



NEWSLETTER

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Current Central Station 3 Version – 2.2.0 (5)
Current Central Station 2 Version – 4.2.9 (0)
Current Mobile Station 2 Version – 3.112

We are at the beginning of a new year with a much better outlook than we have had in a while. We hope that everyone had a wonderful Holiday Season, and you continue to enjoy your trains safely. We cannot wait to get closer to normal and attend train shows again. This is probably a little far off to happen this year, but we are hoping!

Our first article is about simple questions for you to ask yourself before moving on to a more technical fix. They may seem mundane at times, but you would be surprised how many problems these “simple” questions have solved before getting too deep. Our second article touches on the topic of writing a manual for a layout. At the end of this newsletter, you will find a complete index of our newsletters. You may find this useful when looking to troubleshoot an issue or learn something new.

I should start off by saying that this first article does sound a little like a tirade, but it is honestly not meant to be. It is more of what we have seen over the years while helping others with their technical problems. So please take it with a grain of salt.

As we receive technical questions, to our fault, we assume there are certain topics that do not need to be addressed. In many cases, we end up wasting the customer’s time because we did not think to ask the very simple questions. Believe it or not, some people get offended when we finally do ask them. We do understand that some might take our questions the wrong way, but we only ask because we are not standing next to them to verify the problem. Here are a few problems that we have seen and should be checked to see if it is a simple fix to a problem.

Track Power

Defiantly, one of the first questions that we forget to ask is “is there track power?” Many people think “the red light is off so there is track power”. Not so fast, quite a few times the feed wires have come off the track. We have had people call and this is what we found.

Another more recent problem that we helped a customer with was the feed wires were reversed (you know who you are). After 3 phone calls we finally narrowed it down and found the problem. Answer - Brown wire to the outer rails (‘O’) for Märklin and blue wire to the left rail for LGB/TRIX. The red wire should be attached to the Center rail (‘B’) for Märklin and right rail for LGB/TRIX.

Product Manual

Many times, we get questions about items that we simply pull up the manual from the Märklin website for the answer. This is true for locos, accessories, and controllers. We understand we are here to help with technical problems, and the manuals can be vague, but if the customer has not utilized the manual, this is not a productive use of anybody's time. The answer to a question may be minutes away if they just do so. In short, "always read the manual first".

Track Shorts

Track shorts can be very frustrating. When we get someone with this problem, there is very little we can do over the phone. What we recommend is to disconnect the track to ½ of the layout, then check for the short. After that it is a matter of dividing the track again and again until the short is found, which may also be a feed wire issue like mentioned above.

Multi-Meters

A digital multi-meter can help in some situations. I do not know as much as I should on how to use a multi-meter, but I can do the basics. The two most common things to know is how to check for voltage (Volts AC and Volts DC) and continuity (the beepy thing when the probes are touched together), which is basically another setting to check resistance (ohms).

A Few Basic Things

When you feel like you have no other route to take, and you are going to call us for help, here are a few things to have ready to save everyone time.

Item number – This is the number of the item on the box or in the catalog. While we can figure out a locomotive by the numbers on the cab, it takes much longer to do so. The item number of an accessory is usually on the bottom.

Have the manual handy – This is so we can make sure we are talking about the same thing.

What controller is being used? – Since there are a variety of controllers, we need to know what equipment is being used. If the controller is not produced under the Märklin umbrella, we can only give advice on the Märklin/TRIX/LGB product being used.

What the problem is – Obviously, this is the reason someone is contacting us, but this goes back to us asking the simple questions.

A Couple Tips

There are a couple tips we recommend making things easier. These are things we are constantly telling people.

Create a backup in case there is a problem. The Central Station can be restored to a point before the problem occurred if a back-up is done first. This is very important to do before a digital accessory is added to the CS. Once a mistake is made, there is no going back unless a backup has been created.

When adding an MFX digital accessory (M83/84 turnout decoder, signal) SET THE DIP SWITCHES – THEN have the CS discover the item. Read and understand what a pop-up warning is saying. If a mistake is made, the result can be difficult to fix unless a back-up has been created.

Install one accessory at a time (“Discover New MFX accessory”). This way, if there is a conflict with an address, only one item will need to be dealt with.

When adding a locomotive to the CS, do not stop the track power or move the locomotive by hand. Let the registration process complete before sending any commands to the layout and always STOP the track power before putting a locomotive on the track or taking it off.

