Uhlenbrock digital

get more from your control unit

Accessories for the 6021

Booster

GET MORE FROM YOUR control unit 6021

WE OFFER YOU THE COMPLETE ACCESSORY SET FOR DIGITAL SYSTEM

In this prospectus you will find items that can used with the control unit. Form boosters, decoders with and without sound, control desk, hand controllers and feedback units up to the interface unit for track display panel are all deliverable. The prospectus uses the following coloured stripes at the bottom of each page.

The green bar indicates all items that you can simply connect direct to the control unit.

The 6021-infrared & LocoNet adapter expands the control unit with a LocoNet interface and an infrared receiver. All devices that can be controlled via the LocoNet can be connected to this device. Accessories for use with this feature are marked with a blue bar.

Items that in your setup require an IB-Control or IB-Control in addition to the 6021-Infrared- & LocoNet-adapter are indicated with a yellow bar.

POWER 3

THE BOOSTER FOR THE CONTROL UNIT

- Output Power 3.5A
- Configurable output Voltage 12-20V
- With separate reversing loop output
- Short circuit protection
- Replacement for Booster 6017 with higher output.

For layout with many vehicles the capacity of a booster is soon reached. In order to run more vehicles a further booster is required.

The Power 3 is a high capacity booster for use with a Märklin Control Unit, Märklin Central Unit and Intellibox. It provides the layout with an additional 3.5A power output. The device's output is short circuit proof.

A 50VA light transformer may used to power the unit. For full output capability a 70VA transformer should be used.

Part No. 65 600 Power 3

POWER 6

THE BOOSTER FOR GAUGE 1

- Output Power 6A
- Configurable output Voltage 12-20V
- For Gauge 1
- With separated reversing loop output
- Short circuit protection

The Power 6 has the same characteristics as the Power 3. It does however have output rating of 6A.

The integrated reversing loop automation operates in parallel with the booster operation. The reversing loop module has a separate output. A number of reversing loops can be connected provided only one is used at any time.

To power the unit a 150VA transformer should be used.

Part No. 65 650 Power 6

Important Note

The 150VA transformer and Power 6 are suitable for operating Gauge 1 layouts and must not be used with smaller scales.

70VA TRANSFORMER

UNIVERSAL TRANSFORMER FOR ALL DIGITAL SYSTEMS

- For connecting of a Power 3 and Intellibox

The transformer has an output voltage of 16V. Its maximum current rating is 4.3A.

Connection is made with 2 spring loaded clamp connectors on the low voltage side.

Part No. 20 070

150VA TRANSFORMER

TRANSFORMER FOR GAUGE 1

- For connecting of a Power 6

The transformer has output of 17V at a maximum current of 8.8A

The transformer has 2 screw connectors on the low voltage side and a power switch with control lamp.

Part No. 20 150

SIGNAL MODULE SBS

FOR INSTALLING A DIGITAL BRAKING SECTION

Do you want your trains to automatically and realistically stop gently at a red signal? The Signal building block makes this possible on a digital layout. It can also control a signal.

- Märklin Motorola compatible braking using negative track power
- Suitable for all Motorola compatible decoders with integrated start/stop inertia
- Separate braking and stop section
- Switchable by panel switch, contact or switching track and turnout decoder
- Suitable for light and semaphore signals

The module functions like the Märklin signal module 72441.

Part No. 44 200 Signal Module

TURNOUT AND SWITCH DECODER

TURNOUT, SIGNALS, MOTORS, LAMPS OR TRACK POWER SWITCHING WITH EASY ADDRESS SETUP WITHOUT DECODER DEFAULTS

- For Motorola and DCC digital systems
- Pulse or continuous output depending on type.
- Large address range
- Free choice of address
- Address assignment by push of a button
- Potential free relay outputs
- High load: 1A per output
- Simple connection

Turnouts and signals with an electromagnetic drive, which are to be controlled digitally, must be equipped with a turnout or solenoid decoder. Lamps, light signals or track sections that are to be controlled digitally are switched with a switch decoder.

The 6021 can address addresses 1 to 256 and the Intellibox addresses 1 to 320. The addresses are not preset and can be freely assigned.

The address assignment is very simple. First press the programming key on the decoder and then the desired turnout key on the control unit is pressed. The decoder simply remembers the particular address.

Every module has two outputs. Depending on type both outputs can be addressed together under one address or independently under two addresses.

The switch decoders relay contacts have floating outputs and can be connected as desired. Each contact can switch up to 1A,

By having only two connections per module the cable runs remain short and the wiring of the layout simple. Connections are easily done using the screw wiring blocks.

The decoders are powered from the digital center with digital power and control data. The dimensions are 38 x 32 x 15 mm

SOLENOID DECODER MD2

Switches two independent solenoids with a single driver (switch, signal) or a solenoid with two drivers (three-way turnout, double crossing slip, signal with pilot signal). The module has short circuit protection.

Part No. 67 200

SWITCH DECODER SD1

Universal switching decoder with two separate floating two-way contacts which can be addressed with the same address. One contact, for example, can switch a light signal and the second switch track power.

Part No. 67 500

SWITCH DECODER SD1

Universal switching decoder with two two-way floating contacts which can be addressed by two independent addresses. The decoder switches two independent loads, for example lamps or turnout motor.

Part No. 67 600

LOCO DECODER

The decoders can be programmed by Märklin/Motorola or DCC compatible centers.

Control of the locomotive motor is achieved by the decoders with load regulation of the motor potential with a frequency of 18.75 kHz. which ensures very smooth engine running. Minimum speed, maximum speed and start/brake inertia are adjustable. The direction dependent light outputs and on some decoders the special functions outputs are dimmable. An additional adjustable shunting speed makes a very fine low speed operation possible. Shunting speed and starting/brake inertia can be switched on and off using F3 and F4.

Depending upon data format the Märklin brake section or the DCC compatible brake signal can be used for an automatic deceleration in signal sections.

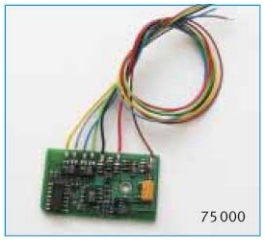
The 4-pole mini socket SUSI interface offers the possibility of attaching sound modules and a LISSY mini transmitter.

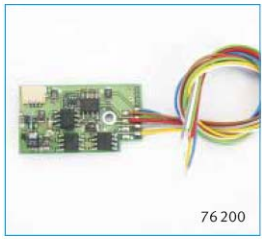
The decoders can be used on digital or analog AC systems.

