

ESU Lok Programmer

Abbreviated user guide



• DCCSOUND .com •

Summary

The ESU LokProgrammer (LP) is an I/O interface tool that enables communication between a personal computer (PC) and decoder.

The LP is a small box that is placed in series between the decoder and PC.

A USB cable with integrated chipset connect the PC to LP

The LP has outputs to the track or ESU decoder tester

The main purpose of the LP is to write (known as flashing) firmware, CVs and sounds to the decoder.

The LP can also read out from a decoder to query the current settings on that decoder, including CVs.

The most common use of a LokProgrammer is to flash a sound project to the decoder.

Writing a sound project to a decoder can take up to 1 hour, depending on the file size of the sound project.

ESU's format for LokSound projects is .esux

It is common for DCCSound to send projects to customers who have access to a LP, such that they can update their decoders, often already fitted to models.

DCCSound periodically releases updates to sound projects, and it is best to keep models up to date with the latest firmware and available sound.

Each ESU LokSound decoder has its own unique serial number, stored in the decoder's memory.

DCCSound administers sound projects that are password protected and written specifically to a particular decoder. This means the decoder's serial number can be read out by the customer using the LP. DCCSound can then be notified of that serial number, where the customer receives a protected sound project specific to that decoder.

The following pages summarise some of the tabs available through the LP GUI.

Project name
Menu
Menu icons

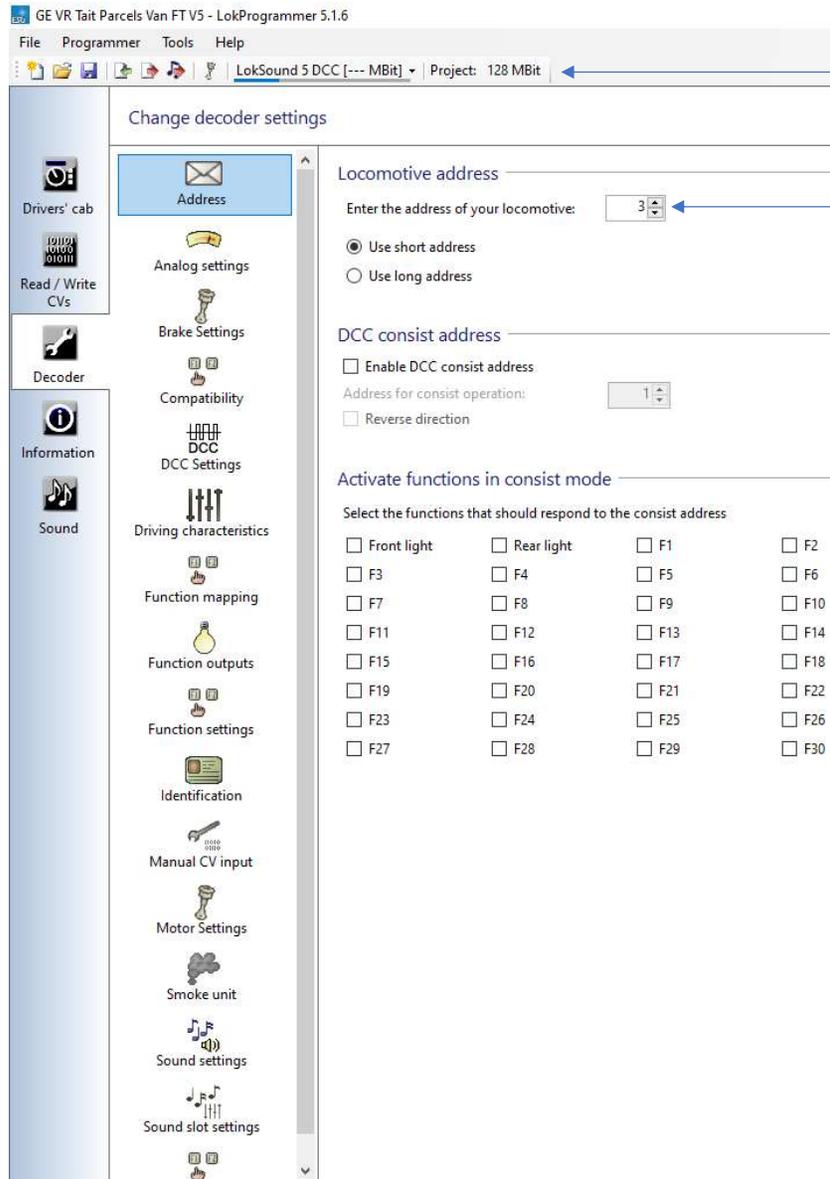
Driver's cab
Direct interface to test decoders in a model or on a decoder tester

