

## INSTRUCTIONS

# SOARMASTER COMPACT

**For electric power system  
and 12 cells  
or 3 / 2300 Li-Po cells**

**This model requires a 5-function radio control system.**

### Introduction

This model is highly pre-fabricated, and can be assembled ready for flying in a very short period.

The SOARMASTER COMPACT is not designed or stressed for aerobatics, but loops and tightly banked turns are well within its capability provided that you are smooth and gentle with the controls.

The SOARMASTER COMPACT is very responsive to thermals and circles very well. If the model should climb to an uncomfortable altitude, the butterfly (crow) setting of the ailerons and camber-changing flaps provides a reliable means of losing height quickly.

**Caution:** this model is not a toy!

If you have little or no experience with powered model aircraft of this type, please enlist the help of a seasoned model flyer who can advise and support you. Attempting to fly the aeroplane without any prior experience could easily result in personal injury; please keep your safety and well-being in mind at all times.

### Important: before you start construction

Even if you have already built many RC models please read right through these instructions very carefully, and check that all the kit components are actually present before starting construction. We have invested considerable time and trouble in making assembly as easy as possible, without compromising safety in any way.

This model is highly pre-fabricated and can be built in a very short time. However, the work which you have to carry out is important and must be done carefully. The model will only be strong and fly well if you complete your tasks competently - so please work slowly and accurately.

### Notes on operating the SOARMASTER COMPACT

**Be sure to read right through the instructions covering assembly and operation of your model before you attempt to operate it for the first time. You alone are responsible for the safe operation of your radio-controlled model. Young people under 18 years of age should only be permitted to build and fly this model under the instruction and supervision of an adult who is aware of the hazards involved in this activity.**

**These operating instructions should be stored in a safe place, and must be handed on to the new owner if you ever dispose of the model. If you have questions or queries about operating this RC model aircraft safely, please contact your local model shop in the first instance, where the staff will be pleased to advise you.**

**Radio-controlled model aircraft are extremely demanding and potentially dangerous objects, and require a high level of specialised knowledge, skill and an awareness of 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. Our brochure "Luftrecht fuer Modellflieger" (Aviation Law for Modellers) is available under Order No. 8032, 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 at all times. Refer to your RC system instructions for more details.

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 of the power system you can no longer be sure that the system will work reliably, and such changes also invalidate your guarantee.

Use only matching polarised connectors. All high-current cables and connectors must be insulated carefully to eliminate the risk of short-circuit; this also includes the flight battery if you assemble the pack yourself. Never combine plugs and sockets of different types, e.g. gold-contact with tin-contact, as such connections are never reliable in the long-term.

If you are using a motor switch or speed controller with an integral receiver power supply (BEC system), be sure to use only Graupner gold-contact connectors.

Avoid short circuits and reverse polarity at all times.

The high energy density of NC batteries involves a permanent danger of fire and even explosion.

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 completing a course of training first. Model flying is just such a skill, and has to be learned in exactly the same way.

However, as manufacturers we have no means of influencing the way you build and operate your RC model aircraft, and for this reason we can do no more than point out the hazards expressly. We accept no further liability.

If you need help, please enlist the aid of an experienced modeller, join a model club or enrol at a model flying training school. Model shops and the specialist model press are also good sources of information. The best course is always to join a club and fly at the approved model flying site.

You alone are responsible for the safe operation of your RC powered glider.

If you have queries concerning safety relating to RC model aircraft, please ask your local model shop for advice, where the staff will be glad to help.

Adhesives and paints contain solvents which may be hazardous to health under certain circumstances. Read and observe the notes and warnings supplied by the manufacturer of these materials.

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 highly dangerous and not permissible under any circumstances.

Make sure that all passers-by and onlookers are aware of the hazards involved in the operation of your model. Remind them to keep a safe distance from the model: at least 5 m behind the rotational plane of the propeller.

Keep a safe distance between your model and other people or objects at all times. Never fly low over people or directly towards them.

Radio-controlled models should only be flown in temperatures within the range -5° to +35°C. More extreme temperatures can lead to changes in battery capacity, material characteristics, the strength of glued joints and other unwanted effects.

All model flyers should behave in such a way that the danger to people and property is minimised. Never act in any way which will disturb other flyers or jeopardize safe, orderly flying at the site.

