

The EasyDCC Digital Wireless Throttle

Operation Guide

Installing Batteries

Unscrew the antenna and set it aside. If your throttle has a knurled screw on the bottom, remove it and set aside.

Now, just like pulling your foot out of a shoe, gently pull up on the throttle knob and slip the cover plate out of the box. If the lid seems too tight, use a small screwdriver to gently pry up the plate at the bottom corner (bottom is the end nearest the CVP Products listing).

Use four AAA-size batteries. For longest life, use Alkaline-type batteries.

The battery orientation is marked on the circuit board. Note the batteries all face the same direction with the plus end towards the bottom.

For best results, use batteries having a paper cover. Some inexpensive batteries are covered with a very thin layer of paint. This paint is easily scratched when the battery is snapped into the battery holder. If this occurs, the battery can be shorted out and the throttle will not function properly.

Slip the face plate back into the box and screw the antenna on finger tight. Do not over tighten or you risk damaging the threads. Insert the knurled screw and fasten on finger tight.

Using rechargeable batteries

Rechargeable Nicad batteries may be used along with an external charger. But, Nicads have a limited charging life and quickly develop an inability to hold a charge. A much better battery is the new Nickel-metal Hydrides (NMH). They cost a little more but have none of the annoying characteristics of Nicads. Be sure to use AAA size batteries.

Digikey sells the Nicads (part number p100-nd) and a Nicad charger, part number p292-nd (charges 4 batteries at once), or p293-nd (charges 8 batteries at once).

NMH batteries may be ordered from Digikey or Mouser. Most Nicad chargers will charge the Nickel-metal Hydride batteries. However, if you can find a charger designed specifically for the NMH battery, it will provide a faster charge.

Transmitter Mode – Burst or Direct

Your throttle comes with one of two types of software: burst or direct mode. For most applications, burst mode provides the most flexibility.

Direct mode software has an orange label on U4. Each throttle is set to one of the 8 available frequencies. No more than 8 throttles may be used. The receiver must be set to direct mode. Only one receiver is used.

The burst mode software has a yellow label on the throttle microprocessor (U4). The direct mode software has an orange label on U4. Burst mode allows up to 8 throttles to share a single, specific frequency. There are a total of 7 different frequencies available for burst mode. The receiver must be set to burst mode and have the same frequency. Burst and direct mode software are not interchangeable and can not be used at the same time.

Setting transmitter frequency

The desired frequency is set using the small slide switches near the antenna jack. Use the table below to select the desired frequency. You must set the receiver to the same frequency used in the transmitter (burst mode). "On" is when the switch is slid towards the word ON marked on the switch. The picture shows the appearance of the switch set for channel 1. Notice the tables shows all switches need to be set to ON and that all switches are near the word ON.



Switch #1	Switch #2	Switch #3	Frequency	Channel
On	On	On	903.37 MHz	1
Off	Off	On	906.37 MHz	2
Off	On	Off	907.87 MHz	3
Off	On	On	909.37 MHz	4
On	Off	Off	912.37 MHz	5
On	Off	On	915.37 MHz	6
On	On	Off	919.87 MHz	7

The 8th frequency is only available when "direct mode" is selected.

On	On	On	921.37 MHz	8
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Power Switch

The power switch is used to apply power to the throttle. When turned on, the green LED direction indicator will flash for about 30 seconds. After 30 seconds, the LED turns on solid indicating the throttle is ready to use. When off, no power is drained from the battery. When not in use, always turn off the power switch.

Replace Battery Indicator

When there is about 30 minutes of charge remaining in the battery, this LED begins to flash. This is your only indication you need to change batteries. However, you can continue to use the throttle but you should plan on changing batteries soon.

Locomotive Decoder Address Selection

The digital wireless throttle is easy to use. If you are familiar with our regular throttle, you'll find the wireless works exactly the same way. Decoder address selection is done with the two rotary switches. For example, to run locomotive with a decoder address of 45, dial a 4 on the 10's switch and dial a 5 on the 1's switch. Consist addresses are selected in the same way.

Time Delay When Address Changed

To avoid "stepping" on active throttles when changing addresses the throttle stops transmitting data the moment the address selection switches are turned. The green direction LED flashes to remind you of the delay. After 30 seconds, the LED turns on solid indicating the throttle is ready to use.

Speed Control Knob

This single turn knob provides speed control. Turning the knob fully counterclockwise sends the STOP speed command. Full clockwise sends the full speed command. How the locomotive interprets the command is dependent on the decoder programming.

Direction Key

The direction key toggles between forward and reverse with the direction LED indicating which direction is selected.

Emergency Stop

An emergency stop command can be issued from the throttle that halts all trains immediately. Push and hold the direction key until both direction LEDs flash. The Command Station display will also show <<<ALL STOP>>> whenever the emergency stop command has been issued. The system will remain stopped until the direction key is pushed. The throttle that initiated the command must be the one that restores normal operation. No other throttle can clear the emergency stop. The throttle's flashing LEDs will be your clue as to WHO issued the emergency stop command. This condition is retained even if the power

switch is turned off. To clear this condition, turn on the throttle and push the direction switch once. You'll notice the LEDs cease flashing indicating a return to normal operation.

Function keys

There are 5 function keys: F0/Lites and F1 – F4. With the exception of the F2 key, all function keys are toggle types. This means push to turn on the function and push again to turn off the function. F2 is momentary for use with sound systems. F0 is usually associated with headlight controls. F1 through F4 are used to control additional functions provided by your decoder.

Address 00 Not Available

Address 00 can not be used with the wireless throttles. .

Accessory Mode

Stationary accessory decoders, like the AD4, can be activated directly from the wireless throttle. Here's how to do it in 5 easy steps.

1. Push the *ACCY* button. The yellow *ACCY* LED will turn on and serve as a reminder you have entered the accessory mode.
2. Use the rotary switches to select the accessory decoder address.
3. Use the *R-OFF* or *N-ON* keys to throw a turnout in the Reverse direction or Normal direction. For accessories that are turned on or off, select the appropriate key.
4. Return the rotary switches back to the locomotive decoder address.
5. Push the *ACCY* key to return to normal operation and selecting locomotive addresses.

Speed/Direction Control Active During ACCY Use

During the time you are in the *ACCY* mode, the original locomotive decoder address is still active and you have complete speed and direction control. You can leave the throttle in the *ACCY* mode as long as desired. This is a handy feature when you need to throw a series of turnouts to exit or enter a staging yard.

Remember to return the address selector switches to the locomotive's address before leaving the *ACCY* mode. If you forget and leave the address selector on a turnout address and turn off the *ACCY* mode, your throttle will reconnect to the wrong decoder address.

Address Range Limit For Two Digit Throttle

The TX902 wireless throttle can directly address accessory decoders with addresses from 1 to 99. The Command Station can access the entire range of 2048 addresses.

No Position Indication On Throttle

There is no accessory position indication on the throttle because the R and N key actuate the accessory decoder directly.

Two Throttles On Same Address

No harm will occur but the locomotive will operate poorly. If you notice a locomotive can not reach full speed, suspect another throttle has been inadvertently dialed to the same address.

FCC Information Statement

Your wireless throttle is a carefully designed and certified unlicensed low-power transmitter. The FCC ID label and the compliance label serves to show the FCC has authorized this transmitter.

This transmitter has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the

user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.*
- Increase the separation between the equipment and the receiver.*
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.*
- Consult the dealer or experienced radio/TV technician for help.*

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