

# STABLE 2.1 RACE

RAST



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(V1.0)

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## Safety instructions:

You have purchased an RC sport paraglider, which - together with appropriate suitable accessories - can be used to complete a functional RC model. Compliance with the operating instructions in connection with the model as well as the installation, operation, use and maintenance of the components associated with the model cannot be monitored by us. Therefore, we do not assume any liability for losses, damages or costs resulting from the faulty operation, faulty behavior or in any way related to the aforementioned. Unless otherwise required by law, we shall not be liable for any damages whatsoever (including personal injury, death, damage to property, loss of revenue or business, business interruption or other indirect or direct consequential damages) arising out of the use of the model. Total liability is limited in all circumstances and in all cases to the amount you actually paid for this model. The commissioning and operation of the model is solely at the risk of the operator. Only careful and considered handling during operation will protect against personal injury and property damage. During the construction phase, observe the safety and processing instructions of the manufacturers when handling adhesives and solvents. Some adhesives and solvents can cause damage to health and materials if they are not used properly. Dispose of leftover adhesives and paints at specialized dealers or special waste collection points. When handling tools, also make sure that you cannot injure yourself with them. Make sure that children do not have access to tools, adhesives or paints. A generously sized free work area is of particular advantage for all craft work.

Have experienced model builders show you difficult operations if you have little model building experience.

About flying: Never let the paraglider fly in nature reserves or landscape protection areas. Be considerate of the animals and plants living there. If necessary, take out special RC model liability insurance. It is essential to keep these safety instructions and they must be passed on to the buyer if the model is resold.

## Manufacturer's Declaration:

Should defects in material or workmanship be found in an item sold by us in the Federal Republic of Germany and purchased by a consumer (§ 13 BGB), we, the company Para Aviation RC; Rico Priesnitz - Engineering assume responsibility for the elimination of defects in the item to the extent set forth below. The consumer cannot assert rights from this manufacturer's declaration if the impairment of the usability of the object is due to natural wear and tear, use under competitive conditions, improper use (including installation) or external influence. This manufacturer's declaration does not affect the consumer's statutory or contractually granted warranty claims and rights under the purchase contract against his seller (dealer).

Scope of warranty service: In the event of a warranty claim, we shall, at our discretion, repair or replace the defective goods. Further claims, in particular claims for reimbursement of costs in connection with the defect (e.g. installation/dismantling costs) and compensation for consequential damage are excluded - to the extent permitted by law. Claims arising from statutory provisions, in particular under the Product Liability Act, are not affected by this.

Prerequisite for warranty service: The purchaser must assert the warranty claim in writing, enclosing the original proof of purchase (e.g. invoice, receipt, delivery bill). He must also send the defective goods at his own expense to the address below. In doing so, the buyer should name the material or processing defect or the symptoms of the defect in such concrete terms that a review of our warranty obligation becomes possible. The transport of the item from the consumer to us as well as the return transport are at the risk of the consumer.

Period of validity: This declaration is only valid for claims made to us under this declaration during the claim period. The claim period is 24 months from the date of purchase of the device by the consumer from a dealer in the Federal Republic of Germany (date of purchase). If defects are reported after the claim period has expired or if the evidence or documents required for the assertion of defects under this declaration are not submitted until after the claim period has expired, the purchaser shall not be entitled to any rights or claims under this declaration.

Statute of Limitations: To the extent that we do not acknowledge a claim duly asserted within the claim period under this declaration, all claims under this declaration shall become statute-barred 6 months from the date of assertion, but not before the end of the claim period.

Applicable law: This declaration and the claims, rights and obligations arising from it shall be governed exclusively by German substantive law without the norms of private international law and to the exclusion of the UN Convention on Contracts for the International Sale of Goods.

The following points must be observed: Before starting the model, check it for safe operation of the remote control as well as the plug connections for safe and tight connection. The batteries must be charged and the range of the remote control must be checked. Especially the transmitter and receiver batteries must be charged before each launch. Check that the channel you are using is clear. Never fly if you are not sure if the channel is clear. Follow the recommendations and instructions for your remote control and accessories. Make sure that the servos are not mechanically limited in their travel. Batteries and rechargeable batteries must not be short-circuited. Remove the batteries when transporting and not using the model. Do not expose the model to strong humidity, heat, cold or dirt. Secure the model and RC components against damage and slipping during transport.

