



ZAPPY™

OWNER'S MANUAL

FOR THE ZAPPY FOLDING ELECTRIC SCOOTER

Patent #5,848,660 • D 433,718 Other U.S. and International Patents Pending.
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\$2.00

REV 8/16/99

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Z E R O A I R P O L L U T I O N ™

BE SAFE! ALWAYS WEAR A HELMET WHEN RIDING



DESIGNED IN THE USA



ASSEMBLED IN THE USA

WELCOME TO THE POWER REVOLUTION!



Your new ZAPPY Power-Assist Scooter is your ticket to fun and freedom. It's whisper quiet, smog free and fun! Fly down the sidewalk, doing errands or visiting friends, for only pennies of electricity. Fold up your little cement surfer and take it in your car, or on the bus or train. It's the worlds first truly portable electric vehicle, 21st century technology, just a little bit ahead of its time.

Remember that you will get the best performance and range on smooth and flat terrain. Remember also that you can always augment the electric power with a few kicks. Kick,

kick, flick that power switch and fly and remember to warn those ahead of you because they won't hear you coming!

Thank you for purchasing a ZAPPY, just one of ZAP's complete line of two- and three-wheeled electric vehicles. Our hope is that your ZAPPY will make your life more fun while contributing to a healthier planet for all.

Please take the time to familiarize yourself with this owner's manual. Proper use of the ZAPPY will maximize your performance and enjoyment. Just a little extra time reading your manual now can help you avoid frustration in the future.

Our customer service department is available between 9:00 a.m. and 4:30 p.m. PST, Monday through Friday at (707) 824-4150 to help you with any questions or problems that may occur. You can also e-mail your questions to us 24 hours a day, seven days a week, to zap@zapworld.com.

ALWAYS WEAR A HELMET!



BEFORE YOU RIDE YOUR ZAPPY™!

READ THOROUGHLY AND UNDERSTAND THIS
OWNER'S MANUAL

TO THE PURCHASER OF THE ZAPPY:

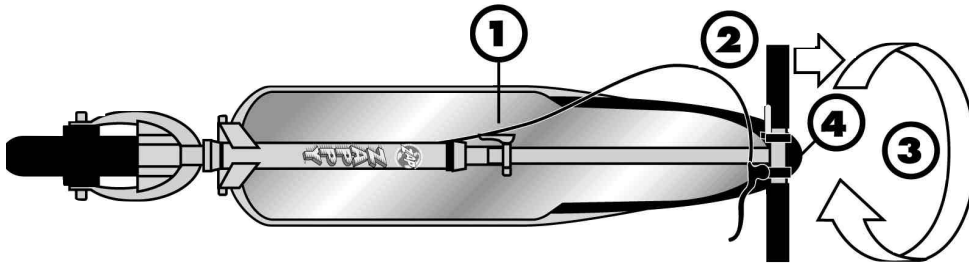
- The status of the ZAPPY as a "motor vehicle" subject to driver's licensing, insurance requirements and registration varies from state to state, and country to country.
- You should check with a reliable authority in your state to see if the ZAPPY must be registered as a motor vehicle. Your police headquarters or local department of motor vehicles may be able to either answer your questions or direct you to a reliable authority.
- The U.S. federal government has concluded by interpretation of the law and regulations that ZAPPY is not a motor vehicle; however, this does not take away state authority in relation to use on state roads.
- Your insurance policies may not provide coverage for accidents involving the use of this vehicle. To determine if coverage is provided you should contact your insurance company or agent.
- The recommended age and minimum weight for riding the ZAPPY is 16 years or older and 100 pounds.

NOTE:

- Your ZAPPY™ is shipped in the locked down folded position.
- Use this feature (and disconnect the battery) whenever you transport the ZAPPY.
- Your ZAPPY is shipped with the battery disconnected. Read page 6 of your Owner's Manual to connect.

TO UNFOLD YOUR ZAPPY:

- Open handlebar release lever ① Pull out handlebar ②
Turn handlebar clockwise 180° ③ Firmly tighten release lever ①
Hold handlebar grips with both hands, place foot on rear fender ④ and lift handlebars.



SINCE YOUR EXISTING INSURANCE POLICY MAY NOT PROVIDE COVERAGE FOR AN ELECTRIC POWER-ASSIST SCOOTER, YOU SHOULD CONTACT YOUR INSURANCE COMPANY OR INSURANCE AGENT TO DETERMINE IF COVERAGE IS PROVIDED. ALONG WITH YOUR ZAPPY, WE'VE INCLUDED AN OWNER'S MANUAL AND A WARRANTY FORM. PLEASE READ THE WARRANTY CAREFULLY AND FILL OUT THE FORM ON THE BACK. YOU MUST RETURN THE WARRANTY FORM WITHIN 10 DAYS OF RECEIVING YOUR ZAPPY IN ORDER TO ACTIVATE THE WARRANTY.

CHARGE BATTERY AFTER EVERY USE!

