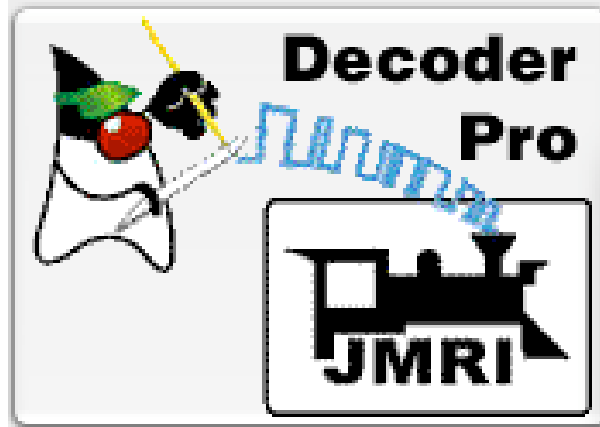


# USING JMRI DECODER PRO TO PROGRAM YOUR ENGINES



- Program a new engine
- Duplicate an existing engine

DecoderPro: All Entries

File Edit Settings Actions NCE Window Help

+ New Loco Identify Help Unknown Programming Mode Direct

ID	DCC Address	Icon	Decoder Model	Road Name	Road Number	Manufacturer	Model	Owner	Date Modified
Amtrak 20	20		SDH166D	Amtrak	20	Proto 1000	RDC	Ron S	Apr 4, 2019 11:31:18 AM
BC 30	30		D13J	BC Rail	30	Proto 1000	RDC	Ron S	Apr 4, 2019 10:33:47 AM
Amtrak 36	36		SDH166D	Amtrak	36	Proto 1000	RDC	Ron S	Apr 4, 2019 11:31:18 AM
B&O 167	167		D13J	Baltimore & Ohio	167	Proto 1000	RDC	Ron S	Apr 4, 2019 12:58:04 PM
NYC 464	464		D13J	New York Central	464	Proto 1000	RDC	Ron S	Apr 4, 2019 10:34:36 AM
NYC 499	499		SDH166D	New York Central	499	Proto 1000	RDC	Ron S	Apr 4, 2019 10:34:45 AM
B&O 1951	1951		SDH166D	Baltimore & Ohio	1951	Proto 1000	RDC	Ron S	Apr 4, 2019 10:35:14 AM
B&O 6516	6516		D13J	Baltimore & Ohio	6516	Proto 1000	RDC	Ron S	Apr 4, 2019 10:35:24 AM

ID:  
Road Name:  
Road Number:  
Manufacturer:  
Owner:  
Model:  
DCC Address:  
Decoder Family:  
Decoder Model:  
Filename:

Programming Track  
 Programming On Main  
 Edit Only

Program

Labels & Media Throttle

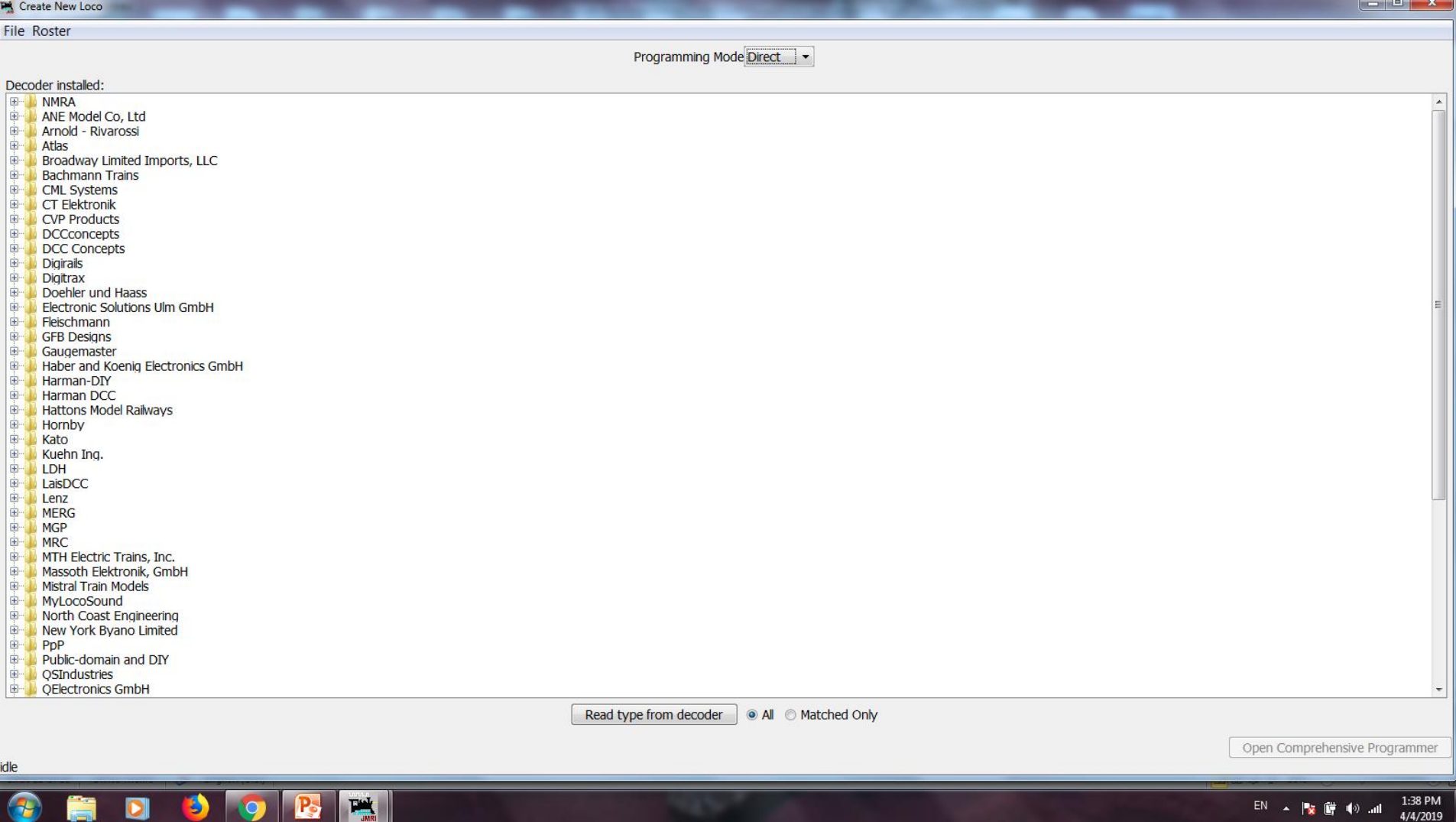
Service Mode Programmer NCE Is Online | Operations Mode Programmer NCE Is Online | Programmer Status: Idle | Active Profile: My JMRI Railroad

## Program a new engine.

From your computer home screen double click on the Decoder Pro Icon.

Now click the New Loco button.