Create a manual for your layout. This will be very handy when trouble shooting is needed. A written manual of event routing will be invaluable when there is an event conflict (see Curtis’ article below). Some other things to include would be a description of your own wiring color scheme, a list of your locomotive addresses if they are not MFX and a list of contact numbers and where they are in the layout. In short, any information that you want to keep handy in the event of a problem is good to put in the layout manual especially if you do not read the Märklin manual first!

Enjoy your hobbies!

Rick Sinclair

Creating an Events Legend for Tracking Your Events

Learning how to use events as a control system for your layout is rewarding and a fun accomplishment that can add to the level of pride in your railroading empire. However, often the road to getting there can have its challenges, especially when sorting out events that do not quite work out the way you want. In this article, I will write about methods that you can use that will optimize your troubleshooting capabilities while testing and operating your events. I will cover some basic prep work that you can employ to ease the necessity of identification and I will address ideas of cataloging your elements.

If you look at the partial collection of events that I have created for my layout (Fig. 1), you will see a grid list of events that do not give you any indication of what those events operate. You will want a good way of knowing what track actions are supposed to occur when specific contacts are triggered. If you ever need to adjust or modify any event, you probably do not want to open each contact’s edit window to locate specific devices that are not sequenced correctly.

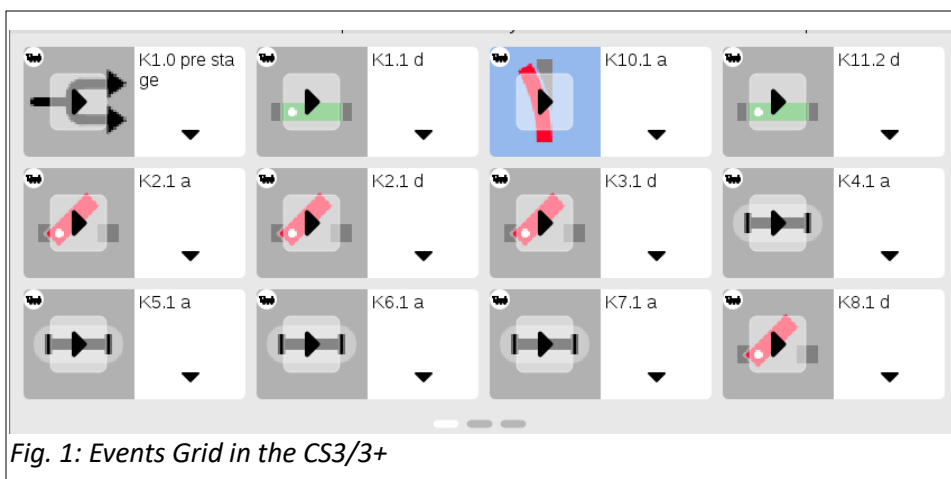


Fig. 1: Events Grid in the CS3/3+

All my events are triggered by contact tracks wired to S88 feedback sensors, so the list that is illustrated here is going to be referenced by a Contact ID. You will need to understand that there are 16 connections for each S88 module. Modules are indexed by the order in which they are connected to the CS3. The first one connected to the CS3 can be indexed as '0' or '1', because there are various ways that you can connect S88 devices, I will not get into that in this article.

The reason why indexing can be of use is if you ever have faulty sensors, knowing which module it is connected to can be a huge time saver. In the example in Fig. 1, the first event is triggered by the 1st sensor connection on the 1st S88 module. Indicated by the 'K1.0'. All other illustrated events are connected to the second S88 module and wired to a contact point. They are listed as 'K*.1', the '*' indicates which contact terminal on the S88, the '.1' indicates the 2nd S88 Module. I will apply these contact ID's in a spreadsheet along the first vertical column, see Fig. 2. If you are going to use handwritten notes, I find that writing the index numbers along the top line may work better.

	A	B
1	Event Contact ('Kontakt') listing	
2	K1.0 pre stage	
3	K1.1 d	
4	K10.1 a	
5	K11.2 d	
6	K2.1 a	
7	K2.1 d	
8	K3.1 d	
9	K4.1 a	
10	K5.1 a	
11	K6.1 a	
12	K7.1 a	
13	K8.1 d	
14	K9.1 a	
15	K9.1 d	
16	K10.1 d	
17	K16.0 a	
18	K2.0 a	

Fig. 2: Listing of Event Labels

Now, I need to list each step for each event into each Contact ID line. Most of your steps may be short, but you may have some events that have many steps. Listing the steps vertically may make more sense when handwriting long events. List them in a manner that suits you. In the end you should have a sheet that looks something like the example in Fig. 3.

