

## Simplified DCC Operating Instructions for the LG&W Railroad

**Intro:** Written instructions can never take the place of actual “hands on” experience. Every Wrecking Crew member must take individual responsibility to learn how to operate the Locust Grove & Western. Club members are encouraged to read Digitrax’s Big Book of DCC. This book is easy to read and packed with useful information.

**Basics You Need to Know:** DCC systems are like and yet unlike plain old DC systems that we are all familiar with operating. They are alike in that a short on DC equals a short on DCC. When the LG&W short circuits it is for exactly the same reason that a DC output transformer would short circuit. Unlike DC, DCC track power is always at full voltage. While turning the control knob stops your train, it does not turn off track power. There are other aspects that make DCC unique, but if you understand the two points above you will avoid many, many problems.

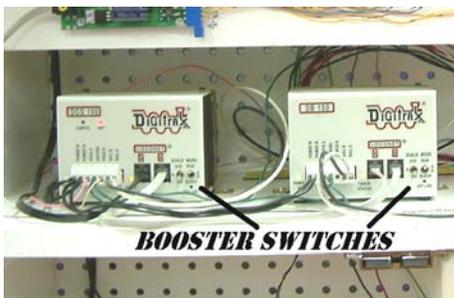
### **STEP 1 – Preflight Checks**

Before powering up the layout, determine that the following has been completed:

- a) All modules are securely joined together.
- b) Track joiners are installed.
- c) Track work is completed.
- d) Electrical Connectors connected under each module.
- e) Electrical Connectors connected to Control Box.
- f) Tools, track gauges, cups, scenery material, etc. are removed from the right-of-way.
- g) Turnouts are aligned as needed (*The operator determines proper location*).
- h) Trains are properly located (*The operator determines proper location*).
- i) 110V Power available at Control Box.

### **STEP 2 – Powering Up the Layout**

- a) Check that Booster Switches, on the Boosters in the Control Box, are in the proper position. Switch settings: SCALE Switch = HO and MODE Switch = RUN



- b) Check that the Transformer for the Radio Transmitter/Receiver is plugged in, and turn on 110V power. The red indicator light is lit when 110V power is on. The Boosters will emit a series of audible beeps or chirps when power is first applied.

### STEP 3 – Acquiring a Locomotive

At this point, you the operator must chose which throttle you will use to control your train. Only the basic functions of the two throttles owned by The Wrecking Crew will be covered in these instructions. If you wish to use another type of Digitrax throttle or are interested in advance features, then please consult the Digitrax instructions for proper operation.

Four digit addressing is Not Recommended for use with Club throttles unless the operator has a *thorough* understanding of Digitrax systems.

The Club owns a radio capable DT100 throttle and a UT2 throttle. The DT100 can control two locomotives independently and does not have to be plugged in to the Loconet at all times. The UT2 can only operate one locomotive and has to be connected to the Loconet. However, the UT2 is considered by most people to be easier to operate.

#### STEP 3A - Using the UT2

##### Acquiring a Locomotive



- a) Plug the UT2 connector into a Loconet Panel.
- b) While depressing the RUN STOP Button, Press the ON Button. The word “ON” is in **red** letters. Release both buttons. Track power is now on.
- c) Using the two dials, select the Decoder Address of the locomotive you wish to acquire or operate. For example, if the Address was “24”, then the left dial would be set to 2 and the right dial would be set to 4. Club locomotive Decoder Addresses should match the engine number.
- d) Press the Acquire Button labeled “ACQ” once, which should acquire the locomotive giving you control. The LED above the letters “ST” will light.
- e) If the LED above “ACQ” is red, then flip the direction switch.
- f) If the four LED below the knob are flashing, turn the knob until they stop. The flashing LED indicate that the speed setting on the decoder and the throttle do not match.
- g) The large knob controls locomotive speed, while direction is controlled by the toggle switch. The F0 Button controls headlights.

##### Dispatching a Locomotive

- h) While depressing the SHIFT Button, Press the DISP Button. The word “SHIFT” and “DISP” are in **blue** letters. Release both buttons.
- i) If the locomotive is dispatched, or released from control by the UT2 throttle, the LED above the letters “ST” will not be lit.