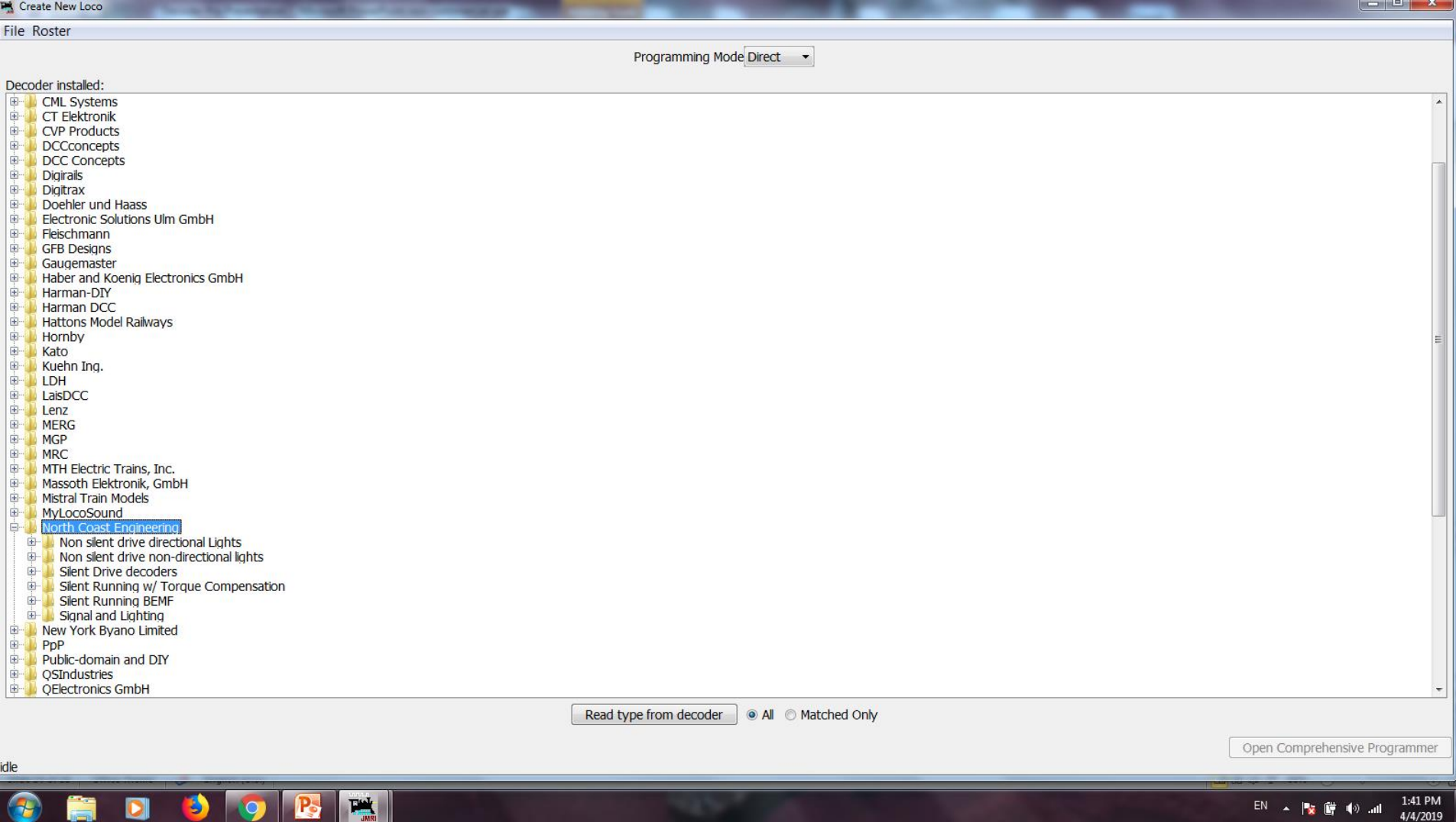


On this screen you'll select the engine/decoder manufacturer.

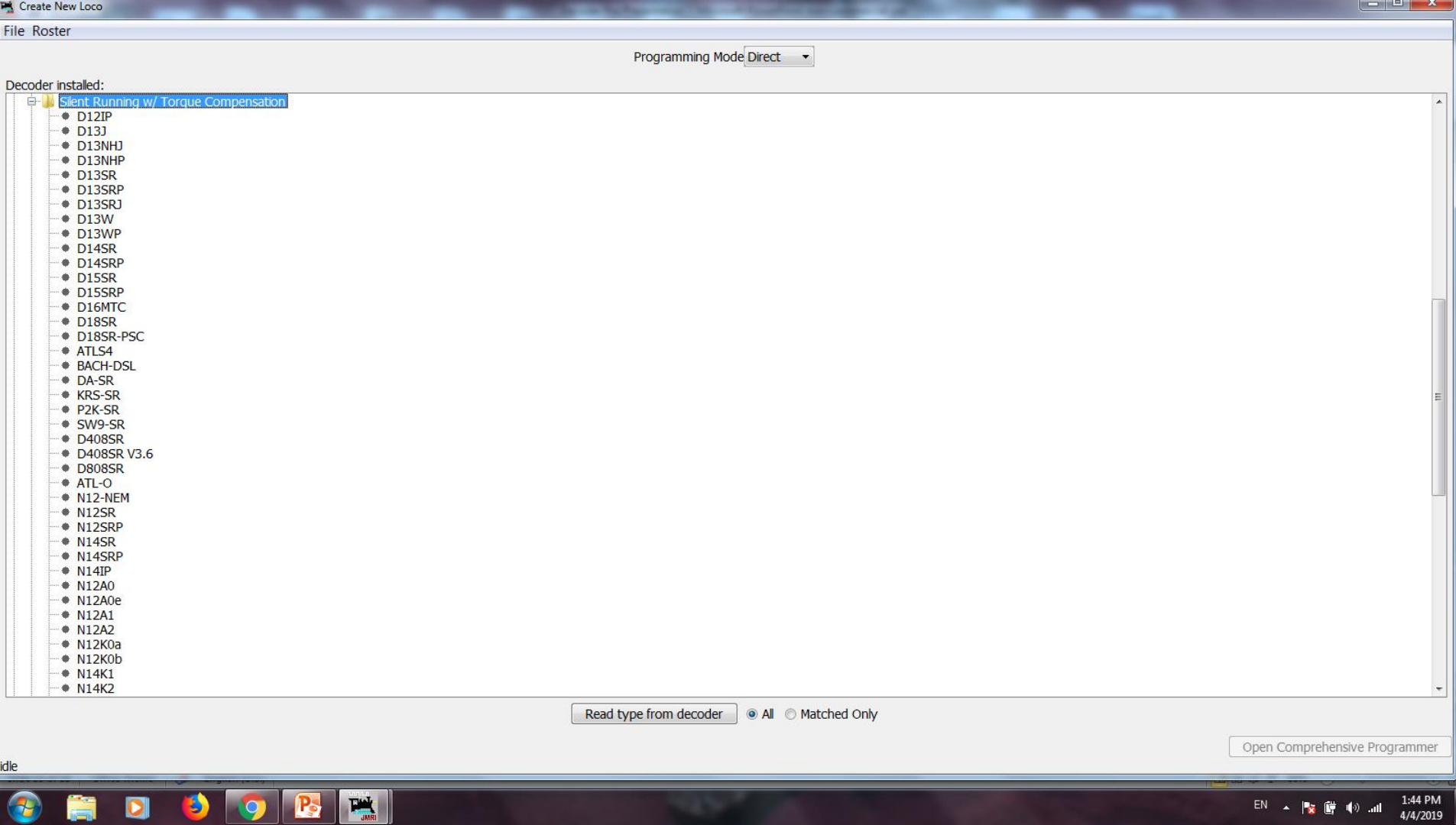
For this clinic we will select North Coast Engineering (NCE).

Alternatively you can place your engine on the track and select Read type from decoder.

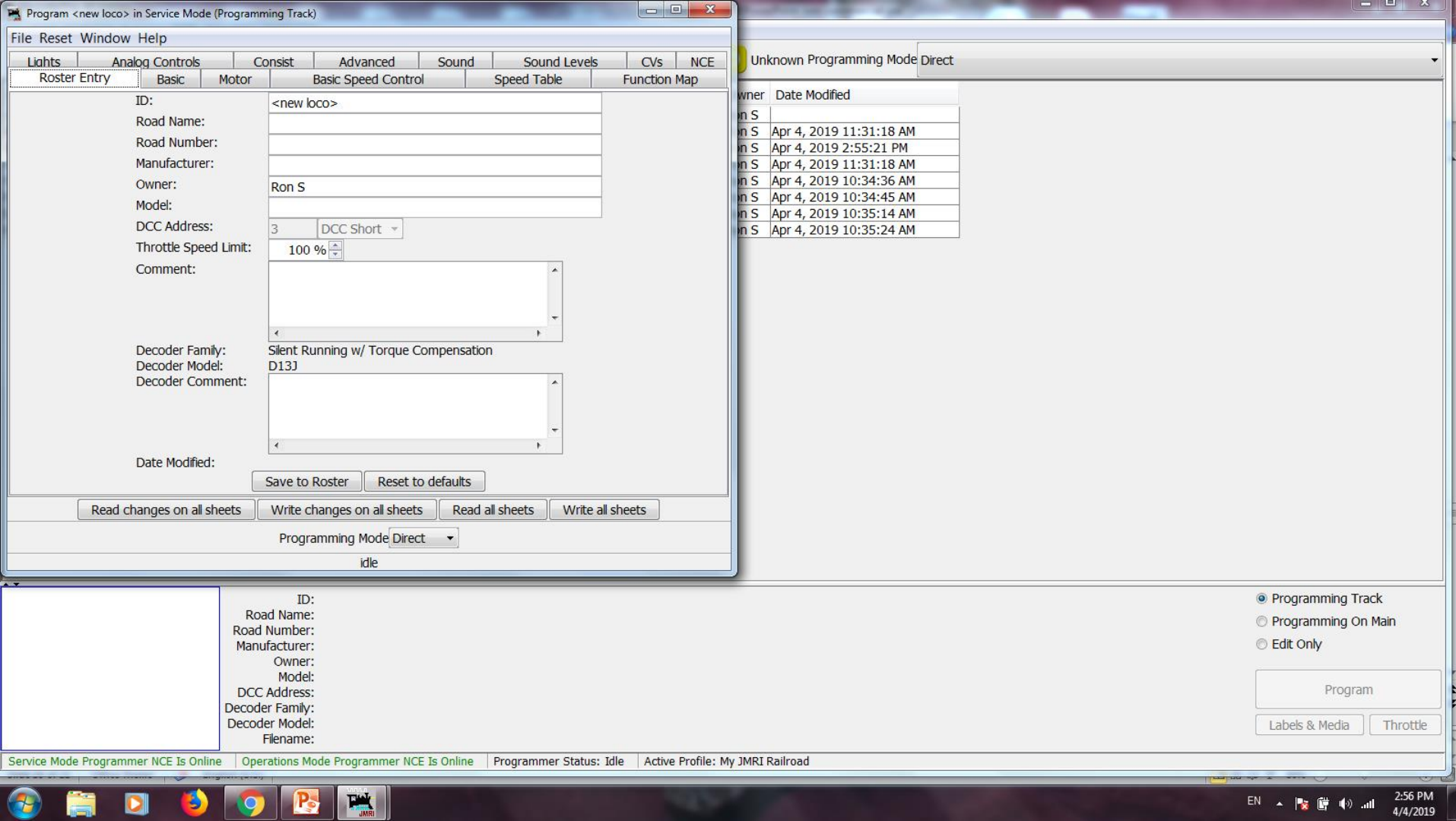
This should narrow the list down with your decoder among those in the shortened list.



