

Many thanks for purchasing one of our **Graham Farish** BR Class 108 Diesel Multiple Units. A lot of care was taken producing your model and we hope you enjoy it for many years to come.

Please note: This model has been designed to run on curves of **no less than 2nd Radius (263.5mm)**. We recommend that you don't use anything smaller as this may result in the model derailling.

For analogue use we recommend using a controller with a smoothed output. If you have any doubts please consult the controller manufacturer before operating this model. **Do not use with Electronic Track Cleaners.**

1. Locomotive Information

Motor Type: 3 Pole Iron Core

DCC Compatibility: 6-Pin Decoder socket in both Power and Trailer Car (SOUND FITTED models come pre-fitted with a Sound Decoder in the Power Car and a Function Decoder in the Trailer Car.)

Recommended Decoders: Bachmann **2 x 36-568A** 6-Pin DCC Loco-Decoder (with Brake Button function).

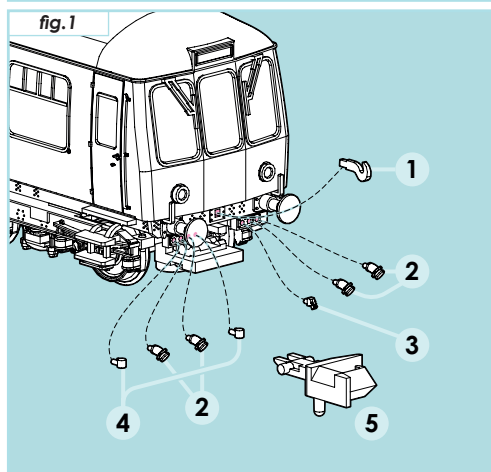
Speaker: 10 x 15mm Speaker Chamber in Power Car (SOUND FITTED models come with speaker pre-fitted).

Electrical Pickup: All Wheels on both Power Car and Trailer Car (3-Car Unit Centre Car does not have pick-up).

2. Accessories

Although our models are highly detailed and ready to run straight from the box, we also supply optional accessories to be fitted by the owner if they wish. Some of the accessories should only be fitted for static display as they may affect coupling or running quality, these parts will be labelled as such below.

Please note: PVA based adhesive should be used for the fitting of accessories.



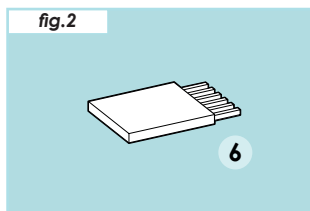
1. Dummy Coupling Hooks

2 & 4. Multiple Working Pipe End Details

3. Air Pipe End Detail

5. Standard Coupling - Pull to remove if not required.

6. 6-Pin DCC Blanking Plates - Supplied with SOUND FITTED models only. Can be used to replace the Sound Decoder & Function Decoder for use on analogue control without sound effects.



3. Running-in

It is necessary that this locomotive is 'run-in' to allow the mechanism and gears to settle. This requires the model to be run without a load (wagons, coaches, etc.) for 30mins in each direction at half speed.

4. Retail Accessories

Selected accessories are available to purchase from your local Bachmann stockist to keep your new model in good order for years to come including:

36-568A – Bachmann 6 Pin DCC Loco-Decoder (with Brake Button function) add two for use on a DCC system.

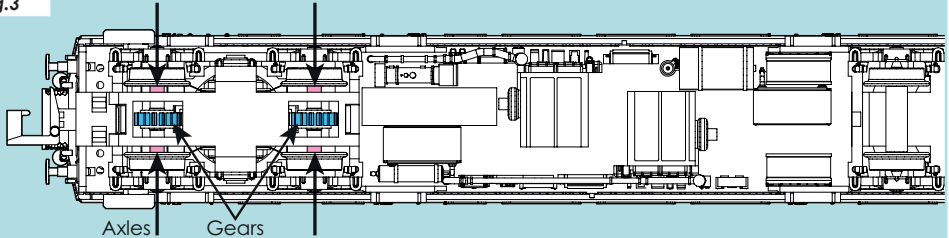
379-401 – NEM Couplings Standard (x20)

5. Lubrication

All Graham Farish DMUs are supplied ready lubricated and can be used straight from the box. Over time your DMU will require some additional lubrication, when will depend on the frequency of use and storage so please inspect your model on a regular basis.

If the driving wheel axles appear dry and no lubricant is visible (pink **fig.3**) it would be advisable to lubricate your model. Push the set of wheels to one side and apply a single drop of **plastic compatible lubricant** to the exposed axles. The gears may also need some occasional lubrication and are easily accessible (blue **fig.3**), add a single drop of heavy gear oil to each exposed gear.

fig.3



Please note: For Axles we recommend the use of **Bachmann Trains 99984 E-Z Lube Light Gear Oil** and for Gears we recommend **Bachmann Trains 99983 E-Z Lube Heavy Gear Oil**.

