

FN_300C_Dodge Installation Manual_v20140402

Product Type: FN_300C_Dodge, [with internal navigation module]

FV_300C_Dodge, [Video interface without internal navigation]

This interface can insert video into Chrysler 300C,dodge,Fiat monitors.[8.4inch or 4.3 inch monitor with 4Pin round connector]. This product offers RGB-navigation,TV,DVD and reverse video insertion onto the OEM screen.

This product is an upgrade version from the previous model, we made the following changes: harness inserted behind the CD so reverse signal is automatically generated, navi touch goes in the harness, digital navigation module inside. Smartphone can be mirrored onto the car screen, OEM speaker to make navigation talkover and very easy for installers.

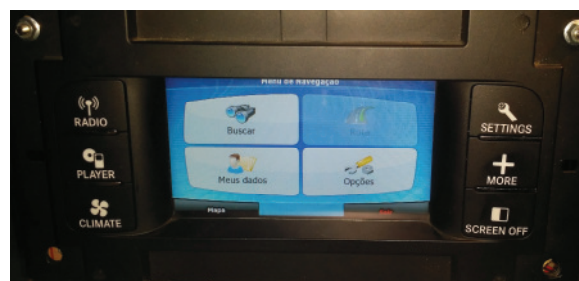


2012 and after, Dodge, Chrysler and Fiat cars with 8.4 inch display(4Pin round connector) can all be installed with this module. OEM touch panel is used to control inserted Navi without background operations.



2012 and after, Dodge, Chrysler and Fiat cars with 4.3 inch display(4Pin round connector) can also be installed with this module.

- ✓ Plug and play installation for Dodge Chrysler, and Fiat car models with seperated monitor and CD unit. The installer just put the Quadlock harness behind the CD, and LVDS cable behind the monitor, then the inserted navigation, touch control and automatic reverse are already inserted.
- ✓ Digital navigation module is embedded inside, the wiring job is simple and easy for the installers, and this digital module gives very clear picture with HD map on screens.
- ✓ OEM speaker is used to insert the navigation sound so no external tiny speaker is used.
- ✓ A high resolution video processor is used inside, the RGB input can be connected to a wireless mirrorcast dongle via a HDMI input cable. The smartphone's display can be mirrored onto the car screen with 1080P or 720P delivery so no picture quality is hurt. Both Android and iPhone can be mirrored. The installer can buy the mirrorCast dongle directly inside his local market. Since this interface only needs an extra HDMI receiver cable to connect to dongle.
- ✓ The installer can also buy MHL to HDMI conversion cable to mirror the phone onto the car screen. Both iPhone and Android phones can be mirrored.
- ✓ also provides a cable so people can use the OEM touch panel to control the connect android phone, while charging the phone at the same time.



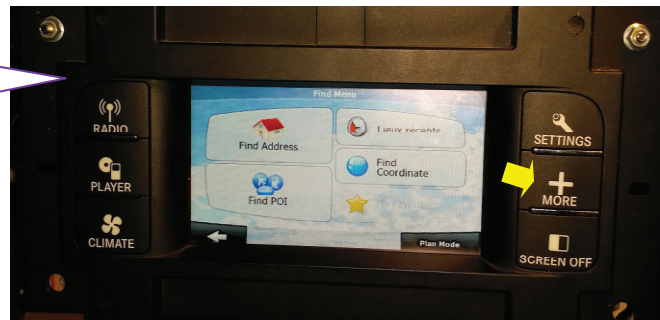
1. User's operation:

(1) Input switch

The user can double click the VOICE key on the steering wheel, then the interface will switch among all the input: Car screen, digital navi, AV1,AV2..

The installer can also put one extra keypad to switch, this switch just connect the white wire to 12V, then the interface switches.

For this version of monitor, press the MORE key to switch.



Attention:

- For the 8.4-inch monitor, the installer should make DIP8 of interface UP.
- For the 4.3-inch monitor, the installer should make DIP8 of interface DOWN.

(2) Reverse camera installation :

When the driver goes to R, the green wire from can box will become 12V [in both Audi A3 and volkswagen], this wire can power on a camera, also it will force the interface into reverse picture display.

- When DIP5=OFF[UP state], the interface assumes that the car has OEM camera, and the OEM picture will be displayed.
 - When DIP5=ON[Down state], the interface assumes that the car has NO-OEM camera, and the inserted video will be displayed.
- The driver may press the switch key, the interface will switch from inserted camera picture to OEM picture.[this situation assumes that the CAR has OEM PDC picture.]

