Specialist in custom DCC installs... sound - lighting - smoke - crew - detailing - coach lighting & population

YouChoos Individual Model Locomotives

# YouChoos *DCC Sound*

immersive Drive

# Certificate & Quick Reference

Thank-you for purchasing a YouChoos sound decoder!

This certificate provides specific details of your decoder including your unique build number. Each sound decoder I load is individually catalogued and assigned a unique certificate, indicating the load date and an individual code...

**Your decoder has unique number: LOCONO1-TEMPLATE-1026**

## YouChoos Sounds
## Locomotion No1

DCC Address: 3



Included in this package:

| | |
|---|---|
| PART NUMBER | YouChoos Sounds - Locomotion No1 YC-LOCONO1 |
| DECODER | MS series - template |
| SPEAKER | N/A - template |

**Functions:**

| FKey | Category | Action |
|---|---|---|
| F0fwd: | LIGHT | FOfwd Forward lights |
| F0rev: | LIGHT | FOfwd Forward lights |
| F1: | SOUND | Running Sounds |
| F2: | ACTIVE BRAKE | Active Brake |
| F3: | SOUND | Bell |
| F4: | SOUND | Cazoo 2 |
| F5: | SOUND | Blower |
| F6: | LIGHT + SOUND | FA1 Firebox glow / Coal Shovelling |
| F7: | QUICKSEL + SOLO | Quick-Select (Light) / Solo Driving |
| F8: | QUICKSEL#2 | Quick-Select#2 (Heavy) |
| F9: | SOUND | Water Filling |
| F10: | SOUND | Guard's Whistle |
| F11: | SOUND | Water Hatch |
| F12: | SOUND | Comms Bell |
| F13: | SOUND | Cab Clanks |
| F14: | SOUND | Bird Song |
| F15: | SOUND | Seagulls |
| F16: | SOUND | Church Bells |
| F17: | SOUND | Cows |
| F18: | SOUND | Gong |
| F19: | SOUND | Steam Release Wheezy |
| F20: | SHUNT + HALF SPEED | Shunting Mode / Half Speed |
| F21: | SOUND | Blower 3 |
| F22: | SOUND | Blower 2 |
| F23: | SOUND | Cazoo 3 |
| F24: | SOUND | Steam Release |
| F25: | SOUND | Blower 4 |
| F26: | SOUND | Water Hatch 2 |
| F27: | VOLUME | Volume Decrease |
| F28: | VOLUME | Volume Increase |

All functions are ON/OFF.

**Feature Notes:**

***Active Braking*** – To slow down, choose the desired speed on the throttle, then use the Brake key to control the slow-down to that speed If you prefer more traditional throttle-based braking, simply decrease the value in CV#4, or even simpler: leave ACTIVE BRAKE switched on all the time!

***Shunt Mode*** – Momentum/Inertia is reduced to ¼ the normal effect and the throttle range is halved to simulate driving light-engine.

***Quick Select*** – For steam, switches from standard chuff sounds to light-engine where chuffs are quieter. For hybrid locomotives, switches engine type – usually effective only at standstill. Some steam projects contain a 'QuickSelect#2' which normally gives heavier chuffs compared to the default. For diesel, sometimes provided for alternative cold start.

***Solo*** – usually defined on the same key as QuickSelect for light-engine on a steam loco – has various effects including reducing the effect of momentum.

***SpeedLock*** – while the SpeedLock key is switched on, the throttle will control the engine sounds only, and leaves the physical speed of the motor unchanged.

***NotchUp*** – for diesel/electric projects, the NotchUp key will raise the base engine level to notch 1 when standing idle. Switch off to return to idle. Has no effect while in motion. Allows you to manually rev the engine up.

***Coast*** – for diesel/electric sounds, the Coast key brings the base engine level down to idle, regardless of the current speed. Switch off to return to speed-dependent engine level.

***LowBeam*** – for some projects, a LowBeam key is provided which dims the forward-motion headlights.

***Mute*** – Fades all sounds out to silent until unmuted, where sounds will be faded back to their previous level.

***Volume Up/Down*** – Overall volume level will be decreased / increased gradually while VOLUP / VOLDOWN is switched on, eventually reaching silent or the maximum defined in the project (usually around 90%). Affects CV#266 master volume level. If you lose sound, check that you haven't simply reduced the volume to silent! Default is recommended around 65%.

***Dynamic / Exponential Inertia*** – Linear throttle-to-speed response is not particularly realistic, so speed change is exponential as speed increases, simulating slow starts from standstill. Similarly, harder throttle requests will result in faster acceleration. This is all built-in to the project working automatically on your throttle requests.

***Looping Sounds*** – Some sounds are looping and will continue repeating until that function is switched off.

***Steam Chuff Rate*** – Use CV#267 to adjust the chuff rate to match wheel rotation.

***Random Sounds*** – Some sounds may be configured to play at random intervals, usually at reduced volume.

**IMPORTANT – WARRANTY INFORMATION!**

Damage caused by mishandling, short-circuit, or undue force is NOT covered by warranty. Normally, a repair/replacement charge will be levied in such cases. Decoders are delicate, so please handle with care. The most common cause of damage is caused by excessive force on wires, or by short-circuit via the speaker output. Also be careful that the coloured coating on the wires does not get pulled back exposing bare wire at the solder pads, thus increasing risk of short-circuit.

# More Information on Your Sound Decoder

## User Sound Assignments

The following table lists the sound effect files loaded onto your decoder, with their unique sample numbers which are used in CVs to assign a sound to a specific feature. Where a sound has no Function Key listed, this indicates that it is an additional sound included in your project which you can manually assign instead of another sound – for example, an alternative whistle/horn which you can swap in for one of the default ones. Please refer to the supplied CV Table document where you can see which CV is used to assign a sound to each Function Key (starts at CV#513).

