

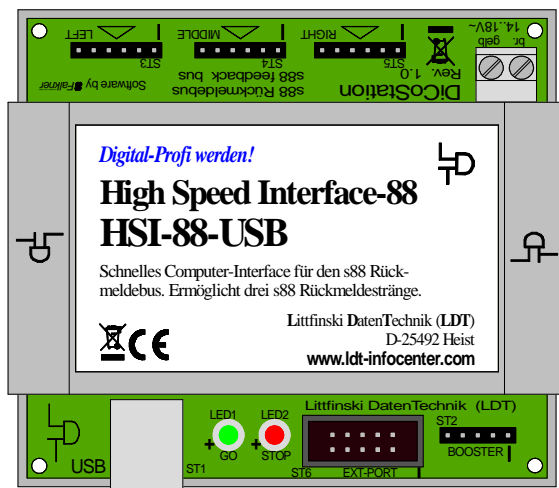
Manual

HSI-88-USB

High Speed Interface for the s88-Feedback Bus and
the USB-Interface
from the *Digital-Professional-Series* !

HSI-88-USB-G Part-No.: 030913

>> finished module in a case <<



Transmits the feedback information directly to the PC without any detour from the s88 bus via the digital central unit.

Fast galvanic separated connection to the computer via the USB-interface (1.1 / 2.0 Full-Speed).

- **3 Feedback-Lines will additionally triple the reading speed of the s88 Feedback Bus.**
- **3 Feedback-Lines will offer as well a simple arrangement of the Feedback Modules below your model layout base plate.**

This product is not a toy! Not suitable for children under 14 years. Improper use will imply danger or injuries due to sharp edges and tips! Please store this instruction carefully.



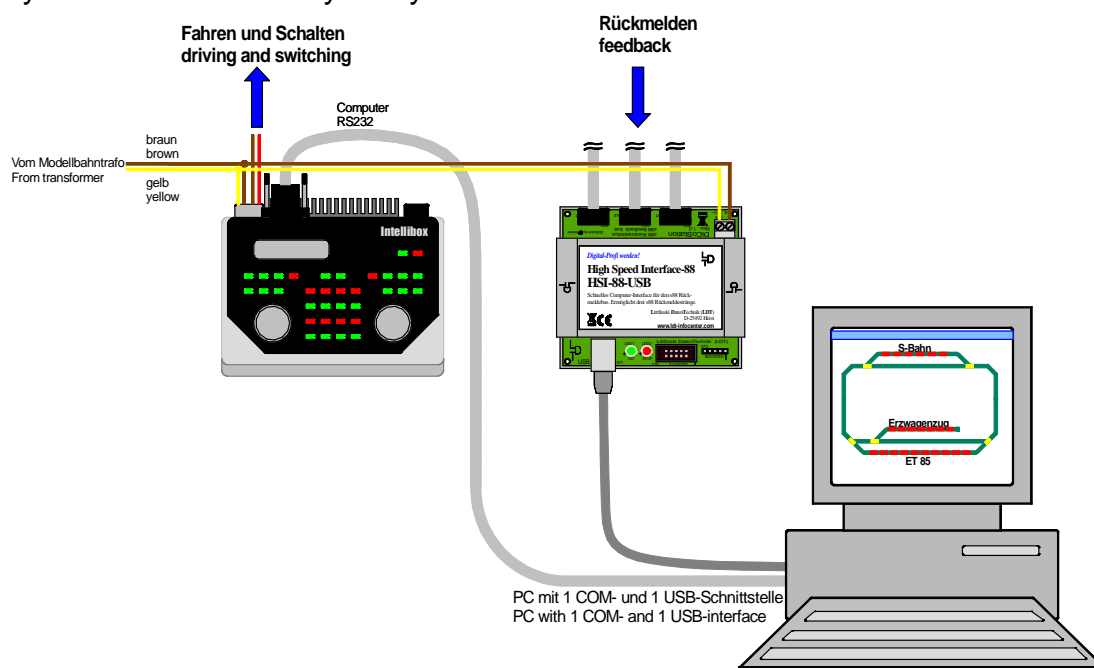
HSI-88-USB – Manual

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1. Preface / Safety Instruction:

You have purchased the **HSI-88-USB** from the assortment of Littfinski DatenTechnik (LDT) for your model railway.

The **HSI-88-USB** is an **Interface** for the **s88-feedback bus**. The **driving and switching** will continue via your **digital central unit**. The **time-critical feedback reports** will be transmitted via the **HSI-88-USB** to the PC respectively to your model railway software without any delay.



We wish you to enjoy using this product!

This unit will be supplied with a **24-month warranty**.

