Theory of Operation

The TD-4 Track Driver uses a free-running multivibrator, operating at 180 Hz, to produce a continuous square-wave which is amplified to produce the proper power and impedance level to feed the track. The resulting AC voltage on the track is about 7 volts. Because of the "transient" components of the square-wave, there are also high voltage spikes, which help to penetrate films of rust between rail and wheel. This voltage will depend upon the conditions of ballast and shunting factors at the time of measurement. The shunting characteristics of the AC-DC track circuit equipment are definitely superior to that of a sine wave source.

The drive and amplifier circuits are so arranged that one common frequency and phase results for all four outputs. This allows both phase and polarity to be reversed across the insulated joints to prevent the adjacent circuit from being picked up through failed insulated joints.

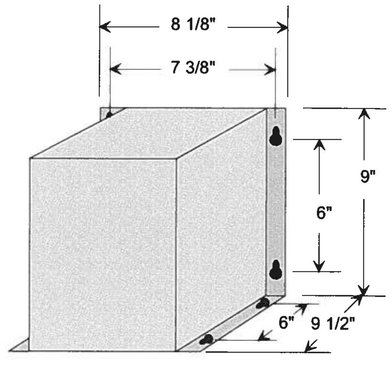
Specifications

Operating Voltage and Current		Fuse	ACG-10 (Amp)
DC Nominal:	10 or 12 Volt Battery 9 Amps maximum	Temperature Range	-40°F to +160°F -40°C to + 71°C
Range:	8-15 VDC	Weight	4 lbs

Output Current Per Track Circuit

12.5 VDC Input	.86 Amps @ 4.0 Ohms 1.68 Amps @ 1.0 Ohms 2.01 Amps @ 0 Ohms
10 VDC Input	.71 Amps @ 4.0 Ohms 1.39 Amps @ 1.0 Ohms 1.67 Amps @ 0 Ohms

Dimensions



TD4dims