SONDORS

METACYCLE

Operations Manual

The Metacycle is meant to be ridden on pavement only, with a capacity of one rider. Before your first ride, please read this operation manual carefully and follow the instructions. The contents and pictures of this manual are for reference only, please refer to your Metacycle for actual appearance, functionality and performance. Please purchase the original components and accessories manufactured by our company.

Metacycle Information

For your reference, use this page to record information pertaining to your Metacycle.

Model:
Vehicle Identification Number (VIN):
Battery Serial Number:
Motor Serial Number:
Key Code:
Date of Purchase:

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Introduction

An Important Message From SONDORS

Congratulations and thank you for purchasing a SONDORS. We welcome you to our community of Metacycle riders.

For your best experience, we recommend that you take your time and carefully read this entire manual. This manual is designed to provide you with a better understanding of the operation, inspection, and basic maintenance requirements of your Metacycle.

SONDORS continually seeks advancements in product design and quality. Therefore, this manual contains the most current product information available at the time of printing. Because of this, your Metacycle may differ from the information supplied in this owner's manual. No legal claims can be made on the basis of data in this manual. When it comes time to sell your SONDORS, please ensure that this manual stays with the Metacycle; it is, by law, an important part of the vehicle. If you have any questions concerning the operation or maintenance of your Metacycle, please contact SONDORS.

California Proposition 65

WARNING: Operating, servicing and maintaining a passenger vehicle or off-highway motor vehicle can expose you to chemicals including engine exhaust, carbon monoxide, phthalates, and lead, which are known to the State of California to cause cancer and birth defects or other reproductive harm. To minimize exposure, avoid breathing exhaust, do not idle the engine except as necessary, service your vehicle in a well-ventilated area and wear gloves or wash your hands frequently when servicing your vehicle. For more information go to www.P65Warnings.ca.gov/passenger-vehicle.

California Perchlorate Advisory

WARNING: Certain components of this Metacycle such as lithium batteries may contain perchlorate material. Special handling may apply for service or end of life disposal. See www.dtsc.ca.gov.

Introduction (Cont'd)

About This Manual

This manual covers the features and operation of the SONDORS Metacycle. The terms "right" or "left" refer to the rider's right or left while seated on the Metacycle.

Useful Information For Safe Riding

This manual contains two important words, which require extra attention while reading.

WARNING: Indicates something that could injure you or others.

CAUTION: Indicates things that could damage your Metacycle.

Please read this manual carefully and completely, before operating this Metacycle. Do not attempt to operate this Metacycle until you have attained adequate knowledge of its controls and operating features, and until you have been trained in safe and proper riding techniques. Regular inspections and proper maintenance, along with good riding skills, help you safely enjoy the capabilities and the reliability of this Metacycle. Disregarding the aforementioned, however, may invalidate the Metacycle's warranty.

Do not probe, tamper with, cut, or modify high voltage cables or wiring.

Introduction (Cont'd)

When to Charge Your Battery

Proper care of the Metacycle's battery is essential! In order to maximize the life of your battery, SONDORS has established the following guidelines for proper charging and operation.

- If the battery is fully discharged, it must be charged within 24 hours to prevent damage to the battery.
- If you ride regularly, but your ride doesn't require most of your battery's capacity, your battery will benefit from not being charged to 100% unnecessarily. In hot climates, going for a few rides before recharging will prolong your battery's life by limiting the amount of time it spends parked at a high state of charge.
- If you ride infrequently, once per week or less, recharging the evening prior to when you need to be at full charge is much better for your battery than charging it right after each ride and having it sit for days between rides at a high state of charge.
- If the battery's state of charge is below 30%, we recommend you charge the battery to at least 60% and then disconnect the charger.

CAUTION: Never store your Metacycle at a low state of charge (below 30% SoC). Leaving the battery at a low state of charge for a prolonged period could damage it and void your warranty.

- If you ride in hot weather (>95°F / 35°C) or spend a majority of your ride at freeway speeds, the battery will benefit from not being charged "hot". Allowing your battery a few hours to cool off prior to recharging will prolong its life. You may also benefit from off-peak electricity rates by waiting until the evening to charge.
- Once your Metacycle has been charged, we recommend that you disconnect the charger. The battery will go into "hibernate mode" and self-discharge extremely slowly over time. So, if you haven't ridden it for a long while and need to charge it to 100% SoC, plug it in to the charger for a few hours prior to your ride. Unplugging the charger when not needed ensures the best long-term health of your battery.
- For long term storage (>30 days) of your Metacycle, see "Parking and Long-Term Storage", on page 17.5.
- To ensure best performance of your SONDORS Metacycle over its lifetime, please be certain that the Metacycle's firmware is up to date. If you have questions, please contact SONDORS.

Introduction (Cont'd)

Emissions Information

The SONDORS Metacycle is a true freeway-capable zero-emissions vehicle under California Air Resources Board (CARB), U.S. Federal (EPA), and European Union standards. It uses no gasoline or other liquid fuel. It has no tailpipe and therefore no tailpipe emissions. It also has no exhaust or evaporative emissions. Because SONDORS Metacycle run solely on electricity, it is the only kind of vehicle which actually gets cleaner in terms of air pollution each year, as the electricity grid gets cleaner and more renewable. Zero Emissions Vehicles (ZEVs) offer greater efficiency, and can help solve the serious air pollution, global warming, and energy security problems facing the country and the world.