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OPERATIONS AND FEATURES

PERFORMANCE AND RANGE

- You will get the best performance on smooth and flat terrain. Give the ZAPPY a push and pull the safety switch to start. Kicking the ground with your foot while the motor is activated will increase your speed and range. The more kicking you do, the more range you will get from the ZAPPY. **Remember to charge the ZAPPY after every ride, no matter how short! Do not ever leave the battery in a discharged state overnight.**

SPEED SELECTION

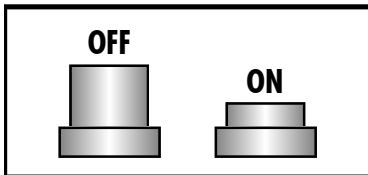
- Your ZAPPY is equipped with an electronic speed controller. The motor can assist you up to 13 miles per hour. Your actual speed depends on a number of variables such as rider weight, tire pressure, incline angle, wind resistance, etc.

SAFETY SWITCH



- **(Fig.1)** For safety, the ZAPPY uses a spring-loaded switch. When released, it will return to the off position. Pulling the switch towards you while pushing the ZAPPY activates the motor. The switch can be activated with the index finger of the right hand.

MAIN POWER SWITCH



- The main power switch is a black button located on the underside of the ZAPPY. Power to the system can be turned either on or off by pushing the button until it clicks.

BATTERY POWER CONNECTOR

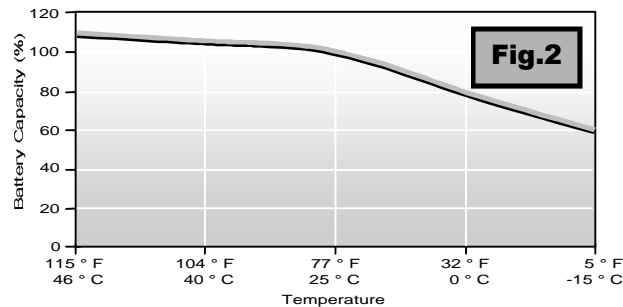
- The battery onboard the ZAPPY supplies power to the motor via the battery power connector. The battery power connector is located underneath the deck and attached to the battery. **For the greatest safety, disconnect this connector whenever the ZAPPY is shipped or stored.**

CIRCUIT BREAKER

Your ZAPPY is equipped with an automatically resetting circuit breaker. If it is drawing more than 30 amps of current, it will momentarily shut off. The circuit breaker will reset in a few seconds. The system will continue to shut down until the current draw is less than 30 amps. The circuit breaker is necessary to protect your motor from damage.

TEMPERATURE EFFECTS ON BATTERY CAPACITY

For best battery life charge your battery to full capacity at least once a month, even if it has not been in use. It is not recommended that your battery be left on the charger for more than 24 hours.



When the outside temperature drops below 50F degrees, bring your battery indoors to charge. To determine the effects of cold weather on your battery performance, please consult the Temperature Effects on Battery Capacity chart (Fig.2).

HANDLEBAR HEIGHT QUICK ADJUSTMENT

The handlebars should be adjusted to just below the rider's waistline. To adjust the handlebar height, open and close the quick release lever with your right hand while gradually tightening the adjustable nut. Continue tightening the nut until you feel resistance with your hand at the point when the lever is perpendicular to the head tube. Grip the head tube with your fingers and use the palm of your hand to close the lever with as much strength as possible.

FOLDING THE ZAPPY

(Fig.3) The ZAPPY can easily be folded down for compact storage. Stand at the rear of the ZAPPY, squeeze the brake lever tightly, and pull down on the handlebars until the handlebars contact the deck.

Fig.3



To unfold the ZAPPY, stand at the rear of the ZAPPY and pull the handlebars up until they automatically reposition themselves into the upright position.

ROLLING THE ZAPPY

- With the ZAPPY in its folded down position, turn the ZAPPY upside down. Use both hands and lift up the ZAPPY by the handlebars. The ZAPPY can now be pushed or pulled with ease, just like a vacuum cleaner!

REMOVABLE DECK



- **(Fig.4)** The deck is removable for quick access to the battery and battery charger. **Since the battery is disconnected before shipping, you will have to take off the deck to connect the battery.** To remove the deck, loosen the 1/4 turn deck fastener by turning it counter clockwise with a quarter or another large coin. **Note:** *Additional*

