Decoder & Sound

Uhlenbrock
digital

New Items 2011

IntelliDrive - Digital decoder

Decoders for HO DC Motors
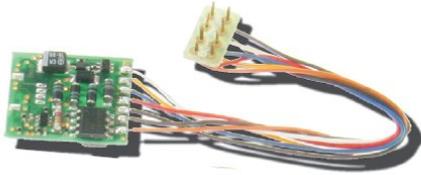
76320 with 8 way NEM 652 Interface Plug

76150 with Plux 16 Interface

76560 with Plux 22 Interface

76330 with 21 way MTC Interface

Decoders for HO Universal Motors
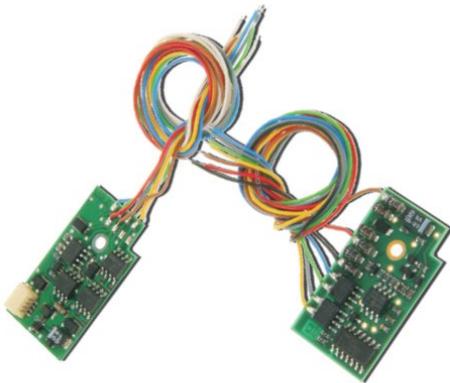
76200 for Universal Motors

75000 for Universal Motors

The digital decoder is the brain of your locomotive. It determines the driving characteristics and switching options. A cheap decoder can rapidly spoil your enjoyment of the vehicle. IntelliDrive decoder are at the top of technology and guarantees you optimum driving characteristics. In our extensive range you will find a decoder for your locomotive.

The PluX 22 decoder is a milestone. Equipped with outputs for light and seven additional special functions all switching possibilities are catered for. With the new PluX 22 interface board, installation is also possible in locomotives that are not fitted with a PluX connection.

Uhlenbrock digital decoders can be operated with DCC centers from all manufacturers and all centers from Märklin®. The exception is the decoder 75 000, which is specifically intended for Märklin®.

In DCC operation the decoders can be run with 14, 27, 28 or 128 speed steps. They can be set to long addresses. This results in an address range 1–9999.

In Motorola® operation the decoders have an address range of 1–255. With the Märklin® Centers 6020 and 6021 however only 80 addresses are available.

The decoders are programmable with Motorola® and DCC Centers in all common programming modes.

The locomotive motors are controlled by the decoders with load regulation and motor power with a frequency of 18.75 KHz which results in extremely smooth and quiet running. Minimum speed, maximum speed and start/brake inertia are configurable. The direction dependant light outputs are dimmable, and with some decoders so are the special function outputs. An additional switchable shunting mode provides accurate speed control at low speeds.

Shunting mode and start/stop inertia can be switched on and off with f3 and f4.

For automatic braking in signal sections the Märklin® brake section or the DCC conforming brake signal can be used.

All decoders with SUSI interface, a 4-way mini-socket, have the option to connect a sound module and LISSY Mini-transmitter.

On mini-decoders this connection is done with solder pads.

All H0 decoders can be used on conventional DC or AC layouts. The DCC data format used is according to the NMRA DCC Standard and is compatible with all NMRA compliant DCC Systems.

Address, driving direction and speed are permanently saved in digital operation. All decoders can be programmed in situ.

Uhlenbrock decoders are updatable with flash memory. They are protected against overheating and with multi-protocol decoders all outputs have short circuit protection.

The latest chip technology provides for minimal warming and for a trouble free running even with short power interruptions like with dirty pickup that often happens on turnouts.

Mini Decoder Scale N
NEW

with improved Characteristics

One of the smallest multi-protocol decoders in the market now with a constant current capability of 500mA (so far 300mA). Short term, it can even drive 1A (so far 600mA), if it is required. It even drives small lamps in older locomotives now. In the event of an error the error buffer will inform about the state of the motor and light outputs.

Part No. 73 400   **Mini** Decoder Scale N with cable connection
Part No. 73 410   **Mini** Decoder Scale N with 6-way plug
Available Now

Decoder Scale N - TT
NEW

larger Loads than the Mini-decoder but still small

The decoder fills the gap between the mini-decoder for N-scale and the H0 Decoders. Ideal for TT locomotives and N locomotives with higher current demands. Applicable on all DCC layouts. The decoder has all characteristics of the N decoder 73400 and also has two additional special function outputs (except 73110) for lighting, smoke unit etc. The constant current load is 600mA and the short time maximum load is 1A.

Part No. 73 100   Decoder Scale N-TT with cable connection
Part No. 73 110   Decoder Scale N-TT with 6-way plug
Part No. 73 140   Decoder Scale N-TT with 6-way plug
Prospective delivery from August 2011

Decoder Spur H0
NEW

with new Load Regulation

Decoders 76 400 and 76 420 have been thoroughly reworked and given the load regulation of our top model 76 560. Already with the factory defaults most locomotives run smoothly like their prototypes. The constant current load is 1A and the short time maximum is 2A.
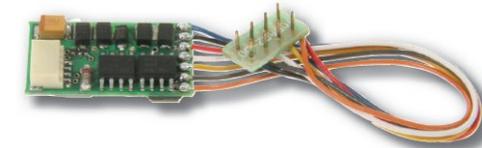
Part No. 76 420   Decoder Scale H0 with 8-way plug
Available from Februar 2011

Decoder Spur 0 - II m
NEW

for larger Loads

The proven decoder 77 500 now has a peak current of 5 Ampere (so far 3.2 A). Now you can also run units with two motors without any problems.

Part No. 76 560   Decoder Scale 0-IIm
Available Now

Decoder with PluX22 Interface H0 Scale

the decoder with the largest variety of functions

A decoder that fully utilizes all options of the PluX22 interface and even more. All 7 additional special functions of the interface can be used with a load of 0.4 A. The decoder delivers a constant motor current of 1.2A and short term peak of 2A.

