



H2SQ USER MANUAL

***WELCOME TO THE BDH RACE SIM HARDWARE
FAMILY***

*RACE ENGINEERING COMPETING IN A
VIRTUAL WORLD*

HAND BUILT IN YORKSHIRE, ENGLAND

Introduction

Congratulations and thank you for buying your BDH H2SQ Shifter. To get the most out of your purchase please review all the content in this document.

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Help Videos

Register at www.bdhracesim.com to access our support video series

Contact Us

If you need to contact us at any point, email info@bdhracesim.com

Setup

Let's get you going!

Setting Up the H2SQ

To increase efficiency our shifters are packed tightly. The shifter is heavy, so please be careful removing it from the packaging, we advise placing the box on it's side and pulling the shifter by the lower clamps while holding the box with your other hand, the shifter should slide out.

Our shifters may look like bright and well-polished show ponies, but that's a by- product of what the shifter is all about, each one is built, crafted and setup by hand- no shifter is alike, and they all have their own minor signs of build and test- so if you find any minor scuffs- don't worry- it's a mechanical car part and meant to be!

Please take care when setting up, read the guide and we should get you set up smoothly.

Our shifters are like any gearbox and they wear in over time, so you'll find the more you use it the better it will be, similar to when you run in a new car.

Remove the Gear Stick, nuts/bolts/thumb wheel and USB cable and set away the box.

Mounting the shifter

There are a number of shifter mounting options (see Mounting section). Typically, customers will mount the shifter with the gear stick end facing away from their monitors.

Support videos

There is a series of videos available for further help, please register at www.bdhracesim.com where you'll find a number of support videos towards the bottom of the page.



The shifter is generally mounted directly to aluminum profile, BDH can provide a mounting plate for rigs such as Advanced Sim Racing and Trakracer chassis, sold separately.

Insert the nuts into the profile slots and mount the shifter to the aluminum profile. Once the holes on the base of the shifter are aligned to the bolts, insert the bolts and tighten the shifter to the simulator chassis. Adjust the shifter as necessary by loosening, moving and re-tightening the shifter as desired.

Your shifter comes with the USB cable attached for ease, to relocate the cable entry hole to suit your needs, remove the larger end cap by loosening the grub screw with a 2mm Allen Key.

This reveals the end of the shifter chassis and the USB connection, is visible:



You can rotate the end cap and cable around 90 degrees, make sure to re-attach the grub screw. Attach the other end of the USB lead into your PC.

Now it's time to attach the Thumb Wheel

The Thumb Wheel is the tensioning mechanism for the shifter.



Insert the Thumb Wheel into the top hole, you will see a yellow spring (it's yellow because of its strength rating) that the Wheel mounts upon, screw the wheel in to about halfway. Once the shifter is mounted you can use the Thumb Wheel tensioner to establish the right feel for your drive in either H or SQ modes.

Now it is time to attach the Gear stick and Knob.

1. Hand tighten the gear stick to the lower gear housing, DO NOT OVER TIGHTEN. Once it is hand tight, it's time to get two spanners.

2. You will need a 10mm spanner and a 19mm spanner.

Use the 19mm spanner to hold the lower gear stick part and the 10mm on the flats of the gear stick. Keep the lower spanner still and tighten with the upper spanner on the gear stick.

3. It is important that you DO NOT twist the lower gear stick part, or you may damage the shifter.

If you ever wish to change the gear knob, the knob uses an M10 x 1.5mm thread, we get asked about changing knobs a lot and M10 x 1.5mm is fairly standard with most motorsport brands- so feel free to change if required.

1. To remove the knob, use the 10mm spanner and hold down the flats in the gear stick to ensure you don't twist it as you unscrew the gear knob.

2. Reverse this process when attaching your new knob always ensuring that you do not twist the gear stick. Any gear knob in excess of 250g will void the warranty of the shifter. Contact us if unsure.



Good to go!

Switch on your PC and once Windows is loaded:

- 1. Wait for Windows to recognise and install driver*
 - 2. You will see "BDH SHIFTER"*
 - 3. Go to "SETUP USB GAME CONTROLLERS"*
 - 4. You will see "BDH SHIFTER"*
 - 5. Select the shifter and click "PROPERTIES" use the windows software to run through the gears, here you will be able to select all 8 gear options.*
 - 6. Note two of the gears, 7&8 are through the far tension gate, so to access these you need to apply force (all the way right or left depending on the way the shifter is mounted) and then selecting up or down.*
- *Do not lift the shifter stick as this may damage the mechanism.*



TO CHANGE MODE

To change from H Pattern to Sequential, it's simple.

