

Owner's Manual (2.4G) **S3021**



English



中文（简体）



France



España



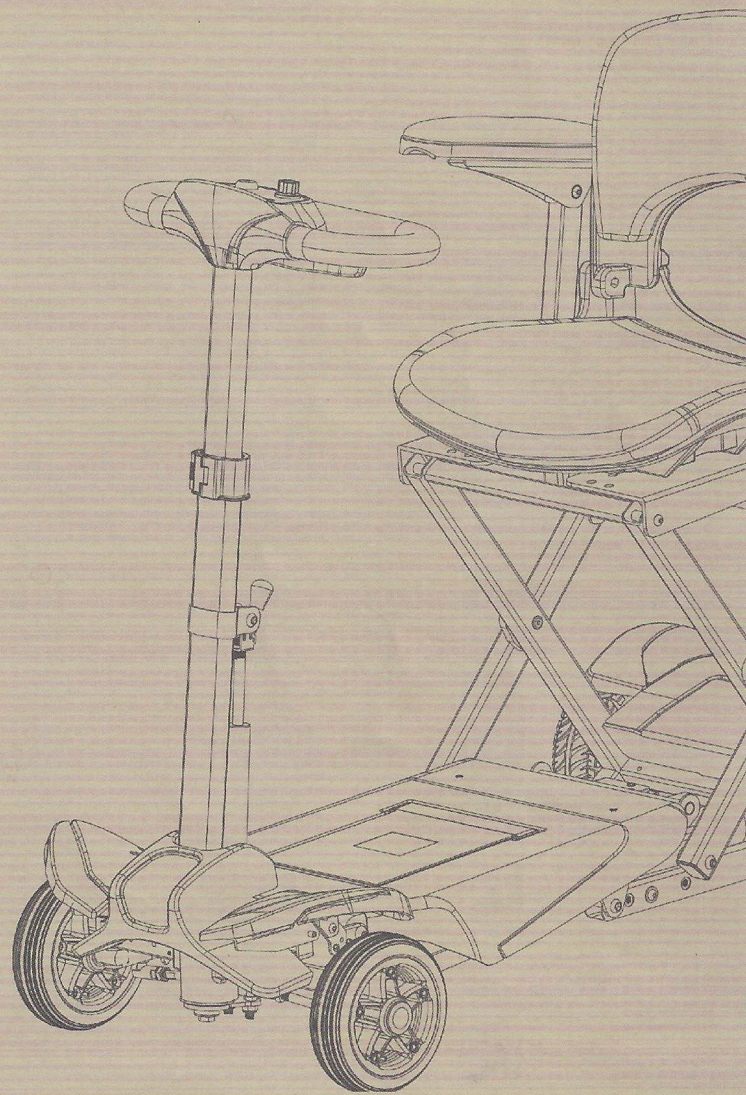
Italia



Deutschland



日本語



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 (Fig. 1) 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.

Transformers Feature Guide

Please refer to the diagram below to identify your scooter parts. Familiarize yourself with the terminology to better understand part references throughout the Owner's Manual.(FIG. 2)



- | | | |
|-----------------------------------|--------------------------------|--------------------------------------|
| ① Control Panel | ⑧ Front Wheel | ⑮ Rotary Locking Handle for Arm Rest |
| ② Adjustable Height Handle | ⑨ Foot Board | ⑯ Armrest Supporting Frame |
| ③ Forward / Reverse Control Lever | ⑩ Manual Folding Release Lever | ⑰ Armrest |
| ④ Handle Switch | ⑪ Seat Supporting Frame | ⑱ Backrest |
| ⑤ Tiller Angle Adjustment | ⑫ Rear Wheel | ⑲ Seat |
| ⑥ Front Cover | ⑬ Anti-tip Wheel | |
| ⑦ Battery / Compartment | ⑭ Rear Cover | |

(There are manual and automatic versions of this scooter; they are basically the same in structure and shape. The main difference is that the folding and unfolding of the manual version is operated manually, while the automatic version is operated by the remote controller.)