Of course there are many more sound files that make up your project, such as engine sounds, braking, set-off etc., but these are not included here – only those that are available as user sounds, assignable to Function Keys.

## Random Sounds

Zimo decoders include 8 random sound generators, Z1 to Z8, which are also indicated here along with the sample number assigned to them, and whether they are to be played randomly at standstill, in motion, or both.

Likewise, please refer to the CV Table document supplied with your YouChoos sound decoder to see which CVs are used in random sound definition (CVs#744 to 767 and CVs#315 to 338).

| Effect Sound Sample Number | Name | Looping | Function Key(s) | Random Generator | Random at Standstill | Random in Motion |
|---|---|---|---|---|---|---|
| 145 | Cazoo | | | | | |
| 146 | Cazoo 2 | | F4 (CV#522) | | | |
| 147 | Cazoo 3 | | F23 (CV#682) | | | |
| 148 | Blower | Loops | F5 (CV#525) | Z1 (CV#744) | Yes | Yes |
| 149 | Blower 2 | Loops | F22 (CV#679) | Z2 (CV#747) | Yes | Yes |
| 150 | Blower 3 | Loops | F21 (CV#676) | Z3 (CV#750) | Yes | Yes |
| 151 | Steam Release | | F24 (CV#685) | Z4 (CV#753) | Yes | Yes |
| 152 | Steam Release Wheezy | | F19 (CV#567) | Z5 (CV#756) | Yes | |
| 153 | Guard's Whistle | | F10 (CV#540) | | | |
| 154 | Wheel Flange | Loops | | Z6 (CV#759) | Yes | Yes |
| 155 | Water Filling | Loops | F9 (CV#537) | Z7 (CV#762) | Yes | |
| 156 | Water Hatch | | F11 (CV#543) | | | |
| 157 | Cab Clanks | | F13 (CV#549) | | | |
| 158 | Bird Song | | F14 (CV#552) | | | |
| 159 | Seagulls | | F15 (CV#555) | | | |
| 160 | Church Bells | | F16 (CV#558) | | | |
| 161 | Cows | | F17 (CV#561) | | | |
| 162 | Coal Shovelling | Loops | F6 (CV#528) | | | |
| 163 | Blower 4 | Loops | F25 (CV#688) | | | |
| 164 | Water Hatch 2 | | F26 (CV#691) | | | |
| 165 | Bell | Loops | F3 (CV#519) | Z8 (CV#765) | Yes | |
| 166 | Comms Bell | | F12 (CV#546) | | | |
| 167 | Gong | | F18 (CV#564) | | | |

Remember, you can always reset to the project's original configuration if you make a mess, by sending CV#8=8, though note that the DCC Address of the decoder will also be reset (normally back to 3)!

## Physical AUX Outputs

The table below states how the physical outputs (for lighting etc.) are configured in your decoder. Outputs that are assigned for FKey0-12 are achieved with Zimo Extended Function Mapping (where CV#61=97). For any outputs assigned to FKeys above FKey12, Swiss Mapping (also known as Zimo Advanced Mapping) is used instead (not shown in this table).

| Physical Output | Wire Colour (if wired) | FKey | Effect / Direction | Notes |
|---|---|---|---|---|
| F0Fwd | WHITE | FKey0 | Constant (simple ON/OFF) - FWD only | FOfwd Forward lights |
| F0Rev | YELLOW | | Constant (simple ON/OFF) - REV only | F0rev Reverse lights |
| FA1 | GREEN | FKey6 | Random Flicker | FA1 Firebox glow |