- Please read this **instruction carefully**. **Claim of warranty will expire due to damages caused by disregarding the instructions**. We will not cover any liability for the result of **consequential damages**. You will find this manual as **PDF-File** on the **enclosed CD "USB-Drivers for DiCoStation and HSI-88-USB"**. This file can be opened with the **Acrobat Reader**.

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2. USB-Driver Installation:

The Interface **HSI-88-USB** is an **USB-Unit** for the connection to an **available USB-Interface Port** of the **PC**. The required **USB-Connection-Cable** will be supplied **together with each HSI-88-USB**.

All **USB-Units** require a so-called **USB-Unit Driver**. The driver for the **HSI-88-USB** will be available at the **enclosed CD “USB-Drivers for DiCoStation and HSI-88-USB”**. The **HSI-88-USB** is a **dual-purpose unit**. During **installation two drivers** will be loaded.

On the **CD** are **USB-Drivers** for the following **PC operating systems** available:

- **Windows 8 / 8.1 (32- and 64-Bit)**
- **Windows 7 (32- and 64-Bit)**
- **Windows Vista (32- and 64-Bit)**
- **Windows XP**
- **Windows 2000**
- **Windows ME**
- **Windows 98**

2.1 Connecting the HSI-88-USB to the PC:

Important Remark: For the **installation of the USB-Drivers** has the **HSI-88-USB** **connected to the PC only**. All **other connections** of the **HSI-88-USB** will remain **without engagement**.

1. Switch-on your PC and connect the **flat USB-Plug** of the enclosed **USB-Connection cable** to an **available USB-Interface port** of the Computer. Following connect the **square plug** of the **USB connection cable** to the **socket marked USB** of the **HSI-88-USB**.

The **red Light Emitting Diode** of the **HSI-88-USB** will lighten up and on the **PC-screen** the info **“Neue Hardware gefunden”** (“**New hardware found**”) will be shortly indicated.

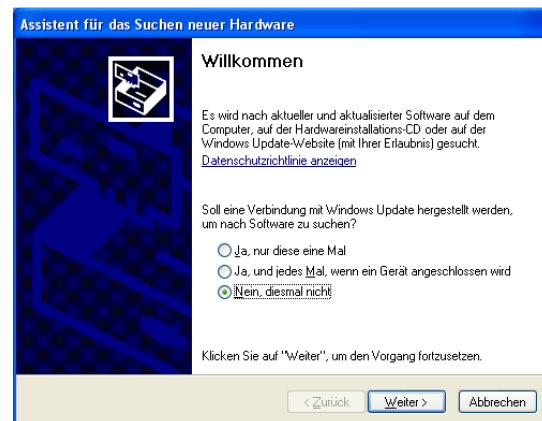


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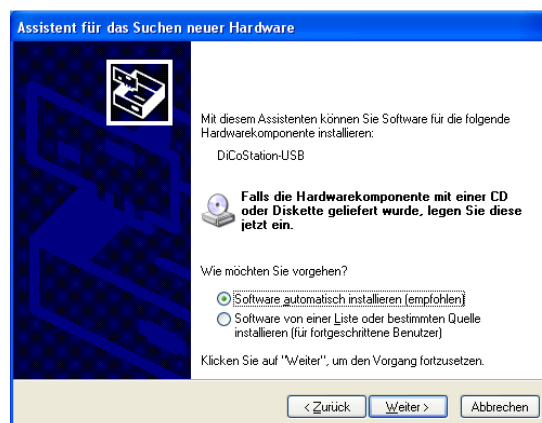
Driver installation e.g. at the operating system Windows XP:

On the screen appears now automatically the window “**Assistent für das Suchen neuer Hardware**” (“Assistant for searching of new hardware”). The **following described installation steps** apply for **Windows XP**. For **other operating systems** are **slight differences** possible.

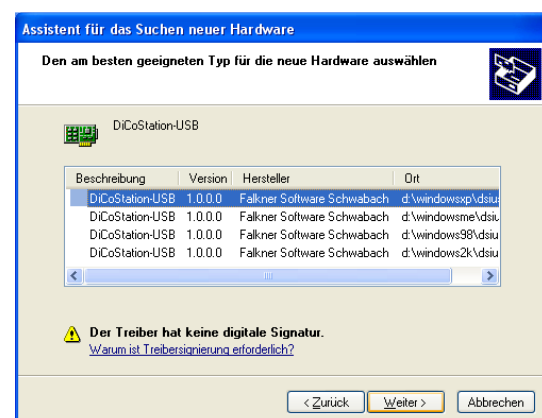
2. Please select “**Nein, diesmal nicht**” (“No, not this time”) and **click** on “**Weiter >**” (“Continue >”).



3. Now insert the **enclosed CD “USB-Drivers for DiCoStation and HSI-88-USB”** into the disk drive and select “**Software automatisch installieren (empfohlen)**” (“Automatic installation of software (recommended)”) and click on “**Weiter >**” (“Continue >”).

