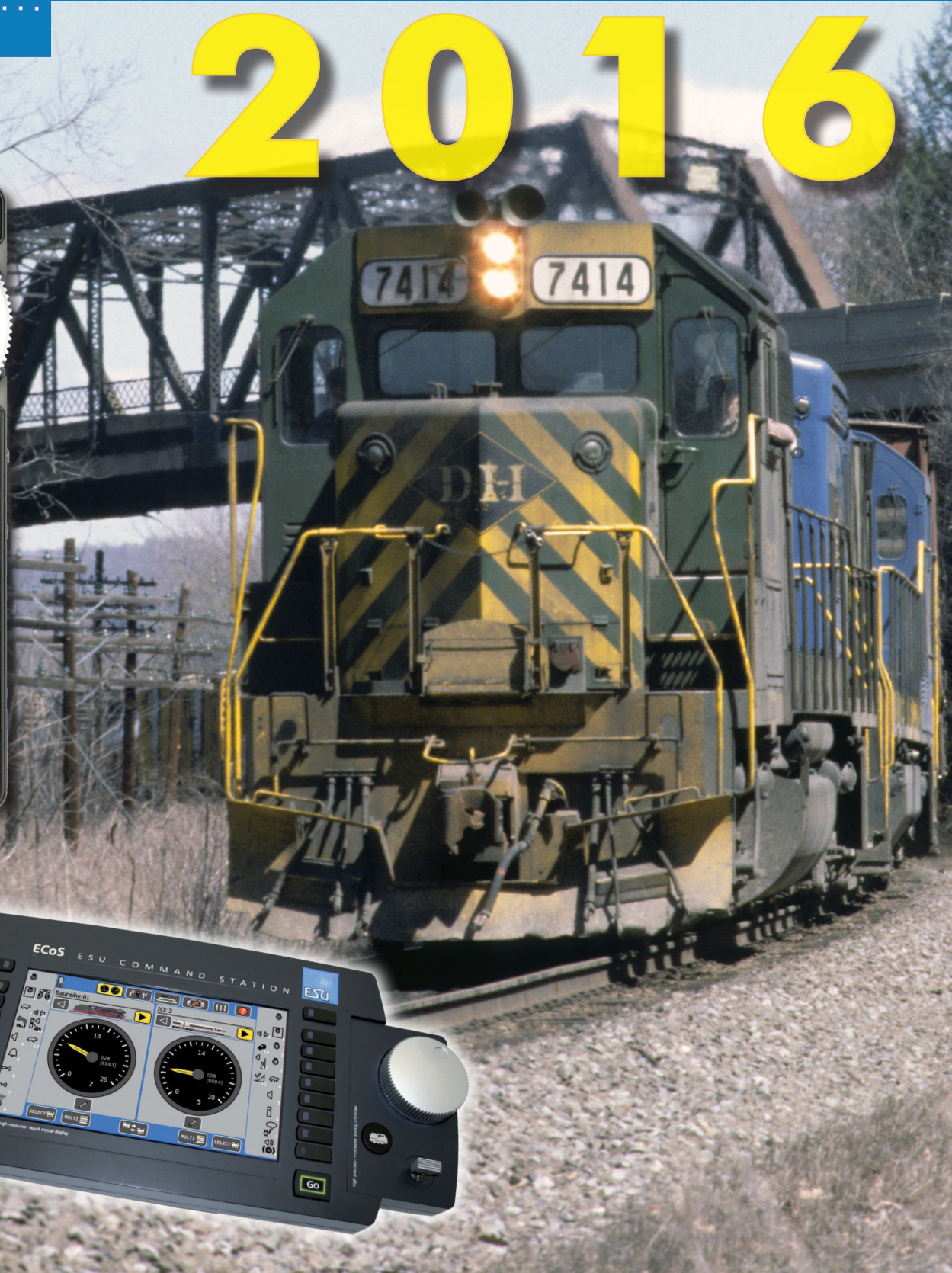


ESU

# Product Highlights

# 2016





## New Business - "Best of Both Worlds"

Over the last few years it has been our Honor that ESU LLC has become the DCC and sound provider for many of the North American Model and Australian Train Manufacturers. A list of these manufacturers would include the following companies:

- Atlas Model Railroad Co.
- Bowser Mfg
- Hornby America
- InterMountain Railway Co.
- Kato USA & Kato Japan
- PBL
- Rapido Trains
- ScaleTrains.com
- Sunset Brass
- Southern Rail Models
- Wuiske Models
- On Track Models
- Fox Valley Models
- True Line Trains

Many people have asked why this is the case all of a sudden when other great DCC companies seemed to have a foothold on the market. Honestly we cannot answer for all of the reasons that our OEM Partners have graciously chosen us. What we have promised is the following:

- Wonderfully Accurate, Professionally Edited, Fresh NEWLY RECORDED Sounds
- Competitive Pricing
- Industry Leading Motor Control
- State of the Art Function Ability and Programming
- Top Notch Customer Support in the USA
- And a Knowledge of, and Experience of, working with Model Train Manufacturers from around the world.

We are excited to see the face of Model Railroading change before our eyes as technology catches up with the Awe-Inspiring detail of today's models. It is fitting with this awesome detail, that our ESU LLC Corporate Slogan is "Sound...Super-Detailed!" Our OEM Partners



go to great lengths to visually Super-Detail the outside of every model they produce. We promise to work just as hard to Super-Detail the sound! You truly can have the "Best of Both Worlds"!

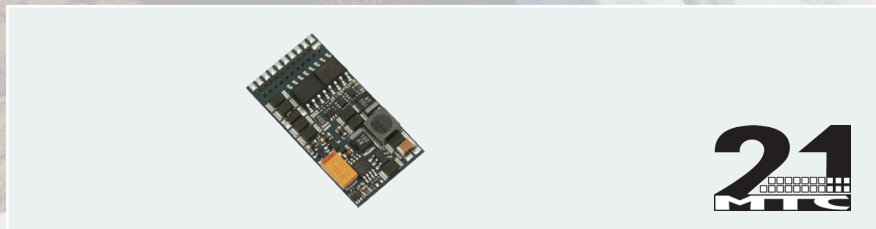
## New Sounds!

