

Addressing the M.T.H. HO K-4 using the Lenz Set100 System

To change the K-4's address on the Lenz system you'll need to use PoM (Programming on Main) mode. Programming tracks won't work with MTH engines. **NOTE – Lenz Set100 systems do not allow the user to change CV1 while in PoM mode. MTH allows you to edit CV49 to change the Short Address.** So, if you want to change the short address that's very simply done by:

1. Apply power to the track
2. Select the engine's current address (default is addr 3)
3. Hit the number 3 button and the engine should start up
4. Hit the F button then the number 7 button. "CV" will now be displayed on the screen
5. Hit ENTER
6. Enter the CV number you want to change. In this case, since it's the short address you want, enter "49". Now hit ENTER
7. Enter the two-digit address you want to change your locomotive to by using the number keys then hit ENTER. You will hear a "toot-toot" from the engine confirming that it's acted on your command
8. Hit ESC until you back at the main control screen.
9. Hit "C" and select the new address you just entered in step 7 then hit ENTER
10. Press the number 2 button on the keypad and the whistle should blow

Now, for changing the extended address it's a bit more involved but still doable. You should know that the default extended address is the cab number of your engine, so if you're happy with that then you needn't go any further. But should you want to change it here is how:

1. First you'll need to tell the engine to start looking at its extended address. This is CV29
2. Make sure there's power on the track
3. Hit the number 3 button on the keypad and the engine should start up (assuming you are still at the short address from above, whatever address was programmed)
4. Hit the F button then the number 7 button. "CV" will now be displayed on the screen
5. Hit ENTER
6. Enter 29 on the keypad and hit ENTER
7. Enter 38 on the keypad and ENTER. You will get a "toot-toot" from the engine letting you know it's acted on your command to enable long addressing
8. Hit ESC until you are back to the main engine screen. Your engine is now in extended addressing.
9. Enter the cab number of the engine by hitting "C" and using the keypad to enter the 4-digit number. If you don't have a cab number use 3333. Again, the cab number is the default extended address that has already been programmed at the factory. Since you are in PoM mode you have to enter a valid address to communicate with the engine
10. Hit the keypad button number 2 and the whistle should blow
11. Now that the engine is in extended addressing we'll need to do some math to figure out the hexadecimal equivalent of the decimal address you want OR, you can use the attached spreadsheet to see what you'd need to enter (the spreadsheet is a WHOLE lot easier). Let's use the spreadsheet instead.
12. Enter the extended address you want in the "Desired 4-Digit Engine Address" cell. The spreadsheet figures the rest out for you. **NOTE – Since the Lenz Set100 doesn't allow users to change CV17 and CV18 on PoM mode. MTH allows you to change CV's 50 and 51 to accomplish editing the extended address. So when you use the spreadsheet below just remember that for the Lenz system CV17 = CV50 and CV18=CV51**

13. Once you have the two values for CV50 and 51 you can enter them using the keypad
14. Hit the F button then the number 7 button and hit ENTER
15. Using the keypad, enter "50" on the keypad and hit ENTER.
16. Now enter the value you get from the spreadsheet for CV 17 (remember CV17=CV50 for the Lenz systems when programming extended addressing) and hit ENTER. You will get a "toot-toot" from the engine
17. Hit ESC until you are back at the main engine screen
18. Hit the F button then 7 on the keypad and hit ENTER
19. Using the keypad, enter "51" on the keypad and hit ENTER
20. Now enter the value you get from the spreadsheet for CV 18 (remember CV18=CV51 for the Lenz systems when programming extended addressing) and hit ENTER. You will get a "toot-toot" from the engine
21. Hit the ESC button until you are back to the main engine screen
22. Hit "Cl" and, using the keypad, enter the extended address you just entered in steps 16-20
23. You should now have control of the engine at its new extended address. Hit keypad button number 2 to verify that the whistle blows

To switch back to the short address from the extended perform the following steps:

1. Ensure you have power on the track
2. Select the address of the engine you want to change back to 2-digit addressing by hitting "Cl" and enter the address using the keypad. Hit ENTER then hit keypad button number 3. The engine should start up
3. Now that you have control of the engine at its extended address you need to alter CV29
4. Hit the F button then button 7 on the keypad. Hit ENTER
5. Enter "29" on the keypad then hit ENTER
6. Enter "6" on the keypad and hit ENTER. You will get a "toot-toot" from the engine indicating that it has understood your command
7. Hit ESC until you are back to the main engine screen
8. Hit the "Cl" button and enter the short address that you had programmed for this engine. If you didn't change it then it's default is 3
9. Hit keypad button 2 to sound the whistle to ensure you have control of the engine at its short address

To use the spreadsheet double-click on it and then enter in the extended address you desire in the first cell. The spreadsheet will calculate the appropriate CV17/18 values for you. Write them down so you can enter them later.

CV17 and CV18 Conversion Tool

Desired Extended Engine Address	Hex Conversion	C17 Value to Enter	C18 Value to Enter
2006	07D6	199	214

END