Parts and Accessories

CAUTION: Only use SONDORS approved parts and accessories for your Metacycle. Parts and accessories for your SONDORS Metacycle have been checked and tested for safety and suitability. SONDORS is unable to accept any liability whatsoever for parts and accessories which have not been approved for your SONDORS Metacycle.

General Safety Precautions

General Safety Precautions

- This Metacycle should be treated with extreme caution.
- Proper safety gear, including a regionally approved helmet, eye protection, riding boots, gloves, and protective clothing should be worn while riding to reduce the risk of potential injury. We highly recommend you ride with the correct protective clothing including full height riding boots. This recommendation applies even for short journeys and every season of the year.
- Read all additional warnings and product instructions in this owner's manual, as well as safety labels, before operating your electric Metacycle.
- Never permit another individual to ride your electric Metacycle without proper instruction.
- Never use alcohol or mind-altering drugs before operating your electric Metacycle.
- Persons unwilling or unable to take responsibility for their actions should not use this Metacycle. You assume all responsibility while operating your Metacycle. The seller assumes no liability for misuse or operator negligence.
- Prior to each use the rider must check everything in the "every ride" column of the maintenance schedule starting on page 16.1, and the charge level of the battery as indicated on the dash display charge indicator.
- Your safety depends in part on the good mechanical condition of the Metacycle. Be sure to follow the maintenance schedule and adjustment requirements contained in this manual. Be sure you understand the importance of checking all items thoroughly before riding.
- Modifications to the Metacycle may render the Metacycle unsafe and may cause severe personal injury or to others. SONDORS cannot be held liable for non-approved modifications.
- Be very careful when loading or adding accessories to your Metacycle. Large, bulky, or heavy items may adversely affect the handling, performance, and effectiveness of safety systems of your Metacycle.

General Safety Precautions (Cont'd)

Important Operating Information

Several operating considerations are listed below:

- Always ensure the Metacycle is off when not actively riding. Due to the Metacycle's silent idle state, it is very easy to forget that the Metacycle is powered up.
- Always extend the kickstand to the down position to disable the drive system when not actively riding. An accident may occur if the Metacycle is powered up while getting on or off the Metacycle and the throttle is twisted.
- Toggle the motor stop switch to the OFF position when backing up or pushing the Metacycle while dismounted.
- Using the brakes when you are stopped on an incline uses less energy than using partial throttle for hill-holding. Using partial throttle for hill-holding will heat up the motor and potentially limit peak power and torque until the motor cools. The more throttle required to hill-hold, the more heat will be generated in the motor.
- If you plan on riding again the next day or the battery's state of charge is less than 30%, recharge the Metacycle. Always use the provided or SONDORS approved chargers and adaptors with your Metacycle.
- While unplugged and off, the Metacycle's electronics will consume a very small amount of power and the battery will drain extremely slowly. If the Metacycle has been unused for more than 30 days, disconnect all chargers and power up the Metacycle to exit long term storage mode and then allow it to charge for 24 hours to ensure optimal battery balance is restored.

CAUTION: Only charge the Metacycle battery with the SONDORS provided charger or an approved SONDORS accessory charger.

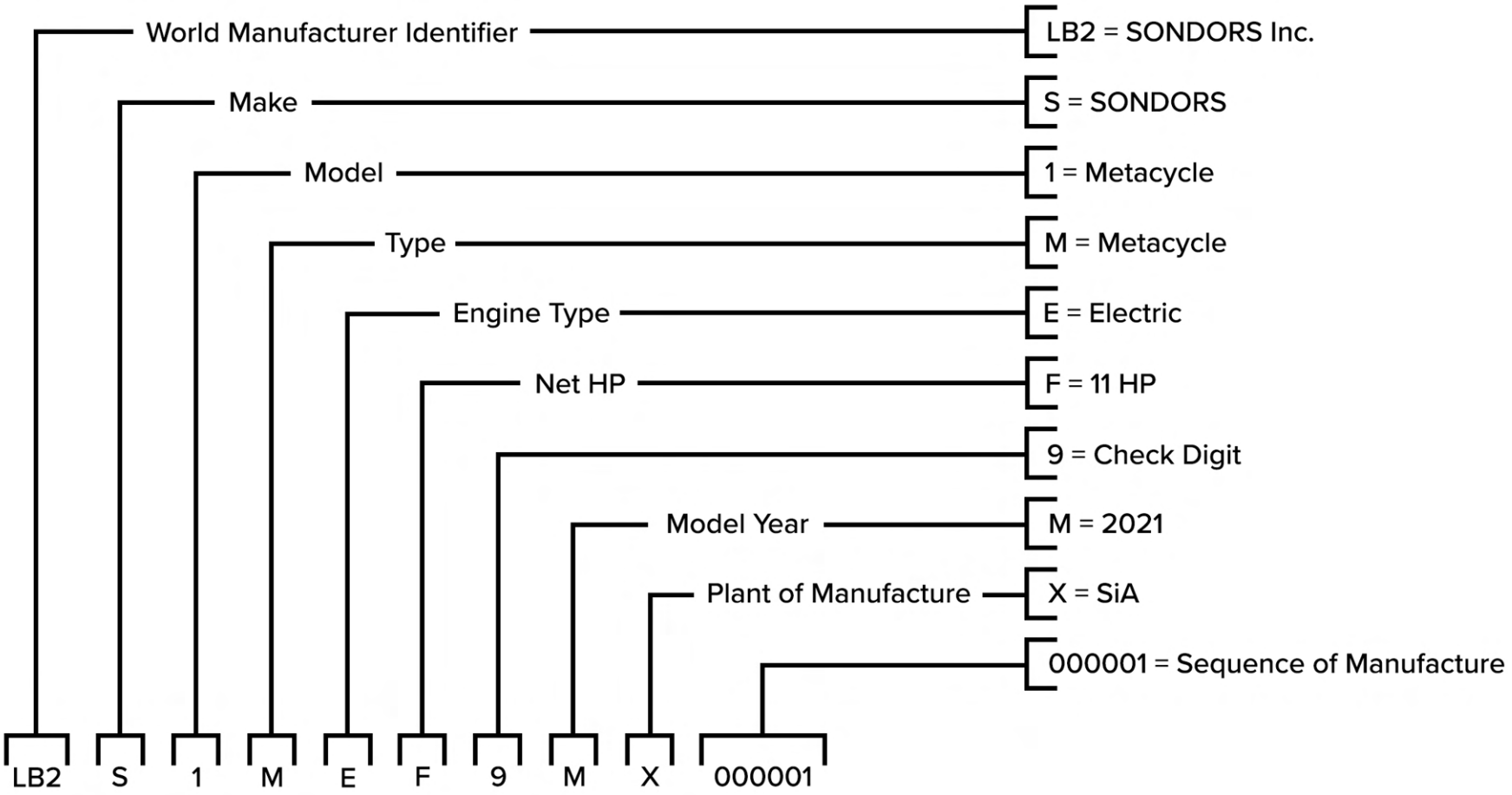
- The battery does not require nor benefit from deep discharging. Leaving a battery in a discharged state will cause damage.
- Failure to follow battery storage and charging instructions as described in this Owner's Manual may void the warranty of your SONDORS Metacycle. These guidelines have been rigorously tested to ensure maximum battery efficiency and life.

