Users Manual

DiMAX® Navigator

Version 1.2 – August 2005

CONTENT

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IMPORTANT NOTES

In order to guarantee pure fun with this product, read this instruction carefully and in detail.

This product is no toy. This product is not suitable for children under the age of 8 years. This product can have sharp edges because of function or production reasons. Because if the functional structure, the danger of sqeezing or wedging may exist. Small parts may be danger for swollowing. Keep away from children and untrained people. Danger of injury exists with inappropriate use. Only use this products in combination with devices that are described in this manual.

Given electrical and mechanical data as well as illustrations are without guarantee. Mistakes of any kind are reserved. Given data is subject to change without notive. No warranty claim exist for inappropriate treatment or foreign interference. Offences cause compelling warrenty loss and general repair refuse. Entitled objections will be repaired free of charge. For repair service please hand this product to your retailer or send it directly to the manufacturer. Postage has to be paid by the customer.

1. INTRODUCTION

Welcome! We would like to thank you for purchasing a DiMAX Navigator remote control of the Massoth Elektronik GmbH, the manufacturer for Sound- and Digitalcomponents for LGB since 1973. Through its Functionality and easy handling the DiMAX Navigator sets new dimension in digital model train control, system-spreading! The DiMAX Navigator is the universal remote control in the DiMAX Digital System of Massoth.

This Manual will lead you step by step through all the functions and features of the DiMAX Navigator. Please study this guide carefully before start-up. We are shure you will have fun and success with the new DiMAX Navigator.

WARNING REFERENCE

- The DiMAX Navigator is only suitable for the use of digital model train layouts in combination with the indicated digital components.
- The DiMAX Navigator can and may only be operated with components discribed in this manual. Other use is strictly permissible.
- Attach the DiMAX Navigator only to the devices described in this manual. Even if other devices use the same kind of jack (plug connectors), it is not possible to run them together. This might damage or destroy the Navigator as well as the other components.
- Please make sure that the DiMAX Navigator never drops or falls down. Expose it to no impacts nor vibration. This can lead to damages.
- Never suspend the DiMAX Navigator to heat nor direct sunlight or humidity. This may impair the functions.
- Open the DiMAX Navigator only on instruction. This can lead to damage and impairment.
- Never clean the Navigator with strong solvents, cleanings solutions or corrosive chemicals.

2. SCOPE OF SUPPLY

The following items come packed with the DiMAX Navigator:

- 1 x DiMAX Navigator
- 1 x connecting cable
- 1 x Users Manual, either german or english

If one of these components if missing, please contact your model train store for help and replacement.

3. BATTERIES (RECHARGEABLE) FOR RC MODE

Batteries or rechargeable Batteries for the RC mode of the DiMAX Navigator are not included. Please use three standard batteries with 1,5 Volt (Type: AA). If rechargeable batteries are installed you can use the charging featuer for the DiMAX Navigator. The charging mode needs to be activated seperately in the RC Configuration. The RC Configuration can only be processed if a RC Sender is installed. Also a RC mode is only possible when the RC Sender is installed.

4. OVERVIEW

The DiMAX Navigator belongs to the most modern and innovative handheldsfor digital train control. Its functions is not limited to pure steering of locomotives, but offers further exclusive features on beyond.

4.1. ABILITIES

4.1.1. SHAPE & ERGONOMICS

The DiMAX Navigator is an ergonomically formed remote and with its to-speaking and graceful designed shape MASSOTH sets new rules of remote design! For shure, it can be controlled with one hand only. Its shape allows also to use it as a left- or right hand remote.
The battery case has been perfectly designed in the back of the DiMAX Navigator. A large graphics display gives detailed information about the locomotive and the layout itself.

4.1.2. SPECIAL FEATURES

The DiMAX Navigator is the only handheld that offers the possibility to process two functions at a time. For example, two locos can be controlled at the same time and or switches can be processed while driving a train. Also the second function can be chosen free. Detailed information on this will follow in the next chapters.

4.1.3. FOREIGN CENTRAL STATIONS

The DiMAX Navigator has been designed for a direct connection to the powerful DiMAX Central Stations. But also, the DiMAX Navigator can be used with Central Stations from UHLENBROCK®, LENZ® or ROCO® Central Stations.

