Product Highlights 2020

Dear ESU friends,

2020! A new Decade! Over 20 years ago ESU's first LokSound decoder was introduced into the market and we continue to accelerate into the future ever since. 2020 is no different as we have many new products in development! One of our major announcements for this year is our new line up of LokPilot 5 and LokPilot 5 DCC non sound decoders! We are excited to bring the same quality and high end features of the LokSound 5 into the non-sound DCC market. We recognize that not all users have a need for sound in every locomotive but have a desire to utilize the unparalleled motor control and outstanding lighting features of that ESU has to offer. For those users that wish to use both LokSound and LokPilot decoders in consist together the LokPilot 5 is the perfect mate to the LokSound 5 as all the motor control and lighting features are identical.

LokPilot 5 - one for all, all in one!

LokPilot decoders have been used by thousands of satisfied customers worldwide since their appearance in 2001 and have earned an excellent reputation: their high reliability in tough system use, the diverse application options thanks to the multi-protocol feature, the unmatched flexible function key mapping and the careful production in ours ISO 9000 certified plant in Pilsen / Czech Republic are just some of the reasons that speak for a real LokPilot decoder. This success story continues with the new LokPilot 5. Completely redeveloped with a modern 32 bit processor as the "heart", digital decoders are a bit more "intelligent" than before. LokPilot 5 decoders are offered in all common interface versions and always as a pure DCC or multiprotocol version. A suitable LokPilot 5 decoder is available for every application.

Continued Speaker Development

As locomotives continue to become more and more detailed and the sound quality from the decoders is ever increasing the limit becomes the speaker that is playing this wonderful audio! If an inferior speaker is used you will never be able to enjoy the fullness of sounds! For this reason ESU is always striving to provide the best and most robust speaker options. This year is no different as we have multiple new "Sugar Cube" and "Bass Reflex" technologies to offer.

Your ESU Team

LokSound 5 - Sound...superdetailed!

LOKSOUND
EST. 1999

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 use 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 use 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 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

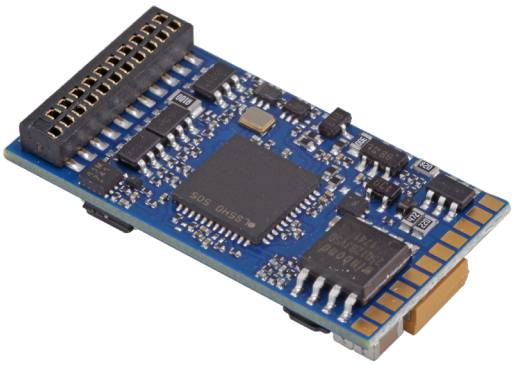
The LokSound 5 XL has been designed and optimized for the large gauges G and 1. The Dimensions of 55 mm x 41 mm have become standard for almost all gauge 1 and G Gauge models. The LokSound 5 XL with its motor current of 4A allows up to 19 outputs for special functions as well as connection possibilities 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



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

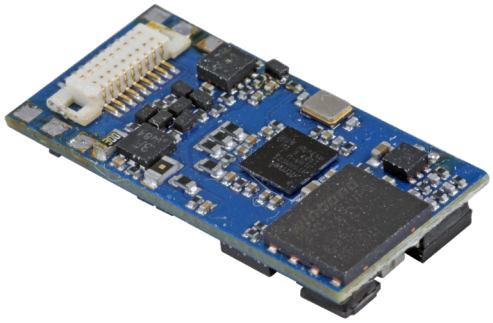
We know that you want your locomotives to be as realistic as possible. That's why we packed the LokSound 5 with function outputs. Depending on the interface version, each LokSound 5 decoder offers at least 10 amplified function outputs. For versions with PluX22 or 21MTC interface, 4 outputs are added 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



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

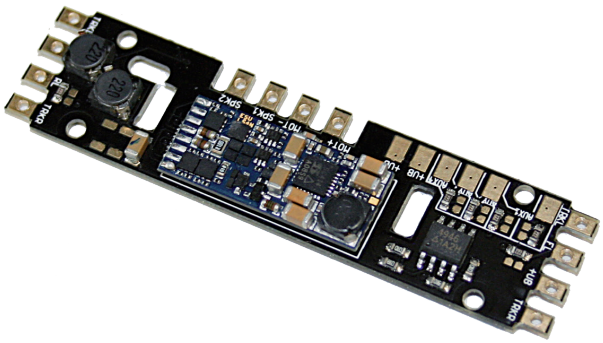
Despite its small size, the LokSound 5 micro has at least 6 amplified function outputs as well as a logic level output. There are two more logic level outputs on the Next18 interface, which can alternatively control RC servos. Of course tons of lighting effects are also available. The brightness of each 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



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 manufacutrers 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!