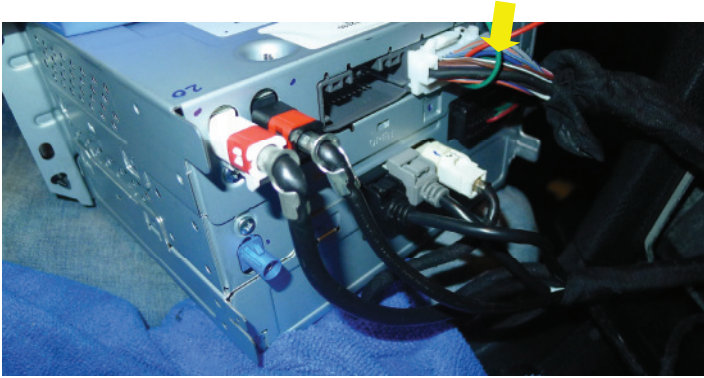
(3) Navigation control.

For the installed navigation, the user the control the OEM panel to control the navigation. The installer does not need to wire separate touch wires. Please pay attention that the finger nails are more effective than thumbs, since the OEM touch are more sensitive than pressure, instead of touching area.

2. Dashboard work:

Remove the plastic piece below the monitor, then we see 2 screws fixing the CD there, remove them and take the wind outlet out.





The CD can also be taken out when the front plastic piece is taken out.

Insert the interface's power plug and socket between the OEM power plug to CD unit.



The Monitor can also be taken out when the front plastic piece is taken out.
Insert the interface's LVDS plug and socket between the OEM LVDS plug-socket.

We can see that, just make the interface's Power plug inserted between the OEM plug, and the LVDS cable between the OEM plug, then basically the installation job is over.

2. DIP settings On interface box:



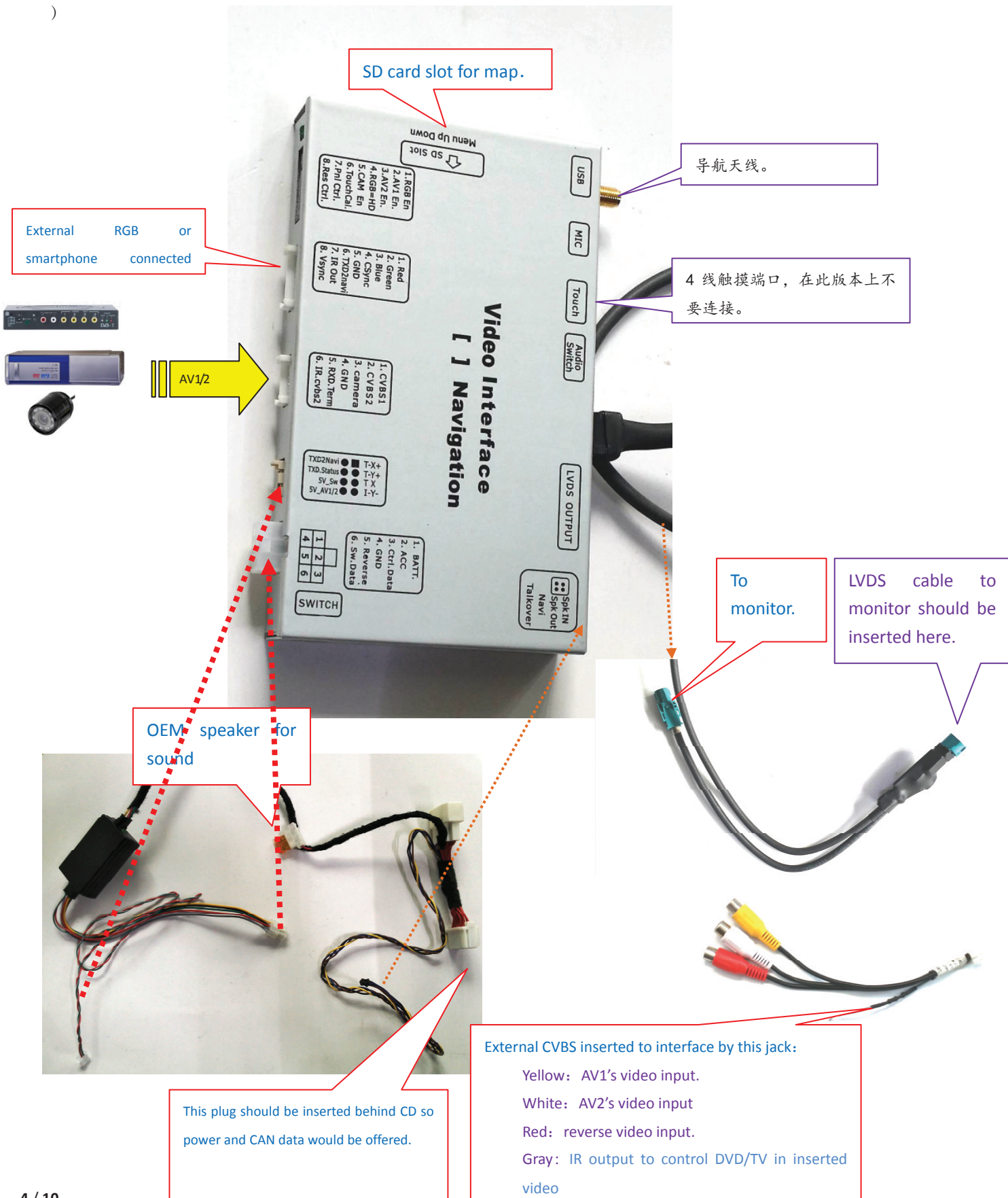
DIP	Down side (=ON)	Up side (=OFF)
1	External RGB input enabled	External RGB input disabled
2,3	AV1/2 input enabled	AV1/2 input disabled
4	RGB input= VGA resolution 800X480, this is for the situation that I external navigation box is connected.	RGB input= HDMI to RGB-1080P converter connected.
5	AV4 video 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	DIP7 is not used, set it up for default. DIP8 is used for LCD size: ➤ For 8-inch, the DIP8 should be set UP. ➤ For 4.3 inch, the DIP8 should be set DOWN.	

