

märklin
digital

TRIX



English
Deutsch

Instruction

Mobile Station 2 (version 3.121 or higher)



60653 / 60657 / 66950 / 66955

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Safety Notes

- Use only switched mode power supply units that are designed for your local power system.
- This set must never be supplied with power from more than one power pack. (DC 18V / max. 36VA)
- On large gauge railroads such as LGB and Märklin 1 Gauge, please note the permissible current load of 1.9 amps!

General Notes

- When you find the following symbol in a section, the menu point described is **only** important for this digital protocol.

 = only for Märklin Motorola (MM)/mfx

 = only for DCC

- These instructions for operation refer to the Mobile Station 2 (MS2) starting with Software Version 3.55. It may be necessary to update your MS2. Update instructions can be found on the Internet at www.maerklin.de --> Service --> Technical Information.
- The operating instructions are a component part of the product and must therefore be kept in a safe place as well as included with the product, if the latter is given to someone else.

Spare parts

Control knob red	E146 711
Control knob green	E153 427
Feet	E159 844
Cable with plug	E146 781



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335842/1223/Sm6Ef
Änderungen vorbehalten
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Mobile Station 2 (MS2)

The MS2 is used to control a model railroad and can be used for H0/N/1/G Gauge.

MS2 Features:

- Digital protocols: Märklin Motorola, mfx, DCC according to NMRA/NEM standards
- Running locomotives (M addresses 1 - 255, DCC 1 - 10239)
- Running mfx locomotives (automatic registration)
- Programming locomotives
- Locomotive list for 40 active locomotives (direct selection)
- Locomotive data baseover 1,000 locomotives
- Keyboard (addresses 1 - 320)

The following is also required for operation:

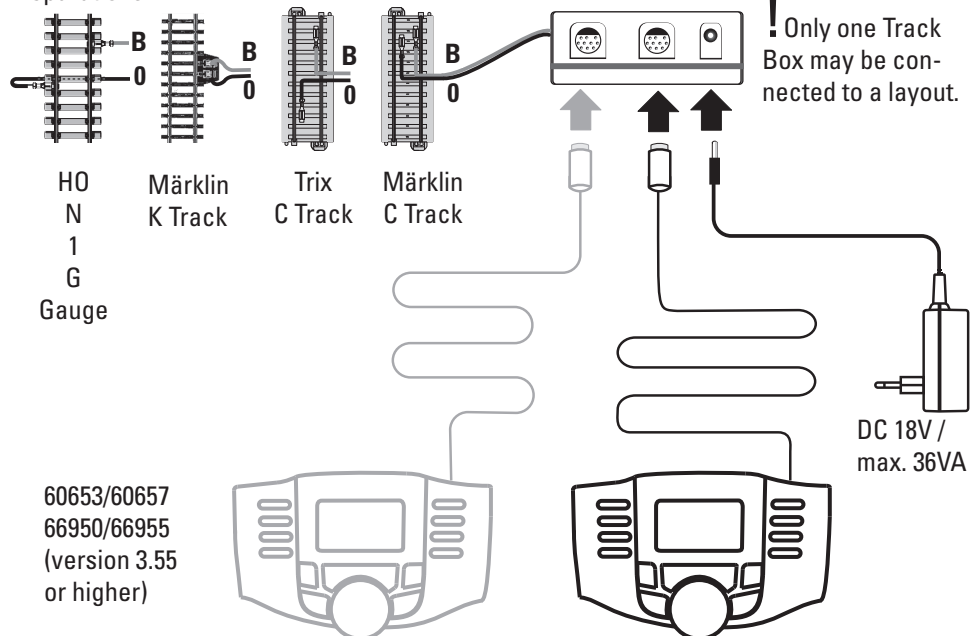
- 60113/60116 Track Box for H0/N or 60112/60114 Track Box for 1/G Gauge
- A switched power pack (DC 18V / max. 36VA)

or

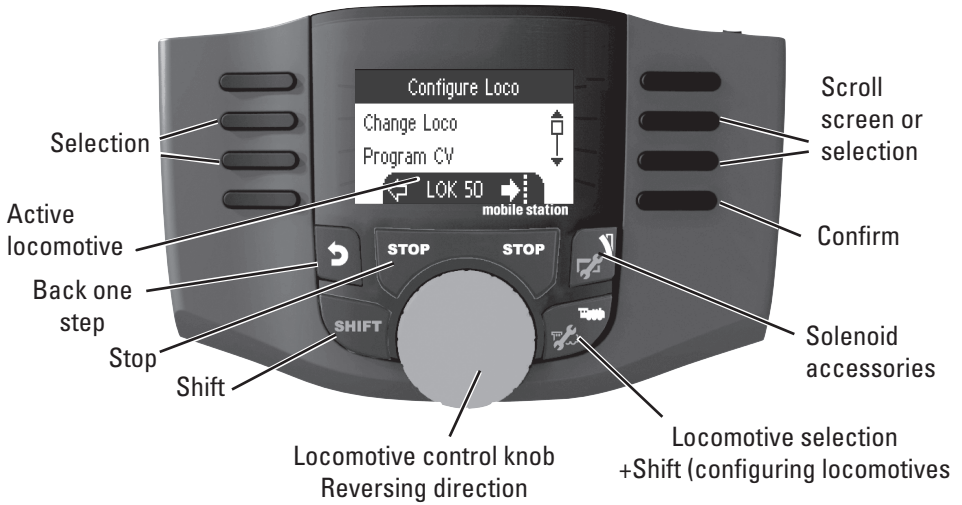
- Connections to a 60213, 60214, 60215, 60216 or 60226 Central Station
- Connections to a 60125/60145 Terminal by means of a (610 479) 60124 adapter cable

