



What is DCC anyway?

DCC?

- ◆ Digital Command Control
- ◆ NMRA command control standard
- ◆ Supported by multiple manufacturers
- ◆ Offers a simplified lower cost wiring system.
- ◆ No computer experience needed.
- ◆ Basic and advanced systems available.
 - Low \$ entry level to full club systems.

Is my layout a candidate?

No

✓

Yes

✓

✓

✓

If you run a “One Horse road”

If you run 2 or more trains at a time

If you (want to) have yard operations

If you (want to) have helper operations

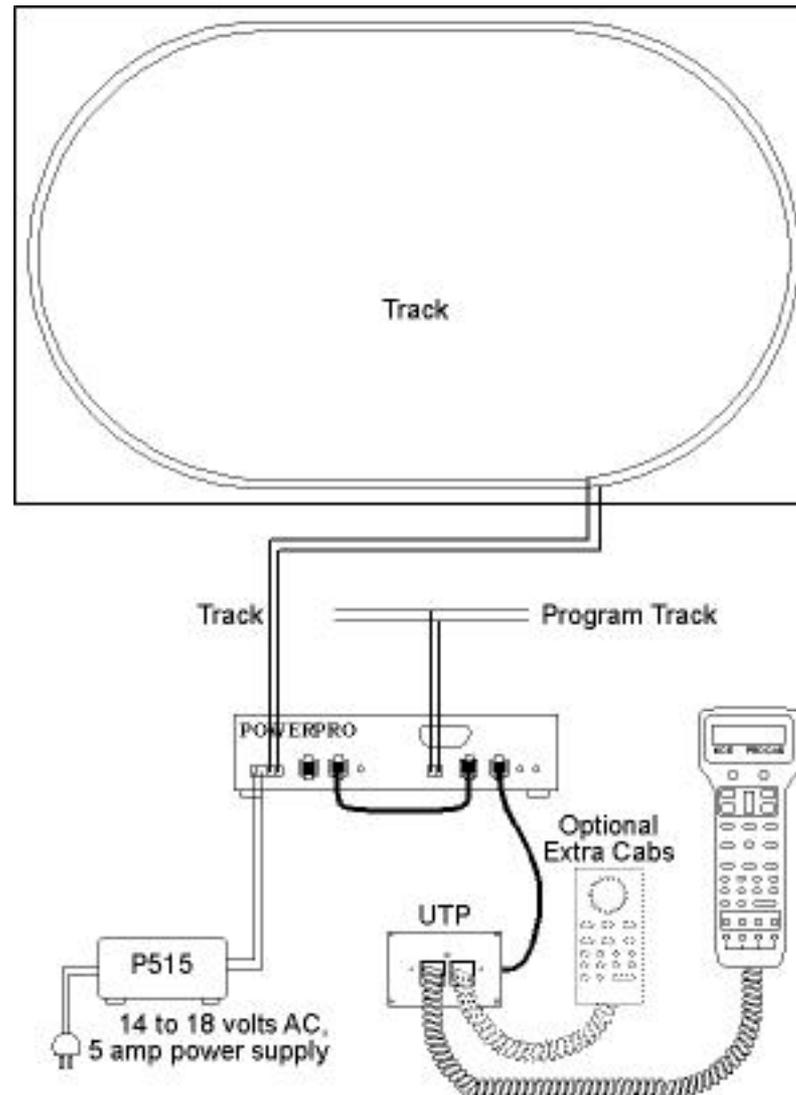
What can DCC do for me?

- ◆ No more “who’s got my train?”
- ◆ Run trains not the control panel
 - Guest operators can run trains easily
 - Simplify or eliminate control panels
- ◆ Walk around control
 - Plug around (with speed/direction memory)
 - Cordless throttles
- ◆ Track can be used to distribute power and control
 - Locomotives
 - Turnouts
 - Signals
 - Other accessories

