



Milkybarkid's Glove box DVD Install Tutorial

This procedure should help you through installing Portable type DVD player in the glove box and connecting it to your EMV screen. It does not apply to fitting a DIN type (stereo sized) DVD player into your car, but certain sections may prove helpful for that job as well.

Using this method you will retain all of the functions of the EMV and touch screen, except the television tuner.

I found lots of useful info regarding the DVD install on the web, but not quite 'idiot proof' enough for me!

This is a fairly simple job as long as you take things slowly and check everything carefully. It should only take two or three hours.

Selecting the DVD player

Firstly – **The whatever unit you choose it MUST have NTSC output.** This is the format that video signal is 'played' in. The standard UK format is PAL and this WILL NOT WORK in your Soarer as the EMV unit will only accept NTSC input. **Most of the DVD players made in the Far East will have switchable PAL and NTSC output as they are made for the world market.** NTSC is the standard format in both the USA and Japan, units purchased there are likely to be NTSC. You MUST check in advance by looking at the specs of the unit, you will normally find these details in the manual or in the manufacturers technical specs. You could buy a NTSC/PAL Convertor, but this will be more expensive and is not really required.

The cheapest and easiest option in my opinion is to install a portable unit (without a screen) in the glove box. With this method you can remove the unit for security and use it with your TV at home as well. Obviously you must ensure that the unit is small enough to fit in the glove box if you go with the glove box option. Many of the modern units without screens will fit fine. Units with screens are less likely to fit and operate when the glove box is closed, but you could operate them with the glove box open, or from the back seat if you wanted to.

There are 4 main types of DVD player on the market:

Home DVD player
Not suitable



DIN sized DVD player

Can be installed, but will be too large to fit the glove box.
More suited to an in-dash or boot install. This is a good option if you want to be flash and have a boot mounted DVD multi-changer!



Portable Unit with screen

Good choice, but the screen is an expensive feature and you have an EMV you already have a screen in your Soarer so why bother? .





Portable unit no screen

Cheapest budget option, these units can be found cheaply as many manufacturers are discontinuing them!



I used a Textel TE-80p unit, shipped from the USA for less than \$50 on Ebay

And a great glowing blue light on the front when operating which looks cool in the glove box!!



Tools Required

- Wire Cutter
- Wire Stripper (It makes it MUCH faster!)
- Stanley Knife
- Cross Head screwdriver
- 10mm Spanner/Socket
- Electrical screwdriver
- Crimping tool (if using crimp connectors)
- Electrical tape

Shopping List

1 x NTSC format DVD Player		
3 x Phono Extender Adaptor	Maplins Code HH05F	79p each
1 x Composite Video A/V Lead 1.5 mtr	Maplins Code L10BA	£4.99
1 x Fuse Holder Optional (see cheat*)	Maplins code DR79L	49p
1 x Length of 2 core cable suitable for a 12 volt power supply		

You will also need at least 6x of the smallest sized (red coloured) electrical crimp type connectors (bullet or spade)

Optional : If you intend to use the DVD on the move. (By following the instructions to by-pass the standard safety circuit) you will also need one of these, otherwise you will get 'feedback' from the alternator through the audio whilst driving which will drive you crazy!

1 x Ground Loop isolator	Maplins Code VW43W	£7.99
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***Cheat-** You can simply wedge a suitable fuse between the sockets of two female bullet type connectors to create a fused connection)



Step 1: Set Up DVD

Take your DVD player and connect it to your TV at home according to the manufacturers instructions. The purpose of this is to check the video out setting and make sure it is set to NTSC. If you try to do this later in the Soarer and find that it's wrong you will have a NIGHTMARE trying to read a flickering black and white screen and will have to remove everything!

Some units will have a manual switch on the body of the player. This is easy, flick the switch to the NTSC setting and proceed to step 2.

Most units however will have on-screen menu type settings. Put a DVD in and play it. There will most likely be three settings for the video signal:

PAL – No good, this will not work with a Soarer EMV

NTSC – The best option

AUTO – OK, however some units may not auto detect that the Soarer EMV is NTSC, so the best bet is the NTSC setting.

