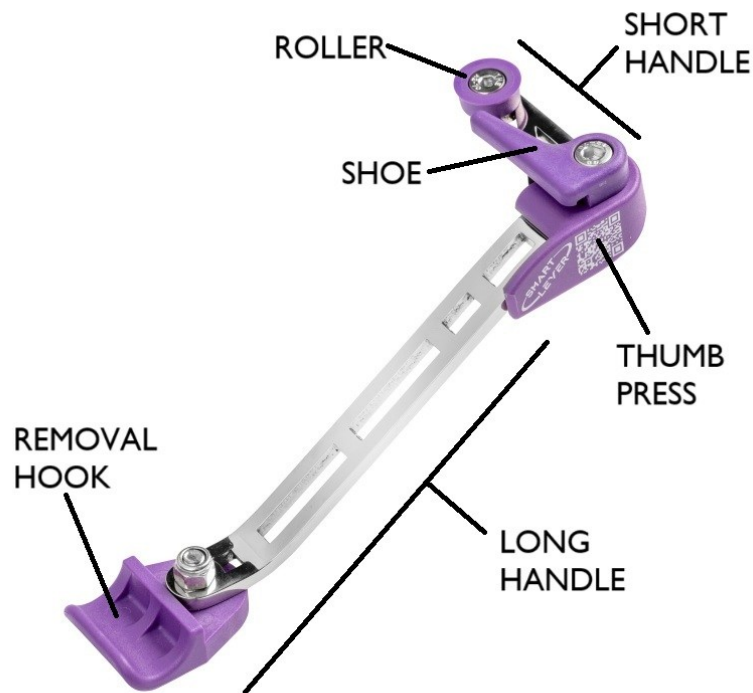


Smart Lever Instructions

Operation is simple and quick, but it is important to understand exactly how Smart Lever and Bead Lever work before first use. Smart Lever is currently only available in a right-handed tool, and whilst removing a tyre works equally well for both right and left-handed users, fitting a tyre is more difficult for left-handed users and requires more care.



IMPORTANT: For proper function, each of the 3 rotatable parts in Smart Lever should remain correctly tightened, screws and nuts may need adjustment after a lot of use, or incorrect use. Correct adjustment is: The Shoe and Removal Hook should offer some resistance when turned to ensure they remain in the position they are turned to. Do not use loose. The Roller should rotate easily, but there must be no visible gap between the roller and the metal body.

TYRE REMOVAL:

1. Fully deflate the tyre and push one side firmly away from the wheel rim so you can see a gap between the tyre and the rim side wall all the way round the wheel. If it won't move, and you have Bead Lever – see separate instructions below.



2. Find a place where the tyre edge (known as the tyre bead) is particularly loose – this is usually at a point some distance away from the valve. Twist the Removal Hook in line with the Long Handle and hold the Smart Lever by the Short Handle (shown at the bottom of the photo). Hook under the edge of the tyre bead as you would with a standard tyre lever.



3. Once the hook is under the bead - pull horizontally / sideways, so that the tyre bead is moved near to the edge of the rim. This makes it much easier to lever over and avoids catching the inner tube.



4. Lever down to pull the tyre bead over the edge of the rim, so that the Removal Hook is vertical. So far, this is the same method as using a standard tyre lever.



5. Keeping the Removal Hook in the vertical position - pivot the handle around a quarter turn clockwise towards the rim (anticlockwise if left-handed), to finish as shown in the photo in 6 below.



6. Once the Long Handle is horizontal, position your body behind the wheel with one hand holding one side of the wheel rim and the other holding the Short Handle like a pistol.



7. Looking down from above, you will see that the Long Handle is angled away from the side of the wheel - which allows you to push directly in towards the wheel rim (1), which will pull a little more of the tyre over, then return (2) to the original position. Do not try and push forward at this stage.



8. After pushing in and back to the original position, only then push forwards with the Short Handle to slide the hook flat under the tyre – your forearm should be in line with the direction you are pushing. At first, you may only be able to move forwards a little.



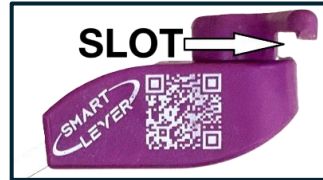
9. Repeat steps 7 and 8 as many times as required, until you can push easily all the way around the wheel. If step 8 remains difficult, **the inner tube may be trapped** – just turn the lever to the vertical and pull the hook out a little, then repeat 5-9.



FITTING A TYRE:

The below advice assumes that one side of the tyre is already on the wheel rim (as is usual when fixing a puncture). However, If you are installing a new tyre, Smart Lever can also be used to install the first side too if this is difficult.

1. The Smart Lever tyre fitting action works in two unique ways: 1. The tapered Shoe lifts the tyre up easily and smoothly from the inside whilst pushing the tyre over, and 2. if the tyre is tight – the Shoe becomes a pivot to lever the tyre up from the outside too, using the Roller. **Start by turning the rotatable Smart Lever Shoe so that it is pointing away from the Roller.** Note the slot under the shoe – the rim edge will be placed in to this slot.



2. Hold the Smart Lever by the Long Handle (with the Removal Hook turned in line for comfort). Push a section of the tyre sideways to expose part of the wheel rim. Insert the Smart Lever Shoe so the slot fits over the side wall of the rim, and ensure that the Shoe rests snugly against the inside of the rim wall as shown in the photo.