# LOCONO1-TEMPLATE-1026 - YouChoos Sounds - Locomotion No1

## CV List MS series - template – Configuration Values at shipping time

| CV | Description | Value |
|---|---|---|
| 1 | Short Address | 3 |
| 2 | Starting voltage | 1 |
| 3 | Rate of acceleration | 50 |
| 4 | Rate of deceleration | 100 |
| 5 | Maximum speed | 0 |
| 6 | Middle speed | 0 |
| 7 | Version Number (Part1) | 5 |
| 8 | Manufacturer Id / HARD RESET | 145 |
| 9 | Motor frequency | 55 |
| 10 | EMF Feedback cut-off | 0 |
| 12 | Operation Types - disable specific protocols | 5 |
| 13 | Analog mode active functions F1-F8 | 3 |
| 14 | Analog functions and Inertia | 130 |
| 17 | Extended address (byte 1) | 192 |
| 18 | Extended address (byte 2) | 3 |
| 19 | Consist Address - high | 0 |
| 20 | Consist Address - low | 0 |
| 21 | Consist functions for F1 - F8 | 0 |
| 22 | Consist functions F0 & F9-F12 + DC Inertia | 0 |
| 23 | Acceleration trimming | 0 |
| 24 | Deceleration trimming | 0 |
| 27 | Direction dependent stops (Lenz ABC) | 0 |
| 28 | RailCom Configuration | 3 |
| 29 | Configuration bits - decoder properties | 6 |
| 31 | Index page - high | 0 |
| 32 | Index page - low | 0 |
| 33 | Function mapping F0 forward | 0 |
| 34 | Funtion mapping F0 reverse | 0 |
| 35 | Function mapping F1 | 0 |
| 36 | Function mapping F2 | 0 |
| 37 | Function mapping F3 | 0 |
| 38 | Function mapping F4 | 0 |
| 39 | Function mapping F5 | 0 |
| 40 | Function mapping F6 | 0 |
| 41 | Function mapping F7 | 0 |
| 42 | Function mapping F8 | 0 |
| 43 | Function mapping F9 | 0 |
| 44 | Function mapping F10 | 0 |
| 45 | Function mapping F11 | 0 |
| 46 | Function mapping F12 | 0 |
| 49 | HLU acceleration | 0 |
| 50 | HLU deceleration | 0 |
| 51 | HLU limit HU | 0 |
| 52 | HLU limit U | 0 |
| 53 | HLU limit UL | 0 |
| 54 | HLU limit L | 110 |
| 55 | HLU limit LF | 180 |
| 56 | Back-EMF control (P and I values) | 55 |
| 57 | Voltage reference | 0 |
| 58 | Back-EMF intensity | 255 |
| 59 | HLU delay | 5 |
| 60 | Reduced function output voltage (Dimming) | 100 |
| 61 | Special ZIMO function mapping | 97 |
| 62 | Effects dimming | 50 |
| 63 | Effects cycle | 62 |
| 64 | Effects ditch | 0 |
| 65 | Version Number (part2) sub-version | 5 |
| 66 | Directional speed trimming - FWD | 0 |
| 67 | Free speed curve | 4 |
| 68 | Free speed curve | 7 |
| 69 | Free speed curve | 10 |
| 70 | Free speed curve | 13 |
| 71 | Free speed curve | 16 |
| 72 | Free speed curve | 20 |
| 73 | Free speed curve | 24 |
| 74 | Free speed curve | 28 |
| 75 | Free speed curve | 32 |
| 76 | Free speed curve | 36 |
| 77 | Free speed curve | 42 |
| 78 | Free speed curve | 48 |
| 79 | Free speed curve | 54 |
| 80 | Free speed curve | 60 |
| 81 | Free speed curve | 68 |
| 82 | Free speed curve | 76 |
| 83 | Free speed curve | 84 |
| 84 | Free speed curve | 92 |
| 85 | Free speed curve | 102 |
| 86 | Free speed curve | 112 |
| 87 | Free speed curve | 124 |
| 88 | Free speed curve | 136 |
| 89 | Free speed curve | 152 |
| 90 | Free speed curve | 168 |
| 91 | Free speed curve | 188 |
| 92 | Free speed curve | 208 |
| 93 | Free speed curve | 230 |
| 94 | Free speed curve | 252 |
| 95 | Directional speed trimming - REV | 0 |
| 97 | Consist FKey | 0 |
| 100 | Current asymmetry | 0 |
| 101 | Comparison asym. offset | 0 |
| 105 | User CV / Manuld | 145 |
| 106 | User CV / Provider Id | 13 |
| 107 | Light suppression on cab side 1 - front | 0 |
| 108 | Light suppression on cab side 2 - rear | 0 |
| 109 | Automatic unilateral light suppression | 0 |
| 110 | Automatic unilateral light suppression | 0 |
| 111 | Emergency stop deceleration rate | 0 |
| 112 | Special ZIMO configuration bits | 0 |
| 113 | EMF reduction - compensation | 0 |
| 114 | Dimming mask | 255 |
| 115 | Uncoupler control (KROIS and ROCO couplers) | 0 |
| 116 | Automated uncoupling procedure | 0 |
| 117 | Flasher functions | 0 |
| 118 | Flashing mask | 0 |
| 119 | Low beam mask for F6 | 0 |
| 120 | Low beam mask for F7 | 0 |
| 121 | Exponential acceleration | 11 |
| 122 | Exponential deceleration | 11 |
| 123 | Adaptive acceleration and deceleration | 22 |
| 124 | Shunting key functions and SUSI | 2 |
| 125 | Special effects F0FWD | 1 |
| 126 | Special effects F0REV | 2 |
| 127 | Special effects FuncOutput1 | 8 |
| 128 | Special effects FuncOutput2 | 0 |
| 129 | Special effects FuncOutput3 | 0 |
| 130 | Special effects FuncOutput4 | 0 |
| 131 | Special effects FuncOutput5 | 0 |
| 132 | Special effects FuncOutput6 | 0 |
| 133 | FO4 as Cam sensor Or FO4 as fan of smoke generators of steam engines. | 0 |
| 134 | Asymmetrical stopping ABC | 106 |
| 135 | Km/h – Speed regulation | 0 |
| 136 | Railcom mph factor | 24 |
| 137 | Smoke generator voltage - standstill | 70 |
| 138 | Smoke generator voltage - cruising | 200 |
