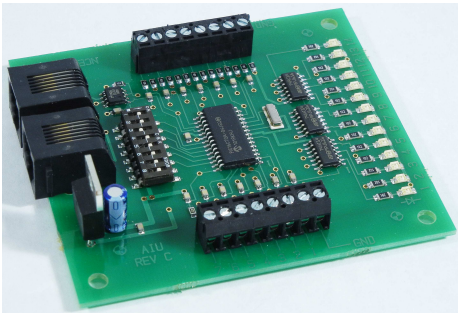
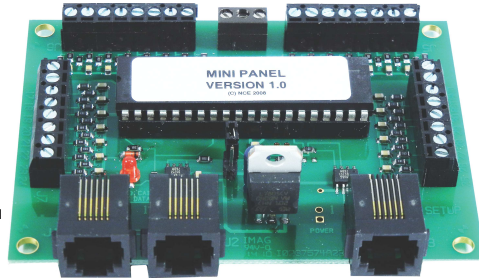


### USB Interface 5240223

Add this USB computer interface for computer programming and/or operation of your Power Cab equipped layout. Requires USB cable, computer and railroad computer program such as JMRI Decoder Pro and Panel Pro. Can also be used with Power Pro system to control trains, signals and/or accessories.

### Mini Panel 5240230

Use this device to build your control panels with greatly simplified wiring. Just connect pushbuttons to the Mini Panel and use to issue turnout routing macros, individual turnout commands by pushing one button. Set up is easy, just plug in a Pro Cab and answer menu questions.

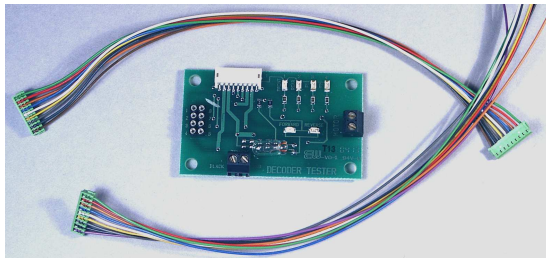


### AIU01 5240200

**Auxiliary Input Unit - The Auxiliary Input Unit provides connection of block occupancy detectors, switch position relays, etc. for purposes of signaling and/or computer control of your layout. Simply plugs in to the Cab Bus.**

### DTK Decoder Tester 5240219

Perfect companion to DCC installation and operation, the decoder tester works with **ANY** DCC decoder. Test for motor forward and reverse, functions 0F, 0R, F1, and F2.



# NCE DCC TWIN



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).

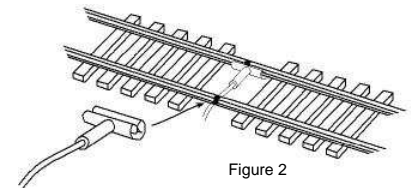


Figure 2

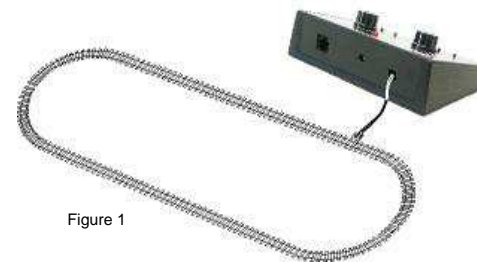


Figure 1

❑ 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).

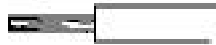


Figure 3

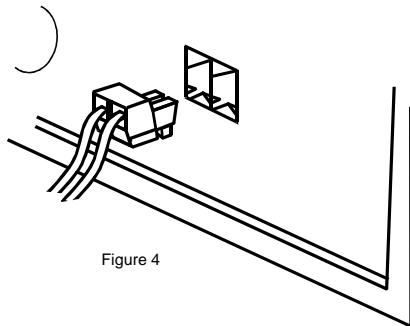


Figure 4

❑ 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!



Figure 5

**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



All NCE Throttles come Radio Equipped if they have an **R** at the end of their title



**Cab04p**  
5240012  
**Cab04p R**  
Radio  
Equipped  
5240013

### Engineer/Operator Cabs

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

**Cab06**  
Intermediate cab with LED display, encoder speed control. Clear, easy -to-read display, select loco, recalls, F0-F28, select accessory, select macro.



**Cab06**  
5240039  
**ab06 R**  
Radio  
Equipped  
5240040

**Cab06p**  
Intermediate cab with LED display, potentiometer speed control.



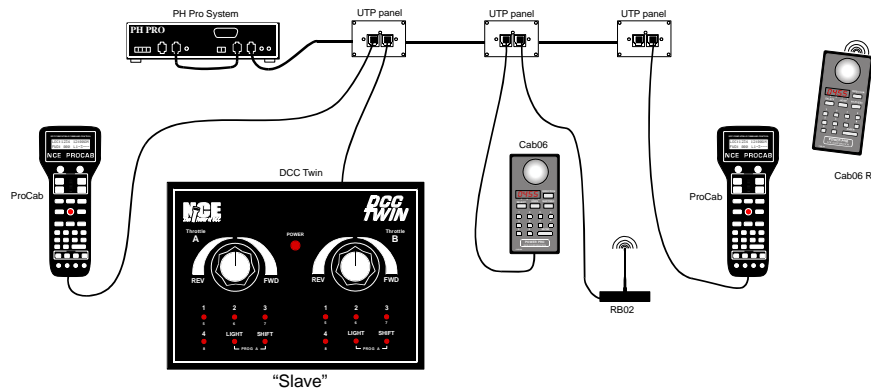
**Cab06p**  
5240043  
**Cab06p R**  
Radio  
Equipped  
5240044

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 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.

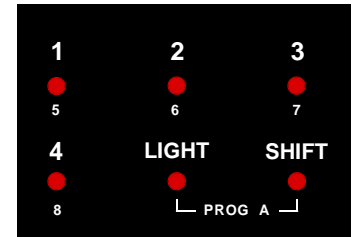


Figure 6

☐ 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.

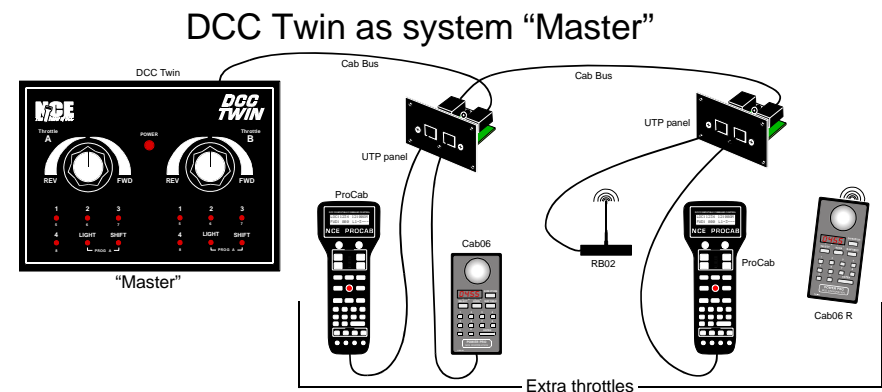
Reset the DCC Twin system by holding **BOTH** Shift buttons down while applying power.

# NCE DCC TWIN E-x-p-a-n-s-i-o-n

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.



## 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/](http://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.