



Data switch

from the *Digital-Professional-Series* !

DSW-88-F Part-No.: 040012

or

DSW-88-G Part-No.: 040013

>> finished module or
 finished module in a case <<
suitable for the s88 feedback bus

The **data switch** enables to ramify the **s88-feedback** line.

The **data switch DSW-88** is suitable for all devices using the s88 feedback bus (**Märklin-Memory, Märklin-Interface, Intellibox, TWIN-CENTER** or **High-Speed Interface HSI-88**).

This product is not a toy! Not suitable for children under 14 years of age! The kit contains small parts, which should be kept away from children under 3 years of age! Improper use will imply danger or injuring due to sharp edges and tips! Please store this instruction carefully.



Introduction / Safety Information:

You have purchased the model railroad **data switch DSW-88** as a kit or as a finished module. The **DSW-88** is a high quality product, which is supplied within the *Digital-Professional-Series* of Littfinski DatenTechnik (LDT) and can be connected to your digital system via the s88-feedback bus without any problems.

We are wishing you having a good time using this product.

The finished module and the finished module in a case comes with a **2 years limited warranty**.

- Please read the following instructions carefully. Warranty will expire due to damages caused by disregarding the operating instructions. LDT will also be not liable for any consequential damages caused by improper use or installation.

General description:

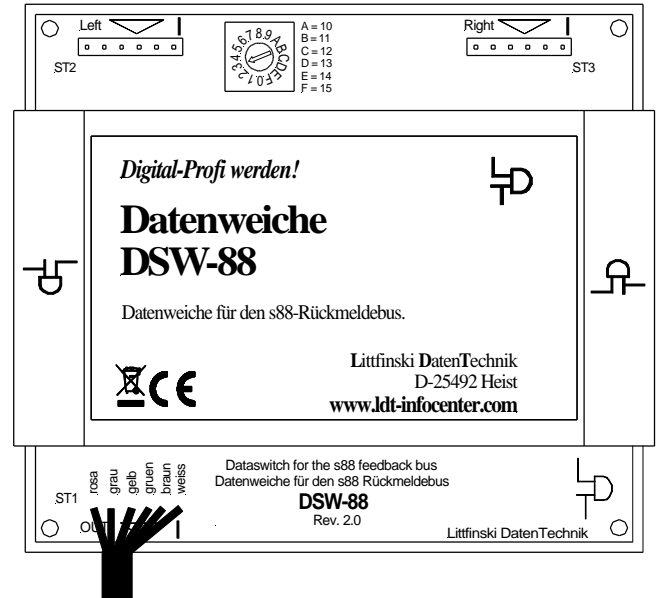
The s88-feedback bus is normally built up as a **continuous line** with all feedback modules behind each other.

This feature has its disadvantages on some model railway layouts. If the digital central control unit is positioned at the center of a model railway track the feedback line can only be directed to the right or left hand side and has then to be re-directed from the left or right end via the layout middle into the opposite layout part.

The **data switch DSW-88** gives you the opportunity to **ramify** the s88 feedback bus at any position on the track.

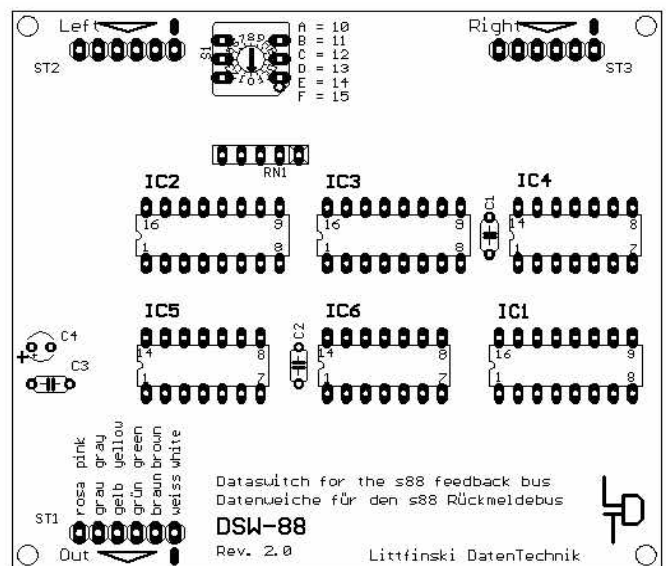
Connecting the DSW-88 to the digital model railway:

- Attention:** Before starting the installation switch-off the drive voltage by pushing the stop button or disconnect the main supply from all transformers.

