Bowser VO-1000
LokSound Select Decoder

Test the loco with address 3 before changing the address

Please go to **www.LokSound.com** for a complete user manual

You have just purchased a Top of the Line Locomotive with one of the most State of Art Digital Sound Decoders on the Market. With nothing more than your Digital Command Station you have the option of 16 separate horns,2 bells, and 2 brakesqueals. All changeable by one CV. No booster is needed! Each individual sound has a separate volume control, and up to 8 sounds can be played at one time! Not only that, but as new sounds become available and firmware gets updated, you can at anytime, hook up to our famous LokProgrammer and update your decoder! Along with outstanding sound, ALL LokSound decoders give you the benefit of the Industry Leading ESU Motor control. You'll see the difference instantly as the engine smoothly accelerates across your pike! Don't forget you also have the option to use one of our MANY lighting effects on any one of your 6(!) function outputs!

Technical data LokSound Select Decoder

Operational modes:
NMRA/DCC with 14, 28, 128 speed steps
2-digit (short) or 4-digit (long) addresses
Analog DC (Dual mode, de-selectable)
Automatic recognition of operational mode
Supports ALL NMRA programming modes

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:
Audio amplifier: 2W @4Ohms 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
F0	Directional Headlights
F1	Bell 4 283 50
F2	Playable Airhorn 3 275 128
F3	Coupler 5 291 128
F4	Dynamic Brake 6 299 90
F5	AUX1/AUX2 (Rotary Beacon)
F6	N/A
F7	Switching Mode
F8	Sound (On/Off) 1 259 128
F9	Drive Hold 2 267 128
F10	Independent Brake 11 339 20
F11	Radiator (Fan) Sound 8 315 50
F12	Dimmer (Headlights)
F13	N/A
F14	N/A
F15	Fast Spitter Valve 15 371 50
F16	Spitters on Shutdown
F17	Brake Set / Brake Release
F18	Sanding Valve 13 355 128
F19	Short Air Let Off 14 363 128
F20	Compressor 7 307 50
F21	Slow Spitter Valve 17 387 50

As with all SELECT decoders there are up to 16 separate horns, 2 separate brake squeals and 2 bells included on this one sound profile! All changeable using CV48.

Prime Mover:
CV48=0

Horns:
CV48=0 Nathan Single Chime
CV48=1 Nathan K3L
CV48=2 Nathan M5
CV48=3 Nathan P3
CV48=4 Nathan Old Cast P5
CV48=5 Nathan K3HA
CV48=6 Leslie RS3L
CV48=7 Leslie S3L #1
CV48=8 Leslie A125
CV48=9 Leslie A200
CV48=10 Leslie RS3K
CV48=11 Hancock Air Whistle
CV48=12 Wabco E2
CV48=13 Nathan M3H
CV48=14 Leslie S2M
CV48=15 Leslie Dual A125-A200

Bells:
CV48=0 Bronze Bell
CV48=64 Steam Loco Rope Pull Bell

Add values from above for total CV48 value.
Default CV48 Value = 0
0 - Baldwin VO-1000
0 - Nathan Single Chime
0 - Bronze Bell
Total 0+0+0 = 0

Please note: Some VO-1000's had a Steam Engine type bell. We have included 2 different Bells for this. Some were rope pull, CV 48 Bell Value 64. And Some were Air Operated. For the Air Operated Steam Loco Bell please set the following CVs:
CV31 = 16, CV32 = 2

CV302 = 0
CV304 = 32

New FULL THROTTLE features:
Drive Hold: Sound Slot 2 Mapped to F9
Independent Brake: Sound Slot 11 Mapped to F10
Run 8: Sound Slot 20 (not Mapped)
Coast: Sound Slot 21 (not Mapped)

Extended Addressing

Most Command Stations will give you the option to enter a 4 Digit Extended Address. Please refer to your Command Station's Manual for guidance as to how to do this. If your command Station does not have this feature a full list of values and instructions are available on line at www.loksound.com

Start Delay

While pulling a train a Prototype Locomotive will not move until the Prime mover has worked up enough power to provide the proper amount of electricity to the traction motors. For this reason when the LokSound Select sound is idling and you turn up the throttle, the locomotives begins to move only after the Diesel engine has reached notch1. Although this behavior is very prototypical, one might not like it because it causes some delay. You can disable this startup delay by simply Changing CV124 to a value of 0. This will cause the LokSound Select decoder to immediately start moving when the throttle is turned up. However, the start up sound will not be prototypically synced with the motion anymore.

Sound on/Sound Off (F8 Operation)

You will notice quickly that the F8 button will work differently than what you may be used to. This is done for two reasons. First so that you can hear both the start and Shut down sequences without any CV changes. Also so that upon power up the drain on your command station is not as great. Sound decoders draw quite a bit of power upon start up. Having the sound off initially when the layout is powered up is a much more efficient way on doing things. This can save your command station from an early demise! You may be used to other manufacturers who do this backwards. If you prefer you can easily reverse this feature in LokSound decoders. Simply Change CV32 to 2, then CV403 to 32. Please note also that F8 only controls the prime mover sounds. On a real engine, as long as there is air, the bell and the horn will work when the prime mover is off!

Diesel sound Volume Control table

Function (Diesel)	CV	Range	Default
Master volume control	63	0 - 192	192
Diesel Volume Control	259	0 - 128	128
Horn Volume Control	275	0 - 128	128
Bell Volume Control	283	0 - 128	99
Coupler Sound Volume Control	291	0 - 128	128
Turbo Volume Control	419	0 - 128	128
Air Compressor Volume Control	307	0 - 128	77
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
Spitter Valve Volume Control	371	0 - 128	128
Random sounds	451	0 - 128	128
BE SURE CV 32 IS SET TO 1 BEFORE CHANGING CVs 257-511			

Decoder-Reset
Write value 08 into CV 08.

From time to time you may have the need to reset the decoder in your new Locomotive. Setting CV08 to a value of 08 will accomplish this. Be aware though that all user settings will be set back to factory defaults with this process. Your address will now become 03.

A full PDF Manual can be found at www.LokSound.com
Please refer to the LokSound Select Manual.

As a Reference NO BOOSTER is needed for programming.