(You may have other options on your unit including Secam and others)

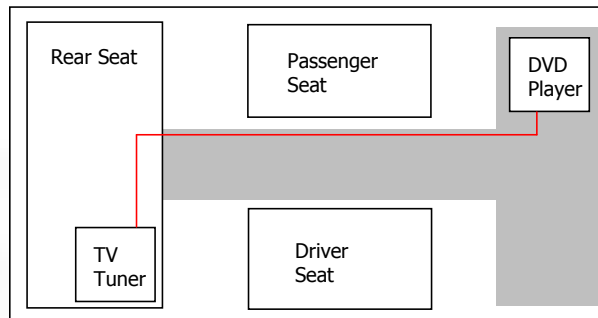
NOTE: If your TV will not support a NTSC signal the picture will go black and white and flicker constantly when you select NTSC... don't worry, this is normal.

Note II: If you intend to use the unit with other TV's you will have to re-set the unit either to Auto or PAL each time unless the TV will also support an NTSC input (many newer models will)

Unplug the unit, now it's time to work on the car.

Step 2: Cabling

The cables will run from the rear seats to the glove box along the side of the gearbox tunnel, like so;



You will need to allow enough cable to run this distance comfortably

Your DVD player will most likely have been supplied with a composite output lead like this :



The bit that goes into the DVD player may differ slightly but the other end will have the following phono type plugs:

Yellow: Video Signal
Red: Audio Right
White: Audio Left

Some DVD players may also have an S-Video output, this is a single circular output, and is not good for this type of install.

The lead supplied with the unit is unlikely to reach from the glove box to the rear seats, check if yours does you are in luck. If not simply extend the supplied lead using 3 x HH05F and the 1.5 mtr lead L10BA. Plug them together, simple as that. Tape up the joints with electrical tape to ensure that they do not come apart.

You will also need to add a power lead this set up to power the DVD player. Use a length of suitable 2 core 12v supply wire that will reach from the back seat to the glove box. Cut plug from the DVD player end of the supplied cigarette lighter lead. Leave a nice length of the original lead attached to the plug (this looks neat in the glovebox) and attach it to one end of your new power lead using crimp connectors.

You now have a long 'loom' consisting of;

- ❑ 1 Red Audio Cable
- ❑ 1 White Audio Cable
- ❑ 1 Yellow Video Cable
- ❑ 1 Power Cable (two core +positive & - earth)

Tape this all together to keep it neat

Step 2a: Remove The Glove box

Remove the glove compartment. Empty it first. Pull out the lower panel in the passenger foot well, this is held in place with two round type black plugs (pull them out) and spring type clips. There are then 4 screws to undo; 2 at the top and 2 at the bottom. The glove box will come downward. There are two electrical block type connectors to undo, 1 for the glove box light itself and one for the switch, undo both of these and the whole glove box unit will come away.

NB – Don't try and Drill a hole with the glove box in place. You might hit something vital

Drill a small hole in the back of the glove box, large enough to fit the DVD end of your loom through.. Bottom right corner is ideal, thread your loom through the hole, and then thread it down behind the vent conduits so the non DVD end is piled up in the in the passenger foot well toward the back and the DVD end is safely 'in' the glove box. Tape it in place to stop it falling back through the hole.



Carefully replace the glove box making sure the DVD end of the loom stays in the glove box. Plug the DVD end into the DVD player and place it in the glove box, there will be two plugs;

- ❑ 1 Composite AV
- ❑ 1 Power Plug

The non slip 'velvet' effect lining of the glove box should be more than enough to stop the DVD player slipping about under all but the most twisty race day

conditions!

Step 3: Find the TV Tuner Module

Put both front seats as far forward as they will go. Turn off the ignition and remove the keys

3a: Remove the lower section of the rear seat. Pull it up (give it a good pull) at the front to disengage two 'plug' type fittings and then slide it up and out carefully. Put it somewhere safe.

3b: On the Drivers side look for the TV Tuner module. It is the box nearest to the side of the car. It has a large 25pin connector block going into the top of it.

3c: Unplug the connector block. This is pretty tricky and will take a bit of patience. If you want you can remove the 3 x 10mm bolts and the carpet plugs pull the whole frame forward for better access, however this is not really required and is a lot of extra work.



3d: Tuck your new loom carefully under the plastic trim running along the side of the gearbox tunnel, this is tricky in the section by the seat and will require you to move the seat back and forth to get at it. As you get toward the back seat you will need to poke the wires under the carpet so they are hidden from view when finished. Your new loom should now be nicely hidden and have reached the area under the back seat.



You are now ready to connect your loom to the tuner.

Step 4: Connecting to the TV Tuner Module

This can be scary for the electrically 'challenged' take it easy and it should be a piece of cake. You will be kneeling on the floor outside the car for some time, you might want to use a cushion or a pad to save you knees!