4.1.4. CONNECTION

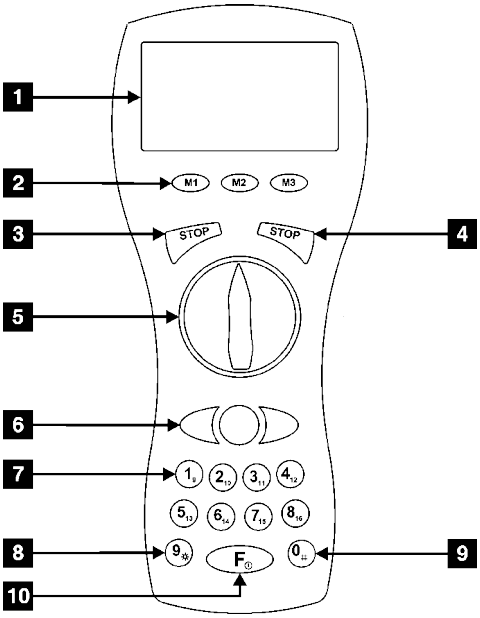
The DiMAX Navigator can be run over cable or wireless. After activation, the Navigator will automatically open a connection to the central station via cable. If a cable connection does not exist, it will start a wireless connection, if the RC sender is installed. If no connection can be started, it will be shown in the display. The symbol of the connection mode is also shown in the display.

4.1.5. RC CONNECTION

The DiMAX Navigator uses a RC frequency that is free of charge. It also does not colidate with the well known LGB RC system. So both RC types can be run at the same time.
The RC works bidirectional. A distance of about 50 to 100 meters can be reached outdoor. The distance can be different if used indoor. Walls might cause a signal quality impairment. Disturbances can also be caused by wireless items like computer mice or keyboards, garage door openers or wireless headphones, etc. This may affect the distance of the wireless connection.

4.2. CONTROL ELEMENTS

The DiMAX Navigator has several control elements. The following sketch gives a short preview of all the keys.



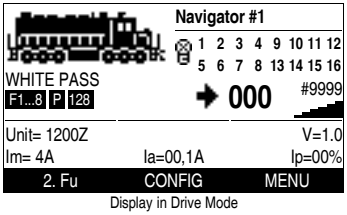
Nr.	Descrition
1	Display
2	Menu Keys
3	left STOP-Key
4	right STOP-Key
5	First Function Control (only for Loco- or Multiheading-Control)
6	Second Function Control (Loco-, Switch-, Route Control or System Info)
7	Keyboard
8	Light Key
9	Loco Selection Key
10	Layer of Functions / On

4.2.1. DISPLAY 1

The large graphics display gives detailed information about the locos condition. With a size of 54mm x 26mm (14cm$^{2)}$ the information will allways be shown in detail. Among other things, the display shows the loco configuration as the locos picture, name, address, functions, parallel of serial control, active functions from 1 to 16, direction, actual speed in steps of speed, speed level indicator, etc.. The displays LCD backlight can be switched on or off in the menu.

4.2.2. MENU KEYS 2

The Menu Key functions M1, M3, M2 are different from situation to situation. The actual functions are given in the lowest line of the display with white letters in black background. Here is an example:



Display in Drive Mode

4.2.3. STOP-KEYS 3 + 4

The DiMAX Navigator has two separate STOP-keys. So different STOP-functions can be triggered. At this time a general EMERGENCY BRAKE or a simple LOCO STOP can be triggered. The STOP mode can be configured in the menu. In the original factory settings, the right STOP-Key 4 will trigger the EMERGENCY STOP, which is a total loss of power on the track. With the left STOP-Key 3 the EMERGENCY STOP can be released.

4.2.4. FIRST FUNCTION CONTROL 5

The main DiMAX Navigator function control is processed through the large and transparent wheel knob (also marked as 5 in the sketch). It controls direction and speed of the loco or the multiheading locos. The center position of the wheel knob will light red when the knob is centered. Also the knob has a backlight. It will light when the LCD backlight is activated and can be found in the menu.

4.2.5. SECOND FUNCTION CONTROL 6

The second function is controlled with the 3 keys under the transprarent wheel knob 5. Parallel to the first function, a second loco or switch or also a route can be controlled. This real second function is only given by the DiMAX Navigator.

4.2.6. KEYBOARD 7

With the keyboard of the DiMAX Navigator, the 16 loco functions (F1 bis F16) are triggered. With the F-key 10, the function layer can be switched from layer one (function 1 to function 9) and the second function layer (function 9 to function 16).

4.2.7. LIGHT KEY 8

This key 8 will turn on and off the light of the active loco. The light function is seperated from the loco functions F1 to F16.

4.2.8. LOCO SELECTION KEY 9

Press this key 9 to start the loco selection of the DiMAX Navigator. There are several options to select a locomotive. Detailed information are given in chapter 6.1.7.

4.2.9. LAYER OF FUNCTIONS / ON 10

This key 10 selects the function layer (function F1 to F8 or function F9 to 16). The actual setting is shown under the loco picture as F1...8 which indicates, that function F1 to F8 can be triggered. The second function layer is shown with F9..16 where function F9 to F16 can be processed. When the F-key 10 is triggerd again, you will automatically get to the first layer F1...8.