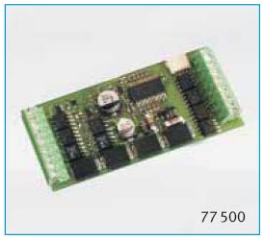
In the digital systems the address, driving direction and speed are stored in non-volatile memory. All decoders can be programmed in-situ.

Uhlenbrock decoders have updatable Flash memory. They have overheating protection and multi-protocol decoders have short circuit protection on all outputs.

IntelliDrive Loco decoder	Classic HO	Classic HO	Comfort HO	Deluxe HO	Deluxe HO	Deluxe Gauge 1
Part number	75 00	75 320	76 320	76 200	76 400/76 420	77 500
Suitability						
Data format	Mot.	Mot.	DCC/Mot.	DCC/Mot.	DCC/Mot.	DCC/Mot.
Operating mode	~	=	=/~	~	=/~	=/~
Gauge	HO~	HO~	TT-Hoe-HOm-HO	HO~	TT-Hoe-HOm-HO	O-I-II
Motor type	Märklin universal	DC	DC/Faulhaber	Märklin universal	DC/Faulhaber	DC/Faulhaber
Outputs		0.9A				
Motor power	1.2A	0.7A	1.0A	1.2A	1.0A	3.0A
Light – direction dependant	1.0A	2 x 0.9A	1.0A	1.0A	1.0A	1.0A
Light output dimmable	no	no	yes	yes	yes	yes
Special function outputs	no	no	no	2	2	8
Function mapping	no	no	no	yes	yes	yes
SUSI interface	no	no	no	yes	yes	yes
LISSY output	no	no	no	yes	yes	yes
Characteristics						
Addresses Märklin/Uhlenbrock	80/255	80/255	80/9999	80/9999	80/9999	80/9999
Speed steps Motorola/DCC	14/-	14/-	14/128	14/128	14/128	14/128
Load regulation	no	no	yes	yes	yes	yes
Programmable motor characteristic	no	no	no	yes	yes	yes
Shunting speed	no	no	yes	yes	yes	yes
Start/Brake Inertia	no	no	yes	yes	yes	yes
Analog operation	~	~	=/~	=/~	=/~	=/~
Short circuit protection	no	yes	yes	yes	yes	yes
Updatable flash memory	yes	yes	yes	yes	yes	yes
Connection	Cable	NEM652	NEM652	Cable	Cable/ NEM652	Screw block
Dimensions in mm	35 x 19 x 3.2	19 x 16 x 5	19 x 16 x 5	33.5 x 19 x 5.5	22 x2 12.5 x 5	68.5 x 28 x 12
Note	Integrated reversing switch. Low priced	Integrated reversing switch. Low priced	Integrated reversing switch. Low priced supersedes 75320, 74400, 74420	Decoder with load regulation and SUSI interface for original Märklin motor with field coil	Small HO decoder with LISSY output, part of sound decoder 36100, 36400	Large scale decoder with 8 special functions and integrated shuttle control







SUPPRESSOR KIT

INTERFERENCE MOTOR FILTER IN DIGITAL LOCOMOTIVES

Usually, electric motors produce interference which can affect the data communication in a way which prevents normal operation of digital decoders.

In new locomotives, the motors are usually filtered. Older makes must be retrofitted with the appropriate electronic components.

The motor suppressor kit consists of one capacitor, 2 inductors and fitting instruction and can be used with all H0 locomotives.

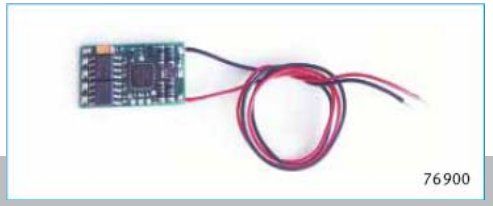
Part No. 71 500 Suppressor kit

FUNCTION DECODER

FOR DCC AND MOTOROLA DIGITAL SYSTEMS

- Four special function outputs
- All outputs can be direction dependent, blink or dimmed
- Blink frequency and dimming are adjustable
- Supports the Function Mapping of 32000 functions in DCC mode
- CV programmable (DCC) and by Motorola center
- Output Power up to 1.2A, 1A per output
- Size 22 x 12.5 x 2.5 mm

Part No. 76 900 with solder connection



IntelliSound Module and decoder with digitised authentic sound

INTELLISOUND MODULE

SOUND MODULE FOR DIGITAL DECODERS WITH SUSI INTERFACE

- Reproduction of digitised authentic sound via 3 channels
- Dynamically loaded regulated sound
- Automatic adjustment according to driving state
- Randomly generated sounds
- Three further sounds can be called up via function keys
- Function key assignment freely selectable
- Signal generator for wheel-synchronous control of steam locomotives
- Adjustable volume
- Very efficient digital output stage
- Available with every sound in the sound list

IntelliSound is the Uhlenbrock/DIETZ digital sound system. The tonal quality and originality of the sound is so far not available in H0.

The separation of decoder and sound in two very small units and in addition the highly efficient small loudspeaker with metal diaphragm make IntelliSound well suited to cramped space conditions.

In each module three additional sounds can be inserted to the dynamic running sound. It can act according to vehicle type around a whistle, a bell, a horn or engine exhaust as with an electric locomotive.

IntelliSound modules include 18 x 18mm loudspeakers and resonance bodies. They are available with a choice of sound from our sound list or as an empty module. To program empty sound modules one requires the Sound-Ladeadapter 31 010 (see Page 11).

With the SUSI, distributor 2 sound modules can be connected to a single decoder. The distributor can be used also as an extension cable.

