

<p align="center">Test Report</p> <p align="center">EN 15194</p> <p align="center">Cycles - Electrically power assisted cycles - EPAC Bicycles</p>	
Report reference No.....	HT21DR-0210475
Tested by (name+ signature).....	Gauk Zhang 
Approved by (name+ signature).....	Tony Yang 
Date of issue.....	Feb. 05, 2021
Testing Laboratory Name.....	Honton Compliance Laboratories (Shenzhen) Co., Ltd.
Address.....	3/F, No. 80, East LaiwuShan, Tongsheng Community, Dalang Street, Longhua District, Shenzhen 518109, China
Testing location	Same as above
Applicant's Name.....	Longxiang Group Limited
Address.....	Rooms 1318-19, Hollywood Plaza, 610 Nathan Road, Mongkok, Kowloon, HK
Standard.....	EN 15194: 2017
Test procedure.....	Type test
Procedure deviation.....	N/A.
Non-standard test method.....	N/A.
Test item description.....	Electric Bike
Manufacturer.....	Guangzhou Handsome Hardware Plastic Product Co., LTD. East Side, Haochongkou, Dongchong Town, Nansha District, Guangzhou
Trademark.....	Super Handsome
Model / Type reference	LX-1, LX-1A, LX-1B, LX-1C, LX-1D, LX-1E, LX-1F, LX-1G, LX-1H, LX-1J, LX-1K, LX-1L, LX-1M, LX-1N, LX-1O, LX-1P, S103, M101
Rating(s)	Input: 110-230VAC, 2.2A, 250W

Summary of testing:

Tests performed:

- EN 15194: 2017

The submitted samples were found to comply with the requirements of above specification

Possible test case verdicts:

- test case does not apply to the test object..... : N/A

- test object does meet the requirement : P (Pass)

- test object does not meet the requirement : F (Fail)

Testing:

Date of receipt of test item : Feb. 01, 2021

Date(s) of performance of test : Feb. 01, 2021 to Feb. 05, 2021

Attachment No.1: Equipments List

Attachment No.2: Photo documentation

Label:

Electric Bike
Model: LX-1
Input: 110-230VAC, 2.2A, 250W

Longxiang Group Limited
Made in China

Note: 1. All models are similar except for the model name and rating.
2. Height of WEEE mark at least 7mm, CE mark at least 5mm.

Model List :			
Model No.	Input voltage	Input current	Power
LX-1, LX-1A, LX-1B, LX-1C, LX-1D, LX-1E, LX-1F, LX-1G, LX-1H, LX-1J, LX-1K, LX-1L, LX-1M, LX-1N, LX-1O, LX-1P, S103, M101	110-230VAC	2.2A	250W

General remarks:

"(see remark #)" refers to a remark appended to the report.

"(see appended table)" refers to a table appended to the report.

Throughout this report a comma is used as the decimal separator.

The test results presented in this report relate only to the object tested.

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Unless otherwise specified, test are made under normal conditions at an ambient temperature within the range of 15°C to 35°C, RH45% to 75% and an air pressure of 860mbar of 1060mbar

General product information:

Electric Bike, model LX-1, LX-1A, LX-1B, LX-1C, LX-1D, LX-1E, LX-1F, LX-1G, LX-1H, LX-1J, LX-1K, LX-1L, LX-1M, LX-1N, LX-1O, LX-1P, S103, M101. All tests were carried out on model LX-1.