As we work to prepare the sounds for upcoming OEM locomotive releases we will also upload these new sounds to our website for immediate download to our programmable decoders. As the decoders we provide to manufacturers are Fully Functional Decoders and not just OEM versions, the sounds and abilities of both the OEM version and the Retail Version of the new sounds are the same.

We've gone to great lengths to make these sounds as accurate as possible. Along with the brand new prime mover recordings, we've added new Dynamic Brake Sounds, New Air Compressors, New LOUD Horns, Bells, Autostart Sequences, AirStart, Blended Dynamic Brakes, HEP units, and on and on! We work very hard to make the sounds and function of the decoder as close to the specific prototype as possible.

We are model railroaders and "layout junkies". We travel the country experiencing the prototype and then operating in ALL KINDS of conditions on a multitude of layouts to be sure we are building the sounds and abilities that the customers want, all while doing our best to find that

## The Brand New LokSound Select 21MTC



► Tired of Hardwiring decoders because there are not enough functions available in a standard 8 or 9 pin NMRA plug?

Want the ability but don't want to take the time to do all that soldering? We have a solution!

Our Manufacturing Partners including Rapido Trains, Bowser, Atlas, InterMountain Railway Co. and True Line Trains are making excellent locomotives with wonderful lighting options. Unfortunately the Standard 8 or 9 pin plug simply does not have enough connections to provide for all of these output functions. So we are

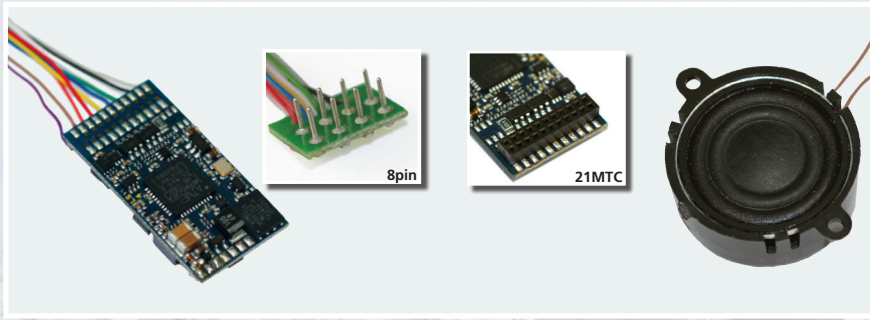
happy to announce that along with the standard 8 pin plug socket these companies will now provide an NEM approved 21MTC connection as well! This connection will allow for all six of our Select decoder's output functions, plus motor and speaker connections! Plus if there is ever a problem you simply remove the decoder which contains no wires and send it in for repair. No more sending the entire engine back for warranty work!

All engines coming from the above companies containing ESU Sound will come

with the 21MTC Select Decoder. To support the upcoming engines delivered without sound, we are pleased to announce a brand new Retail LokSound Select decoder. The LokSound 21MTC Select is available NOW!

- Great Size 1.18" x 0.61"
- Versatile DCC & DC "Dual Mode" decoder!
- 8 channel sound system!
- SIX! Lighting outputs and a 1.1A motor controller
- Available with ALL Current LokSound Select Sound Profiles
- Use 4, 8, or 16 Ohms Speakers





► The LokSound Select is a versatile DCC & DC "Dual Mode" decoder integrating a full-featured, 8 channel sound system, six lighting outputs and a 1.1A motor controller. It is available in 4 different versions:

- LokSound Select with 8 pin plug (1.18" x 0.59" / 30 x 15.5mm)
- LokSound Select with 21MTC interface (1.18" x 0.59" / 30 x 15.5mm)
- LokSound Select Direct (0.67x2.72inch / 17x69mm)
- LokSound Select micro (0.98" x 0.42" / 25 x 10.6mm)

LokSound Select, due to its unique thermal design, does not need any heat sinks. It also contains on board capacitance for smooth operation. For LokSound Select, we offer a comprehensive range of new high-power speakers, rated 4 Ohms.

## 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.

Steam decoders can produce over 20 sound effects, including the bell, air pump, exhaust chuff, coupler, steam release, cylinder cocks, brake release, side rod clank, blower, injector, Fireman Fred and many more. Synchronizing the steam chuff rate by using two CVs only virtually eliminates the need for a cam, but can of course be connected. Diesel decoders can produce over 20 sound effects, including the engine start-up and shutdown, prime mover sounds through all eight notches, bell, air horn, air compressor, dynamic brakes, fans, brake squeals, coupling and uncoupling, detector sounds, rail clank and many more.

## Customize your sounds

Unlike other manufacturers, LokSound Se-

lect 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.

## Superior motor control

ESU offers load compensation (using B-EMF) since 1999. While other manufacturers seem only to focus on the sound options, the LokSound Select offers the 5th generation of motor control resulting in a smooth and precise locomotive operation. We at ESU believe that good motor control is mandatory for model trains: Even the best sound is worthless if the locomotive running is not smooth! Regardless if you are using coreless or conventional DC motors, the LokSound Select's unique auto-detection function can measure the characteristics and adjust the internal settings. There is no need to fiddle around with many CVs to adjust to the engine. Due to Dynamic Drive Control (DDC) you can limit the influence of the load control and operate really smoothly around the depot and over turnouts, while on the main, when going uphill the engine prototypically slows down.

