FV-VW2013-ENTRY navi+interface Module users manual_v20130419

Product type： FN-VW2013-ENTRY（with internal navi-module）

FV-VW2013-ENTRY（without internal navi.）

This head unit is used in some Volkswagen cars since 2013, the car models are Audi, Skoda, and more. This interface can insert high definition navigation picture, reverse camera video and other videos onto the OEM screen, the features:

- Internally equipped with navigation module which can be controlled by the oem touch screen, this interface is easy to install.

- Internal Daughter board is used, so Navi and Reverse video can be easily switched and displayed in whatever state. The user holds on the steering key to switch the input.

- Automatic switch into reverse camera mode, and the installer can choose the OEM reverse camera or installed camera by set DIP5. Guideline may be displayed in installed camera video mode.
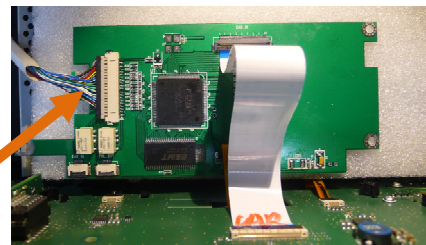
1. System connection
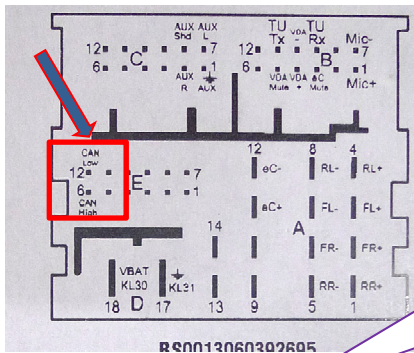
The 4 input wires of the CAN box:

Red with fuse（power supply） --- to the BATT/ACC of the car.

Black（Ground）------------to the black ground wire.

Blue（CAN high）------to the can high as the label on CD shows.

Gray (CAN low)------ the can low as the label on CD shows.
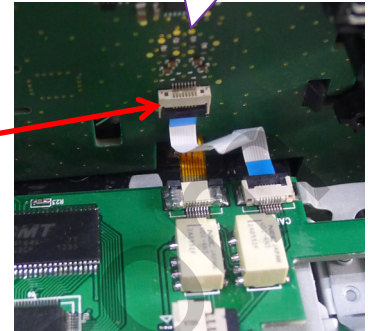
DIP
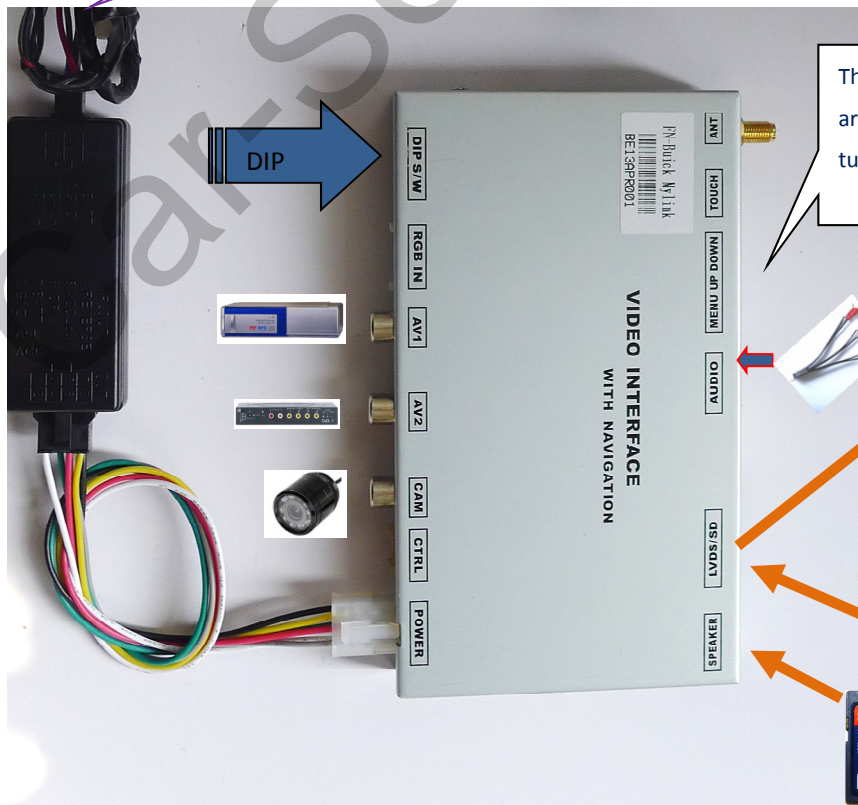
These 3 keys are for color tunning.