| 139 | Smoke generator voltage - acceleration | 255 |
| 140 | Constant braking distance - config | 0 |
| 141 | Constant braking distance - distance | 20 |
| 142 | High speed correction - ABC | 5 |
| 143 | High speed correction - HLU | 0 |
| 144 | Programming and update lock - not in MS | 0 |
| 145 | Experimental - Alternative motor control method | 0 |
| 146 | Compensation for gear back-lash | 0 |
| 147 | BackEMF I-value (Integral) | 0 |
| 148 | BackEMF D-Value (Differential) | 0 |
| 149 | BackEMF P-Value (Proportional) | 0 |
| 150 | Experimental motor reg - deviation control | 0 |
| 151 | Motor brake and reduce motor BackEMF in Consist | 0 |
| 152 | Dim Mask 2 - FO7-FO12, RiBi | 0 |
| 153 | Stop time after DCC signal loss | 0 |
| 154 | Zimo configuration part 2 | 0 |
| 155 | FKey for half-speed | 20 |
| 156 | FKey for deactivating momentum | 20 |
| 157 | FKey for MAN function | 0 |
| 158 | Sound/RailCom config | 16 |
| 159 | Special effects FuncOutput7 | 0 |
| 160 | Special Effects FuncOutput8 | 0 |
| 161 | Servo outputs: Protocol | 0 |
| 162 | Servo 1 - Left stop | 49 |
| 163 | Servo 1 - Right stop | 205 |
| 164 | Servo 1 - Center position | 127 |
| 165 | Servo 1 - Rotating speed | 10 |
| 166 | Servo 2 - Left stop | 49 |
| 167 | Servo 2 - Right stop | 205 |
| 168 | Servo 2 - Center position | 127 |
| 169 | Servo 2 - Rotating speed | 10 |
| 170 | Servo 3 - Left stop | 0 |
| 171 | Servo 3 - Right stop | 0 |
| 172 | Servo 3 - Centre position | 0 |
| 173 | Servo 3 - Rotating speed | 0 |
| 174 | Servo 4 - Left stop | 0 |
| 175 | Servo 4 - Right stop | 0 |
| 176 | Servo 4 - Centre position | 0 |
| 177 | Servo 4 - Rotating speed | 0 |
| 180 | Motor reg EMK-difference max | 0 |
| 181 | Servo 1 - FKey assignment | 0 |
| 182 | Servo 2 - FKey assignment | 0 |
| 183 | Servo 3 - FKey assignment | 0 |
| 184 | Servo 4 - FKey assignment | 0 |
| 185 | Special assignment for live steam engines | 0 |
| 186 | Pantograph 1 - FKey assignment | 0 |
| 187 | Pantograph 2 - FKey assignment | 0 |
| 188 | Pantograph 3 - FKey assignment | 0 |
| 189 | Pantograph 4 - FKey assignment | 0 |
| 190 | Brightening up times | 0 |
| 191 | Dimming down time | 0 |
| 195 | Special effects FuncOutput9 | 0 |
| 196 | Special effects FuncOutput10 | 0 |
| 197 | Special effects FuncOutput11 | 0 |
| 198 | Special effects FuncOutput12 | 0 |
| 199 | Special effects FuncOutput13 | 0 |
| 201 | SUSI#1 Configuration | 0 |
| 202 | SUSI#2 Configuration | 0 |
| 203 | IN1/IN2 Configuration | 0 |
| 204 | IN3/IN4 Configuration | 0 |
| 248 | Bootloader version | 0 |
| 249 | Bootloader subversion | 0 |
| 250 | Decoder ID | 0 |
| 251 | Decoder ID | 0 |
| 252 | Decoder ID | 0 |
| 253 | Decoder ID | 0 |
| 254 | Project Number | 36 |
| 255 | SubProject Number High Byte | -4 |
| 256 | SubProject Number Low Byte | -2 |
| 260 | Load Code P1 | 0 |
| 261 | Load Code P2 | 0 |
| 262 | Load Code P3 | 0 |
| 263 | Load Code P4 | 0 |
| 264 | Variable low voltage (large scale) | 0 |
| 265 | Loco type selection | 1 |
| 266 | Total volume | 64 |
| 267 | Chuff rate (using virtual cam) | 90 |
| 268 | Switching to real cam sensor | 0 |
| 269 | Lead-chuff accentuated | 25 |
| 270 | Longer chuff length at very low speeds | 0 |
| 271 | Overlapping effect at high speed | 16 |
| 272 | Blow-off duration | 50 |
| 273 | Delayed start after blow-off | 20 |
| 274 | Blow-off schedule | 30 |
| 275 | Engine (chuff) sound volume at low speed | 225 |
| 276 | Engine (chuff) sound volume at high speed and no-load | 240 |
| 277 | Degree of volume change under load for driving (chuff) sound. | 5 |
| 278 | Load change threshold | 0 |
| 279 | Reaction time to load change | 0 |
| 280 | Load influence (DIESEL) | 0 |
| 281 | Acceleration threshold for full load sound | 8 |
| 282 | Duration of acceleration sound | 30 |
| 283 | Engine sound volume at full acceleration | 255 |
| 284 | Threshold for deceleration sound | 1 |
| 285 | Duration of reduced volume on deceleration | 30 |
| 286 | Volume level during deceleration | 75 |
| 287 | Brake squeal threshold | 55 |
| 288 | Minimum driving time before brake squeal | 50 |
| 289 | Thyristor - stepping effect | 0 |
| 290 | Thyristor - pitch at medium speed | 0 |
| 291 | Thyristor - pitch at max speed | 0 |
| 292 | Thyristor - speed step for pitch increase | 0 |
| 293 | Thyristor - volume at cruising | 0 |
| 294 | Thyristor - volume during acceleration | 0 |
| 295 | Thyristor - volume during deceleration | 0 |
| 296 | eMotor - highest volume | 0 |
| 297 | eMotor - speed when audible begins | 0 |
| 298 | eMotor - speed for full volume | 0 |
| 299 | eMotor - pitch dependent on speed | 0 |
| 300 | Enter OpsMode | 0 |
| 301 | Inc/Dec programming of CVs | 0 |
| 302 | Start Calibration Mode/Sequence | 0 |