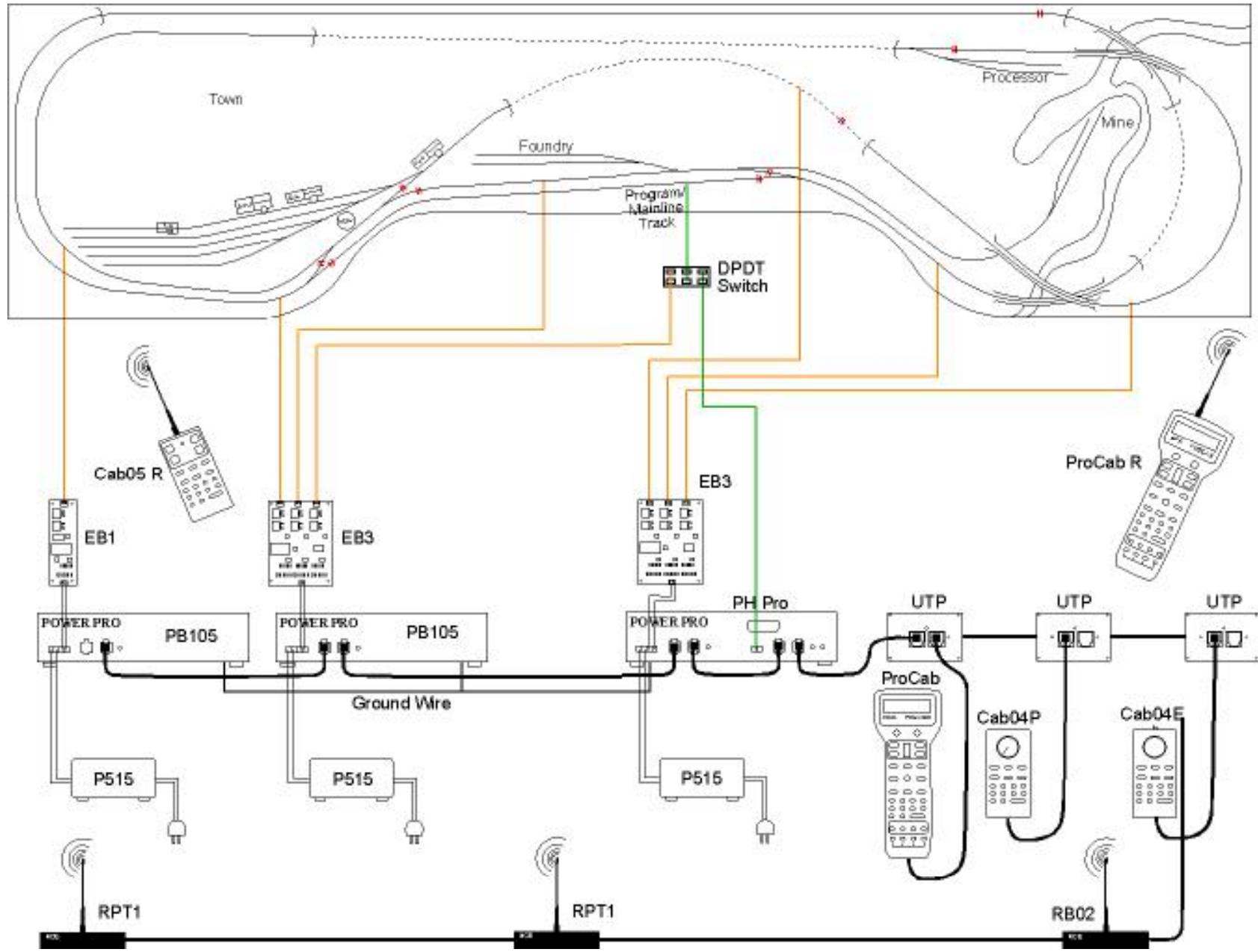
What can DCC do for me? continued

- ◆ Fine tune locomotive performance
 - Adjustable start voltage/maximum speed
 - Speed matching for good MU operation
 - Smooth steam loco operation with “Torque Control”
- ◆ Prototype Lighting effects
 - Dimming
 - Mars, Strobes, Beacons, firebox flicker
 - Operating ditch lights

Typical DCC system setup



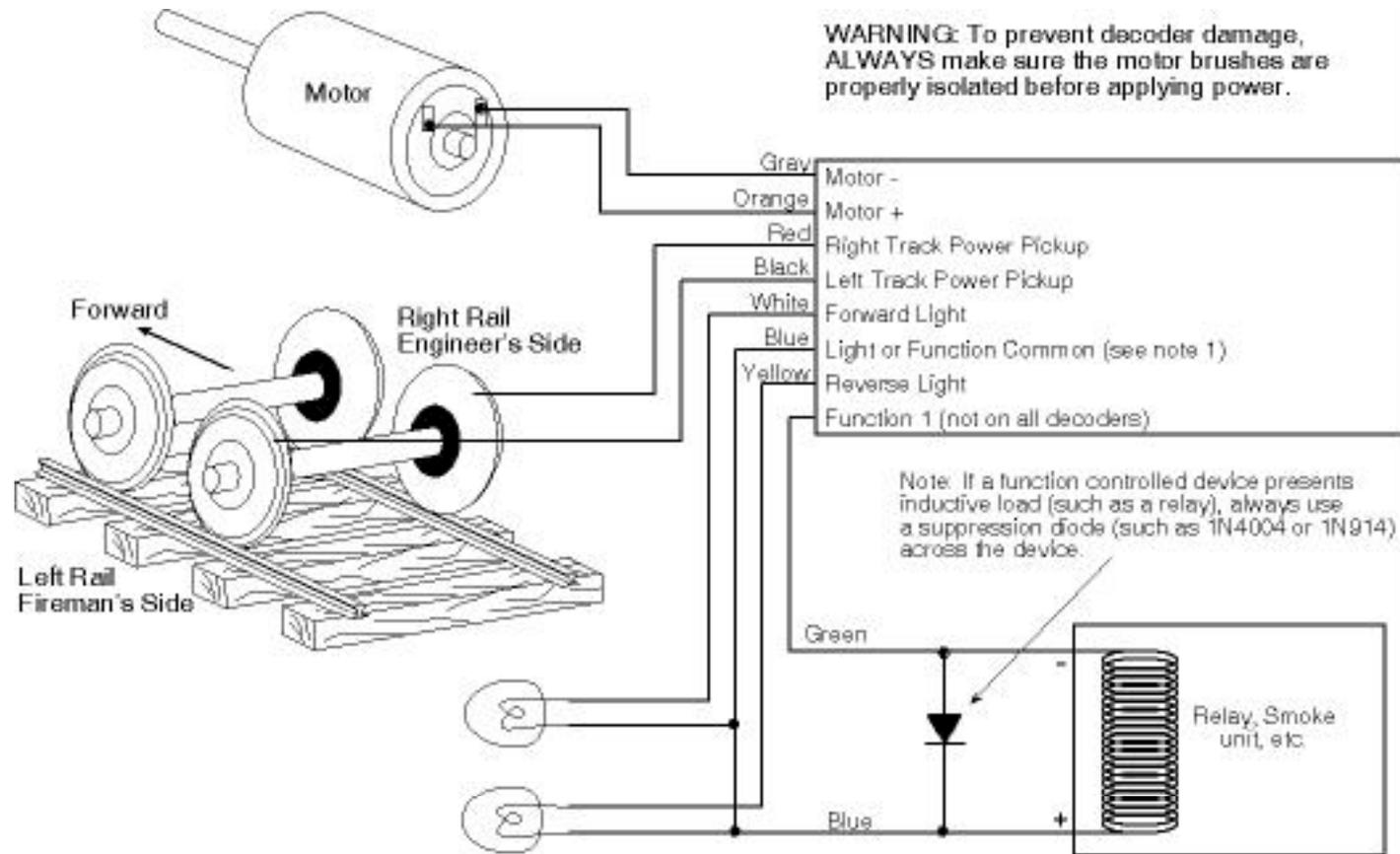
Advanced DCC system setup



Decoders

- ◆ Gives each locomotive a unique “Address”
 - Address can be 2 digit or (optional) 4 digit. (Set to Loco #)
 - Detects DCC commands and implements it when “Addressed”
 - Motor Speed, Function output, MU, etc.
- ◆ Drives motor
 - Low heat pulse power for good starting torque and running
 - Implements optional Momentum and Speed Tables
 - Modern high frequency quiet drive (Silent Running™)
- ◆ Drives “Function” outputs
 - Headlights, lighting effects, etc.

Typical Decoder Wiring



Note 1: The function common (blue wire) is the positive lead providing rectified DC voltage. If you elect to NOT use the common, power the light or other device from either track power pickup for "half-wave" operation (approx. 1/2 voltage).

Considerations before you buy

- ◆ How much power do you need (Power Budget)
 - It's not size but quantity
 - Allow 1/4 - 1/2 Amps per locomotive
 - About 8-10 locomotives per 5 Amp booster
 - Sub-divide booster districts into separate power districts
 - Use EB3 DCC circuit breaker for each power district
 - a short in one power district will not shut down the whole booster
 - 10 amp boosters are not for HO
 - 220 Watts is enough to melt code 70 rail
 - locomotive wires vaporize if a short travels through the loco wires

Considerations before you buy

- ◆ How many operators will you have?
 - Probably more than you had with DC operation
 - If it's easier to operate, more operators will show
 - Now you can really have multiple trains moving in the yard or in a town
- ◆ What kind of cabs will you need?
 - Intermediate cabs - simpler
 - Full Feature Pro Cab
 - Engine terminal operator - setting up consists
 - “Master” operator stop the fast clock, etc
 - Cordless – Intermediate and Pro Cab

How do I get started?

- ◆ Don't buy anything (yet)
- ◆ Try different systems to see which suits you best - get the one YOU like.
- ◆ Try running locomotives, programming locomotives, etc.
- ◆ Look over our catalog to see the extent of our systems and decoders