

WING

Thanks for choosing the Freedom of Wing!

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NOTICE: Assembly and first adjustment of your Wing Bike requires special tools and skills and it is recommended that this be done by a trained bicycle mechanic to ensure best results.

FREEDOM, FREEDOM2, S2 & FATTY2 OWNER'S MANUAL

Welcome to your new Wings

Thank you for purchasing from Wing Bikes™. We take pride in bringing you a quality product and experience that we know you'll enjoy. Before riding, please take a moment to review these instructions.

Using This Manual

***NOTICE:* Be sure to read the entirety of this assembly manual and familiarize yourself with each section before beginning assembly of your new Wing Bike.**

This manual contains details of the product, its equipment, and information on its operation and maintenance. Read it carefully and familiarize yourself with your Wing Bike before riding in order to ensure safe use and prevent accidents. Be sure to retain this manual as your convenient Wing Bikes information source.

Please click on any section in the following Table of Contents to be taken directly to that section.

Included are many Warnings and Cautions concerning the safe operation and consequences if safe setup, operation and maintenance are not performed. All information in this manual should be carefully reviewed and if you have any questions contact Wing Bikes immediately. Users should pay special attention to information marked in this manual by the triangular Caution Symbol or beginning with *NOTICE*.



Because it is impossible to anticipate every situation or condition that can occur while riding, this manual makes no representations about the safe use of bicycles under all conditions. There are risks associated with the use of any bicycle, which cannot be predicted or avoided, and which are the sole responsibility of the rider. You should save this manual, along with any other documents that were included with your bicycle, for future reference. All content in this manual is subject to change or withdrawal without notice. Wing Bikes makes every effort to ensure accuracy of its documentation and assumes no responsibility or liability if any errors or inaccuracies appear within.

Need service or support? Visit our website for quick answers, manuals and live chat support, drop us an email, or feel free to drop by our showroom in NYC to have a chat!

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General Info

Assembly and Fit

Correct assembly and fit are essential elements of ensuring your bicycling safety, performance, and comfort. Even if you have the experience, skill, and tools to complete these essential steps before your first ride, Wing Bikes™ recommends having a certified, reputable bike mechanic check your work.

NOTICE: If you do not have the experience, skill, and tools to complete assembly and fit, Wing Bikes™ highly recommends having a certified, reputable bike mechanic complete these procedures as well as any future adjustments or tuning.

NOTICE: A critical aspect of assembling your Wing Bike is securing the front wheel and checking the tightness of the rear wheel axle nuts. The wheels on all bikes by Wing Bikes™ are bolted on. These mechanisms may become loose or unsecured during shipment or over time. The torque and security of all wheel mounting hardware should be inspected upon arrival and on a regular basis. Both wheels need to be properly secured before operating your bike.

Mandatory Equipment and Use Locations

Before all rides, ensure you have all required and recommended safety equipment and are following all laws pertaining to using an electric bike in your region. For example, these laws may specify the need for mandatory equipment, use of hand signals, and where you can ride.

Changing Components or Attaching Accessories

The use of non-original components or spare parts can jeopardize the safety of your Wing Bike, void your warranty, and, in some cases, cause your ebike to not conform with laws pertaining to your bike.



The replacement of original components or installation of third-party accessories or accessories from Wing Bikes™ not explicitly recommended for your bike model is at your own risk. Using aftermarket accessories or components that have not been tested by Wing Bikes™ for safety and compatibility may void your warranty, create an unsafe riding condition, damage to property or your bike, or result in serious injury and/or death.

Safety Check Before Each Ride

Always check the condition of your Wing Bike before you ride, in addition to having regular maintenance performed. If you are unsure of how to conduct a complete check of the condition of your bike before every ride, you should consult a certified, reputable bike mechanic for assistance. See the Pre-Ride Safety Checklist for more information.

Electrical System

The electrical system on your Wing Bike offers various levels of power assistance and lighting for different operating conditions and user preferences. It is critical that you familiarize yourself with all aspects of your Wing Bike's electrical system and check to see that it is working correctly before every ride. The rear brake lever contains a safety power cutoff switch, which disables the motor when applied and should be checked for correct operation. The throttle should provide smooth acceleration when gradually applied. If the throttle, brake lever cutoff switch, pedal assistance, or lighting are functioning abnormally, intermittently, or not working, please discontinue using your Wing Bike immediately and contact Wing Bikes™ for assistance.

Brakes

Ensure brakes are working correctly, all braking system components are free from damage, and properly secured. When you fully squeeze the brake levers, ensure neither the front nor rear brake levers touch the handlebar. Take your Wing Bike to a certified, reputable bike mechanic to have the brakes adjusted or repaired if you find a problem.

