

SYNCROS
User Manual

Handlebars, stem, headset

Important information about use, care, maintenance and installation

Contents

Notes on This User Manual .....1
Introduction .....1
Before Your First Ride – Intended Use.....2
Before Every Ride.....3
Special Characteristics of Carbon.....3
Cleaning and Care.....4
Maintenance .....4
General Notes on Installation .....5
Carbon assembly paste .....5
Using a torque wrench .....6
Headset.....7
Checking the headset.....7
Adjusting the Aheadset®-headset .....7
Headset maintenance.....9
What to Bear in Mind with Carbon Steerer Forks.....9
What to Bear in Mind with Integrated and Semi-Integrated Headsets .....10
Installing the Bearing Cups of Conventional Aheadset®-Headsets and Semi-Integrated Aheadset®-Headsets into the Frame.....10
Installing Aheadset®-Stems .....11
Special Characteristics of SYNCROS FRIC Stems .....11
Installing the LO-Ball Direct Mount Stem .....12
Installing the Handlebars .....13
Adjusting the Shifters and Brake Levers .....13
Installing Bar Ends .....13
Adjusting Handlebar Height and Fore-to-Aft Position .....14
Aheadset®-Stems – Height Adjustment with Spacers .....14
Installing the Grips .....15
Warranty Terms .....15
Additional manufacturer's warranty .....16
A note on wear .....16

Notes on This User Manual

Pay particular attention to the following symbols:

Warning symbols and their meanings:
1. Danger symbol: This symbol means that your life or health may be in danger unless you comply with provided instructions or carry out prescribed measures.
2. Warning symbol: This symbol warns you about actions that could lead to damage of property or the environment.
3. Information symbol: This symbol indicates there is special information on how to handle the product and may refer you to a specific passage in this manual requiring your special attention.

The possible consequences described above are not repeated every time one of the symbols appears!

Introduction

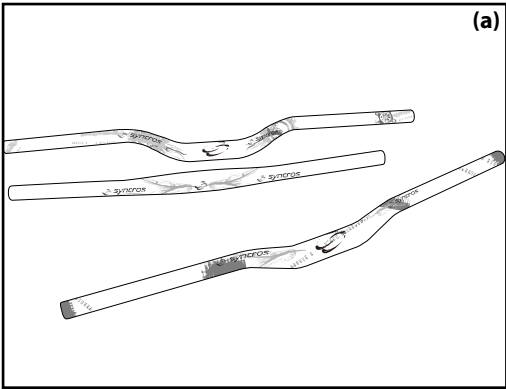
Congratulations, when buying a SYNCROS component, you made a superb choice. SYNCROS develops, tests and manufactures our products with dedication to uphold the highest standards of quality. Like all high-quality sports equipment, SYNCROS components require careful installation in order to function properly and provide long-term dependability. We recommend that you ask a qualified mechanic at your authorized SYNCROS dealer for help with installation and use SYNCROS components together whenever possible in order to achieve optimum performance and durability. Our precise tolerances are intended to ensure component compatibility, and are carefully monitored during production and quality control so that installation will be easy and trouble-free.

This manual contains important notes about use, care, maintenance and installation.

Please read this manual carefully, beginning with the general information, followed by the chapter referring to the component you purchased, or you intend to use. Doing so will ensure smooth installation and trouble-free use of the product.

Keep this user manual for your records and future reference. If you sell or lend your component or bike to someone, share this manual with the new user.

With SYNCROS components, as with all lightweight bicycle products, special care and attention need to be paid to proper installation and intended use. Materials used by SYNCROS are extremely strong and durable, with very low weight. However, sometimes they can break, rather than bend, in the event of an accident. Internal damage to the component may not show up obviously or with visible signs of damage. In the event of undue stress of any kind, e.g. as a result of a crash, the components may fail and thus lead to an accident with unforeseeable consequences need to be inspected by a qualified mechanic to ensure the product is safe to continue using. Therefore consult your SYNCROS dealer after any such occurrence.



Before Your First Ride – Intended Use

SYNCROS handlebars (a), stems (b) and headsets (c) are designed for mountain bikes and their typical use.

Mountain bikes are designed to be used for off-road cycling and for riding over natural terrain (e.g. terrain of a mountain bike marathon and cross country racing). Due to their design and equipment these bikes are, however, not intended to be used on public roads. If you intend to use this type of bicycle on public roads, it must be fitted with the devices and equipment prescribed for this purpose. Standard cross country, marathon and all-mountain bikes are not suitable for freeriding, dual slalom, downhill riding, jumps or the like. There are special mountain bike types for these specific forms of cycling. SYNCROS components are divided according to their intended use:

FL (Feather Light)

The SYNCROS components of the FL series are designed for an easy off-road use and are usually built on cross country, marathon and touring mountain bikes. The FL components are not suitable for use in rough terrain, jumps or drops.

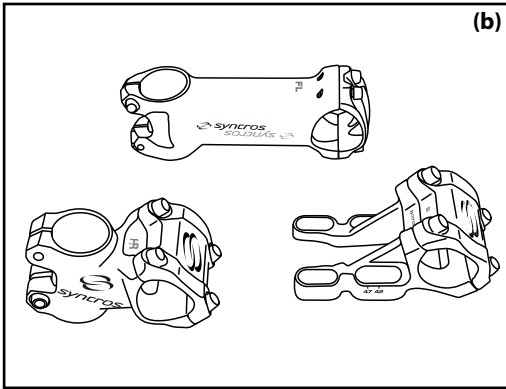
AM (All Mountain)

The SYNCROS components of the AM series are designed for a moderate off-road use. and are usually built on Enduro and all mountain bikes. The AM components are not suitable for dual, dirt, downhill or freeride use.

FR (Freeride)

The SYNCROS components of the FR series are designed for a hard off-road use on secured terrain and thus for extreme stress, competitive use included. They are usually built on dirt, fourcross, urban and dual slalom bikes.

For more information see the specifications in our catalogue and/ or visit us at www.syncros.com.



Warning: Never make any changes to seat post or saddle. Do not file or drill holes in components, especially in carbon components, as it will compromise their structural integrity and void your warranty.

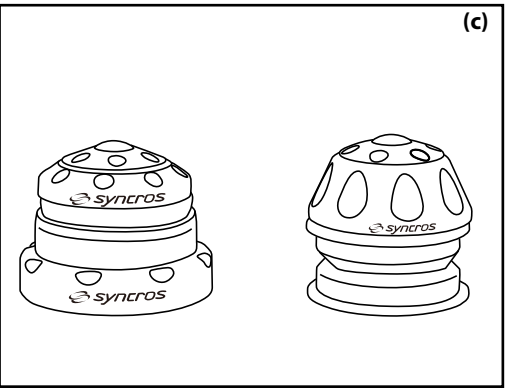
We recommend that you always use SYNCROS components together in order to achieve optimum performance and component durability. If you intend to combine SYNCROS components with components from other manufacturers, make sure they are compatible, i.e. that all dimensions are identical with the specifications given in this manual.

Warning: SYNCROS handlebars, stems and headsets are designed for an overall load of 110 kilos (242 lbs) including rider and baggage, e.g. rucksack.

Warning: After a crash, such as an accident or other major impact, have your handlebars, stem, headset and bar ends by a SYNCROS dealer, if necessary for your own safety.

Warning: If your handlebars, stem, headset and bar ends, if mounted, produce any creaking or cracking noises or show any external sign of damage, such as notches, cracks, dents, discolourations etc., do not use your bike any longer. Ask your SYNCROS dealer to check these components thoroughly and to replace them, if necessary.

Information: If you have any questions, please contact your SYNCROS dealer.