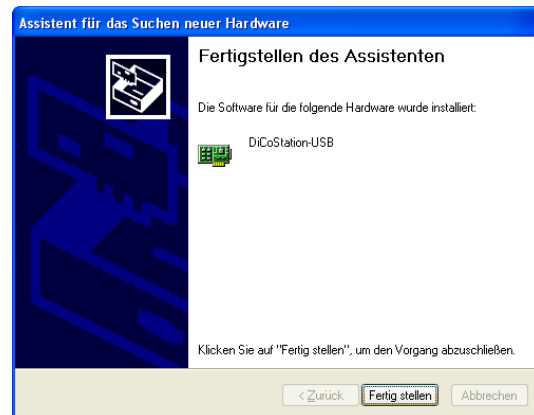
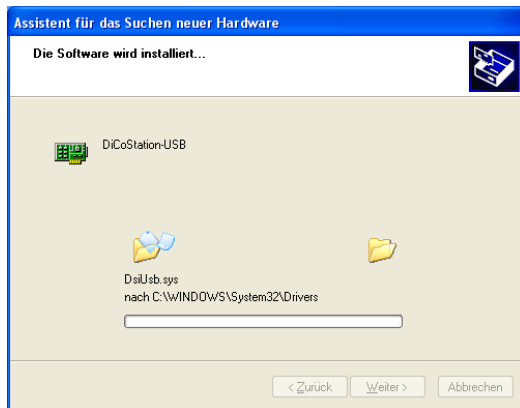


4. Now the window appears “**Den am besten geeigneten Typ für die neue Hardware auswählen**” (“Choose the best suitable driver for the new hardware”). Select the driver from the **CD** under “**windowsxp**”. For **other Windows Operating Systems**, please select the **appropriate driver** from the list.

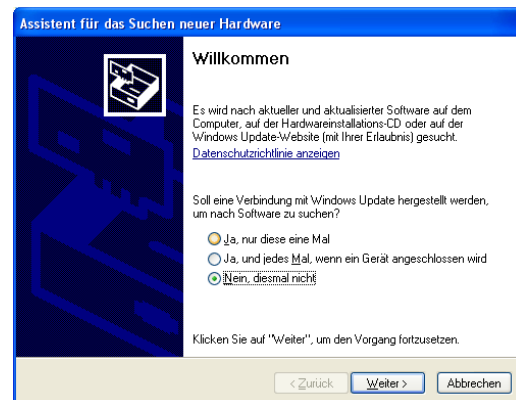


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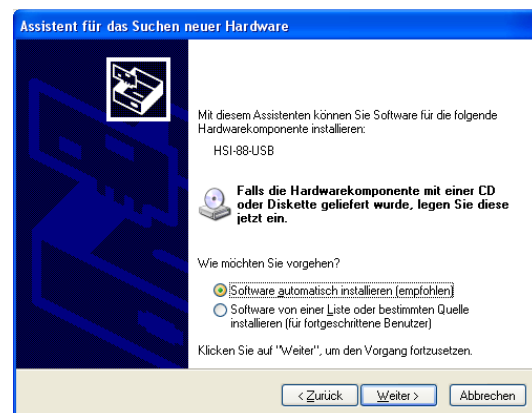
5. The **first driver** will now be copied from the **CD** to your **PC** (image left side). Click then onto the button **“Fertig stellen”** (“Complete”) (image right).



6. The **PC** recognizes now **automatically** that the loading of a **second driver** shall be required (**left**). For this loading has the **CD “USB-Drivers for DiCoStation and HSI-88-USB”** to be remain inside the disk drive. Select now at the **right side** again **“Nein, diesmal nicht”** (“No, not this time”) and click on **“Weiter >”** (“Continue >”).

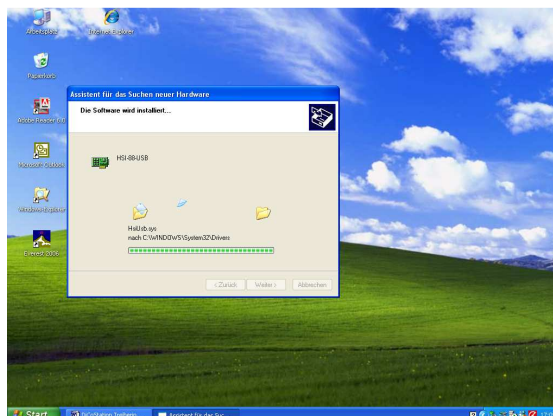
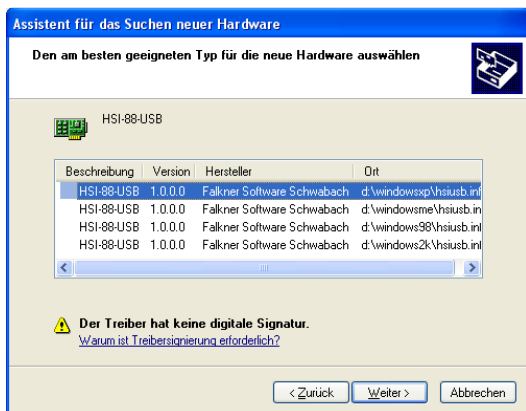


7. Select now again **“Software automatisch installieren (empfohlen)”** (“Automatic installation of software (recommended)”) and click on **“Weiter >”** (“Continue >”).