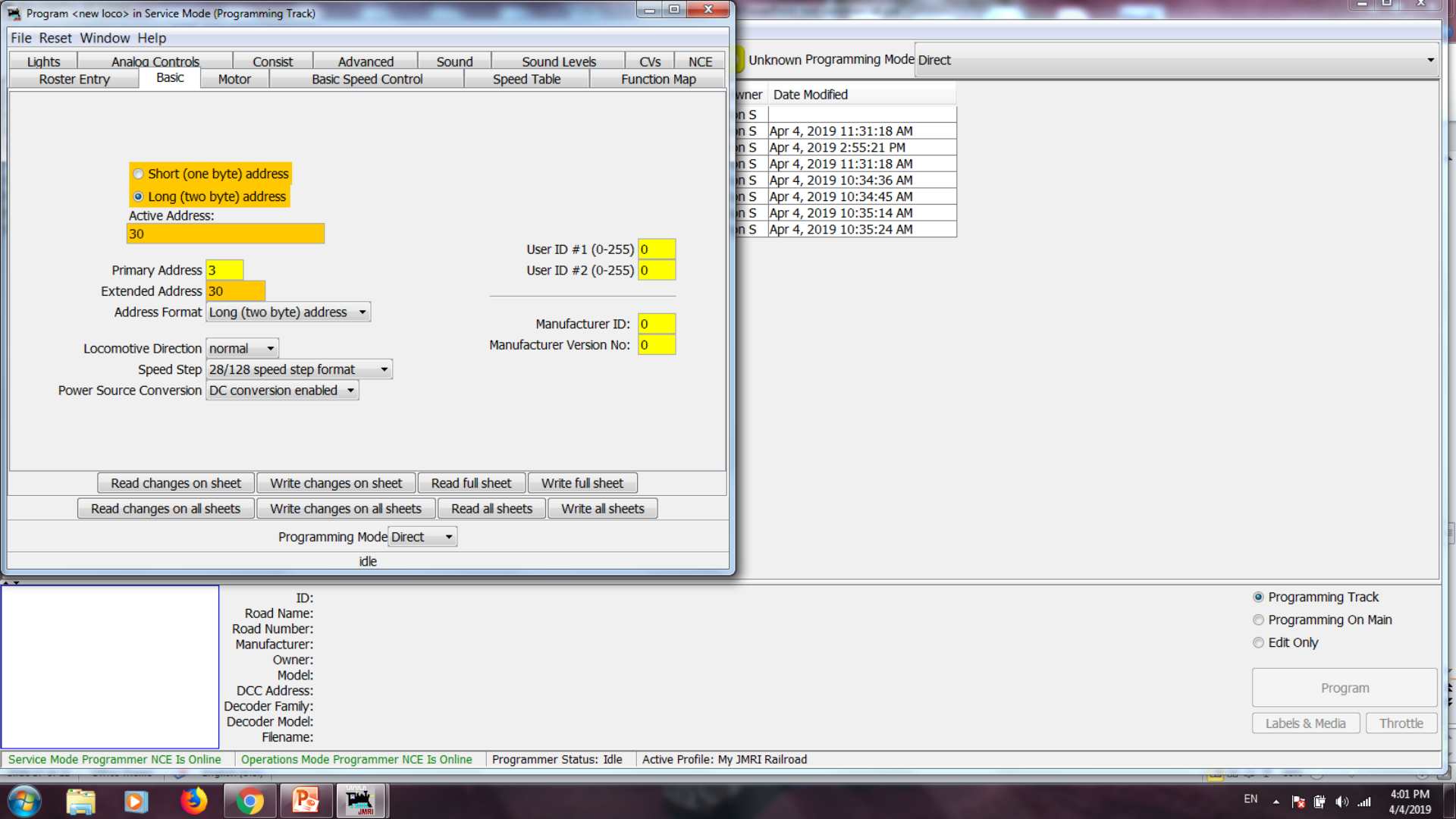
Double clicking on North Coast Engineering will bring up a list of “types” of decoders. Again for this clinic we’ll use “Silent Running With Torque Compensation” which describes most of the new decoders.



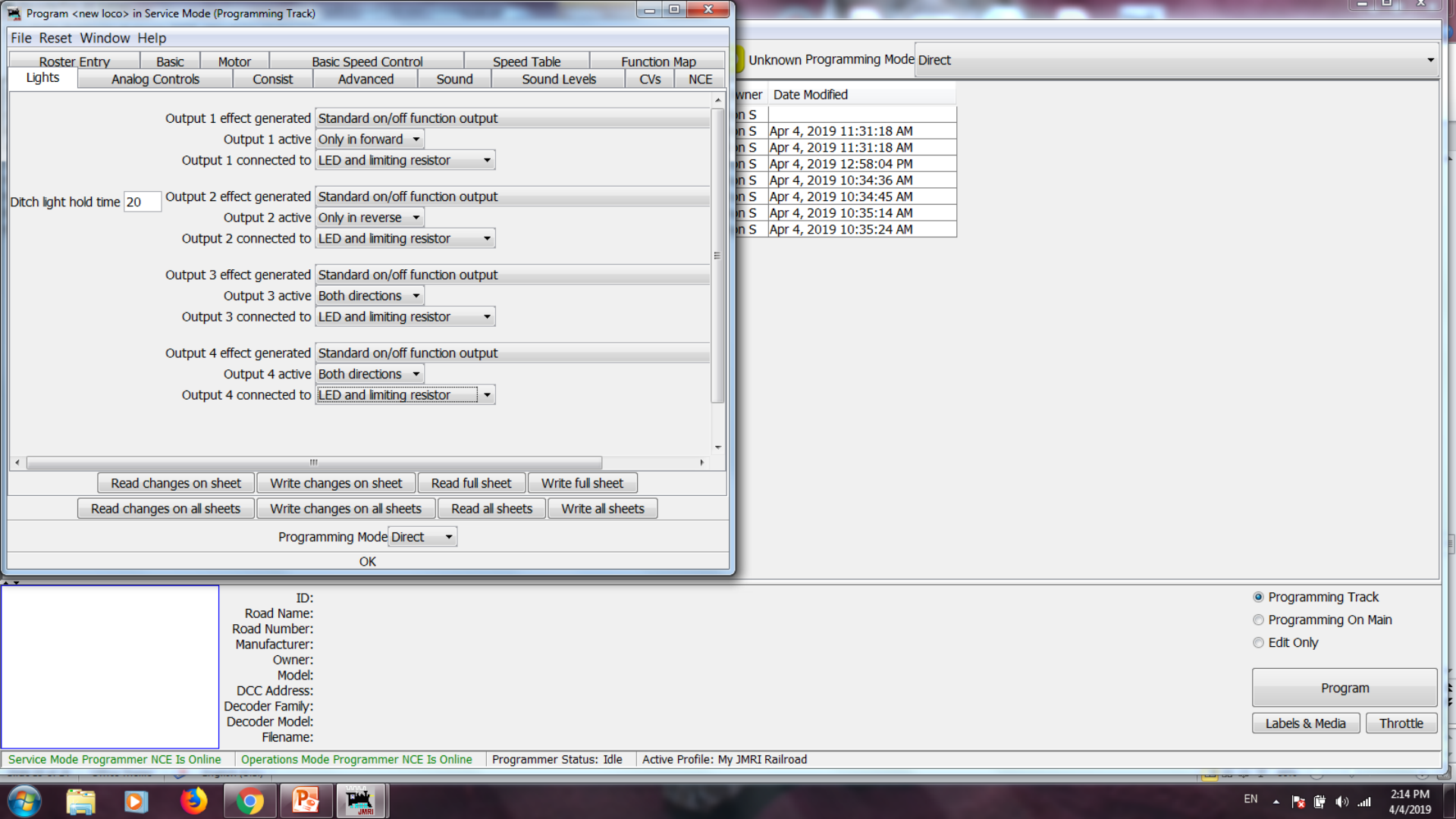
This in turn brings up a list of decoders. I want D13J and I find it in the list. I double click on this decoder.