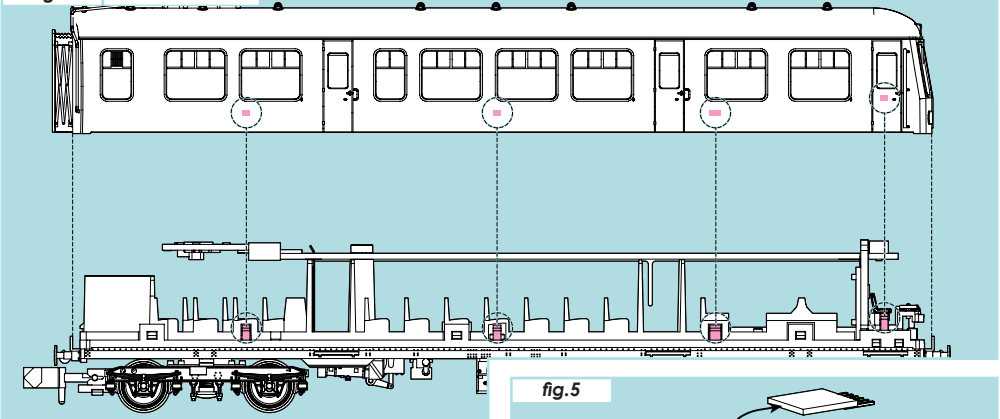
6. DCC Decoder Fitting - 6-Pin

Please Note: **SOUND FITTED** models come pre-fitted with a Sound Decoder in the Power Car and a Function Decoder in the Trailer Car

Digital Command Control (DCC) allows for greater functionality and control over the models on your layout: such as the simultaneous control of speed & direction of multiple Locomotives, enables the use of DCC controlled track, points and other DCC Decoder fitted accessories and unlocks the full potential of **SOUND FITTED** models bringing a whole new level of realism to your model railway.

To enable the use of Directional and Destination Blind lights in both Driving Motor and Driving Trailer cars a DCC Decoder is required for each vehicle.

fig.4 Trailer Car



1. The body and chassis are held together by a series of clips along each side. To remove the body, gently ease out the sides of the body with some thin plasticard to disengage the clips and pull the body away from the chassis (**fig.4**).

2. Remove the 6 Pin DCC Blanking plate and replace with 6 Pin DCC Decoder (**fig.5**). We recommend the use of **36-568A 6-Pin DCC Loco-Decoder**.

fig.5

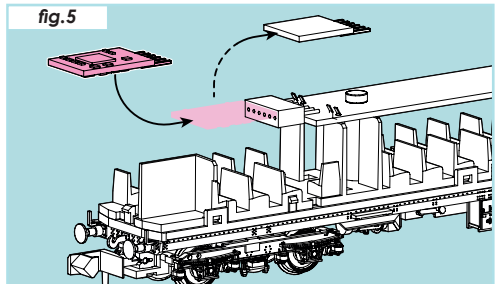
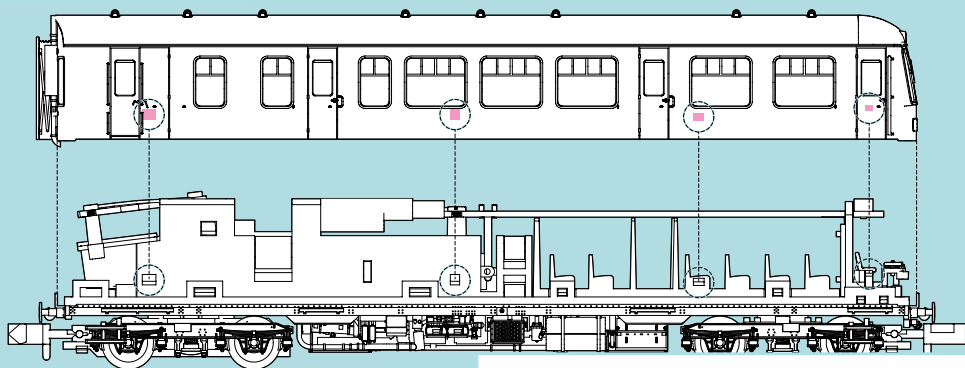


fig.6

Power Car

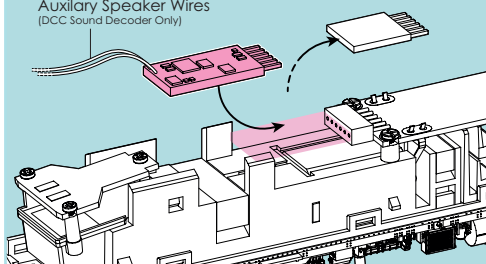


1. The body and chassis are held together by a series of clips along each side. To remove the body, gently ease out the sides of the body with some thin plasticard to disengage the clips and pull the body away from the chassis (fig.6).