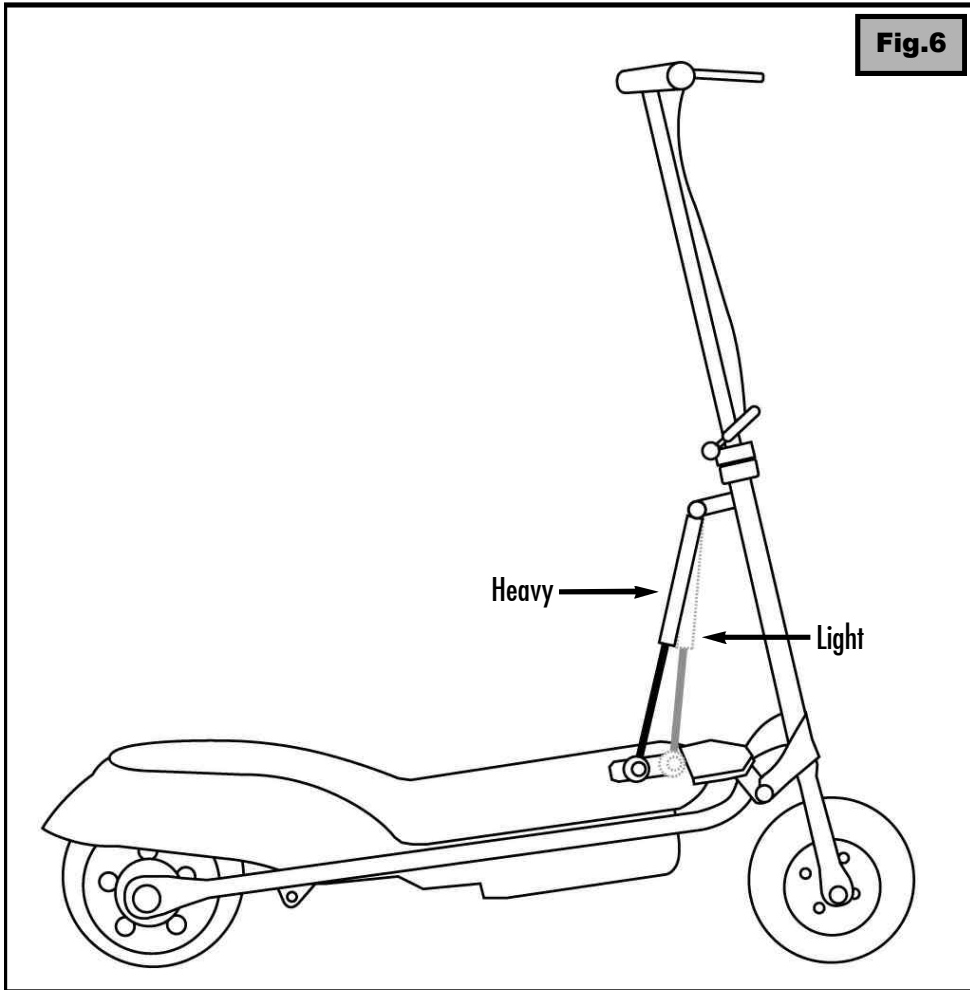
safety warnings can be found on the underside of the deck.

(Fig.5) Slide the deck back two inches, then lift the deck off. Reverse this procedure to reattach the lid.



CHARGE BATTERY AFTER EVERY USE!

ADJUSTING THE GAS STRUT POSITION



- **(Fig.6)** The ZAPPY is equipped with a gas strut that is adjustable to two different levels of resistance. If the rider has difficulty folding the ZAPPY, the gas strut can be moved to the light position.

DRIVE BELT ADJUSTMENT

- The drive belt on the ZAPPY will periodically need adjusting to maintain proper tension. The belt should deflect about 6mm (1/4 inch) with slight pressure applied at the center of the belt. Before servicing the ZAPPY, disconnect the battery power connector to prevent accidental starting of the ZAPPY.

- If the drive belt makes a "popping noise" while accelerating, it will need to be tightened immediately. To tighten the drive belt, loosen the rear axle nut until the wheel can be moved by hand forward and backward. Rotate the belt adjusters on each side of the wheel evenly until the proper tension is achieved. Tighten the axle nut and recheck belt tension.

WHEEL WARNING!

- **IMPORTANT!** ALWAYS DEFLATE THE TIRE BEFORE DISASSEMBLING THE WHEEL.

DRIVE BELT REPLACEMENT

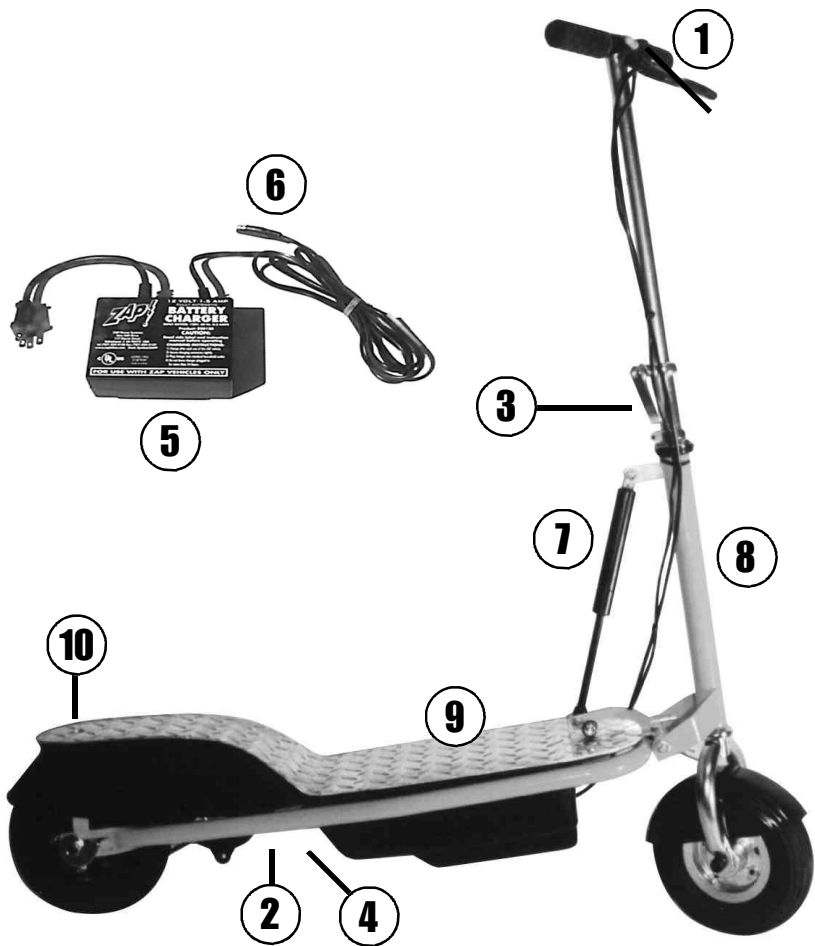
- If the drive belt has broken or frayed, it will need replacing. Call ZAP at (707) 824-4150 to purchase a new belt. Before servicing the ZAPPY, disconnect the battery power connector to prevent accidental starting of the ZAPPY.
- To replace the belt, the rear wheel will first need to be removed. To remove the rear wheel, first loosen the rear axle nut. Derail the belt if it's still connected. Remove the brake mounting bolt. Remove the rear wheel by pulling it straight back. Install the new belt onto the motor drive gear located on the motor. Reverse this procedure to reinstall the rear wheel. Make sure the drive belt is properly seated on the wheel drive gear. Adjust the belt tension following the instructions specified in the paragraph above.

