

'MOGUL' MAGIC

TOOLS

- » Soldering iron
- » Solder
- » Wire strippers
- » Tweezers

Dapol's new 'OO' gauge GWR 'Mogul' has been designed with simplicity in mind when it comes to digital sound upgrades.

MIKE WILD explores its potential by installing twin speakers and a few details to make this already stunning locomotive even better.



TECHNICAL DETAILS

Manufacturer:	www.dapol.co.uk
Cat No:	4S-043-004 (featured)
Description:	GWR '43XX' 2-6-0 6324, BR black
Builder:	GWR, Swindon
Region:	Western Region
Gauge:	'OO'/16.5mm
Scale:	4mm:1ft
Length (over buffers):	235mm
Price:	£159.95 (DCC ready), £183.95 (DCC fitted), £309.95 (DCC sound fitted)
Couplings:	Small tension locks in NEM pockets
DCC:	DCC ready, Next18 socket
Speaker:	15mm x 11mm cube (locomotive) 40mm x 20mm (tender)
Exterior lights:	None
Interior lights:	Firebox flicker
Minimum curve radius (designed):	Second
Minimum curve radius (tested):	Second
Motor type:	Five-pole
Flywheel:	One
Wheel arrangement:	2-6-0
Purpose:	Mixed traffic
Haulage capacity (expected):	Eight coaches
Haulage capacity (actual):	Eight coaches (maximum tested)



Completing this model for the time being is the addition of a real coal load in the tender, crew on the footplate and a lamp at the front.

IT'S NOT THAT LONG AGO THAT sound was an afterthought for ready-to-run locomotives, but recent releases have been following a trend to make the process simpler for modellers. Each manufacturer has its own outlook on how to achieve this, with Dapol's new 'OO' gauge GWR 'Mogul' being amongst those to put digital and sound installation high on the list of priorities for locomotive design.

The advantage is that Dapol has considered how the model will be used from the start of the design process. Provision has been made for two speakers, wiring is provided from the factory to connect these to the decoder and, moreover, access to the decoder socket is straightforward too. These considerations combined with a new no-wire power coupling between the locomotive and tender make this a very user-friendly locomotive, as we will show here.

When it comes to installing sound there are two choices with the 'Mogul'. You can go for the completely tool-free route by adding a 15mm x 11mm cube speaker and Next18 sound decoder inside the smokebox or, if you want the very best from the sound file, you can add a speaker in the tender as well for enhanced audio. Adding the second speaker requires a small crosshead screwdriver

and the use of a soldering iron in order to connect the speaker to the pre-fitted wires in the tender.

Even so, it is a straightforward process throughout and there is no cutting, drilling or modification required to introduce a twin speaker set up to the Dapol 'Mogul'.

Our project uses Digitrains' ZS012P GWR two-cylinder sound file loaded onto a ZIMO MX659N18* sound decoder. The Next18 plug and socket is very neat and saves space too. The decoder is highly capable and features 23 functions including live volume control through F27 and F28 (avoiding the need to use CV programming to adjust the locomotive's volume) as well as the F2 Active Brakes and F5 heavy/light engine sound sets which are hallmarks of the Proto and Active Drive sound decoder profiles sold by Digitrains.

To complete our 'Mogul' project – at least until it is weathered anyway – we added a Modelu GWR crew and lamp using the manufacturer's new locomotive crew pack (HM162) as well as a crushed coal load in the tender to improve its appearance. 6324 is now ready for service with sound to match its super-detailed exterior.

The following step by step guide shows how we installed a ZIMO MX659N18* decoder and two speakers into the Dapol 'OO' gauge GWR 'Mogul'. [Video](#)

Dapol's GWR 'Mogul' is a stunning new ready-to-run model for 'OO' gauge and it has been designed with sound in mind. This model of 6324 in BR black now has a ZIMO MX659N18 decoder and twin speakers installed.

WHAT WE USED

PRODUCT	SUPPLIER	CAT NO.
ZIMO MX659N18 sound decoder	www.digitrains.co.uk	MX659N18*
GWR 'Hall' two-cylinder Proto-Drive sound file	www.digitrains.co.uk	ZS012P
15mm x 11mm cube speaker	www.dccsupplies.co.uk	112965
Rail Exclusive 40mm x 20mm speaker	www.digitrains.co.uk	LS40x20x7
Modelu GWR locomotive crew pack	www.modelu3D.co.uk	1010

* The decoder used here is a ZIMO MX658N18, note by ZIMO.

