

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: HST-TEMPLATE-1025

YouChoos Sounds
DMU Class 41 HST Prototype
DCC Address: 3



Included in this package:

PART NUMBER	YouChoos Sounds - DMU Class 41 HST Prototype YC-HST41PROTO
DECODER	MS series - template
SPEAKER	N/A - template

Functions:

FKey	Category	Action
F0fwd:	LIGHT	F0fwd Forward lights
F0rev:	LIGHT	F0fwd Forward lights
F1:	SOUND	Running Sounds
F2:	ACTIVE BRAKE	Active Brake
F3:	SOUND	Horn
F4:	SOUND	Horn 5
F5:	LIGHT	FA1 Disable #1 end lights
F6:	LIGHT	FA2 Disable #2 end lights
F7:	NOTCH UP	Notch Up
F8:	SOUND	Brake Release
F9:	SOUND	Guard's Whistle
F10:	SOUND	Clag 2
F11:	SOUND	Compressor
F12:	LIGHT	FA3 High Intensity headlight
F13:	LIGHT	FA4 Front cab light
F14:	LIGHT	FA6 Rear cab light
F15:	SOUND	Wheel Flange
F16:	SOUND	Doors Closing
F17:	SOUND	Horn 4
F18:	SOUND	Horn 7
F19:	SOUND	Mute
F20:	SHUNT + HALF SPEED	Shunting Mode / Half Speed
F21:	SOUND	Horn 6
F22:	SOUND	Wheel Flange 2
F23:	LIGHT	FA5 Guard's compartment light
F24:	SOUND	Horn 3
F25:	SOUND	Horn 2
F26:	SPEEDLOCK	SpeedLock
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
22	Horn		F3 (CV#519)			
23	Horn 2		F25 (CV#688)			
24	Horn 3		F24 (CV#685)			
25	Horn 4		F17 (CV#561)			
26	Horn 5		F4 (CV#522)			
27	Horn 6		F21 (CV#676)			
28	Brake Release		F8 (CV#534)			
29	Wheel Flange	Loops	F15 (CV#555)			
30	Wheel Flange 2	Loops	F22 (CV#679)			
9	Clag 2		F10 (CV#540)			
31	Horn 7	Loops	F18 (CV#564)			
32	Compressor	Loops	F11 (CV#543)			
33	Guard's Whistle		F9 (CV#537)			
34	Doors Closing		F16 (CV#558)			

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)	F0fwd Forward lights
F0Rev	YELLOW		Constant (simple ON/OFF)	F0rev Reverse lights
FA1	GREEN	FKey5	Constant (simple ON/OFF)	FA1 Disable #1 end lights
FA2	BROWN	FKey6	Constant (simple ON/OFF)	FA2 Disable #2 end lights
FA3	-additional-	FKey12	Constant (simple ON/OFF)	FA3 High Intensity headlight
FA4	-additional-	FKey13	Constant (simple ON/OFF)	FA4 Front cab light
FA5	-additional-	FKey23	Constant (simple ON/OFF)	FA5 Guard's compartment light
FA6	-additional-	FKey14	Constant (simple ON/OFF)	FA6 Rear cab light

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

42	150	Experimental motor reg - deviation control	0	270	Longer chun
48	151	Motor brake and reduce motor BackEMF in	0	271	Overlapping