CAN box's 2Pin twisted signal definition: [only for reference, the user does not need to modify:]

Green/White twisted: touch UART TXD data wire, it is directly wired to the navigation module's UART so people can control the map.

Red/White twisted: interface's status report to the CAN box, so the can box knows when to generate the TXD and when to block the OEM touch data to CD unit.

3. System connections:



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

YELLOW: power supply of 12V BATT.

RED: generated ACC (=12V when key in ignition state): when=12V, the interface works. This wire is automatically generated by can box.

BLACK: Ground to Chassis.

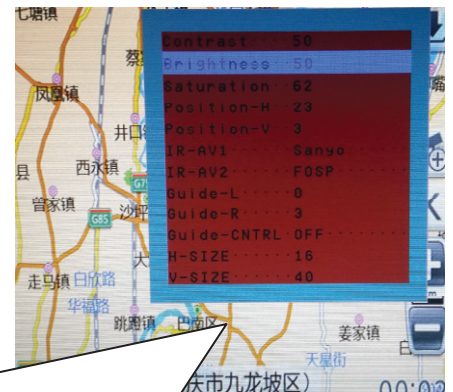
GREEN: reverse trigger signal [when =12V the reverse video is enabled], this wire can also be used to give power to reverse camera. It can offer 1A in reverse mode.

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.

4. the 3 side key buttons

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 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 position H,position V set 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 or touch screen to control the installed device in AV1/2 mode. Left/right push will pop up the MMI icons, and push will execute the selected icon.
 - 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.

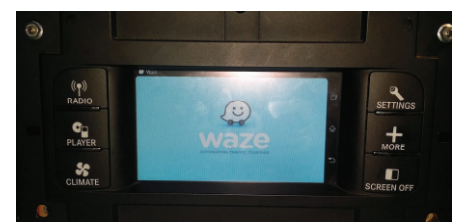
The **"Guide CTRL.....ON"**: the installer can set ON/OFF to enable the parking guide line, which shows the safe zone when parking. Please set to **OFF** in VW and A3.which means the guide line should be disabled.

The **Guide L** option sets the left guide line's offset on screen, when the value changes, the left guide moves its location.

The **Guide R** option sets the Right guide line's offset on screen, when the value changes, the Right guide moves its location. With this combination, the guide line can always fits the car width and show the safety area no matter whatever camera the installer uses.

When in AV1/2, the user can long press the left-top area of the LCD to pop up the MMI-icons, so he can control the digital video recorder[power on/off], play, stop, record etc.