The special function outputs can be controlled with function keys f1 to f12 (function mapping). They are dimmable and can blink at a configurable frequency.

For operating electric couplings, two time- controlled outputs are provided. For a dynamic smoke development of a smoke generator these can also be speed step dependant.

Head and tail lights are switched depending on the travel direction. Together with our interface board 71 680 it is a universal decoder that can be installed in all types of vehicles.

Part No. 76 560   PluX 22 Decoder
Available Now

Uhlenbrock digital

IntelliDrive Product Overview

Part Number	73100	73110	73140	73400	73410	75000	76150	76200	76320	76330	76400	76420	76560	77500
Suitable for														
Scale	N-TT-H0e-H0m	N-TT-H0e-H0m	N-TT-H0e-H0m	N-TT-H0e-H0m	N-TT-H0e-H0m	H0	H0e-H0m-H0	H0	H0e-H0m-H0	H0	TT-H0e-H0m-H0	TT-H0e-H0m-H0	H0	0-I-IIm
Data format	DCC/Mot	DCC/Mot	DCC/Mot	DCC/Mot	DCC/Mot	Mot.	DCC/Mot	DCC/Mot	DCC/Mot	DCC/Mot	DCC/Mot	DCC/Mot	DCC/Mot	DCC/Mot
Motor type	DC Bell Armature	DC Bell Armature	DC Bell Armature	DC Bell Armature	DC Bell Armature	Märklin® Universal	DC Bell Armature	Märklin® Universal	DC Bell Armature	DC Bell Armature	DC Bell Armature	DC Bell Armature	DC Bell Armature	DC Bell Armature
Motor frequency	High	High	High	High	High	Normal	High	High	High	High	High	High	High	High
Outputs														
Continuous Maximum Load	0.7A	0.7A	0.7A	0.5A	0.5A	0.95A	1.0A	1.4A	0.65A	0.65A	1.0A	1.0A	1.2A	3.0A
Peak Motor current	1.5A	1.5A	1.5A	1.0A	1.0A	1.0A	2.0A	2.0A	1.0A	1.0A	2.0A	2.0A	2.0A	5.0A
Light and Special Functions	0.4A	0.4A	0.4A	0.25A	0.25A	0.95A	0.25A	1.0A	0.65A	0.65A	1.0A	1.0A	0.4A	1.0A
Dimmable Light Outputs	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Additional Special Function Outputs	2	No	2	No	No	No	2	2	No	2	2	2	7	8
Time controlled Special Function Outputs	No	No	No	No	No	No	No	No	No	No	From Ver. 24	From Ver. 24	Yes	Yes
Function Mapping	No	No	No	No	No	No	No	Yes	No	No	Yes	Yes	Yes	Yes
SUSI Sound Interface	Solder pads [1]	Solder pads [1]	Solder pads [1]	Solder pads [1]	Solder pads [1]	No	Via interface Socket [1]	Yes [1]	No	Yes [1]	Yes	Yes	Via interface Socket [1]	Yes
LISSY Output	Solder pads [1]	Solder pads [1]	Solder pads [1]	Solder pads [1]	Solder pads [1]	No	Via interface Socket [1]	Yes [1]	No	Yes [1]	Yes	Yes	Via interface Socket [1]	Yes
Characteristics														
Addresses DCC/Motorola®	9999/255 [2]	9999/255 [2]	9999/255 [2]	9999/255 [2]	9999/255 [2]	-/255 [2]	9999/255 [2]	9999/80 [2]	9999/255 [2]	9999/255 [2]	9999/255 [2]	9999/255 [2]	9999/255 [2]	9999/255 [2]
Speed Steps DCC/Motorola®	128/14	128/14	128/14	128/14	128/14	-/14	128/14	128/14	128/14	128/14	128/14	128/14	128/14	128/14
Load Regulation	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Programmable Motor characteristics	No	No	No	No	No	No	No	Yes	No	No	Yes	Yes	Yes	Yes
Shunting Mode	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Start/brake Inertia	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Analogue Operation	=	=	=	=	=	~	=/~	=/~	=/~	=/~	=/~	=/~	=/~	=/~
Short Circuit Protection	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Updatable Flash Memory	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Error Buffer	Yes	Yes	Yes	Yes	Yes	No	Yes	No	Yes	Yes	No	No	No	No
Connection	Cable	6 way plug	PluX-12	Cable	6 way plug	Cable	8 way plug	Cable	8 way plug	21 MTC	Cable	8 way plug	Plux-22	Screw Terminals
Size in mm	14.5x8.3x2.4 [3]	14.5x8.3x2.4 [3])[4]	14.5x8.3x2.4 [3])[4]	10.8x7.5x2.4	10.8x7.5x2.4 [3]	35x19x5	20x11x5 [3]	33.5x19x5.5	19x15.4x5.5	20.5x15.4x4.5 [3]	22x12.5x5	22x12.5x5	22x15x3.8 [3]	68.5x28x12
Notes	With solder pads for Sound modules or LISSY Mini transmitter.	With solder pads for Sound modules or LISSY Mini transmitter.	With solder pads for Sound modules or LISSY Mini transmitter.	Super small. With solder pads for Sound modules or LISSY Mini transmitter.	Super small. With solder pads for Sound modules or LISSY Mini transmitter.	Reversing switch and Decoder for the original Märklin motor with Field coil. Cost effective	Fits onto the Pickup switch 71 750.	Decoder with Load regulation for the original Märklin motor with Field coil .	Cost effective. With load regulation.	Cost effective. With load regulation. For Locos with 21-way. MTC interface.	Small H0-Decoder.	Small H0-Decoder.		Large scale railway decoder with integrated shuttle control and INDUSI

[1]) SUSI and LISSY are only usable alternatively   [2]) Only 80 addresses are usable with the Märklin® Centers 6020 and 6021   [3]) Dimensions without connecting plug   [4]) Dimensions were not defined at time of printing.

