Basic Decoder Programming Steps Using the LH100

A Step by Step Guide

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Remember:

Programming the decoder in a locomotive and putting the locomotives address in the LH100 stack are two separate and distinct processes.

1. Programming The Decoder:

With your system power on, the display on your LH100 should read "E-####" (# = a digit from 0-9)

If your display has an L-#### instead of an E-####, that is because your LH100 is set to German Language. That is a subject for another Help page.

The following assumes that you have a programming track set up that is completely electrically isolated from the rest of the layout and that is properly connected to the P and Q terminals at the back of the LZV100.

First put your locomotive on the programming track.

Once it is on the track, with all wheels properly on the rails, Press the F key then the 8 key.

If PROG does not appear on your LH100 display, press the + key until it appears on the display.

Once you have PROG on the display, press the ENTER key.

DIR should appear on the display. If it does not, press the + key until it does.

Once you have the DIR on your display, press the ENTER key.

ADR should appear on the display. If it does not, press the + key until it does.

Once you have the ADR on your display, press the ENTER key.

Your locomotive should jog a bit. (That tells you that the command station is communicating with the locomotive.)

Then you should see the address at which the decoder is programmed appear on the display.

If the locomotive does __not__ budge the first time you press ENTER, press ENTER again.

[If you get an ERR 02 on the display, the locomotive may not be sitting properly on the track and conducting power from the rail tops to the wheels and through to the decoder so that the command station cannot communicate with the decoder. In this case, pre ESC <u>Once</u>, and the ERR 02 should disappear from the display.

[Then try pushing the locomotive gently down the track an inch or so in order to make sure all of the locomotive (and tender) wheels are solidly on the track. Then press ENTER again.

[If the locomotive does not move a bit, then recheck the wiring from your P & Q terminals to your programming track very carefully to ensure there is continuity along the whole route and try again.

[If you still get an ERR 02, make sure that both the programming track rails and all of the power pickup wheels on the locomotive are clean. Don't laugh and don't be insulted. I have had people send me or bring me their locomotives in frustration, only to see themselves amazed when the first thing I do is make sure there is power transmission to the locomotive and programming works properly!!

[If you still get an ERR 02, that means that something is coming between the decoder and the LZV100/LH100. This could be capacitor circuitry on board a sound or other manufacturer's decoder.

[In pre V.3.6 systems, this could be dealt with by inserting a 10 Ohm/½ Watt resistor in series on one of the P or Q wires. If you get the ERR 02 with a V.3.6 system, you might still try the resistor.

[IF NONE OF THE ABOVE WORK, THERE IS A PROBLEM SOMEWHERE ELSE THAT WILL NEED MORE EXTENSIVE TROUBLE SHOOTING. IN WHICH CASE, YOU MAY HAVE TO CALL FOR HELP.]

Back to the Step by Step:

Having pressed the Enter Key with **ADR** on the display, the address to which the decoder is programmed should then appear on the display as "A-####". (# = a 0-9 digit.)

If you want to program the decoder to a different address, press the CLR key once. The numbers on the display should disappear.

Then key in the number to which you want to program the decoder and press the Enter key.

The locomotive should jog a bit. That tells you that the programming is taking place.

If you press the ENTER key again, the same jog should take place and the address to which you have programmed the decoder appear again on the display.

Press ESC until you are back at the original E-#### on the display.

You will then have successfully programmed the new address in the decoder.

2. Putting The Decoder Address In The LH100 Stack:

Press the ESC key until you come to an address that you are not using.

Then press the CLR key.

Then key in the locomotive address you want to control and press the ENTER key.

You should then be able to control the locomotive whose address you have keyed in normally.

By pressing the ESC key, you can cycle through all of the locomotives on your LH100 display stack.

> *You can have up to 12 different addresses in the display stack.*

> *You may reduce that to any number of addresses less than 12, if you would like to reduce the number you have to cycle through to get to the one you want.*