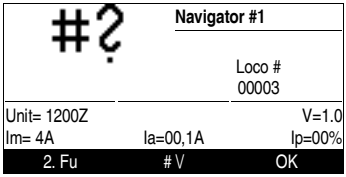
IF the Navigator is used in RC mode, the F-key F will also turn on the DiMAX Navigator.

5. FIRST STEPS TO DRIVE

The fist steps to drive a loco are very easy and can be done very quick. The following chapters will show, how a loco can be selected and also configured.

5.1. ENTERING THE LOCO ADDRESS

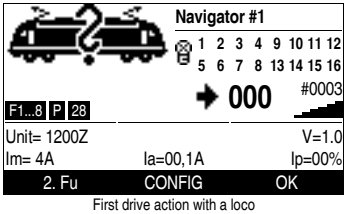
With the Loco Selection Key 9 you will enter the Loco Selection Mode. By typing in the address over the keyboard, as for example the address: 0003 and a following „OK“ the loco will be activated. The Navigator will automatically start the drive mode. Please read your locos manual to find the correct loco address.



Typing in the locos address

5.2. FIRST DRIVE

Congratulations! After typing in the loco address and the confirmation with OK the locomotive can be controlled with the transparent wheel knob. The first loco action can be done immediately. The loco will get its information from the central with 28 steps of speed as also parallel. More detailed settings as the loco picture, its name, etc. will be definded in the LOCO CONFIGURATION.



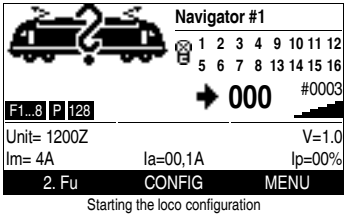
First drive action with a loco

HINT: Please note, that locos with configured 14 steps of speed will show strange light effects when driven with 28 steps of speed. This will also occur when a 28 steps of speed decoder will be driven with 14 steps of speed.

6. LOCO CONFIGURATION

6.1. ENTERING THE LOCO CONFIGURATION

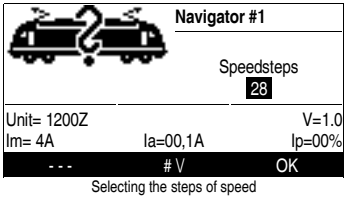
The loco configuratio will define the locos features as there are the steps of speed, serial or parallel data transmission, or the loco picture. You can enter the loco configuration by pressing CONFIG M2:



Starting the loco configuration

6.1.1. STEPS OF SPEED

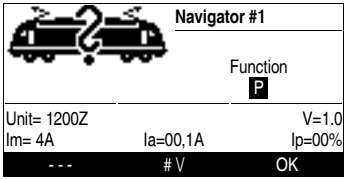
After starting the loco configuration the steps of speed need to be set. Select the correct mode for your loco with this button: # V M2. Pick one of: 14; 28 und 128 steps of speed. Confirm your selection with OK.



Selecting the steps of speed

6.1.2. DATA TRANSMISSION MODE

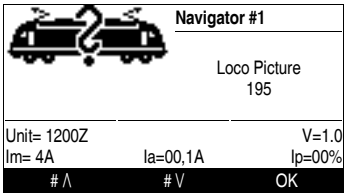
The next step will define the mode of the data transmission. Push M2 to choose between parallel P or seriell S. Confirm your selection with OK. Please find the data transmission mode in your locos manual.



Selecting the data transmission mode

6.1.3. LOCO PICTURE

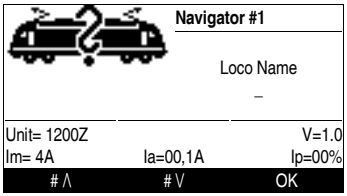
Pick your prefered loco picture with M1 or M2. You will navigate through the complete lost of available locos. You might also type in the locos picture by the pictures number. The loco pictures including its number are all given in chapter 9.



Selecting the loco picture

6.1.4. LOCO NAME

Configure your personally prefered locomotive name which will shown under the locos picture. The loco name will also be given in the loco drive mode of the second function control. Hereby the loco name will be given under the loco address in the left lower corner.



Configuring the loco name


keys of the second function

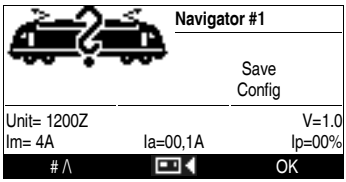
Use the keys M1 and M2 to move through the map of available letters. Pick the desired letter. The following letters, numbers and signs are available.

