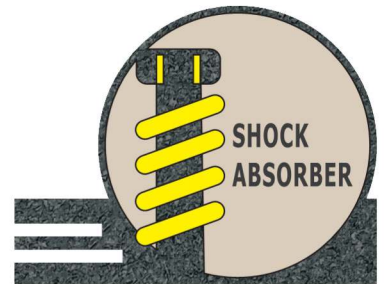




TRANSFORMERS--S3025



Product images may vary and will be subject to real products received.

Solax Electric Scooter Instruction Manual

Instruction

Dear Customer

Thank you for choosing the foldable scooter — Transformers !

Please read this manual carefully before operating the Transformers because this manual will help you to operate the Transformers smoothly-This manual is applicable to the manual and automatic version. If you can't understand all of the content completely or you need the assistance, please contact the scooter dealer of Transformers or with the following.

Solax Technology Limited



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info@solaxtech.com



Warning: Failure to note the warnings from this manual will cause your personal injury.

Notification: Failure to note the notification from this manual will damage the Transformers.

- This manual covers the Transformers main structure characteristics, main components, function of each part, safety requirements and instructions, battery instructions, matters need attention, the methods of dealing with emergencies, and scooter's maintenance.
- The following symbols used in this manual are to indicate warning and matters need to pay attention; therefore, it is important for you to fully understand and master the content.
- All of the information and pictures in this manual are subject to the factory's products and only for customer reference. The product will continue to be improved and modified without prior notice. Please do understand and support us.



Fig.1 Transformers

Finally, we believe that the Transformers will lead you to the comfortable, convenient, and wonderful life.

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Feature Guide

Please refer to the diagram below to identify your scooter parts. Familiarise yourself with the terminology to better understand part references throughout the Owner's Manual.



Product images may vary and will be subject to real products received.

The overall design of The Transformers is full of modern recreational flavor. It's safe and comfortable, easy operation, convenient to be folded and carried, lightweight and steady. It mainly has the following characteristics:

1. The frame is consisting of advanced aluminum alloy with features of light, strong and durable.
2. It can be folded and unfolded without any tool used. Easy operation.
3. Seat, front and rear frames can be folded, which make it easy to carry.
4. It can be put in the trunk or take it with you when taking the public transportation for its light weight and small size
5. Battery is easy to load and unload, and also convenient for user to carry.
6. Comfortable—with the ergonomic seat and the handle tube can be adjusted to a comfortable height and gradient.
7. Start smoothly and brake flexible and stableBody shape, the stream is beautiful and elegant, surface is smooth and bright, environmental protection and durable.

In conclusion, The Transformers is a unique scooter, for middle age, elderly, disabled, walking difficulties, weak and lack endurance elder people, cripple or physically disabled people. The scooter is a trustworthy product. It also used for theme park, amusement park, zoo, museum etc. , meanwhile it is ideal ride instead of walking, shopping tools for middle aged and elderly people.

Product Specifications and Relevant Parameters

Model	S3025
Maximum Product Size	950*450*865mm
Product Minimum Size	450*450*635mm
Seat Above Ground	530mm
Seat Width	380mm
Backrest Height	310mm
Product weight (excluding battery)	23.6kg
Maximum Weight Capacity	125kg
Travel Distance	15km
Fastest Speed	6km/h
Turning Radius	≤1.4m
Maximum Climbing Angle	0°-12°
Drive Way	Rear Wheel Drive
Obstacle Crossing Ability	38mm
Controller	PG S-Drive 45A
Battery Specifications	Power Lithium Battery, 24V10AH
Charger Planning	24V 2A (output:29.4V 2A)

Main Parts and Relevant Function

Control Panel-"C" Fig.01

The control panel is an operating controlling component, which is mainly to control the connecting and cutting of the power.

The upper controller of the current scooter has optional functions.

Controller picture is for reference only.



Fig.01



Notice: Do not put the control panel in the humid area. If the control panel has been affected by moisture before using, please ensure it is dry when you operate it.

Power Switch

Key switch (Fig.02)

1. Turn the key switch clockwise to ON, can drive.
2. Turn the key switch anticlockwise to OFF, can't drive. Please turn the power off when stop driving.



Fig.02



Warning: If turn off the battery during operating. The electromagnetic brake will be locked and your scooter will stop suddenly.