Audio switch

VIDEO INTERFACE WITH NAVIGATION

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2．Installation process

（1）take the head unit down, and separate the LCD part.

（2）Connect the daughter board behind the LCD, as the picture shows below：

The 8Pin touch signal should be rewired: the RED ribbon should goes to the PNL-OUT, and the CAR-In should be wired to the PCB.

The daughter board should go through the ribbon to LCD.

The red ribbon ----to PNL_OUT

The PCB ------to CAR-in socket.

（3）Fix the daughter board in this way with the 3 screws：

This cable to the interface box.

2
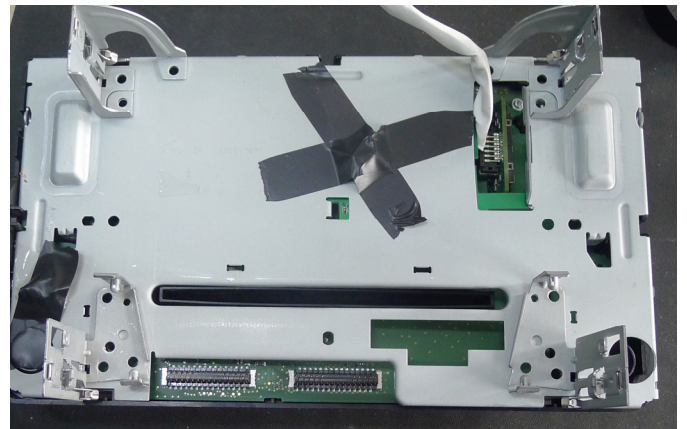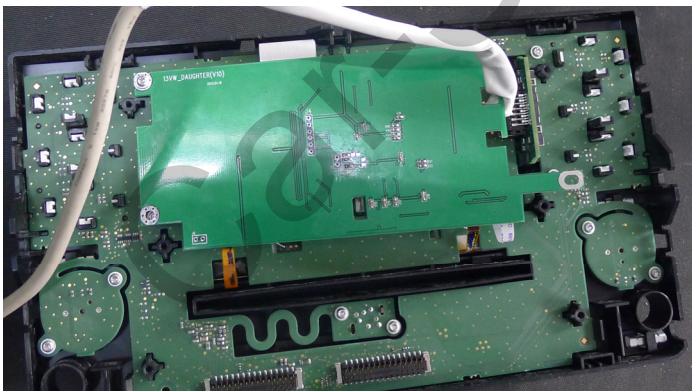
The 6PIN power connector signal definition between the Can box and interface box：

This 6 signals are generated by the CAN box, the installer does not need to modify.

 YELLOW ： power supply of 12V BATT。

 RED：generated ACC（=12V when key in ignition state）：when=12V，the interface works.

 BLACK：Ground to Chassis。

 GREEN：Can box generated reverse trigger signal [when =12V the reverse video is enabled]

 WHITE：Can box generated switch signal wire, when=12V, this interface switches。[max.25V]

 GRAY：CAN box's communication with interface on sharing control signal to DVD/TV on this wire.[if we do not need to idrv to control DVD/TV/iPOD, this wire may be cut off.]

3. The 3-keys

The input box has 3 side keys, the installer may use it to tune the picture display, and touch function for the connected DVD or other devices. The 3 keys are : menu, +, -.

The first 5 options has separate state memory. The modification of one input is different , and it does not affecting other inputs.

- 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 brightness/contrast/saturation tunes the color of the current video input.
- The H position,V position sets the image position on screen.
- 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.

