



LinkPro High Voltage Adapter Installation and Wiring Guide

Initial Release 01/14/10

Rev 1.0

Document Revision History

- 1.0 Initial release

Special Thanks from Belktronix!

- Thank you for your purchase of a Belktronix Prescaling High Voltage Adapter.
- Use CAUTION when working with high voltage battery packs and keep unconnected wires from touching vehicle chassis or other battery terminals during the installation process.
- Please read through the manual to familiarize yourself with the installation process, it covers 3 possible installations.
- Please contact Belktronix if there are questions or problems with the installation or documentation.
- LinkPro datasheets exclude HV Adapter wiring & startup sequence. The data presented herein is based on existing Link10 & XBM models and verified operational. Verify LinkPro prescaler settings are correct.

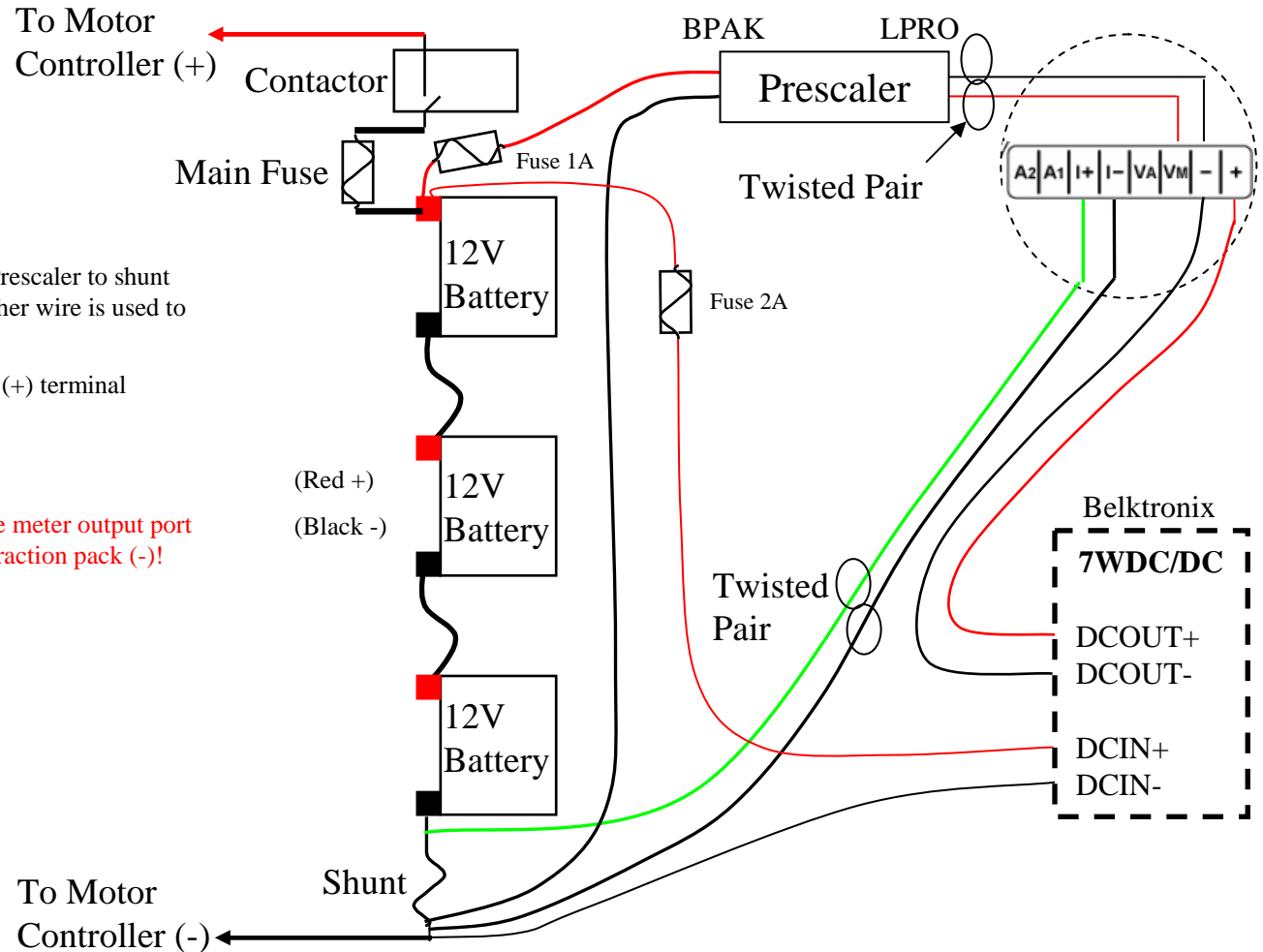
LinkPro Wiring

Exercise caution when working with HIGH VOLTAGE

- **Check wire lengths:** Be sure the Adapter wire lengths are adequate for the installation.
- **Adding wire lengths:** If the wire length supplied with the HV Adapter is not adequate, add more wire to the Adapter using crimp terminals or solder splices. You can add wire to either side of the Adapter in order to have sufficient length for installing the unit. Insulate any crimps or splices carefully from the vehicle chassis.
- **Mounting HV Adapter:** Locate a 1-inch flat area on the vehicle chassis for the HV Adapter to be mounted with the self-stick tape. For metal surfaces and some plastics, clean the surface with rubbing alcohol. (Note: when cold or dampness is present, it will be necessary to pre-heat the area to help with the adhesive process). Carefully peel back the green-checked tape, exposing the sticky tape underneath. Place on cleaned surface and press down. Adapter should not come back off with light movement of the case. Be sure wire leads are not strained and pull the HV Adapter off the mounting location.