| 303 | Switching input 1 - key/options | 0 |
| 304 | Switching input 2 - key/options | 0 |
| 305 | Switching input 3 - key/options | 0 |
| 306 | Switching input 4 - key/options | 0 |
| 307 | Cornering squeals or reed configuration | 0 |
| 308 | Cornering squeal FKey | 0 |
| 309 | Brake Key | 2 |
| 310 | On/off key for engine and random sound | 1 |
| 311 | On/off key for function sound | 0 |
| 312 | Blow-off key | 0 |
| 313 | Mute key | 0 |
| 314 | Mute fade in/out time | 10 |
| 315 | Minimum interval for random generator Z1 | 40 |
| 316 | Maximum interval for random generator Z1 | 100 |
| 317 | Playback length for random generator Z1 | 0 |
| 318 | Minimum interval for random generator Z2 | 45 |
| 319 | Maximum interval for random generator Z2 | 105 |
| 320 | Playback length for random generator Z2 | 0 |
| 321 | Minimum interval for random generator Z3 | 50 |
| 322 | Maximum interval for random generator Z3 | 110 |
| 323 | Playback length for random generator Z3 | 0 |
| 324 | Minimum interval for random generator Z4 | 55 |
| 325 | Maximum interval for random generator Z4 | 115 |
| 326 | Playback length for random generator Z4 | 0 |
| 327 | Minimum interval for random generator Z5 | 60 |
| 328 | Maximum interval for random generator Z5 | 120 |
| 329 | Playback length for random generator Z5 | 0 |
| 330 | Minimum interval for random generator Z6 | 65 |
| 331 | Maximum interval for random generator Z6 | 125 |
| 332 | Playback length for random generator Z6 | 0 |
| 333 | Minimum interval for random generator Z7 | 70 |
| 334 | Maximum interval for random generator Z7 | 130 |
| 335 | Playback length for random generator Z7 | 0 |
| 336 | Minimum interval for random generator Z8 | 75 |
| 337 | Maximum interval for random generator Z8 | 135 |
| 338 | Playback length for random generator Z8 | 0 |
| 339 | NotchUp 1st FKey | 0 |
| 340 | Notch level and extra Notch FKeys | 0 |
| 341 | Switch input 1 Playback time | 0 |
| 342 | Switch input 2 Playback time | 0 |
| 343 | Switch input 3 Playback time | 0 |
| 344 | Follow-up time for fan noise | 0 |
| 345 | Quick-select FKey | 7 |
| 346 | Switch collection conditions | 3 |
| 347 | Switch-over key for solo driving | 7 |
| 348 | Switch-over parameters | 19 |
| 349 | Brake Time | 10 |
| 350 | Delay of switchgear sound after start up - ELECTRIC | 0 |
| 351 | Smoke fan speed at steady speed | 0 |
| 352 | Smoke fan speed at acceleration and motor start-up - DIESEL | 0 |
| 353 | Automatic shut-down of smoke generator | 0 |
| 354 | Steam chuff frequency at step 1 | 0 |
| 355 | Exhaust fan speed at stand-still (steam and diesel) | 0 |
| 356 | Speedlock Key | 0 |
| 357 | Thyristor - lowering volume at high speed | 0 |
| 358 | Thyristor - volume reduction curve at high speed | 0 |
| 359 | Duration of Electric switch gear sound on speed changes | 0 |
| 360 | Electric switchgear duration on coming to stop | 0 |
| 361 | Switch gear sound - Playback delay - ELECTRIC | 0 |
| 362 | Thyristor - Switchover threshold for second thyristor sound | 0 |
| 363 | Switch gear sound - Dividing the speed into shift steps - ELECTRIC | 0 |
| 364 | Speed drop during upshifts (diesel with mechanical transmission) | 0 |
| 365 | Upshift rpm (diesel mechanical) | 0 |
| 366 | Turbo - max volume | 0 |
| 367 | Turbo - dependency on speed | 0 |
| 368 | Turbo - dependency on acceleration | 0 |
| 369 | Minimum load for turbo | 0 |
| 370 | Turbo - frequency increase | 0 |
| 371 | Turbo - frequency decrease | 0 |
| 372 | eMotor - volume dependent on speed | 0 |
| 373 | eMotor - volume dependent on braking | 0 |
| 374 | Coasting-Key (or Notching) | 0 |
| 375 | Coasting-Step (or Notching) | 0 |
| 376 | Driving sound | 0 |
| 377 | Volume - large scale decoders | 0 |
| 378 | Likelihood of switchgear sparks during accel | 0 |
| 379 | Likelihood of switchgear sparks during decel | 0 |
| 380 | Manual electric brake key | 0 |
| 381 | Electric brake - minimum speed | 0 |
| 382 | Electric brake - maximum speed | 0 |
| 383 | Electric brake - Pitch according to speed | 0 |
| 384 | Electric brake – Deceleration threshold | 0 |
| 385 | Electric brake – Hill descent | 0 |
| 386 | Electric brake – loops | 0 |
| 387 | Influence of accel to diesel sound steps | 64 |
| 388 | Influence of decel to diesel sound steps | 64 |
| 389 | Limit accel influence over diesel sound steps | 30 |
| 390 | Momentum reduction when driving solo | 75 |
| 391 | Driving with idle sound, when driving solo | 0 |
| 392 | Switch input 4 Playback time | 0 |
| 393 | Zimo Config 5 - switch inputs | 0 |
| 394 | Switchgear flash with sound plus Blending | 16 |
| 395 | Max Volume via FKey volume adjust | 65 |
| 396 | FKey to reduce volume | 27 |
| 397 | FKey to increase volume | 28 |