## Before Every Ride

Check the following points before setting off:

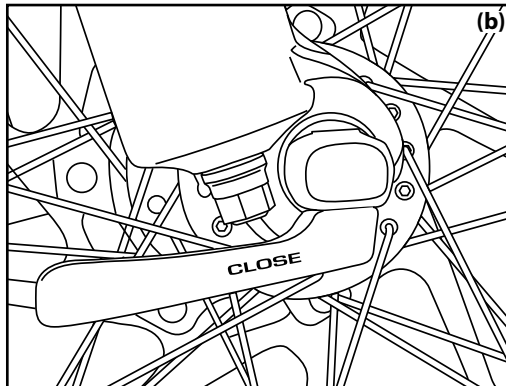
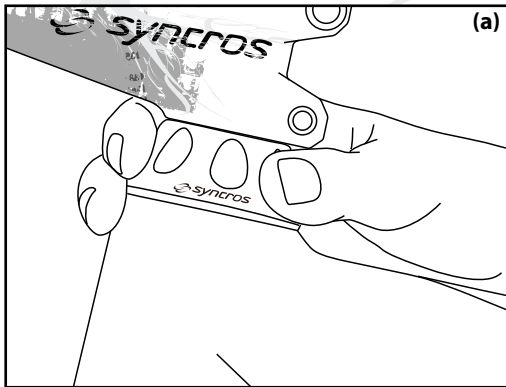
1. Verify that the headset is free of play and moves easily **(a)**. Make a visual inspection!
2. Check the tight fit of the stem on the fork steerer and of the handlebars in the stem.
3. Are the quick-release levers or nuts of the front and rear wheel properly closed **(b)**? For more information see the **respective chapters of your general bike user manual**.



Improperly closed quick-releases or thru axles can cause the wheels to come loose. This can lead to a serious accident!



Read the user manual of your bicycle manufacturer before you set off!



## Special Characteristics of Carbon

All SYNCROS products made of carbon fiber-reinforced resin, also referred to as carbon or abbreviated CFR **(c)**, require special care and attention.

Carbon is an extremely strong material which combines high compression resistance with low weight. Please note that carbon, unlike metals, shows no visible deformation after overstress, even though some of its fibers may be damaged. This makes it very dangerous to continue using a carbon component after an impact or undue stress, as it may fail without previous warning thereby causing an accident with unforeseeable consequences.

If your SYNCROS carbon component sustained this kind of impact or undue stress, we strongly recommend that you take your complete bike to your SYNCROS dealer for inspection. He will check the damaged bike and, if necessary, replace the deficient component. In case there are any unanswered questions or doubts, the dealer can contact SYNCROS or one of our SYNCROS distributors directly.



For safety reasons components made of carbon must never be repaired; they must be replaced at once. Make absolutely sure that any damaged component is never re-used; it should be destroyed to ensure that re-use is impossible.

Parts made from carbon should never be subjected to excessive heat under any circumstances. Therefore, never have a carbon component enamelled or powder-coated. The temperatures required for doing so could destroy it. Do not leave carbon components near a source of heat or in a car or trunk during hot or sunny weather.

Components made of carbon have, like all lightweight bicycle parts, only a limited service life. Therefore, to be on the safe side it is recommended that you replace handlebars, stems and headsets depending on use at regular intervals (e.g. every three years), even if they were not involved in an accident or similar incident.

Make sure the clamping areas are absolutely free of grease and other lubricants, especially when the clamping surfaces are made of carbon! Grease will penetrate the surface of the carbon component and undermine the stability of joined parts by reducing the coefficient of friction. Greased carbon components may never again provide a safe clamping surface! When you install carbon



components, apply carbon assembly paste (e.g. from RITCHEY) to interconnecting surfaces to increase friction. This will allow you to tighten bolts to prescribed torque limits, execute proper installation and attain reliable, slip-free hold.



If any notches, tears, deformations, dents or discolorations etc. are visible on your carbon component, or if it makes creaking or cracking noises, do not use the bike until the component has been replaced. After undue stress, a crash or other major impact, replace the component or have it inspected by your SYNCROS dealer before using it again.



Do not store carbon components in the blazing sun or near a source of heat.

## Cleaning and Care

Clean your handlebars, stem and headset with water and a soft cloth at regular intervals. If necessary, use a non abrasive soap to remove grime. You may add a little detergent liquid for cleaning and removing tough stains, such as oil or grease, from hard surfaces. Do not use degreasing agents, which contain organic solvents (e.g. acetone, trichloroethylene, methylene, etc.). Chemicals of this sort may damage the finish or substructure of the material.

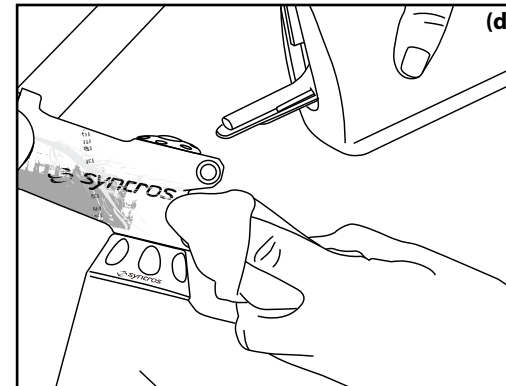
After your bike has dried, apply a wax based polish **(d)** to painted, carbon and metal surfaces (exception: braking surfaces). Polish the components after the wax has dried. With this treatment your handlebars, stem and headset will keep their nice appearance for years.



While cleaning your bike, look for cracks, scratches, dents or changes to the colour. In case of any doubt, contact your SYNCROS dealer. Have damaged or defective components replaced immediately.



Make absolutely sure to keep the braking surfaces or rotors free of cleaning agent, grease or oil. Otherwise the braking performance might be drastically reduced or even rendered ineffective.



## Maintenance

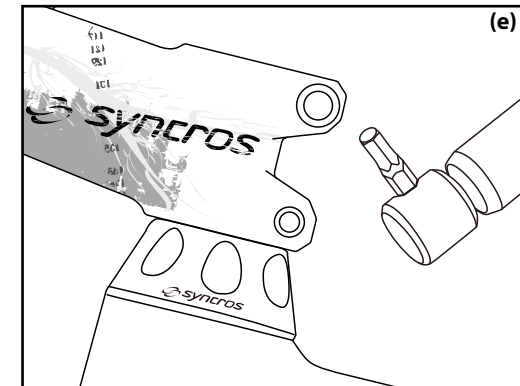
Check the tightening torque of all bolts after the first 100 to 300 km (60 to 180 miles) or 5 to 15 hours of use. Tighten them, if necessary, with a torque wrench to the prescribed torque setting. Check at least every 1,500 kilometres (930 miles) or 75 hours of use thereafter **(e)**. Please note that adjusting bearings are jobs best left to skilled mechanics. Ask your SYNCROS dealer to do these routines.



Loose or overly tightened bolts may result in an accident!

After about three years the handlebars, stem and headset have aged to an extent that they need to be checked thoroughly and have to be replaced, if necessary. Ask your SYNCROS dealer for advice.

Although headsets have seals, they are not entirely tight. Therefore, have the headset dismounted and re-lubricated by an authorized SYNCROS dealer at least once a year, depending on the intensity of use.



## General Notes on Installation

In general, handlebars, stem and headset installation are jobs for skilled mechanics. We therefore recommend that you have these jobs performed by an authorized SYNCROS dealer. Each of the following instructions must be followed strictly. Non-observance of these instructions can lead to component failure, resulting in a crash or injuries.



Installing non-matching components can result in bolt failure and consequently in a serious accident.

We recommend that you always use SYNCROS handlebars, stems and headsets together, as they are designed to fit and function as an integrated whole. If you decide to use a component from another manufacturer, consult the user manual of this component regarding size accuracy to ensure proper fit and usability with SYNCROS components.

SYNCROS assumes no responsibility for problems resulting from a SYNCROS component being used with a component from another manufacturer.

Before installation watch out for sharp edges and burrs on all clamping surfaces of the handlebars, stem (a) and headset. Do not use these components, if they have burrs or sharp edges. If there are burrs or sharp edges on a SYNCROS or non-SYNCROS component, have your SYNCROS dealer inspect it to see, whether it is usable or whether the issue can be remedied and how.