Connections to a Track Box

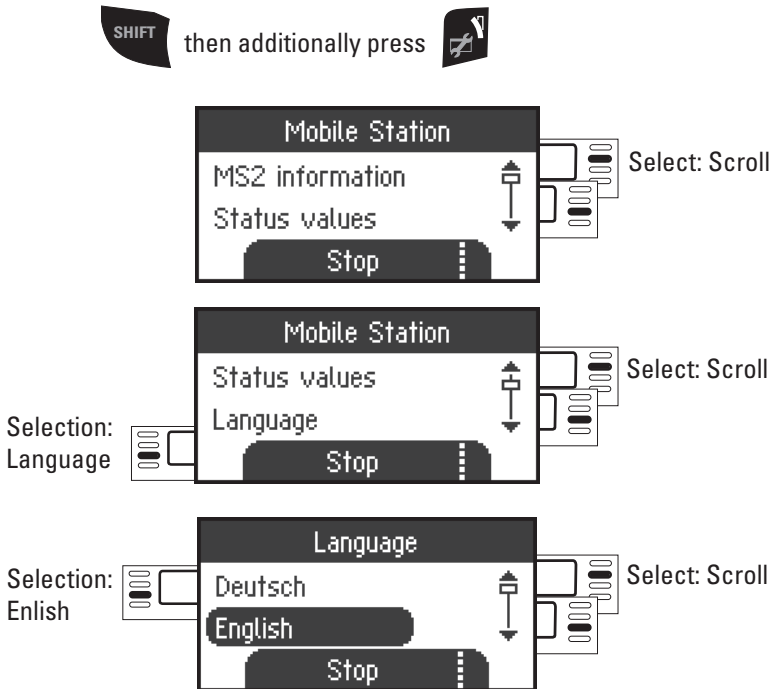
Preparations



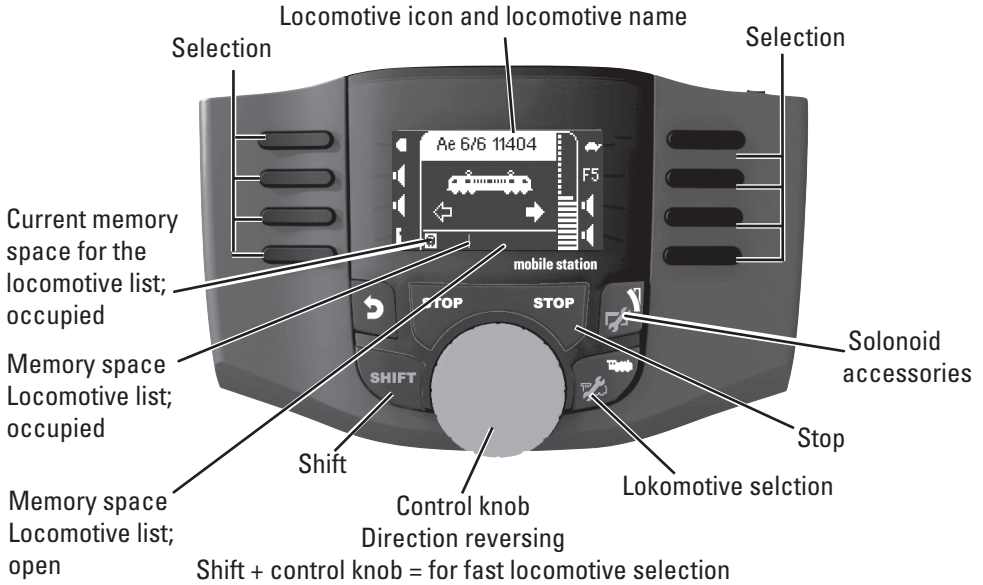
Button Functions (Menu)



Language Selection



Entering a Locomotive

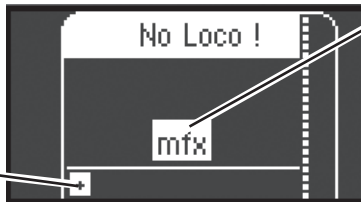


Ⓜ Registering an mfx Locomotive



Place your locomotive with the mfx-decoder on the track. The locomotive registers itself as shown in the following illustrations.

An open memory place in the locomotive list is automatically recognized.



“blinks” during registration.

mfx locomotive is recognized; data is read in.



mfx locomotive is ready to be used and can be run.

If desired or if necessary, the locomotive and function icons in the menu „Configuring Locomotives“ can be edited as described starting on page 14.

Memory space in the locomotive list is occupied.

Entering a Locomotive with a Locomotive Card

Insert the locomotive card; the locomotive is immediately ready for use.
(In multiple device operation, this is not possible at the MS2 slave device.)



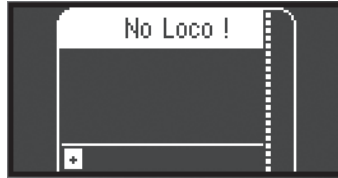
Note: If the internal memory placed is full, a memory space must be deleted before a new locomotive can be taken into the list (see page 19).

Finding a Locomotive

!The locomotive to be found must be the only locomotive standing on the track layout. Locomotives with mfx decoders do not have to be standing on the track layout by themselves.



Look for a free memory space by pressing this button (several times if necessary).



then additionally press



If you see a menu item with a line through it, this means it is not available in this window.



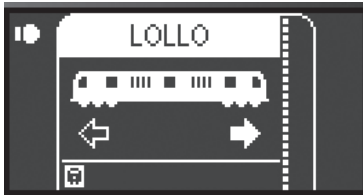
Select: Scroll

Select:
Find



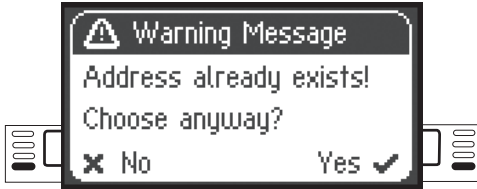
The Mobile Station is looking for the locomotive. A search is made in the protocols mfx, DCC, and MM2 one after the other.





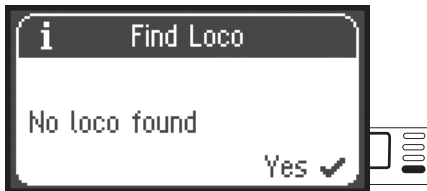
Locomotive has been found, taken into the locomotive list, and is ready to run. The name is only find by mfx loco. The other decoder only get the protocols and the address.

or



Locomotive has been found. The address already exists and was not automatically taken into the locomotive list. Take into the list or reject as desired.

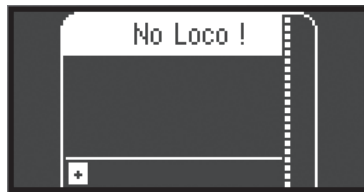
or



Locomotive was not found. Confirm and search again. Check the locomotive if necessary or program again, or if the address is known, enter manually.

Ⓜ Entering a Locomotive from the Database

Look for a free memory space by pressing this button (several times if necessary).



SHIFT then additionally press

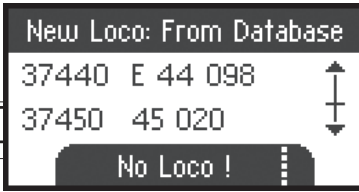
Select:
From database



Select:

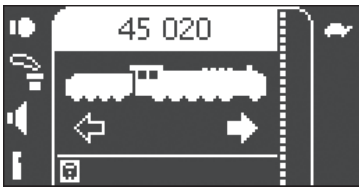


or scroll



Select one of your locomotives in the database.

! This only works if the address set at the factory for the locomotive has not been changed.



Locomotive is taken into the locomotive list and is ready to run.

Entering a Locomotive Manually



Look for a free memory space by pressing this button (several times if necessary).

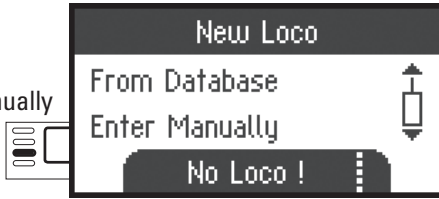


then additionally press

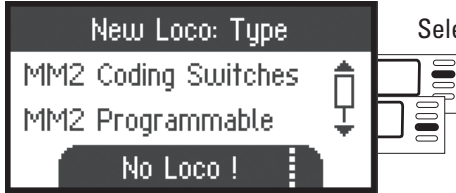


Select: Scroll

Select:
Enter manually



Select: Scroll

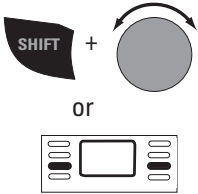


Select: Ex.
MM2 program-
mable



The following steps are the same for all types of decoders. The selection of the decoder controls editing of the locomotive later on. For example, with programmable decoders changing the address must also be sent to the locomotive to be stored in memory, but not for locomotives with coding switches.

