
# New Features Using ESU Decoders

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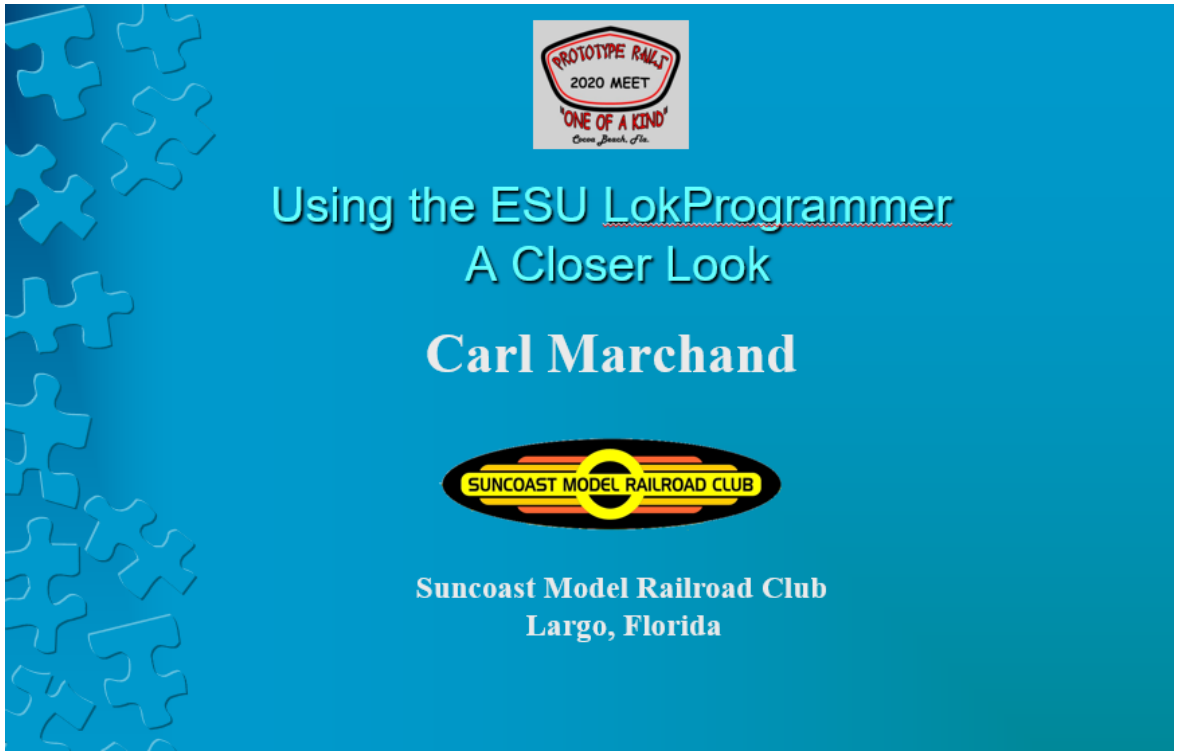
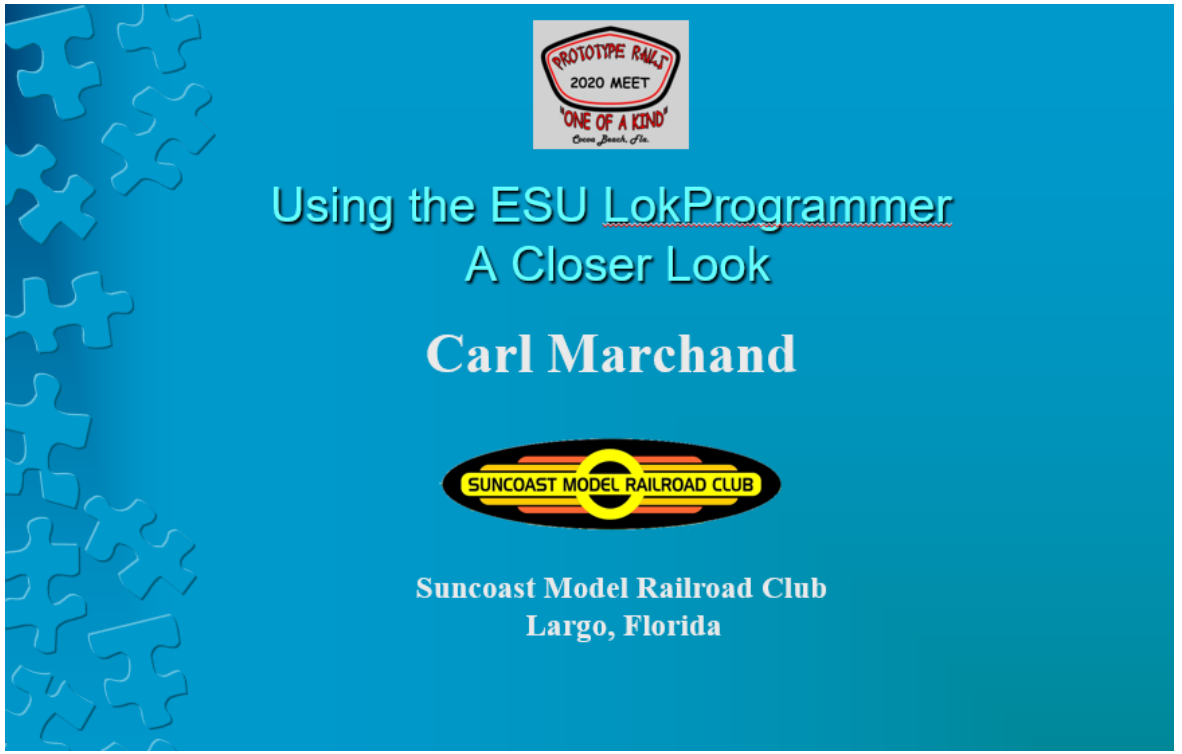
NMRA DCC Working Group Manager

