Instructions for G4 replacement I/O and PC standoff mounting.

Instructions for Kit 1 and 2.

The case should be stripped of all electrical items and fittings prior to kit installation so as to avoid problems with drilling swarf. The directions below do not detail the full stripping process but do deal with stripping the door mounted components.

1. Unlatch the side door so it is opened.
2. If motherboard/processor etc have not previously been removed then do that now and store them away carefully.
3. Take the plastic panel off the door. - this involves removing the four hex bolts in the corners of the door:

4. From inside the door remove the two screws that hold the door handle part to the frame.

5. Push the two tabs securing the centre of the panel inwardly and simultaneously wiggle the outer panel to let the plastic panel pop away from the door.

6. Undo the four screws holding the large plastic latch to the inside of the door and pull it off.

7. Remove the old plastic from the I/O panel. This is secured by plastic spring clips which can be gently released one at a time working from right to left by using a small flat head screwdriver.

8. Remove any wiring from the door and now get out your drill.

9. After carefully making sure that no electrical components are still in the case or that they are masked off from the door area so they will not be affected, drill out (using a 3 to 4mm drill bit) each of the ten rivets that hold the metal I/O plate to the door rear fascia. Then do the same for the rivets that hold the bottom of the I/O plate to the door panel - these are drilled out from beneath the door panel.

10. Take the paper template now and apply it to the inside of the stripped door. You will find that the four red circled holes fit over the positions where the four screws holding the latch were present. The red marked holes 1 and 2 need to be positioned to be nearest where the rear I/O items are located. To stop the template moving, tape it in position.
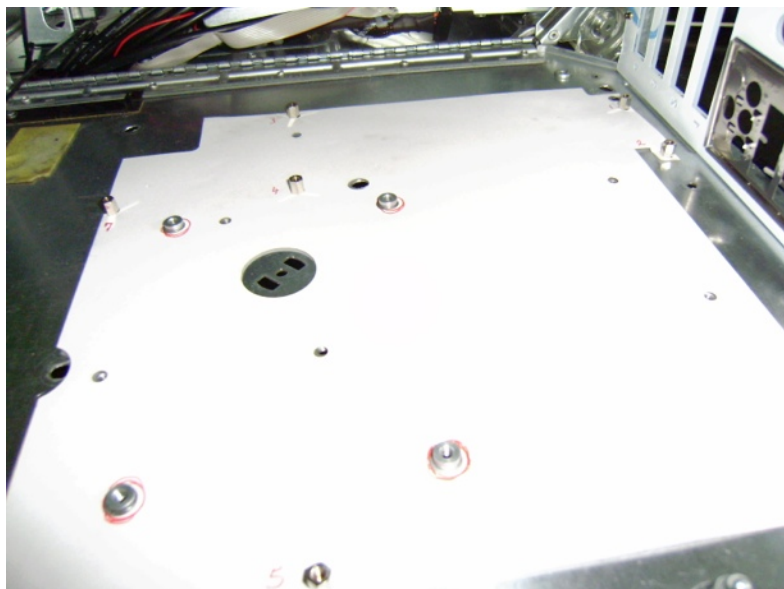
11. Centre punch in the middle of each of the numbered holes 1 to 8 to mark where you will be drilling.
12. Using your drill bit (preferably 3mm, but it doesn't matter if it is a little larger - up to 4mm say) now drill the 8 holes needed for your new standoffs.
13. Next, any protruding pillars that would impinge upon your motherboard or PCI-e card area need to be removed. This can be done in a number of ways: (a) you may dremel them off at the base taking care to leave no more than 1.5mm protruding - preferably dremel them flush to the door, (b) you can take a large pair of pliers and try to twist the posts free, or (c) hit them sideways with a hammer to tear the bases from the door. Methods (b), (c) can cause distortion to the door panel but to be honest, no one will see.......
14. Now may be a good time to re-fix the plastic latch so that you can use the holes that you drilled in the door to mark where corresponding holes will be needed on the plastic latch.
15. Once you have marked the latch for the standoff holes it can be removed again from the door, taken away and drilled away from the case.
16. Because the plastic latch needs to move up and down, you need to make the latch holes oval. This picture illustrates what I mean by this - note that where standoffs are near to the horizontal latch strips the easiest and best mode is to just cut those strips.