IMPORTANT: The battery installed in the model must not be disposed of in household waste. The battery must be disposed of in used battery collection containers.

IMPORTANT: The model and the transmitter must not be disposed of in household waste and must be taken to a recycling center as electronic waste. Please contact your local authority for more information.

## **Safety instructions**

- When mounting, testing, programming on the transmitter, programming the controller or other adjustment work, the propeller must be removed so that there is no danger in the event of an unintentional start-up of the motor.

## **1. Introduction:**

Our STABLE 2.1 RACE RAST sets new standards in all flight areas of a hybrid paraglider. Especially the good take-off, flight and glide characteristics when flying fast or slow reveal the overall performance level. It can be flown very sporty, but it also likes very slow cruising very much - always with a high safety margin. Also, the good control characteristics and a high maneuverability were very important to us. This makes it very easy to crank out even weaker and very tight thermals.



## **2. scope of delivery Stable 2.1 Race RAST:**

- ✓ RC sport paraglider depending on ordered color
- ✓ Paraglider packing bag

### **Paraglider packing bag features:**

The paraglider packing bag is made of high quality backpack fabric. The dark gray mesh triangle is used to ventilate the packed paraglider. With the comfortable carrying handle, the RC sport paraglider can be carried comfortably. Thus, the RC sport paraglider does not have to be carried by the "pull loop" with locking element. Inside a small pocket is sewn, in which the risers can be safely stowed. Thus, tangling of the lines in the packing bag is almost impossible.



### 3. Technical Data Stable 2.1 Race RAST:

- Hybrid RAST RC sports paraglider
- 4m span width
- Aspect Ratio 7,5
- RAST® valves in all closed cells
- very easy to start due to RAST®
- high glide performance
- very agile wing
- Ideal for extensive thermal flights in the plain or slope flight
- Can be accelerated very well with a still good sliding power
- New modern flow-simulated profile-strak
- Nitinol sticks, a nickel titan alloy and known as a formal memory alloy. Bent chopsticks were yesterday
- Edelrid Pro Dry Linen of the latest generation
- High quality packing bag made of backpack material with breathable mesh segment, inside pocket for the carrying straps and carrying handle

#### Technical Data:

Canopy:	Hybrid with RAST®-valves
Span width:	4 Meter
Cord type:	3-Liner
Aspect Ratio:	7,5
Cells:	37, thereof 27 with RAST®-Technologie and 6 cells as Single-Skin
Recommended weight:	2,5kg - 3,5kg

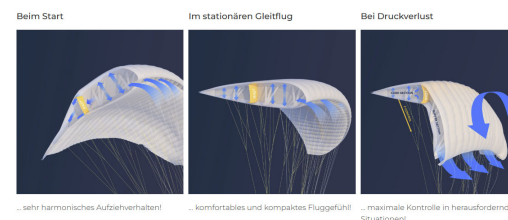
### 4. RAST® Technology:

Dear customer, please be aware that you are not holding a conventional RC sport paraglider in your hands, but a glider with RAST valves. This technology was elaborately developed by the man-carrying company Swing and has already saved many lives in the man-carrying paraglider sector. We, Para Aviation RC, have adapted this technology in our RC sport paragliders and invested a lot of development time to ensure that this technology also works as it should in the RC sector. Thus it was possible for us to develop a hybrid paraglider, which does not have single-skin cells in the important performance-generating and buoyancy-strong middle area, but instead has RAST valves installed.

Maximum control in any situation - that's RAST®.  
 RAST is a technical design element that makes RC paragliding more predictable for you by dividing the paraglider canopy into different pressure zones. The glider behaves more stable and is easier to control, especially in turbulent conditions.

