

How to... sort your rear mech

The **mbr** spannerman shows you how to put an end to graunchy gear changes – grab your tools and read on!

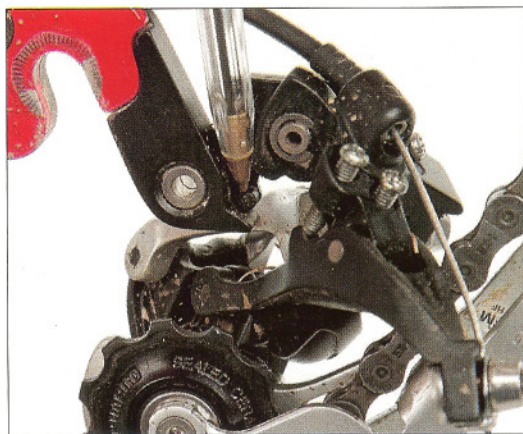
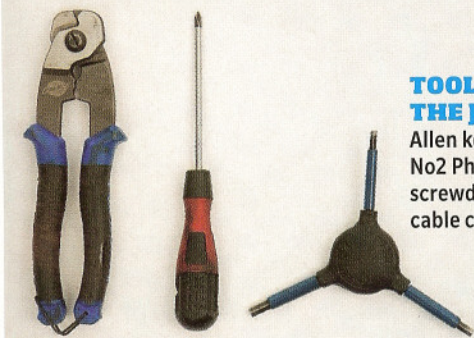
Gear set-up problems usually come from a lack of understanding about what the various adjusters on the mech and shifter actually do. The main adjustments on any rear mech are the limit screws and the cable tension. The limit screws control the range of movement the mech has across the cogs. They need to be set so that the mech can access the highest and lowest gears without overriding them and causing the chain to derail or, worse still, to venture into the spokes! The limit screws are usually marked L and H, for low and high. The low adjuster limits the movement of the mech towards the lowest gear (largest cog) and the high adjuster does the same for the highest gear (smallest cog). Once the limits of a mech are set, they can be left alone as long as the mech or mech hanger doesn't become bent. Cable tension adjusts the indexing of the gears. It can be roughly set at the cable clamp and then fine tuned by barrel adjusters on the mech or the shifter. Minor tweaks are often needed to account for cables bedding in and deteriorating over time. It is essential that the mech and mech hanger are aligned and that the drivetrain is in good condition in order to set up gears correctly. The cables are the most sensitive part of the system; even worn components can be given a new lease of life with some good quality, free flowing cables.



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TOOLS FOR THE JOB

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cable cutters



1 Check that the mech hanger bolts and mech mounting bolts are tight. For a Shadow rear mech ensure that the pin on the back of the mech is tight up against the tab on the mech hanger as shown. If it isn't, undo the mounting bolt, reposition the mech and retighten.

2 Ensure that the rear wheel axle is mounted fully into the dropouts and that the QR is secure.



3 Check that the rear mech hangs down straight so that it's parallel with the sprockets. If the mech and/or hanger are bent, you need to fix this before attempting to adjust the gears.



4 Bent mech hangers can be straightened by hand, but it's much better to use a hanger alignment tool or replace the hanger.

5 Bent mechs can sometimes be straightened by hand, but generally replacing them is the better option.



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6 Check for excessive slop in the mech's pivots and jockey wheels. Sloppy mechs give sloppy shifting.

TOP TIP

Stiff pivots can often be freed up with penetrating oil if caught early enough

7 Check that the pivots move freely. The upper/main pivot on regular Shimano mechs can be prone to seizure if neglected.



8 The cable needs to be smooth-running and undamaged. Its path needs to be as short as possible without any acute bends and without hindering steering or suspension action.



9 If in any doubt, replace the cable with a quality item. Most gear problems can be corrected with fresh cabling.



10 Shift to the middle chainring and to the smallest sprocket. Undo the cable pinch bolt and adjust the high limit screw until the upper jockey wheel is parallel to the smallest sprocket.

TOP TIP

Low normal (Rapid Rise) mechs are set up with the same principles except that you work from the other end of the cassette

11 Fully wind in the barrel adjuster/s then back off one turn. Clamp the rear mech cable while pulling it taut with your fingers.



TOP TIP

Ensure cassette lockrings are tight and there is no hub play, otherwise correct gear adjustment will be impossible

12 Shift one click and the chain should shift one cog. Fine-tune with the barrel adjusters until the chain runs quietly. Gears should now be indexed.

13 Shift to the largest sprocket (lowest gear) and adjust the low limit screw until the upper jockey wheel is aligned with the sprocket.

14 In first gear (smallest chainring and biggest sprocket) adjust the B tension screw until the upper jockey wheel just clears the sprocket. With a Shadow mech there needs to be a 5-6mm gap.



15 Shift through all the gears ensuring they index properly. Check the limit adjustments — try to derail the chain by applying gentle pressure to the mech while pedalling as shown. Make any minor adjustments as required.



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