Vehicle Identification Number

The vehicle identification number (VIN) is engraved on the left side of the vehicle headtube. The anti-counterfeiting label is placed next to it.

Vehicle Identification Number (Cont'd)

The following breakdown of the VIN will help you understand the significance of each digit or character in case you need to reference it when contacting SONDORS or ordering parts.



Vehicle Emission Control Information (VECI)

The VECI ("Vehicle Emission Control Information") label is located on the right side of the Metacycle's Head Tube. It contains the following:

- The manufacturer's name
- The statement of compliance with EPA emission regulations for the manufactured year.

Note: The DMV in certain states may require the data on the Metacycle VECI label in order to complete the registration process.

Motor Serial Number

The motor serial number can be found on the motor side cover. The last 12 digits are needed for registration.

Metacycle Components

1. Headlight
2. Front Turn Signals
3. Front Fender
4. Front Suspension
5. Front Wheel
6. Front Brake Caliper
7. Front Brake Rotor
8. Charging Port
9. Rear Wheel
10. Rear Brake Caliper
11. Swing Arm
12. Rear Brake Rotor

Metacycle Components (Cont'd)

13. Rear Running Light
14. Rear Turn Signals
15. Rear Brake Light
16. License Plate Lamp
17. Rear Shock Absorber
18. Rear Fender
19. Motor

Metacycle Components (Cont'd)

20. Rear View Mirrors
21. Rear Brake Lever
22. Left Combination Switch
23. Display
24. Power Button
25. Wireless Charging Box
26. Right Combination Switch
27. Front Brake Lever
28. Throttle

Left Combination Switch

A. **Headlight Intensity Switch**
When switched upwards, it activates high beams.
When switched downwards, it activates low beams.

B. **Turn Signal Switch**
Slide switch to indicate intended turn direction. manually reset to center to stop indicators from flashing.

C. **Horn**
Activates vehicle's horn.

D. **Park Mode Button**
Press to deactivate Park Mode. See page 10.1 for more details on Park Mode.

Right Combination Switch

E. **Hazard Lights**
Press this button to activate all turn signals in case of emergency.

F. **Headlight Switch**
The far-right position activates daytime mode. The center position activates the low beam. The far-left position activates the high beam.

G. **Sport Mode**
Press this button to enter Sport Mode and ride at top speed. This mode lasts 120 seconds to maintain optimal battery performance.

H. **Reverse Button**
Hold this button while applying throttle to go backwards.

I. **Motor Stop Switch**
When depressed, will prevent the throttle from sending power to the motor.

Key Fob Operation

1. Alarm Arm
2. Alarm Disarm
3. Vehicle Start
4. Parking Chirp

RFID Key

When walking away with the vehicle off, the alarm will arm once the rider is approximately 8 ft. (2.4 m) away. As the rider comes back, the alarm will disarm when the rider is approximately 1 ft. (0.3 m) away, and the vehicle will be ready to power up using the power button.

