

# 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: 150-TEMPLATE-1057**

## YouChoos Sounds

### DMU Class 150

DCC Address: 3



Included in this package:

PART NUMBER	YouChoos Sounds - DMU Class 150 YC-150
DECODER	MS series - template
SPEAKER	N/A - template

#### Functions:

FKey	Category	Action
F0fwd:	LIGHT	F0F Front Dest
F0rev:	LIGHT	F0F Front Dest
F1:	SOUND	Running Sounds
F2:	ACTIVE BRAKE	Active Brake
F3:	SOUND	Horn
F4:	SOUND	Horn 2
F5:	SOUND	Rev Up 2
F6:	LIGHT	FA1 Rear Reds / FA6 Front Reds
F7:	NOTCH UP	Notch Up
F8:	LIGHT	FA3 Interior
F9:	SOUND	Guard's Whistle
F10:	LIGHT	FA5 Door Lights
F11:	LIGHT	FA9 Front Night / FA11 Rear Night
F12:	LIGHT	FA4 Front Cab / FA2 Rear Cab
F13:	SOUND	Announcement
F14:	SOUND	Wheel Flange
F15:	SOUND	Comms Buzzer
F16:	SOUND	Doors
F17:	SOUND	Horn 3
F18:	SOUND	Horn 5
F19:	SOUND	Mute
F20:	SHUNT + HALF SPEED	Shunting Mode / Half Speed
F21:	SOUND	Come to Halt 3
F22:	COAST	Coast
F23:	SOUND	Rev Up 3
F24:	SOUND	Announcement 2
F25:	SOUND	Horn 4
F26:	SOUND	Compressor
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 1/4 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
18	Horn		F3 (CV#519)			
19	Horn 2		F4 (CV#522)			
20	Horn 3		F17 (CV#561)			
21	Horn 4		F25 (CV#688)			
22	Wheel Flange		F14 (CV#552)			
23	Doors		F16 (CV#558)			
24	Compressor	Loops	F26 (CV#691)			
25	Compressor Release					
26	Comms Buzzer		F15 (CV#555)			
27	Brake Release					
28	Announcement		F13 (CV#549)			
29	Announcement 2		F24 (CV#685)			
7	Come to Halt 3		F21 (CV#676)			
30	Rev Up 2		F5 (CV#525)			
31	Rev Up 3		F23 (CV#682)			
32	Guard's Whistle		F9 (CV#537)			
33	Horn 5	Loops	F18 (CV#564)			
34	Air Hiss					
35	Brake Release 2					

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)	F0F Front Dest
F0Rev	YELLOW		Constant (simple ON/OFF)	FOR Rear Dest
FA1	GREEN	FKey6	Constant (simple ON/OFF)	FA1 Rear Reds
FA2	BROWN	FKey12	Constant (simple ON/OFF)	FA2 Rear Cab
FA3	-additional-	FKey8	Constant (simple ON/OFF)	FA3 Interior
FA4	-additional-	FKey12	Constant (simple ON/OFF)	FA4 Front Cab
FA5	-additional-	FKey10	Constant (simple ON/OFF)	FA5 Door Lights
FA6	-additional-	FKey6	Constant (simple ON/OFF)	FA6 Front Reds
FA9	-additional-	FKey11	Constant (simple ON/OFF)	FA9 Front Night
FA11	-additional-	FKey11	Constant (simple ON/OFF)	FA11 Rear Night