3. Swing the Smart Lever through half a turn so that the Roller is just under the top of the wheel rim. Your hand should be around the Long Handle and your thumb pressing against the Thumb Press, then push forward in the direction of the arrow, keeping the Roller below the tyre edge / bead as you do so.



4. As you push the tool forward, make sure your body is directly behind, and your forearm aligned with the direction you are pushing. Ensure the Roller remains under the tyre bead, with the inside of the roller flat to the wheel rim side wall. Please note: that whilst the short metal arm and the flat side of the Roller will be parallel to the side of the wheel, the Long Handle (and therefore your hand) will be angled away from the spokes.



5. Pushing forward an arm's length at a time, keeping the Roller below the bead should smoothly install the tyre. Rotate the wheel towards you after each move and push again. If the tyre starts to fall off at the opposite cross over point, simply hold around the tyre with your left hand at that point.



6. When you cannot push further, leave Smart Lever trapped in place (see photo) and go around the wheel pushing all of the installed tyre right over into the central channel of the rim. The tool will keep the tyre tight so it doesn't move back as you do this.



7. Push the Smart Lever tool forwards again. Repeat as necessary until the last part of the tyre pops over the rim edge. We recommend repeating, say 3 times, but if the tyre is too tight to be pushed on even with the bead entirely in the central channel, then follow the final stage below.



8. **Very tight tyres:** When you have pushed as far as you can, the Shoe will be firmly held in position and becomes a fulcrum to lever the tyre up from the outside. The Roller must be under the bead and flat against the rim - push the bottom of the Long Handle with your palm - a large lever advantage lifts the tyre up with the Roller. Keep the Roller flat to the rim and do not lift too far as the Roller may slip up the side of the tyre - small lifts are best.






9. With each lift up (1) using the Roller, the Shoe pulls a little more of the tyre over. After lifting you will find you can push forwards (2) a little with the Thumb Press. Small movements are best - **lever the bead up a little (1), then push forwards (2) - one after the other, not simultaneously.** Repeat until the last section of tyre pops over.



Bead Lever Instructions

Please note: Two different screws are included for clamping Bead Lever: A. The wing screw shown in our instruction video provides a convenient one piece way to clamp your tyre, and B. The socket head screw and Allen key provide an alternative if your tyre needs a firmer grip or you have difficulty tightening the small wing screw. The alternative socket screw and Allen key are described here:

PARTS USED:	
Smart Lever	
Bead Lever handle	
Bead Lever socket screw	
Bead Lever Nut	
Supplied Allen Key	

INSTRUCTIONS:	
1. Turn the Removal Hook so it is in line with the long metal Smart Lever handle.	

2. Place the socket screw through the round hole in Bead Lever (pointing in the same direction as the curved metal hook) then insert the curved metal hook through the short slot in the Long Handle from the side shown in the photo, so the screw passes through the long slot below.



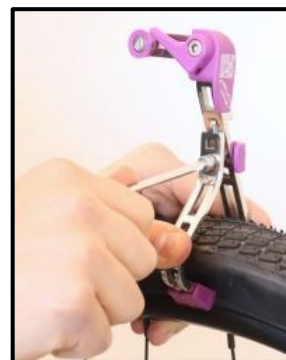
3. Place the nut onto the end of the screw and turn a few times clockwise, then align the nut as shown in 4 below.



4. Pull open up the clamp jaws fully ensuring that the side pieces of the nut move around the sides of the metal Smart Lever, then place over / around your deflated tyre, on the opposite side of the wheel to the valve.



5. Keeping the plastic jaw parts adjacent to the edge of the rim, place the long side of the Allen Key in the screw head and screw clockwise until it clamps. Please Note: to do this rapidly, squeeze the clamp together with one hand and roll the long shaft of the Allen key between fingers and thumb with the other hand.



6. Check that the removal hook is still positioned just above the rim edge and tighten the Allen Key. If you have difficulty tightening enough to grip your tyre – turn the Allen key around and place the short side in the screw head for the last few turns.



7. Stand on the side of the wheel where the removal hook is positioned so you can pull the lever towards you. Grip the Short Handle as shown in the photo.



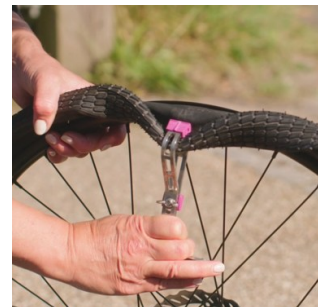
8. The most effective method is: with one hand holding the wheel near the tool, turn the lever to the horizontal position then **pull hard directly towards you**. Then, whilst maintaining the tension, push the lever down towards the spokes as shown in 9 below.



9. As you perform this action the stuck tyre bead should be pulled away from the rim side wall as shown here.



10. If the bead does not separate and the jaws slip too far on the tyre, repeat 8-10 and try to pull further horizontally first, then lever down and hold the tool down by the spokes for an extended period – it may take a few seconds for the bead to come away.



11. If the bead still does not separate – unscrew and tighten in the same way, but as close as possible to the rim edge. Repeat the steps outlined in 8. To 10., making sure you pull horizontally as well as levering over. If it still does not separate repeat a few inches to one side of the original position. Once free in one place it should be possible to push the remaining bead away from the rim side wall all the way around.