- **Wiring the Current Shunt:** Wire up the shunt connections to the meter at this time.
- **Wiring HV Adapter to Meter:** Twist the wires on the LPRO side of the Adapter together to improve noise immunity. Wire the LPRO side first, Black wire (-) to terminal (-) of the LinkPro meter, Red wire (+) to terminal V_M of the LinkPro meter.
- **Wiring HV Adapter to Pack:** Wire the BPAK side of the Adapter to the battery pack as shown in the instructions, with Black (-) wire to the load side of the shunt, not the battery (-) terminal itself. **The last connection will be made with Battery + lead on the HV Adapter to the battery pack.**
- **Wiring LinkPro Power:** Wire power to the meter by one of the 3 methods outlined in the following slides.
- **Power Up the LinkPro:** Follow the manual instructions on changing the voltage scaling factor to the 10:1 setting for the HV Adapter. Note that other E-Meter features are changed as well. Update any functions needing to be changed. **Carefully make the final connection with the BPAK + connection to the Battery + terminal (highest voltage potential from the shunt),** the meter should now reflect the correct pack voltage.

LinkPRO Prescaler Wiring

(Optional HV DC-DC)



Traction Pack, 3 Batteries shown for simplicity

Be sure to set the scaling of the meter to 10:1!

Meter power (-) connection is made through the Prescaler to shunt load side. This eliminates any ground loop if another wire is used to connect shunt load side to meter power (-).