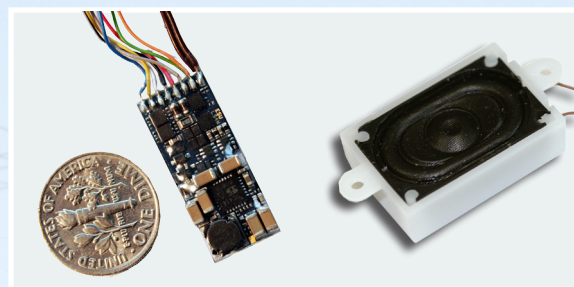
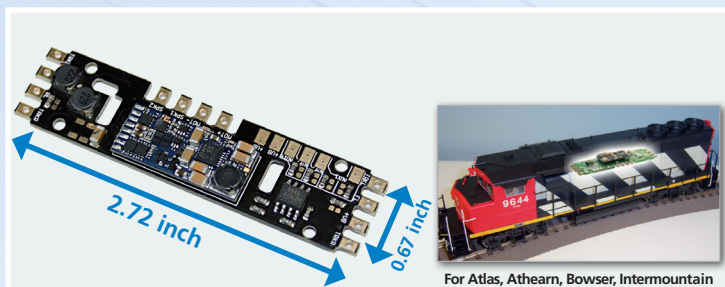
## Shining lighting effects

Each LokSound Select include 6 (!) outputs with 0.25A current each that can be allocated individually to a light effect, which simulates the light patterns of many popular warning beacons. Besides D312 Rotary beacon, strobe and alternate flashing, there is a firebox flicker, smart flicker, Mars light, Gyralight, Ditch lights (two types), Oscillating Headlights, Stratolight and many more. The Rule 17 dimmable headlight can be either controlled automatically or by function button. A LED brightness correction feature now also allows using LEDs for lighting effects. This is an important feature since LEDs do behave different than bulbs.

## Safeguard

All function outputs and the motor connection are protected against overload and short-circuit.





## LokSound Select Direct

With its unique design, the LokSound Select Direct 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

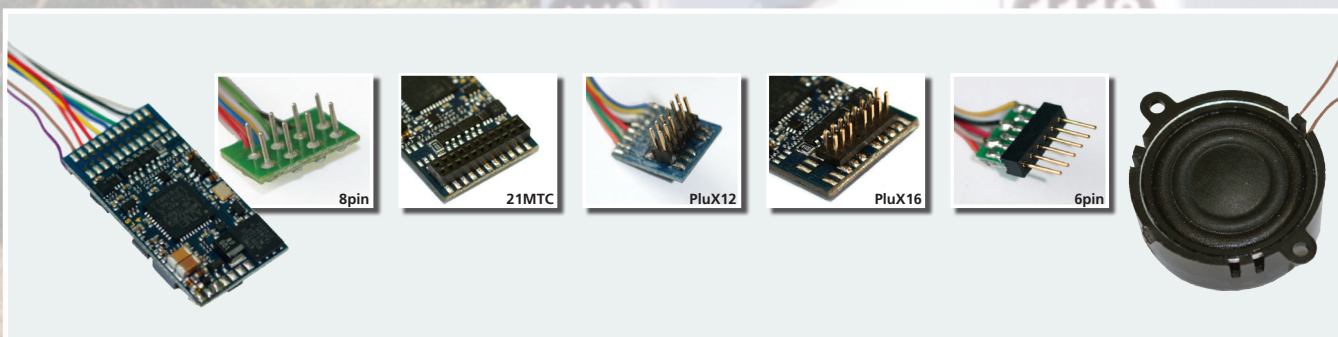
better with our 4 Ohm speakers listed below! You pay a lot of money for your favorite trains! Give them a chance to run and sound as good as they look!

## LokSound Select Micro

Need a Smaller decoder? The 4 output function LokSound Select Micro decoder was designed with this purpose in mind. With a size of only 0.98" x 0.42" it is the world's smallest LokSound decoder!

## Ordering information

| Art.No. | Description  | MSRP      |
|---------|--|-----------|
| 73400   | LokSound Select 8pin «Generic» Ready for Programming   | \$ 99.99  |
| 73900   | LokSound Select 21MTC «Generic» Ready for Programming  | \$ 99.99  |
| 73700   | LokSound Select Direct «Generic» Ready for Programming | \$ 109.99 |
| 73800   | LokSound Select micro «Generic» Ready for Programming  | \$ 99.99  |



## LokSound V4.0 – The reference

Since the "Great-grandfather LokSound Classic" our LokSound decoders are the yardstick for excellent sound on your model train layout. The LokSound V4.0 is the latest member of the LokSound family. It looks very similar to the LokSound Select, but is more flexible in use due to extended Hard- and Software.

## Decoder

LokSound V4.0 is a "true" multiprotocol decoder. It supports DCC with RailCom-Plus®, Motorola® and Selectrix® and registers automatically at the ESU ECoS. It is also perfect for european style model railroaders that demand more than just DCC.

## Sound

In addition to the sound capabilities of the LokSound Select, the LokSound V4.0 offers the ability for full-customized sound: Using the LokProgrammer, you can create you very own sound using our Template library as a starting point. Further, beside the north american sound selection, we offer many sounds for european and australian prototype locomotives.

## Ordering information

► All sounds available are to find on our website [www.loksound.com](http://www.loksound.com)

| Art.No. | Description  | MSRP      |
|---------|--|-----------|
| 54400   | LokSound V4.0 "Universal sound for reprogramming", with 8-pin NEM652 interface, Gauge: 0, H0 | \$ 139.99 |
| 54499   | LokSound V4.0 "Universal sound for reprogramming", 21MTC, Gauge: 0, H0                       | \$ 139.99 |
| 55400   | LokSound V4.0 "Universal sound for reprogramming", PluX12 on cable harness, Gauge: 0, H0     | \$ 139.99 |
| 56498   | LokSound V4.0 "Universal sound for reprogramming", NEM658 (PluX16), Gauge 0, H0              | \$ 139.99 |
| 56499   | LokSound V4.0 "Universal sound for reprogramming", 6-pin NEM651, Gauge: 0, H0                | \$ 139.99 |



# LokSound Decoders



## ESU PowerPack Mini - NEW 2016!

The new ESU PowerPack Mini can be wired to all fourth generation ESU decoders. Although it is considerably smaller than its predecessor, the space requirements of the PowerPack Mini of about 15.7 mm x 9.7 mm x 13 mm must be taken into account when installing this unit. A three-pole wire harness connects the PowerPack Mini to the decoder. The wires are already soldered to the PowerPack Mini and must be soldered to the appropriate solder pads of the decoder.