This sheet will pop open. You will now place your engine on the programming track. At this point you will want to click on the tab Read All Sheets. This will dump all the basic settings existing in the decoder to the program.

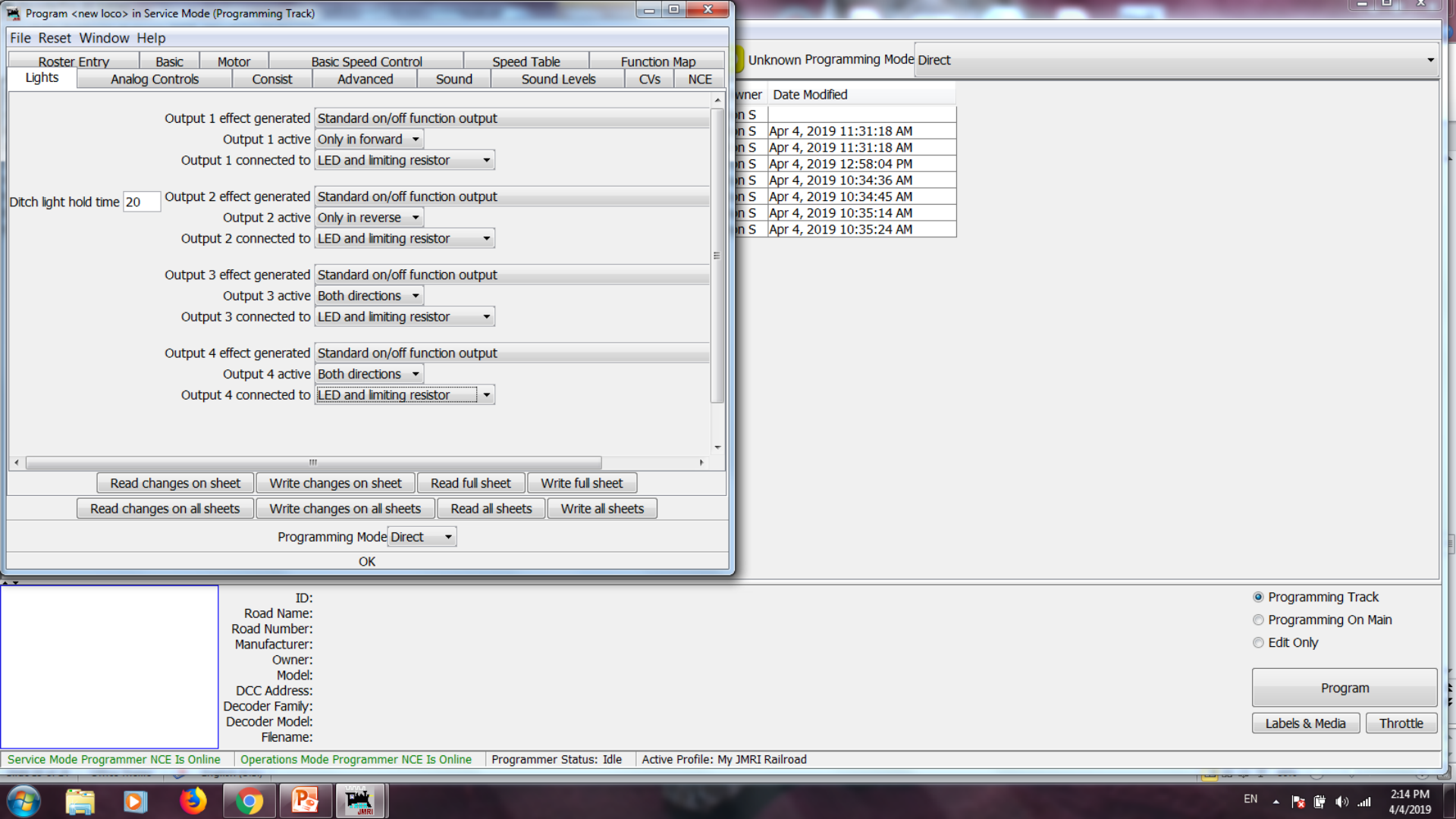


On the Basic Tab we will select Long (two byte) address and change the active address to 30, our engine number. Click Write Full Sheet. You will notice that our orange highlighted boxes turn to red then lose their color once the changes are programmed into the engine.



Now go through the rest of the tabs and select your preferences. For instance on the Lights Tab I changed from Incandescent Bulbs to LEDs.





Once you are satisfied with your changes select Write all sheets. Your engine is now programmed.

DecoderPro: All Entries

File Edit Settings Actions NCE Window Help

+ New Loco 🔍 Identify ? Help Unknown Programming Mode Direct

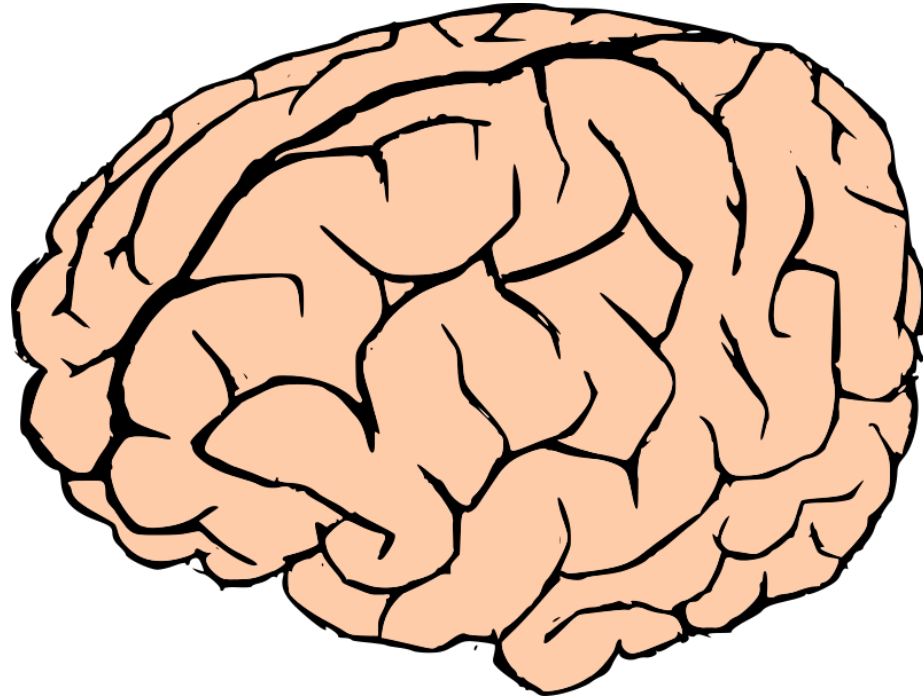
ID	DCC Address	Icon	Decoder Model	Road Name	Road Number	Manufacturer	Model	Owner	Date Modified
Amtrak 20	20		SDH166D	Amtrak	20	Proto 1000	RDC	Ron S	Apr 4, 2019 11:31:18 AM
BC 30	30		D13J	BC Rail	30	Proto 1000	RDC	Ron S	Apr 4, 2019 2:46:36 PM
Amtrak 36	36		SDH166D	Amtrak	36	Proto 1000	RDC	Ron S	Apr 4, 2019 11:31:18 AM
B&O 167	167		D13J	Baltimore & Ohio	167	Proto 1000	RDC	Ron S	Apr 4, 2019 12:58:04 PM
NYC 464	464		D13J	New York Central	464	Proto 1000	RDC	Ron S	Apr 4, 2019 10:34:36 AM
NYC 499	499		SDH166D	New York Central	499	Proto 1000	RDC	Ron S	Apr 4, 2019 10:34:45 AM
B&O 1951	1951		SDH166D	Baltimore & Ohio	1951	Proto 1000	RDC	Ron S	Apr 4, 2019 10:35:14 AM
B&O 6516	6516		D13J	Baltimore & Ohio	6516	Proto 1000	RDC	Ron S	Apr 4, 2019 10:35:24 AM

