Z21® digital control system
FLEISCHMANN & Roco

Roco

FLEISCHMANN

Z21

- Easy, wireless control
- High-capacity administration (up to 9,999 locomotive adresses)
- RailCom® - compatible
- Multi-protocol capability (supports DCC & MM)

www.Z21.eu

www.roco.cc | www.fleischmann.de

The Z21® digital control system connects your model railway system, your digital locomotives and your wagons via WiFi to your tablet, smartphone or the Z21®-WiFi-MULTIMAUS®.

No additional networking knowledge is needed for this. You can extend your Z21® digital control system easily, due to the large number of interfaces. This also makes it the ideal basis for PC-based automation.

The Z21® is a complete Plug & Play System consisting of:

- Digital control centre Z21®
- Z21®-App for control of all system components
- Power supply
- WiFi router

- Upgrade for already existing digital layouts through downwards compatibility i.e. MULTIMAUS®, Lokmaus 2, multiMAUSpro etc.
- Possibility to update software & sound of ZIMO-Sound-Decoders

Art. No.: 10820

In start sets incl.

The Z21 System
for beginners and experts

	z21 start Available in the start set without WiFi Package	z21 start WiFi Package Art. No.: 10814 / 10818	z21 Available in the start set incl. WiFi router	Z21 Art. No.: 10820 incl. WiFi router
Plug & Play System	☑	☑	☑	☑
2 X-BUS interfaces on the front	☑	☑	☑	☑
1 X-BUS interface on the back	☐	☐	☐	☑
For digital DC and AC locomotives (DCC and MM - Scale Z to Scale 1)	☑	☑	☑	☑
POM programming, POM readout, CV programming and CV readout	☑	☑	☑	☑
B-BUS and R-BUS	☑	☑	☑	☑
Configurable with maintenance	☑	☑	☑	☑
Control possible with convenient Z21®-App and various hand held controler	☐	☑	☑	☑
Photorealistic diver's cab on Android tablet and iPad	☐	☑	☑	☑
LocoNet and Sniffer BUS connection	☐	☐	☐	☑
CAN-BUS - allows convenient configuration of new Z21® components	☐	☐	☐	☑
Adjustment option for track voltage	☐	☐	☐	☑
Separate programming track output with Zimo-decoder update procedure	☐	☐	☐	☑

The MULTIMAUS® is a digital control system that allows you to control your trains, use the digital functions, switch points and signals and general programming. It gives you complete control over your layout. The clear design together with the simple operation makes the MULTIMAUS® the benchmark for digital model railway controllers, not just for beginners. Thanks to the illuminated display and large buttons, operation is clear and simple. The rotary knob also allows you to control your locomotives precisely. The snapping zero point provides feedback about the current controller position, without taking your eye off the system.

The programming with the WiFi-MULTIMAUS® is designed intuitively, so that even beginners can get to grips with the basic functions quickly. There is a multitude of extended functions available for digital experts, so that the driving behaviour of the locomotives can be laid out exactly as per the locomotive model (such as e.g. programming the CV-values per POM also by downloading using Railcom® and programming the CV mode).

These work perfectly together with the Z21®. This allows to quickly and easily install updates and function extensions

The MULTIMAUS®

- Administration of 9,999 locomotive addresses
- 64 locomotive addresses can be stored in the database with 5-character names
- Control of locomotives with either 14, 28 or 128 speed levels, individually for every locomotive
- Up to 21 functions can be activated per locomotive
- Up to 1,024 magnetic items switchable
- Write and read configuration variables (DCC-CVs)

The WiFi-MULTIMAUS®

Additional features:

- Wireless freedom with secure WiFi transmission
- 29 locomotive functions
- Database for 100 locomotives with 10-character names
- Operation with standard batteries or battery packs (3x AAA)

Z21® Detector (RailCom®)

Art. No.: 10808

- Track occupation sensor for 8 sections
- Occupation message via current monitoring of track sections
- RailCom®-sensor for locomotive identification
- Easy configuration and update via CAN