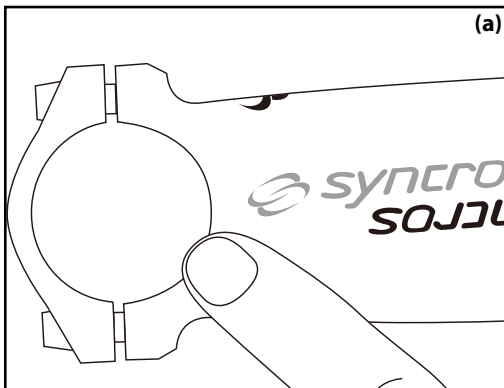
If you fit a headset to an existing fork, check the steerer tube and the old headset carefully for scratches, abrasion marks and notches after removing them. Notches in the contact area indicate defective processing or deficient design of the headset in these areas.



Do not use components, if you are not absolutely sure about their compatibility. In case of any doubt ask your SYNCROS dealer for advice.



Do not use further damaged components! If there is any doubt, we recommend that you replace the component. Do not use your bike until this has been done.



## Carbon assembly paste

### Installing components with carbon assembly paste

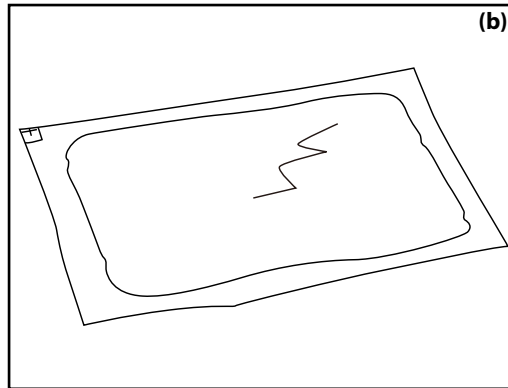
Carbon fiber components are particularly vulnerable to damage caused by excessive clamping force. Carbon assembly paste (e.g. from RITCHEY (b)) creates extra friction between two surfaces, allowing the tightening torque to be reduced by up to 30%.

This is especially useful in the clamping areas of seat post and seat tube, i.e. an area where too much clamping force can damage either component, causing component failure or voiding the warranty. By reducing the clamping force, carbon assembly paste relieves stress on sensitive carbon surfaces, preventing damage to fibers or the cracking of the clamping areas. It also retains its effectiveness in wet conditions and provides maximum protection against corrosion.

Carbon assembly paste can be used for all carbon, aluminium and steel connections including:

- Stem/steerer tube clamping areas (c)
- Seat post/frame clamping areas
- Stem/handlebars clamping areas (d)

Carbon assembly paste (e.g. from RITCHEY) is always ideal for clamping, as it does not harden.



### Instructions for use

Before applying carbon assembly paste, remove dirt particles and lubricant residues from the surfaces to be treated. Then, apply a thin and even film of carbon assembly paste to the cleaned surfaces using a brush, lint-free rag or chamois/artificial chamois. Install the component, as prescribed by the manufacturer. Use a torque wrench and do not exceed the prescribed maximum tightening torque. Remove any excess carbon assembly paste and close the container after use.

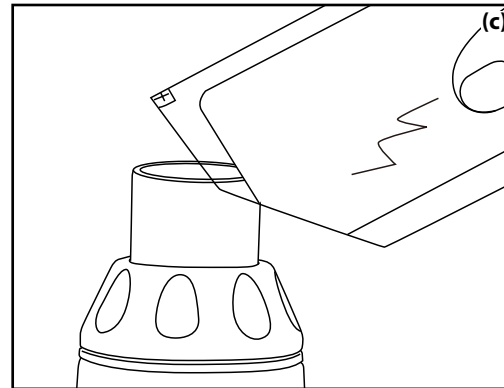
### Additional information

Many manufacturer warranties do not cover damage to components due to overtightening. Always observe the maximum tightening torques prescribed by the manufacturers for each component.

Use a torque wrench to verify you are within the prescribed torque limits. Using carbon assembly paste will allow you to safely install your bicycle components – particularly in the case of carbon fiber components – without exceeding the tightening torques prescribed by the manufacturers. In most cases, using carbon assembly paste will enable you to use a tightening torque reduced by 30% to install your components.



Carbon assembly paste (e.g. from RITCHEY) is neutral to copper and aluminium alloys, steel and synthetic materials, and will not damage product surfaces.



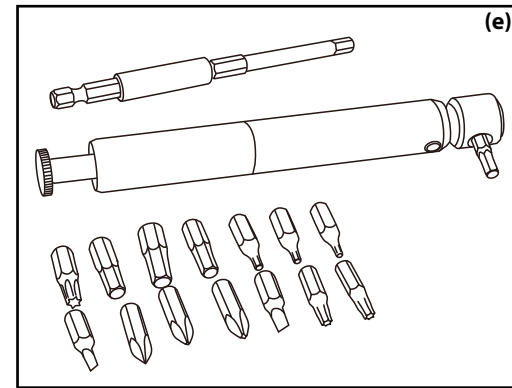
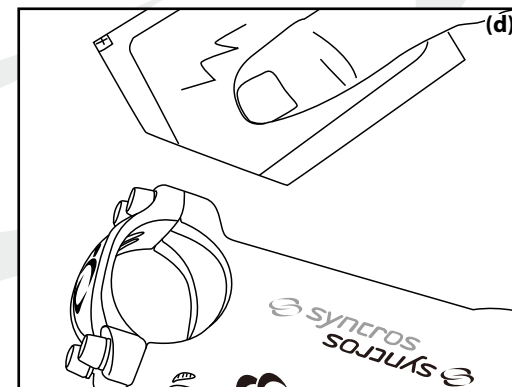
### Using a torque wrench

To achieve long lasting and problem-free clamping of components, SYNCROS considers the use of a torque wrench absolutely necessary (e). If the prescribed tightening torque does not create sufficient clamping force, apply carbon assembly paste (e.g. from RITCHEY), to interconnecting surfaces to increase friction.

Exceeding the maximum tightening torque on clamp bolts of SYNCROS components creates a too high clamping force, which can lead to component failure. This not only bears a high risk of accident, but also voids the warranty.



Loose or overly tight bolts can result in component failure and in an accident. Strictly observe the tightening torque specifications. If you do not have a high-quality torque wrench, contact your SYNCROS dealer.





## Headset

The headset connects the fork to the frame, but allows it to move freely. It must turn with virtually no resistance, if the bicycle is to run straight, stabilising itself as it travels. Shocks caused by uneven road surfaces expose the headset to considerable levels of stress. As a result of this it can become loose and go out of correct adjustment. You should check the headset at regular intervals, readjust it, if necessary, and have it greased at least once a year. Noises, in particular cracking noises, are often due to a lack of lubrication.

If you have a fork with steel/aluminium steerer tube, you can apply mounting grease on the steerer tube in the area of the headset and the spacers, however, not in the area of the stem clamping.

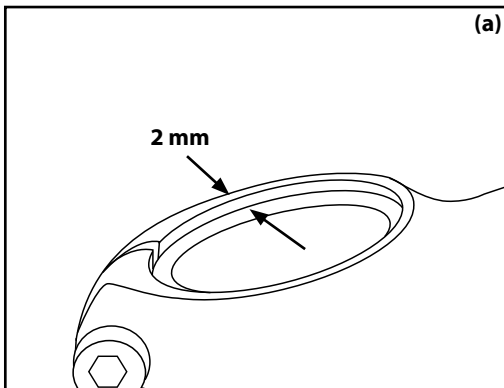
If you have a fork with carbon fiber steerer tube, you must not apply mounting grease! The surface between steerer tube and stem as well as between the pre-load mechanism (clamping cone) and the inner side of the steerer tube must remain free of grease, otherwise a reliable clamping of these components cannot be granted. If you have a carbon fork, the grease must, therefore, be applied carefully and systematically between the steel/aluminium parts of the bearing, the clamping or between the contact areas of the aluminium spacers.