Speed Controller (Fig.03)

The speed controller is used for controlling the speed when driving. You can set the speed from 0km/h to 6km/h. When you adjust the knob to the left end (the slowest), it's the minimum speed; when you adjust the knob to the right end (the fastest), it's the maximum speed.

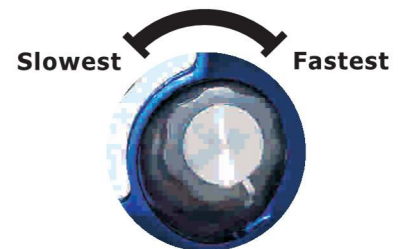


Fig.03



Warning: when you turning or driving backward, please do not adjust the speed to the maximum speed.

Power Indicator (Fig.04)


Switch the rocker switch to [ON] , the power indicator will show the power condition. 



Fig.04

Direction Control Lever

The direction control lever is used to control the forward and backward.

- Move the joystick with your right hand to drive forward.(Fig.05)
- Move the joystick with your left hand to move backward.(Fig.06)
- When the scooter moves backward, the horn will start the beeping.
- The control lever will return to the center position when released and the brake will be locked.



Fig.05



Fig.06

Horn Button (Fig.07)

When you press the button, it will sound the beeping alarm.
In order to prevent accidents and injury, please use it in time.



Fig.07

Headlight(Fig.08)

Please turn on the headlight switch"—".



Fig.08

Telescopic Handle

Open the handle switch outward and make it in loose state. Then the handle drawtube will draw back down. Buckle up the handle switch after the handle drawtube draw back in place (Fig.09).



Fig.09

Controller

Controller is fixed in the rear cover and it receives the signal from the control panel and transfers the signal to motor, brake and bulb.



Notice: Do not store the controller in the moisture environment. If the controller has been affected by moisture, make sure to dry it before operation.

Freewheel Lever

When you need to move the scooter manually, you can flip the joystick back (Fig.10).



Fig.10

Motor/Transmission component

Motor/ Transmission component as a mechanical and electrical part will convert the electrical energy to rear wheel drive.

Electric Folding and Unfolding

Remote control (Fig.11)

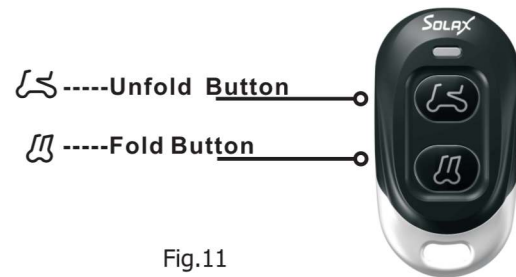


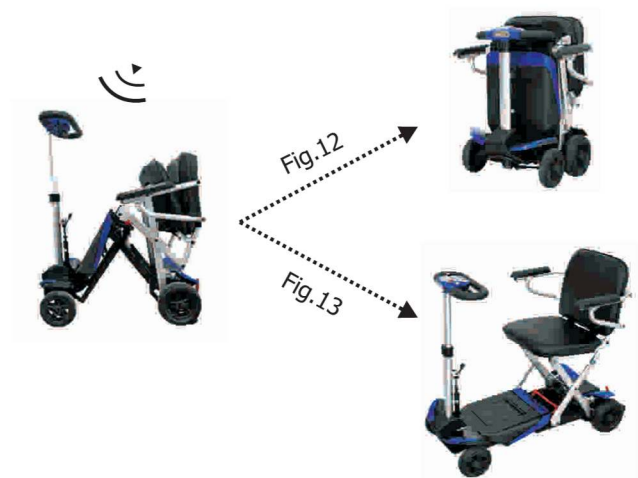


Fig.11

Automatic folding and unfolding scooters:

1. Press [] button and do not release your hand.
2. Scooter will folding automatic (Fig.12)
3. After folded completely ,you will hear "click" sound. Then release your hand.
4. Press [] button and do not release your hand. Unfolding totally (Fig.13)



Automatic folding and unfolding buttons on the control panel:



Open-----Long press the "A=🔓" button

Close-----Long press the "B=🔒" button



Notice: Do not fold and unfold electrically on slopes!

Fold and Unfold Manually

1. Place the scooter on a level ground and manually lift the red button.
2. After manually extracting a certain height, close the scooter with both hands, and when you hear a "click" sound, finish.



