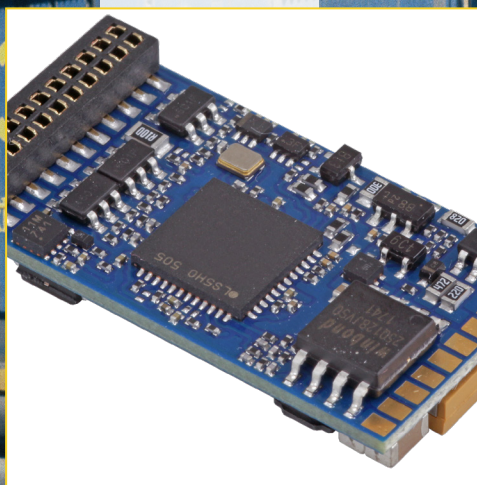


Product Highlights 2019





Dear ESU friends,

2019 is a very special year for ESU. Just about 20 years ago, during the Nürnberg toy fair back in 1999, the first LokSound Decoder was introduced to the Public. For the first time ever, a multiprotocol digital decoder with an integrated, flash memory based, user rewritable sound module was born. Right from the start, we also had the LokProgrammer that offers a comfortable, hassle free, PC based programming solution for ESU decoders. Over the years, many things have happened and our company has grown from a startup to an important company within the model train industry. We would like to thank you for all your support and loyalty since from the beginning. Although the product range has extended very much since our very beginning, we have never forgotten about our very first and still most important product: LokSound Digital Sound Decoders! For that reason, now in our 20th year, we are happy to announce the 5th Generation of these groundbreaking decoders in 2 new versions! LokSound 5, and LokSound 5 DCC! The LokSound V5 DCC will be available in the North American and Australian Market. This will only speak the DCC Language (along with Analog DC of course). For Marklin Users, and those needing more options, we will also be providing a Multiprotocol LokSound V5 version. This will speak, DCC, Motorola, Selectrix, and MFX/M4 (along with Analog AC/DC of course)

Our 5th generation of LokSound has been developed from scratch. Thanks to a high performance, 32-Bit microcontroller, we have been able to improve all key features again: LokSound 5 decoders will support up to 10 simultaneous sound channels. Each channel will reach HiFi-Quality level thanks to 16 Bit Resolution and 31250 Hz sample frequency. LokSound 5 decoders will bring your model trains to the next level and sound almost like the original. A 128 Mbit flash memory chip allows for enough capacity to hold the sounds

LokSound 5 decoders offer an advanced B-EMF load control that runs with up to 50 kHz base frequency and is optimized for low-noise operation. This is important for coreless motors such as Faulhaber or Maxon and also for Large scale locomotives. Every LokSound 5 decoder comes with plenty of function outputs and can control servos or SUSI-modules if needed. Even better, most LokSound 5 decoders could also be used with Analog DC (even the small N scale decoder!)

Based on the command station, up to 32 function buttons are supported that can be mapped to any output due to our superior ESU function mapping. Three brake functions and a two-stage load simulation will let you enjoy your model railroad even more. Compatibility with is ensured with our LokSound 4 and Select product lines as well as we have continued to incorporate our "Full Throttle" features, like Drive Hold! Even more impressive is that all the V4 sound files already created (Over 100!) will be automatically converted in a new version of our famous LokProgrammer software so on Day 1 we will have a full library of sounds to be able to choose from!

By the end of February, we will replace all existing LokSound V4.0 decoders in our product line with the new generation. Further details about the decoders (technical data, Users instructions) as well as an updated sound data base including new LokProgrammer Software version will be published on our website within January 2019.

-Your ESU Team



LokSound 5 - Sound...superdetailed!



We offer every model railroader who wants to create the most authentic model railroad operation possible a real highlight with the new LokSound 5 decoders. Our newly developed, Fifth generation of LokSound, intelligently combines a sound module with a multi-protocol or DCC only Digital decoder. The best part is with LokSound decoders, not only can you operate just like the prototype, but it will sound just like the prototype too! This is made possible by our award-winning LokSound technology - the decoder that every other one has been compared to since its introduction in 1999. From the inventor of user programmable sound decoders.... ESU.

LokSound decoders are available in several versions, depending on the gauge used or Digital System:

LokSound 5 DCC

For North American model railroaders, we created the LokSound 5 DCC Decoder. With its standard size of 30 mm x 15.5 mm, it should find its place in almost every locomotive. It is a pure DCC Decoder, that supports RailComPlus and can also be used on DC layouts. Up to 14 functions are available – depending on the interface. Thanks to its extensive lighting and sound functions as well as its engine output power of 1,5A it is the perfect “all-round decoder” for your locomotives.

LokSound 5 micro DCC

The LokSound 5 micro is a small powerhouse: Its extremely small dimensions of only 21 mm x 10 mm will make sure it fits in almost all N scale locomotives. It is a pure DCC decoder that supports RailComPlus and can also be used on DC layouts. With up to 9 function outputs, you can finally also run smaller locomotives with prototypically equipped lighting functions. An external PowerPack can also be connected. The engine output of 0.75A is suitable for almost all uses in which little space is available. The LokSound 5 micro is always supplied with a standard-compliant Next18 interface. The decoder will include adapter cables connect to locos with other interfaces.

LokSound 5 L DCC

The LokSound 5 L finds its place in O Scale between the LokSound 5 and the LokSound 5 XL. With dimensions of just 51 mm x 25.5 mm, it is not only recommended for size 0 scale locomotives, but also for all other models where a LokSound 5 XL does not fit or is required. . It is a pure DCC decoder that supports RailComPlus and can also be used on DC layouts. The LokSound 5 L offers a motor output current of 3A and up to 17 function outputs as well as the possibility to connect two RC servos. Its dual power amplifier can drive two speakers. Thanks to the now integrated PowerPack, dirty rails are a thing of the past. The decoder is always supplied with pin headers and a matching adapter board.

LokSound 5

The LokSound 5 decoder is a true “Global player”. In addition to DCC with RailComPlus®, it also understands M4®, Motorola® and Selectrix® and is therefore useful for those who require these additional features. LokSound 5 Decoders work on conventional DC and AC systems as well. LokSound 5 decoders come with an 11 mm x 15 mm “sugar cube” speaker and a customizable speaker box kit.

LokSound 5 micro

The LokSound 5 micro is a small powerhouse: despite its extremely small dimensions of only 21 mm x 10 mm, in addition to DCC with RailComPlus®, it also understands M4®, Motorola® and Selectrix® and can also be operated on analog DC and AC (!) systems. With up to 9 function outputs, you can finally also run smaller locomotives with prototypically equipped lighting functions. An external PowerPack can also be connected. The engine output of 0.75A is suitable for almost all uses in which little space is available. The LokSound 5 micro is always supplied with a standard-compliant Next18 interface. The decoder will include adapter cables connect to locos with other interfaces. The LokSound 5 micro decoder comes with an 11 mm x 15 mm “sugar cube” speaker and a customizable speaker box kit.

LokSound 5 L

The LokSound 5 L finds its place in O Scale between the LokSound 5 and the LokSound 5 XL. With dimensions of just 51mm x 25.5mm, it is not only recommended for size 0 scale locomotives, but also for all other models where a LokSound 5 XL does not fit or is required. The LokSound 5 L offers a motor output current of 3A and up to 17 function outputs as well as the possibility to connect two RC servos. Its dual power amplifier can drive two speakers. Thanks to the now integrated PowerPack, dirty rails are a thing of the past. The decoder is always supplied with pin headers and a matching adapter board.

LokSound 5 XL

The LokSound 5 XL has been designed and optimized for the large gauges G and 1. The Dimensions of 55 mm x 41 mm have become standard for almost all gauge 1 and G Gauge models. The LokSound 5 XL with its motor current of 4A allows up to 19 outputs for special functions as well as connection possibilities for 4 additional RC servos hardly leaving any desire unanswered: the adventurous modeler can adapt his locos to the smallest detail of the model. With its integrated PowerPack, sound dropouts are a thing of the past, even in the garden....

The LokSound 5 XL is available in two versions: The version with screw terminals is for hardwiring, while the version with pin headers will work in almost all gauge 1 models from Märklin®, Kiss®, and KM-1®.

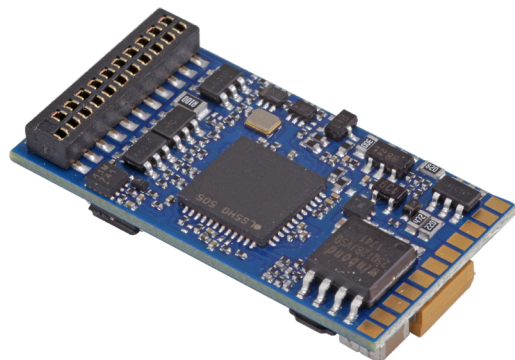
Variety of sounds

ESU as the market and technology leader in the sound field takes your demands on the sound very seriously. There are hundreds of different sound file variants are already available for the LokSound 5 decoder! ESU is constantly expanding this sound library and offers you all the sounds on our homepage for free download.

LokSound 5

LokSound 5 DCC

NEW



The LokSound 5 is the most important member of the LokSound family. Due to the combination of digital decoder and sound module on a printed circuit board, the decoder is only 30mm x15.5mm and can be installed in almost any locomotives of in H0, S, or 0 gauges if the max amperage draw is under 1.5 amp.

Because of different needs in our Global Market we have created 2 different versions of the LokSound V5, LokSound 5 DCC and the Multi-Protocol LokSound 5.

LokSound 5 DCC

The LokSound 5 DCC is made for the North American and Australian markets. It is a pure DCC Decoder, which supports RailComPlus and can also be used on DC layouts.

LokSound 5

In addition to be speaking DCC, Motorola, Selectix, and MFX/M4 digital languages, LokSound 5 decoders are offered with all common interfaces and always come with a 11x15mm "sugar cube" speaker and sound enclosure kit.

