

**riese und müller**  
**s u s p e n d e d   c y c l i n g**

*Birdy* & *birdy*  
**manual**

Dear Dealer, dear Customer,  
at the Internet you will find a small movie how to fold the Birdy.  
Type „[http://www.r-m.de/index.pl/birdy\\_folding](http://www.r-m.de/index.pl/birdy_folding)“ and klick at the  
picture to start the movie.

Your riese und müller team

riese und müller GmbH  
Haasstraße 6  
64293 Darmstadt  
Germany  
phone: 0049 6151 366 86 0  
fax: 0049 6151 366 86 20  
email: [team@r-m.de](mailto:team@r-m.de)

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*(all page numbers refer to the German language version)*

## PAGE 2

**Dear customer,**

Congratulations on the purchase of your Birdy. You've joined the folding revolution – full suspension, easy-riding and extremely light. Your Birdy comprises a selection of thoroughly-developed and manufactured components chosen with care. Your specialist dealer will have completed final assembly and will have performed a final functional test, so that you can pedal away happily from the very first foot.

In this manual we've gathered together plenty of tips about using your bike, along with valuable information about cycle technology, care and maintenance. The Birdy takes advantage of unusually innovative technology, so even if you're an 'old hand' who has been riding bikes for a lifetime, do read and observe the following tips carefully before you first use the bike.

If you have any questions do not hesitate to ask your dealer or directl contact riese und müller.

**So that every ride is a pleasure, and for your own safety, the quick check procedure should be performed before every ride.** You can read how to do this check on *page 5* of this booklet.

***Danger:*** Do not ride if the bike doesn't pass the check 100%!

There are a whole series of maintenance and assembly procedures described in this manual. If you carry out any of these, you must always remember that the instructions apply only to the Birdy and not to any other bike.

It's also possible that because of the wide range of models, and regular model changes, that the instructions are not entirely complete.

**With this in mind, always follow the instructions provided by component manufacturers, included with this manual, or which will be given to you by your dealer.**

Also consider that the explanations may, depending on your level of experience and mechanical aptitude, be insufficient, and may also require special tools and knowledge of common (not described here) mechanical operations.

***Warning:*** In the interests of your own safety, don't go beyond your limits. If you are in any doubt consult your dealer!.

To conclude this introduction, a few things important for any cyclist. In traffic, always ride with full attention, so that you do not endanger yourself or others. Observe traffic laws and regulations, so that you don't attract the anger of other road users. Respect nature when you're riding in the countryside. Ride only on marked and surfaced roads. Observe any laws and regulations for the use of bicycles off-road – including regional or local bye-laws. Never ride without a helmet, and always ride in suitable cycling clothing.

We hope you have great fun on your new Birdy!

First, we'll tell you about the parts of your Birdy. Fold the front cover flap of this brochure out. Here you'll find a Birdy with all of the relevant parts clearly shown.

***Tip:*** *Unfold the front cover foldout. It'll make everything clearer!*

## PAGE 4

**Before the first ride****Body height**

The Birdy fits to a rider's body height until 195cm.

**Load capacity**

The Birdy is designed for a maximum loading (Birdy, rider weight and luggage weight) of 120kg (245lb).

Max. carrier loads:

SL carrier: 12 kg

Expedition carrier: 15 kg

Lowrider: 10 kg

**Carriers/Trailer bikes**

Only two-lane carriers with attachment at the rear axle are allowed at the Birdy. The max. carrier load is 50kg.

**Trailer hitch**

We recommend the "Weber-trailer hitch".

***Danger:*** Other trailer hitches do not guarantee perfect function of trailer and suspension and could cause accidents or damage!

**Use the Birdy only on streets and surfaced roads**

We can take no responsibility for the consequences of inappropriate use, assembly errors, accidents, racing, jumping or similar activities.

**Clothing**

Wear bike appropriate clothes. Never ride without wearing a helmet!

**Are you confident using the brakes?**

Check whether the front brake is operated with the lever you usually use. If this isn't the case, you should get used to the arrangement thoroughly, as an unintended application of the front brake can lead to a fall. Alternatively, let your dealer re-assemble the brakes the other way round. Modern brakes are much more powerful than old ones! Take care! In any case, before you take to the streets, test your brakes and get familiar with them away from the traffic! You can read more about the braking system on *pages 26-28*.

**Are you confident that you know how to change gear, and how the gears work?**

Ensure that you're familiar with the gears somewhere where there's no traffic. You can read more about gearing systems on *pages 29-33*.

**Are saddle and handlebars correctly adjusted?**

The saddle should be adjusted so that with the pedal in its lowest position, you can just reach it with your heel. Check that you can stay in the saddle and still reach the ground with your tiptoes. Your dealer will be able to help you if you're not happy with your saddle position. You can read more about seating position on *pages 12-16*.

**Suspension**

Is the suspension adjusted to your needs? You can read more about suspension on *page 17*.

**PAGE 5***Before every journey you must check the following points:*

- Are the **quick-releases and nuts** on front and rear wheels, on the height-adjustment on the stem and on the seatpost clamp all correctly fastened? Read more on *pages 18, 37 and 14* of this manual.
- Is the **tension lever on the stem hinge** closed correctly? More information on *page 20-22*. Are all hinge part for the stem hinge present? More information on *page 20-22*.
- Are the **rear swing-arm catch** and the **front swing-arm catch** both correctly engaged? More about this on *pages 23-24*.
- Are the **tyres** in good condition, do they run round and are they at the correct pressure? More on this topic on *pages 36-41*.
- Perform a **stationary brake test** by pulling the levers hard towards the handlebar. The brake blocks should press with their full area against the rims, without touching the tyre. You should not be able to pull the lever right up to the handlebar! Further tips on braking on *pages 25-28*.
- Check that the dynamo is securely mounted. **Does the light illuminate** properly? More on lighting on *pages 46-47*.
- Is the max. load not exceeded (*page 4*)?
- As you ride, always listen out for unusual rattling noises or unusual handling – these could indicate a problem. If this occurs, check bearings, pivots, all fastenings and parts of the folding mechanism.

**Danger:** Do not ride the bike if your bike fails any of these checks! In case of doubt, always consult your dealer. A defective bike can lead to serious accidents!

**PAGE 6***Unfolding the Birdy*

Make your Birdy ready to ride by following this procedure:

- Fold the stem and handlebars up.
- Close the hinge lever.
- Open the seatpost quick-release and pull out the seatpost (watch scaling).
- Close the quick-release again. Do not pull the seatpost out beyond the lowest mark (see *page 13*).
- Close the quick-release again.
- Lift the Birdy by the saddle, so that the rear swingarm swings backwards.
- Engage the rear swing-arm catch.
- If you have one, unfold the stand.

**PAGE 7**

- Lift the Birdy by the handlebar, unfold the front wheel and put the Birdy back on the ground.
- Press briefly on the handlebar, so that the front spring audibly engages in the front swing-arm catch.
- If your Birdy is equipped with a height-adjustable stem, open the height-adjustment quick-release, press the pin and pull the stem out upwards to the desired height. In no event go beyond the 'MINIMUM INSERTION' mark. Check that the pin engages in one of the holes at the stem.
- Carefully close the quick-release.
- Check that everything is secure on the stem, by holding the front wheel between your legs and attempting to twist the handlebars with your hands. If it doesn't turn, it's secure.

- Adjust the seatpost to the correct height. Turn the saddle so it is in line with the bike, by lining up the front of the saddle with the bottom bracket or along the main frame tube.
- Check that the seatpost is securely fixed by grasping the front and rear of the saddle and attempting to twist it. If it doesn't move at all, it's secure.

**PAGE 8*****Folding the Birdy***

With a little practice you can easily fold the Birdy in a short time. The folding procedure is as follows:

- Choose top (seventh, eighth or ninth) gear – the chain should be on the smallest sprocket.
- If your Birdy is equipped with a height-adjustable stem, open the height-adjustment quick-release, press the pin and push the stem in until the lowest pin hole. Close the quick-release again.
- Ensure the right-hand pedal points upwards (the crank should be in line with the seatpost).
- Stand on the left-hand side of the Birdy and grip the handlebar with your right hand. Press the front swing-arm catch with the left hand, so that it releases the spring from the fork.
- Fold the front swing-arm right under until the front wheel rests next to the main frame tube, and the tyre grips up against the fixing screw on the front forks.
- Put the bike back down. If you have one, fold the stand away. Lift the bike a little by the saddle and open the rear swing-arm catch with a light pull outwards.
- Now fold the rear swing-arm forwards and put the Birdy back on the ground.
- Now undo the seatpost quick-release and push the saddle down as far as it will go. Close the quick-release.
- Finally, open the stem hinge lever and fold the handlebars down.

Finished!

**Hint:** Do not store the Birdy Rohloff horizontal over longer times. There is the possibility of oil leakage at the Rohloff Speedhub. This is harmless but should be respected when storing the Birdy on sensitive grounds.

**PAGE 9*****Transporting your Birdy***

Folded up, your Birdy is easily transported in the boot of a car, and also on trains, buses, aeroplanes or on ferries.

**Train travel**

Some train services require that your Birdy is covered up in a bag, especially if it is carried on as normal luggage, rather than placed in the luggage van or special storage area. Two Birdy bags are available: the protective cover and the rucksack bag. The protective cover slides over the Birdy in one easy motion, and is closed at the bottom with a pull on the drawcord. The cover is made from tear-resistant nylon. Like a poncho, it can fold up very small into its integrated mesh pouch, and can then be fastened to the bike. The rucksack bag is an ideal Birdy accessory. Two large compartments carry all of your belongings, and then comes the clever bit: open up another zip, and another compartment opens up for you to stow your Birdy. The bike can then be easily carried with the padded shoulder cord or the carry-handle. You can still use the other luggage compartments. It's made from extremely durable Cordura Plus.