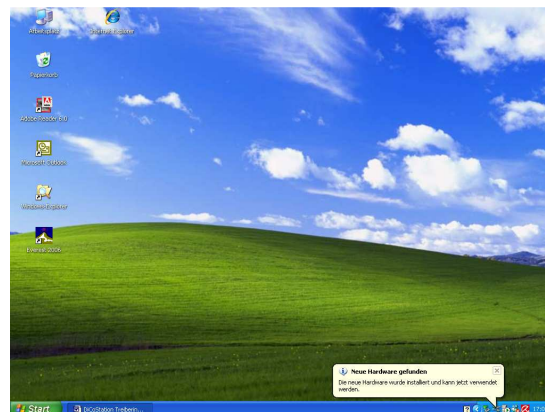
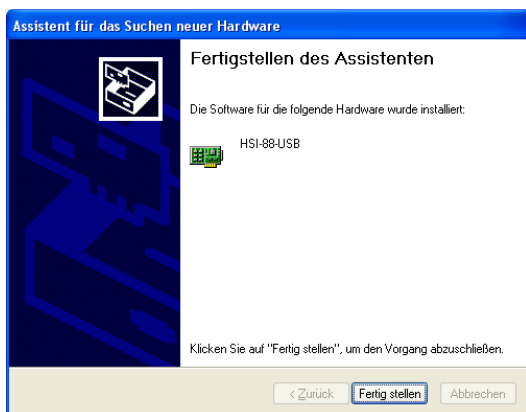


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8. Select now again the **correct driver** for your **Windows operating system** (the example is Windows XP) (**image left**). The **second driver** will now be **copied** from the **CD** to your **PC** (**image right**).



9. Click now again on **“Fertig stellen”** (“Complete”) (**image left**). The **PC reports** now that the **new hardware has been installed and can be used** (**image right**).



10. The installation of the **USB-Drivers** has now been completed. Now you can remove the **CD “USB-Drivers for DiCoStation and HSI-88-USB“** from the **disk drive**.

If it is **not possible**, to install the appropriate **USB drivers**, you can ask **Mr. Falkner**, our programmer of the **USB driver**, for help with the installation. You can reach **Mr. Falkner** by **phone** always on **Monday** from **19:00 to 21:00 clock** under **0160 96 32 84 62**. Or you can **write** him an **e-mail** for help (**digitals@modellplan.de**).