Accessories, Straps, and Hardware

Ensure all hardware is secured and all approved accessories are properly attached per the specific component manufacturer's instructions. It is good practice to look over all hardware, straps, and accessories before each ride and if you do discover something is wrong or find something you are not sure about, have it checked by a certified, reputable bike mechanic.

Tires and Wheels

Your wheels should always spin straight and must be repaired or replaced if they wobble side to side or up and down when spinning. If your wheels become untrue or spokes loosen, which can happen with normal use, we recommend that a certified, reputable bike mechanic performs all wheel tuning and truing operations on your Wing Bike. Do not attempt to true wheels or tighten spokes unless you have adequate knowledge, tools, and experience. Ensure the tires and inner tubes are in good working condition without any visual damage and have the correct amount of air pressure. Always replace tires and inner tubes with punctures, cuts, or damage before you ride. Tires without the correct amount of air pressure can reduce performance, increase tire and component wear, and make riding your bike unsafe.

Handlebar, Grips, and Seat Adjustments

Ensure the handlebar and handlebar stem are properly aligned, fitted to the user, and secured to their recommended torque values. Handlebar grips should not move easily on the handlebar end. Loose, worn or damaged handlebar grips should be replaced before you ride and can be purchased from www.wingbikes.com. The seat and seatpost should be properly aligned and fitted to the user, and the seatpost clamp should be properly tightened before riding.

Battery Charged, Secured, and Unplugged

Ensure the battery is adequately charged and operating properly. The battery gauge on the LCD display and charge status indicator on the battery should read similarly. Ensure the battery charger is unplugged from the outlet and battery, then stored in a safe location before you ride. The battery MUST be locked onto the frame battery mount properly before use. Do not operate the electrical system if the battery is removed.

Fully Assembled Wing Bikes



Freedom2 & X



Freedom S2



Freedom Fatty2

(Not pictured: Wing Freedom2 Silver & Freedom X Silver)

Assembly Instructions

NOTICE: The following steps are only a general guide to assist in the assembly of your Wing Bike and are not a complete or comprehensive manual of all aspects of assembly, maintenance, and repair. Consult a certified, reputable bike mechanic to assist with assembly, repair, and maintenance of your Wing Bike.

Step 1:

Unpack the Bike. Open the bike box and remove the 2 small boxes inside. Carefully remove the Wing Bike from the bike box, get someone to help you if necessary. Remove the long battery box (if battery isn't already installed in the bike). Carefully remove the packaging material protecting the bike frame and components. Please recycle packaging materials especially cardboard and foam whenever possible. Open the small boxes and carefully set out all contents.

Ensure all the following pieces are included with you Wing Bike:

- Front wheel
- Front fender
- Rear fender (on bike)
- Assembly toolkit
- Front light (clear lens)
- Rear light (red lens)
- Pedals (left & right)
- Keys x2
- Alarm fobs x2
- Charger
- Stem extender
- Spacers (rings) for stem extender

If there are any missing parts, please contact Wing Bikes at hello@wingbikes.com.

NOTICE: You can use the bike box as a makeshift stand to support the bike during assembly. Simply lower the forks into one end of the box so that the edge sits between the fork and the rest of the bike.

Step 2:

Install the Handlebar.

- Wing Freedom2, S2 & Fatty2

- **Unscrew the 4 clamp bolts at the front** of the stem and remove the clamp plate.
- **Trace the cables** directly up from the bike to the left and right handlebar and ensure they are not twisted.
- **Locate the handlebar in the stem clamp** and replace the 4 bolts to reinstall the front plate (do not tighten yet).
Note: Install the handlebar so that the grooves are positioned in the middle of the clamp.
- **Adjust the handlebar** so the grips are approximately parallel to the ground.
- **Evenly tighten the four bolts** to the recommended torque value (**6 Nm**).

- Wing Freedom X

- **Unscrew the 4 clamp bolts underneath** the front of the stem and remove the clamp plate.
- **Trace the cables** directly up from the bike to the left and right handlebar and ensure they are not twisted.
- **Locate the handlebar in the stem clamp** and replace the 4 bolts to reinstall the front plate (do not tighten yet).
Note: Install the handlebar so that the grooves are positioned in the middle of the clamp.
- **Adjust the handlebar** so the grips are approximately parallel to the ground.
- **Evenly tighten the four bolts** to the recommended torque value (**6 Nm**).
 - **NOTICE:** Ensure the 2x short bolts are installed at the front and 2x long bolts at the rear of the clamp plate, and all washers are replaced. If the bolts are the wrong way around, or not tightened evenly, the clamp may not hold the handlebar securely.