Part No. 32 000 IntelliSound empty module 25 x 15 x 5 mm
Part No. 32 100 IntelliSound empty module 20.8 x 11.8 x 5 mm
Part No. 32 400 IntelliSound module with specified Sound 20,8 x 11,8 x 5 mm
Part No. 31 010 IntelliSound Ladeadapter
Part No. 71 100 SUSI distributer

INTELLISOUND LOCO DECODER

INTELLISOUND MODULE + DECODER 76 420

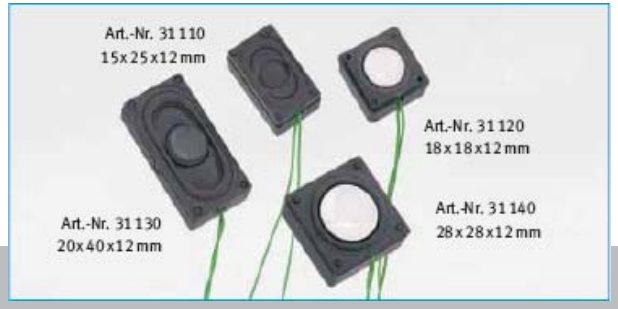
- Includes 18 x 18 mm speaker and resonance shell
- With 8-pole NEM 652 connector
- Size 29 x 15.8 x 5.2 mm

Part No. 31 010 IntelliSound Ladeadapter
Part No. 71 100 SUSI distributer

LOUDSPEAKERS

FOR INTELLISOUND MODULE AND DECODER

These loudspeakers are characterized by small dimensions and an outstanding sound.



SOUND LIST

Steam locos		
99-222	Steam Loco 99 222 (HSB)	D
99-1067	Rack Steam Loco Brünigbahn	CH
99-4652	Steam Loco Nicki + Frank S.	D
99-5906	Mallet Steam Loco (HSB)	D
99-6001	Steam Loco 99 6001 (HSB)	D
99-7243	Steam Loco 99 72... (HSB)	D
99-ELLIS	Steam Loco "Elias"	D
99-G45	Swiss narrow gauge steam loco	CH
99-IVk	Narrow gauge steam loco IVk	D
99-Mh53	Narrow gauge steam loco Rügen	D
99-Spreewald	Steam loco Spreewald	D
99-U43	Steam loco Zilleralbahn	A
99-UNI	Narrow Gauge Steam universal	EU
99-Xrot	Steam snow plough RhB	CH
DL-001	Steam Loco BR 01	D
DL-005	Steam Loco BR 05	D
DL-011	Steam Loco BR 01 Coal fired	D
DL-012	Steam Loco BR 01 Oil fired	D
DL-023	Steam Loco BR 23	D
DL-038	Steam Loco BR 38	EU
DL-041	Steam Loco BR 41	D
DL-044	Steam Loco BR 44 Oil fired	D
DL-044	Steam Loco BR 44 Coal fired	D
DL-050	Steam Loco BR 50	D
DL-052	Steam Loco BR 52	EU
DL-055	Steam Loco BR 55	EU
DL-056	Steam Loco BR 56	D
DL-057	Steam Loco BR 57	D
DL-058	Steam Loco BR 58	D
DL-078	Steam Loco BR 78	D
DL-080	Steam Loco BR 80	D
DL-091	Steam Loco BR 91	D
DL-089-T3	Steam Loco BR 89 / T3	D
DL-24-64-86	Steam Loco BR 24 / 64 / 86	D
DL-CLIMAX	Forest steam loco	USA
DL-EB33 Tig	Swiss steam loco	CH
DL-HEISLER	Forest steam loco	USA
DL-MIKADO	Steam loco 2-8-2	USA
DL-S36	Steam loco Bavarian S 3/6	D
DL-SHAY	Forest steam loco	USA
DL-UNI1	Steam Loco large European	EU
DL-UNI2	Steam Loco small European	EU
DL-USA	Steam Loco American	USA
ELS locos		
EL-101	EL loco 101	D
EL-103	EL loco 103 / E 03	D
EL-110	EL loco 110 / E 10	D
EL-141	EL loco 141 / E 41	D
EL-143	EL loco 143	D
EL-150	EL loco 150 / E 50	D
EL-155	EL loco 155	D
EL-169	EL loco 169 / E 69	D
EL-191	EL loco 191 / E 91	D
EL-194	EL loco 194 / E 94	D
EL-CE68	EL loco Ce 6/8 Krokodil (SBB)	CH
EL-KROKO	EL loco Ge 6/6-1 Krokodil (RhB)	CH
EL-HGE44-II	Rack rail EL loco He 4/4-II	CH
EL-GE44-3	EL loco Ge 4/4-III (RhB)	CH
EL-461	EL loco Ge 4/6-I (RhB)	CH
EL-662	EL loco Ge 6/6-II (RhB)	CH
EL-NEU	Modern EL loco	EU
EL-RE425	EL loco RE 425	CH
EL-ATW	Electric Rail Car, historical	EU
EL-ICE	Electric Rail Car, ICE	D
ETA-176	Rail Car	D
Diesel locos		
VL-110	Diesel loco V100 DR / 110	D
VL-2091	Diesel loco 2091 ÖBB	A/D
VL-2095	Diesel loco 2095 ÖBB	A
VL-212	Diesel loco 212 / V 100	D
VL-218	Diesel loco 218 / V 160	
VL-220	Diesel loco 220 / V 200	D/CH
VL-232	Diesel loco 232 / Ludmilla	EU
VL-236	Diesel loco 236 / V 36	D
VL-260	Diesel loco 260 / V 60	D
VL-320	Diesel loco 232 / V 320 DB	D
VL-BlueTig.	Diesel loco "Blue Tiger"	D
VL-F-LKM	Field diesel loco	EU
VL-F-STD	Field diesel loco	EU
VL-G2000	Vossloh Diesel loco G 2000	D
VL-Kö	Diesel loco Kö 2	D
VL-Köf	Diesel loco 323 / Köf III	D
VL-Köf-PW	Diesel loco fire engine LGB	E
VL-TM22	Shunting tractor Tm 2/2 (RhB)	CH
VL-US1	Diesel loco, large, american	USA
VL-US2	Diesel loco, small, american	USA
VL-128	Rail Bus "Regio Shuttle"	D
VT-610	Rail Bus "Pendolino"	D
VT-628	Diesel Rail Car VT 628	D
VT-772	Rail Bus VT 772	D
VT-795	Rail Bus VT 795	D
VT-HSB-T3	Rail Bus Te (HSB)	D
VT-SKL	Gang motor vehicle SKL	D
VT-WSB	Wismarer	D
Others		
K-LANZ-H	Lanz Bulldog, historical	EU
K-MAGIRUS	Magirus LF 16 with Martin horn	EU
K-UNIMOG	Unimog	EU
K-VW-POL	VW beetle with Martin horn	EU
SB-ALT	Tram, historical	EU
SB-NEU	Tram, modern	EU
SB-106	Tram	D
SB-107	Tram	D

To order IntelliSound modules or decoders with specific sound add the sound identifier to the part number: e.g. 32400-DL-001 for a sound module with BR 01 steam loco sound or 36420-ELNEU for a sound decoder with the sound of a modern EL loco.