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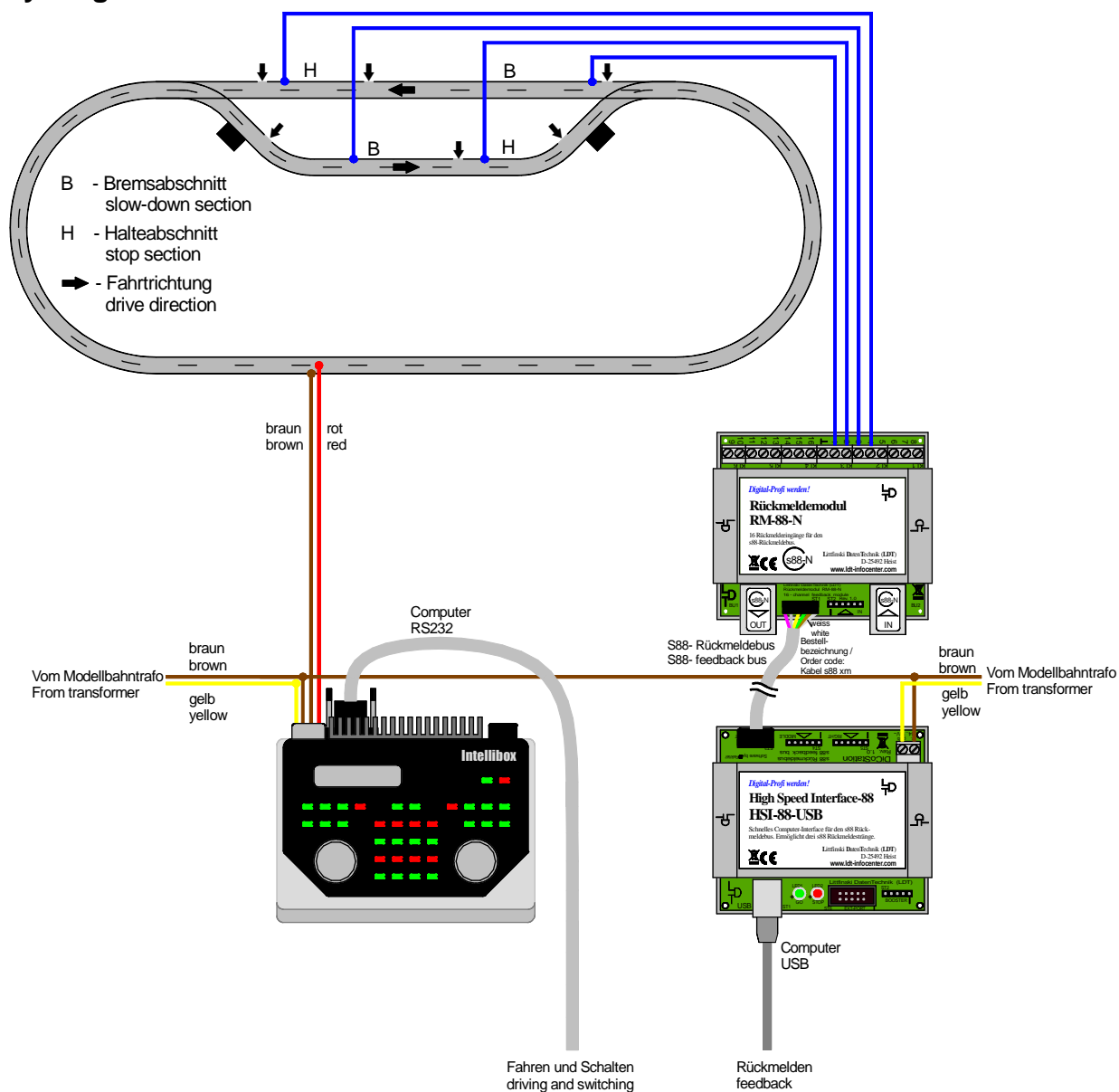
3. HSI-88-USB connection to the digital layout:

The **HSI-88-USB** will get the **power supply** via the 2-poles connection clamp **KL1**. The voltage is acceptable within the range of 14.18V~ (alternated voltage of a model railway transformer).

If you use the interface **HSI-88-USB** on a 3L-System (track with middle conductor from Märklin) you can use feedback modules which are switching against ground.

In this case please attend to the correct connection of the supply cables “brown” (this is system ground) and “yellow”. The connections at the clamp **KL1** is accordingly marked.

If the HSI-88-USB will get the supply from a model railway transformer the connection “brown“ of the transformer has to be connected to “brown” of the layout ground.