# 150-TEMPLATE-1057 - YouChoos Sounds - DMU Class 150

## 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	20
4	Rate of deceleration	100
5	Maximum speed	1
6	Middle speed	1
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	195
17	Extended address (byte 1)	0
18	Extended address (byte 2)	0
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	10
31	Index page - high	0
32	Index page - low	0
33	Function mapping F0 forward	0
34	Function 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	20
52	HLU limit U	40
53	HLU limit UL	70
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)	50
61	Special ZIMO function mapping	97
62	Effects dimming	0
63	Effects cycle	62
64	Effects ditch	0
65	Version Number (part2) sub-version	19
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	150	Experimental motor reg - deviation control	0
78	Free speed curve	48	151	Motor brake and reduce motor BackEMF in Consist	0
79	Free speed curve	54	152	Dim Mask 2 - F07-F012, RiBi	0
80	Free speed curve	60	153	Stop time after DCC signal loss	0
81	Free speed curve	68	154	Zimo configuration part 2	0
82	Free speed curve	76	155	FKey for half-speed	20
83	Free speed curve	84	156	FKey for deactivating momentum	20
84	Free speed curve	92	157	FKey for MAN function	0
85	Free speed curve	102	158	Sound/RailCom config	0
86	Free speed curve	112	159	Special effects FuncOutput7	0
87	Free speed curve	124	160	Special Effects FuncOutput8	0
88	Free speed curve	136	161	Servo outputs: Protocol	0
89	Free speed curve	152	162	Servo 1 - Left stop	49
90	Free speed curve	168	163	Servo 1 - Right stop	205
91	Free speed curve	188	164	Servo 1 - Center position	127
92	Free speed curve	208	165	Servo 1 - Rotating speed	10
93	Free speed curve	230	166	Servo 2 - Left stop	49
94	Free speed curve	252	167	Servo 2 - Right stop	205
95	Directional speed trimming - REV	0	168	Servo 2 - Center position	127
97	Consist FKey	0	169	Servo 2 - Rotating speed	10
100	Current asymmetry	0	170	Servo 3 - Left stop	49
101	Comparison asym. offset	0	171	Servo 3 - Right stop	205
105	User CV / Manuld	145	172	Servo 3 - Centre position	127
106	User CV / Provider Id	13	173	Servo 3 - Rotating speed	10
107	Light suppression on cab side 1 - front	0	174	Servo 4 - Left stop	49
108	Light suppression on cab side 2 - rear	0	175	Servo 4 - Right stop	205
109	Automatic unilateral light suppression	0	176	Servo 4 - Centre position	127
110	Automatic unilateral light suppression	0	177	Servo 4 - Rotating speed	10
111	Emergency stop deceleration rate	0	180	Motor req EMK-difference max	0
112	Special ZIMO configuration bits	0	181	Servo 1 - FKey assignment	0
113	EMF reduction - compensation	0	182	Servo 2 - FKey assignment	0
114	Dimming mask	255	183	Servo 3 - FKey assignment	0
115	Uncoupler control (KROIS and ROCO couplers)	0	184	Servo 4 - FKey assignment	0
116	Automated uncoupling procedure	0	185	Special assignment for live steam engines	0
117	Flasher functions	0	186	Pantograph 1 - FKey assignment	0
118	Flashing mask	0	187	Pantograph 2 - FKey assignment	0
119	Low beam mask for F6	0	188	Pantograph 3 - FKey assignment	0
120	Low beam mask for F7	0	189	Pantograph 4 - FKey assignment	0
121	Exponential acceleration	11	190	Brightening up times	0