	A	B	C	D	E	F	G
1	Event Contact ('Kontakt') listing		Event Steps	(Macro)(article)(condition or action)			
2	K1.0 pre stage		if k7.1	if k6.1	if k5.1	if k4.1	K15.0 ?
3	K1.1 d		Bm4.12 go				
4	K10.1 a		depot t1 turn	Bm4.12 stop			
5	K11.2 d		depot bm2.18 go				
6	K2.1 a		depot bm2.18 stop		depot t1 go		
7	K2.1 d		Bm4.12 stop	Bm3.11 go			
8	K3.1 d		Stage 1 stop	Stage 2 stop	Stage 3 stop	Stage 4 stop	
9	K4.1 a		K3.1 ? D	Stage 1 go			
10	K5.1 a		K3.1 ? D	Stage 4 go			
11	K6.1 a		K3.1 ? D	Stage 3 go			
12	K7.1 a		K3.1 ? D	Stage 2 go			
13	K8.1 d		Bm3.11 stop				
14	K9.1 a		N/a				
15	K9.1 d		Bm4.12 go	depot bm1.17 stop			
16	K10.1 d		Sbh 1 stop	Sbh 2 stop	depot bm1.17 go		
17	K16.0 a		sbh t.26 turn				
18	K2.0 a		IF 2.0 a				
19	K2.0 d		depot bm2.17 go				
20	K3.0 a		if 3.0 a				
21	K3.0 d		depot bm1.17 go				
22	IF 2.0 a		K10.1 ? D	Sbh 2 go	Sbh 2 stop		
23	IF 3.0 a		K10.1 ? D	Sbh 1 go	Sbh 1 stop		
24	IF K5.1		K5.1 ? A	stage t 3 str	stage t 3 turn		
25	IF K4.1		K4.1 ? A	stage t 4 str	stage t 4 turn		
26	IF k6.1		K6.1 ? A	stage t 3 str	stage t 3 turn		
27	IF 7.1		K7.1 ? A	stage t 1 str	stage t 1 turn		

Fig. 3: Example legend of full event procedures

Try not to get caught up in the programming steps that I have used because you will probably have a different set of steps to meet your layout conditions. Instead, I will point out some of the details on what information I can get by glancing at my event log.

Contact List Details

As mentioned before, I list my Events by contact triggers associated with an article ID. The article ID's are formulated by type of device ('K' for contact) followed by the number of the contact connection and which S88 module it is connected to (xx.x).

I normally use arrival and departure triggering so I include a suffix of 'a' or 'd' to let me know what action is triggering the event (see Fig. 4). If you are not sure of what an arrival or departure trigger is then you will want to reference the article index at the end of this newsletter for an event programming article. Any subsequent text added is simply a way for me to reference where the trigger may be on the layout (this was not possible for CS2 users, because the CS2 limited ID Labels to about 8 characters).

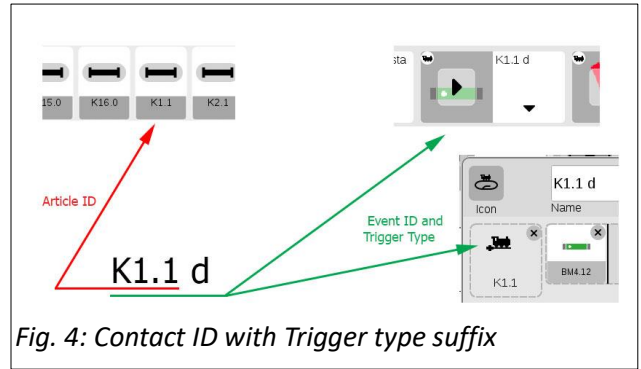


Fig. 4: Contact ID with Trigger type suffix

Macro Events

There are a few contact ID's that start with an 'IF' instead of the standard 'K' listing. These indicate that they are IF type Macros. These are called up when placed in the action steps of an Event. I will discuss the Macro event cataloging later. Fig. 5 Shows the relationship between the IF Event ID and the Event Step listing.

The Event Steps

The event steps generally refer to track articles that are in your CS3's article inventory. The list of articles generally includes references to Turnouts, Signals and Track Sensors.

	A	B	C
1	Event Contact ('Kontakt') listing		Event Stops (Macro)
2	K1.0 pre stage		if k7.1 if 6.1
3	K1.1 d		BM4.12 go
4	K10.1 a		depot t1 turn BM4.1 rienot bm2.18 go
19	K2.0 u		
20	K3.0 a		ll 3.0 a
21	K3.0 d		depot bm1.17 go
22	IF 2.0 a		K10.1 ? D Sbh 2
23	IF 3.0 a		K10.1 ? D Sbh 1
24	IF K5.1		K5.1 ? A stage t
25	IF K4.1		K4.1 ? A stage t
26	IF K6.1		K6.1 ? A stage t
27	IF 7.1		K7.1 ? A stage t

Fig. 5: A Macro IF event and the event that activates it.