## Ordering information

| Art.No. | Description  | MSRP     |
|---------|--|----------|
| 54671   | PowerPack Mini for LokPilot V4.0 & LokSound V4.0 family, 1F/2.7V | \$ 52.49 |

## Sound selection for LokSound Select

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. You will find even more sounds for free within our sound library on our website:

<http://www.esu.eu/en/downloads/sounds/loksound-select/loksound-select-usa/>

| Sound decoder description                             | Select 8 pin | Select 21MTC | Select micro | Select Direct | Select L     |
|---|--------------|--------------|--------------|---------------|--------------|
| Diesel "Alco24412cyl"                                 | 73401        | 73901        | 73801        | 73701         | 73301        |
| Diesel "GEFDL-12"                                     | 73403        | 73903        | 73803        | 73703         | 73303        |
| Diesel "BaldwinVO-6"                                  | 73405        | 73905        | 73805        | 73705         | 73305        |
| Diesel "EMD645E-8Non-Turbo"                           | 73407        | 73907        | 73807        | 73707         | 73307        |
| Diesel "EMD645E-16cyl"                                | 73408        | 73908        | 73808        | 73708         | 73308        |
| Steam "CabForward"                                    | 73409        | 73909        | 73809        | 73709         | 73309        |
| Diesel "Alco539T6cylSwitcher"                         | 73411        | 73911        | 73811        | 73711         | 73311        |
| Diesel "GallopingGoose"                               | 73412        | 73912        | 73812        | 73712         | 73312        |
| <i>Steam "Mogul"</i>                                  | <i>73413</i> | <i>73913</i> | <i>73813</i> | <i>73713</i>  | <i>73313</i> |
| Steam "Steam4DrivenAxles"                             | 73414        | 73914        | 73814        | 73714         | 73314        |
| Steam "Shay"  | 73415        | 73915        | 73815        | 73715         | 73315        |
| Steam "BigBoy"  | 73416        | 73916        | 73816        | 73716         | 73316        |
| Steam "SteamLocomotive Collection"                    | 73417        | 73917        | 73817        | 73717         | 73317        |
| Electric "PCCTrolley"                                 | 73418        | 73918        | 73818        | 73718         | 73318        |
| Diesel "GEU50"  | 73421        | 73921        | 73821        | 73721         | 73321        |
| Diesel "Genset"                                       | 73422        | 73922        | 73822        | 73722         | 73322        |
| Diesel "GEES44AC/DC "Gevo"                            | 73423        | 73923        | 73823        | 73723         | 73323        |
| Diesel "EMD16-710G3C-T2 W/ Airstart: SD70M-2/SD70ACe" | 73425        | 73925        | 73825        | 73725         | 73325        |
| Diesel "16-645E Non-Turbo "SD38-2"                    | 73426        | 73926        | 73826        | 73726         | 73326        |
| Diesel "Alco25116-251EAirStart/ Electricstart"        | 73427        | 73927        | 73827        | 73727         | 73327        |
| Diesel "EMD16-710GB" MP40PH-3C"                       | 73428        | 73928        | 73828        | 73728         | 73328        |
| Diesel "MPI(EMD)16-645F3B "MP36PH-3C"                 | 73429        | 73929        | 73829        | 73729         | 73329        |
| Diesel "EMDF40PH"                                     | 73430        | 73930        | 73830        | 73730         | 73330        |
| Diesel "EMD16-710GB"SD90/43MAC-SD70MAC"               | 73431        | 73931        | 73831        | 73731         | 73331        |
| Diesel "FM 6cyl 38D"                                  | 73432        | 73932        | 73832        | 73732         | 73332        |
| Diesel "EMD16-567C/D" F-unit/Geep"                    | 73436        | 73936        | 73836        | 73736         | 73336        |
| Diesel "GE7FDL-12 "B23-7"                             | 73438        | 73938        | 73838        | 73738         | 73338        |
| Diesel "EMD12-645E3" GP/SD39-2"                       | 73439        | 73939        | 73839        | 73739         | 73339        |
| Diesel "GE7FDL-16 "Dash8"                             | 73440        | 73940        | 73840        | 73740         | 73340        |
| Diesel "Alco12-251B" RS-36"                           | 73441        | 73941        | 73841        | 73741         | 73341        |
| Steam "4-4-2" "Hiawatha"                              | 73442        | 73942        | 73842        | 73742         | 73342        |
| Diesel "EMD645E-12Non-Turbo"                          | 73443        | 73943        | 73843        | 73743         | 73343        |
| Diesel "GECat-44"                                     | 73444        | 73944        | 73844        | 73744         | 73344        |
| Diesel "GEFDL-16"                                     | 73445        | 73945        | 73845        | 73745         | 73345        |
| Diesel "BLW606/606NA"                                 | 73446        | 73946        | 73846        | 73746         | 73346        |
| Diesel "BLW606SC/606A"                                | 73447        | 73947        | 73847        | 73747         | 73347        |
| <i>Diesel "FM12cyl-38D"</i>                           | <i>73448</i> | <i>73948</i> | <i>73848</i> | <i>73748</i>  | <i>73348</i> |
| Diesel "EMD12-710"                                    | 73449        | 73949        | 73849        | 73749         | 73349        |