# For additional information…




http://dccgeek.com/InternetFiles/ESU_Loksound_Deep_Dive.pdf

# For additional information…

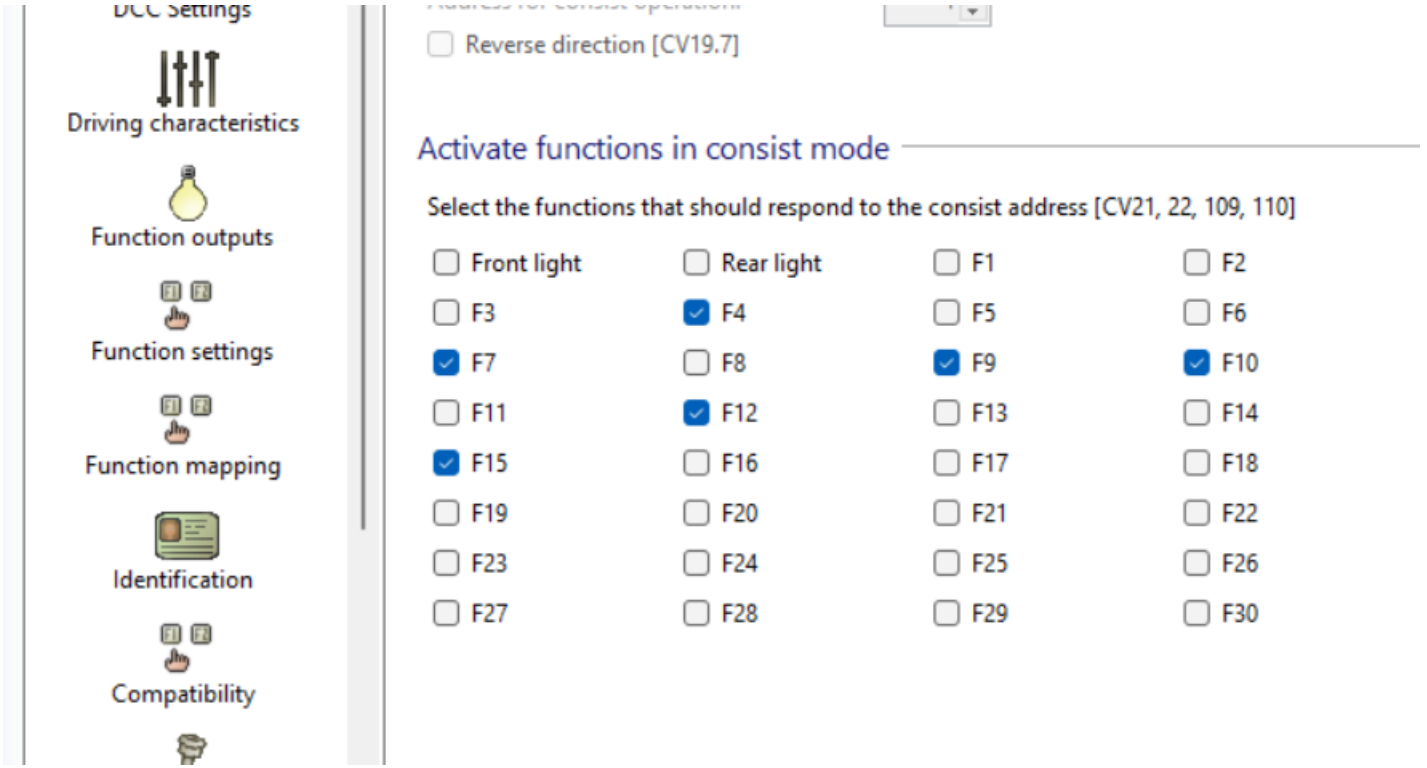



http://www.dccgeek.com/downloads.html

# ESU Decoder LokProgrammer Updates and Deep Dive Part 3

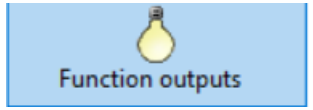
- ESU Loksound V5 decoders using firmware 5.9.159 and higher have additional features not available in previous releases.
- Existing Loksound V5 decoders can be updated currently to 5.12.172 using the LokProgrammer and the 5.29 version of the software.
- We will explore these new features as well as cover additional advanced use of the LokProgrammer.

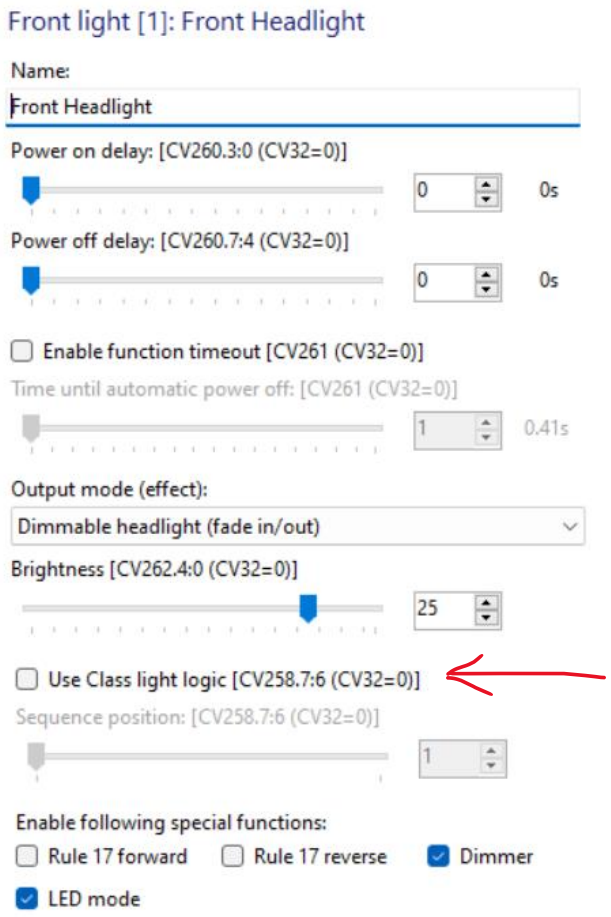
# Functions available in a consist




Loksound decoders can now support up to F30 in consist (depending on your DCC system)

