



Preliminary ASI-Grin High powered BAC500 Wiring Specifications – 04/25/2013

- Motor Phase wires connected with 100cm standard ASI motor phase/hall wiring harness
- Battery power connected as per **Figure 1 and 2** with provided Grin inline shunt

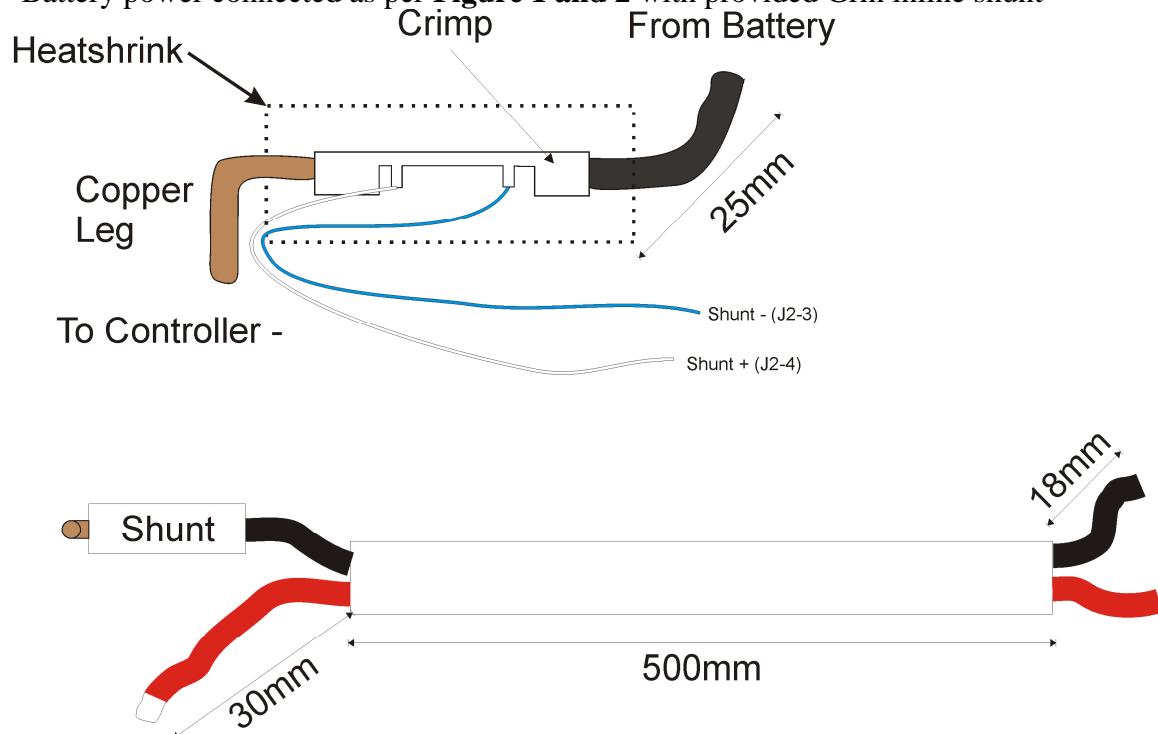


Figure 1: Battery Power and Shunt Diagram

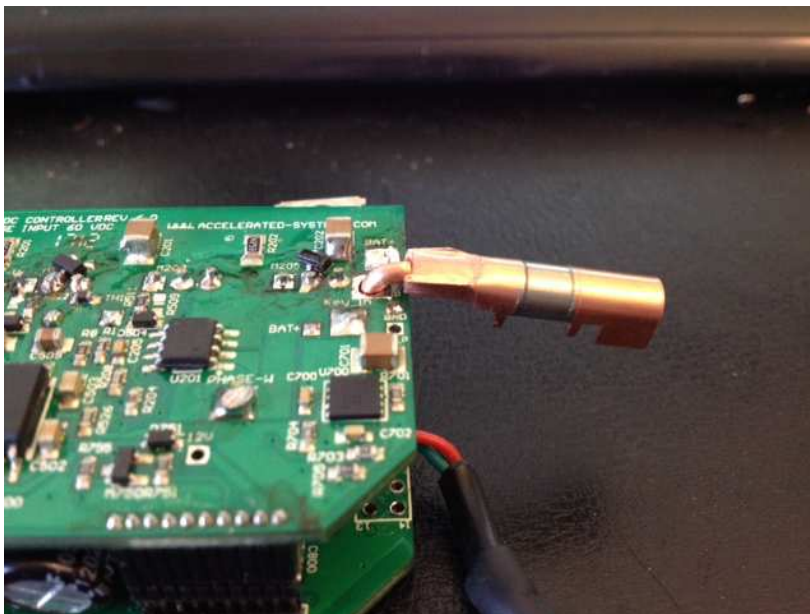
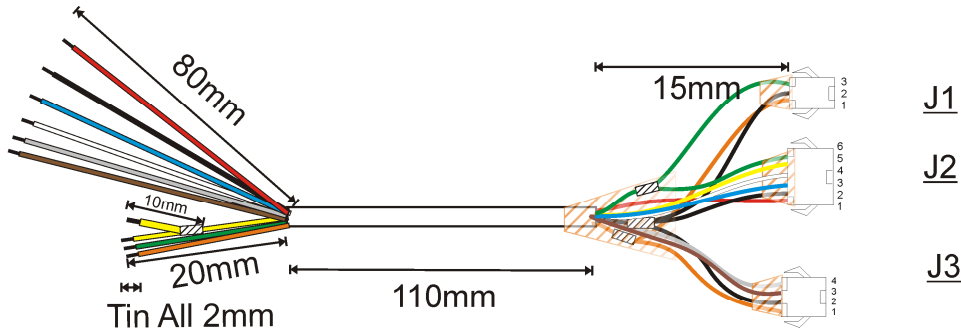


Figure 2: Shunt placement

- Solder Shunt to board, then crimp battery cables with heatshrink in place
- Tin shunt wire tabs, solder shunt wires as per **Figure 1**
- Heatshrink shunt assembly
- Positive battery wire to be soldered on the same side of the board as the shunt
- Grin Custom JST wiring harness soldered to ASI control board as per **Table 1** and **Figure 3** specifications
- 3-Wire TRS Jack to be soldered by ASI, see **Table 1** for details



CABLE:
 - 9x 24 AWG
 - 105degC rated insulation
 - Red, Black, Blue, White, Yellow, Green, Brown, Orange, Grey
