NEWSLETTER

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Current Central Station 3 Version – 1.4.1 (0)
Current Central Station 2 Version – 4.2.9 (0)
Current Mobile Station 2 Version – 3.55

We have just returned from the NMRA National Train Show in Sandy, Utah and the ETE's 23rd annual EuroWest Show in San Carlos, California. Both were great shows and we had a lot of fun talking to enthusiasts.

Our first article is an in-depth review of the Märklin m84 Decoder and how versatile it is for powering accessories on a layout. Our second article, explores the Central Station 3/3 plus locomotive editor's "Information" and "Set up" features.

Also, there is another update for the CS2 to bring it up to the version 4.2.9 (0). We did not get a notice of this update or what it contains, but it looks like it has the same update for the Mobile Station 2 as the CS3.

First of all, I would like to cover (or uncover) a topic that has always haunted me, and possibly you. I am referring to a messy workspace! Now I know it is a "personal space" and it seems to never get cleaned up (like a child's room).

I'm issuing everyone a challenge to clean off your workspace. I don't mean clean like a kid and push everything under the bed or in the closet, I mean put everything back where it goes and get all of the debris thrown away as well. I don't ask this without leading by example! Here is my clean workspace. It's not glamorous but it's clean.

Any Mom would be proud!

Märklin m84 Decoder – An In-depth Review

Here I would like to take a close look at the settings of the m84 Decoder (60842). The set-up of the m84 was covered in the *Digital Newsletter*, March/April Vol. 30 No. 2, 2018, so I will not repeat entering this into a controller. This is a look into the different modes that the m84 can be set to.

If one doesn't know, the m84 is a receiver used to turn on and off an analog device with your Central Station. Think of it like a light switch on the wall – "on and off" but controlled digitally with a controller, and it opens up many possibilities to control accessories.

This module can turn lights on and off in a village, station, building, or accessories like a ski lift or grade crossing (see *Digital Newsletter*, July/Aug Vol. 30 No. 4 2018). Basically anything on your layout that needs an on or off switch. The best part is that the m84 can be entered into a route to have the train activate whatever is connected to it.

I think it is important to note the following instructions are for users of the CS3/3 plus.

m84 Modes

According to the manual, the m84 has 5 modes that it can be set to. It might be a little confusing in a CS3, as the modes are not numbered or named exactly like the instruction manual. I will try to clarify the mode description for each.

Mode 0 – Standard mode

This is the default mode as it comes from the factory. Power will be channeled through either the red side or the green side. When the power is channeled to the "red" side, the green terminal is turned off and vice versa.

Mode 1 – 8 switches, 4 addresses

This mode is similar to mode "0," but the buttons are momentary to turn red and green side on or off. The buttons can be made constant. This mode will allow for simultaneous use of the red and green of a single channel. This will effectively double the amount of items you can power with the m84 at once.

Mode 2 – 8 switches, 8 addresses

This is similar to Mode 1 but a "Phantom" k84 will need to be set up to access the channel three and four. In this mode the m84 can be set with 16 buttons for independent on / off buttons for each channel.

Mode 3 – Blinking and random, 8 addresses
(Random Blinking, 8 Adr. in CS3)

With this mode, the m84 can be set to blink the output, for instance warning lights or flashing building signage / billboards.

Mode 4 – Random building lighting, 8 addresses
(Lighting, 8 Adr. in CS3)

This mode can be used for random on and off of building lighting. This has 8 outputs for lighting. This means if you have a building with multiple rooms, the lights can go on and off in each room randomly.

Setting the Desired Mode

Now that the modes are somewhat understood, here is how to set them and the modifications that can be done in “edit mode” to enhance the effect.

Changing the Mode

To change the mode using a CS3/3 plus and to get into the “Edit” mode of the m84, select the wrench icon at the top of the “Article” screen on a CS3/3 plus. Next, select “Edit Article List” from the drop down menu. After that, touch the m84 icon in the article list. Now, the m84 can be edited. Touch the “Configuration tab, then touch the triangle next to “Configuration.” Scroll down and you should see the words “Current Mode” in the “Attributes” column. The name of the “Current Mode” is on the right in the “Value” column. You will see in the “CV” column, it is CV 79.

It might be a little confusing in a CS3, as the modes are not numbered or named exactly like the instruction manual. I will try to clarify the mode description for each.

Outputs

Each output of the m84 can be set to various states in each mode. Please note, it will seem that not all states work in each mode. This is usually because the standard “k84” icon is being used.