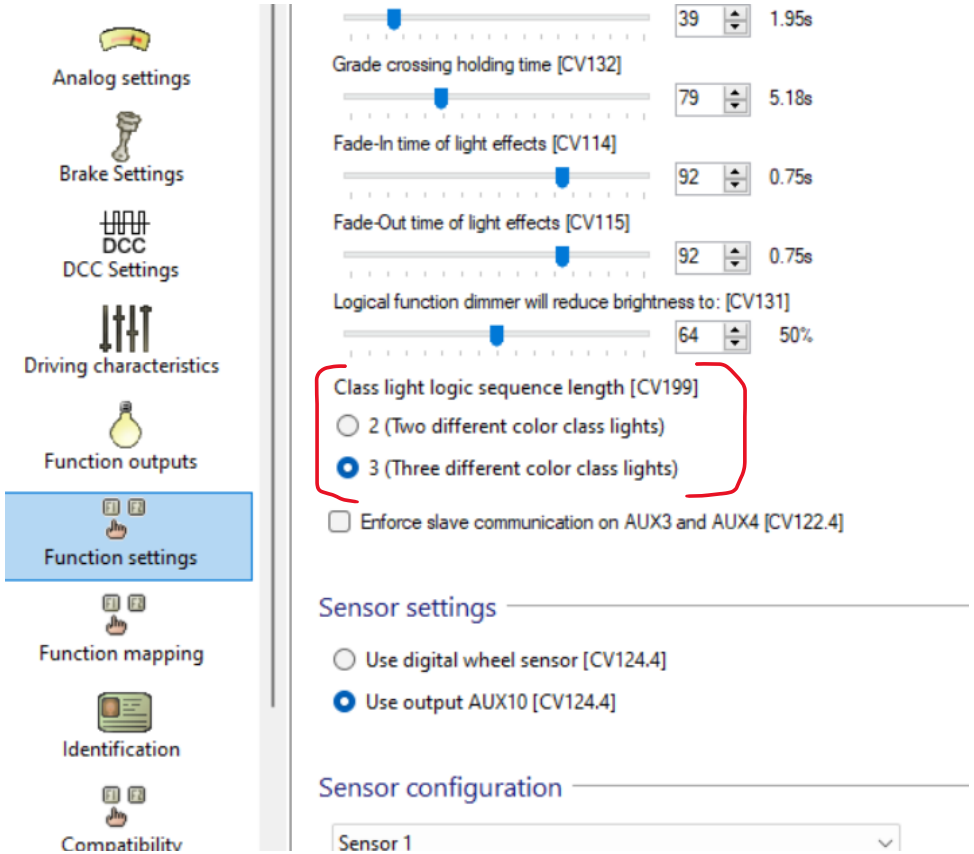
# Class Light Logic – Function Outputs Section



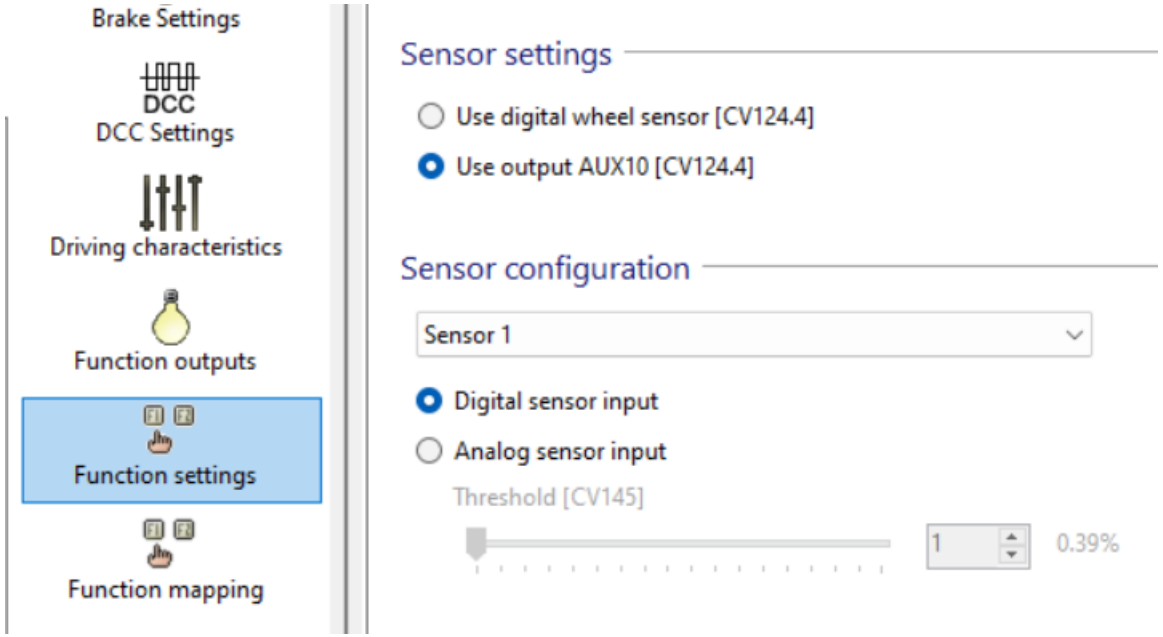

This alternate version allows you to setup class lights easily, without having to use the Logic module