Modes

Like all family members, the LokSound5 is a true multiprotocol decoder. It masters the data format DCC as well as Motorola®, Selectrix® and M4. In the DCC format, 14 to 128 speed steps are as natural as 2- and 4-digit addresses and up to 32 functions. Thanks to RailComPlus®, the decoders log on fully automatically to a suitable digital central unit.

It masters all DCC programming modes and, thanks to RailCom®, the CV values on the main track can be read out with suitable control panels. For panels that can only program the CVs from 1-255, there are auxiliary registers.

Motorola® users benefit from up to 28 speed steps with 255 addresses. Three additional Motorola® addresses enable the triggering of 16 functions. A built-in programming mode also makes reprogramming possible with the venerable Control Unit 6021. The M4 protocol allows automatic logon to mfx® compatible panels.

The LokSound 5 decoder recognizes the Märklin® braking distances as well as ZIMO® HLU brake commands or the Lenz® ABC system. Braking with DCC brake modules or DC voltage is also possible. He also stops with a Selectrix® brake diode. An automatic ABC shuttle allows automatic commuting between two stations.

The LokSound 5 decoder can be used on analog DC and AC tracks.

Sound

The LokSound 5 decoder can play up to 10 channels simultaneously. Each channel can be resolved with up to 16 bit / 31250 kHz and finally offers hi-fi quality on your system. There is virtually no difference to the original more audible. A Class D audio power amplifier with up to 3W output powers the speakers, which may have between 4 ohms and 32 ohms impedance. The huge 128 Mbit sound storage provides enough capacity.

All individual sounds can be individually adjusted in volume. The super flexible Sound engine without rigid schedule allows the prototypical simulation of all imaginable locomotives. Three separately adjustable braking functions and two alternative load scenarios give you the maximum control over your Locos.

Features

We know that you want your locomotives to be as realistic as possible. That's why we packed the LokSound 5 with function outputs. Depending on the interface version, each LokSound 5 decoder offers at least 10 amplified function outputs. For versions with PluX22 or 21MTC interface, 4 outputs are added to control servos or logic level outputs. Of course tons of lighting effects are also available. The brightness of each output can be set separately. The decoder handles the automatic on and off during uncoupling for ROCO®, Krois® and Telex® couplings. In order to keep compatible with the thousands of LokSound Selects and LokSound V4 decoders already on the market we made sure to add many of the most popular features of that Generation! This includes the Full Throttle features, including the Famous Drive Hold!

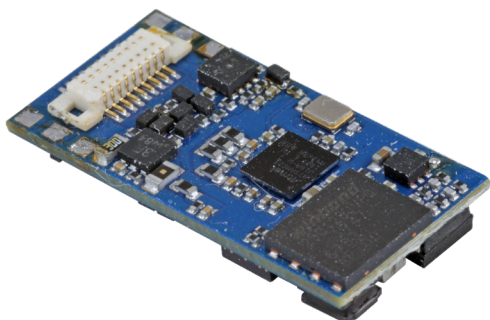
Motor Control

The engine control of the LokSound 5 has again been fundamentally improved. A variably adjustable PWM clock frequency of 10kHz to 50kHz ensures especially in bell armature motors for a super quiet operation - The typical "humming" is a thing of the past. The load control can now be adapted to difficult cases with up to 10 CVs. The unique "Autotune" function allows the automatic decompression of the decoder to the motor. The LokSound 5 decoder delivers up to 1.5A motor current enough juice for older engines.

58420 , LokSound 5 DCC »blank decoder«, 8-pin NEM 652, gauge: 0, H0	\$ 109,99 (MSRP)
58429 , LokSound 5 DCC »blank decoder«, 21 MTC NEM 6660, gauge: 0, H0	\$ 109,99 (MSRP)
58410 , LokSound 5 DCC/MM/SX/M4 »blank decoder«, 8-pin NEM 652, with Speaker 11x15mm, gauge: 0, H0	\$ 129,99 (MSRP)
58412 , LokSound 5 DCC/MM/SX/M4 »blank decoder«, PluX22, with speaker 11x15mm, gauge: 0, H0	\$ 129,99 (MSRP)
58416 , LokSound 5 DCC/MM/SX/M4 »blank decoder«, 6-pin NEM 651, with speaker 11x15mm, gauge: 0, H0	\$ 129,99 (MSRP)
58419 , LokSound 5 DCC/MM/SX/M4 »blank decoder«, 21 MTC NEM 6660, with speaker 11x15mm, gauge: 0, H0	\$ 129,99 (MSRP)
58449 , LokSound 5 DCC/MM/SX/M4 »blank decoder«, 21 MTC NEM 6660 »MKL«, gauge: 0, H0	\$ 129,99 (MSRP)

LokSound 5 micro LokSound 5 micro DCC

NEW



The LokSound 5 micro is a “little wonder”: With only 21mmx10mm footprint, it is by far the smallest LokSound decoder we’ve ever built. This is perfect for N scale, but can also be used in small H0 locos. LokSound 5 micro decoders always have a Next18 interface and are offered with adapter plugs for all common interfaces.

Because of different needs in our Global Market we have created 2 different versions of the LokSound V5, LokSound 5 DCC and the Multi-Protocol LokSound 5.

LokSound 5 micro DCC

The LokSound 5 Micro DCC is made for the North American and Australian markets. It is a pure DCC Decoder, which supports RailComPlus and can also be used on DC layouts.

LokSound micro 5

In addition to be speaking DCC, Motorola, Selectix, and MFX/M4 digital languages, LokSound 5 Micro decoders are offered with all common interfaces and always come with a 11x15mm “sugar cube” speaker and sound enclosure kit.

Modes

The LokSound 5 micro is also a true multi-protocol decoder. It masters the data format DCC as well as Motorola®, Selectrix® and M4. In the DCC format, 14 to 128 speed steps are as natural as 2- and 4-digit addresses and up to 32 functions. Thanks to RailComPlus®, the decoders log on fully automatically to a suitable digital central unit.

It masters all DCC programming modes and, thanks to RailCom®, the CV values on the main track can be read out with suitable control panels. For panels that can only program the CVs from 1-255, there are auxiliary registers.

Motorola® users benefit from up to 28 speed steps with 255 addresses. Three additional Motorola® addresses enable the triggering of 16 functions. A built-in programming mode also makes reprogramming possible with the venerable Control Unit 6021.

The M4 protocol allows automatic logon to mfx® compatible panels.

The LokSound 5 micro decoder recognizes the Märklin® braking distances as well as ZIMO® HLU brake commands or the Lenz® ABC system. Braking with DCC brake modules or DC voltage is also possible. He also stops with a Selectrix® brake diode. An automatic ABC shuttle allows automatic commuting between two stations.

The LokSound 5 micro decoder can be used on analog DC and AC tracks (!).

Sound

The LokSound 5 micro decoder can play up to 10 channels simultaneously. Each channel can be resolved with up to 16 bit / 31250 kHz and finally offers hi-fi quality on your system. There is virtually no difference to the original more audible. A Class D audio power amplifier with up to 3W output powers the speakers, which may have between 4 ohms and 32 ohms impedance. The huge 128 Mbit sound storage provides enough capacity.

All individual sounds can be individually adjusted in volume. The superflexible Soundengine without rigid schedule allows the prototypical simulation of all imaginable rail vehicles. Three separately adjustable braking functions and two alternative load scenarios give you the maximum control over your vehicles.

Features

Despite its small size, the LokSound 5 micro has at least 6 amplified function outputs as well as a logic level output. There are two more logic level outputs on the Next18 interface, which can alternatively control RC servos. Of course tons of lighting effects are also available. The brightness of each output can be set separately. The decoder handles the automatic on and off during uncoupling for ROCO®, Krois® and Telex® couplings. In order to keep compatible with the thousands of LokSound Selects and LokSound V4 decoders already on the market we made sure to add many of the most popular features of that Generation! This Includes the Full Throttle features, including the Famous Drive Hold!

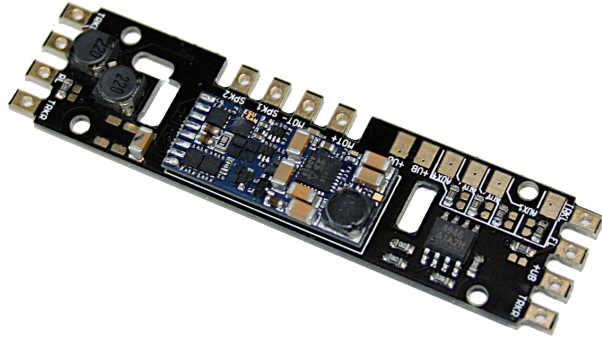
Motor Control

The engine control of the LokSound 5 has again been fundamentally improved. A variably adjustable PWM clock frequency of 10kHz to 50kHz ensures especially in bell armature motors for a super quiet operation - The typical “humming” is a thing of the past. The load control can now be adapted to difficult cases with up to 10 CVs. The unique “Autotune” function allows the automatic decompression of the decoder to the motor. The LokSound 5 decoder delivers up to 0.75A motor current enough juice for all intended usage scenarios.

58820 , LokSound 5 micro DCC »blank decoder«, 8-pin NEM 652, gauge: N, TT	\$114,99 (MSRP)
58828 , LokSound 5 micro DCC »blank decoder«, Next18, gauge: N, TT	\$114,99 (MSRP)
58810 , LokSound 5 micro DCC/MM/SX/M4 »blank decoder«, 8-pin NEM 652, with Speaker 11x15mm, gauge: N, TT	\$134,99 (MSRP)
58814 , LokSound 5 micro DCC/MM/SX/M4 »blank decoder«, PluX16, with Speaker 11x15mm, gauge: N, TT	\$134,99 (MSRP)
58816 , LokSound 5 micro DCC/MM/SX/M4 »blank decoder«, 6-pin NEM 651, with speaker 11x15mm, gauge: N, TT	\$134,99 (MSRP)
58818 , LokSound 5 micro DCC/MM/SX/M4 »blank decoder«, Next18, with speaker 11x15mm, gauge: N, TT	\$134,99 (MSRP)

LokSound 5 DCC Direct

NEW



With its unique design the LokSound 5 Direct DCC can easily replace boards that provide poor motor control, low volume, or generally inferior sound. Not only will the decoder work fine with most factory installed speakers, but it will sound even better with our new 11x15mm "sugar cube" speaker and sound enclosure kits.