17. With all the main board mod.s done and with the area of the motherboard free from protrusions you can get on and dremel out the central pillar separating the I/O rectangular area from the PCI-slot area. Two straight cuts with a good cutting wheel across the top and the bottom should be sufficient. You can always "under" cut first and tidy up later.
18. Now it is time to fit your main rear I/O kit!
19. Step one is to remove the protective films from the outer plate and line up the holes in it with where the rivets were.
20. Take the metal I/O plate and position it behind the metal frame and first pass through the two short M3 screws and fasten them with the combined nut/washers at the positions noted as "1" and "2" overleaf. Please note that while the picture shows regular nut/washers now combined 'mushroom head' nuts/washers are supplied.
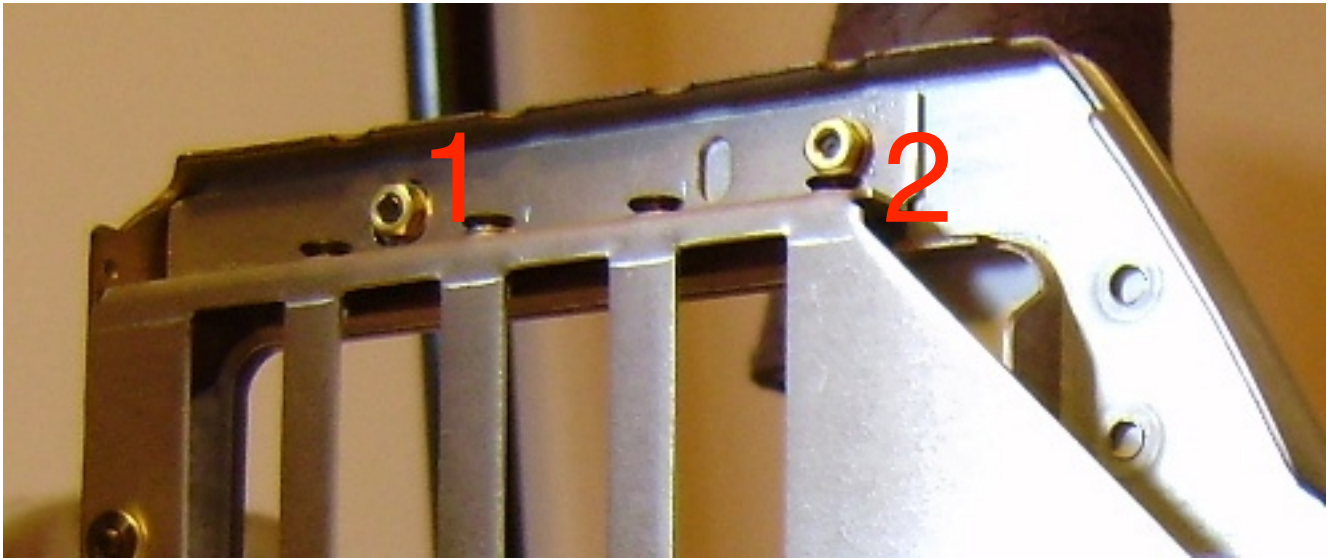
21.Now take the remaining mushroom headed nuts (single piece brass nut and washer) and insert those into the holes in the metal plate indicated below and then fix in place with long m3 screws.
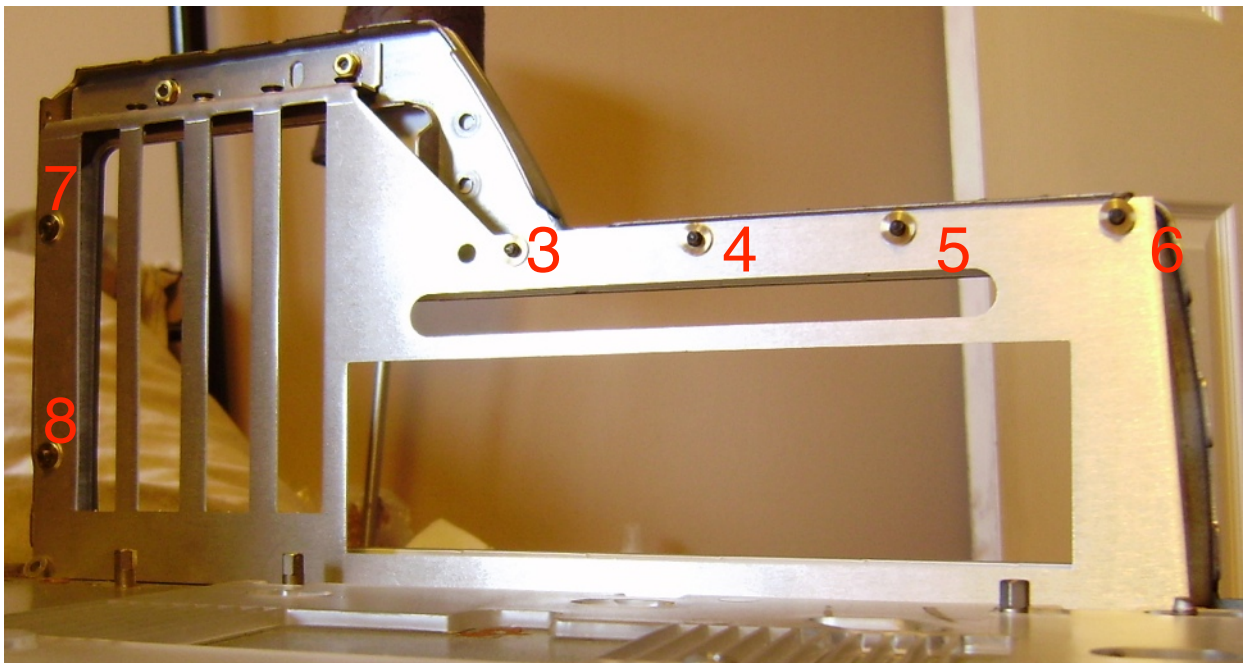
22. Now is a good time to do a test of how the door panel co-operates with the static right hand panel. As you close the door, the new panel should slide under the lip of the existing, original panel as illustrated in the photo on the left. If there is difficulty in closing the door then check where there is any binding and make any adjustments needed.