**Air travel**

We recommend that when you take your Birdy on a plane you package it in a strong box – for example, the box in which it arrived at your dealer. The pedals should be removed and packaged separately. Another possibility is the use of the rucksack bag – we recommend that in this case you use plenty of additional cardboard and bubblewrap to protect against bumps. The rear derailleur is the most vulnerable part of the bike: we recommend that you unscrew it from the frame, wrap it in bubblewrap, and tape it to the frame so that it won't be vulnerable to impacts.

The Birdy suitcase has two small wheels and can be used like a trolley because of its telescope grip. Before putting the Birdy into the suitcase the pedals have to be removed. The SL carrier also has to be removed. Because of the many variations of the Birdy accessoires (fenders, kickstand, carriers, lighting) it may be necessary to dismantle some of them.

**Hint:** When the suitcase gets damaged during transportation at the airplane please directly contact the airline at the airport to claim the damage.

**PAGE 10****Legal Requirements**

When you ride your bike on the road, it must comply with national legislation and guidelines. These will vary from country to country. In general, there are minimum standards for brakes, reflectors and lighting systems, as well as usually a general duty to ensure that your vehicle is in roadworthy and safe condition. There will also be a duty to ride in a safe and responsible manner. If you ride your Birdy in traffic you should be sure to observe all relevant laws and regulations which apply. Please ask your local dealer for current law information.

**Brakes**

In most countries, including Germany and the UK, two independent braking systems are required. Do not ride with only one brake working!

**Lights**

Bicycle lighting systems need to comply with the relevant national standards: in Britain this is the relevant British Standard. Lights complying with this will have the BS symbol moulded or printed onto each light unit. In Britain both dynamo and battery lights are permitted. The front light must be white and the rear light must be red.

Note: The sections of the German-language Birdy manual on pages 10 and 11 are not translated, as they refer in detail to German traffic regulations which do not apply in other countries.

**PAGE 11 NONE OF THIS IS RELEVANT TO UK – SUCH REGULATIONS DON'T EXIST****PAGE 12****Fitting the Birdy to the rider****How can I check my seating position?**

A good riding position is important for your comfort and for optimal performance on the bike. You need to adjust saddle and handlebars as precisely as possible to fit. Several components on the Birdy are designed to adjust the fit to suit your body dimensions. If required, your dealer will be pleased to change the stem on your Birdy.

**Danger:** All of the procedures we are about to describe require a certain degree of skill, suitable tools and mechanical aptitude. After any assembly operation perform the **Quick Check** (see page 5) and take a short test-ride somewhere quiet, away from traffic. This lets you check in safety that everything works properly. If you have any doubts, it's best just to do the riding position check, and then to explain any changes you'd like to your specialist dealer. They can carry out your requests with all the proper tools and skills, perhaps in conjunction with the first inspection.

**Adjusting for the correct saddle height**

The need for a comfortable pedalling action determines the saddle height. It's important that when you pedal, the ball of the foot should be over the centre of the pedal axle. When the pedal is at its lowest position your leg should not be quite fully extended. If the saddle is too high, it's hard to get round this lowest point, and the pedalling action becomes uneven. If the saddle is too low, you're likely to experience knee pain.

Check the seat height using the following simple procedure. Use shoes with a flat sole for this check:

- Sit on the saddle and put your heel on the pedal, so that it moves to its lowest position. In this position the leg should be fully extended. Note that the hips should stay straight and level.
- To adjust the seat height, you need to undo the quick-release.
- The loosened seatpost can now be adjusted for height. Make sure that the seatpost isn't greased. If it doesn't slide smoothly in the frame, clean out and remove all grease from inside the frame and on the seatpost. If you have further problems, consult your dealer. In no event use force to move the seatpost.
- Set the saddle straight, by lining up the saddle nose either with the bottom bracket or the main frame tube.
- Re-fasten the quick-release.

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- Check that the seatpost is securely fixed by grasping the front and rear of the saddle and attempting to twist it. If it doesn't move at all, it's secure.
- Does the leg extension seem correct when you repeat the test? Check it by moving your foot to the ideal pedalling position, with the ball of the foot above the pedal axle. The knee should now be slightly bent – if this is so, you've reached the correct saddle height.
- Memorize the value at the scaling. At later unfolding you know directly the correct height of the seatpost.
- Check that you can stay in the saddle and still reach the ground with your tiptoes. If this isn't the case, put the saddle a little lower.

**Danger:** Do not ride if the seatpost is withdrawn beyond the 'MINIMUM INSERTION' mark! This marking must not be visible: if it is, the seatpost could break or the frame could be damaged. The seatpost is not designed for mounting bags or carriers at seatpost or saddle. This could lead to overload of the seatpost!

### Birdy stems

Three different handlebar stems are available for the Birdy:

- Allround stem, not adjustable  
lightweight stem for sporty rider's position
- Allround stem, adjustable  
allows sports position for small and tall riders too
- Comfort stem, adjustable  
the handlebar is closer to the saddle and allows an upright rider's position

Your dealer can change the stem following your needs.

#### Upright rider's position

Advantages: lower loads for the wrists, arms and cervical spine.

Disadvantage: higher load for the seating area.

#### Sporty rider's position

Advantage: less loads for the seating area, more efficient performance, less air resistance, more weight on the front wheel.

Disadvantage: higher loads for the wrists, arms and cervical spine.

## PAGE 14

#### Adjusting the handlebars

- Open the quick-release at the stem.
- Press the pin and adjust the stem to the desired height. The pin has to engage again into one of the holes.

**Danger:** Do not ride if the 'Comfort' stem is withdrawn beyond the 'MINIMUM INSERTION' mark!

**Danger:** Do not ride if the quick-release of the adjustable stem is not tightened or the pin did not engage into one of the holes. Never open the quick-release during riding!

#### Adjusting reach and setting the saddle angle

The distance between the handlebar grips and the saddle (reach), and the angle of the saddle, are important factors when it comes to how much you're leaning forwards, and hence for your riding comfort and performance.

The reach can be adjusted over a short distance using the saddle rails, by sliding the saddle forwards or back on the seatpost clamp. This will also affect pedalling: if the saddle is right back, you'll be pedalling more 'from behind', and vice versa.

The geometry of the Birdy was designed so that for normal use, the saddle is positioned **as far forwards as possible**. This minimises folded size.

The saddle should in general be set dead level.

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- Undo one or two seatpost clamp bolts **A**, turning each of them at most two or three turns anticlockwise. No more, or the whole assembly can fall apart.
- Move the saddle forwards or backwards as required. Often a sharp slap to the saddle is needed. Re-tighten the bolts, turning them clockwise.
- Depending on which of the bolts is done up first, the saddle angle may change. Observe the recommended tightening torque of 9-12 Nm for the bolts.
- When you've tightened everything, check whether the saddle tilts, by pushing alternately on the front and back.

**Danger:** When you change saddles, check that the saddle rails are designed for a 8mm clamp. Other types of saddle rail may cause failure of the seat clamp and a nasty accident.

#### Adjusting angle of handlebars, bar ends and brake levers

Adjust the handlebars so that your wrist joints and hands are relaxed and are not too sharply angled outwards. To adjust the handlebar position by turning the handlebar:

- Open the hex bolt on the front of the stem.
- Turn the handlebar until it reaches the desired position.

- Check that the stem clamp is exactly in the middle of the handlebars.
- Re-tighten the hex bolt with a torque of 12-14Nm.

For additional adjustment you can mount bar ends or a different handlebar. Eventually the brake and shifter cables have to be replaced by longer ones.

## PAGE 16

### Adjusting the reach of the brake levers

The distance between brake levers and handlebar grips is adjustable. The levers can be brought closer to the bars, making them easier to use for riders with small hands. The lever position where the brakes start to 'bite' also needs to be adjusted for finger length.

- Check when the brake blocks hit the rim. If this 'bite point' comes after just a short movement of the levers, you'll have to adjust the cable if you want to adjust lever reach (see *page 25*). Otherwise, the brakes may rub on the rims after the reach adjustment. If, however, the brakes only bite after the levers are halfway to the bars, you have some 'play' with which to adjust lever reach.
- There's a small adjuster screw just near where the cable goes into the lever housing (see arrow on diagram). Screw this adjuster in, and observe how the lever position changes.
- When you've reached the desired position, you must check that there's still enough available motion so that there's a little lever movement before the brakes 'bite'.

**Danger:** You shouldn't be able to pull the levers all the way to the handlebar! Maximum braking power should be reached before this!

Once you've adjusted the handlebar angle, you need to adjust the brake lever position.

- Loosen the hex-key bolt on the lever housing clamps.
- Turn the lever on the handlebar. Sit on the saddle and grip the levers with your fingers. Check that your hand makes a straight line with your forearm.
- Re-tighten the bolts and check that the brake lever housings don't twist!

### Bar ends

Bar ends offer additional hand positions. They are generally fitted so that the hands rest comfortably on them, when the rider is in a slightly leant-forward position. They usually make about a 25 degree angle upwards.

- Undo the screws, usually found on the lower part of the bar-end clamps, at most one or two turns.
- Rotate the bar ends to taste and check that both sides are at the same angle.
- Re-tighten the bar end clamp bolts with the appropriate tightening torque.
- Check that everything is tight, by attempting to rotate the bar ends by hand.

**Danger:** Always be sure that securing bolts on stem, handlebars, bar ends and brakes are tightened with the appropriate tightening torque. The appropriate values are listed on pages 54-55. Otherwise, it's possible that parts may come loose or break. This can lead to serious accidents.

**Attention:** The handlebar stem is designed for handlebar bags or baskets until 3 kg (max. load including the weight of bar or basket).

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### Adjusting the suspension

#### Changing the rear elastomer

The Birdy is fitted as standard with a red elastomer, which is suitable for a very wide range of conditions. It can, however, sometimes make sense to fine-tune the riding qualities to your personal taste by changing the rear elastomer to reflect your particular weight, riding style and the state of your local roads. A softer yellow elastomer and a harder, green one are available. To change it over, move the rear swing-arm clear and pull the elastomer off with your hand. The following table may help you select the correct elastomer. Please note that elastomers get 'harder' at low temperatures. It could therefore be a good idea to change to a 'softer' elastomer in winter.