Select Address



Address range:
MM2 with coding switches 1- 80
MM2 programmable 1 - 255
DCC 1 - 10239

Address selected



Confirm selection

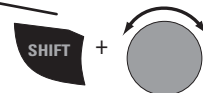
Cursor
back

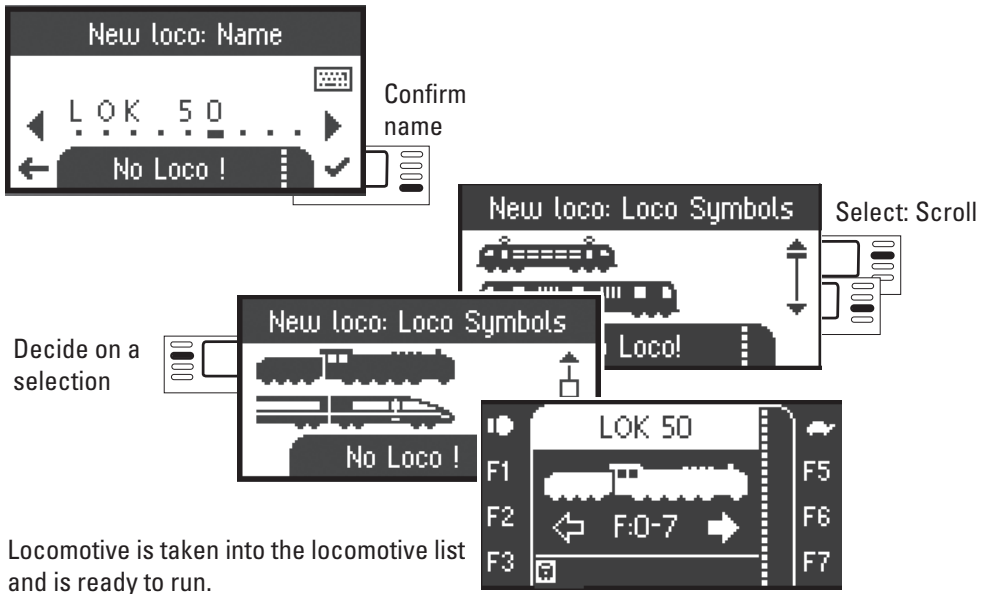


Cursor
forward

Select letter

The letters or digits can be selected at this spot.

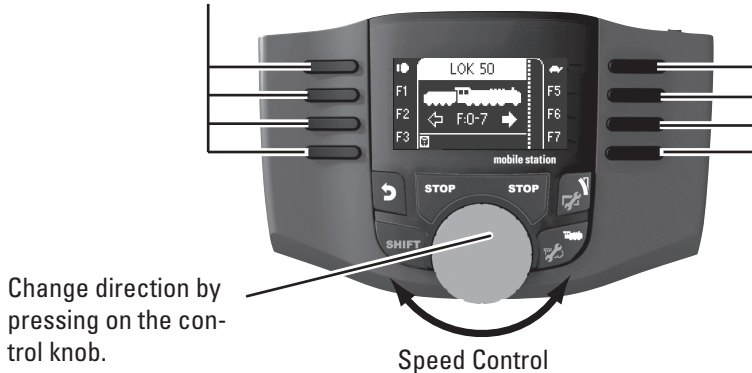




Button Functions (Running Locomotives)

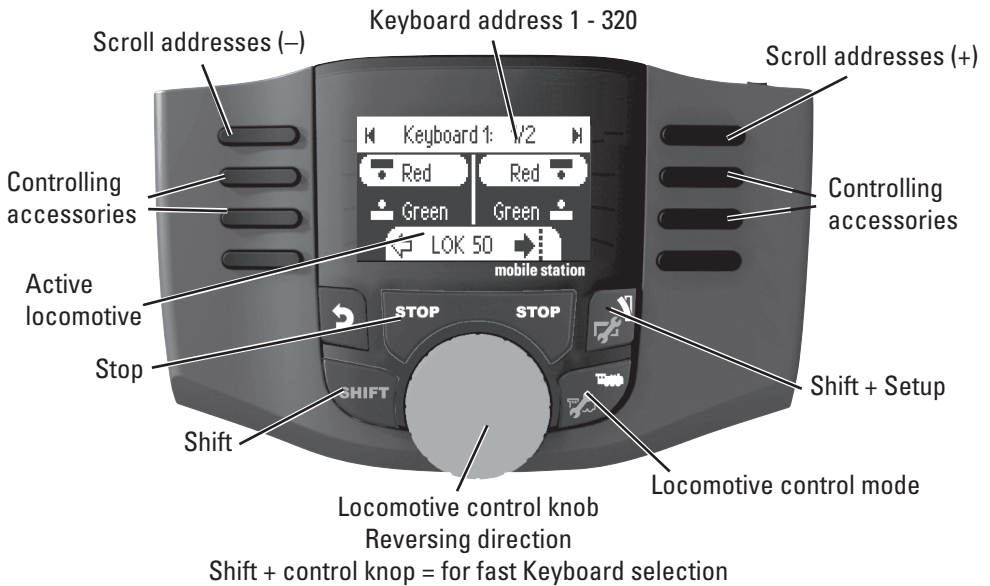
Now, the locomotives that have been entered can be controlled with the control knob and any functions that are present can be activated with the function buttons.

- | | | |
|------------------|------------------|------------------|
| f0 - f3 | Switch functions | f4 - f7 |
| 1 x = f8 - f11 | | 1 x = f12 - f15 |
| 2 x = f16 - f19 | | 2 x = f20 - f23 |
| 3 x = f24 - f27 | | 3 x = f28 - f31 |
| 4 x = f0 - f3 | | 4 x = f0 - f3 |



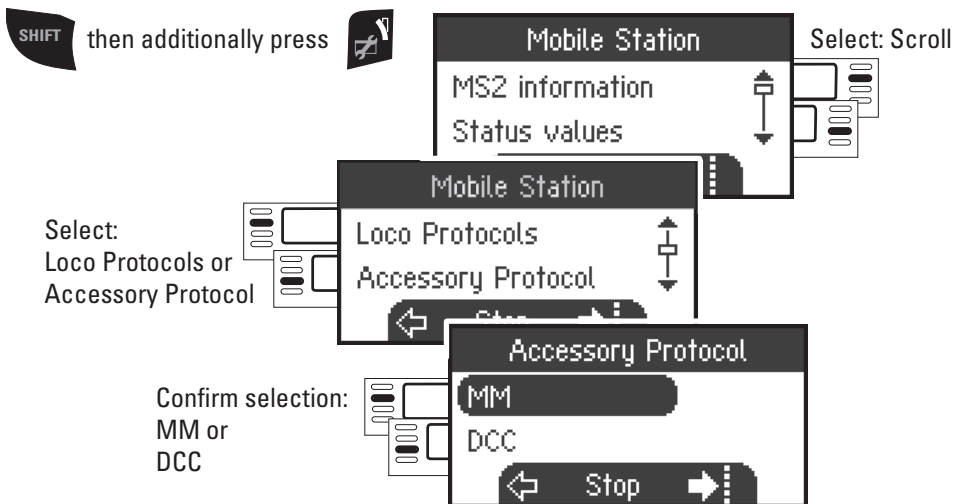
Controlling accessories (Keyboard)