Z21® Detector x16

Art. No.: 10819

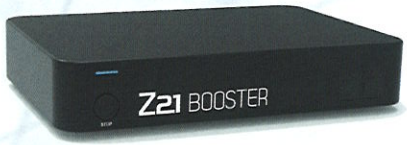
- Track occupation sensor for 16 sections
- Occupation message via current monitoring of track sections
- Connection via R-BUS
- Easy configuration and update with App or PC via Z21®
- Occupied/feedback notification with moment contact

Z21® CAN-Hub

Art. No.: 10804

- Additional power supply for CAN-BUS
- Ideal for big layout with several CAN-users
- 2 CAN-outputs with 1A voltage feed each
- Including connection cable for CAN-BUS

Z21® Booster



Art. No.: 10806

- Power 3 A (track output)
- Adjustable track voltage via Z21® (12–24 V)
- RailCom® global detector (allows POM reading in the booster section)
- Easy configuration and update with App or PC via Z21®

Z21® Dual Booster

Art. No.: 10807

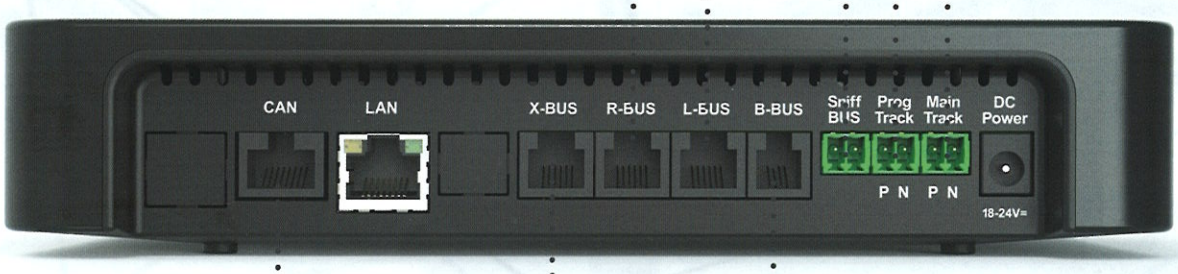
- Power 2x 3 A (track outputs)
- Voltage can be set for both track outputs separately via app or PC with Z21® (12–24 V)
- RailCom® global detector (allows POM reading in the booster section)
- Easy configuration and update with App or PC via Z21®

R-BUS
Roco feedback BUS for e.g. 10787
with limited functionality 10808
Allows an update of your MULTIMAUS®

LocoNet
currently more than 21 tested manual controllers, feedback and switching modules of various producer
Allows to connect a multiMAUSpro via multiZENTRALEpro

Sniffer-BUS
Read in switching and operation commands easily from the DCC signal of old central units

Prog-Track
CV-Programming
MM-Programming
Decoder update for sound and firmware



Track connection

Z21® Reverse loop module

Art. No.: 10797

- Ideal for reverse loops, track triangles and turntables for digital operation
- RailCom® compatible
- Operation via short-circuit detection or with switch contacts

MULTIMAUS®

X-BUS
Allows the connection of all X-BUS devices, such as RouteControl, MULTIMAUS®, Lokmaus 2/3 as well as a variety of compatible throttles and feedback modules of various other manufacturers.
2 additional X-BUS interfaces on the front side of the Z21®-centre

