ensure that the ailerons are exactly parallel to each other (in line with the wing airfoil).

The battery compartment cover retainers can now be fixed to the fuselage at the marked points; pierce pilot-holes, and fix the swivel retainers using 2.2 x 5 mm self-tapping screws. Install the battery in the compartment and pack foam round it if necessary to hold it in place.

[Seite 23]

Decoration

Cut out the decals and apply them in the positions shown in the kit box illustration.

[Seite 24]

Glue the undercarriage fairings to the wire legs using foam cyano or UHU plus schnellfest (epoxy).

Assembling the CHRISTEN EAGLE II

Connect the servos to the appropriate receiver output sockets: 1 = motor, 2 = 100 mm extension lead for left aileron, 3 = elevator, 4 = rudder, 5 = 100 mm extension lead for right aileron. Fix the receiver at the front of the radio compartment using double-sided foam tape. Connect the aileron servos, and fix the wings to the fuselage using the screws and washers supplied.

Balancing the CHRISTEN EAGLE II

The completely equipped model, with the flight battery installed, should balance level at a point **about 80 mm** aft of the root leading edge of the top wing, ideally with the nose inclined slightly down. If necessary, adjust the position of the flight battery until the model balances at the stated point.

Before flying the aeroplane set the transmitter trims to centre and ensure that all the control surfaces are exactly at centre (neutral).

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Control surface travels

Ailerons	15 mm up	15 mm down
Elevator	15 mm up	15 mm down
Rudder	20 mm left	20 mm right

Important:

When fitting and adjusting the various linkages you should ensure that they move freely, without binding, are able to move to their full extent - including trim travel - and are not obstructed mechanically at any point.

When you move the rudder stick to the right, the rudder should also deflect to the right (left stick: left rudder). Pull the elevator stick back towards you, and the elevator must deflect up (stick forward: elevator down). If you move the aileron stick to the right, the right ailerons should rise, the left ailerons fall. When you move the throttle stick forward, the motor should run at full power.

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Test-flying the CHRISTEN EAGLE II

For the initial test-flights seek out a grassy meadow around the size of a sports field. There should be no obstacles present in any direction. Wait for a day with little or no wind, as this makes it easier to detect errors in the model's trim.

Switch the transmitter on, set the throttle stick to the "OFF" position, then connect the LiPo battery.

Check one last time that the model is correctly assembled, and carry out a range-check. Ensure that all the working systems are operating correctly.

If you have a smooth, flat strip, the aeroplane is perfectly capable of taking off from the ground. If not, you will find that hand-launching presents no problems.

Place the model in the centre of the runway, facing directly into any breeze. Open the throttle slowly and gradually; the model will start running forward, and will lift off by itself once it reaches flying speed. Use the rudder initially to hold the model pointing into wind. Once the Eagle is at a reasonable height, use the ailerons gently to fly the first broad turns. Note that there will always be a certain delay between a control command (to change course) and the model's response, so you should always keep the model at a reasonable altitude until you feel familiar with its control response.

The motor run is around ten minutes. You should always use a timer to ensure that there is adequate energy left in the battery for the landing approach. Always land directly into wind.

This is the hand-launch procedure: hold the transmitter in one hand, the model in the other. Apply full-throttle and give the aircraft a powerful launch directly into wind, with the wings and fuselage level. Get both hands on the sticks again immediately, so that you are ready to correct the model's flight path if necessary.

[Seite 26]

A few tips on flying

Always wear sunglasses if you are flying in strong sunshine, or if the cloud cover is thin.

If the wind should strengthen to an uncomfortable level while the model is in the air, land it as soon as you can to avoid possible damage.
The recharging time for the flight pack varies according to the quality of the battery and the frequency of charging. **Don't forget to supervise the charge process.**

We hope you have many hours of fun building and flying your

CHRISTEN EAGLE II.

Yours - the ***Graupner*** team