Digital Interface Socket

For rapid Decoder exchange

A Digital Interface Socket makes digitizing of locomotives child's play. The sockets are installed in the vehicles. The plugs are then soldered to the module, e.g. a Digital decoder or reversing switch. Then changing a decoder is no longer a problem and only takes a few seconds. The dimensions of the plug and socket are in accordance with the NEM Standard NEM.

Now also for PluX-Decoders

The Interface board 71 680 is intended for the retrofit of all PluX-Decoders. Besides a PluX-22 socket if offers a SUSI and a LISSY interface socket, and also the pads for soldering the connecting wires. With this board and our Decoder 76 560 you can equip every locomotive with up to seven Functions.

NEW **Part No. 71 641** 5 pieces 6-way plug. NEM 651

Projected availability from April 2011

Part No. 71 621 5 pieces 8- way socket with 175 mm Cable. NEM 652

Part No. 71 651 5 pieces 8- way plug . NEM 652

NEW **Part No. 71 680** PluX-Interface board NEM 658

Dimensions: 24.1 x 15.7 x 4.0 mm

Available in store
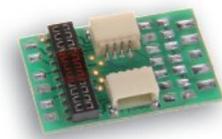
71 621
71 651
71 680 PluX Interface Board

IntelliDrive Function — Function Decoder

Uhlenbrock Functions decoders for Motorola® and DCC have four Function outputs. They function mapping of 32000 functions.

All outputs can be switched according the travel direction, blink or be dimmed. Blink frequency and amount of dimming are configurable.

Part No. 73 900 Function Mini

Part No. 76 900 Function H0

IntelliDrive Function decoder	Function Mini	Function H0
Part Number	73 900	76 900
Suitable for		
Data format	DCC/Mot.	DCC/Mot.
Track gauge	N-TT-H0e-H0m-H0	H0
Characteristics		
Maximum Current load	0.6A	1.2A
Function outputs	4	4
Blink generator	1	1
Addresses DCC/Motorola®	9999/80	9999/80
Analogue operation	=	=
Short circuit protection	yes	yes
Connection	cable	cable
Dimensions in mm	10.8 x 7.5 x 2.4	22 x 12.5 x 5
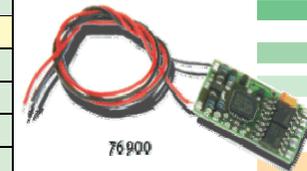
73 900
76 900

IntelliDrive Pickup Switch

For Railcars with two Pickups

With railcars that have two pickups it is essential that the power always comes from the front pickup so that the train stops correctly at a red signal.

The pickup switch 71 750 ensures that always the front pickup, relative to travel direction, is used.

The pickup switch is for installation in vehicles with solder points for front and rear pickups, motor, front and rear lights and prepared for f1, f2.

The Decoder 76 150 is additionally used and simply plugged onto pickup switch.

Dimensions: 40 x 20 x 10 mm
Part No. 71 750 Pickup Switch
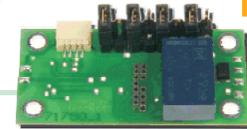
71750 Pickup Switch
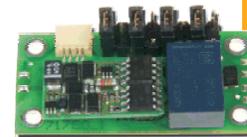
71750 Pickup Switch with 76150 Decoder

Motor Suppressor Kit

For Reducing Motor interference

Electric motors in principle produce interference, which can change the data transfer to a Digital decoder to such an extent that normal operation of the decoder is not possible.

With newer locomotives the motors, as a rule are suppressed.

Older units can be retrofitted with these electronic components.

The Motor Suppressor Kit consists of a capacitor, two chokes and installation instructions.

Part No. 71 500 Motor Suppressor Kit

![Uhlenbrock digital logo]
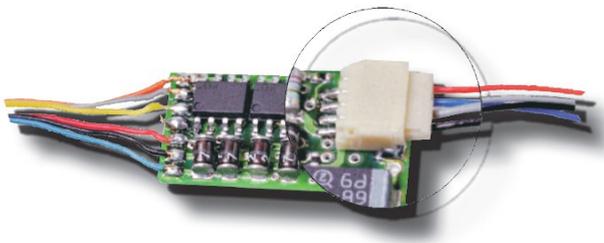
IntelliSound – this is how a real train sounds!

IntelliSound is the digital Sound system from Uhlenbrock/DIETZ for Model Railways.

IntelliSound is available as a sound decoder, that is, a digital decoder with integrated sound module and as sound module for connecting to a SUSI interface of a digital decoder.

The division of decoder and sound into two very small units and the extremely efficient small loudspeaker makes IntelliSound useful even with very little space.

The sounds from the sound module are mixed from three or four independent sound channels. The module can hold up to 40, or 320 seconds of original digitalized sound. Using an intelligent sound control the individually saved original sounds are dependent on the various running situations as in a real train, giving a rich experience.

IntelliSound can independently differentiate between the stop, acceleration, normal running, idle, braking, uphill and downhill states.

The sounds will always be played to match the situation. Thus for a stationary steam engine you hear the boiler hissing, the air pump, the injector and coal shovelling. When starting, a very strong chuff is heard, in idle, the sound of load free drive rods. When the locomotive brake is applied you naturally hear the squealing brakes. When switching the sound on and off a diesel for example you hear the motor starting up or running down to a stop.

On every module sounds additional to the dynamic running sounds can be switched. Among these is the vehicle whistle, a bell, a signal horn or motor fan in an E-locomotive.

SUSI – The universal Interface

SUSI (Serial User Standard Interface) is the interface for connecting additional devices to a digital decoder, and is supported by a number of manufacturers. Locomotives that are fitted with decoders with SUSI, can easily be retro-fitted with Sound and additional special functions.