 - Black Jacket OD = 5.2mm

J1	J2	J3
JST SMP-03V-BK (BLACK)	JST SMP-06V-BK (BLACK)	JST SMP-04V-BK (BLACK)
1 - Orange 2 - Black 3 - Green	1 - Red 2 - Black 3 - Blue 4 - White 5 - Yellow 6 - Green	1 - Orange 2 - Black 3 - Brown 4 - Grey

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Figure 3: Grin Custom Wiring Harness

Table 1: Grin Wiring Harness to ASI Board Connections

J150-Pin#	Brake and Communications Jumper	
1	Grey-24AWG	Brake 1, J3-4
2	Black-24AWG	Ground, J1-2, J2-2, J3-2
3	Brown-24AWG	Brake 2, J3-3
*4	Black-24AWG	Serial Ground – Sleeve
*9	Green-24AWG	Serial RX – Tip
*11	Red-24AWG	Serial TX – Ring
J151-Pin#	Command I/O and Hall Connections	
6	Yellow-24AWG	Hall Phase C, J2-5
12	Orange-24AWG	5v Throttle & Brake, J1-1, J3-1
13	Green-24AWG	CA/Throttle Signal, J1-3, J2-6
Other	Power Connections	
Battery Positive	Red-12AWG, Red-24AWG	B+, J2-1
Battery Negative	Black-12AWG	B –Ve

*Serial Connection Wiring Harness, **Battery Power Harness**