Locate all fuses as close as possible to the battery (+) terminal

RED wire is Positive (+) terminals

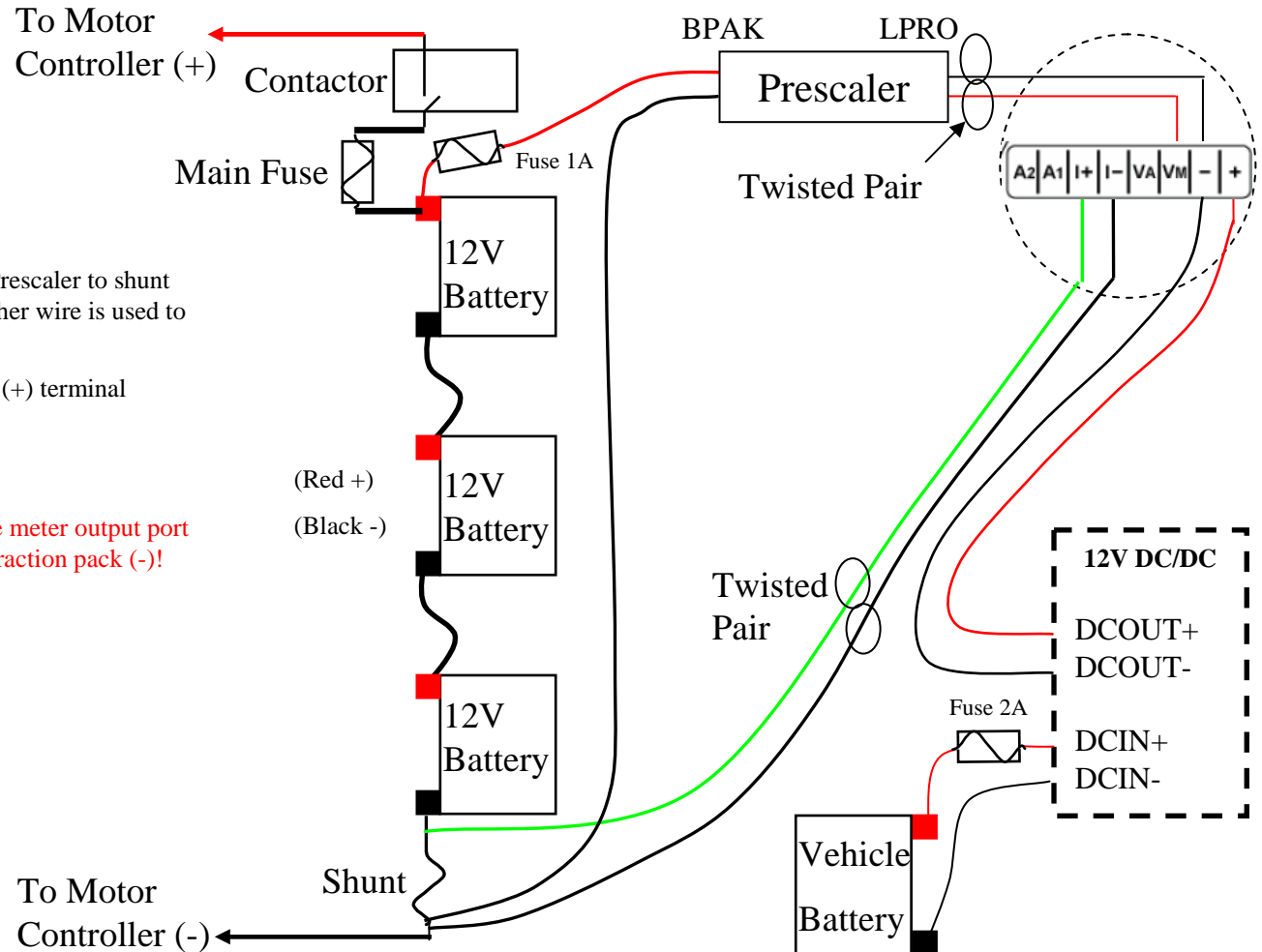
Black wire is Negative (-) terminals

CAUTION: Even with a HV DC-DC installed, the meter output port is not isolated! Outputs will be referenced to the traction pack (-)!

Working with HIGH VOLTAGE Systems can be Dangerous! Be CAREFUL!

LinkPRO Prescaler Wiring

(Optional LV DC-DC)



To Motor
Controller (+)

BPAK LPRO

Prescaler

Main Fuse

Fuse 1A

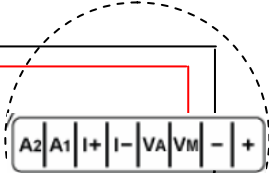
12V
Battery

12V
Battery

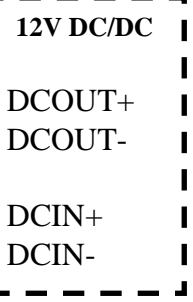
12V
Battery

(Red +)
(Black -)

Twisted Pair



Twisted Pair



Fuse 2A

Vehicle
Battery

To Motor
Controller (-)

Shunt

Traction Pack, 3 Batteries shown for simplicity

Be sure to set the scaling of the meter to 10:1!

Meter power (-) connection is made through the Prescaler to shunt load side. This eliminates any ground loop if another wire is used to connect shunt load side to meter power (-).

Locate all fuses as close as possible to the battery (+) terminal

RED wire is Positive (+) terminals

Black wire is Negative (-) terminals

CAUTION: Even with a LV DC-DC installed, the meter output port is not isolated! Outputs will be referenced to the traction pack (-)!

Working with HIGH VOLTAGE Systems can be Dangerous! Be CAREFUL!