HOW TO DISCONNECT THE DRIVE BELT WHEN THE BATTERY IS DISCHARGED

- If ZAPPY's battery becomes discharged, the belt can be removed to allow a resistance-free ride home. 1) Place ZAPPY on its side so the belt is visible. 2) Gently pull up on the drive belt while turning the wheel clockwise. 3) Once the belt is loose, tuck the belt into the frame to avoid contact with the wheel. 4) Now your ZAPPY can be ridden like a regular kick scooter. Be sure to charge ZAPPY's battery immediately after you arrive at your destination.

REPLACING OR REPAIRING TIRES AND/OR INNERTUBES

- 1) Remove the wheel. 2) Deflate the tire. 3) Remove the four hub bolts. 4) Split the hub. 5) Remove the tire and inner tube. 6) Replace or patch the inner tube. Deflate the tube as much as possible. 7) Position the inner tube in the tire. 8) Reassemble the hub around the tire and inner tube being very careful not to pinch the inner tube between the two hub halves. 9) Inflate the tire to the proper psi (pounds per square inch). 10) Reinstall the wheel onto the ZAPPY.



DESCRIPTION OF SYSTEM

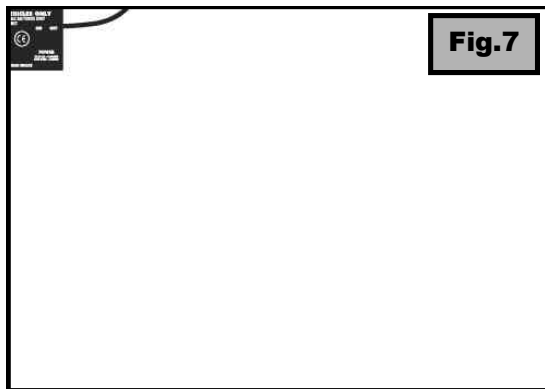
- | | |
|--|----------------------------|
| 1) SAFETY SWITCH | 6) CHARGER POWER CONNECTOR |
| 2) BATTERY CHARGING JACK | 7) GAS STRUT |
| 3) HANDLE HEIGHT QUICK ADJUSTMENT | 8) HEAD TUBE |
| 4) MAIN POWER SWITCH | 9) DECK |
| 5) BATTERY CHARGER
(MAY VARY IN APPEARANCE) | 10) 1/4 TURN DECK FASTENER |

ALWAYS WEAR A HELMET!

CHARGING

TO CHARGE ZAPPY'S BATTERY (FIG.7)

1. Plug the charger power connector into the battery charging jack.
2. Then, plug the ZAP charger into a standard 110 VAC (or 220, if applicable) wall socket.
3. Please observe all safety warnings described on pages 14-16.



NEVER EXPOSE THE CHARGER TO WET OR DAMP CONDITIONS!

NOTE: You can charge the battery away from ZAPPY. Remove the deck, disconnect the battery power connector, and remove the battery. Connect the charger power connector to the power connector on the battery.

TO DISCONNECT THE CHARGER:

1. First, unplug the ZAP charger from the 110 VAC (or 220 in some countries outside the USA) wall socket.
2. Then, disconnect the charger power connector from the battery charging connector.
3. Replace the battery charger back under the deck.
4. Reattach the deck.

NOTE: Your ZAPPY is equipped with a low voltage cutout. This means that when your battery is discharged, the controller will shut off the motor. If this happens, you must recharge ZAPPY immediately to avoid damaging your battery permanently.

CHARGING TIME

- The battery will usually take up to several hours to fully recharge. **Refer to the charger instructions included with your ZAPPY to determine when your battery is completely charged.**
- Charge the battery immediately after use in order to maximize battery life. Charge the battery at room temperature if possible. Use only the ZAP battery charger. Using any other charger may damage the battery.