Get into the “Edit” mode of the m84 as above. Then, go to the “Configuration” tab. It is at the bottom left of the tab where there is a box named “Output.” This is where the features of each channel can be changed with a drop down menu (Fig. 1).

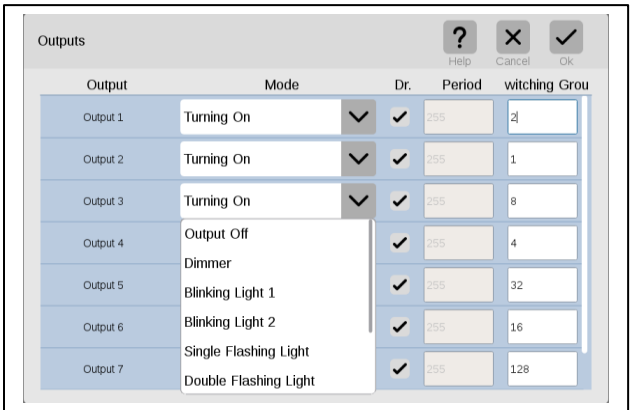


Fig. 1 - Output page and drop-down menu selection

To save you time, I will explain each output below.

Note: “Period” refers to the amount of time the item is on. The numbers are not seconds. A close reference is a period setting of 10 is about 5 seconds.

It seems that the “Dr.” stands for “Duration.” Meaning, the button is momentary instead of constant if this box isn’t checked.

I haven’t discovered what the purpose of the “Switching Group” is.

Output Settings

“Output Off” – This does exactly what it says. There will be no operation for this m84 channel.

“Dimmer” – Switches from red to green like default.

“Blinking Light 1” – On/off according to set “Period.” On for “Period,” then off for “Period” – Starts in “off” state.

“Blinking light 2” – On/off according to set “Period.” On for “Period,” then off for “Period” – Starts in “on” state.

“Single Flashing Light” – Flashes once, then waits for “Period” then starts again.

“Double Flashing Light” – Flashes twice, then waits for “Period” then starts again.

Switching – Constant on according to set “Period” then turns off automatically – needs to be turned off then on to start again.

“Min. Switching” – Constant on for set “Period,” then it can be turned off. Works best with separate “red” and “green” buttons. With the default “k84” button it works like the standard default output.

“Turning On” – Constant on and can’t be turned off.

Mode 1 Note:

For “Mode 1 – 8 switches, 4 addresses” there are eight channels and the m84 can have eight buttons on the keyboard. If eight buttons are chosen, each red and green button toggles on and off for that respective color of that channel.

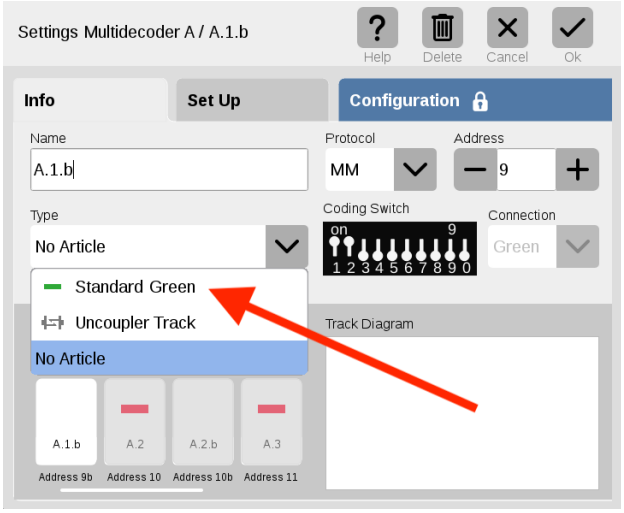


Fig 2. - Setting button icons (Standard Green shown)

For eight buttons the icons can be configured as “Standard Red / Standard Green”. The Standard “k84” icon can be used also, but the buttons will operate like this: Green on – Red on – Green off – Red off.

If you choose to add the other four “on/off” buttons, get back in “Edit” mode of the keyboard (Edit Article List) and touch the m84 to edit the button icons. In the “Info” tab, set the icon “Type” to “Standard Red” for the first button. Then set the next box to “Standard Green” (Fig. 2). All of the subsequent buttons must be set the same way.

Please note: The button designations are derived from the m84 module. Example: m84 #1 is designated “A”. Therefore “A.1” is the first button. Next is “A.2” and so on, with the default m84 icon. Once the icon is changed, the Red output is still designated “A.1,” but the new box for the Green output is designated “A.1.b”. So all buttons ending in the lower case “b” will be set as green buttons, as that is the only option once the “Standard Red” is chosen.