Note：

◆ The OEM touch panel can also be used to control the installed DVD and Digital TV, when in this case, please contact fosp sales people on the specific operation on how to program the interface to get the IR code, and generate the IR code。

- The user hold on the "next page" key to switch the inputs.[until the input switches, around 3 seconds] .
- When go to Reverse, the Green wire of can box will go 12V, then the interface will decide to switch to installed camera or OEM picture based on DIP5 setting.

3
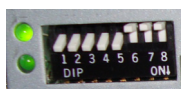
4.DIP swtches

| DIP	Down side（=ON）	Up side（=OFF）
1	RGB input enabled	RGB input disabled
2,3	AV1/2 input enabled	AV1/2 input disabled
4	RGB input= VGA resolution 800X480	RGB input= NTSC resolution 400[or 480]X240。
5	CAM cvbs is selected when green wire goes to 12V.[this is for the case aftermarket camera is installed]	Car oem picture is selected when green wire = 12V.
6	Set to ON once for IR programming.	Set to OFF for normal use.
DIP78 7，8	Both DIPs should be set to UP, =OFF.	

5． Use the OEM touch panel to control DVD

There are already many DVD and Digital TV remote code inside the interface. The installer can set to the suitable one and then he can use the touch panel to control DVD/Digital TV, without searching for a remote controller.

The installer can also set the OSD option to be "Prog", in this case, he can set the interface to learn the new remote code, and when touch the panel, icons will pop out and programmed code will be sent.

For the detailed information, please contact Fosp sales people on the detailed manual on "Programming the IR code of FOSP interfaces."

6. The Ctrl port.

Ctrl port here.

1	2	3	4
5	6	7	8
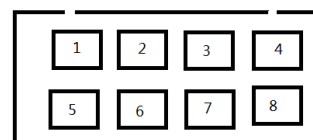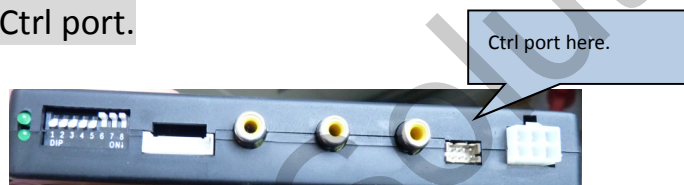
The Ctrl port has 8 pins, it is not necessary for the installers to use it in most cases, however it can be used for installer's convenience in case many more external devices are installed.

Pin 1, Pin2	+5V output voltage for sound switch relay when AV1 is selected, 0V when AV2 selected.	This pin can pull the relay with +5V. [max output=2A, while most mechanical relay only needs 0.1~0.3A.]
Pin3:	constant +5V when the unit is working.	max 2A output.
Pin 4,8	GND	It is tied to GND inside.
Pin 5:	data bus for touch screen	Pin5,6 should NOT be connected to GND, because it will halt the CPU inside.
Pin 6:	clock bus for touch screen.	Leave it open for normal use.
Pin 7	+5V output voltage for switch relay, when in inserted video mode, this pin=5V, when in original car video mode, this pin=0V.	max 2A output.

7. Parameters

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No.	name	parameter
1	RGB resolution input	800X480 HD suggested.
2	Av1,Av2, cam video	0.7Vpp with 75 ohm impedance NTSC/PAL/SECAM automatic switch
3	IR output	5V digital infrared control code with 4 data bytes [machine code1,machine code 2, user code, verification code]
4	Control wires	White wire: signal= max 5V. Gray wire: signal= max 5V. All these wires can tolerate 12V for <10 seconds.
5	Normal Power consumption	4.8W [0.4A @12V]
6	Standby current	< 10uA
7	Reverse trigger threshold	>5V trigger
8	Work temperature	-40 ~ +85C
9	Size	15.8 * 9 * 2CM
10	Internal navi module resolution	800X480
11	USB	OTG function,1A output with surge of 3A.
12	Compatible with maps	Navione, navitel, Igo, Primo.sygic, etc.

8. Other interfaces

FOSP has another interface which fits the other Volkswagen screens including the MIB-Standard(5.8-inch) and MIB-HD(8-inch) .

[product type：FN-VW2013, with DIP8 up or down, this interface fits both LCDs.]