Modes

The LokSound 5 DCC is made for the North American and Australian markets. It is a pure DCC Decoder, which supports RailComPlus and can also be used on DC layouts. With its size of 0.67x2.72inch/17x69mm The V5 Direct DCC will fit in almost all of the popular North American and Australian HO manufacturers locomotives.

In the DCC format, 14 to 128 speed steps are as natural as 2- and 4-digit addresses and up to 32 functions. Thanks to RailComPlus®, the decoders log on fully automatically to a suitable digital central unit.

It masters all DCC programming modes and, thanks to RailCom®, the CV values on the main track can be read out with suitable control panels. For panels that can only program the CVs from 1-255, there are auxiliary registers.

Braking with DCC brake modules or DC voltage is also possible. An automatic ABC shuttle allows automatic commuting between two stations.

The LokSound 5 decoder can also be used on analog DC tracks.

Sound

The LokSound 5 decoder can play up to 10 channels simultaneously. Each channel can be resolved with up to 16 bit / 31250 kHz and finally offers hi-fi quality on your system. There is virtually no difference to the original more audible. A Class D audio power amplifier with up to 3W output powers the speakers, which may have between 4 ohms and 32 ohms impedance. The huge 128 Mbit sound storage provides enough capacity.

All individual sounds can be individually adjusted in volume. The super flexible Sound engine without rigid schedule allows the prototypical simulation of all imaginable locomotives. Three separately adjustable braking functions and two alternative load scenarios give you the maximum control over your Locos.

Features

We know that you want your locomotives to be as realistic as possible. That's why we packed the LokSound 5 with function outputs. Depending on the interface version, each LokSound 5 decoder offers at least 8 amplified function outputs. Of course tons of lighting effects are also available. The brightness of each output can be set separately. The decoder handles the automatic on and off during uncoupling for ROCO®, Krois® and Telex® couplings. In order to keep compatible with the thousands of LokSound Selects and LokSound V4 decoders already on the market we made sure to add many of the most popular features of that Generation! This includes the Full Throttle features, including the Famous Drive Hold!

Motor Control

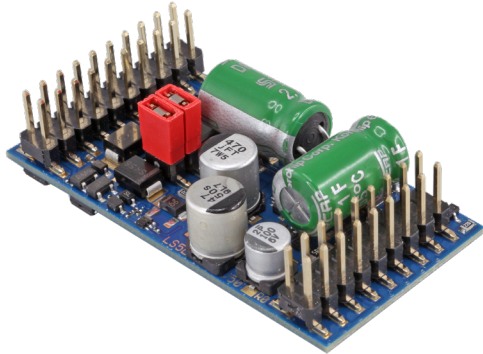
The engine control of the LokSound 5 has again been fundamentally improved. A variably adjustable PWM clock frequency of 10kHz to 50kHz ensures especially in bell armature motors for a super quiet operation - The typical "humming" is a thing of the past. The load control can now be adapted to difficult cases with up to 10 CVs. The unique "Autotune" function allows the automatic decompression of the decoder to the motor.

The LokSound 5 decoder delivers up to 1.5A motor current enough juice for older engines.

LokSound 5 L

LokSound 5 L DCC

NEW



The LokSound 5 L finds its place in O Scale between the LokSound 5 and the LokSound 5 XL. With dimensions of just 51mm x 25.5mm, it is not only recommended for size 0 scale locomotives, but also for all other models where a LokSound 5 XL does not fit or is required.

The LokSound 5 L offers a motor output current of 3A and up to 17 function outputs as well as the possibility to connect two RC servos. Its dual power amplifier can drive two speakers. Thanks to the now integrated PowerPack, dirty rails are a thing of the past. The decoder is always supplied with pin headers and a matching adapter board.

The LokSound 5 L is always equipped with pin headers and is delivered ex works with an adapter board that has solder termination points.

Because of different needs in our Global Market we have created 2 different versions of the LokSound V5 L, LokSound 5 L DCC and the Multi-Protocol LokSound 5 L.

LokSound 5 L DCC

The LokSound 5 L DCC is made for the North American and Australian markets. It is a pure DCC Decoder, which supports RailComPlus and can also be used on DC layouts.

LokSound 5 L

The LokSound L "Speaks" DCC, Motorola, Selectix, and MFX/M4 digital language.

Modes

Like all family members, the LokSound 5 L is a true multiprotocol decoder. He masters the data format DCC as well as Motorola®, Selectrix® and M4. In the DCC format, 14 to 128 speed steps are as natural as 2- and 4-digit addresses and up to 32 functions. Thanks to RailComPlus®, the decoders log on fully automatically to a suitable digital central unit.

It masters all DCC programming modes and, thanks to RailCom®, the CV values on the main track can be read out with suitable control panels. For panels that can only program the CVs from 1-255, there are auxiliary registers.

Motorola® users benefit from up to 28 speed steps with 255 addresses. Three additional Motorola® addresses enable the triggering of 16 functions. A built-in programming mode also makes reprogramming possible with the venerable Control Unit 6021.

The M4 protocol allows automatic logon to mfx® compatible panels.

The LokSound 5 L decoder recognizes the Märklin® braking distances as well as ZIMO® HLU brake commands or the Lenz® ABC system. Braking with DCC brake modules or DC voltage is also possible. He also stops with a Selectrix® brake diode. An automatic ABC shuttle allows automatic commuting between two stations.

The LokSound 5 L decoder can be used on analog DC and AC tracks.

Sound

The LokSound 5 L decoder can play up to 10 channels simultaneously. Each channel can be resolved with up to 16 bit / 31250 kHz and finally offers hi-fi quality on your system. There is virtually no difference to the original more audible. A dual Class-D audio power amplifier with up to two times 3W output powers the speakers, which may have between 4 ohms and 32 ohms impedance. The huge 128 Mbit sound storage provides enough capacity.

All individual sounds can be individually adjusted in volume. The super flexible Sound engine without rigid schedule allows the prototypical simulation of all imaginable rail vehicles. Three separately adjustable braking functions and two alternative load scenarios give you the maximum control over your vehicles.

Features

Each LokSound 5 L decoder comes with 11 amplified function outputs. In addition, there are 6 more logic level outputs available, which can also control (2 pieces) RC servos or SUSI expansion modules on request. Of course tons of lighting effects are also available. The brightness of each output can be set separately. The decoder handles the automatic on and off during uncoupling for ROCO®, Krois® and Telex® couplings. 4 sensor inputs can trigger functions on request. In order to keep compatible with the thousands of LokSound Selects and LokSound V4 decoders already on the market we made sure to add many of the most popular features of that Generation! This Includes the Full Throttle features, including the Famous Drive Hold!

Motor Control

The engine management of the LokSound 5 L has again been fundamentally improved. A variably adjustable PWM clock frequency of 10kHz to 50kHz ensures especially in bell armature motors for a super quiet operation - The typical "humming" is a thing of the past. The load control can now be adapted to difficult cases with up to 10 CVs. The unique "Autotune" function allows the automatic decompression of the decoder to the motor. The LokSound 5 L Decoder delivers enough juice with up to 3.0A motor current.

58325, LokSound 5 L DCC »blank decoder«, Pinheader, gauge: 0

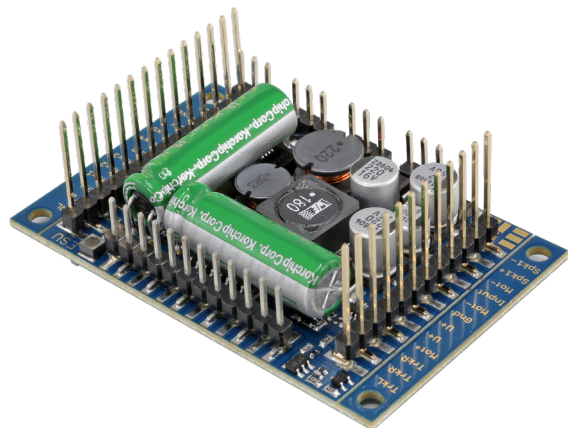
\$ 179,99 (MSRP)

58315, LokSound 5 L DCC/MM/SX/M4 »blank decoder«, Pinheader, gauge: 0

\$ 199,99 (MSRP)

LokSound 5 XL

NEW



The LokSound 5 XL decoder is an extremely powerful decoder! It must be as it is intended for use in your garden railway or gauge 1/G gauge locomotives. Its integrated, power-adapted PowerPack ensures safe operation even on dirty tracks.

The LokSound 5 XL measures 51mm x 40 mm and is produced in two variants: In addition to a variant with robust screw terminals for retrofitting even in older models, there is a version with pin headers. This decoder fits into all locomotives in which an older LokSound XL decoder was installed.

Modes

Like all family members, the LokSound 5 XL is a true multi-protocol decoder. It masters the data format DCC as well as Motorola®, Selectrix® and M4. In the DCC format, 14 to 128 speed steps are as natural as 2- and 4-digit addresses and up to 32 functions. Thanks to RailComPlus®, the decoders log on fully automatically to a suitable digital central unit. The LGB® chain control can trigger the function keys correctly with older LGB® controllers.

The decoder controls all DCC programming modes and, thanks to RailCom®, the CV values on the main track can be read out with suitable control panels. For panels that can only program the CVs from 1-255, there are auxiliary registers.

Motorola® users benefit from up to 28 speed steps with 255 addresses. Three additional Motorola® addresses enable the triggering of 16 functions. A built-in programming mode also makes reprogramming possible with the venerable Control Unit 6021.

