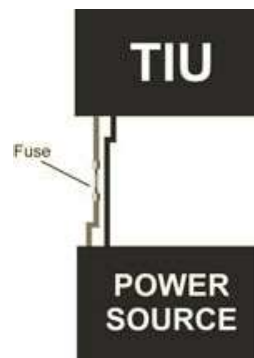


Introduction To DCS

Recommended Wiring Method - Older Transformers

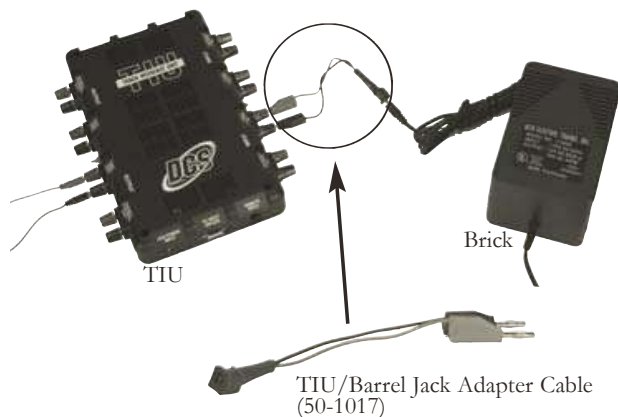
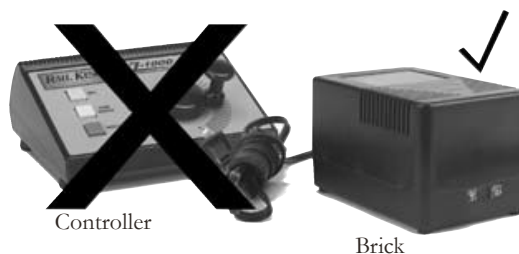
Older transformers, like the Lionel postwar ZW or KW models employ a bi-metallic strip to act as a circuit breaker. The strip responds to heat as high current flows through the transformer. If enough heat is generated by the high current, the strip will open the circuit and prevent further current from flowing out of the transformer. The bi-metallic strip is not a precise overload protection device and does not measure the current. As a result, it may not trip when excessive amps are being generated by the short circuit. Should the strip thus fail to trip, excessive and potentially harmful current could be sent through the TIU.



MTH therefore recommends that any user employing an older transformer that does not meet today's U.L. standards install inline fuses or circuit breakers between the transformer and the TIU input channels. An AG3C "fast-acting" or "fast-blow" fuse rated at 15 amps would be suitable protection. These can be obtained from most hardware or electronic stores including Radio Shack. Users will also need an inline fuse holder to house the fuse. Radio Shack sells a heavy duty model, part number 27-1217.

Recommended Wiring Method - Electronic Transformers

Any transformer employing two parts, a brick (step down transformer) and a controller (used to vary the voltage output) may cause operational problems due to low power or poor DCS signal. To correct this problem, MTH recommends connecting only the brick to the TIU inputs. In addition, check the output voltage of the transformer; it should not exceed 22 volts (or 18 volts if lighted cars are used on the track).



When using the Z-500, Z750 or Z1000 electronic type transformer use an adapter cable, MTH item 50-1017, to connect the brick directly to the TIU input as shown below. **DO NOT** use the controller portion of an electronic type transformer.