PRE-RIDE CHECK LIST

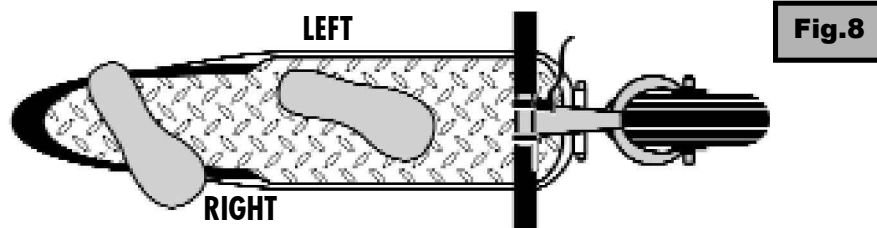
PERIODICALLY GO THROUGH THIS CHECKLIST TO MAKE SURE THAT YOUR ZAPPY IS IN PROPER ADJUSTMENT FOR SAFETY AND OPTIMAL PERFORMANCE. IT IS IMPERATIVE THAT YOU REVIEW THIS CHECKLIST BEFORE YOUR FIRST RIDE. ALTHOUGH YOUR ZAPPY HAS PASSED OUR QUALITY ASSURANCE PROCEDURE, IT MAY NEED ADJUSTMENT AFTER SHIPPING.

1. Connect the battery power connector to the controller power connector.
2. Check tire pressure: The tires on your ZAPPY should be at least 36 psi (pounds per square inch).
3. Be sure all wire connections, especially battery terminals, are tight.
4. Check the handlebar quick release to see that it is tight.
5. **ALWAYS** wear your ANSI or Snell-approved helmet.

NOW YOU ARE READY. HAVE A GOOD RIDE!!!

HOW TO RIDE THE ZAPPY

- Practice makes perfect...right? Yes, it does! The more time spent on the ZAPPY, the easier maneuvering will become. Follow the foot placement guide below to get yourself started for safe, controlled riding. Practice without applying power for balance.
- Note: If you are left footed, or just looking for a change, place your right foot in front, and your left foot on the rear of the ZAPPY.



- Be sure to lean forward when giving the starting kicks. When the power hits the front wheel, the front of the ZAPPY may lift off of the ground!
- Both feet should be on the ZAPPY before power is applied, and the push scooter needs to be moving.
- Since ZAPPY is a new product, certain jurisdictions are not clear on regulations. Even law enforcement officers are not clear. Check with your local agencies and follow all laws. When in doubt, only use the ZAPPY as a push scooter.

ALWAYS WEAR A HELMET!

BATTERY CARE

TO ENSURE THE ZAP BATTERY GIVES ITS BEST PERFORMANCE:

- 1) Store and charge your ZAPPY at temperatures between 50° F (10° C) and 100° F (38° C).
- 2) Keep your battery charged. Batteries stored for long periods of time will self-discharge. The higher the temperature, the greater the rate of self-discharge.
- 3) Keep the terminals clean and tight.
- 4) Handle with care (don't drop it).
- 5) Recharge your battery as soon as you can after riding.
- 6) The ZAP battery will take 4-10 cycles of riding and charging to bring the battery up to its full potential.
- 7) **DEEP DEPTH OF DISCHARGE ON A CONTINUAL BASIS WILL DIMINISH THE OVERALL LIFE OF THE BATTERY.**
- 8) Always disconnect the battery power connector when shipping or storing the battery.
- 9) Do not leave the charger connected to the battery for more than 48 hours.

THIS PRODUCT CONTAINS A
SEALED LEAD-ACID BATTERY
IT MUST BE RECYCLED.

BATTERY PACK REPLACEMENT

Batteries must be recycled. To preserve natural resources, please recycle the battery properly. Local, state or federal laws prohibit disposal of lead-acid batteries in ordinary trash. Consult your local waste authority for information regarding available recycling options, or call ZAP customer service.



REPLACING THE BATTERY

- When the battery needs to be replaced, we recommend that you contact your nearest ZAP authorized dealer.



BATTERY PREPARATION FOR RECYCLING

WARNING Upon the removal of the battery, cover the terminals with heavy-duty adhesive tape. Do not attempt to destroy or disassemble battery pack or remove any of its components. Also, never touch both terminals with metal objects or body parts as a short circuit may result. Keep the battery away from children. Failure to comply with these warnings could result in fire or serious injury.

CHARGE BATTERY AFTER EVERY USE!

TROUBLESHOOTING GUIDE

Read the following section carefully. This guide will help your ZAPPY achieve maximum performance. If you cannot adjust your ZAPPY using this guide, call ZAP at 707) 824-4150. Our customer service representatives will be glad to help you.

PROBLEM	POSSIBLE CAUSE	ACTION TO BE TAKEN
MOTOR DOES NOT START	Power switch is in off position	Push switch on the left side of the battery tray to ON position (Push button until it clicks)
	Broken drive belt	Replace the belt
	Vehicle not moving at least 3 mph	Kick up to 3 mph
	Battery is drained	Charge battery immediately
	Electrical fault in wiring	Check all wiring connections (battery terminals, motor leads, etc.)
	Battery not connected	Connect Battery
REAR WHEEL WON'T TURN	Brake cable wrapped around handlebar	Unwrap cable
	Handlebar overextended	Lower handlebar (see "Brake Operation")
	Brake too tight	Adjust brake
MOTOR SHUTS OFF DURING USE	Circuit breaker has tripped	Release throttle, wait 5 seconds
	Inadequate rider input (kicking) for incline	Kick more
INSUFFICIENT RANGE	Low tire pressure	Inflate to at least 36 psi
	Hilly terrain	Kick more
	Out of adjustment	Tune brakes, bearings, make sure belt is not overtightened
	Battery is not "broken in"	Charge, use, charge 4-10 times before optimum range
	Cold battery	Keep the battery warm when charging
	Makes "popping" noise when accelerating	Make sure belt is properly tightened
	Battery not fully charged	1) Keep battery in fully charged condition 2) Refer to the charger instructions included with your ZAPPY to determine when your battery is completely charged.
	Damaged, old battery	Replace battery