EN 15194			
Clause	Requirement – Test	Result - Remark	Verdict
4	Requirements		P
4.1	The electrically power assisted cycles, shall comply to clause 4, 5 and 6 of the European Standard prEN 14764, in addition to that follows applies.		P
4.2	EPAC specific additional requirements		P
4.2.1	Electric circuit		P
	The electrical control system shall be designed so that, should it malfunction in a hazardous manner, it shall switch off power to the electric motor.		P
4.2.2	Batteries		P
	Batteries shall comply with EN 50272-3, EN 61429		P
	The battery terminals shall be protected against hazardous contacts creating short circuit.		P
	An appropriate overheating and short circuit protection device shall be fitted		P
4.2.3	Electric cables and connections		P
	The temperature shall be lower than the one specified for the cables and plugs and there shall not be corrosion on plug pins and no damage on cable insulation.		P
	Measure cable and plug temperature and judge cable and plug by view.		P
4.2.3.1	Wiring		P
	a) Wire ways shall be smooth and free from sharp edges.		P
	b) Wires shall be protected		P
	c) Wiring shall be effectively prevented from coming into contact with moving parts.		P
	d) If any open coil spring is used, it shall be correctly installed and insulated		P
	e) The movable part is moved backwards and forwards, so that the conductor is flexed through the largest angle permitted by the construction		P
	f) The insulation of internal wiring shall withstand the electrical stress likely to occur in normal use.		P
4.3.2	Cables and conduits		P
	Conduit entries, cable entries and knock-outs shall be constructed or located so that the introduction of the conduit or cable does not reduce the protection measures adopted by the manufacturer.		P
4.2.3.3	Terminals for external conductors		P
4.2.4	Power management		P
4.2.4.1	The test may be performed either on a test track or on a test bench.		P
4.2.4.2	Under all circumstances the braking efficiency shall comply with the bicycle standard pr EN 14764 When tested by the method described in 4.2.4.3 the recordings shall show that		P
	a) Assistance is provided only when the cyclist pedals forward.		P
	b) Assistance is cut off when the cyclist stops pedalling forward such that the cut off distance does not exceed 5 m with brake lever cut off switch or 2m without brake lever cut		P

EN 15194			
Clause	Requirement – Test	Result - Remark	Verdict
	off switch.		
	c) The output or assistance is progressively reduced and finally cut off as the vehicle reaches the maximum assistance speed as designed.		P
4.2.4.3	Test procedure – Electric motor management test		P
4.2.4.3.1	Check that there is no electric motor assistance when pedalling backward.		P
4.2.3.2	Check the assistance cut off.		P
4.2.4.3.2.1	Test conditions		P
	Accuracy: at least $\pm 2\%$;		P
	The ambient temperature shall be between 5°C and 35°C;		P
	The battery shall be fully charged according to the manufacturer instructions.		P
4.2.4.3.2.2	Test method		P
	linear speed versus time measurement (an example is given in informative B);		P
	torque versus distance measurement,		P
	or any other appropriate method.		P
4.2.5	Electro Magnetic Compatibility		P
4.2.5.1	Emission: The EPAC shall conform with normative Annex C.		P
4.2.5.2	Immunity: The EPAC shall conform to normative Annex C.		P
4.2.5.3	Battery charger		P
4.2.6	Maximum speed for which the electric motor gives assistance		P
4.2.6.1	The maximum speed for which the electric motor gives assistance may differ by $\pm 5\%$ when determined according to the test method described in 5.1, from the values specified by the manufacturer.		P
4.2.6.2	Test method - Cut off speed measurement		P
4.2.6.2	Test conditions		P
	The speed-measuring device shall have the following characteristics:		--
	Accuracy: $\pm 2\%$;		--
	Resolution: 0,1 km/h;		--
	The ambient temperature shall be between 5°C and 35°C;		--
	Maximum wind speed: 3m/s;		--
	The battery shall be fully charged according to the manufacturer instructions.		--
4.2.6.2.2	Test procedure		P
	Pre-condition the EPAC by running 5 minutes at 80% of the maximum assistance speed as declared by the manufacturer.		P
	Pedalling, go steadily to reach a speed equal to 1,25 times the maximum assistance speed as declared by the manufacturer.		P
	Record continuously the current and note the speed at which the current drops to a value equal to or less than “no load current point”.		P

EN 15194			
Clause	Requirement – Test	Result - Remark	Verdict
	Record the speed at the no load current point which is the maximum assisted speed.		P
4.2.7	Maximum power measurement		P
5	Marking and labelling		P
6	Instructions for use	See manual	P
	In addition to the instruction required by the bicycles standard EN 15194, each EPAC shall be provided with a set of instructions containing information on:		P
	1) concept and description of electric assistance;		--
	2) recommendation for washing;		--
	3) maximum range as determined according to the EN 15194;		--
	4) control and tell tales;		--
	5) specific EPAC recommendations for use;		--
	6) specific EPAC warnings;		--
	7) recommendations about battery charging and charger use.		--