Infrared Remote control and LocoNet connection for the control unit

6021-INFRARED & LOCONET ADAPTER

FOR CONNECTING OF LOCONET DEVICES TO THE CONTROL UNIT

You control your layout with a Märklin Control Unit 6021 and are interested in the functionality of Uhlenbrock devices? With this adapter you will get more out of your 6021!

The adapter not only opens the possibility to connect all Uhlenbrock devices with LocoNet outputs to your control unit but also controls your layout with an infrared remote control.

WHICH DEVICES CAN BE USED

IB-Control – stationary dual controller with keyboard function

FRED – digital hand control

DAISY – digital hand control with display for 80 locomotives and 256 turnouts

Profi-Control – driving desk

IRIS – the infrared remote control with option to switch turnouts in the entire available address range.

IB-Switch – Keyboard and memory function in one device

Mobile station Adapter – to operate a mobile station on a 6021 Control Unit

Maus Adapter – to connect up to 3 Lokmice 2s

Feedback Module – to influence train operation

Switch-Control – module for connecting a track plan panel

Switch Module – for switching lamps and solenoids

LISSY – the address feedback system for automation without a computer

LocoNet Display – for displaying locomotive speed step, turnout and feedback module status, a model railway clock and with the addition of LISSY its feedback on the LocoNet.

IntelliLight – places every Model railway layout in the correct light

Part No. 63 820 6021-Infrared & LocoNet Adapter

Part No. 63 820 Set of adapter and infrared Control from IRIS

IRIS

INFRARED REMOTE CONTROL

The wireless remote control for the 6021-Infrared & LocoNet Adapter

- Direct control of up to 4 locomotives
- Address range 1-80
- Special function: function and f1 to f4
- Switches turnout addresses 1 to 256
- Up to 4 handsets can be used simultaneously

With IRIS you control driving direction, speed and special functions of locomotives on a digital layout and switch solenoids.

Part No. 66 510 Individually IRIS remote handset

Part No. 66 520 IRIS auxiliary receiver

Part No. 66 530 Y-cables for connection of several auxiliary receivers

WHAT IS LOCONET

The LocoNet bus is the inexpensive and safe link between digital control devices.

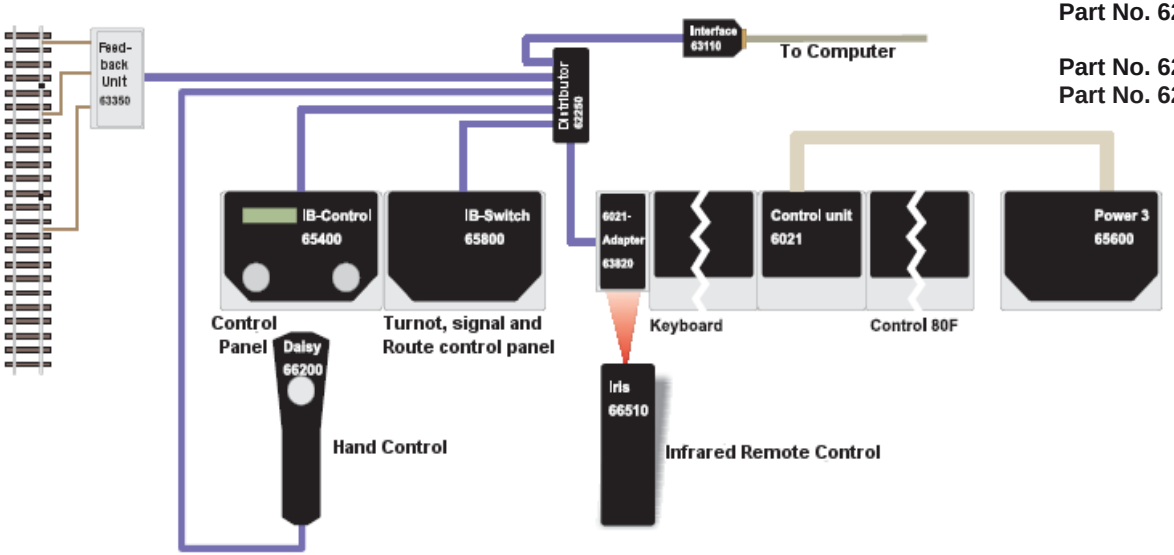
The cable used has six conductors and is terminated with RJ12/6 connectors. The easy connection and separation of the modules makes it easy to set up a network.

With the mobile hand control one can plan e.g. sockets in the sides of the layout and quickly connect oneself at any of those locations

For the setting up the network we offer numerous inexpensive suitable elements. Runs of up to 100 meters are no problem for the system.

All devices that are connected to the LocoNet are also powered from the network.

Beyond a certain size of network, which does not depend on the cable length, but only on the power consumption of the attached devices, perfect operation of the attached devices can no longer be ensured. Then a LocoNet power feed unit should be used to add a further 500mA to the LocoNet in a new section of the network.



LOCONET CABLE

FOR CONSTRUCTING A LOCONET

Part No. 62 010 Cable, 28 cm, plug/plug
Part No. 62 020 Cable, 2.15 cm, plug/plug
Part No. 62 030 Spiral cable, 3 m, plug/plug
Part No. 62 040 Cable, 60 cm, plug/plug
Part No. 62 060 Cable, 6 m, plug/plug
Part No. 62 120 Y-Cable, 2,15 m, plug/dual socket
Part No. 62 220 Joiner, socket / socket
Part No. 62 250 Distributor, plug /5 sockets

POWER FEED UNIT

PROVIDES ADDITIONAL POWER TO THE LOCONET

- Maximum power load 0.5A
- Includes 9V Plug-pak
- With load indication

The table below will assist with calculating the power used in a LocoNet Section.

Part No. 63 100 LocoNet Power Feed

POWER USEAGE OF LOCONET DEVICES

Part No.	Description	Current
63 340	Feedback module 2-Rail	30mA
63 350	Feedback module 3-Rail	30mA
63 400	Switch Control	30mA
63 410	LocoNet Switch Module	0mA
63 440	LocoNet Panel Display	60mA
63 450	LocoNet Display	150mA
63 840	Maus Adaptor with 3 Lokmice	90mA
65 400	IB-Control	120mA
65 500	Profi-Control	30mA
65 800	IB-Switch	100mA
65 810	Mobile Station Adaptor	0mA
66 000	FRED	25mA
66 200	DAISY	50mA
66 600	LISSY Receiver	25mA

Hand Controllers

FRED

DIGITAL HAND CONTROL FOR 4 LOCOMOTIVES

- Controls up to 4 Locomotives
- Relocatable while running locomotive
- Connects via LocoNet up to 100 m from the control centre

The small light weight hand control has a large rotary speed control with end stop, a rocker switch for the change of the driving direction and a stop key, in order to stop the locomotive at any time. With the function keys the light and up to 4 special functions can be switched.