# Class Light Logic – Function Settings



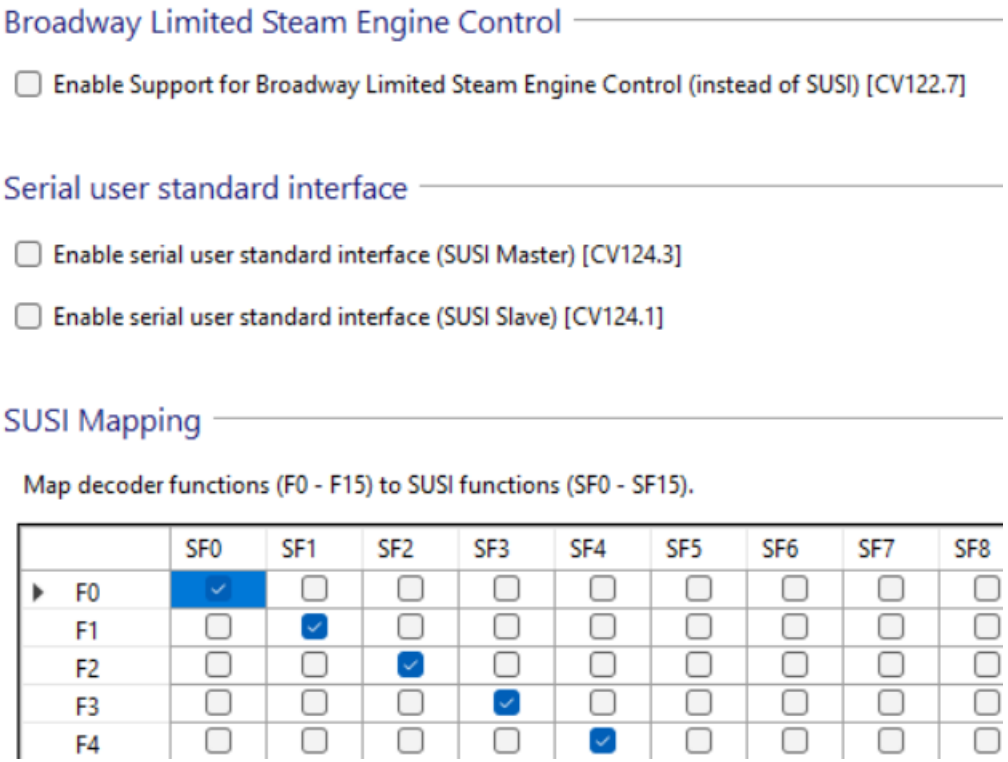

Choose 2 color or 3 color class light options

# Additional Sensor Settings



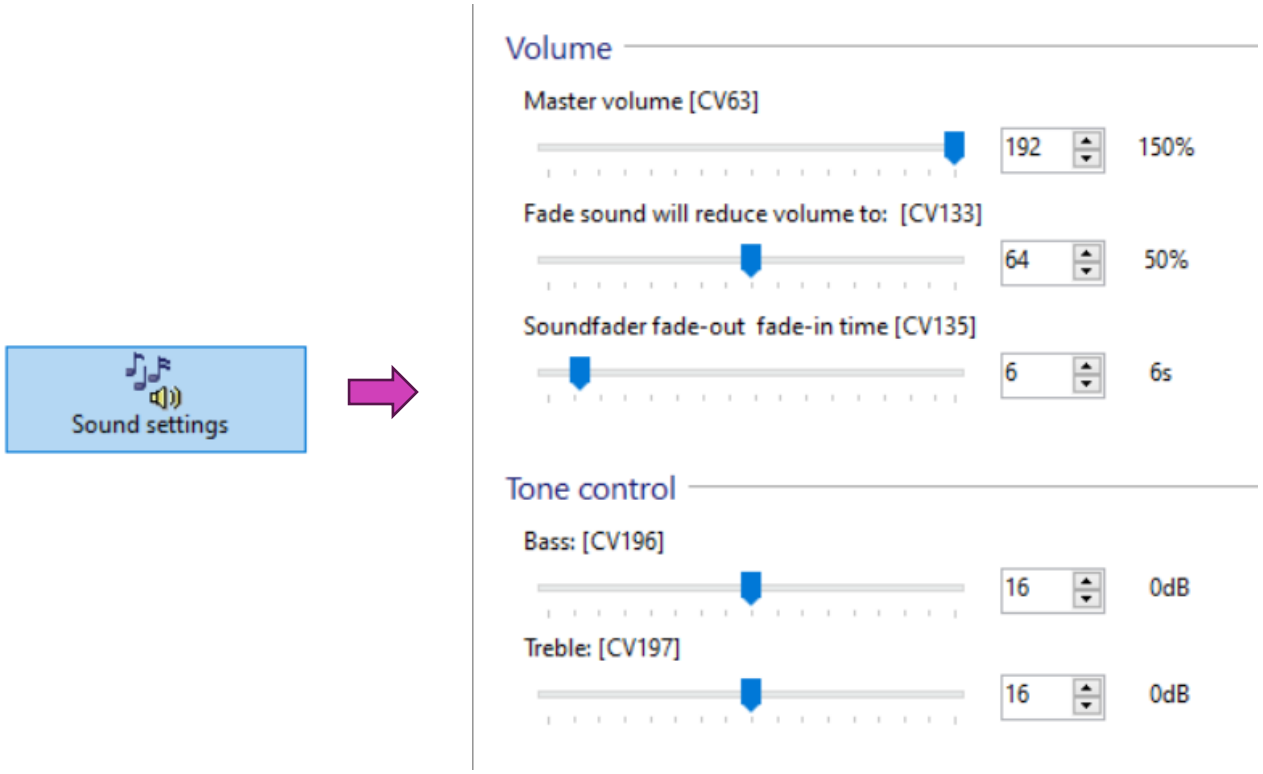

Choose between digital and analog sensors.
Use the sensor as a function in Function Mapping