<p>ID: B&amp;O 167            Road Name: Baltimore &amp; Ohio            Road Number: 167            Manufacturer: Proto 1000            Owner: Ron S            Model: RDC            DCC Address: 167            Decoder Family: Silent Running w/ Torque Compensation            Decoder Model: D13J            Filename: B_O_167.xml</p>	<p><input checked="" type="radio"/> Programming Track  <input type="radio"/> Programming On Main  <input type="radio"/> Edit Only</p> <p style="text-align: center; margin-top: 10px;">Program</p> <p style="text-align: center; margin-top: 5px;">Labels &amp; Media    Throttle</p>
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Service Mode Programmer NCE Is Online    Operations Mode Programmer NCE Is Online    Programmer Status: Idle    Active Profile: My JMIRI Railroad

TIP: On the roster sheet you can simply double click on any of the column headings to sort on that column. This is an easy way to find if someone else is using that engine number on the layout.

Brain purge . . . .



. . . . Switch Gears

DecoderPro: All Entries

File Edit Settings Actions NCE Window Help

+ New Loco 🔍 Identify ? Help Unknown Programming Mode Direct

ID	DCC Address	Icon	Decoder Model	Road Name	Road Number	Manufacturer	Model	Owner	Date Modified
Amtrak 20	20		SDH166D	Amtrak	20	Proto 1000	RDC	Ron S	Apr 4, 2019 11:31:18 AM
BC 30	30		D13J	BC Rail	30	Proto 1000	RDC	Ron S	Apr 4, 2019 10:33:47 AM
Amtrak 36	36		SDH166D	Amtrak	36	Proto 1000	RDC	Ron S	Apr 4, 2019 11:31:18 AM
NYC 464	464		D13J	New York Central	464	Proto 1000	RDC	Ron S	Apr 4, 2019 10:34:36 AM
NYC 499	499		SDH166D	New York Central	499	Proto 1000	RDC	Ron S	Apr 4, 2019 10:34:45 AM
B&O 1951	1951		SDH166D	Baltimore & Ohio	1951	Proto 1000	RDC	Ron S	Apr 4, 2019 10:35:14 AM
B&O 6516	6516		D13J	Baltimore & Ohio	6516	Proto 1000	RDC	Ron S	Apr 4, 2019 10:35:24 AM

ID: B&O 6516  
 Road Name: Baltimore & Ohio  
 Road Number: 6516  
 Manufacturer: Proto 1000  
 Owner: Ron S  
 Model: RDC  
 DCC Address: 6516  
 Decoder Family: Silent Running w/ Torque Compensation  
 Decoder Model: D13J  
 Filename: B\_O\_6516.xml

Programming Track  
 Programming On Main  
 Edit Only

Service Mode Programmer NCE Is Online | Operations Mode Programmer NCE Is Online | Programmer Status: Idle | Active Profile: My JMRI Railroad

12:03 PM 4/4/2019

## Duplicate an existing engine.

You have an engine with settings that are “just right” and you have a similar engine in which you want to install the same programming.

Click on the engine you want to duplicate. In this case B&O 6516.

DecoderPro: All Entries

File Edit Settings Actions NCE Window Help

Identify Help Unknown Programming Mode Direct

ID	Icon	Decoder Model	Road Name	Road Number	Manufacturer	Model	Owner	Date Modified
Amtrak	20	SDH166D	Amtrak	20	Proto 1000	RDC	Ron S	Apr 4, 2019 11:31:18 AM
BC Rail	30	D13J	BC Rail	30	Proto 1000	RDC	Ron S	Apr 4, 2019 10:33:47 AM
Amtrak	36	SDH166D	Amtrak	36	Proto 1000	RDC	Ron S	Apr 4, 2019 11:31:18 AM
NYC	464	D13J	New York Central	464	Proto 1000	RDC	Ron S	Apr 4, 2019 10:34:36 AM
NYC	499	SDH166D	New York Central	499	Proto 1000	RDC	Ron S	Apr 4, 2019 10:34:45 AM
B&O	1951	SDH166D	Baltimore & Ohio	1951	Proto 1000	RDC	Ron S	Apr 4, 2019 10:35:14 AM
B&O 6516	6516	D13J	Baltimore & Ohio	6516	Proto 1000	RDC	Ron S	Apr 4, 2019 10:35:24 AM

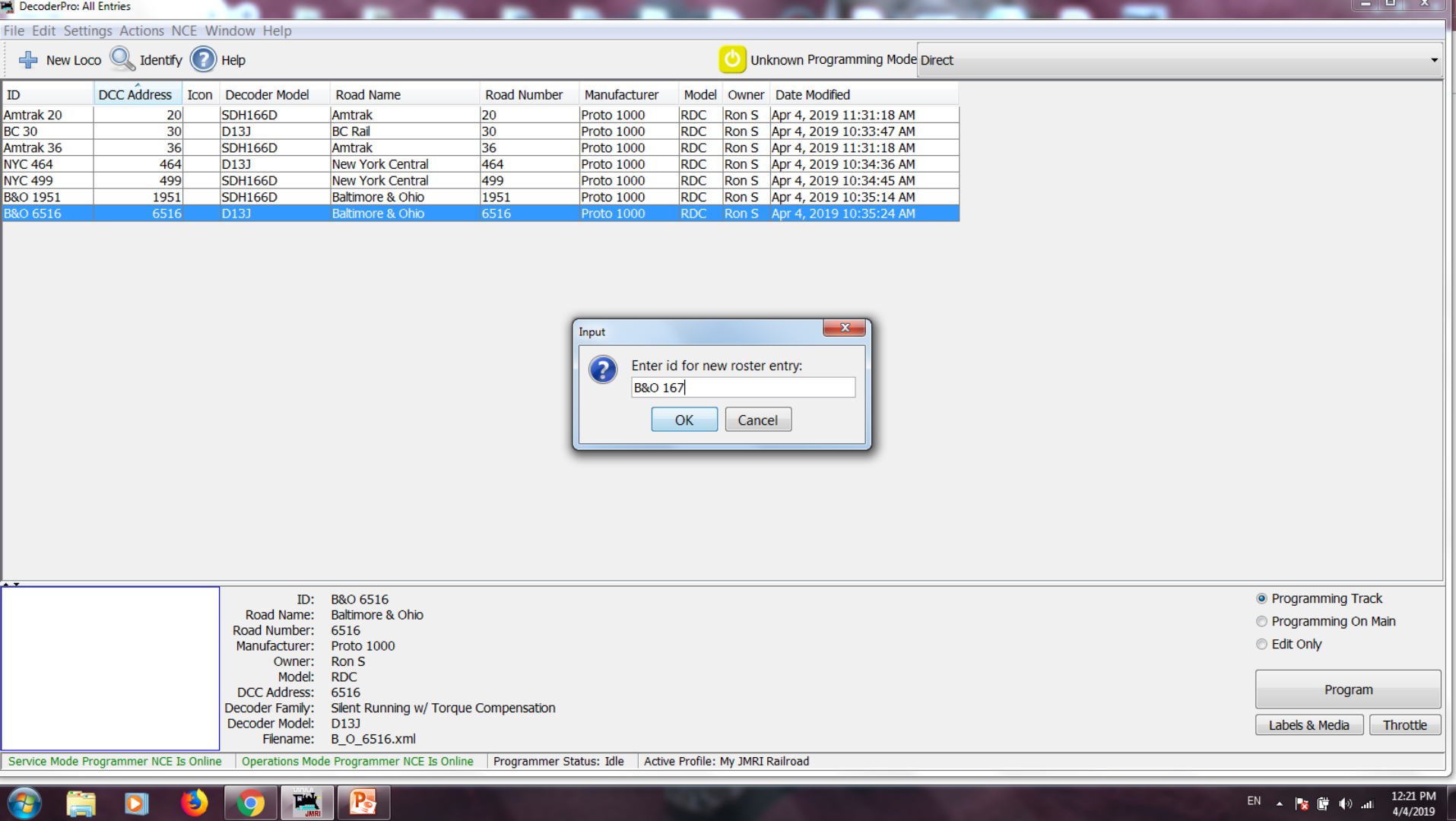
ID: B&O 6516  
 Road Name: Baltimore & Ohio  
 Road Number: 6516  
 Manufacturer: Proto 1000  
 Owner: Ron S  
 Model: RDC  
 DCC Address: 6516  
 Decoder Family: Silent Running w/ Torque Compensation  
 Decoder Model: D13J  
 Filename: B\_O\_6516.xml