FRED can be separated from the LocoNet at any time and relocated to another place. Since the locomotive addresses are administered by the control centre, the information about speed and driving direction remains.

Complete with 3 m spiral.

Up to 16 FREDs can used with a 6021 Infrared & LocoNet Adapter.

Complete with 3m spiral cable**.**

Part No. 66 000 FRED
Part No. 62 030 Spare coiled cables

DAISY

DIGITAL HAND CONTROLLER WITH DISPLAY

- Controls up to 80 locomotives
- Switches up to 256 turnouts
- Large four digit LED display
- Continuous rotary control with travel direction change-over
- Emergency stop function
- Connects via LocoNet up to 100 m from the control centre

The DAISY hand control can directly select and control up to 80 locomotives. In addition DAISY can switch up to 256 turnouts.

All address and control information is shown in the display. The speed is controlled with a continuous rotary control. Pressing speed control changes the driving direction. The function keys can switch lights and up to 4 special functions. The stop key switches the layout off.

DAISY can be disconnected from the LocoNet and be put in another place, at anytime without any loss of the driving condition.

Complete with 3 m spiral cable.

Part No. 66 200 DAISY

MOBILE STATION ADAPTER

CONNECTS THE NEW WORLD WITH THE LOCONET WORLD

The mobile station Adapter 63 810 connects a Märklin mobile station with the LocoNet-connector of a 6021-Infrared & LocoNet Adapter. It is then possible to operate a mobile station on the Märklin 6021 Control Unit.

All control operations are possible and all special functions can be switched. The internal data bank can be fully utilized.

The mobile station adapter does not extend the data format of the control unit. The additional mfx functionality of the mobile station is not available. That means the new mfx locomotives do not identify themselves to the mobile station by name.

Part No. 63 810 mobile station Adapter

Note: If a device that is capable of programming a LocoNet configuration variable is connected to the digital layout (IB-Control or the LocoNet Interface with LocoNet-Tool software), then it is also possible to switch turnouts with the 6021 function keys.

IB-CONTROL

STATIC TWIN SPEED CONTROL WITH KEYBOARD CONTROLS

- 2 speed controllers
- Keyboard function
- s88-Monitor
- Display of turnout state
- Connection over LocoNet up to 100 m from the centre center

The IB control extends the Intellibox by two speed controllers and a keyboard with 256 turnout addresses. Power supply is connected via the LocoNet. The IB-Control can be placed up to 100 m away from the centre, anywhere on the layout.

Complete with 2.15 m cable.

Part No. 65 400 IB control

PROFI-CONTROL

LOCOMOTIVE SIMULATION CONTROL

- Drive like in original driver cabin
- Operation by hand wheel, brake lever and combination lever
- Display for driving speed, brake pressure and driving status
- Rocker switch for light and 4 special functions
- Dead man switch with warning lamp and horn
- Emergency stop key
- Connects via LocoNet up to 100 m from the control centre

The Profi-Control gives the inspired Model railroader new possibilities in controlling locomotives realistically. The Profi-Control has some levers and hand wheels, which are also to be found in the driver cabin of the prototype of an Epoch III Diesel or electric locomotive. Now you can control your model train locomotive of any scale with a main switch, speed step switch and brake lever, like an engine driver in the German Federal Railroad. The three instruments on the Profi-Control give you information about the train's speed, the currently selected motor speed step and the air pressure in the main air line of your train at any time. When starting and stopping the Profi-Control simulates the train mass and accelerates or decelerates the train gently depending upon selected operating condition.

So that driving with the Profi-Control is still more fun, the driving desk has a Dead man switch. This control device, which is also to be found in the prototype, consists of a key switch, which the Profi-engine driver must activate at least once every 30 seconds. If this does not happen, then the engine driver is first reminded by a warning lamp and later by horn. If the engine driver still does not activate the switch, the safety device automatically stops the train by emergency braking.

Other control elements on the desk, which are also to be found in the prototype, are 9 rocker switches for the digital special functions, light and F1 to F4. The emergency stop switch produces a locomotive-specific emergency braking via the digital control center.

The Profi-Control stores all locomotive addresses, which it controls. If it is switched off or disconnected from the LocoNet, the locomotives can be controlled without having to re-enter the selection.

Complete with 2.15 m cable

Part No. 65 500 Profi-Control

Switching and Feedback

IB-SWITCH

FOR SWITCHING OF TURNOUTS AND ROUTES

- switches 40 turnout, solenoid decoder or routes
- Route can have up to 20 entries
- Automation with feedback modules is possible
- Free address choice, Address range 1 – 256

The IB-Switch can control turnouts and signals, implement arbitrary switching functions and switch routes. Each of the 20 key pairs can control 2 addresses. Therefore 40 switching possibilities are available. The addresses for each key pair can be freely assigned.

Each route can implement 20 switch commands. Concatenation and sub-routes are possible. Continuous loops are recognized automatically and prevented.

Routes can block each other mutually, e.g. to safeguard against crossing routes. Blocking can be calculated automatically by the equipment or specified manually.

The switching of turnouts and routes in the IB-Switch can be done by means of the train recognition system LISSY, by LocoNet, s88-feedback unit, by depressing the key on the IB-Switch or a track diagram panel.

The turnout status and the state of the routes are indicated by LEDs.

Complete with 2.15 m cable.

Part No. 65 800 IB-Switch

FUNCTION OF FEEDBACK MODULES

AUTOMATIC OPERATION WITH IB-SWITCH OR COMPUTER

A feedback module continues to give the information of the track occupancy status (if a vehicle is in the supervised track section) to the attached devices (e.g. IB- Switch) or a computer control program. These automatically implement switching commands, which are programmed for the feedback. This can be the switching of an individual solenoid or an entire route.

The 3-rail version operates with an isolated and separated rail side, which is connected to the feedback unit and is bridged by the vehicle axles and connected to chassis.

A voltage monitor prevents false ‘free’ status messages to be sent if the power is switched off.