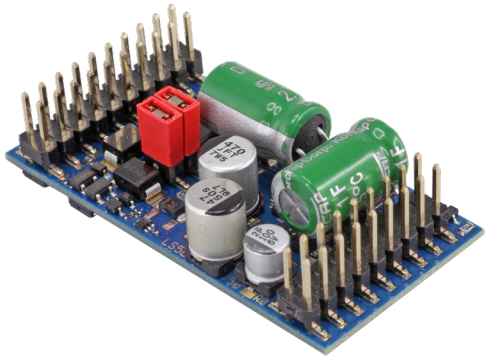
Motor Control

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.

58821, LokSound 5 DCC Direct »blank decoder«, gauge: 0, H0 $119,99 (MSRP)

LokSound 5 L
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 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

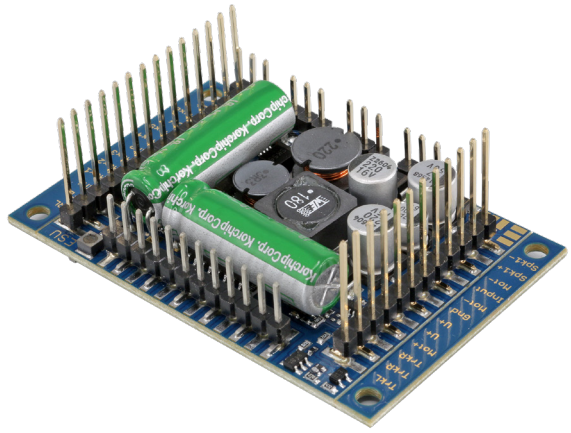
Each LokSound 5 L decoder comes with 11 amplified function outputs. In addition, there are 6 more logic level outputs available, which can also control (2 pieces) RC servos or SUSI expansion modules on request. Of course tons of lighting effects are also available. The brightness of each output can be 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



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

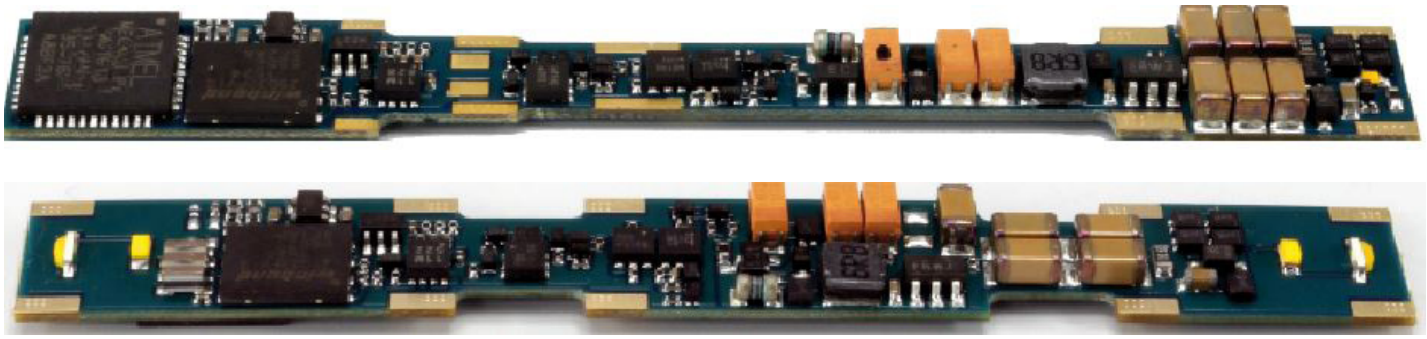
Each LokSound 5 XL decoder is equipped with 12 amplified function outputs. In addition, there are 7 additional logic level outputs available, which can also control (4 pieces) RC servos and SUSI expansion modules on request. Of course tons of lighting effects are also available. The brightness of each 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.