Programming Track  
 Programming On Main  
 Edit Only

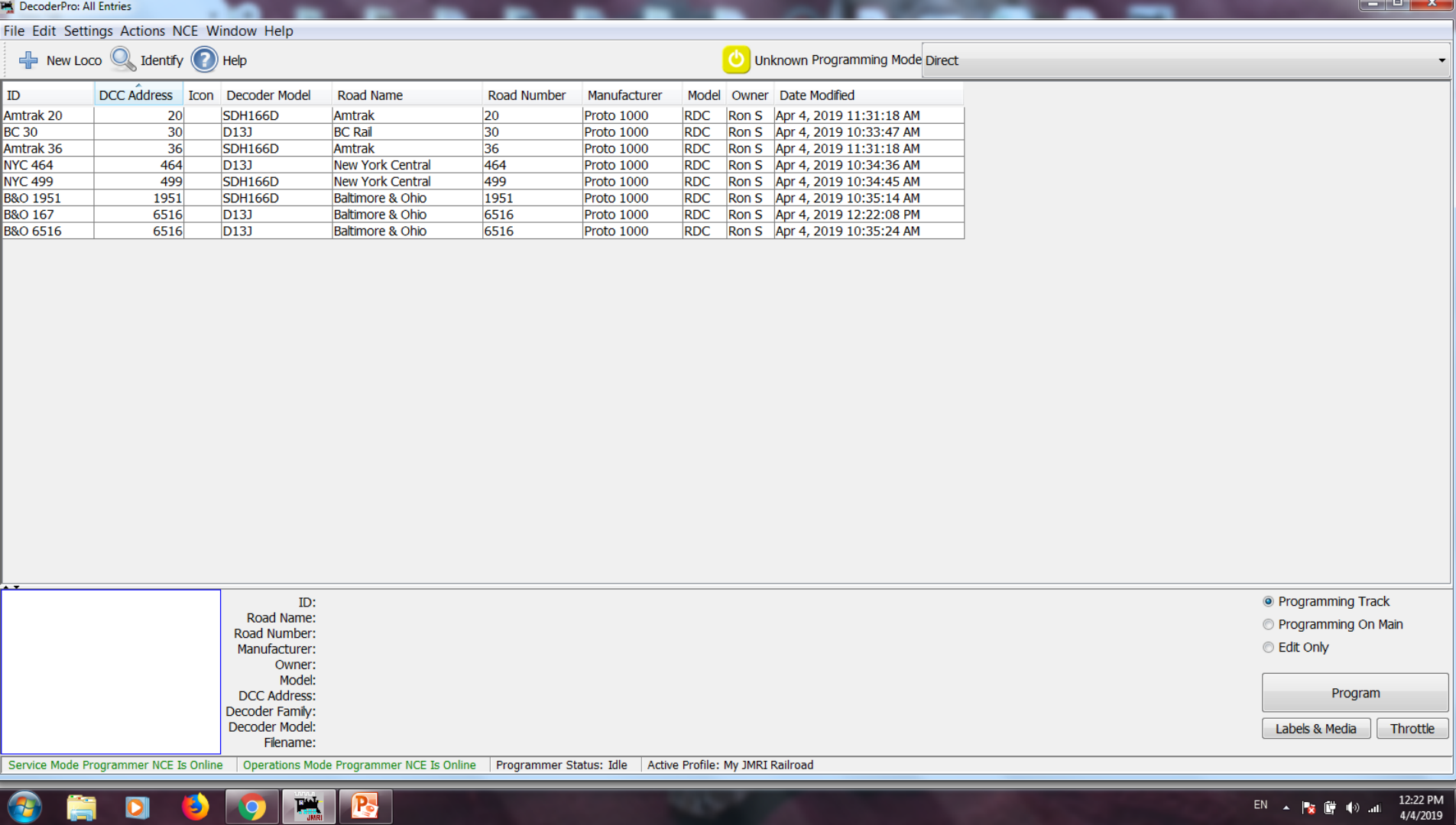
Program  
 Labels & Media Throttle

Service Mode Programmer NCE Is Online   
 Operations Mode Programmer NCE Is Online   
 Programmer Status: Idle   
 Active Profile: My JMRI Railroad

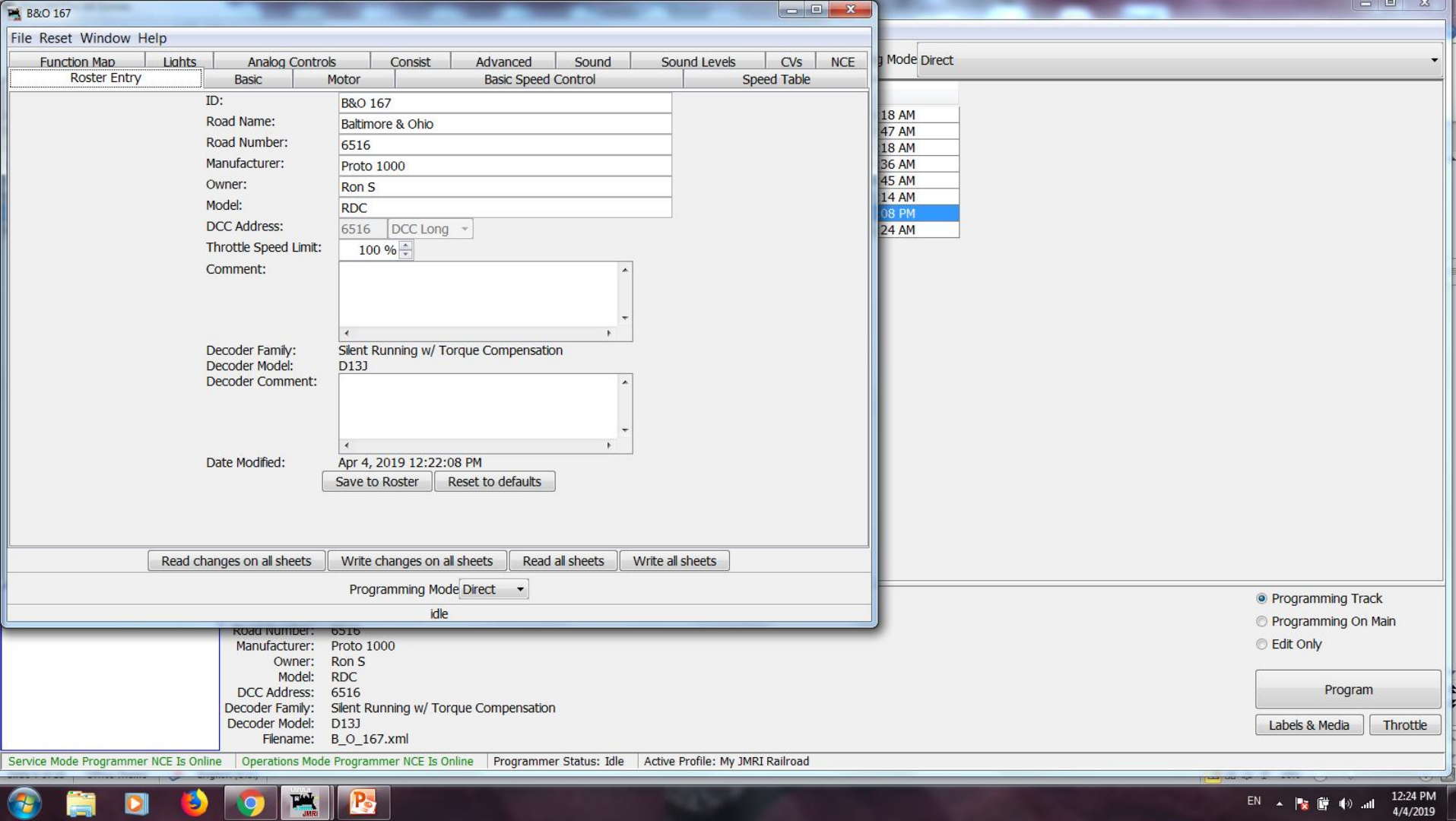
On the menu select Edit then Duplicate Loco.