Z21® Booster light
B-BUS

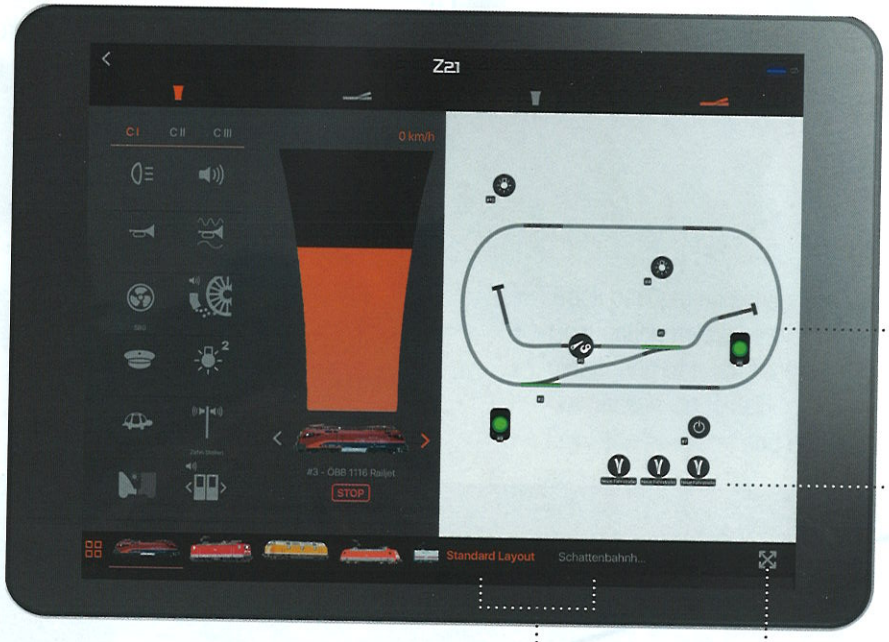
Art. No.: 10805

- Power 3 A (track output)
- RailCom®-Gab

The new Z21®-App from Roco and FLEISCHMANN: Just by optimizing and updating the already known and well-proven Z21®-App, you will discover many new functions and possibilities which will allow you to create and experience your digital model railway world even more exiting.

The Z21®-App allows you to create a detailed library of locomotives. Here you can easily add all locomotive-specific data, as well as main control information (such as e.g. locomotive address, speed levels, locomotive functions and maximum speed). In addition the Z21®-System also supports automatic synchronisation with multiple input devices (such as e.g. MULTIMAUS® and Z21®-App). This opens up the path to your locomotive and model railway enjoyment.

Tablet view



Control of the platforms, signals, etc.

Tracks

Switching between the various parts of the system

Full screen mode

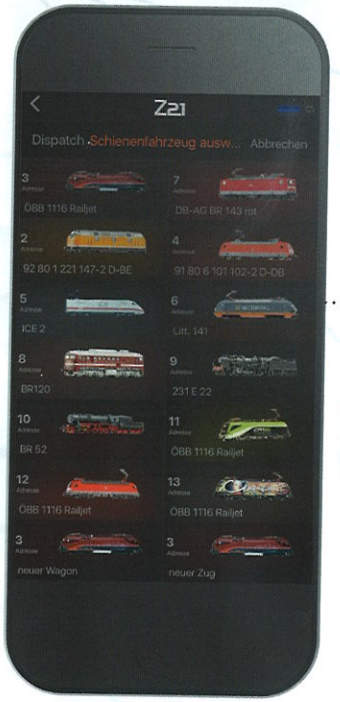
Smartphone view

3 pages for locomotive functions

Conversion to original speed

Driving controller with haptic feedback at 0% and 100%

Function buttons with image and description. No need to memorise the function layout thanks to logical presentation



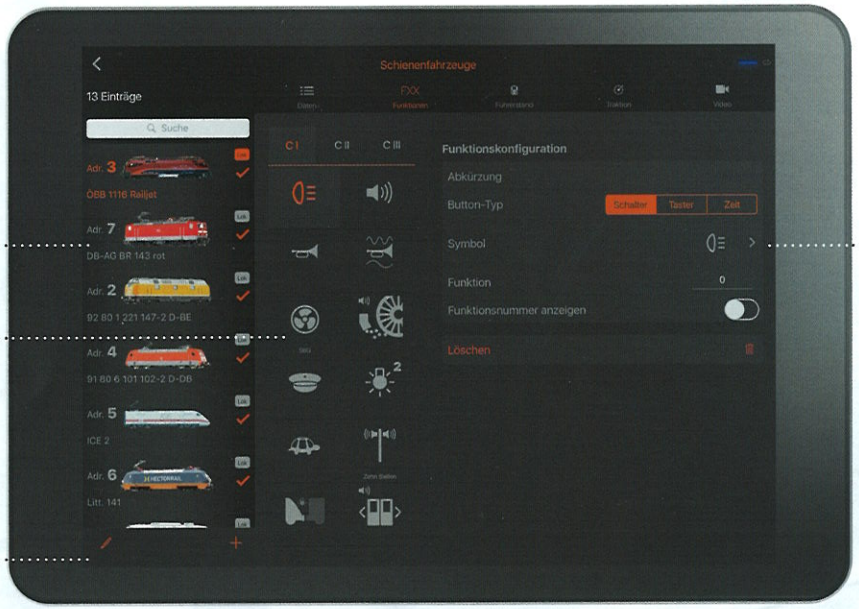
Clear overview of locomotives with names and addresses as well as image