2. Remove the 6 Pin DCC Blanking plate and replace with 6 Pin DCC Decoder or Sound Decoder (fig.7). We recommend the use of **36-568A 6-Pin DCC Loco-Decoder**.

fig.7

Auxiliary Speaker Wires
(DCC Sound Decoder Only)

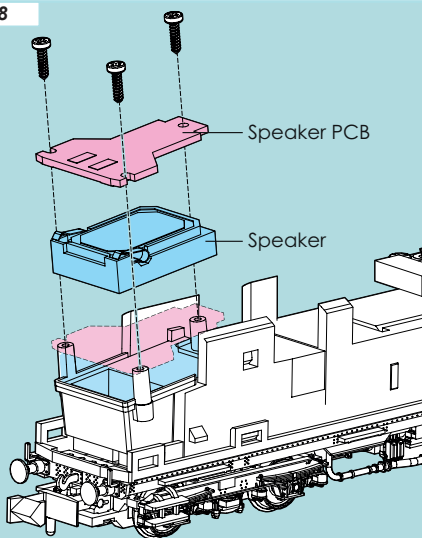


7. DCC Sound Decoder and Speaker Fitting - 6-Pin

If you are converting your model to DCC SOUND FITTED you will need to fit both a DCC Speaker and a DCC Sound Decoder with auxiliary speaker wires to your DMU Power Car.

Please note: You'll still need to fit a 6-Pin DCC Decoder to your trailer car for the use of Directional Lights.

fig.8



1. To fit your DCC Sound Decoder to your Power Car please follow the instructions above (Figs. 6 & 7).

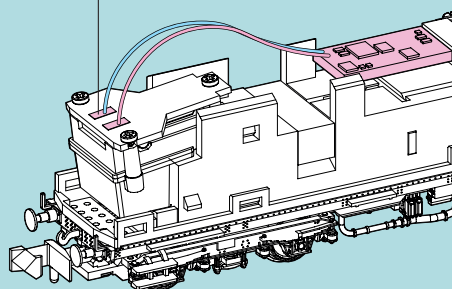
2. With the body already removed from the Power Car unscrew the Speaker PCB and place your 10 x 15mm cube speaker into the tray provided with the speaker contacts facing up (fig. 8).

3. Replace and screw fit the Speaker PCB to hold the speaker in place (fig. 8).

4. Solder the ends of the two auxiliary speaker wires from your DCC Sound Decoder to the soldering pads on the Speaker PCB (fig. 9).

fig.9

Speaker PCB
Soldering Pads



8. Decoder Functions - 36-568A

If you have fitted a pair of Bachmann **36-568A 6-Pin DCC Loco-Decoders** to your model the following DCC Functions will be available to use on a DCC controlled track / layout.

36-568A Decoder Functions

F Key	Function
0	Directional / Headcode Lights On / Off
1	-
2	Brake Key
3	-
4	-
5	-
6	-

9. Spare Parts

Selected spare parts are available from the Bachmann Europe Service Department. For further information and enquiries please contact the Service Department directly by email on **service@bachmann-europe.co.uk** or by phone **01455 245575**.

10. Warranty

This product has a Warranty for 12 months from the date of purchase against faulty materials or workmanship subject to the following conditions. During this period such defects that occur will be repaired or defective parts replaced free of charge.

1. This Warranty applies only if the item was purchased from an authorised retailer of Bachmann Europe PLC ('Bachmann') within the United Kingdom, European Union & European Economic Area. This Warranty does not confer any rights other than those expressly set out above and does not cover any claims for consequential loss or damage. The Warranty is offered as an additional benefit and does not affect your statutory rights as a consumer.

2. For claims under this Warranty, in the first instance the product must be returned to the retailer with evidence of the purchase date in the form of retailer receipt/invoice accompanied by a letter or Service Request form setting out the date and place of purchase, giving a brief explanation of the problem that has led to the claim. It is essential that the claim reach the retailer on or before the last day of this Warranty period. Late claims will not be considered.

3. This Warranty is only available to the original retail purchaser of this product and is non-transferable.

4. The Warranty does not extend to cover damage resulting from misuse or careless handling, accidental damage, wear and tear, or use on a voltage supply other than that stamped on the product.

5. The Warranty may be considered void if repairs have been attempted other than by Bachmann staff.

6. The Warranty is on the original product in its entirety and does not extend to individual components removed from the product. In respect of train sets the warranty applies to motorized units and controllers only.

7. If Bachmann chooses to replace a product it will be with the nearest appropriate model of its choice.

8. Bachmann reserves the right to decline service to any model that has been fitted with a decoder after manufacture.

9. Bachmann will not be held responsible for damage to or loss of an after market decoder fitted to a model submitted for service under the Warranty.

10. The fitting of a Bachmann decoder with a current Warranty shall not be deemed to change the position regarding a product that is otherwise outside its own Warranty. It may be necessary to change decoder settings during service.

11. Bachmann's liability under this Warranty will in no case exceed the price paid for the product as originally manufactured.