| Sound decoder description            | Select 8 pin | Select 21MTC | Select micro | Select Direct | Select L     |
|--------------------------------------|--------------|--------------|--------------|---------------|--------------|
| Diesel "EMD16-645FwithTurbo" - SD50  | 73450        | 73950        | 73850        | 73750         | 73350        |
| Steam "Heisler"                      | 73451        | 73951        | 73851        | 73751         | 73351        |
| Steam "Climax"                       | 73452        | 73952        | 73852        | 73752         | 73352        |
| <i>Steam "0-6-0"</i>                 | <i>73453</i> | <i>73953</i> | <i>73853</i> | <i>73753</i>  | <i>73353</i> |
| <i>Steam "4-6-0"</i>                 | <i>73454</i> | <i>73954</i> | <i>73854</i> | <i>73754</i>  | <i>73354</i> |
| <i>Steam "2-6-0"</i>                 | <i>73455</i> | <i>73955</i> | <i>73855</i> | <i>73755</i>  | <i>73355</i> |
| <i>Steam "4-6-6-4"</i>               | <i>73456</i> | <i>73956</i> | <i>73856</i> | <i>73756</i>  | <i>73356</i> |
| <i>Steam "2-8-8-2"</i>               | <i>73457</i> | <i>73957</i> | <i>73857</i> | <i>73757</i>  | <i>73357</i> |
| <i>Steam "2-6-6-2"</i>               | <i>73458</i> | <i>73958</i> | <i>73858</i> | <i>73758</i>  | <i>73358</i> |
| Electric "GG-1"                      | 73459        | 73959        | 73859        | 73759         | 73359        |
| Diesel "EMD12-567C" SW1200R5"        | 73460        | 73960        | 73860        | 73760         | 73360        |
| <i>Steam "2-10-0Decapod"</i>         | <i>73470</i> | <i>73970</i> | <i>73870</i> | <i>73770</i>  | <i>73370</i> |
| <i>Steam "4-4-0American"</i>         | <i>73471</i> | <i>73971</i> | <i>73871</i> | <i>73771</i>  | <i>73371</i> |
| <i>Steam "2-6-2Prairie"</i>          | <i>73472</i> | <i>73972</i> | <i>73872</i> | <i>73772</i>  | <i>73372</i> |
| <i>Steam "2-8-0Consolidation"</i>    | <i>73473</i> | <i>73973</i> | <i>73873</i> | <i>73773</i>  | <i>73373</i> |
| <i>Steam "2-8-2LightMikado"</i>      | <i>73474</i> | <i>73974</i> | <i>73874</i> | <i>73774</i>  | <i>73374</i> |
| <i>Steam "4-8-2Mountain"</i>         | <i>73475</i> | <i>73975</i> | <i>73875</i> | <i>73775</i>  | <i>73375</i> |
| Diesel "GE8CylFDLU18B"               | 73476        | 73976        | 73876        | 73776         | 73376        |
| Diesel "EMD5671w6cylW/Turbo"         | 73477        | 73977        | 73877        | 73777         | 73377        |
| <i>Electric "MP54"</i>               | <i>73478</i> | <i>73978</i> | <i>73878</i> | <i>73778</i>  | <i>73378</i> |
| Steam "ReadingCrusader"              | 73479        | 73979        | 73879        | 73779         | 73379        |
| <i>Diesel "Baldwin608A"</i>          | <i>73480</i> | <i>73980</i> | <i>73880</i> | <i>73780</i>  | <i>73380</i> |
| <i>Diesel "BaldwinVO-1000"</i>       | <i>73481</i> | <i>73981</i> | <i>73881</i> | <i>73781</i>  | <i>73381</i> |
| Diesel "GEP42/AMD103w/HEP"           | 73482        | 73982        | 73882        | 73782         | 73382        |
| Diesel "DualEMD56712cylEUnit"        | 73483        | 73983        | 73883        | 73783         | 73383        |
| <i>Diesel "BuddRDC"</i>              | <i>73484</i> | <i>73984</i> | <i>73884</i> | <i>73784</i>  | <i>73384</i> |
| <i>Diesel "DoodleBug"</i>            | <i>73485</i> | <i>73985</i> | <i>73885</i> | <i>73785</i>  | <i>73385</i> |
| <i>Steam "D&amp;RGWK-27"</i>         | <i>73486</i> | <i>73986</i> | <i>73886</i> | <i>73786</i>  | <i>73386</i> |
| <i>Steam "D&amp;RGWK-37"</i>         | <i>73487</i> | <i>73987</i> | <i>73887</i> | <i>73787</i>  | <i>73387</i> |
| <i>Steam "D&amp;RGWC-19"</i>         | <i>73488</i> | <i>73988</i> | <i>73888</i> | <i>73788</i>  | <i>73388</i> |
| <i>Diesel "Alco539NonTurbo"</i>      | <i>73489</i> | <i>73989</i> | <i>73889</i> | <i>73789</i>  | <i>73389</i> |
| Steam "UPFEFNorthern"                | 73490        | 73990        | 73890        | 73790         | 73390        |
| <i>Diesel "Alco/MLW251 6cyl"</i>     | <i>73491</i> | <i>73991</i> | <i>73891</i> | <i>73791</i>  | <i>73391</i> |
| <i>Diesel "Alco/MLW251 8cyl"</i>     | <i>73492</i> | <i>73992</i> | <i>73892</i> | <i>73792</i>  | <i>73392</i> |
| Diesel "Dual EMD645E3A16Cyl DDA40X"  | 73493        | 73993        | 73893        | 73793         | 73393        |
| <i>Diesel "Alco538"</i>              | <i>73494</i> | <i>73994</i> | <i>73894</i> | <i>73794</i>  | <i>73394</i> |
| Electric "AEM-7"                     | 73495        | 73995        | 73895        | 73795         | 73395        |
| Diesel "EMD-710-20Cyl-SD80MAC"       | 73496        | 73996        | 73896        | 73796         | 73396        |
| Diesel "Dual-Alco539T-DL109"         | 73498        | 73998        | 73898        | 73798         | 73398        |
| Diesel "Dual-Baldwin 606NA"          | 75401        | 75901        | 75801        | 75701         | 75301        |
| Diesel "Dual-Baldwin 606SC"          | 75402        | 75902        | 75802        | 75702         | 75302        |
| Diesel "GE GTEL Turbine"             | 75403        | 75903        | 75803        | 75703         | 75303        |
| Diesel "ACS 64 Sprinter"             | 75404        | 75904        | 75804        | 75704         | 75304        |
| Diesel "GE 12cyl FDL Early - U23B"   | 75405        | 75905        | 75805        | 75705         | 75305        |
| <i>Diesel "EMD 6cyl 567 - SW-1"</i>  | <i>75406</i> | <i>75906</i> | <i>75806</i> | <i>75706</i>  | <i>75306</i> |
| <i>Diesel "EMD 20cyl 645 - SD45"</i> | <i>75407</i> | <i>75907</i> | <i>75807</i> | <i>75707</i>  | <i>75307</i> |

