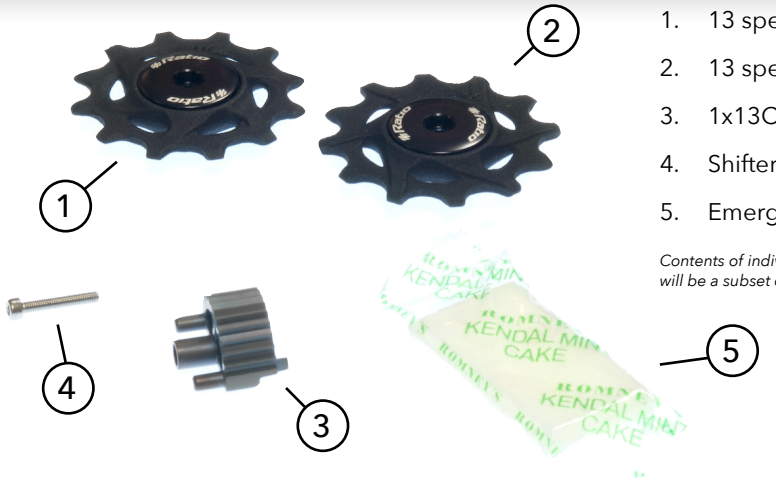

# Ratio

## 1x13C

# UPGRADE KIT CONTENTS



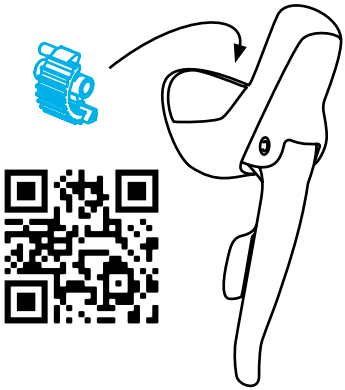

1. 13 speed upper jockey wheel
2. 13 speed lower jockey wheel
3. 1x13C ratchet
4. Shifter disassembly screw
5. Emergency mint cake

*Contents of individual part kits will be a subset of those above*

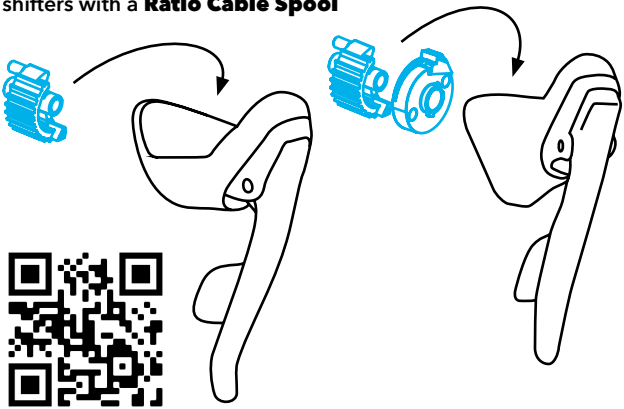
# 1. SHIFTER RATCHET REPLACEMENT

Fit the 1x13C ratchet to your shifter. Scan the QR code for your shifter type or visit **ratiotechnology.com** to view our video guide. Make sure that you follow the correct guide.

**SRAM 11 speed shifters for hydraulic brakes**



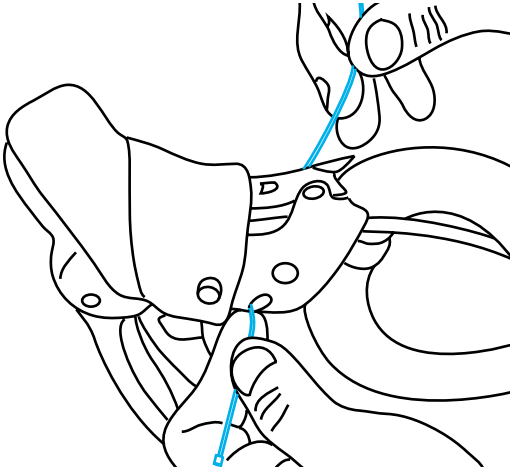
**SRAM 11 speed shifters for cable brakes or SRAM 10 speed shifters with a Ratio Cable Spool**




The 1x13C kit is compatible with SRAM Exact Actuation™ 1x-specific derailleurs including Force 1™, Rival 1™ and Apex 1™. The kit is also compatible with SRAM 1x11 MTB X Actuation™ derailleurs with our Cable Fin fitted. Check that your chosen Ekar™ cassette doesn't exceed the **maximum capacity** of your derailleur as recommended by SRAM.