122	Exponential deceleration	11	191	Dimming down time	0
123	Adaptive acceleration and deceleration	22	195	Special effects FuncOutput9	0
124	Shunting key functions and SUSI	2	196	Special effects FuncOutput10	0
125	Special effects F0FWD	0	197	Special effects FuncOutput11	0
126	Special effects FOREV	0	198	Special effects FuncOutput12	0
127	Special effects FuncOutput1	0	199	Special effects FuncOutput13	0
128	Special effects FuncOutput2	0	201	SUSI#1 Configuration	11
129	Special effects FuncOutput3	0	202	SUSI#2 Configuration	0
130	Special effects FuncOutput4	0	203	IN1/IN2 Configuration	11
131	Special effects FuncOutput5	0	204	IN3/IN4 Configuration	11
132	Special effects FuncOutput6	0	248	Bootloader version	0
133	FO4 as Cam sensor Or FO4 as fan of smoke generators of steam engines.	64	249	Bootloader subversion	0
134	Asymmetrical stopping ABC	106	250	Decoder ID	0
135	Km/h - Speed regulation	0	251	Decoder ID	0
136	Railcom mph factor	24	252	Decoder ID	0
137	Smoke generator voltage - standstill	0	253	Decoder ID	0
138	Smoke generator voltage - cruising	0	254	Project Number	150
139	Smoke generator voltage - acceleration	0	255	SubProject Number High Byte	-4
140	Constant braking distance - config	0	256	SubProject Number Low Byte	-33
141	Constant braking distance - distance	20	260	Load Code P1	0
142	High speed correction - ABC	5	261	Load Code P2	0
143	High speed correction - HLU	0	262	Load Code P3	0
144	Programming and update lock - not in MS	0	263	Load Code P4	0
145	Experimental - Alternative motor control method	0	264	Variable low voltage (large scale)	0
146	Compensation for gear back-lash	0	265	Loco type selection	101
147	BackEMF I-value (Integral)	0	266	Total volume	75
148	BackEMF D-Value (Differential)	0	267	Chuff (using virtual cam)	90
149	BackEMF P-Value (Proportional)	0	268	Switching to real cam sensor	0
			269	Lead-chuff accentuated	0
			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	175
			276	Engine (chuff) sound volume at high speed and no-load	150
			277	Degree of volume change under load for driving (chuff) sound.	25
			278	Load change threshold	1
			279	Reaction time to load change	1
			280	Load influence (DIESEL)	10
			281	Acceleration threshold for full load sound	1
			282	Duration of acceleration sound	50
			283	Engine sound volume at full acceleration	255
			284	Threshold for deceleration sound	1
			285	Duration of reduced volume on deceleration	50
			286	Volume level during deceleration	125
			287	Brake squeal threshold	55
			288	Minimum driving time before brake squeal	50
			289	Thyristor - stepping effect	1
			290	Thyristor - pitch at medium speed	20
			291	Thyristor - pitch at max speed	100
			292	Thyristor - speed step for pitch increase	10
			293	Thyristor - volume at cruising	2
			294	Thyristor - volume during acceleration	255
			295	Thyristor - volume during deceleration	1
			296	eMotor - highest volume	255
			297	eMotor - speed when audible begins	15
			298	eMotor - speed for full volume	50
			299	eMotor - pitch dependent on speed	100
			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	119
			314	Mute fade in/out time	0
			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