0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	G	H	I	J
K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	-	/	_	

available letters for the loco name

If you have chosen the letter you want, use the right button of the second function to get to the next letter position to the right. Push left to go back to the last sign and to change it if required. Repeat this procedure until you have definded the complete loco name. The loco name length can be up to 10 letters. For example: V 51 or: V 51 BOB, as name for the best friends V51.
Use the STOP-key of the second function to define the end of the name. So if you want to cut HANSI from the complete name V 51 HANSI, it will be enough, to push the STOP-key right after V 51 and the following letters or signs will be deleted and shown correctly after entering the configuration again.

6.1.5. SAVING THE LOCO CONFIGURATION



Saving the loco configuration

Use this option to save your loco configuration. With M2 the configured data will be saved and will remain persistant. Saving the data with M3 only, will store the information for only this time of play. When you turn on the central station the next time, this information does not exist any more. After saving the loco data, you will automatically get back into the drive mode.

6.1.6. CONFIGURE MORE LOCOS

To configure more locos, please follow the instructions in chapters 5 and 6 over and over.

6.1.7. LOAD A LOCO

There are two ways to load a loco, which has been configured and saved previously. Push 0 # to open the loco selection. Use the keypad to type in the loco address and hit OK to load the configuration. The drive mode will be loaded immediately. If the loco address is not configured the first loco drive (chapter 5.2) is loaded.
A second option is to load a one loco out of all configured locos. Hit M2 or M3 to go through the list of configured locos step by step. Hit OK to load the selected loco.
To return from the loco selection mode without picking a new loco, hit OK. This will only work if no loco has been selected.

6.1.8. LOG OUT THE LOCO

A selected loco is reserved and can not be selected from other handhelds until the loco has been logged out. To log out a loco just open the loco selection mode with 0 #). The loco reservation is canceled automatically.

HINT: The administration is accomplished in the central station. If a loco is selected, the central station will register it as reserved and can not be selected from other handhelds. This is independet from the locos actual condition.

A driving loco will always be logged out passive, since the loco still gets information form the central. The loco will only be logged out on the control bus and can be picked up again from another handheld. If a loco does not move, it will be logged out active. This means, it will also be logged out in the central station and is not active anymore.

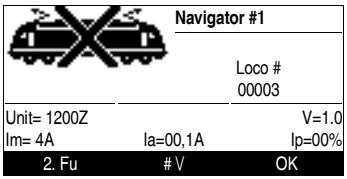
This can be controlled in the central stations display very easy. The upper right corner shows the number of active locos.

6.1.9. CATCHING A LOCO AFTER SELECTION

If a loco is selcted that allready drives on the track it needs to be catched at its actual speed before it can be controlled. After loading the loco the display will show the actual speed and direction of the loco. Also the according direction side of the transparent wheel knob will flash. To catch the loco turn the knob in the according direction until the knob stops flashing which coresponds to the moment when the steps of speed will change the first time. This is the moment, when the loco is catched and can be controlled again.

6.1.10. LOADING A REGISTERED LOCO

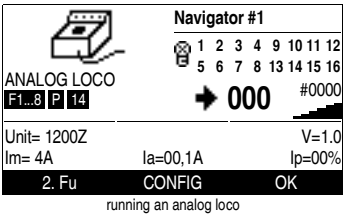
Loco that are allready selected from other handhelds or even from you, cannot be selected again. They need to be logged out before. You can log out the loco with opening the loco selection mode 0 # independent from the acutal mode of the loco. When selecting a registered loco, it is impossible to load it. A crossed loco will be shown on the display.



Loading a registered loco

6.2. ANALOG LOCO

Also an analog loco can be controlled with the DiMAX Navigator. The address of the analog loco is always 0. No loco configuration is available for any loco feature.The display will show the picture of a analog power controller.



running an analog loco

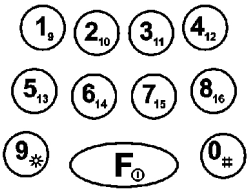
HINT: A high frequency whistling of analog locos on the digital track is caused by the special form of the digital voltage. It is innocuous for the electronics of the loco.

6.3. DRIVE MODE

As used, the loco is controlled with the transparent wheel knob. In the centered position, the loco will stand still. The steps of speed 000 will be shown on the display. The direction will be shown through the arrow in front of the steps of speed. The tip of the wheel knob will light red when it is centered.

6.4. FUNCTIONS IN DRIVE MODE

All functions of the loco are triggered with the keys 1 to 8 of the keypad. If the loco get all the information in parallel, the function will light up once. Is it all serial instead, the function one will flash in the number of the function.



With F the function layer is skipped from functions 1 to 8 to functions 9 to 16. Pressing F again will jump back to the first 8 functions. All functions are given on the keys.