Use a **3 mm** hex key to remove the original 11 speed jockey wheels. The upper and lower screws are **different**; take care to keep them separate.

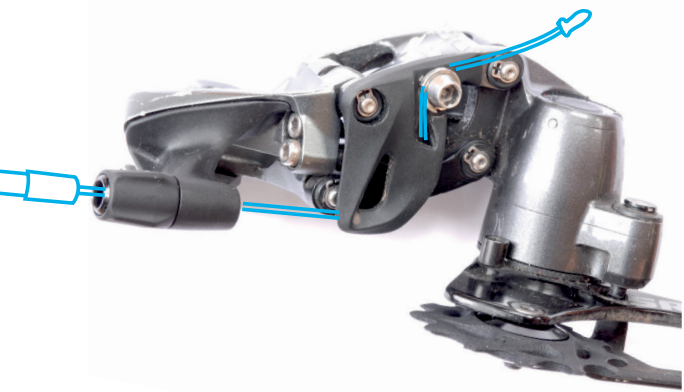
Fit your Ratio jockey wheels. With the markings facing outwards, the upper jockey (**marked "U"**) should be on the left as shown and the lower jockey (**marked "L"**) should be on the right. The rotation arrows mark the direction that the jockeys will rotate when the bike is pedalled **forwards**.



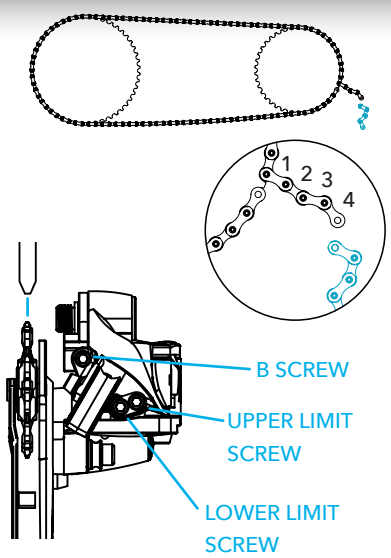
**Cable brakes only:** Pull the lever, then feed the brake cable through the hole and out of the shifter. Connect the brake and check that the operation is normal.

**Both brake types:**

1. Shift the mechanism into the **smallest** sprocket
2. Roll the shifter hood back from the base
3. Feed the end of your new derailleur cable into the hole at the **bottom** of the shifter
4. Ensure that the cable passes through the **hole in the red cable spool** inside the shifter
5. Pull the cable out of the top of the shifter until the end of the cable is **seated in the spool**
6. Fit an outer ferrule and then slide the inner cable into the outer housing



1. Fit a ferrule to the end of the outer cable
2. Engage the **cage lock** on the derailleur
3. Thread the inner cable through the **cable stop** and the **cable fin**
4. Pull the cable tight and clamp it with the bolt (**3 Nm** maximum), ensuring that the cable is **seated in the groove** in the washer
5. Cut the cable to length and crimp a cable end in place




1. Wrap your Ekar™ 13 speed chain around the **chainring** and the **largest sprocket**, missing the derailleur
2. Sit the chain on the **narrow-wide teeth** of the chainring so that the two ends meet with **as little slack** as possible
3. Count **four links** from the meeting point as shown and break the chain, ensuring that the chain **ends at an inner link**
4. Thread the chain through the derailleur and join it with a **quick link**
5. Adjust the **lower limit screw** until the upper jockey wheel is aligned with the centre of the **smallest** sprocket
6. Use the guide provided with the derailleur to set the **B screw** - in the largest sprocket, there should be **14 mm** between the sprocket and the upper jockey wheel
7. Use the clamp bolt and then the barrel adjuster to index the gears. If the shifts **inboard** are slow, turn the adjuster **anticlockwise**. If the shifts **outboard** are slow, turn it **clockwise**
8. Release the upper limit screw. In the largest sprocket, trying to shift to an easier gear should put you back into the **same sprocket**. Turn the limit screw **clockwise** until this doesn't happen, then release it around **half a turn**. It should not be possible to shift the chain **into the spokes**

**Ratio Technology** was founded in 2018 to develop groundbreaking drivetrain components. Since then, we've set our minds to creating the parts we want to ride on our own bikes. We hope you enjoy them.

The Lake District, UK

**Tom, Felix, Will and Louis**

**#ratiotechnology**