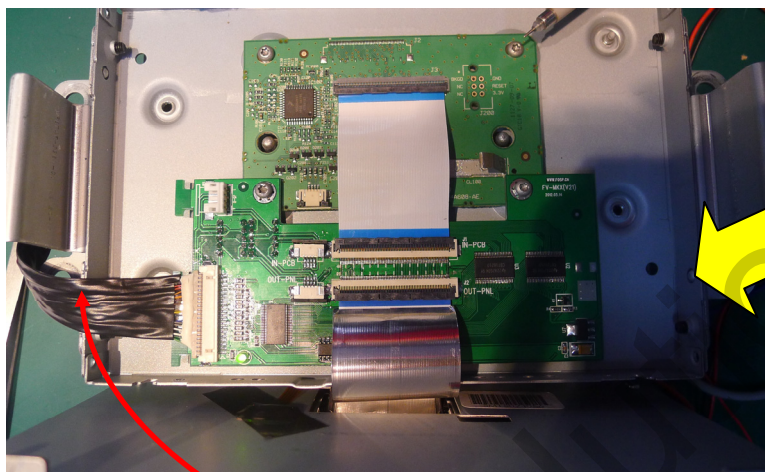


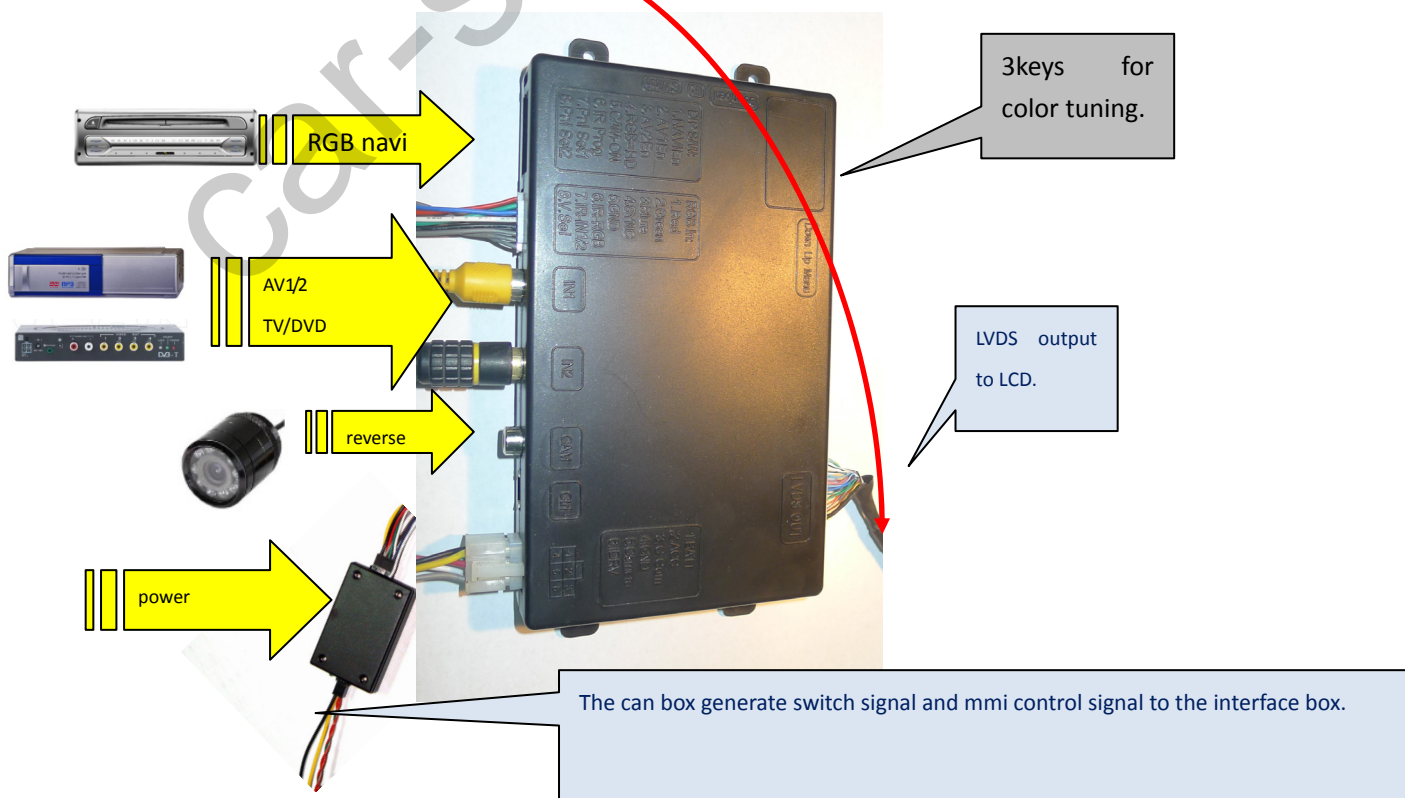
Ford Edge 2012 interface installation manual

This interface can insert High definition RGB navigation video, AV and reverse camera video onto ford edge, Lincoln MKX cars[from 2011 and later]. The features are:

- HD video delivery is used in video insertion, thus HD navigation can be seen on screen.
- CAN bus generated switch signal. OEM touch panel is switched to the installed navigation.
- Plug and play connectors are used inside the panel, the installer does not need to cut or modify any cable. Full digital circuit inside also guarantees the quality.
- Ford Lincoln MKT,MKS uses 4-pin round connector, in this case, please use other fosp interface.