Standard Key

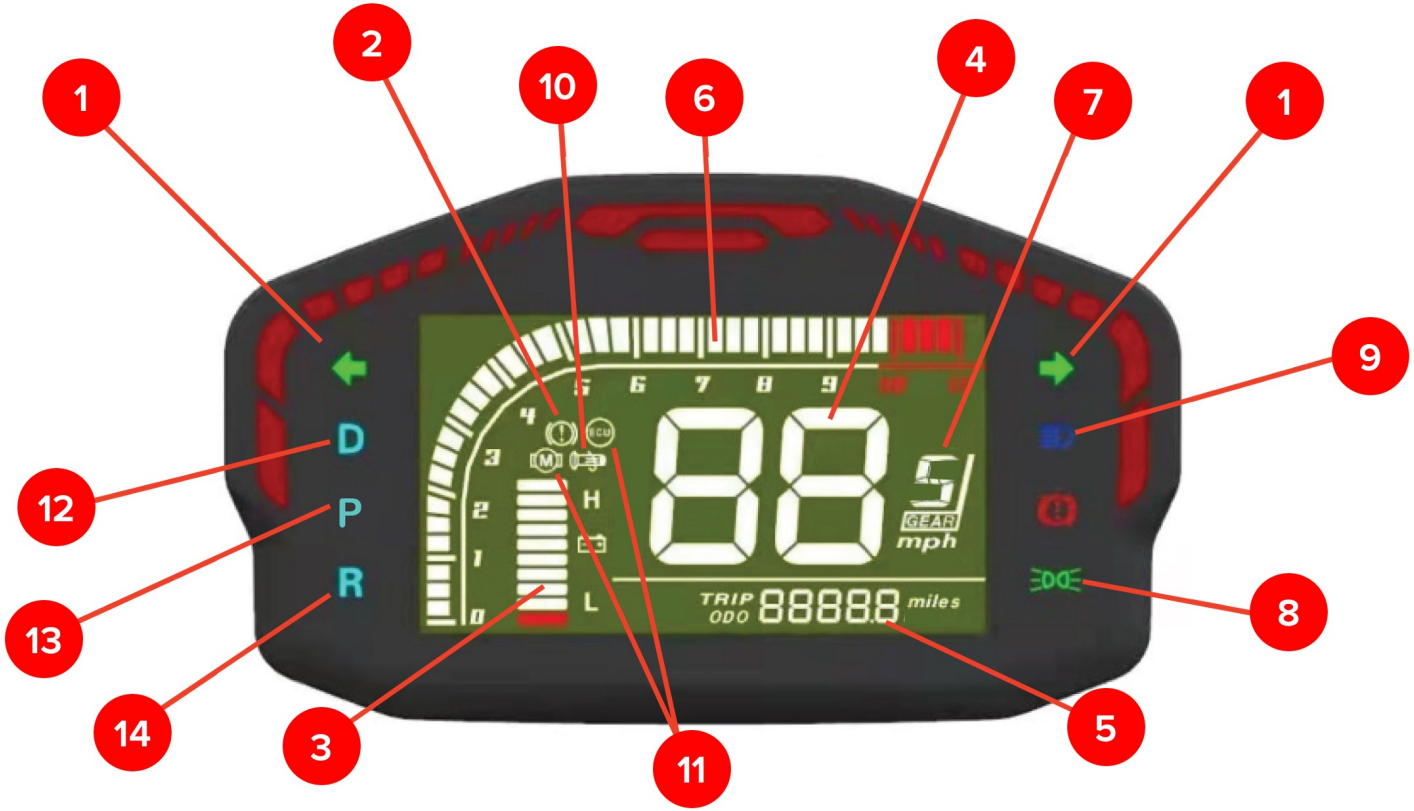
The standard key works using button presses rather than distance to arm, dis-arm, and start the vehicle. Firm double press the vehicle start button to power up the Metacycle.

Battery

Both key fobs use a CR2032 battery.

Display

1. Turn Signal / Hazard Light Indicator
2. Brake Function Indicator
3. Battery Charge Level
4. Speed Indicator
5. Total Mile Odometer
6. Motor RPM
7. Sport Mode (“S”) Indicator
8. Headlight Indicator
9. High Beam Indicator
10. Throttle Indicator
11. Motor / ECU Indicator
12. Drive (“D”) Indicator
13. Park (“P”) Indicator
14. Reverse (“R”) Indicator



Park Mode

Park Mode is indicated by a “P” on the display.

With kickstand up, press the “P” button on the left combination switch to turn off Park Mode. The bike is now ready to drive by turning the throttle.

When done driving, simply put the kickstand down to re-enter Park Mode.

Sport Mode

Sport Mode (“S”) allows for bursts of maximum motor performance on the Metacycle.

Pressing the Sport Mode button will show the "S" icon on the left side of the LCD screen.

The duration of Sport Mode is limited to 120 seconds in order to ensure maximum battery performance and guard against excessive heat within the system. **The top speed for Sport Mode is up to 80 mph (130 kph).**

Sport Mode will automatically reset to the standard Drive Mode ("D") when the Sport Mode cycle has been completed. **The top speed for Drive Mode 60 mph (100 kph).**

Alternatively, Sport Mode can be disengaged by pressing the "S" button again to enter standard Drive Mode.

See Page 18.4 for details on how to effectively use Sport Mode during Highway Use.

Reverse

Reverse is achieved by:

1. Putting the kickstand up and turning off Park Mode, then pressing the “R” button on the right combination switch.
2. Hold the “R” button while gently turning the throttle to move backwards.
3. Release the “R” button to re-enter Drive Mode. Apply throttle to move forwards.

Tool Kit

A. T40 Security Bit Driver
B. T50 Security Bit Driver
C. Set of 4 Stainless Steel Bolts, Washers, & Nuts for Rear License Plate

Charging Components

A. International Power Cord
B. United States Power Cord
C. Charging Unit w/Metacycle Charge Port Cable
D. Off-bike Charging Adaptor Cable

On-Bike Charging

Power off the Metacycle, then complete the following steps:

1. Connect the blue collared cable connector to the charge port on the left side of the battery compartment.
2. Connect the US power cord to the short cable on the charging unit by lifting the spring-loaded door and plugging it into the cord.
3. Connect the metal plug end of the US power cord to a standard US 110/120-volt outlet or surge protection strip.