23. Now, it is time to continue with preparing the door. Take the eight standoffs and insert them into each of the eight holes that you drilled in the door. For each standoff attach a washer and push the threaded end through the drilled holes in the door then on the other side of the door skin use another washer and a nyloc nut (or shakeproof washer and conventional nut) and fix the standoff into place.

24.In the kit you will also find there are 4 countersunk M3.5 screws, these can be used to replace the 4 domed metal screws that hold the plastic latch in position. These will ensure that nothing should be able to short out your motherboard from underneath.

25. Replace the latch now and, if all went well, your motherboard should fit nicely onto the top of the standoffs and you can secure it using short M3 screws. Make sure you insert the metal I/O shield into the rectangular gap of the inner I/O plastic part before putting your mobo into position.

25.A word of caution - if something does not fit correctly first time, do not force it, but instead check what is wrong and make any adjustments - for instance if your drill slipped when positioning one of the standoffs you may be able to reposition it or re-drill.

26.Check underneath the motherboard and make sure there is enough clearance and no chance of the underside shorting out onto the door.

27.If all is well, remove the motherboard, clear out any dust or swarf from inside the case and re-assemble making sure the latch is correctly positioned. Don't rush this stage as a loose rivet head or piece of metal cut off can easily cause shorts and expensively damage your new build.

Kits 1 and 2:
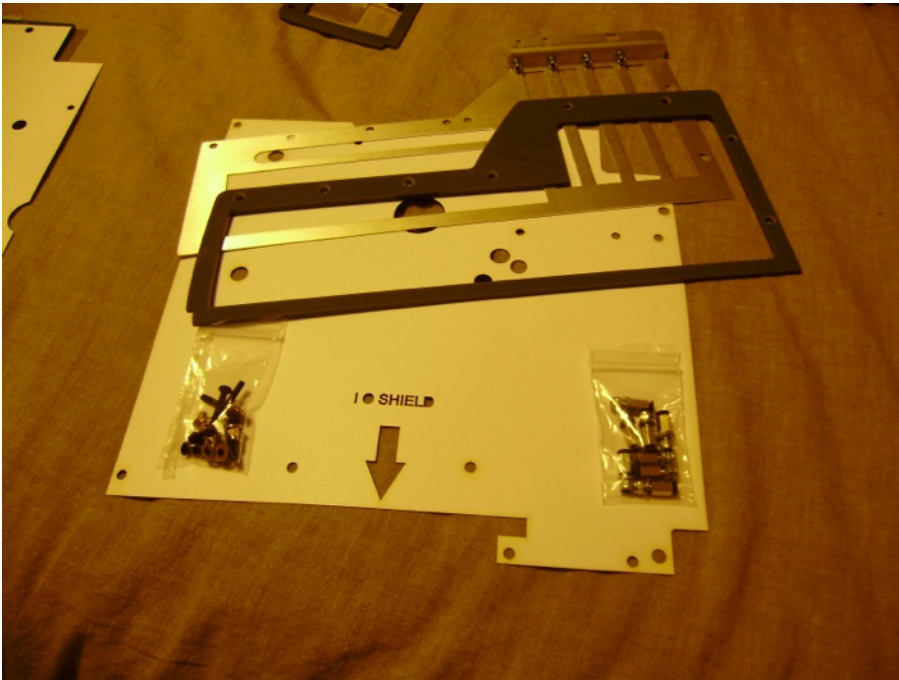
Contents kit 1: 8 x mushroom nut/washers, 2 x short black screws, 6 long black screws, 1 x perspex outer shield, 1 x aluminium micro ATX plate.
Contents kit 2: drilling template, 8 x standoffs and screws and nuts + washers, 4 x M3.5 countersunk screws.