

How to Fit a Garmin Nuvi in a 2000yr XKR Cabriolet

The car is a year 2000 XKR with the factory fitted Sat-Nav which is an Alpine unit. This has the display mounted in the dash and a DVD player in the boot (trunk)

I used the following parts:

Garmin Nuvi 1490. this is the widescreen unit, This was chosen as it almost fits width wise. The more common 4.3" units leave a big space.

Mini USB male – female extension cable, available from Ebay.

A car cigarette lighter type electrical socket with about 2feet of cable

2 spade connectors

A handful of cable ties

2 lengths of fine cable, I used ribbon cable from an old computer.

2 lengths of meccano about 3"long

4 rubber pads, like on the bottom of a chair leg, available from the local hardware store.

A soldering iron and fine solder.

Very small torx driver, size unknown, possibly T5.

Electrical circuit tester (any standard voltmeter usually has this, you just need to check continuity)

A couple of hours spare.

Before you start. Borrow a sat-nav similar to what you want to use. Set it to navigate and throw it in the glove box. See if can still get a signal. Go for a drive around checking it every so often. I have a cabrio, maybe the hardtops block the signal. You should test before you start.

The original fitting Alpine Sat-Nav was out of date when I bought the car in 2000 (wish I had know that when I was in the dealers) there are no DVD updates available after the early 2000s. Another annoyance is having to replace the disk every time you cross a country border. The plan was to replace this with a modern Sat-Nav from either TomTom or Garmin whilst retaining the original dash appearance.



This photo shows the original screen after the dash fascia is removed. The screen unit is held in place by 4 torx head screws. The wood facia simply pulls off. Open the glove box and start with that corner.

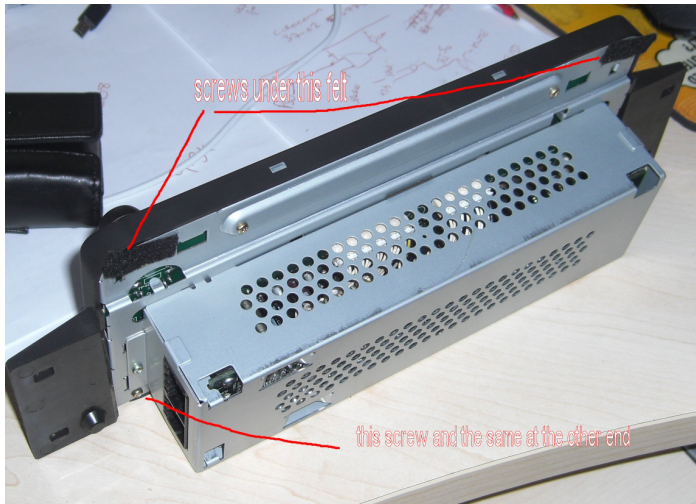
Once the 4 screws are removed the unit can be pulled forwards far enough to unclick the 2 cable connectors on the left side.

The whole unit can then be removed. This leaves a nice space in the dash however I found I needed to cut some of the plastic away to allow for the USB cable. You will need to check this when your nuvi is assembled prior to fitting.

Remove the Alpine display unit and take it to the workbench.

The next task is to remove the screen unit from the fascia plate. You will need the fascia plate and the buttons. Before removing the screws pull the knob at the bottom left off. This is the knob used for the pan function. It just pulls straight off.

Now turn the unit over and undo the 4 fixing screws holding the screen and driver assy to the faceplate. 2 of these screws are hidden underneath the small felt strips. Then unclip the fascia. It is held by 2 clips on each of the long sides



you will need to remove the 2 circuit boards which have the push buttons. These are each held in the same manner. There are 2 metal tag which are twisted after the cards are fitted. Straighten the tags then lift the board. They use a plug/socket arrangement onto the main board and can be pulled straight off. You are now finished with the screen and its driver.

Now decide which button to use for powering the Nuvi on/off. Place the button boards into the faceplate and test the buttons. I used the "Menu" button.

You will see on each side of the button the 2 very small connectors. Solder 1 wire to each connector. Leave the wires nice and long for now, 1 foot is plenty.

Once done fit the boards back into the faceplate. Use the meccano strips and the original screws which held the screen. You can pack the boards down using the small rubber pads. The boards need to be fixed firmly. I double fixed mine using small dabs of epoxy glue at each corner (Araldite). Before using any glue get your circuit tester and connect to the free ends of the cables. Then press the button to be sure it goes to a nice short circuit when the button is pressed and open circuit when released.

Now for the Nuvi.

Opening these is quite simple once you know the trick. The faceplate is held by 4 tiny Torx type screws. These are however hidden.

TAKE CARE do not scratch the screen.

As you look at the screen you will see the surround is actually 2 parts. The outer of these unclips. It is quite fiddly and you need some thin soft edge (or in my case a swiss army knife and a lot of care) Once unclipped you see the 4 torx screws. Undo these and then unclip the back of the case from the front. Again tight and well clipped in place. I had to go around a couple of times unclipping the plastic. Do not poke anything inside the unit, there are delicate components and film connectors.

Once you have the back off take great care of the flexible film connector. If you break this you will need a complete replacement screen and digitiser.

You are looking for the power switch.

Make a small hole in the back case of the Nuvi at the side and thread your 2 cables from the fascia switch through. Now cut to length. You need to solder these to the power switch, there are 4 pins 2 on each side, take 1 top and 1 bottom. You could test with you meter is not certain.

Once the soldering is complete clip the nuvi back together and test that it still switches on and off from the Jag fascia switch.

Now place the nuvi into the fascia and centralise it. I held it using cable ties fixed diagonally using the holes for the original clips. I did find that it tended to ride upwards but a small application of epoxy soon fixed that.

Now it is time to look at fitting this back into the car.

You need to remove the glove box assy. It has 4 screws that can be seen from the front when the box is open and a further 2 underneath at the back. You will find 4 underneath but you only need to undo the outer 2. as the glove-box assy comes away take care of the cables for the lamp. These just unclip.

Once the glove-box is out you need to thread the male end of the USB extension cable through to come out where the Sat-Nav will fit. This was made easier by pushing a mouse wire from the Sat-Nav hole into the space left by the glove-box and then taping the USB cable to it and pulling it through.

Fit the usb cable to the Nuvi and offer it up. If the cable catches you will need to cut the plastic away.

You cannot put any stress on the usb cable joint as it will damage the Nuvi circuit board (speaking from experience). Once you have an interference free fit ensure the USB cable is firmly fixed (epoxy time again) then fit the unit and screw it in place. You can now refit the wood fascia panel. This sounds easy, I had to cut not only the plastic but a small piece of the metal in that area using tin snips.

Next take the ciggy lighter adaptor. You want this to be in the glove-box . Check for length. Behind the glovebox on the upper right almost behind the air vent I found the auxiliary power connector. Check with your voltmeter for power & neutral. Fix spades to the wires from the ciggy adaptor then leaving the socket in the glove-box thread the wires and connect them.

Next drop the female end of the USB connector into the glove-box and refit the glove-box .

Now you can use the Garmin supplied power lead to connect for power in the glove-box , this keeps the garmin battery full and it means you can disconnect the usb and connect a cable from you laptop (with wifi) so that the garmin can be updated.