**Don't operate your model in the vicinity of overhead power cables, industrial sites, residential areas, public roads, squares, school playgrounds, public parks or sports fields etc.**

**Don't ignore our warnings. They refer to hazardous materials and processes which, if ignored, can result in fatal injury or serious damage to property.**

**Propellers and other rotating parts which are powered by a motor represent a permanent hazard and present a real risk of injury. Don't touch them with any part of your body. For example, a propeller spinning at high speed can easily slice off your finger.**

**Keep well clear of the rotational plane of the propeller. You never know when some part (or the whole propeller) may come loose and fly off at high speed, hitting you or anybody else in the vicinity; this can result in serious injuries. Never touch the revolving propeller with any object.**

**Ensure that there is no chance of any object obstructing the propeller and preventing it turning.**

**Take care with loose clothing such as scarves, loose shirts etc. Flapping cloth can easily be sucked into the area of the propeller and then get tangled in the blades. This is extremely dangerous.**

**Every time you intend flying the model, check carefully that all parts connected to it are working correctly, including propeller, gearbox, RC components, etc. Everything must be properly located and firmly secured. Check for possible damage, and do not fly your model unless you are confident that everything is in perfect order.**

**Whenever you are working on the motor, make sure that you are on a safe surface and cannot slip. Wear high-grip shoes such as trainers.**

**Satisfy yourself that your frequency is vacant before you switch on. Radio interference caused by unknown sources can occur at any time without warning. If this should happen, your model will be uncontrollable and completely unpredictable. Never leave your radio control system unguarded, as other people might pick it up and try to use it.**

**Do not switch on an electric motor unless you are sure that there is nothing in the rotational plane of the propeller. Don't attempt to stop the spinning propeller with your hands. Never run an electric motor with a propeller fitted unless it is firmly anchored.**

**If you are to fly your model safely and avoid problems it is essential that you are aware of its position and attitude throughout each flight - so don't let it fly too far away! If you detect a control problem or interference during a flight, immediately land the model to prevent a potential accident. Models must always give way to full-size aircraft. Take-off and landing strips should be kept free of people and other obstacles.**

**Your RC system can only work reliably if the batteries are kept fully charged. Never use batteries which are hot, faulty or damaged. Always heed the instructions provided by the battery manufacturer.**

**Before every flight be sure to carry out a range check, and ensure that all functions are working correctly. Note in particular that the motor control function on the transmitter must first be set to the OFF position before you switch on the system. Always switch on the transmitter first, then the receiving system, to eliminate any chance that the motor will burst into life unexpectedly. When switching off, reverse the order: receiving system first, then the transmitter.**

**Check that the control surfaces move in the direction which corresponds to the stick movement:**

**If you move the rudder stick to the right, the right-hand elevator should move down and the left-hand elevator up.**

**Pull the elevator stick back towards you, and both elevators should rise.**

**When you move the aileron stick to the right, the right-hand aileron should deflect up, the left-hand aileron down.**

**At the butterfly (crow-brake) setting (stick back towards you), both ailerons should rise, both camber-changing flaps fall.**

**Always move the transmitter sticks smoothly - never abruptly.**

**After each session remove the battery from the model and store it in a discharged state (approx. 0.9 V per cell) at a temperature of about +5° to +25° C. Batteries should be kept out of the reach of children at all times.**

**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 lack knowledge and experience, or work carelessly or irresponsibly. If you take reasonable care, model flying is a highly creative, instructive, enjoyable and relaxing pastime.**

### **Building and flying the SOARMASTER COMPACT**

#### **Before you start building the model:**

If you are buying a radio control system for this model, check that the transmitter and receiver are suitable for **model aircraft** and bear the standard type-approval sticker.

The frequency bands used for radio control systems are shared by other radio equipment and radio-frequency apparatus, so it cannot be guaranteed that you will not suffer interference when using your system.

Individual countries may require you to pay for a licence to operate your radio control equipment. In Great Britain no fee is payable to operate 35 MHz radio control equipment, but you should check with your local authority for any by-laws restricting its use. This information may not apply to other countries.

Your local Post Office or model shop will be able to provide more information on this subject.

#### **During construction**

RC components and linkages must be installed when mentioned in the appropriate stage of construction. Fitting these parts later will be more difficult, and could even be impossible.

#### **Flying the model**

Never fly your SOARMASTER COMPACT in a nature reserve or any other protected site. Please don't disturb the animals and plants which live in the countryside.