Annex C			
Electromagnetic compatibility of two EPACs and electrical/electronic sub-assemblies			
C.1	Conditions applying to vehicles and to electrical/electronic sub-assemblies (ESA)		P
C.1.1	Marking		P
C.1.1.1	the make or name of the manufacturer of the ESAs and their components;		P
C.1.1.2	the trade description.		P
C.1.2	Requirements		P
C.1.2.1	All vehicles and ESAs shall be designed and constructed in such a way that, under normal conditions of use, they meet the conditions laid down in this Annex.		P
	However, the measuring methods used in checking the immunity of vehicles and ESAs to electromagnetic radiation described in C4 and C7.		P
C.1.2.2	Requirements relating to wide-band radiation from vehicles		N/A
C.1.2.2.1	Measuring method		N/A
	The electromagnetic radiation generated by the vehicle type submitted for testing are to be measured by the method described in C2.		N/A
C.1.2.2.2	Vehicle reference limits (wide-band)		N/A
C.1.2.2.2.1	If measurements are taken using the method described in C2, in respect of a vehicle-antenna distance of $10,0 \pm 0,2$ m, the radiation reference limit will be 34 dB microvolts/m (50 microvolts/m) in the 30-75 MHz frequency band and 34-45 dB microvolts/m (50-180 microvolts/m) in the 75-400 MHz frequency band. This limit will increase by the frequency logarithm for frequencies above 75 MHz. In the 400-1 000 MHz frequency band the limit remains constant at 45 dB (180 microvolts/m).		N/A
C.1.2.2.2.2	If measurements are taken using the method described in C2, in respect of a vehicle-antenna distance of $3,0 \pm 0,05$ m, 10 dB shall be added to the limit.		N/A

EN 15194			
Clause	Requirement – Test	Result - Remark	Verdict
C.1.2.2.2.3	The measured values expressed in dB (microvolts/m) shall be at least 2,0 dB below the reference limit for the vehicle submitted for testing.		N/A
C.1.2.3	Requirements relating to narrow-band radiation emissions from vehicles		N/A
C.1.2.3.1	The electromagnetic radiation from the vehicle submitted for testing is to be measured by the method described in C3.		N/A
C.1.2.3.2	Vehicle Reference limits for vehicle narrow-band radiation		N/A
C.1.2.3.2.1	If measurements are taken using the method described in C3, in respect of a vehicle-antenna distance of $10,0 \pm 0,2$ m, the radiation reference limit will be 24 dB (16 microvolts/m) in the 30-75 MHz frequency band and 24-35 dB (16-56 microvolts/m) in the 75-400 MHz frequency band. This limit will increase by the frequency logarithm for frequencies above 75 MHz. In the 400-1 000 MHz frequency band the limit remains constant at 35 dB (56 microvolts/m).		N/A
C.1.2.3.2.2	If measurements are taken using the method described in C3, in respect of a vehicle-antenna distance of $3,0 \pm 0,05$ m, 10 dB shall be added to the limit.		N/A
C.1.2.3.2.3	The measured values for the vehicle type submitted for testing expressed in Db (microvolts/m), shall be at least 2,0 dB below the reference limit.		N/A
C.1.2.4	Requirements regarding vehicle immunity to electromagnetic radiation		P
C.1.2.4.1	Tests to determine the immunity of the vehicle type to electromagnetic radiation shall be conducted in accordance with the method described in C4.		P
C.1.2.4.2	Vehicle immunity reference limits		P
C.1.2.4.2.1	If measurements are taken using the method described in C4, the field strength reference level shall be 24 volts/m r.m.s. in over 90 % of the 20 MHz to 1 000 MHz frequency band and 20 volts/m r.m.s. over the whole 20 MHz to 1 000 MHz frequency band.		P
C.1.2.4.2.2	The vehicle representative of the type submitted for testing shall not display any deterioration in the direct control of the vehicle which might be observed by the driver or by any other road user when the vehicle in question is in the state defined in Annex C4, clause 4, and when it is subjected to the field strength expressed in volts/m, which shall be 25 % above the reference level.		P
C.1.2.5	Requirements concerning wide-band ESA radiation		P
	The electromagnetic radiation generated by the ESA submitted for component type-approval shall be measured by the method described in C5.		P
C.1.2.5.2	ESA wide-band reference limits		P
C.1.2.5.2.1	If measurements are taken using the method described in C5, the radiation reference limit will be 64-54 dB (microvolts/m) within the 30-75 MHz frequency band, this limit decreasing by the frequency logarithm, and 54-65 dB		P