The Keyboard is for switching solenoid items such as turnouts and signals. Press the following button to change to the Keyboard:



Solenoid Accessory Protocol / Loco Protocols

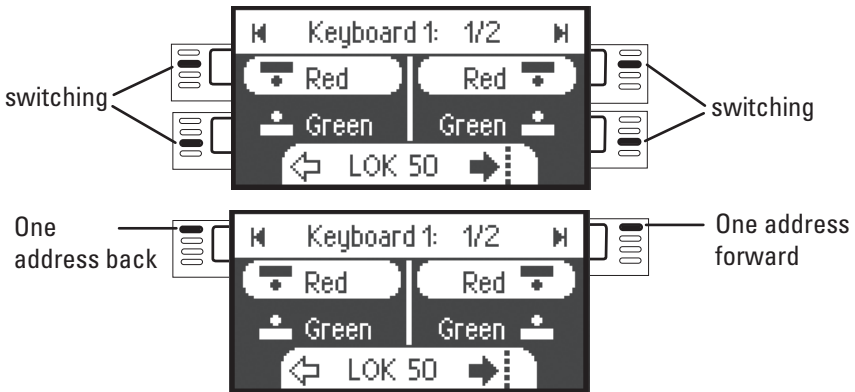
Here, you can set which data protocol is to be used for controlling solenoid accessories. Independently of the locomotive protocol. Märklin Motorola is already set as a standard protocol.



Controlling accessories

320 addresses for solenoid accessories (MM or DCC) will be displayed with the standard symbols available for use. If the Mobile Station is connected to a Central Station, the solenoid accessories will be displayed with the symbols used on the Central Station. (Exceptions are turntables and color light signals. Color light signals are represented as semaphore/target signals and the turntable is represented with the standard symbols for solenoid accessories).

press 



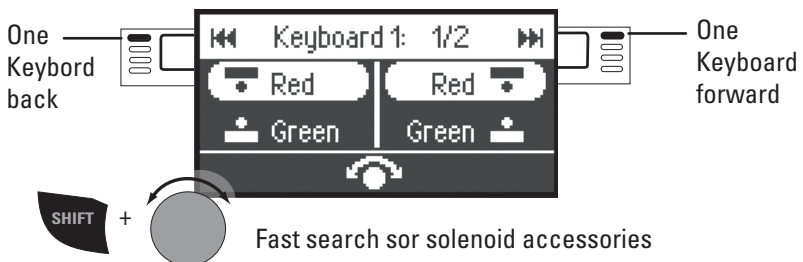
The last locomotive used by you remains called up and can continue to be run with the control knob. You must go into the locomotive mode with this button to use the functions on this locomotive or to select another locomotive.



!Tip



By holding this button you can search faster.
(Each Keyboard has 16 addresses)



Configuring a Locomotive

This menu is used to make custom adjustments to the locomotive or its decoder. The locomotive address, the locomotive name, and all CV parameters can be edited. Please see the instructions for your locomotive or decoder to determine how much your locomotive can be edited in this menu. **Only the locomotive to be edited may be standing on the track.**

In this menu the locomotive selected remains called up and can be controlled from the control knob, thus allowing you to check the altered programming immediately and correct it if necessary.