Trees and bushes are the natural habitat of many birds, and also serve as nesting sites and general protection for them.

Exhausted dry cells and rechargeable batteries must not be thrown in the household waste, as they contain toxic materials. Take all batteries back to the model shop where you purchased them, or to your local toxic waste collection centre.

#### **Tools required** to build the SOARMASTER COMPACT

Pencil (HB lead), setsquare, household scissors, miniature electric drill, 4 mm Ø twist drill, cross-point screwdriver, e.g. Order No. 810, allen keys, Order Nos. 551 and 806, thread-lock fluid, Order No. 952, flat-nose pliers.

We recommend the use of DEVCON 5-minute epoxy adhesive, Order No. 961.70.

Areas of the fuselage and wing panels which are to be glued should be rubbed down with fine-grit abrasive paper to remove any lingering traces of mould release agent. Aim at reducing the glossy surface to a **mat** finish, otherwise there is little chance of a durable glued joint.

**Important:** don't use more glue than is necessary, as excess adhesive just adds unnecessary weight. Please read the instructions supplied by the adhesive manufacturer before using any particular glue. For more information on adhesives see the main FS catalogue.

### Important Safety Notes

It is important to use matching polarised connectors exclusively. All cables, connectors and terminals (including those of the flight battery, if home-assembled) must be insulated to avoid short-circuits. Never combine connectors with contacts of different materials, e.g. tin-plate and gold-plate, as these combinations may be unreliable.

If you are using a speed controller or motor switch with a BEC power supply, use only Graupner gold-contact connectors.

Avoid short-circuits and reversed polarity.

The high energy density of NC batteries involves a risk of explosion and fire.

### Pre-flight checks

Before every flight be sure to carry out a range check, and ensure that all functions are working correctly. This is the procedure: switch on the transmitter, followed by the receiver. Leave the transmitter aerial collapsed, and walk away from the model. At a reasonable ground range check that all the control surfaces still work perfectly when you move the sticks.

Repeat the check with the motor running, while a friend holds the model securely.

Don't ignore our warnings. They refer to hazardous materials and processes which, if ignored, can result in fatal injury or serious damage to property.

The motor should only be test-run in the open air, as the powerful suction effect of the propeller combined with the large quantity of accelerated air can easily cause accidents in any enclosed space (such as pictures falling down, curtains sucked into the propeller). Ensure that your assistant is holding the model really securely before you switch the motor on.

If you start the motor when the model is close to loose or sandy ground, the propeller will suck up sand and dust and hurl it around, and it could easily get in your eyes and do damage. Wear protective goggles at such times.

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 lack knowledge and experience, or work carelessly or irresponsibly. If you take reasonable care, model flying is a highly creative, instructive, enjoyable and relaxing pastime.

It is essential to read and observe the safety notes provided by the manufacturer of the batteries you intend to use in the model.

### Specification

Wingspan approx.	3200 mm
Fuselage length approx.	1540 mm
Wing section	HQ/W 2.5/8 to 3/9
Tailplane section	HQ/W 0/8 to 0/9
Wing area approx.	52 dm <sup>2</sup>
Tailplane area	7.41 dm <sup>2</sup>
Total surface area approx.	59.41 dm <sup>2</sup>
All-up weight min. approx.	2900 g
Longitudinal dihedral	+ 1.5°
Centre of Gravity	100 mm (aft of root leading edge)

### Recommended servos

Type	Order No.	No. off	Function
DS 281	5148	2	Rudder / elevator
DS 3210	5200	2	Ailerons
DS 368	5162	2	Camber-changing flaps
GENIUS 40	2896	1	Speed controller

**Servo extension leads required (in the fuselage)**

Order No. 3935.105	for rudder and elevator	2 leads
Order No. 3935.18	for speed controller	1 lead
Order No. 3935.18	for ailerons	2 leads
and		
Order No. 3935.75	for wing centre section	2 leads
Order No. 3935.18	for camber-changing flaps	2 leads
Order No. 3935.11	for connecting extension leads to receiver	4 leads
Order No. 98516.1	Folding ferrite ring for aileron and flap servo leads	1
Order No. 98516	Folding ferrite ring for rudder and elevator	1