(Step 2: continued)

- Wing Freedom2, S2 & Fatty2

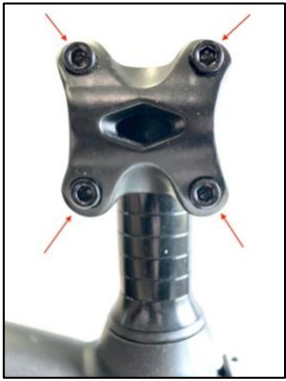


Fig. 2 a. Unscrew the four clamp bolts



Fig. 2 b. Align handlebars



Fig. 2 c. Replace and tighten clamp bolts evenly

- Wing Freedom X

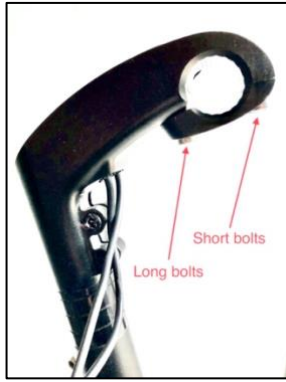


Fig. 2 d. Unscrew clamp bolts



Fig. 2 e. Align handlebars



Fig. 2 f. Replace and tighten clamp bolts evenly

Step 3:

Install the Fenders.

- Front fender:

- **Attach fender** to top of front fork using the large bolt and washer inserted through the fender support tab
- **Attach the metal support rods** either side of the front fork using two of the smaller bolts and washers.
- **Tighten all three bolts** while ensuring the fender is aligned with the front wheel.

- Rear fender:

- **Attach the metal support rods** either side of the rear wheel using two of the smaller 4mm bolts and washers.
- **Tighten all four bolts.** The rear fender is attached at the top of the wheel under the rear light tube and in front of the wheel by the kickstand mounting point.



Fig. 3 a. Front fender mounting points



Fig. 3 a. Rear fender mounting points

Step 4:

Install the Front Wheel.

- **Remove both axle nuts and washers** and align the axle with the gaps in the ends of the fork arms.
- **Align brake rotor** between the brake pads in the center of the brake caliper
- **Fully seat axle** in the fork on both sides
- **Reinstall washers** onto each side of the axle, on outside of the fork
- **Reinstall axle nuts** and tighten equally to the recommended torque value (**16-25Nm**)

When properly installed, the front wheel should be fully seated and centered in the dropouts of the front fork, the brake rotor should be in between the brake pads in the brake caliper, and the axle nuts should be fully and properly secured. Ensure the front wheel is properly secured before moving on to the next step.



Fig. 4. Ensure nut and washer are on outside of



Caution: Never touch the brake rotor, especially when the wheel and/or bike is in motion, or serious injury could occur. Hand oils can cause squeaking and decrease brake performance; do not touch the brake rotor while inspecting, opening, or closing the quick release lever.



WARNING: an improperly secured front wheel and/or handlebar stem can cause loss of control, accidents, serious injury, or death. Check that the front wheel and handlebar stem are properly secured to the bike during assembly and before each ride.

Step 5:

Install the Lights.

- **Remove the tape** from front and rear ends of the top tube
- **Locate light power cable** (yellow/white wires) inside top tube. **NOTE:** for the front light this may require carefully removing the alarm box
- **Connect the light's cable** to the power cable by pushing the two halves of the connector together
- **Replace alarm box** (if removed) ensuring the speaker hole is facing downwards
- **Install the light** by pushing it into the frame, ensuring the hole in the housing is facing downwards.



Fig. 5 a. If necessary, remove alarm box to access power cable

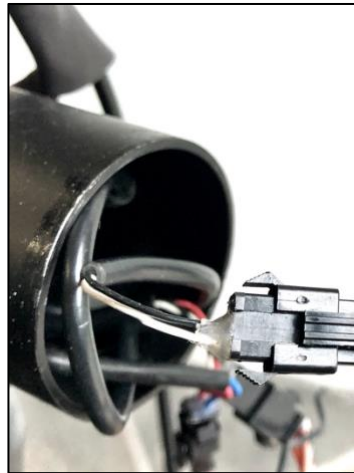


Fig. 5 b. Locate connector with black/white wires



Fig. 5 c. Plug light into power cable connector

(Step 5: continued)

- Wing Freedom X & Freedom2

- **Rotate the lights** until the hole in the light body aligns with the hole in the frame.
- **Insert bolt and washer**
- **Tighten bolt** while holding light flush to the frame

- Wing Freedom S2 & Fatty2

- **Insert lights** with hole facing downwards
- **Insert screw and washer**
- **Tighten screw** while holding light flush to the frame

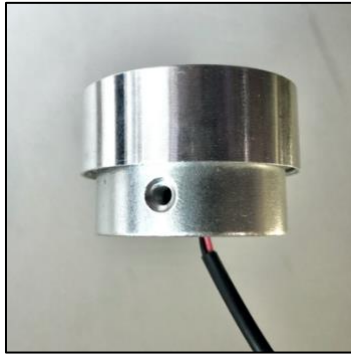


Fig. 5 c. Thread bolt into hole in light body
for Freedom2 & X

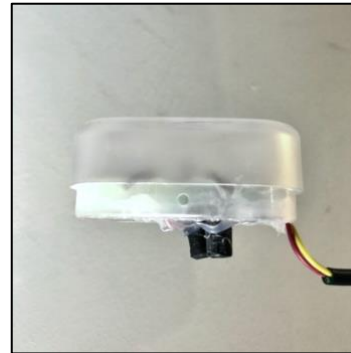


Fig. 5 c. Thread screw into hole in light body
for S2 & Fatty2

Step 6:

Install the Pedals.

