Class 03 Diesel Shunter
Sound Fitted Information

Important: Please read this sheet before running your locomotive.

Many thanks for purchasing one of our **Bachmann Branchline** Class 03 Sound Fitted Locomotives. Please take the time to read through this sheet carefully before running your locomotive to ensure you get the most out of your model.

Decoder Info.

Decoder & Speaker Spec.

Decoder type:	Zimo Next18 (MX658N18)
CV1 Address:	03
Speed Steps:	28/128
Speaker:	8 Ohms (10 x15mm)

For full details of the decoder please refer to information sheets on **Zimo Next18 MX658N18** available from **www.bachmann.co.uk**

For Best Results.

Please make sure your DCC system is set to run on 128 speed steps to obtain the very best results from this decoder.

Keeping the track, wheels and pick-ups clean are essential to ensure good electrical contact and will also contribute to the decoder working to it's best ability.

Loco Decoder Address.

This model is set with a default decoder address of 3.

Running on DC.

Your model is equipped with a Next18 sound decoder, this will still operate on DC powered track producing basic Prime Mover (engine) sounds, which will vary with speed, and any other automated sounds.

Please note: *If this model is to be controlled with an analogue (DC) output controller Bachmann Europe Plc recommend the use of a controller with a smoothed output. If you intend to use a feedback type controller, or one with PWM (pulse width modulation) please consult the controller manufacturer before using it with this model.*

Operation Notes

Important; leaving approximately 1 second between function button presses will ensure a more reliable operation.

The following text has been provided to give you an example of how the decoder and sound file can be used to give you a realistic railway operating experience.

On a Diesel locomotive, movement is created by a diesel engine, also known as the Prime Mover, with a mechanical gearbox.

Please note: Without activating F1 your model will not make any of the automated sound effects.

On your controller, select the appropriate address for the loco (default 03).

Before moving the locomotive, you will need to start the engine, or Prime Mover (**F1**). This also activates all the automated sound features.

F8, then F1 - Cold Start. Engine will crank several times before starting. The engine will 'hunt' several times before settling down to normal Idle. (F8 can then be disengaged if required)

Throttle Responce.

As supplied, the decoder will produce the sounds of a Class 03 with a loaded train. This includes sounds generated from it's rolling stock, depending upon how the loco is driven.

Selecting speed step 1. The brakes will release, the sound of 1st gear being selected will be heard and the engine will increase power to get the loco moving. With higher throttle settings the engine sounds will

respond accordingly and the gear changes will sound once your Class 03 reaches the appropriate scale speed.

The gear sounds will change down at similar points on deceleration.

If you would prefer your engine to perform as in **Light Engine Mode**, press **F5** to activate. This feature automatically reduces inertia and momentum settings to give the characteristics of a solo locomotive without the additional sounds of connected rolling stock.

Working Locomotive Brakes.
In a real locomotive, acceleration, speed and deceleration are under control of the driver, using his experience of the locomotive type, the train weight and knowledge of the route.

By the very nature of a shunting loco's typical duties, the brakes will be used more frequently than on mainline locomotives.
With the locomotive moving, reduce the throttle setting to zero. The loco will coast, gradually decelerating and the engine sound will spool down directly to idle.

Engage Brakes with **F2**. A short 'dab' will produce a short air release sound and a modest increase in deceleration rate. This can be repeated if required, and is entirely prototypical in operation.

A longer application will produce a longer air release sound and a higher rate of deceleration.

Holding the Brake Key down continuously will produce a long air release sound and the loco will perform a prototypically modelled emergency stop. Automatic brake squeal will accompany the final moments before halting.

Function Instructions

Important; leaving approximately 1 second between function button presses will ensure a more reliable operation.

Trigger or latch? The characteristics of this Locomotives functions will depend on whether your DCC controller has the corresponding Function (F) button set to **Trigger** or **Latch**.

In the instructions that follow we have suggested the best setting for each F button in *(italic)* next to each title. Please consult your DCC controller instruction for how to change this.

F0. No user access.
F0 is used to support other functions features and should not be used for remapping.

F1. Engine Start (Latch)
F1 On - Engine starts and switches to idle.
F8 On, then F1 On - Engine will crank several times before starting, then engine will 'hunt' several times before settling down to a normal idle. (F8 can then be disengaged if required)

F2. Loco Brake (Trigger)
F2 - When a lower speed setting has been selected, F2 Slows the loco down whilst moving - if necessary to a stop. Brake sounds will accompany any use of the Loco Brake function key.

F3 & F4. Horns (Trigger)
F3 - Single tone.
F3 Held On - Plays the horn for as long as the button is held.
F4 - Plays a fixed length Two-Tone horn.