STEP BY STEP DAPOL GWR 'MOGUL' SOUND INSTALLATION GUIDE

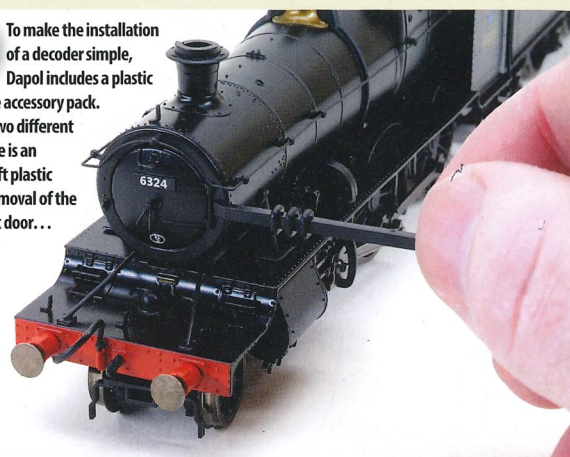
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Dapol's new GWR 'Mogul' has been designed with DCC and sound modellers in mind. It has a Next18 decoder socket in the smokebox on a pull-out PCB together with space for two speakers.

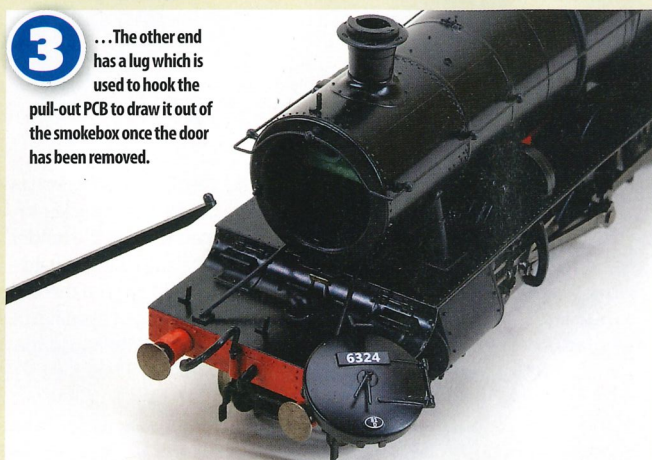
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To make the installation of a decoder simple, Dapol includes a plastic tool in the accessory pack. This has two different ends – one is an angled soft plastic end for removal of the smokebox door...



3

...The other end has a lug which is used to hook the pull-out PCB to draw it out of the smokebox once the door has been removed.



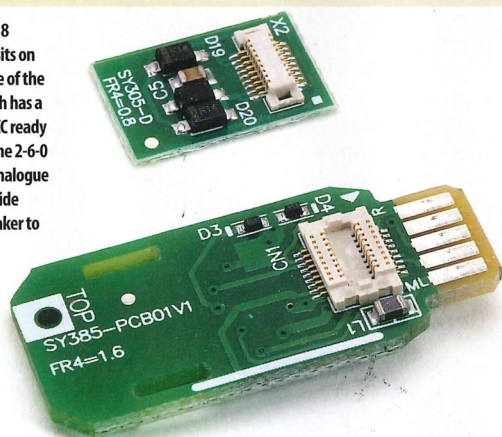
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The PCB clips into place inside the boiler but slides out easily with the supplied tool offering full access to the PCB.

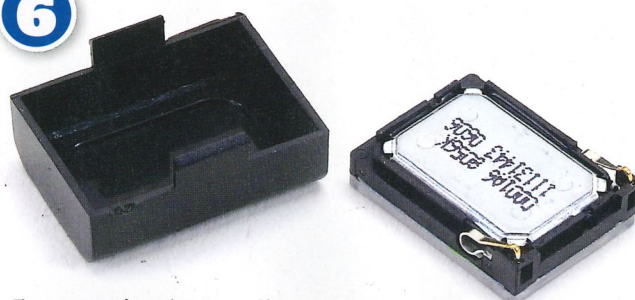


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A Next18 socket sits on one side of the pull-out PCB which has a blank fitted on DCC ready models to allow the 2-6-0 to operate with analogue control. The rear side has tabs for a speaker to connect to.