398	Steps to trigger Automatic Coasting	25	472	SMG Group 8 FKey	0	545	F11 looping/short	0	684	F23 looping/short	0	783	PWM slow from auto-run	0
399	Rule 17 speed dependent headlights	0	473	SMG Group 8 MKey	0	546	F12 sound assignment	0	685	F24 sound assignment	29	784	PWM fast from auto-run	0
400	Input mapping for internal F0	0	474	SMG Group 8 Forward 1st AUX	0	547	F12 volume adjust	0	686	F24 volume adjust	0	800	SMG Group 14 FKey	0
401	Input mapping for internal F1	0	475	SMG Group 8 Forward 2nd AUX	0	548	F12 looping/short	0	687	F24 looping/short	0	801	SMG Group 14 MKey	0
402	Input mapping for internal F2	0	476	SMG Group 8 Reverse 1st AUX	0	549	F13 sound assignment	28	688	F25 sound assignment	21	802	SMG Group 14 Forward 1st AUX	0
403	Input mapping for internal F3	0	477	SMG Group 8 Reverse 2nd AUX	0	550	F13 volume adjust	0	689	F25 volume adjust	0	803	SMG Group 14 Forward 2nd AUX	0
404	Input mapping for internal F4	0	478	SMG Group 9 FKey	0	551	F13 looping/short	0	690	F25 looping/short	0	804	SMG Group 14 Reverse 1st AUX	0
405	Input mapping for internal F5	0	479	SMG Group 9 MKey	0	552	F14 sound assignment	22	691	F26 sound assignment	24	805	SMG Group 14 Reverse 2nd AUX	0
406	Input mapping for internal F6	0	480	SMG Group 9 Forward 1st AUX	0	553	F14 volume adjust	0	692	F26 volume adjust	0	806	SMG Group 15 FKey	0
407	Input mapping for internal F7	0	481	SMG Group 9 Forward 2nd AUX	0	554	F14 looping/short	0	693	F26 looping/short	8	807	SMG Group 15 MKey	0
408	Input mapping for internal F8	0	482	SMG Group 9 Reverse 1st AUX	0	555	F15 sound assignment	26	694	F27 sound assignment	0	808	SMG Group 15 Forward 1st AUX	0
409	Input mapping for internal F9	0	483	SMG Group 9 Reverse 2nd AUX	0	556	F15 volume adjust	0	695	F27 volume adjust	0	809	SMG Group 15 Forward 2nd AUX	0
410	Input mapping for internal F10	0	484	SMG Group 10 FKey	0	557	F15 looping/short	0	696	F27 looping/short	0	810	SMG Group 15 Reverse 1st AUX	0
411	Input mapping for internal F11	0	485	SMG Group 10 MKey	0	558	F16 sound assignment	23	697	F28 sound assignment	0	811	SMG Group 15 Reverse 2nd AUX	0
412	Input mapping for internal F12	0	486	SMG Group 10 Forward 1st AUX	0	559	F16 volume adjust	0	698	F28 volume adjust	0	812	SMG Group 16 FKey	0
413	Input mapping for internal F13	0	487	SMG Group 10 Forward 2nd AUX	0	560	F16 looping/short	0	699	F28 looping/short	0	813	SMG Group 16 MKey	0
414	Input mapping for internal F14	0	488	SMG Group 10 Reverse 1st AUX	0	561	F17 sound assignment	20	700	unused	0	814	SMG Group 16 Forward 1st AUX	0
415	Input mapping for internal F15	0	489	SMG Group 10 Reverse 2nd AUX	0	562	F17 volume adjust	0	724	HS switching gear set	0	815	SMG Group 16 Forward 2nd AUX	0
416	Input mapping for internal F16	0	490	SMG Group 11 FKey	0	563	F17 looping/short	0	726	Sound id for trigger 1	0	816	SMG Group 16 Reverse 1st AUX	0
417	Input mapping for internal F17	0	491	SMG Group 11 MKey	0	564	F18 sound assignment	33	727	AUX output to activate with trigger 1	0	817	SMG Group 16 Reverse 2nd AUX	0
418	Input mapping for internal F18	0	492	SMG Group 11 Forward 1st AUX	0	565	F18 volume adjust	0	728	Sound id for trigger 2	0	818	SMG Group 17 FKey	0
419	Input mapping for internal F19	0	493	SMG Group 11 Forward 2nd AUX	0	566	F18 looping/short	8	729	AUX output to activate with trigger 2	0	819	SMG Group 17 MKey	0
420	Input mapping for internal F20	0	494	SMG Group 11 Reverse 1st AUX	0	567	F19 sound assignment	0	730	Sound id for trigger 3	0	820	SMG Group 17 Forward 1st AUX	0