The feedback unit reports every state change “vacant” or “occupied” to the control center or other LocoNet device via the LocoNet.

Contrary to the S88 bus system the LocoNet is extraordinarily reliable for the transmission of information, e.g. feedbacks.

FEEDBACK MODULES

THE FAST AND SURE REPLACEMENT FOR S88-MODULES

- Occupancy alarm unit for 16 track sections, track contacts or keys
- An ‘earth’ output
- Choice of address in the range 1-2048
- Programmable with programming key
- Connection via LocoNet

Part No. 63 350 Feedback Module 3-rail

Note: If a device capable of programming a LocoNet configuration variable is connected to the digital layout (IB-Control or the LocoNet Interface with LocoNet-Tool software), then the delay/reaction time can be configured individually for each input.

SOUND LOADADAPTER

FOR SOUND MODULE AND DECODER WITH SUSI INTERFACE

- Loading of sound
- Testing of all functions
- Running simulation
- Sound testing
- CV programming

With the Sound Loading adapter sounds can be loaded from the PC to the sound module. All functions can be tested and the driving simulated can be used to hear what the sounds will be like. The sound module's CV's can also be programmed.

The sound loading adapter is connected to the PC's COM port via a 9pin RS232 cable.

The accompanying CD contains the driver program for the loading adapter and over 100 different sounds from steam, diesel and EL locomotives to trams and Trecker.

Part No. 31 010 Sound loading adapter

LOCONET-INTERFACE INC. SOFTWARE LOCONET-TOOL 1.0

THE CONNECTION BETWEEN LOCONET AND COMPUTER TO THE AUTOMATIC LAYOUT CONTROL AND PROGRAMMING OF LOCONET MODULES

The LocoNet interface is the simple and inexpensive connection between LocoNet and computer.

The interface is connected to a PC's 9-pol Com port. It is clearly faster than the Märklin interface and is therefore well suited for automatic layout control. A suitable control program is e.g. Railroad & CO.

With the included software LocoNet-Tool (see description below) LocoNet modules can be easily programmed.

Note: Feedback from s88-Modules that are connected to Märklin devices can not be forwarded to the computer.

Enclosures: Computer cable, instruction manual and the LocoNet-Tool software.

Part No. 63 110 LocoNet-Interface

Available from September 06.

LOCONET-TOOL 1.0

SIMPLE PC PROGRAMMING OF LISSY RECEIVERS AND OTHER LOCONET MODULES

- Easy programming
- With much explanatory text
- Secure configuration, reloading, printing
- With LocoNet monitor control
- PC program for Win98 upward

The LocoNet-Tool allows easy programming and reading of LocoNet-Module and LISSY receiver LNCV'S from a PC.

In principle all configuration variables (LNCV`s) of Uhlenbrock LocoNet modules can be programmed. The Uhlenbrock IntelliLight 28000, LocoNet 2-rail feedback module 63340 and LocoNet 3-rail feedback module, Switch-Control 63400, Switch module 63410, LocoNet panel display 63440, LocoNet display 63450, mobile station adapter 63810 and LISSY receiver 68600 there are special input masks. These are supported by explanatory text for simple programming, so that in many cases programming is possible without reading the module's manual.

All configurations can be saved in files, reloaded and printed to document the configuration.

A LocoNet monitor eases finding of programming faults in automatic control layouts.

Operating System: Windows 98 SE, Windows NT, Windows 2000 or Windows XP together the LocoNet-Interface 63 110.

LISSY – the individual locomotive control system

Finally, your digital layout can have all the things that have been possible on analog layouts for a long time. LISSY fulfills the demands of railway modelers, who want to have simple automatic control of their layout, with block systems and auto reversing, a digital system which up till now needed the aide of a computer.

AND LISSY DOES THIS ON A DIGITAL LAYOUT

- Train recognition
- Shuttle train control
- Locomotive dependent shadow station control
- Digital block control
- Speed measurement
- Starting and stopping inertia at signals
- Auto-control of special functions
- Works without each track isolation

LISSY consists of an Infrared transmitter, which is installed under the vehicle, and a receiver module, whose two infrared sensors are built into the track.

The locomotive address and train category sent by an Infrared transmitter are conveyed by the receiver to the LocoNet so various automatic control functions can be realized without the need of a computer,

LISSY recognizes the locomotive and indicates which train has entered on track 1 of the station.

LISSY controls the shuttle train service in the terminus of the single railed branch line.

LISSY administers your shadow station and finds an individual track for each train and automatically lets the trains depart from the shadow station again.

LISSY is a new block system for digital layouts and automatically controls the block sections on the layout, without the need of a computer.

LISSY brakes a digital locomotive on approaching a red signal using the decoder's internal brake delay.

LISSY measures the speed of passing locomotives true to scale.

LISSY controls situation-dependant sound of locomotives e.g. whistle before a tunnel or blowing the horn at the whistling board before a railway crossing.

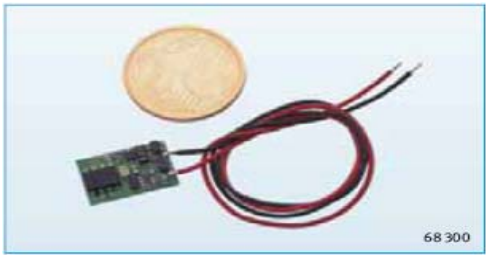
LISSY turns off the sound in locomotives equipped with "IntelliSound" when it travels into invisible areas (shadow station, tunnel).

LISSY switches the light of a certain locomotive on or off after a set time, e.g. if the engine driver turned the locomotive off.

LISSY controls the locomotives' speed, e.g. upon station entry or in slow sections.

LISSY operates without the need for track interruption and can easily be built retro-fitted into a model railway layout.

Each vehicle which is to implement an automatic control function must be equipped with a LISSY Infrared transmitter. The module is only 13.5 x 8.4 x 2.5 mm in size and are configured using decoder programming. It has an address range of 1 to 16382 and four train categories.



The LISSY mini-transmitter 68400 can be connected directly to the 76200, 76400 76420 locomotive decoders or to sound modules 36020 and 36420. it is only 7 x 5.1 x 1.7 mm in size and fits under the NEM coupling pocket.

Displays

LISSY INFRARED RECEIVER

At every location on the layout, at which an automatic operation is to be implemented, a LISSY receiver must be fitted.