# Support for Broadway Limited Steam Engine Control (Smoke Generator)

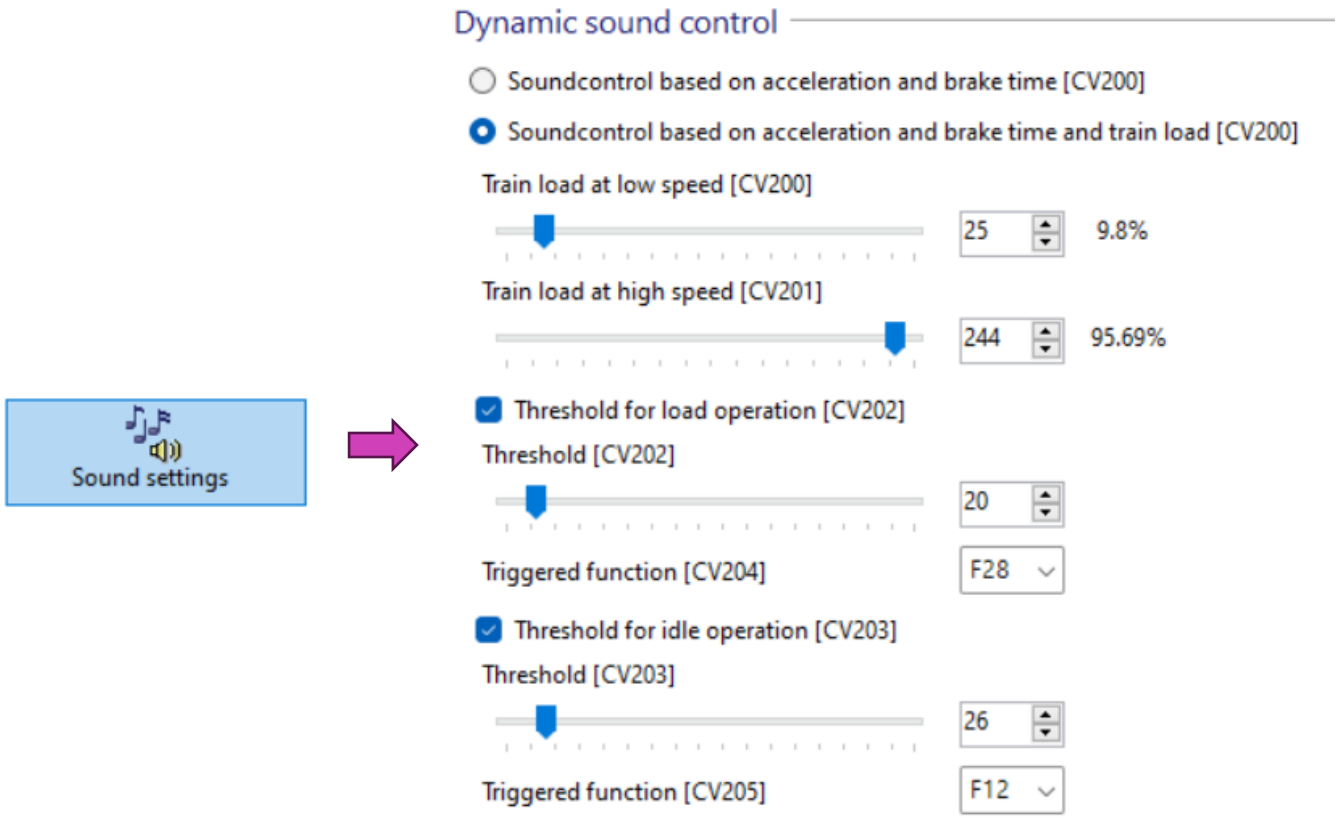

This new feature allows you to operate The BLI smoke generator unit with ESU decoders connected to the upcoming BLI motherboard replacement from ESU.

# Bass and Treble Controls




ESU Loksound decoders now have tone controls for a better sound experience across different speaker types.

# Dynamic Sound Control

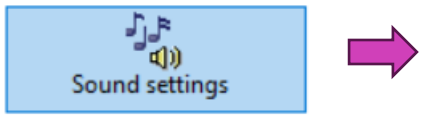


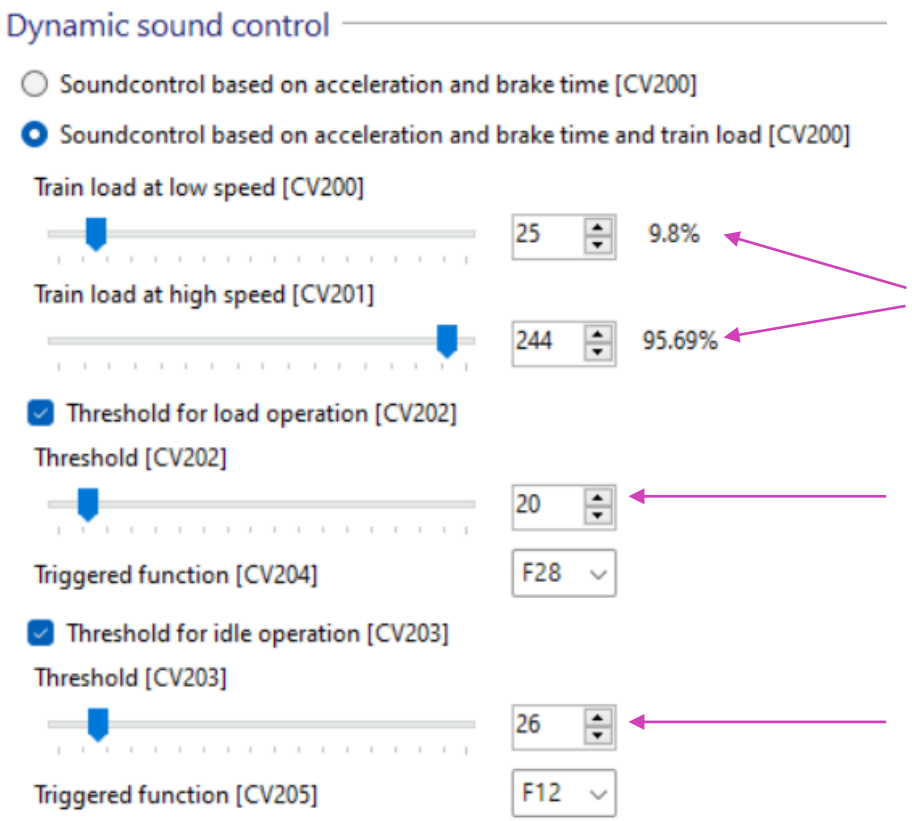

Dynamic Sound Control adds load dependent sound effects for steam and diesel locomotives.

It is recommended to calibrate the BEMF (CV54=0, then press F1) and calibrate the load speed settings (CV200=255, then press F1) first before making any further adjustments.

# Dynamic Sound Control

Dynamic Sound Control adds load dependent sound effects for steam and diesel locomotives.