EN 15194			
Clause	Requirement – Test	Result - Remark	Verdict
	microvolts/m) in the 75-400 MHz band, this limit increasing by the frequency logarithm.		
C.1.2.5.2.2	The measured values for the ESA submitted for approval, expressed in dB (microvolts/m), shall be at least 2,0 dB below the reference limits.		P
C.1.2.6	Requirements concerning narrow-band ESA radiation		P
C.1.2.6.1	The electromagnetic radiation generated by the ESA submitted for component type-approval is to be measured in accordance with the method described in C6.		P
C.1.2.6.2	ESA narrow-band reference limits		N/A
C.1.2.6.2.1	In the 400-1 000 MHz frequency band the limit remains constant at 55 dB (560 microvolts/m).		N/A
C.1.2.6.2.2	The measured values for the ESA submitted for competent type-approval, expressed in db (microvolts/m), shall be at least 2,0 dB below the reference limits.		N/A
C.1.2.7	Requirements concerning ESA immunity to electromagnetic radiation		P
C.1.2.7.1	The immunity to electromagnetic radiation of the ESA submitted for component type approval will be tested by means of one of the methods described in C7.		P
C.1.2.7.2	ESA immunity reference limits		P
C.1.2.7.2.1	If measurements are taken using the methods described in C7, the immunity test reference levels will be 48 volts/m for the 150 mm stripline testing method, 12 volts/m for the 800 mm stripline testing method, 60 volts/m for the TEM cell testing method, 48 mA for the Bulk Current Injection (BCI) testing method and 24 volts/m for the Absorberlined Chamber testing method.		P
C.1.2.7.2.2	The ESAs representative of the type submitted for testing may not exhibit any malfunction which is able to cause any degradation on the direct control of the vehicle perceptible to the driver or other road user if the vehicle is in the state defined in Annex C, clause 4 at a field strength or current expressed in appropriate linear units 25 % above the reference limit.		P
C.2	Method of Measuring wide-band electromagnetic radiation from vehicles		P
C.2.1	A quasi-peak detector shall be used to measure wide-band electromagnetic radiation.		P
C.2.1.2	According CISPR 12		P
C.2.2	Test conditions (According CISPR 12)		P
C.2.3	State of the vehicle during the test		P
C.2.4	Antenna type, position and orientation(According CISPR 12)		P
C.3	Method of measuring narrow band electromagnetic radiation from vehicles		P
	The measuring equipment shall comply with the conditions laid down in Publication No 16, Edition 2, of the International Special Committee on Radio Interference (CISPR).		--

EN 15194			
Clause	Requirement – Test	Result - Remark	Verdict
	A mean-value detector is used to measure narrow-band electromagnetic radiation.		
C.4	Methods of testing vehicle immunity to electromagnetic radiation		P
C.4.1	These tests are designed to demonstrate the insensitivity of the vehicle to any factor which may alter the quality of its direct control. The vehicle shall be exposed to the electromagnetic fields, described in this Annex, and shall be monitored during the tests.		P
C.4.2	The field strengths shall be expressed in volts/m for all the tests described in this Annex.		P
C.4.3	The test equipment shall be capable of generating the field strengths in the range of frequencies defined in this Annex, and shall meet the (national) legal requirements regarding electromagnetic signal		P
C.4.4	State of the vehicle during the tests		P
C.4.4.1	The mass of the vehicle shall be equal to the mass in running order.		P
C.4.4.1.1	The engine shall turn the driving wheels at a constant speed predetermined by the testing authority in agreement with the vehicle manufacturer.		P
C.4.4.1.2	The dipped-beam headlamps shall be switched on.		P
C.4.4.1.3	The left or right direction indicators shall be on.		P
C.4.4.1.4	All other vehicle systems shall be operating normally.		P
C.4.4.1.5	There shall be no electrical connection between the vehicle and the test surface and no connections between the vehicle and the equipment, save where so required by C.4.1.1.1 or C.4.4.2.		P
C.4.4.2	Where ESAs are involved in the direct control of the vehicle and where these systems do not operate under the conditions described in C.4.1.1.1		P
C.4.4.3	During the tests on the vehicle, only non-interference-generating equipment may be used.		P
C.4.4.4	Under normal conditions, the vehicle shall be facing the antenna.		P
C.4.5	Type, position and orientation of the field generator		P
C.4.5.1	Type of field generator		P
C.4.5.1.1	The criterion for the selection of the field generator type is the capacity of the latter to attain the prescribed field strength at the reference point (see C.4.5.4) and at the appropriate frequencies.		P
C.4.5.1.2	Either the antenna(s) or a transmission line system (TLS) may be used as the field generating		P
C.4.5.1.3	The design and orientation of the field generator shall be such that the field is polarised both horizontally and vertically at frequencies between 20 and 1 000 MHz.		P
C.4.5.2	Measurement height and distance		P
C.4.5.2.1	Height		P