- **Identify Left & Right pedals** - the RIGHT pedal (1) has an 'R' stamped on its end and a smooth axle exterior. The LEFT pedal has an 'L' stamped on its end and grooves on the axle exterior.
- **Apply grease** to the pedal threads.
- **Install right pedal** onto crank on the RIGHT side (chain side) of the bike. Carefully thread the RIGHT pedal onto the crank **CLOCKWISE** by hand.
- **Install left pedal** onto crank on the left side (non-chain side) of the bike. Carefully thread the LEFT pedal onto the crank **COUNTERCLOCKWISE** by hand.
- **Tighten both pedals** to the recommended torque value (**35Nm**) with a 15mm wrench.



Fig. 6 a. Identify right (1) and left (2) pedals

NOTICE:

RIGHT pedal tightens **CLOCKWISE**

LEFT pedal tightens **COUNTERCLOCKWISE**

Step 7:

Install the Seatpost and Saddle.

NOTE: Our bikes use 2 different types of seatpost clamp. Please check which type you have before proceeding.

Type 1: This is the standard ring-shaped clamp attached to a post above the frame and is tightened with a single 4mm bolt (Fig 7a):

- **Apply grease** lightly to the seatpost below the insertion markings etched into the seat post tube.
- **Loosen the single clamp bolt** and install the seatpost, ensuring that the insertion markings are not visible.
- **Align saddle** so that it is pointing straight forward.
- **Tighten seat clamp** to the recommended torque value (**7Nm**)

Type 2: This clamp is integrated into a housing located in the frame, below the top tube and is tightened using two 5mm bolts, one on either side of the frame (Fig 7b):

- **Apply grease** lightly to the seatpost below the insertion markings etched into the seat post tube.
- **Loosen the two 5mm clamp bolts** on either side of the frame and install the seatpost into the hole in the top tube, ensuring that the insertion markings are not visible.
- **Align saddle** so that it is pointing straight forward.
- **Tighten seat clamp bolts** alternating from one side to the other until the clamp is tight and the seat doesn't move.

- **Level saddle** – the saddle should be level or pointing up slightly at the front. Loosen both silver bolts underneath the saddle (Fig 7c) a little then tighten the front bolt to lower the front of the saddle, or the rear bolt to raise it. Once the saddle is levelled, tighten the other bolt.
- **Set seat height** – loosen the seatpost clamp a little and slide the seatpost up or down until the desired seat height is achieved, while ensuring the seatpost is inserted into the frame past the minimum insertion point.



Fig. 7 a. TYPE 1: Loosen single bolt to install seatpost and adjust height



Fig. 7 b. TYPE 2: Loosen 2 bolts to install seatpost and adjust height



Fig. 7 c. Use silver bolts to adjust seat



WARNING: Do not extend the seat post beyond the insertion markings etched into the seat post tube. This can cause the seat post or frame to break.

Step 8:

Adjust the Kickstand.

- Wing Freedom X, Freedom2 & Freedom S2

- **Tighten attachment bolt** found in front of the rear wheel
- **Adjust kickstand length** – loosen bolt on arm of kickstand and slide the arm so that the desired length is achieved. Select the length that ensures the bike does not fall over when placed on the kickstand. Then tighten the bolt.

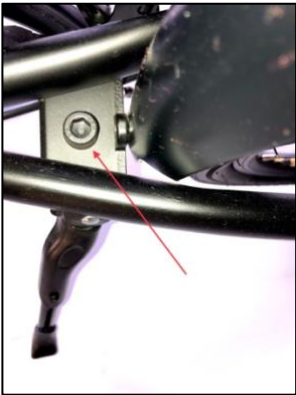


Fig. 8 a. Kickstand mount bolt



Fig. 8 b. Kickstand length adjustment bolt

- Wing Fatty2

- **Tighten the two attachment bolts** where the kickstand is secured to the frame



Fig. 8 a. Fatty mount bolts

Step 9:

Inflate the Tires.

- **Check tire beads** are evenly seated inside the wheel rims.
- **Inflate tires** using a pump with a Schrader valve and pressure gauge.

Wing Freedom X & Freedom2

The maximum tire pressure is 65 PSI. The minimum pressure is 40 PSI. We recommend **55-60 PSI**.

