Electric-3-Wheel-Scooter

Ameise 1000 / COLLY 1

Operating Manual

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European community declaration of conformity

for the purpose of the directive machinery 98/37 EC

6. Edition

The manufacturer

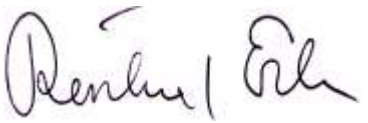
Erler Mobile GmbH
Erlenstr. 76
46539 Dinslaken

represented by Mr. Reinhard Erler, declares hereby, that

the electric scooter COLLY 1

is manufactured in conformity with the machinery directive 98/37 EC,
evaluated und confirmed by an irrespective investigator of the DEKRA AUTOMOBILE GMBH, Ludwigshafen, Germany (Inspection Report Nr. 0235/002643/1806143111)

Dinslaken, April 1, 2008



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TECHNICAL DATA

Type:	COLLY 1
Dimensions:	Length 102 cm, width 55 cm, height 120 cm
Driving motor:	Polyphase brushless motor
Motor power:	36V 300 W
Noise emission:	70 dB
Battery type:	Sealed AGM battery, maintenance-free, closed
Battery capacity:	3x12V 22Ah approx. 200 cycle
Charger:	230V 4 Amp
Charging time:	10-12 hours
Driving speed:	up to 20 km/h
Range per charge:	up to 30 km
Max. vehicle payload:	130 kg , max. 1 person
Vehicle weight:	52 kg
Safety equipment:	Front and rear brake, emergency stop switch, safety foot-operated switch, key-operated switch

SAFETY INSTRUCTIONS

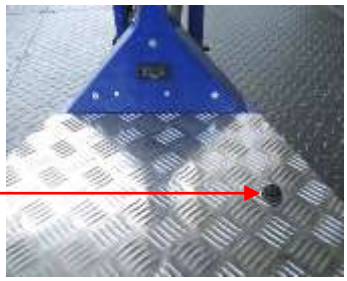
- The general use of the scooter is only allowed on private properties.
- The scooter has no official approval and homologation for road service.
- The maximum payload is 130 kg.
- The scooter is designed for the transport of one person only.
- Before starting, a check of the proper condition of the scooter is required.
- Use the scooter only if the front brake and the rear brake are in proper condition.
- Before starting, a check of the condition of the batteries is required.
- A replacement of the batteries should be done by qualified personnel, only.
- Cut of the electric circuit by pulling out the battery drawer before working on the electrical system.
- The floor on which the scooter is used should be even, dry, chemical free and should have a sufficient capacity.
- The driver should wear appropriate shoes, no high heels.
- Press the speed control at the handle bar slowly and smoothly.
- Drive the scooter with adequate speed.
- Reduce the speed in a turn.
- While driving hold both hands on the handle bar!
- Shield the scooter, the batteries and the charger from heat, fire, water and dirt.
- The maximum payload of the handle bar basket is 5 kg and of the box-attachment is 20 kg. Do not overload it!
- Do not transport explosive or flammable materials.

CONTROL ELEMENTS OF THE SCOOTER

Handle Bar

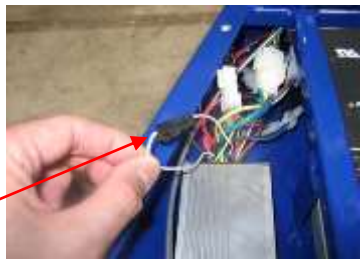
DRIVING THE SCOOTER

1. Position of key switch: "ON"
2. Position of emergency switch: "ON"
3. Press the safety foot-operated switch with your right leg



Now the power circuit to the battery and the electric steering is closed the scooter is ready to drive. The charging level of the battery can be read out of the LED battery controller. Drive the scooter by turning the traction switch at the handle bar.

Speed control under standing platform
With the traction switch the driving speed is stepless variable up to max. 22 km/h.
You can reduce the speed to approx. 15 km/h by connecting the white cables at the electric steering (see picture)



Connect these plugs to reduce the max. speed

Slowing down the scooter
The scooter is equipped with two independently operating hand brake systems. Additionally you can activate the engine brake by lifting your right leg from the foot-operated switch and the scooter will stop after approx. 5 meters.

Pressing the left hand brake lever:
Brake pads of the rear wheel slow down the scooter according to the pressure on the hand brake lever. In general, when pressing a hand brake lever (left of right) the engine brake is activated automatically and the engine stops.

