

# Dapol A1 and A1x Terrier

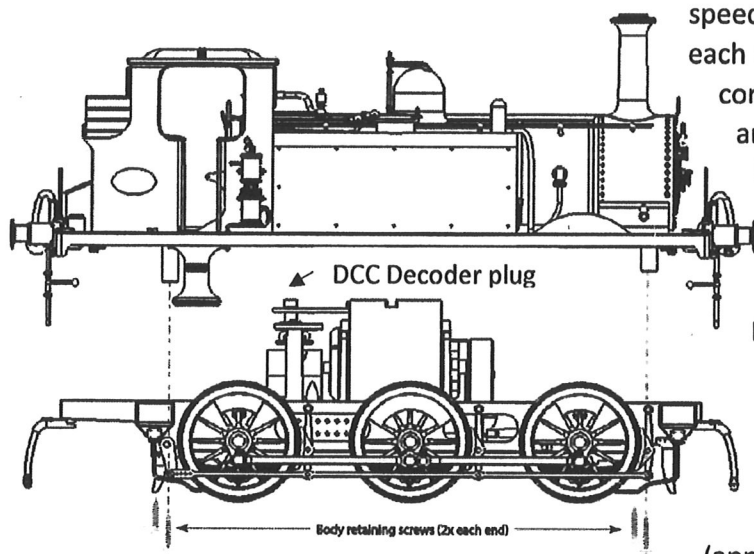
## Maintenance and DCC Decoder installation sheet

**The LB&SC A1x.** 50 locomotives of this class were constructed at Brighton works by the London, Brighton and South Coast Railway (LB&SCR). Designed by William Stroudley, between 1874 and 1880 they quickly became known as "Terriers" due to the distinctive 'bark' of the exhaust beat. 10 locomotives exist in preservation.

**Features and operation.** This model features a 21 pin DCC decoder plug, and/or has been factory fitted with DCC Sound. Non-DCC fitted models require fitting with a decoder before use on a DCC layout. DCC fitted versions will operate on either DC or DCC controlled layouts without modification.

All models are supplied with a speaker housing which can be fitted in the boiler. A suitable speaker can be obtained from DCC Supplies Ltd (01905 621999, [www.dccsupplies.com](http://www.dccsupplies.com)). A firebox flicker effect is fitted to all models, which will operate continuously under DCC control. On layouts using Analogue (DC) control, the flicker will not operate below approximately 5v of track voltage.

**First use and Running in.** We suggest that the model is first operated at a medium speed for approximately ½ hour in each direction. During this time correct operation can be verified and the mechanism will free-up. Running in can also be carried out after fitting a DCC decoder, there is no specific requirement to run-in using DC.



**Lubrication.** The model has been factory assembled with sufficient lubrication for initial operation. After running in (approximately 1-2 hours), we

suggest light lubrication of axles and connecting rods and again after approximately 50 hours running, or after extended storage (especially if stored in a warm/hot location).

**Important:** Only synthetic oils should be used on your model (we suggest Dapol, or 'Locolube') as other oils may damage the model. When oiling, only 2 or 3 drops should be used, in severe cases, over oiling may invalidate your warranty.

**Fitting a DCC decoder.** Remove the body by removing the four outermost screws (located in the base of the model). The body will then lift off the chassis in one piece. (If the firebox flicker board becomes loose, it can be replaced onto its mounting on the motor housing.) The DCC blanking plate will be seen fitted to the decoder plug on top of the motor assembly. Carefully unplug this (using thumb and fore-finger) and fit the 21 pin decoder of your choice. If you are fitting sound, the speaker enclosure will be found inside the boiler, and (depending on your decoder instruction sheet) can be either hard-wired to the decoder or to the spare solder pads on the decoder mounting PCB.

# DAPOL A1/A1X Terrier

## The detail's in the sound!

Thank you for purchasing the A1/A1X Terrier locomotive with sound.

The sound project has been meticulously crafted from specially commissioned recordings of Terrier no. 32678 on the Kent & East Sussex Railway.

The sound project contains some unique features designed to enhance the driving experience and increase the authenticity.

There are a number of sounds that occur when a function button is pressed, and a number of sounds that are played automatically. These are detailed below and overleaf.

We hope you enjoy the added realism and enhanced driving experience that this will bring to your layout operations. To get the best realism and satisfaction out of your sound decoder, you will need to practice a little bit of driving!

