

mfx[®] Dive into a New Dimension of Operation

The developments in model railroading keep going on and on, and this year Märklin is right up front in the digital area. The first mfx decoders with up to 16 auxiliary functions will set new standards for all model railroaders. More ease of operation, closer to the prototype, more operating enjoyment.

More operating enjoyment! Märklin has seen to this and has developed the mfx decoder further. The Märklin "World of Operation" with the new mfx+ decoder now stands for operations close to the prototype. Six Märklin H0 new items are equipped with the new mfx+ digital decoder this year. Operating with a model railroad has now become even more realistic and still closer to the prototype. You will need the 60213 – 60215 Central Station for this as it has been offered since 2008 and with the latest Firmware Version 2.5 from 2013 installed on it.

The new thing about this decoder is that it has a virtual supply of operating fuel corresponding to the prototype that is used up in running operations and that must be replenished. Under a full load and on a grade the usage rate increases for example. On an electric locomotive it is the sanding that plays a role. On a diesel locomotive it's the diesel fuel, and on a steam locomotive

it's sand, water, and coal. If the supply of a component is used up, this necessarily leads to an effect on the running operation. The locomotive then runs at a "crawling rate" until the missing sand or fuel is replenished. We consciously refrained from a complete breakdown in operations. Another special feature is the Sifa or "dead man's" button on a diesel and an electric locomotive. This button must be pressed at regular intervals by the "locomotive engineer" just as on the real life railroad in order to prevent an automatic obligatory braking of the train. (Note: in Germany. In North America people are more familiar with the so-called "dead man's switch" on locomotives.)

You can choose among four levels of difficulty for controlling the mfx+ locomotive:

Standard: The locomotive behaves like a normal mfx locomotive without taking into account any use of fuel.

Semi-pro: The use of fuel is activated. The indicator for the current "level of fuel" and a control field for taking on more fuel are added to the control screen for the Central Station 2.

Pro: A simulation of the engineer's cab for an electric locomotive, diesel locomotive, or a steam locomotive appears. The locomotive is now controlled according to the typical operating procedures you would see in a real life locomotive.

Specialist: You need a fully wired layout in order to run the model in this mode. You determine exactly by means of feedback modules where the locomotive must be refueled.

In the semi-pro and pro modes the locomotive must be prepared according to the type of operation so that it can even move. So, the fire in the boiler for the steam locomotive

must be started and the boiler pressure must be at the right level. For an electric locomotive the main relay must be thrown and the pantograph must be up. You'll get information or messages on the Central Station's display to show support for the control functions.

And, if you have an external speaker available and connect it to the Central Station, you'll also receive an acoustic signal.

When we designed the engineer's cabs, we consciously refrained from simulating the exact engineer's cabs for different locomotive classes. We concentrated more on operating enjoyment in the selection and placement of the different operating elements. The operating steps are supposed to be typical for the mode of operation in question, but at the same time easy to understand. Probably the most interesting engineer's cab for many model railroaders will be that for the steam locomotive. In addition to enough fuel, you also have to constantly monitor the boiler pressure, adjust the water level in the boiler,



and feed enough steam to the cylinders. This is the most interesting but also the most challenging mode of operation.

The Data Are Stored.

The data about the level or amount of fuel are also stored in the locomotive. If the locomotive is called up for example on a group's layout or on a friend's layout with a Central Station with Firmware Version 2.5, the data will also be available there after selecting the desired mode of operation or will be available directly again as an output status. Operating the locomotive on a controller without these operating possibilities does not change the data.