The M4 protocol allows automatic logon to mfx® compatible panels.

The LokSound 5 XL decoder recognizes the Märklin® braking distances as well as ZIMO® HLU brake commands or the Lenz® ABC system. Braking with DCC brake modules or DC voltage is also possible. He also stops with a Selectrix® brake diode. An automatic ABC shuttle allows automatic commuting between two stations.

The LokSound 5 XL decoder can be used on analog DC and AC tracks.

Sound

The LokSound 5 XL decoder can play up to 10 channels simultaneously. Each channel can be resolved with up to 16 bit / 31250 kHz and finally offers hi-fi quality on your system. There is virtually no difference to the original more audible. A dual Class-D audio power amplifier with up to two times 6W output powers the speakers, which may have between 4 ohms and 32 ohms impedance. The volume can be controlled separately with two optional potentiometers. The huge 128 Mbit sound storage provides enough capacity.

All individual sounds can be individually adjusted in volume. The super flexible Sound engine without rigid schedule allows the prototypical simulation of all imaginable rail vehicles. Three separately adjustable braking functions and two alternative load scenarios give you the maximum control over your vehicles.

Features

Each LokSound 5 XL decoder is equipped with 12 amplified function outputs. In addition, there are 7 additional logic level outputs available, which can also control (4 pieces) RC servos and SUSI expansion modules on request. Of course tons of lighting effects are also available. The brightness of each output can be set separately. The decoder handles the automatic on and off during uncoupling for ROCO®, Krois® and Telex® couplings. 3 sensor inputs can trigger functions on request. In order to keep compatible with the thousands of LokSound Selects and LokSound V4 decoders already on the market we made sure to add many of the most popular features of that Generation! This includes the Full Throttle features, including the Famous Drive Hold!

Motor Control

The engine management of the LokSound 5 XL has again been fundamentally improved. A variably adjustable PWM clock frequency of 10kHz to 50kHz ensures especially in bell armature motors for a super quiet operation - The typical "humming" is a thing of the past. The load control can now be adapted to difficult cases with up to 10 CVs. The unique "Autotune" function allows the automatic decompression of the decoder to the motor. The LokSound 5 XL decoder provides with up to 5.0A (continuous current: 4.0A) motor current enough juice for PIKO® G-Spur locomotives as well as twin-engine locomotives with Buhler® or Mabuchi® engine.

58513, LokSound 5 XL DCC/MM/SX/M4 »blank decoder«, Screw terminals, gauge: G, I

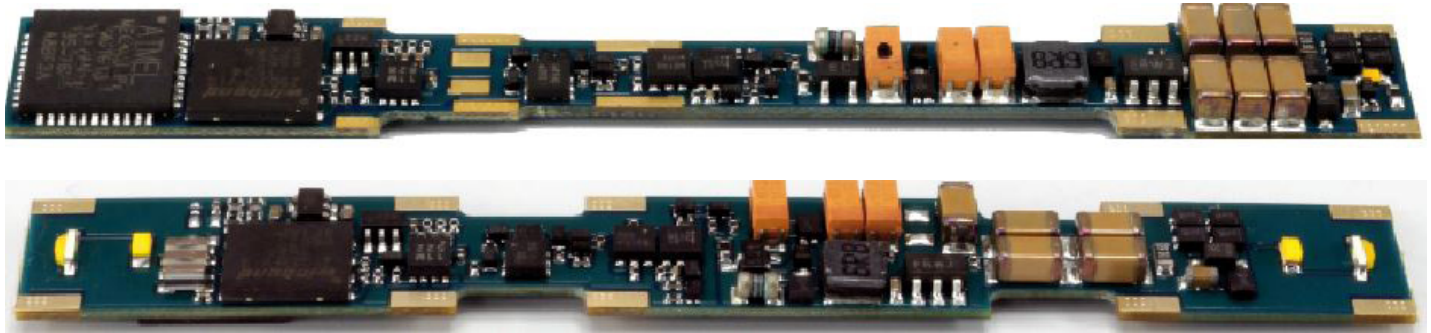
\$249,99 (MSRP)

58515, LokSound 5 XL DCC/MM/SX/M4 »blank decoder«, Pinheader, gauge: G, I

\$249,99 (MSRP)

LokSound Select Direct micro

LokSound Select Direct micro OEM



New N Scale DCC and Sound

ESU LLC is working with numerous OEM customers to help pioneer Full DCC and Sound in Narrow Bodied Diesels in N Scale! Due to this challenging work we have developed not just 1 but 2 Brand New DCC and Sound decoders for our Select Product line. Due to overwhelming demand we've decided to make these decoders available to the retail market for aftermarket installation!

BIG OPTIONS - little decoders

Both of these awesome new decoders come with 6(!) lighting outputs to give you many options even in such a tiny locomotive. As they are both LokSound Select decoders they also come with all the abilities of normal Select Micros. While one decoder is made for retro fitting sound and DCC in earlier N Scale locos, the other is meant to add sound to a DC (non-sound) version of ESU factory installed locos. Like all Selects any Select sound file may be added to either version by using the LokProgrammer. The LokSound Select is a versatile DCC & DC "Dual Mode" decoder integrating a full-featured, 8 channel sound system, six lighting outputs and a .75 Amp motor controller.

Operational modes

The LokSound Select can be used on conventional "analog" layouts and controlled with a DC power pack, but to benefit from all its features, we highly recommend DCC operation. The LokSound Select follows all NMRA DCC standards and recommended practices. It can be used with 14, 28 or 128 speed steps, supports two digit (7 bit addresses) as well as "4-digit" addressing. Up to 29 function keys are supported. The LokSound Select can change between DC and DCC operation at any time "on the fly". Of course, the LokSound Select supports all DCC-programming modes including Programming on the Main Track ("POM").

Because of its unique low-power design, the LokSound Select can be programmed on the programming track of all popular DCC systems. No programming track boosters or other circuitry will be needed. By the use of our LokSound Programmer, programming can be even more comfortable by using your computer to adjust the many CVs and settings.

Sound

The LokSound Select comes with a 32 MBit memory chip. The sounds stored therein are our own recordings which were made by using the latest recording equipment and have been digitally re-mastered for the best audio possible. LokSound Select decoders offer the following unique features:

Multiple whistle and horns: Each LokSound Select offers many whistles & horns. By just changing one CV, you can select your favorite one. This allows an easier adjustment to your model.

-Playable whistle: The LokSound Select supports a very fast responding whistle function. By just pressing your throttle's button, you can really blow the whistle like the real engineer.

-8 channel sound: The LokSound Select can playback up to 8 sounds at the same time. This will result in the most realistic experience available today.

-Synchronized brake squeal: The LokSound Select will synchronize the brake squeal sound with the real movement of the locomotive. No longer will stopped trains have the brake sound still on!

-Manual notching: The diesel speed steps can be either manually controlled by function keys or automatically based on the speed.

-Individual volume control: The volume of all sound effects can be adjusted individually.

Customize your sounds

Unlike other manufacturers, LokSound Select offers you two options to customize your engine. The most simple is by using one (!) CV. You can select the prime mover sound, the desired whistle or horn and the bell. Each LokSound Select offers various options on that. However, if you are still unsatisfied with the result, you may at any time use the famous LokSound Programmer to download new sounds into the LokSound Select. We offer numerous "ready-made" sound packages for easy downloading.

73100, LokSound Select Direct micro «blank decoder» Ready for Programming

\$109,99 (MSRP)

73199, LokSound Select Direct micro OEM «blank decoder» Ready for Programming

\$109,99 (MSRP)

Modular speaker baffle set for a single Sugar Cube speaker



With our new modular speaker baffle set suitable for a single miniature speaker you can easily assemble your tailormade speaker baffle for two miniature speakers. Both – diameter and height – can be individually adapted to suit your needs. Even with one speaker the audio pressure is considerably better than with one circular speaker intended for these dimensions.

The popular sugar cube speaker 11x15mm and 8 Ohm impedance is supplied with a sealed mounting plate. First select one of the three base frames subject to the type of speaker you want to assemble, namely a circular frame with either 20mm or 23mm diameter or a rectangular type with 16x25mm. After you have inserted the speaker into the base frame you may now determine the height of the speaker baffle. The minimum height is 6mm, which can be raised to 8mm, 9mm, 10mm, 11mm or 13mm by adding up to three intermediate frames. The set contains two 2mm high and one 3mm high intermediate frame. They can easily be fixed with some glue suitable for plastic materials.

The higher the speaker baffle, the better the bass fidelity. It certainly pays off to utilize the entire space available.

50341, Speaker set, Single 11x15mm, Modular sound capsule set for 20mm, 23mm, 16x25mm

\$15,49 (MSRP)

Modular twin speaker baffle set for Sugar Cube speakers



With our new modular speaker baffle set you can easily assemble your tailormade speaker baffle suitable for two miniature speakers. Both – diameter and height – can be individually adapted to suit your needs. Considerable audio pressure and excellent sound fidelity can be generated by employing two speakers wired in parallel.

The popular 11x15mm sugar cube speaker with 8 Ohm impedance is supplied with a sealed mounting plate. First select one of the three base frames subject to the type of speaker you want to assemble, namely a circular frame with 28mm diameter or a rectangular type with either 16x35mm or 20x40mm. After you have inserted the speakers into the base frame you may now determine the height of the speaker baffle. The minimum height is 6mm, which can be raised to 8mm, 9mm, 10mm, 11mm or 13mm by adding up to three intermediate frames. The set contains two 2mm high and one 3mm high intermediate frame. They can easily be fixed with some glue suitable for plastic materials.

The higher the speaker baffle, the better the bass fidelity. It certainly pays off to utilize the entire space available.

