

Step1.

Assemble the headset, stem, spacer and fork to the frame, note that the 45° chamfer on the bearing outer race should be placed toward the headtube.

Maximum spacer stacking height is 40mm.

Mark the top of the stem on the steerer, then mark a second line 3mm below it – this is the cutting line for later.

Step2.

Remove the fork from the frame and cut the steerer tube to the marked length.

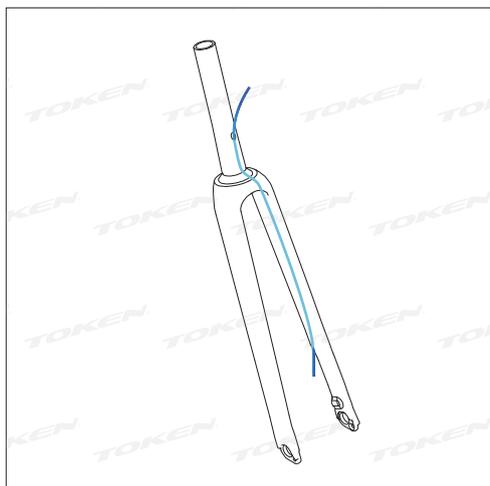
Clean up any residual burr on the steerer tube.

Step3.

Feed the front brake line into the exit hole on the fork leg and route it through the fork.

Pull the brake line from the other end until the caliper end reach its final position.

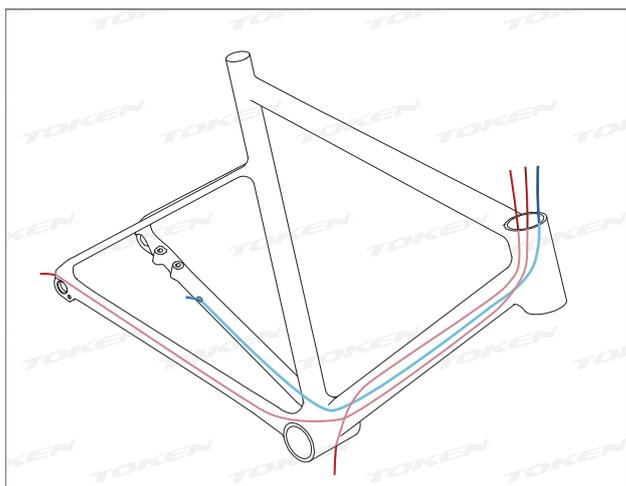
The fork is ready for now, but do not assemble it back to the frame yet.



Step4.

Feed the shifting cable housings from the exit holes (near where the derailleurs attached to the frame) into the frame, route them through the down tube, and then exit from the top of the head tube.

Repeat the same process for the rear brake line.



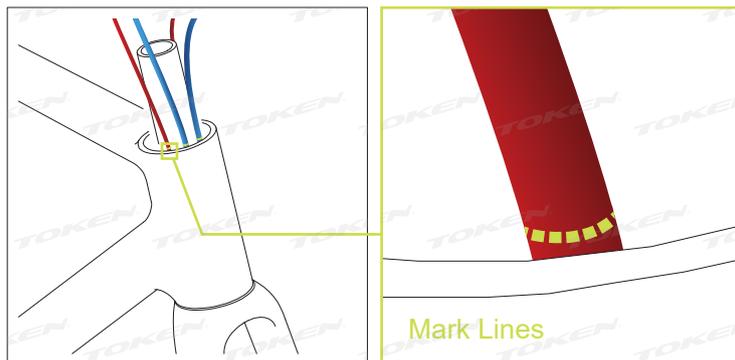
Step5.

Pull the housings / brake line from the headset until the other end reach their final position (attach to the derailleurs / caliper, or cable guide).

Step6.

Insert the fork into the frame with the lower headset bearing assembled.

Then, mark the top of the headtube on all shifting cable housing and brake lines.

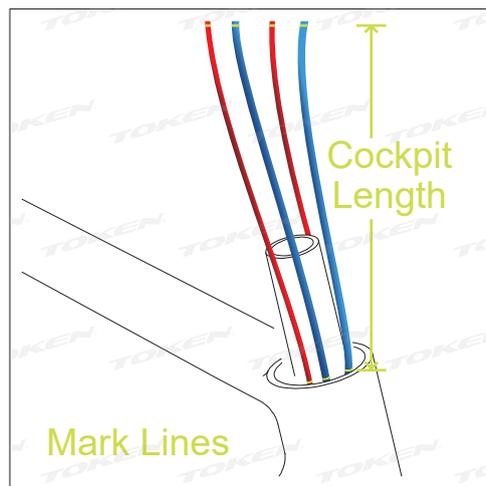


Step7.

Add "cockpit length" to complete the length measurement and mark it on each of the housings / brake lines – this is the cutting mark.

- Cockpit length includes the following two parts (a+b) -
- a. Stem length
 - b. Extra housing length needed to complete routing as shown in the chart below.