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. 6 inch solid front tires and 7 inch solid rear tires.
8. 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. (Fig. 3)



Fig. 3



Product Specifications and Relevant Parameters




Fig. 4 ,Unfolded Size



Fig .5 ,Folded Size

Specifications

Model	Transformers
Overall Length	0.95 m (37.4 in)
Overall Width	0.45 m (17.7 in)
Tires (solid wheels)	Tire Size Front 6 x 1.5 Tire Size Rear 7 x 2.36 in
Maximum Speed Maximum Gradient	6 km/h (3.7 mph)
Safe Gradient /	0-12°
Range Up To	15 km (9.32 miles)
Turning Circle	1.4 m (55 in)
Weight (without battery pack)	24 kgs (53 lbs)
Color	
Brake	Intelligent, Regenerative, and Electromagnetic
Drive system	S-drive 45A
Handlebar	PU Foam
Maximum Weight Capacity	125 kgs
Seat Width	0.43 m (17 in)
Seat Height (from the ground)	0.56 m (22 in)
Battery	24V 10AH
Motor	24V 120W
Battery Charger	DC24V 2A (OUTPUT: 29.4V 2A)



Main Parts and Relevant Function

Control Panel

The control panel is an operating controlling component, which is mainly to control the connecting and cutting of the power, moving forward and backward as well as show the battery level. It consists of power switch (Key switch/rocker switch), speed control switch, direction control lever, battery condition indicator, control panel, top and bottom cover, etc. (Fig. 6)



Fig. 6

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. 7)

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. 7

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

Speed Controller (Fig 8)

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 tortoise), it's the minimum speed; when you adjust the knob to the right end (the rabbit), it's the maximum speed.



Fig. 8

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

Power Indicator (Fig. 9)

Switch the rocker switch to [-], the power indicator will show the power condition. Green means the power is enough; yellow means the power is weak; red means it needs recharging.

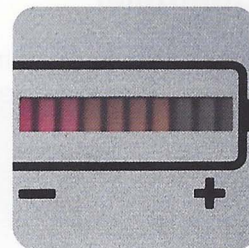


Fig. 9

Direction Control Lever (Fig. 10)

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

- Hold the rubber handlebar with both hands.
- Push the right-hand lever in your own direction to move the vehicle forward.
- Push the left-hand lever in your own direction to move the vehicle backwards.
- 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.

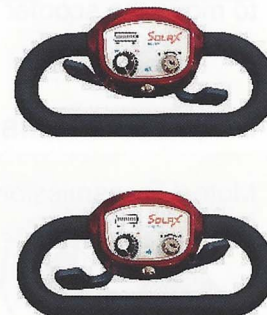


Fig. 10

Horn Button (Fig. 11)

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



Fig. 11

Telescopic Handle

Open the handle switch outward (Fig. 12) and make it in loose state. Then the handle drawtube will draw back down (Fig. 12). Buckle up the handle switch after the handle drawtube draw back in place (Fig. 13).

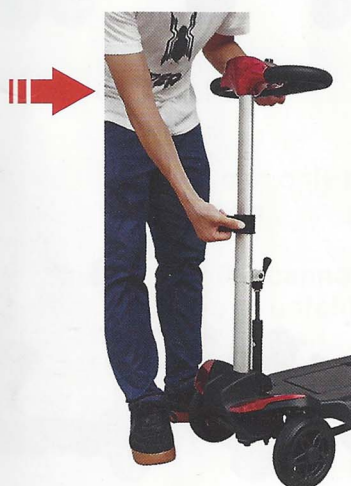


Fig. 12



Fig. 13



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.

Brake

Genies install the electromagnetic brake and it can not brake by manual. You can raise the headstock to move the scooter or pull the scooter after fold.

Motor/Transmission component

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

Remote control [automatic] (Fig. 14)



Fig.14

Automatically Unfold and Fold the scooter by remotes:

Genies install the electromagnetic brake and it can not brake by manual. You can raise the headstock to move the scooter or pull the scooter after fold.



Fig 16

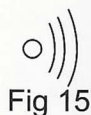


Fig 15

Folding operation



1. Press  button and do not release your hand.
2. Scooter will folding automatic (Fig 15-16)
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 17)



Fig 17

2.4 G remote controller code matching instructions

1.First press and hold the manual folding button **I** in the back of the scooter and release it after 5 seconds. A long buzzer sound will be heard.

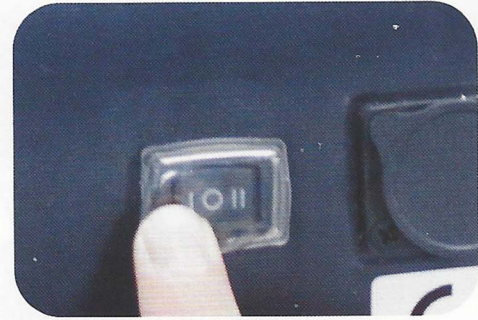


Fig.18

2.Then press folding and unfolding button on the remote controller at the same time, a long sound after the buzzer rings five times indicates a successful code matching.