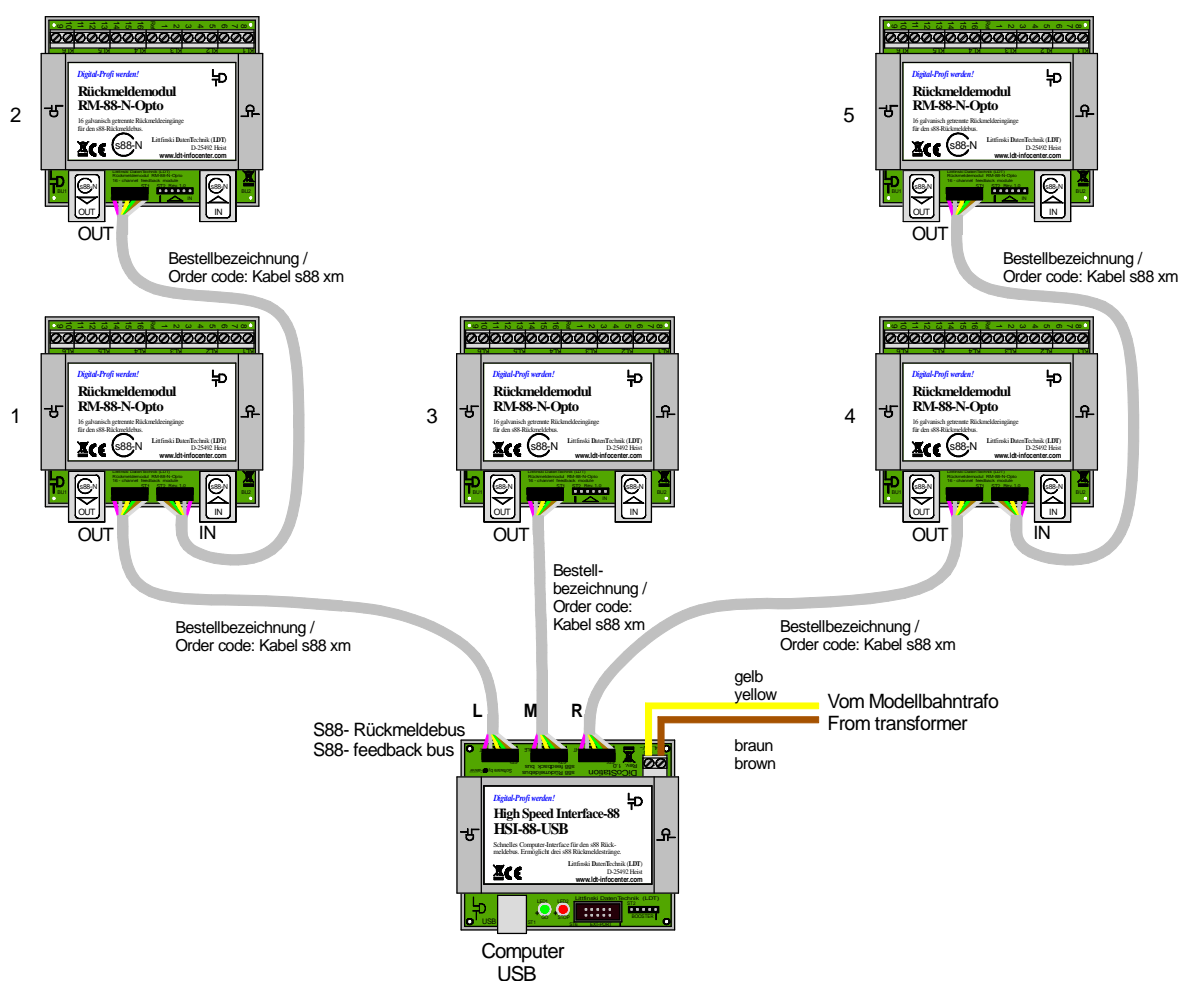


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The application of the **HSI-88-USB** allows to install **three s88 Feedback Lines** instead of one. The request speed of the feedback modules will be therefore **three times as fast**. Additionally is the **arrangement** of the feedback modules below the layout base plate **considerable simple**.

Start always to connect the **first line** to the terminal **Left (L)**. The second line connect to the terminal **Middle (M)**. If you need a third line you should connect this line to the terminal **Right (R)**.

Plug-on the **s88-bus plugs** that way to the **6-poles pin plug bar** that the **white single wire** will correspond to the **white marking** at the **pin plug bar**. Pay special attention that the **bus-plugs** will **not be plugged** to the **pin bar** in an **offset position**. Otherwise the **s88-inputs** of the **HSI-88-USB** will be **damaged**.



Even if you use only a few feedback modules at your layout you should **distribute** the modules **even on the three lines**.

This will give you the advantage that the **reading** of the feedback events will be considerable **faster** and **reported to the PC**.



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The numbering of the feedback modules: The **standard feedback modules of the s88-feedback systems** consist of **16 inputs**. The **first 16-fold module** at the **Left** input will be always the **first feedback module within the feedback system**. The further counting will continue via the terminal **Middle** until the end of the **right line**.

With the **HSI-88-USB** is it possible to control up to **31 16-fold-feedback modules (62** of the type **RM-GB-8-N** with 8 inputs). To each bus line can be a maximum of **31** modules connected. But in **summary to all three lines** cannot be more than **31 16-fold respectively 62 8-fold modules connected**.

It is possible to connect all **s88-feedback bus compatible** feedback modules to the **HSI-88-USB**. Apart from the **LDT-Modules RM-88-N** and **RM-88-N-Opto** for the **3-conductor** rail-system and the **RM-GB-8-N** with **integrated track occupancy report** for the **2-conductor** rail-system is it as well possible to use feedback modules from other manufacturers. **Different brands and types can be mixed** within the feedback lines.

Various **application- and wiring-samples** are available on our **Web Site** at the **Internet** within the section **Sample Connections** and **Downloads**.

The **High Speed Interface HSI-88-USB** works **event controlled**: one or several **changes** of feedback inputs will be **reported** to the PC at once. This **saves** considerable **computing time** and will be noticed within a **reduced reaction time** because the PC has not to request at a cyclical mode (and therefore delayed) about changes but receives those reports actual from the **HSI-88-USB**.

Functional control:

If the **HSI-88-USB** has been **connected** to the **switched-on PC** via the **USB-interface** the **red LED will lighten up**. Whenever **feedback changes** will be **transmitted** to the PC the **green LED** of the **HSI-88-USB** will **flash up**.