(graph head: Choice of rear elastomer)

(graph columns: Comfort, Allround, Sporty)

#### Changing the front elastomer

The front elastomer can also be exchanged for a harder version. The standard version is hollow, while the harder version is solid. The elastomer can be pushed out of the spring with a screwdriver.



## Pedals

Grease the threads before assembly and insert the pedal by rotating the axle 2 or 3 turns by hand. The left/right pedal has a "L"/"R"-sign. Tighten the pedals with 15 Nm.

## PAGE 18

### How do I use a quick-release?

Quick-releases hold wheels, seatpost and the height-adjustable stem in position.

**Danger:** *an incompletely or improperly closed quick-release can result in parts coming loose, and hence in a crash, possibly resulting in serious injury!*

A quick-release consists of two basic parts:

- The lever (1) on one side of the hub – this provides the clamping force.
- The adjusting nut (2) on the other side: by adjusting this on the screw thread, the clamping tension can be adjusted.
- Open the quick-release. The inscription 'Open' should be visible on the lever.
- To close the quick-release, move the lever so that the word 'Close' is visible on the outward side of the lever. At the start of the lever's motion, for, say, half of its movement, the lever should move very easily, without any clamping action.
- In the second half of the lever's movement, the force on the lever should rise considerably. At the end, it should be hard to move. Use the ball of your hand. In its final position the lever should lie parallel with the bike, and should not stick out to one side.
- Check the security of the lever by attempting to twist the lever. Press on the end of the lever from above.
- If the lever can be made to pivot around in a circle, you can't guarantee that the seatpost, wheels or stem height-adjustment is secure. You must re-open the quick-release and increase the clamping tension. Do this by screwing the adjusting nut on the other end of the quick-release half a turn clockwise.
- Repeat the closing procedure and check that the lever is secure. If the lever can't be rotated, it's clamping properly.
- Finally, check that the part being secured is firmly fixed: - Attempt to twist the saddle - Lift each wheel an inch or so off the ground, and give it a slap onto the tyre from above. A properly fixed wheel will remain secure in the frame's axle slots. - Wedge the front wheel between your legs and attempt to twist the handlebar. If it doesn't turn when you do this test, the stem is secure.

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### Seatpost clamp

The Birdy red is equipped with a new type seatpost clamp which consists of 2 segments. All other Birdys have a conventional seatpost clamp. The usage of the quick release is described on *page 19*.

#### How do I adjust the seat post clamp?

The nut **B** has to be adjusted that one the one hand the seatpost is fixed tight enough and one the other hand the seatpost can slide easily after opening the quick release.

#### How do I maintain the seat post clamp?

It is not necessary to grease any parts of the segment clamp. In case of contamination just clean all parts of the segment clamp with a dry lint-free cloth. In case of strong contamination clean the parts with water and some soft detergent.

After disassembly it is important to place the segments in the correct position. The angular surfaces must contact the seatpost (see arrows in picture below).

For re-assembly of the new type seatpost clamp please watch the order of assembly shown at the picture below. Besides the modified mainframe the segment clamp consists of the following parts:

- 1x quick release **A** incl. knurled nut **B**
- 2x spacer black OD 20mm, 7mm thickness **C**
- 1x segment left and right each **D**
- 1x cone spring **E**

#### Standard seatpost clamp

The position of the clamp should be with the lever at the right side. In combination with the expedition carrier the clamp has to be rotated about 90 degrees.

**Attention:** *Check the position of the clamp regularly. The clamp should sit completely at the seat tube to ensure best clamping function.*

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## Stem folding hinge

**Different types of folding hinge**

Two different folding hinge types are available, depending on the bike model:

- with vertical lever (see picture in the middle)
- with horizontal lever (see picture right at the bottom)

**Vertical lever**

When it's closed, the lever of the stem closure mechanism should point straight up. You should be able to close the lever without great force, and when it's closed, there should be no play in the hinge. If this isn't the case, the closure mechanism needs adjusting. The lever shouldn't be adjusted too tight, either: this can bend the closing lever and will lead to play when the joint is closed. A technically-minded person can adjust the hinge mechanism as follows:

1. Close the hinge and undo locknut **A**
2. Undo 2.5mm hex bolt **B**
3. Open the hinge
4. The mechanism is adjusted by turning the tension rod **C**. Turning clockwise makes it stiffer, anticlockwise makes it softer. Because locknut A is self-locking, the tension rod can be rotated by turning the locknut. The tension rod **C** is also fitted with a 4mm hex socket, which can be used for adjustment.
5. Close the hinge
6. Close the 2.5mm hex bolt **B** gently (1 Nm torque)
7. Do up the locknut **A** gently (3-4 Nm torque), holding the tension rod **C** in place with the 4mm hex key.

**Horizontal lever**

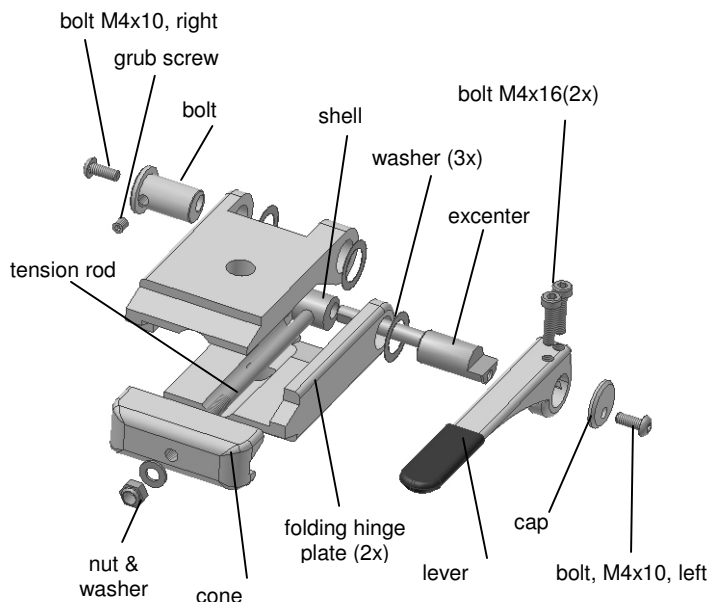
This folding hinge type allows the adjustment of tension and action point.

**Attention:** This folding hinge consists of many parts. Let the maintenance done by your dealer. Wrong assembly can lead to malfunction and loss of steering control!

**Function of the folding hinge**

The folding hinge is correctly adjusted by riese und müller. However it can be maintained by an expert. The following description helps to find and erase errors.

Blown-up drawing of folding hinge:



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**How to adjust the clamping force**

The mechanism is adjusted by turning the tension rod.

- Close the lever. Loosen the nut for some turns.
- Open the lever.
- Now you can adjust the tension rod with a 2.5mm allen wrench.

- Close the lever again and tighten the nut
- Check the tightening force. The lever should be moved with low force but should have no play when closed. If this is not, the tension rod has to be adjusted again.

#### How to adjust the action point

The point of maximum clamping force should be reached shortly before the end position. Otherwise it has to be adjusted.

- Open the left bolt M4x10 for a half rotation.
- Loosen one of the M4x16 bolts and tighten the other one (see arrows in picture). The white arrows show how to get an earlier action point.
- After correct adjustment of the action point please tighten both bolts M4x16.
- Check again for correct tightening force.

**Attention:** Always tighten the left bolt M4x10 after tightening both bolts M4x16. Otherwise the axial play will be too strong!

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#### How to adjust the axial play

- If the play is too big first check if the right bolt M4x10 is tightened correctly.
- To tighten the play please loosen both bolts M4x16 first. Slightly tighten the left bolt M4x10. Watch for correct fit of the cap.
- Tighten both bolts M4x16 again.
- If the lever goes too hard, the play is too small. Loosen both bolts M4x16 and then bolt M4x10.
- Loosen the lever and tighten both bolts M4x16 again.
- Tighten left bolt M4x10.

#### How to grease the folding hinge

In general there is no maintenance needed. But after frequent use or after heavy rain we recommend to clean the folding hinge and to apply some viscous oil.

#### How to dismantle the folding hinge

The folding hinge should be dismantled only by an expert.

- Open the lever and remove left and right bolt M4x10.
- Loosen both bolts M4x16.
- Push the excenter to the right side until you can see the grub screw at the right side. Loosen the grub screw.
- Tear excenter and bolt apart. Watch out for the thin washers.
- Clean all parts with a dry cloth.

#### How to assemble the folding hinge

- Grease inside of shell and the areas of excenter and bolt which touch the folding hinge. Grease the cone and the washers.
- Place the washers at the folding hinge plates (glue them with the grease).
- Place the cone and the tension rod together with the shell into the folding hinge plate.
- Push the excenter through washer, folding hinge plate and shell.
- Push the bolt onto the excenter and assemble the right bolt M4x10. Tighten the grub screw. Take care that the grub screw hits the flat section of the excenter.
- Put the lever onto the excenter. Assemble cap and left bolt M4x10. Do not tighten the bolts.
- Adjust clamping force, action point and axial play. Take care of correct tightening of all bolts.

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### *The rear swing-arm catch*

The rear swing-arm is attached to the frame when it's unfolded with a black plastic catch. You should adjust the position of this catch so that it engages automatically when you unfold the Birdy, and so that there's no play.

#### How to adjust the rear catch

- To adjust it, you must loosen both Allen bolts inside the rear swing-arm box profile.
- The catch can then be pushed inwards or outwards.
- Finally, re-tighten both bolts with a torque of 2-3Nm.
- Open and close the catch several times to check the adjustment.
- The M6 x 12 bolt is secured into the main frame with threadlock adhesive. The bolt should be screwed in just far enough that when the catch is engaged, it's under slight tension inwards.
- If the tension is no longer sufficient for the catch to engage, you need to pre-tension the catch: fold the rear swing-arm slightly forwards, remove the elastomer and bend the plastic catch firmly inwards for a few seconds.