If all is done correctly, the m84 should have eight channels that can be turned on or off independently.

Mode 2 Note:

For “Mode 2 - 8 switches, 8 addresses,” the difference here is each side of a channel for the m84 can have two buttons. The green button will turn the channel on and the red will turn it off. This means there can be sixteen buttons for the m84. The default k84 icon will work also.

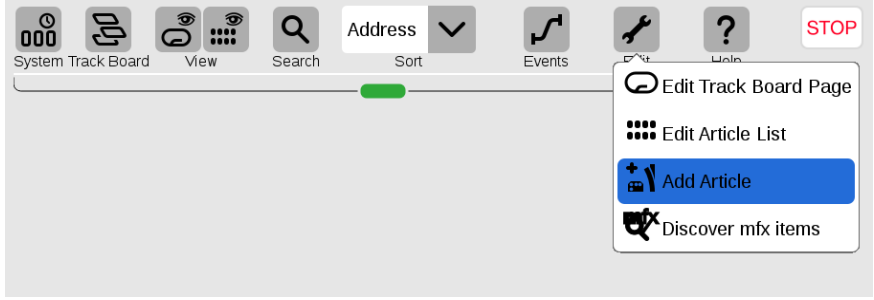


Fig. 3 - Add Article then “Misc. Devices” (Misc. Devices not shown)

For this mode a “phantom” m84 needs to be set up to access the other four channels / buttons.

To do this go to “Edit” then, “Add Article” then, click on “Misc. Devices (Fig. 3). Here you will set up a “phantom” m84.

Next, click on the “Exist. multidecoder” circle and enter the first address of the next address block. My first m84 is address 9-12, so the number I should enter for the address is 13 (Fig. 4). This will attach the next four addresses to the current m84. Then click the check mark. Note that this “phantom” M84 is designated as “B” in the CS3.

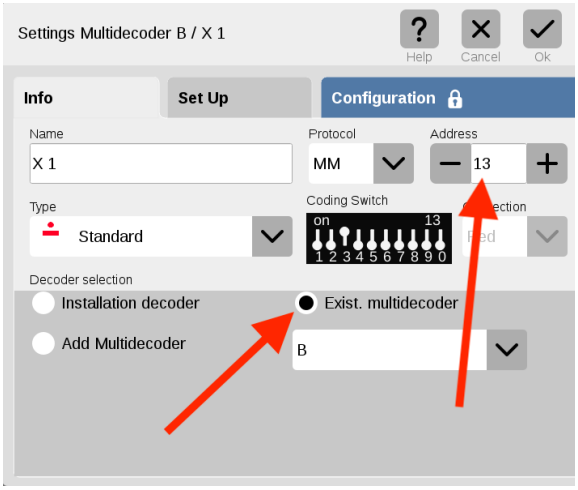


Fig 4. - Adding four more addresses to existing M84

Be sure to select “New multidecoder” on the “Set Up” tab (Fig. 5).

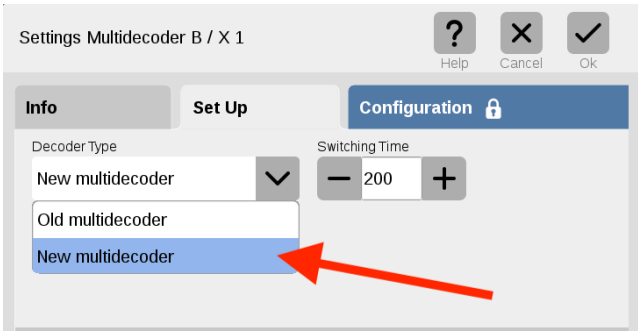


Fig. 5 - Select “New multidecoder”

Once again, the button icons can be set to “Standard Red” and “Standard Green” as before.

Select “Edit” again, then select “Edit Article List”. Then select the m84 marked “B” (Fig. 6). Then change the button icons to “Standard Red” or “Standard Green”.

You may notice the first button of the “phantom” m84 is named “X.1”. I do not know the reason for this, but I just re-named it “B.1”.

With all of this done, I have a green button to turn on one side of a channel and a red button to turn it off.