Before I continue, I am going to explain that much of this methodology was created on the CS2 where I mentioned that the naming limits required me to use short abbreviations. In General, I categorized Turnouts with a 'T', Signals with an 'S' and Contact track sensors with a 'C' or a 'K'. I also referenced Braking or Stop tracks as a 'B'. The CS3 is more forgiving with naming lengths, so while you will still see my CS2 categorizing, there are more descriptive names to help locate items on the layout. For example, some items will have a name descriptor of where they are ('Stage' and 'Depot' areas for example).

I will be honest with you, at the time of this writing I noticed that some naming conventions that I have used are less strict in the overall sense, but they are consistent within the type of device. For example, my contacts are indexed by Kxx.x - (K 'connection point' 'module number'), and my braking modules are referenced by BM x.xx - (BM 'M83 module' 'address'). It is still consistent with the use of categorical labels (T, S, K and BM) except for the Staging yard stops that are missing the 'BM' references to an M84 (but, I know they all are in the staging area to a single M84). This is the type of thing you may run into when you focus on programming.

Articles are by default, set as 'Action' steps. Meaning that you are setting the action of the item in that step. Signals can be set as either a 'Stop' or 'Go' action (likewise with a Brake Module or Stop section). Turnouts will be set as either a 'straight' or a 'turn' setting. You can see an example of how the actions are listed in Fig. 6. Examples are 'depot t1 turn' – (location-turnout ID-action), or 'BM4.12 stop' – (BM ID-action).

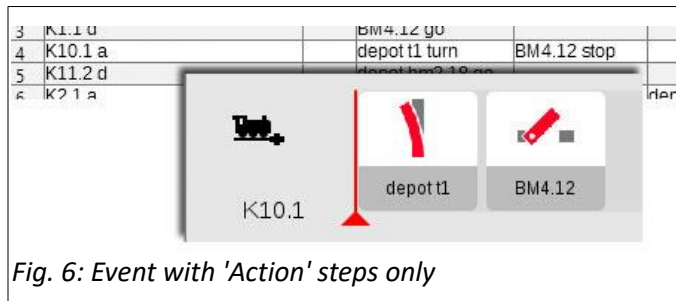


Fig. 6: Event with 'Action' steps only

Adding conditions either by including track occupancy sensors or setting your CS3 into 'Extended events mode' creates an additional notation necessary for quick identification of conditions in your events. Conditions are queries sent to the CS3 to 'ask' what the setting is for that device. Because it is a conditional setting, I categorize them with a '?'. A suffix of what the setting is looking for is added after that. Fig. 7 displays 'K10.1 ? D' – (Contact ID - is a Conditional - '?' Setting)

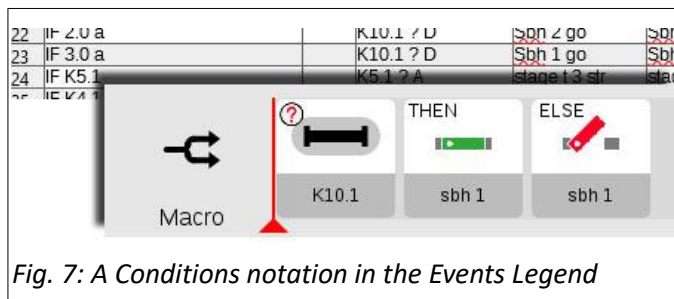


Fig. 7: A Conditions notation in the Events Legend

Normally this is applied to contact tracks, so I use the same name convention for the contact tracks 'A' or 'D' (arrival or departure). You can use 'O' or 'U' if you wish (occupied, unoccupied), because the abbreviations may not be used elsewhere. If you are setting a conditional based on a turnout or a signal, then the listing would be labeled as 'T1 ? Straight' – (Turnout ID - is a Conditional - setting) or 'S1 ? Stop' – (Signal ID - is a Conditional - setting). A quick example of what the description's event icon looks like is shown in Fig. 8.