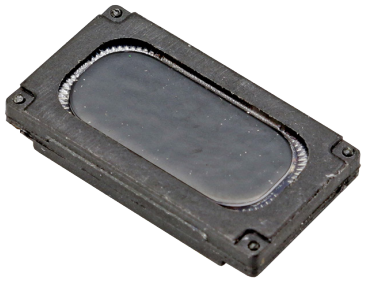
Customize your sounds

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)

Speakers 9 mm x 13 mm

NEW



This 9mm wide rectangular speaker is slim enough to handle even small H0 or N scale Models. Despite its small dimensions, the volume and sound image is amazingly balanced.

The speaker comes with a matching sound capsule and is a real alternative everywhere where there is no space for a larger speaker.

50342, Speaker 9mm x 16mm x 3.0mm, rectangular, 8 Ohm, with sound capsule, 0.5W $9,99 (MSRP)

Speaker 29 mm x 65 mm

NEW

This loudspeaker module is suitable for models with a gauge of 0 or 1. Its built-in passive radiator, in combination with the built-in broadband loudspeaker, gives good bass reproduction without neglecting the highs and mids. Especially for diesel or steam locomotives, this module is a real alternative for those who like deep bass.

The speaker fits perfectly with our LokSound 5 L or LokSound 5 XL decoders.

50343, Speaker 29mm x 65mm x 14mm, rectangular, 8 ohms, bass reflex $22,99 (MSRP)

Speaker 24 mm x 55 mm

NEW

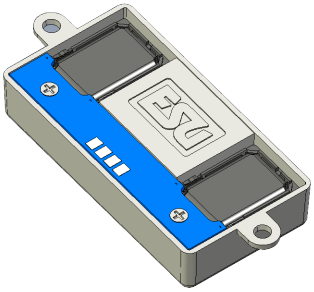
This speaker module is suitable for large tenders with H0 or OO gauges or models of Gauge 0. Its built-in passive radiator results in connection with the built-in broadband speaker a good bass reproduction without neglecting the highs and mids. Especially for Diesel or steam locomotives, this module is a real alternative for those who like deep bass, however It is not created for extreme volume.

The speaker fits perfectly with our LokSound 5 or LokSound 5 L decoders.

50344, Speaker 24mm x 55mm x 8.6mm, rectangular, 8 ohms, bass reflex $16,99 (MSRP)

Speakers 22 mm x 42 mm

NEW



This new loudspeaker module fits anywhere where 20mm x 40mm rectangular speakers have been installed. With the help of the built-in passive radiator in connection with two rectangular speakers the module achieves a significantly improved bass response and reaches a remarkable sound pressure without sacrificing the highs and mids. The module is particularly suitable for diesel or steam locomotives, where emphasis is placed on contemporary bass reproduction. The speaker fits perfectly with our LokSound 5 micro, LokSound 5 or LokSound 5 L decoders.

50345, Speaker 22mm x 42mm x 8.0mm, rectangular, 4 ohms, bass reflex $16,99 (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)

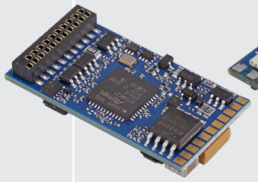
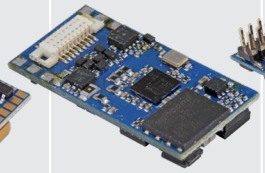
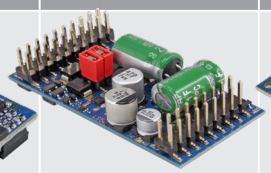
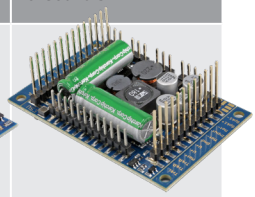
Sound selection for LokSound Select Decoders

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 verision 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**

