



Instruction Manual

Bell Throttle Pot BNR-203

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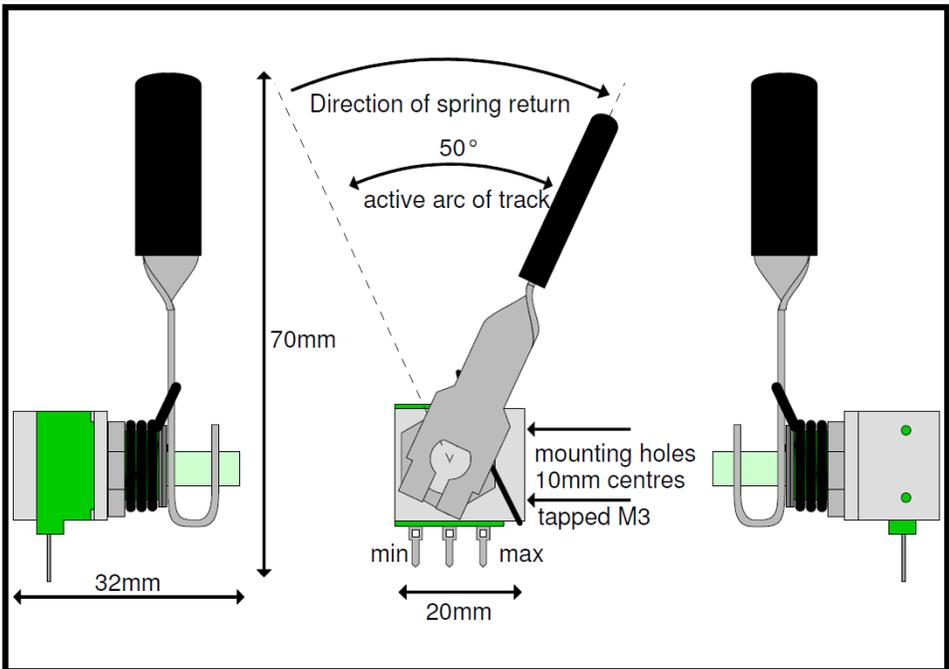
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1. Introduction

The Bell throttle is a finger-tip throttle assembly (speed control mechanism) using a 50° 10K pot. It has a spring return to zero. The spring is light enough to minimise finger strain, yet is still strong enough to ensure reliable operation. The lever can safely be bent if a different shape is needed.

2. Dimensions

The throttle assembly is available either as an unboxed assembly, shown in the drawing, or boxed. The basic 50° pot is also available separately. The throttle is available with a left or right handed return action. The drawing above shows the right handed option. The left handed option is identical except that the lever returns to the left rather than the right, so the max and min connections must be reversed.



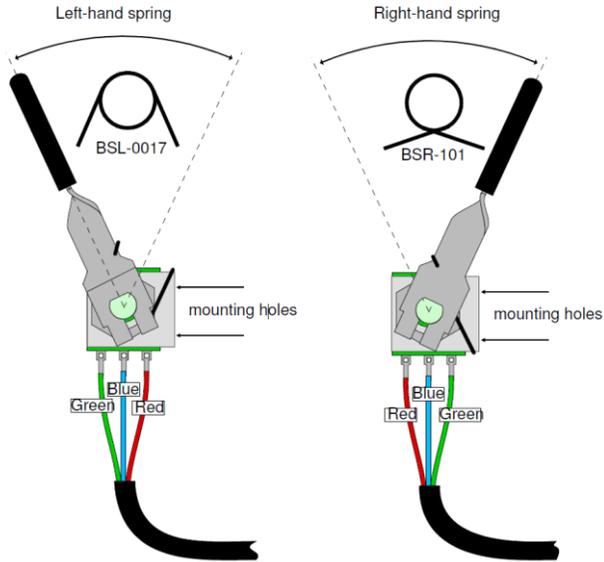
3. Connections

Pot maximum and minimum connections are shown below.

Wiring diagrams in all 4QD manuals show the pot wiring with red, blue and green wires.

