

SWING



PARAGLIDER

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Date: 08.02.2019

SPITFIRE 2
Manuel (EN)



INFORMATION

SWING Flugsportgeräte GmbH reserves the right to alter or add to the contents of this Manual at any time. You should therefore regularly visit our website:

www.swing.de

where you will find additional information relating to your paraglider and any changes to the Manual. There is further information about the SWING website in the section "SWING on the World Wide Web".

The date and version number of this Manual are given on the front page.

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The data and information contained herein can be altered without prior notification. The fact that this Manual has been made available does not confer any claim to the product descriptions, common or trade names or other intellectual property.

Dear Spitfire 2 PLUS pilot

You have just purchased a sophisticated product. We place great importance on our workmanship and the high quality of the materials used.

If you have any questions which are not answered in this Manual, please do not hesitate to contact your SWING dealer or SWING directly, Tel: +49 81 41 32 77 888 - info@swing.de

The SWING Team



WARNING

Read this Manual before using your glider!

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01 Introduction

Manual

You must read this Manual carefully before using the speed rider for the first time. This will allow you to acquaint yourself with its new functions and learn the best way to fly it in various situations. It will also explain how to get the most out of your speed rider.

Information in this Manual on design of the speed rider, technical data and illustrations are subject to change. We reserve the right to make changes without prior notification.

Special text giving safety information is identified in this Manual in accordance with the ANSI Z535.6 standard.

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Special text



DANGER

Sections of text headed “Danger” indicate a situation where there is **imminent** danger, which in all probability **will lead to death or serious injury**, if the instructions given are not followed.



WARNING

Sections of text headed “Warning” indicate a potentially dangerous situation, which **may lead to death or serious injury**, if the instructions are not followed.



CAUTION

Sections of text headed “Caution” indicate a potentially dangerous situation, which may lead to **minor or slight injury**, if the instructions are not followed.



PLEASE NOTE

Sections of text headed “Please note” indicate possible **damage to property**, which may occur if the instructions are not followed.



TIP

Sections of text headed “Tip” give advice or tips which will make it easier to use your speed rider.

Series of instructions

In this Manual, instructions which must be followed in a certain order are numbered consecutively.

- < Where there is a series of pictures with step-by-step instructions, each step has the same number as the corresponding picture.
- d Letters are used where there is a series of pictures but the order is not relevant.

Lists of parts

- Numbers circled in red refer to various parts of the item pictured. A list of the numbers and the name of the part labelled follows the picture.

Bullet points

Bullet points are used in the Manual for lists.

Example:

- risers
- lines

Manual on the Internet

Additional information about your speed rider and any updates to the Manual can be found on our website at www.swing.de.

This Manual was current at the time of going to print. This Manual can be downloaded from SWING's website prior to print.

SWING Flugsportgeräte and the environment

Protection of the environment, safety and quality are the three core values of SWING Flugsportgeräte GmbH and they have implications for everything we do. We also believe that our customers share our environmental awareness.

Respect for nature and the environment

You can easily play a part in protecting the environment by practising our sport in such a way that there is no damage to nature and the areas in which we fly. Keep to marked trails, take your rubbish away with you, refrain from making unnecessary noise and respect the sensitive biological equilibrium of nature. Consideration for nature is required even at the launch site!

Smokers – please do not leave any cigarette butts, matches etc. at flying sites.

Paragliding is, of course, an outdoor sport – protect and preserve our planet's resources.

Environmentally-friendly recycling

SWING gives consideration to the entire life cycle of its products, the final stage of which is recycling in an environmentally-friendly manner. The synthetic materials used in a glider must be disposed of properly. If you are not able to arrange appropriate disposal, SWING will be happy to recycle the glider for you. Send the glider with a short note to this effect to the address given in the Appendix.

02 Limitations of liability and warranty exclusions

Information

You confirm that, by using the SWING speed rider for the first time, you have read and understood this manual in its entirety, including all instructions and warnings which are contained herein.

Furthermore, you agree to ensure that any other users of your SWING speed rider have also read and understood this manual in its entirety before they use it for the first time, including all instructions and warnings which are contained herein. This applies whether the speed rider is borrowed for a short time or taken permanently.

Assumption of risk

Use of the SWING speed rider and of its component parts involves certain risks of personal injury or death for the user of the product or for third parties.

By using the SWING speed rider, you agree to assume and accept any and all risks of injury, whether known or unknown, likely or unlikely.

The risks inherent in this sport can be reduced to a large extent by observing the safety advice and warnings in this Manual and by exercising general common sense. However, they can never be excluded completely.