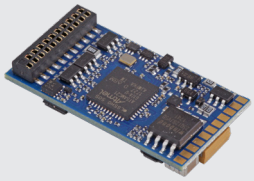
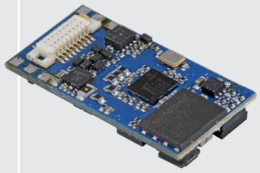
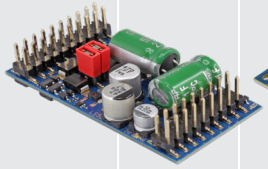
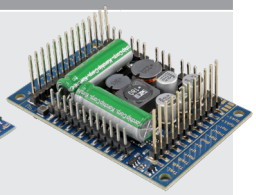
SOUNDPROJECTS for LOKSOUND 5 Decoder		
Steam	2-6-0-Z27-Class	S0740
Steam	2-8-2-Heavy-Mikado	S0514
Steam	2-8-2-SOO-1003	S0574
Steam	Big-Boy	S0516
Steam	DRGW-K27	S0586
Steam	Shay	S0515
Steam	SP-GS-4-4449	S0737
Steam	UP-4-6-6-4-Challenger	S0556
Steam	UP-FEF-844	S0590
Diesel	Alco-12cyl-244-V2-FT	S0743
Diesel	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	l-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	
Serieal protocol (SUSI)	OK					OK				OK	OK	
Adjustable brake controller, (de-selectable)	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 Logic-level or PowerPack 1x Logic-level or wheelsen-sor	10x Power 1x Logic-level or PowerPack 1x Logic-level or wheelsen-sor	10x Power 1x Logic-level or PowerPack 1x Logic-level or wheelsensor 2x Logiclevel or Susi AUX3, AUX4 Logiclevel	10x Power 1x Logic-level or PowerPack 1x Logic-level or wheelsensor 2x Logiclevel or Susi AUX3,AUX4 Power	10x Power 1x Logic-level or PowerPack 1x Logic-level or wheelsen-sor 2x Logi-clevel or Susi	6x Power 1x Logic-level or PowerPack	6x Power 1x Logic-level or PowerPack	6x Power 1x Logic-level or Power-Pack 2x Logiclevel or Susi	6x Power 1x Logic-level 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	

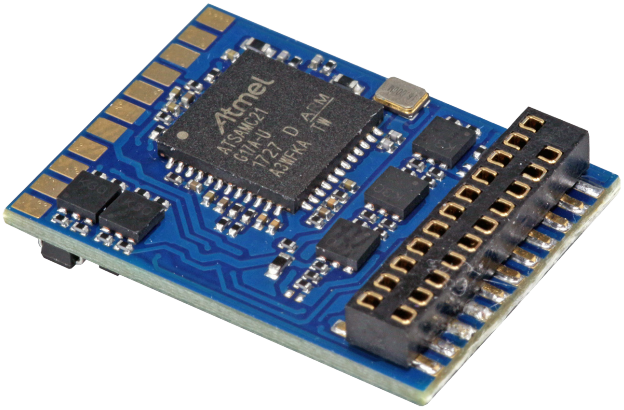
Decoder overview: LokPilot

	LokPilot Standard	LokPilot Nano Standard	LokPilot Fx V4.0	LokPilot Fx 5 micro (DCC)	LokPilot 5	LokPilot 5 DCC	LokPilot 5 micro wires	
								