Road HB Width (C-to-C measured from shifter clamping area)	36cm	38cm	40cm	42cm	44cm
Extra Housing Length	32cm	33cm	34cm	35cm	36cm



Step8.

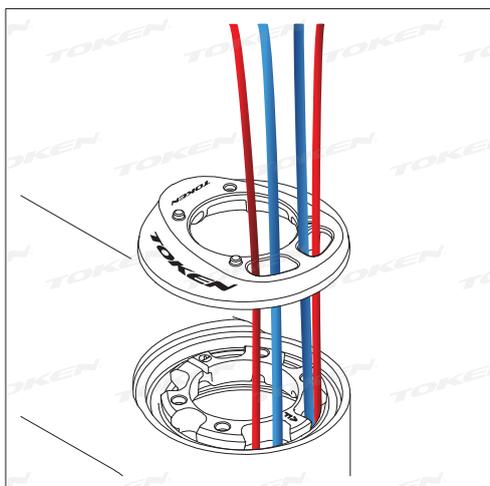
Route the shifting cable housings and rear brake lines through one headset bearing and the headset top cover (with a water seal on it).

Each cable hole on the headset top cover holds one shifting housing (4mm) and one brake line (5mm).

Starting from the far left, they should be arranged as: rear shifting, rear brake, front brake and front shifting.

Shifting housings are placed at outer left and outer right to avoid tight turns which could degrade shifting performance.

Make sure all housings / brake line pass through headset top cover and the bearing!



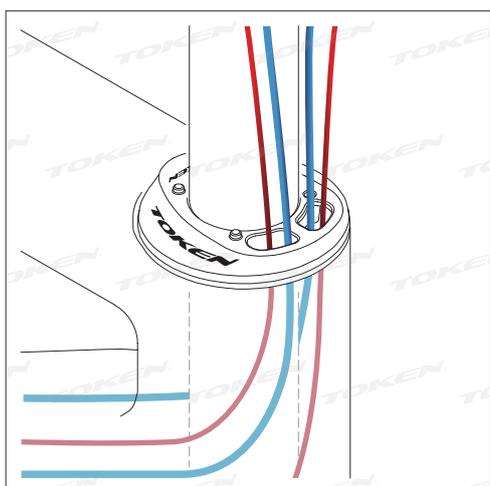
Step9.

Install the compression ring of the headset.

The compression ring should be placed between the headset top cover and the upper bearing.

Note that the "F mark" on it should be placed towards the front of the bike and all housings should be placed into the correct recess correspond to the two holes of the top cover.

When passing the steerer tube through the headtube, housings held by the left hole of the headset top cover should be kept on the same (left) side of the steerer tube, and vice versa.



Step10.

Route the cable housings and brake lines through the stem and the handlebar.

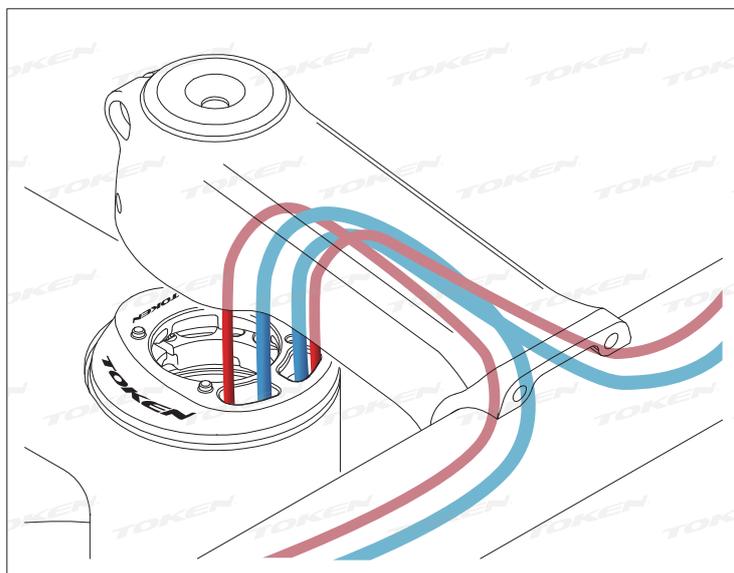
Shifting housings / brake lines should be arranged as two groups when entering the center hole of the handlebar – upper group and lower group.

Each group should contain one shifting housing and one brake line, and should be connected to the same shifter later.

Some stems and handlebars have sharp edge around the cable holes.

Be careful when routing housings / brake lines through them.

Using cable routing tool kit such as Parktool IR-1 could make the task easier.



Step11.

Complete the installation of the headset, handlebar, stem and spacers.

A headset expander is usually needed here. Turn the handlebar left and right a few times to check if there's any restriction caused by housings / brake lines,

Step12.

Install the shifters to the preferred position on the handlebar, then check carefully if the cutting marks on each of the housings / brake lines is valid. Modify the position of the cutting mark slightly if needed.

Step13.

When all is checked and set, cut the shifting housings and brake lines, then move on to the installation and adjustment of derailleurs and brakes.

Installation Video for Cable Box.