## The front swing-arm catch

When you unfold the Birdy the front suspension spring engages in the front swing-arm catch. This catch consists of a metal hook, which pivots on a shaft mounted on the fork crown, and it's kept in tension with a small spring. If this hook doesn't move or if it is not being pulled back properly by the spring, the two fork clamping bolts may be done up too tightly, or the spring may have failed. In this case, please ask your dealer to help. The hook should engage in the last turn of the spring and should fix it in position. To fold, press down on the suspension catch: this moves the hook clear of the spring.

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**Attention:** Do not ride if the front swing-arm catch is not engaged correctly. The result could be a sudden unwanted folding of the front swingarm. Accidental danger! Visit your dealer for new adjustment.

#### How to adjust the front swing-arm catch

- The plastic cap on which the end of the spring rests is fixed in place with an asymmetrically-placed Allen bolt. The cap should be fixed so that it is central with the fork. The fixing bolt should be tightened to 3-4 Nm.
- If the catch hook doesn't engage cleanly in the first turn of the spring, the spring must be rotated.
- Loosen the fastening at the bottom of the spring with a long 5mm hex key, which you should insert from the free end of the spring. Only turn the spring far enough to ensure that the top turn of the spring ends in the seven-o'clock position, and engages the catch hook without play. The spring must be carefully lined up with the black plastic cap so that it slides easily onto the cap and engages with the catch.
- Finally re-fix the spring in place with a tightening torque of 6-8 Nm.

If the fork spring doesn't engage play-free, both the spring position and that of the black plastic cap can be adjusted. Exact adjustment can require some experience, and any problems should be referred to your Birdy dealer.

#### How to adjust the stop-bolts

The new Birdy with Monocoque-frame has two bolts with plastic head to adjust the swingarms endposition at folding. The front bolt always has to be tightened completely. The thread has to be secured with a small drop of Loctite. The bolt at the bottom has an additional lock nut. Adjust the bolt to achieve minimal play of rear swingarm after pushing down the seatpost.

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## Brakes

#### How to use the brakes correctly

The Birdy is equipped with particularly powerful brakes. Braking distance is, however, very much determined by the rider's skill, and can be improved with practice. Weight is transferred from the rear to the front when you brake, and loading on the rear wheel reduces. This is why braking distance is determined first by the tendency of the bike to flip you over the bars, and only as a second order effect by the limits of adhesion of the tyre. This problem becomes particularly acute when descending steeply. If you use full braking, ensure that your weight is placed as far back as possible.

Use both brakes simultaneously and note that because of the weight transfer effect, the front brake needs to provide the vast majority of the braking power. But you also need to avoid locking the front wheel, which could lead to going over the bars or an uncontrolled slide.

When your Birdy is delivered, the **left** brake lever will activate the **front** brake. Be sure to get familiar with this arrangement, or ask your dealer to swap the brakes over to your preferred set-up.

**Danger:** be careful as you get used to your brakes! Practice emergency stops away from traffic, until you have the bike under complete control. This can be vital for avoiding accidents in traffic.

**Danger:** After long downhill sections the rims can become very hot. Rest regularly to let the rims cool down. Overheated rims can lead to a puncture. Accidental danger!

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#### How they work, and how they get worn out:

When you apply the brakes, using a hand-operated lever or a back-pedal (coaster) brake, a fixed brake pad presses against a rotating braking surface, and friction occurs. The bike is slowed down through this friction. Alongside the force with which the blocks push against the rim, another important factor is the so-called coefficient of friction between the two surfaces.

If water, dirt or oil get onto the braking surface, this coefficient of friction will change. This is why a rim brake has poorer performance when it's wet, and doesn't stop you as quickly.

**Warning:** *Wet conditions diminish braking performance. You need longer braking distances when it's raining! When you change brake blocks, use only approved brands compatible with your rims. Your dealer will be happy to advise. Ensure that your braking surfaces remain absolutely free of wax, grease and oil. Watch the wear indicator. Worn-out rims can lead to blow-out punctures and dangerous accidents!*

Friction also causes wear on both brake blocks and rim. This wear is accelerated if you ride a lot in the wet. If the rim wall is worn away far enough, the pressure of the tyre can blow the rim apart. The wheel can then lock up, and the inner tube split: in either case it can lead to a crash. Once you've worn out your second pair of brake pads, you should take the bike to your dealer and let him check the wall thickness of the rims. If the rim has a wear indicator, please replace the rim when the wear indicator disappears.

**Danger:** *Damaged brake cables, with, for example, individual strands poking out, must be replaced immediately, to prevent brake failure and possible accidents. Ask your dealer for advice!*

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### Checking, adjusting and balancing brakes

V-brakes consist of left and right-hand arms, mounted separately each side of the wheel. When you use the brake, the two arms are drawn together by the cable. The arms pivot inwards on their mounting points and the blocks rub against the rim walls.

Function check:

- Check that the brake blocks are aligned precisely with the rim, and have plenty of braking material left. If the grooves in the block are worn away, it's time to replace them.
- The brake blocks should touch the rim with the front part of the block making contact first. The rear part of the block should at that point be one or two millimetres from the rim. Seen from above, the brake blocks should make a V-shape. This V-shaped adjustment helps avoid squealing brakes.
- The brake blocks should both hit the rim at the same time when you pull the lever.
- The brake lever must have some movement in reserve – when applying full braking power it must not reach the handlebar.

**Danger:** *Adjusting brake blocks against the rim requires a good degree of mechanical skill. Errors could lead to brake failure and accidents. If in any doubt, leave the adjustment of brakes or changing brake blocks to your dealer. Poorly adjusted brakes can lead to serious accidents!*

### Rear Coaster Brake

The Birdy city is equipped with a coaster brake. You brake by pedaling back. The best braking performance is reached when pedaling back at horizontal position of the cranks.

**Hint:** *The Birdy city is equipped with a chain tensioner and so you have to pedal back a little bit until the brake becomes active. This is harmless but should be trained.*

- Check regularly the tight fit of the bolts which are fixing brake reaction arm of the coaster brake.

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To balance the brakes, use the adjustment screw in the side of the brake arm body. Adjust this screw until the blocks are the same distance from the rim on each side.

To adjust the brakes, loosen the knurled locknut where the cable enters the handlebar brake lever. Turn the knurled and slotted adjustment screw out by a few turns. The 'dead' lever motion before the brakes bite will be reduced.

Hold the adjustment screw in place, and turn the knurled locknut tight against the brake lever housing. This stops the adjustment screw vibrating loose.

Check that the slot in the screw does not face upwards or forwards, as this can allow water and dirt to get in.

**Danger:** *It is essential after any brake adjustment that you carry out a static brake test, and that you ensure that the brakes are hitting the rim with their full area. Brake failure or a locked-up wheel could otherwise cause an accident.*

After you've adjusted the brakes, it is essential that you test them away from traffic, so as to get used to their performance after adjustment.

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### Gear system

A bike's gears have the job of matching your power output to the gradient and to your desired speed. The amount of physical work you need to do won't be reduced by the gears, because this remains constant for the same distance covered at the same speed. What does change is the power input per turn of the cranks. In other words, this means that in a 'smaller' gear you can get up steep hills without undue effort, but to do so you'll have to turn the pedals more often.

Going downhill you can choose a higher ratio. This means that each turn of the cranks takes you several metres, so your speed can be high.

To ride energy-efficiently, you need to change gear often. Just like a motor vehicle, you must keep your 'motor' running in its 'cruising' rev-band, to ensure you get the best performance.

On the flat, a pedalling frequency, also known as 'cadence', of around 60 turns per minute is reasonable. Racing cyclists increase this on the flat to around 90-110 revolutions per minute. When climbing, the cadence naturally falls somewhat – but you should always be able to pedal smoothly.

The fine steps between gears and the easy action of modern gearing systems put you in the best position to ride efficiently. In addition, wear on chain and sprockets, as well as the loading on your knee joints, can all be much reduced.

**Derailleur gearing** is currently the most efficient form of gearing for bicycles. With a well-maintained and lubricated chain, 97-98% of the power you put in is transmitted to the rear wheel. Despite this near-perfect performance many riders worry about the 'gears locking up'. This fear is unfounded with modern equipment. Both ease-of-use of the gearing and the power of modern brakes are excellent.

With special tooth-profiles on the sprockets, flexible chains and accurate indexing in the changers, changing gear is extremely easy. On the Birdy, the twist-shifters even inform you which gear you're currently riding. It is important for this gear-change process that you keep pedalling, smoothly and without applying great force, all the time that the chain is moving between the sprockets. Shifting under load shortens the life of the chain considerably. Avoid changing gear when you're pedalling particularly hard.

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### Shifting levers, How to adjust the gear system

Two different kinds of shifters are used at the Birdy.

**Twist-shifters**

Turning the right-hand twist-grip towards the rider gives an easier gear. The twist-grip shows you which gear you're in. The shifting lever has two levers to switch to heavier/easier gears and has a separate gear display.

The shifter transmits your gear-change command to the rear derailleur through the gear cable. The rear derailleur moves across, and directs the chain onto the next sprocket.

**Rapid fire-shifters**

The thumb shifts to heavier gears, the forefinger into easier gears. The sign in the small window informs you about the chosen gear.

***Danger:*** Practice changing gear on a traffic-free street. Make yourself familiar with the functioning of the twist-shifters. Getting used to the gears in traffic could distract your attention from possible dangers.

**Checking and adjusting the gears**

Your dealer will have carefully adjusted your derailleur gearing system before he handed the bike over. But in the first kilometres of riding, the gear cables can stretch, making the gear indexing imprecise. The chain can then climb unintendedly onto the next sprocket.

**Rear derailleur:**

- Adjust the barrel adjuster, where the gear cable goes into the rear derailleur.
- Check after each adjustment whether the chain moves cleanly up to the next larger sprocket. To do this, either turn the cranks by hand or ride the bike.
- When the chain climbs up easily, you need to check that it still goes down easily onto the smallest sprocket. Several attempts can be needed to get the adjustment right.

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**End-limit adjusters:**

To stop the derailleur or chain hitting the spokes, or to stop the chain falling off the smallest sprocket, the movement of the derailleur must be controlled by the so-called end limit adjustment screws. These will have been pre-adjusted by your dealer. In normal use they won't move, and need no adjustment.