Operational Modes								
DCC 14, 28, 128 speed steps	OK	OK	OK	OK	OK	OK	OK	
DCC long and short addresses	OK	OK	OK	OK	OK	OK	OK	
DCC traction address (Consist Mode)	OK	OK	OK	OK	OK	OK	OK	
DCC LGB pulse control	-	-	OK	Ok	OK	OK	OK	
Automatic speed steps detection	OK	OK	OK	OK	OK	OK	OK	
Lenz® LG 100, ROCO brake unit	OK	OK	OK	OK	OK	OK	OK	
Lenz® ABC brake unit	-	-	OK	Ok	OK	OK	OK	
Lenz® ABC shuttle train control	-	-	OK	OK	OK	OK	OK	
ZIMO HLU commands	-	-	OK	Ok	OK	OK	OK	
DC analogue operation	OK	OK	OK	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	
Selectrix®	-	-	OK	(OK)	OK	-	OK	
Märklin® brake unit	-	-	OK	OK	OK	-	OK	
AC analogue operation	-	-	OK	-	OK	-	-	
Automatic detection of operational mode	OK	OK	OK	OK	OK	OK	OK	
Throttle (Motor Control)								
DC and coreless motors, AC motors with permanent magnet	OK	OK	-	-	OK	OK	OK	
PWM frequency	20,00 kHz	20,00 kHz	-	-				10,00
BEMF control in digital operation	OK	OK	-	-	OK	OK	OK	
BEMF control in analogue operation	-	-	-	-	OK	OK	OK	
Adjustable start / maximumspeed in analogue operation (momentum)	-	-	-	-	OK	OK	OK	
Mass simulation for 14 speed steps operation	OK	OK	-	-	OK	OK	OK	
"Autotune" function for BEMF control	-	-	-	-	Ok	Ok	OK	
Adjustable BEMF measurement period and measurement gap	-	-	-	-	Ok	Ok	Ok	
Continuous motor current	0,9A	0,75A	-	-	1,5A	1,1A	1,1A	
Short circuit protection, Motor brake, Motor overload protection	OK	OK	-	-	OK	OK	OK	
Programming								
DCC-Servicemode programming modes (Register, Direct Mode)	OK	OK	OK	OK	OK	OK	OK	
DCC POM (Programming On the Main)	OK	OK	OK	OK	OK	OK	OK	
Programming mode for Märklin 6021	-	OK	OK	OK	-	OK	OK	
M4® configuration on the Main	-	-	-	-	-	OK	-	
Specials								
M4® Feedback System	-	-	-	-	OK	-	-	
RailCom® Feedback System	OK	OK	OK	OK	OK	OK	OK	
RailComPlus® automatic recognition	OK	OK	OK	OK	OK	OK	OK	
Storage of current operational state (memory)	-	-	OK	-	-	-	-	
Motorola® wrong-direction bit	OK	OK	OK	-	OK	-	OK	
Function outputs								
Output dimming	common	individually	individually	individually	individually	individually	individually	
Light effects like blinking lights, Marslight, Fire box flickering, etc.)	OK	OK	OK	OK	OK	OK	OK	
Time controlled function outputs	-	-	OK	OK	OK	OK	OK	
Function Mapping ESU as ESU Standard (F0 - F20)	OK	OK	-	-	-	-	-	
Function Mapping V4.0 ESU (F0 - F28)	-	-	OK	-	-	-	-	
Function Mapping V5.0 ESU (F0 - F31)	-	-	-	OK	OK	OK	OK	
Shunting mode (deselectable)	OK	OK	-	-	OK	OK	OK	
Momentum control (deselectable)	OK	OK	-	-	OK	OK	OK	
Serial protocol (SUSI)	-	-	OK	OK	OK	OK	OK	
Adjustable brake controller (deselectable)	-	-	-	-	-	-	-	
Alternative load and primary load simulation	-	-	-	-	-	-	-	
»PowerPack« Keep alive	-	-	optional	optional	optional	optional	optional	
Power rating of powered function outputs)	250mA	150mA	250mA	180mA	250mA	250mA	180mA	
Number of powered function outputs	4	4 (no protection)	6	6	10	10	4	
Number of logic level outputs (including SUSI-Pins)	2	-	2 (21MTC)	2	4 (21MTC, PluX)	4 (21MTC, PluX)	2	
Number of servo outputs (instead of Susi)	-	-	-	2	2	2	2	
Number of servo outputs (dedicated)	-	-	-	-	-	-	-	
Item numbers								
8-Pin wire harness	**53611**	**53661**	**54620**	**59110** **59120 (DCC)**	**59610**	**59620**	**59810**	
6-Pin wire harness		**53664**			**59616**	**59626**	**59816**	
6-Pin Direct connection		**53665**						
6-Pin Direct connection 90 degree ankle							**59817**	
PluX16								
PluX22					**59612**	**59622**		
Next18								
21MTC NEM660 (AUX3, AUX4 Logiklevel @ interface)	**53614**		**54621**		**59619**	**59629**		
21MTC »MKL« (AUX3, AUX4 powered @ interface)					**59649**	**59659**		
Pinheader with adapter								
Dimensions	25,5x15,5x4,5	8,0x7,0x2,8	17,5x15,5x4,5	8,0x7,0x2,4	21,4x15,5x4,5	21,4x15,5x4,5	8,0x7,0x2,4	

	LokPilot 5 micro Next18/PluX16	LokPilot 5 micro DCC wires	LokPilot 5 micro DCC Next18/PluX16	LokPilot 5 L
				