1. *Make sure the shifter is in neutral*
2. *Rotate the knurled collar all the way Right (if the stick is nearest to you)*
3. *Give the stick a little wiggle*
4. *Turn the collar again fully so the knurled collar is fully in the right position and engaged (note the wiggle is important!)*

**to change to H pattern from Sequential put the shifter in neutral and turn the collar all the way to the left.*

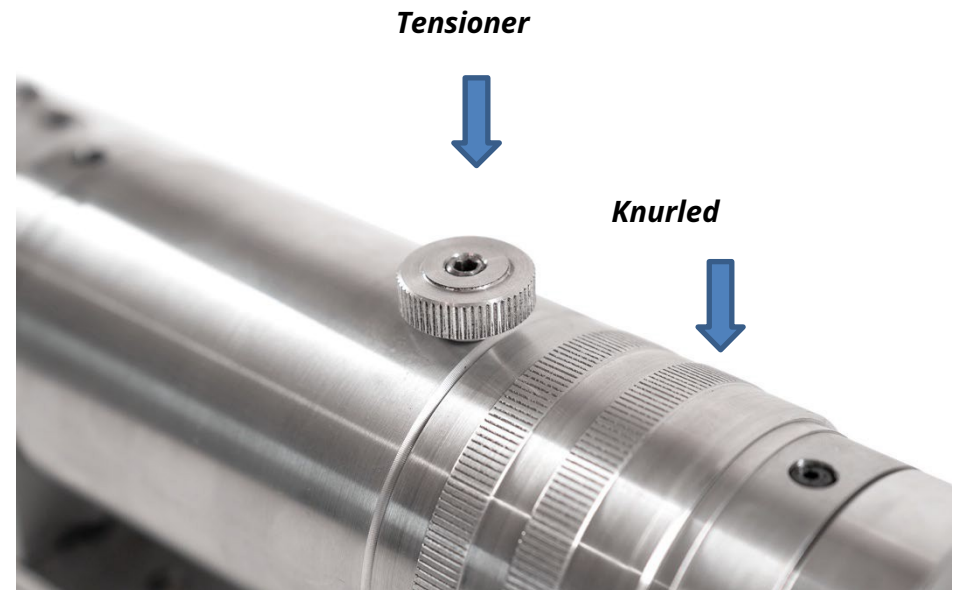
CONFIGURE IN GAME

Now you have the shifter mounted, it has been recognised by Windows, you can now get it going within your game.

1. *Make sure the Shifter is in H Pattern Mode*
2. *Go into your chosen game*
3. *Access Game Controllers*
4. *Setup Gear Shifter*
5. *Within the game configure each gear by selecting the 8 within the H Pattern shifter.*
6. *Switch to Sequential Mode and select appropriate up and down configuration, noting gears 9 and 10 for Sequential.*

Tensioner

Our tensioning technology enables our customers to simulate their favorite gearboxes.



1. *Move the tensioner clockwise to tighten the shifter feel*
2. *Move the tensioner anti-clockwise to loosen the shifter feel*

You may find that H and SQ modes require different tolerances that you can adjust to suit

**Please note overtightening of the Tensioner may result in excessive wear of the shifter*

Mounting

The shifter can be mounted in numerous ways to adapt to the driver's style.

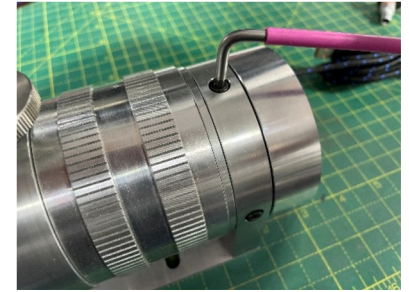
There are typically 4 mounting options on the right or left of your chassis:

- 1. Top of profile stick nearer driver*
- 2. Top of profile body nearer driver*
- 3. Side of profile stick nearer driver*
- 4. Side of profile body nearer driver*

The shifter chassis can be rotated independently of the clamps, allowing the shifter to be side mounted or top mounted.

Side Mounting:

- 1. Remove the M4x10 screws on each clamp with a 3mm Allen key (there are 3 screws in each clamp).*



- 2. Rotate the shifter body to your desired alignment. (If you encounter any resistance do not force it, slacken the 4 base plate screws on the underside of the shifter with a 4mm Allen key).*



- 3. Re-fit the screws, however, the screw directly opposite the gearstick must be re-fitted with the longer M4x16 screw provided in the fitting kit.*



- 4. Once the shifter is in position, you can amend the orientation of the end cap to suit your wiring configuration by slackening off the grub screw with a 2mm Allen key.*



Maintenance

The shifter is built for speed and durability, but like any car it can perish if abused or not looked after.

The shifter comes pre-lubricated, although we would recommend adding some a lithium based grease into the top of the ball joint in the lower gear stick housing.



If it looks like the lubrication has dried, the ball joint feels rough or it has been over a year since last adding lubrication after regular use, we recommend smearing a tiny amount (half a pea) lithium-based grease onto the top of the joint and moving through the gears so the parts all get a coating.

We'd recommend regular dusting and cleaning of the shifter

Do not lift the gear lever upwards, this can cause issues with the mechanism.

Retighten all the bolts on your sim rig, including the shifter bolts mounting your shifter regularly.

DIMENSIONS:

