- Supplied software:
  Configuration tool for setting the
  XpressNet address
  PC control panel
  CV editor for easy configuration of
  decoder settings

Digital plus
by Lenz

LI-USB Software
Users Guide

1st edition, 03 05

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Contents

Important advice, please read first!

The USB interface is a component of the *Digital plus by Lenz*® system and was submitted to intensive testing before delivery. Lenz Elektronik GmbH guarantees fault-free operation if you follow the advice below:

The USB interface may be used only with components of the *Digital plus by Lenz*® system. Any use other than the one described in this operating manual is not permitted and all guarantees shall become null and void if the USB interface is used inappropriately.

Only connect your USB interface to devices which are designed for this purpose. This operating manual will inform you which devices are suitable. Even if other devices (including those of other manufacturers) use the same connectors, you must not operate the USB interface with these devices. *The fact that the connectors are similar does not automatically mean that you may use them for operation*, even if you are dealing with devices for controlling model railways.

Do not expose the USB interface to damp or direct sunlight.

If you have any questions which this operating manual does not answer, please contact us:

	Europe	North America
Postal address:	Lenz Elektronik GmbH Huettenbergstrasse 29 D-35398 Giessen	Lenz Agency PO Box 143 Chelmsford, MA 01824
Phone	++49 (0) 6403 900 133	++1 978 250 1494
Fax	++49 (0) 6403 900 155	++1 978 455 LENZ
Email	info@digital-plus.de	support@lenz.com

If you experience any problems with the USB interface, just contact us, stating the following information:
- The system you are using (LZ100, Compact etc.)
- The version number of this system and of your USB interface

Application software for the USB interface

The "LI-USB Server" program

The program "LI-USB Server" provides a TCP/IP server for the other applications. It ensures secure communication between these applications and the USB interface. It is automatically started together with any of the three applications.

The language of all three programs four programs is also set in the LI-USB server.

If the interface is correctly connected to the USB port of your PC and the *Digital plus by Lenz*® system is active, communication between the interface and the PC is automatically established.
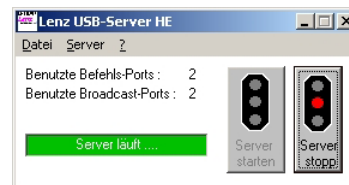
If the interface is not connected or the USB driver is not installed, you will receive an error message.

In this case, check all connections between the PC and the interface and vice versa.

The USB server allows two applications to simultaneously access the interface and therefore the *Digital plus by Lenz* ® system. This feature is particularly useful if you want to use the control panel to test decoder settings that you have changed with the CV editor.

To change the language to English start the LI-USB Server program and then click on "Sprache" near the top of th e program window and select English.

Once selected the language is used on all the LI-USB programs.

The "LI-USB Configuration" program

The program "LI-USB Configuration" serves to check the communication between your PC and the *Digital plus by Lenz* ® system as well as to set the interface's XpressNet address.

Start the program by double-clicking the icon "LI-USB Configuration" on your desktop.

Once the program has been started (the program "LI-USB Server" is started automatically at the same time), your PC will try to establish communication with the command station of the *Digital plus by Lenz* ® system via the interface.

If the connection is correct, the program window will display the basic information of the *Digital plus by Lenz* ® system and the interface:

Figure 1: The program window

(Depending on the command station used and its software version, this information may differ.)

The first line shows the identification number of the command station next to "Command Station". This number indicates which command station (LZ100, LZV100, SET02 or Compact) is used.

The second line shows the software version of the command station (3.5 in the above example).

The two lines below show the version and the code (service) number of the USB interface.

Below you will find the set XpressNet address. This setting can be changed.

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Setting the XpressNet address of the USB interface

The interface has an XpressNet address, just like any other *Digital plus by Lenz* [®] input device. This is the address used by the command station to call up the interface. The default address is 30.

If you want to change the interface address, click on the field showing the set address. You can change the value via your keyboard.

Please note that you may only enter values between 1 and 31. Moreover, you may not use an address which is already used by another XpressNet device (such as a LH100, LH90 or XPA)

When you have set the new value, click the "Write" button and the new XpressNet address will be entered into the USB interface. Afterwards, the USB interface data will be reread to ensure they are correct.
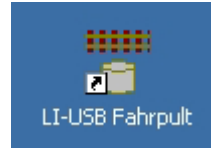
Terminating the program:

Click the "Exit" button to close the USB interface tool.

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The "LI-USB Fahrpult program"

This program enables you to control locomotives on the *Digital plus by Lenz* ® layout via your PC.

Start the program by double-clicking
the icon
"LI-USB Fahrpult"
on your desktop.

Once the program has been started (the program "LI-USB Server" is started automatically at the same time), you will see the program window. Please refer to the following page for more information.

Click here and enter the desired locomotive address via your keyboard and press thekeyboard Enter key to select the locomotive.

Use these buttons to activate or deactivate functions. Activated functions are highlighted.

Use the slider for speed control. The running notch and running-notches mode are shown above the slider.

These buttons determine the direction of travel.

This button triggers a STOP for all locomotives. Click and the locomotives will move again.

You may open up to two control panels simultaneously if no other LI-USB application is running (the USB server does not count!).

Exit the program via the menu "File" and "END" or by clicking the **X** in the top right corner of the program window.

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The "LI-USB CV Editor" program

This program enables you to program locomotive decoders on the programming track or in operational mode via your PC. While programming on the programming track, it is possible to read out CV values.

"Decoder descriptions" ensure that you do not have to remember which CV is responsible for which feature. These descriptions can be loaded into the CV editor in which case the CVs and their respective features will be displayed.

You can also save decoder values. In combination with the decoder descriptions, you can save the CV settings for each decoder used on your PC and reload them into the decoder, if required.

Start the program by double-clicking
the icon
"LI-USB CV Editor"
on your desktop.

Once the program has been started (the program "LI-USB Server" is started automatically at the same time), the decoder description "Standard decoder" is loaded.
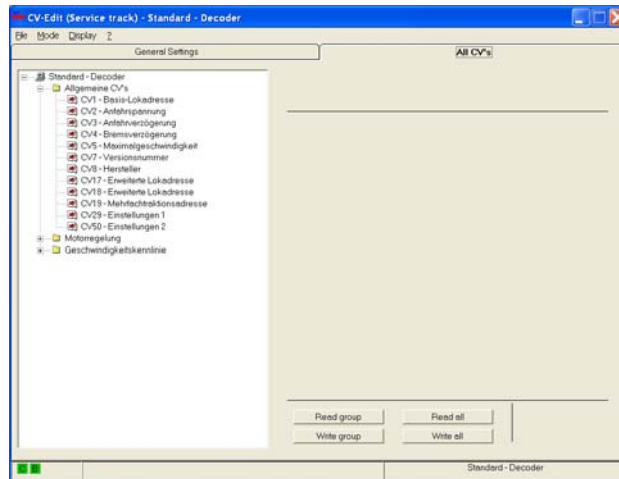
This window is displayed once the program has been started

The menu "File"

"Open decoder description…"

Here, you can select and open a decoder description file.

By default, decoder description files are stored in the folder where the program files are installed. Unless you have chosen a different folder during installation, this is "C:\Program Files\LI-USB", but you may also choose any other folder.

"Load decoder values…"

This command enables you to load a value file for a decoder. This file contains the CV values. Load the appropriate decoder description first.

"Save decoder values…"

This command enables you to save the values which have been read out of the decoder or entered into the CVs of the decoder in a file.

"Exit"(Ctrl+Q)

This command terminates the program. Alternatively, you can use the key combination "Ctrl+Q" or click the cross in the top right corner of the program window.

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The menu "Mode"

"Programming on the programming track"

"Programming in operational mode (PoM)"

Use these two options to select the programming mode. It is currently not possible to read out CV values when programming in operational mode.

"Finish programming mode automatically"

When programming on the programming track, choose this option to exit the programming mode of the command station after each read-out or programming procedure.

"End programming mode now"

Use this command to exit the programming mode of the command station if the option "End programming mode automatically" is deactivated.

The menu "Display"

"Show CV Values in categories"

You can view decoder CVs in the program window either according to categories or according to the order of the CVs. The decoder description defines which CVs are displayed in which category.
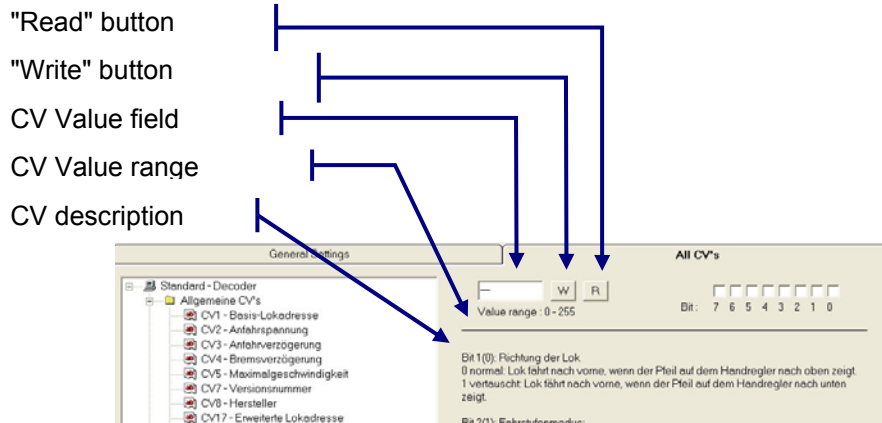
"Show bit values conforming to Lenz Standard"

This (default) option displays bits starting with 1. Click this option to display bits starting with 1 and ending with 8.

The tab "Alle CVs" ("All CVs")

The left side of this tab shows a list of CVs defined in the respectively loaded decoder description. During the initial start, the description "Standard decoder" is loaded and displayed; the CVs are shown according to categories. CVs are displayed and used as in the Windows© Explorer.

Click '-' to hide the list of CVs under the category and keep the overview simple and clear.
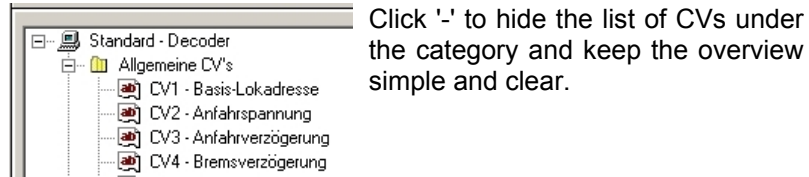
Click a CV to see "Alle CVs" ("All CVs") on the right-hand side of the tab:

"Read" button

"Write" button

CV Value field

CV Value range

CV description

"Read" button

Click "R" to read out the selected CV (only possible if "Programming on the programming track" is selected in the menu "Mode"). The read-out value will be displayed in the value field.

"Write" button

Click "W" to enter the numerical value shown in the value field into the respective CV. The program will automatically reread the value to ensure that it is correct (if "Programming on the programming

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track" is selected). The program detects and reports errors made when entering the value.[1]

Value field

The value field shows the read-out value of a CV. When loading a value file, the value contained in the file for this CV will be displayed. You can change the value by clicking on the field and entering a different value via the keyboard. Click the "W" button to enter the value into the CV.

Value range

The value range permitted for the selected CV is shown here.

CV description

This text contains information about those decoder features that can be changed with the selected CV.

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[1] When resetting a decoder by changing CV8, the manufacturer ID will be reread during the following read-out. Of course, this does not correspond to the value which you have entered for the decoder reset. You will receive an error message which you can ignore.

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At the bottom right of the tab "Alle CVs" ("All CVs"), you will find a maximum of five more buttons:
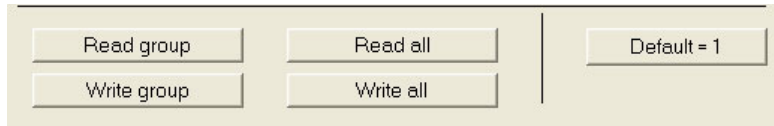
"Read/Write group"

Click one of these buttons to read/write all CVs of the selected category.

"Read/Write all")

Click one of these buttons to read/write all CVs defined in the decoder description.

"Default = [value]")

Click this button to enter the default value stored in the decoder description into the selected CV.

The tab "General settings"
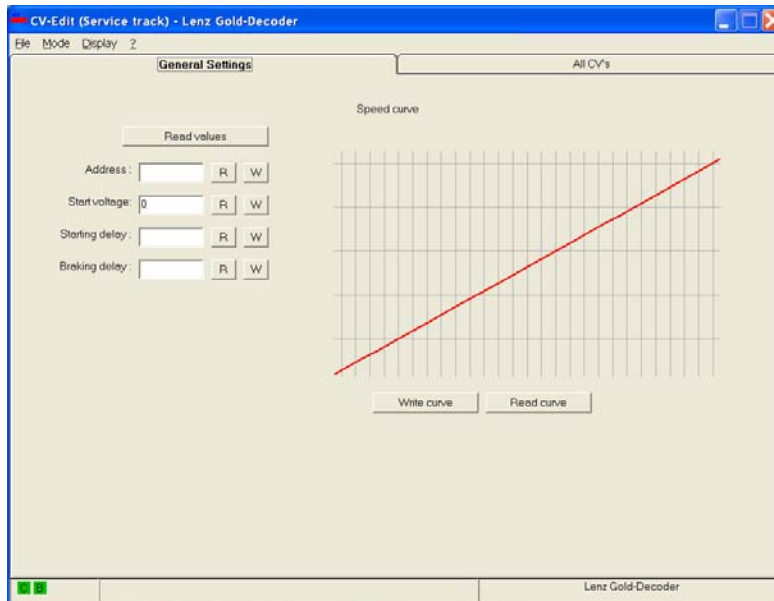
Use these buttons to read out and change the decoder features used most often.

Programming the locomotive address is particularly easy here. You do not have to choose between a 2 or a 4-digit address; simply enter the address in the address field. The settings of CV1, CV17, CV18 and CV29 are automatically taken over by the program.

"Read/Write characteristic speed curve"

Use these buttons to adjust the characteristic speed curve.

Click "Read Curve" to read out the appropriate values and to display the resulting speed line graphically.

Use the mouse to edit the speed line (click and draw). The program automatically calculates the related values. Click "Write Curve") to enter the values into the locomotive decoder.

Decoder descriptions

Two decoder descriptions are supplied with the CV editor:

"Standard_DE.dec" and "LENZ Gold-Decoder_DE

The description "Standard" contains all CVs defined by the NMRA. The description "Gold decoder" contains all CVs used in these decoders.

Further decoder descriptions will be published on our home page WWW.lenz.com under "Support".

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