

SRM L class operation using factory installed ESU Select decoder (DCC)

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PLEASE NOTE: *SOME OF THE INFORMATION IN OUR MANUAL REGARDING THE CV SETTINGS IS INCORRECT. THE FOLLOWING NOTES INDICATE THE CORRECT CV SETTINGS AND ACT AS A HANDY GUIDE FOR UNDERSTANDING THE OPERATION OF YOUR LOCO*

The factory installed ESU Select decoder operates with sophisticated hardware and software. The software emulates the prototypical operation of a real locomotive, in this case that of ex W.A.G.R. 'PACIFIC NATIONAL L class member L251. The following information is provided as a guide only:

- 1) Place the model on the track
- 2) Prime mover start-up. Press F1 on the DCC cab controller. The prime mover start-up sequence commences. With a 16-645E3 prime mover, the first sounds heard are of the turbo lube and fuel prime. Then the main engine cranks over and fires. The cold engine start-up sequence takes approximately 10 seconds. If the engine is restarted, an alternate warm engine start-up sequence will occur. This follows prototypical operation.
- 3) Once the prime mover completes its start-up sequence, the idle sound will loop until throttle is applied. The idle cycle length is 3.6 seconds long but as it is made up of 4 elements, when throttle is applied, the model will respond within 1 second. This has been developed so as to provide a smooth idle sound as well as a model responsive to throttle inputs.
- 4) Reverser. F4 simulates the prototype's reverser (forward, neutral, reverse direction in real locomotive). When the loco's prime mover settles into idle from start-up, the engine sound will be in "low idle", which is achieved when the selector is in the neutral position. With the model stationary, engage F4 and apply throttle. The loco will not move, as the selector is in the modelled "neutral" state.
- 5) By default, the decoder has been set with the following acceleration and deceleration values which emulate prototypical prime mover response: CV 3 (acceleration): 104, CV 4 (deceleration): 82

Changing the values in CV3 & 4 will have an effect on the rate of change of speed at which the model accelerates and decelerates. Any changes should not be set too low, otherwise the sound speed will get out of phase from the physical speed of the model. Either CV can be set to a maximum value of 255. At such a setting however, the model will be slow to respond to throttle inputs.

- 6) Applying throttle from rest (idle) and the decoder will follow one of two routes, depending upon the rate of speed application: 1) Moderate increase in prime mover notching from notch point 1 through to 8, or 2) Heavier increase in prime mover work output such that notch 8 will be reached sooner.
- 7) Manual notching. This feature, controlled through the use of F5 & F6 enables the "notch point" of the model to be set higher than the natural notch of the model for a given speed. For example, if notch 4 occurred at 50% of the loco's maximum speed, to simulate a heavy load, press F5 and the decoder will notch-up from notch 4 to notch 8, one notch at a time (so long as F5 is on). To prevent the notch rising all the way to 8, only activate F5 for a short period, say 2 seconds, then turn it off. In this case the notch will increase from 4 to 5 or 6, depending on how long F5 was active for. Conversely, use F6 (with F5 off of course) to bring the notch back down to F4, in this example. Manual notching can be best practised with the model in the stationary position. With the idle sound playing, press F5 and leave it on. The notch point will rise from idle to notch 1 and all the way to notch 8. Then, with it in notch 8, turn off F5 and then turn on F6. The decoder will respond by bringing the notch point back down to idle, as that was the original starting point.
- 8) Prime mover shutdown. With the model in the stationary position, turn off F1. The prime mover will commence the shutdown sequence. If F1 is pressed before the model comes to rest, the prime mover sound will mute. To unmute, press F1.

NB. The LokSound Select decoder comes pre-programmed from the factory with the following CV settings:

CV1 = 3 Primary address, CV2 = 1 Start voltage, CV3 = 104 Acceleration rate, CV4 = 82 Braking rate
CV5 = 200 Maximum speed, CV6 = 75 Medium speed, CV7 = 255 manufacturer ID, CV48 = 0 Horn type

Any questions regarding L class decoder operation may be directed to Mike Walters at the following email address:
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