NOTE: The charger will cycle through a series of alternating red/green flashes (approx. 3 to 5 green flashes) before a flashing red is shown, indicating charging is taking place. The LED on the charge unit will change to green when battery is fully charged. Charging times will vary based on the battery level at the start of the charge cycle.

Battery Removal

1. Use the T40 Wrench to remove the Battery Cover Bolts.

2. With both hands, grab the lower seam of the Battery Cover as shown. Pull up until you feel the retaining clips release. Then remove the cover.

3. Use the T50 Wrench to remove the Battery Retention Bolts and Battery Alignment Brackets.

4. To disconnect the Positive (Orange) High Voltage Connector, pull and hold the lock towards the rear of the Metacycle. Then, use your other hand to pull the connector away from the battery.

Battery Removal (Cont'd)

5. Gently pull the battery out to access the Negative (Black) High Voltage Connector.

6. Disconnect the Negative (Black) High Voltage Connector using the same method.

7. Gently pull the battery out further to access the Low Voltage Harness.

8. To disconnect the Low Voltage Harness, push the red terminal down and towards the Metacycle until it locks in place. Then, pull the harness away from the bike to disconnect.

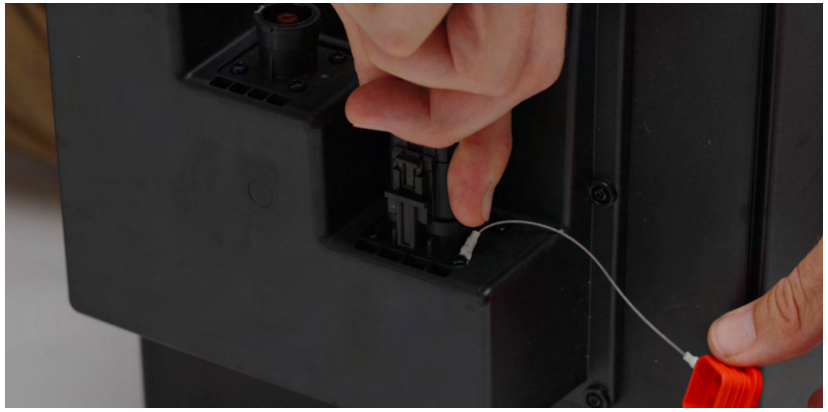
Battery Removal (Cont'd)

9. Hold the cables to the side as shown and pull the Battery to the edge of the Battery Compartment.

10. Then, use both hands to fully remove the Battery.

Off-Bike Charging

1. For off-bike charging, remove the cover.



2. Connect the Off-Bike Charging Adapter by aligning it with the Low Voltage Port no the Battery, then push until it locks into place.

3. Unscrew the cap on the opposite side of the Adapter. The connector underneath is identical to the Charging Port on the Metacycle.

4. Connect the Metacycle Charger. Use the indicated arrows to align the connectors and twist the collar to lock.

Off-Bike Charging (Cont'd)

5. For off-bike charging, remove the cover.

6. Plug the power cable into the charger.

7. Once connected, the charger light will flash GREEN and RED for a few seconds. It will flash RED during the charging cycle.

8. It will be solid GREEN when charging is complete.

Off-Bike Charging (Cont'd)

9. For off-bike charging, remove the cover.

10. Rotate the collar 1/4 turn counterclockwise to unplug the charging connector. Replace the cap on the adapter.

11. To disconnect the Adapter, press the release latch and firmly pull the connector. DO NOT pull on the white cables. If storing, replace the red cover on the Low Voltage Port.

Battery Installation

1. Move the Battery Cables to the side, then rest the Battery on the edge of the compartment. Remain mindful of the Battery Cables during installation.

2. Connect the Low Voltage Harness until it locks.

3. Align the Negative Terminal as shown, then push until it locks.

4. Be sure to align the large notch on the high voltage terminals with the arrow on the connector.

Battery Installation (Cont'd)

5. Align the Positive (Orange) High Voltage Connector as shown, then push until it locks.

6. Reinstall the Battery Alignment Brackets and Retention Bolts (T50). Torque spec: 10 ft-lbs (14Nm)

7. Reinstall the Battery Cover by first sliding in the top edge, then press firmly on the bottom to reseat the clips.

8. Reinstall the Battery Cover Bolts (T40). Torque spec 5ft-lbs (7Nm)

NOTE: The Battery Cover Bolts, Battery Retention Bolts, and their threaded holes in the frame are designed to be reused. Never use excessive force when initially threading the bolts as to avoid cross-threading. If using the provided T-Handle wrenches, tighten the bolts 1/8 of a turn past snug.

Battery Installation (Cont'd)

5. Insert the Battery Marriage Dongle into the charge port and press the activation button. Then remove.

6. Press the DISARM button once to disarm the alarm. A double chirp confirms it is disarmed.

7. To START Metacycle, press and briefly hold the Power Button above the smartphone compartment.

Watch our "Battery Removal and Installation" video.

Pre-Ride Checks

Check the following items each time before riding your Metacycle. Do not ride your Metacycle unless all of the conditions below are satisfied.