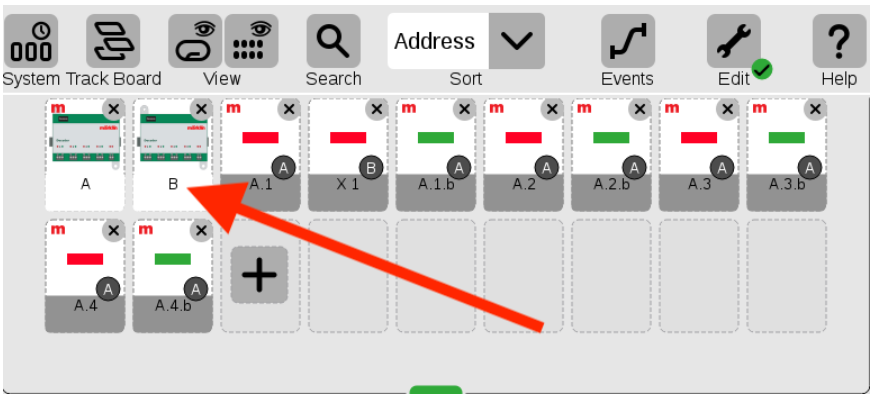


Fig. 6 - Select M84 designated as “B”

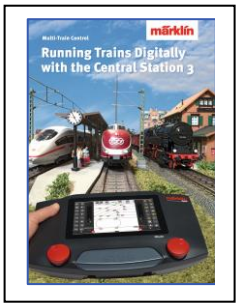
Additional Modes

In the CS there are two additional modes – “Energy Save” and “Mode 6.” I am not sure what the difference is, but they seem to work like “Mode 0” (default). These could possibly be there for a future update.

This has been a very daunting task as there are 8 modes and 9 states for each mode but it has been fun to see all the features of this powerful device.

Enjoy your hobbies!

Rick Sinclair



Available from Märklin Dealers!

Running Trains Digitally with the Central Station 3

This book provides extensive information about the Märklin Digital system. It contains all of the essential information about the new controller Central Station 3. Another focal point is the description of the new generation of decoders. In addition, all of the Märklin Digital system's components are featured with complete explanations of their use on a Digital layout.

191 pages in the DIN A4 format. Version with English text. #03092

Upcoming appearances:

National Garden Railway Convention Public Show (LGB)
Doubletree by Hilton Portland
1000 NE Multnomah St
Portland, OR
August 31, 2019

Gold Coast Station Open House (LGB)
426 N Curry St
Tehachapi, CA
September 21, 2019

Just Trains Open House
5650 Imhoff Dr, Ste H
Concord, CA
October 6, 2019

Trainfest
Wisconsin State Fair Park Expo Center
8200 W Greenfield Ave
West Allis (Milwaukee), Wisconsin
November 9-10, 2019

Exploring the CS3/3 plus Locomotive Editor

In this issue, I'll look into some of the features of the locomotive edit window. For some, this information may be familiar, but it will offer some insight for new users. I will cover the first 2 of 3 sections found in the loco edit pages: Information and Set up.

To access the locomotive edit windows, you'll first need to open your locomotive library list. This is accomplished by either clicking the bottom center icon to toggle the window open, or by dragging the icon up to reveal the 'edit' button in the list menu. The locomotive list menu may be hidden when you click on the icon. If this happens, just drag the list button up from there and the menu will be displayed. Fig. 1 illustrates the icon to click / drag and the edit button to access the edit mode.

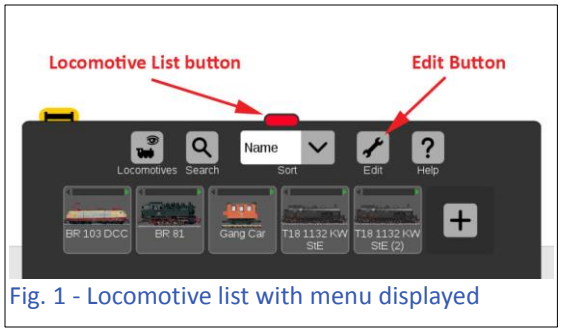


Fig. 1 - Locomotive list with menu displayed

Clicking on the 'Edit' button will reveal a menu of edit options, for the purpose of this article select the 'Edit Locos' option. Once in edit mode, all your icons will display an 'x' in their upper right corners (Fig. 2). You've entered the edit mode for the locomotive list and clicking on any of the 'x's' will initiate a delete authorization warning for the locomotive selected.

Fig. 2 - Edit mode display for loco list with 'Delete' warning displayed

To edit the locomotive, you'll click on the locomotive's icon instead, and the locomotive's 'Lok Settings' window will be displayed (example, Fig. 3). There are three tab buttons along the top giving access in the general settings modes. These are: Info, Set Up and Configuration.