Download from the App store for iOS or in Google Play for Android!
The app is available as a free download and can also be tested without the Z21®-System.

Data:
Basic data of the locomotive such as name, pictures, address and decoder type

There is a choice of many symbols

Additions are made via the locomotive database - All Roco models after 2015 can be imported



Easy customisation of the functions and short description

No need to note locomotive addresses any more! Duplicated allocation identified thanks to system settings

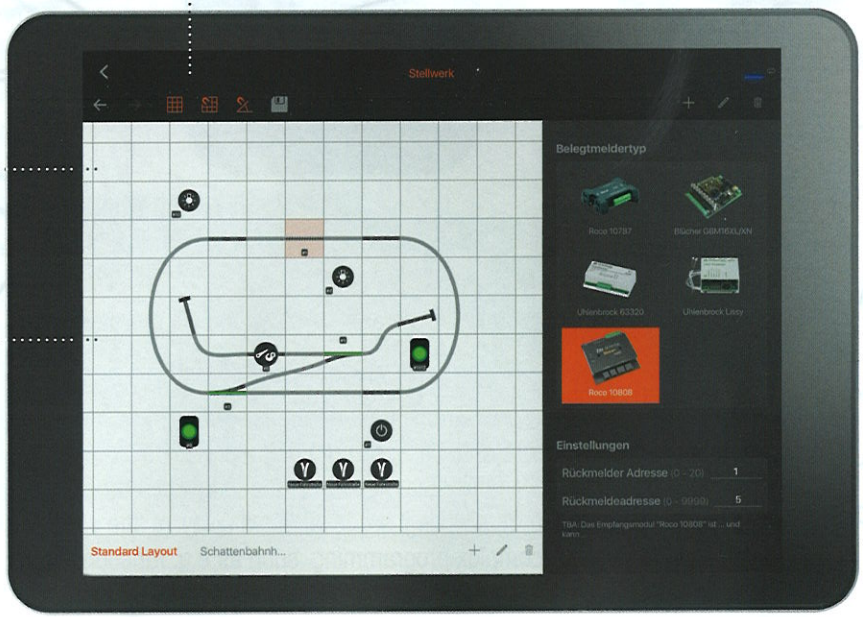
- Open multi-protocol centre supporting DCC- and Motorola®-formats individually adjustable for each locomotive and magnetic article
- Read out and get feedback of locomotives and switches via RailCom®
- Save and reload database and layout with the Import- and Export-function
- Wireless controlling via Tablet and Smartphone and (WiFi-) MULTIMAUS®
- High-capacity administration (up to 9,999 locomotive and 2,500 turnout adresses)

Create and administer system

Zoomable grid for easy sorting

Simple creation of your platform arrangement

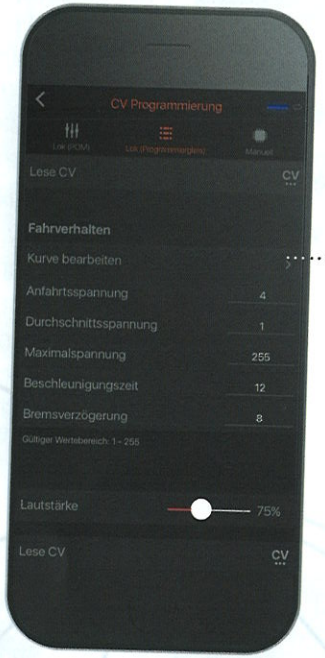
Simple connection/docking of the point elements

