

Quick Start - When The Train Doesn't Run

There may come a time when the decoder no longer responds to what you believe is the correct frequency, or you don't know its address or you've changed the light settings and have lost track of what's what. Don't despair! The solution is easy. Just reset the Drop-In decoder back to the original factory settings. **Note: this procedure will not reset the P8 sound module. But when you load a new loco number, the P8 will also accept the new number and the two will work together.**

Beware of Lurking Locomotives When Using SERVICE PROGRAM Mode

The SVC PROGRAM app broadcasts commands that can be heard and understood by any other decoder sharing the same frequency as the intended decoder. If another decoder receives the command, it too will be programmed. Play it safe and make sure to turn off all power switches on locomotives not being programmed.

Resetting Decoder to Original Factory Settings of Loco Number 3 and Frequency 0

1. Turn off all AirWire throttles. This is very important since it is the absence of a throttle signal, plus turning the power off and then back on (a power cycle), that allows the decoder to temporarily jump to a specific known frequency, which is frequency 0.
2. Switch off the decoder if it was powered on.
3. Switch on the decoder and **wait** at least one minute. At the end of the one minute, the decoder will chirp 5 times. At the end of the chirps, the decoder will be temporarily on frequency 0.
4. Now **turn** on your throttle. Set the throttle to frequency 0. The loc number doesn't matter.
5. Push MENU twice and then push 4 for SVC PROGRAM.
6. Push 8 and ENT for CV8.
7. Push 1, 3, 5 and push ENT to send the factory reset value of 135. The decoder will chirp when the command is accepted.
8. Turn off, and then turn back on the Plug-In decoder. The decoder is now set to address 3 and frequency 0. All of the lighting effects, function key assignments and modes are set to their original factory values. Remember that the P8 sound module has not been changed in any way. To match sound and motion, you must now change the loco number as described on page 3.

This completes the factory reset procedure.

Quick-Start - Resetting The Drop-In Frequency*

There may come a time when your locomotive no longer responds to what you believe is the correct frequency, or you can not remember the correct frequency. Here's how to reset the frequency. But, this procedure **WILL NOT** change or reset the locomotive number or any changes made to the decoder.

Step 1 Turn off all AirWire throttles. This is very important since it is the combination of the absence of a throttle signal, plus a decoder power-cycle (turning the decoder's power off and then back) that allows the decoder to temporarily jump to frequency 0 where you can set a new frequency.

Step 2 Turn off the Drop-In decoder if it was powered on.

Step 3 Turn on the Drop-In decoder and wait at least one minute. Do not turn on any throttles during this time. At the end of one minute, the decoder will chirp 5 times. Wait for the chirps to end then move to the next step.

Step 4 Turn on your throttle, and set it to frequency 0.

Step 5 - Use SVC PROGRAM to set CV200 to the desired frequency. The locomotive address does not matter when using SERVICE PROGRAM mode. Be sure and make a note of the new frequency.

- * CV58 Frequency CV for G3
- * CV200 Frequency CV For DROP-In, Plug-In

Battery Won't Charge - Tips And Common Mistakes

Lithium-Ion rechargeable batteries are remarkably robust with a long life. However, proper charging procedure and equipment is mandatory.

How Long Will A Battery Last

This is a very common question that does not have a simple answer. This is because the answer depends on many factors such as: type of railroad, locomotive condition, temperature, how the railroad is operated, how many cars are pulled, how many hills and so on.

A Fully Depleted Battery Will Measure 0 Volts

The battery has internal protection that shuts off the output voltage when the battery is fully depleted. Thus a battery will measure 0 volts on a voltmeter. There is nothing wrong with the battery. Recharging the battery will restore normal output voltage.

Use Battery Charger Designed For Lithium-Ion Batteries

This type of charger is typically called a "smart" chargers. A smart charger is required to properly charge the battery and to keep it charged or "topped off" after charging. A smart charger can remain plugged into the battery indefinitely. Using any other type of charger will shorten the life of the battery as well as not charge it to full capacity.

Match Charger Voltage To Battery

For a 14.8V battery, the charger must also be set or designed for 14.8V.

Allow Sufficient Charging Time

With a charger rated at 1.5A, a fully depleted 6.8Ah battery will take about 4.5 hours to reach full charge. If your charger has a different current rating, divide the Ah rating by the charger output current. The answer is the number of hours to charge a fully depleted battery.

If It Doesn't Charge - Check Wiring, Jacks and Cables

When the CVP smart charger is plugged in, the charger's green indicator turns red. If this doesn't happen, then check the physical link between the charger and the battery.

Make Sure Drop-In Decoder Power Switches Are OFF

If the Drop-In power switches are in the "on" position, the charger is not connected to the battery. The charger's indicator will not turn red.

If You Suspect You Have A Bad Battery...

Remove the battery. Connect it directly to the smart charger. Verify the charger indicates charging. Let it charge overnight. Measure the battery voltage after charging. A fully charged 14.8V battery, will measure about 16.5 volts. Your battery may be faulty if the charger never shows "charging" or if the battery still measures 0 volts after charging overnight.

Batteries Do Last A Long Time - But They Don't Last Forever

With normal operation and the use of a smart charger, you can expect the battery to sustain between 500 and 700 charge/discharge cycles before it needs replacement. This means the battery will provide many years of operating enjoyment.

Off Season Battery Storage Tips

Remove the batteries from the trains. Don't charge the battery before storing. The battery lifetime is enhanced if it is stored partially depleted instead of fully charged. There is very little voltage loss during storage. Store batteries in a cool and dry environment. When it is time to put the battery into service, allow it warm to room temperature before charging.

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