If the bike falls over, there's a danger that the derailleur or its mounting may be bent. After an accident, or if you fit a new rear wheel, the motion limits should be checked.

- Change gear with the twist-grip to the highest gear (smallest sprocket). The gear cable is then fully relaxed, and the chain moves to the smallest sprocket.
- Look from behind at the sprocket cluster and check that the derailleur's guide roller (upper jockey wheel) lies exactly under the tips of the teeth of this sprocket.
- If this is not the case, you need to adjust its position with one of the end limit screws. On most derailleurs the screws are marked 'H' for 'High gear' and 'L' for 'Low gear' (see picture on page 30). The 'high' gear in this case means the highest gear, and hence the smallest sprocket.
- Turn the screw right (clockwise) if the derailleur needs to move inwards (towards the wheel) or in the other direction if it needs to move outwards.
- Change onto the largest sprocket at the rear wheel. Take care, in case the derailleur goes right into the spokes at this point. Move the chain just onto the largest sprocket, then shift further at the twistgrip. Push the derailleur inwards by hand, moving the wheel gently by hand.
- If the derailleur cage hits the spokes, or if the chain climbs off the sprocket, you need to adjust the limit screws. Adjust the 'L' screw until collisions are reliably avoided.
- Check the position of the derailleur cage. There must be at least one or two chain links between the upper guide roller (jockey wheel) on the derailleur and the largest sprocket.
- To adjust this spacing, the derailleur has a screw which bears against a tab on the back of the derailleur hanger. For the Birdy, screw this out as far as it will go. The derailleur must be in its most forwards position.

**Warning:** *Completely re-adjusting derailleur gears is a job for experienced mechanics only. Improper adjustments can lead to serious mechanical damage. Read and obey the instructions from the gearing system manufacturer. If you have problems with your gears, please ask your dealer.*

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### The chain tensioner

The chain tensioner keeps the chain under tension during the whole folding process. The chain tensioner is mounted on the lower derailleur jockey wheel, replacing its bolt with a longer one. The bolt is secured on the other side with a nut. It is important that first the bolt is done up tight, then the nut screwed on against it.

The correct position of the chain tensioner is shown on the picture opposite. In the seventh or eighth gear (the chain on the smallest sprocket) the distance between chain and tensioner should be 1-2 mm.

If you replace the rear derailleur, check that the new one has the same cage length as the old one. Otherwise problems can arise during folding, as it can't be guaranteed that the chain will remain under tension.

Adjust a bigger distance between chain and tensioner if your Birdy is equipped with Big Apple-tyres. This prevents touching between tensioner and tyres during shifting into smallest gear.

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### Hub gears

One advantage of hub gears is that they are enclosed: the mechanism is almost completely hidden away inside. Dirt has little chance of getting at it. The transmission on the Birdy green, which is equipped with hub gears, will last considerably longer than a derailleur system – if properly cared for. The disadvantage is the somewhat higher level of power losses within the hub. Hub gears can be combined with derailleur gears and rim brakes (Birdy blue) or with an integrated back-pedal (coaster) brake (Birdy green).

#### How they work, and how to use them.

A twist-grip controls the gears. The chosen gear is clearly displayed. The Shimano hub gear can be shifted under load. When changing gear on the Rohloff hub gear of the Birdy you should pedal lightly.

**Danger:** *Practice changing gear on a traffic-free street. Make yourself familiar with the functioning of the twist-shifters. Getting used to the gears in traffic could distract your attention from possible dangers.*

Check the instructions from the gear manufacturer, which accompany your bike.

### Adjustment and checking

The various gears are selected via the gear cable. The adjustment method varies between the Birdy touring (Shimano Intego), the Birdy city (Shimano Nexus) and the Birdy Rohloff. Read the accompanying instruction booklets from the hub gear manufacturer carefully. If you have questions, consult your dealer.

Check regularly, and particularly after removing a wheel, that the rear axle washers with fixing tabs (which fit into the frame dropouts) are properly in place, and that the axle nuts are tightened to the appropriate torque. Also check the bolt securing the brake reaction arm.

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**Chain care**

Lubricate well, ride well. The amount of lubricant is not critical: more important are how it is applied and the regularity of its use.

Clean your chain from time to time with a dry cloth to remove any old dirt and oil. There should be no need to use special chain degreasers.

When the chain is as clean as possible oil it with chain oil, grease or wax. Wax is a particularly clean lubricant, and we recommend it for the Birdy.

Turn the cranks and dribble or spray onto the chain.

When you've finished, turn the cranks round several times. After that, let the bike stand for a few minutes, to let the lubricant find its way inside the chain.

Finally, remove excess lubricant with a rag, so that it doesn't fly off when you ride.

**Hint:** *To protect the environment use only biodegradable lubricants, because with use, some lubricant inevitably finds its way onto the ground, particularly in the wet.*

**Chain wear**

The chain is one of the parts of the bike which will wear out, but its life can be extended by the rider. Always make sure that the chain is adequately lubricated, particularly after riding in the rain. Chains on derailleur systems are usually worn out after about 1500 to 3000 km. Very worn chains also shift gear poorly, and wear chainrings and sprockets away very quickly. As replacing these components is relatively expensive compared to a new chain, replace the chain regularly.

Your dealer will have an accurate measurer to check chain wear precisely. Changing the chain should be done by an expert, because most modern chains have no joining link. They are 'endless' and a special tool is needed. Your dealer can, if necessary, select and mount a new chain suitable for your gearing system.

**Warning:** *Take care of correct chain length when replacing the chain.*

**Warning:** *An insufficient riveted chain can tear apart and lead to accident. Let your dealer change the chain.*

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*Wheels and tyres*

The wheels of a bike are your points of contact with the ground. They are highly loaded with the weight of the rider, luggage, and by bumps on the road surface. Although the wheels are carefully manufactured and centred before delivery, they will 'settle in' in the first few kilometres of riding. After an initial running-in period of 200 to 400 km (125 to 250 miles) you should get your wheels trued by your dealer. After this running-in period you should regularly check the wheels, though in general re-truing is seldom necessary.

The wheels consist of hubs, spokes and rim. The tyre is mounted on the rim, with the inner tube inside it. To protect the delicate inner tube a rim tape is glued over the often-sharp edges of the spoke holes and over the ends of the spokes.

**Tyres, tubes, rim tape, valves and air pressure**

Tyres are responsible for traction on the riding surface, vital for braking, accelerating and turning. They should also have low rolling resistance. Both street tyres (speed, road) and knobbles (MTB) for rough tracks are available. Tyres can only function well when inflated to the correct pressure. Puncture resistance is also improved when running at the correct pressure. In particular, rupturing of the inner tube when going over a sharp edge (so-called 'snake-bike' punctures) are caused by too little pressure.

The pressure recommended by the manufacturer is marked on the side of the tyre. The following table shows pressure in Bar:

| PSI | BAR |
|-----|-----|
| 45  | 3.0 |
| 50  | 3.5 |
| 65  | 4.5 |
| 85  | 6.0 |
| 95  | 6.5 |
| 120 | 8.0 |

\*) The pressures shown at the side of the MTB tyre are wrong!

**Danger:** *Never pump your tyres up above the maximum recommended pressure! The tyre could blow away from the rim as you ride, or explode. Accident danger!*

**Danger:** *Always ride with the recommended tyre pressure, and check it at regular intervals.*



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The tyres and rim alone are not airtight. To retain the internal pressure the inner tube is placed inside the tyre. It is filled through a Presta valve (also known as a 'racing' or 'French-type valve'). With Presta valves you must undo the small, knurled nut on the end before you pump, and press it down briefly until some air escapes.

If the valve body of the Presta valve isn't properly screwed down, this can lead to air loss. Check the location of the valve body in the valve shaft.

Hand-pumps are often not suitable for achieving high pressure. Track pumps with a gauge are better, as you can check the pressure as you pump.

Check that the valve is an appropriate diameter for the hole in the rim, and that it always stands up straight!

Tyres with the tread worn away, or with damaged side-walls, should be replaced. The interior of the tyre can be damaged should moisture or dirt get in. Defective rim tape should be replaced immediately.

Damage to tyres can in extreme cases lead to sudden blow-outs, which could cause serious accidents!

**Rim truing, spoke tension.**

The spokes keep the hub in the centre of the rim. Even spoke tension is necessary for the true running of the wheel. If the tension of one spoke changes, for example after hitting a step at speed, or because of spoke breakage, the tension forces go out of balance and the rim will no longer run true.

Even before you notice this imbalance through wobbling, the functioning of your bike will already be impaired.

The side-walls of the rims are usually contacted by the brake blocks simultaneously. If the wheel is no longer running true, braking performance can be affected.

**Danger:** *do not ride with wheels which are not true (round). With extreme side-wobble the brake pads could leave the rim braking surface and get caught in the spokes! This generally leads to instant lock-up of the wheels, and severe danger of a nasty crash!*

Check the roundness of your wheels from time to time. Lift the wheel off the ground and give it a spin by hand. Watch the gap between brake blocks and rim. If this gap varies by more than a millimetre, the wheel should be re-trued by an expert.

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**Hint:** *Truing wheels is a difficult business, which should definitely be left to your dealer!*

**Wheel attachments**

Wheels are fixed to the frame via the hub axles. The axle will either be fitted with six-sided axle nuts, or will have a quick-release to secure it in the 'drop-outs'.

**Danger:** *Never ride a bike if you haven't first checked that the wheels are secure. If a wheel comes loose as you are riding, you'll have a nasty crash!*

The front wheel is additionally secured by two washers with external tab.

- To remove the front wheel you have to open the quick-release or loosen the axle nuts for some turns.
- To fit the wheel into the drop outs you have to take care of the washers fitting the tab into the drop out.

**Axle nuts**

Watch the necessary tightening torque at *page 65*.

**Quick-release**

Despite the easy use of quick-releases some accidents happen by wrong use. The correct use is described at *page 18*.

