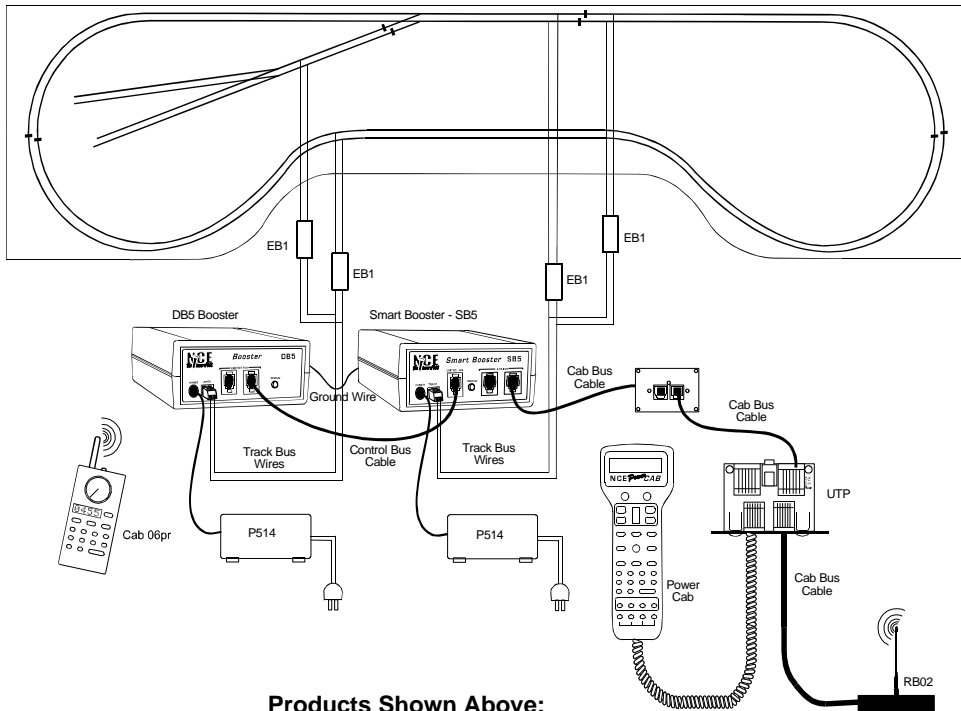


## Expanded Use of NCE Products



### Products Shown Above:

SB5 -.....	5240031
DB5 -.....	5240032
PowerCab -.....	5240025
UTP Panel -.....	5240207
EB1 Circuit Breakers.....	5240225
RB02 Radio Base Station.	5240023
Cab06pr Radio Throttle.....	5240044



# NCE DB5



## Booster

The DB5 Booster adds an additional 5 Amp section of power to your DCC railroad.

The DB5, 5 Amp booster may be added to the SB5 for more power handling on larger layouts.

This manual covers only the addition and installation of the DB5 to an SB5 system. For operation of DCC, consult your system manual.

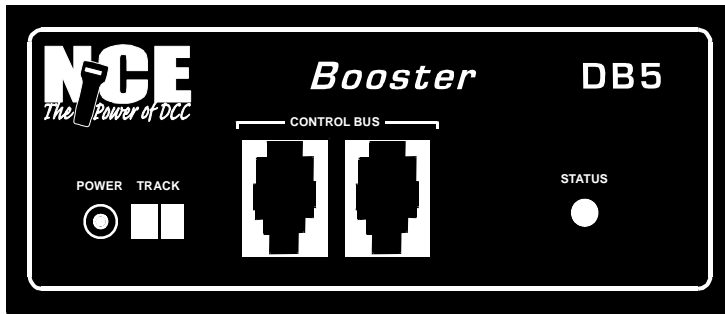
Use only the power supply included with the SB5. Use of another supply will void the warranty.

### Power Connection:

The round connector plug from the power supply goes into the round power socket marked Power.

### Track Terminals:

Strip 1/4 inch of insulation from the ends of your Track Bus wires coming from your track. Remove the Track connector plug from the DB5, it just pulls out. Insert the wires into the two pin plug. Tighten the screws so that they are snug. Not too tight, just snug. Insert this plug in the two pin socket on the DB5 marked Track.