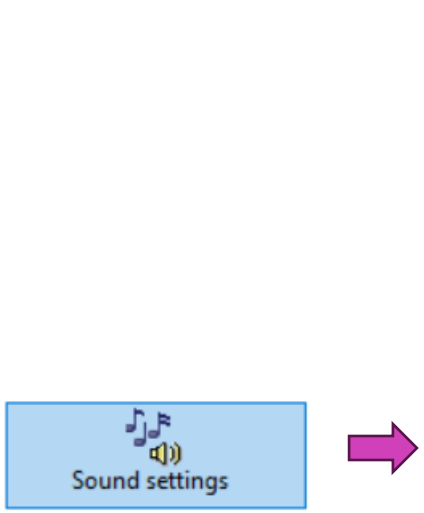

Recommend setting these with auto-calibration (CV200=255)

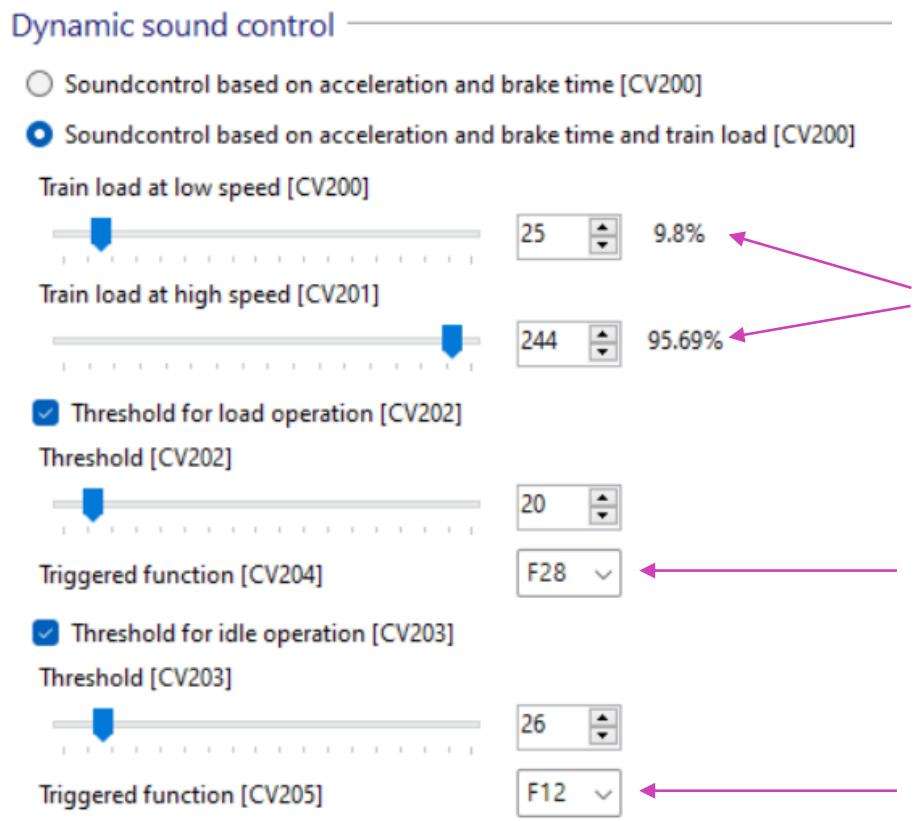
CV202 sets the heavy load (or Primary Load) threshold – the point where the train gets "heavier"

CV203 sets drop to idle (or Optional Load) threshold – the point where the train gets "lighter"

# Dynamic Sound Control

Dynamic Sound Control adds load dependent sound effects for steam and diesel locomotives.



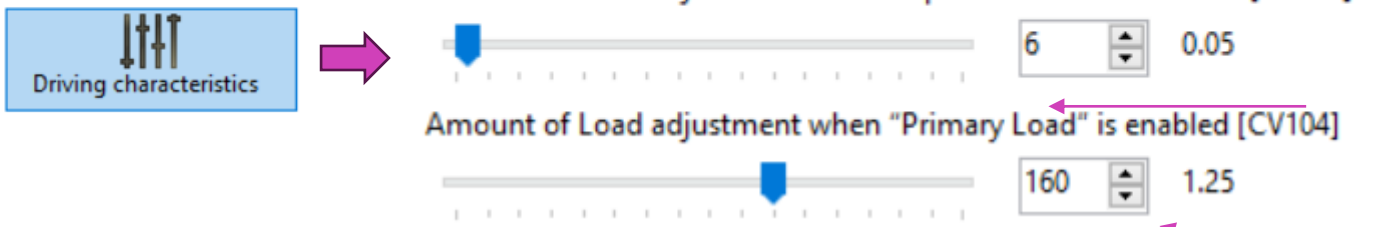




Recommend setting these with auto-calibration (CV200=255)

Map your heavy load (or Primary Load) sound to a Function and assign the function here.

Map your idle (or Optional Load) sound to a Function and assign the function here.