**Electric motor and accessories**

Motor Order No.	Propeller Order No.	Spinner Order No.	Flight battery Order No.	Speed controller Order No.
COMPACT 490 16 V <b>6523</b>	45 x 25 cm <b>1336.45.2</b> <b>5</b>	<b>9500.4</b> <b>5</b>	SANYO 12N-2400 RC 14.4 V / 2.3 Ah <b>2476</b> or LiPo 3 / 3200 11.1 V <b>7650.3</b>	COMPACT CONTROL 50 <b>2885</b> or Genius 40 <b>2896</b>
INLINE 700 <b>6540</b>	40 x 25 cm <b>1336.40.2</b> <b>5</b>	<b>9500.4</b> <b>5</b>	SANYO 12N-2400 RC 14.4 V / 2.3 Ah <b>2476</b> or LiPo 3 / 3200 11.1 V <b>7650.3</b>	COMPACT CONTROL 50 <b>2885</b> or Genius 40 <b>2896</b>

**Radio control system for the SOARMaster COMPACT**

We suggest the following items as the minimum equipment for this model:

**For the electric glider version**

1	mc-19 35 MHz radio control system or better, e.g.	Order No. 4821
2	DS 281 servo	Order No. 5148
2	DS 3210 servo	Order No. 5200
2	C 3241 servo	Order No. 3900
1	DS 19 receiver	Order No. 3221
1	8RC 300 MH transmitter battery	Order No. 3239
1	4NH-1700 RX receiver battery	Order No. 7552

We deliberately recommend rechargeable batteries for the receiver and transmitter, as they provide the broadest margin of safety.

Please refer to the main FS catalogue for details of battery chargers.

**The building instructions**

The basic rule is to trial-fit parts before reaching for the glue, and trim them where necessary. Some components are deliberately over-sized to allow for this. We recommend that you sort out the parts into groups relating to the fuselage, wing panels, tail panels etc.

Cover your work surface with soft foam to avoid damaging the finished surfaces.

You may wish to deviate from the sequence of assembly described in these instructions; you do this at your own discretion and risk.

**Refer to the building instructions and stage photos constantly while you are completing the model.**

Note that balsa knives, pins and wire ends are sharp and pointed, and can easily cause injury.

Take care to keep tools, adhesives and paints out of the reach of children.

When using solvent-based adhesives it is important to work in a well ventilated place.

Take waste glue and paint back to the model shop for disposal, or to your local toxic waste collection centre.

A large, unobstructed working area is a great advantage for all types of model-making.

If you are a relative beginner and are not sure of any process, please ask an experienced modeller for advice.

### **The wing**

Installing the servos in the outboard wing panels.

The first step is to install the servos in the outboard wing panels. Repeat each procedure with the second wing panel. The servos are screwed to the wooden frames supplied in the kit, which are then glued in the wings. Use abrasive paper to roughen the joint area thoroughly inside the outboard wing panels, to provide a "key" for the epoxy.

Locate the pushrod position just forward of the aileron, and cut the pushrod clearance slot using a 4 mm Ø twist-drill and file.

Fix the servo to the wooden frame using the screws supplied with the servo.

Cut down the servo output arm as shown in the photo.

Set the servo to centre from the transmitter, then fix the prepared output arm on it, exactly at right-angles to the servo case.

The servo lead must now be extended before the servo can be glued in the wing. Connect an extension lead, Order No. 3935.18, to the servo, and secure the connection permanently using a drop of cyano or a heat-shrink sleeve.

Apply glue to the servo frame and fit the servo assembly in the wing as shown.

Ensure that the servo output arm is exactly in line with the hole for the aileron horn.

Press the servo lightly against the top wing skin until the epoxy has set.

When the glue has cured, run the extension lead through the rectangular opening in the root rib of the output wing panel.

The next step is to prepare the brass aileron horn as shown in the picture. The horn must be cut down to an overall length of 13.5 mm.

Flap horn

Aileron horn 13.5 mm

Screw the horn into the aileron as far as it will go. Take care to screw in both aileron horns to the same depth; you can check this by measuring the distance from the trailing edge to the linkage hole.

Connect the clevis to check freedom of movement.

The next step is to make up the pushrod from the servo to the aileron. Each pushrod consists of two M2.5 clevises and a length of M2.5 studding (cut from the full-length threaded rod supplied). The clevises can be secured on the pushrod using thread-lock fluid or a drop of cyano.