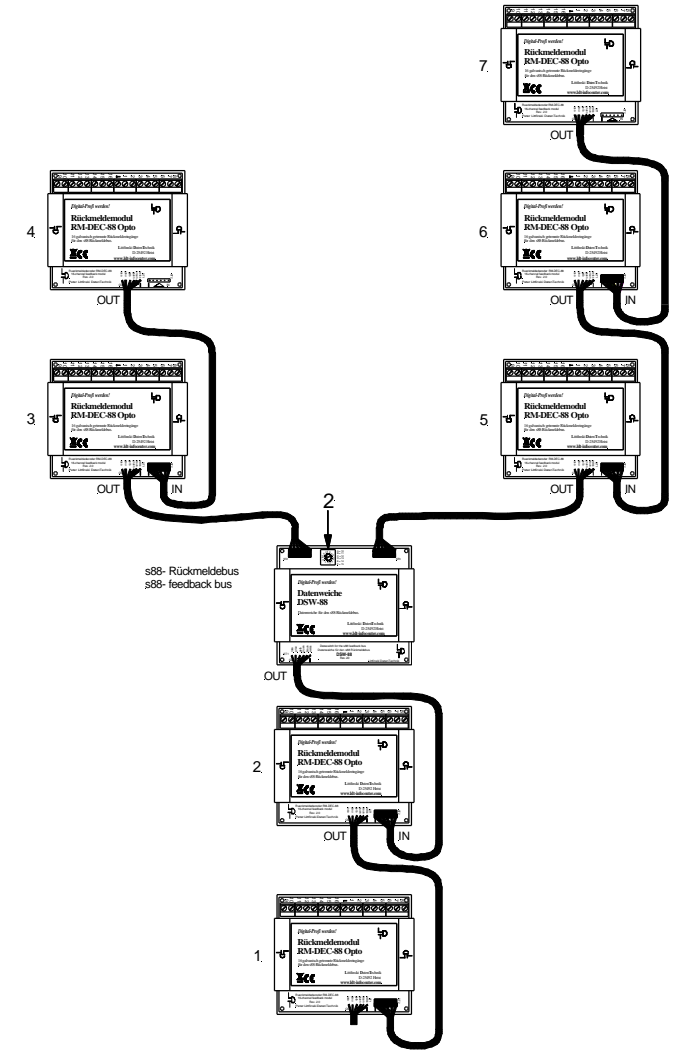
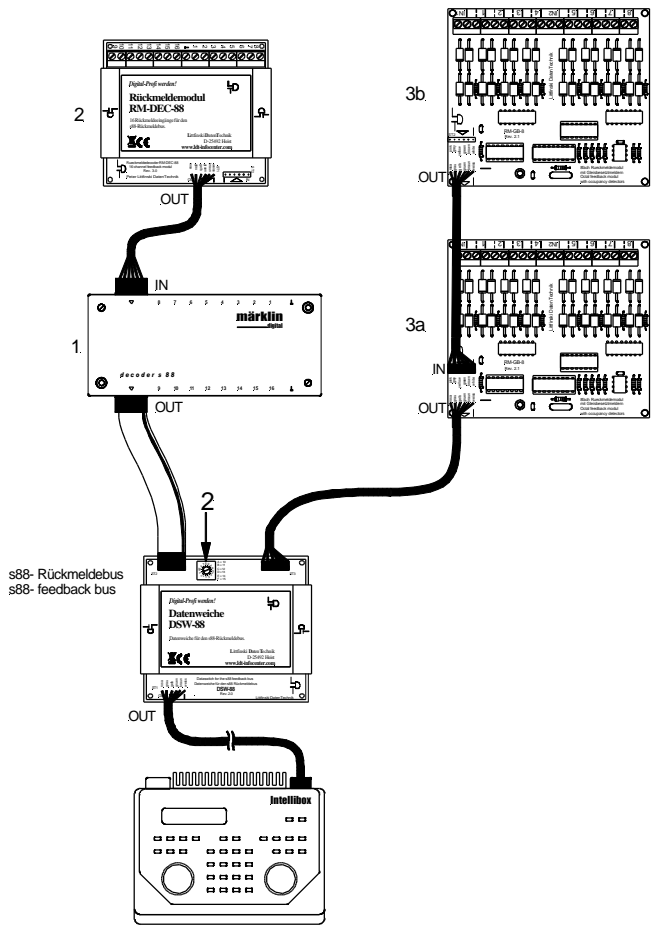