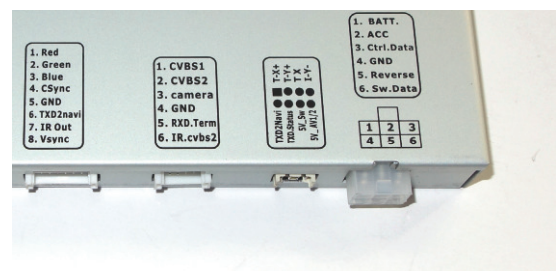
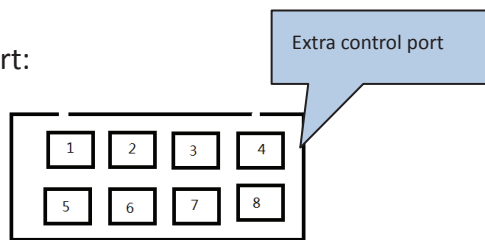
The Last 2 Options: **Size H**, and **Size V** are used to tune the picture size, in case an iPhone of android phone is connected, this option can be used to make the output nicely fit the screen size.



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, which means the suitable IR code is wanted. The installer should now connect the hardware: connect the IR signal wire of the DVD to the gray-wire in the power cable of the interface[the IR input wire.], and press once the related IR key.
- Then the 2nd icon will be blinking, which means one IR code is read and another code is wanted, the installer just repeat the pressing till all code are read.
- When the last icons stops blinking. The installer should change the hardware: connect the IR output wire[RGB port's 7 pin wire] of interface to the DVD's IR signal wire. Then when the user rotates the knob or use the touch foil to generate the IR code, DVD will be controlled.
- The programming of AV2 is the same as above.

5. Extra control port:



This interface has released a lot of hidden functions, so the 3rd party can use it for various usages.

The Extra control port close to the power connector:

- (1) the 4-pin in the up row: touch screen 4Pin input, when in DVD or TV, the touch foil can be switched and connected to these 4Pin, so the controller inside can read the touch operation and location and generate the IR code for DVD etc.
- (2) the 5th Pin(TXD2Navi): the input pin to take external control data for internal navi, to replace the touch control.
- (3) the 6th Pin (TXD.Status): the interface tells the outside its internal status.
- (4) the 7th Pin (5V_SW) : this pin can output 5V with 1A max, which is enough for a relay pull, when in inserted video this pin=5V, when in OEM video, this pin=0V.
- (5) the 8th Pin (5V_AV1/2) : this pin can output 5V with 1A max, which is enough for a relay pull, when in AV1/2 video this pin=5V, otherwise this pin=0V. it can be used to switch the 4Pin touch so one touch foil is shared by navi, and DVD/TV.



The 5th pin in the Video input port (RXD.Term):

This interface can work in terminal mode, a 3rd developer or installer can send commands into this pin. E.g. when he sends "switchInput 1\r", the interface will switch into RGB navi, "switchInput 2\r", the interface will switch into AV1, when he sends "Help\n", the interface will tell a list of available commands. This Pin works in 11.5K baud rate and it loots all sent commands when drops power.

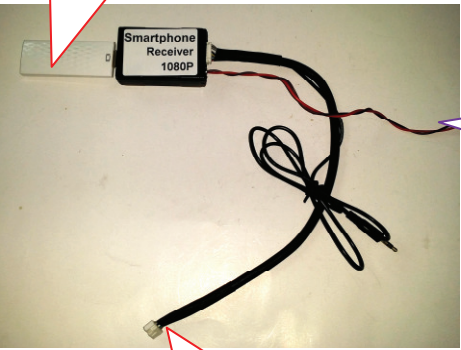
5. Parameters

No.	name	parameter
1	RGB map resolution	800X480 HD suggested.
2	Av1, , cam video	0.7Vpp with 75 ohm impedance NTSC/PAL/SECAM automatic switch
3	GPS antenna	5V active antenna from the golden finger connector.
4	Reverse Control wire	>5V will force into camera mode.

		All these wires can tolerate 12V for <10 seconds.
5	Normal Power consumption	4.8W
6	Standby current	< 10uA
7	Reverse trigger threshold	>5V trigger
8	Work temperature	-40 ~ +85C
9	Size	15.2 * 9 * 2.1CM
11	USB	OTG function,1A output with surge of 3A.
12	Compatible with maps	Navione, navitel, Igo, Primo.sygic, etc.

7. How smartphone image mirrored:

Smartphone Dongle

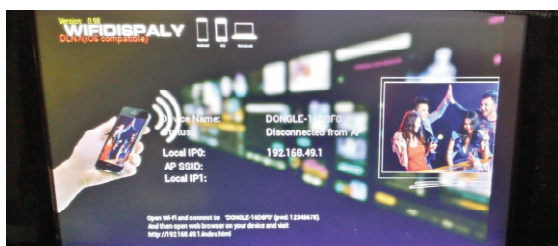


- The smartphone receiver has an HDMI connector for dongle, and convert it into RGB-1080p or 720p, for the video interface.
- The RED/BLACK should be wired to ACC/GND of the interface box for power supply.
- The DIP4 of interface should be stay OFF, and DIP1 should stay ON.