By dividing the locomotive decoder and sound module even the

SUSI Distribution Cable

A SUSI distributor is available as an accessory so two sound modules can be connected to one decoder. This way a second separately controllable sound module can be connected to a Decoder, e.g. for twin motor locomotive such as the V320 or the

tiniest space in a locomotive can be optimally utilized. Furthermore a locomotive can be fitted with sound at a later time without having to replace the decoder.

Many of our decoders are equipped with a SUSI interface and are therefore ready to connect an IntelliSound module.

VT 18.16 railcar. The distributor can also be used as an extension cable.

Part No. 71 100   SUSI Distributor 70mm,

1 Plug/2 Sockets

IntelliSound 3 - Modules and Decoders

NEW

- **320 Second Sound buffer**
- **Own sounds can be added**
- **Sound dependant special function outputs**

- 4 Channels can play simultaneously
- Function mapping to F28
- Hall sensor for wheel synchronization of puffs
- With SUSI interface
- Connection for storage capacitor
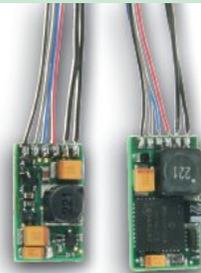
IntelliSound 3 and IntelliSound Module Size Comparison

Voith Maxima with Decoder 76 560, Sound module 32 100 and Loudspeaker 31 140

The new IntelliSound 3 modules and decoders are particularly characterized by their large sound buffer and their small dimensions. Now it is much simpler to convert small H0 locomotives or even N and TT scale with Sound.

You process your own sounds with some PC sound software, save them as WAV File and load them into the module with our SUSI-Sound-Manager. So a station announcement could be played by pressing a function key. Up to 4 additional personal Sounds can be loaded into a module in and assigned to any desired function key.

Except for the IntelliSound 3 mini decoder, all modules and decoders have two sound dependant special function outputs which open up new dimensions:
- the engineer shovels then the firebox flickers
- the chuffs work harder then the smoke unit develops more smoke
- the Elok drives over the layout, the pantograph sparks
- the freight train brakes hard the brakes linings begin to glow

The modules and decoders provide a connection for a Hall sensor, which is useful for wheel synchronization of cylinder chuffs or wheel squeaking in curves.
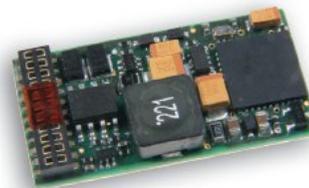
Sound decoder 35 330
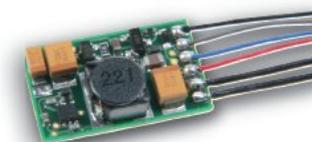
Sound module 32 300

Prospective delivery from

Part No.	Description	
Part No. 32 300	IntelliSound 3-Module	June 2011
Part No. 32 304*	IntelliSound 3-Module with Sound	June 2011
Part No. 33 100	IntelliSound 3-Minidecoder	August 2011
Part No. 33 104*	IntelliSound 3-Minidecoder with Sound	August 2011
Part No. 33 110	IntelliSound 3-Minidecoder, with 6-way Interface	August 2011
Part No. 33 114*	IntelliSound 3-Minidecoder, with 6-way Interface with Sound	August 2011
Part No. 33 150	IntelliSound 3-Minidecoder, with PluX-16 Interface	August 2011
Part No. 33 154*	IntelliSound 3-Minidecoder, with PluX-16 Interface with Sound	August 2011
Part No. 35 330	IntelliSound 3-Decoder, with 21 MTC Interface	June 2011
Part No. 35 334*	IntelliSound 3-Decoder, with 21 MTC Interface with Sound	June 2011
Part No. 36 320	IntelliSound 3-Decoder, with 8-way Interface	June 2011
Part No. 36 324*	IntelliSound 3-Decoder, with 8-way Interface with Sound	June 2011
Part No. 36 360	IntelliSound 3-Decoder, with PluX-22 Interface	June 2011
Part No. 36 364*	IntelliSound 3-Decoder, with PluX-22 Interface with Sound	June 2011

*Note

When ordering IntelliSound modules or decoders with a particular Sound please supply the order number of the desired Sound.

Note the separate order numbers for our empty and sound modules and decoders that come loaded with a required sound.

You will find a list of the available Sounds on Page 11.

IntelliSound 3 - Modules and Decoders

■ 40 Second Sound buffer

■ 3 Channels can play simultaneously

■ Function Mapping

■ Hall sensor for wheel synchronization of puffs

■ With SUSI interface

The proven IntelliSound second generation modules and decoders are equipped with a SUSI interface and are supplied with loudspeaker 31 120 and resonance shell, either empty for individual programming or with one of the sounds from our Sound library.

NOW AT REDUCED PRICES

Part No. 32 100   IntelliSound Empty Module
Part No. 32 400*   IntelliSound Module with Sound
Part No. 36 020   IntelliSound Decoder empty, with 8-way connector
Part No. 36 420*   IntelliSound Decoder with 8-way connector with Sound

32 100/32 400 Sound Module with SUSI interface plug for connecting to a decoder with a SUSI interface
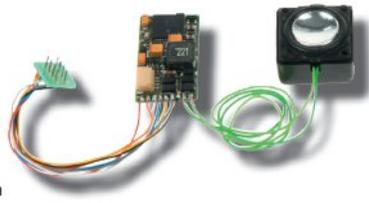
36 020/36 420 Sound decoder with 8-way NEM 652 plug

IntelliDrive Product Overview

*Note

When ordering IntelliSound modules or decoders with a particular Sound please supply the order number of the desired Sound.

You will find a list of the available Sounds on Page 11.

[1]) At time of printing the dimensions were not specified.