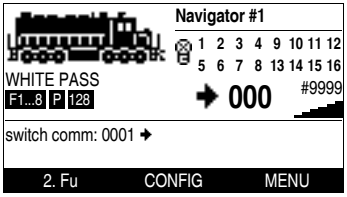
7. ZWEITE FUNKTION

The DiMAX Navigator offers a real second control besides the usual main train control. This allows to control two trains at a time or to send switch commands while drinving a loco. If no other second function is selected, the information mode is activated and will show the status information about the system itself.

By pressing M1 the second function is defined. Pushing this key for the first time will only switch all keys (0 to 9) to the second function. This can be seen right under the loco name. The display changes from F1..8 to 2.Fu.
You can control you loco as used with the wheel knob, only the function keys will not trigger a loco function. Instead they will be available to work with the second function. Pushing the M1 again will change the second function to the following options...

7.1. SWITCH COMMAND

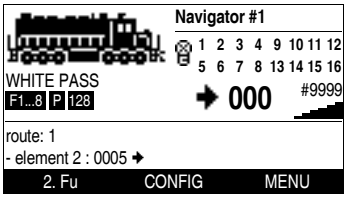
Enter the switch address with the keypad and use the two arrow keys to trigger the switch into both directions. Aditionally the last eight triggered switches can be loaded step by step using the round stop button of the second function control keys. So if you have triggered switch #0001 and #0006 once. You can use the round stop key, to jump from switch #0001 to switch #0006. This will also work, if the keypad is switched back to the first function control and ttrigger loco functions. This is done by pressing F. So you can control the loco including its functions and also trigger the last eight switch commands.



sending switch commands

7.2. ROUTE SWITCHING

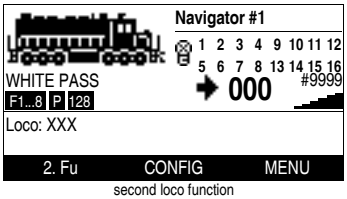
Besides the switch control, also routes can be controled and triggered with the second key function. Just enter the address of the route and trigger it with the right key of the second function control. All elements of the route will be triggered one after the other.
As known from the switch commands, the last eight triggered routes can be selected with the round stop key of the second function control. The route configuration can be found in the Navigators menu.



triggering a route

7.3. SECOND LOCO

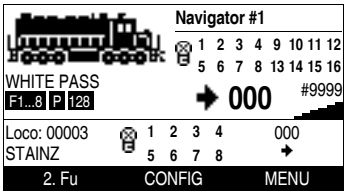
The DiMAX Navigator is the only handcontrol to control two locos at the same time. Choose the loco mode as second funcion, type in the loco address and confirm your selection with the right key. With the second loco control, only configured and saved locos can be played.



second loco function

confirm your selection

If the loco address was confirmed and loaded correctly, the display will show the according loco information in the lower part of the display with loco address, loco name, light bulb and functions 1 to 8 as also the direction and steps of speed.




control of the second loco

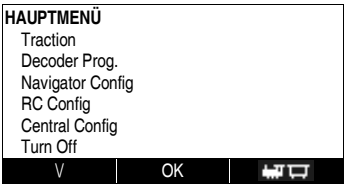
Use the arrow keys to control the second loco. The round stop key will set the speed to 0 and the loco will stop. If the loco is standing still, this key will change the direction of the loco. To pick a new loco just use the 0 # -button as known from the first train control.

7.4. INFO MODE

When the DiMAX Navigator is started, the info mode is always loaded. This will show the type of central station, firmwareversion of the Navigator, the maximum output current of the central station, actual utilization in amps and also in percent.

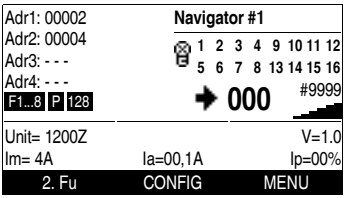
8. SYSTEM SETTINGS

The system settimgs of the handheld can be opened with the menu function from the dirve mode. This is always the key M3 / MENÜ The following functions are available.



8.1. TRACTION (MULTI HEADING)

A loco traction binds several loco to one train together. This is a very common practice in the US where huge freight treins run trough the country with several hundreds of cars.
The Navigators function can be switched from loco control to traction control. Just select the traction and hit OK to go on with a traction. The display will show the four loco addresses instead of the loco picture. The traction control is similar to the loco control.



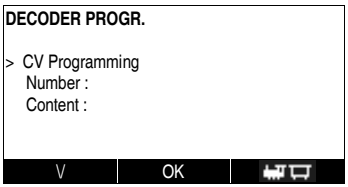
After selecting Traction the menu will show Loco Mode, instead of Traction. Activate Loco Mode to go back to the single loco control.