Wing Freedom S2

The maximum tire pressure is 65 PSI. The minimum pressure is 40 PSI. We recommend **50-60 PSI**.

Wing Freedom Fatty2

The maximum tire pressure is 30 PSI. The minimum pressure is 5 PSI. We recommend **20-25 PSI**.



Fig. 9 Tire with Schrader valve

Step 10:

Check and Install Battery.

- **Tighten all battery screws** at both ends of the battery, including the one securing the silver lock tab.
- **Tighten battery terminal rings** – use an adjustable wrench to tighten the silver rings on both the battery and the frame.
- **Install battery** – slide the top end of the battery into the frame and then press down on the bottom end. The battery will click into the holster and an audible beep will signal that the battery is properly connected. This beep will not occur if you insert and remove the battery in quick succession.
- **To remove battery** insert the key into the lock and turn clockwise. Then lift the battery out with two hands.



Fig. 10 a. Tighten silver lock tab



Fig. 10 b. Tighten silver lock rings

NOTICE: Do not ride the bike without the battery installed
Please review the notes on the correct charging procedure

Step 11:

Ensure all hardware is tightened properly following recommended torque values below.

Recommended Torque Values

Hardware Location	Torque Required (Nm)
Handlebar	18-20
Stem	18-20
Saddle	18-20
Seat	18-20
Front Wheel (For Bikes With Bolt On Front Wheel)	16-25
Rear Wheel	30-35
Bottom Bracket Parts	35-55
Pedals	35
Disk mounting Bolts	6
Disk Caliber Mount	10
Crank Bolts	40
Rear Derailleur Cable Pinch	6
Front Derailleur Clamp	7
Seat Post Clamp	7

Step 12:

Throttle installation (optional):

Wing Bikes offers an optional throttle to purchase separately. Please follow the following steps for installation.

1. Remove left grip (if pre-installed).

There are three different types of grip used on Wing Bikes, which are removed in 2 different ways.

- Rubber grip: remove the plastic bar end cap from the left handlebar. Loosen both silver bolts on either end of the left grip, then slide the grip off the bar.
- Black/brown 'leather' grip: remove the plastic bar end cap from the left handlebar and slide grip off the bar end. Occasionally these grips are difficult to remove. If this is the case, use a small amount lubricant sprayed under the grip, then gently twist and pull the grip to remove.



Fig. 12 a. Rubber grips +



Fig. 12 b. Black 'Leather' grips



Fig. 12 c. Brown 'Leather' grips

2. **Loosen** the horn button, brake lever, and display clamp bolts.
3. **Slide** the horn button, brake lever, and display towards the center of the bars to make room for the throttle.
4. **Slide the throttle onto the bar** followed by the throttle spacer with the cutouts towards the throttle.
 - Ensure the arm of the throttle body is underneath the brake lever.



Fig. 12 d. Throttle



Fig. 12 e. Throttle spacer



Fig. 12 f. Remove left grip and slide throttle spacer on after throttle

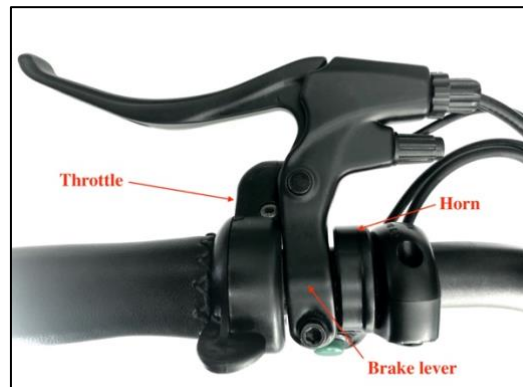


Fig. 12 g. Ensure throttle 'arm' sits behind brake lever

5. **Reinstall the grip** by sliding back onto bar and tap the plastic bar end into place to ensure it is fully inserted.
6. **Slide throttle up against grip** and lightly tighten the clamp bolts.
7. **Slide brake lever up against throttle**. Adjust position to match right brake lever and tighten clamp.
8. **Adjust throttle** to sit up against underside of brake lever and tighten clamp bolts.
9. **Adjust** position and angle of display and horn button if needed, and retighten the clamp bolts.
10. **Remove front light** and alarm box behind it.
11. **Locate the throttle cable** (yellow connector) inside the frame behind the alarm box.
12. **Pass throttle cable** through the rubber grommet on left-hand side of frame.
13. **Connect the throttle cable** to the matching yellow cable on the bike.
14. **Re-install front light** and alarm box, ensuring the hole on the alarm box is facing down.
15. **Secure throttle cable** to the other cables using cable/zip ties.