S/N	Item	Checks
1	Battery	Ensure battery has sufficient charge.
2	Brakes	Check the following in the braking system: 1. Brake fluid is above the minimum fill level. 2. Check the brake handle has 2-3mm of minimal free travel. 3. Check wear on the brake pads and rotors.
3	Throttle	With the vehicle off, gently turn the throttle to full engagement. Then, release the throttle completely. The throttle should return to the neutral/closed position.
4	Steering	Ensure the action smooth, but not loose, from lock to lock. No binding of control cables.
5	Tires	Check tire pressure and wear. See the VIN label on the rider's left-hand side of the steering head for recommended tire pressures.
6	Headlights, Turn Signals, and Brake Lights	Ensure headlights, turn signals, and brake lights are functioning properly.
7	Kickstand	Ensure the kickstand and integrated power switch is functional and returns to and stays at the fully up position by spring tension.
8	Critical Bolts	Check that the front wheel bolts, rear wheel bolts, and swing arm bolt are secure. The blue marks on the bolt and its housing should align.

General Operation

Operation Procedures

1. Press the Power Button to power on the vehicle.

2. After the powering on the vehicle, the vehicle enters the Park Mode (“P” Mode”) by default; press the “P” button of the left combination switch to enter the Drive Mode (“D” Mode) and get ready for driving.

3. To make a turn, turn on the turn signals in advance.

4. When the kickstand is in the down position, the vehicle parking (“P” Mode) will activate. The Metacycle can only enter "D", "S" or "R" modes when the kickstand is raised and not in the down position.

5. When the display shows the "P" symbol, press the “P” key of the combination switch to exit “P” Mode before driving. If the vehicle fails to enter “D” Mode, check to see if the kickstand is down or if the kill switch is pressed.

6. Release both left and right brake handles, and then turn the throttle slightly to start the electric Metacycle, and then put your feet on the footrest.

General Operation (Cont'd)

After-Riding

Check the battery charge level. If needed, charge your battery.

CAUTION: Never store your Metacycle at a low state of charge (below 30%). Storing your battery at a low state of charge for a prolonged period could damage it.

Carrying Capacity and Cargo

WARNING: Overloading or improper loading can cause a crash in which you could be seriously hurt or killed. Observe load limits and loading guidelines in this manual.

Your Metacycle has been designed to carry you and limited cargo. It was NOT designed to carry additional passengers. When you carry cargo, you may feel some difference during acceleration and braking, but as long as you keep your Metacycle well-maintained, with good tires and brakes, you can safely carry loads within the given limits and guidelines.

How much weight you put on your Metacycle, and how you load it, are important for your safety. Any time you ride with cargo, you should be aware of the following information.

Loading Guidelines

Light weight or small items (for example, a jacket) may be secured to the seat. Additional items should be kept in a backpack or other container which is secured to the rider without impairing their ability to operate their Metacycle.

Climbing Ability

The maximum climbable slope is a 15-degree incline.

General Operation (Cont'd)

Vehicle Range

Metacycle has a real-world range of 60 miles with up to 80 miles under ideal conditions.

The range of an electric vehicle is defined as the distance the vehicle travels on a single full charge of the battery. Just like EPA mileage estimates for an automobile, "your mileage may vary." Your range results are a direct reflection of your riding habits. The more conservatively you ride, the better range you can expect from your Metacycle.

Some of the factors which affect range include: speed, acceleration, number of starts and stops, ambient air temperature, head or tail wind, changes in elevation, and rider aerodynamics. The combination of these factors, as you travel from one point to another, defines your trip profile. In addition, tire pressure and payload are important considerations.

We suggest that you ride conservatively when you first get your Metacycle, to get to know your Metacycle and your commute. Once you become familiar with the range versus performance of your Metacycle, then you can adjust your riding characteristics if you desire. This applies mainly to riders with trip profiles which are at the edge of the performance envelope.

Maximizing Your Range

Range varies in the Metacycle similarly to how it varies in gas motorcycles. However, the big difference between electric and gas is that energy consumption is averaged over a shorter distance on Metacycle. The Metacycle is designed for convenient daily recharges versus less frequent and less convenient trips to the gas station. As a result, the same Metacycle often yields different ranges from one full recharge to the next.

How to Predict the Range

To generally predict how the Metacycle's range will be affected, you can use the four factors:

- route
- rider
- weather
- bike
- wind
- ambient temperature
- solar gain

By considering each of these factors, estimate what the Metacycle's real-world range will be under your particular usage case.

General Operation (Cont'd)

Highway Use

When choosing to ride your Metacycle on the highway, it is important to consider the following:

- Know Your Cruising Speed in Drive Mode
    - Your exact cruising speed depends on several factors, but for most riders it will be ~60 mph.

- Understand the Purpose of Sport Mode
    - Sport Mode may temporarily increase your top speed but generates significant heat in both the motor and controller. Excessive Sport Mode use may trip thermal limits within the powertrain and result in decreased performance.

- Mind Your Range
    - The Metacycle motor is most efficient below 45 mph. Further, the effect of aerodynamic drag is much greater at highway speeds. Combined, these results in decreased efficiency during highway use.

With these points in mind, always use discretion when choosing to take your Metacycle on a highway. Riding on roads where the flow of traffic exceeds 60 mph is not advised. Plan your routes carefully to avoid range anxiety.

Maintaining Your Metacycle

Owner’s Responsibilities

Listed below, are the responsibilities afforded to the owner:

- This owner’s manual should be considered a permanent part of this Metacycle and should remain with it even if the Metacycle is subsequently sold.
- Perform routine care and maintenance of your Metacycle as detailed in this owner’s manual.
- Use only SONDORS approved parts and SONDORS Metacycle accessories.
- The operator is responsible for learning and obeying all country, federal, state, and local laws governing the operations of an electric motorcycle.
- Always wear a regionally approved helmet, goggles, appropriate boots, and all other appropriate safety equipment when operating the Metacycle.

