

Warning .... Before attempting this work you need to be a fairly competent solderer; the components are small and any solder splashes could result in the key not operating - with the result that it won't start the car (i.e. it won't be recognised). Read through this whole document before starting.

Pay Attention and Work slowly when doing this, pay special attention to how everything comes apart. There are several small parts that need to go back in the correct places when assembling the fob again. Take photos if possible at every stage just in case.

Ok let's take the key apart.

Here's how I changed the micro-switch on my 2 button flip style key-fob.

Firstly here's a photo of it to show you the type I mean. My car is a 2001 2L TS 156.

My key worked fine except for the alarm/central locking button.



### 1. Firstly remove the battery.

Flip out the key (deploy it) and this should give you access to the battery holder.



Turn the screw to Unlock and then remove the battery. You can just see the screw in this picture.

Here's the battery removed. The battery is a 3 Volt CR2032 (Panasonic say) which you should be able to buy in most electrical shops. Note that the +ve of the battery faces down towards the desk in this picture.



## 2. Remove the Fob Screw

Remove the Alfa logo (don't ask me how as my key doesn't have one .... ☹)

Remove the screw under the badge.

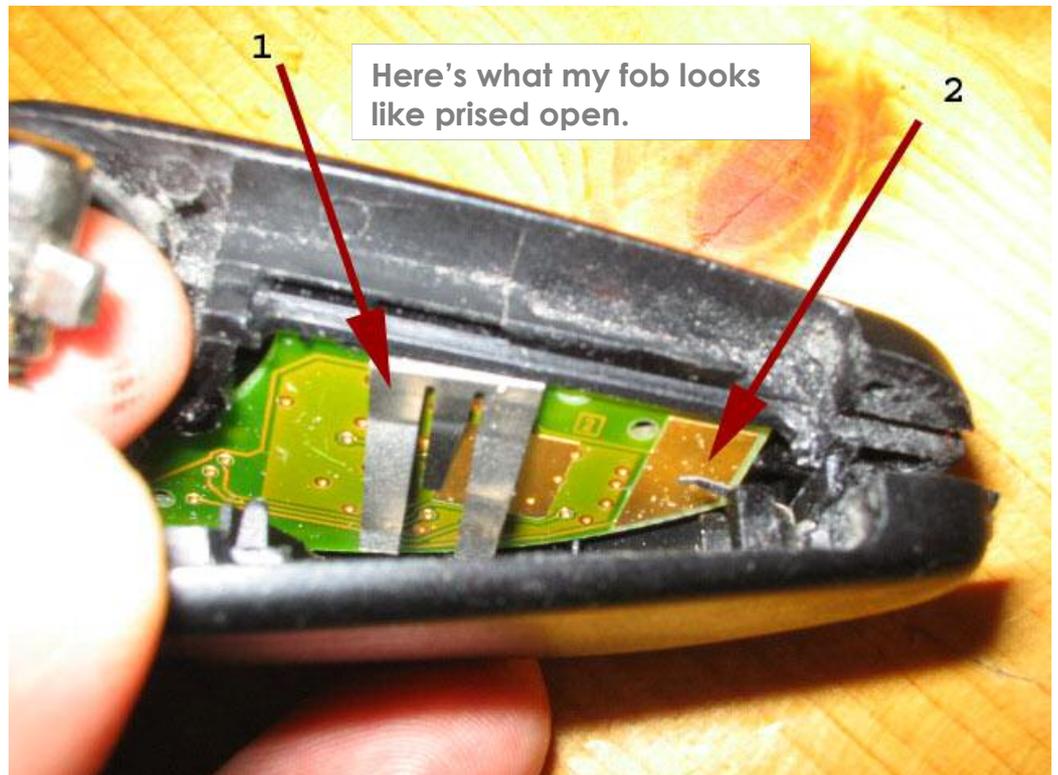


## 3. Prise Open the Fob

This part may be tricky – the previous owner had glued the end of my key together to prevent it falling off the key

ring (i.e. to stop the metal thingy coming out the end). Get a small blade screwdriver and slowly work around the join of the fob prising it apart. Due to the glue mine only opens like a clam shell which makes working at it harder (so all my descriptions are with the key prised open from the battery side), yours should open fully and the next steps will be easier for you.

The 3 pronged clip is important as it picks up the +ve side of the battery. Notice that all 3 prongs are 'above' the PCB (printed circuit board – i.e. the green board in the picture) – do not insert it with the middle one behind the PCB (this is a very easy mistake to make). Note the middle prong touches a large brown contact pad on the PCB.



Also note the small clip marked 2. It's not that easy to see so I left the resolution on the photo quite high. This clip must again be 'above' the PCB and when the key is assembled it touches the brown contact pad on the PCB. Do not replace the PCB with this contact hidden – it must be on the underside of the PCB as shown and not on the component side. This clip is part of a large metal clip which starts off at the very back of the fob as seen looking at the photo (i.e. it is way down inside the fob where my finger is at the bottom of the photo). The job of this clip is to pick up the -ve of the battery and to route it to the contact shown.

Note - please look carefully at these two clips before taking the fob apart as they must go back exactly in the right positions. The 3 pronged clip is held in by the PCB and will fall out as soon as you remove the PCB. This clip is very fiddly to get back in correctly.