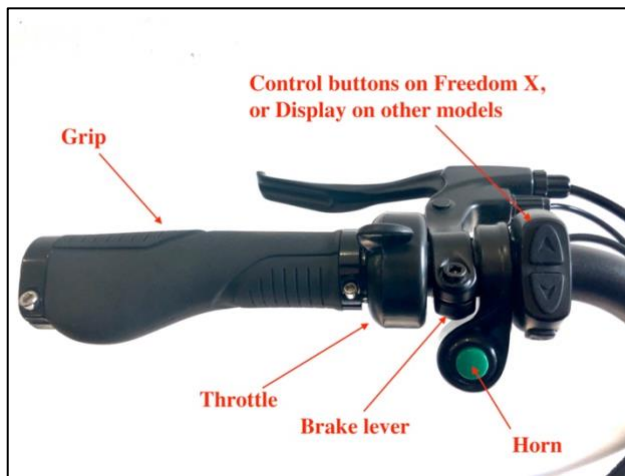


Fig. 12 h. End result should look like this

Step 13:

Stem Extender installation (optional):

The Wing Freedom X, Freedom2 & S2 are supplied with a stem extender that allows you to raise the handlebars another 3 inches if desired. Once the bike has been assembled per the above instructions, please follow the following steps for your bike model.



Fig. 13 a. Stem Extender



Fig. 13 b. Spacers (top)
& top cap (bottom)



Fig. 13 c. Short and long stem bolts

- Wing Freedom2 & Freedom S2

1. **Place your bike on the floor** on flat, stable ground – having the bike on the floor helps keep the fork in place
2. **Loosen rear stem clamp bolts**
3. **Remove top stem bolt** – undo the stem bolt and remove along with the top cap



Fig. 13 d. Loosen rear stem clamp bolts



Fig. 13 e. Loosen stem bolt and remove with top cap

4. **Remove stem** – slide the stem and handlebars off the steering tube
5. **Install stem extender** – slide the stem extender onto the steering tube
6. **Install spacers** – slide the 3 wide and 1 thin spacers (rings) onto the stem extender
7. **Reinstall stem** – slide the stem and handlebars onto the stem extender
8. **Install long stem bolt** – install the supplied long bolt and top cap in place of the short bolt removed in Step 3
9. **Tighten stem bolt** – tighten the bolt just enough by hand so that the extender and all spacers are secure and no play/movement is felt at the headset
10. **Align handlebars** so that they are straight
11. **Tighten clamp bolts** – evenly tighten the bolts on stem extender and then on the stem



Fig. 13 f. Remove stem from steering tube

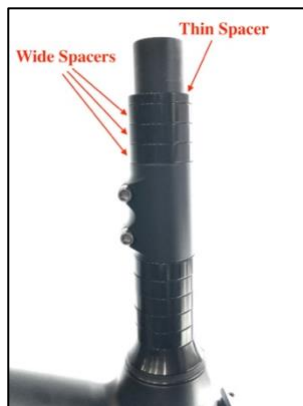


Fig. 13 g. Slide stem extender and spacers onto steering tube



Fig. 13 h. Slide stem onto extender

- Wing Freedom X

1. **Place your bike on the floor** on flat, stable ground – having the bike on the floor helps keep the fork in place
2. **Remove display from stem** - loosen the small screw on the underside of the display and push up on the cables to pop the display out of its housing in the stem
3. **Loosen rear stem clamp bolts**
4. **Remove top stem bolt** – undo the stem bolt and remove



Fig. 13 i. Remove small screw to remove display from stem

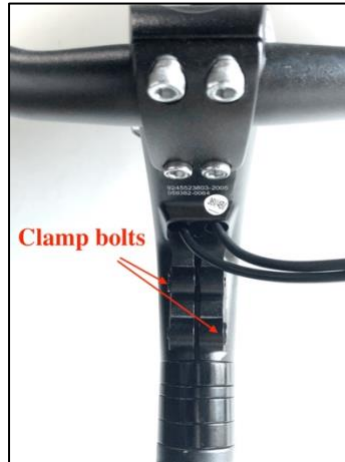


Fig. 13 j. Loosen stem clamp bolts



Fig. 13 k. Loosen stem bolt and remove

5. **Remove stem** – slide the stem and handlebars off the steering tube
6. **Install stem extender** – slide the stem extender onto the steering tube
7. **Install spacers** – slide the 3 wide spacers (rings) onto the stem extender (the X doesn't use the thin spacer)
8. **Reinstall stem** – slide the stem and handlebars onto the stem extender
9. **Install long stem bolt** – install the supplied long bolt in place of the short bolt removed in Step 3
10. **Tighten stem bolt** – tighten the bolt just enough by hand so that the extender and all spacers are secure and no play/movement is felt at the headset
11. **Align handlebars** so that they are straight
12. **Tighten clamp bolts** – evenly tighten the bolts on stem extender and then on the stem
13. **Reinstall display** by carefully seating it into the stem housing and securing with the screw removed in step 2