Periodic Maintenance

When driving in dusty or dirty conditions, maintenance should be done more frequently.

X	Indicates SONDORS Technician Service	Odometer Mileage Reading (Miles)				
X	Indicates User Inspection					
Item	**Routine**	**Every Ride**	**Every 500 miles or 1 month**	**3,000 miles or 12 months**	**6,000 miles or 18 months**	**10,000 miles or 24 months**
Brake Fluid	Check level using sightglass on handlebars, add more fluid if below minimum level	X	X	X	--	X
Brake Rotors	Inspect for visual damage. Ensure at least 2mm of thickness	X	X	X	--	X
Brake Pads	Inspect for wear, Ensure at least 3mm (0.1in) of friction material is remaining	X	X	X	--	X
Brake Lever	Ensure minimal free play	X	X	--	--	--
Turn Signals	Ensure function in both directions	X	X	--	--	--

Periodic Maintenance (Cont'd)

X	Indicates SONDORS Technician Service	Odometer Mileage Reading (Miles)				
X	Indicates User Inspection					
Item	**Routine**	**Every Ride**	**Every 500 miles or 1 month**	**3,000 miles or 12 months**	**6,000 miles or 18 months**	**10,000 miles or 24 months**
Headlight	Check both high and low beam function	X	X	--	--	--
Shock Absorbers	Check operation and for oil leakage	X	X	X	--	X
Fasteners	Ensure all fasteners are tightened	--	X	--	--	--
Wheels	Check run-out, and for damage	--	X	X	--	--
Tires	Check tread depth, if below 2mm; replace tire. Ensure filled to 32 PSI	X	X	--	X	--

Periodic Maintenance (Cont'd)

X	Indicates SONDORS Technician Service	Odometer Mileage Reading (Miles)				
X	Indicates User Inspection					
Item	**Routine**	**Every Ride**	**Every 500 miles or 1 month**	**3,000 miles or 12 months**	**6,000 miles or 18 months**	**10,000 miles or 24 months**
Steering Mechanism	Ensure smooth operation along full range of motion. Ensure steering nut is not loose	X	X	--	--	--
Front and Rear Wheel Bearings	Ensure smooth rotation and that no oil is leaking	--	X	--	X	--
Kickstand	Ensure kickstand moves fully without sticking and is retained by spring, and that is positively locks in the "up" position and "down" position	X	X	--	--	--
Drive Motor	Ensure smooth operation	--	X	--	--	--

General Maintenance

Wheels And Tires

Inspect both wheels for the following:

- Bends or cracks.
- Impact marks.

Inspect both tires for the following:

- Cuts, cracks, splits, or missing tread lugs in the tread or sidewall area.
- Bumps or bulges within the tire body.
- Uneven tire tread wear. Wear on one side of the tire tread or flat spots in the tire tread indicate a problem with the tire or Metacycle.
- Exposed tire thread or cords.
- Tread depth below 1/16 in (1.6 mm).

If either of the wheels or tires are found to have any of the above conditions, replace the wheel and/or tire immediately.

Tire Inflation

WARNING: Under-inflation is a common cause of tire failure and may result in severe tire cracking, tread separation, bead unseating from wheel, “blowout,” or unexpected loss of Metacycle control, causing serious injury or death.

Front Tire	Rear Tire
221 kPa (32 PSI)	207 kPa (30 PSI)

Tire pressure should be checked and adjusted to the proper inflation level before each ride. Tire pressure should be checked using an accurate gauge when the tires are COLD.

Note: A COLD tire is defined as one that has not been ridden on for at least 3 hours.

Note: Always install the valve stem caps after adjusting the tire pressures.

Tire Replacement

WARNING: ONLY use SONDORS Metacycle approved radial tires. Installation of non-approved tires may cause adverse handling and performance problems.

WARNING: Installation of non approved tires may cause adverse handling and performance problems.

General Maintenance (Cont'd)

Brakes

WARNING: Brake fluid is highly toxic - keep containers sealed and out of the reach of children. If accidental consumption of fluid is suspected, seek medical attention immediately.

WARNING: If the fluid comes into contact with the skin or eyes, rinse immediately with plenty of water.

WARNING: Do not ride the Metacycle if the brake fluid is below the MIN mark on either reservoir. Brake fluid MUST be added to the reservoir before riding.

WARNING: If the brake lever or pedal travel is unusually long, the feel is spongy or if there is any significant loss of brake fluid contact customer support. Riding under such conditions could result in extended stopping distances or complete brake failure.

CAUTION: Only use new fluid from an airtight container. Fluid from open containers or fluid previously bled from the system will have absorbed moisture, which will adversely affect performance, and must not be used.

CAUTION: Brake fluid will damage plastic or painted surfaces. Soak up any spillage with an absorbent cloth immediately and wash the area with a mixture of car soap and water.

Your SONDORS Metacycle is equipped with separate front and rear hydraulic braking systems each with their own fluid reservoir.

The fluid level in the reservoirs may drop slightly during normal use, as a result of brake pad wear, but should not be allowed to drop below the MIN mark.

Brake Fluid Replacement

Brake fluid must be replaced every 12 months regardless of the distance the Metacycle has been ridden. Use only DOT 3 or DOT 4 brake fluid. It is recommended that this procedure is carried out by a SONDORS approved Metacycle Technician.