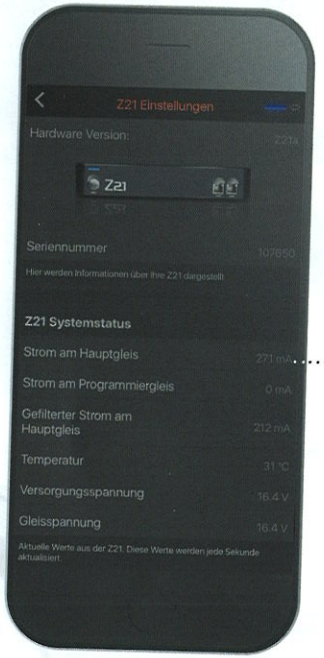


To make adding your models even easier and more convenient, the Z21®-App allows you direct access to the Roco/FLEISCHMANN locomotive database.
Here you can simply enter the article number and automatically import all information, incl. model picture in your personal Z21®-App database.
The Z21®-App also makes it very easy for you to create a signal box to suit your model system, and takes into account all relevant accessories (such as e.g. platform occupied sensor, double-diamond crossings, light signals, etc.). Thanks to the integrated Drag-and-Drop function, as well as simple connection of docking of the points elements, even complex platform configurations are made easy.

Selection and configuration of accessories

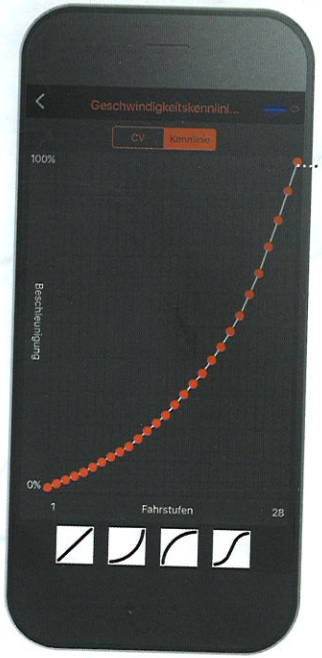
Suitable for the majority of Roco/FLEISCHMANN decoders





Settings and live data of the Z21®

Automatic download of the characteristic curves and subsequent evaluation. Graphical representation in plain language



The Z21®-App also allows you CV-programming to optimize the running behaviour of your locomotives.

Models which are already equipped with a RailCom®-compatible decoder also allow innovative CV-programming using POM. This allows you to directly address the relevant decoder and read out live. The example is especially helpful when customising the locomotive driving characteristics (such as e.g. starting voltage, acceleration and braking behaviour, as well as the sound decoder volume). When doing so, the relevant characteristic curves can be automatically downloaded, evaluated and processed graphically.