①



②



3. Move the red button forward to make the scooter in a loose state.

4. Use both hands to fully unfold the scooter, and when you hear a "click" sound, complete.



③



④



Safety Requirements

Driving Surface

The Scooter has the best stability under the normal driving conditions (such as dry level ground with the constituent concrete or asphalt). However, it may meet other grounds, such as grassland, gravel and etc.

So there are some requirements before riding the scooter :

Please read this manual before driving the scooter.

- Make sure about your physical condition before driving the scooter.
- The scooter can be used in the park and grass safely.
- Try to avoid driving in the loose gravel, covered soil and sandstone.
- Do not drive the scooter if you can't tell the condition of the roads.
- Electric Scooter can stride over an obstacle with a certain height, but you must minimize the speed and slowly drive over the obstacle.

Safety Precautions

- Do not operate your scooter before you fully read and understand this manual.
- Do not carry passengers or drunk driving when you drive the scooter.
- Ensure the seat is fixed and fastened.
- Please slow down when driving on the uneven or soft ground.
- Please slow down before turning.
- Do not park on slopes.
- Approach slope end, slopes, raised group and unprotected edge zone (such as curbside, vestibule and stairs etc.) with extra care.
- Changing initial setting or refitting your scooter is forbidden.
- Please be careful when driving in the busy streets, market or shopping center; driving in the unsafe zone. Prohibited area is forbidden. Please consult local authorities about the traffic rules for scooters.
- Hold the handle with both hands and put both feet on the footboard when driving.
- Using your scooter as a seat on moving vehicle is forbidden.
- Please ensure the safety of the batteries when your scooter is on the other vehicles for transportation.
- Climbing or driving along the edges of roads is forbidden, otherwise, the scooter will be damaged permanently.
- Do not exceed the maximum tolerance gradient when driving.
- Do not carry passengers or exceed the maximum weight capacity.
- Do not reverse on uneven slopes or uneven ground; be careful when passing over slopes.

Contraindications

Product stipulate that the following situation should not be used.

- Patient with slow perception.
- Unconscious, bad coma blood circulation or severe sensitive skin.
- Patient with visual deficits
- Patient with uncontrolled seizures
- Patient with impaired cognition and judgment



WARNING—Do not attempt to drive on slopes more than 12 degrees.



WARNING—Do not use on these individuals: Children or infants, because the device has not been evaluated for pediatric use; Persons incapable of expressing their thoughts or intentions.



WARNING—Do not exceed the maximum weight capacity (125 kg).

Battery and Battery Charging

This scooter is designed with one maintenance free of power Li-polymer battery with a long usage time as well as a long useful life. Charging with a charger makes it easy to use.

- Charge the battery before the first operation. Please charge the battery every 3 months.
- If you don't use your scooter for a long time, please take off after charging full. Do not put in the scooter.

The guide for charging steps:

1. Close (the ship stype switch or key switch) and place the charger. Then switch off its power and open the bottom charger cap and insert the plug into the charge socket.



Close the ship stype switch or key switch



Then open the rear charging socket and insert the plug



Warning: Match the charger socket and charger plug properly.

2. Insert one end of the AC power wire into the socket of household power then insert the other plug into the socket of the charger. Verify the connection before you turn on the main power switch. Red light indicates power on, orange light indicates on charging and green light means fully charged.

3. Turn off the power switch first when the battery is fully charged. Then take out the DC charging connector before you take out the AC input power socket.



Warning: You must turn off the power switch once the battery is fully charged and then take out the plug otherwise you may shorten the working life of the battery.

4. If the red light is off when the power on, please check whether the power plug is properly inserted.

5. Normally allows 8-14 hours for charging.



Note: The scooter has a self-locking function to prevent driving when you charge the battery.

Guide to safe and lasting battery

How does charger work?

When the battery voltage is low, the battery charger outputs a large current to charge the battery.

When battery voltage is close to full, the battery charger outputs a small current.

When battery is full, the battery charger will output very little current which is almost zero. Therefore.

The battery will continually charge after connecting the charge, but will not overcharge. It is better to charge no more than 24 hours.

How does the indicator light (LED) in charger display.

There are two LED indicator lights in the charger. The red indicator light is the power indicator light.

Regarding the other one, it is orange when charging and it will become green when the battery is charged fully.