Recurring bearing play may be due to insufficient friction between stem and fork and/or to a poor fit of the counter bearing in form of a cone mechanism in the fork steerer. Apply a thin layer of carbon assembly paste on the clamping surfaces to ensure a proper and gentle clamping.

Furthermore, check whether the fork steerer ends 2 to 3 mm below the top of the stem (a) or spacer, if one is installed on top, otherwise adjusting the bearing play will be impossible.

**⚠** Steering resistance or play in some handlebar positions can be due to improper fit, i.e. when the bearing races in the frame are not snug as a result of deficient processing or when unsuitable bearings were mounted. In such an event, please contact your SYNCROS dealer.

**⚠** Headsets come in different diameters and angles. Often the exact headset description is printed directly on the cartridge bearing. If not, a headset gauge that you can obtain from your SYNCROS dealer will help you.



## Checking the headset

Pull the front brake lever and place the fingers of your other hand around the upper headset cup (b).

Bring your weight to bear on the saddle and push the bicycle a little back and forth. If there is movement at the gap, the headset shows too much play. Repeat this test with the front wheel turned crossways.

Letting the front wheel bounce to the ground from a height of approx. 10 cm is another method that requires, however, a certain amount of experience. Knocking noises indicate too much bearing play. However, rattling brake levers, cables or cycle computers may be misleading!

To check whether the headset turns smoothly, take hold of the top tube and lift the front part of the bicycle until the front wheel is about 20 cm above the ground. With a little tap on the grips, the handlebars should turn easily until the front wheel is at least at right angle to the direction of motion. Perform this test to the right and to the left.

If the handlebars do not turn or only half way, slacken the cables and try again. In case there is any cracking or rubbing noise, check where it comes from. Often these noises are due to cables that are dry or even rusty in their cable stops. In this case, please apply thin lubricant.

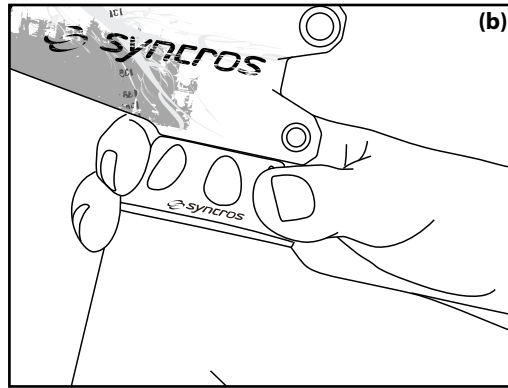
If that still does not help, check whether the fork turns freely at the bottom of the head tube and whether the bearing cover has enough play. The gaps as well as the seals must be even. To check the headset turn the fork from far left to far right.

## Adjusting the Aheadset®-headset

**⚠** Adjusting the headset is a job for a skilled mechanic. Have this work done by an authorized SYNCROS dealer. If you intend to do the adjustment on your own, please note that you need special tools, e.g. a torque wrench with bits.

Release the clamping bolts on the stem side by two to three turns without unscrewing them entirely.

The Allen bolt located in the top cap is intended to re-adjust the bearing play (c). Turning the bolt clockwise removes play, as the stem is pressed downward on the bearing; turning the bolt anticlockwise increases the play.



Check the headset as described in chapter "Checking the headset". In case there is bearing play, tighten the adjusting bolt by another quarter or half a turn. Do not over-tighten the headset; otherwise there is the risk of headset failure.

**⚠** Do not over-tighten the top Allen bolt, it is intended for adjustment! Tighten the bolt carefully in quarter-turns and check the play regularly.

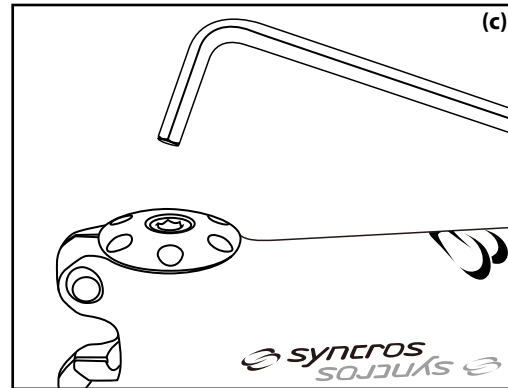
Once the play is properly adjusted, bring the stem in alignment with the front wheel. Check the alignment from the top. The handlebars should be at right angle to the direction of motion.

Tighten both clamping bolts alternately by using a torque wrench (d). If you use a standard torque wrench, start with a minimum tightening torque of 4 Nm. In case the stem clamping is not tight enough, increase the tightening torque to 5 Nm (e).

After adjusting the headset check the tight clamping of the stem by holding the front wheel between your knees and trying to turn the handlebars relative to the front wheel. In case the stem is not tight, do not tighten the bolts any further. Use carbon assembly paste instead to increase friction in the clamping areas.

Check the tight clamping once again. If the stem is still not tight, fork and stem are probably incompatible. Replace the stem by a matching model or ask your SYNCROS dealer for assistance.

**⚠** With carbon steerer tubes, make sure the inside of the tube is supported by an expander-cone mechanism (for adjusting the headset). Strictly observe the instructions about stem tightening in the user manual of the fork manufacturer.

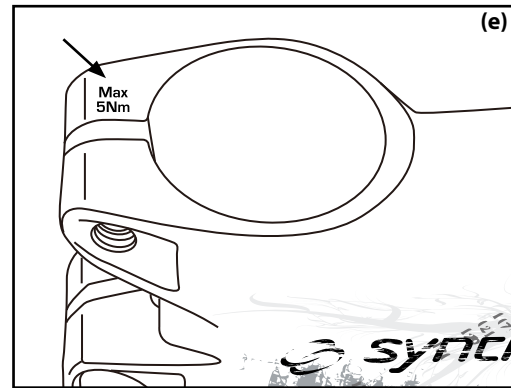
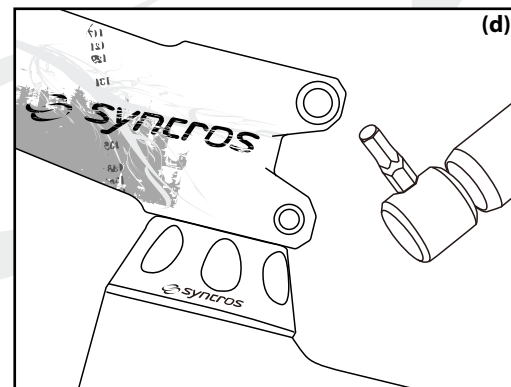


**⚠** Check the tight clamping of the stem by holding the front wheel between your knees and trying to turn the handlebars relative to the front wheel. A loose stem can lead to an accident!

**⚠** If the stem cannot be tightened on the fork steerer tube with a tightening torque of 5 Nm, in spite of carbon assembly paste on the clamping surfaces, stem and fork are incompatible. Replace the stem by a matching model or ask your SYNCROS dealer for assistance.

**⚠** Observe the specific instructions for the LO-Ball Direct Mount Stem in chapter "Installing the LO-Ball Direct Mount Stem".

**⚠** Please also observe the specific instructions regarding installing for the FRIC Stem in chapter "Special Characteristics of SYNCROS FRIC Stems".



## Headset maintenance

The maintenance of the headset, the removal of noises in spite of correct adjustment or an insufficient steering behaviour require a dismounting of the fork from the frame.



The maintenance of the headset is a job for a skilled mechanic. Have this work done by an authorized SYNCROS dealer. If you want to try it on your own, you should have the know-how and experience of a mechanic as well as special tools, if necessary.

Undo the front brake and remove the front wheel.

Unscrew the upper Allen bolt completely and remove the top cap. Release the bolt(s) on the stem side.

Pull off the handlebars including stem, keep hold of the fork with one hand and let the handlebars/stem hang down. Make sure frame, levers, handlebars and stem remain undamaged.

Remove the spacers (a), the bearing cover and the upper bearing cone. Clean the components with a rag and arrange them in the order you removed them. Keep the order in mind.