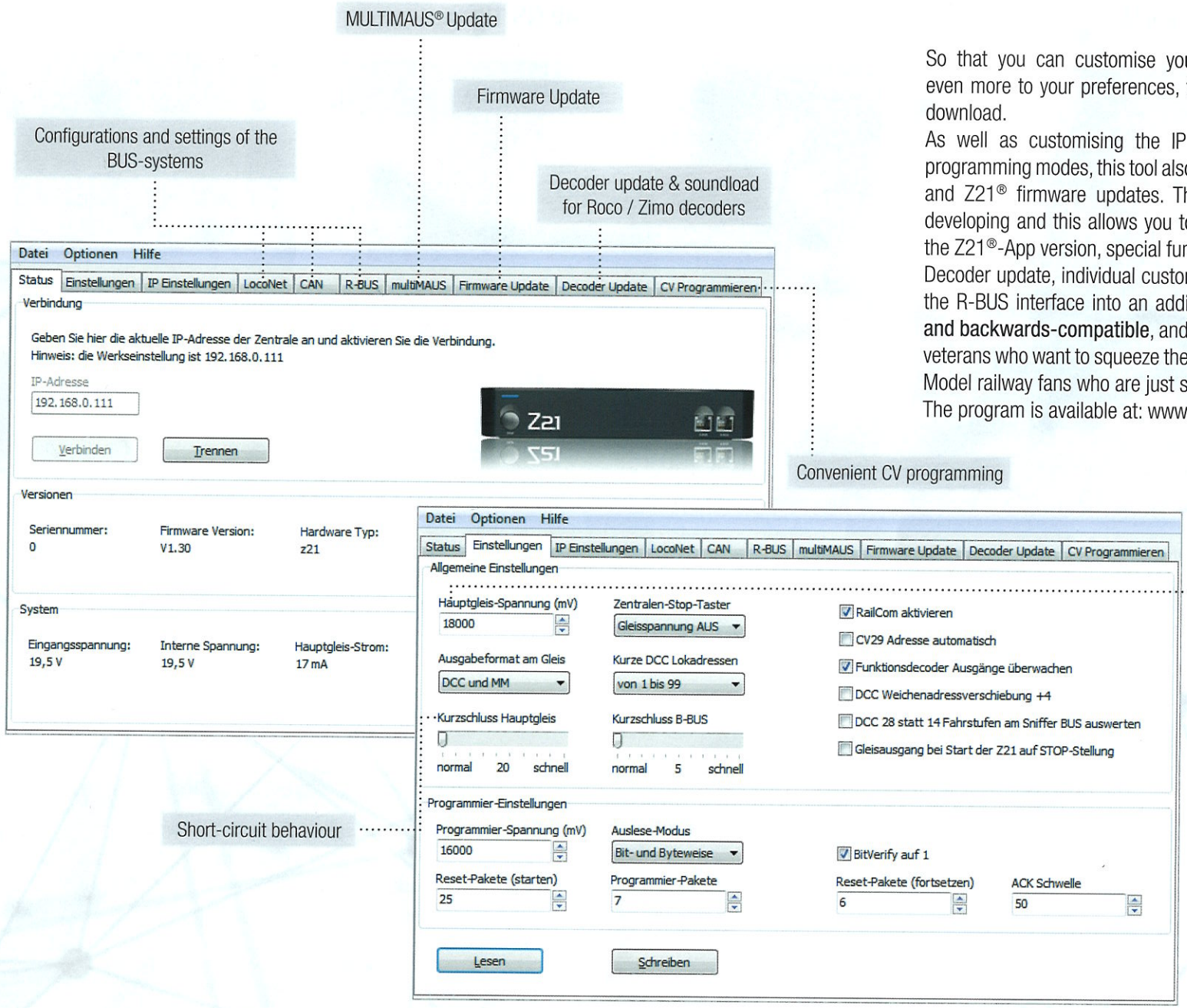
A programming platform, as well as the constant repositioning of your locomotives is therefore unnecessary. With decoders or RailCom® of course you can always revert to traditional CV-programming, which the innovative program help also offers. A new feature for the CV programming is the direct display of the relevant bits, which is a particular help during complex programming, such as e.g. function mapping .

Driver's cab Re 4/4

Driver's cab NS 1200

1	Main switch
2	Locomotive brake
3	Car brake
4	Direction switch
5	Whistle
6	Emergency stop
7	Train front light
8	Fan
9	Pantograph
10	Brake line pressure

Converting or upgrading to digital model railways will reward you with many advantages. To be able to drive the locomotives as the driver yourself is just one of the features which will make your eyes light up. As the locomotive driver, be amazed by the photorealistic views of the driver's cabs, which are equipped with original switches, controls from the relevant locomotive model and interactive functions. Every control-related button and every lever can be selected and provides the relevant action for your locomotive model. The Z21®-App covers 8 individual driver's cabs starting with the driver's cab of the Re 4/4 up to NS 1200, which are just waiting to be controlled by you. Because digital locomotive driving also needs practice to achieve mastery. Other driver's cabs will be available for you soon.



So that you can customise your z21®/Z21®-system or your smartRail™ even more to your preferences, the Maintenance Tool is available as a free download.
As well as customising the IP address or the use of various decoder programming modes, this tool also allows you to carry out native MULTIMAUS® and Z21® firmware updates. The scope of the functions is continuously developing and this allows you to access the latest versions. Depending on the Z21®-App version, special functions are also available, such as the Zimo-Decoder update, individual customisation of the output voltage or converting the R-BUS interface into an additional X-BUS. **The systems are forwards- and backwards-compatible**, and so also ideal companions for model railway veterans who want to squeeze the last drop of performance from their system. Model railway fans who are just starting out will find this equally useful.
The program is available at: www.z21.eu/downloads.