The red one will sometimes still on after pulling the charger plug out from the power socket; then you may think there is something wrong with the charger, however, in fact, it needs seconds for the red light to snuff out when the battery voltage is up to 26V.

Other chargers can be used?

In order to charge safely and efficiently, we suggest using the charger supplied by original manufacturer.

How often should charge the battery?

The charge time depend on the following elements:

- Driving scooter all day.
- Driving scooter occasionally for few times.

Following information will offer the safe and reliable charge method.

- If you driving scooter everyday, you should charge it after using. So that it is convenient for you to use it next day. Charging of the battery should be vary from 8 up to 12 hours.
- If driving scooter once a week, then charge battery once a week. Charging the battery should be vary from 12 up to 14 hours.
- Make sure your battery fully charged and saturation.

How can you get the maximum operating distance?

Some driving conditions such as hills, sidewalk gaps, uneven and soft surface, turning and against the wind will affect the driving distance and time after per battery charging.

Several methods for obtaining the maximum driving distance

- Fully charged your battery before driving it.
- Avoid hills, gaps, macadam and soft surface.
- Only to carry the necessities and reduce the luggage weight.
- Keep a constant speed.
- Avoid intermittent driving.



Warning: Please do not dismantle the Li-polymer battery and do not add water. Failure to observe this note will invalidate the warranty, and damage the battery and scooter.

Why the power of the new battery is weak?

Deep-cycle battery uses the unique chemical technology and design. It can be charged quickly and can be used for a long time after full-charged. The battery is fully charged already before leaving the factory, but may change its initial performance during the transportation due to the temperature. The power of the battery will lose in high temperature and it will extend the charging time in low temperature. The battery needs few days to adapt to the surrounding environment before it gets stable performance. More importantly, deep-cycle battery can only get high performance after using for several times of charging-discharging cycles.

Please follow the steps to improve the battery performance as below:

1. New battery must be fully charged before using and it can reach 88% capacity.
2. Please drive in the safe and the familiar area. Low speed is recommended at the first time. Do not travel too far until you are familiar with the operation and the battery should be fully charged.
3. Please give the battery another fully charging after operated it in the second times and this will make the battery up to 90% capacity.
4. The battery capacity will top to 100% and extend the driving time after four to five charging and discharging cycles.

How to ensure the battery life?

A fully charged battery will provide good performance and extend battery life, so keep the battery full charged whenever possible. It will affect performance and shorten battery life if you over discharging, seldom charging or do not fully charge.

How to store scooter and battery?

If you don't operate your scooter, please follow the instructions:

- Charge your battery fully before you store it.
- Disconnect the battery from controller attachment joint.
- Store your scooter in a dry and warm place.
- Avoid to store scooter in temperature variation place.



Warning: If battery was frost, it should be kept warming for several days before charging.


If you will leave the scooter for a long time, please lay a plate under the footboard to support scooter. It can reduce stains of tires when wheels pressing on the ground.

Enc Information

This device complies with Medical EMC Standard IEC 60601-1-2:2014.

Guidance and manufacturer's declaration – electromagnetic emissions		
The 4-Wheel Folding Scooter is intended for use in the electromagnetic environment specified below. The customer or the user of the 4-Wheel Folding Scooter should assure that it is used in such an environment.		
Emissions	Compliance	Electromagnetic environment-- guidance
RF emissions CISPR 11	Group 1	The 4-Wheel Folding Scooter uses RF energy only for its internal function. Therefore, its RF emissions are very low and are not likely to cause any interference in nearby electronic equipment. The 4-Wheel Folding Scooter is suitable for use in all establishments, including domestic establishments and those directly connected to the public low-voltage power supply network that supplies buildings used for domestic purposes.
RF emissions CISPR 11	Class B	
Harmonic emissions IEC 61000-3-2	Class A	
Voltage fluctuations/ flicker emissions IEC 61000-3-3	Complies	