| | | |
|---|---|---|
| 398 | Steps to trigger Automatice Coasting | 0 |
| 399 | Rule 17 speed dependent headlights | 0 |
| 400 | Input mapping for internal F0 | 0 |
| 401 | Input mapping for internal F1 | 0 |
| 402 | Input mapping for internal F2 | 0 |
| 403 | Input mapping for internal F3 | 0 |
| 404 | Input mapping for internal F4 | 0 |
| 405 | Input mapping for internal F5 | 0 |
| 406 | Input mapping for internal F6 | 0 |
| 407 | Input mapping for internal F7 | 0 |
| 408 | Input mapping for internal F8 | 0 |
| 409 | Input mapping for internal F9 | 0 |
| 410 | Input mapping for internal F10 | 0 |
| 411 | Input mapping for internal F11 | 0 |
| 412 | Input mapping for internal F12 | 0 |
| 413 | Input mapping for internal F13 | 0 |
| 414 | Input mapping for internal F14 | 0 |
| 415 | Input mapping for internal F15 | 0 |
| 416 | Input mapping for internal F16 | 0 |
| 417 | Input mapping for internal F17 | 0 |
| 418 | Input mapping for internal F18 | 0 |
| 419 | Input mapping for internal F19 | 0 |
| 420 | Input mapping for internal F20 | 0 |
| 421 | Input mapping for internal F21 | 0 |
| 422 | Input mapping for internal F22 | 0 |
| 423 | Input mapping for internal F23 | 0 |
| 424 | Input mapping for internal F24 | 0 |
| 425 | Input mapping for internal F25 | 0 |
| 426 | Input mapping for internal F26 | 0 |
| 427 | Input mapping for internal F27 | 0 |
| 428 | Input mapping for internal F28 | 0 |
| 430 | Swiss Mapping Group 1 FKey | 29 |
| 431 | Swiss Mapping Group 1 MKey | 0 |
| 432 | Swiss Mapping Group 1 Forward 1st AUX | 14 |
| 433 | Swiss Mapping Group 1 Forward 2nd AUX | 0 |
| 434 | Swiss Mapping Group 1 Reverse 1st AUX | 15 |
| 435 | Swiss Mapping Group 1 Reverse 2nd AUX | 0 |
| 436 | SMG Group 2 FKey | 6 |
| 437 | SMG Group 2 MKey | 0 |
| 438 | SMG Group 2 Forward 1st AUX | 1 |
| 439 | SMG Group 2 Forward 2nd AUX | 0 |
| 440 | SMG Group 2 Reverse 1st AUX | 1 |
| 441 | SMG Group 2 Reverse 2nd AUX | 0 |
| 442 | SMG Group 3 FKey | 0 |
| 443 | SMG Group 3 MKey | 0 |
| 444 | SMG Group 3 Forward 1st AUX | 0 |
| 445 | SMG Group 3 Forward 2nd AUX | 0 |
| 446 | SMG Group 3 Reverse 1st AUX | 0 |
| 447 | SMG Group 3 Reverse 2nd AUX | 0 |
| 448 | SMG Group 4 FKey | 0 |
| 449 | SMG Group 4 MKey | 0 |
| 450 | SMG Group 4 Forward 1st AUX | 0 |
| 451 | SMG Group 4 Forward 2nd AUX | 0 |
| 452 | SMG Group 4 Reverse 1st AUX | 0 |
| 453 | SMG Group 4 Reverse 2nd AUX | 0 |
| 454 | SMG Group 5 FKey | 0 |
| 455 | SMG Group 5 MKey | 0 |
| 456 | SMG Group 5 Forward 1st AUX | 0 |
| 457 | SMG Group 5 Forward 2nd AUX | 0 |
| 458 | SMG Group 5 Reverse 1st AUX | 0 |
| 459 | SMG Group 5 Reverse 2nd AUX | 0 |
| 460 | SMG Group 6 FKey | 0 |
| 461 | SMG Group 6 MKey | 0 |
| 462 | SMG Group 6 Forward 1st AUX | 0 |
| 463 | SMG Group 6 Forward 2nd AUX | 0 |
| 464 | SMG Group 6 Reverse 1st AUX | 0 |
| 465 | SMG Group 6 Reverse 2nd AUX | 0 |
| 466 | SMG Group 7 FKey | 0 |
| 467 | SMG Group 7 MKey | 0 |
| 468 | SMG Group 7 Forward 1st AUX | 0 |
| 469 | SMG Group 7 Forward 2nd AUX | 0 |
| 470 | SMG Group 7 Reverse 1st AUX | 0 |
| 471 | SMG Group 7 Reverse 2nd AUX | 0 |
| 472 | SMG Group 8 FKey | 0 |
| 473 | SMG Group 8 MKey | 0 |
| 474 | SMG Group 8 Forward 1st AUX | 0 |
| 475 | SMG Group 8 Forward 2nd AUX | 0 |
| 476 | SMG Group 8 Reverse 1st AUX | 0 |
| 477 | SMG Group 8 Reverse 2nd AUX | 0 |
| 478 | SMG Group 9 FKey | 0 |
| 479 | SMG Group 9 MKey | 0 |
| 480 | SMG Group 9 Forward 1st AUX | 0 |
| 481 | SMG Group 9 Forward 2nd AUX | 0 |
| 482 | SMG Group 9 Reverse 1st AUX | 0 |
| 483 | SMG Group 9 Reverse 2nd AUX | 0 |
| 484 | SMG Group 10 FKey | 0 |
| 485 | SMG Group 10 MKey | 0 |
| 486 | SMG Group 10 Forward 1st AUX | 0 |
| 487 | SMG Group 10 Forward 2nd AUX | 0 |
| 488 | SMG Group 10 Reverse 1st AUX | 0 |
| 489 | SMG Group 10 Reverse 2nd AUX | 0 |
| 490 | SMG Group 11 FKey | 0 |
| 491 | SMG Group 11 MKey | 0 |
| 492 | SMG Group 11 Forward 1st AUX | 0 |
| 493 | SMG Group 11 Forward 2nd AUX | 0 |
| 494 | SMG Group 11 Reverse 1st AUX | 0 |
| 495 | SMG Group 11 Reverse 2nd AUX | 0 |
| 496 | SMG Group 12 FKey | 0 |
| 497 | SMG Group 12 MKey | 0 |
| 498 | SMG Group 12 Forward 1st AUX | 0 |
| 499 | SMG Group 12 Forward 2nd AUX | 0 |
| 500 | SMG Group 12 Reverse ast AUX | 0 |
| 501 | SMG Group 12 Reverse 2nd AUX | 0 |
| 502 | SMG Group 13 FKey | 0 |
| 503 | SMG Group 13 MKey | 0 |
| 504 | SMG Group 13 Forward 1st AUX | 0 |