General Maintenance (Cont'd)

Charger Use and Maintenance

Normal Status Indication	
Charging Status	**Indicator**
Standby	Red light on constantly
Charging	Red light flashing
Full Power	Green light on constantly

Error Flash Codes		
Charging Status	**Indicator**	**Remarks**
No-load (short circuit, under-voltage, or reverse connection)	Red and green lights flashing alternately (every 0.5s)	Check output voltage
Communication Error	Red-Red-Green	Check the communication wire
Abnormal AC Power	Red-Green-Green	Check the input AC voltage
Output Over-Voltage	Red-Green-Green-Green	Check the output connection and the output voltage
Internal Overheat	Red-Red-Green-Green	--

NOTE: If you're experiencing abnormal error flash codes, please contact support.

General Maintenance (Cont'd)

Cleaning

CAUTION: Improper cleaning can damage electrical components, cowlings, panels, and other plastic parts. Do not use steam or high-pressure water cleaner systems; they can cause water intrusion of bearing, seals, and electrical components. Avoid spraying water of great force around the dash unit, charge port, battery, and controller.

To prolong the life of your Metacycle it should be washed periodically. Regular cleaning is an important factor in maintaining the value of your Metacycle. It also ensures that safety related parts remain in full working order. If tar, bugs, or other similar deposits have accumulated, clean them off as soon as possible.

WARNING: After cleaning and before starting your journey, always test the brakes.

Wheels and tires

Avoid using strong acidic wheel cleaners. If such products are used on hard-to-remove dirt, do not leave the cleaner on the affected area any longer than instructed. Also thoroughly rinse the area off with water, immediately dry it, and then apply a corrosion protection spray.

Do not use products such as tire dressings on tires as this will adversely affect traction.

Washing

WARNING: Do not use high-pressure washers (like those at coin-operated car washes) as these can damage certain parts.

CAUTION: Do not use any harsh chemical products on plastic parts. Be sure to avoid using cloths or sponges which have been in contact with strong abrasive cleaning products, solvent or thinner, fuel (gasoline), rust removers or inhibitors, brake fluid, antifreeze, or electrolyte.

Note: We recommend the use of a garden hose to wash your Metacycle. Avoid directing the water jet at any electrical components or at the swing arm pivot bearings.

1. Gently wash your Metacycle with a sponge or a clean soft cloth, mild detergent, and plenty of water.
2. Use care when cleaning the plastic parts (dash, fenders, and side panels), which can scratch easier than the other parts of your Metacycle.
3. After washing, rinse your Metacycle thoroughly with plenty of clean water to remove any detergent residue.
4. Dry your Metacycle with a chamois or a soft, dry towel.
5. After cleaning, inspect for damage, wear or leaks.

After washing the Metacycle, allow all of the electrical components to dry prior to operation. If the Metacycle is ridden after being washed, apply both brakes several times in order to remove any moisture from the brake pads.

General Maintenance (Cont'd)

Parking and Long-Term Storage

- Whenever you plan on not riding or storing your Metacycle for extended periods of time (more than 30 days), it is recommended that you charge the battery to approximately 60% state of charge (SoC) and then leave the charger disconnected.
- The battery will discharge extremely slowly over time. Check the SoC at least monthly and charge it back up to 60% if it has dropped below 30%.
- To prolong the life of your battery you should store your Metacycle in a cool area. Storing your Metacycle in a hot area will cause your battery's life to be shortened. The recommended storage temperature is -4°F (-20°C) to 95°F (35°C).

Customer Information

Customer Assistance

Please have the following available when contacting SONDORS Inc. as they are essential to effectively and efficiently answer your questions or resolve your concerns.

- Owner's name and address
- Owner's telephone number
- Vehicle identification number (VIN)
- Date of purchase
- Motor serial number (if visible)

Note: A Metacycle information chart is provided on the inside of the front cover to record this information.

SONDORS Inc. can be contacted as follows:

Phone: +1 (323) 372-3000
Monday-Friday 8am to 8pm (Pacific Time)

E-mail: support@sondors.com (24 hours)

For updates and additional information about your Metacycle, visit the SONDORS website: www.sondors.com

Customer Information (Cont'd)

Reporting Safety Defects

United States

If you believe that your vehicle has a defect which could cause a crash or could cause injury or death, you should immediately inform the National Highway Traffic Safety Administration (NHTSA) in addition to notifying SONDORS Inc.

If NHTSA receives similar complaints, it may open an investigation, and if it finds that a safety defect exists in a group of vehicles, it may order a recall and remedy campaign. However, NHTSA cannot become involved in individual problems between you or SONDORS Inc.

To contact NHTSA, you may call the Vehicle Safety Hotline toll-free at: 1-888-327-4236 (TTY: 1-800-424-9153); go to http://www.safercar.gov; or write to:

Administrator
National Highway Traffic Safety
1200 New Jersey Avenue SE
Washington, DC 20590

You can also obtain other information about motor vehicle safety from: http://www.safercar.gov

Canada

If you believe that your vehicle has a defect which could cause a crash or could cause injury or death, you should immediately inform Transport Canada, in addition to notifying SONDORS Inc.

To contact Transport Canada, call their toll-free number: +1-800-333-0510

United Kingdom, Europe, and Global Markets

If you believe that your vehicle has a defect which could cause a crash or could cause injury or death, you should immediately contact SONDORS Inc. directly on +1 (323) 372-3000, or through our website at: https://sondors.com/

First Responder Information – High Voltage Component Locations

WARNING

DO NOT CUT COLORED ZONES

- NEVER cut high voltage components or cabling. Cutting could result in serious injury or death.
- High voltage cables and components may remain energized for up to 60 seconds after disabling.

HIGH VOLTAGE