Carefully pull out the fork and wipe off any dirt from the components (b). Check on the dismounted fork, whether the crown race was installed horizontally, whether it is in sound condition (i.e. without notches), and whether the steering tube is free of scratches, notches, colour changes etc. over its entire length and circumference.

Remove the bearings, wipe off the grease from the bearing cup races.

Check whether the bearings turn freely and without play and make sure they are free of chips etc.

If you have an open bearing headset, you should check in addition, whether the bearings are well greased. Make sure there are no chafe marks or notches.

Asymmetrical marks of that kind indicate a careless processing of the frame.

Apply plenty of grease (not carbon assembly paste) on the bearing and bearing races during reassembly that will seal the bearings in addition (c). Wipe off excess grease after reassembly.



Verify that the top clamping area of carbon steerer tubes is free of grease!

Observe the correct order of assembly and place the lower bearing on the crown race. The bevel of the cartridge bearing's outer ring, normally, shows in direction of the head tube, whereas the bevel of the cartridge bearing's inner ring shows to the crown race. Slide the fork from below into the head tube of the frame.

Slide the upper bearing that is greased on the outside, the upper bearing cone, the bearing cover and the spacers completely on the steerer tube until the fork is mounted almost free of play. Make sure the clamping area of the stem is absolutely free of grease and apply carbon assembly paste. Slide the stem on the steerer tube and install the top cap. Adjust the headset as described in chapter "Adjusting the Aheadset®-headset".

## What to Bear in Mind with Carbon Steerer Forks

Carbon steerer tubes must remain free of grease, otherwise a reliable and sufficient clamping of the stem will not be achieved. You would require high tightening torques damaging the steerer tube or the stem and resulting in a failure. Degrease the stem and the fork with benzine or spirit, if necessary. Apply carbon assembly paste subsequently (d)!

Pre-load mechanisms acting as counter bearing for the adjusting bolt inside the fork steerer are often delivered without being greased. In this case increased inner friction prevents the transformation of bolt force into clamping force. Apply grease specifically on the inner, bevelled surfaces of the slotted sleeve and the inner cone.

The outer surface of the sleeve must remain free of grease. Apply carbon assembly paste in this area, as well, before tightening the mechanism in the fork steerer.



Never use a star nut as counter bearing inside the fork steerer! **Risk of breakage!**

## What to Bear in Mind with Integrated and Semi-Integrated Headsets

With integrated headsets the upper and lower bearing cup races are part of the head tube, with semi-integrated headsets they are normally pressed in by the manufacturers. This allows smooth transitions between headset, fork and stem.

The fork crown race is normally provided with a slit that allows an easy installation on the fork steerer.



Apply grease on the entire headset including bearing cup races to ensure smooth running and to prevent corrosion!

Verify that the gaps between bearing cover and head tube as well as between fork crown and lower bearing cup race are evenly parallel. If they are not, the bearings possibly run rough and wear down fast.

## Installing the Bearing Cups of Conventional Aheadset®-Headsets and Semi-Integrated Aheadset®-Headsets into the Frame



The installation of the Aheadset®-headset is a job for a skilled mechanic. Have this work done by an authorized SYNCROS dealer. If you want to perform this task yourself, you should have the know-how and experience of a mechanic as well as special tools, if necessary.

Place the crown race horizontally onto the fork crown. Slide the crown race onto the steerer either manually or with an appropriate special tool. With the desired minor undersize of the crown race towards the fork crown you need to tap slightly on the crown race to bring it into the correct position without leaving any gap between crown race and fork crown. Keep the fork in hand during hitting and do not put it down. **Risk of breakage!**



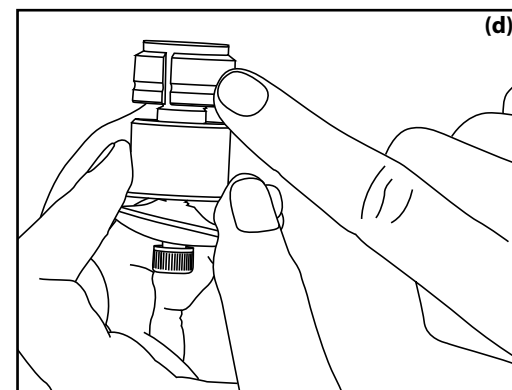
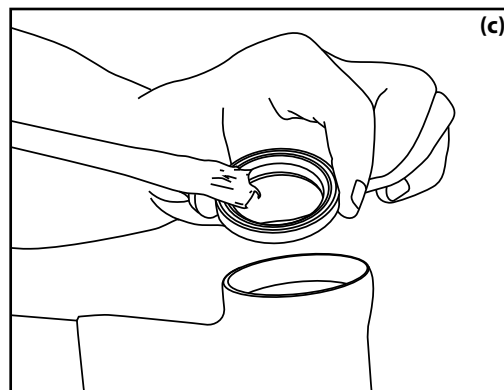
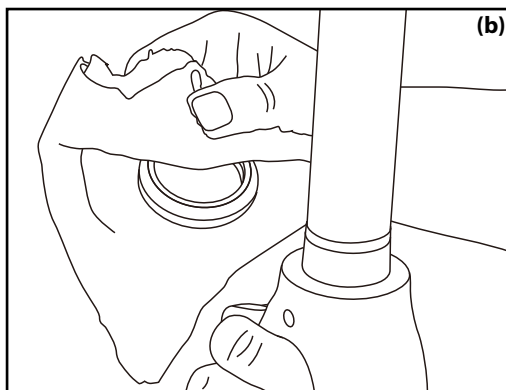
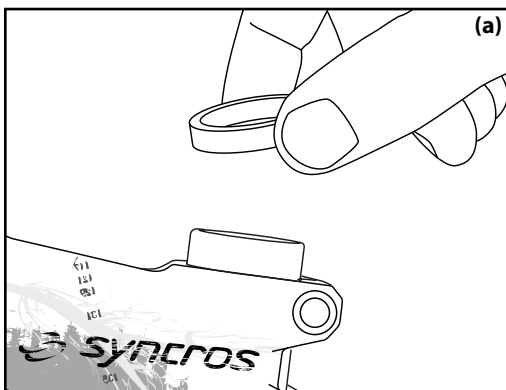
Before installation thoroughly check the cleaned fork steerer, in particular the fork crown and the stem clamping area, for damage, such as cracks.

Perform the installation only with headset tools. An appropriate press fit of the bearing cup races into the frame can only be achieved with these tools. Precondition is, however, that the tolerances are observed and that the surfaces gliding on top of one another are well greased. Verify not to slide on the bearing cup races in oblique position and make sure they are flush. Tighten the special tool evenly and observe as the bearing cup races slide into the head tube.

Bearing cup races that you can slide in manually will cause cracking or rattling noises during cycling. Degrease the bearing cup races and the inner face of the headset in a metal frame and apply some two-component adhesive, according to the manufacturer's instructions. If you have a carbon fiber frame, use carbon assembly paste (e.g. from RITCHEY)!



Let the adhesive harden before re-installing the fork.



## Installing Aheadset® -Stems

The SYNCROS FL and AM stems can be installed in either vertical orientation. These flip-flop models allow handlebars installation at two different heights by simply inverting the stem.

Verify that the stem and fork steerer tube always have matching or compatible clamp diameters!

If you fit a new stem on a fork with carbon steerer tube, check the clamping area for notches or abrasion marks. In case such damage is actually visible, ask your SYNCROS dealer whether it is necessary to have the fork replaced.

Make sure the clamping areas are absolutely free of grease, especially when the clamping surfaces are made of carbon.

Apply carbon assembly paste (e.g. from RITCHEY) to optimise the clamping. Grease the threads and the connecting surfaces/heads of the steerer clamp bolts. Keep lubricants away from clamping surfaces.

Slide the stem onto the fork steerer tube. It must fit snugly onto the fork. Do not fit stems which have play on the steerer tube.

