Mounting a SIGMA SPORT BC800 Trip Computer on a Honda ST1100

This description was written specifically for a HONDA ST1100 ABS however it has application to just about any motorcycle – you just need to use your imagination about the mounting of the computer unit.

The speedo fitted to any bike is a compromise based on the tyre fitted by the bike maker as new. As soon as the tyre starts to wear or if you replace it with anything else the speedo calibration becomes suspect. Fitting the bicycle computer allows you to correct for this error plus it provides a lot more functionality. The SIGMA unit has been used by many motorcyclists with a lot of success.

All versions of the SIGMA SPORT BC800 offer the following features:

Speedo to 300kpm/180mph
Trip distance accurate to 10m or 1/100 mile
Clock
Odometer, logs up to 99,999 miles or Km
Riding Time – auto start/stop stop watch tracks actual riding time
Max – stores maximum speed
AVS – Average speed (auto calculated by trip distance divided by Riding Time)
Comparison – constant indication of current actual speed to average speed

12 month warranty.

In addition to the above the 2000 model allows 2 different calibrations to be stored, though as they both affect all other indicators I think this is somewhat pointless. One other point to consider is that the newer model uses larger digits for the speedo reading , so once you exceed 100 the comparison to average speed is not shown till you reduce your speed to under 100. The earlier model does not suffer from this minor problem

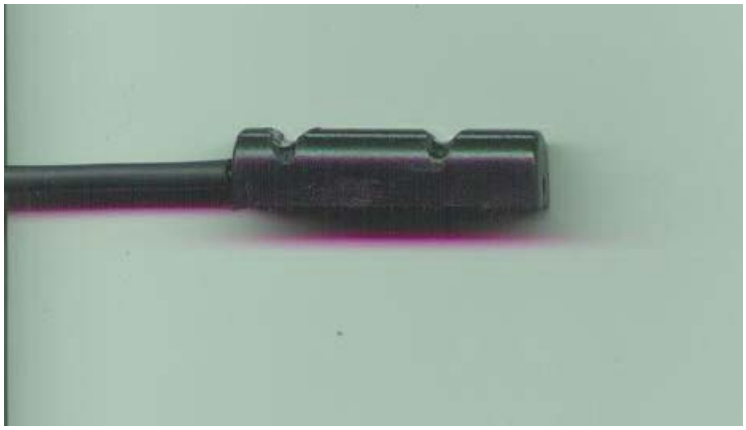
It must be pointed out that the operating environment on a motor cycle is far LESS harsh than experienced on a bicycle, so robustness of the unit is not in question.

OK so what do you need? Head off to your local bicycle store and purchase a SIGMA SPORT BC800 bicycle computer – no you do not want any other make, no you do not want any other model. You also need a small amount of high strength double sided tape – an auto accessory store or your local panel beater can help here. About a dozen thin cable ties and some kneadable (thick) epoxy. While you are at it try to locate a small metal angle bracket – about 1 inch by 1 inch. You may also need a length of microphone cable – more on this later.

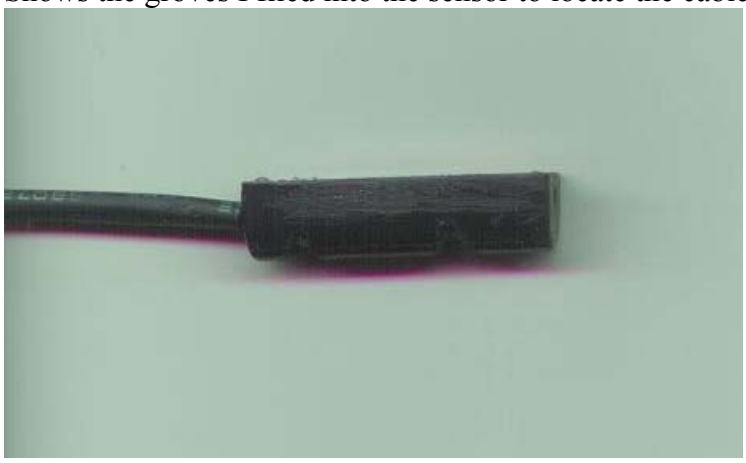
These computers all work the same way. The sensor is always some form of magnetic switch and each time that the switch closes (by a passing magnet) it activates a pulse inside the computer. The sensor mounts on the front fork and the magnet mounts on the wheel. Now – the itty bitty magnet that comes with the computer is just that – itty bitty gutless, ok for a bicycle where speeds are low and its easy to adjust the space between the sensor and the magnet but rather hopeless on a motor bike. I attacked a cheap set of compact headphones (not the in ear bud type) and salvaged the voice coil magnets. These things are about 1cm in diam and just a few mm thick and boy oh boy are they strong magnets. OK so now you have a suitable magnet. (in fact you will have 2 if you trashed both sides of the headphones).