#### general benefits:

- Easy start behaviour, especially under difficult conditions
- High canopy stability
- Counteracts large-scale rattles
- No complete emptying of the cap in the event of malfunctions – thus less loss of altitude and faster reopening, lower tendency to hang up and better control of the brake
- More performance in moving air due to less canopy movement
- More control and lag-free steering in thermals




### 5. Riser:

The right riser is marked green in the lower area. The left riser is marked red. The brake line feed-through, so-called low-friction rings, which come from the man-carrying area, therefore look outwards on both sides when the riser is mounted. The front D-ring is responsible for attaching the accelerator lines, which can be looped through at this point.

### 6. Brake line length, minimum sink, best gliding

The type plate of the paraglider with serial number and further information is located on the right rib no. 6.

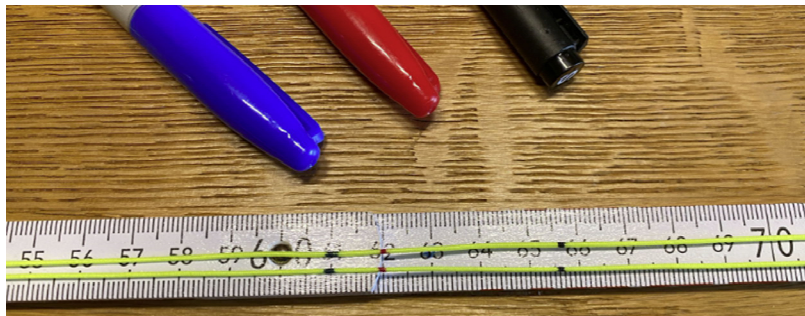
Gütesiegel für RC-Sportgleitschirm / Certification for RC-Sports Paraglider	
• Gleitschirm / Paraglider: STABLE 2.1 RACE	www.para-aviation-rc.com
• Hersteller / Manufacturer: Para Aviation RC	
• Spannweite / Wing Span: 4m	
• Fläche / Wing Area: 2,1m <sup>2</sup>	
• Streckung / Aspect Ratio AR: 7,5	
• Fluggewichtsbereich / Weight Range: 2,5 bis 3,5kg	
• Bremsleinenlänge neutral: Brake line length neutral: <b>656 mm</b>	<b>Seriennummer / Serial Number:</b> <div style="border: 1px solid black; padding: 2px; width: 100px; height: 15px; margin-top: 5px;"></div>
• Bremsleinenlänge bestes Gleiten: Brake line length best gliding: <b>620 mm</b>	
• Bremsleinenlänge geringstes Sinken: Brake line length minimum sink: <b>610 mm</b>	<small>Hergestellt mit integriertem RAST® System in Lizenz von SWING (GSSM Handels GmbH)</small>

Brake line neutral: 656 mm  
 Brake line best gliding: 620 mm  
 Brake line minimum sink: 610 mm



Type plate with information about brake line length, minimum sink, best gliding





## 7. Adjusting the brake line length

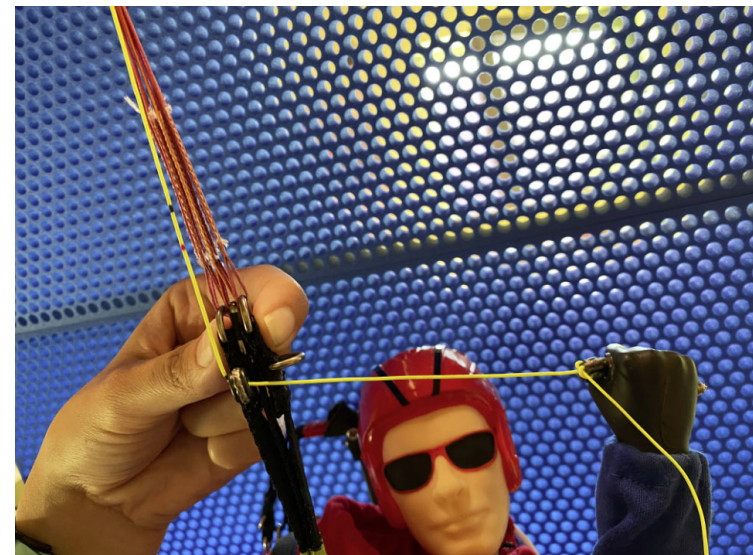
The length is measured at the yellow brake line.  
The specified dimensions are measured from the upper first node of the yellow lines, i.e. where the yellow line is tied in to the orange aramid lines. This means that the upper junction is the starting point of the measurement, i.e. the point 0mm.