DB5 Face Plate

### Control Bus - 4 Wire (RJ-H) Socket:

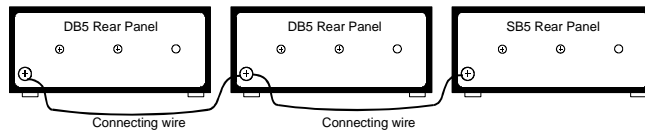
Connect the 4 pin cable from this socket to the first SB5 Smart Booster. If adding more than one DB5, use a "daisy chain" fashion to connect the SB5 to each DB5. This is the low level DCC signal that will be amplified by the power booster(s).

### Status Light:

This light is always on except when a short circuit occurs (see "short circuit protection" below).

### Ground Screw:

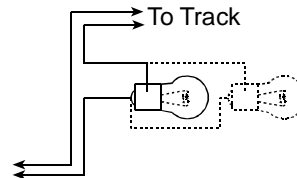
The screw on the rear of the DB5 is used to connect the DB5 to other ground screws on SB5 and DB5 Boosters. We do not recommend connecting to earth ground or house ground.



### Short Circuit Protection:

The P514 Power Supply that is supplied with the DB5 incorporates internal short circuit protection that will shut down track power in the event of a short circuit. The unit will attempt to re-energize the track every 3-4 seconds until the short is cleared. The Status LED conveys status of the track power. The LED will 'blip' each time the P514 attempts to restore track power, steady 'on' of the LED indicates track power is restored.

The circuit protection of the DB5/P514 is not intended to protect the booster from long term short circuits. Do not allow a long term short circuit to persist for more than 3 or 4 minutes or damage may result. Therefore we strongly recommend an external short circuit protection device. This can be as simple as one or more automotive tail light bulbs such as an #1156 or similar wired in series with the track power output of the booster. NCE makes a variety of circuit protection devices and circuit breakers such as the CP6 and the EB1. This provides a means to divide your layout into separate power "districts." A short or derailment in one district will only affect that section of track without shutting down other sections of the layout.



### Connecting Extra Boosters:

The Control Bus output connector is used to connect additional boosters to the DB5. See diagram on Page 4.

### Layout Wiring:

For runs up to about 25 feet (8 meters), we recommend #16 gauge wire as a layout "track power bus". If you need more than 25 feet #14 gauge is a better choice. For power drops from the track to the bus #20, #22 or #24 gauge wire is sufficient if you keep the length to 18 inches or less. With code 83 or larger rail keep your drops 6 feet (2 meters) or less apart. Code 70 and smaller rail should be about every 3 feet (1 meter). While it is not absolutely required, we suggest twisting the track power bus wires together (2 to 4 turns per foot). Don't bother twisting short power runs or power drops.

### Electrical Specifications:

P514 Power Supply (included) Replacement part number 5240238  
Maximum continuous track current (with cooling) 5.1 Amps  
Factory track voltage setting: 12 or 13.8 Volts. Selectable by switch on P514

### Available Connections:

- 1- Two position Track output power connector
- 2- CONTROL BUS output connectors
- 1- DC Power connector
- 1- Ground screw on rear of box

### Indicator Lights:

- 1- DC power on (red LED)

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### Limited Warranty

NCE guarantees that when used with the factory supplied Power Supply, every Power Cab and Smart Booster DCC System is free from physical defects in material and workmanship for a period of 1 year. Use of a different Power Supply will void the warranty.

Within the first year full repair or replacement will be made to the original purchaser of any item that has failed due to manufacturer defect. Should the item no longer be produced and the item not repairable a similar item will be substituted at the manufacturer's discretion. The customer pays only shipping to the NCE Warranty Center. Please save your original receipt as a photocopy of it may be requested. NCE returns the items UPS ground unless other arrangements are made in advance. After the first year a fair and reasonable service charge may be placed on each failed item returned for repair.

This warranty is not valid if the customer has intentionally misused, miswired, performed any unauthorized alterations to the product, used the incorrect Power Supply or removed any product protection devices. In this case a service charge will be applied for all repairs and replacements. To protect the warranty, please contact the Warranty Center for authorization prior to altering any product. In no event will NCE's liability exceed the price paid for the product from direct, indirect, special, incidental or consequential damages resulting from the use of the product, it's accompanying software or its documentation. NCE makes no warranty or representation, expressed, implied or statutory with respect to its products or the contents or use of this documentation and accompanying software and specifically disclaims its quality, performance, merchantability, or fitness for any particular purpose. NCE reserves the right to revise or update its products, software, or documentation without obligation to notify any individual or entity.

Please contact the Warranty Center for specific shipping instructions and any service charges before returning any product for service.

NCE Warranty Center - 585-265-0230