EN 15194			
Clause	Requirement – Test	Result - Remark	Verdict
C.4.5.2.1.1	The phase mid-point of all antennas shall not be less than 1,5 m above the vehicle plane.		P
C.4.5.2.1.2	No part of the antenna radiator elements shall be less than 0,25 m from the vehicle plane.		P
C.4.5.2.2	Measuring distance		P
C.4.5.2.2.1	Greater homogeneity of the field may be obtained by placing the field generator as far as technically possible from the vehicle. This distance will normally be in the range 1 to 5 m.		P
C.4.5.2.2.2	There shall be no absorption material between the transmitting antenna and the vehicle under test.		P
C.4.5.2.3	Position of the antenna in relation to the vehicle		P
C.4.5.2.3.1	The field generator shall be positioned in the median longitudinal plane of the vehicle.		P
C.4.5.2.3.2	No part of the TLS, except the vehicle plane, may be less than 0,5 m from any part of the vehicle.		P
C.4.5.2.3.3	Any field generator placed above the vehicle shall cover at least 75 % of the length of the vehicle.		P
C.4.5.2.4	Reference point		P
C.4.5.2.4.1	The reference point is the point at which the field strengths are established and is defined as follows:		P
C.4.5.2.4.1.1	Horizontally, at least two metres from the antenna phase mid-point or, vertically, at least one metre from the TLS radiator elements;		P
C.4.5.2.4.1.2	In the median longitudinal plane of the vehicle;		P
C.4.5.2.4.1.3	At a height of $1,0 \pm 0,05$ m above the vehicle plane;		P
C.4.5.2.4.1.4	at $0,2 \pm 0,2$ m behind the vertical centre line of the vehicle's front wheel in the case of motorcycles.		P
	at $0,2 \pm 0,2$ m behind the vertical centre line of the vehicle's front wheel in the case of motorcycles.		P
C.4.5.5	If it is chosen to subject the rear part of the vehicle to radiation, the reference point shall be established as stated in C.4.5.4. In this case the vehicle will be positioned with its front part facing in the opposite direction to the antenna and as if it had been rotated horizontally through 180 degrees about its central point. The distance between the antenna and the nearest part of the outer surface of the vehicle shall remain the same.		P
C.4.6	Requisite test and condition		P
C.4.6.1	Range of frequencies, duration of the tests, polarisation		P
	The vehicle shall be exposed to electromagnetic radiation in the 20-1 000 MHz frequency range.		P
C.4.7	Generation of the requisite field strength		P
C.4.8	Inspection and monitoring equipment		P
	For the purposes of monitoring the external part of the vehicle and the passenger compartment and of determining		--

EN 15194			
Clause	Requirement – Test	Result - Remark	Verdict
	whether the conditions laid down in 6.4.6.2 have been met, use will be made of a video camera or cameras.		
C.5	Method of measuring wide-band electromagnetic radiation from separate technical units (ESA)		P
C.5.1	General		P
C.5.1.1	Measuring equipment		P
C.5.1.2	Test method(According CISPR 25 Absorberlined Chamber)		P
C.5.2	Test conditions(According CISPR 25 Absorberlined Chamber)		P
C.5.3	State of the ESA during the test (According CISPR 25 Absorberlined Chamber)		P
C.5.4	Antenna type, position and orientation (According CISPR 25 Absorberlined Chamber)		P
C.6	Method of measuring narrow-band electromagnetic radiation from separate technical units (ESAs)		P
	The measuring equipment shall meet the conditions laid down in publication No 16, edition 2 by the International Special Committee on Radio Interference (CISPR).		P
C.7	Methods of testing the ESA immunity to electromagnetic radiation		P

