



## Application Note

### Blines 'Power' and 'Remote' 13:1 gearboxes

#### Background

These gearboxes originally came about to fit the Modern Motive Power (MMP) Class 60 kit, which had some unique characteristics that could not be answered from currently-available drive solutions. In the case of the Class 60 the cooler group components can be seen through the body and any of the off-the-shelf drive solutions would have placed a motor into the middle of this highly visible area.

The solution was to put the motor within the bogie, as designed by MMP, with a suitable transmission to replace the Home of 0-Gauge gears originally specified but no longer available. After a period of work it emerged that there is a more general interest in gear-coupled drive bogies and so the gearboxes have been productionised and made more widely available.

#### Description

##### 1. Blines 13:1 Power

An etched nickel silver motor/gearbox unit which is designed around a set of Branchlines-Ultrascale 13:1 gears. The mount is ball raced and has motor fixings at 10, 12 and 15mm centres, as well as an optional motor shaft support bearing for use with certain motors. Example motors include Mashima 14xx, 16xx and 18xx series, Canon 1833 and many coreless. It is available as a fret, kit or ex-works assembled with a motor of your choice.

##### 2. Blines 13:1 Remote

An etched self-contained gearbox unit which is designed around a set of Branchlines-Ultrascale 13:1 gears. The mount is ball raced. It is available as a fret, kit or ex-works assembled.

#### Applications

Although primarily developed for diesel locomotive drive bogies it can also be used in many applications where rod coupling of driven wheel sets is impractical or un-prototypical. Given a suitably slow-revving motor the unit can be used in main-line steam locomotives.

Combined with drive components from other manufacturers, the drive solutions are bounded only by your imagination. Suggested third-party components include; Branchline universal joint sets, Exactoscale universal joint sets, Exactoscale 1:1 and 2:1 drive boxes, Delrin sprockets and drive chain, etc.

Maximum scale speed (indicative, based on nominal 10% frictional losses)

Motor	No-load speed	3'0" dia. wheel	3'6" dia. wheel	4'0" dia. wheel
Canon 1833	11,000rpm	85mph	100mph	115mph
Mashima 1824	9,200rpm	70mph	80mph	90mph
Mashima 1833	8,500rpm	60mph	70mph	80mph

Please also see planning template <sdmp\_blines\_planning\_templates\_v0,3.pdf> for example installations in typical diesel locomotives.

Further information, the planning templates, instructions, current pricing and ordering information are available from the SDMP website; www.stephdale.co.uk