I should also mention, that any **non**-mfx decoder will require a dedicated connection to the programming output on the CS3. Only one decoder can be programmed at a time on the programming track. mfx decoders have no restrictions and can be programmed on the main line.

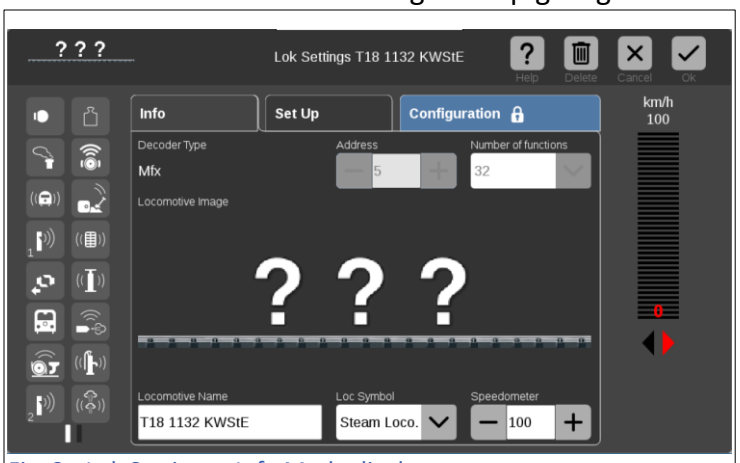


Fig. 3 - Lok Settings - Info Mode display

Info Tab Settings

By default, the mode that is displayed when you first open a loco's settings are the Info tab's settings. This mode will allow you to test the locomotive's functions (left panel) and speed and direction (right panel). Editable areas in the Info mode are located in the main center panel. One thing to note is the changes made in the Info settings are primarily how the CS3 will display information of the loco when in operating mode. For example, the Speedometer setting is just to set the maximum visual range when viewing the speed control. It has no adjustment to your locos actual speed. If you alter your volume knob on your radio to read 11, instead of 10, it really makes no difference to the volume, it just looks different.

In the top left corner of the center panel is the Decoder Type that the loco is registered under (Fig. 3). This is uneditable, and in this example an mfx decoder is what is in use. Because the decoder is an mfx chip, the 'Address' and 'Number of Functions' are grayed out and uneditable as well. The two other decoder types are MM and DCC. If you have a loco that isn't functioning and your Decoder type setting is mismatched with the actual decoder, you'll have to delete the loco from your Database and re-enter it into your system. Just be sure to accurately set the decoder type, because again, this is uneditable once entered.

Fig. 4 shows the decoder type is an MM decoder, but now reveals a 'Read' button and allows for editing of the Address and Number of Functions values. The 'Read' button is for reading the decoder information and settings from the loco. (mfx type decoders, don't require this because the decoder information is read into any mfx controller by default.) To utilize the 'Read' button, you'll need to place the loco on a programming track that is connected to the program socket on the back of your Central Station. The same will apply to DCC decoders.

Fig. 4 - Read Decoder button with editable fields.

Setting the number of functions for an 'MM' decoder device will give you two options: 8 or 16 (Fig. 5).

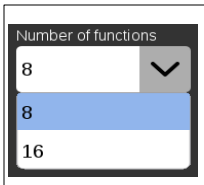


Fig. 5 - Functions

Common edit features are located in the center and bottom of the center panel. Clicking on the '???' will display a locomotive icon database (Fig. 6). You can select the photo icon for the locomotive, if it doesn't appear in your loco list. Older locs or special colors may not be available in the inventory, so you may have to select a substitute that matches the loc type.

The 'Loc Symbol' is the generic setting for the loc type in cases where a photo icon is not available. The options are: Electric Loco., Diesel Loco., Steam Loco., and Misc. This is the reference setting that is accessed when a Mobile Station is connected to the CS3 as a controller.

