

Programming the Legacy Remote for Locomotives without a Memory Module

Throughout 2013 and beyond Lionel will no longer produce the Orange Memory Module for Legacy equipped locomotives. For consumers who have downloaded and use the Legacy System Utility they can update their Legacy Base using the software. For customers who do not have a computer or LSU installed on their computer they can load the engine specific data manually. The process is quite simple; please follow along below as we explain how to accomplish this.

- **Overview**

Anything that operates on the track of a Legacy equipped layout requires a unique ID number. These items are equipped with a variety of features, specific to that particular locomotive, vehicle, breakdown unit, Stationsounds Diner, Legacy Freight Cars, Command Controlled Crane and Boom cars. Because there is such variety and feature sets available on any given layout it is important that you program your Legacy remote with the specific data for each individual track operated item (referred to as “locomotive” from this point forward). Every locomotive ID number has an “engine menu” behind it. There are several options available in the “engine menu” that allow you to customize your remote to each locomotive, so, when operating that locomotive the touchpad icons and feature sets display properly and can be fully exploited.

- **Step 1**

Before we get into the remote and the setup process you must first assign a unique ID number to your locomotive, regardless of whether it is TMCC or Legacy equipped. To do this place the “Program/Run” switch into the “Program” position and place the locomotive on the track (the Legacy Base must be plugged in and connected to the track). Apply power to the track (18VAC). Using the Legacy Remote press ENG plus the 1 or 2-digit ID number you are assigning to the locomotive (*we recommend this be either the first two or last two digits of the locomotive cab number*). For instance, a locomotive with a cab number of 3445 could be assigned ENG 34 or ENG 45. Once you have selected the 1 or 2-digit ID number press the SET button on the bottom of the Legacy Remote.

Key strokes: ENG + ID Number + SET

Refer to your owner’s manual or download the owner’s manual from lionel.com to determine if your locomotive has a specific auxiliary code that must be used to restore factory features to your locomotive. For instance; the 6-18562 Southern Pacific GP-9 from 1996 requires an auxiliary code of “5” to make the strobe light operate properly. If your engine has an auxiliary code, press the AUX1 (straight arrow) key and enter the 1, 2 or 3-digit auxiliary code that may apply to your locomotive.

Turn off the track power, remove the locomotive from the track and place the “Program/Run” switch back into the “Run” position. Your locomotive will keep this unique ID number until you

change it again in the future. **NOTE: Lionel recommends you do not use the ID numbers of 1 or 99 when assigning an ID number to your locomotive.**

- **Step 2**

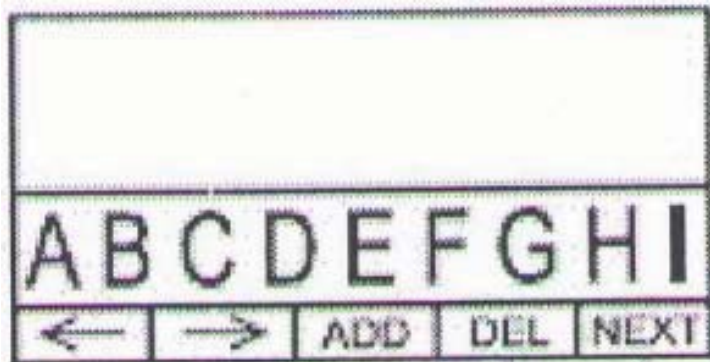
Now that the locomotive ID number has been assigned you need to program your Legacy Remote. Press ENG plus the 1- or 2-digit ID number you just assigned to the locomotive. Now press the INFO key (in the upper right hand corner of the remote). This will open up the “engine menu” for this particular ID number.

- **Assigning the locomotive a name**

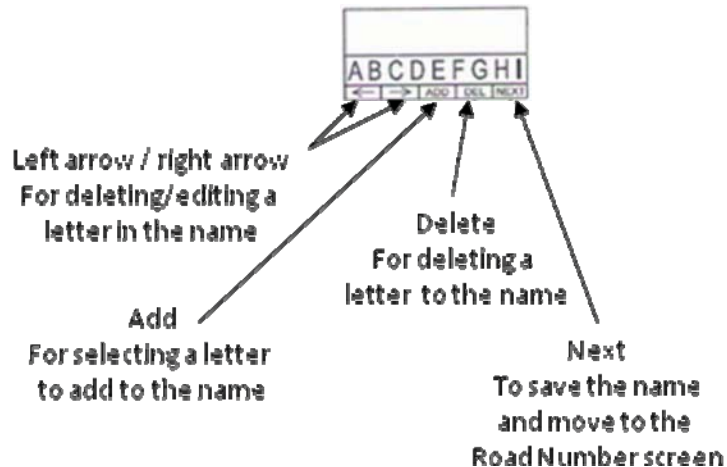
Press the key directly under “NAME” on the engine menu screen. The illustration below shows the location of “NAME” on the display screen.



Once you have pressed the key under “NAME” the naming screen will appear. The illustration below illustrates this screen.



The next page is taken directly out of the Legacy system manual, which illustrates how to operate the naming screen shown above. The Velocity Throttle is the red thumbwheel normally used to increase or decrease speed at the bottom of the Legacy Remote.



You will see alpha-numeric character choices.