The LISSY receiver is a module with two small, hardly visible IR sensors with a diameter of 3 mm which are installed in the track. Connection to the Intellibox is done using the LocoNet. If the automatic functions are to be implemented independent of travel direction, the module can supervise two locations. Then only the address and train category of the passing locomotive are conveyed.

In places where a travel direction dependent automatic function is to be implemented, the two sensors of a receiver are installed in the track one behind the other. In addition to the address and train category the speed and travel direction can be determined.

WHAT IS REQUIRED?

For **switching functions** that only depend on the locomotive address, the receiver module's two sensors can supervise two different tracks. On the other hand if speed and/or travel direction are to be evaluated, both sensors must be installed in the track one behind the other.

For a **shuttle train** a receiver module must be inserted at each end.

For **block system control** each block requires a receiver module.

For fully automatic control of a **shadow station** a module for the entry track, a module for the exit track and a module per track of the shadow station are needed.

Part No. 68 000 LISSY-Set
2 transmitter, 1 receiver,
Connecting cable, Manual
Part No. 68 010 LISSY shuttle train control
1 transmitter, 2 receivers,
Connecting cable, Manual
Part No. 68 020 LISSY shadow station control
5 transmitter, 5 receivers,
Connecting cable, Manual
Part No. 68 300 LISSY transmitter
13.5 x 8.4 x 2.5 mm
Part No. 68 400 LISSY mini transmitter module
7 x 5,1 x 1,7 mm
Part No. 68 610 LISSY- receiver

LOCONET DISPLAY

THE LOCONET DISPLAY WITH MODEL TIME

The display is connected to the LocoNet and will always display the exact information about your digital system.

- The speed and direction of a particular digital locomotive
- The state of 8 consecutive turnouts
- The state of 16 consecutive feedback circuits
- The locomotive address, speed and direction of a locomotive, passing a LISSY receiver
- All IRIS remote control commands
- A model clock

An easily readable, two-line LED display which can be read from larger distances. There are 6 different display modes, which can be switched with the use of turnout instructions. Up to 16 notices can be preset and called up by turnout instruction.

Includes a 2.15 m LocoNet cable.

Part No. 63 450 LocoNet Set

LOCONET PANEL DISPLAY

LISSY INFORMATION AT THE CONTROL DESK

For display of locomotive information on the control panel, that is reported by a LISSY receiver.

- Display of address and speed in km/h
- 4 digit display
- Size 63 x 25,5 x 25,5 mm
- Cutout size 59 x 22 mm

Includes mounting material and LocoNet cable

Part No. 63 440 LocoNet Panel display

Model railway lighting

INTELLILIGHT

STOP STANDING IN THE DARK

We all know of beautiful model railway layouts which are lit by fluorescent or halogen lamps and give no real impression of a landscape in the daylight.

IntelliLight gives you realistic lighting for your model railway layout. IntelliLight lights up your layout to match the time of day and the weather.

- Change between day and night
- Different lighting situations:
- clear sky, cloudy appearance, rain and thunderstorm
- With a photo-flash and IntelliSound module: "rain and thunderstorm"
- Usable in analog and digital layouts
- IntelliLight is powered with a normal model railway transformer
- The modular construction can be individually adapted to each layout

Functions

The day in the model railway layout begins with dawn. The sun then rises after a magnificent morning red. The sun then goes down after an eventful day and the moon washes the entire layout in a mysterious silvery light.

Depending on the weather conditions there is radiantly beautiful or gloomy weather. Now and then it rains or a thunderstorm develops and it flashes and thunders.

The day's routine is started when switching the layout on with an adjustable timer. The type of lighting depends on the time and cloudy appearance. Thunderstorms and rain appear according to a random number generator or by the push of a button.

Depending upon the programming a day passes in 24 hours or up to 20 times faster, therefore in approximately 1¼ hours. The lighting can be switched manually or controlled automatically according to time.

Connection with digital and analog layouts

Our IntelliLight lighting system is powered by a separate model railway transformer. In combination with a digitally controlled model railway facility, which is controlled by a digital center with LocoNet interface (Control unit with 6021-Infrared & LocoNet adapter), it is connected to the LocoNet. Then the day/night transitions, as well as the meteorological phenomena can be triggered by instruction via LocoNet. The lighting can be controlled by the push of a button from the control center. Furthermore it is possible for IntelliLight to switch the road or house lighting that is installed on the layout on and off at the correct time.

If IntelliLight is used with a model railway without LocoNet (analog or digital), then it is possible to attach key switches to the system with which ii can be controlled. If such layouts are also fitted with LocoNet switch module 63 410 the light system and the lighting for roads and houses are connected, then these can be switched on and off at the correct time.

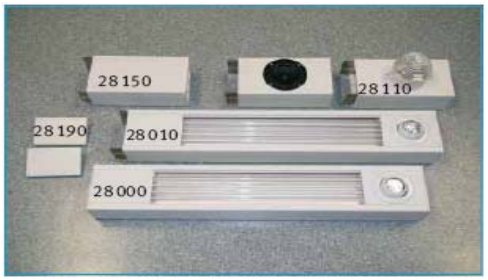
The Components

Basic unit: with the electronic control, two white, a red and a blue CCFL tube and a halogen flood lamp. Allowing connection of as many add-on units as desired. Including two end caps it measures (L x B x H): 600 x 105 x 66 mm. Add-on unit white: with four white tubes and a halogen flood lamp, including the connecting piece and cable. Power requirement approx. 27VA.

Coloured Add-on unit: with two white, a red and a blue CCFL tube and a halogen flood lamp including connecting piece and cable. Power requirement approx. 27VA.

Lightning and sound Add-on unit: a unit with photo flash and a unit with loudspeaker and IntelliSound module "rain and thunderstorm". Included: 2 connecting pieces and cables. Power requirement approx. 43VA.

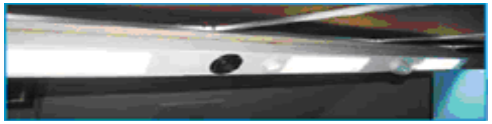
Empty channel Add-on unit: 3 units for length adjustment of the lighting. Included: 3 connecting pieces and cables.

