Gopher Models N Scale XPT Instructions

Thank you for purchasing a Gopher Models N scale XPT. We hope it provides you enjoyment on your layout for many years to come, and thank you for supporting Australian N Scale!

Putting your model on the track

Our XPT model features a unique type of kinematic coupler which has an electrical two pin connector built in. This electrical connector carries track power between each car of the complete XPT consist. Please take care when coupling each car together.

We recommend coupling together pairs of cars off the track in your hands, please refer to the image below. Use your thumbs to guide each coupler together, and support them as you push them together. It is quite a firm fit, which has the advantage of the cars never coming uncoupled, and good longevity over many years. We then recommend you place these pairs of cars on the track, and carefully couple all of the pairs together. Most typically there will be an odd car out (5 or 7 car set), so you may find assembling one trio of cars excluding the power cars may be helpful. When on the track, attempt the same type of support of the underside of the couplers, lifting the cars off the track to achieve a successful joint. Buckambool Model Trains have specially developed some 3D printed ‘ramps’ which can be slid between the two cars in order to make coupling at track level much easier, they will be available for sale on their website for a small fee.

Coupling off track in hands

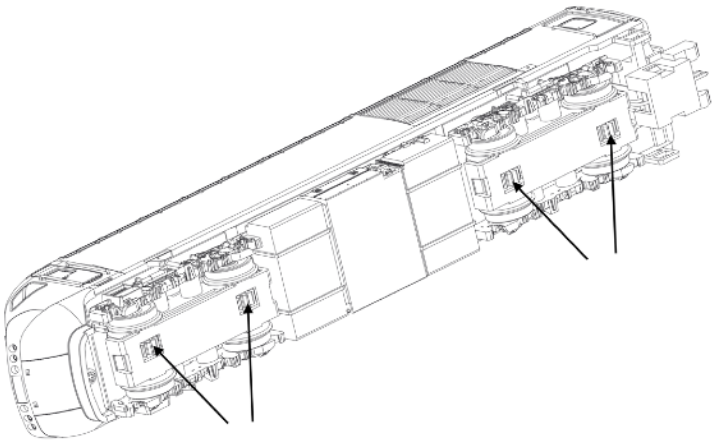
Coupling on track using hands

Maintenance of your model

This model has been designed for absolute ease of maintenance. Typically our factory supplies our locomotives un-lubricated, thus we recommend adding one tiny drop of oil (from a pin head or similar) to each of the exposed gears on the underside of the motorised power car. There are slots in the undersides of the bogies for this, please refer to the diagram on the next page. Should you wish to lubricate the worm and main bogie gear, the bogies can be unclipped from the mechanism. To unclip the bogies, carefully apply a decent amount of force, pulling downwards on the bogie. Take care as each bogie has two wires attached which join to the internal circuit board.

See the next section for specific power car body removal instructions. With the body removed the main circuit board is easily accessible and can be removed via the two centrally located screws. This provides direct access to the coreless motor and linkages to the worm drives.

Should you wish to disassemble a passenger car, the body is held in place with several clips down both sides of the car. Spread the sides of the body on the underside of the car, working from one end to the other to remove the body shell, it will easily separate.



Arrows show where lubricant should be applied

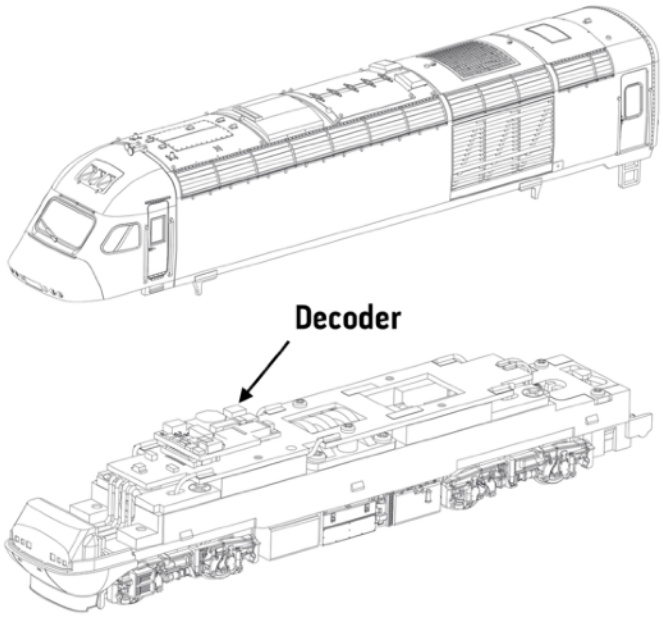
Decoder fitting/removal of body shells

The body shell of both power cars can be carefully removed by spreading the sides of the body, easiest at the rear of the power car, using the rear bogies to lever the mechanism out of the body shell. There are 3 clips along each side, not much force is required to release them.