HINT: It is a must, that all locos that are to be combinded as a traction have the same settings. This means that they all need to be configured with the same steps of speed, and parallel functions. If this is not the case, the traction can not even be saved.
READ MORE IN CHAPTER 8.3.4

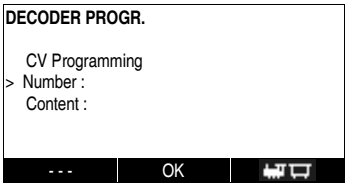
8.2. DECODER PROGRAMMING

Programm your decoders with this option right away. CRs and Registry-programming can be performed as also CV reading.

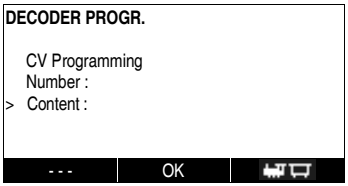
Select the mode of programming in the first step and confirm your selection with OK. Then enter the CV-number you want to program. In the third step enter the content you would like to program. Hit OK to process the programming.



Select programming mode



Enter the number of CV



Enter the content for the CV

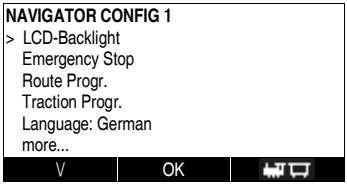
The Programming mode can be left with the drive mode button M3.

HINT: The programming with DiMAX Digital Central Stations is performed only on the programming track. Programming on the main track is not possible. Programming has been tested with decoders fro the following manufacturer:
Massoth®, LGB®, Lenz®, Zimo®, Esu®

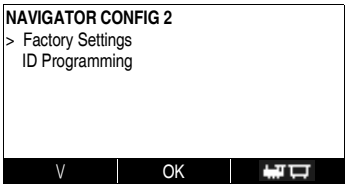
Massoth®, LGB®, Lenz®, Zimo® und Esu® are registered trademarks of the according licensee.

8.3. NAVIGATOR CONFIG

The Navigator Config offers specific settings for the DiMAX Navigator. Here you will find options to toggle the light, define the type of Emergency Stop, program routes and tractions, select language or enter the enhanced system setup where factory setting can be loaded or handhelds ID can be set seperately.



first configuration layer



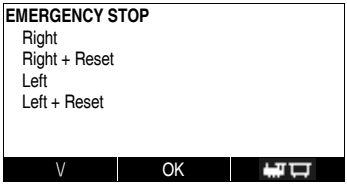
second configuration layer

8.3.1. LCD BACKLIGHT

Use this function to turn on the light of the display and also the transparent wheel knob and turn it off again. The red light of the wheel knobs tip is always active.
We intend to turn off the light when the Navigator is used in wireless mode and if the sun shines bright enough. This will extend the time the batteries will last.

8.3.2. EMERGENCY STOP

Select your prefered emergency stop mode depending on if you are left- or righthanded. LEFT or RIGHT define the key to trigger the emergency stop. The second STOP-key will release the emergency stop. The RESET option allows to send an additional RESET-command. This will stop all decoders but the current on track will remain.



Configure the Emergency Stop

HINT: If you use the option RIGHT, the emergency stop will be triggered with the right STOP-key. If triggered, both STOP-keys will flash alternatingly. The current on the track will be shut down immediately. Use the left STOP-key to release the emergency stop again.

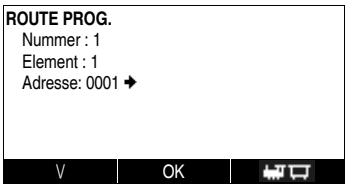
If you choose the option RIGHT + RESET, you can additionally send a RESET-command. If a RESET command is triggered, both keys will light permanently and all loco will stop. Use the same STOP-key to release the command.

You can even trigger a STOP-command when the RESET-command has been released by pressing the oposite STOP-key.

IMPORTANT: Some Decoders may not understand or know the RESET-command. In this case, the decoder will not stop and the loco will continue its way. A emergency stop is required to stop all trains.

8.3.3. ROUTE PROGRAMMING

Up to 16 routes with 15 elements each can be configured. First define the address of the route you are going to use afterwards and confirm with OK. The elements will be counted automatically until no more elements are definded. Only type in the elements (the switch) address and also the direction you want to switch with the LEFT and RIGHT -key from the second function control and confirm with OK. Then the next element can be defined.