	OK	OK	OK	OK
	OK	OK	OK	OK
	OK	OK	OK	OK
	OK	OK	OK	OK
	OK	OK	OK	OK
	OK	OK	OK	OK
	OK	OK	OK	OK
	OK	OK	OK	OK
	OK	OK	OK	OK
	OK	OK	OK	OK
	OK	-	-	OK
	OK	-	-	OK
	OK	-	-	OK
	OK	-	-	OK
	OK	-	-	OK
	-	-	-	OK
	OK	-	-	OK
	OK	-	-	OK
	OK	-	-	OK
	OK	OK	OK	OK
	OK	OK	OK	OK
kHz bis 50,00 kHz, adjustable				
	OK	OK	OK	OK
	OK	OK	OK	OK
	OK	OK	OK	OK
	OK	OK	OK	OK
	Ok	Ok	Ok	Ok
	Ok	Ok	Ok	Ok
	0,75A	0,75A	0,75A	4,0A
	OK	OK	OK	OK
	OK		OK	OK
	OK		OK	OK
	OK		-	OK
	-		-	OK
	OK	-	-	OK
	OK	OK	OK	OK
	OK	OK	OK	OK
	-	-	-	-
	OK	-	OK	OK
	individually	individually	individually	individually
	OK	OK		OK
	OK	OK	OK	OK
	-	-	-	-
	-	-	-	-
	OK	OK	OK	OK
	OK	OK	OK	OK
	OK	OK	OK	OK
	OK	OK	OK	OK
	-	-		-
	-	-		-
	optional	optional	optional	integrated
	180mA	180mA	180mA	0mA
	6	4	6	11
	2	2	2	4
	2	2	2	2
	-	-	-	2
		59820		
		59826		
		59827		
	59814		**59824**	
	59818		**59828**	
				59315
	13,0x9,2x2,9	8,0x7,0x2,4	13,0x9,2x2,9	25,4x51,8x14,0

LokPilot 5 DCC

NEW



The LokPilot 5 DCC is the "twin brother" of the LokPilot 5. The two share almost all characteristics, however, the LokPilot 5 DCC is a pure DCC decoder and cannot be used on analog AC systems. This lack of flexibility comes with a cheaper price.

LokPilot 5 decoders are offered with all common interfaces.

Modes

The LokPilot 5 DCC is a "pure-bred" DCC decoder. 14 to 128 speed steps are as natural as 2- and 4-digit addresses. Up to 32 functions can be triggered. Thanks to RailComPlus® the decoders register automatically with a suitable DCC system like the ESU CabControl.

The decoder accepts all DCC programming modes and thanks to RailCom® the CV values can be read on the main track with RailCom equipped DCC systems. For command stations that only program the CVs from 1-255 auxiliary CV registers exist.

The LokPilot 5 DCC decoder recognizes the Märklin® braking sections as well as the ZIMO® HLU / ZACK Commands or the Lenz® ABC system. Also braking with DCC brake modules or with DC voltage is possible. It also stops with a Selectrix® brake diode. An ABC automatic shuttle train enables automatic commuting between two train stations.

The LokPilot 5 DCC decoder can be used on analog DC trains. The top speed can be set separately. The decoder switches between the operating modes fully automatically "on-the-fly".

Features

We know that you want your locomotives to be as realistic as possible. Therefore we have the LokPilot 5 DCC packed with function outputs. Depending on the interface version, each LokPilot offers 5 DCC Decoder at least 10 amplified function outputs with 250mA output current each. In the executions with PluX22 or 21MTC interface there are 4 outputs to control servos or Logic level outputs added. All-important lighting functions are available. The brightness of each output can be set separately. The decoder masters automatic pushing and pulling when uncoupling for ROCO®, Krois® and Telex® couplings.

Motor Control

The engine control of the LokPilot 5 DCC has been fundamentally improved again. A variably adjustable PWM clock frequency from 10kHz to 50kHz ensures super quiet operation, especially with bell-armature motors.

Operation

The typical "hum" is a thing of the past. The load control now has up to 10 CVs which can be adjusted for difficult cases. The unique "Autotune" function enables the automatic calibration of the decoder to the motor. The LokPilot 5 DCC decoder delivers up to 1.5A of motor current. Enough juice even for older motors.

Operational safety

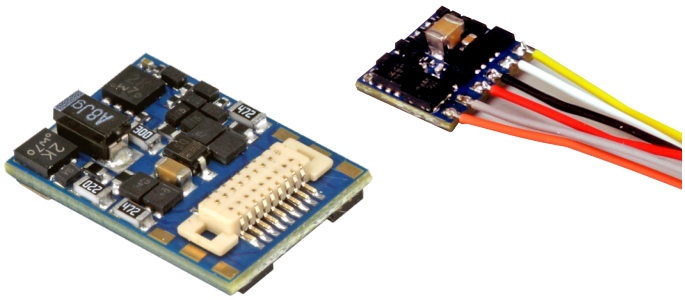
On request, a PowerPack can be fitted to the LokPilot 5 DCC to bridge dirty rail sections.

Protection

Of course, all function outputs and the motor output are protected against overload. We want you to enjoy your decoder for as long as possible.