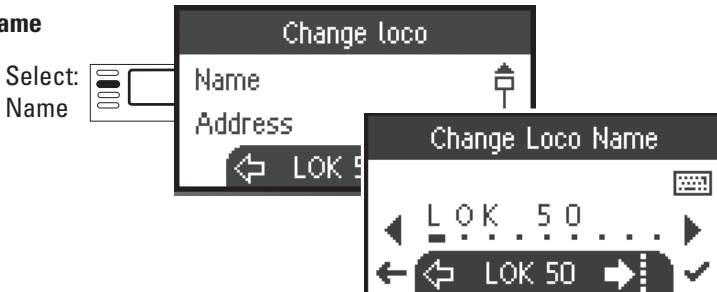


 then additionally press 

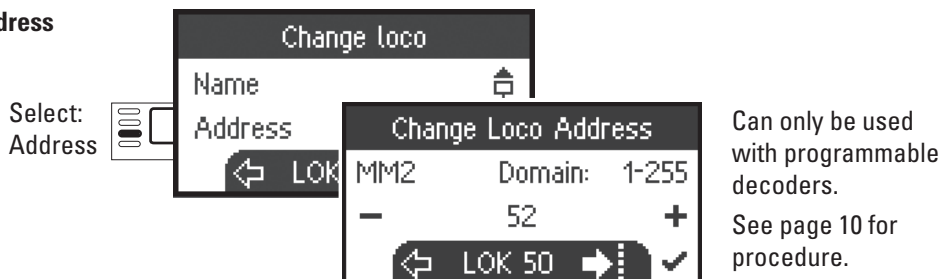


Change loco

Name

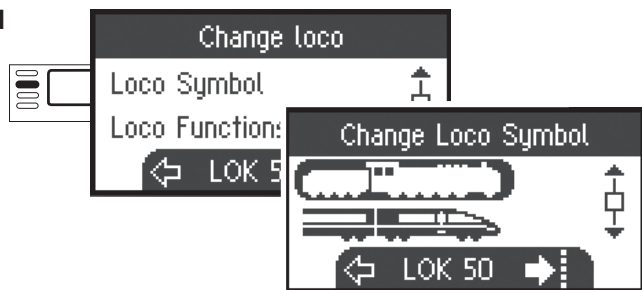


Address



Loco Symbol

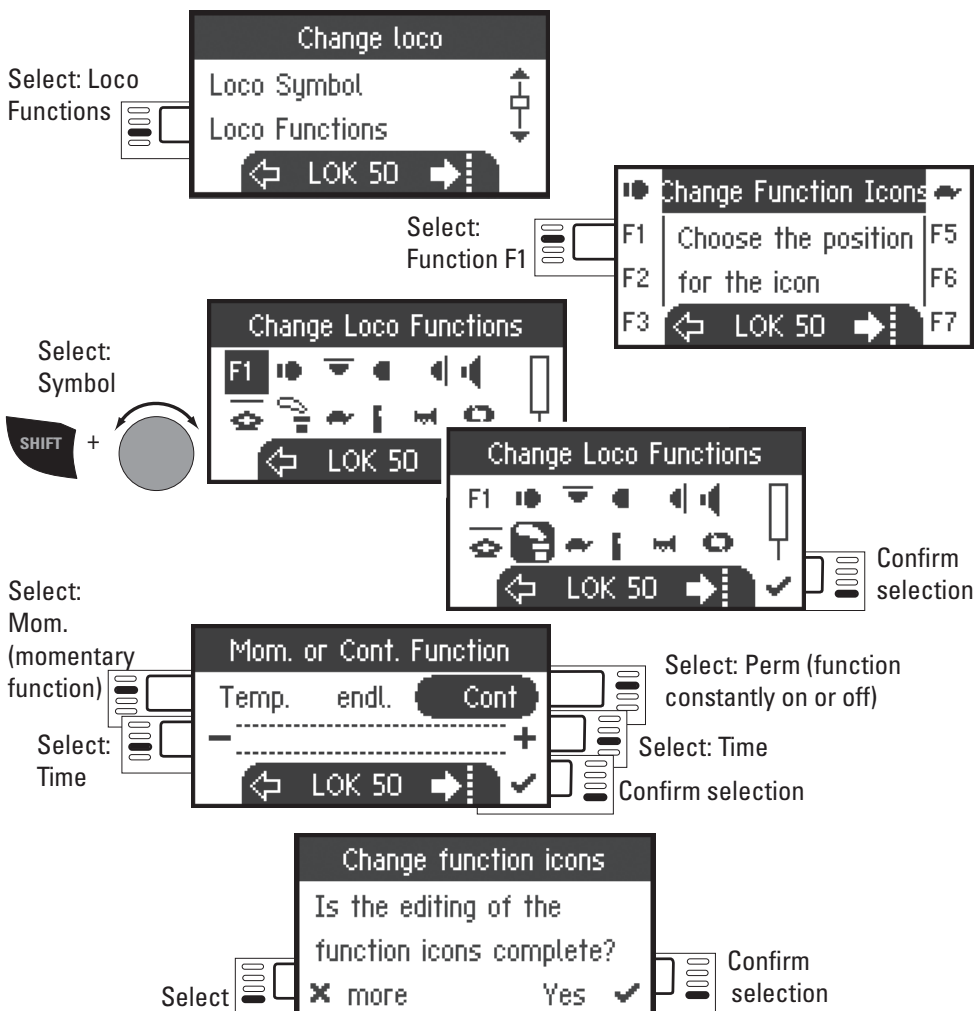
Select: Loco Symbol



See page 11 for procedure.

Loco Functions

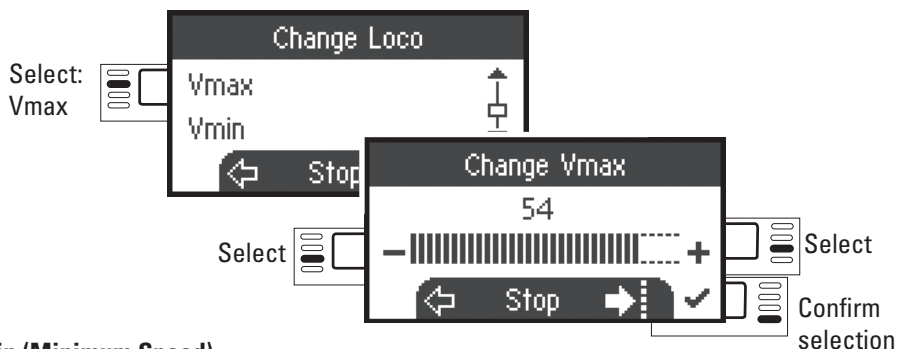
Please check the instructions for your locomotive to see if these settings can be done.



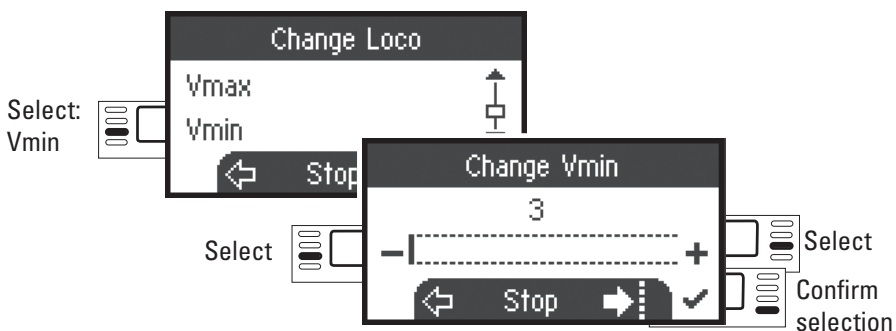
Maximum Speed / Minimum Speed

Please check the instructions for your locomotive to see if these settings can be done.

Vmax (Maximum Speed)



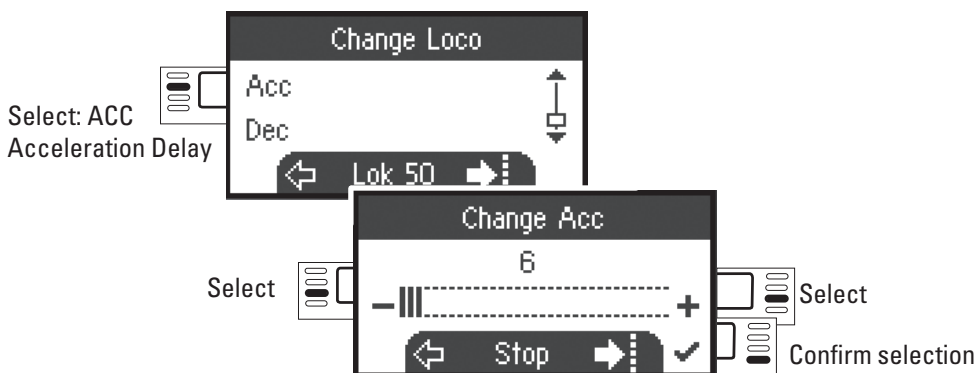
Vmin (Minimum Speed)



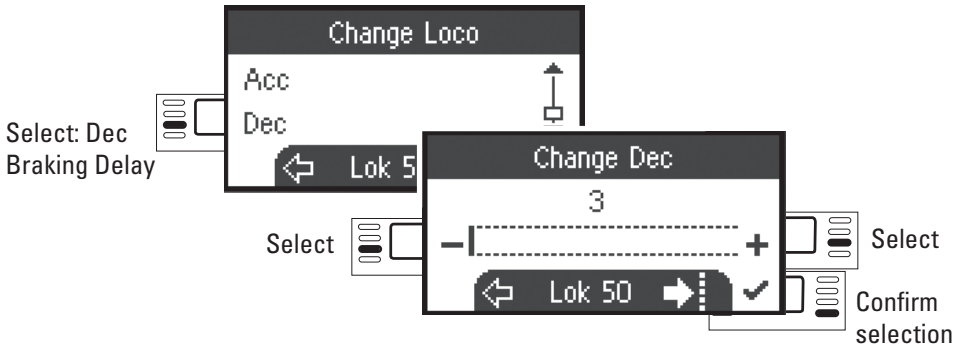
Acceleration Delay / Braking Delay

Please check the instructions for your locomotive to see if these settings can be done.