50340, Speaker set, Dual 11x15mm, Modular sound capsule set for 28mm, 20x40mm, 16x35mm

\$19,99 (MSRP)

Sound selection for LokSound Select Decoders

ESU is the market leader in terms of sound, therefore we take your high demand for good sound very seriously. Here you will find a selection of standard sounds for popular Prime Movers which have been directly recorded from the original loco. For some Locomotives you may even find more than one version for the ULTIMATE variety of sounds for your empire! You will find even more sounds for free within our sound library on our website: <http://projects.esu.eu/projectoverviews/2>

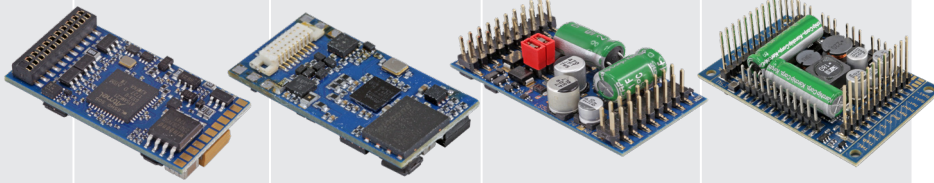
SOUNDPROJECTS for LOKSOUND 5 Decoder

Steam	2-6-0-Z27-Class	S0740
Steam	2-8-2-Heavy-Mikado	S0514
Steam	2-8-2-SOO-1003	S0574
Steam	Big-Boy	S0516
Steam	DRGW-K27	S0586
Steam	Shay	S0515
Steam	SP-GS-4-4449	S0737
Steam	UP-4-6-6-4-Challenger	S0556
Steam	UP-FEF-844	S0590
Diesel	Alco-12cyl-244-V2-FT	S0743
Diesel	ALCO-12cyl-251B-FT	S0541
Diesel	ALCO-12cyl-251C-FT	S0722
Diesel	Alco-12cyl-251C-V2-FT	S0745
Diesel	ALCO-16cyl-251C-FT	S0709
Diesel	ALCO244-12	S0501
Diesel	ALCO244-16	S0561
Diesel	ALCO251-12	S0502
Diesel	ALCO251-Air-Start	S0527
Diesel	ALCO251-Electric-Start	S0562
Diesel	Alco-539T-6-cyl	S0511
Diesel	ALCO-6cyl-251-FT	S0591
Diesel	Alco-6cyl-539-FT	S0589
Diesel	Alco-8cyl-251F-FT	S0769
Diesel	Baldwin-606_606NA	S0546
Diesel	Baldwin-606SC_606A	S0547
Diesel	Baldwin-608A-FT	S0580
Diesel	Baldwin-VO-1000-FT	S0581
Diesel	Baldwin-VO-6	S0505
Diesel	Cat-44	S0544
Diesel	CAT-M636-CAT-FT	S0724
Diesel	Dual-ALCO-16cyl-251C-FT	S0718
Diesel	Dual-ALCO-6cyl-539T-FT	S0598
Diesel	Dual-EMD-12cyl-567-FT	S0583
Diesel	Dual-EMD-16cyl-645E3-FT	S0593
Diesel	Dual-GE-16cyl-FDL-FT	S0521
Diesel	EMD 12cyl 645E3 FT	S0725
Diesel	EMD 16cyl 645E3 V2 Low Idle FT	S0710
Diesel	EMD 16cyl 645E3 V3 Silenced FT	S0730
Diesel	EMD 16cyl 645E3B V4 FT	S0732
Diesel	EMD_645E-8-Non-Turbo	S0507
Diesel	EMD-12-567	S0506
Diesel	EMD-12cyl-567A-FT	S0762
Diesel	EMD-12cyl-567B-FT	S0731
Diesel	EMD-12cyl-567C-FT	S0560
Diesel	EMD-12cyl-645E3-FT	S0539
Diesel	EMD-16-645E3_GP38-2	S0526
Diesel	EMD-16-645F	S0565
Diesel	EMD-16-645F-SD50	S0550
Diesel	EMD-16cyl-567BC-FT	S0711
Diesel	EMD-16cyl-567B-FT	S0746
Diesel	EMD-16cyl-567C-GP10-FT	S0717
Diesel	EMD-16cyl-567C-V3-FT	S0768
Diesel	EMD-16cyl-567D3-FT	S0577
Diesel	EMD-16cyl-567D3-V2-FT	S0758
Diesel	EMD-16cyl-567D-FT	S0723

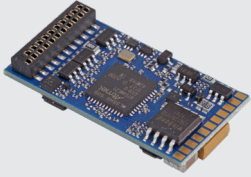

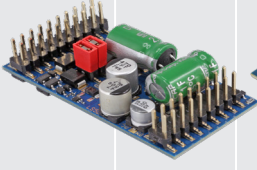
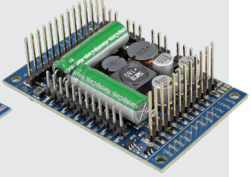
SOUNDPROJECTS for LOKSOUND 5 Decoder

Diesel	EMD-16cyl-645BC-GP16-FT	S0742
Diesel	EMD-16cyl-645C-FT	S0708
Diesel	EMD-16cyl-645E	S0721
Diesel	EMD-16cyl-645E3B-HEP-F40PH-FT	S0530
Diesel	EMD-16cyl-645E3B-V5-FT	S0765
Diesel	EMD-16cyl-645E-V2-FT	S0712
Diesel	EMD-16cyl-710E3B-SD60E	S0757
Diesel	EMD-16cyl-710G3A-FT	S0531
Diesel	EMD-16cyl-710G3B-FT	S0720
Diesel	EMD-20cyl-645E3-FT	S0707
Diesel	EMD-567-16cyl-Non-Turbo	S0536
Diesel	EMD-645E-12-Non-Turbo	S0543
Diesel	EMD-645E-16cyl-Turbo	S0508
Diesel	EMD-6cyl-567A-FT	S0706
Diesel	EMD-710-20Cyl-SD80MAC	S0596
Diesel	EMD-8cyl-567CR-FT	S0771
Diesel	EMD-Dual-12cyl-567BC-FT	S0761
Diesel	FM-38D-6-FT	S0532
Diesel	GE-12cyl-7FDL-Early-FT	S0705
Diesel	GE-12cyl-7FDL-Modern-FT	S0538
Diesel	GE-12cyl-7FDL-Modern-V2-FT	S0727
Diesel	GE-12cyl-GEVO-FT	S0523
Diesel	GE-12cyl-GEVO-V2-FT	S0715
Diesel	GE-16cyl-7FDL16AE-FT	S0728
Diesel	GE-16cyl-7FDL16K16R-FT	S0719
Diesel	GE-16cyl-7FDL-C39-8	S0747
Diesel	GE-16cyl-7FDL-Early-V2-FT	S0734
Diesel	GE-16cyl-7FDL-Modern-FT	S0540
Diesel	GE-16cyl-FDL-Dash_7-FT	S0713
Diesel	GE-16cyl-FDL-Dash-7-V2-FT	S0726
Diesel	GE-16cyl-FDL-Early-V3-FT	S0766
Diesel	GE-7FDL	S0504
Diesel	GE-7FDL-16-cyl	S0568
Diesel	GE-7FDL-16-cyl-A-Modern	S0569
Diesel	GE-8cyl-7FDL-FT	S0576
Diesel	GE-ET44AC-Tier4-Gevo-V2-FT	S0738
Diesel	GE-ET44AH-Tier4-Gevo-FT	S0735
Diesel	GE-FDL-12	S0503
Diesel	GE-FDL-16	S0545
Diesel	GE-P42-AMD103-HEP	S0582
Diesel	GMD-12cyl-645C-FT	S0741
Diesel	Goodwin-6cyl-251-48-Class-FT	S0759
Diesel	Goodwin-Alco-12cyl-244-43-Class-FT	S0739
Diesel	GTEL-Turbine-FT	S0703
Diesel	I-EMD-12cyl-645E-V2-FT	S0733
Diesel	Misc-Galloping-Goose	S0512
Diesel	MLW-12cyl-251B-FT	S0767
Diesel	MLW-12cyl-251C3	S0714
Diesel	MLW-12cyl-251C-M420W-FT	S0770
Diesel	MLW-16cyl-251E-FT	S0729
Diesel	SD70M-2	S0525
Electric	AEM-7	S0595
Electric	GG-1	S0559
Electric	NewOrleans_Trolley	S0736

Decoder overview: LokSound

	LokSound 5	LokSound 5 micro	LokSound 5 L	LokSound 5 XL
				
Operational modes				
DCC 14, 28, 128 speed steps	OK	OK	OK	OK
DCC long and short addresses	OK	OK	OK	OK
DCC traction address (Consist Mode)	OK	OK	OK	OK
DCC LGB pulse control	OK	OK	OK	OK
Automatic speed steps detection	OK	OK	OK	OK
Lenz® LG 100, ROCO brake unit	OK	OK	OK	OK
Lenz® ABC brake unit	OK	OK	OK	OK
Lenz® ABC shuttle train control	OK	OK	OK	OK
ZIMO HLU commands	OK	OK	OK	OK
DC analogue operation	OK	OK	OK	OK
Motorola® 14 speed steps	OK	OK	OK	OK
Motorola® 28 speed steps	OK	OK	OK	OK
Motorola® address 1 - 80	OK	OK	OK	OK
Motorola® address 1 - 127	OK	OK	OK	OK
Motorola® address 1 - 255	OK	OK	OK	OK
M4 data protocol (mfx compatible)	OK	OK	OK	OK
Selectrix®	OK	OK	OK	OK
Märklin® brake unit	OK	OK	OK	OK
AC analogue operation	OK	OK	OK	OK
Automatic detection of operational mode	OK	OK	OK	OK
Throttle (Motor control)				
DC and coreless motors, AC motors with permanent magnet	OK	OK	OK	OK
PWM frequency	10,00 kHz bis 50,00 kHz, adjustable			
BEMF control in digital operation	OK	OK	OK	OK
BEMF control in analogue operation	OK	OK	OK	OK
Adjustable start / maximumspeed in analogue operation (momentum)	OK	OK	OK	OK
Mass simulation for 14 speed steps operation	OK	OK	OK	OK
"Autotune" function for BEMF control	OK	OK	OK	OK
Adjustable BEMF measurement period and measurement gap	OK	OK	OK	OK
Continuous motor current	1,5A	0,75A	3,0A	4,0A
Short circuit protection, Motor brake, Motor overload protection	OK	OK	OK	OK
Sound				
LokSound 5 Soundengine	10 channels, 16 Bit HiFi quality, 31250 kHz Sampling rate, 128 MBit Flash Memorychip			
Power of audio output stage (Sinus)	1,5W Mono. 4-32 Ohm	1,5W Mono. 4-32 Ohm	3,0W (Dual Output) 4-32 Ohm	6W (Dual Output) 4-32 Ohm
Programming				
DCC-Servicemode programming modes (Register Mode, Address Only, Direct Mode)	OK	OK	OK	OK
DCC POM (Programming On the Main)	OK	OK	OK	OK
Programming mode for Märklin 6021	OK	OK	OK	OK
M4® configuration on the Main	OK	OK	OK	OK