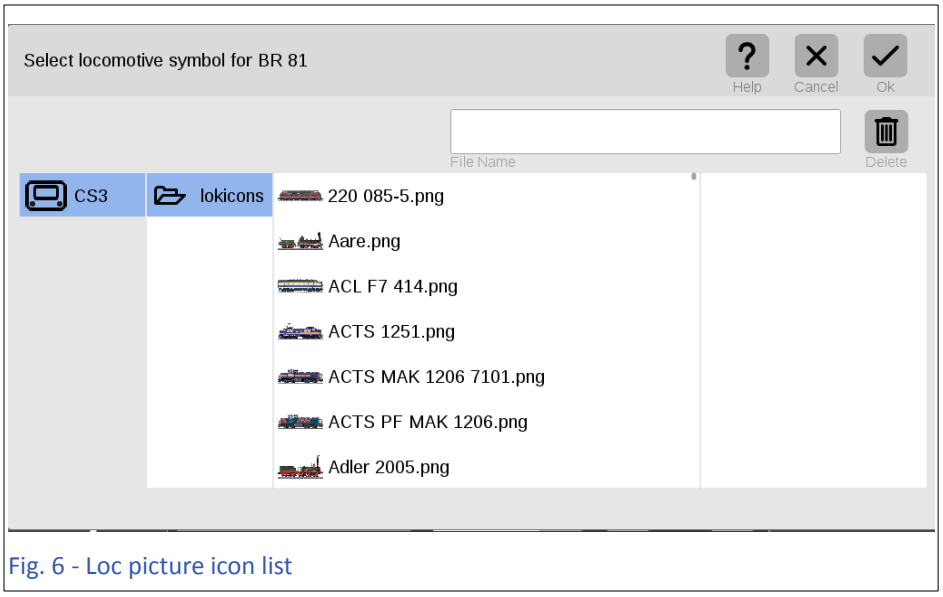


Fig. 6 - Loc picture icon list

The 'Speedometer' setting is the number setting to show the Maximum speed setting for the speed display on the controller. This setting does not alter the physical max speed of your locomotive. It only alters your speed range display. Fig. 7 shows the two ways in which they are viewed.

Set Up Tab Settings

The Set Up tab is the area where you can make adjustments to a loc's basic decoder functions. These are common settings that don't require any advanced CV (Control Value) knowledge. Unlike the settings found in the Info tab, these will actually make operational changes to the loc's decoder. I will briefly cover some of the more traditional adjustments still in use, then I'll go into detail with functional settings on some of the more advanced decoders.

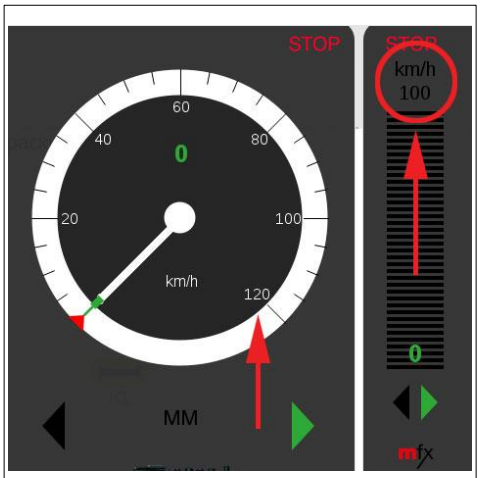


Fig. 7 - Speedometer Settings Display

Numerical Settings

The common controllers with numerical settings (Fig. 8) are: Acceleration / Braking Delay, Minimum / Maximum Speed and the Volume settings.

The Acceleration and Braking Delay settings are essentially time stretches, or how long will it take for the loc to reach max speed, or stop completely. If you think your loco is taking too long to get up to speed, shorten the delay on Acceleration Delay field. If your loco seems to stop too abruptly on a Brake module, you can increase the delay. (The acceleration setting works in conjunction with a speed curve setting, which is found in the Configuration tab, and will be covered in the next issue.)

Fig. 8 - Overview of 'Set Up' tab

Minimum and Maximum Speeds may be self-explanatory, but here are some tips. If you have some guests who like to run all your locs full throttle (making you consider putting carpet on the floor), then you can reduce the Maximum Speed figure to limit how fast the loc can go. You have a range setting of 1-255. The range may seem arbitrary, but Max speed is the limit to what the loc's motor is designed for. You won't be able to make it go any faster. Minimum speed can be set higher if your slow movement seems too jerky for your tastes. This is more of a common issue with older 3-pole motors. 5-pole and other motors can have a very smooth slow operational output.

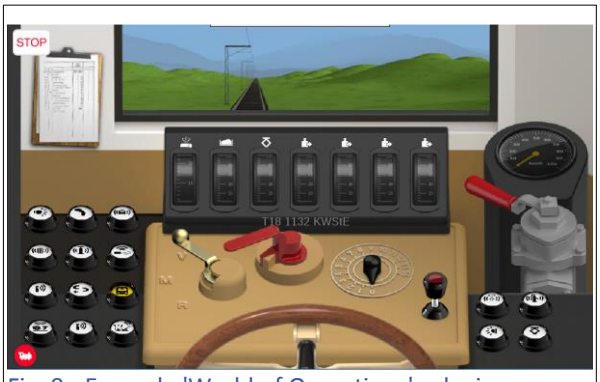


Fig. 9 - Example 'World of Operations' cab view

Volume is an overall volume setting. It is the master volume for your loc's decoder. Turning down the volume, turns down the output of all sounds together. If you feel that a whistle is too quiet compared to the engine sound, you won't be able to adjust it in this

section.