ACCESSORIES

SPARE BATTERY

- Buy another battery for quick changes. Remove the deck, pull out the drained battery and pop in a fresh one, secure the deck and you are ready to go! Immediately hook up the drained battery to the battery charger to maximize battery life.

RAPID CHARGER

- Want to charge the battery a lot faster? Why not purchase our 6-amp battery charger and charge your battery twice as fast?!

MOBILE CHARGER

- Charge ZAPPY's battery using your boat, RV, or automobile cigarette lighter input.

SAFETY WARNINGS



THE PURPOSE OF SAFETY SYMBOLS IS TO ATTRACT YOUR ATTENTION TO POSSIBLE DANGERS. THE SAFETY SYMBOLS, AND THE EXPLANATIONS WITH THEM, DESERVE YOUR CAREFUL ATTENTION AND UNDERSTANDING. THE SAFETY WARNINGS BY THEMSELVES DO NOT ELIMINATE ANY DANGER. THE INSTRUCTIONS OR WARNINGS THEY GIVE ARE NOT SUBSTITUTES FOR PROPER ACCIDENT PREVENTION MEASURES.



WARNING

Failure to obey a safety warning can result in injury to yourself or others. Always follow the safety precautions to reduce the risk of fire, electric shock and personal injury.

PRE-OPERATIONAL SAFETY WARNINGS



- Read and understand this owner's manual carefully before using this unit.
- Thoroughly inspect your ZAPPY for loose or damaged parts before each use. If there are any loose or damaged parts, perform the needed adjustments or repairs before starting your ZAPPY.

GENERAL WARNINGS



1. Do not smoke while operating the ZAPPY. Keep ZAPPY away from open flames such as pilot lights, cigarettes, etc.
2. Do not ride in sand.
3. The ZAPPY is an electrical assistance for your leg power. Overloading the motor will cause the motor to shut off. This may happen when climbing hills, or crossing traffic. Ride your ZAPPY in such

a manner that the electrical assistance is not necessary for maintaining control of the ZAPPY. Always be prepared for the sudden loss of electrical assistance.

4. Know and obey all local laws concerning the operation of, and equipment requirements of, electrically assisted cycles. Make sure that your equipment and operation of your electrically assisted cycle meets these standards. Failure to obey these laws may result in severe injury or death.
5. AVOID UNINTENTIONAL STARTING - Do not leave the ZAPPY with the master "on/off" switch ON when not in use. For greater safety disconnect battery power connector.

BATTERY WARNINGS



1. To reduce the risk of injury, use only batteries provided or recommended by ZAP. Other batteries may explode causing personal injury and damage.
2. DO NOT PLACE THE BATTERY NEAR FIRE OR HEAT. It could explode.

3. Batteries can emit explosive gases while being charged. Do not obstruct the vents on the battery container. Read the instructions supplied with your charger before attempting to charge your battery.

CHARGER WARNINGS



1. Before using the battery charger, read the section in this manual regarding it.
2. USE ONLY THE CHARGER PROVIDED WITH YOUR ZAPPY. Use of any other charger could cause the battery to explode, causing serious injury.

3. Do not expose the charger to moisture and water.
4. To reduce the risk of damage to the charger and cord, pull the charger by the plug, rather than the cord, when disconnecting the charger.
5. Make sure the cord is located so that it will not be stepped on, tripped over, or otherwise subjected to damage or stress.
6. Do not use an extension cord unless necessary. An improper extension cord could result in fire or electric shock. If you must use an extension cord, ensure that:
 - a. The pins on the plug of the extension cord are the same number.
 - b. The extension cord is properly wired and in good electrical condition.
 - c. The wire size is large enough for the AC ampere rating of the charger as specified below.
7. DO NOT OPERATE CHARGER WITH A DAMAGED CORD OR PLUG. If the cord or plug is damaged, replace the charger.
8. Do not operate the charger if it has received a sharp blow, been dropped, or been damaged in any way. If the charger case is damaged, replace the charger.
9. Do not disassemble the charger. The charger is not serviceable; disassembly may result in electric shock or fire.
10. Only clean the charger with a dry cloth. Never use liquid to clean your charger.
11. Do not use charger outdoors in wet conditions.

12. Charge in a well-ventilated area away from sparks, flames, and smoking areas.
13. For optimum performance, your ZAPPY should be charged in a location where the temperature is more than 50° F (10° C) but less than 100° F (37° C). (See "Battery Care" on page 12.)