4. HSI-88-USB implementing into your model railway software:

If your **model railway software** supports the **HSI-88-USB** you have to select at your **model railway software** your **digital central unit** as the **first digital system** for the **driving and switching**.

For the **feedback reports** you have to select at your **model railway software** the **HSI-88-USB** as the **second digital system**.

The detailed procedure should be explained within the **manual** of your **model railway software**.

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5. Firmware Update:

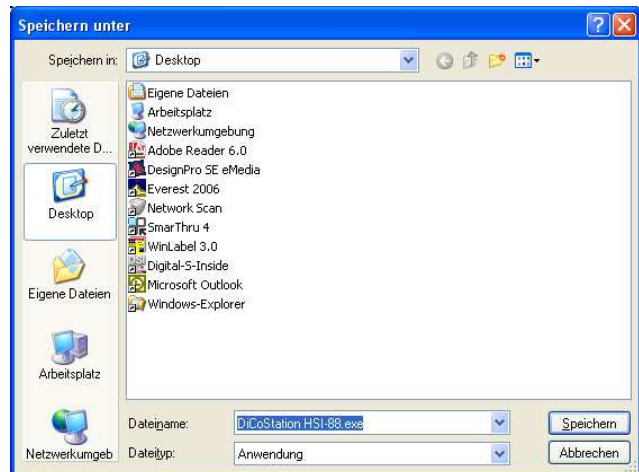
The software of the **HSI-88-USB** is a so-called **Firmware**. This software can be **easily actualized** via the PC.

1. At first **load-up** the file **“DiCoStation HSI-88.exe“** to your PC. This file can be found at the **section “Downloads“** on our **Web Site** at the **downloads** for **HSI-88-USB**.

This file is a **ServiceTool**, which includes the **actual Firmware** as well. At first click with the **right mouse button** onto the file **“DiCoStation HSI-88.exe“** and then with the **left mouse button** onto **„Ziel speichern unter ...“** (“Save under...”).



2. As **memory cell** on your **PC** select at the window **“Speichern unter“** (“Store under”) **“Desktop“** (“Desktop”) and **click** onto **“Speichern“** (“Save”).



3. **Click** on **“Schließen“** (“Close”) as soon as the window **“Download beendet“** (“Download completed”) appears.



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4. For the following procedure has the **HSI-88-USB** to be **connected** via the **USB-interface** to the **PC**. The **model railway layout** has not to be switched-on.

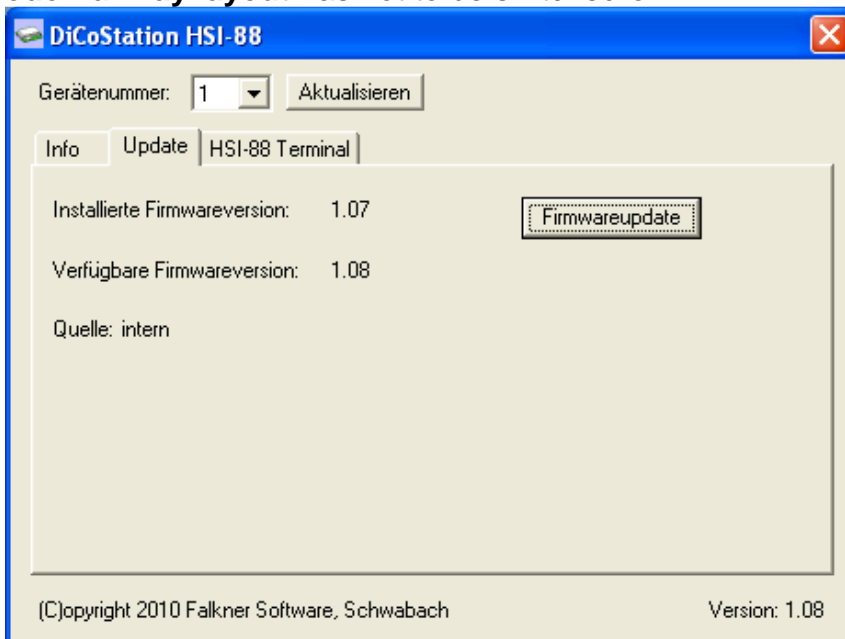
5. Call with a **double-click** the program **“DiCoStation HSI-88”** from the **Desktop** and click onto the section **“Update”**.

Under **“Installierte Firmwareversion“**

(“Installed firmware version”): the present version stored at your **HSI-88-USB** will be indicated.