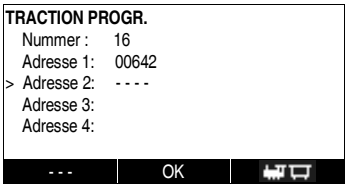


Route programming

To exit the configuration, leave the next element empty and hit to exit to the drive mode. The route configuration will be exit and the drive mode will be loaded. The route can be triggered with the route mode in the second funtion.
To change a route, as for example to delete the third element, load the route configuration, and exit the config for the third element without confirming the config with OK. All following elements will be deleted. All defined elements can be passed with OK.

8.3.4. TRACTION PROGRAMMING (MULTI HEADING)

Up to four locos can be configured as a traction / multi heading and 16 tractions can bedefined. First define the traction number. Afterwards the four loco addresses can be selected. Confirm each setting with OK. Leave the configuration with . As known from the route programming, leaving the configuration with will delete the defined locos behind the actual position.



programming the traction

It is important, that all locos have the same decoder setting which means that they all need to work with the same setting of the steps of speed and also parallel. The configuration will not accept different settings in a traction. The configuration will be canceled.

8.3.5. LANGUAGE: GERMAN / ENGLISH

This feature will change the Navigators language either to German or English.

8.3.6. FACTORY SETTINGS

Be shure that you want to go back to the factory settings before using this function. All former settings will be deleted. You need to start again from scratch. All settings like locos or routes, etc. need to be defined again.

8.3.7. ID PROGRAMMING

Besides the automatic ID settings, which is always activated, you can set the ID manually.

The IDs for cable use or wireless use are different and can be set seperately. After entering the IDs, and a confirmation with OK the Navigator will start again to activate the new set IDs.

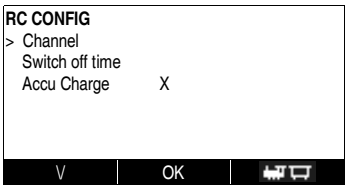
8.4. RADIO CONTROL

8.4.1. RC INSTALLATION

The DiMAX Navigator can be purchased for cable use or combined for radio control and cable use. The radio control version comes with the installed RC sender chip installed. Also every DiMAX Navigator can be equipped with the radio control later if desired.
To do so, only open the five screews on the back of the DiMAX Navigator and take off the backside of the case. There is one male connector with 10 pins right under the displays lower edge. The RC Sender comes with a 10 pin female connecter which will fit on the 10 pins. The round hole on the RC senders top will hold on the screew pin above the display.
Make sure that the connectors fit together 100% correct. If pushed hard enough, the RC sender can be assembled incorrect. If so, the Navigator as also the RC sender will be distroyed when they are turned on. Massoth does not warrant for these defects.
To use the DiMAX Navigator with Radio Control at least firmware version 1.2 is required. You can download the latest firmware of the Internet.

8.4.2. RC CONFIGURATION

Starting with the Firmwareversion 1.2 the Radio Control Operation is activated and can be configured in the DiMAX Navigator menu. The option RC CONFIG can be selected.



Radio Control Configuration

8.4.2.1. RC CHANNEL

Select the radio control channel for your DiMAX Navigator. Four channels are available. In the factory settings it is set to channel 1 as also the DiMAX RC Receiver. After changing the channel the Navigator will restart to load the new radio control settings. If no Receiver is found at the configured channel, the navigator will not start. To change the channel again, please connect it to the central station with cable and reconfigure the Navigator.

8.4.2.2. RC TURN OFF

To save energy a radio control turn off time can be set. If the Navigator is not used for the configured time, it will automatically turn off and all active and connected locos will be disconnected.

8.4.2.3. BATTERY CHARGING

If rechargable batteries are used you can activate this fuction to recharge the batteries when connected to the central station with cable.

WARNING: Do only activate the charging function if rechargeable batteries are installed. Standard batteries which are not rechargeable must not be charged. This will lead to danger situations and might harm the product and you!
DANGER OF EXPLOSION

8.5. CENTRAL CONFIG

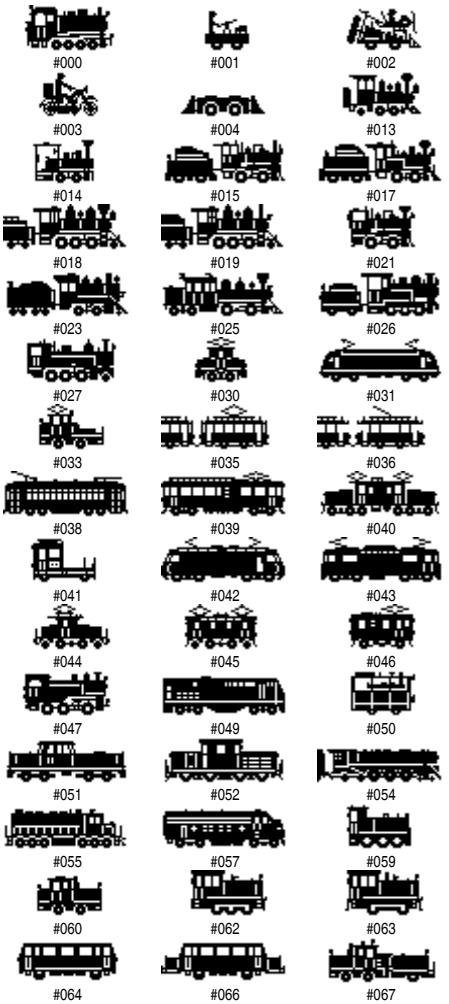
This fucntion is not enabled and is reserved for future use.