1. System connection



OEM key to switch:

- CAN box has 4 input wires:

They should be wired to the rear connector of the air conditioner/volume control panel. There is a 5-pin socket like the picture shows.

CAN box's Red wire/fuse----gray/red wire in picture.

CAN box's brown wire----black/gray wire in picture.

CAN box's blue wire----blue wire in picture.

CAN box's gray wire----violet/gray wire in picture.

The 4 inputs wires has strong isolation, any wrong connection will not damage the car or interface.

- The user can press the right-arrow key to switch the interface, he can also use the other arrow keys to pop up the MMI menu to control the installed devices.
- The user can also use the extra keypad to switch.



The signal definition of 6P on interface from CAN box:

Yellow: constant power of 12V. **black:** GND of chassis.

RED[ACC]: when the monitor works, this wire=12V, otherwise=0V.

Green: reverse signal wire[=12V when in reverse], it can be used:

- To give reverse signal to interface box, also giving power to camera[max.1A]
- When giving power to camera, a 100u capacitor is necessary on this wire to filter the noise on camera long wires.
- When only give reverse signal to interface, and camera is powered elsewhere, do not add capacitor.

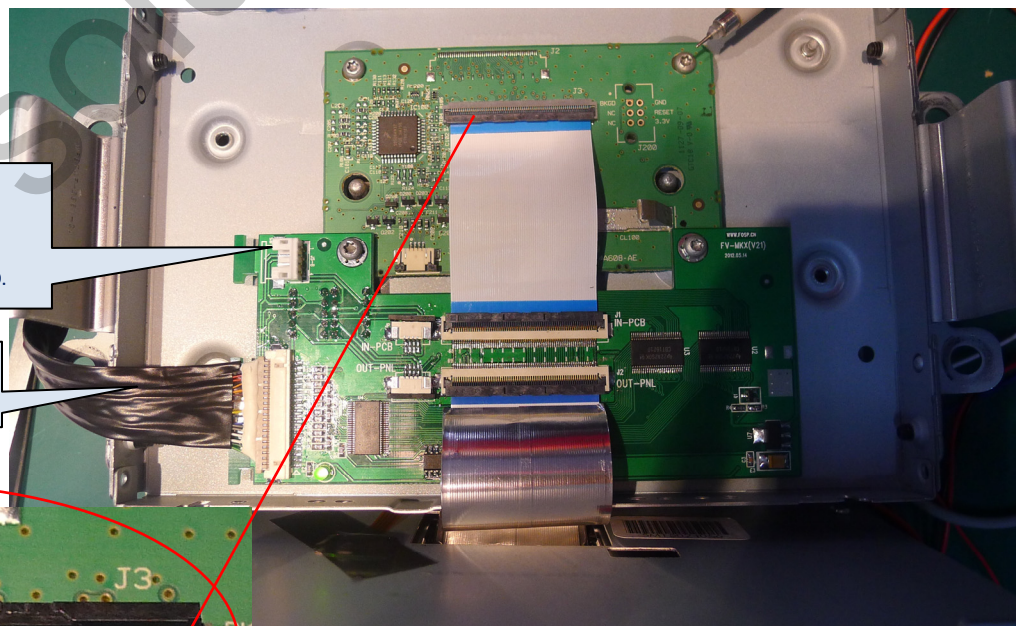
White wire: switch signal wire, when =12V or 5V, this interface switches.

Gray wire: CAN bus control data to interface, it is used to pop up the control icons. See note2 on the end of this wire.

Daughter PCB connecton:

This connector is for inserted navi.
IN-PCB: to main PCB's touch socket.
OUT-PNL: to touch foil on top of LCD.

Video cable to interface.



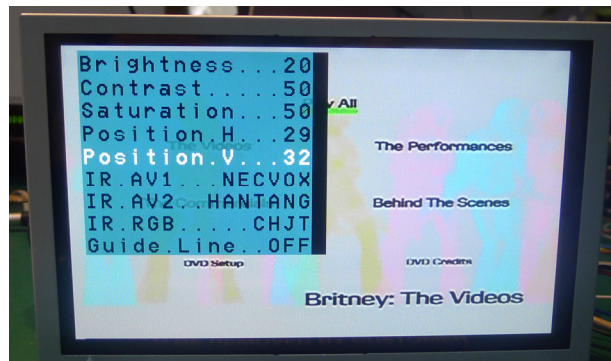
Warning: the ribbon to main PCB, should be inserted DEEPLY into the socket. Since the socket has extra ground contact-pins.
If black screen is seen after installation, please pull out the power plug, and re-insert this ribbon.