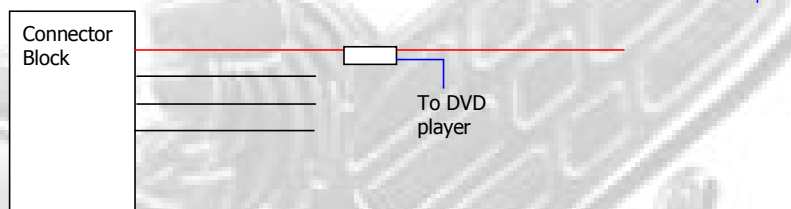
You are going to 'patch' your made up DVD loom into the existing plug by;

A: identifying the correct wire leading to the existing 25 pin plug.

B: Cut the correct wire

C: Crimp your new wire and the existing wire back together

Like so:



You need to identify, cut and crimp 6 wires. Familiarise yourself with the connector plug and the numbers printed on it, they identify the correct wires.

- 1: **12Volt Power Supply (+Positive)**
Grey coloured Wire – Pin Number 1

Connect this wire to the + Positive Power lead on your loom.

For safety you must also include a fuse in this connection, use an inline fuse connector or the cheat method described on page 1

- 2: **12 Volt Power Supply (Earth)**
White coloured wire with black bands – Pin Number 25
Connect this wire to the - Earth lead on your loom.

Video Signal

Cut off the yellow phono plug. And strip off a length of the black outer cover. There are two cores to the cable, a shielded central wire and an unshielded wire. The shielded wire is + Positive Video in and the unshielded is -Negative Video in

- 3: Connect the +Positive to the Blue coloured wire – Pin number 8
- 4: Connect the -Negative to the Brown coloured wire with white bands – Pin number 22



Audio Signal

Cut off the relevant phono plug and strip off a length of the black outer cover. There are two cores to the cable, a shielded central wire and an unshielded 'filament'. You only need to worry about the shielded central wire with this type of install. Cut off any of the filament wire as it is not required.

- 5: Connect the Left Audio (previously a White Phono plug) to the Green coloured wire – **Pin number 9**
- 6: Connect the Right Audio (previously a Red Phono plug) to the Red coloured wire – **Pin number 1**

Step 5 Tidy and Make good

Do not replace the TV tuner plug into the top of the module. With this install you are substituting the TV tuner for a DVD player, just tuck it neatly back under the seat.

Replace the rear seat

Move the front seats back so you can sit in them.

Put your keys in and turn to ACC position.

Turn on your DVD player (some models come with a remote which is cool!)

Select the TV button from the buttons at the bottom of your EMV



Viola! A working DVD in a Soarer for under £100, with great sound quality thanks to the Soarer's excellent standard audio equipment

Note: If you turn on the engine, or move the gearshift out of park, or move the handbrake the TV screen will cut out. This is a factory safety feature to stop you watching anything whilst driving.

There is a simple work around for this that will allow you to operate the screen whilst driving on various websites, but I have not included it here cos if Mr Plod catches you driving and watching TV he will probably

not be a happy man!

Note: If you intend to bypass the safety feature don't forget to buy

1 x Ground Loop isolator

Maplins Code VW43W

£7.99

Otherwise you will get a nagging 'whine' through the audio which is feedback/interference from the alternator.

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Options

Multiple Screens

You don't have to stick to just the EMV screen, you can really 'pimp' things up and add extra screens. When making up your loom just add in additional video out's (Yellow Phono) and additional power supplies. Small TFT and LCD screens can be picked up quite cheaply and can be mounted and fitted almost anywhere in the car, budget allowing!



Playstation/Xbox

Unlikely to fit in the glove box ;-)) but you can use the same wiring method to patch in a games console using the Red/White/Yellow outputs on the device.

Boot Mounting

Again you can use the same wiring method to patch in a boot mounted unit. Its quicker, and easier and you don't have to extend any looms if you mount in the boot. However you will have to make sure your unit has a remote sensor extension so you can mount the sensor for the remote functions somewhere in the front of the cabin, otherwise you will have to get out of the car and open the boot every time you want to operate the thing!

Disclaimer: This guide is only meant as a tutorial for a DIY user. You should check everything carefully before starting any work, if in doubt consult a professional. I accept no responsibility for any damage or failure caused as a result of instructions contained in this guide howsoever arising.

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