| 505 | SMG Group 13 Forward 2nd AUX | 0 |
| 506 | SMG Group 13 Reverse 1st AUX | 0 |
| 507 | SMG Group 13 Reverse 2nd AUX | 0 |
| 508 | Dimming Group 1 Settings | 0 |
| 509 | Dimming Group 2 Settings | 0 |
| 510 | Dimming Group 3 Settings | 0 |
| 511 | Dimming Group 4 Settings | 0 |
| 512 | Dimming Group 5 Settings | 0 |
| 513 | F1 sound assignment | 0 |
| 514 | F1 volume adjust | 0 |
| 515 | F1 looping/short | 0 |
| 516 | F2 sound assignment | 0 |
| 517 | F2 volume adjust | 0 |
| 518 | F2 looping/short | 0 |
| 519 | F3 sound assignment | 165 |
| 520 | F3 volume adjust | 0 |
| 521 | F3 looping/short | 8 |
| 522 | F4 sound assignment | 146 |
| 523 | F4 volume adjust | 0 |
| 524 | F4 looping/short | 0 |
| 525 | F5 sound assignment | 148 |
| 526 | F5 volume adjust | 0 |
| 527 | F5 looping/short | 8 |
| 528 | F6 sound assignment | 162 |
| 529 | F6 volume adjust | 0 |
| 530 | F6 looping/short | 8 |
| 531 | F7 sound assignment | 0 |
| 532 | F7 volume adjust | 0 |
| 533 | F7 looping/short | 0 |
| 534 | F8 sound assignment | 0 |
| 535 | F8 volume adjust | 0 |
| 536 | F8 looping/short | 0 |
| 537 | F9 sound assignment | 155 |
| 538 | F9 volume adjust | 0 |
| 539 | F9 looping/short | 8 |
| 540 | F10 sound assignment | 153 |
| 541 | F10 volume adjust | 0 |
| 542 | F10 looping/short | 0 |
| 543 | F11 sound assignment | 156 |
| 544 | F11 volume adjust | 0 |
| 545 | F11 looping/short | 0 |
| 546 | F12 sound assignment | 166 |
| 547 | F12 volume adjust | 0 |
| 548 | F12 looping/short | 0 |
| 549 | F13 sound assignment | 157 |
| 550 | F13 volume adjust | 0 |
| 551 | F13 looping/short | 0 |
| 552 | F14 sound assignment | 158 |
| 553 | F14 volume adjust | 0 |
| 554 | F14 looping/short | 0 |
| 555 | F15 sound assignment | 159 |
| 556 | F15 volume adjust | 0 |
| 557 | F15 looping/short | 0 |
| 558 | F16 sound assignment | 160 |
| 559 | F16 volume adjust | 0 |
| 560 | F16 looping/short | 0 |
| 561 | F17 sound assignment | 161 |
| 562 | F17 volume adjust | 0 |
| 563 | F17 looping/short | 0 |
| 564 | F18 sound assignment | 167 |
| 565 | F18 volume adjust | 0 |
| 566 | F18 looping/short | 0 |
| 567 | F19 sound assignment | 152 |
| 568 | F19 volume adjust | 0 |
| 569 | F19 looping/short | 0 |
| 570 | F0 sound assignment | 0 |
| 571 | F0 volume adjust | 0 |
| 572 | F0 looping/short | 0 |
| 573 | IDLE sound assignment | 1 |
| 574 | IDLE volume adjust | 0 |
| 575 | CHANGEDIR sound assignment | 2 |
| 576 | CHANGEDIR volume adjust | 0 |
| 577 | COMETOHALT sound assignment | 4 |
| 578 | COMETOHALT volume adjust | 0 |
| 579 | THYRISTOR sound assignment | 0 |
| 580 | THYRISTOR volume adjust - not used | 0 |
| 581 | SETOFF sound assignment | 3 |
| 582 | SETOFF volume adjust | 0 |
| 583 | WATEROUTLET sound assignment | 0 |
| 584 | WATEROUTLET volume adjust | 0 |
| 585 | EMOTOR sound assignment | 0 |
| 586 | EMOTOR volume adjust | 0 |
| 587 | ROLLING sound assignment n/a | 0 |
| 588 | DRIVING SOUNDS volume adjustment | 0 |
| 589 | SWITCHVALVE sound assignment | 0 |
| 590 | SWITCHVALVE volume adjust | 0 |
| 591 | THYRISTOR2 sound assignment | 0 |
| 592 | THYRISTOR2 volume adjust | 0 |
| 593 | PANTOSTOP sound assignment | 0 |
| 594 | PANTOSTOP volume adjust | 0 |
| 595 | PANTODOWN sound assignment | 0 |
| 596 | PANTODOWN volume adjust | 0 |
| 597 | PANTODOWNSTOP sound assignment | 0 |
| 598 | PANTODOWNSTOP volume adjust | 0 |
| 599 | TURBO sound assignment | 0 |
| 600 | TURBO volume adjust - not used | 0 |
| 601 | DYNAMIC BRAKES - sound assignment | 0 |
| 602 | DYNAMIC BRAKES volume adjustment | 0 |
| 603 | CORNERING squeal sound assignment | 0 |
| 604 | CORNERING squeal volume adjust | 0 |
| 671 | Reed input 4 sound assignment | 0 |
| 672 | Reed input 4 volume adjust | 0 |
| 673 | F20 sound assignment | 0 |
| 674 | F20 volume adjust | 0 |
| 675 | F20 looping/short | 0 |
| 676 | F21 sound assignment | 150 |
| 677 | F21 volume adjust | 0 |
| 678 | F21 looping/short | 8 |
| 679 | F22 sound assignment | 149 |
| 680 | F22 volume adjust | 0 |
| 681 | F22 looping/short | 8 |
| 682 | F23 sound assignment | 147 |
| 683 | F23 volume adjust | 0 |
| 684 | F23 looping/short | 0 |
| 685 | F24 sound assignment | 151 |
| 686 | F24 volume adjust | 0 |
| 687 | F24 looping/short | 0 |
| 688 | F25 sound assignment | 163 |
| 689 | F25 volume adjust | 0 |
| 690 | F25 looping/short | 8 |
| 691 | F26 sound assignment | 164 |
