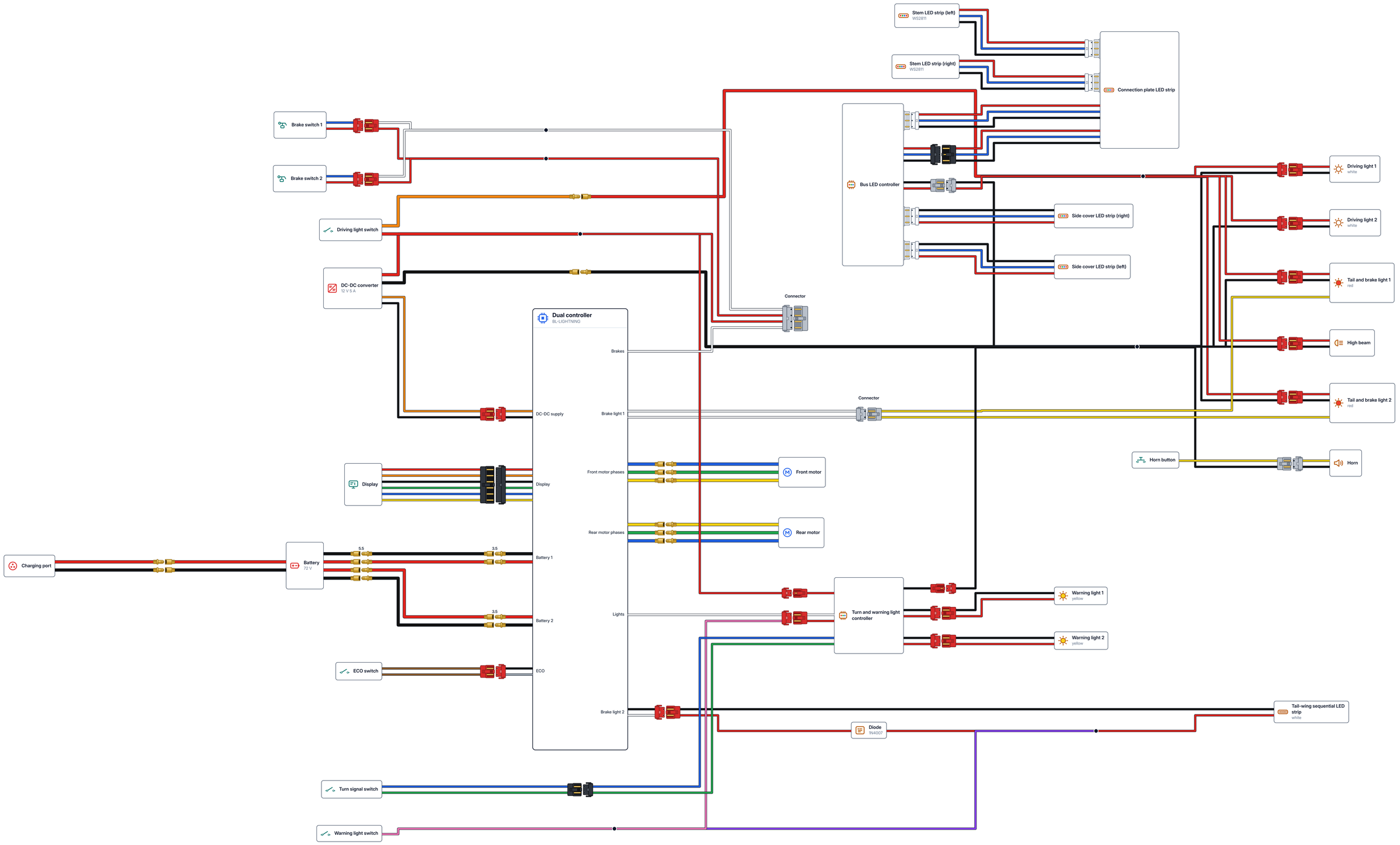
WIRING DIAGRAM

Bluetran Lightning | 72 V

FOHZSHOP.FR



WIRE COLOURS

- Black BK
- Blue BU
- Brown BN
- Green GN
- Grey GY
- Orange OG
- Pink PK
- Red RD
- Violet VT
- White WH
- Yellow YE

CONNECTORS

Gold pins: male side. Dark sockets: female side.