OPERATIONAL SAFETY WARNINGS AND OPERATING WARNINGS

1. Keep hands, face, feet, and long hair away from all moving parts.
2. Do not touch the motor or wheels while they are rotating.
3. Be alert. To prevent injury to yourself and to others, do not operate your ZAPPY if you are fatigued or on medication.
4. Do not operate your ZAPPY while under the influence of drugs, alcohol, or medication.
5. Always wear a helmet while riding.
6. Never ride the ZAPPY at night.
7. Never ride the ZAPPY on public streets or roads.
8. Be sure all wire connections, especially all battery connections are tight.
9. Do not break any laws on your ZAPPY.
10. The ZAPPY should not be used without the supervision of an adult.
11. Use extreme caution when riding downhill. Be careful of overspeeding. If a hill is too steep to climb, it's too steep to ride down. ZAPPY's brakes might overheat if the hill is too steep.
12. ZAPPY should **NEVER** be ridden by more than one person.
13. Do not ride on gravel, sand, wet or rough terrain.
14. Do not ride through puddles or water.



OTHER SAFETY WARNINGS

1. Keep your ZAPPY in good working condition. Call your authorized service dealer for repairs or maintenance procedures that are not described in this manual. Call ZAP at (707) 824-4150 for the name of a dealer near you.
2. Use only original equipment manufacturer's replacement parts when servicing this ZAPPY. These parts are available from your authorized service dealer. The use of non-standard parts, or other accessories or attachments not designed for the ZAPPY, could result in serious injury to the user and damage to the ZAPPY.
3. STORE UNIT INDOORS - When not in use, the ZAPPY should be stored in a cool, dry place out of reach of children.
4. IMPORTANT! Before STORING or SHIPPING your ZAPPY be sure to DISCONNECT YOUR BATTERY POWER CONNECTOR.
5. **WHEEL WARNING! IMPORTANT! ALWAYS DEFLATE THE TIRE BEFORE DISASSEMBLING THE WHEEL.**



IT IS EXTREMELY IMPORTANT THAT YOU FOLLOW THE SAFETY GUIDELINES CONTAINED IN THIS MANUAL IN ORDER TO INSURE MAXIMUM SAFETY. FAILURE TO COMPLY WITH THE STANDARDS OUTLINED IN THIS MANUAL COULD RESULT IN FIRE AND/OR SERIOUS INJURY. ZAPWORLD.COM (ZAP) IS NOT LIABLE FOR ANY DAMAGE OR INJURIES CAUSED BY UNSAFE OPERATION OR FAULTY REPAIRS. ANY REPAIRS MADE TO THIS PRODUCT BY UNAUTHORIZED SERVICE TECHNICIANS ARE THE SOLE RESPONSIBILITY OF THE OWNER.

BRAKE OPERATION

The ZAPPY's braking system consists of a band brake on the rear wheel. The brake is activated by squeezing the brake lever located on the handlebar. When applying the brakes it is important to release the throttle switch to deactivate the ZAP motor.

Brakes are designed to control your speed, not just to stop the scooter. Maximum braking force occurs at the point just before the wheel locks-up (stops rotating) and starts to skid. You need to practice slowing and stopping smoothly without locking up a wheel. Practice braking where there is no traffic or other hazards and distractions. Locking up the wheel will prematurely wear out the tire.

Everything changes when you ride on loose surfaces or in wet weather. Tire adhesion is reduced, so the wheels have less cornering and braking traction and can lock up with less brake force. Moisture or dirt on the brake surface reduces its ability to grip. The way to maintain control on loose or wet surfaces is to reduce speed.

SQUEAKY BRAKES

Your brake may squeak before it fully breaks in. This is normal and will not affect the function of the brake. With continued use the squeak should go away.

ADJUSTMENTS

Properly adjusted, you can apply full braking force at the lever without having the brake lever pull all the way to the handlebar.

With use it is normal for the brake cable to stretch and the outer casing to compress. Minor adjustments to the cable tension can be made with the barrel adjuster on the brake lever. Turning the barrel adjuster clockwise will loosen the brakes. Turning the barrel adjuster counter-clockwise will tighten the brakes. If the brakes

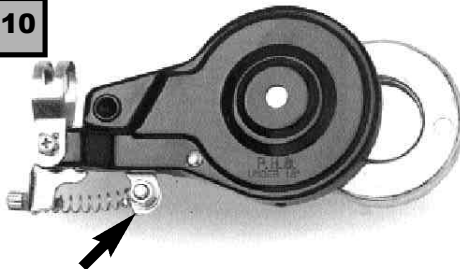
are binding, inspect the brake line for any kinks or sharp turns. Handlebar adjustments can affect the brake adjustment; if the handlebars have been raised too high, the brake cable will bind at the brake lever (refer to Fig. 9). **DO NOT TWIST THE BRAKE CABLE AROUND THE HANDLEBAR TUBE.**

For significant changes in the cable tension, the brake cable can be adjusted by re-positioning the brake cable at the cable anchor bolt located on the band brake (refer to Fig. 10). This adjustment should only be made by a qualified ZAP mechanic.

Fig.9



Fig.10



ZAP® warrants each new ZAP product for three (3) months according to the following terms. Batteries are also warranted for three (3) months.

This warranty extends to the original retail purchaser only and commences on the date of the original retail purchase.