Guidance and manufacturer's declaration – electromagnetic immunity			
The 4-Wheel Folding Scooter is intended for use in the electromagnetic environment specified below. The customer or the user of the 4-Wheel Folding Scooter should assure that it is used in such an environment.			
Immunity test	IEC 60601 test level	Compliance level	Electromagnetic environment --guidance
Electrostatic discharge (ESD) IEC 61000-4-2	±8 kV contact ±15 kV air	±8 kV contact ±15 kV air	Floors should be wood, concrete or ceramic tile. If floors are covered with synthetic material, the relative humidity should be at least 30 %.
Electrical fast transient/burst IEC 61000-4-4	±2 kV for power supply lines ±1 kV for input/output lines	Not Applicable	Mains power quality should be that of a typical commercial or hospital environment or typical home environment
Surge IEC 61000-4-5	± 1 kV line(s) and neutral	Not Applicable	Mains power quality should be that of a typical commercial or hospital environment or typical home environment
Voltage dips, short interruptions and voltage variations on power supply input lines IEC 61000-4-11	<5 % UT (>95 % dip in UT) for 0,5 cycle 40 % UT (60 % dip in UT) for 5 cycles 70 % UT (30 % dip in UT) for 25 cycles <5 % UT (>95 % dip in UT) for 5s	Not Applicable	Mains power quality should be that of a typical commercial or hospital environment or typical home environment. If the user of the 4-Wheel Folding Scooter requires continued operation during power mains interruptions, it is recommended that the 4-Wheel Folding Scooter be powered from an uninterruptible power supply or a battery.
Power frequency (50/60 Hz) magnetic field IEC 61000-4-8	3 A/m	3A/m	Power frequency magnetic fields should be at levels characteristic of a typical location in a typical commercial or hospital environment or typical home environment.
NOTE UT is the a.c. mains voltage prior to application of the test level			

Guidance and manufacturer's declaration – electromagnetic immunity			
The 4-Wheel Folding Scooter is intended for use in the electromagnetic environment specified below. The customer or the user of the 4-Wheel Folding Scooter should assure that it is used in such an environment.			
Immunity test	IEC 60601 test level	Compliance level	Electromagnetic environment – guidance
Conducted RF IEC 61000-4-6	3 Vrms 150 kHz to 80MHz 6Vrms in ISM bands	3 Vrms 150 kHz to 80MHz 6Vrms in ISM bands	Portable and mobile RF communications equipment should be used no closer to any part of the 4-Wheel Folding Scooter, including cables, than the recommended separation distance calculated from the equation applicable to the frequency of the transmitter. Recommended separation distance
Radiated RF IEC 61000-4-3	3 V/m 80 MHz to 2.7GHz 385MHz- 5785MHz Test specifications For ENCLOSURE PORT IMMUNITY to RF wireless communication equipment (Refer to table 9 of EN 60601- 1-2:2015)	3 V/m 80 MHz to 2.7GHz 385MHz- 5785MHz Test specifications for ENCLOSURE PORT IMMUNITY to RF wireless communication equipment (Refer to table 9 of EN 60601- 1-2:2015)	$d = [3,5/V1] \times P^{1/2}$ $d = 1.2 \times P^{1/2}$ 80 MHz to 800 MHz $d = 2.3 \times P^{1/2}$ 800 MHz to 2.5 GHz Where P is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer and d is the recommended separation Distance in meters (m). Field strengths from fixed RF transmitters, as determined by an electromagnetic site survey, ^a should be less than the compliance level in each frequency range. ^b Interference may occur in the vicinity of Equipment marked with the following symbol: 
NOTE 1 At 80 MHz and 800 MHz, the higher frequency range applies.			
NOTE 2 These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects and people.			
a. Field strengths from fixed transmitters, such as base stations for radio (cellular/cordless) telephones and land mobile radios, amateur radio, AM and FM radio broadcast and TV broadcast cannot be predicted theoretically with accuracy. To assess the electromagnetic environment due to fixed RF transmitters, an electromagnetic site survey should be considered. If the measured field strength in the location in which the 4-Wheel Folding Scooter is used exceeds the applicable RF compliance level above, the 4-Wheel Folding Scooter should be observed to verify normal operation. If abnormal performance is observed, additional measures may be necessary, such as re-orienting or relocating the 4-Wheel Folding Scooter. b. Over the frequency range 150 kHz to 80 MHz, field strengths should be less than 10 V/m.			