It is therefore measured from the upper junction and a mark is made at the 3 given measurements, preferably with 3 different colored pens.

At 656 mm (e.g. black) -> basic setting for starting

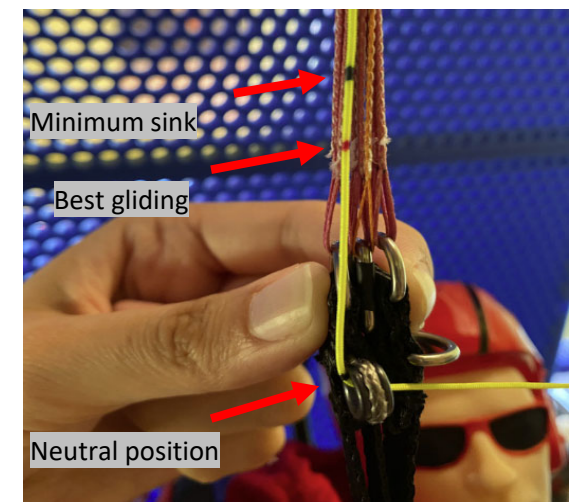
At 620 mm (e.g. red) -> value at which the paraglider glides furthest

At 610 mm (e.g. blue) -> value at which the paraglider has the least sink rate, i.e. for example in the thermal position.



When adjusting the brake line length, make sure that the point is visible at the back of the low-friction ring. It is important that the brake line ring is not twisted during this adjustment.

Also, the riser and lines must go up in an imaginary straight line. You can use your thumb and forefinger to prevent the ring from twisting and thus set the correct length.



### **8. General setting work and important points to be observed**

Dear customer, please be aware that the profile design is a different philosophy of flying than conventional RC sport paragliders. The profile strak was developed so that you can fly a high range of use and speed.

#### **Thus, the following important points arise:**

- **Acro steering: The brake is steered directly on the pilot's arm. Do NOT fly with acro steering, as this will make the model uncontrollable.**
- **Expo on side and brake: It is imperative that you fly with an EXPO value of at least 80% on the right, left and when braking. Therefore please set the EXPO value to at least 80% in the remote control. This enables a sensitive control.**
- **Accelerated state: It is important to put the accelerator on the depth control stick. During the whole flight the accelerator is used very often. Short bursts of acceleration allow for very agile and sporty flying.**
- **Takeoff:**  
**In light to strong winds, takeoff can be made in the normal flight position.**  
**In zero wind, takeoff can be made in the best glide position. Pre-acceleration is not necessary.**
- **In normal powered flight, the flight phase is the same as for takeoff.**
- **In normal gliding flight the flight phase "best gliding" is flown.**
- **In thermal flight the flight phase "minimum sink" is flown.**
- **A 3-step switch for the 3 flight phases has proven to be very effective**
- **The accelerator travel is approx. 50 mm (depth control stick)**

### **9. Flying with the Stable 2.1 Race RAST**

Since the aerodynamic design of the profile strak differs from conventional RC sport paragliders and also depending on the desired flight phase the profile is slightly de- or warped, give yourself a little time to get to know the full potential of the paraglider.

Especially in the accelerated state a high glide ratio is maintained. This allows you to fly quickly out of a downwind field and still reach the next upwind.

Our first customers, who switched from single skin to hybrid, report back that they are all very enthusiastic about the easy handling and high forgiveness of the wing. Should an outer ear or a larger area of the outer wing get tangled around the lines even in strong alpine thermals, you can continue flying with this wing and land relatively normally.

**We wish you now a lot of fun and extended flights  
with your new**

***STABLE 2.1* RACE  
RAST**

**Your Para Aviation RC Team**