Enter your new ID, typically this is your road name and road number, e.g. B&O 167.  
Click OK.

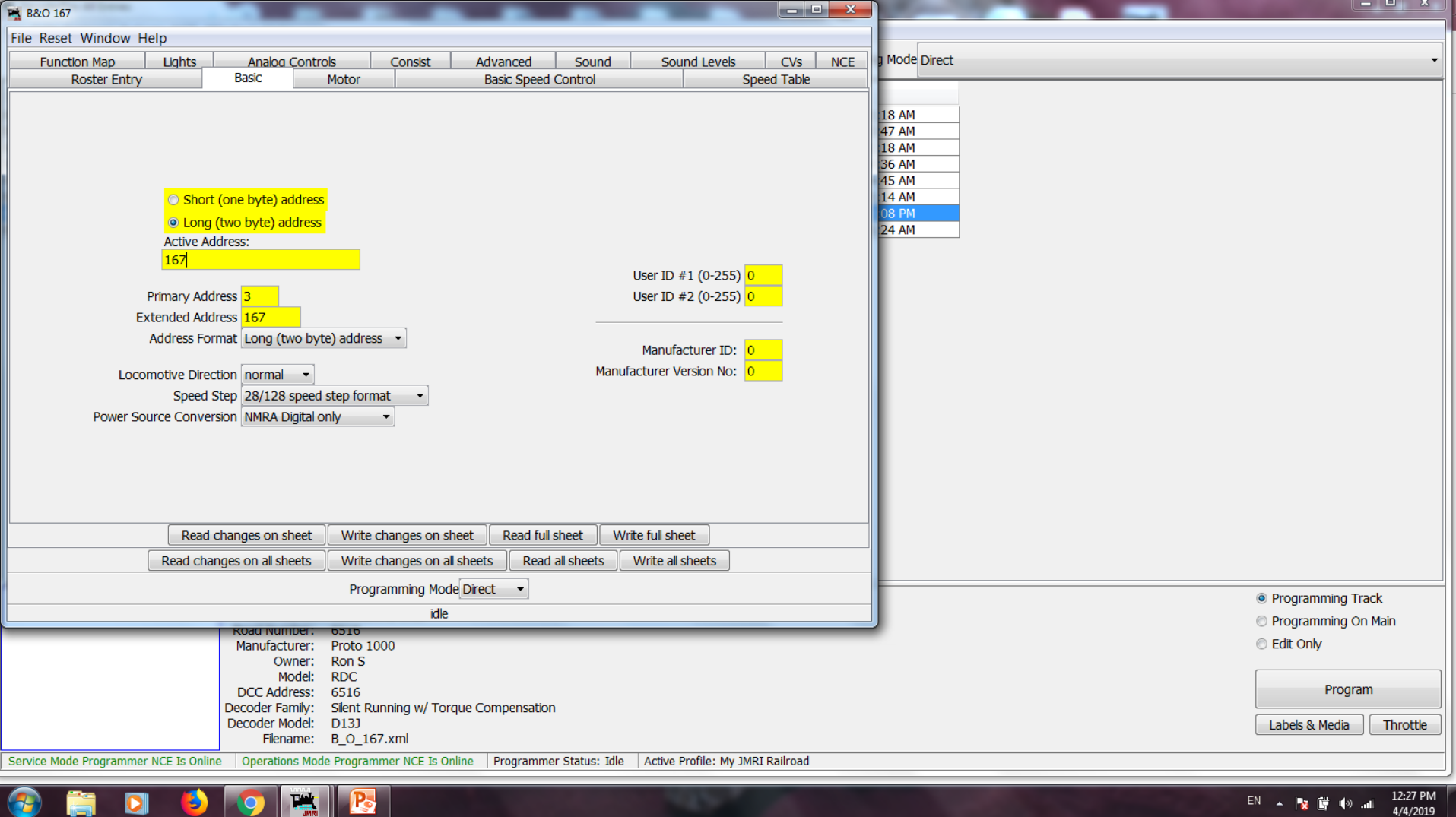


You now have B&O 167 as a roster item but you see that you still have the original engine number so we need to change that.



Double click on B&O 167 will bring up this screen. Click on the Basic tab will bring up the following screen.





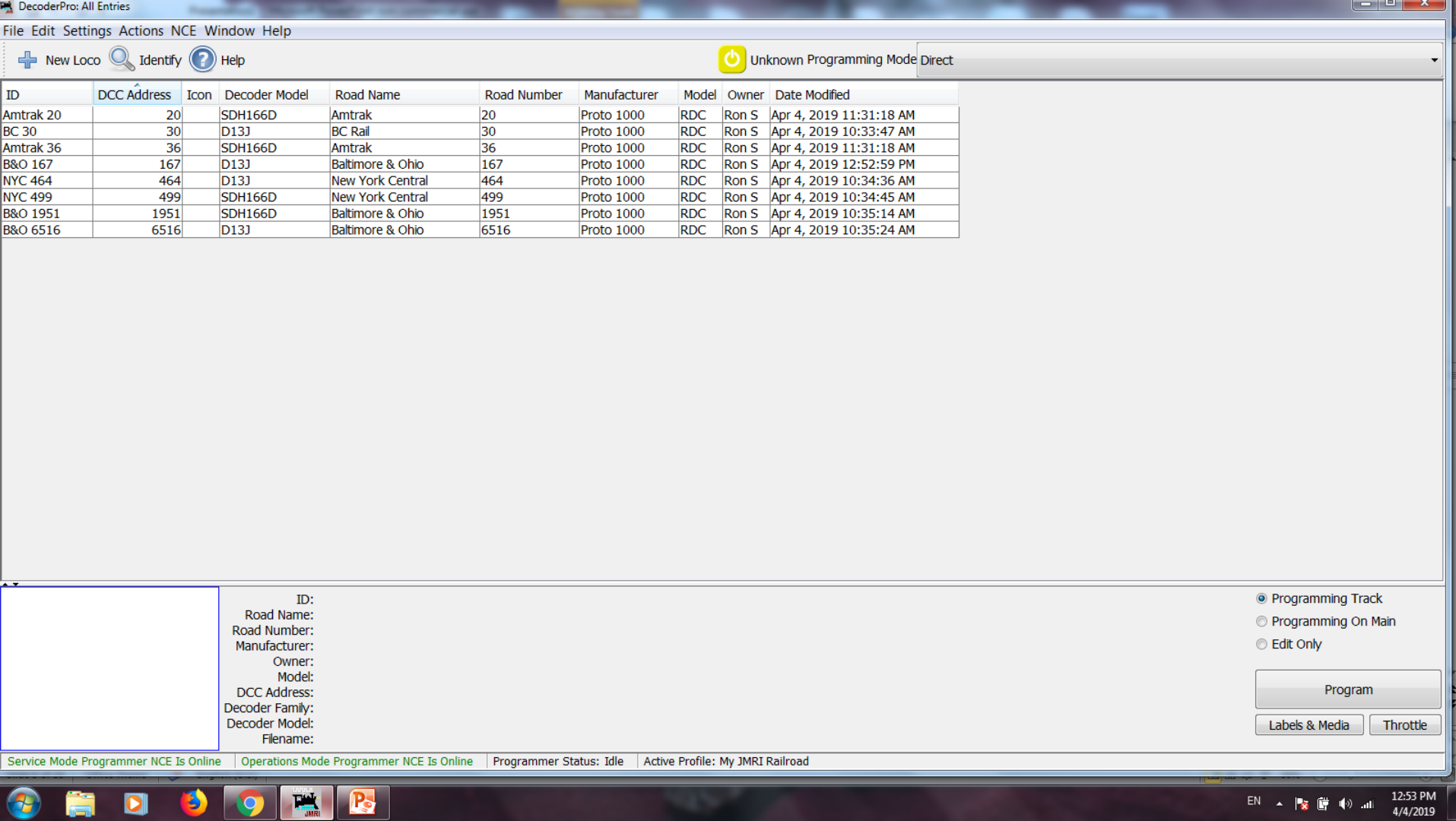
Click the radio button for Long Address. Now change your Active Address to 167. This will also change your Extended Address to 167. On the lower tabs click Write changes on sheet.