Decoder overview: LokSound

	LokSound 5					LokSound 5 micro				LokSound 5 L	LokSound 5 XL		
													
Specials													
M4@ Feedback System	OK					OK				OK	OK		
RailCom@ Feedback System	OK					OK				OK	OK		
RailComPlus@ automatic recognition	OK					OK				OK	OK		
Storage of current operational state (memory)	-					-				-	-		
Motorola@ wrong-direction bit	OK					OK				OK	OK		
Function outputs													
Output dimming	individually					individually				individually	individually		
Light effects like blinking lights, Marslight, Fire box flickering, Smoke box, etc.	OK					OK				OK	OK		
Time-controlled function outputs	OK					OK				OK	OK		
Function Mapping as ESU ESU (F0 - F15)	-					-				-	-		
Function Mapping LokSound 5 ESU (F0 - F31)	OK					OK				OK	OK		
Function Mapping M4@ compatible	-					-				-	-		
Shunting mode (deselectable)	OK					OK				OK	OK		
Momentum control (deselectable)	OK					OK				OK	OK		
Serial protocol (SUSI)	OK					OK				OK	OK		
Adjustable brake controller, (deselectable)	3					3				3	3		
Alternative load and Primary load simulation	Ok					OK				OK	OK		
»PowerPack« keep alive	optional					optional				integrated 2x 1F/2.7F	integrated 2x 5F/2.7V		
Item number (Multi protocol)	58410	58416	58419	58449	58412	58810	58816	58818	58814	58315	58513	58515	
Item number (DCC only)	58420		58429			58820		58828		58325			
Connection	8-pin wires	6-pin wires	21MTC Direct	21MTC MKL Direct	PluX22 Direct	8-pin Adapter	6-pin Adapter	Next18 Direct	PluX16 Adapter	Pinheader Adapterboard	Screwterminals	Pinheader Adapterboard	
Function outputs	10x Power 1x Logiclevel or PowerPack 1x Logiclevel or wheelsensor	10x Power 1x Logiclevel or PowerPack 1x Logiclevel or wheelsensor	10x Power 1x Logiclevel or PowerPack 1x Logiclevel or wheelsensor 2x Logiclevel or Susi AUX3, AUX4 Logiclevel	10x Power 1x Logiclevel or PowerPack 1x Logiclevel or wheelsensor 2x Logiclevel or Susi AUX3,AUX4 Power	10x Power 1x Logiclevel or PowerPack 1x Logiclevel or wheelsensor 2x Logiclevel or Susi	6x Power 1x Logiclevel or PowerPack	6x Power 1x Logiclevel or PowerPack	6x Power 1x Logiclevel or PowerPack 2x Logiclevel or Susi	6x Power 1x Logiclevel or PowerPack 2x Logiclevel or Susi	11x Power 1x Logiclevel or wheelsensor 2x Logiclevel or SUSI 2x Logiclevel or Servo3/Servo4 1x Smokeunit heater 1x Smokeunit Motorcontrol	12x Power 1x Logiclevel 2x Logiclevel or SUSI 4x Logiclevel or Servo 1-4	12x Power 1x Logiclevel 2x Logiclevel or SUSI 4x Logiclevel or Servo 1-4	
Function output power rating for power outputs	250mA each					180mA each				500mA each	500mA each		
Inputs	1x Wheelsensor (or Logiclevel output)					-				1x wheelsensor, 2x Sensor 1x Motor-Off 1x Smokeunit Temp. Sensor	1x wheelsensor 2x Sensor		
Servo outputs	2x or SUSI	2x or SUSI	2x or SUSI	2x or SUSI	2x or SUSI			2x or SUSI	2x or SUSI	2x fixed, 2x or Susi	4 fixed, 2x or Susi		
Dimensions in mm	30.5x15.5x5.5					21.0x10.6x4.0				25,4x51,8x14,0		51,0x40,0x14,0	

Cab Control WiFi DCC System



Since smart phones with touch screens have almost completely replaced the conventional mobile phone, model train enthusiasts and manufacturers face the question how to employ more powerful devices for controlling model trains. As a result of this, many apps have been developed lately, which can be uploaded onto your mobile phone and used for running your trains.

This concept, however, has one disadvantage, namely that smart phones have not been primarily designed for running model trains. Due to the lack of suitable input elements the operator is forced to spend most of the time looking at the display. The limits become quickly obvious so we at ESU had a look at the question on how to utilize the advantages of the smart phone technology and combine it with the needs of model train enthusiasts.

It is with great joy that we now present the results of our considerations. With the new ESU CabControl DCC system you have wireless control of your locomotives, accessories and routes simply by Wi-Fi!

With the 50310 CabControl Integrated Control Unit, advanced model railroading is as simple as ever. With our new system, you have full control over your locomotives, switches and signals just at the tap of a finger. The unit communicates with our Mobile Control II Wireless Controller via wireless LAN. The CabControl's integrated 7 Amp booster also allows it to power even larger layouts with ease. LokSound decoders equipped with RailComPlus® even register automatically with the system! Running trains has finally caught up with the technology of today!

CabControl - Integrated Control Unit

ESU's "North American" System

This system was specially developed for use in North America and Australia.

- American and Australian locomotive icons (along with European icons).
- Easy Consisting for multiple unit lash-ups using drop down menus.
- Wireless walk around system making it easy to follow your train on a large layout.

50310, CabControl DCC System, with WiFi Throttle, 7A, Set with power supply 110V-240VA, USA, Output 15-21V, english \$499,99 (MSRP)

Technical Specifications

CabControl Features

- All DCC modes (14, 28, 128 speed steps) Long and short addresses
- Over 16,000 locomotives can be arranged and controlled
- Up to 28 functions per locomotive

Built-in WLAN Access Point

- Creates a unique Wifi-Network for your Mobile Control II Wireless throttles.
- Supports at least 32 Mobile Control II Wireless Controllers.
- Compliant with all relevant IEEE WLAN standards. Suitable for use in America and Europe.
- The Cab Control features a LAN port to connect the box to your home network.
- Via the home network, the CabControl can be connected to Model Railroad Control Software.

CabControl - Handheld Wireless Throttle

Ergonomics & Functionality Combined

When you hold your CabControl Throttle in your hands for the first time you will immediately notice its excellent ergonomics. All Parts of the screen can easily be reached with one hand, and unlike a cell phone throttle, the most important functions can even be reached "without looking" giving you the ability to watch your trains and not needing to watch your throttle. This is due to the central, motorized throttle knob with end stop. With this knob you can delicately control the speed of your trains and change direction.

For activating functions simply touch the icons on the display. The display also serves for changing functions – exactly the same way as you know it from your mobile phone. Finally, two buttons each on either side serve for changing direction or triggering the most important functions. These side buttons are user editable giving you the choice of what you want to control with them. Colorized Function Icons are displayed showing what function does what. Gone are the days of having to memorize what function button control what decoder feature.

Running Locomotives

The CabControl Throttles can control all locomotives registered in the system and supports 14, 28 or 128 speed steps. All of the important locomotive properties such as name, a picture, function mapping as well as easily identifiable icons for function buttons will be taken from the Integrated Control Unit and will be displayed correctly.

You may switch up to 28 functions for each locomotive, which, of course, can either be momentary or continuous functions. You read that correctly! EVERY Function Button can be momentary or latching depending on your use! No more limitations on how you function map your decoders. As standards are constantly changing and the number of DCC function buttons is increased a simple update will allow for even more!

ECoS



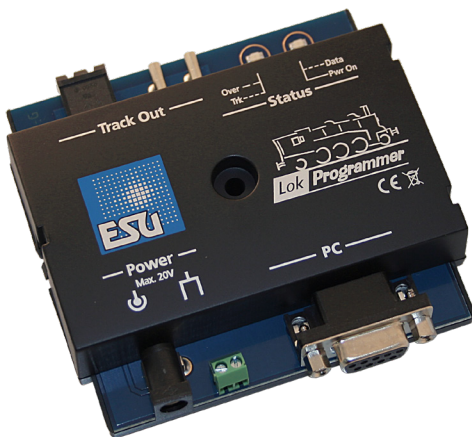
The ECoS 50210 is already the second generation of our successful ECoS command station. ECoS offers state-of-the-art digital technology combined with a contemporary functional range and easy handling. All this, for a fair price-performance ratio.

A fully graphic-capable, illuminated TFT display with excellent contrast values shows all information in plain text. For operation the ECoS has a touch-sensitive display which can be operated either by hand or with the delivered stylus.

50210, ECoS 2.1 system, 6A, 7" TFT, MM/DCC/SX/M4, power supply 15-21V German & English manual

\$799,90 (MSRP)

LokProgrammer



You want to listen to the sound spectrum of your favourite loco on your model railroad? No problem with ESU's LokProgrammer! One prerequisite: A PC with sound card, serial interface or USB port as well as Windows XP or Windows 7. Simply record the original sound of your engine and edit it at home with your computer.