Exclusion of liability, waiver of claims

By purchasing the SWING speed rider, you confirm that you agree with to following, to the extent permitted by law:

- to waive any and all claims of any kind from use of the SWING speed rider and any of its components, which may exist against SWING Flugsportgeräte GmbH and any other parties now or in the future.
- to release SWING Flugsportgeräte GmbH and any other parties from any and all claims for loss, damage, injury or expense which you, your next of kin or relations or any other user of your SWING speed rider may suffer as a result of using the SWING speed rider, including liability arising under law and contract on the part of SWING Flugsportgeräte GmbH and any other parties related to the design and manufacture of the SWING speed rider and any of its components.
- in the event of death or disability, all of the provisions contained herein shall take effect and be binding upon the user's heirs, next of kin and relatives, executors, administrators, assigns and legal representatives. SWING Flugsportgeräte GmbH and all other parties have not made any oral or written representations and expressly deny having done so, with the exception of what is set out in this Manual.

03 Safety



WARNING

SPEED RIDING IS DANGEROUS!

This speed rider is a piece of sports equipment and NOT a piece of aviation equipment. It therefore does not have aviation certification.

For this reason, SWING Flugsportgeräte GmbH specifically states that no claims for liability can be made against it in connection with use of the speed rider.

Load test

In addition to the extensive practical tests, the strength of the Spitfire 2 PLUS has also been tested in accordance with DIN EN 926-1.

Basic rules

- 1) Extreme care is called for when using this equipment.
- 2) This product should only be used by people who are in good physical condition.
- 3) The product must at no time be used in a manner which is careless, frivolous or negligent.
- 4) Users are responsible for their own safety and there must be no danger to third parties.
- 5) The user alone takes full responsibility for any injury which might arise as a result of use of this product.
- 6) This Manual must be read carefully before using the speed rider for the first time.

- 7) The laws applying to use of this product in the relevant country must be observed.



WARNING

The safety advice given below must be followed in all circumstances. Failure to do so could lead to serious injuries or even death.

Safety advice

Few other sports demand such a high level of individual responsibility as speed riding. Prudence and risk-awareness are basic requirements for the safe practice of the sport. Carelessness and overestimating one's own abilities can quickly lead to critical situations. A reliable assessment of conditions for flying and the terrain is particularly important. Most serious accidents are caused by pilots misjudging the weather for flying or their own abilities.

SWING recommends that you always wear a helmet, gloves, firm shoes with ankle-support and suitable clothing.

Only use the Spitfire 2 PLUS if the wind direction, wind speed and current and forecasted weather conditions can be considered safe.

Observe the other specific safety advice in the various sections of this Manual.

Safety notices

Safety notices are issued when defects arise during use of a glider which could possibly also affect other gliders of the same model.

The notices contain instructions on how to inspect the gliders concerned for possible faults and the steps required to rectify any faults.

SWING publishes on its website any technical safety notices and airworthiness

instructions which are issued in respect of SWING products.

Safety rules

The greatest risk in speed flying and speed riding is their simplicity. This can cause users to be tempted into forgetting or ignoring risks. Exercise particular care, especially in speed riding starts to feel too "normal".

- **Assess objective risks**

WEATHER: never use the Spitfire 2 PLUS if there is a föhn wind, storm or cold front. Your speed rider may offer maximum safety but the risks caused by extreme turbulence are unpredictable.

AVALANCHE: In unstable areas, make sure you have the appropriate skills/training and equipment (avalanche transceiver, snow shovel etc.)

- **Inspect your equipment**

Inspect your equipment thoroughly before each launch and do not launch if you discover any damage. Adjust your equipment according to the conditions. We recommend that you have a reserve chute for bigger slope distances

- **Assess your own well-being**

Never go speed riding if you are not well, whether you are physically unwell or have other concerns. Take a rest day – the mountains will always be there

- **WHAT IF? – Plan B**

Do not make any impulsive decisions. Take time to analyse the situation. Always make a plan B (e.g. choice of route, emergency landing areas etc.)

- **ALWAYS CARRY OUT A SAFETY RUN**

Reconnoitre a new route by making a run with sufficient height. Be on the lookout for potential obstacles. Ensure when flying near

ground level that no third parties will be injured.

- **Foot launch = increased risk**

Please bear in mind that the Spitfire 2 PLUS was designed for use with skis

- **Do not be afraid to speak out**

If you feel that others are overestimating their abilities. Likewise:

- **Accept comments from others**

Even if it can be hard to acknowledge mistakes.

- **Analyse your mistakes**

Analyse any close calls as if it had been an actual accident and learn the necessary lessons. Avoid doing the same thing, because next time it could be too late.