**Hint:** *Lock your quick-release wheels and the frame to a solid object if you leave your bike unattended.*

**Hint:** *The quick-release lever should be located at the right side to reduce the folding dimensions.*

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**Fixing a puncture**

A puncture is a pain for any rider. But the dreaded hiss need not mean the end of a day's cycling, so long as you carry with you the tools needed to replace tyre and inner tube, and a spare tube or puncture-kit. Necessary tools are:

- pump, puncture-kit or spare tube, tyre levers

- wheels with axle nuts: 15mm wrench
- wheels with coaster brake: 10mm allen wrench

### Wheel removal

- With V-brakes, you must first unhook the cable at the brake lever.
- Now you can unhook the cable at the brake arm. To do this, put one hand around the tyre and pull the brake pads or brake arms together. When this is done the cable can be unhooked easily.
- For the front brake or with Big Apple tyres we recommend to open the cable fixing bolt at the brake arm.
- On the Birdy Rohloff, you must also undo the gear box. Please read the Rohloff manual.
- On the Birdy touring the gear-change mechanism for the hub gear must also be uncoupled. Follow the instructions from the hub gear manufacturers.
- On rear wheels with derailleur gearing, you should change gear to the smallest sprocket. This moves the derailleur outwards, where it won't get in the way.

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- On the Birdy city, you must also undo the reaction arm, which transmits drive and braking loads to the frame.
- Open the quick-release as described at *page 18*.
- To make removal of the rear wheel easier, you should pull the derailleur back a little by hand.
- Lift the bike a little and give the wheel a slap – it should fall out and down.

**Hint:** *If you have a puncture on the road, you can attempt to fix it without removing the wheel, by only removing part of the inner tube. Leave the valve in the rim, and first try to find the hole where air is escaping, by pumping more air into the tube. A bucket of water or a puddle may be of some help. Once you've found the hole, check at that point on the tyre and examine it closely for whatever caused the puncture. Remove this if necessary.*

### Removing the tyre

- Unscrew the valve cap and retaining nut from the valve stem and let all the air out.
- Press the tyre from the edges of the rim towards the middle, around the whole tyre. This makes removal easier.
- Put the tyre levers to the left and right of the valve, and hook them under the bead of the tyre. Lift the edge of the tyre over the rim edge. Hold the levers in this position.
- Push the second lever about 10 cm from the first and again lift the tyre bead over the rim.

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- After part of the tyre bead is over the rim, the rest of the bead can usually be lifted off just by pushing the tyre lever around the rim.
- Now you can remove the inner tube. Take care that the valve doesn't get caught in the rim, and that the inner tube isn't damaged.
- Repair the punctured inner tube, following the instructions from your puncture repair kit.
- If you have removed the tyre, you should check the rim tape. The tape should be seated evenly, and should not be damaged or torn, and must cover all the spoke holes. If you are in any doubt, consult your dealer.
- If necessary, the second tyre bead can be easily pulled off the rim.

### Fitting the tyre

When you re-fit the tyre, be careful that no foreign bodies like sand or mud get into the inside, and that you do not damage the inner tube.

- Put the rim over one tyre bead. Push this bead completely into the rim using your thumbs. This process should be possible without tools for any tyre. Then put the valve through the hole in the rim.
- Pump up the inner tube slightly, so that it goes into shape, and place it completely inside the tyre. Check that it's not folded or creased anywhere.
- Start pushing the final tyre bead onto the rim, starting opposite the valve. Push the bead over the rim with your thumbs as far as you can.

Check that the inner tube isn't caught between tyre and rim, where it could get pinched. Push the inner tube back to the centre of the tyre with your index finger.

- Work evenly around both sides, moving towards the valve. At the end you should pull the tyre forcefully downwards, so that the part you've already mounted can move into the deeper centre of the rim. This makes getting the last few centimetres on noticeably easier.
- Check the position of the inner tube again, and push the tyre over the rim with the ball of your hand.
- If this doesn't work, you will need to use a tyre lever. Be careful that the blunt edge is towards the inner tube, and that the inner tube is not damaged.
- Push the valve inwards, so that the inner tube does not get pinched under the tyre bead.

- Is the valve straight? If not, you need to take off one side of the tyre and re-arrange the inner tube. If you want to be totally sure that the inner tube isn't getting caught under the bead, you should half-pump up the tyre and push it back and forth around the whole rim. This also lets you check that the rim tape hasn't moved.
- Pump the tube up to the desired pressure. The maximum allowable pressure is printed on the side of the tyre (see page 32).
- Check that the tyre is properly seated using the mounting line on the tyre side-wall. It is important that the line is a constant distance from the top of the rim the whole way round the tyre.

### Mounting the wheels

Mounting the wheels follows the reverse procedure to their removal. Ensure that the wheels fit perfectly into the dropouts, and run centrally in the front forks or rear swing-arm.

Check that the quick-releases are fastened correctly (see page 18) and re-hook the brake cables in place immediately!

**Danger:** Re-hook the brake cable in position and check before you ride that the brake blocks make proper contact with the rims. - Check the quick-release or axle bolts. - Check that after the repair the braking surfaces are still free from grease or other lubricants. - It is essential that you test your brakes! - Errors in mounting wheels can lead to loss of control, and could lead to serious accidents.

Finally, if you have hub gears, check that the tabbed fixing washers are correctly in position, and tighten the axle nuts to the correct torque (40Nm). Tighten the reaction arm bolt with a torque of at least 6Nm.

**Danger:** Incorrect assembly can lead to poor functioning or failure of the brakes. Proceed in strict accordance with the manufacturer's instructions. You absolutely must test your brakes! Errors in mounting wheels can lead to loss of control, and could lead to serious accidents.

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### Steering bearings or headset

The fork, stem, handlebar and front wheel are fixed to the frame by the steering bearings, also known as the headset. So that the bike can self-stabilise and have good straight-line handling, this bearing must be able to turn easily. Road shocks and bumps impose heavy loads on this bearing, and it can come loose and go out of adjustment.

**Danger:** If you ride with a loose headset, extremely high loads are imposed on fork and bearings. Damage to the bearings or even a fork breakage could be the result, with possibly serious consequences.

### Checking

- Check for play by putting your fingers around the upper bearing shell.
- Hold the front brake with your other hand, and push the bike firmly forwards and backwards.
- If the bearing has play, you will feel noticeable movement between upper and lower parts.
- To check that the bearing is turning easily, lift the frame up with one hand, so that the front wheel loses contact with the ground. Move the handlebar from left to right. The front wheel should move easily from far left to far right, without 'indexing'. If the handlebar is lightly touched, the wheel should move as if of its own accord from the straight-ahead position.

**Caution:** Adjusting the headset bearings requires a degree of experience, so this work should be left to your dealer.

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### Adjustment

The headset bearings consist of an inverted Aheadset arrangement. The 'steerer tube' goes from the stem hinge downwards. At its lower end the fork pushes onto it, and is fixed by two clamp screws A (similar to the way an Aheadset stem is fixed). In addition, the fork is held in place from below with a fixing cap secured by bolt B.

- To adjust the headset, the two clamping screws A must first be loosened.
- The play can now be adjusted out using the recessed bolt B. Tighten this up gently 'by feel'.

**Caution:** Do not completely tighten up this bolt, or you will be 'dialling in' play.

- Align the stem again so that the handlebars are straight.
- Re-tighten the side clamp bolts A. Apply a torque of 5Nm.
- Carry out the test for play as described above. Also, make sure that the bearing isn't adjusted too tight.

**Danger:** Check that the stem is completely secure against turning after you've adjusted the headset bearings! A loose stem could lead to a crash!

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## Suspension pivot bearings

### Front suspension bearings

The front wheel swing-arm on the Birdy is supported by maintenance-free IGUS 'Iglidur' bearings. The pivot bolts can be adjusted from the outside with an 8mm hex key. The inner part of the bolt is secured to the fork against rotation and cannot be moved. If the front suspension develops play and starts to wobble or oscillate as you ride, the outer pivot bolt can be tightened somewhat. If the front suspension is hard to fold, the outer pivot bolt can be slightly loosened. If the bearing is completely disassembled, please secure the thread of the pivot bolt with thread-lock adhesive.

### Rear suspension bearings

The Birdy's rear swing-arm is supported on a very precise and maintenance-free INA sealed cartridge needle bearing, which requires neither adjustment nor maintenance. However, the position of the pivot axle and its corresponding clamp bolts should be checked regularly. Should the axle have moved over to left or right, so that it is no longer completely locked into the swing-arm on both sides, please consult your dealer. The clamp bolts must be tightened to 5 Nm torque.

### Cable length

The table helps you to find the right length when replacing shifter and brake cables.

front brake: 1250mm, rear brake: 1300mm, rear derailleur: 1250+550mm, hub gear: 1530mm, Rohloff: 1600, 1580mm

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## Lighting

In many countries an effective lighting system is a legal requirement for using a bicycle on public roads. In other countries, lights are only required in poor light or at night. See *page 10* for more details. The following section considers dynamo lighting in particular (dynamos are legally required in Germany).

You should know how your lights work, so that if something does go wrong, you have a good chance of fixing it yourself. Difficulties most often arise if you ride a lot in the rain, or in winter.

The dynamo's roller wheel can slip against the tyre, and the light then dims or goes out completely. This is why hub dynamos or spoke-driven versions are becoming ever more popular, because they work well in all weathers. A further advantage is that these types have a higher efficiency – in other words, the effort necessary to produce a certain electrical power is less than with normal bottle dynamos.

Bottle dynamos usually have a button to press to spring them against the tyre, or you may have to push down on the dynamo from above. For the Birdy, we recommend the Union Quattro bottle dynamo for right-hand-side mounting: this dynamo is also part of the Birdy 'dynamo safety kit' accessory pack. It is attached to the rear V-brake pivot (on the Birdy red, blue, black and elox) using a special bracket, or bolted on from the inside of the swing-arm (Birdy green). Assembly should be carried out only by your dealer. If you want to equip your Birdy with a lighting system, consult your dealer.