	ID	Description	Value		ID	Description	Value		ID	Description	Value		ID	Description	Value
1	1	Short Address	3	77	77	Free speed curve	42	150	150	Experimental motor reg - deviation control	0	270	270	Longer chuff length at very low speeds	0
2	2	Starting voltage	1	78	78	Free speed curve	48	151	151	Motor brake and reduce motor BackEMF in Consist	0	271	271	Overlapping effect at high speed	16
3	3	Rate of acceleration	20	79	79	Free speed curve	54	152	152	Dim Mask 2 - F07-F012, RiBi	0	272	272	Blow-off duration	50
4	4	Rate of deceleration	100	80	80	Free speed curve	60	153	153	Stop time after DCC signal loss	0	273	273	Delayed start after blow-off	20
5	5	Maximum speed	1	81	81	Free speed curve	68	154	154	Zimo configuration part 2	0	274	274	Blow-off schedule	30
6	6	Middle speed	1	82	82	Free speed curve	76	155	155	FKey for half-speed	20	275	275	Engine (chuff) sound volume at low speed	175
7	7	Version Number (Part1)	4	83	83	Free speed curve	84	156	156	FKey for deactivating momentum	20	276	276	Engine (chuff) sound volume at high speed and no-load	150
8	8	Manufacturer Id / HARD RESET	145	84	84	Free speed curve	92	157	157	FKey for MAN function	0	277	277	Degree of volume change under load for driving (chuff) sound.	25
9	9	Motor frequency	55	85	85	Free speed curve	102	158	158	Sound/RailCom config	0	278	278	Load change threshold	1
10	10	EMF Feedback cut-off	0	86	86	Free speed curve	112	159	159	Special effects FuncOutput7	0	279	279	Reaction time to load change	1
12	12	Operation Types - disable specific protocols	5	87	87	Free speed curve	124	160	160	Special Effects FuncOutput8	0	280	280	Load influence (DIESEL)	10
13	13	Analog mode active functions F1-F8	3	88	88	Free speed curve	136	161	161	Servo outputs: Protocol	0	281	281	Acceleration threshold for full load sound	1
14	14	Analog functions and Inertia	195	89	89	Free speed curve	152	162	162	Servo 1 - Left stop	49	282	282	Duration of acceleration sound	50
17	17	Extended address (byte 1)	0	90	90	Free speed curve	168	163	163	Servo 1 - Right stop	205	283	283	Engine sound volume at full acceleration	255
18	18	Extended address (byte 2)	0	91	91	Free speed curve	188	164	164	Servo 1 - Center position	127	284	284	Threshold for deceleration sound	1
19	19	Consist Address - high	0	92	92	Free speed curve	208	165	165	Servo 1 - Rotating speed	10	285	285	Duration of reduced volume on deceleration	50
20	20	Consist Address - low	0	93	93	Free speed curve	230	166	166	Servo 2 - Left stop	49	286	286	Volume level during deceleration	125
21	21	Consist functions for F1 - F8	0	94	94	Free speed curve	252	167	167	Servo 2 - Right stop	205	287	287	Brake squeal threshold	55
22	22	Consist functions F0 & F9-F12 + DC Inertia	0	95	95	Directional speed trimming - REV	0	168	168	Servo 2 - Center position	127	288	288	Minimum driving time before brake squeal	50
23	23	Acceleration trimming	0	96	96	Consist FKey	0	169	169	Servo 2 - Rotating speed	10	289	289	Thyristor - stepping effect	1
24	24	Deceleration trimming	0	97	97	Consist FKey	0	170	170	Servo 3 - Left stop	49	290	290	Thyristor - pitch at medium speed	20
27	27	Direction dependent stops (Lenz ABC)	0	100	100	Current asymmetry	0	171	171	Servo 3 - Right stop	205	291	291	Thyristor - pitch at max speed	100
28	28	RailCom Configuration	3	101	101	Comparison asym. offset	0	172	172	Servo 3 - Centre position	127	292	292	Thyristor - speed step for pitch increase	10
29	29	Configuration bits - decoder properties	10	105	105	User CV / Manuld	145	173	173	Servo 3 - Rotating speed	10	293	293	Thyristor - volume at cruising	2
31	31	Index page - high	0	106	106	User CV / Provider Id	13	174	174	Servo 4 - Left stop	49	294	294	Thyristor - volume during acceleration	255
32	32	Index page - low	0	107	107	Light suppression on cab side 1 - front	0	175	175	Servo 4 - Right stop	205	295	295	Thyristor - volume during deceleration	1
33	33	Function mapping F0 forward	0	108	108	Light suppression on cab side 2 - rear	0	176	176	Servo 4 - Centre position	127	296	296	eMotor - highest volume	255
34	34	Function mapping F0 reverse	0	109	109	Automatic unilateral light suppression	0	177	177	Servo 4 - Rotating speed	10	297	297	eMotor - speed when audible begins	15
35	35	Function mapping F1	0	110	110	Automatic unilateral light suppression	0	180	180	Motor reg EMK-difference max	0	298	298	eMotor - speed for full volume	50
36	36	Function mapping F2	0	111	111	Emergency stop deceleration rate	0	181	181	Servo 1 - Fkey assignment	0	299	299	eMotor - pitch dependent on speed	100
37	37	Function mapping F3	0	112	112	Special ZIMO configuration bits	0	182	182	Servo 2 - Fkey assignment	0	300	300	Enter OpsMode	0
38	38	Function mapping F4	0	113	113	EMF reduction - compensation	0	183	183	Servo 3 - Fkey assignment	0	301	301	Inc/Dec programming of CVs	0
39	39	Function mapping F5	0	114	114	Dimming mask	255	184	184	Servo 4 - Fkey assignment	0	302	302	Start Calibration Mode/Sequence	0
40	40	Function mapping F6	0	115	115	Uncoupler control (KROIS and ROCO couplers)	0	185	185	Special assignment for live steam engines	0	303	303	Switching input 1 - key/options	0