Operation Mode

The ‘Operation Mode’ setting is the World of Operation setting, also referred to as a pro-mode. The common default setting is the ‘No World of Operation’ and it can be set to various locomotive types. The setting enables a cab view of the selected locomotive (Fig. 9). To activate the cab view while in operation, you’ll need to drag the loco toggle button to the full width of the screen. I.e. if it’s the left side loc, drag the icon to the right side. In Fig. 10, I display the pull down list which you can scroll through to see other options.

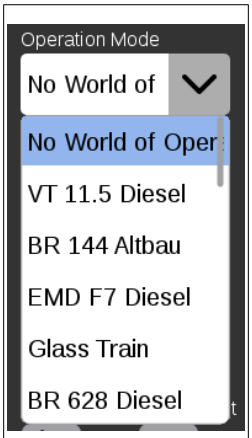


Fig. 10 - WoO - Cab List

As a precaution, be aware that if you set this up, there may be contingent settings in the Configuration tab that will affect your locomotive. Mainly, the World of Operations can be set to work in a reality based depletion state. In other words if you ‘run out of coal’, the (WoO) mode will limit the loc’s max speed (to a crawl) until you replenish the coal. It is possible to run trains in the World of Operations mode without depletion and therefore won’t affect your loc’s operation at all. I mention this so that if something does happen with your loc when you activate WoO, there would be no need to panic.

Function Buttons

Along the left edge are the Function buttons similar to what is displayed in the ‘Info’ tab, however, the ‘Set Up’ tab is the section where you can change / edit the functionality of the buttons themselves. By clicking on any of the function icons, configuration information about the Icon selected will be displayed. Under the heading ‘Function Buttons’, the name of the function will be listed. The ‘Icon’ and ‘Test’ header will display the function’s assigned icon. The ‘Test’ icon is a button that will allow you to test the function.

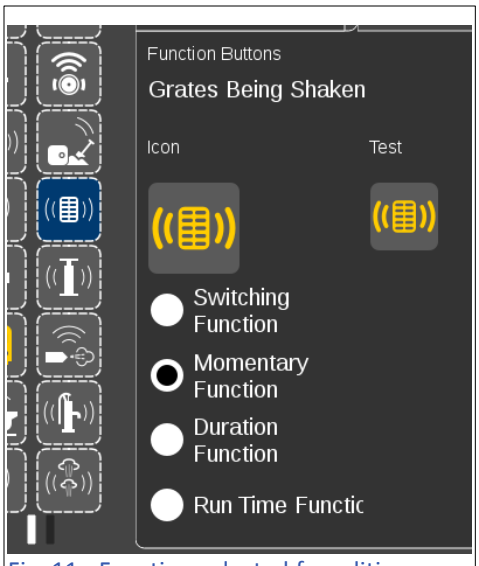


Fig. 11 - Function selected for editing

Each function button has an operational style and only one type can be assigned per button. The options for function style are: Switching Function, Momentary Function, Duration Function, and Run Time Function. The style is tied in with the Function’s purpose, as well as any personal preferences.

It is possible to use two identical functions and have two different styles of operations, to make them unique. The simplest example is that of a whistle. You can have a whistle operate as long as you are touching the button (Momentary Function), and you can have another whistle toggle on and off by pressing the button for each action (on, then off – Switching Function).

The Duration Function when selected, opens another field where you can select the duration that the function is active. This setting is undefined as far as what the time segment is. It’s not listed as seconds and it may be a multiplier. I realized that it may be determined by the length of the sound

clip itself, such as a station announcement. It may be a setting of how many times it may play the sound clip. In any case, it's a setting that you may have to play around with and it may not be precise.

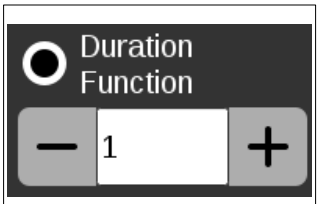


Fig. 12 - Duration Function setting revealed

The 'Run Time Function' will also display an additional field. In this case the field will display a pull down menu that lists available contact triggers. These are the same triggers (contact tracks) that you may have set up to operate your event scripts. In this case they may be used to trigger loc functions. I haven't seen any functions yet that use this feature, but it's something you can experiment with. It may have the ability to turn on the function, but I haven't sorted out how you may use it to turn off a function (having two identical functions, one for on and one for off may work).