**NOTE:** You *MUST* Dispatch locomotives from your throttle if you will Not be operating them. Failure to do this blocks other Club throttles from Acquiring the locomotive.

## STEP 3B – Using the DT100

### Acquiring a Locomotive



- a) Plug the DT100 into a Loconet Panel.
- b) While depressing the RUN STOP Button, Press the '+' Button. The '+' symbol is in black on a **green** triangular field. Release both buttons. Track power is now on.
- c) Turn the knob you want to control the locomotive a ¼ turn and then press the SEL Button.
- d) Use the right knob to make the display show the number of the Decoder Address you wish to Acquire or control. Club locomotive Decoder Addresses should match the engine number.
- e) Press the SEL Button again to Acquire the locomotive.
- f) Speed is controlled by the knob chosen in step c, while direction is changed by pressing the button above the double ended green arrow below the same knob.
- g) A locomotive can be assigned to the other knob by repeating steps c to e for that knob.

### Dispatching a Locomotive

- h) Turn the knob of the locomotive you want to Dispatch a ¼ turn.
- i) While depressing the SEL Button, Press the MODE Button. Release both buttons.
- j) If the locomotive is dispatched, or released from control by the DT100 throttle, the display should read SET when the knob is turned.

### Other Features

The DT100 is a powerful throttle capable of operating turnouts, consisting, and more. Every Club member is encouraged to learn all these functions to take full advantage of the Digitrax System. The easiest to learn first is how to turn a loco headlight on and off. How? Just press the F0 Button. The word "F0" is in **blue** letters next to the blue light bulb symbol.

*Reminders: A fresh 9 Volt battery has to be in the DT100 for the radio feature to work.*

*Also, you must plug in all current Digitrax Radio Throttles to Acquire a Locomotive.*

*NOTE: You MUST Dispatch locomotives from your throttle if you will Not be operating them. Failure to do this blocks other Club throttles from Acquiring the locomotive.*

## STEP 4 – Shutting Down

Before shutting down it is recommended that locomotives are Dispatched from throttles. Then, the track power should be turned off before turning off the 110V power.

### With the UT2

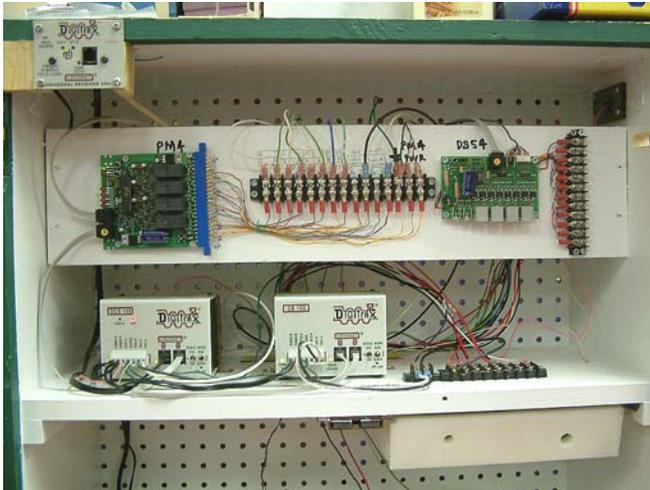
- a) See previous instructions on Dispatching locomotives.
- b) While holding down the RUN STOP Button, press the OFF Button. Release both buttons. The word “OFF” is in **red** letters.
- c) The boosters will beep.
- d) Turn off the 110V power at the Power Switch in the Control Box. The red light at the switch will go out when 110V power is off.

### With the DT100

- e) See previous instructions on Dispatching locomotives.
- f) While holding down the RUN STOP Button, press the ‘-’ Button. Release both buttons. The ‘-’ s in black on a **green** triangular field.
- g) The boosters will beep, and the LED near the knobs will turn yellow.
- h) Turn off the 110V power at the Power Switch in the Control Box. The red light at the switch will go out when 110V power is off.

*Reminder: Remove the 9V battery from the DT100 and leave with throttle.*

## Control Box Photos – Do You Know What This Stuff Is?



No You Don't?

Then

Learn!