41	41	Function mapping F7	0	116	116	Automated uncoupling procedure	0	186	186	Pantograph 1 - Fkey assignment	0	304	304	Switching input 2 - key/options	0
42	42	Function mapping F8	0	117	117	Flasher functions	0	187	187	Pantograph 2 - Fkey assignment	0	305	305	Switching input 3 - key/options	0
43	43	Function mapping F9	0	118	118	Flashing mask	0	188	188	Pantograph 3 - Fkey assignment	0	306	306	Switching input 4 - key/options	0
44	44	Function mapping F10	0	119	119	Low beam mask for F6	0	189	189	Pantograph 4 - Fkey assignment	0	307	307	Cornering squeals or reed configuration	0
45	45	Function mapping F11	0	120	120	Low beam mask for F7	0	190	190	Brightening up times	0	308	308	Cornering squeal Fkey	0
46	46	Function mapping F12	0	121	121	Exponential acceleration	11	191	191	Dimming down time	0	309	309	Brake Key	2
49	49	HLU acceleration	0	122	122	Exponential deceleration	11	195	195	Special effects FuncOutput9	0	310	310	On/off key for engine and random sound	1
50	50	HLU deceleration	0	123	123	Adaptive acceleration and deceleration	22	196	196	Special effects FuncOutput10	0	311	311	On/off key for function sound	0
51	51	HLU limit HU	20	124	124	Shunting key functions and SUSI	2	197	197	Special effects FuncOutput11	0	312	312	Blow-off key	0
52	52	HLU limit U	40	125	125	Special effects F0FWD	0	198	198	Special effects FuncOutput12	0	313	313	Mute key	119
53	53	HLU limit UL	70	126	126	Special effects F0REV	0	199	199	Special effects FuncOutput13	0	314	314	Mute fade in/out time	0
54	54	HLU limit L	110	127	127	Special effects FuncOutput1	0	201	201	SUSI#1 Configuration	0	315	315	Minimum interval for random generator Z1	40
55	55	HLU limit LF	180	128	128	Special effects FuncOutput2	0	202	202	SUSI#2 Configuration	0	316	316	Maximum interval for random generator Z1	100
56	56	Back-EMF control (P and I values)	55	129	129	Special effects FuncOutput3	0	203	203	IN1/IN2 Configuration	0	317	317	Playback length for random generator Z1	0
57	57	Voltage reference	0	130	130	Special effects FuncOutput4	0	204	204	IN3/IN4 Configuration	0	318	318	Minimum interval for random generator Z2	45
58	58	Back-EMF intensity	255	131	131	Special effects FuncOutput5	0	248	248	Bootloader version	0	319	319	Maximum interval for random generator Z2	105
59	59	HLU delay	5	132	132	Special effects FuncOutput6	0	249	249	Bootloader subversion	0	320	320	Playback length for random generator Z2	0
60	60	Reduced function output voltage (Dimming)	50	133	133	F04 as Cam sensor Or F04 as fan of smoke generators of steam engines.	0	250	250	Decoder ID	0	321	321	Minimum interval for random generator Z3	50
61	61	Special ZIMO function mapping	97	134	134	Asymmetrical stopping ABC	106	251	251	Decoder ID	0	322	322	Maximum interval for random generator Z3	110
62	62	Effects dimming	0	135	135	km/h - Speed regulation	0	252	252	Decoder ID	0	323	323	Playback length for random generator Z3	0
63	63	Effects cycle	62	136	136	Railcom mph factor	24	253	253	Decoder ID	0	324	324	Minimum interval for random generator Z4	55
64	64	Effects ditch	0	137	137	Smoke generator voltage - standstill	0	254	254	Project Number	148	325	325	Maximum interval for random generator Z4	115
65	65	Version Number (part2) sub-version	254	138	138	Smoke generator voltage - cruising	0	255	255	SubProject Number High Byte	-4	326	326	Playback length for random generator Z4	0
66	66	Directional speed trimming - FWD	0	139	139	Smoke generator voltage - acceleration	0	256	256	SubProject Number Low Byte	-1	327	327	Minimum interval for random generator Z5	60
67	67	Free speed curve	4	140	140	Constant braking distance - config	0	260	260	Load Code P1	0	328	328	Maximum interval for random generator Z5	120
68	68	Free speed curve	7	141	141	Constant braking distance - distance	20	261	261	Load Code P2	0	329	329	Playback length for random generator Z5	0
69	69	Free speed curve	10	142	142	High speed correction - ABC	5	262	262	Load Code P3	0	330	330	Minimum interval for random generator Z6	65
70	70	Free speed curve	13	143	143	High speed correction - HLU	0	263	263	Load Code P4	0	331	331	Maximum interval for random generator Z6	125
71	71	Free speed curve	16	144	144	Programming and update lock - not in MS	0	264	264	Variable low voltage (large scale)	0	332	332	Playback length for random generator Z6	0
72	72	Free speed curve	20	145	145	Experimental - Alternative motor control method	0	265	265	Loco type selection	101	333	333	Minimum interval for random generator Z7	70
73	73	Free speed curve	24	146	146	Compensation for gear back-lash	0	266	266	Total volume	75	334	334	Maximum interval for random generator Z7	130
74	74	Free speed curve	28	147	147	BackEMF I-value (Integral)	0	267	267	Chuff rate (using virtual cam)	90	335	335	Playback length for random generator Z7	0
75	75	Free speed curve	32	148	148	BackEMF D-Value (Differential)	0	268	268	Switching to real cam sensor	0	336	336	Minimum interval for random generator Z8	75
76	76	Free speed curve	36	149	149	BackEMF P-Value (Proportional)	0	269	269	Lead-chuff accentuated	0				
												</			