Screw the pushrod into one clevis, and connect the clevis to the aileron horn. Connect the second clevis to the servo output arm and mark the correct length of the pushrod. Cut the pushrod to length, screw the clevis onto the cut end and secure it.

The final work on the outboard wing panels is to trim the servo well covers to fit and attach them. Using a soft pencil, draw extended lines on the wing panel to indicate the outline of the servo well. Place the well cover on the wing with the servo output arm in the centre of the bulged fairing. Mark the position of the pencil lines on the well cover in this position. Cut along the lines using a pair of scissors, then carry out any final trimming required using abrasive paper on a block, as shown.

When the well covers are a really snug fit, they can be taped to the wing panels.

### **Installing the servos in the wing centre section**

Sand the inside of the servo wells thoroughly to obtain a good “key” for the adhesive, as described for the outboard aileron servos.

Cut and file out a 20 mm Ø hole exactly central between the two holes for the wing retaining screws; the servo extension leads are passed through this hole.

The servos have to be prepared prior to gluing them in the wing, as shown in the pictures.

Use a pair of pliers to expand the heat-shrink sleeves slightly so that they fit over the servos. Remove the servo output arm before fitting the sleeve. Shrink the sleeve round the servo, allow it to cool down, then cut the material away round the output shaft; ensure that the output arm does not foul the sleeve at any point.

Set the servos to centre from the transmitter, then fit the output arms and tighten the retaining screws. Sand the heat-shrink sleeves before gluing the servos in place.

The slots for the pushrods must again be drilled and filed to shape to clear the camber-changing flap linkages, as described for the ailerons.

Screw the horns into the flaps as far as they will go, as described for the aileron horns.

The servo leads must now be extended before the servos are glued in the wing. Connect an extension lead, Order No. 3935.18, to each servo, and secure the connection permanently using a drop of cyano or a heat-shrink sleeve.

The two flap servos can now be epoxied in the wing as shown.

Once again it is very important to ensure that the servo output arms are exactly in line with the flap horns.

The next step is to make up the pushrods from the servos to the camber-changing flaps. Screw the M2.5 pushrod into one clevis, and connect the clevis to the flap horn. Connect the second clevis to the servo output arm and mark the correct length of the pushrod. Cut the pushrod to length, and screw the clevis onto the cut end. Secure the clevises with a drop of cyano or thread-lock fluid.

Cut and trim the servo well covers to fit accurately, as described for the aileron servos, and tape them to the wing centre section.

A further two extension leads, Order No. 3935.75, now have to be drawn through the wing centre section in order to extend the aileron servo leads.

Glue the extension lead sockets in the facing ribs using cyano. Run all four extension leads out of the hole in the middle of the wing centre section as shown, wrapped in foam to avoid abrasion damage.

### **Installing the tail servos in the fuselage**

The next step is to glue the servo plate for the two tail servos in the fuselage together with an aluminium tube (guide sleeve for the tail retaining screw).

Be sure to roughen the joint surfaces of the fuselage beforehand, as already described.

30 mm

Guide sleeve for V-tail retaining screw

Cut the aluminium tube to the length shown in the photo. The position of the servo plate is dictated by the position of the tail retaining screw.

Slip the aluminium tube into the servo plate and fit this assembly in the fuselage, as shown in the photo.

Fit the tail retaining screw through the aluminium tube and the tailplane saddle in order to position the servo plate correctly.

Use the template supplied to set the correct height of the servo plate; it should be parallel to the edge of the fuselage. Epoxy it in the fuselage in this position.

The two tail pushrods must be prepared before the two servos are installed.

Bend the pushrods to the shape shown in the photo, and set them to the exact lengths stated. You will need to open up the linkage holes in the servo output arms using a 2 mm Ø drill.

Connect the pushrods to the servo output arms.

Fit the servo / pushrod assemblies in the servo plate, and secure them using the retaining screws supplied with the servos. Drill pilot-holes for the servo screws beforehand.

The ball-links must now be pressed onto the brass linkage balls on the elevator horns, and the V-tail unit screwed to the fuselage using the M4 socket-head screw supplied.

### **Installing the electric motor**

The electric motor is attached to the nose bulkhead using two M3 x 8 socket-head cap screws.