- **NO FRONT RISER TURNS**

NEVER pull down the front risers (A-risers). The Spitfire 2 PLUS will immediately react by collapsing!

- **NO RISK – NO FUN, NO LIMITS – NO LIFE**

Respect your limits and do not go beyond them just because you are with more experienced pilots. Have the courage to say "enough"!

04 Technical Description

Manufacture

Your Spitfire 2 PLUS was manufactured using the latest machines and manufacturing techniques.

A thorough quality control is carried out after every stage in manufacture.

The quality control of course includes inspection of the materials used as well. This allows us to all but exclude the possibility of any material defects and to trace the exact origin of the materials used.

Included in delivery

- SWING Spitfire 2 PLUS speed rider
- Speed bag
- Inner bag
- Manual



TIP

Familiarise yourself thoroughly with the equipment before your first run.

Riser and trimmer



WARNING

NO FRONT RISER TURNS!

The 3-line design does not allow front riser turns. Pulling down the front risers will inevitably lead to a collapse, which can have fatal consequences.

The Spitfire 2 PLUS has brake handles (toggles) for steering.

stop the trimmer webbing from flapping, as it can then be secured.



Fig 1 Trimmer

The riser for the Spitfire 2 PLUS is designed in such a way that it can be operated while wearing gloves. There is an anti-rotation device on the B-level. In addition, the B-level deflector alters the profile and the angle of attack more effectively when opening the trimmers, which counters any vibration of the canopy. The SWING Speedflying Team advises pilots wishing to fly the Spitfire 2 PLUS through the back risers, to do so between the B- and C- riser.

The Spitfire 2 PLUS is fitted with trimmers, which prevent, e.g. your helmet camera from getting tangled. (see Fig. 1)

Trimmer travel itself has a significant impact on the dive & speed of the Spitfire 2 PLUS.

You should therefore keep the trimmers closed for your first flights and slowly familiarize yourself with that position.

The trimmers allow you to fly with best glider when closed. Open the trimmers to use “dive” or to

lose height. To adjust the trimmers in flight, hold the brake handles and open the trimmers symmetrically. If you open the trimmers asymmetrically (e.g. if you open them one after the other) the Spitfire 2 PLUS will fly a sharp turn towards the side of the closed trimmer. There are magnets on the trimmer webbing and on the riser which prevent the trimmers opening fully.

The magnets must be separated before full trimmer travel can be used. When the trimmers are closed, the magnets also

However, bear in mind too that, when the trimmers are being opened gradually, they can suddenly and unintentionally unfasten completely. If that happens, simply return the trimmers to the desired position.

Take a gradual approach to opening the trimmers fully. “Speed & dive” increase considerably when the trimmers are opened. Once you have familiarized yourself with the Spitfire 2 PLUS with trimmers closed, you should then slowly and gradually test out the full trimmer travel, as the glide angle in “dive” decreases sharply. Bear in mind that the sink in turns increases significantly when the trimmers are opened!

Trimmer positions

- best glide: trimmers fully closed and approx. 15% brake (let your arms hang)
- maximum stability in turbulent conditions: trimmers fully closed and “active flying” using the brake handles
- maximum speed, steepest flight path: trimmers fully open, 0% brake
- minimum sink: approx. 50% brake
- minimum sink in turns: trimmers fully

closed

- maximum loss of altitude in turns: trimmers fully open

Facts on trimmer positions

- The trimmers alter not only sink in turns, but also how much the Spitfire 2 PLUS responds to weight-shifting. The Spitfire 2 PLUS responds best to weight-shifting with trimmers closed, and responds least with trimmers fully open.
- The more you open the trimmers, the longer braking distance becomes. The position of the brake handles in zero position is then higher up.
- The trimmers affect braking distance, but not your minimum flight speed. This means that your touch-down speed is not affected by trimmer position.
- The Spitfire 2 PLUS becomes more “pitchy” the more the trimmers are opened. This means, e.g., that it can shoot forwards further on launch.
- Avoid flying for lengthy periods with trimmers fully open while braking strongly. You may feel a slight vibration on the brakes.

Basic rule: Trimmer closed (Fig. 2): normal flight

Trimmer open (Fig. 3): more “speed & dive”

(Descent with open brakes)



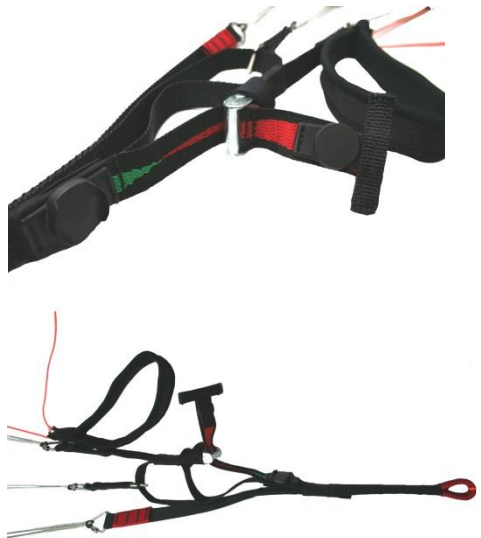
WARNING

Never fly with trimmers fully open in turbulent conditions!