- Many basic system settings
- Exact setting of CV-programming also possible for older decoders

Z21®-App NEW!

Minimum requirement for the Z21®-App

iOS from 9.3

Android from 4. 4. 4
Device capabilities: WiFi, camera
RAM: 2 GB I Ideal 3 GB
Display Size: 3.5 Inch I Ideal 4.0 Inch

Z21® Updater Firmware Update

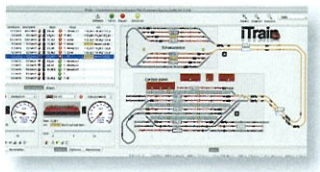
Z21®-App

The previous version of the Z21®-App is temporarily still available online. However, new functions are only available with the new App.

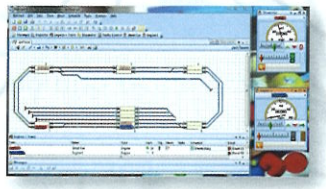
If you would like to find out more about our Z21®-Systems, then please visit one of our Z21® information events or test the system free of charge at: www.z21.eu/downloads.

Another feature which sets the Z21®-systems apart is its compatibility with many well-established PC-based model railway controllers . The Z21® also has the major advantage that the complete communication system is extremely reliable via the LAN-interface. Both older and new PCs provide this interface.

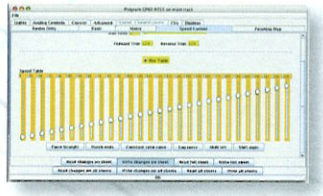
iTrain from V3.0



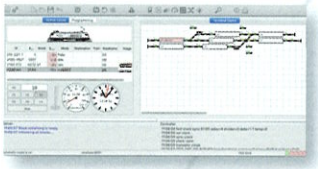
TrainController from V8.0 B4



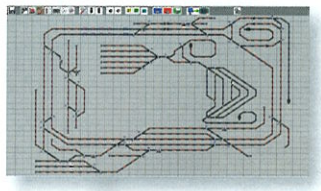
JMRI DecoderPro from V3.11



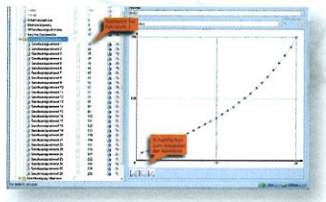
Rocrail from Rev. 4635



ModellStellwerk from V8.20



TrainProgrammer



Manual: Digital for beginners, Part 1 - English Version

What is a digital model railway and how can it be used best ? This manual, edited by experts, answers the most important questions to the topic „How to digitize your own model railway layout".

It provides both beginners and advanced users with valuable tips and tricks.
More to come soon.

Art. No.: 81391

Manual: Digital for beginners, Part 2 - German Version

What is a digital model railway and how can it be used best ?

The manual, written by experts, answers the most important questions for the digitization of your own model railway. It provides both beginners and advanced users with valuable tips and tricks.

Art. No.: 81396

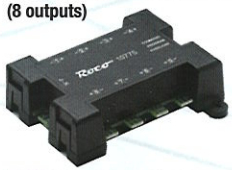
Z21®-CDE Booster Adapter

Art. No.: 10789

Switching power supply

Art. No.: 10851

Turnout decoder DCC
(8 outputs)



Art. No.: 10775

Signal module

Art. No.: 10777

All advantages at one glance

- Wireless controlling via Tablet, Smartphone and WiFi-MULTIMAUS®
- High-capacity administration for a large rolling stock (saves up to 9,999 locomotive and 2,500 turnout adresses)
- Open Multi-protocol centre supporting DCC and MOTOROLA®-formats
- Upgrade for already existing digital layouts through downwards compatibility i.e. MULTIMAUS®, Lokmaus 2, multiMAUSpro etc.
- Read out values and get feedback of locomotives and switches via RailCom®
- Save and reload database and layout with the Import- and Export-function
- Possibility to update software & sound of ZIMO-Sound-Decoders

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