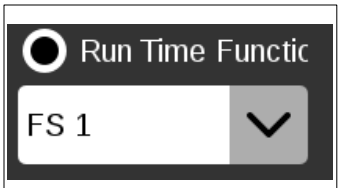


Figure 13 - Run time trigger setting

Changing Functions

By clicking on the graphic under the 'Icon' label you will access an additional window for 'Icon/Function' settings. Here you will actually change which functions are listed in the function list for the loco. In other words, it's the method to arrange the function buttons that you control. You can see the Icon / function list is divided into three categories: Light, Sound and Mechanic. Light and sound functions should be self-explanatory. The Mechanic functions are items like uncoupling telex devices and crane controls, just to name a couple. They are pretty well listed and after changing them, remember you may need to adjust the operational style that was described in the previous section.

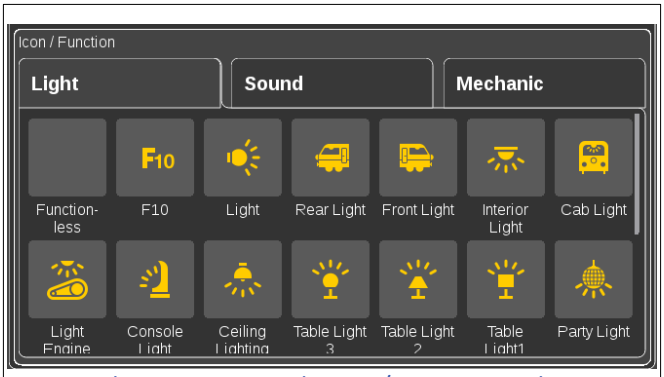


Fig. 14 - Changing icons in the Icon/Function window

Configuration Setup Buttons

The buttons for 'Loco Card', 'Loco Reset' and 'Loco Update' essentially affect a loc's decoder in a global configuration. Rather than affecting a single parameter for the loc, these buttons capture the entire set of parameters for their specific use.

'Loco Card'

This button saves the specific Loc's settings into a memory flash card (60135). The slot is straight toward the back aligned with each of the control knobs. You will use this when you wish to preserve your loc's configuration. The memory cards are useful for non-mfx digital locomotives, because you can use the card's memory when transferring loc data to another Marklin controller, thus not requiring you to remember digital addresses.


Fig. 15 - Memory Cards #60135

When you insert the card into the slot, the CS will first notify you the card is being read into the CS. By pressing on the 'Loco card', it may warn you to place the card in a specific slot (left or right). Then it will declare it is loading the data onto the card.

'Loco Reset'

The 'Loco Reset' button is for returning your decoder to its factory default settings. Clicking on this button will declare a final warning before initiating the reset. Depending on the decoder type, the Loc will be deleted from the CS memory needs to be re-registered into memory.

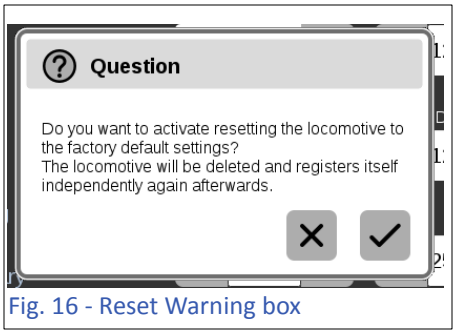


Fig. 16 - Reset Warning box

'Loco Update'

This feature only applies to mfx decoded locomotives and the button will not be displayed with non-mfx decoders. I haven't come across any notices regarding loc updates and this feature has been untested. This feature may be utilized by any loc programming files created with digital decoder programming software.

So far, I have covered in detail the Info and Set Up pages in the Central Station 3 / 3 plus edit section. The edit features themselves are not much different than they have been for years, but the method of how they are altered does change with newer components and controllers. For less experienced digital users, the information is there for you to play with your settings if you wish. At least it should be a good starting point to formulate any questions regarding digital setup.

In my next article, I will cover the Configuration Tab in the loco editor. This contains the CV (Control Value) settings. Many of the features are typically left untouched by most users and they shouldn't require any editing. However, some will venture into the core levels of CV editing. CV editing has the potential for changing important items, as well has causing ill effects that can only be corrected by a decoder reset. I will cover what I can, but when it comes to some CV editing, I'm not that foolhardy.

See you next time!

Curtis Jeung

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