Fig. 13 f. Remove stem from steering tube



Fig. 13 f. Slide stem extender and spacers onto steering tube

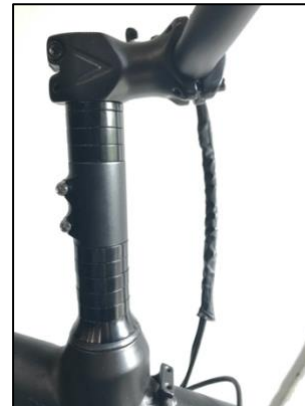


Fig. 13 f. Slide stem onto extender



NOTICE: Do not tighten the stem bolt all the way as this will stiffen the steering and may damage the headset bearings.

WARNING: Never tighten or loosen the long stem bolt when the clamp bolts are tightened. This will damage the star nut inside the fork.

Review the remainder of the manual. Once the bike has been assembled per the above instructions, read, understand, and follow the procedures outlined in the remainder of this assembly manual and Wing Owner's Manual before operating the bike.



WARNING: If you have any questions regarding the assembly of your bike, contact Wing Bikes. If you are not able to ensure all the assembly steps in the assembly video are performed properly you **MUST** consult a certified, reputable local bike mechanic for assistance in addition to contacting Wing Bikes for help.



WARNING: Do not extend any components including the handlebar stem, seatpost, or seat saddle beyond any minimum insertion marking etched into the components. Ensure that all hardware is properly tightened (to the values in the Recommended Torque Values table), components are

secured, and all safety checks have been performed before moving on to the next step and before your first ride, otherwise damage to the bike, property, serious injury, or death could occur.

Battery Charging and Maintenance

Charging Procedure – follow these steps for charging your Wing Bike.

1. **Remove the rubber cover on the charging port** on the lower side of the battery.
2. **Plug the charger into the battery's charging port.** With the battery on or off the bike, place the charger in a flat, secure place, and connect the DC output plug from the charger (round barrel connector) to the charging port on the side of the battery.
3. **Plug the charger into a power outlet.** Connect the charger into a power outlet. Charging should initiate and will be indicated by the LED charge status lights on the charger turning red.
4. **Unplug the charger from the outlet, then the charging port.** Once fully charged, the charging indicator light will turn green. Unplug the charger from the wall outlet first and then unplug the battery from the charger.
5. **Remember to always replace the rubber cover on the charging port** to prevent water and dirt from entering.



Always charge your battery in temperatures between ***50°F – 77°F (10°C – 25°C)** and ensure the battery and charger are not damaged before charging. If you notice anything unusual while charging, please discontinue charging and use of the bike and contact Wing Bikes for help.

Battery Charging Information

- ❑ **Check the charger**, charger cables, and battery for damage before beginning each charge
- ❑ **Always charge in a safe area** that is cool*, dry, indoors, away from direct sunlight, dirt, or debris, in a clear area away from potential to trip on the charging cords, or for damage to occur to the bike, battery, or charging equipment while parked and/or charging.
- ❑ **The battery can be charged on or off the bike.** To remove the battery, turn the key and carefully lift the lower end of the battery upwards and out of the frame. See the When the Battery is Removed section for more information for off-bike battery handling.
- ❑ **The battery should be recharged after each use**, so it is ready to go the full range per charge next ride. There is no memory effect, so charging the battery after short rides will not cause damage.
- ❑ **Charging the battery normally takes 3-5 hours.** In rare cases, it may take longer to allow the battery management system to balance the battery, particularly when the bike is new or after long periods of storage.
- ❑ **The charge indicator light on the charger** will be red while the battery charges. When charging is complete, the light will turn green. Ensure the light faces upwards while charging.
- ❑ **Press the button on the battery to show the charge remaining.** Red: 0-30% ; Green: 30-70% ; Blue: 70-100%.
- ❑ **The charger will turn off after 14.5 hours.** To protect the battery, the Wing battery charger will automatically turn itself off after 14.5 hours connected to an electrical outlet. To turn back on, simply unplug from the outlet and plug back in after 10-15 seconds. **If the battery will not charge, please check this first.**
- ❑ **Do not leave a charging battery unattended.**



Failure to follow Battery Charging Best Practices could result in unnecessary wear to the charging components, battery and or charger, and could lead to an underperforming or non-functional battery. Replacement will not be covered under warranty.

When the Battery Is Removed

- **Be careful not to drop** or damage the battery when lifting the battery off the frame or while loose from the bike.
- **Do not touch or damage the “+” and “-” terminal** contacts on the bottom of the battery and keep them clear of debris.
- **Do NOT operate the bike without the battery installed in the frame.**
- **Do NOT operate the bike without the rubber charging port cover fully in place.**



Use caution to avoid damage to battery connector terminals, which are exposed when the battery is unlocked and removed from the frame of the bike. In the case of damage to the terminals or battery mounts, please discontinue use and contact Wing Bikes immediately.