		Useful when the locomotive is going "off-scene" or into a tunnel, to simulate the effect of going into the distance. Conversely, on entering the scenic section, or when exiting a tunnel, this can be used to fade the sound back in.
F1	Sound fade in/fade out	
F2	Short whistle	On pressing F2, a short whistle will be heard.
F3	Long + short whistle	On pressing F3, a long and short whistle will be heard.
F4	Coal shovelling	On pressing F4, the sound of the firebox door being opened will be heard, after which the firebox flicker effect will be seen, and the sound of shovelling coal will be heard. The coal shovelling will continue until F4 is turned off and the firebox flicker will extinguish when the firebox door is heard to close.
F5	Injector	On pressing F5, the sound of the water injector will be heard. This sound will continue until F5 is turned off.
F6	Ejector	On pressing F6, the sound of the ejector will be heard. This sound will continue until F6 is turned off.
F7	Brake application/release	When F7 is pressed, the sound of the brakes being applied will be heard. When F7 is pressed again (F7 turned off), the sound of the brakes being released will be heard.
F8	Flange squeal	On pressing F8, the sound of the wheel flanges squealing will be heard.
F9	Light engine mode	With F9 ON, lighter chuffs will be heard and at the same time, the inertia will be reduced to simulate a lightly loaded engine or train. CV390 can be used to determine to what extent the inertia is reduced. As supplied this has a value of 140.
F10	Safety valves	On pressing F10, the sound of the safety valves operating will be heard. This sound will continue until F10 is turned off.
F11	Westinghouse pump	On pressing F11, the sound of the Westinghouse pump operating will be heard. This sound will continue until F11 is turned off.
F12	Manual draincocks	As well as the automatic draincocks, F12 can be used to turn this effect on. The effect will be heard until F12 is turned off.
F13	Coupling	On pressing F13, the sound of the coupling being placed on the hook will be heard.
F14	Guard's whistle	On pressing F14, the sound of the Guard's whistle will be heard.
F15	Door slam	On pressing F15, the sound of a coach door being slammed will be heard.

Brake squeal	The brake squeal will be played when the speed of the locomotive drops below the threshold AND the locomotive is decelerating. The threshold can be set via CV287 in order to reduce or increase the amount of brake squeal. As supplied, the value of CV287 is 20.
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Different chuff intensities.	There are 3 chuff intensities on this sound project. Heavy chuffs will be heard when the locomotive is accelerating. Lighter chuffs will be heard when the target speed is reached. On deceleration, no chuffs are heard. With F9 ON, even lighter chuffs are heard, with more 'cut-off'.
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CV	Purpose	Comment
3	Acceleration rate	As supplied this is set to a value of 40. A higher value gives a slower acceleration. A lower value gives more rapid acceleration.
4	Deceleration rate	As supplied this is set to a value of 50. A higher value gives a slower deceleration. A lower value gives more rapid deceleration.
266	Overall volume	As supplied, this is set to a value of 64. A higher value will increase the volume whilst a lower value will decrease the volume. The recommended maximum is around 100.
267	Chuff synchronisation	As supplied this is set to a value of 72. As your model locomotive is run in, you may find it necessary to alter this to achieve close synchronisation between the sound of the chuffs and the wheel revolutions. There should be 4 chuffs per wheel revolution.

# DAPOL Terrier

## Fine-tuning the sound

With this sound project, It is possible to alter the volume of the various individual sounds if you wish, in order to fine-tune the sound project to your personal preferences.

This is possible because each sound has a 'volume CV' associated with it. By modifying the value in the relevant 'volume CV', the volume can be altered.

Each 'volume CV' can have a value of 0 to 255 inclusive. Note that a value of 0 means the same as a value of 255! Therefore, the minimum volume is when a value of 1 is placed in the 'volume CV'. The maximum volume is when a value of 255 or a value of 0 is placed in the 'volume CV'.

The individual sounds are listed below, with their associated 'volume CV' number. Also shown is the value in each 'volume CV' as delivered.

Sound functions		Volume CV	As delivered value
F2	Toot whistle	517	0
F3	Long + toot whistle	520	0
F4	Coal shovelling	523	64
F5	Injector	526	91
F6	Ejector	529	0
F7	Brake application/release	532	64
F8	Flange squeal	535	128
F10	Safety valves	541	0
F11	Westinghouse pump	544	128
F12	Manual draincocks	584	0
F13	Coupling	550	128
F14	Guard's whistle	553	0
F15	Coach door slam	556	0

## For automatic sounds

Automatic sounds	Volume CV	As delivered value
Simmering	574	46
Brake squeal	578	0
Draincocks	584	0