
BRAIN BOX LITE™



ZPN 741399

Introduction

Thank you for purchasing **Brain Box Lite**, another quality product from Zodiac, Europe's leading custom design house. **Brain Box Lite** offers a simple but elegant solution to your custom bike electrical set up providing the interface between the rider and the bike's main electrical ancillaries as shown in the diagram on page 3. **Brain Box Lite** is designed to operate with up to four handlebar control switches (not supplied). These switches allow the **Brain Box Lite** module to provide the rider with control of the following bike functions:



- Indicator Left.
- Indicator Right.
- Horn.
- Headlamp Hi/Lo Beam.

In addition, an output is provided for a turn signal warning light. The module features limited short circuit protection and uses no moving parts in the design. Electrical connections to the **Brain Box Lite** module are made using standard automotive "crimp" terminals.

Control Switches

Brain Box Lite is designed to work with momentary "push to make" push button switches. These switches are readily available in many custom handle bar control kits and offer a clean "switch less" look to the handlebars. When pressed the switches connect the **Brain Box Lite** switch inputs to ground (chassis).

Control Switch Operation

The handlebar control switches operate in the following manner.



Turn Signal Switches.

Brain Box Lite is supplied with automatic turn signal cancelling mode enabled but can easily be reconfigured to manual only turn signal cancelling. (See below).



In automatic mode, momentarily pressing either turn signal switch will activate the appropriate turn signal. The turn signal will automatically cancel after 10 flashes. During these 10 flashes you can choose to manually cancel the signal by pressing the same switch again. Pressing the opposite turn signal switch will automatically cancel the current turn signal and activate the opposite turn signal. Pressing and holding a turn signal switch prevents the signal from automatically cancelling until the switch is released.

In Manual only mode the indicators do not automatically cancel after 10 flashes. In this mode momentarily pressing either turn switch will activate the appropriate turn signal continuously. Press the same switch to cancel the turn signal. Pressing the opposite turn signal switch will automatically cancel the current turn signal and activate the opposite turn signal.

Changing Between Auto & Manual Only Turn Signal Cancelling

You can toggle between automatic and manual cancelling by using the following procedure:

1. Switch Ignition on.
2. Press and hold the "Headlamp Hi/Lo" switch and the "Right Hand Turn Signal" switch until you hear a short confirmation blip from the horn. (This will take approximately 10 seconds to occur).
3. Turn Ignition Off.

You have now changed between Automatic and Manual turn signal cancelling. Follow the same procedure to change back.

Hazard Warning Signal

You can enable the Hazard Warning Signal by pressing both turn signal switches at the same time. The Hazard Warning Signal will continue until both switches are pressed again or the ignition is turned off. Note that the Hazard Warning Signal does not auto cancel.

*If you experience difficulty in obtaining suitable switches or would simply like further advice please do not hesitate to contact us.

General Installation Notes

1. Seek professional advice before carrying out any work on your motorcycle that you are unsure of.
2. Disconnect and remove the battery before attempting any wiring work on your motorcycle. Always disconnect the negative terminal first and reconnect last.
3. Mount the **Brain Box Lite** control unit in a suitable location away from any direct source of heat, water spray and excessive vibration. Take additional steps to protect the module from such hazards as necessary. Mount the unit vertically using the holes provided and with the terminals exiting downwards. Do not over tighten mounting screws. The use of suitable washers will help to spread mechanical loads.
4. Make the electrical connections to the module terminals using automotive type insulated crimp terminals (receptacle, 6.3mm) and a suitable professional crimping tool.
5. You **must** ensure that the correct fuses have been installed in supply wires in accordance with the wiring information on pages 2 & 3. These fuses protect your control unit from damage should a short circuit occur. If a fuse blows investigate cause of failure before replacing. Only replace a blown fuse with one of the same type and rating. We recommended the use of automotive minisize blade fuses.
6. Use suitable protection, e.g. grommets, where wires pass through bulkheads, frames etc.
7. An installation that does not require all the features that **Brain Box Lite** provides must have unused terminals insulated. This is to prevent inadvertent connection to the motorcycle frame, other wiring or water. For this purpose we strongly recommend the use of adhesive heat shrink sleeving crimped at the open end.
8. Do not re-connect the battery until all wiring has been completed and checked.
9. Check and test all electrical functions prior to riding the motorcycle.

Specification

Electrical

Power Supply:	Motorcycle 12 Volt DC battery system.
Current consumption:	<10 mA.
Headlamp output:	12V 55/60W Bulb recommended. 6A max.
Indicator output:	12V 21W Bulb, max 2 per output, recommended. (Or L.E.D. alternative not exceeding 4 amps per output)
Horn output:	6A max.
Warning Lamp output:	12V 24W bulb or less recommended. (Or L.E.D alternative, max 2A)

Mechanical

Case:	Moulded from flame retardant ABS plastic.
Terminals:	6.25mm tabs. (Use 6.3mm crimp receptacle terminals to make connections)

Warranty

We do not compromise on quality so why should you? **Brain Box Lite** is covered for a warranty period of 12 months from the date of purchase. Subject to the terms listed below the warranty will provide for the repair of, or at the discretion of Zodiac, the option to replace a module which is identified as faulty or as a result of inferior workmanship or materials. Products over 28 days old may be replaced with a refurbished product.

- The warranty shall only apply to defects that occur within the 12 month warranty period.
- Proof of purchase must be provided.
- The Brain Box Lite is returned to Zodiac or its agent as instructed.
- The warranty does not cover any defects caused by accidents, misuse, fair wear and tear, neglect, tampering with equipment, improper or inexperienced installation, or any attempt at adjustment or repair other than by Zodiac approved agents.

Further Information

If you would like further information on **Brain Box Lite**, other Zodiac custom parts, bike builds, part builds, or would like to order a catalogue, please contact us using the details below.

Zodiac International B.V.

Industrieweg 44
3641 RM Mijdrecht
The Netherlands.



Tel: +31 (0)297 28 86 21
Fax: +31 (0)297 28 82 26
e-mail: sales@zodiac.nl
Web: www.zodiac.nl



Horn Switch.
Press to sound the horn.



Headlamp Hi/Lo Switch.

Pressing this switch will toggle the headlamp between Hi and Lo beam. In our diagram the lights are switched on when the ignition key is set to the 3rd position. When the ignition is first switched on **Brain Box Lite** sets the headlamp to Lo beam.

Installation

The following table and diagram provide information to enable the competent installer to carry out a successful installation. The information should be used in conjunction with the General Installation Notes and Specifications found on the back page of this booklet. **In particular we draw your attention to note 5 regarding the importance of fusing your unit correctly.**

If you are at all unsure about your wiring skills, or any other aspect of the installation, we strongly recommend you seek the advice of a qualified automotive technician before commencing any work.

Terminal ID*	Function	Notes
1	Headlamp Supply	From Ignition Key Switch 3rd Position (Fused 10A)
2	Auxiliary Supply	Module Positive Supply (Fused 15A)
3	Headlamp Hi	Feed to Headlamp Hi Beam
4	Headlamp Lo	Feed to Headlamp Lo Beam
5	Warning Lamp	Feed to Rider Warning Lamp
6	Horn	Feed to Horn
7	Indicator Right	Feed to Turn Signal Right
8	Indicator Left	Feed to Turn Signal Left
9	Ground	Module Negative Supply
10	Switch 1	To Headlamp Hi / Lo Switch
11	Switch 2	To Horn Switch
12	Switch 3	To Turn Signal Right Switch
13	Switch 4	To Turn Signal Left Switch

Wiring Diagram

To be used in conjunction with table on P 2.