Fig. 2 Trimmer closed



Fig. 3 Trimmer open



Control handles

The control handles on the Spitfire 2 PLUS are made of a strap padded with neoprene. The best way to hold them is shown in the photo. In this way, they are ideally adjusted for the Spitfire 2. For safety reasons, we generally recommend that you loop your hands through the brake handles.



Fig. 4: Recommendation: hand looped through the brake handle

Technical Data

Size	Comp*	8.5	9.5	11	13	15	Twin**
Cells	21	21	21	21	17	17	17
Flat Area (m ²)	8	8.5	9.5	11	13	15	18
Projected Area (m ²)	6.7	7.3	8.4	9.7	11.6	13.4	16.1
Wingspan (m)	5.0	5.2	5.5	5.9	6.4	6.9	7.5
Projected span (m)	4.1	4.2	4.5	4.9	5.4	5.8	6.4
Aspect ratio	3.2	3.2	3.2	3.2	3.2	3.2	3.2
Projected AR	2.4	2.4	2.4	2.4	2.5	2.5	2.5
Canopy weight (kg)	1.65	1.75	1.97	2.06	2.26	2.49	2.64

*) available only for SWING Speedflying Team members or by recommendation from a SST member

***) technical construction corresponds to Spitfire 18

05 Operating the Spitfire 2 PLUS

Before the first flight

Familiarise yourself with the Spitfire 2 PLUS before using it for the first time by carrying out some practice inflations and trying out some runs on a training slope.

Your first runs should take place in a straightforward area which is familiar to you.

Launch

With the Spitfire 2 PLUS, it is not necessary to hold the A-risers.

Make sure that both trimmers on the Spitfire 2 PLUS are closed for your first launches.

Conduct at ski areas

Here are a few important rules which must be followed at all times in skiing areas:

- First clarify local conditions, e.g. with the lift operator.
- In general keep to the side of the slopes when speed-riding.
- If there are designated speed riding areas, then keep to those.
- Pack away your Spitfire 2 PLUS into the speed bag before you go back to the ski slope.
- Make sure that you do not get caught up anywhere with your equipment, so as not to interfere with the lift operation.
- Never put any third parties at risk, especially skiers.

Please observe these rules so that other speed rider pilots can continue to use the areas too.

06 Looking after the glider

Storage

The speed bag

Always transport your Spitfire 2 PLUS in the speed bag provided. The speed bag makes it considerably easier for you to use the Spitfire 2 PLUS and is compulsory in most speed riding areas.

When you launch, simply take the speed rider out of the speed bag, roll up the speed bag and put it away.

After you have finished a run, gather together the Spitfire 2 PLUS, take out the speed bag and lay it out open beside the speed rider. Place the gathered-up speed rider on top of the speed bag, put it away into the speed bag and do up the speed bag. Hang the speed bag over your shoulder and make your way to the lift.

Always make sure when you are putting away the Spitfire 2 PLUS that you have put all of the lines and straps into the speed bag and that nothing is hanging out which could get caught. After you have finished speed riding for the day, you can also attach the risers to the speed bag strap, by feeding the strap through the riser loops.

Storage

Store your speed riding equipment away from UV light in a dry room which is well-ventilated and has a constant temperature. Remove it from the backpack and open up the speed bag so that air can get in.

Make sure that you do not put away the Spitfire 2 PLUS while it is wet. It should always be dried out after use, preferably overnight in a room as described above.

Care of your speed rider

Cleaning

If you do have to clean the speed rider, use only lukewarm fresh water and a soft sponge.



PLEASE NOTE

Harsh chemicals, high-pressure cleaners or steamers will destroy your speed rider.

Only clean the speed rider if it is absolutely necessary.

Repairs

Small repairs to the glider

You can repair small tears in the wing yourself using self-adhesive sail material, provided that the tears are in places which do not bear heavy loads, are not at the seams and are no bigger than 3 cm. Replacement lines for the Spitfire 2 PLUS can be ordered direct from us online at:

www.swing.de → Service → Line service

If line groups are replaced, this must be carried out by a SWING workshop.