With the LokProgrammer, you can also change the settings of all ESU decoders such as LokSound, LokPilot as well as SwitchPilot decoders according to personal requirements. This makes a realistic railway feeling possible.

53452, LokProgrammer set: LokProgrammer, power supply 120V US, serial cable, instruction manual, CD-Rom, USB-Adapter \$179,99 (MSRP)

What ECoS can do

With an ECoS command station you acquire an open system. ECoS was created to be as open and compatible as possible with all present systems and norms.

- Run locos
- Operate turnouts and magnetic accessories
- Track diagrams
- Routes
- Shuttle train control
- Turntable control
- RailCom® and RailComPlus®
- Current monitor
- Decoder programming
- Self-made Loco Images

In combination with its ground-breaking and easy-to-use user interface ECoS reaches unprecedented ergonomics. All symbols and text are clearly marked and structured.

Thanks to the graphical user interface of Windows the best-possible decoder adjustment can be carried out, even without any programming experience. Never has the adjustment of a digital decoder been easier!

Settings

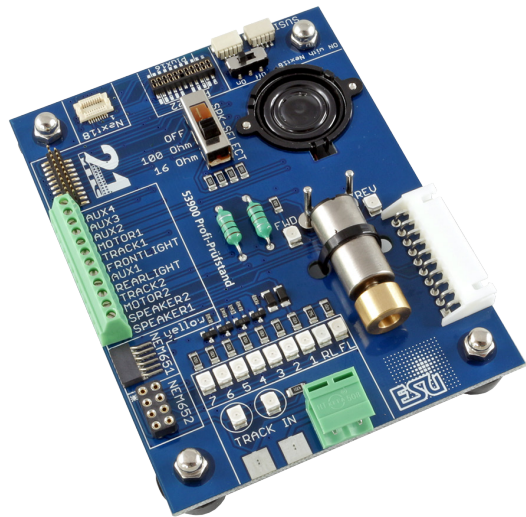
The most important function of the LokProgrammer is the tuning and adjustments of new decoders. No matter if it is a DCC, multi-protocol or M4 decoder. With the help of the LokProgrammer you are able to change almost each of the decoder's settings in an easy and convenient way. Depending on the decoder type the amount of available options varies. You can change all of the decoder's digital parameters, such as address of the loco, operation speed, maximum speed, braking deceleration, brightness of bulbs etc.

Furthermore you can change the parameters of the total load control or the function key allocation as well as for brake distance or analogue modes. Also the speed table can be conveniently manipulated by mouse click. In short, all decoder settings can be displayed and modified.

Of course you can also edit the settings of M4 decoders such as loco symbol, function key symbols and the loco name, just like it is shown later on the command station. If your ESU decoder already speaks RailComPlus®, you are able to modify the respective values as well.

Thus you can set all options with your computer very easily - no cumbersome entering of CVs (configuration variables) with your command station!

Decoder Tester V2.0



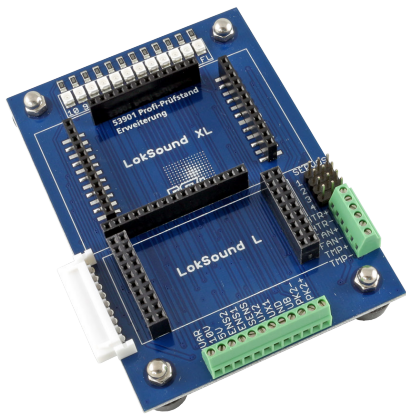
Maybe you know the situation: In front of you there is a digital decoder on the workbench, and before you undertake its complicated installation into the loco, you would like to know if the decoder works as advertised. But, how do you test it? The Decoder Tester helps you: It's designed for testing decoders before these are installed into a loco. The Decoder Tester is simply hooked up to your digital command station, or the LokProgrammer. It even works well with non ESU decoders!

Configuration

To make this as simple as possible for you, the Decoder Tester comes with useful features: To connect the decoder, there is a 6-wire NEM 651 harness and an 8-wire NEM 652 interface, as well as a 21-pin mtc-interface available. Plug it in – Bingo! Locos without an interface board can be hooked up with alligator clips. A quality coreless motor with flywheel serves in conjunction with LEDs indicating the direction for checking the motor output: Thus it is quite easy to check on the low speed performance and the even speed of the decoder. An LED monitor informs you about the functioning of the headlights and back-up lights as well as the function outputs AUX1 through AUX6. For testing LokSound decoders we have integrated a 20 mm speaker. Due to its sensible features and simple handling, the Decoder Tester will soon become an indispensable asset in your shop.

53900, Decoder tester, NEM651, 652, 21MTC, PluX22, Next18, wires. With Motor, LED monitor, 20mm speakers, Extension port \$52,90 (MSRP)

Decoder Tester Extension



Test even more!

If you also have to deal with large scale LokSound XL or LokSound L decoders in your workshop, the Profi Decoder Tester Extension is just the right thing for you: You can plug on LokSound XL V4.0 decoders with multi-pin connectors as well as LokSound L V4.0 decoders directly and easily test them.

The extension module has multi-pin connectors for direct plug-on of the decoder types mentioned above. An LED monitor with 12 LEDs displays the status of all physical function outputs. You may also plug on a second speaker or sensor inputs onto the multi-pin connector for quick and easy testing. Up to four servos may also be plugged on for direct testing.

53901, Decoder tester extension for LokSound XL V4.0, LokSound L V4.0 with LED monitor \$28,99 (MSRP)

Hook up wire



If you work on locos and decoders (e.g. run wires from loco to tender or hardwiring decoders), you need thin, extremely flexible wires. These are not always easy to get. Responding to many requests from our customers, we offer super thin wire (AWG 36) with an outside diameter of only 0.5 mm (0.02 inch), in all common DCC colors. They come in 10 m (30 feet) bundles at an affordable price.

- 51940**, Highly flexible wire, white \$4,99 (MSRP)
- 51941**, Highly flexible wire, purple \$4,99 (MSRP)
- 51942**, Highly flexible wire, black \$4,99 (MSRP)
- 51943**, Highly flexible wire, red \$4,99 (MSRP)
- 51944**, Highly flexible wire, orange \$4,99 (MSRP)
- 51945**, Highly flexible wire, green \$4,99 (MSRP)
- 51946**, Highly flexible wire, grey \$4,99 (MSRP)
- 51947**, Highly flexible wire, yellow \$4,99 (MSRP)
- 51948**, Highly flexible wire, brown \$4,99 (MSRP)
- 51949**, Highly flexible wire, blue \$4,99 (MSRP)

Switch Pilot V2.0



The SwitchPilot 2.0 is an updated version of our well known accessory decoder. It is a robust multi protocol switch and accessory decoder for controlling up to 4 solenoid accessories (e.g. Switches) or 8 loads such uncoupling ramps or incandescent lamps (e.g. street lighting, lighting of buildings or signals). Due to its intelligent software it can be operated with any DCC system.

Operating modes

The SwitchPilot can be operated with all DCC systems. It is compatible to the DCC standard and is triggered by accessory commands.

Functionality

The SwitchPilot can either be powered by the digital command station or by a separate transformer supplying AC or DC. You may connect up to 4 solenoid motors by any of the known manufacturers to its 8 transistor outputs with a maximum continuous current of 1A. In order to prevent blowing the coil of a solenoid without end position contacts, the switch-on time can be adjusted separately for each output from 0.1 sec to 1 second. Alternatively you may choose to configure each output as a continuous output. This is useful for operating signals, streetlights, lighting of buildings or switches. Effects such as fade-in / fade-out ("Zoom") or blinking lights assist you in realizing prototypical signal aspects or warning lights at level crossings.

Servo control

The SwitchPilot V2.0 can do more: in addition to the 4 transistor outputs it can control two conventional RC servos. Speed of movement as well as the end positions can be individually programmed. This facilitates particularly prototypical, slow and powerful point motors regardless of the brand of track system. This is especially valuable for driving semaphore signals or the gates at level crossings. If so desired, the servo pulse can be turned off once the end position has been reached. The power supply to the servo can also be interrupted in order to prevent the humming of some low cost servos.

Feedback

The SwitchPilot can, as the ideal "partner" of the ECoS, provide real feedback of the actual setting of the points. This requires mechanical preparation of the point respectively the point motor: finally you have certainty that your point is really set in the desired position!

Setting parameters

The SwitchPilot can be flexibly programmed: on the one hand it supports all DCC programming modes including POM (Programming on the Main). Provided there is a command station with a programming output, all settings can be monitored and adjusted. Alternatively you may enter the address also with the aid of the programming button mounted directly on the SwitchPilot: press the button – trigger a switch command at the command station – done!

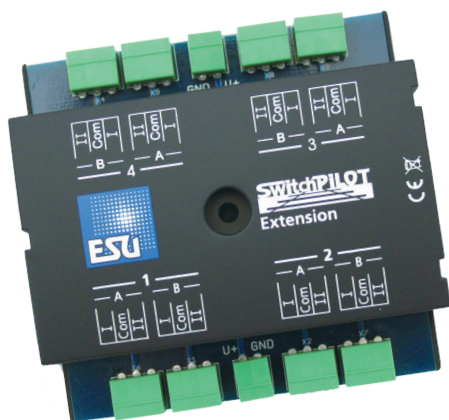
Protection

As it has been the case with our loco decoders, in the design phase great emphasis has been placed upon near indestructibility of the SwitchPilot Servo decoders. That means ESU quality is also built into our stationary decoders, now and in the future! You can rely on it!

Future proof

The internal software of the SwitchPilot V2.0 can be replaced by a more up-to-date version at any time. This is done with the aid of the ESU LokProgrammer. That way everything remains current in case of changes in the standards and you may also profit from new functions.

SwitchPilot Extension



If required, SwitchPilots and SwitchPilot Servos can be augmented with the SwitchPilot Extension Module: Plugged in at the side of the SwitchPilot, it offers four relay-driven outputs, used for switching potential-free loads, or for polarizing the frog; the ideal supplement for tricky circuitry.