421	Input mapping for internal F21	0	495	SMG Group 11 Reverse 2nd AUX	0	568	F19 volume adjust	0	731	AUX output to activate with trigger 3	0	821	SMG Group 17 Forward 2nd AUX	0
422	Input mapping for internal F22	0	496	SMG Group 12 FKey	0	569	F19 looping/short	0	732	Sound id for trigger 4	0	822	SMG Group 17 Reverse 1st AUX	0
423	Input mapping for internal F23	0	497	SMG Group 12 MKey	0	570	F0 sound assignment	0	733	AUX output to activate with trigger 4	0	823	SMG Group 17 Reverse 1nd AUX	0
424	Input mapping for internal F24	0	498	SMG Group 12 Forward 1st AUX	0	571	F0 volume adjust	0	734	Sound id for trigger 5	0	824	Key inverted by IN1	0
425	Input mapping for internal F25	0	499	SMG Group 12 Forward 2nd AUX	0	572	F0 looping/short	0	735	AUX output to activate with trigger 5	0	825	Key inverted by IN2	0
426	Input mapping for internal F26	0	500	SMG Group 12 Reverse ast AUX	0	573	IDLE sound assignment	0	736	Sound id for trigger 6	0	826	Key inverted by IN3	0
427	Input mapping for internal F27	0	501	SMG Group 12 Reverse 2nd AUX	0	574	IDLE volume adjust	0	737	AUX output to activate with trigger 6	0	827	Key inverted by IN4	0
428	Input mapping for internal F28	0	502	SMG Group 13 FKey	0	575	CHANGEDIR sound assignment	0	738	Reed input 1 sound assignment	0	830	Braking distance FWD high	0
429	Swiss Mapping Group 1 FKey	29	503	SMG Group 13 MKey	0	576	CHANGEDIR volume adjust	0	739	Reed input 1 volume adjust	0	831	Braking distance FWD low	0
430	Swiss Mapping Group 1 MKey	0	504	SMG Group 13 Forward 1st AUX	0	577	COMETOHALT sound assignment	5	740	Reed input 2 sound assignment	0	832	Braking distance REV high	0
432	Swiss Mapping Group 1 Forward 1st AUX	14	505	SMG Group 13 Forward 2nd AUX	0	578	COMETOHALT volume adjust	0	741	Reed input 2 volume adjust	0	833	Braking distance REV low	0
433	Swiss Mapping Group 1 Forward 2nd AUX	0	506	SMG Group 13 Reverse 1st AUX	0	579	THRYSRATOR sound assignment	8	742	Reed input 3 sound assignment	0	834	Turbo - reduce dependency on accel	0
434	Swiss Mapping Group 1 Reverse 1st AUX	15	507	SMG Group 13 Reverse 2nd AUX	0	580	THRYSRATOR volume adjust - not used	0	743	Reed input 3 volume adjust	0	835	Number of Additional Quick Select FKeys	0
435	Swiss Mapping Group 1 Reverse 2nd AUX	0	508	Dimming Group 1 Settings	0	581	SETOFF sound assignment	4	744	Z1 Random sound assignment	0	836	Probability of switchgear sparks	0
436	SMG Group 2 FKey	6	509	Dimming Group 2 Settings	0	582	SETOFF volume adjust	0	745	Z1 Random volume adjust	91	837	Script processes	0
437	SMG Group 2 MKey	0	510	Dimming Group 3 Settings	0	583	WATEROUTLET sound assignment	0	746	Z1 Random standstill / motion	72	840	Analog functions F13-F20	0
438	SMG Group 2 Forward 1st AUX	1	511	Dimming Group 4 Settings	0	584	WATEROUTLET volume adjust	0	747	Z2 Random sound assignment	0	841	Analog functions F21-F28	0
439	SMG Group 2 Forward 2nd AUX	0	512	Dimming Group 5 Settings	0	585	EMOTOR sound assignment	6	748	Z2 Random volume adjust	91	843	Deactivate scripts 9 to 16	0
440	SMG Group 2 Reverse 1st AUX	6	513	F1 sound assignment	0	586	EMOTOR volume adjust	0	749	Z2 Random standstill / motion	72			
441	SMG Group 2 Reverse 2nd AUX	0	514	F1 volume adjust	0	587	ROLLING sound assignment n/a	0	750	Z3 Random sound assignment	0			
442	SMG Group 3 FKey	8	515	F1 looping/short	0	588	DRIVING SOUNDS volume adjustment	0	751	Z3 Random volume adjust	91			
443	SMG Group 3 MKey	0	516	F2 sound assignment	0	589	SWITCHVALVE sound assignment	0	752	Z3 Random standstill / motion	72			