Depending on the steerer tube length and the desired stem position, install spacers on the fork steerer above the upper cover of the headset and / or above the stem. You can stack them up to a maximum height of 30 mm.

These spacers are available in different heights. You have installed the correct number of spacers, when the steerer tube ends 2 mm below the top edge of the stem or spacer, if one is installed above the stem.

Verify that the stem provides sufficient support for the steerer tube and that the steerer tube ends 2 mm at the most below the top edge of the stem. This ensures a reliably clamping when tightening the clamping bolts of the steerer tube clamp to the prescribed tightening torque.

If your preferred stem height results in a deeper position of the stem on the steerer tube, the steerer tube projects from the stem. To check the correct position, insert spacers at an appropriate height on top of the steerer tube. After the test ride the steerer tube of a carbon fork must be shortened.



The space between the top of the steerer tube and the upper edge of the stem should not exceed 3 mm. Tighten the stem bolts only a little, if you intend to install the handlebar right afterwards. Finish by adjusting the headset.



The clamp bolts of SYNCROS stems are designed to oppose each other for proper load distribution during clamping. Please check that the bolt heads are always oriented in opposition to each other.

## Special Characteristics of SYNCROS FRIC Stems (a)

The instructions given for our standard product range, in general, also apply to the SYNCROS FRIC stem. The following instructions about the special characteristics should be regarded as supplementary!

### Installing the Stem to the Handlebars and the Steerer Tube

Before proceeding with installation, be sure the stem and the handlebars have the proper and matching clamping diameter. **The FRIC stem is only permitted with handlebars with a 31.8 mm clamping diameter. We strongly recommend that you use SYNCROS handlebars.**

The SYNCROS FRIC stem has a symmetrical design and can therefore be installed in either vertical orientation. We recommend, however, that you install the stem in a way that the SYNCROS lettering is not upside down.

Release the two bolts of the steerer tube clamp and the bolts of the handlebar clamp brackets by two to three turns without unscrewing them entirely.

To install the handlebars you need not dismount the two front clamp brackets completely. Slide in the handlebars without fittings from the side into the stem. If you have riser bars, turn the handlebars a little in both directions along the longitudinal axle to slide the bends easier through the handlebar clamp brackets. Do not use brute force, otherwise you will scratch the handlebars. **Risk of breakage!** Ask your SYNCROS dealer for advice instead.

Screw in the greased bolts of the handlebar clamp brackets with your fingers by a few turns. Tighten the two lower bolts until the clamp slots of both brackets measure approx. one millimetre (b).

Subsequently, the stem must be installed on the fork steerer tube. Slide the stem onto the fork steerer tube.

Mount the handlebar fittings and the grips on the handlebars. Tighten them only a little, as they will be fixed in the correct position at a later date.

Adjust the headset as described in chapter "Adjusting the Headset". Bring the stem in alignment and tighten the two bolts of the steerer tube clamp with your fingers.

Tighten the two bolts evenly, i.e. alternately and in small increments, by using a torque wrench to the minimum limit of the recommended tightening torque of 5–6 Nm (c).

Position the handlebars in a way that they extend the same distance from the stem on either side by offering you a comfortable grip position.

Tighten the two upper bolts of the handlebar clamp brackets evenly, i.e. alternately and in small increments, by using a torque wrench to the minimum limit of the recommended tightening torque of 4–5 Nm (d).

Bring the handlebars, the fittings and the grips in the correct position and tighten them with a torque wrench according to the instructions of the manufacturers. Finally, check the reliable fit of the handlebars in the stem, of the fitting on the handlebars and of the stem on the steerer tube.



Observe the recommended maximum tightening torques. Always use a torque wrench and observe the torque settings indicated on the component in case of doubt.

### Adjusting the Headset

With a SYNCROS folder stem adjusting the headset requires different procedures as with other SYNCROS stems. You need to release the clamp bolts of the steerer tube as well as the clamp bolts of the handlebars by two to three turns at the most.

After adjusting the headset tighten first the clamp bolts of the steerer tube to the required tightening torque of 5 to 6 Nm.

Bring the handlebars then in the correct position and tighten the two upper bolts of the handlebar clamp brackets according to the recommended tightening torque of 4–5 Nm.



Finally, check the reliable fit of the handlebars in the stem and of the stem on the steerer tube.

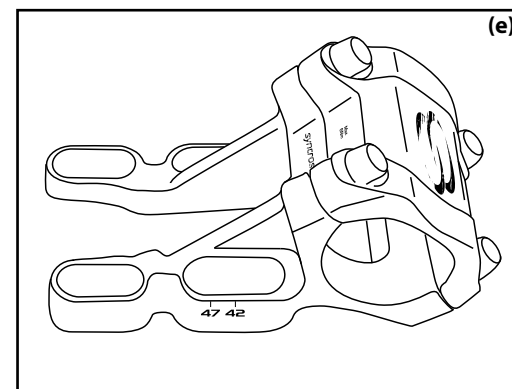
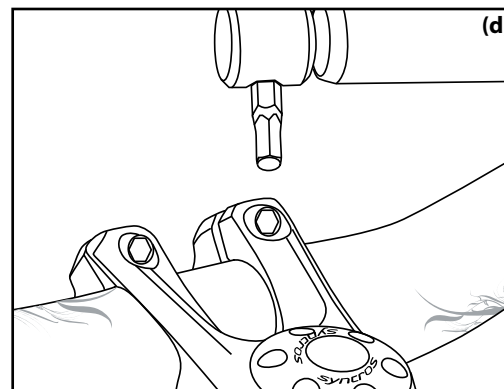
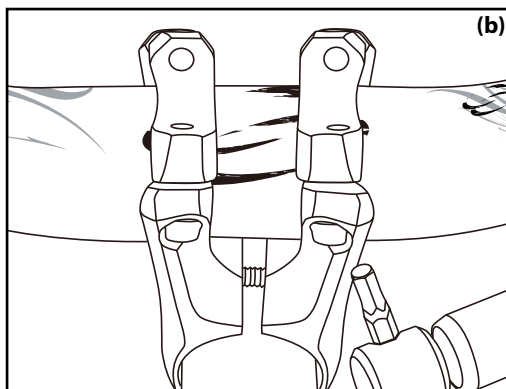
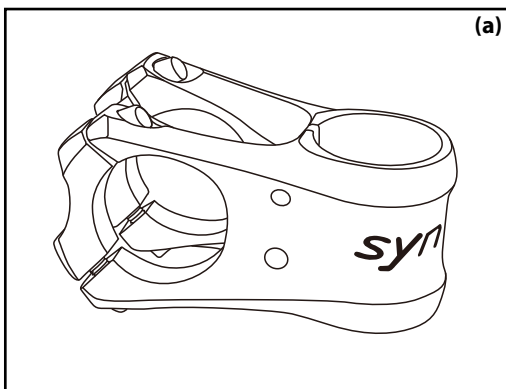
## Installing the LO-BALL Direct Mount Stem

The SYNCROS LO-Ball Direct Mount stem (e) is only compatible with the double crown suspension forks FOX 40 and Rock Shox Boxxer (from model year 2009).

The LO-Ball Direct Mount stem is screwed with 4 bolts directly to the upper fork crown. The handlebars are installed, as described in chapter "Installing the Handlebars" by observing the prescribed tightening torque of 6 Nm.



Read the user manual of your fork manufacturer before installing a LO-Ball Direct Mount stem.





## Installing the Handlebars

Before you start installation verify that the stem you have chosen has a clamping diameter matching the handlebars!

Stems with a 31.8 mm clamping are for example only compatible with handlebars with a clamping diameter of 31.8 mm.

Position the stem clamp in the middle of your new SYNCROS handlebars so that the handlebars extend the same distance from the stem on each side. If the handlebars do not slide easily into the stem clamp or if there is play between the two components, ask your SYNCROS dealer whether both components are compatible.