Wire colour	Function
Red	Pot maximum [top]
Blue	Wiper
Green	Pot minimum [0]

Do not solder to more than the thin portion of the tag: if you overheat the thick part of the tag the plastic of the pot will soften and the connection to the track may be damaged.

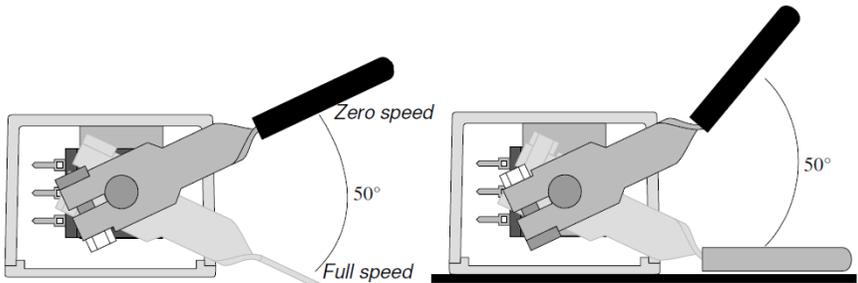


4. Mounting

4.1 Throttle Mounting

When the naked assembly is mounted, the housing should limit the travel of the lever. The electrically active part of the track is a 50° arc centred, as shown, opposite the tags. The mechanical travel of the lever is ±120° but the 95° either side of the 50° arc indicated have no electrical effect.

Active travel is ±25° of centre: centre point is with the flat opposite the centre solder tag.



section through box showing mechanism.

section through box showing additional bend

Right-hand version of mechanism shown

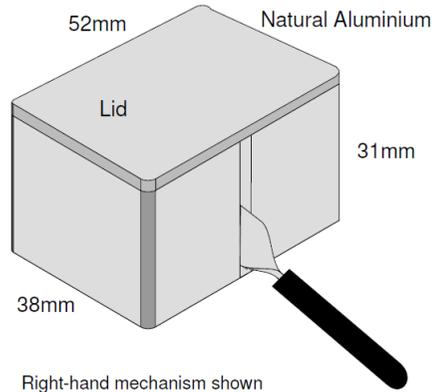
4.2 Boxed Unit

The boxed unit (right) can be mounted for left or right handed operation.

The lever can be pulled or pushed, depending on mounting position.

It is also possible to bend the lever tip so it can be squeezed against a surface as in the second drawing right.

Because of the unit's flexibility of mounting, mounting holes are not provided in the standard boxed version, nor is a hole provided for the connecting lead. The user should drill these where required.

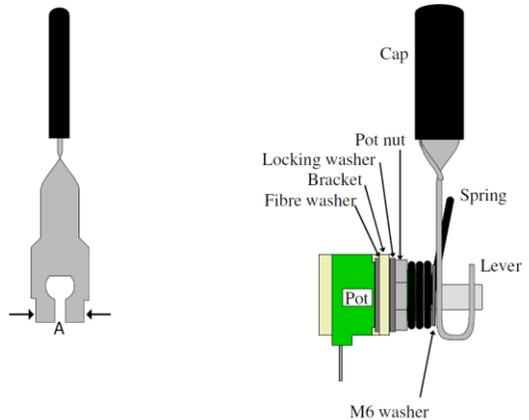


4.3 Waterproofing

The throttle assembly is likely to be used in situations where it could get wet. Although it is always best to keep water out of mechanical assemblies, there is little in the assembly which will be damaged by water. The pot is quite well sealed and water is unlikely to penetrate the mechanism. It is difficult to fully waterproof the slot. If there is danger of water getting into the box, drill a drainage hole at the lowest point for water to escape.

4.4 Lever Fixing

The lever is clamped onto the pot by a 12 x 3mm bolt at the point shown by the arrows below. To remove a lever, loosen the nut and gently prize open the clamp by inserting a screwdriver or similar tool in the gap, A in the diagram below.



5. Service

We cannot offer an economical repair service for the Bell throttles, but you can purchase the component parts from us if you wish to make your own repair.

The pot used is specially made for 4QD Ltd and is rated for 20,000 cycles.

Warranty

All our products have a warranty against defective manufacturing for 12 months from the date of shipment. The warranty doesn't cover damage caused by incorrect installation.