444	SMG Group 3 Forward 1st AUX	3	517	F2 volume adjust	0	590	SWITCHVALVE volume adjust	0	753	Z4 Random sounds assignment	0			
445	SMG Group 3 Forward 2nd AUX	0	518	F2 looping/short	0	591	THRYSRATOR2 sound assignment	0	754	Z4 Random volume adjust	91			
446	SMG Group 3 Reverse 1st AUX	3	519	F3 sound assignment	18	592	THRYSRATOR2 volume adjust	0	755	Z4 Random standstill / motion	72			
447	SMG Group 3 Reverse 2nd AUX	0	520	F3 volume adjust	0	593	PANTOSTOP sound assignment	0	756	Z5 Random sound assignment	0			
448	SMG Group 4 FKey	10	521	F3 looping/short	0	594	PANTOSTOP volume adjust	0	757	Z5 Random volume adjust	91			
449	SMG Group 4 MKey	0	522	F4 sound assignment	19	595	PANTODOWN sound assignment	0	758	Z5 Random standstill / motion	72			
450	SMG Group 4 Forward 1st AUX	5	523	F4 volume adjust	0	596	PANTODOWN volume adjust	0	759	Z6 Random sound assignment	0			
451	SMG Group 4 Forward 2nd AUX	0	524	F4 looping/short	0	597	PANTODOWNSTOP sound assignment	0	760	Z6 Random volume adjust	91			
452	SMG Group 4 Reverse 1st AUX	5	525	F5 sound assignment	30	598	PANTODOWNSTOP volume adjust	0	761	Z6 Random standstill / motion	72			
453	SMG Group 4 Reverse 2nd AUX	0	526	F5 volume adjust	0	599	TURBO sound assignment	0	762	Z7 Random sound assignment	0			
454	SMG Group 5 FKey	11	527	F5 looping/short	0	600	TURBO volume adjust - not used	0	763	Z7 Random volume adjust	91			
455	SMG Group 5 MKey	0	528	F6 sound assignment	0	601	DYNAMIC BRAKES - sound assignment	7	764	Z7 Random standstill / motion	72			
456	SMG Group 5 Forward 1st AUX	9	529	F6 volume adjust	0	602	DYNAMIC BRAKES volume adjustment	0	765	Z8 Random sound assignment	0			
457	SMG Group 5 Forward 2nd AUX	0	530	F6 looping/short	0	603	CORNERING squeal sound assignment	0	766	Z8 Random volume adjust	91			
458	SMG Group 5 Reverse 1st AUX	11	531	F7 sound assignment	0	604	CORNERING squeal volume adjust	0	767	Z8 Random standstill / motion	72			
459	SMG Group 5 Reverse 2nd AUX	0	532	F7 volume adjust	0	611	Reed input 4 sound assignment	0	768	Current sound set selected	0			
460	SMG Group 6 FKey	12	533	F7 looping/short	0	672	Reed input 4 volume adjust	0	769	Last known drive direction	1			
461	SMG Group 6 MKey	0	534	F8 sound assignment	0	673	F20 sound assignment	0	770	Servo1 last known position	127			
462	SMG Group 6 Forward 1st AUX	4	535	F8 volume adjust	0	674	F20 volume adjust	0	771	Servo2 last known position	127			
463	SMG Group 6 Forward 2nd AUX	0	536	F8 looping/short	0	675	F20 looping/short	0	772	Servo3 last known position	127			
464	SMG Group 6 Reverse 1st AUX	2	537	F9 sound assignment	32	676	F21 sound assignment	7	773	Servo4 last known position	127			
465	SMG Group 6 Reverse 2nd AUX	0	538	F9 volume adjust	0	677	F21 volume adjust	0	774	Last used rail data format	1			
466	SMG Group 7 FKey	0	539	F9 looping/short	0	678	F21 looping/short	0	775	Measured kmh/mph values	42			
467	SMG Group 7 MKey	0	540	F10 sound assignment	0	679	F22 sound assignment	0	776	Measured kmh/mph values	26			
468	SMG Group 7 Forward 1st AUX	0	541	F10 volume adjust	0	680	F22 volume adjust	0	777	Measured motor load parameter	0			
469	SMG Group 7 Forward 2nd AUX	0	542	F10 looping/short	0	681	F22 looping/short	0	778	Measured motor load parameter	0			
470	SMG Group 7 Reverse 1st AUX	0	543	F11 sound assignment	0	682	F23 sound assignment	31	779	Measured motor load parameter	0			
471	SMG Group 7 Reverse 2nd AUX	0	544	F11 volume adjust	0	683	F23 volume adjust	0	780	Measured motor load parameter	0			