Fig.19

3.Short press the manual folding button **II** in the back of the scooter, then release to exit the code matching.



Fig.20

Note:

- The code matching can only be operated when the scooter is turned on.
- But the code matching cannot be operated during the scooter is folding or unfolding.
- You need to turn off then turn on power switch again to conduct remote controller code matching.



Automatic Fold Switch on the scooter (Fig.21)

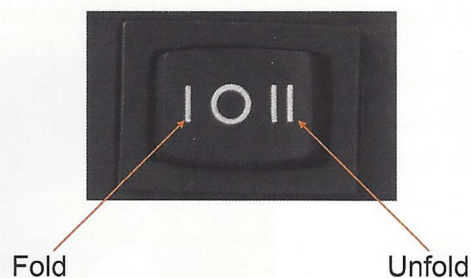
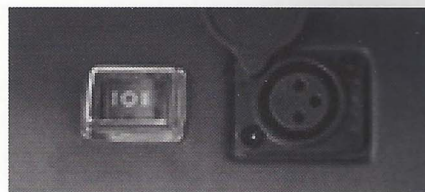


Fig.21



Note: The manual one don't have the automatic function and remote control. The folding and unfolding operation, please reference to the "Folding and unfolding".

The Folding and Unfolding

Transformers Manual for unfolding:(FIG.22-25)



Fig.22

1. Leave folded scooter on the smooth ground.



Fig.23

2. Pull the manual switch forward (to the tiller direction)



Fig.24

3. One hand on the front tiller the other one on the seat, move reverse to unfold the car.



Fig.25

4. Pushh down the foot pad until "click".

Transformers Manual for folding:(FIG.26-29)

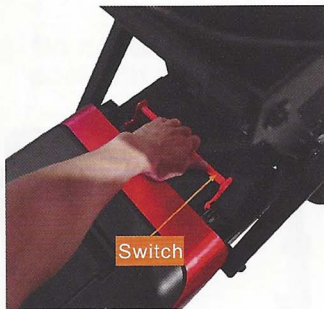


Fig.26

1.Pull up the manual switch.



Fig.27

2.Keep pulling to fold the car.



Fig.28

3.One hand on the front tiller
the other one on the seat to
fold the car.



Fig.29

4.Keep pushing until "click".

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.
- Genies scooter can stride over an obstacle with a certain height, but you must minimize the speed and slowly drive over the obstacle. (Fig.30)

Load Capacity	Height
≤125 kgs	36 mm



Fig.30

Warning: Do not exceed the specify climbing angle (0-12°). Please do follow the manual instruction before operation.

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 steets, 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.

Warning: The battery should be protected in freezing temperature! Do not charge the frozen battery. Otherwise, it will damage the battery and may cause personal injury.

Warning: Do not drive on freezing, slippery or salty ground, otherwise, you may suffer accident and personal injury.

Battery and Battery Charging

This scooter is designed with one maintenance free of lithium 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

Fig.31



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 some thing 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.

Operation Instruction

Inspection before operating:

- Please inspect the battery is fully charged or not.
 - Please make sure you know the route well. (Including the crowd, animal, obstacle)
 - Avoid the un-flat and slope road condition,.
 - Check if the key is inserted into the key switch or the end of rocker switch is pressed.
 - Make sure your hands are steering the handle bar.
 - Please check the horn is working or not.
- Please check the tiller quick release is locked or not.

Driving

Please follow the instructions after you choose your route:

- Please unfold the scooter fully according to the instruction after you read the manual.
- Unfold the seat to right position, and adjust the tiller for the suitable position, then lock it.
- Please seat on the seat and grasp the handlebars, then turn on the power switch.
- Press the speed control lever gently by your right thumb.
- Brake releases automatically and scooter will move forward (Remark: do not press the speed control lever too fast)
- Push right handlebar moves scooter turn left when operating.
- Push left handlebar moves scooter turn right when operating.
- Steer the handlebar in the middle, scooter will move in forward direction.
- Release the speed control lever, until scooter has slowed down or fully stopped.
- Brake can be automatic locked when scooter fully stopped.

Finish operating

1. Make scooter fully stopped
2. Off the switch and remove the key or press the rocker switch "O".
3. Get down scooter in safety.
4. Fold the scooter according to the instruction.

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.



Solax Technology Limited Electric Vehicle 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.