About that microphone cable. It may be that the cable between the sensor unit and the computer mount as supplied is not long enough for your installation – and this was the case for me. What I did was cut the original cable about 12 inches away from both the sensor and the computer mount then soldered in a length of microphone cable. I used very thin heat shrink tube to insulate each conductor (microphone cable is a form of very very flexible coaxial cable – i.e. it is two conductor) then put a slightly larger diam heat shrink over the lot. I chose to use microphone cable because it is very flexible and also has a strong outer covering.

Preparing for the install. The sensor that comes with the unit is in 2 parts – a holder that is meant to attach to the bicycle fork and the sensor that locks into the holder. Separate the two and throw that holder gizmo into the rubbish bin right now. Grab a pair of side cutters then remove from the back of the sensor those dinky mounting lugs. Next get a small file – we are about to cut some location groves into the ‘face’ of the sensor to locate thin cable ties (oh, you are going to need a few thin cable ties – if at any time u think that they are not long enough , remember- they can be joined together). In case you are not too sure about this look at the original out of the box unit in your hand and compare it to the modified sensor in the attached pics.



Shows the groves I filed into the sensor to locate the cable ties

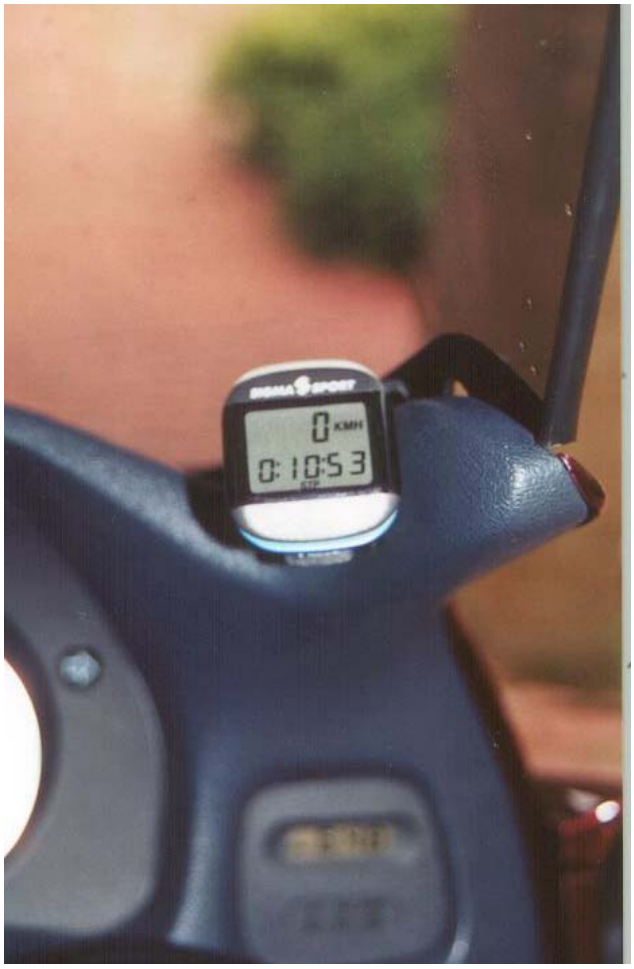


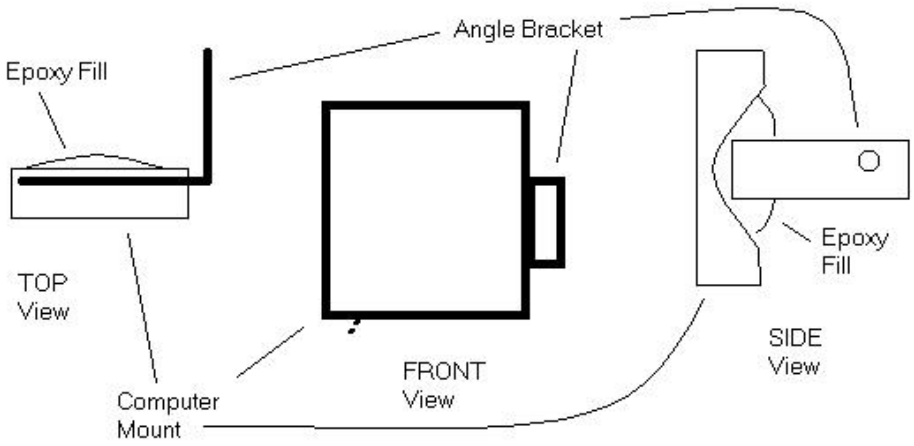
Shows the rear of the sensor with the mounting lugs removed. Yes I have also filed it smooth.

Once you have removed the lugs from the sensor and cut the location groves, put the double sided tape on the back of it and trim the tape to size. Do not remove the outer protective tape layer just yet!

It is now time to turn your attention to the other end of the cable – the computer mount.

When you sit on your ST I want you to look at the way the fairing sweeps around the instruments and back toward you. On the grey plastic, just below the screen on the right hand side you will see 2 screws. Focus on the one closest to you, that's the one that will be used to mount the computer-mounting bracket. A bit later on I refer to this screw as the mounting screw. Here is a pic showing the computer mounted on my ST.





This is my feeble attempt at drawing what I did to the computer mount. If you look at a side on view of the computer mount you will see that the back of it is concave, designed to fit around a bicycle handlebar. First grab the double sided tape already on the concave face of the computer mount and remove it, make sure that the resulting surface is clean. Now take your 1 inch by 1 inch bracket. Oh, be sure to put a whole in one end of the bracket, a hole just big enough for the mounting screw to pass

through. Just hold the angle bracket into the back of the computer mount then hold all of that up against the mounting screw – OK I hope you can now visualise just how it will all look when finished. Have a peek at this snap taken with the screen removed.