Check the Spitfire 2PLUS trim whenever the lines have been replaced.



WARNING

Damaged lines must be replaced immediately.

SWING workshops

All repairs and servicing should be carried out by a SWING-authorized workshop or directly by SWING. SWING workshops have trained staff, original SWING parts and the necessary know-how, all of which will ensure top quality.

Inspection periods

The Spitfire 2 PLUS must be inspected every 100 hours or once a year. If you need to replace damaged or worn-out parts, use only original parts from SWING Flugsportgeräte GmbH

07 SWING on the World Wide Web

SWING website

SWING has a comprehensive website, which provides additional information about the Spitfire 2 PLUS and many other issues related to paragliding and speed riding. SWING's website is the first port of call for SWING's worldwide following:

www.swing.de

On SWING's website, you will find an extensive range of accessories for your Spitfire 2 PLUS, useful products for pilots, as well as additional information and accessories for pilots.

You will also find links there to other services and websites:

- Product registration
- SWING's online shop
- Facebook, Twitter & Youtube

These websites and their content are provided for your use. The content of SWING's websites has been made available for your use on an "as is" and "as available" basis. SWING reserves the right to alter the websites at any time or to block access to them.

Product registration

Registration of SWING paragliders is easy and gives you many advantages. In addition to important safety notices, you will receive advance information about, e.g. new products, upgrades, events and special offers.

Registration is a prerequisite for a valid warranty (refer here also to the section "Warranty"). In addition, SWING sends any safety notices and information for the

registered product immediately to the email address submitted. Your email address will not be provided to any third parties.

SWING's online shop



At SWING's online shop you are able to obtain directly from SWING the full range of paraglider accessories, clothing, accessories and reserves. It is easy to place an online order and payment is made by credit card or Paypal.

Facebook, Twitter & Youtube



SWING is very active with the new media of Facebook, Twitter and youtube and has various websites which are updated daily on various topics related to aviation and SWING products.

Paragliding

www.facebook.com/pages/SWING.Paragliders
<http://twitter.com/swingparaglider>

Speed gliding

www.facebook.com/SwingSpeedflyingTeam
<http://twitter.com/SSTSpitfire>

SWING TV



On SWING TV, SWING puts official video footage and footage by pilots, under these categories:

- Paragliding
- Speed flying
- Accessories
- Video footage by pilots

<https://vimeo.com/swingparagliders>

<https://www.youtube.com/channel/UCVituxPWODYREVJrlsFbfbA>

SWING App



We recommend that you use our Smartphone App so that you can keep up-to-date at all times.

This brings the latest news, photos and videos, as well as information on our products like technical data, manuals and service instructions directly to your smartphone or tablet.

Now we wish you

A lot of fun and many inspiring runs with your Spitfire 2 PLUS

Your

SWING Team

Appendix

Addresses

SWING Flugsportgeräte GmbH

An der Leiten 4
82290 Landsberied
Germany
Tel.: +49 (0) 8141 3277 - 888
Fax: +49 (0) 8141 3277 - 870
Email: info@swing.de
www.swing.de

Paraglider recycling

SWING Flugsportgeräte GmbH
- Recycling Service -
An der Leiten 4
82290 Landsberied
Germany

DHV

Deutscher Hängegleiterverband e.V.
Am Hoffeld 4 (street address)
Postfach 88 (postal address)
83703 Gmund am Tegernsee
Germany
Tel.: +49 (0) 8022 9675 - 0
Fax: +49 (0) 8022 9675 - 99
Email: dhv@dhv.de
www.dhv.de

EAPR

European Academy of Parachute Rigging
Marktstr. 11
87730 Bad Grönenbach
Germany
Tel.: +49 (0) 8334 - 534470
Fax: +49 (0) 8334 - 534469
Email: info@para-academy.eu
www.para-academy.eu

DULV

Deutscher Ultraleichtflugverband e.V.
Mühlweg 9
71577 Großerlach-Morbach
Germany
Tel.: +49 (0) 7192 93014 - 0
e-mail: info@dulv.de
www.dulv.de

Versions

Version 1.0
Date: 08.02.2019
First version of the Instruction Manual

Speed rider details

Model:	Size:	Colour:	Serial number:
Spitfire 2 PLUS			Spf2 ___/___ - ___/___/___ - ___/___/___/___

Check flight (date):	___/___/ - ___/___/ 20___
Mark and signature:	_____

Pilot details / Proof of ownership

1st Owner:	
Name:	
Address:	
Telephone:	
Email:	
2nd Owner:	
Name:	
Address:	
Telephone:	
Email:	
3rd Owner:	
Name:	
Address:	
Telephone:	
Email:	

Notes:



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