Acc (Acceleration Delay)

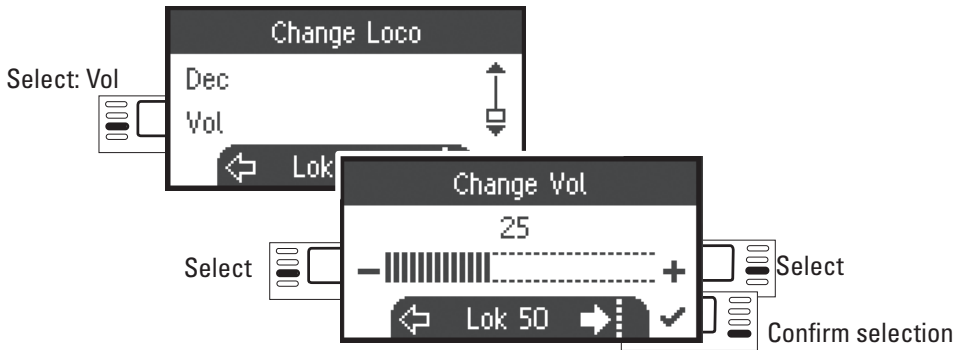


Dec (Braking Delay)



Volume

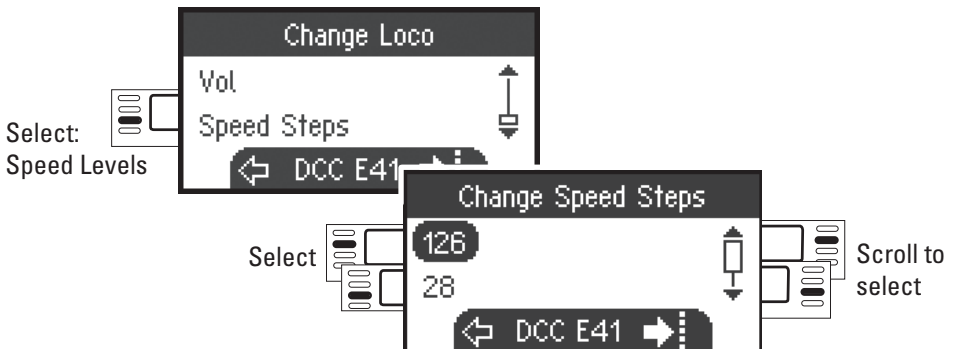
Please check the instructions for your locomotive to see if these settings can be done..



The following selection is only for locomotives with DCC decoders.

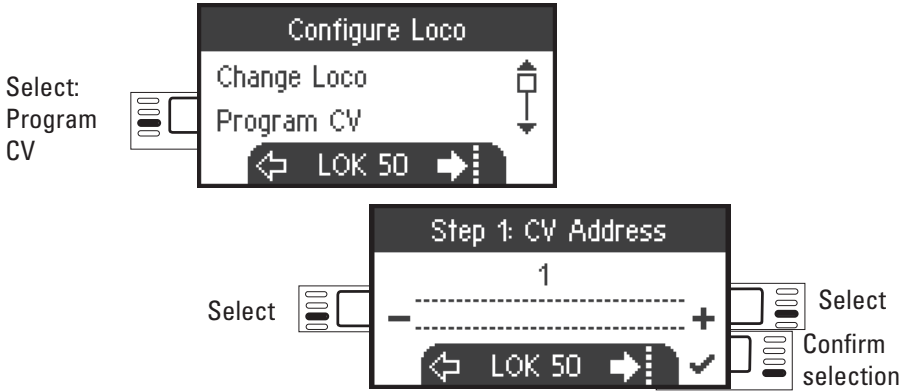
Please check the instructions for your locomotive to see if these settings can be done.

Speed Levels



Programming a Locomotive (CV)



 then additionally press 

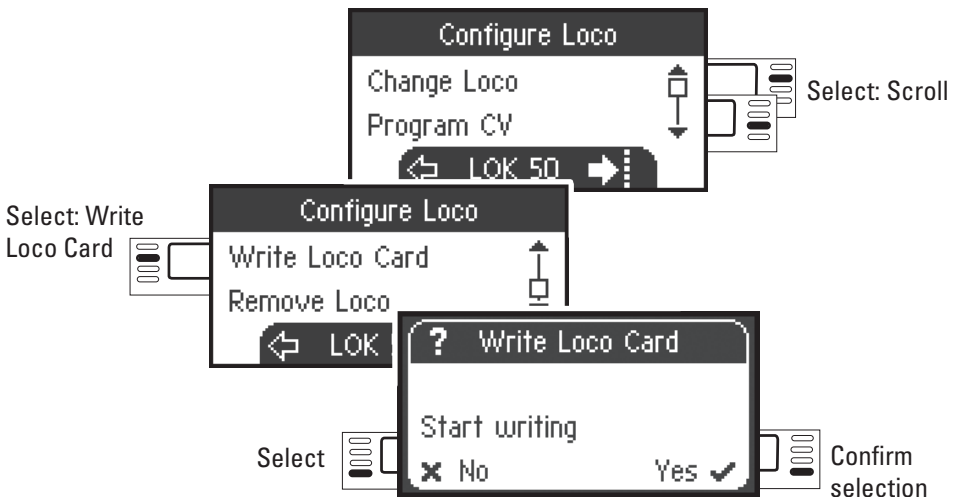


First, set the CV value to be edited (according to your decoder / locomotive instructions) and confirm the selection. First, the CV value being sought is read in; after that you can change the value in Step 2 and confirm. With this procedure you can change any permissible CV value.



Writing to a Locomotive Card

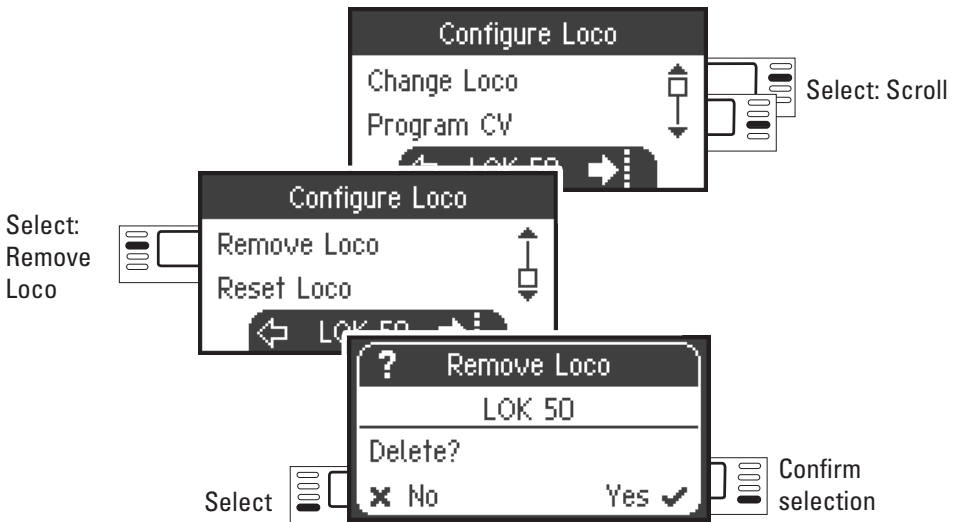
Insert locomotive card (see page 7)