[2]) With the Märklin® Centers 6020 and 6021 only 80 Addresses are available.

Part Number empty/with Sound	32100/32400	32300/32304	33100/33104	33110/33114	33150/33154	36020/36420	36320/36324	36360/36364	25330/35334
Suitable for									
Data Format	Decoder dependant	Decoder dependant	DCC/Mot.	DCC/Mot.	DCC/Mot.	DCC/Mot.	DCC/Mot.	DCC/Mot.	DCC/Mot.
Scale	TT-H0e-H0m-H0	N-TT-H0e-H0m-H0	N-TT-H0e-H0m	N-TT-H0e-H0m	N-TT-H0e-H0m	TT-H0e-H0m-H0	TT-H0e-H0m-H0	H0	H0
Motor Type			DC	DC	DC	DC	DC	DC	DC
Connection	SUSI	SUSI	Cable	NEM561 (6 way)	PluX 16	NEM562 (8 way)	NEM562 (8 way)	PluX 22	21 MTC
Dimensions in mm	20.8x11.8x5.0	17.8x11.0x4.7	[1])	[1])	[1])	29x15.7x5.7	[1])	[1])	[1])
Outputs									
Continuous Maximum Load			0.7A	0.7A	0.7A	1.2A	1.2A	1.2A	1.2A
Peak Motor current			1.5A	1.5A	1.5A	2.0A	2.0A	2.0A	2.0A
Light and Special Functions			0.4A	0.4A	0.4A	1.0A	0.4A	0.4A	0.4A
Dimmable Light Outputs			yes	yes	yes	yes	yes	yes	yes
Special Function Outputs			2	2	2	2	2	5	2
Sound dependant Special Function Outputs	-	2	-	-	-	-	2	2	2
SUSI Sound Interface	Socket	Socket	plug	plug	PluX	plug	plug	PluX	plug
LISSY Output			no	no	no	yes	yes	yes	yes
Sound Characteristics									
Sound Buffer	40s	320s	320s	320s	320s	40s	320s	320s	320s
Simultaneously playable channels	3	4	4	4	4	3	4	4	4
Function Mapping	yes	yes	yes	yes	yes	yes	yes	yes	yes
Loading of own sounds	-	4	4	4	4	-	4	4	4
Included Loudspeaker	18 x 18mm	-	-	-	-	18 x 18mm	-	-	-
Decoder Characteristics									
Addresses DCC/Motorola®			9999/255 [2])	9999/255 [2])	9999/255 [2])	9999/255 [2])	9999/255 [2])	9999/255 [2])	9999/255 [2])
Speed Steps DCC/Motorola®			128/14	128/14	128/14	128/14	128/14	128/14	128/14
Function Mapping			no	no	no	yes	yes	yes	yes
Load Regulation			yes	yes	yes	yes	yes	yes	yes
Programmable Motor characteristics			no	no	no	yes	yes	yes	yes
Shunting Mode			yes	yes	yes	yes	yes	yes	yes
Start/brake Inertia			yes	yes	yes	yes	yes	yes	yes
Analogue Operation			=	=	=	=/~	=/~	=/~	=/~
Short Circuit Protection	yes	yes	yes	yes	yes	yes	yes	yes	yes
Updatable Flash Memory	yes	yes	yes	yes	yes	yes	yes	yes	yes
Notes	Standard Sound Module	IntellSound 3 Sound Module	IntellSound 3 Sound Module	IntellSound 3 Sound Module	IntellSound 3 Sound Module	Standard Sound Module	IntellSound 3 Sound Module	IntellSound 3 Sound Module	IntellSound 3 Sound Module

IntelliSound - Loudspeakers

NEW

New to the program is a 23 mm diameter loudspeaker that fits into locomotives which already have a location made for a 23mm loudspeaker. The loudspeaker with 3.6mm is very flat. It is supplied without a resonance shell.

Part No. 31 183   23 **x** 3.6 mm, 0.4 W
Prospective delivery from March 2011

The Loud speakers which we offer specially for Uhlenbrock IntelliSound modules and decoders in the H0 range, are characterized by the smallest dimensions.
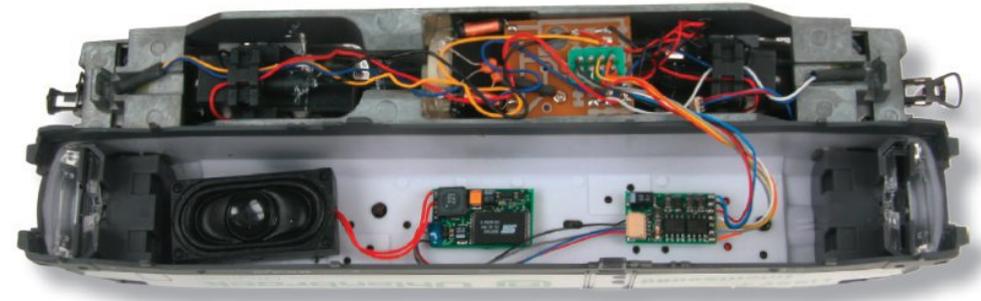
Decoder 76 420, Sound module 32 100 and loudspeaker 31 130 installed in a PIKO Taurus. See the parts.

In the H0 range we offer various loudspeakers with resonance shells. Two larger ones, because a valid reason for selecting a loudspeaker is: The larger the loudspeaker, the stronger the sound.

Part No. 31 110   15 **x** 25 **x** 12 mm, 0,5 W
Part No. 31 120   18 **x** 18 **x** 12 mm, 1 W*
Part No. 31 130   20 **x** 40 **x** 12 mm, 1.5 W
Part No. 31 140   28 **x** 28 **x** 12 mm, 2 W*
All dimensions include the resonance shell

There is also the possibility that a loudspeaker is installed in a "ghost wagon" directly behind the locomotive.