DIP switch setting:

DIP	=ON [DIP=Down side.]	=OFF
1	RGB enabled	RGB disabled.
2,	AV1 for DVD enabled	AV1 disabled
3	AV2 for Tuner or extra video enabled	AV2disabled
4	RGB=HD RGB [800X480 or VGA 640X480]	RGB=Normal NTSC [480X240]
5	This is reverse camera trigger wire go to CAM when Green wire= 12V]	go to car video when Green wire= 12V
6	IR programme when once to ON Touch calibration when get to ON >5 times.	OFF for normal work.
7,8	7=UP,8=UP: (=OFF) , leave both UP when in normal use.	

2. Interface Settings

- The 3 side keys are : menu, +,- respectively. When menu is press, OSD strings will pop up on screen, and the installer may adjust the best video effect. The +/- will change the value.
- The DVD/TUNER/NAVI is to set the IR code output to the installed device, so people use original knob to control
- When set to "none", the control icons will not pop out
- When set to "Prog", the installer can use DIP6=Down to program the IR code into the interface, so extra new devices can be controlled.
- When the menu key is pressed twice, the H Pos,V Pos options will show up, so the installed can move the picture location, the picture is the default best value.



The programming of IR code:

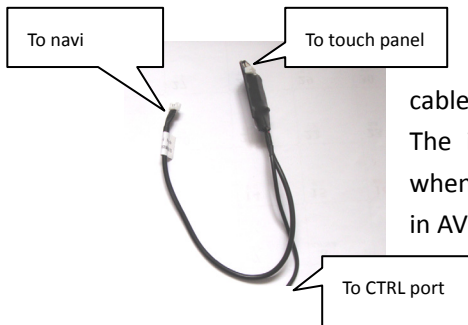
- There are >10 types of DVD, NAVI, and Tuners' IR code are stored inside the interface. The installer just adjusts the options to select to wanted one, then it works. If the wanted type is not there, he may set the option to be "Prog" in the menu.
- When programming, switch the input to AV1, and set DIP6 down once, then the control icons will be shown, and one of the them will be blinking. Point the IR remote controller to the IR port of interface, the blinking icon will be moved to the next one. Which means one code is programmed. Repeat this step until all icons are programmed.
- The programming of AV2 is the same as above.

3. CTRL port

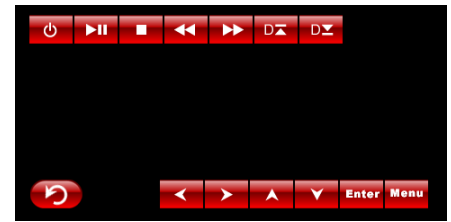
There is a 8-pin extra CTRL port on the interface, which the installer does not need to use in normal situation. For experienced users, this port may be used to get extra functions.

One dedicated daughter board can be used, so people just touch the screen, the installed devices can be

controlled by the icons, because the interface can generate IR code based on touch screen operations.



the CTRL port can be connected to the left touch cable, so DVD and other devices can be touch controlled. The internal switch makes the navi use touch panel when in RGB-input, and DVD uses the touch panel when in AV1 input.



Ctrl port signal definitions:

Pin 1,2	+5V output voltage for sound-switch-relay, when AV1 is selected=5V, 0V when AV2 selected. Max 3A.	
3:	Constant +5V	Max .2A
4, 8	Ground	
5:	Dedicated control bus for camera.	Should not be connected to GND, otherwise CPU will halt.
6:		
7	+5V output when in interface mode, 0V when in Car mode.	

Note2:

There is a gray wire between the can box and interface box, which is used to deliver control data, so that multimedia icons will pop out and be executed. This wire can also deliver terminal-mode control data. So a 3rd party computer can control this interface.[terminal mode like: to directly go to RGB input, to AV1 input, AV2 input,reverse camera input], to get the full implementation of fosp interface terminal mode operations, please contact fosp sales people.

4. Parameters

No.	name	parameter
1	RGB video amplitude	0.7Vpp with 75 ohm impedance NTSC resolution [400X240,480X240] of navigation is allowed.
2	sync amplitude in RGB-navi port	3~5Vpp with 5K ohm impedance Sync should be NTSC composite with negative polarity.
3	Av1,Av2, cam video amplitude	0.7Vpp with 75 ohm impedance
4	Av1,Av2, cam standard	NTSC/PAL/SECAM automatic switch
5		
6	Normal work Power consumption	2.4W [0.2A @12V]
7	Standby current	< 5mA
8		
9	Reverse trigger threshold	>5V trigger
10	Work temperature	-40 ~ +85C
11	dimensions	15.6 X 9.2 X 2.2 Cm