



TCS WOWSound Diesel Sound Decoder
The Future of DCC Audio!

WOWDIESEL



WOWDiesel Features

- 30+ Individual Horns
- 30+ Individual Bells
- Multiple Prime Movers including Dual Prime Movers
 - EMD 567 Non Turbo
 - EMD 567 Turbo
 - EMD 645 Turbo
 - EMD 710 Turbo
 - ALCO 251 Turbo
 - GE FDL-16
 - GE 7FDL-16 #1
 - GE 7FDL-16 #2
- Mainline and Switching Momentum
- 3 Throttle Operating Modes
- Prototypical Braking
- Working Dynamic Brakes
- Coupling and uncoupling sounds right from the prototype
- 6 Fully programmable light Functions. Choose from 19 different lighting effects
- Many More!

What is **WOWSound**

Pure Recording

- All 300+ sounds on a TCS WOWSound Diesel decoder are LIVE recordings. Producing the best audio without digitally generated sounds.
 - We actually leased different diesel locomotives and their crews so that we can have complete access to the locos. This way we can record every sound needed the way we needed to record it!
- Audio Quality
 - True CD Quality – 44,100 Sample per Second at 16 bit Resolution
 - CD Quality is what you hear in Blu-Ray Movies and Audio CD's
 - Our nearest competitor has less than 30% of that!
- Bit Depth
 - Bit Depth defines how many distinct voltage levels or tones the decoder can send to the speaker.

- CD Quality is equal to 65,536 separate tones that can be reproduced. Our nearest competitor can do 4,096!
- Sample Rate
 - WOWSound's CD Quality is 44,100 sound sample per second. Our nearest competitor does 8 to 15,000 samples per second. You can hear the difference!

Performance: Models Aren't Toys

- **Automatic BEMF**
 - The best slow speed control in the industry without any user adjustments. Right out of the bag, any TCS decoder will crawl at speed step 1, so slow that you will have to keep looking at it to make sure it is actually moving!
- **Prototype Throttle Mode** - Load Based Automatic Notching. The Prime Mover notches up and down automatically depending on how hard the locomotive is working. ***This can be calibrated to your specific locomotive using our easy 2 step calibration process in Audio Assist.***
- **Traditional Throttle Mode** – The Prime Mover notches up and down based on the throttle speed step setting. The speed step that each notch changes can be set independently.
- **Manual Notch Throttle Mode** – Prime Mover notch rate is controlled using Buttons 10 to increase and 11 to Decrease the notch rate independent of the throttle setting. This is active at all times so you can manually override the other throttle modes. Changing throttle settings returns control to active throttle mode
- **Realistic Braking** - Apply and release brakes with a function button. Each press of the button is a 20% brake application. Brakes interact with throttle application just like the prototype.
- **Working Dynamic Braking** –
 - Press the Dynamic Brake Button 1 time and the Prime mover goes to a preset notch and the Fans come on. (No speed change)
 - Press the Dynamic a second time and the fan sound will increase in intensity and the loco speed will drop a preset number of speed steps. (CV 191)
 - Press the Dynamic Brake button a third time and the fan sound increases again and the speed will drop again.
 - Continued button presses will decrease the speed until it reaches a preset limit. (CV 189)

- Dynamic brake deceleration rate is controlled by CV 190
- Pressing Button 6 (Brake Release), at any time, will turn off the Dynamic Brake Fans, The Prime Mover will return to its previous setting, and the locomotives speed will return to whatever the throttle is set to.
- **Keep Alive™ = Smooth Operation**
 - Keep Alive TCS KA2 comes with the WOWSound 101-Diesel-KA
 - This provides from 5 to 8 seconds of power to keep your loco running through dead spots in the track.
 - This keeps everything running – Motor, Lights and Sound!
 - When you turn off the power to your layout you will still hear the WOWSound decoder making sound for several seconds. This may take some getting used to.

Audio Assist™: It Speaks!

- Audio Assist is revolutionizing the way we program decoders
- No more grabbing the manual to get CV Numbers and values to make sound adjustments
- Just Press 8 four times and areal human voice will guide you through the process
- Using Audio Assist™ you can change Master Volume, Sound Type Volume, Choose Sounds, Change Throttle Operating Mode, Change Prime Mover, Remap sounds to any function button, and do any of several reset options.
- ALL without know or using a CV!
- Now, you can also change Lighting Features using Audio Assist™.

Rotate Horn/Bell Feature

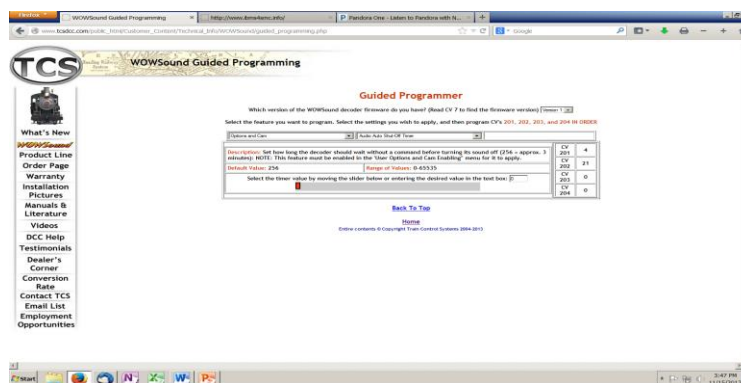
- Every TCS *WOWDiesel* decoder comes with 30 Horns and 30+ Bells
- Blow the Horn or Ring the Bell
- Use a function button to rotate through either all the Horns or all the Bells depending on what you accessed last.
- Not only can you Rotate through the Horns, but the decoder tells you what Horn it is!
- *WHOOPS*, if you liked the previous one just use the reverse button on your throttle to go back to it.
- No complicated CV's to look up!

Light Mode / Sound Mode

- Allows you to use convenient function buttons for both Lighting Functions and Sound Functions (The best of both worlds)

- With most other sound decoders, you have to make a trade off between what sounds to control with function buttons and which lighting features you want to control with function buttons.
- Light Mode/Sound Mode makes all 28 function buttons available for both sound and lights.
- Press F8 twice to enter Light Mode which gives you a full 28 available function buttons to assign lighting features to.
- Press F8 twice again and you enter Sound Mode where all 28 function buttons are available to assign sound features to.
- You can even make some buttons control both sound and light features at the same time. Such as having the Generator sound start up with the Headlight.

Online Programming Tool



- There are a few features that are not accessible in Audio Assist™
- For most people, the default settings are going to be fine
- For those of you that want to change these settings, we have our Online Programming Tool to give you the CV values to program into your decoder.
- TCS Uses 4 indexed CV's to adjust all the sound setting (CV201, 202, 203, & 204)
- Features to use the Programming Tool For Include:
 - Individual Notch up points
 - Random Sound Frequency (How often they play)
 - Mainline and Switching Acceleration and Deceleration Rates
 - Enable/Disable Automatic Sounds
 - Dynamic Brake Low Limit Speed Step
 - Brake Grinding sound start speed
 - Dual Mode functions
 - User Options
 - Audio Auto Shutoff Time

Support and Service

- All TCS Decoders are covered by our world renown **Goof-Proof Warranty**
- WOWSound dedicated section on our website populated with tutorial videos, guides and CV Calculators (for non-Audio Assist™ features)
- Phone and email support from individuals involved in the WOWSound development. 215-453-9145 techsupport@tcsdcc.com www.tcsdcc.com