- Bullet connectors
- Board header
- JST SM plug
- Splice: wires are joined at this point

NOTES

1. The original names the model only through the controller reference, BL-LIGHTNING, and the file name, LIGHTNING.SchDoc. The Chinese title of the controller calls it a front motor controller, the English title a two-in-one controller; both motors are wired to it.
2. The driving light switch (wires J1 and J2), called the main switch on the original, feeds 12 V to the driving lights, the tail lights, the high beam and the bus LED controller. One of the four headers of that controller is not connected to anything.
3. The switch wires carry the markers J1 to J8 on the original (see the table). The black wire J3 leaves the ground splice through a grey 2-pin plug, whose pin 2 is empty, and stops with the mention “inside the switch”. The same mention, with no wire beyond, appears on one terminal of the warning light switch, on the common terminal of the turn signal switch and on one terminal of the horn button.
4. The switch of wires J7 and J8 is marked “ECO” in Chinese and “Front drive switch” in English on the original. Wire J7 is drawn pale pink there but marked light brown, J8 being marked brown: the written name wins, both are noted brown.
5. In position L, the turn signal switch closes the green wire J5, which reaches terminal R of the turn and warning controller; in position R, it closes the blue wire J4, which reaches terminal L.
6. The SC and JS inputs of the turn and warning controller carry no further explanation: SC takes the white wire from the controller, JS the warning light switch. Its RF and LF outputs feed the two yellow warning lights, its RR and LR outputs are not connected to anything.
7. The tail-wing strip, whose LEDs are marked “white”, is fed by the purple wire coming from the warning light switch and by the white controller wire through a 1N4007 diode, – side toward the strip and + side toward the controller. The original does not say whether it is a running light or a brake light; it calls the two wires linking it to the controller the “black-white brake light harness”.
8. At the top right, the original also draws the kit harnesses separately, with a length to fill in (100 mm on three of them): two 3 mm² red and black cables with 5.5 male and 3.5 female plugs (those drawn on the battery cables), the six-wire display cable, two four-wire cables, a double red wire with two SM terminals, the one-to-two brake harness, the tail-wing cable with its diode and the one-to-six plus three harness. There it calls the wire drawn pink here that leaves the warning light switch the “five-function purple wire”, and draws in red the wire running from that point to the tail-wing strip. These harnesses are not repeated as components.
9. The horn and the high beam are drawn in one frame. The horn + terminal starts red for a few millimetres, then wire J6 is yellow.
10. Both brake switches carry the same “left / right” label on the original, which does not say which one is on the left.
11. The original diagram shows no throttle.

DOCUMENT

Based on the manufacturer diagram “Schéma électrique BLUETRAN” dated 2 September 2021.

Redrawn by FõhzShop on 1 November 2026.

Disconnect the battery before any work.

CONNECTOR PINOUT

Connector	To	Wire
Dual controller Front motor phases	**Front motor** Connectors: Bullet connectors	Blue · Motor phase Green · Motor phase Yellow · Motor phase
Dual controller Rear motor phases	**Rear motor** Connectors: Bullet connectors	Yellow · Motor phase Green · Motor phase Blue · Motor phase
Dual controller DC-DC supply	**DC-DC converter** Input Connectors: JST SM plug	2 · Orange · IN+ 1 · Black · IN–
Dual controller Lights	**Turn and warning light controller** Input Connectors: JST SM plug	2 · White · SC
Battery Output	**Dual controller** Battery 1 Connectors: Bullet connectors 5.5 / Bullet connectors 3.5	Black · Battery – Red · Battery +
Battery Output	**Dual controller** Battery 2 Connectors: Bullet connectors 5.5 / Bullet connectors 3.5	Red · Battery + Black · Battery –
Charging port	**Battery** Charge Connectors: Bullet connectors	1 · Red · Charge + 3 · Black · Charge –
Display	**Dual controller** Display Connectors: JST SM plug	Red Orange Black Green Blue Yellow
DC-DC converter Output	**Splice**	Red · +12 V
DC-DC converter Output	**Splice** Connectors: Bullet connectors	Black · Ground
Splice	**Driving light switch**	Red · J1
Splice	**Turn and warning light controller** Power Connectors: JST SM plug	2 · Red · Supply +
Splice	**Connector**	→ 1 · Red
Splice	**Driving light switch** Connectors: Bullet connectors	Red, then orange after the connector · J2

