



Hub-Gear adjustment.

Adjustment of the gear control must be carried out with the bike fully unfolded (i.e NOT parked), and with the indicator rod screwed **fully home** into the hub (and backed off not more than half a turn to align with the cable). The aim is to make sure that the indicator rod & chain down at the the rear axle moves to the correct position in response to moving the trigger. For this the cable has to be running well: it must be free of kinks or sharp radii, with the cable pulley rolling freely.

While setting gears, you should ensure that the gear you select by moving the control trigger has indeed engaged in the hub, and to this end, each time you are moving the trigger, keep the wheel spinning forwards, and pedal back and forwards, to ensure the gear engages. It's easiest, when actually altering the setting, to have the cable slack: so select top gear and back and forward pedal a bit first.

If you cannot obtain a satisfactory setting, then the most likely cause is either the cable not running freely, or damage to the indicator chain itself, where it runs into the axle end. Otherwise, the fault may be with the hub internals.

SRAM 3-spd gear adjustment:.

The cable is made tighter by pushing the adjustor A further onto the grooved end B of the indicator chain GICH: to obtain a looser setting, the spring clip C has to be depressed.

You can usually get things right first time by moving the trigger into top gear, pulling on the adjustor (away from the pulley housing CPULA), and then feeding the grooved end B of the indicator chain into the adjustor until it is just not loose, i.e. *WITHOUT* pulling the indicator chain out of the axle at all. The setting is correct when:-

- with the trigger in top, the cable is just slack (with a *Brompton Y-trigger* fitted, there should be up to 5mm side-to-side movement at D-D, and with a *Sram Torpedo* trigger, rather less), in other words neither flopping around too much, nor taut. If, when you try pulling the adjustor A away from the CPULA, you can see any movement of the indicator chain back into the axle where it enters it, then the setting is too tight, and
- with the trigger in low, the indicator chain (where it enters the end of the axle) should either move not at all, or perhaps up to 1mm, when you pull the adjustor towards the CPULA (if it moves more than this, then the setting is probably too loose: on the other hand, if, while back-peddalling and moving the trigger slowly from mid- to low-position, you see that the indicator chain stops moving out of the end of the axle *before* the trigger has clicked into low-position, then the setting is probably too tight), and
- when pedalling forwards (under no load) and changing through the 3 gears, both up and down, all three gears are positively selected.

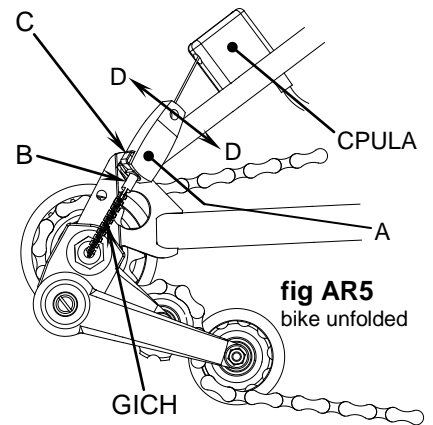


fig AR5
bike unfolded

STURMEY ARCHER 3-spd & 5-spd adjustment:

Adjustment is carried out by slackening the lock nut N, turning the barrel B to obtain correct setting, and relocking the nut N. Ensure the indicator rod is the correct length for the hub-type.

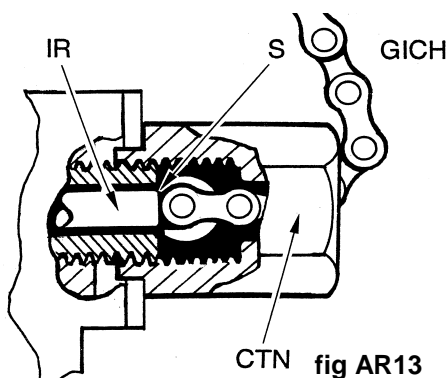


fig AR13

3-speed. Engage top gear, then move the control trigger to the middle position: the step, S, towards the end of the indicator rod, IR, should be level with, or protruding upto 1mm from the end of the axle, visible through the hole in the CTN. Next, select bottom gear, then middle, then top, and check that all three are engaging correctly.

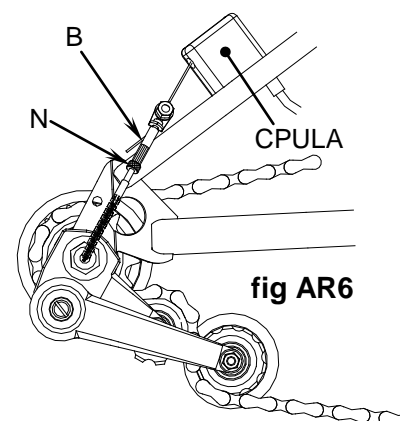


fig AR6

5-speed, fig AR15 (Note: the GRA must be aligned with the cable/indicator-chain, fig AR12). Engage top gear, then move the control trigger to position 2 (2nd bottom gear): the annular groove, SR, coloured red or blue, towards the end of the indicator rod, should lie level with the end of the axle. Next change down and then up through all the gears, and check that all gears engage cleanly, fine tuning the setting if needed. In practice, you may find that, with the gears functioning correctly, the groove SR lies (when in 2nd gear) somewhere between the end of the axle and 1.5mm out from the end of the axle (i.e. a slightly tighter setting): but bear in mind that, when in top, the indicator chain, GICH, should be just slack. Next, test the gear selection under load by riding the bike, again changing down and up through all the gears.