# Dynamic Sound Control



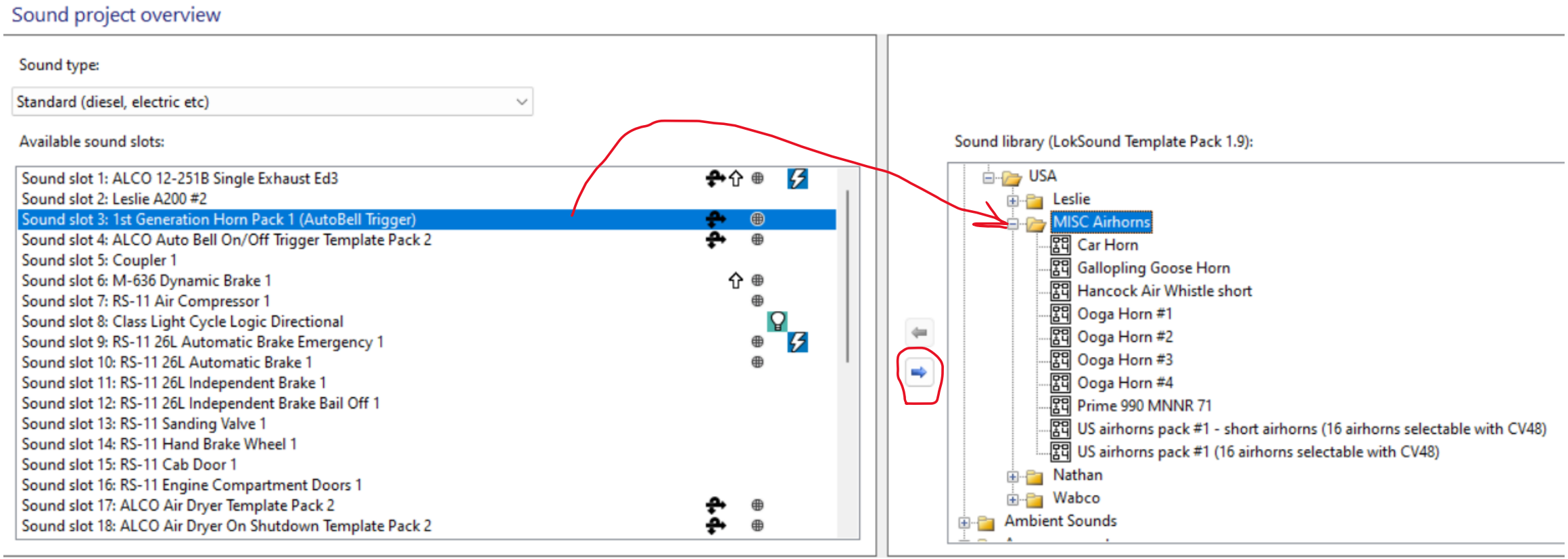

CV103 – Optional Load is typically used to set the idle or cruising engine speed sound

**NOTE**: Optional Load and Primary Load are mapped to buttons for manual control OR assigned to Dynamic Sound Control triggers

CV104 – Primary Load is typically used to set the increased engine speed for heavy loads

https://youtu.be/9xgEQ4evegQ?si=UlJbcpl_HKQpS70X

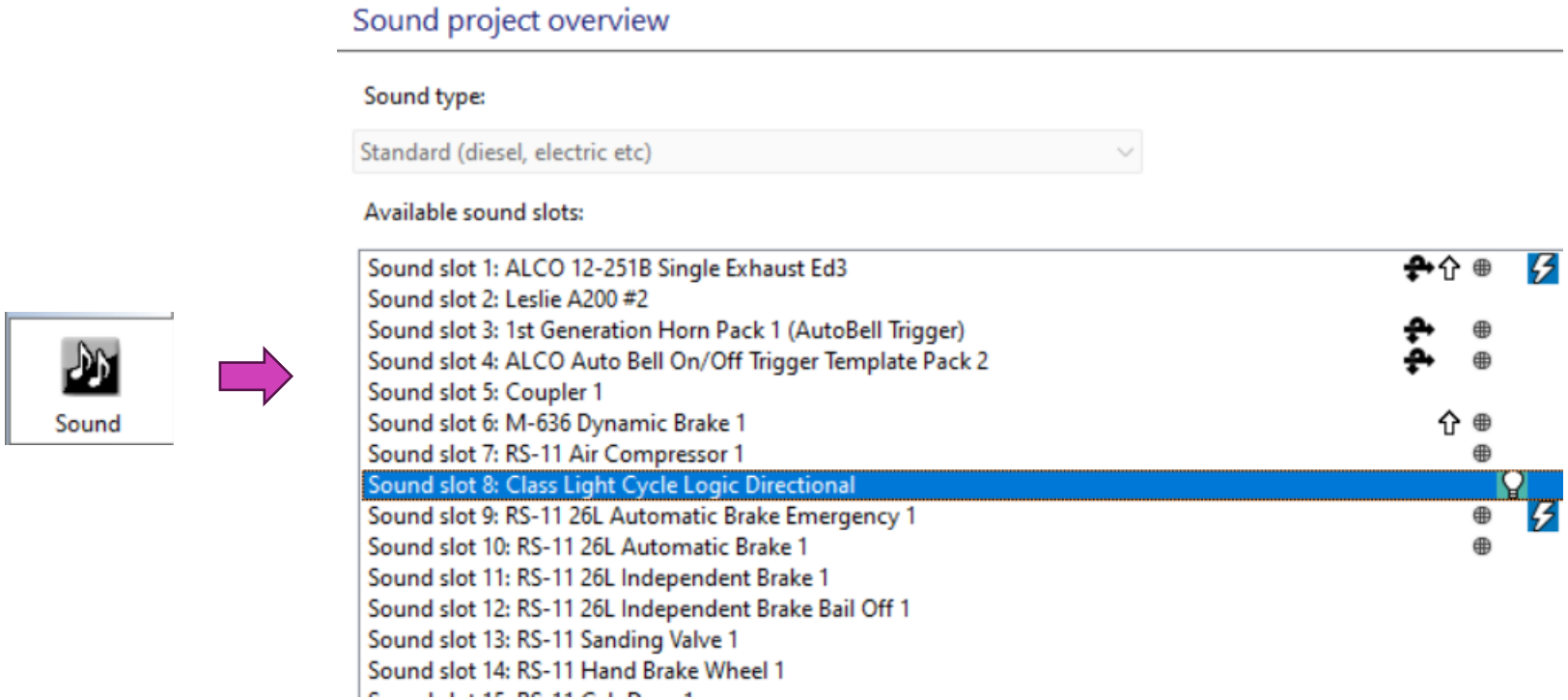
# Adding sounds from ESU decoder files to your Sound Library




Copying horns, bells, etc. from existing Loksound file to your Sound Library is easy