 then additionally press 





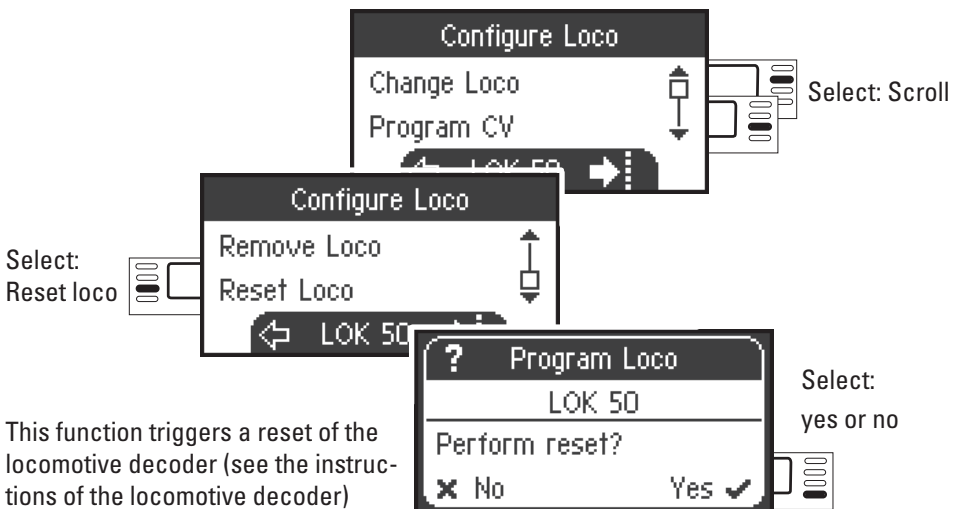
Deleting a Locomotive

 then additionally press 



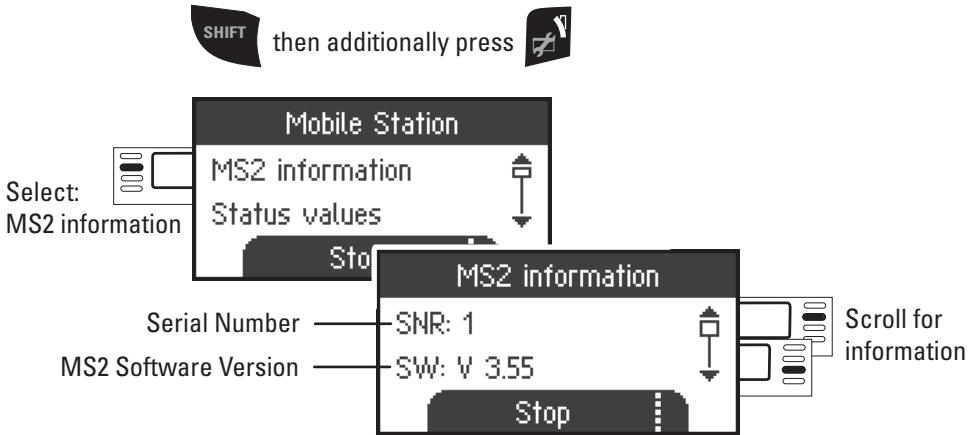
Reset Loco (Factory Settings)

 then additionally press 



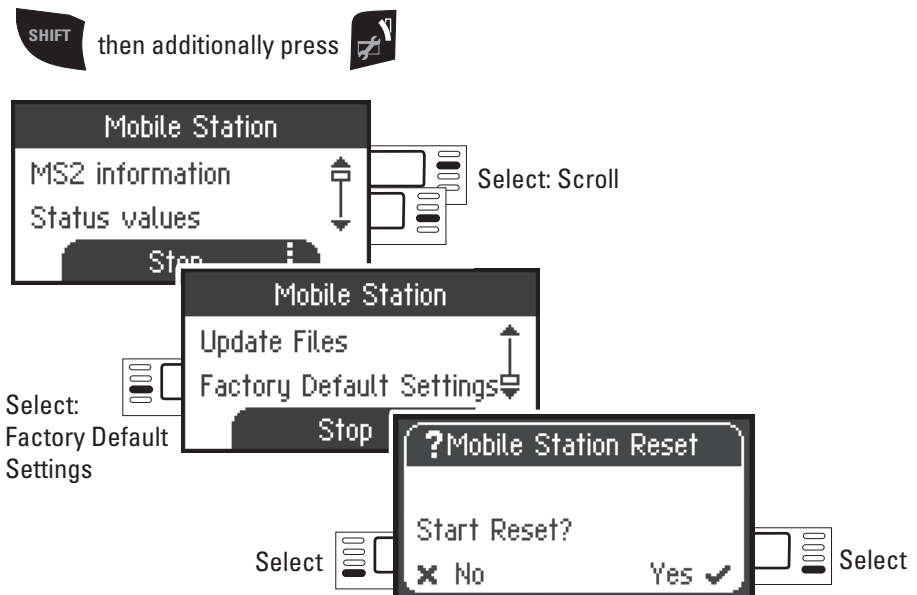
Menu

MS2 Information



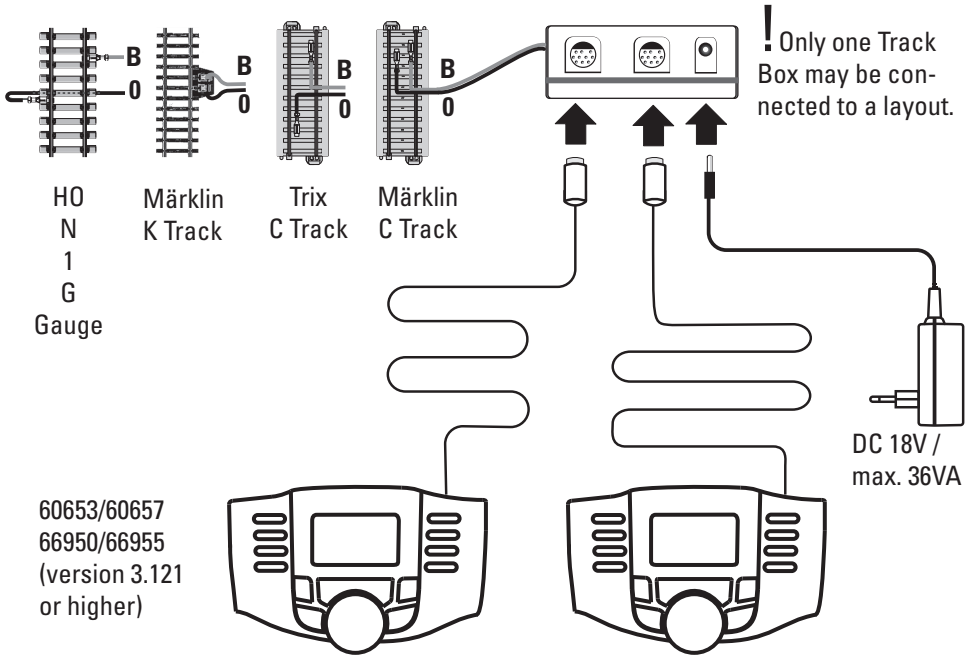
Here, you can get information about the serial number, software version, hardware version, locomotive data status, and Can Bus status.