So now it is time to mix up enough of that thick epoxy (I used the kneadable stuff, sometimes called KNEAD-IT Polymer Repair) – for those in Australia you can also use Selleys PlastiBond. Once mixed you apply it to the concave side of the computer mount, then push the angle bracket into it and apply a bit more over the top of the bracket to make sure it all stays put. Be sure that the leg of the bracket with the hole in it is not the one in the epoxy. The stuff I used took about 30 minutes to set – though you only have about 2 minutes to work from when you start mixing . Once the epoxy is set you can paint it black if you want – else just leave it the ugly epoxy color.

After this you can mount the computer holder to the inner of the right hand fairing using the mounting screw.

You now need to feed the cable (connecting the computer mount to the sensor) down through the fairing so that you can mount the sensor on the front side of the LEFT HAND fork (see photo). You may choose to remove some fairing parts in order to do this. I needed to remove the screen and the dress panel (that's the one you can get to once you have removed the screen).

Do not stick the sensor down just yet!

Now for the magnet, it mounts close to the inside edge of the left hand disk (see the photo). I applied a small daub of epoxy to the back of the magnet – just in case. Hey, before you do the same put the magnet on the disk and then spin the front wheel to ensure that the magnet does not hit on the fork – if it does hit the fork you need to seek out a thinner magnet (Uh O – there goes another set of headphones – in fact the headphones I used were a souvenir from a airline in-flight).

Once you have the magnet in place you can remove the cover tape from the double sided stuff you put on the back of the sensor then put that sensor into position. It does not need to be at 90 degrees to the magnet – on my install its about 45 degrees and all works fine – be sure to check that when you spin the wheel that the magnet does not hit the sensor.

You can see the magnet positioned in between the 2 disk socket screws. Note how the white alignment mark on the sensor lines up with the centre of the magnet – this is important for correct operation of the sensor.

All done? Well wrap a couple of cable ties around the sensor/fork leg as insurance against the mounting tape failing. Why put the sensor on the front of the leg you ask. If it is on the rear and god forbid it comes loose it will jamb between the fork leg and the disk – on the front at worst it will just flap about.

Use those spare cable ties to tidy everything up , ensuring that the sensor cable cannot foul the wheel etc.

OK – time for a glass of wine? Not just yet!

You now need to calibrate the computer – detailed instructions are included with the computer so just follow them.

Now have the wine! And do not even think of removing your speedo cable in order to keep your bike seemingly ever young!

Here is another crappy drawing