### How it works

The dynamo generates the current needed to power the lamps. Two wires go from the dynamo to front light and rear light.

### Using the dynamo lighting set

To turn on the light in darkness or in low visibility conditions, you need to simply press the appropriate button or surface on your dynamo. Pull the dynamo gently outwards from its resting position, press the tab, and let the dynamo move to press against the tyre.

To switch it off, simply pull the dynamo away from the tyre. It will click into its 'off' position automatically.

Check that your lighting system works each time you ride your bike. It would be dangerous to find yourself suddenly without lights at night. Should either front or rear light not work, this will lead in a short time to the other still-working light burning out. Also check for loose cables and intermittent contacts.

### Dynamo hub

Only the front light is powered by the dynamo hub. The tail light is battery powered. Both lights have a switch. The tail light has an additional sensor to switch on the light at dawn automatically.

***Danger:*** Never use your bike if the lights aren't working! You will be very easily overlooked by other road users. You could also end up not seeing road hazards. Serious accidents could result!

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### Troubleshooting

- First, check the bulb in the front light. The bulb element must be intact. Blackened glass indicates a burned-out bulb.
- Check the bulb contacts, and the connections to the lamp. Are these shiny, or greenish and corroded? If necessary remove the corrosion with a penknife, screwdriver, sandpaper or steel wool, until the contact surfaces are white and shiny.

- Follow the wire and check that it isn't damaged. Check all contact points. Push-on connectors often get corroded by salt and rain. Pull such connections apart then fit them together again.
- If you still have no success, use a 4.5V flat battery to put current into the circuit. If the lamps light up, then the dynamo is probably defective. If the lamps don't light up, then you should move the battery step by step nearer the lamps and check when the current starts to flow.

**Hint:** Read more about lighting on page 7.

**Caution:** A non-functioning or incomplete lighting system is not only often illegal, it also puts your life at risk. Unlit cyclists are easily overseen at night, and risk serious accidents!

### Adjusting the front light

German regulations specify that the centre of the area illuminated by the front light should hit the road at most 10 m from the bike. To adjust this, loosen the mounting bolt and tilt the lamp unit as required. Re-tighten the mounting bolt.

### Mounting accessories

If you buy additional bells or horns, or lighting accessories, you must carefully check that these accessories are legal for street use in your country. Additional battery or rechargeable lighting systems must conform to the relevant standards (see page 10).

Mirrors can improve your view to the rear. When you buy one, make sure the mounting is solid and vibration-free.

**Danger:** Accessories fitted after sale can affect the functioning of your bike. You could even lose control of the bike when riding. Always consult your dealer before you add any accessories to your bike. Your dealer will have available many accessories developed specifically for the Birdy. You will find plenty of information about this in this handbook. In particular, stem and handlebar should always be changed in a specialist workshop.

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### Mounting accessories

#### Mud guards

Special mudguards are available for the Birdy. Mount the mudguards as shown on the picture.

#### Lowrider

The lowrider is mounted at the front swingarm and is designed for max. loads until 10 kg.

#### SL carrier rack

The SL carrier rack is mounted on the Birdy rear swing-arm, and folds with it. It is mounted using the threaded holes on the rear dropouts, and to the cross-brace of the rear swing-arm.

#### Expedition carrier

The expedition carrier pack is attached at the seat post quick-release. When the Birdy is folded, it folds automatically and lies along the 'seat-tube'.

The patented adapter for Ortlieb panniers enables you to mount Ortlieb front panniers on the frame-fit rear carrier. The adapter is mounted on the threaded holes on the rear dropouts, and supports the panniers laterally and axially. A comprehensive instruction booklet accompanies the Ortlieb adapter kit.

#### Kick-stand

The lightweight aluminium kick-stand is mounted on the rear dropout. There are different mounting procedures for the derailleur-gearred Birdy red, black and elox models, and the models with hub gears, the Birdy blue and green.

#### Pump

The special Birdy pump is stored inside the seatpost, where it is protected from theft and from the weather. With its long shaft and screw-on tube it's a comfortable pump to use. To fit it, the seatpost is first completely withdrawn. Then fold the tube in the middle, and push the pump into the tube. The sealing ring, which should be pushed completely onto the pump grip, holds the pump in the seatpost. Push the pump in so that you just enough left to grip when you want to pull it out.

#### Locks

Bicycles are attractive to thieves, because they are often of high value and are easy to sell on. Because of their low weight they are easily carried off.

Simple cable or combination locks do not offer sufficient protection. Even a thick cable lock offers a thief little resistance. A high-quality U-lock is a far greater obstacle. Make sure that the length and width of the shackle are sufficient to lock your bike to a fence or railings. For the Birdy we recommend the Trelock eco 280/160 with universal mounting, and it can be mounted direct to the 'down tube'.

Lock your frame and, if possible, both wheels. The seatpost and wheels, which are secured by quick-releases, are almost asking to be stolen. Lock these parts when you leave your bike, or use quick-release locks.

### General care and inspection tips

The bicycle you now own is a high-quality product. When you collect your bike from your dealer, he will have assembled it ready to ride. Nevertheless, like any other vehicle, your bike needs regular care and must be serviced at intervals by your dealer. Only in this way can the reliable and safe functioning of all parts be guaranteed, so that you will be able to cycle safely and enjoyably for many years.

**Caution!** Only attempt maintenance work for which you have the necessary expertise and the correct tools.

#### Washing and care

Dried sweat, mud and road salt from winter riding, or sea air, can all attack your bike. You should carry out regular cleaning and corrosion protection of all parts of your bike.

Easiest is to blow away all dirt and deposits with a steam cleaner. This express cleaning method has serious drawbacks: the very strong, high-pressure water jet can push past bearing seals and reach the inside of bearings, where it can displace lubricant and increase friction. In the longer term, the bearing surfaces can be destroyed and the bearing will refuse to turn smoothly. Steam cleaners also often loosen frame stickers.

**Caution!** Do not clean your bike with a very strong water jet or with a steam cleaner.

Far more appropriate is to wash the bike with a gentle flow of water, or from a bucket, using a damp cloth or a large paintbrush – for example a wallpaper brush. Hand-washing has another beneficial side-effect: you can detect early signs of damaged paintwork, worn-out components, loose bolts, slack spokes or other problems. As you carry out this regular cleaning you should check tyre pressure, functioning of brakes and lights, and generally check the bike for damage or problems.

**Caution:** As you clean, check for cracks, scratches, any deformed material or discoloration. If in any doubt contact your dealer. Replace any damaged parts immediately, and touch up any damaged paintwork.

When the bike has dried, you should treat the paintwork and metal surfaces with wax polish. Also protect spokes, hubs, nuts and bolts etc with a wax film. Polish the waxed surfaces with a soft cloth, so that they shine, and water will bead and run off.

**Hint:** protect areas where cables could touch paintwork, such as underneath the chainstays, with a plastic film or similar. This avoids unsightly scratches and damage to paintwork.

#### Care of the anodised finish

A special anodised finish protects the aluminium parts of your Birdy. This is a protective film which is part of the material itself, and which is created using an electro-chemical process. This film is particularly hard, and so is scratch-resistant. Despite this, the anodised finish also requires care.

Clean using just water, with, if necessary, a little washing-up liquid to shift grease. After drying, treat the surfaces with anodised aluminium polish, which your dealer can supply. Distribute the polish evenly over the surface using a clean cloth – this lets you remove paint, tar or oil traces.

Finally, rub the parts with a clean, soft cloth, so that excess polish is removed and does not attract dust.

**Hint:** After cleaning is completed you should if necessary lubricate your chain (see page 33).

**Danger:** Make sure that you get no cleaning polish and no chain oil on the brake blocks or rim braking surface! Brake failure can lead to serious accidents!

#### Storage

If you use your bike regularly, you need take no particular precautions, except against theft, when storing it for short periods. We recommend that the bike be stored in a dry, well-ventilated room.

Should you wish to store the bike for the winter, please note:

During long periods of storage the inner-tubes lose pressure. If the bike stands for long periods on flat tyres, the tyre carcass can be damaged. So it's best to hang the bike up, or regularly check tyre pressure.

- Clean the bike and protect against corrosion, as described above.
- Store the bike in a dry room.
- Change gear onto the smallest sprocket. This ensures that cables and springs are under the least possible tension. With the Birdy green hub gear, change to first gear. On the Birdy blue, change the hub to third gear.

**Hint:** Often, cycle dealers have very short waiting times in the winter, and many have special offers for servicing. Use this slack period to take your bike for inspection!

### Servicing and maintenance intervals

As it is 'run in', the spokes 'settle', cables stretch, and bearings run in. The first inspection, when all important functions will be checked and adjusted, should be carried out by your dealer after a short run-in period (4 to 8 weeks, or after 200 to 400 km, 125 to 150 miles). Arrange an appointment with your dealer for the servicing of your new bike.

Regular check-ups on your bicycle guarantee reliable functioning and riding pleasure. As with a car, annual inspections mean that you can often avoid expensive remedial work. Adjustment of bearings and timely replacement of worn parts can avoid serious damage to your machine, so after the run-in phase, you should have your bike serviced at regular intervals. The service intervals recommended in the appendix (page 63) are for cyclists who cover between 1000 and 2000 km per year. If you regularly cover greater distances, or often ride on bad roads or off-road, shorten the service intervals to reflect the harder use. This also applies if you ride often in the rain or in a damp climate.

**Caution:** For your own safety, take your bike to your dealer for its first inspection after 200 to 400 km (125 to 250 miles), or after 4 to 8 weeks, or at the latest after three months.

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### Guarantee

Your cycle dealer is obliged by law to ensure, amongst other things, that your bike is not affected by defects, which materially diminish its value or fitness for purpose. The exact details will vary according to country. In Germany, this guarantee ends two years after purchase. We offer a guarantee, in addition to you statutory rights, of 25 years on the Birdy frame and rear swingarm. This additional guarantee is only applicable when the accompanying Bicycle Passport is filled out completely, including inspection reports from your dealer, and in cases of guarantee claims this must be sent, together with a copy of the receipt, to riese und müller. The guarantee only applies to the original purchaser.