If you are fitting a COMPACT 490 16V motor, note that the three connecting wires must be routed underneath the speed controller to avoid them fouling the motor case. If you are fitting an INLINE 700 motor, the wires exit the rear of the motor in any case.

### **Preparing the canopy**

File slots in both ends of the fuselage canopy recess to locate the canopy retaining wire, as shown in the two photos.

Bend both ends of the retaining wire at a slight angle as shown, as this makes it easier to fit the canopy.

Thoroughly sand the inside of the canopy where the retaining wire is to be glued.

Check that the ends of the wire line up correctly with the slots in the fuselage, then glue the retaining wire to the inside of the canopy. Check also that the canopy lines up correctly with the shape of the fuselage.

### **Installing the speed controller**

Connect the three speed controller cables to the motor cables. The controller can be left "in mid-air" behind the motor.

### **Installing the receiver and receiver battery**

The receiver and receiver battery can now be installed in the fuselage using Velcro (hook-and-loop) tape. Remember to connect all the extension leads to the receiver before installing it. When the receiver is in place, the four short extension leads for the aileron and flap servos must project out of the opening in the wing saddle.

The ON-OFF switch can be fixed to the inside of the fuselage using Velcro tape.

The flight battery is also attached to the fuselage using Velcro tape. This is the procedure: stick pieces of Velcro tape round the edges of the flight battery immediately adjacent to the cables on both sides (see photo). Stick the mating pieces of Velcro in the fuselage at the appropriate points. Check the model's Centre of Gravity before you finalize the battery position.

The final stage is to attach the tail servo cover to the fuselage. Trim it to fit if necessary, then tape it over the opening as shown.

Drill a 4 mm Ø hole in the cover at the marked point, so that you can access the retaining screw using an allen key. This allows you to fit and remove the V-tail without having to remove the cover.

### **Assembling the SOARMASTER COMPACT**

Fix the V-tail unit to the fuselage using the M4 socket-head cap screw.

Ensure that the two brass balls on the elevator horns engage fully in the plastic ball-links on the tail pushrods.

Connect the wing servo extension leads (projecting from the wing centre section) to the extension leads at the wing saddle. Slip the leads into the fuselage, then attach the wing centre section to the fuselage using the two M5 socket-head cap screws provided.

**Important:** ensure that the V-tail and wing are firmly secured to the fuselage, and cannot shift.

Plug in the two outboard wing panels using the square-section joiners, and tape the panels together.

### **Balancing the SOARMASTER COMPACT**

Assemble the model completely, ready to fly, and support it under both wing roots at a point about 95 - 100 mm aft of the leading edge. The model should now balance level, ideally with the nose inclined slightly down. Re-position the flight battery if necessary until this is the case. Once you have established the correct battery position, draw a pencil-line in the fuselage to ensure that it is always replaced correctly.

For initial test-flights the CG should be at the forward end of the stated range.

Before every flight check that all control surfaces are exactly at centre (neutral) when the transmitter sticks and trims are also at centre.

### **Control surface travels**

Ailerons	25 mm up	5 mm down
Elevators	10 mm up	10 mm down
Rudder	10 mm up	10 mm down
Flaps	2 mm down	1 mm up

### **Butterfly (Crow) setting**

Ailerons	up	9 mm
Flap	down	max., approx. 75°
Elevators	down	4 mm

(max. means measured at the trailing edge of control surface)

### **Important:**

When installing and adjusting the mechanical linkages it is vital to ensure that they all work smoothly and are able to carry out their full travel - including trim movement - without fouling at any point, and without being obstructed mechanically (servos stalled).

When you move the rudder stick to the right, the right elevator should move down and the left elevator up. Pull the elevator stick back towards you, and both elevators should deflect up through the same angle (forward stick = down). If you move the aileron stick to the right, the right-hand aileron should rise, the left-hand aileron fall. Pull the Butterfly (Crow) stick back towards you, and the ailerons should rise and the flaps fall. We recommend assigning the camber-changing flaps to a slider on the transmitter; it is best to limit the flaps' travel electronically, so that the stated deflections are obtained at full travel of the slider.

And now all that remains is to wish you many hours of pleasure building and flying your SOARMASTER COMPACT.

Yours - the **Graupner** team!

**GRAUPNER GmbH & Co. KG D-73230 KIRCHHEIM/TECK GERMANY**

We reserve the right to introduce modifications. No liability for printing errors.

Ident No. 50778

05/2005