Connector	To	Wire
Splice	**Turn and warning light controller** Power Connectors: JST SM plug	1 · Black · Supply –
Bus LED controller Power	**Splice** Connectors: JST SM plug	1 · Black 2 · Red
Bus LED controller RGB output 1	**Connection plate LED strip** Input Connectors: Board header	Red · LED + Blue · LED data Black · LED –
Bus LED controller RGB output 2	**Connection plate LED strip** Output Connectors: JST SM plug	1 · Red · LED + 2 · Blue · LED data 3 · Black · LED –
Bus LED controller RGB output 3	**Side cover LED strip (left)** Connectors: Board header	Black · LED – Blue · LED data Red · LED +
Bus LED controller RGB output 4	**Side cover LED strip (right)** Connectors: Board header	Black · LED – Blue · LED data Red · LED +
Stem LED strip (right)	**Connection plate LED strip** RGB output 1 Connectors: Board header	Red · +12 V Blue · LED data Black · Ground
Stem LED strip (left)	**Connection plate LED strip** RGB output 2 Connectors: Board header	Red · +12 V Blue · LED data Black · Ground
Driving light 1	**Splice** Connectors: JST SM plug	2 · Red 1 · Black
Driving light 2	**Splice** Connectors: JST SM plug	2 · Red 1 · Black
Tail and brake light 1	**Splice** Connectors: JST SM plug	2 · Red 1 · Black
Tail and brake light 1 Brake light	**Connector**	→ 1 · Yellow
Tail and brake light 2	**Splice** Connectors: JST SM plug	2 · Red 1 · Black
Tail and brake light 2 Brake light	**Connector**	→ 2 · Yellow
Connector	**Dual controller** Brake light 1	1 · White 2 · White

Connector	To	Wire
High beam	**Splice** Connectors: JST SM plug	2 · Red · LED + 1 · Black · LED –
Horn	**Splice** Connectors: JST SM plug	1 · Black · Ground
Horn	**Horn button** Connectors: JST SM plug	2 · Yellow · J6
Tail-wing sequential LED strip	**Splice**	Red · +12 V
Tail-wing sequential LED strip	**Dual controller** Brake light 2 Connectors: JST SM plug	1 · Black · Ground
Diode Output	**Splice**	Red
Diode Input	**Dual controller** Brake light 2 Connectors: JST SM plug	2 · Red, then white after the connector
Brake switch 1	**Splice** Connectors: JST SM plug	2 · Blue, then white after the connector 1 · Red
Brake switch 2	**Splice** Connectors: JST SM plug	2 · Blue, then white after the connector 1 · Red
Splice	**Connector**	→ 2 · White → 1 · Red
Connector	**Dual controller** Brakes	2 · White
ECO switch	**Dual controller** ECO Connectors: JST SM plug	1 · Brown, then black after the connector · J8 2 · Brown, then grey after the connector · J7
Turn signal switch	**Turn and warning light controller** Turn signals Connectors: JST SM plug	1 · Blue · J4 3 · Green · J5
Warning light switch	**Splice**	Pink
Splice	**Splice**	Violet
Splice	**Turn and warning light controller** Input Connectors: JST SM plug	1 · Pink, then red after the connector · JS
Turn and warning light controller Front right turn signal	**Warning light 1** Connectors: JST SM plug	1 · Black · LED – 2 · Red · LED +
Turn and warning light controller Front left turn signal	**Warning light 2** Connectors: JST SM plug	1 · Black · LED – 2 · Red · LED +