Operating modes

The SwitchPilot Extension Module only works in conjunction with a SwitchPilot. Plugged in at the side, it gets its electrical power directly from the SwitchPilot. It contains a total of 4 Twin-Relays (2 x DPDT), of which each is dedicated to a pair of transistorized SwitchPilot outputs.

The respective relay's switch position is directly dependent upon the state of this pair of outputs. With the relay's help, loads can be switched, galvanically separated from the rest of the track, or a motorized turnout can be polarized.

With the relay's 1.5 Amp continuous rating, either frogs can be polarized, or blocks powered signal dependent, or motorized devices, such as Crossing gates may be triggered. Especially intricate is the option to control motorized turnouts: Of course the SwitchPilot Extension Module easily handles the necessary motor polarization as well.

51801, SwitchPilot Extension, 4x relay output, extension for SwitchPilot V1.0

\$35,99 (MSRP)

SwitchPilot Servo V2.0



For each servo, not only lever speed can be adjusted individually but also its end positions. Thus it is possible to operate especially prototypically slow and powerful turnout motors, independent of track- and gauge systems. You could also employ the SwitchPilot Servo for driving Semaphore Signal arms or railway crossing gates. Also the automatic opening of engine house doors does not need to remain a dream.

Programming

The SwitchPilot Servo can be programmed very comfortably: For one it supports all DCC modes of programming including POM (programming in the main). As RailCom® is integrated, it is also possible to read out and control recent settings, even during operation on a RailCom® equipped layout. Alternatively you can use the comfortable three-button input: You are able to control addresses, the end positions of all four servos and the corresponding motion speed directly, during operation and without any complicated programming- on all command stations!

Analog operation

The Switch Pilot Servo would not be a typical ESU product, if it had not even more to offer: You can operate the decoder without the use of a command station! Conventional switches can be controlled with the help of eight switch inputs. Therefore fans of "classic" analog model railway can benefit from the advantages of the servo motor. In other words: the SwitchPilot Servo does not need a command station to switch and set servo paths as well as speed.

While similar to our SwitchPilot V2.0 our SwitchPilot Servo is specifically designed with Servo use in mind and can be used with any DC or DCC systems. It is compatible with the DCC norm and reacts to switch commands.

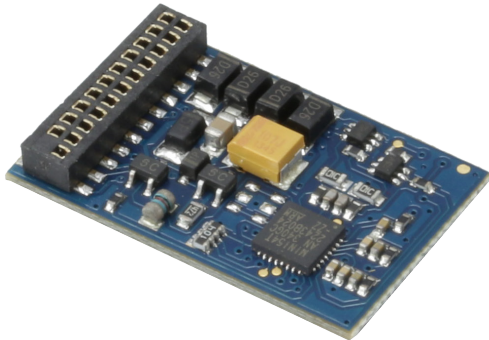
Functions

The SwitchPilot Servo can be powered either directly by the digital command station itself or separately by a DC- or AC source (transformer). RC servos or ESU servo motors can be directly connected to its four servo outputs. The 5V voltage needed as well as the special control impulse is generated by the SwitchPilot Servo itself.

51822, SwitchPilot Servo V2.0, 4-fach Servo decoder, DCC/MM, RailCom®

\$35,99 (MSRP)

LokPilot Standard V1.0



Every once in a while we received inquiries for a robust, simple to use and affordable DCC decoder.

We are proud to present you our answer to the challenge: The all new LokPilot Standard was developed from scratch with the aim to bring you a decoder which would satisfy the needs of the majority of model railroaders. On the one hand it offers all the fundamental functions, while on the other hand it is easy on the wallet.

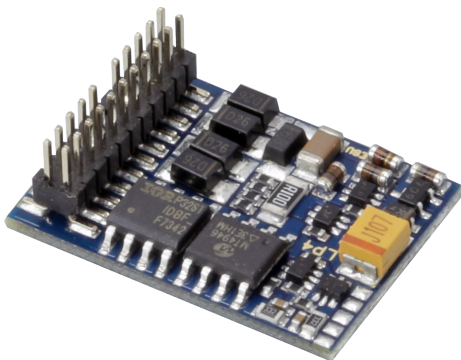
The result is convincing: The LokPilot Standard is surely not a stripped down, technically obsolete decoder, on the contrary: It contains the most modern, on the world market presently available 32 Bit CPU technology.

Like all other LokPilot decoders, the LokPilot Standard is convincing due to its excellent load control, good slow speed characteristics, four function outputs and its robust build-up. It features function mapping, dimmable headlights, lighting effects such as Mars light, Strobe or flashing lights. Further, because of RailComPlus® it can be automatically detected by suitable command stations.

The LokPilot Standard lends itself to all popular DCC-systems and sports a so far unbeatable price/performance ratio. At last, you do not need to work without a decoder featuring load control for your locos anymore, but have access to a fully matured brand.

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| 53611 , LokPilot Standard DCC decoder, 4 outputs, with 8-pin plug | \$23,99 (MSRP) |
| 53614 , LokPilot Standard DCC decoder, 4 outputs with 21MTC interface | \$23,99 (MSRP) |
| 53616 , LokPilot Standard DCC decoder, 4 outputs with PluX12 interface | \$23,99 (MSRP) |

LokPilot V4.0 DCC



We like to present to you the LokPilot V4.0 DCC decoder. It suits perfectly into almost every kind of H0 locomotive.

The LokPilot V4.0 DCC is available in all contemporary plug and interface versions: beside the common interfaces we have a 21MTC version as well.

Features

In DCC mode 14-128 speed steps are possible, as well as 2- and 4-digit addresses. You can activate up to 28 functions. Thanks to RailComPlus®, the decoders will be automatically recognised by a suitable command station (e.g. ECoS). The LokPilot V4.0 DCC is equipped with fifth generation B-EMF which is same as on LokSound Select. This results in a very smooth operation of your trains.

The decoder has at least 4 function outputs 250mA each. Beside that (with 21MTC) there are two more unamplified outputs. All-important light functions are available. The brightness of each output can be adjusted separately.

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| 54611 , LokPilot V4.0, DCC, 8-pin plug NEM652, cable harness | \$32,99 (MSRP) |
| 54613 , LokPilot V4.0, DCC, 6-pin plug NEM651, cable harness | \$32,99 (MSRP) |
| 54615 , LokPilot V4.0, DCC, 21MTC interface | \$32,99 (MSRP) |
| 54617 , LokPilot V4.0 DCC, PluX NEM558 | \$32,99 (MSRP) |

Mobil Control II



Since smart phones with touch screens have almost completely replaced the conventional mobile phone, model train enthusiasts face the question how to employ more powerful devices for controlling model trains. As a result of this, many apps have been developed lately, which can be uploaded onto your mobile phone. This concept, however, has one disadvantage, namely that smart phones have not been primarily designed for running model trains. Due to the lack of suitable input elements the operator is forced to spend most of the time looking at the display.

We at ESU had a look at the question on how to utilize the advantages of the smart phone technology and combine it with the needs of model train enthusiasts. With the new Mobile Control II you have wireless control of your locomotives, accessories and routes simply by WiFi control!

Open Platform

The completely new development of the Mobile Control II is based on a powerful Android system: The ARM® Cortex® A8 micro processor can access 1 GB RAM and controls a high resolution 3.2 inch TFT colour display. There are 4 GB flash memory for storing apps and data.

A capacitive touch screen assures touch-free data entry. For communicating with the "outside world" there is a USB port and a WLAN interface. The powerful Lithium polymer rechargeable battery will serve you right through the most extensive operating sessions. Due to the open platform design you may add further apps for the Google Play Store.

Ergonomics & functionality

When you hold your Mobile Control II in your hands you will notice its excellent ergonomics: all data entry elements can easily be reached with one hand. This is due to the central, motorised throttle knob that is used to control the speed of your trains.

The Mobile Control II is perfectly tuned for the interaction with the ECoS command stations: the ECoS synchronises all data with the radio controlled throttle.

Functions

The Mobile Control II can control all locomotives registered in the ECoS. All locomotive properties such as name, symbol, function mapping as well as symbols for function buttons will be taken from the ECoS and will be displayed correctly. You may switch up to 28 functions for each locomotive.

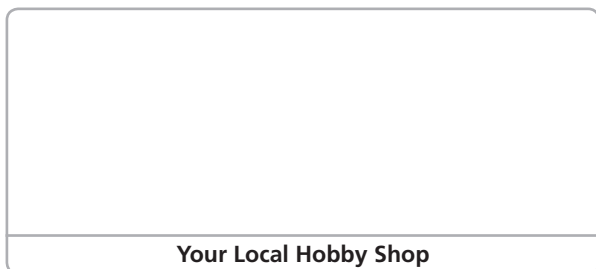
All accessories and routes displayed on the control panel of the ECoS can be switched.

The high resolution (480 x 800 pixels, 280 dpi), backlit TFT display of the Mobile Control II always keeps you up to date on the most important operating parameters.

The Mobile Control II applies the WiFi standard for communication. Therefore you must connect the command station to a WiFi network. Should you already have a WiFi router you may simply connect the ECoS to it. The ECoS and the Mobile Control II will find each other automatically. If you do not wish to connect your model train layout with your home network, we can supply a mini access point on request that can easily be set up in a few steps with the ECoS.

When your layout keeps growing you may operate up to 16 Mobile Control II throttles with your ECoS.

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|--|-----------------|
| 50113 , Mobile Control II wireless throttle for ECoS, Including WiFi Access Point, German / English | \$319,99 (MSRP) |
| 50114 , Mobile Control II wireless throttle for ECoS (Use this one for the CabControl!), single handset, German / English | \$299,99 (MSRP) |



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USA & Canada & Australia

ESU LLC
 Montoursville PA USA
 Phone +1 (570) 980 1980
 Fax +1 (866) 591 6440



www.loksound.com