LokSound Select Direct - One Size fits ALL!

- Easy Drop in Design! (Motor mounts built in for Athearn, Atlas, Bowser & Intermountain Uses 4, 8 or 16 Ohm Speakers
- Six Output Functions with 250mA per output! Plus LED compensation mode!
- Best Motor Control on the market!
- Programmable with ALL Future and currently available LokSound Select sound profiles*
- Suitable for use with any DCC system or DC
- Decoder with BEMF (Back Electro Motive Force, aka Load Compensation)
 - 16 Horns or Whistles, up to 4 Prime Movers, Multiple Bells. No Programmers or Boosters needed*

73700 LokSound Select Direct Universal Sound

Ready for programming Suitable for Athearn, Atlas Bowser, Intermountain, and More!



Technical data LokSound Select Direct

Operational modes: NMRA/DCC with 14, 28, 128 speed steps 2-digit (short) or 4-digit (long) addre Analog DC (Dual mode, de-selectable) Automatic recognition of operational mode Power: Runs all DC and coreless motors Silent, safe 31,25 kHz pulse width frequency BEMF

Motor output overload protected Function outputs:

6 outputs 250 mA load per output Outputs short-circuit protected

Sound:

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Audio amplifier: 2W @40hms load Speaker impendance 4-8 Ohms Memory Capacity 32MBit 8 Sound Channels, All playable at once! Over 20 different sounds! Dimensions:

1.02 x 0.62 x 0.18 inch (25.5 x 15.5 x 4.5 mm)

Default Function Assignments Function key Effect adliaht Bell Playable Airho Coupler Clank Dyna mic Brak AUX3 output (Preset to Mars Light) AUX1+AUX2 Switching Mode Prime Mover Sound On/Off (MUTE) F8 F9 Manual Notching Up Manual Notching Down Radiator (Fan) Dimmer (Headlights) AUX4 / Slow Spitter Valve F14 "Detector Sounds **Cab Radio Communication when F8 is "on") "Rail Clank (only active Brake Set/Release E18 Sanding Val F19 Short Air let off F20 Compressor "Spitter Valve

LOKSOUND

*) In order to replace a Sound Profile a LokProgrammer is needed. The LokProgrammer is not required to select the pre-loaded Prime Movers. This can be achieved by changing CV 48 with any DCC command station.
*) Please set the download section for the LokSound Sectors on our S5U Vebsite for more specific info on each soundfile. Info listed will include specific horns, function mapping, and volume controls for each file as some sounds may be different from one file to the next depending on the prototype. Soundfile builders can be download here:

Full manual available on www.loksound.com



MADE IN CHINA

This product is not a toy. Not recommended for children under 14 years of age.

WARNING: This product contains chemicals which are known to the state of california to cause cancer, birth defects or other reproductive harm.

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ESU P/N 04111-10701

www.loksound.com

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LokSound Select Direct "Quick Start Guide" Please go to <u>www.LokSound.com</u> for complete user manual

The LokSound Select Direct is unique as it was designed to fit in multiple brands of locomotives. Please use the same mounting method as the Manufacturer's light board. This will insure a seemless installation. Before beginning please be sure the engine is in

good mechanical condition: Only an engine running

smoothly in DC mode should be modified for digital

Important warnings

- Don't expose to wet or humid conditions and avoid mechanical force or pressure on the decoder.
- Use minimum amount of solder needed.
- Always disconnect power before handling decoder.
- Do not overwrap with insulating electrical tape as this may overheat the decoder.
- Make sure that no wires are squeezed or cut when reassembling the engine.



Resistors

If using LED's attach a resistor in series with each cathod(-) (shorter lead) and attach the anode(+) (longer lead) to the common terminals of the decoder.

On the Select Direct Board we have already added a resistor with 2.2k for each function output. This will result in a current between 8mA and 10mA suitable for most locomotives. Thus you can directly connect your LEDs without thinking of resistor values.

However, should you use bulbs consider the following: First locate the appropriate soldering bridge on the Select Direct Board (see diagram above) for the output desired. Use a small amount of solder to connect the two soldering pads. This will bypass the installed 2.2k resistor.

If the bulbs to be used are less than 16V types, please add a resistor between the Select Direct and the bulbs.

- Athearn: 2 1.5 Volt Bulbs 360-510Ohms (Front or rear lights)
- Athearn: 1 1.5 Volt Bulb 680-1K Ohm (Acc. Lights)
- Atlas: Resistors may already be attached to Factory LED's, you may be also bypass the Select Direct installed 2.2k resistors

Diesel sound Volume Control table

Function (Steam)	cv	Range	Default			
Master volume control	63	0 - 128	180			
Diesel Volume Control	259	0 - 128	99			
Horn Volume Control	275	0 - 128	128			
Bell Volume Control	283	0 - 128	128			
Coupler Sound Volume Control	291	0 - 128	128			
Dynamic brake Volume Control	299	0 - 128	128			
Air Compressor Volume Control	307	0 - 128	128			
Radiator Fan Volume Control	315	0 - 128	128			
Detector Sound Volume Control	323	0 - 128	128			
Crossing Comm Sound Volume Control	331	0 - 128	128			
Railclank Volume Control	339	0 - 128	64			
Brake Set / Brake Release	347	0 - 128	128			
Sanding valve Volume Control	355	0 - 128	128			
Short Air Let Off Volume Control	363	0 - 128	128			
Short Airhorn Volume Control	371	0 - 128	128			
Random sounds	451	0 - 128	128			
RE SURE CV 32 IS SET TO 1 REFORE CHANGING CVc 257-511						

Decoder-Reset

Write value 08 into CV 08

CV Name	Description		Default
1 Short address	Short (2-digit) Address of engine		60003
2 Start Voltage	Sets the minimum speed of the engine		and fill 3
3 Acceleration Rate	This value multiplied by 0.25 is the time in seconds from stop to maximum speed.		16
4 Braking Rate	This value multiplied by 0.25 is the time in seconds from maximum speed to stop.		32
5 Maximum Speed	Maximum Speed of the engine		64
6 Medium Speed	Medium Speed of the engine		64
17 Extended Address	See full manual online at www.loksound.com		
29 Configuration Register	Add the desired values for each function to get the needed value of CV29		6
	Function Value		
	Reverse the direction of travel (Forward becomes Reverse) 1		
	Speed steps 0=14; speed steps 2=28/128 speed steps 2		
	Analog Mode Enabled 0=disable; 4=enable 4		· Wallste
	Address Select: 0=1-127 Primary address; 32=128-9999 Extended address 32		and the second
32 Index Register	Index Register for access of CVs 257-511, CV32 should be 0 for changing CVs 1-256		0
48 Master Sound Select	Selects the Prime Mover Sound 0,16,32,64 - Horn Sound 0-15 - Bell Sound 0,48 - Brake Squeal Sound 0,128 - Add the relative numbers from each sound to get total value for CV 48		6003
63 Master Volume Control	Master Volume Control		180
124 Start-Up Delay	Prototype engines start moving when the prime movers reaches "notch one" many times this is difficult for model trains because of non-sound decoders or other brands of sound decod- ers without this realistic feature. This delay can be adjusted or turned off using CV 124, BI 3.		4
	Function Value		A State
	Bit 0 = Reserved 0		1 and
Bit 2 = Enable decoder lock			PALL
CON A SAL	Bit 3 = Start-up delay 4		de Torres



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