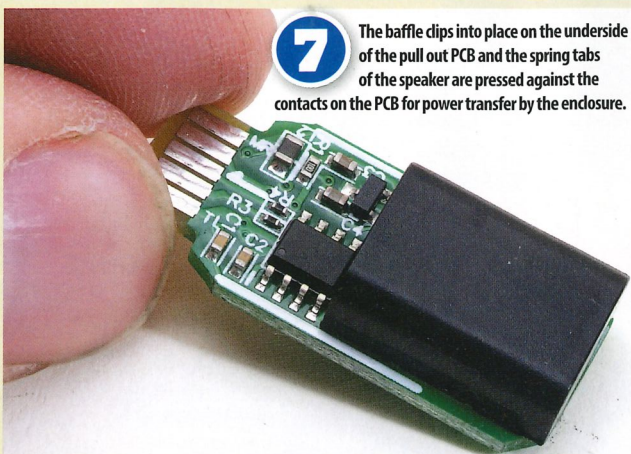
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The accessory pack contains a 15mm x 11mm cube speaker baffle with clips to allow its connection to the PCB for power transfer. A standard 15mm x 11mm cube speaker without a baffle fits into the supplied plastic enclosure.

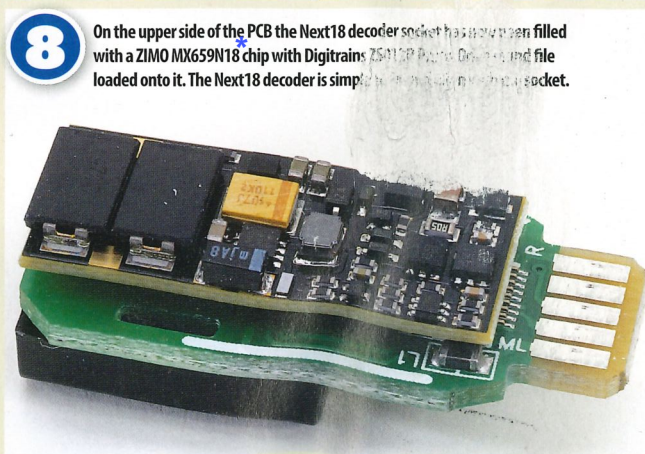
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The baffle clips into place on the underside of the pull out PCB and the spring tabs of the speaker are pressed against the contacts on the PCB for power transfer by the enclosure.



8

On the upper side of the PCB the Next18 decoder socket has now been filled with a ZIMO MX659N18 chip with Digitrains Z5910P Pacific Decoder and file loaded onto it. The Next18 decoder is simply a socket.

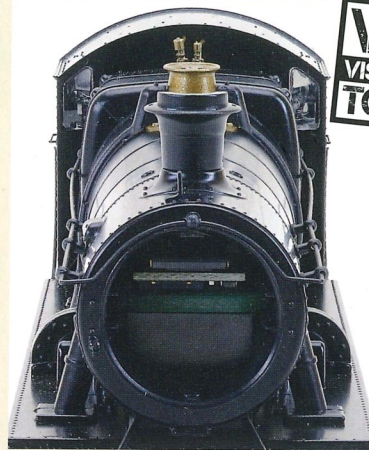


9 With the speaker and decoder connected, the PCB slides back into the smokebox. Push it back until it clips into place inside the smokebox.