Note also that the key itself is sprung and will fall out so try to see how it goes together before it falls out and don't lose any of the parts – there's a small spring and a keyed button (that's the button you use to deploy the key).

#### 4. Remove the PCB

Maybe your fob will come right apart and the next stages will be easier for you. I had to work with the fob levered open as shown above.

Next prise out the PCB – put a small bladed screwdriver in behind it and it should fall out. Make sure you don't lose the 3 pronged clip.

#### 5. Replace the Micro-switch

You should see two micro-switches on the PCB. However it is not unusual for one of them to have broken or partially fallen off. Locate the broken micro-switch and desolder it from the board. You'll need a fine solder tip for this and steady hands. Do not splash any solder on the PCB or like me you'll short out some tracks and the key won't be recognised by your car. If you do then remove the solder splash with some braid (the braid from inside a TV aerial BNC cable should work).

The micro-switches are similar to this....

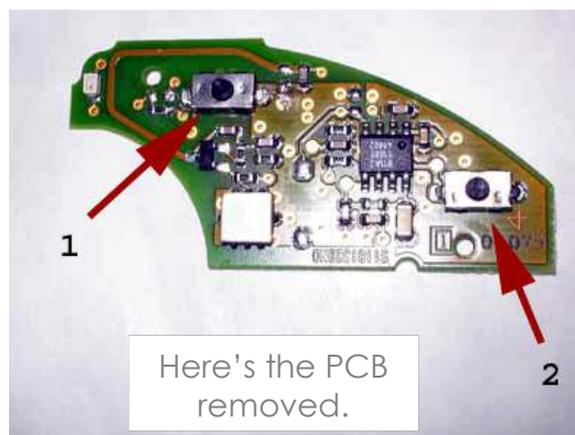
This is a J bend one – the contacts at either end are shaped like a J. The fob uses gull wing ones which are shaped like an L so the electrical contacts lie flat on the PCB.



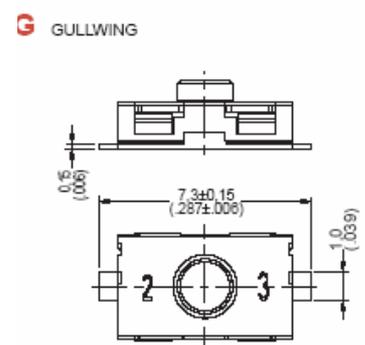
The micro-switches are from ITT and are KSR251G type (KSR253G will also do as will KSR231G and KSR233G).

The micro-switches are the silver rectangles with black dots (buttons) marked as 1 and 2.

1 is for the central locking/alarm and 2 is the boot release (I hope that's correct). This is the view after I replaced the switch so I haven't got a photo of it broken (the top was cracked and part of it eventually fell out).

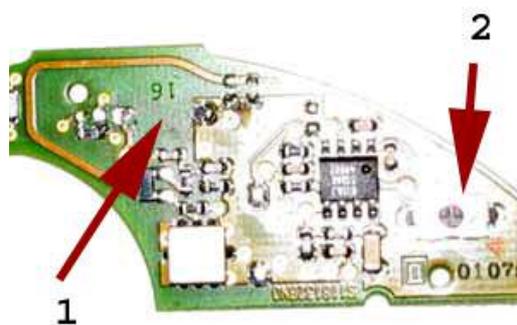


Here's a drawing of the gullwing type.



Here's what it looked like after I had removed the faulty switch.

Sorry about the quality of this picture – arrow 1 points to the area where the central locking micro-switch was removed. The contacts are to the left and right of the tip of the arrow. Arrow 2 points to the other micro-switch still in position (you can just make out the black button).



## 6. Putting it Back Together

This is actually quite hard and requires 4 hands..... ☺

Snap the key back as shown in section 3 – so the fob is open like a clam-shell. Or if your key comes fully apart then ignore and just proceed to the next paragraph.

Drop in the PCB with the micro-switches against the rubber buttons on the top of the key. Make sure the clip at the end is touching the contact (clip 2 in section 3). Prise up the edge of the PCB closest to you and then slip the 3 pronged clip in under it making sure all 3 prongs are visible. Jiggle the clip until it touches the contact and the edge of it is trapped by the edge of the PCB. It's hard to describe so that's why I suggested paying attention to how it came out.

Now insert the spring for the key and put the button on the end of it. Note the button has 3 keyed lugs on it which locate into the hinge of the key. The spring has a foot sticking out of it and this foot anchors the spring against a plastic lug on the fob. Wind the button up against the spring so that it flips the key out when deployed. Wind it anti-clockwise looking down on it – I wound it three rotations I think. Next slip the key over the button and using a screwdriver or forceps turn the button until it springs into place in the recess in the key – note the button must protrude out the top of the key so make sure the lugs in the button slip into the correct slots in the key hinge.

Now try to put the fob back together and if everything goes well snap it shut and replace the screw which was under the logo.

Replace the battery and press either of the rubber buttons. The red LED should come on. If not then the most likely problem is that the two clips haven't been installed correctly so check these.

## 7. The Scarey Bit

Next run out and try the key. Both buttons should work and ..... the key should start the car. If the key doesn't get recognised by the car then open it up again and check for solder splashes.

That's about it – pretty difficult in a way and certainly not for the novice.

Any questions then email me on [stockdam@hotmail.com](mailto:stockdam@hotmail.com)