



Fitting of Pickups

When you choose the option of 'NO WHEELS', you are unfortunately taking on a lot of work. We would like to stress that if you can fit the wheels without disassembling the BullAnt, this is highly desirable. We frequently get emails from people who have disassembled the BullAnt and cannot get it back together again satisfactorily.

In some cases the BullAnt has had to be returned for us to re-assemble it because the purchaser was not able to. In short, if you are not confident in your ability to successfully take it apart and put it back together properly, don't do it.

If you must disassemble the BullAnt, examine it carefully before doing so in order to know where all the parts go. The Delrin gearbox casing is a clip together structure held by tiny barbed clips. To release the axle, slide a thin blade between the cover and main gearbox. The clips are not designed for repeated removal and can lose their grip. For this reason two spare covers are provided.

Note that the steel layshaft has small phosphor bronze thrust washers fitted at either ends. These washers must be aligned inside the Delrin gearbox, not outside. Also note how many are fitted at the non-driven end and make sure they are all replaced when re-assembling the BullAnt.

Removing the motor brings its own issues, as the meshing with the gear train has been adjusted when the motor is fitted. If the motor is removed, you need to make sure the gear mesh is correct when refitting the motor. There is a small amount of slack in the fixing screw positions to allow for this adjustment. Generally, pushing the motor away from the idler gear will give best performance.

The electrical pickups will not be fitted to the bogie. The reason for not fitting the pickups, is that we have no reference to where the pickups should contact the wheel surface.

However we will supply a set of preformed pickups for you to fit yourself once the wheels have been fitted. An additional un-formed pickup is also supplied in case you make a mistake in fitting the supplied pickups or break one.

Please be aware that the pickups are made from Phosphor Bronze, and excellent material for the job as it is springy and a good electrical conductor. But Phosphor Bronze is also quite brittle and will not take kindly to being bent more than once.

Please also note the pre-formed pickups are handed, in order to place the solder tags both on the same side and near to the motor leads.

First, measure the distance to the desired contact point on the wheel, and bend the pickup leaf back at a shallow angle. Note that in the 3D view, the ends of the pickups are bent back a fraction more than horizontal. Once the bend has been made at the end of the pickup, trim the end back to approximately 1mm length.

As shown in the 3D drawing below, the pickups are fitted over the small pegs moulded into the plastic bolster. They are designed to be a light force fit onto the pegs. Orient the solder tags on the pickups so that they are closest to the motor leads.

Use a small drop of Cyanoacrylate adhesive (CA or Superglue) to secure each pickup to the bolster. Please take great care not to get CA in the layshaft area or anywhere near the gears. Solder the motor wires to the solder tags provided.

Finally, bend the pickups slightly so that they gently push against the wheel. Bend them at the end nearest the centre of the pickup.

Important

If you are fitting wheels to this mechanism, do not fit wheels that use rubber traction tyres. Traction tyres will cause excessive wear to the gear train of this mechanism and cause it to fail. Failure of this mechanism due to fitting of traction tyres will void the warranty. Also, we will NOT repair any damage to the mechanism caused by fitting traction tyres.