59620, LokPilot 5 DCC, 8-pin NEM 652, gauge: 0, H0	$33,90 (MSRP)
59622, LokPilot 5 DCC, PluX22 NEM 658, gauge: 0, H0	$33,90 (MSRP)
59626, LokPilot 5 DCC, 6-pin NEM 651, gauge: 0, H0	$33,90 (MSRP)
59629, LokPilot 5 DCC, 21MTC NEM 660, gauge: 0, H0	$33,90 (MSRP)
59659, LokPilot 5 DCC, 21MTC MKL, gauge: 0, H0	$33,90 (MSRP)

LokPilot 5 micro DCC NEW



The LokPilot 5 micro DCC is the "twin" of the LokPilot 5 micro. With just 8.0mm x 7.0mm and a thickness of only 2.4mm (on the capacitor: 2.9mm), just so small that it can also be accommodated in very small locomotives of nominal sizes Z, N or TT, it is a pure DCC Decoder. This lack of flexibility is rewarded with a lower price.

LokPilot 5 micro DCC decoders are available with all common interfaces. The variants with Next18 or PluX16 interface are a bit larger with a base area of 13.0mm x 9.2mm, but have 2 additional function outputs.

Modes

The LokPilot 5 micro DCC is a "pure-bred" DCC decoder. 14 to 128 speed steps are as natural as 2- and 4-digit addresses. Up to 32 functions can be triggered. Thanks to Rail¬ComPlus®, the decoders log on to a suitable DCC System fully automatically.

It masters all DCC programming command stations. Auxiliary registers exist for DCC systems that can only program CVs from 1-255.

The LokPilot 5 micro DCC decoder recognizes the Märklin® braking sections as well as ZIMO® HLU / ZACK commands or the Lenz® ABC system. Braking with DCC brake modules or with DC voltage is also possible. It also stops with a Selectrix® brake diode. An ABC automatic shuttle train enables automatic commuting between two stations.

The LokPilot 5 DCC decoder can be used on analog DC trains. The maximum speed can be set separately.

The decoder switches between the operating modes fully automatically "on-the-fly".

Features

We know that you want your locomotives to be as realistic as possible. Therefore we have the LokPilot 5 micro DCC equipped with an amazing number of function outputs. The variants with 6-pin or 8-pin Wiring harnesses offer 4 amplified function outputs, each with 180mA output current and two logic level.

Outputs

The versions with Next18 or PluX16 interface have a total of 6 amplified outputs and two logic level outputs available. All important lighting effects are available. The brightness of each output can be adjusted separately. The decoder masters automatic pushing and pulling when uncoupling for ROCO®, Krois® and Telex® couplings.

Motor Control

The motor control of the LokPilot 5 micro DCC has been fundamentally improved again. A variable adjustable PWM clock frequency from 10kHz to 50kHz ensures super quiet operation ,especially with bell-armature motors- The typical "hum" is a thing of the past. The load control now has up to 10 CVs which can be adjusted for difficult cases. The unique "Autotune" function enables the automatic calibration of the decoder to the motor. The LokPilot 5 DCC decoder delivers up to .75A of motor current. Enough juice for most motors.

Safety

A PowerPack to bypass dirty track can be fitted to the LokPilot 5 micro.

Protection

Of course, the motor output and the function outputs are against overload protected. We want you to enjoy your decoder for as long as possible.

59820, LokPilot 5 micro DCC, 8-pin NEM 652, gauge: N, TT	$34,90 (MSRP)
59824, LokPilot 5 micro DCC, PluX16, gauge: N, TT	$34,90 (MSRP)
59826, LokPilot 5 micro DCC, 6-pin NEM 651, gauge: N, TT	$34,90 (MSRP)
59827, LokPilot 5 micro DCC, 6-pin direct, gauge: N, TT	$34,90 (MSRP)
59828, LokPilot 5 micro DCC, Next18, gauge: N, TT	$34,90 (MSRP)
59857, LokPilot 5 micro DCC, 6-pin direct angled, gauge: N, TT	$34,90 (MSRP)

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.

What ECoS can do

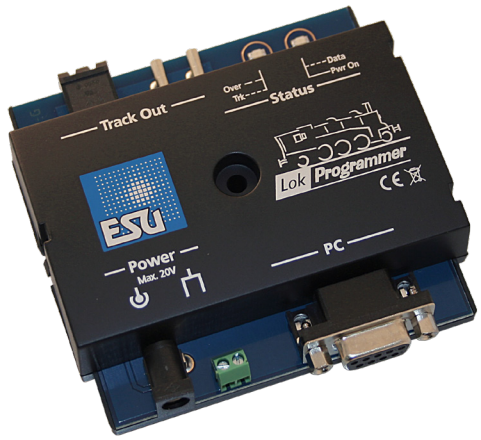
With an ECoS command station you acquire an open system. ECoS was created to be as open and compatible as possible with all present systems and norms.