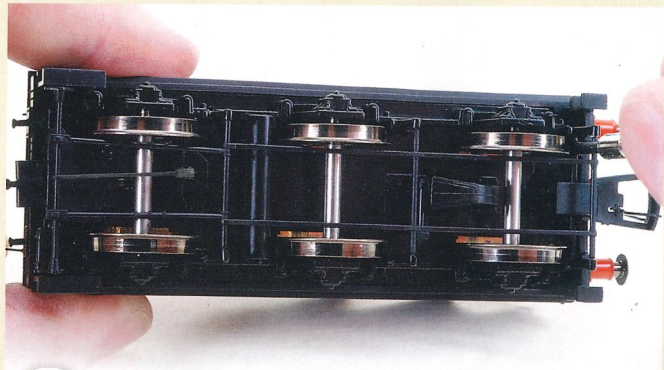
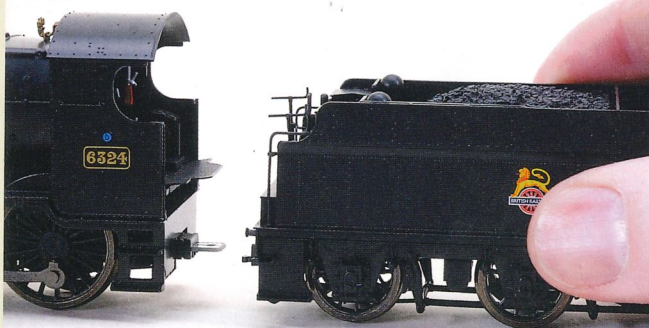


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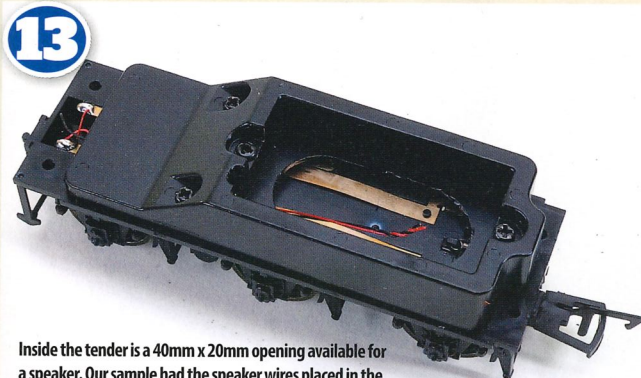
10 The smokebox installation process is clean, neat and tidy and fills the space available. However, the '43XX' has space for a second speaker in the tender too expanding the performance of the sound decoder. Adding a second speaker is optional - the sound will play through the 15mm x 11mm cube speaker on its own if you prefer.



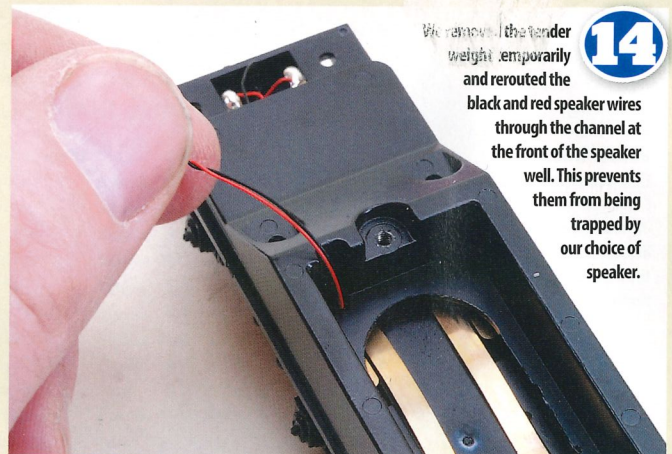
11 The power coupling between the locomotive and tender provides a modern means of connecting the tender and also makes it simple to separate the two parts during maintenance and sound installation.



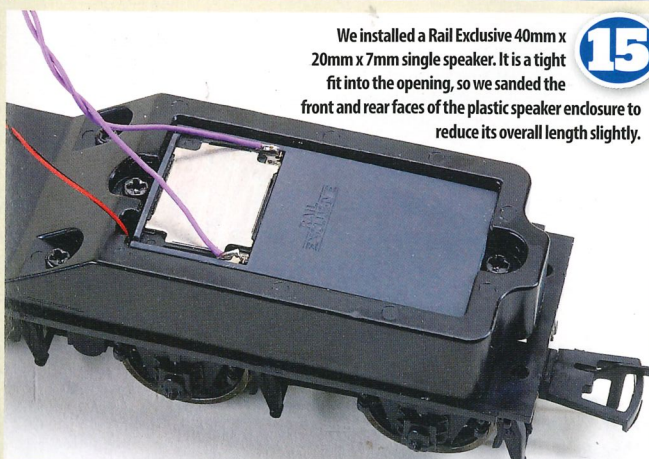
12 To access the tender interior, there are four crossheads, one at each corner of the tender chassis. Remove all four and keep them safe for re-assembly.