# Alternate Class Light Logic Method

This method uses the Sound logic module and stores the logic in a sound slot



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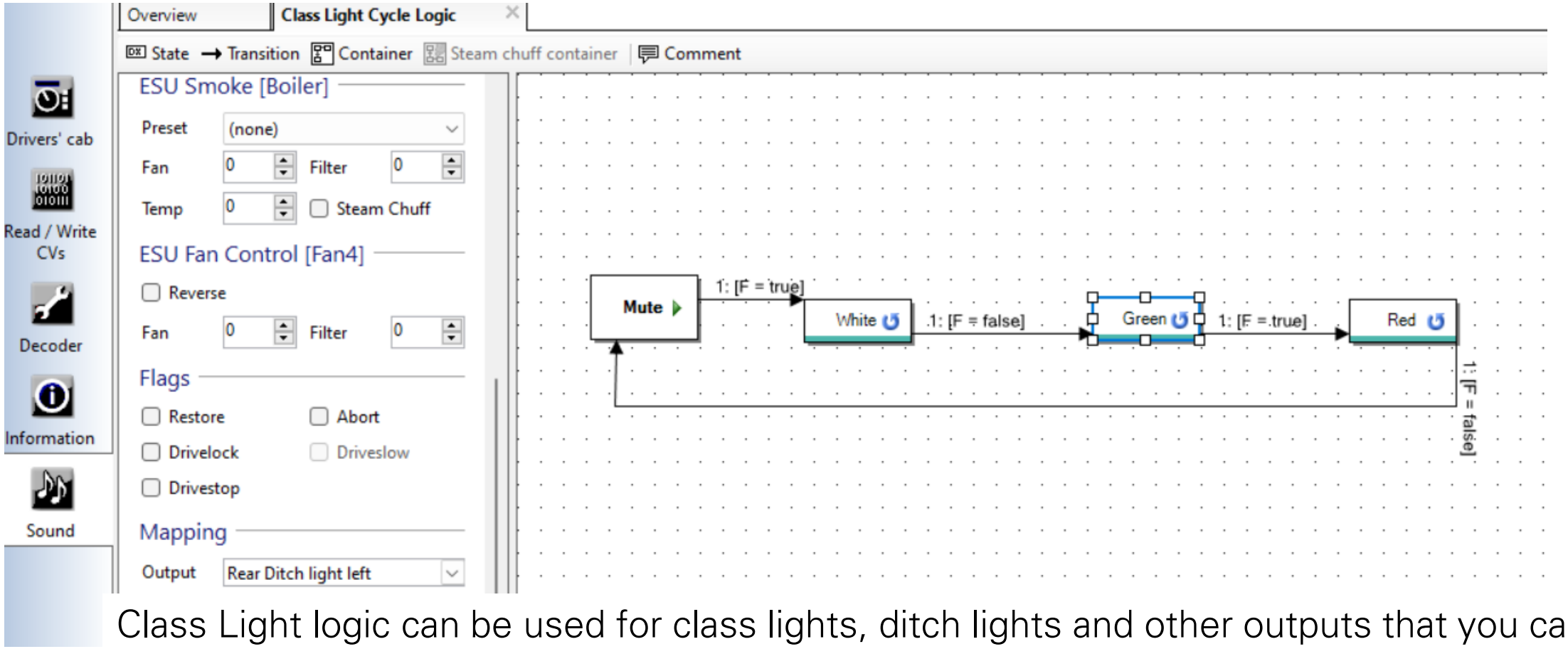


Class Light logic can be used for class lights, ditch lights and other outputs that you can "cycle" using only one function for control.

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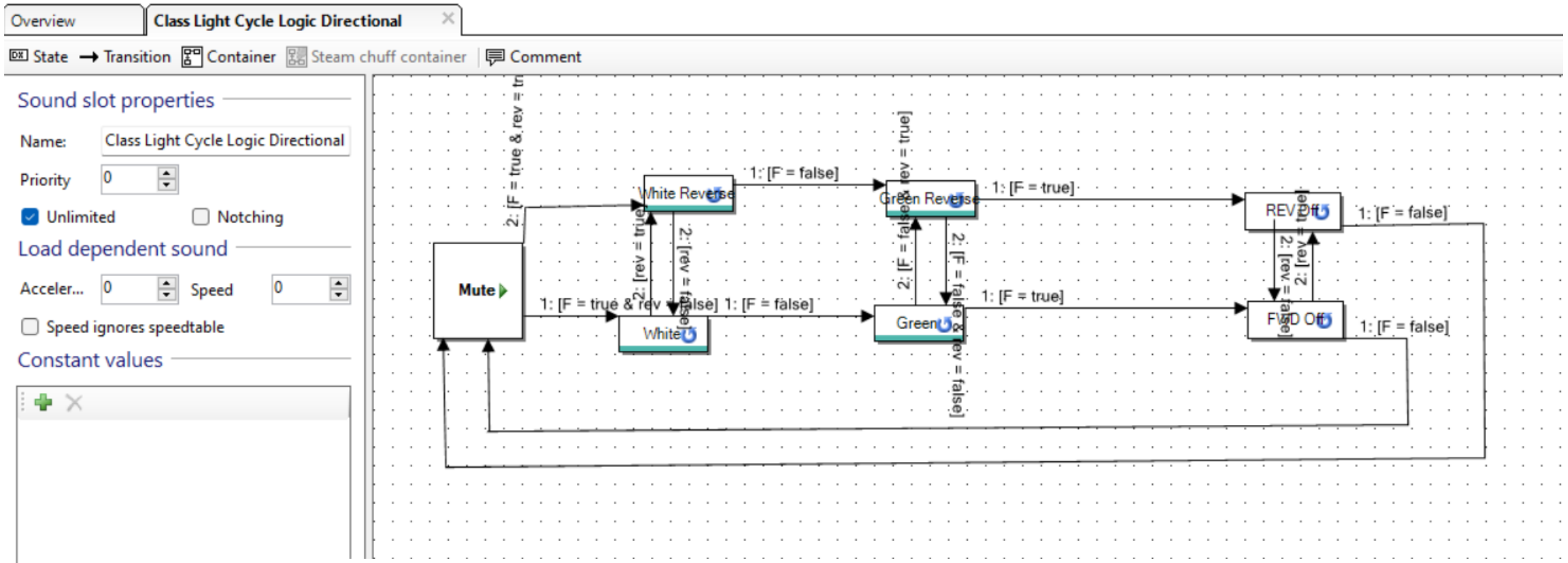


Class Light logic can be used for class lights, ditch lights and other outputs that you can "cycle" using only one function for control.

# Horn Option Example

How to setup bidirectional horns in Function Mapping

| Conditions | | Sounds |
|---|---|---|
| Forward, F2, not F6 | → | 1st Generation Horn Pack 1 (AutoBell Trigger) |
| Reverse, F2, not F6 | → | Leslie A200 #2 |
| F2, F6 | → | Leslie A200 #2 |

Not pressing F6 a multi-chime horn is used in forward direction; the Leslie A200 #2 (copied in to a Sound Slot from the Sound Library) is used in reverse direction. Pressing F6 sets the horn to the Leslie A200 in either direction.

# Additional Info / Useful Links

- http://dccgeek.com/InternetFiles/ESU_Info_Websites.pdf
- https://www.esu.eu/en/start OR https://www.loksound.com
- https://dccwiki.com
- https://www.nmra.org/index-nmra-standards-and-recommended-practices