

BATTERY EQUALIZER/CONVERTER

Installation Instructions

Model 21060E00, 21080E00, 21100E00 and 21100E01 (Equalizers)
21060C00, 21080C00 and 21100C00 (Converters)

NOTE: A detailed discussion of Equalizer installation, wire sizing, positioning, etc. is covered in Sure Power Application Note # 180097.

1. For safety reasons, all batteries should be disconnected prior to installation. Reconnect the batteries after installation is complete, always using proper safety clothing and glasses.

2. Provide the appropriate fuse protection. Fuse both the 12V and 24V battery terminals to protect the wiring in the event of a short to ground. Fuses should be sized approximately 25% above the maximum current passing through the wire and should be installed as close to the battery as possible. Always refer to Manufacturers and SAE recommendations regarding circuit protection. See table below.



3. Mount the equalizer / converter in a well ventilated area with easy access to the terminals. The equalizer / converter should be protected from direct water exposure and water must not be allowed to pool on the equalizer / converter or the terminals.

4. Select the appropriate wire size for the installation. The table below provides an estimate of required wire size, which is sufficient for most applications. Sure Power suggests that the maximum voltage drop across any power wire should be no more than about 0.20V maximum.

5. If a battery-disconnect switch is required with an equalizer application, two disconnect switches should be used (see page 2, figure 1). Electrically, place one disconnect between the "A" battery "POS" and the 12V connections, including the equalizer 12V terminal and 12V loads. Place the second disconnect between the "B" battery "POS" and the equalizer-to-alternator connection.

6. The equalizer can be used as a converter. See page 2, figure 2. Please note that the output voltage of an equalizer is half of the input voltage.

7. Connect the equalizer / converter 24V, 12V and ground connections using M8 ring terminals, and the other end to the batteries.

Notes:

- i. The equalizer / converter 24, 12 and ground of the battery connections should be made to the batteries.
- ii. Do not rely upon a chassis ground connection.
- iii. Connect the loads to the batteries or switched terminal of disconnect switch and not the equalizer. The common connection point should be the batteries.

8. LED Status Indicator: The models listed have a built in LED status indicator. The LED will illuminate if output current is being produced. If no current is required the indicator will go dark or 12V loads and the LED should illuminate. **Note:** Model 21100E01 does not include an LED.

9. Apply a coating of corrosion inhibitor material (E.g., dielectric grease, insulating paint, etc. such as Glyptol 1201), as per manufacturers application instructions, to Battery Equalizer terminals to help eliminate corrosion and protect the metal surfaces.

10. Install the supplied terminal cover

Unit	Current Out (12V)	Recommended Circuit Protection on 12V & 24V Terminal		Recommended Wire Gage			
		12V	24V	0-10 Ft	11-20 Ft	21-30 Ft	31-40 Ft
21060X00	60A	75A	50A	4 AWG	2 AWG	1/0	2/0
21080X00	80A	100A	75A	4 AWG	1 AWG	2/0	3/0
21100X0X	100A	125A	75A	2 AWG	1/0	3/0	4/0