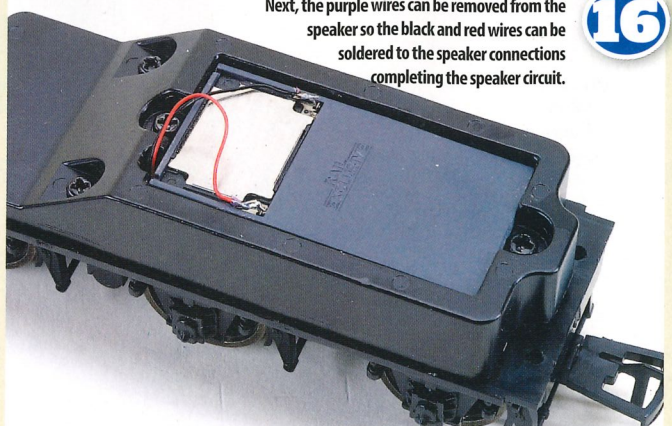
Inside the tender is a 40mm x 20mm opening available for a speaker. Our sample had the speaker wires placed in the centre of the speaker opening, but a channel at the front is available to suit different speaker types.



14 We removed the tender weight temporarily and rerouted the black and red speaker wires through the channel at the front of the speaker well. This prevents them from being trapped by our choice of speaker.



15 We installed a Rail Exclusive 40mm x 20mm x 7mm single speaker. It is a tight fit into the opening, so we sanded the front and rear faces of the plastic speaker enclosure to reduce its overall length slightly.



16 Next, the purple wires can be removed from the speaker so the black and red wires can be soldered to the speaker connections completing the speaker circuit.

STEP BY STEP DAPOL GWR 'MOGUL' SOUND INSTALLATION GUIDE

Intermediate
Beginner **SKILL LEVEL** Advanced

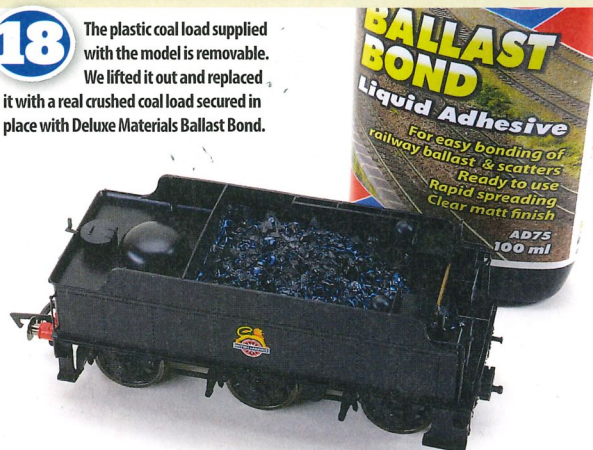
17



The tender body fits neatly back over the chassis as it did before, completing the sound installation. The tender speaker is an optional step in the sound fitting process but does enhance the decoder's audio performance.

18

The plastic coal load supplied with the model is removable. We lifted it out and replaced it with a real crushed coal load secured in place with Deluxe Materials Ballast Bond.



19



A locomotive crew will enhance the superbly detailed open back cab of the '43XX'. For this model we are using Modelu's new GWR locomotive crew pack which consists of a driver, fireman and a set of GWR pattern lamps. All require painting.

20

To start the painting process, we added white to the crew shirts first followed by black for their grease tops, jackets and boots.



21

The finishing touches were Humbrol No. 25 for their trousers, No. 61 for faces plus dry brushed matt black to take away the fresh paint finish.



22



The crew have been glued in place on the footplate using Deluxe Materials Roket Rapid superglue to complete the cab interior.

23

The GWR locomotive lamps were painted with Lifecolor Wood Cold Light Shade (UA718) – a subtle off-white – requiring two coats of paint for full coverage. The finishing touch is a silver backed jewel, included in the crew pack, to give the lamp its lens.



24



The sound installation is completely invisible from the outside while the addition of a lamp, crew and coal load add finishing touches to the finely detailed 'Mogul'. All it needs now is weathering for that true in service look.