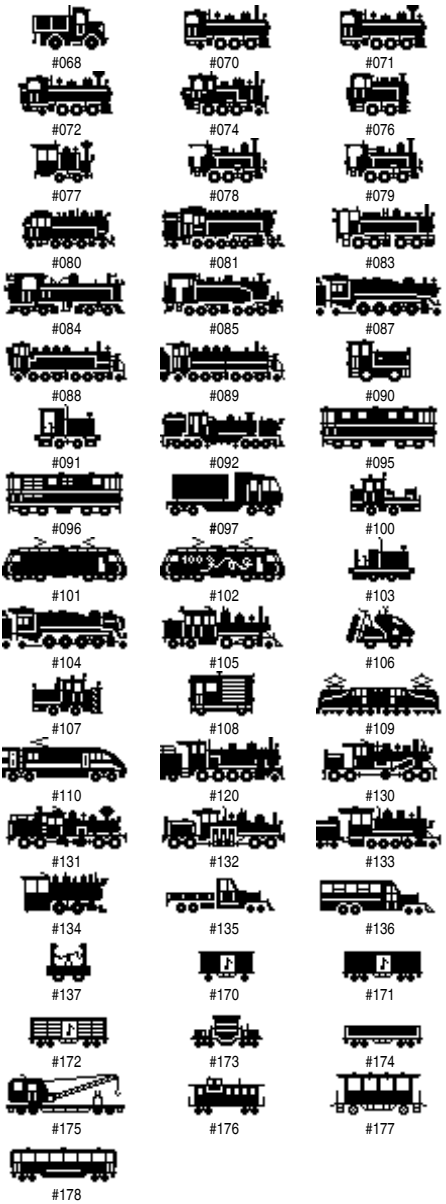
8.6. TURN OFF

If the Navigator is used in wireless mode, this funtion will turn it off. Using this function in cable use, the Navigator will turn off but start again since the external power supply is always connected.

9. LOCO SYMBOLS

The following loco symbols are installed in the DiMAX Navigator. This contains almost every loco ever built from LGB. LGB loco pictures are saved with the LGB loco series number. So the picture of the LGB #2181 2 DR Steam Loco, built number 99 7222-5, can be found as picure: 081. Pictures from Nr.: 100 are special varieties of locos. As for example LGB locos from Aster which all carry the No. 83 as LGB item but have different shape.





10. SOFTWAREUPDATE

The DiMAX Navigator is a handcontrol of state of the art technique. This also allows softwareupdates directly over the control bus over the central station without any special requirement.
For a softwareupdate the Navigator should be connected to the central station only. A special command is not required to start the updated. The Navigator will detect the update information itself. Detailed information will also give the software tool from your PC. Please find more information about the softwareupdate also in the centrals manual.

11. TECHNICAL INFORMATION

The DiMAX Navigator is a handcontrol for digital model train systems. Take care of the following information:

Cable-Use:

maximum supplied current	U_E max ± 24V
minimum supplied current	U_E min ± 14V
average load	I_E max 80mA
Use only on these digital central stations with firmware from 2.0	DiMAX 1200Z DiMAX 800Z

RC-Use:

maximum supplied current	3 x Batterie 1,5 Volt Mignon / Typ: AA 3 x Akku 1,2 Volt Mignon / Typ: AA
minimum supplied current	U_E min ± 3,1V
average load	I_E max 80mA
RC use over DiMAX wireless reciever (FM)	DiMAX 1200Z DiMAX 800Z
With DiMAX Central Stations with firmware from version	V2.0

CE

12. LIABILITY

Massoth warrants for one full year of service for this product. On top of this, you might have additional requirements from country to country. Wearing parts are not included in the warranty since these items wear out while time passes. You guarantee voids if the product is used in a not defined way.

13. SERVICE

For consultation, assistance or service, please contact your retailer or the manufacturer. The website will give you detailed information and documents about this product. Also a FAQ-List is included. Latest software releases and manuals can be found there also. We suggest to contact the manufacturer over the hotline-eMail-address: hotline@massoth.de

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