Mountain bike handlebars are normally mounted with the sweep supporting a natural ergonomic hand position, i.e. pointing slightly rearward. The handlebar position is correct when your wrists are relaxed and your elbows not flared out too much.

Tighten the greased bolts of the stem faceplate with your fingers by a few turns. Gently tighten all four bolts with a quality torque wrench (a) until they are snug and verify that the upper and lower clamping slots are identical in width. Do not exceed the prescribed tightening torque.

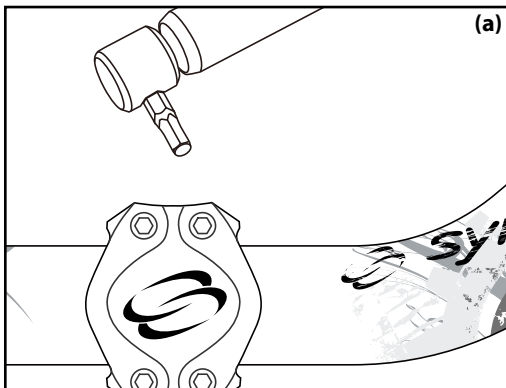
Tighten the fixing bolts evenly in a cross pattern, i.e. alternately and in small increments to the minimum limit of the recommended tightening torque.


The recommended maximum tightening torque for SYNCROS 4-bolt stems is 4 to 6 Nm (depending on model). Always use a torque wrench and observe the torque settings indicated on the component in case of doubt.


Check shifter and brake lever clamps for burrs and sharp edges. Do not use shifters or brake levers with burrs or sharp edges to prevent your handlebars from damage and dents. Components that are affected by burrs and sharp edges should be checked by a SYNCROS dealer. They will see, whether this is a problem that can be solved or whether the component has to be replaced. Loosen clamping bolts completely to ensure clamps are open all the way before sliding the shifters and brake levers onto the handlebars.

Start tightening the clamping bolts slightly, so that the levers can still rotate freely. Bring the levers to the desired position. Tighten the bolts to the prescribed tightening torque to ensure a reliable hold (b).

Never rotate the levers on handlebars after you have tightened the clamping bolts. Otherwise you will scratch the surface and mar the finish. In addition you run the risk of damaging the material.



 Read through the manufacturer's user manuals of all components before you follow the above instructions.

 Never shorten carbon fiber mountain bike handlebars, by cutting off the ends, as handlebars are generally reinforced where shifters and brake levers are installed. Shortening handlebars by cutting off the ends can damage the handlebars and result in an accident during use! Any modification to a SYNCROS carbon component will void the warranty.

## Adjusting the Shifters and Brake Levers


Turn the loosened grips on the handlebars so that they show slightly downward. Sit on the saddle and place your hands on the grips with your fingers on the brake levers. The back of your hands should form a straight line with your forearms. Adjust the shifters to the correct anatomical position.

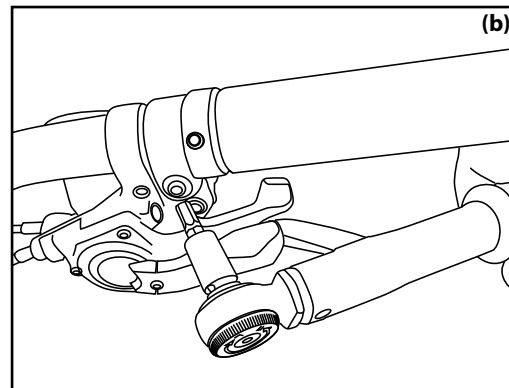
In case both the shifters and the brake levers are still not tight, verify that each bolt has been tightened to the recommended torque (5 Nm for SYNCROS). If each bolt has been tightened to a tightening torque of 5 Nm and the clamping force is still insufficient, release the bolts, remove shifters and brake levers and apply carbon assembly paste to the clamping areas. Retighten each bolt individually to a tightening torque of 5 Nm. If the shifters and brake levers are still not tight on the handlebars, seek the assistance of your SYNCROS dealer.

## Installing Bar Ends

Bar ends add more hand positions to your handlebar configuration. They are usually set to a position that provides more leverage and more comfort when you pedal out of the saddle.

High-quality bar ends are suitable for all SYNCROS handlebars.

 Mounting bar ends to unsuitable handlebars, i.e. handlebars with thin wall thicknesses that are not designed to withstand the specific load, can lead to handlebar failure during use and result in an accident!




Verify that the clamping areas of the bar ends are free of burrs and sharp edges. Do not use bar ends with burrs or sharp edges. Burrs are sharp and can cut into other components. If there are any burrs or sharp edges, contact your SYNCROS dealer.


Loosen the shifter and brake lever bolts and move the levers toward the stem to ensure the bar ends have sufficient clamping space. If the grips have end caps, cut them so you can move the grips toward the stem, as well. Do not use any liquids or grease to loosen the grips; if necessary, use compressed air to loosen them.


Loosen the bar end bolts on the bottom side of the bar ends by two to three complete turns.

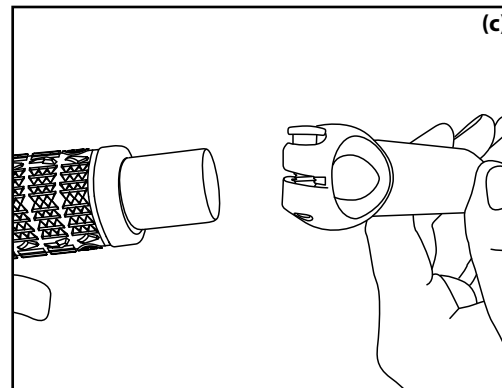
Slide the bar ends on the respective side of the handlebars (c). Angle the bar ends according to personal preference and make sure they are both at the same angle. Observe possible right/left references on the bar ends.

Retighten the bolts carefully in small increments of 0.5 Nm. Do not exceed the maximum torque of 5 Nm for the bolts of bar ends used with SYNCROS handlebars. Never exceed the maximum torque indicated on the components (d).

 If a tight fit of the bar ends on the handlebars cannot be achieved in spite of using carbon assembly paste on the contact surfaces, bar ends and handlebars are not compatible. Replace the bar ends or the handlebars by appropriate models.

 The interfacing clamping areas of stems, handlebars, bar ends, shifters and brake levers must be tightened to specified torque settings.

 Installing bar ends to unsuitable handlebars can lead to sudden failure during use and therefore result in an accident. Bar ends with asymmetric clamp styles and sharp edges are mostly unsuitable for use with handlebars. To be on the safe side, ask your SYNCROS dealer for advice.




## Adjusting Handlebar Height and Fore-to-Aft Position


Both the handlebar height and the stem length determine how much your upper body will be inclined forward. Lowering the handlebars gives the rider a streamlined position and brings more weight to bear on the front wheel. An excessively low handlebar position may prove less comfortable, especially on longer rides, and can strain wrists, arms, upper body and neck. Seek the assistance of a qualified bike fit expert, especially if you experience pain or discomfort after set up and use. If necessary, your SYNCROS dealer will help you find a seating position according to your needs.

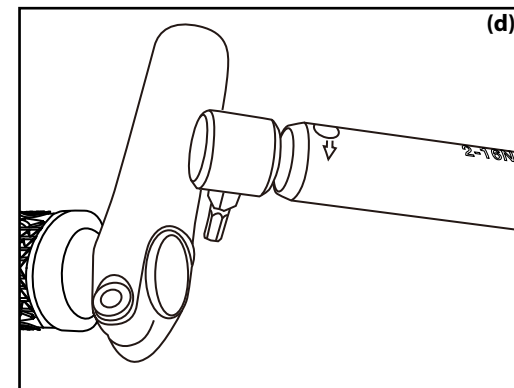
## Aheadset®-Stems – Height Adjustment with Spacers

On bikes using a threadless headset system, or Aheadset®-system ((a), p.15) the stem is an integral part of the headset. To find the appropriate height the stem must be dismounted and re-mounted. If you change the position of the stem, you must also readjust the headset (see chapter “Adjusting the Headset”). The vertical position of the stem is determined by the arrangement of the spacers. In the case of flip-flop models it is also possible to reverse the stem in order to achieve a higher or lower handlebar position. Loosen the headset cap bolt at the top of the fork's steerer tube. This cap serves to adjust the initial bearing pressure. Remove the cap and loosen the stem's steerer clamp bolts, then pull the stem up and off the steerer tube. Now you can remove the spacers. Reposition the spacers on the steerer tube above and below the stem in order to position the handlebar at the desired height.