398	Steps to trigger Automatic Coasting	25
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	5
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	6
443	SMG Group 3 MKey	0
444	SMG Group 3 Forward 1st AUX	2
445	SMG Group 3 Forward 2nd AUX	0
446	SMG Group 3 Reverse 1st AUX	2
447	SMG Group 3 Reverse 2nd AUX	0
448	SMG Group 4 FKey	12
449	SMG Group 4 MKey	0
450	SMG Group 4 Forward 1st AUX	3
451	SMG Group 4 Forward 2nd AUX	0
452	SMG Group 4 Reverse 1st AUX	3
453	SMG Group 4 Reverse 2nd AUX	0
454	SMG Group 5 FKey	13
455	SMG Group 5 MKey	0
456	SMG Group 5 Forward 1st AUX	4
457	SMG Group 5 Forward 2nd AUX	0
458	SMG Group 5 Reverse 1st AUX	4
459	SMG Group 5 Reverse 2nd AUX	0
460	SMG Group 6 FKey	14
461	SMG Group 6 MKey	0
462	SMG Group 6 Forward 1st AUX	6
463	SMG Group 6 Forward 2nd AUX	0
464	SMG Group 6 Reverse 1st AUX	6
465	SMG Group 6 Reverse 2nd AUX	0
466	SMG Group 7 FKey	23
467	SMG Group 7 MKey	0
468	SMG Group 7 Forward 1st AUX	5
469	SMG Group 7 Forward 2nd AUX	0
470	SMG Group 7 Reverse 1st AUX	5
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	22
520	F3 volume adjust	0
521	F3 looping/short	0
522	F4 sound assignment	26
523	F4 volume adjust	0
524	F4 looping/short	0
525	F5 sound assignment	0
526	F5 volume adjust	0
527	F5 looping/short	0
528	F6 sound assignment	0
529	F6 volume adjust	0
530	F6 looping/short	0
531	F7 sound assignment	0
532	F7 volume adjust	0
533	F7 looping/short	0
534	F8 sound assignment	28
535	F8 volume adjust	0
536	F8 looping/short	0
537	F9 sound assignment	33
538	F9 volume adjust	0
539	F9 looping/short	0
540	F10 sound assignment	9
541	F10 volume adjust	0
542	F10 looping/short	0
543	F11 sound assignment	32
544	F11 volume adjust	0