- 1.) Using the Velocity Throttle scroll to the first character.
- 2.) Add the character by pressing the key directly under "Add".
- 3.) Add additional characters.
- 4.) If using multiple words separate them using a space.
- 5.) Use the left or right arrow keys to select characters to edit, delete them or replace them.
- 6.) Delete characters by using the key directly under delete.
- 7.) There is a limit of 31 characters (including spaces). Use abbreviations as necessary.
- 8.) The touch-screen can be used to enter numbers (Add must be pressed to add them to the name.)
- 9.) When the last letter of the name you are entering is highlighted DO NOT press the key under "Add", simply press the key under "Next".
- 10.) When finished adding the name press the key under "Next" to go to the Assign Road Number screen.
- 11.) The Assign Road Number screen will appear. Enter a road number if you want. This can be up to a 4-digit road number (If you enter the wrong number, simply fill the box with additional numbers. Once the box is full, re-enter the number you want.)
- 12.) Once you have entered the road number of the locomotive press the key under "Set".
- 13.) "Name Saved" will appear momentarily then the screen will return to the "engine menu" screen.

- **Setting the locomotive "TYPE"**

Press the "SCROLL" key in the upper left hand corner of the remote one time. This will take you to the "TYPE" tab on the display screen at the top of the Legacy Remote. It is important that you specifically tell the remote what "TYPE" of product the locomotive you are addressing is. This will do several things for you. Such as set up the touch-screen specific to the locomotive you are addressing and display icon specific to that product. It also helps the remote maximize your locomotive's features, for instance, on switcher locomotives it displays the speed steps consistent with the speed tables inside the locomotive (switcher locomotives, such as Alco S-2's

and Pennsylvania CC-2's run half as fast as road locomotives at the top end as well as all speed steps in the speed range). There are several options available for setting the "TYPE" of locomotive you have.



Down Arrow
Used to scroll to
the next screen of
options

Select the "type" that is specific to the locomotive you are setting up. To select these additional types you can press the key under "Down Arrow". Choose the correct engine type:

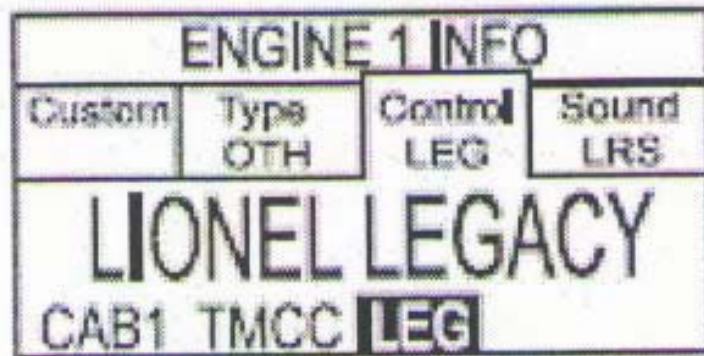
- a.) DSL Diesel (road locomotive)
- b.) STM Steam (road locomotive)
- c.) DSW Diesel Switcher
- d.) SSW Steam Switcher
- e.) ELC Electric
- f.) SUB Subway
- g.) FPD Flyer Pullmor Diesel
- h.) FPS Flyer Pullmor Steam
- i.) ACC Accessory
- j.) PAS Stationsounds Diner
- k.) BDU Breakdown Unit
- l.) FRT Legacy Freight sounds car
- m.) ACLA Lionel Acela Passenger Set
- n.) CRN Command Controlled Crane & Boom Car
- o.) XFMR Transformer

Once you have found the "type" that your locomotive is press the key directly under that type to highlight that "type". The option you select will directly affect the display icons on the touch-screen for the locomotive you are configuring. (This selection will also establish the icon your Legacy Remote displays when building lash ups or using Train Link.)

Now press the "SCROLL" key in the upper left hand corner of the Legacy Remote to move to the "CONTROL" tab.

- **Setting the Locomotive “CONTROL”**

You must select the “control” you wish to operate your locomotive with. There are 3 options available. It is important that you select the correct option, specific for the locomotive you are setting up. The “CONTROL” screen is shown below.



The options available are:

- 1.) Cab-1 Mode (mimmicks the original Cab-1 screen or only numbers on the touch-screen. Also sends only 8-bit digital commands to this locomotive.)
- 2.) TMCC Mode (blends Cab-1 controlled locomotives with Legacy specific touch-screen icons. Also sends only 8-bit commands to this locomotive.)
- 3.) R100 Mode (Relative 100 speed steps) very similar to TMCC mode, but accounts for the 100 speed steps these locomotives have, on the display screen speed bar. (Also sends only 8-bit commands to this locomotive.)
- 4.) LEGACY Mode (displays icons specific to Legacy Locomotives on the touch-screen). Also sends 9-bit commands to this locomotive.
- 5.) **NOTE: Cab-1 TMCC locomotives will NOT recognize 9-bit commands!**

To select the control type specific to the locomotive you are programming press the key directly under the option you wish to select. Once you press the key the option will be highlighted and will display the choice across the display screen on the top of the remote.

Press the “SCROLL” key in the upper left hand corner of the Legacy Remote to scroll to the “SOUNDS” tab.

- **Setting the Locomotive “SOUNDS”**

It is important to select what sounds your locomotive is equipped with. This will assist the Legacy Remote in ensuring you have access to all the features of your locomotive. The “SOUNDS” tab is shown o the next page.



The options available are:

- a.) NS No Sounds
- b.) RS Railsounds 2.0 through Railsounds 4E
- c.) RS5 Railsounds 5.0
- d.) LRS Legacy Railsounds (Legacy equipped locomotives only)

To select the sound system specific to your locomotive press the key directly under the option you wish to select. The setting will appear on the display screen at the top of the Legacy Remote.

At this point all the setting in the "Engine Menu" are complete. To exit the "Engine Menu" screen simply press the "INFO" key in the upper right hand corner of the remote and you are ready to operate the locomotive!

You can access the "engine menu" at any time by pressing the "INFO" key in the upper right hand corner of the remote. This data can be manipulated to fit your specific needs or requirements. Once you have done this once or twice it will become second hand and the entire process will take less than a minute. Once the options have been set the data is stored in the Legacy Base.