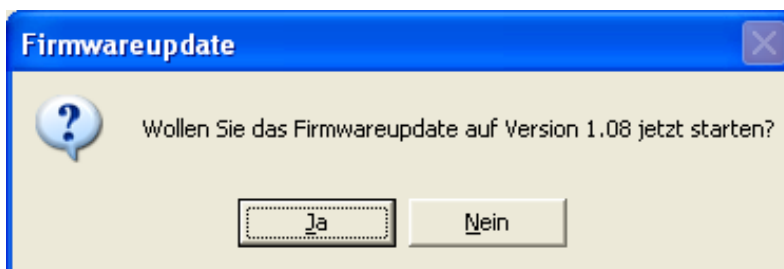
If under **“Verfügbare Firmwareversion“**

(“Available Firmware Version”): a **higher version number** will be indicated please **click** onto **“Firmwareupdate”**.

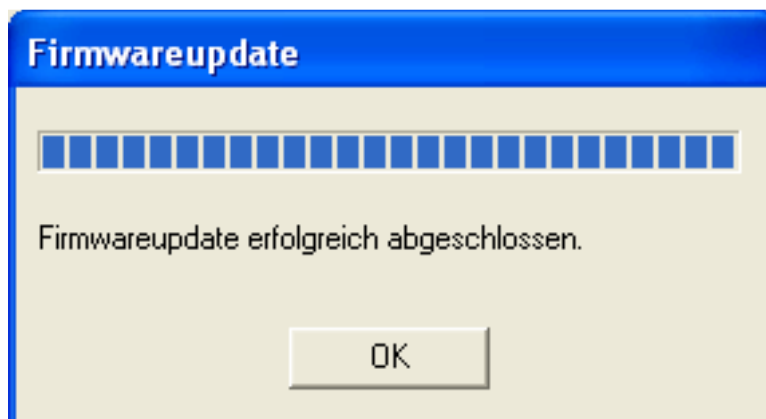


Important Information: The **device number** should **never be changed**. Otherwise the model railway software will not **recognize** the **HSI-88-USB** any more. The device number will be important as soon as you use more than one **HSI-88-USB** or **additionally a DiCoStation** for **driving** and **switching**. The first **HSI-88-USB** will get automatically always the **device number 1**.

6. Click at the window **“Firmwareupdate”** on **“Ja”** (“Yes”).

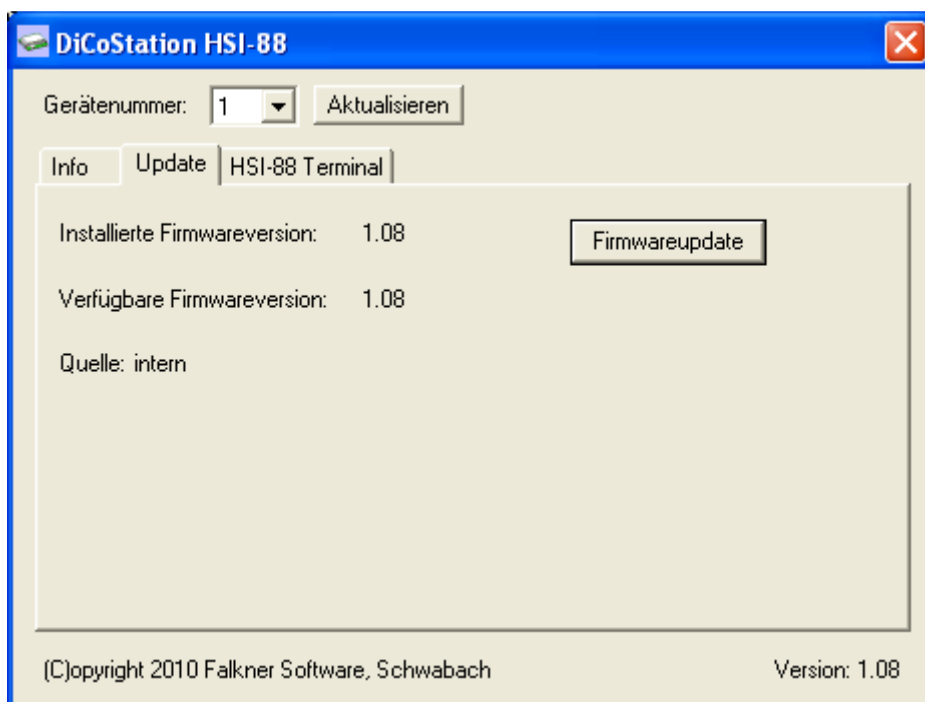


7. During the updates should be the **USB-connection** to the **HSI-88-USB** **not interrupted**. After a short **transmittance time** which will be indicated at two additional windows please **click** under the report **“Firmwareupdate erfolgreich abgeschlossen”** (“Firmware successful completed”) on **“OK”**.



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8. "Installierte Firmwareversion" ("Installed Firmware Version") and "Verfügbare Firmwareversion" ("Available Firmware Version") are now identical. Close now the ServiceTool "DiCoStation HSI-88" with a click on the "X" at the right top window border.



After this successful update you can use the HSI-88-USB as usual.

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