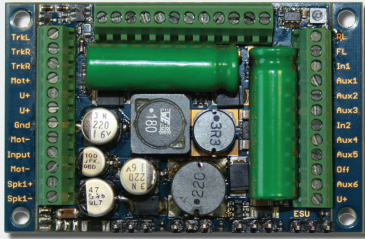
## Need Soundfiles from factory installed LokSound equipped OEM Locomotives?

Often our OEM partners have specific function mapping and sounds for their highly detailed locomotives. To make it easier for our customers to find these specific files we have posted them to our Website on their own page.

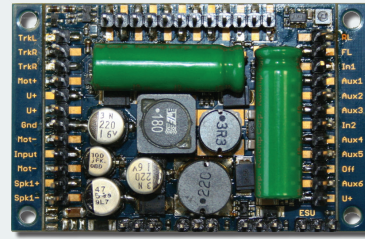
<http://www.esu.eu/en/downloads/sounds/loksound-select/loksound-select-oem/>



# LokSound Decoders



With screw terminals



With PIN connector

## LokSound XL V4.0

The LokSound XL V4.0 decoder is a real "brick" and of course it has to be, since it is meant to be used with larger scales such as gauge I or G. The LokSound XL V4.0 has a size of 51x40mm and comes with robust screw terminals, which can be easily installed.

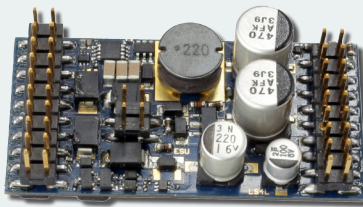
The decoder is quad-protokoll decoder and supports the four data formats DCC with RailComPlus®, Motorola® and Selectrix® and M4. Its motor output can handle up to 4.0A (even 5A for a short time). There are 12 function outputs with 500mA each available. 4 RC servos can be controlled.

The sound capabilities are identical with the LokSound V4.0 H0 and offer the same options for full-customized sounds. It is equipped with a Dual-amplifier output with up to 13Watts output and offers separate volume control with the help of two (optional) rotary potentiometers.

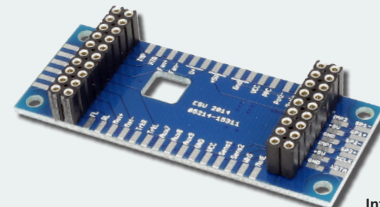
## Ordering information

All sounds available are to find on our website [www.loksound.com](http://www.loksound.com)

| Art.No. | Description  | MSRP      |
|---------|--|-----------|
| 54500   | LokSound XL V4.0 "Universal sound for reprogramming", terminal screws, Gauge G, I          | \$ 269.99 |
| 54599   | LokSound XL V4.0 "Universal sound for reprogramming", with MULTI-PIN connector, Gauge G, I | \$ 269.99 |



With PIN connector



Interface board

## LokSound L Select

The Brand New LokSound L V4.0 and LokSound L Select decoders are made to fill a huge void in the O scale DCC market. For years now many have been using a large scale non sound decoder for the motor and wasting an HO Scale DCC and Sound decoder to operate the sound as no High Amperage, High Quality sound decoder has been available that will fit comfortably into an O scale locomotive. The wait is finally over! The LokSound L V4.0 and LokSound L Select decoders will easily use the many respective ESU V4.0 and Select sound files already on the market as they are of course

programmable with the famous ESU Lok-Programmer hardware.

The LokSound L decoder is still a combination of driving decoder and sound module on one PCB. You can install it in nearly every loco in O scale locomotive with its dimensions of only 2 inches in length and 1 inch wide! Made to Plug and Play in to New Atlas (and others) O Scale Locomotives, the Decoders will also come with an interface board for hardwiring into whatever Brand Locomotive you have.

With a constant current of 3Amps continuous the decoder's load control will power all current O scale locomotives whether hav-

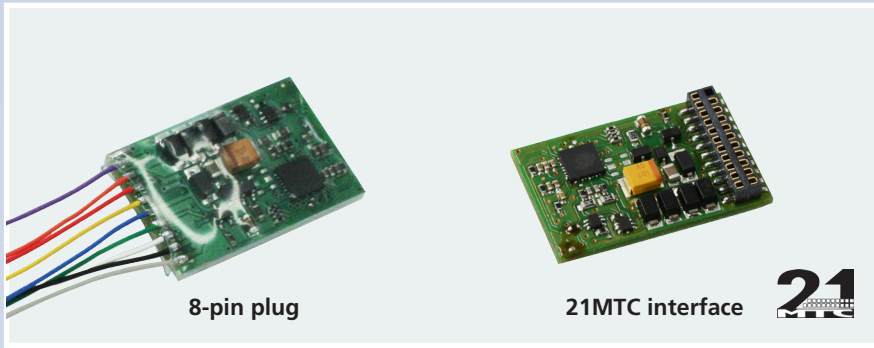
ing 1 or 2 motors with ease. The decoder's hardware includes 9(!) function outputs, ability run 2 servos, and inputs for 3 hall sensors (commonly used for syncing Steam Chuffs). You can also add 2 speakers as there are 2 separate speaker outputs (one Channel). Additionally there is the ability to add an external volume control and external power pack. Add this to the powerful logic contained in the LokSound V4.0 and Select technology already on the market and this new decoder is a force to be reckoned with! Finally "O Scalers" will have the Power, Sound and Motor Control they need, in a package that will fit in their locomotives!