To RGB connector of interface.

To the AUX sound input of the car, the installer can also leave it, and use the phone's speaker as sound output.

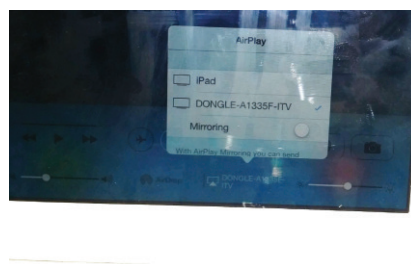
- the wirelss dongle has a key button to show the state:



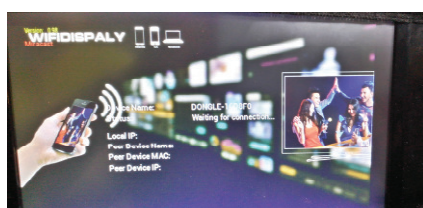
when left-top corner shows:

- **DLNA**[or AirPlay], it means iOS can be received.

The user should enable the iOS device's wifi, find the dongle, and connect it.



Then he scratch the bottom side of the iOS device, click the air Play function, and select the appropriate dongle, and enable the mirroring function and wait a little while. Then all the iOS shows will be mirrored.

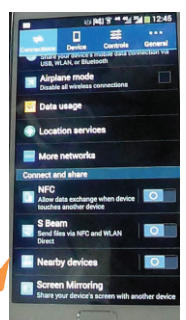


When the left-top corner shows:

- **MiraCast or EZcast**, it means the android phone can be mirrored.

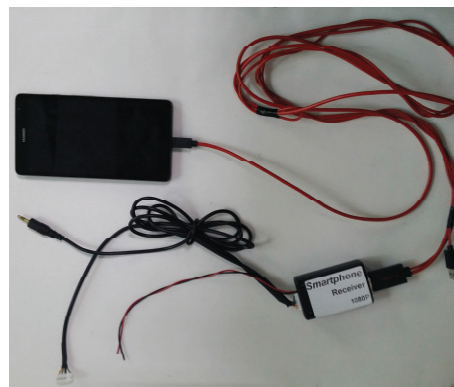
When using the Android phones: the user need to enable the wifi, just start the miracast the phone.[the name maybe different from android 4.1, 4.2, or

4.3]. also It is different from different phone brand.



Just enable the screen mirroring, then the phone's display will be mirrored onto car screen.

- The installer can also get the display from the smartphone in the wire way, the below picture shows, the smartphone receiver can also deliver the video input from iOS device with a standard apple HDMI cable, or from android device with a standard MHL to HDMI cable.

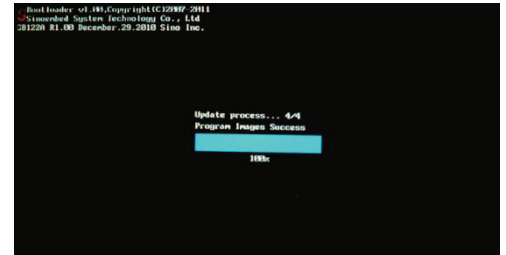


8. simple manual about the navi module.

(1) How to update the module software:

Copy the files that provides into a SD card.

When the units power on, the users may see this picture. He just wait the start Up screen shown again.



(2) How to make a start up Logo:

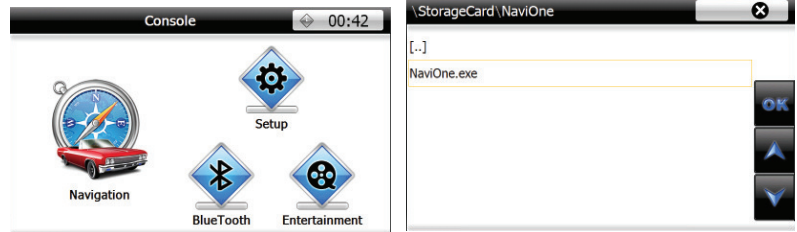
Make a directory named YP_A5, and put all the file that supplies for a boot.

The logo.BMP contains the logo. Please be sure it must be 800×480, BMP format, and 16 bit in color.

(3) The functions of the icons.

The left picture shows the start up picture, the user may go to each icon to get their respective function.

When the navigation map is inserted the first time, the user may click the navigation icon, and the right-side



picture will show up, the user should select the *.exe file to run the map. All the other functions are self-explained in the menu.