

These things look a bit complicated when you first have a look at them, but here are the key things to get your head around...

*All your 12 volt electrical systems will be connected up to the fuse box and a single control cable then attaches to your Control panel. You can mount the control panel somewhere convenient, without having to waste a large section of your furniture just to hide the multitude of wires. The Fuse panel needs to go somewhere you can run the wiring too, and needs to be accessible... but not 'on view'.*

What the Control Panel does:	What the control panel does not do:
<p>Fused circuits for your 12v systems in the campervan.</p> <p>Touch control switches for 2 light circuits, kitchen water pump, and AUX circuit.</p> <p>Voltmeter for car and leisure batteries.</p> <p>Split-charge relay between car &amp; leisure batteries on vans that DO NOT have stop-start technology. OR Automatic control of the NDS Battery to Battery charger in vans with stop-start technology (The B2B charger is available separately)</p>	<p>240v charging for your leisure battery - you need a separate 240v to 12v charger for this.</p> <p>Car battery to leisure battery charging in a Euro 8 vehicle (eg Volkswagen T6) - you need an additional Battery to Battery charger to do this.</p> <p>Solar regulator - you must add a separate one of these if you have solar panels fitted</p>

**Note: You should always disconnect the power supply while working on your electrical system.**

#### Leisure Battery power supply.

1. Connect your leisure battery Negative to the earth (eg: a bolt into the van floor)
2. Connect Leisure battery Positive to terminal B2
3. Connect another Earth strap to terminal J3

*Remember: fuse your positive battery connections as close as possible to the battery using a fuse that is rated lower than your cables.*

#### Car battery power supply.

>> For vans **without** a factory fitted start/stop function:

If you want the system's split charging ability enabled, and be to be able to check the car battery voltage on your control panel then:

1. Connect the cars D+ output to terminal JP6 pin 1
2. Connect Car Battery + to B1

*D+ is a circuit which becomes live when the engine is running. Where you can pick up the D+ circuits depends on your van model and age, but typically you will find it in the fuse panel or, in a T5, on the headlight switch. Google your van model and D+ for a few suggestions.*

>> For vans **with** stop-start technology you have 2 choices:

- a) Use an **NDS Battery to Battery charger**: Use JP13 to connect a D+ line so that the system knows when your engine is running (terminal 1) and attach an NDS battery to battery charger signal wire to JP13 Terminal 2. Your B2B charger will then operate when D+ is live. You will also need to bypass the basic split-charge relay functionality completely by bridging J14 + J15

- b) Use any **other Battery to Battery charger** & simply bypass the battery charging functionality completely by bridging J14 + J15. Your alternative charger will require a D= connection so that it knows when to start operating.

### **Connection from Fuse box to Control Panel**

Use 4 pin cable supplied and Connection JP11.

*The control will not actually work until you connect a battery.*

**IMPORTANT: The system is supplied with fuses that are generally appropriate. However it is your responsibility to check that they are suitable for your individual set up and change them if necessary.**

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One simple example of a common small campervan set up is as follows. Best advice is to read through this in conjunction with the wiring diagram and with the fuse panel to hand before starting.

**Compressor Fridge** (powered by Leisure battery permanently). Fuse is on F7

For the fridge to have permanently power supply:

1. Connect Negative to JP4 Terminal 4
2. Connect positive to JP4 Terminal 3

*3-way fridge ? : Use JP4 Terminal 2 (Fuse 2) for the positive if you only want to run on 12v while driving*

**Lights. Switch 1** - These are fused on F5

1. Negative connects to JP2 Terminal 3
2. Positive connects to JP2 Terminal 2

**Lights. Switch 2** - These are fused on F8.

1. Negative connects to JP1 (any terminal)
2. Positive connects to JP5 Terminal 6

*Light switch 1 can actually control 2 separately fused light circuits - just in case you want to split lights onto 2 fuses for some reason.*

**12 volt power socket (e.g. USB or cigarette lighter style).** Fuse is on F9

To hook up a 12 volt plug:

1. Positive connects to JP5 Terminal 4 (also Terminals 1,5,7,8 if you want to add multiple items to this switch)
2. Negative connects to JP1 (any terminal)

Switch AUX on control panel will power up the socket

**Heater** Fuse is on F3

To power a heater through through the fuse panel

1. Connect Positive to JP3 Terminal 1
2. Connect Negative to JP3 Terminal 3

**Kitchen power supply for cooker ignition and water pump.** Fuse is F7

Use the Pump switch to control supply to the kitchen so:

1. Connect cooker ignition and pump power Positive to JP5 Terminal 12
2. Connect Negatives to JP1 (any terminal)

Switch is the Tap icon on control panel

**Some extra features that are relevant to some users:**

**Alternator charging indicator:**

- Connect D+ to JP6 Terminal 1. This will indicate when ignition is on and the alternator is operating and is also necessary for the split charging function to work (only for vans without a factory fitted start/stop function).

**Battery Charge Power On indicator:**

- Connect the Grey wire from our 21 Amp mains powered battery charger to JP6 Terminal 2 . This will indicate, on your control panel, when the 240v power supply is connected. That's all it does though - it doesn't 'control' the charging.

**Solar Panel connection:** (note there is no reference to this in the Nordelettronica instructions booklet!)

- Connect your Regulator output to JP16 Terminal 2 (Positive) and Terminal 4 (Negative). This will then direct the power to your leisure battery.