 Observe the maximum stacking height of spacers of 30 mm below the stem.

Check the reliable fit of all components, as described above.

 If you want to reduce the number of spacers, you have to shorten the steerer tube. This shortening is irreversible. Cutting the steerer tube is a job for a skilled mechanic. Have this work performed only after you have found the ideal position. Instead of shortening the steerer tube you have also the option to modify the arrangement of the spacers. Make a test ride and place the equal number of spacers you have removed from below the stem above the stem and vice versa.



## Installing the Grips

For a reliable fit without play SYNCROS grips must be mounted on handlebars that are free of oil and grease.

SYNCROS locking grips (with 2 or 4 bolts) can be mounted easily by sliding onto the handlebars. Verify that the clamping mechanism is at the end of the handlebars. Slide the grip into the correct position on the handlebars and tighten the bolts to ensure a tight fit of the grip **(b)**. Never exceed the maximum tightening torque of 3 Nm.

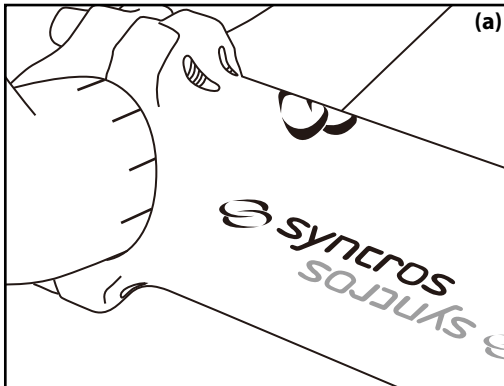
Other SYNCROS grips (e.g. grip model Deep Relief) adhere to the handlebars due to friction between the handlebars and grip. The easiest way to mount these grips is with compressed air. Inflate the grips with air and slide them onto the handlebars. If you don't have compressed air, please contact your SYNCROS dealer to perform this job for you.

We discourage the use of hairspray and comparable solvents! These can cause the grips to loosen during use.

With all types of grips designed with an open end, you should push plugs into the ends of the handlebars. This will avoid or at least reduce potential damage to the handlebars and, more importantly, injuries in the case of a crash.



Make sure the handlebars are free of lubricants and do not use chemical fluids to mount the grips!



## Warranty Terms

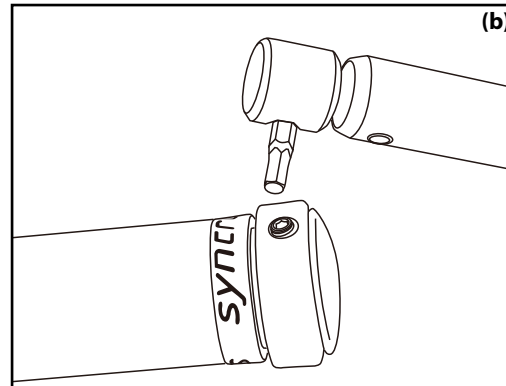
Under European consumer law the purchaser has full statutory warranty rights for two years from the delivery of the SYNCROS product. Your dealer is liable for any lack of conformity with the contract, namely that your purchased product is free of faults, which are impairing its worth or its typical use. In case of a lack of conformity you may require the dealer to repair the product or to replace it, unless this is impossible or disproportionate. Otherwise you may require an appropriate reduction of the price or have the contract rescinded, the latter being excluded if the lack of conformity is minor.

This warranty is valid in states having adopted applicable European Union (EU) regulations into national legislation. The applicable national legislation governing the sale of consumer goods is not affected by this guarantee. Please ask your dealer about the applicable provisions in your country.

Warranty claims will only be accepted if the bicycle or component has been used for its intended purpose. Any bicycle or component used for an unintended purpose will not be eligible for warranty protection.

This warranty does not cover damage resulting from wear (i.e. tire tread wear, bearing wear, rim surface wear, or any other wear or deterioration that is a result of regular use of the product), neglect (insufficient care and maintenance), accidents, stress caused by overloading or over-torque, incorrect mounting or improper treatment or damage or malfunction resulting from changes or modifications made to the bicycle or component. For additional information, note the instructions in your product manual, or consult your dealer.

For all warranty inquiries or claims, in order to benefit from your rights, you must address the claim to the dealer from which you purchased the SYNCROS product within a period of two months from the date on which you detected its lack of conformity with the terms of the warranty. You must include your original proof of purchase when initiating your claim with the dealer from which the SYNCROS product was purchased.



## Additional manufacturer's warranty

SYNCROS products have been developed and manufactured with great care and have been subject to quality assurance and control tests to help ensure that your SYNCROS product performs as it is meant to. Our products are examined and tested both internally and by external neutral test laboratories on an ongoing basis.

We warrant, in addition to above outlined statutory warranty, that your SYNCROS product is free of faults or manufacturing defects for two years from the purchase date. This warranty does not cover grips, bar tape and tires, or any part of our products that are subject to wear as a part of their function (bearings, rim braking surfaces, tire tread, chain ring wear, or the normal breakdown of foam in saddles). You shall be entitled to have your product repaired or replaced subject to the following conditions:

The manufacturers guarantee only applies to claims made by the initial buyer upon presentation of the original sales receipt, which must show the date of purchase, dealer address, price paid, and product model name and/or number. Warranty claims will only be accepted if the SYNCROS product and/or bicycle have been used for its intended purpose.

### Manufacturer's warranty does not cover damage resulting from:

- Wear as a part of the product's normal function (as noted in the section below entitled **"A note on wear"**)
- Neglect (insufficient care and maintenance)
- Accidents including falls, regardless of who or what was responsible for the accident
- Overstress caused by overloading or over-torque
- Incorrect mounting or improper treatment or damage resulting from changes or modifications made to the bicycle or component (i.e. cutting the handlebar or seatpost, filing or drilling of any kind, and other modifications that can have structural, strength, or safety implications of any sort)

Please pay attention to the instructions in your SYNCROS product manual and to the note on wear below. The warranty is null and void in any case where the mounting/installation instructions are ignored, or where inspection intervals are not adhered to, or in cases where the bicycle or component is not maintained with sufficient care.

In the event of all warranty claims, SYNCROS reserves the right to provide a bicycle or component of an equivalent or greater quality in an available colour or model. SYNCROS does not guarantee that we will be able to replace your warranted product with an identical replacement. This warranty does not cover assembly or refitting costs, nor any costs relating to new accessories, upgrades, replacements or modifications that may be required in order to put a component or frame replaced through warranty back into use.

This warranty does not cover labour and transport costs, nor does it cover follow-up costs resulting from subsequent product compatibility problems, defects, or any other costs associated with the warranty claim.

For all warranty claims please initiate the claim with your dealer, who will instruct you on whether or not you have a valid warranty claim, and the correct warranty procedure. If you are unable to contact your dealer, you can contact SYNCROS directly as indicated below.

## A note on wear

Components on bicycles are subject to wear due to their function. The rate of wear will depend on care and maintenance, the bike's usage and the environment it is exposed to such as rain, mud, dust, and sand. Some components require regular care and maintenance, but despite the best maintenance program, all components will eventually reach the end of their serviceable life, depending on conditions and intensity of use.

### The following SYNCROS components are subject to wear due to their function and are not covered for wear as described under this warranty:

- Grips and bar tapes – Compression, abrasion and contamination
- Headsets – Wornout bearings
- Lubricants

In case of any inquiries, contact your national distributor. Find a list at [www.syncros.com](http://www.syncros.com).

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