The screenshot displays the NCE software interface. The main window is titled "B&O 167" and has a menu bar with "File", "Reset", "Window", and "Help". Below the menu bar are several tabs: "Function Map", "Lights", "Analog Controls", "Consist", "Advanced", "Sound", "Sound Levels", "CVs", and "NCE". The "Roster Entry" tab is active, showing a form for editing locomotive data. The form is divided into sections: "Basic", "Motor", "Basic Speed Control", and "Speed Table". The "Basic" section contains the following fields:

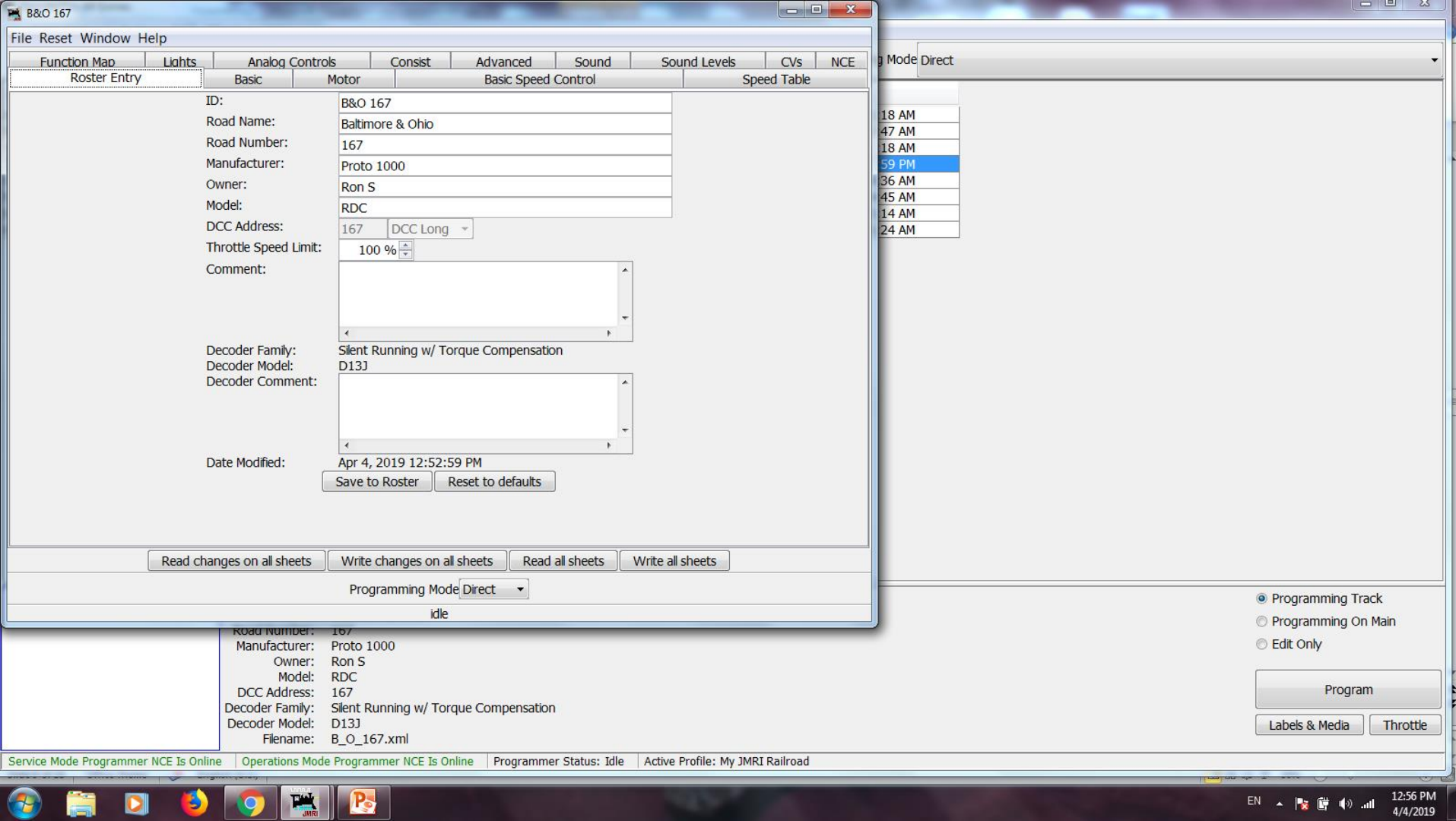
- ID: B&O 167
- Road Name: Baltimore & Ohio
- Road Number: 167
- Manufacturer: Proto 1000
- Owner: Ron S
- Model: RDC
- DCC Address: 167 (with a "DCC Long" dropdown menu)
- Throttle Speed Limit: 100 %
- Comment: (empty text area)

The "Decoder Family" is "Silent Running w/ Torque Compensation" and the "Decoder Model" is "D13J". The "Date Modified" is "Apr 4, 2019 12:22:08 PM". At the bottom of the form are "Save to Roster" and "Reset to defaults" buttons. Below the form are buttons for "Read changes on all sheets", "Write changes on all sheets", "Read all sheets", and "Write all sheets". A dropdown menu shows "Programming Mode Direct" and an "OK" button is at the bottom center. To the right of the main window is a "Mode Direct" dropdown menu with a list of times: 18 AM, 47 AM, 18 AM, 36 AM, 45 AM, 14 AM, 08 PM (highlighted), and 24 AM. At the bottom right of the interface are radio buttons for "Programming Track" (selected), "Programming On Main", and "Edit Only", along with "Program", "Labels & Media", and "Throttle" buttons. The status bar at the bottom shows "Service Mode Programmer NCE Is Online", "Operations Mode Programmer NCE Is Online", "Programmer Status: Idle", and "Active Profile: My JMRI Railroad". The Windows taskbar at the very bottom shows various application icons and the system clock displaying "12:51 PM 4/4/2019".

Go back to the Roster Entry tab and you will see that your DCC Address has changed. Now edit your Road Number to 167. Close this window with the red X and select save and close.



You now have B&O 167 in your roster.



Place your new engine on the programming track, double click on the roster for B&O 167. This screen will appear. Click on Write all sheets. When complete your new engine is now programmed.

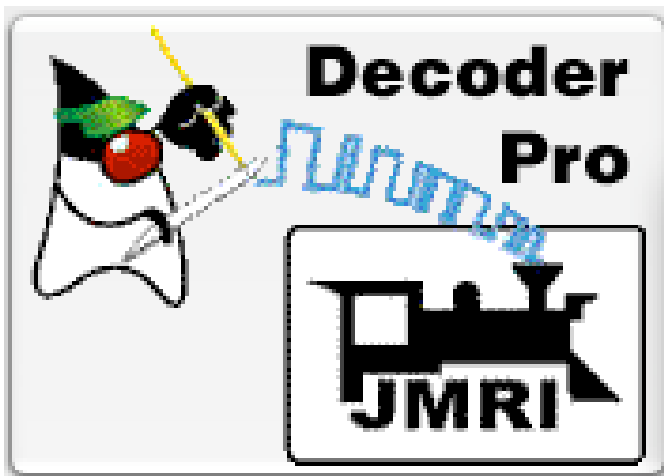
## **Benefits of having your engines in the roster:**

- Easily change your engine's characteristics.
- You can duplicate any existing engine's programming to your new engine.
- If your decoder gets scrambled (sometimes happens with shorts) you can easily reprogram your engine by using Write all sheets to get back to where you were.
- You can see if that engine number is being used by another club member.

Resources:

JMRI Website <http://jmri.org/>

JMRI Users Group <https://groups.io/g/jmriusers>



Questions