

DCC Glossary

- 1. DCC (Digital Command Control)** - A model railroad control system following a specific standard that uses special receivers, known as decoders, inside locomotives, rolling stock, or trackside, that receive digital packets of information and commands from the DCC system. The DCC system allows the individual to control multiple locomotives or trains on the same stretch of track at the same time.
- 2. DCC System** - The basic system is comprised of a power supply, command station, and a throttle, which can be part of a fixed console or an individual walk-around handheld, commonly called a cab (like the cab of a locomotive). The power supply powers the base station while supplying power to the layout through the rails.
- 3. Decoder** - A receiver that allows for control of the model or device in which it is installed. Each decoder is assigned (by the DCC system) an individual address that lets it receive only the information (digital packet) sent by the base station to it and not any of the other decoders on the track rails. There are typically two types of decoders:
 - Mobile Decoders** - Are installed inside a locomotive or rolling stock to control that specific item.
 - Accessory Decoders** - Are used trackside to control a certain accessory, like a building light or turnout (switch). Some accessory decoders can have multiple outputs to individually control more than one accessory. Accessory decoders use a range of addresses assigned by the DCC Standard to differentiate them from mobile decoders.
- 4. Address** - A unique ID number assigned to a specific decoder. There are two types of addresses:
 - 2-digit address** - from 1-127
(Also known as the Short or Primary Address)
 - 4-digit address** - from 0001 – 9,999
(Also known as the Long or Extended Address)Most decoders come with a factory default address of 3.
- 5. CVs (Configuration Variables)** - These are adjustments that can be made within the decoder. They contain the detailed information for specific functions and features (e.g., address, lights, etc.). Each CV can be adjusted to match the modeler's preferences. Some CVs are the same for every decoder, while others are manufacturer-specific.
- 6. Programming** - Every DCC system has the capability to input data (program) into a specific decoder by way of the CV. Programming can be done on a dedicated program track or by programming on the main.
- 7. Program Track** - This is an isolated piece of track used to program a decoder. This is also known as Service Mode programming.
- 8. Operations (Ops) Mode Programming (programming on the main)** - If the DCC system supports Ops Mode programming, the modeler can change the decoder's parameters while it is on the mainline, without having to physically remove it from the layout.
Note: You need to know the decoder's address to use this feature!
- 9. Functions** - Controllable features (i.e., lights, smoke units, and/or sounds) built into a decoder that are accessed via the command station's function buttons. The amount of functions built into a decoder depends on the manufacturer. Likewise, the number of functions that can be controlled by a DCC system is dependent on the manufacturer.
- 10. Power Boosters** - These units amplify track voltage to increase the power output of your DCC system. If you have a large layout and operate numerous trains on the layout, additional boosters may be needed. DCC boosters are specially designed for DCC, and you cannot use a regular analog powerpack as a DCC booster.
- 11. Power Districts** - Large layouts that use numerous trains should be divided into electrically isolated power districts.

12. Buses - There are two types normally referred to:

A) Control Bus - This is the associated wiring from your base station to different parts of your track layout.

B) Cab Bus - This is the wiring network from your throttle(s) to various parts of your layout, back to the DCC system's base unit.

13. Reverse Loop or Reverse Section - This is a section of the track rails that folds back upon itself, allowing a train to travel upon the same trackage in the opposite direction from which it came.

14. Reverse Loop or Reverse Section Controller - This is a piece of DCC system equipment that makes wiring a reverse loop or reverse section of track easier, with no buttons to push or toggle switches to operate as the train traverses the reverse section.

15. Speed Steps - Speed steps are incremental steps on the throttle and programmed into the decoder that go from speed 0 to full speed. Presently there are three groups of speed steps used: 14, 28, or 128 speed steps. The greater the number of speed steps, the finer the throttle control.

16. Momentum - Mimics the way real trains start and stop due to the load they are pulling.

17. Consists - If more than one locomotive is assigned to pull a train, they can be programmed to run as one unit, or a consist. This is also known "M.U.'ing." There are two main types of consists used today:

Universal or Old-Style Consist - This type of consist is memorized by the DCC system, and the information is stored in the cab not in the decoder.

Advanced Consist - This type of consist is stored in a decoder's memory. There are no limits to the number of models in a consist, but there is a limit of 127 consists per system.

25. Routes or Routing - When using turnouts with their associated switch motors and accessory decoders, some DCC systems allow you to program a number of pre-programmed instructions simultaneously. This is known as a route.