Reset (Factory Default Settings MS2)



! Important. When you do a Reset, all of the data and settings are deleted.

Work with two MS2



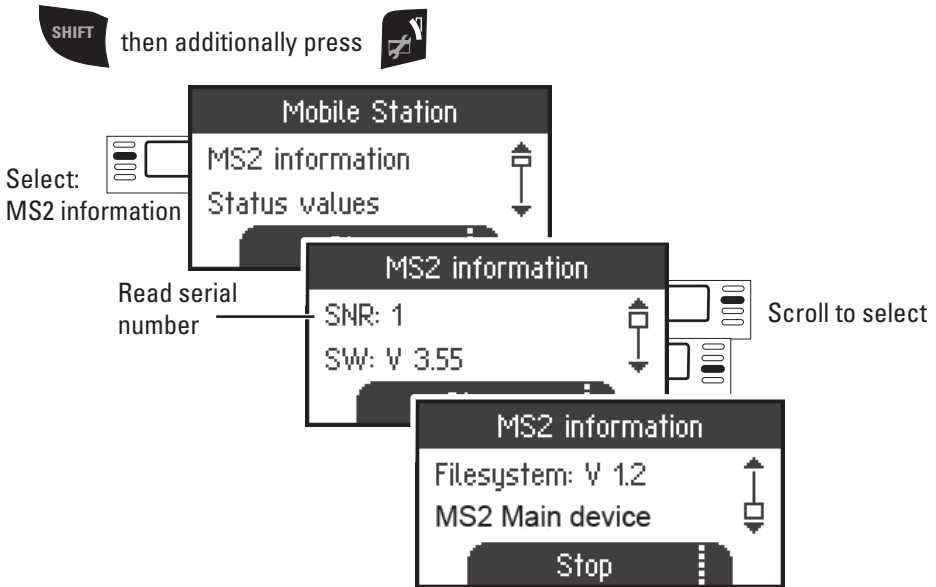
A maximum of 2 MS2 can be connected to the track box. The MS2 main device is automatically recognized. The other MS2 units then automatically become expansion devices.

The setup, recognition, and programming is done only with the MS2 main device. The MS2 expansion device takes on all locomotives from the MS2 main device.

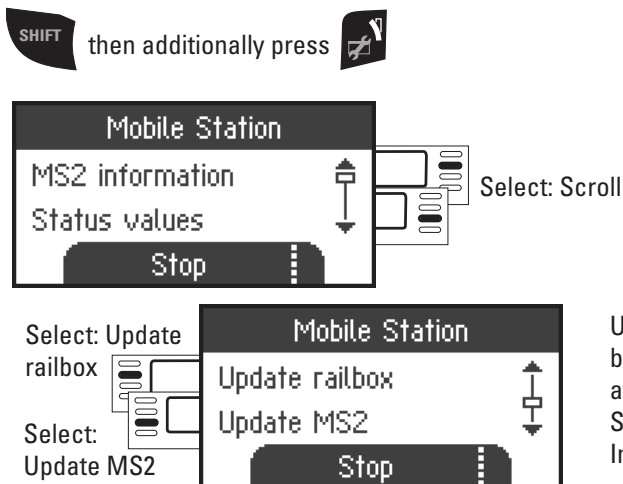
Recognizing the main / expansion device

The locomotives must first be registered on the MS2 main device. To do this, use the MS2 with the lower serial number, because this unit automatically becomes the MS2 main device.

The serial number can be read in the menu for the MS2 as follows:



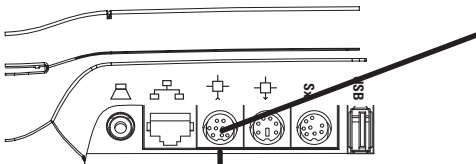
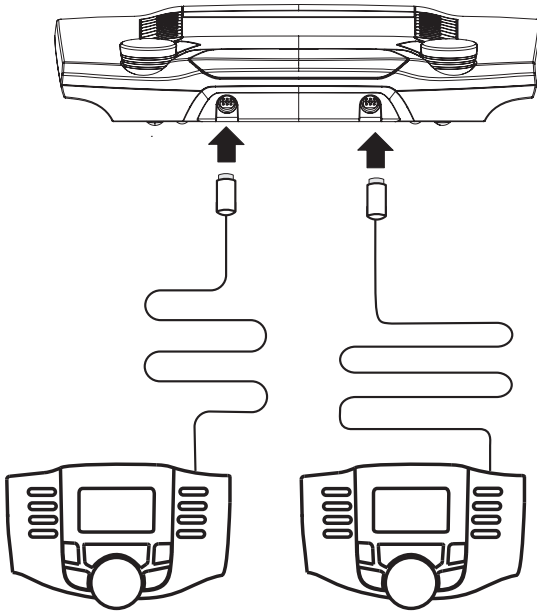
Update MS2



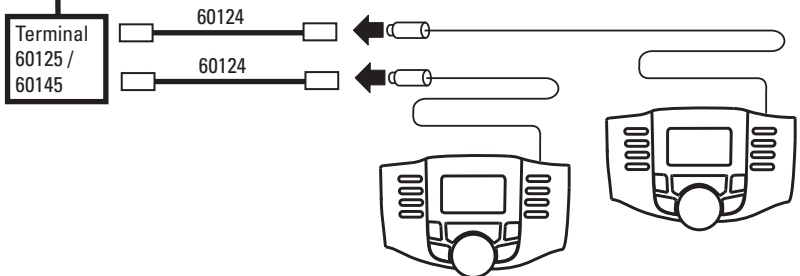
Update instructions can be found on the Internet at www.maerklin.de --> Service --> Technical Information.

Work with Central Station (as of 60213)

Possible connections to the Central Station



Alternatively, the 60125/60145 Terminal and one each 60124 Adapter Cable for additional MS2 units can be used.



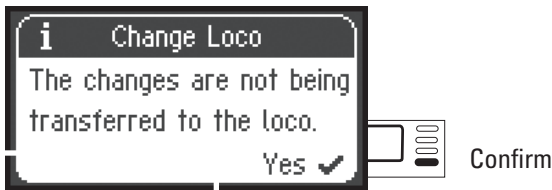
Assuming Control of a Locomotive from the Central Station

 then additionally press 



The locomotive selected can now be run with the Mobile Station.

Configuring a Locomotive



When the Mobile Station is connected to the Central Station, configuring and editing a locomotive should only be done with the Central Station and its programming track.