For vehicles where there is no space for a loudspeaker with a resonance shell we offer flat loudspeakers without resonance shells. The 28 mm loudspeaker is intended for vehicles which a provided with a location for a 28 mm loudspeaker.

Part No. 31 180   13.5 **x** 19.5 **x** 4 mm, 1 W
Part No. 31 181   18 **x** 3.7 mm, 0.9 W*
Part No. 31 182   28 **x** 5.4 mm, 0.5 W

For track gauges of 0 to IIm we have larger loudspeakers in our range.

Part No. 31 150   34 **x** 34 **x** 15.5 mm, 3 W
Part No. 31 160   46 **x** 46 **x** 22 mm, 3 W*
Part No. 31 170   57 **x** 57 **x** 39 mm, 10 W

*The loudspeaker marked with * have a metal membrane. All loudspeakers are 8 Ohm.*

Except for loudspeaker 31150, which is 4 Ohm.

31 180   31 181   31 182   31 110   31 120   31 130   31 140   31 150   31 160   31 170

9
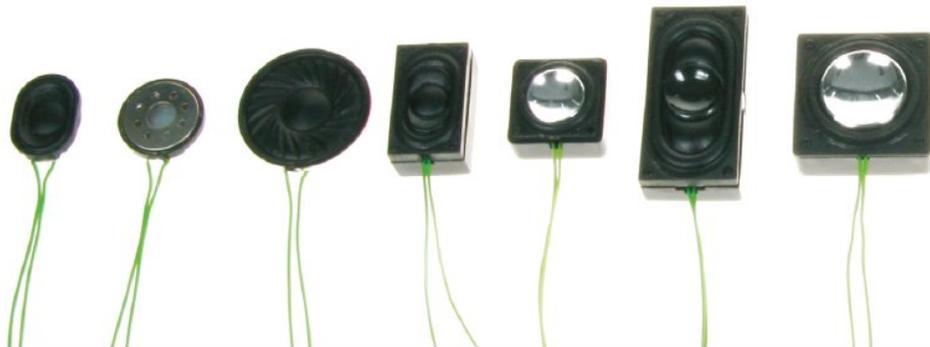
IntelliSound - Loading Adapter
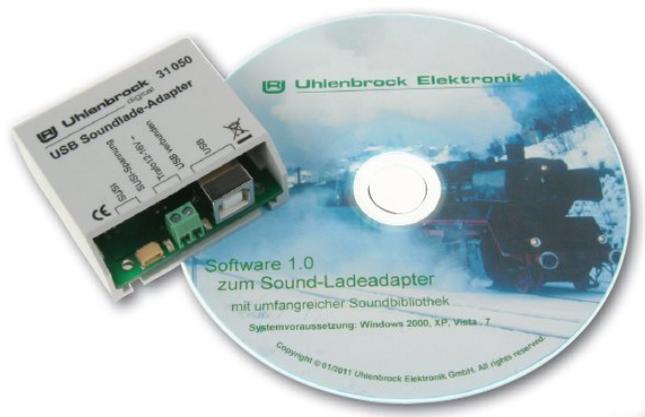
For IntelliSound Modules and Decoders with SUSI Interface

- Loading of Sound
- Testing of sounds and functions
- Start running simulation
- Programming CVs
- With SUSI interface

With the Sound Loading adapter the Sounds from our Sound Library can be loaded from a PC into the IntelliSound modules and decoders. All functions can be tested and with a running simulation the sounds can be previewed. In addition all CVs in the Sound modules can be programmed.

The Sound Loading adapter is connected directly to the PC's serial Com Port or via a connecting cable (9-way SubD socket) or the USB interface and a 12 - 16V ~ transformer. The Sound module is connected to the SUSI Interface of the Loading adapters.

On the accompanying CD you will find the program for Loading

adapter and many different sounds from steam, Diesel and Electric locomotives to trams and tractors.

System requirements: Windows 2000, XP, Vista or 7.

Contents:
Sound Loading adapter, CD with the SUSI-Com program for Windows, operating instructions, Sound Loading cable for IntelliSound Decoders, SUSI/21-way Adapter for IntelliSound Decoder with 21-way interface.

Part No. 31 010	Sound Loading cable (Com-Port)	
Part No. 31 050	USB Sound Loading adapter with Program SUSI-SoundManager _Prospective delivery from June 2011_	
Part No. 31 020	Sound Loading cable 70 mm for Sound decoder, single	
Part No. 31 030	SUSI/21-way Adapter for IntelliSound Decoder with 21-way interface, single	
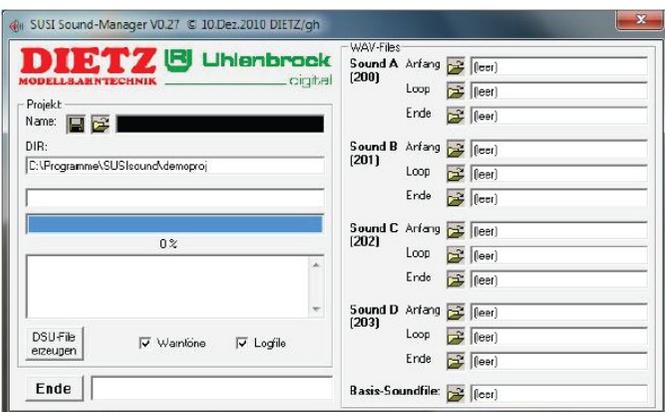
IntelliSound - SUSI-SoundManager

NEW

in combination with the Sound Load adapter and the IntelliSound 3

- Loading of up 4 sounds
- Sound configurable 1x /on/loop/off

With the SUSI-SoundManager up to 4 additional Sounds of your own can be add to the Sound data in the IntelliSound 3 Modules.

For preparing the Sounds in wav Format the Windows Audio Recorder or another Sound Program can be used.