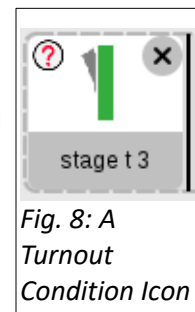


Fig. 8: A Turnout Condition Icon

Use a Track Plan with the Legend

Essentially, all your event triggers and steps written out in shorthand will give you a quick understanding of what each event is supposed to do. It is going to give you a full overview of each event's actions without having to open each event to review the steps. This list of events will be of more use if you have a track plan with all your articles listed out on a hard copy printout. You may use the track plan screen in the CS3 alone, but it is not so effective if you are in the edit screen of your events as the events window will block the track plan. (Tip – If you know how to connect your

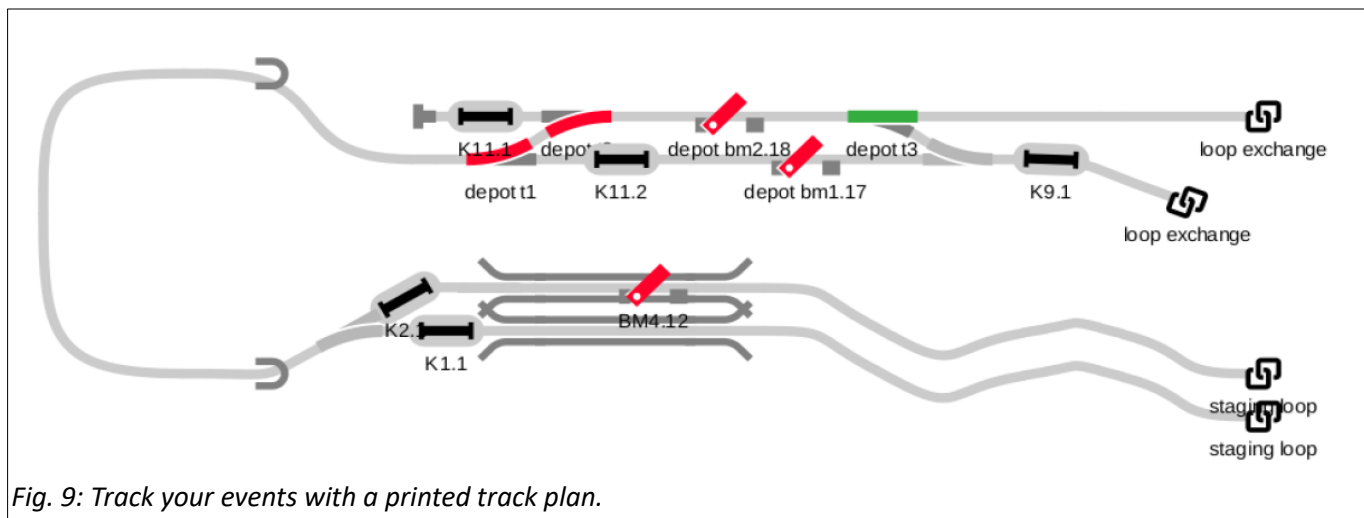


Fig. 9: Track your events with a printed track plan.

CS3 via a browser, you can print your track plan screens. Be sure the track plans are zoomed in enough so that you can read the article labels in the printout.) I have included a portion of my track plan and you could probably track some events with the Legend listed in Fig. 3.

Extra Things to Know

Once you have some prints of your track plans and events, here are some insights on why they are helpful. If you have trouble spots that are generated through event scripts, you will be able to identify which contact is triggered using the track plan and then reference the event steps on the event legend. Using the screen to identify contacts may not be as efficient if you must switch between track board screens.

You will not be able to monitor your events when the event page is in 'edit' mode. When the system is in edit mode, it disables all events from operating. Having the printout of your event steps will allow you to monitor your event's actions to check for misfiring actions. The list will also allow you to scan for any events that activate similar articles that may be causing conflicts. An example is if you have a turnout that may switch back and forth repeatedly.

Having the Legend will help you scan through any nested events or Macro instructions included as steps because nested events require you to close one event to view the instructions of another.

Having an events Legend will be a very useful tool when getting involved in Event scripting. Primarily it is easier to have an overview of all events and actions instead of only being able to view one event's instructions at a time. Using the legend with a track plan assists in the location of misbehaving triggers and visualizing the actions which are supposed to occur. While it may take time to write out events, it will be a real time saver when setting up, running, and testing any event issues.

Curtis Jeung

Upcoming appearances:

Märklin Digital Webinar #10

Topic: Adding custom icons to the CS3

March 10th 11:00 – 1:00 PST

You can use the usual links to join the webinar. A reminder will also be sent about two weeks prior to the event.

To contact Rick and Curtis for help with your Digital, technical and product related questions:

Phone: 650-569-1318 Hours: 6:00am – 9:00pm PST. Monday through Friday.

E-mail: marklindudes@gmail.com

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