Connect the 6-poles plug to the **Interface, Memory, Intellibox, TWIN-CENTER** or to the existing s88 feedback modules. The connection cable has to show into the bottom of the data switch. If you connect the data switch to an output of the **High-Speed Interface HSI-88** the cable shall show in a direction away from the **HSI-88**.

The **plugs of following feedback modules** shall be plugged onto the left or right 6-poles pin plug bar so that the cable will point away from the data switch. Next to one end of the pin bars you find a **white mark**. If you use **LDT** feedback modules with **interference-protected twisted connection cable** the white marking has to correspond with the white wire of the cable. If you use feedback modules with a ribbon-cable the plug has to be inserted that way that the cable will point away from the data switch.



Sample connections:



The first sample connection solves the above mentioned problems of a digital control unit placed at the middle of a layout.

In this example the data switch is connected directly to the Intellibox to built two feedback lines.

The left line goes to the left layout side and consist of one Märklin s88 feedback module and one s88 compatible **RM-DEC-88** from **LDT**. At the right line there are two **LDT** feedback modules with integrated occupancy detector (**RM-GB-8**) connected.

Next to the left connection pin bar is a **rotary code switch** located. With a small screwdriver the **number** of feedback modules connected to the **left line** must be set. At the above sample there are 2 modules connected to the left line and the code switch has to be set to 2. After the digital central unit has red-out the feedback information the data switch **DSW-88** will know that after the read-out of the second feedback module it has to switch-over to the right line.

The **rotary code switch** allows up to **15 modules for the left line**. Numbers from 1 to 9 are shown on the switch followed by letters A to F. The letter A means number 10 and F number 15. The exact allocation is printed on the board next to the switch.

The digital control unit or the PC software will assign an individual address to each of the feedback modules with 16 inputs beginning from the central unit.

The module with the number 1 is always connected directly to the digital control unit or the Interface, followed by module 2, 3 and so on.

In case you use our feedback modules with integrated occupancy function **RM-GB-8** with 8 inputs two feedback modules will be detected as one module with 16 inputs with one address by your digital control unit or Interface/PC software.

Example 1 shows the module numbering in detail. The numbering of the modules will be done behind the data switch from left to right. The Märklin module s88 on the left line has been assigned as module number 1, followed by the **RM-DEC-88** as number 2. The two **RM-GB-8** modules connected to the right line will both have the module number 3 in this system, as both together have 16 Inputs.

The second sample connection shows a feedback system with 7 feedback modules. The **data switch DSW-88** is used behind the second module to **split the s88-feedback bus**.

The left line connected to the **DSW-88** has the assigned modules number 3 and 4 and on the right line modules number 5, 6 and 7 are connected. As there are 2 modules connected to the left line the rotary code switch has been set to 2.

Further sample connections can be found on our internet site (www.ldt-infocenter.com) in the area "Downloads". Please load the file "DSW88_INFO_eng" onto your PC.

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