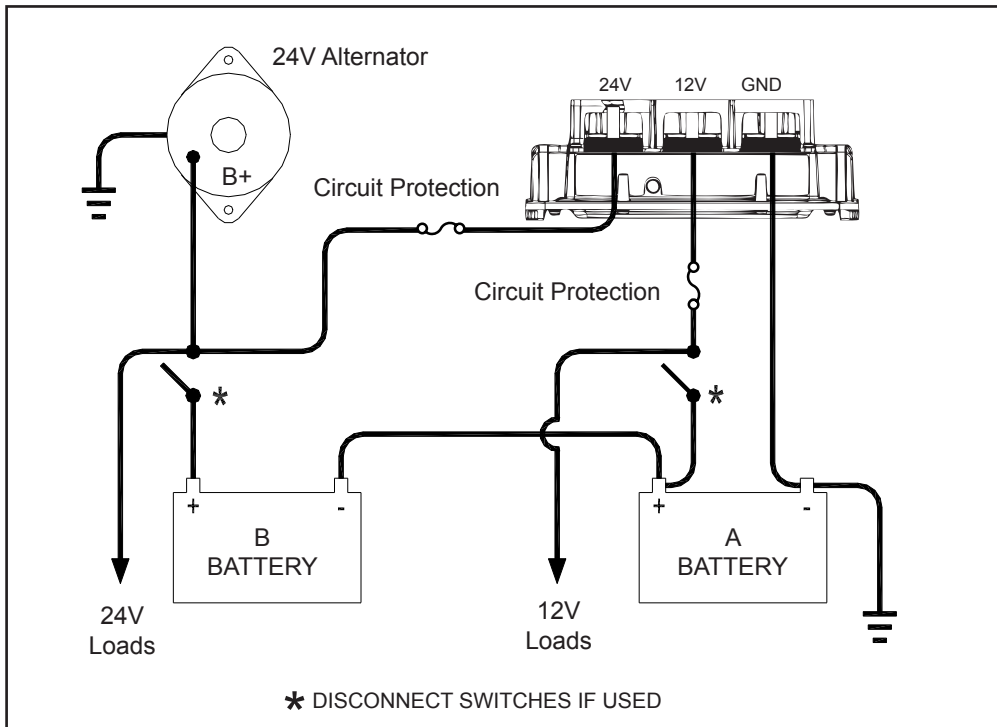


Figure 1: Equalizer connection diagram.

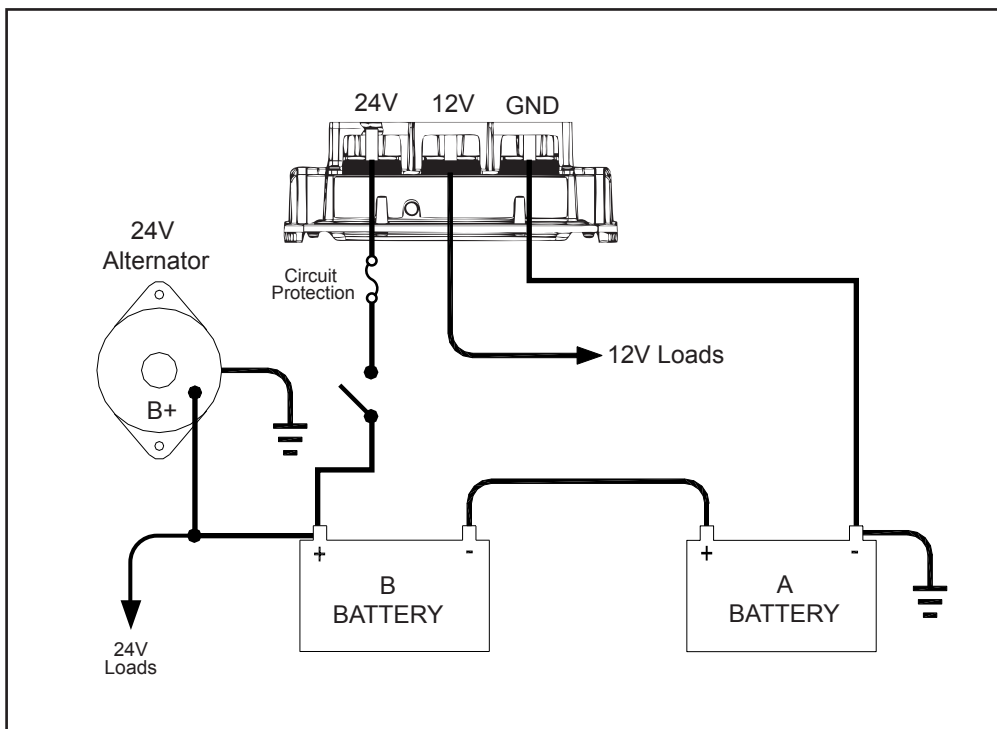


Figure 2: Battery Equalizer shown used as a Converter. Note: If a Battery disconnect is required a single disconnect switch should be placed between the "A" Battery and frame ground, or between the "B" Battery positive (+) terminal and the 24V connections.

Note: Failure to follow these directions will void included warranty.