Read / Write CVs
Direct interface read existing values of or new CV values to connected decoder

Decoder
For defining a sound project from scratch this is the most common tab to use

Information
Contains project information as well as functions for ESU ECoS interface

Sound
Contains sound slots (channels) and links to sound template libraries for adding sounds to a project



Decoder type
Returns the type of ESU decoder connected

Decoder address
Defines the short or long address of the decoder

Virtual drivers' cab

Drivers' cab

- Decoder test
- Turnout control panel
- Read / Write CVs
- Decoder
- Information
- Sound

Decoder test

STOP GO

Address: 3
Protocol: DCC28

Light

F1	F2	F3	F4
F5	F6	F7	F8
F9	F10	F11	F12
F13	F14	F15	F16
F17	F18	F19	F20
F21	F22	F23	F24
F25	F26	F27	F28
F29	F30	F31	F32

0

← →

Decoder test

Select the current address and select the green "Go" button. Power is then applied to the connected decoder, emulating a DCC cab for testing purposes

Function keys

These keys reflect that of a typical NMRA compliant DCC cab

Function mapping

Defines what outputs, logic functions and/or sound slots are assigned to each DCC cab function button

Change decoder settings

- Drivers' cab
- Read / Write CVs
- Decoder
- Information
- Sound
- Address
- Analog settings
- Brake Settings
- Compatibility
- DCC Settings
- Driving characteristics
- Function mapping**
- Function outputs
- Function settings
- Identification
- Manual CV input
- Motor Settings
- Smoke unit
- Sound settings
- Sound slot settings

Function mapping

Conditions	Physical outputs	Logical functions	Sounds
Forward, F0	-	-	Headlight and dimmer #1 end
Reverse, F0	-	-	Headlight and dimmer #2 end
F1	-	-	Tait electrics, Power limiter Tait 317M, Buffer strike accel 317M
F2	-	-	RVB 3 Hurricane 3 chime horn playable (SV9)
F3	-	-	Coupler Tait (knuckle coupler)
F4	-	-	Doors - departure
F4	-	-	Sound slot 23
F4	-	-	Sound slot 24
not F5	-	-	Slow speed rail clack
F6	-	-	Independent Brake Tait
F7	-	Switching Mode	-
not F8	-	-	High speed rail clack 317M
F9	-	-	RVB Hurricane 3 chime Short (SV9)
F10	-	-	Curve squeal
Forward, F11	AUX1 [1]: Destination board #1 end	-	-
Reverse, F11	AUX2 [1]: Destination board #2 end	-	-
F12	-	-	Canopy light logic
Forward, F13	AUX12: Aux 12: Red markers #2 end	-	-
Reverse, F13	AUX6: Aux 6: Red markers #1 end	-	-
F14	-	-	Windscreen wiper
F15	-	Shift Mode 1	-
F16	-	-	Guard - on demand
F17	-	-	Taildisc
not F18	-	-	Compressor VR Tait 317M
not F19	-	-	Traction fan Tait 317M
F20	-	-	Horn Short RVB 317M
-	-	-	-
-	-	-	-
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-	-	-	-

Drivers' cab

Decoder information

Read / Write CVs

Read / Write CVs

Read and Write CVs

CV 1

Value 0

Bit [7..0]

Use index CVs (CV31/CV32)

CV31 16

CV32 0

LokProgrammer

What do you want to do?



- Modify settings of an ESU decoder
- Perform a complete decoder update
- Create a new decoder project
- Open an existing decoder project

Show wizard on startup

To write a sound project to a decoder:
File > Show Wizard

Navigate to the *.esux file on your PC and select it
Firmware then CVs then sound files are written.

Note this process overwrites any existing sounds on the decoder