Damage through wear and tear, neglect (inadequate care and maintenance), crashes, overloading through excess weight, incorrect assembly, or modifications to the bike (additional or changed components) is excluded. Competitive use, jumping or similar overloading is also not covered by guarantee.

In the interest of long life and component reliability, the manufacturer's assembly instructions (including torque settings for bolts) and the correct service intervals must be precisely observed. The guarantee is void if assembly instructions or service intervals are neglected. Carry out the checks indicated in this handbook (page 63), and replace any safety-critical parts when necessary, for example handlebar, brakes etc.

**Caution:** Your authorised dealer must make your bike rideable, so that safe functioning is guaranteed. The dealer must do a final safety check and carry out a test ride.

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### Tightening torques

| Part                          | Threaded component                                  | Tightening torque               |
|-------------------------------|---|---------------------------------|
| Rear derailleur               | Mounting bolt                                       | 8-10 Nm                         |
|                               | Cable clamp bolt                                    | 4-6 Nm                          |
|                               | Jockey wheel bolts                                  | 3-4 Nm                          |
| Twist-grip                    | Securing bolt (hex key)                             | 1-2 Nm                          |
| Brake lever                   | Securing bolt (hex key)                             | 5-6 Nm                          |
| Hub                           | Quick-release operating lever                       | 9-12 Nm                         |
|                               | Locknut for bearing adjustment (quick-release hubs) | 10-25 Nm                        |
|                               | Axle nut for hub gears                              | 40-45 Nm                        |
| Freehub body                  | Freehub body securing bolt                          | 35-49 Nm                        |
|                               | Freehub body securing nut                           | 35-44 Nm                        |
|                               | Cassette lockring                                   | 29-49 Nm                        |
| Crankset                      | Crank bolt  | 35 Nm                           |
|                               | Chainring bolt                                      | 8-11 Nm                         |
| Sealed-bearing bottom bracket | Housing   | 49-69 Nm                        |
| V-brakes                      | Brake socket bolts                                  | 5-9 Nm                          |
|                               | Cable clamp nut                                     | 6-8 Nm                          |
|                               | Brake shoe fastening bolt                           | 8-9 Nm                          |
| Seatpost                      | Saddle rail clamp bolts                             | 9-12 Nm                         |
| Rear swing-arm                | Clamp bolts   | 5 Nm                            |
| Front swing-arm               | Fork clamp bolt to 'steerer tube'                   | 5 Nm                            |
| Stem hinge                    | Tension rod adjuster M3                             | 1 Nm                            |
|                               | Tension rod locknut M5                              | 3-4 Nm                          |
| Stem                          | Handlebar clamp bolt                                | 12-14 Nm                        |
| Bar ends                      | Clamp bolts   | See manufacturers' instructions |

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## Service and maintenance intervals

| Part                   | Job   | Before every ride | Monthly | Annually | Other interval                                     |
|------------------------|---|-------------------|---------|----------|--|
| Lighting               | Check   | ●                 |         |          |  |
| Tyres                  | Check pressure  | ●                 |         |          |  |
| Tyres                  | Check tread and side walls  |                   | ●       |          |  |
| Brakes                 | Check brake lever movement, block wear, and position on the rims. Do stationary brake test. | ●                 |         |          |  |
| Brake cables           | Visual inspection   |                   |         |          |  |
| Dynamo mounting        | Check   |                   | ●       |          |  |
| Stem hinge             | Snap-rings on the bolts? Hinge lever closed?  | ●                 |         |          |  |
| Rims (aluminium)       | Check wear indicator, change if necessary.  |                   |         |          | At the latest after the second set of brake blocks |
| Bottom bracket bearing | Check for play  |                   | ●       |          |  |
| Chain                  | Check, lubricate if necessary   | ●                 |         |          |  |
| Chain                  | Check, change if necessary  |                   |         |          | After 1000 km                                      |
| Cranks                 | Check, re-tighten if necessary  |                   |         | ●        |  |
| Paintwork              | Wax   |                   |         |          | At least every 6 months                            |
| Wheels/spokes          | Check trueness and spoke tension  |                   | ●       |          |  |
| Handlebar, aluminium   | Check, replace if necessary   |                   |         |          | Change handlebar at least every two years          |
| Headset bearings       | Check for play  |                   | ●       |          |  |
| Headset bearings       | Re-grease   |                   |         | ■        |  |
| Metallic surfaces      | Wax   |                   |         |          | At least every 6 months                            |
| Hubs                   | Check for play in bearings  |                   |         | ●        |  |
| Pedals                 | Check for play in bearings  |                   |         | ●        |  |
| Seatpost, seat tube    | Clean and de-grease   |                   |         |          | At least every six months                          |
| Rear derailleur        | Clean, lubricate  |                   | ●       |          |  |
| Quick-releases         | Check   | ●                 |         |          |  |
| Nuts and bolts         | Check, re-tighten if necessary  |                   | ●       |          |  |
| Valves                 | Check   | ●                 |         |          |  |
| Front swing-arm catch  | Check for play and proper functioning   |                   |         | ■        |  |
| Rear swing-arm catch   | Check for play and proper functioning   |                   |         | ■        |  |
| Stem hinge             | Check for play, grease  |                   |         | ■        |  |
| Stem and steerer       | replace   |                   |         |          | At least every 3 years                             |
| Front swing-arm        | Check for play<br>replace   |                   |         | ■        | At least every 20,000 km                           |
| Brake and gear cables  | Disassemble, re-grease or replace   |                   |         | ■        |  |

The jobs marked ● you can carry out yourself, provided that you have a certain amount of mechanical competence, experience, and suitable tools (for example, a torque spanner). If any checks indicate something wrong, take suitable remedial measures immediately. If you are in any doubt, or if something is unclear, please consult your dealer.

The jobs marked ■ should be carried out only by your dealer.

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## Which documents are important?

In the appendix of this handbook you will find:

- The **riese und müller Bicycle Passport**, in which service inspections carried out by your dealer will be recorded. The extra guarantees provided by riese und müller over and above your statutory rights are only valid when claims are accompanied by a completely filled-out Bicycle Passport, together with a copy of your purchase receipt. The appropriate service inspections must have been carried out by your dealer and recorded in the Bicycle Passport.
- The **riese und müller dealer maintenance record**. This document is intended for the dealer's records.
- A **service and maintenance interval planner** on page 54-55.
- A list of **recommended tightening torques** for all important parts of your bike is on page 52-53. The cycle workshop which carries out repairs and inspection will need this.

Alongside this manual we you will find included:

- User instructions from component manufacturers. This handbook refers several times to these specialised, detailed documents. Here you will find full details of use, care and maintenance. Ensure that you are provided full instructions with clipless pedals, gear and brake system components, and that you keep them, together with this handbook, in a safe place.
- Your receipt, which proves that the bike belongs to you, and when you bought it.

We wish you and your Birdy a very pleasant ride. If you do have any further questions, your dealer will be delighted to help. If you do have any problems which your dealer can't help you with, please feel free to call us at any time.

Your riese und müller team



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*riese und müller Bicycle Passport*

(This Bicycle Passport is intended for the **customer**)

Model: Birdy  red  city w/ coaster brake  city w/freewheel  rohloff  speed  touring

color:  black  blue  anthracite  orange  red  cream white

Frame number:

Date of purchase:

The bike was handed over:

Place: Dealer's stamp:

Date:

Dealer's signature:

Please ensure that all inspections and servicing carried out by your dealer are recorded in this Passport. The extra guarantees provided by riese und müller over and above the statutory guarantee are only valid when claims are accompanied by a completely filled-out Bicycle Passport, together with a copy of your purchase receipt. The appropriate service inspections must have been carried out by your dealer and recorded in the Bicycle Passport.

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**First service inspection**

After at most **400 km (250 miles)** or at latest three months after purchase.

Job number:

Dealer's stamp and signature

Date:

Parts replaced or repaired:

**Second service inspection**

After **2000 km (1250 miles)** or one year after purchase.

Job number:

Dealer's stamp and signature

Date:

Parts replaced or repaired:

**Third service inspection**

After at most **4000 km (2500 miles)** or two years after purchase.

Job number:

Dealer's stamp and signature

Date:

Parts replaced or repaired:

**Fourth service inspection**

After at most **6000 km (4000 miles)** or three years after purchase.

Job number:

Dealer's stamp and signature

Date:

Parts replaced or repaired:

**Fifth service inspection**

After at most **8000 km (5000 miles)** or four years after purchase.

Job number:

Dealer's stamp and signature

Date:

Parts replaced or repaired:

**Sixth service inspection**

After at most **10000 km (6000 miles)** or five years after purchase.

Job number:

Dealer's stamp and signature

Date:

Parts replaced or repaired:

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*riese und müller dealer maintenance record*

(This document is meant for the **dealer**)

Model: Birdy  red  blue  black  elox  green

Frame number:

Date of purchase:

The bike was handed over:

Customer name:

Customer address:

Postcode:

Customer's signature:

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Dear dealer,

Please record all service inspections you carry out in this Maintenance Record. The extra guarantees provided by riese und müller over and above the statutory guarantee are only valid when claims are accompanied by a completely filled-out Bicycle Passport or this Maintenance Record, together with a copy of your purchase receipt, and when the appropriate service inspections have been carried out by you and recorded in the Bicycle Passport or Maintenance Record

**First service inspection**  
**400 km (250 miles)** or three months

Job number:

Date:

Mechanic:

**Fourth service inspection**  
**6000 km (4000 miles)** or three years

Job number:

Date:

Mechanic:

**Second service inspection**  
**2000 km (1250 miles)** or one year

Job number:

Date:

Mechanic:

**Fifth service inspection**  
**8000 km (5000 miles)** or four years

Job number:

Date:

Mechanic:

**Third service inspection**  
**4000 km (2500 miles)** or two years

Job number:

Date:

Mechanic:

**Sixth service inspection**  
**10000 km (6000 miles)** or five years

Job number:

Date:

Mechanic: