Welcome to the world of DCC! This manual will familiarize you with the set up and operation of two locomotives on your railroad using the NCE DCC TWIN.

In addition to the NCE DCC TWIN, you will need:

- Track
- At least 1 (preferably 2) locomotives with DCC installed
- Terminal Track or Terminal Joiners

Let’s Get Started

- Use the instructions that came with your track to create an oval or circle of track. Make sure you add either a Terminal Track section or use Terminal Joiners at the joints of two pieces of track (Figures 1 and 2).
Strip 1/4 inch of insulation from the ends of the two wires coming from the track joiners or terminal track as in Figure 3. Insert these wires into the two pin plug that came with your DCC Twin (Figure 4).

Tighten the screws so that they are snug. Not too tight, just snug. Turn the plug over and insert this plug in the two pin socket on the back of the DCC Twin (Figure 4).

Plug the power supply into your house outlet. Then insert the power plug into the socket on the back of the DCC Twin. Make sure the red Power light on the front of the DCC TWIN comes on. Just for convenience, we like to use a power strip that has an on/off switch for turning the system on and off.

Setting a Locomotive to Run with Throttle A

Place one of your locomotives on the track and make sure all the wheels are properly seated.

Press and release both of the small buttons at the same time that are labeled PROG A on the left (Throttle A) side of the TWIN (Figure 5). The Power Light will blink for a few seconds letting you know that this locomotive is being set up.

This sets the locomotive to Throttle A, you do not need to do this again, the locomotive will remember its setting.

You're now ready to operate this locomotive!! Turn the knob of Throttle A slowly to the right. The locomotive will start up and run forward. Turn the knob to the left past center and watch the locomotive run in reverse!

IMPORTANT - Only one locomotive at a time should be programmed in this way. Otherwise, all locomotives on the track will be set to run on Throttle A.

Listed here and on the last page are throttles and accessories that can be added to the DCC Twin:

- **ProCab™ 5240010**
  - Our deluxe Pro Cab provides the most user-friendly access to all system features. Uncomplicated menus on the easy to read, backlit LCD display guide you through the most advanced operations with a minimum of fuss. **ProCab R Radio Equipped 5240011**

- **RB02 Radio Base Station 5240023**
  - Third generation two way wireless for DCC. All features of your cabs are available without plugging in! Radio equipped cabs automatically switch from radio mode to tethered mode when plugged in. A seven foot hook up cable is included.

**Engineer/Operator Cabs**

- **Cab04p 5240012 Cab04p R Radio Equipped 5240013**
  - The Cab04 and Cab05 feature easy selection of locos/consists, single button operation of decoder functions, momentary HORN button. Our unique OPTION button that can be programmed to act as any button you wish, even those found on a much larger cab.

- **Cab05 5240016 ab05 R Radio Equipped 5240017**
  - Intermediate cab with LED display, encoder speed control. Clear, easy-to-read display, select loco, recalls, F0-F28, select accessory, select macro.

- **Cab06p 5240043 Cab06p R Radio Equipped 5240044**
  - Intermediate cab with LED display, potentiometer speed control.

All NCE Throttles come Radio Equipped if they have an R at the end of their title.
With a ProCab or PowerCab, it is possible to assign a loco’s short or long address to Throttles A and B of the Twin. Just treat A and B as Cab address 3 and 4 respectively. Assigned loco addresses will be remembered between operating sessions. To reset Throttle A to loco address 3, press the two Prog A buttons. Throttle B resets the same way. Remember that any locomotives on the track will be also be programmed. Consist addresses cannot be assigned. If an external throttle selects the same loco address as throttle A or throttle B, the external throttle will override the throttle A or B speed commands until either a loco address different from throttle A or B is selected or the external throttle is removed and the Twin system is power cycled.

Holding both Shift keys down during power up will reset the entire Twin to original factory settings.

### DCC Twin can act as two “Slave” Cabs (throttles)

The DCC Twin “Slave” as Two Additional Cabs (Throttles)

See example above

The DCC Twin can be used as two individual Cabs on the NCE Cab Bus. When using an NCE ProCab it is possible to Assign a Loco to Throttles A and B. Just treat A and B as Cab address 3 and 4 respectively.

There is a set up parameter when using a ProCab in the Set CMD Station menu for “TWIN SLAVE MODE ENABLE 1=Y. Setting this to 1 enables power up default to “Slave Mode”. Setting it to 0 disables “Slave Mode” and returns the power up to “Command Station Mode”.

The Twin will work as two “Slave” cabs on the NCE Cab Bus when connected to another NCE system. Default addresses are: Throttle A = 3; Throttle B = 4. There is an option to change these addresses as the last two options in the Set CMD Station menu of the Twin. This must be done by plugging in a ProCab/PowerCab into the Twin when it is in “Master Mode”.

The Twin is powered from the Cab Bus when in “Slave Mode”. **No need to plug in the Twin’s power supply.**

### Setting a Locomotive to Run with Throttle B

- If you have a second locomotive, remove the first locomotive from the track. Place the second locomotive on the track and make sure all the wheels are properly seated.
- Press and release both of the small buttons at the same time that are labeled PROG B on the right (Throttle B) side of the TWIN. The Power Light will blink for a few seconds letting you know that this locomotive is being set up.

Once the locomotive is set to Throttle B, you do not need to do this again, the locomotive will remember its setting.

You’re now ready to operate this locomotive!! Turn the knob of Throttle B slowly to the right. The locomotive will start up and run forward. Turn the knob to the left past center and watch the locomotive run in reverse!

### Normal Operation

- Place the first locomotive back on the track and now you can operate locomotive 1 with the Throttle A knob and locomotive 2 with the Throttle B knob. It doesn't matter that they are on the same track, DCC allows you to do this. Just make sure you don't have any “Adams Family” meet-ups along the way.
- Now what about those numbers above the push buttons? They are “Function” buttons. Take a look at Figure 6. With a locomotive on the track, you can operate the lights by pressing the LIGHT button. If you have a sound equipped locomotive, you can ring the bell with button 1 or blow the horn or whistle with button 2. Button 2 is a momentary push button and will turn off when you release the button. The other buttons will turn on with the first button push and off with the next push.
- You can also HOLD DOWN the SHIFT key and press 1 but it will be Function 5. See the smaller 5 under the push button? Pretty cool, huh? You can operate Functions 5, 6, 7, and 8 this way for a total of 9 Functions. Do not press the number button first, press the Shift key first.

We’re sure that you’ll want to expand your railroad with more track, track switches or “turnouts” and bridges and buildings.

### A note about Kato Unitrack -

When using Kato Unitrack turnouts, they should be set to Non-Power Routing. See your Kato turnout instructions for directions on this setting.
Technical Section
All locomotives programmed on Throttle A will be set to address 3.
All locomotives programmed on Throttle B will be set to address 4.

If you wish to change which direction of your locomotive is forward, you can. It may take two hands to do this. Use the push buttons that are directly below this throttle. Press and HOLD DOWN the number 1 key, press and HOLD DOWN the Light key, press the Shift key. Then release all three keys. Now remember that FWD is actually Reverse and REV is actually forward.

To reset the loco direction, press and HOLD DOWN the number 2 key, press and HOLD DOWN the Light key, press the Shift key. Then release all three keys.

Electrical Specifications:
P314 DC Power Supply (included) Replacement part number 5240239
Maximum continuous track current 3 Amps
Factory track voltage setting: 13.5 Volts.

Available Connections:
1- Two position TRACK output power connector
1- Cab bus “RJ” connector (future expansion)
1- DC Power connector

Indicator Lights:
1- DCC power on (red LED)

DCC Specifications of the DCC Twin:
Maximum number of cabs (throttles) including the two on the Twin: 8
- Cab Addresses for add-on throttles MUST be in the range of 2 through 7. Plus up to 3 USB, AIU or Mini Panel accessories in address range of 8 through 10.
- Functions controlled: 9
- Maximum number of trains operated simultaneously: 18

NCE DCC Twin Troubleshooting
The NCE DCC Twin is designed and built to NMRA Standards and Recommended Practices. Even at that, when we run trains, sometimes we forget something that can affect the operation of a product. Following is a list of troubleshooting items.

My locomotive doesn’t run!
- Is the DCC Twin plugged in? Is the red Power Light ON?
- Does the locomotive have a DCC decoder installed?
- Go through the set up procedure for Throttle A one more time. Make sure you wait until the red LED stays on steady before running your train.
- Are the track wires connected?

When I turn the locomotive around, it still goes Forward. Shouldn’t it go Backwards?
- With DCC, forward is always forward and backward is always backward. No matter which way the locomotive is turned on the track.

Reset the DCC Twin system by holding BOTH Shift buttons down while applying power.

Welcome to the “Nothing Wasted Growth Path” of the DCC Twin! Get ready for some exciting features of your system. With it you can:
- Add up to SIX additional throttles (cabs) to your Twin system
- Add a ProCab to access FULL programming modes
- Add up to THREE Accessory devices like the USB Interface, AIU or Mini Panel
- Use the Twin as TWO additional throttles on another NCE DCC system

Take a look at the drawings on pages 5 and 6 to see how you can add more throttles to the DCC Twin system or to add the Twin to your PH Pro system.

DCC Twin as system “Master”

The DCC Twin “Master” with Additional Cabs (Throttles)

See example above
If you are going to use the DCC Twin as a “Master Command Station” system, we will gladly send you the DCC Twin Reference Manual (call 585-265-0230). You may also download it from our web site www.ncecorporation.com/extras/manuals/systems/. It details all of the capabilities of the DCC Twin. With the DCC Twin as the “Master” or “Command Station” of your railroad, a large variety of additional throttles and/or accessory devices can be added. The first to get should be a ProCab. A ProCab converts your Twin to a full featured DCC system and allows you to do full DCC programming and set up with the Twin. If you wish, you can also add the USB Interface or AIU computer interfaces, or Mini Panel.

You will probably need one or more UTP plug in panel(s) to add a “Cab Bus” where you can plug in your new throttles (cabs). Part Number 5240207.

You will also need cable(s) to connect the Twin to the panel(s). Seven foot cable Part Number 5240213 or twelve foot cable Part Number 5240214.