DCS100 Command Station 5 amp Booster

The DCS100 is a combination DCC Command Station & Booster. The DCS100 operates as the command station and main system booster on a Digitrax LocoNet system. It can also be used in conjunction with your computer if you choose to do so.

The DCS100 accepts throttle input from any LocoNet throttle (DT400 series, DT300 series, DT100 series, DT200, UT2, UT1, BT2, Computer throttle, LocoPalm Throttle and new Digitrax and LocoNet Certified throttles to come soon)

Supporting Documentation

Control over 9,000 locomotive addresses.

Baseline DCC decoders use the range 0-127 (126 DCC & 1 Analog). Address "00" is defined as the analog locomotive address. Extended Packet Format DCC decoders use the range 128 and above. This provides complete backward compatibility with all existing DCC decoders and does not force you to replace any decoders to have four-digit addressing.

Built in read/write programmer and separate service mode programming output

lets you program each individual decoder's acceleration, deceleration, start-voltage, mid-point voltage, loadable speed table, etc. without shutting down the layout. The DCS100 offers paged mode, physical register mode and direct CV access programming to allow you to program decoders from all DCC compatible manufacturers. These characteristics can also be programmed using the Digitrax PR-1 Decoder Programmer for your computer.

Operations mode programming

lets you program decoders "on the fly." By sending programming directed to a particular loco address you can change the address and /or operating characteristics of an engine while it is on the layout. For example, you can simulate added train weight by increasing the ACCEL and DECEL rate in a decoder.

128 speed step operation!

You can select 14, 28, or 128 speed step operation for each individual decoder so you don't have to sacrifice performance if you have some decoders that have 128 speed steps & some that don't.

Basic, Advanced or UniVersal Consisting lets you choose how you handle consists.

UniVersal consisting lets you use ANY DCC decoder for consisting. You can even include an analog loco (one without a decoder) in a consist. You can mix & match any DCC compatible decoders in your consists because the command station controls the consist. Add & delete locos from MU lash-ups with a few simple keystrokes.

Advanced consisting lets you use decoders that are capable of Advanced Consisting for consisting. With this method of consisting, the decoders rather than the command station, control the consist so it is portable from one layout to another. Note that when you use "Advanced" Consisting, only EPF decoders can be included in the consist. In addition, if you use this type of consisting, you must be certain to properly remove the advanced consist information from the decoders when you want to rearrange them in the consist or remove them from the consist.

The DCS100 also allows "Nested consisting" which lets you make up consists composed of other consists.

Function Control

Function control is very simple with the DT300 series throttles.

Just press the function activation key followed by the key associated with the function you wish to access.

Control directional lighting & 8 additional function outputs from the keypad.

Sound controls for bell & whistle are on the F1 & F2 keys, you'll see a bell and whistle graphic beside these keys.

Function 2 is a non-latching control that allows you to sound the horn for as long as the key is held down; just like the real thing!

Control up to 999 switch addresses from the keypad.

Customizable Fast Clock. Displays synchronized scale time clock on all DT300 & DT100 series throttles.

Compatible with DCC Standard and RP's.

Customizable System Options

let you set up how your system runs. You can have "beeps" on or off, you can set time outs, set up purge options,

enable trinary mode for operation with Marklin Motorola format equipment, enable advanced consisting and much more.

DCS100's Booster Capabilities give you a 5 amp booster along with your command station.

Optionally, the DCS200 gives you 8 amps!

- A powerful 5 (DCS100) or 8 Amp (DCS200) Digital Command Control Booster Rated at 80VA
- Accepts either 50/60Hz AC or DC input from your existing power supply. Minimum input voltage: 12V AC or DC, Maximum input voltage: 22V AC or 28V DC. The power supply you use should be within this range & should be overload protected for a maximum output of 5 amps DC.
- Auto resetting over temperature & short circuit protection. Unique smart protection will not "weld" derailed locos to the track.
- Safe for use with all scales because it’s multi xcale selectable for N through G scale operations. N Scale=12V, HO Scale=15V, O/G Scale=20V.
- User adjustable voltage trim.
- Track Status indicator shows voltage & signal type (DCC or "Zero Stretch" Analog Signal for conventional operation.)
- Stabilized Track Drive Output. Over Voltage Protected.
- LocoNet Expansion Network for easy reliable system hook up & future system expansion.

- High impedance balanced signal input receivers on the LocoNet Interface allow boosting of several different types of command control signals.
- Auto shutdown if command control drive signal is lost so that the layout will not convert to DC operation if a cable or connection is broken. This means that the trains won't just "take-off" if they are not getting the DCC signal.
- Complies with FCC Part 15, Class B RFI Requirements.

Note: If you add a DCS100 to your existing DT200 (Big Boy Set), you will add system capacity and all DT200's in the system become walkaround throttles and will be able to perform all the same functions as before. The DT200's will still be limited to 127 locomotive and switch addresses.

Technical Note About DCC Booster Output Ratings: Digitrax boosters have maximum output current limits of either 5 or 8 amps. The actual continuous output current that your booster will provide to the layout depends on several factors including the input supply voltage, the ambient room temperature and air flow over the booster's heat sink. Higher input voltages increase the amount of heat that must be dissipated by the booster's heat sink. If the heat sink does not get enough air flow to allow for heat dissipation, the booster will eventually reach an over temperature state and shut down. A small fan blowing across the heat sink on your booster will increase the maximum sustained current output capacity of your booster.

Each DCC company specifies the output capacity of its boosters according to their own internal standards. Tests designed and performed by several model railroaders have shown wide variations in the actual output capacity of DCC boosters. In most cases the tests were designed to overload boosters and cause them to shut down. The conclusion based on these tests is that each manufacturer uses a different way of determining booster output capacity, Digitrax tends to be more conservative in stating booster output ratings. The factor that is most important for achieving maximum output capacity is the booster’s heat sinking ability. In these tests, Digitrax boosters have demonstrated excellent heat sinking capabilities and the ability to consistently output the advertised 5 or 8 amps when appropriate fans are added in high temperature situations.