| 692 | F26 volume adjust | 0 |
| 693 | F26 looping/short | 0 |
| 694 | F27 sound assignment | 0 |
| 695 | F27 volume adjust | 0 |
| 696 | F27 looping/short | 0 |
| 697 | F28 sound assignment | 0 |
| 698 | F28 volume adjust | 0 |
| 699 | F28 looping/short | 0 |
| 700 | unused | 0 |
| 724 | HS switching gear set | 0 |
| 726 | Sound id for trigger 1 | 0 |
| 727 | AUX output to activate with trigger 1 | 0 |
| 728 | Sound id for trigger 2 | 0 |
| 729 | AUX output to activate with trigger 2 | 0 |
| 730 | Sound id for trigger 3 | 0 |
| 731 | AUX output to activate with trigger 3 | 0 |
| 732 | Sound id for trigger 4 | 0 |
| 733 | AUX output to activate with trigger 4 | 0 |
| 734 | Sound id for trigger 5 | 0 |
| 735 | AUX output to activate with trigger 5 | 0 |
| 736 | Sound id for trigger 6 | 0 |
| 737 | AUX output to activate with trigger 6 | 0 |
| 738 | Reed input 1 sound assignment | 0 |
| 739 | Reed input 1 volume adjust | 0 |
| 740 | Reed input 2 sound assignment | 0 |
| 741 | Reed input 2 volume adjust | 0 |
| 742 | Reed input 3 sound assignment | 0 |
| 743 | Reed input 3 volume adjust | 0 |
| 744 | Z1 Random sound assignment | 148 |
| 745 | Z1 Random volume adjust | 91 |
| 746 | Z1 Random standstill / motion | 72 |
| 747 | Z2 Random sound assignment | 149 |
| 748 | Z2 Random volume adjust | 91 |
| 749 | Z2 Random standstill / motion | 72 |
| 750 | Z3 Random sound assignment | 150 |
| 751 | Z3 Random volume adjust | 91 |
| 752 | Z3 Random standstill / motion | 72 |
| 753 | Z4 Random sounds assignment | 151 |
| 754 | Z4 Random volume adjust | 91 |
| 755 | Z4 Random standstill / motion | 72 |
| 756 | Z5 Random sound assignment | 152 |
| 757 | Z5 Random volume adjust | 91 |
| 758 | Z5 Random standstill / motion | 8 |
| 759 | Z6 Random sound assignment | 154 |
| 760 | Z6 Random volume adjust | 91 |
| 761 | Z6 Random standstill / motion | 72 |
| 762 | Z7 Random sound assignment | 155 |
| 763 | Z7 Random volume adjust | 46 |
| 764 | Z7 Random standstill / motion | 8 |
| 765 | Z8 Random sound assignment | 165 |
| 766 | Z8 Random volume adjust | 91 |
| 767 | Z8 Random standstill / motion | 8 |
| 768 | Current sound set selected | 0 |
| 769 | Last known drive direction | 1 |
| 770 | Servo1 last known position | 127 |
| 771 | Servo2 last known position | 127 |
| 772 | Servo3 last known position | 127 |
| 773 | Servo4 last known position | 127 |
| 774 | Last used rail data format | 1 |
| 775 | Measured kmh/mph values | 42 |
| 776 | Measured kmh/mph values | 26 |
| 777 | Measured motor load parameter | 0 |
| 778 | Measured motor load parameter | 0 |
| 779 | Measured motor load parameter | 0 |
| 780 | Measured motor load parameter | 0 |
| 783 | PWM slow from auto-run | 0 |
| 784 | PWM fast from auto-run | 0 |
| 800 | SMG Group 14 FKey | 0 |
| 801 | SMG Group 14 MKey | 0 |
| 802 | SMG Group 14 Forward 1st AUX | 0 |
| 803 | SMG Group 14 Forward 2nd AUX | 0 |
| 804 | SMG Group 14 Reverse 1st AUX | 0 |
| 805 | SMG Group 14 Reverse 2nd AUX | 0 |
| 806 | SMG Group 15 FKey | 0 |
| 807 | SMG Group 15 MKey | 0 |
| 808 | SMG Group 15 Forward 1st AUX | 0 |
| 809 | SMG Group 15 Forward 2nd AUX | 0 |
| 810 | SMG Group 15 Reverse 1st AUX | 0 |
| 811 | SMG Group 15 Reverse 2nd AUX | 0 |
| 812 | SMG Group 16 FKey | 0 |
| 813 | SMG Group 16 MKey | 0 |
| 814 | SMG Group 16 Forward 1st AUX | 0 |
| 815 | SMG Group 16 Forward 2nd AUX | 0 |
| 816 | SMG Group 16 Reverse 1st AUX | 0 |
| 817 | SMG Group 16 Reverse 2nd AUX | 0 |
| 818 | SMG Group 17 FKey | 0 |
| 819 | SMG Group 17 MKey | 0 |
| 820 | SMG Group 17 Forward 1st AUX | 0 |
| 821 | SMG Group 17 Forward 2nd AUX | 0 |
| 822 | SMG Group 17 Reverse 1st AUX | 0 |
| 823 | SMG Group 17 Reverse 1nd AUX | 0 |
| 824 | Key inverted by IN1 | 0 |
| 825 | Key inverted by IN2 | 0 |
| 826 | Key inverted by IN3 | 0 |
| 827 | Key inverted by IN4 | 0 |
| 828 | Chuff sound beat for Set+1 | 0 |
| 829 | Turbo - min step | 0 |
| 830 | Braking distance FWD high | 0 |
| 831 | Braking distance FWD low | 0 |
| 832 | Braking distance REV high | 0 |
| 833 | Braking distance REV low | 0 |
| 834 | Turbo - reduce dependency on accel | 0 |
| 835 | Number of Additional Quick Select FKeys | 2 |
| 836 | Probability of switchgear sparks | 0 |
| 837 | Script processes | 0 |
| 840 | Analog functions F13-F20 | 0 |
| 841 | Analog functions F21-F28 | 0 |
| 843 | Deactivate scripts 9 to 16 | 0 |