EN 15194			
Clause	Requirement – Test	Result - Remark	Verdict

Annex D Components list					P
Object/part No.	Manufacturer/ trademark	Type/model	Technical data	Standard	Approval/Reference
Plastic enclosure	Various	Various	125°C, V-1	EN 15194/UL 94	Tested in appliance/ UL recognized
Internal wire	Various	Various	22AWG, 80°C,300V	UL 758	UL recognized
PCB	Various	Various	V-1,105°C	UL 796	UL recognized
Motor	Various	Various	-	EN 15194	Tested in appliance
Electrical Tubing	Various	Various	130°C	UL 224	UL recognized
Metal enclosure	Various	Various	min. thickness 1.0mm	—	Tested in appliance
Terminal	Various	Various	80°C	-	Tested in appliance
Connector	Various	Various	80°C	-	Tested in appliance
Li-ion Battery	Various	Various	48V, 8700mAh,417.6Wh	-	Tested in appliance
Li-ion Battery Charger	Shenzhen Atnen Technology Co.,Ltd	LBC0305460 20	Input: 100-240VAC,2.2A, 50/60Hz Output:54.6VDC, 2.0A	EN 62368-1	CE recognized

Attachment No.1
Photo documentation

Photo 1 : Outlook of Electric Bike (model: LX-1)



Photo 2 : Outlook of Electric Bike (model: LX-1)

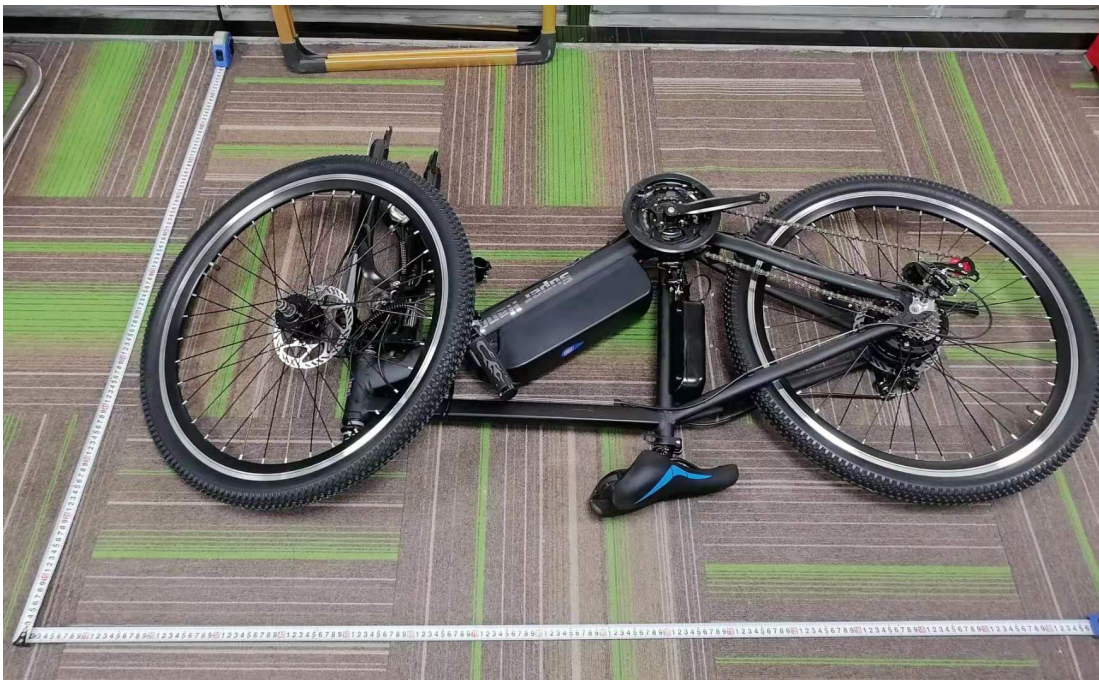


Photo 3 : Partial view of Electric Bike (model: LX-1)



Photo 4 : Inside view of Electric Bike (model: LX-1)



End of report