Pressing the right hand brake lever:
The front wheel will be stopped similarly.

Safety foot-operated switch:
By lifting the leg from the safety foot-operated switch the engine brake is activated and stops the scooter.

CHARGING THE BATTERIES:

1. Position of key switch: "Off".
2. Open the battery drawer a few centimeters and connect the plug of the charger cable with the charger socket at the right side of the battery drawer.
3. Put the power plug of the charger into the power outlet.
4. Turn on the charger by pressing the rocker switch.

The operating lamp (left) of the charger is glowing red permanently.
The charging lamp (right) is glowing orange if the battery is empty, the lamp is glowing green if the charging procedure is finished. The charging time is approx. **10 to 12** hours if the battery is totally empty.
Prerequisite for properly fully charged batteries is an uninterrupted charge. Interrupting the charge in the meantime can cause capacity loss and premature failure of the batteries.

Charger socket

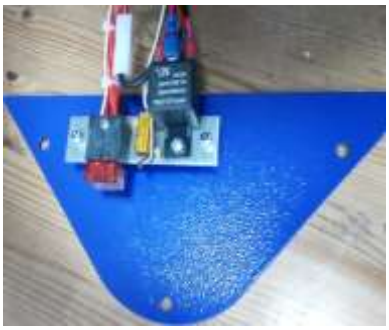
Battery controller

In the case that the capacity of the battery is not sufficient for the operating period of the scooter the battery controller shuts down the power circuit if the voltage of the battery is below 32,04 volts.
Thereby the battery is protected against deep discharge.

MAINTENANCE AND REPAIRING

Annual inspection is important for the safety of the scooter and should be arranged by the user. The inspection is to be done by authorized personnel only.

Changing the fuses
The fuse of the drive motor (20 Amp), the electric steering (3 Amp) and the charger socket (10 Amp) are behind the frontal faceplate.



Adjusting the front wheel brake
Before starting check if the front wheel brake is in proper condition. Check the brake pads every 6 months. You can adjust the brake wire with the setscrews on the brake lever or on the front wheel.

Setscrew on the front wheel

Adjusting the rear wheel brake
Before starting check if the front wheel brake is in proper condition. Check the brake pads every 6 months. You can adjust the brake wire with the setscrews on the brake lever or on the front wheel.

Setscrew for the rear brake

Checking the wheels
Before starting check if the wheels are in good condition and if the air pressure is sufficient. (max. 3bar)

SAFETY DEVICES FOR THE ELECTRONIC

Relays	24V, resilient up to 40 Ah
Resistor	reduced from 36V to 24V
Fuse 25 Amp (battery)	resilient up to 80 V
Fuse 20 Amp (motor)	resilient up to 80 V
Fuse 3 Amp (electric steering)	resilient up to 80 V
Fuse 10 Amp (charger socket)	resilient up to 80 V
Battery controller	3 batteries each 6 cells = 18 cells
Against deep discharge	value =1,78 V each cell 1,78 x 18 = 32,04V

The charging level of the battery can be read out of the LED battery controller.
In the case that only the red diode of the battery control is visible, the batteries need to be charged immediately! This guarantees that the batteries cannot be deep discharged.

TROUBLE SHOOTING

Problem	Reason	Solution
Key switch and emergency switch are on – but no signal	1. Fuse broken 2. Plug connection interrupted 3. Battery empty 4. Electric steering defective	1. Change fuse 2. Check cables and luster terminal 3. Charge or replace battery 4. Change electric steering
Engine out of order	1. Traction switch defective 2.Electric steering defective 3. Engine defective 4. Safety foot-operated switch without function	1. Change drive control 2. Change electric steering 3. Change motor 4. Replace safety foot-operated switch
Wheel brakes without function	1. Brake wired snapped 2. Leverage to low	1. Replace brake wire 2. Adjust brake setscrew
Rear wheel makes noise	Wheel bearing defective	Replace wheel bearing
Handle bar is fluttering	Rear wheel noncircular	Replace wheel
Lamps of the charger do not glow	1. No power on charger 2. Charger fuse defective	1. Check charger plug 2. Replace fuse
Charger: Lamp is red, but no charging	Fuse at battery drawer defective	Replace fuse
While charging the operating lamp must be red and the charging lamp must be yellow. Charging lamp is green if charging is finished.		

WIRING DIAGRAM