## Ordering information

All sounds available are to find on our website [www.loksound.com](http://www.loksound.com)

| Art.No. | Description   | MSRP      |
|---------|---|-----------|
| 54399   | LokSound L V4.0 "Universal sound for reprogramming", with Adapter board, Gauge 0        | \$ 199.99 |
| 73399   | LokSound L Select V4.0 "Universal sound for reprogramming", with adapter board, Gauge 0 | \$ 149.99 |





8-pin plug

21MTC interface



## 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 con-

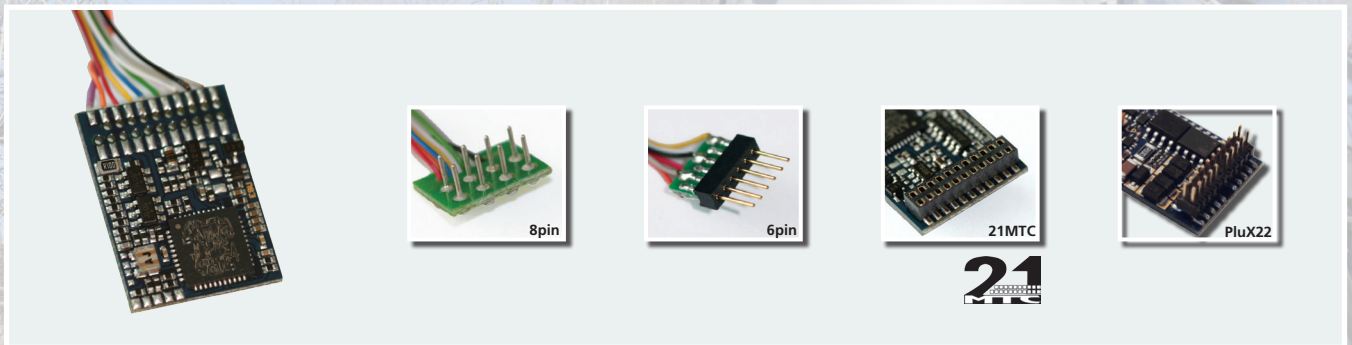
trary: It contains the most modern, on the world market presently available 32 Bit CPU technology.

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 the a fully matured brand.

## Ordering information

| Art.No. | Description  | MSRP     |
|---------|--|----------|
| 53611   | LokPilot Standard V1.0, 8-pin plug, 4 outputs, blister packaging   | \$ 25.99 |
| 53614   | LokPilot Basic V1.0, 21MTC interface, 4 outputs, blister packaging | \$ 25.99 |



## 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.

## Ordering information

| Art.No. | Description  | MSRP     |
|---------|--|----------|
| 54611   | LokPilot V4.0, DCC, 8-pin plug NEM652, cable harness | \$ 36.99 |
| 54613   | LokPilot V4.0, DCC, 6-pin plug NEM651, cable harness | \$ 36.99 |
| 54615   | LokPilot V4.0, DCC, 21MTC interface                  | \$ 36.99 |
| 54617   | LokPilot V4.0 DCC, PluX22 NEM558                     | \$ 36.99 |



# Accessories

## Hook up wire



### Ordering information

| Art.No. | Description  | MSRP    |
|---------|--|---------|
| 51940   | highly flexible wire, diameter 0.5mm, AWG36, 2A, 10m sleeve, white colour  | \$ 4.69 |
| 51941   | highly flexible wire, diameter 0.5mm, AWG36, 2A, 10m sleeve, purple colour | \$ 4.69 |
| 51942   | highly flexible wire, diameter 0.5mm, AWG36, 2A, 10m sleeve, black colour  | \$ 4.69 |
| 51943   | highly flexible wire, diameter 0.5mm, AWG36, 2A, 10m sleeve, red colour    | \$ 4.69 |
| 51944   | highly flexible wire, diameter 0.5mm, AWG36, 2A, 10m sleeve, orange colour | \$ 4.69 |
| 51945   | highly flexible wire, diameter 0.5mm, AWG36, 2A, 10m sleeve, green colour  | \$ 4.69 |
| 51946   | highly flexible wire, diameter 0.5mm, AWG36, 2A, 10m sleeve, grey colour   | \$ 4.69 |
| 51947   | highly flexible wire, diameter 0.5mm, AWG36, 2A, 10m sleeve, yellow colour | \$ 4.69 |
| 51948   | highly flexible wire, diameter 0.5mm, AWG36, 2A, 10m sleeve, brown colour  | \$ 4.69 |

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.

## 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!

ing 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.

### 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 function-

### 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.

(To be used in conjunction with the 53900)

## Decoder Tester Extension

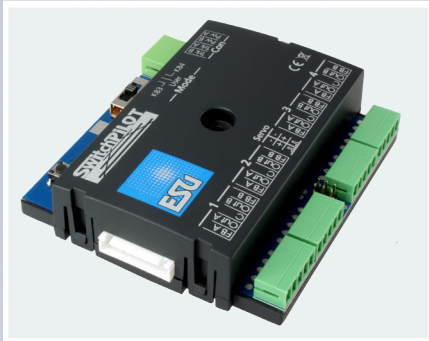


### Ordering information

| Art.No. | Description   | MSRP     |
|---------|---|----------|
| 53900   | Decoder tester, NEM651, NEM652, 21MTC, PluX22, Next18, single wires. With motor, LED-Monitor and 20mm speaker | \$ 55.99 |
| 53901   | Decoder tester extension for LokSound XL V4.0, LokSound L V4.0 with LED monitor                               | \$ 29.99 |



## SwitchPilot 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 as 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 con-

tinuous 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.