System requirements: Windows 2000, XP, Vista or 7.

Part No. 31 060   **Program** SUSI-SoundManager to add to Sound Loading adapter 31010

Prospective delivery from June 2011.

IntelliSound - Library

Identifier	Sound	Country
	Steam Locomotives	
DL-001	Steam Loco BR 01	D
DL-005	Steam Loco BR 05	D
DL-011	Steam Loco BR 01.10 coal fired	D
DL-012	Steam Loco BR 01.10 oil fired	D
DL -S36	Steam Loco bay. S 3/6	D
DL-018201	Steam Loco 18201	D
DL-023	Steam Loco BR 23	D
DL-024	Steam Loco BR 24	EU
DL-038	Steam Loco BR 38	EU
DL-041	Steam Loco BR 41	D
DL-041-OEL	Steam Loco BR 41 oil fired	D
DL-042	Steam Loco BR 42	D
DL-043	Steam Loco BR 44 oil fired	D
DL-044	Steam Loco BR 44 coal fired	D
DL-050	Steam Loco BR 50	EU
DL-052	Steam Loco BR 52	D
DL-052-KON	Condenser tender Steam Loco BR 52	D
DL-055	Steam Loco BR 55	D
DL-057	Steam Loco BR 57	D
DL-058	Steam Loco BR 58	D
DL-064	Steam Loco BR 64	EU
DL-070	Steam Loco BR 70	D
DL-075	Steam Loco BR 75	D
DL-078	Steam Loco BR 78	D
DL-080	Steam Loco BR 80	D
DL-086	Steam Loco BR 86	EU
DL-089-T3	T3 Steam Loco BR 89 / T3	D
DL-091	Steam Loco BR 91	D
DL-094	Steam Loco BR 94	D
DL-EB33	Steam Loco Tigerli SBB	CH
DL-UNI1	Steam Loco, large, european	EU
DL-UNI2	Steam Loco, small, european	EU
DL-USA	Steam Loco "american"	USA
DL-Mikado-US	Steam Loco 2-8-2	USA
DL- Mikado F	Französiche Steam Loco 1D1	F
DL-Climax	Small train Steam Loco	USA
DL-E-DK	Steam Loco type E (Danish Railways)	DK
DL-F-SE	Steam Loco type F (Swedish Railways)	SE
DL-Heisler	Small train Steam Loco	USA
DL-Shay	Small train Steam Loco	USA
DL-Shay-Öl	Small train Steam Loco oil fired Shay	USA
DL-USA-Holz	Holz Steam Loco holzgefeuert	USA
DL-UINTAH	US Mallet Steam Loco Uintah Railway	USA
DL-Wn12	Steam Loco 12 of the "Härtsfeldbahn"	D
99-UNI	Narrow Gauge Steam Loco, universal	EU

Identifier	Sound	Country
99-222	Steam Loco 99 222 of the HSB	D
99-1067	Rack Rail 1067 'Brünig' train	CH
99-4652	Steam Loco 'Nicki' + French Swiss	D
99-5906	Mallet Steam Loco of the HSB	D
99-6001	Steam Loco 99 6001 of the HSB	D
99-7243	Steam Loco 99 72. of the HSB	D
99-ELIAS	Steam Loco "Elias"	D
99-G45	Steam Loco 107/108 RhB Type G4/5	CH
99-HEIDI	Narrow gauge Steam Loco	CH
99-Spreewald	Steam Loco "Spreewald"	D
99-IVk	Narrow Gauge Steam Loco IVk	D
99-MH53	Narrow Gauge Steam Loco Ruegen	D
99-U43	Steam Loco Zill Valley Railway	A
99-Xrot	Steam snow plough RhB	CH
	E-Locos	
EL-101	E-Loco 101	D
EL-103	E-Loco103 / E03	D
EL-110	E-Loco110 / E10	D
EL-120	Modern DB E-Loco	D
EL-141	E-Loco141 / E41	D
EL-143	E-Loco 143	D
EL-150	E-Loco150 / E50	D
EL-155	E-Loco 155	D
EL-169	E-Loco 169 / E69	D
EL-182-V1	E-Loco 182/Taurus	D
EL-182-V2	E-Loco 182/Taurus	D
EL-182-V3	E-Loco 182/Taurus	D
EL-191	E-Loco 191 / E91	D
EL-194	E-Loco 194 / E94	D
EL-AE66	E-Loco AE 6/6 of SBB	CH
EL-CE68	E-Loco Ce 6/8 Crocodile	CH
EL-KROKO	E-Loco Ge 6/6-I Crocodile (RhB)	CH
EL-HGE22	Rack Rail Hge 2/2	EU
EL-GE44-3	E-Loco Ge 4/4-III (RhB)	CH
EL-GE44-3-J	E-Loco Ge 4/4-III (RhB Jubi Edition)	CH
EL-461	E-Loco Ge 4/6-I of the RhB	CH
EL-662	E-Loco Ge 6/6-II of the RhB	CH
EL-NEU	Modern E-Loco	EU
EL-RE425	E-Loco RE 425	CH
EL-Taurus	E-Loco BR 182 "Taurus"	D
ETA-176	Limburger Cigar	D
ET-515	Akku Rail car ETA 515	D
ET-ATW	Electro Rail car, historic	EU
ET-ICE	Electro Rail car ICE	D
ET-STW	Control Wagon	EU
EL-H6E44-2	Zahnrad E-Lok HGe 4/4-II	CH