Recommended separation distances between portable and mobile RF communications equipment and the 4-Wheel Folding Scooter			
The 4-Wheel Folding Scooter is intended for use in an electromagnetic environment in which radiated RF disturbances are controlled. The customer or the user of the 4-Wheel Folding Scooter can help prevent electromagnetic interference by maintaining a minimum distance between portable and mobile RF communications equipment (transmitters) and the 4-Wheel Folding Scooter as recommended below, according to the maximum output power of the communications equipment.			
Rated maximum output power of transmitter (W)	Separation distance according to frequency of transmitter (m)		
	150 kHz to 80 MHz $d=1.2 \times P^{1/2}$	80 MHz to 800 MHz $d=1.2 \times P^{1/2}$	800 MHz to 2.5 GHz $d=2.3 \times P^{1/2}$
0.01	0.12	0.12	0.23
0.1	0.38	0.38	0.73
1	1.2	1.2	2.3
10	3.8	3.8	7.3
100	12	12	23
For transmitters rated at a maximum output power not listed above, the recommended separation distance d in meters (m) can be estimated using the equation applicable to the frequency of the transmitter, where P is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer.			
NOTE1 At 80 MHz and 800 MHz, the separation distance for the higher frequency range applies.			
NOTE2 These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects and people.			

Basic Troubleshooting

The main reason is battery without sufficient capacity or performance declined, and most of the electrical equipment issue can be solved by yourself.

- Please check the key is inserted into the switch /rocker switch, and keep it "ON".
- Check it if the battery is fully charged or not.
- If the battery capacity is insufficient, please increase the charging time/ cycles.
- If the issue continued, then battery capacity testing is needed.

Scooter can not work continually when you are driving it

- Battery line is loose.
- Motor carton bush is damaged.

Speed suddenly slows down when driving

- Battery capacity is insufficient.
- Battery aging.

If met the problem that you can not solve it by yourself, please contact your dealer for further consult and assistance.

Maintenance

There are few parts of SOLAX scooter require maintenance.
The following issues must be checked and maintained periodically:

The connection of the battery and electrodes

- Ensure the electrode connections are tight and have no corrosion.
- The battery should be placed flatly inside the battery holder.

Wire Connector

- Check all the wire connectors regularly.
- Check all the wiring insulation condition, including the plug of the charger regularly.
- Repair or change the damaged connector and connector joint.

ABS Plastic Cover

● Control panel, front cover, footboard and back cover are all made by durable ABS plastic with baking finish on the surface. Do not use oil or other chemical liquids to wipe the scooter. In order to prevent the electrical components from damage, do not wash the scooter from the tap directly.

Bearings and Motor/ Transmission Parts

- The components have injected lubricant and are sealed; therefore, it is unnecessary to inject lubricant any more.
- Protect all the electronic components from moisture, such as control panel, battery charger and other electric controlled components.
- If some components become damp, please dry it before use.

Product Warranty Card

User Name		ID No.	
Address		Phone No.	
Model		Item No.	
Purchasing Date	Y	M	D
Warranty Period	12 months warranty from purchasing date, battery is 6 months warranty		
Manufacturer	Solax Technology Limited		
Dealer (Stamp or Signature)			
Phone No. and Address			

Warranty Statement











Materials, manufacturing or assembling problems under the normal usage is responsibility of the dealer for the repair or replacement of parts.

Warranty Exclusions:

1. Failure to follow the proper use of operation and maintenance;
2. Not using regular spare parts and cause damage;
3. Mechanical damage cause by accidents;
4. Consumables such as the inner core and outer tires, bearings, light bulbs, etc. are not covered in the limits of warranty;
5. Any unauthorized changes to vehicle design;
6. Any nature disasters or accidents such as typhoons, hurricanes, floods and earthquakes.

Symbol Definitions

The following symbols are found on the Scooter:

	Manufacturer
	Date of Manufacture
	Refer to The Instruction Manual
	Medical Device
	Serial Number
	Catalogue Number
	Lot Number
	CE Mark
	WEEE Label. Do not discard the item in general waste. Follow the local recycling policy.
	Item is recyclable

	Warning of Microwave Radiation
	Do not drive in rain or snowy weather
	Keep loose clothing clear of the scooter
	Do not operate cell phones while the scooter is powered on.
	Warning. Beware of potential hazard
	Warning. Pinch hazard
 WARNING: EMI	Be aware of nearby transmitters, such as radio or television stations, and avoid close proximity.



Dongguan Prestige Sporting Goods Co., Ltd.
 3rd Industrial, Qiaotou Area, Houjie Town,
 Dongguan City, Guangdong Province, China.



Share Info GmbH
 Heerdter Lohweg 83, 40549 Düsseldorf, Germany

Importer

MODEL S302521

SOLAX
 easy life