- 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.

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.

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.

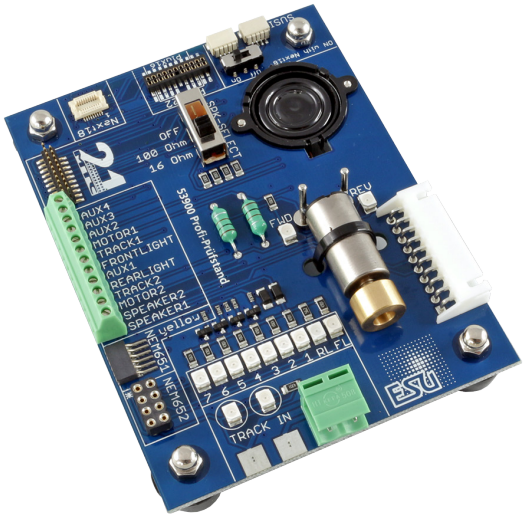
Furthermore you can change the parameters of the total load control or the function key allocation as well as for brake distance or analogue modes. Also the speed table can be conveniently manipulated by mouse click. In short, all decoder settings can be displayed and modified.

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!

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

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!

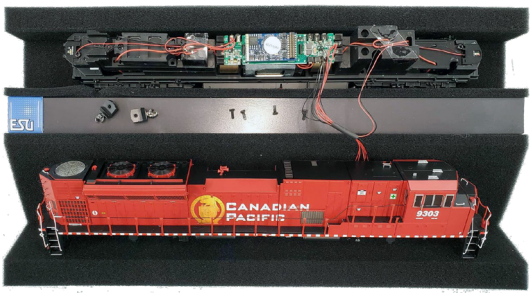
Configuration

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)

Premium Foam Train Service Tray

NEW



The ESU Premium Foam Train Service Tray is the ideal tool for the maintenance and care of your locomotives. Two recesses are available: The locomotive can be supported upside down to comfortably get to the underbody. Or in the inclined tray, you can easily work on the side of the body. You can also set up the locomotive almost vertically. This works great for decoder installs! For safe storage of small parts and screws, a magnetic storage recess is available over the entire length. The Premium Foam Train Service Tray is 13 inches long and can be arranged in rows so that longer railcars can be serviced!

41010, Premium Foam Train Service Tray, with magnetic storage recess, 13 x 6.5 x 2.5 inches $19,99 (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

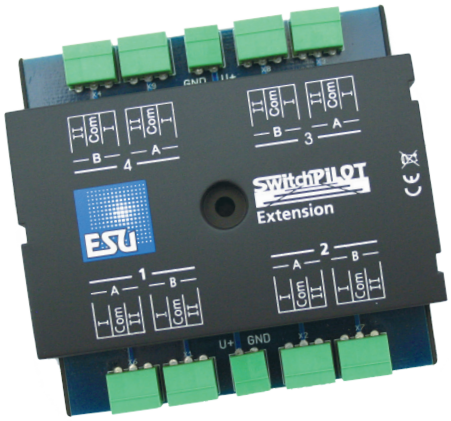
As it has been the case with our loco decoders, in the design phase great emphasis has been placed upon near indestructibility of the SwitchPilot Servo decoders. That means ESU quality is also built into our stationary decoders, now and in the future! You can rely on it!

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.

51820, SwitchPilot V2.0, 4-pin magnet article decoder, 2xServo, DCC/MM, 1A $42,99 (MSRP)

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

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.

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.

51822, SwitchPilot Servo V2.0, 4-fach Servo decoder, DCC/MM, RailCom® $35,99 (MSRP)

Cab Control WiFi DCC System

The ESU CabControl DCC system gives you 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.

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
- Free User updates using your PC

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

- Excellent Ergonomics
- All functions reachable by one hand
- Central motorized knob for delicate speed control and optional direction change
- 4 Programmable side buttons
- Colorized Function Icons

Running Locomotives

- 14, 28,128 Speed Step Control
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- Each Function can be set to momentary or continuous latching use

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

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