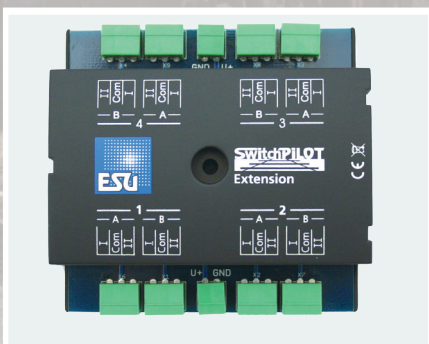
### Servo control

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!

## 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.

### Modes of operation

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 transis-

### 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.



torized 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.



# SwitchPilot

## 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!

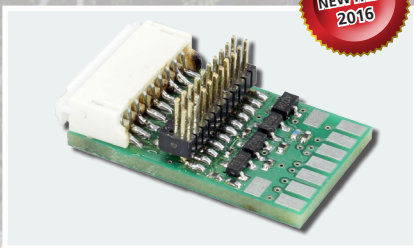
### Analog operation

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.

## Ordering information

| Art.No. | Description  | MSRP     |
|---------|--|----------|
| 51820   | SwitchPilot V2.0, 4x accessory decoder, 2x servo, DCC/MM, 1A, updatefähig, RETAIL packaging    | \$ 42.99 |
| 51822   | SwitchPilot Servo V2.0, 4x decoder for servo, DCC/MM, RailCom, updateable, RETAIL packaging    | \$ 35.99 |
| 51801   | SwitchPilot Extension, 4 twin-relays (DPDT) output, 2A each, extension for Switch Pilot Family | \$ 35.99 |

## JST Adapter



Perfect for Athearn (and others) this new 9 pin (female) 21MTC (Male) adaptor board allows the popular 6 output ESU 21 MTC LokSound and LokPilot decoders to be easily added to your favorite locomotive.

### More Functions

More and more locomotives now have front and rear headlights and front and rear flashing ditch lights. In order to accommodate for this in DCC 6 function outputs need to be used. As 8 and 9 pin DCC plugs only allow for 3 and 4 outputs respectively, this new adaptor board will allow easy conversion to our 6 function decoders. 4 Outputs though the 9 pin plug and 2 more on solder pads.

### 1.5 Volt Lighting

As Athearn normally uses 1.5 volt bulbs it is often easier to use the supplied resistance in the Motherboards for those lights. This new adaptor board also includes a 1.5 voltage regulator (100mA output) for all outputs that do not already go through the 9 pin JST plug. ESU decoders also include the ability to dim the outputs to match perfectly the onboard resistance with the adaptor resistance if needed.

In addition there are extra common pads and solder pads for speakers directly on the adaptor board.

Adding Great DCC and Sound with all the proper lighting has never been so easy.

## Ordering information

| Art.No. | Description  | MSRP     |
|---------|--|----------|
| 51954   | Adapter Board 21MTC to 9-pin JST (for Athearn locomotives) | \$ 14.99 |





## 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

► The ECoS 50200 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.

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.

## 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!

## Ordering information

| Art.No. | Description   | MSRP      |
|---------|---|-----------|
| 50200   | ECoS 2 command station, 7" TFT colour display, MM/DCC/SX/M4, set with power supply input 240V Euro, output 15V-21V, German & English manual | \$ 899.90 |
| 53452   | LokProgrammer, power supply 110 V, serial cable, instruction manual, CD-Rom, USB adapter  | \$ 199.99 |
| 51952   | Cable USB-A 2.0 FTDI on RS232, 1.80m for Lokprogrammer  | \$ 28.99  |



# The New WiFi Throttle

## Mobile Control II



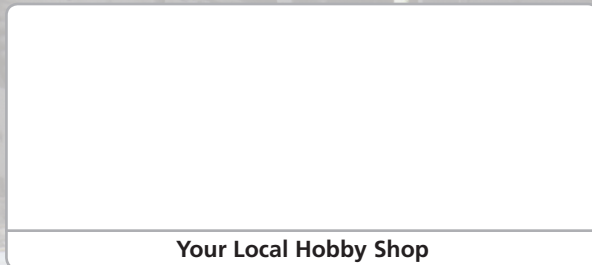
Item No. 50113, 50114

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!

### Ordering information

| Art.No. | Description   | MSRP      |
|---------|---|-----------|
| 50113   | Mobile Control II wireless throttle+Access Point for ECoS | \$ 345.90 |
| 50114   | Mobile Control II wireless throttle for ECoS              | \$ 319.90 |



Your Local Hobby Shop

»fx« ist eine eingetragene Marke der Firma Gebrüder Märklin & Cie. GmbH  
»märklin« ist eine eingetragene Marke der Firma Gebrüder Märklin & Cie. GmbH  
»Railcom« und »RailcomPlus« ist eine eingetragene Marke der Firma LENZ-Elektronik GmbH

Copyright 2016 by ESU electronic solutions ulm GmbH & Co KG. Products and all specifications are subject to change without notice. All rights reserved worldwide. »LokSound« is a registered trademark of ESU electronic solutions ulm GmbH & Co KG. Märklin is a registered trademark of Gebr. Märklin & Cie GmbH, Göppingen. Motorola is a registered trademark of Motorola Inc., Tempe-Phoenix, USA. Other trademarks are the property of their owners.

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.

### USA & Canada & Australia

ESU LLC  
23 Howard Street  
US-17754 Montoursville PA  
Phone +1 (570) 980 1980  
Fax +1 (866) 591 6440



[www.loksound.com](http://www.loksound.com)