To operate your XPT on DCC you will at least need to fit a Next18 decoder to the motorised power car. We recommend the ZIMO MN180N18 decoder available from Buckambool Model Trains. It is not essential, but should you also wish to control the lights of the un-motorised dummy power car, you will need to fit another Next18 decoder, ideally a cheap motor decoder or a function-only decoder (designed to control lights only). We recommend the ZIMO MX689N18 decoder available from Buckambool Model Trains.

Should you wish to upgrade your XPT to DCC sound, we recommend purchasing a ZIMO MS591N18 sound decoder from Buckambool Model Trains, who can also provide an XPT sound file for the decoder. This decoder should be installed in the motorised power car, which already features a pre-installed speaker in the top of the body shell. Note if you would prefer to use an ESU sound decoder, please use the 58928 model, the 58828 will not fit.

With the body off, if you purchased a DC analogue model you will see a DC dummy board plugged into the Next18 socket. Unplug this board and replace with your decoder, plugging it in the same orientation as the DC dummy board, i.e. facing towards the rear of the power car.



XPT power car with body shell removed

Contact Details

Please contact us if you have any queries or concerns about this N scale XPT:

Gopher Models	badgerbits@gmail.com	0433 646 393	www.gophermodels.com.au
Buckambool Model Trains	bmodeltrains@gmail.com	0430 460 985	www.bmodeltrains.com.au

Troubleshooting

- **Gradients**: Our XPT model has been designed and tested to comfortably perform on a 2% grade with a full consist of 2x power cars (1x motorised, 1x dummy) and 7x passenger cars. From our testing it should cope well with slightly steeper grades, however you may notice slower speeds and/or slipping of wheels on the motorised power car
- **Curve radii**: Curves or point radii tighter than 280mm may cause derailments or issues. The XPT passenger cars are very long and feature scale flanges. Should you encounter significant issues we would recommend reviewing the curvature on your layout, make all curves as broad as possible. Short of this you may add weight to the passenger cars at your own risk
- **Rough trackage**: N scale models don't appreciate rough trackage at the best of times! Ensure your track work is smooth and tidy, the XPT passenger cars are very long and feature scale flanges. As a result they may perform poorly on rough trackage
- **Electrical issues**: Our XPT model carries track power down the length of the entire train, it may cause issues should you have minor electrical faults present, or when crossing between different electrical track blocks

---

A brief history of the XPT

In this you can find helpful prototype information to best replicate XPT operations on your layout

In 1982 the first passenger train service to be replaced by XPT's was the Central West Express, rebranded as the Central West XPT, offering a daily service Mon-Sat from Sydney to Dubbo. Following this two more XPT services were introduced, the Mid North Coast XPT (Sydney to Kempsey) and the Riverina XPT (Sydney to Albury). In 1983 the Canberra XPT (Sydney to Canberra) and Northern Tablelands XPT (Sydney to Armidale/Moree) were introduced. At this stage all XPT services were capped to a maximum of 5 passenger cars due to the availability of such passenger cars, and all power and passenger cars were painted in the Candy colour scheme. In 1985 the cap of 5 passenger cars was lifted with the introduction of additional cars, allowing formations of up to 7 passenger cars. In the same year, the Mid North Coast XPT was replaced by the Holiday Coast XPT, extending XPT service from Sydney to Grafton.
1990 saw the introduction of a Sydney-Brisbane and Sydney-Murwillumbah XPT service, brought about by the cancellation of the Canberra XPT and reduction in services for the Northern Tablelands XPT. In 1991 an order for sleeper cars as well as additional power cars was placed by the NSW and Victorian Governments, which by 1993 allowed the introduction of an overnight Sydney-Melbourne XPT service, and by 1994 a daylight Sydney-Melbourne XPT service. Sleeper carriages were also introduced on the Brisbane and Murwillumbah services. As delivered these new XPT power and sleeper cars were painted in a new CountryLink livery, and saw the eventual repainting of all previously produced XPT stock. N.B. this livery differs to the later version CountryLink livery being offered by Gopher Models.
1998 saw all XPT services reduced to a total of 6 passenger cars, and then 5 passenger cars by 2001 in off-peak periods. In 2004 with the closure of the Murwillumbah line, this particular XPT service was cut back to Casino. In 2006 the new CountryLink livery (*as modelled by Gopher Models*) was first debuted, with the entire XPT fleet slowly being repainted over the next several years. 2014 saw the first instance of the TrainLink livery (CountryLink colours with the removal of CountryLink branding). The TrainLink livery is the current in-service livery as of late 2025.
In 2016 the NSW government announced the XPT fleet would be entirely replaced. The replacement fleet, originally set to enter service in 2023, has encountered delays (now scheduled for around 2025–2027). In 2025 a life extension project was announced which will see every XPT power car and passenger car fully refurbished, thus the XPT will operate longer than originally anticipated with the potential for them to be retained after the new trains enter service.