Any part of the ZAP Product manufactured or supplied by ZAP and found in the reasonable judgment of ZAP to be defective in material or workmanship will be repaired or replaced by an authorized ZAP service dealer without charge for parts and labor. The ZAP Product including any defective part must be returned to an authorized service dealer within the warranty period. The expense of delivering the ZAP Product to the factory or authorized service dealer for warranty work and the expense of returning it back to the owner after repair or replacement will be paid for by the owner. All dealer returns are subject to a 15% restocking fee. ZAP's responsibility in respect to claims is limited to making the required repairs or replacements and no claim of breach of warranty shall be cause for cancellation or rescission of the contract of sale of any ZAP product. Proof of date of purchase will be required by the dealer to substantiate any warranty claim. An authorized ZAP service dealer must perform all warranty work.

This warranty is limited to thirty (30) days from the date of the original purchase for any ZAP Product that is used for rental, demonstration or commercial purposes, or any other income-producing purpose.

This warranty does not cover any ZAP Product that has been subject to misuse, neglect, negligence or accident, or that has been operated in any way contrary to the operating instructions as specified in the ZAP Owner's Manual. This warranty does not apply to any damage to the ZAP Product that is the result of improper maintenance or to any ZAP Product that has been altered or modified so as to adversely affect the product's operation, performance or durability or that has been altered or modified so as to change its intended use. This warranty does not extend to repairs made necessary by normal wear or by the use of parts or accessories which are either incompatible with the ZAP Product or adversely affect its operation, performance or durability.

In addition, this warranty does not cover items that experience normal wear and tear.

ZAP reserves the right to change or improve the design of any ZAP Product without assuming any obligation to modify any product previously manufactured.

ALL IMPLIED WARRANTIES ARE LIMITED IN DURATION TO THE THREE (3) MONTHS WARRANTY PERIOD OR thirty (30) DAYS FOR PRODUCTS USED FOR ANY COMMERCIAL PURPOSE. ACCORDINGLY, ANY SUCH IMPLIED WARRANTIES INCLUDING MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR OTHERWISE, ARE DISCLAIMED IN THEIR ENTIRETY AFTER THE EXPIRATION OF THE APPROPRIATE THIRTY DAY WARRANTY PERIOD. ZAP'S OBLIGATION UNDER THIS WARRANTY IS STRICTLY AND EXCLUSIVELY LIMITED TO THE REPAIR OR REPLACEMENT OF DEFECTIVE PARTS, AND ZAP DOES NOT ASSUME OR AUTHORIZE ANYONE TO ASSUME FOR THEM ANY OTHER OBLIGATION. SOME STATES DO NOT ALLOW ANY LIMITATIONS ON HOW LONG AN IMPLIED WARRANTY LAST, SO THE ABOVE LIMITATION MAY NOT APPLY TO YOU.

ZAP ASSUMES NO RESPONSIBILITY FOR INCIDENTAL, CONSEQUENTIAL OR OTHER DAMAGES INCLUDING, BUT NOT LIMITED TO EXPENSE OF RETURNING THE ZAP PRODUCT TO AN AUTHORIZED SERVICE DEALER AND EXPENSE OF DELIVERING IT BACK TO THE OWNER, MECHANIC'S TRAVEL TIME, TELEPHONE OR TELEGRAPH CHARGES, RENTAL OF A LIKE PRODUCT DURING THE TIME WARRANTY SERVICE IS BEING PERFORMED, TRAVEL, LOSS OR DAMAGE TO PERSONAL PROPERTY, LOSS OF REVENUE, LOSS OF USE OF THE PRODUCT, LOSS OF TIME, OR INCONVENIENCE. SOME STATES DO NOT ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE LIMITATION OR EXCLUSION MAY NOT APPLY TO YOU.

This warranty gives you specific legal rights, and you may also have other rights, which vary from state to state. This warranty applies to all ZAP Products manufactured by ZAP and sold in the United States.

To locate a service dealer, or to purchase an Extended Warranty Plan, call (707) 824-4150.

MANUFACTURED BY: ZAP

WARRANTY CARD: Please complete both sides and return within 10 days of purchase.

Please take a couple of minutes to fill out your registration card. This informal survey will aid us in providing our customers with the best possible product.

Name: _____ Address: _____

City: _____ State: _____ Country: _____ Zip: _____

Phone: (Home) _____ (Work) _____

Purchase Date: _____ Purchased From: _____

Serial Number (Stamped on ZAPPY motor guard. Flip ZAPPY over to read serial number):

Age: _____ Sex: _____ Occupation: _____

Is this your first Electric Vehicle? _____

I use my ZAPPY for: *Commuting Recreation Work Fun Shopping Exercise Environment*

If work, what application _____

Other _____ My typical length of ride is: _____ miles

Where did you hear about our product? *Friend Relative Associate Internet Show News Article Dealer*

Ad (where) _____ *Other* _____

Are you interested in ZAP Shareholder information? (Our stock symbol NASDAQ:ZAPP)

Yes No

Do you use the internet?

Yes No If so, what is your E-mail address? _____

Favorite Magazines:

1. _____ 2. _____ 3. _____

Favorite TV Shows:

1. _____ 2. _____ 3. _____

Are you interested in a ZAP Store?

Yes No

Are you interested in selling ZAPs?

Yes No

Are you interested in assisting us in: (check applicable)

Marketing _____ *Public Relations* _____

Dealer Information _____ *A ZAP Franchise* _____

Comments: _____



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