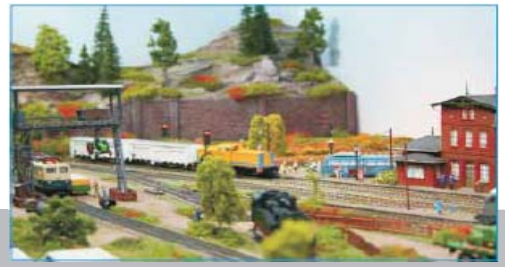


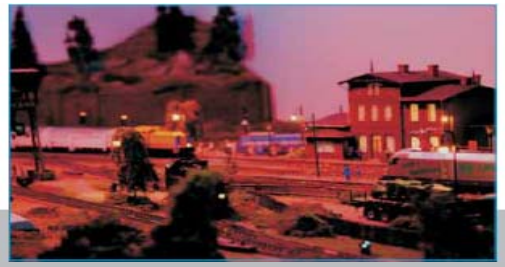
Part No. 28 000 Basic unit, 60 cm
Part No. 28 010 White Add-on unit, 60 cm
Part No. 28 020 Coloured Add-on unit, 60 cm
Part No. 28 110 Lightning & Sound Add-on unit, 2 x 20 cm
Part No. 28 150 Empty channel Add-on unit, 3 pieces 20 cm
Part No. 28 190 End caps, 2 pieces

For our demonstration layout of approx. 2.5 x 1 m one basic unit and two white add-on units with the "lightning & sound" extension were combined.

All units were connected together at a height of 1 m above the layout at an angle of 45°. Thus the layout and also the background are optimally lit.







Switching via LocoNet

LOCONET SWITCH MODULE

SWITCH LAMPS, TURNOUTS AND SIGNALS

- With 20 switch outputs at 1A
- Each output can be independently configured as a continuous output (for lamps) or momentary output (for turnouts or signals).
- Separate transformer means no load on the digital supply
- All outputs can be switched by solenoid commands
- With 2 independently adjustable flashers, each output can be assigned to either flash generator (e.g. for the warning light at the level crossings) or both flash generators (e.g. for the signal light at building sites or for a welding light)

- The addresses for each output are freely selectable in the 1-256 address range

Part No. 63 410 LocoNet Switch module *(Delivery: July 06)*

SWITCH CONTROL

FOR CONNECTING A TRACK DISPLAY

- For connecting of track diagram panel to a digital center with LocoNet connection.
- For the connection of 10 keys and lamps or LEDS.
- All inputs and outputs are freely programmable.
- Turnouts in the address range 1 - 256 directly switchable.
- Switching of routes, which are stored in Intellibox or IB-Switch.
- Switching of routes by start/end key

Part No. 63 400

When it's to be new central controller…

INTELLIBOX-IR

THE MULTI-PROTOCOL DIGITAL SYSTEM

A single unit offers all digital control functions needed on your model railway layout. The Intellibox is independent of the track system or decoder format. It controls most manufacturer's decoders and data formats.
And all mixed at the same time!

OUR STANDARD SETS A NEW BASE LINE

- Independent of track system
- Simultaneous Motorola, DCC, Selectrix
- Up to 128 speed steps
- Up to 9999 Decoder addresses
- Virtual Locomotive addresses
- Multi-traction with up to 4 locomotives
- Switching of turnouts and signals
- Switching of routes
- Multilingual user interface
- Integrated computer interface
- Possible to connect many devices
- Programming of decoders with different data formats
- Free system software updates
- Simplest operation

ALL IN ONE BOX

With the Intellibox you are fully equipped for digital operation. A single device puts the functions of central processing unit, booster, speed controller, keyboard, route control, s88-Monitor, Programmer, computer interface and an infrared receiver at your disposal.

You can use the Intellibox on 2-rail or 3-rail layouts. You can use locomotive, function, turnout and switching decoders simultaneously in Motorola, DCC and Selectrix format from most manufacturers.

CONNECT WHAT YOU LIKE

The Intellibox can be connected with a variety of digital modules from different manufacturers

Control 80/80f, boosters in the Motorola and DCC format, keyboard, Memory, Switch board, Lokmaus 1, s88 and LocoNet feedback modules, PC or Mac and all devices with LocoNet connection (IB-Control, FRED, IB-Switch) can be attached directly.

Using special adapters you can attach a Central unit, Control unit, Motorola Track power booster, Lokmaus 2® and X-bus devices.

TECHNICAL DATA

max. Current load 3 A

on the I²C Bus up to 1 A

on LocoNet output up to 0.5 A

Part No. 65 050 Intellibox-IR

Part No. 61 020 Adapter Intellibox/Control Unit

Information

CATALOG 2005/06

BRAKING SECTION

Our detailed catalog of all our products with lots of tips and advice.

68 pages.

Part No. 10 050

CD ROM 2005/06

DIGITAL CATALOG AND MORE

Under the title "Technology for Model Railways" you not only find all our products, but also descriptions, manuals, "Susikomm" - the program for the sound loading adapter, the currently available sound files for sound decoders or IntelliSound modules, Intellibox updates 1.501 and the column Tips and Tricks.

Part No. 18 050

WWW. UHLENBROCK.DE

THE INFORMATIVE INTERNET SITE

Whether you need the latest information about Intellibox, a price or a dealer list or different publications to download, our InterNet site is worth a look in any case.

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WAYS INTO THE DIGITAL WORLD

SPECIAL EDITION OF A SERIES OF ARTICLES OF THE MODEL RAILWAY PICTORIAL

The “Modellbahn Illustrierten” had a series of articles about "Digitization of Model Railway Layouts". In this special edition all 7 contributions are collected together.

This booklet is interesting for everyone who wants to digitize an existing analog layout or newcomers starting with a digital starter set.

The booklet has 36 pages.

Part No. 16 210

DIGITAL PRACTICES FOR MODEL RAILWAYS

BASICS FOR DIGITAL DRIVING FUN

During the digitization of its model railway layout the model railroader is confronted with a very complex topic.

The well known author and layout builder Rolf Knipper gives basic practical examples which are shown at exhibitions, basic professional knowledge which is right to the point. On both layout projects Elberfeld (2-Rail) and Kottenforst (3- Rail) the professional digitization of the model railway is explained.

The book contains numerous photographs of the layouts' construction as well as many designs and sketches, so that the individual steps can be easily reproduced. In addition the author explains the use of digital components, like Intellibox, IB-Switch, Motorola and DCC decoders, SUSI interface, IntelliSound and decoder installation. A practical guide for beginners and the advanced!

Hard cover, 160 pages, 17 x 24 cm, with approx. 200 illustrations and 45 designs, 4 colour.

ISBN 3-9807748-3-X, 2. revised edition

Part No. 16 010 Volume 1

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