F5. Heavy Train/Light Engine (Latch)
F5 On - Light Engine Mode
This feature automatically reduces inertia and momentum settings to give the acceleration and deceleration characteristics of a solo locomotive.

F5 Off - Heavy Train Mode.
This feature configures the inertia and momentum settings to give the characteristics of a locomotive with a fully laden train. This includes sounds generated by the coupled rolling stock depending on the rate of acceleration / deceleration.

F6. Engine Idle / Coasting (Latch)
F6 On - Causes the sound of the engine revs to fall and the Unit to appear to be coasting whilst not affecting the speed. The speed can still be adjusted if required without affecting the sound of the engine. This will continue until F6 is turned Off.

If used whilst the Unit is stationary it will allow you to move the Unit without revving the engines, this is useful for short low-speed movements.

F7. Shunting Mode (Latch)
F7 - activates Shunting Mode which reduces the top speed of your locomotive by half giving you greater control at lower speeds.

F8. Cold Engine Start (Latch)
F8 - activate before pressing F1 to simulate a cold engine start.

F9. Flange Squeal (Latch)
F9 enables the Flange Squeal sound effrects. The sounds played during slow speeds differ from those played during higher speeds for a more realistic effect.

The Flange Squeals will not play when speed is zero which means it can be safely used in close quarters shunting without needing to be manually disengaged.

F10. Cab Light (Latch)
F10 - turns on the Cab Light.

F11. Buffer Up (Trigger)
F11 - replicates the sounds of the engine buffering up to it's rolling stock or another engine.

F12. Coupling (Trigger)
F12 - replicates the sounds of the engine being coupled up.

F13. Low Toot (Trigger)
F13 - plays a Low 'Toot'

F14. High Toot (Trigger)
F14 - plays a High 'Toot'

F15. Windscreen Wipers (Latch)
F15 - plays the sound effects of the windscreen wipers

F16. Dispatch Whistle (Trigger)
F16 - sounds the dispatch whistle.

F17. Driver's Door (Latch)
On - Driver's door opening sound effects.
Off - Driver's door closing sound effects.

F18. Fade All Sounds (Latch)
F18 Fades out all sounds until turned off.

F19. Drawing up. (Latch)
On - "Draw up"
Off - "6 foot, 4 foot, 2 foot, Whoa!"

F20. "Squeeze up" (Trigger)
On - "Squeeze Up"

F21. "Going under" (Latch)
On - "Going under"
Off - "Clear to go under"

F22 - F26. No user access.
F22 - F26 are used to support other functions features and should not be used for remapping.

F27. Volume Down (Trigger)
F27 turns volume down.

F28. Volume Up (Trigger)
F28 turns volume up.

Function List - Class 03

No.	Function/Sound	F Button *Suggested Setting*	Sound Type
0	Reserved* (Not to be used for Remapping)	-	-
1	**On** - Engine Start	Latch	Continuous
	On (with F8 On) - Cold Engine Start	Latch	Single
2	Brake (Function & Sound)	Trigger	Single
3	Horn (Playable)	Trigger	Continuous
4	Horn (Two-Tone)	Trigger	Single
5	Heavy Train / Light Engine	Latch	Continuous
6	Coasting / Engine Idle	Latch	Continuous
7	Shunting Mode (Half Speed & No Inertia)	Latch	Continuous
8	Cold Start (When activated before F1)	Latch	Single
9	Flange Squeal (Speed Dependent)	Latch	Continuous
10	Cab Light (Aux. 1)	Trigger	Single
11	Buffer Up	Trigger	Single
12	Coupling Sounds	Trigger	Single
13	Low Toot	Trigger	Single
14	High Toot	Trigger	Single
15	Windscreen Wipers	Latch	Continuous
16	Dispatch Whistle	Trigger	Single
17	**On** - Driver's Door Open	Latch	Single
	Off - Driver's Door Shut	Latch	Single
18	Fade All Sounds	Latch	-
19	**On** - "Draw up"	Latch	Single
	Off - "6ft, 4ft, 2ft, Whoa!"	Latch	Single
20	"Squeeze up"	Trigger	Single
21	**On** - "Going under"	Latch	Single
	Off - "Clear to go under"	Latch	Single
22	Reserved* (Not to be used for Remapping)	-	-
23	Reserved* (Not to be used for Remapping)	-	-
24	Reserved* (Not to be used for Remapping)	-	-
25	Reserved* (Not to be used for Remapping)	-	-
26	Reserved* (Not to be used for Remapping)	-	-
27	Volume Down	Trigger	-
28	Volume Up	Trigger	-