Notice: The battery may take longer to charge when fully depleted, when very new, and after 3-5 years of regular use. If your battery does not seem to be charging normally, is taking longer to charge than expected, or you are experiencing substantial reduction in range, please discontinue use and contact Wing Bikes immediately.

Charger Safety Information

- The charger should be used only indoors in a cool, dry, ventilated area, on a flat, stable, hard surface.
- Avoid charger contact with liquids, dirt, debris, or metal objects. Do not cover the charger while in use.
- Store and use the charger in a safe place away from children and where it cannot suffer damage from falls or impact.
- Fully charge the battery before each use to ensure it is ready to go the full range per charge, to extend the life of the battery, and help reduce the chance of over-discharging the battery.
- Do not charge the battery with any chargers other than the one originally supplied from Wing Bikes or a charger designed for use with your specific bike purchased directly from Wing Bikes.
- Do not open the charger or modify voltage input.
- Do not yank or pull on the cables of the charger. When unplugging, carefully remove both the AC and DC cables by pulling on the plastic plugs directly, not by pulling on the cables.
- The charger will get hot when operating as designed. If the charger gets too hot to touch, you notice a strange smell, or any other indicator of overheating, discontinue charger use immediately and contact Wing Bikes.



Charge the battery only with the charger originally supplied with the bike from Wing Bikes, or a charger purchased directly from Wing Bikes. Never use an aftermarket charger, which can result in damage, serious injury, or death.



Please take special care in charging your Wing Bike in accordance with the procedures and safety information detailed in this manual. Failure to follow proper charging procedures can result in damage to your Wing Bike, the battery, the charger, or personal property, and/or cause serious injury, or death.

Long-Term Battery Storage

If storing your Wing Bike for longer than two weeks at a time, follow the instructions below to maintain the health and longevity of your battery.

- Charge (or discharge) the battery to approximately 75% charged.
- Store the battery in a dry, climate controlled, indoor location between 50 °F – 77 °F (10 °C – 25°C).
- Check the battery every month, and if necessary, use the charger from Wing Bikes to charge the battery to 75% charged.
- Do not leave the battery for extended periods of time with less than 75% charge.



Please follow the above instructions for storing your bike and battery from Wing Bikes. Failure to follow proper battery storage procedures can result in a non-functional battery. Replacement will not be covered under warranty.



If the battery is physically damaged, non-functional, performing abnormally, or was dropped or involved in a crash, with or without obvious signs of damage, please discontinue use and charging and contact Wing Bikes immediately.



Do not cover up the charger when plugged in or charging. The charger air cools and needs to be on a hard, flat surface in an open space. Use the charger with the indicator light facing upward. Do not use with the charger inverted, which can inhibit cooling and reduce charger lifespan.



Do not open the battery housing, which will void the warranty and can result in damage to the battery or property or cause serious injury and/or death.

General Warnings



Like any sport, bicycling involves risk of damage, injury, and death. By choosing to ride a bike, you assume the responsibility for that risk, so you need to know, and practice, the rules of safe and responsible riding and the proper use and maintenance of this bike. Proper use and maintenance of your bike reduces risk of damage, injury, and death.



Biking and controlled substances do not mix. Never operate a bike while under the influence of alcohol, drugs, or any substance or condition that could impair motor functions, judgement, or the ability to safely operate a bike/vehicle.



The Wing Bike is designed for use by persons 18 years old and older. Riders must have the physical condition, reaction time, and mental capability to ride safely and manage traffic, road conditions, and sudden situations, as well as respect the laws governing electric bike use where they ride, regardless of age. If you have an impairment or disability such as a visual impairment, hearing impairment, physical impairment, cognitive/language impairment, or a seizure disorder, or any other physical condition that could impact your ability to safely operate a vehicle, consult your physician before riding any bike.



If you do not have the experience, skill, and tools to complete the assembly, maintenance and adjustment of your bike, Wing Bikes strongly recommends having a certified, reputable bike mechanic assemble, maintain, tune and ensure the bike is safe to ride.

A Note for Parents and Guardians

As a parent or guardian, you are responsible for the activities and safety of your child. The Wing Bike is not designed for use by children under the age of 18. If you are carrying a passenger in a child safety seat, they must also be wearing a properly fitted and approved helmet. See the Helmet and Carrying a Child sections of the Wing User's Manual for additional information on keeping a child safe when being transported in a child safety seat attached to the Wing Bike RadCity.

We are here to help!

If you have questions, please:

Access Wing Bikes Support (www.wingbikes.com),

Contact us directly by email: hello@wingbikes.com, or

Call Wing Bikes: (212) 292-5641

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