Glossary A

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AC

Alternating Current - Generally with a sinusoidal wave form. Mains power in Britain and Europe is 230v AC at 50Hz, that is 50 complete cycles per second. USA uses 115v at 60Hz.
http://www.allaboutcircuits.com/vol_2/chpt_1/1.html

Accessory decoders

DCC decoders are used to control trackside accessories such as turnouts and signals using the NMRA standard pulsed signal. The signal can be carried by the track and track feeders or can be a separate circuit, which avoids the risk of a derailment or short preventing the control of the turnouts. All DCC manufacturers make accessory decoders and MERG provide kits.
http://www.merg.org.uk/merg_resources/dcc.php

Accessory encoder

The MERG DCC accessory encoder is designed to operate as a DCC command station independently from the track DCC although it uses the NMRA Standard for its information encoding and can operate most other accessory decoders as well as the MERG kits.
http://www.merg.org.uk/merg_resources/dcc.php

Address

Address is the unique identification of anything. In the context of DCC it means the coding of each loco or other decoder, which ensures that it identifies the signals intended for it.

Amplifier

An Amplifier is a device which uses a small amount of power to control a source of a large amount of energy.

Amplitude modulation (AM)

The process of additively mixing a single or number of frequencies with the carrier wave to produce a

complex waveform with variable amplitude. This signal may be demodulated by a simple diode detector. Most common method for low, medium and high frequency broadcast transmissions.

Amps

The unit of current. It is defined as the constant current which if maintained in two straight parallel conductors of infinite length, of negligible cross-section and placed one metre apart in vacuum, will produce between the conductors a force equal to 2×10-7newton per metre length.

Analogue

A continuously variable signal. This is generally compared to a digital signal, which increases in steps or is conveyed by digital coding.

And

This is a Boolean operator which is used to join two statements so that the final statement is true only if the individual statements are all true. Thus (X>1)AND(X<2) is true if X is between 1 and 2. In electronic logic circuits an AND circuit is shown here.

API

Application Program Interface - A set of routines / protocols and tools for building software applications.
API

ASCII

American Standard Code for Information Interchange Table of Codes
Wikipedia article

Aspect

The name given to the appearance of a signal to the driver of a train. Each aspect is allocated a specific meaning so that the driver can decode the message and react accordingly. For example a semaphore home signal has two aspects, one with the arm horizontal meaning stop and one with the arm inclined meaning proceed.

Auto reverse

An auto reverse module is used in DCC to prevent shorts in reversing loops and other situations where the polarity of two lines must be reversed for a train to run through. It works by reversing the polarity if a short is detected. If the short is eliminated then the new polarity is accepted and is kept. One auto reverse module can protect several track sections provided that only section break is being bridged by a loco at any one time.

AWG

American Wire Gauge- This is not the same as Standard Wire Gauge. There is no direct conversion in that the ratio of radii SWG/AWG varies from 0.8 at 6/0 to 1.64 at 43.
http://www.hardwarebook.net/table/AWG.html
http://www.simetric.co.uk/siwire.htm

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