Operating cycle

All XPT sets except that assigned to the Dubbo service, which operates a daily return service, rotate to operate all services across a 7 day cycle. The cycle is as follows:

Day 1: 07:40 Sydney to Melbourne arrives 18:30, forms 19:50 Melbourne to Sydney
Day 2: arrives Sydney 06:52, forms 14:47 Sydney to Grafton arrives 00:49
Day 3: 05:15 Grafton to Sydney arrives 15:45, forms 20:42 to Melbourne
Day 4: arrives in Melbourne 07:30, forms 08:30 to Sydney arrives 19:48
Day 5: 07:08 Sydney to Casino arrives 18:41, forms 19:30 Casino to Sydney
Day 6: arrives Sydney 06:50, forms 14:41 Sydney to Brisbane
Day 7: arrives Brisbane 04:53, forms 06:00 Brisbane to Sydney arrives 20:12
(as of late 2025 this cycle has been altered to allow 1 XPT set to be refurbished at a time)

XPT regular services

- NT31 Sydney to Brisbane (night), NT32 return service (day)
- NT33 Sydney to Casino (day), NT34 return service (night)
- NT35 Sydney to Grafton (day), NT36 return service (day)
- ST21 Sydney to Melbourne (night), ST22 return service (day)
- ST23 Sydney to Melbourne (day), ST24 return service (night)
- WT27 Sydney to Dubbo (day), WT28 return service (day)

Car formation

The XPT passenger car fleet comprises of the following vehicles:
- XBH first and XDH/XFH economy class saloon/luggage cars
- XF economy class saloon cars, some of which were previously XD, featuring rotating seats
- XBR first class saloon/buffet cars
- XL first class saloon cars
- XAM sleeping cars

In order to keep the retail price of this model low, we have only tooled the XBH/XDH/XFH, XF/XD and XBR cars. The following information will help identify your cars and marshal them correctly.

XBH/XFH cars feature a small protrusion from one window, which acts as a side periscope for the guard to view the train. XF cars feature windows the length of each side. XBR cars feature a number of blanked off windows on one side, for the rear of the buffet. XL and XAM cars are visually most similar to the XF cars, use XF cars to substitute for these, which will also be available for separate purchase.

When first introduced, all XPT services ran with 5 cars in the approximate order of XBH, XBR, XF, XF, XF or 7 cars in approx. order of XDH, XD, XBR, XD, XD, XF, XFH. Later formations (post 1998) suggest an order of XFH, XF, XF, XBR, XL, XAM in peak periods, with an XF removed to form the more typical 5 car set. The Dubbo set now operates as XFH, XF, XBR, XL. The XBH/XDH/XFH end of the train leads out of Sydney Central.

Maintenance

The XPT fleet is maintained at the XPT Service Centre in Sydenham, within the confines of the Meeks Road Triangle. When between operating services in Sydney, the XPT sets are shuttled from Central station to Meeks Rd where they are decanted, refuelled and run through a wash shed. Refuelling and decanting facilities are also located where appropriate at far flung destinations. All maintenance work is performed at Meeks Rd except for wheel re-profiling which is performed on a wheel lathe at Flemington Maintenance Depot.