545	F11 looping/short	8
546	F12 sound assignment	0
547	F12 volume adjust	0
548	F12 looping/short	0
549	F13 sound assignment	0
550	F13 volume adjust	0
551	F13 looping/short	0
552	F14 sound assignment	0
553	F14 volume adjust	0
554	F14 looping/short	0
555	F15 sound assignment	29
556	F15 volume adjust	0
557	F15 looping/short	8
558	F16 sound assignment	34
559	F16 volume adjust	0
560	F16 looping/short	0
561	F17 sound assignment	25
562	F17 volume adjust	0
563	F17 looping/short	0
564	F18 sound assignment	31
565	F18 volume adjust	0
566	F18 looping/short	8
567	F19 sound assignment	0
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	0
574	IDLE volume adjust	0
575	CHANGEDIR sound assignment	4
576	CHANGEDIR volume adjust	0
577	COMETOHALT sound assignment	6
578	COMETOHALT volume adjust	0
579	THYRISTOR sound assignment	9
580	THYRISTOR volume adjust - not used	0
581	SETOFF sound assignment	5
582	SETOFF volume adjust	0
583	WATEROUTLET sound assignment	0
584	WATEROUTLET volume adjust	0
585	EMOTOR sound assignment	7
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	8
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	27
677	F21 volume adjust	0
678	F21 looping/short	0
679	F22 sound assignment	30
680	F22 volume adjust	0
681	F22 looping/short	8
682	F23 sound assignment	0
683	F23 volume adjust	0

684	F23 looping/short	0
685	F24 sound assignment	24
686	F24 volume adjust	0
687	F24 looping/short	0
688	F25 sound assignment	23
689	F25 volume adjust	0
690	F25 looping/short	0
691	F26 sound assignment	0
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	0
745	Z1 Random volume adjust	91
746	Z1 Random standstill / motion	72
747	Z2 Random sound assignment	0
748	Z2 Random volume adjust	91
749	Z2 Random standstill / motion	72
750	Z3 Random sound assignment	0
751	Z3 Random volume adjust	91
752	Z3 Random standstill / motion	72
753	Z4 Random sounds assignment	0
754	Z4 Random volume adjust	91
755	Z4 Random standstill / motion	72
756	Z5 Random sound assignment	0
757	Z5 Random volume adjust	91
758	Z5 Random standstill / motion	72
759	Z6 Random sound assignment	0
760	Z6 Random volume adjust	91
761	Z6 Random standstill / motion	72
762	Z7 Random sound assignment	0
763	Z7 Random volume adjust	91
764	Z7 Random standstill / motion	72
765	Z8 Random sound assignment	0
766	Z8 Random volume adjust	91
767	Z8 Random standstill / motion	72
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	0
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