Identifier	Sound	Country
	Diesel Locos	
VL-0600DA-V1	Romania Diesel 0600DA KEG 2100	EU
VL-0600DA-V2	Romania Diesel 0600DA KEG 2100	EU
VL-110	Diesel Loco V 100 / 110	D
VL-120-TT	Diesel Loco 120 "Taigatrommel"	D
VL-212	Diesel Loco 212 / V 100	D
VL-218	Diesel Loco 218 / V 160	D
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-251	Narrow Gauge Diesel BR261/ V51	D
VL-260	Diesel Loco 260 / V60	D
VL-265	MAK Diesel Loco V 65	D
VL-290	Diesel Loco V 290 / V 90	D
VL-320-1	Diesel Loco 232 / V 320 DB	D
VL-320-2M	Diesel Loco 232 / V 320 DB (2 Motors)	D
VL-0600DA-V1	Romania Diesel 0600DA KEG 2100	EU
VL-BlueTiger	Diesel Loco "Blue Tiger"	D
VL-G2000	Vossloh Diesel Loco G 2000	D
VL-2091	Diesel Loco 2091 ÖBB	A/D
VL-2095	Diesel Loco 2095 ÖBB	A
VL-F-LKM	Field work Diesel Loco	EU
VL-F-STD	Field work Diesel Loco	EU
VL-GMF44	Diesel Loco Gmf 4/4 (RhB)	CH
VL-Ko-II	Diesel Loco Kö 2	D
VL-KOEF3-V1	Diesel Loco 323 / Köf III	D
VL-KOEF3-V2	Shunting Diesel Loco 323 / Köf III	D
VL-Kof-FW	Fire Dept. Diesel Loco LGB	EU
VL-TM22	Shunting tractor Tm 2/2 RhB	CH
VL-US1	Diesel Loco, large, American	USA
VL-US2	Diesel Loco, middle, American	USA
VL-alco535wp	ALCO Diesel Loco 535	USA
VL-alco-greece	ALCO Diesel Loco	GR
VL-emdgp40	EMD/GM GP 40-2	USA
VL-V29	Diesel Loco V29 Nagold-Altensteig	D
VL-VR-T	Diesel T-Class Victorian Railways	AU
VT-18.16	Rail Car VT18.16	D
VT-18.16	Rail Car VT18.16	D
VT-128	Rail Car "Regio Shuttle"	D
VL-137	Historic Rail Car	D
VL-187	Modern Diesel Rail Car	D
VT-601	Diesel Rail Car	D
VT-610	Rail Car "Pendolino"	D
VT-628	Diesel Rail Car VT 628	D
VT-642	Modern Rail Car "Desiro"	D
VT-772	Rail Bus VT 772	D

Identifier	Sound	Country
VT-795	Rail Bus VT 795	D
VT-798	Rail Bus VT 798	D
VT-AWS	Shunting Diesel SWITCHER	USA
VT-BM35	Motor-Draisine from ÖBB	A
VT-Goose	Rail Bus "Goose"	USA
VT-HSB-T3	Diesel Rail Car T3 of the HSB	D
VT-RAm	Diesel Rail Car VT-Ram	CH/NL
VT-SKL	Red Diesel Wagon SKL	D
VT-TCA	Historical Rail Car TCA (SKLGB)	A
VT-WSB	Wismarer rail bus	D
Draisine	Motor-Draisine	D
VT-AWS	Shunting Diesel SWITCHER	USA
	Road vehicles and sundry	
Bremsgeräusch	Braking noises	EU
Drehscheibe	Turntable BW Heilbronn	D
Feuerwehr	Fire engine	D
Hilfswagen	Help vehicle	-
VW-Käfer	VW beetle with Martin horn	D
K-LANZ-H	Lanz Bulldog, historical	EU
K-MAGIRUS	Magirus LF 16	EU
K-UNIMOG	Unimog	EU
SB-ALT	Tram, historical	EU
SB-NEU	Tram, modern	EU
Straßenbahn	Tram HEAG 66	EU
Straßenbahn	Wuppertal Tram type 107	D
Gewitter	Rain and thunder noises	-
Bremsgeräusch	Braking noises	EU

Status: January 2011

www.uhlenbrock.de

Are you looking for a sound for a special locomotive, tram or tractor? Then visit the Sound Library on our Internet site. Here you will always find available Sound files to try and download free of charge.

## LISSY — the Locomotive individualized Control System

With LISSY you can control your digital layout automatically without a Computer. LISSY is the same as the Fleischmann Train Navigation and offers interesting Functional extensions.

- Train identification by locomotive address and/or train category
- Shuttle train control
- Locomotive dependant shadow station control
- Digital block control
- Speed measurement
- Automatic control of special functions and locomotive speed
- Precise stopping
- Works without track isolation

LISSY consists of an Infrared transmitter which is mounted on the vehicle, and a receiver module whose Infrared sensors are installed in the track.

The locomotive address and train category from the Infrared transmitter are reported to the LocoNet by the receiver. Therefore a variety of automatic control functions can be realized without the installation of a Computer.

LISSY Infrared Transmitter **NEW**

Every vehicle which is to trigger an automatic function is fitted with a LISSY Infrared transmitter. The module sends addresses in range 1–16382 and four train categories. Such as ICE, passenger train or freight train.

The new Infrared transmitter offers the following advantages:
- Very simple
- Higher operating reliability with two IR-LEDs
- External LISSY mini transmitter connection

The transmitter behaves like a DCC decoder and can also be programmed like one. The address and train category are entered into CVs. The size is now only 13.1 x 7.5 x 1.9 mm, before 13.5 x 8.4 x 2.5 mm. Therefore the unit fits under many vehicles which previously could not be fitted with LISSY.

Part No. 68 310 LISSY Infrared transmitter, single
Part No. 68 311 LISSY Infrared transmitter, 5er Pack
Prospective delivery from March 2011

Complete Catalogue 2011/2012

Our complete 76 page catalogue with all our products, many

Tips and advice can be obtained for 3,50 EUR from your local

Uhlenbrock dealer, sending postage stamps to the value of 5,– EUR directly to us or by ordering online on our internet site.

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