

Last updated : 2014.06.12

MODEL : QVI-LVTX-1CH-V6.1 / Product code : LVTX-1CH-1201-003

# Video Interface for Porsche Cayenne With PCM 3.1 head units

## Installation Manual

# Contents

## 1. Before installation

1.1 Main specification .....	3
1.2 Features .....	4
1.3 System diagram .....	5
1.4 Components .....	6
1.5 Exterior .....	7

## 2. Setup

2.1 DIP switch .....	8
2.2 Remote control .....	9
2.3.1 OSD (on screen display) .....	10
2.3.2 OSD (on screen display) .....	11
2.4 Factory mode .....	12
2.5 Parking Guide line setting .....	13
2.6 Touch Calibration .....	14
2.7.1 Remote controller button .....	15
2.7.2 Remote controller button .....	16
2.8 DVD, DTV model selection .....	17
2.9 Switching mode via CAN wire .....	18

## 3. Installation

3.1 Installation diagram .....	19
3.2 Cautions on installation .....	20
3.3 Installation .....	21

## 4. Troubleshooting .....

26

# 1.1 Main Specification

## 1. Product composition

Multimedia Interface \* 1ea  
Sub-board \* 1ea

## 2. MULTIMEDIA INTERFACE input spec.

3 \* A/V (NTST&PAL) input  
1 \* CVBS (rear camera) input. (rear camera source)  
1 \* Analog RGB  
1 \* LCD input (car system input)

## 3. MULTIMEDIA INTERFACE output spec.

1 \* LCD output(LCD Operation)  
1 \* Audio OUTPUT  
2 \* CVBS OUTPUT(Video Out for installing Headrest monitor)

## 4. POWER spec.

Input power : 8VDC ~ 16VDC  
Consumption power : 4WATT (in maximum level)

## 5. Switch input mode

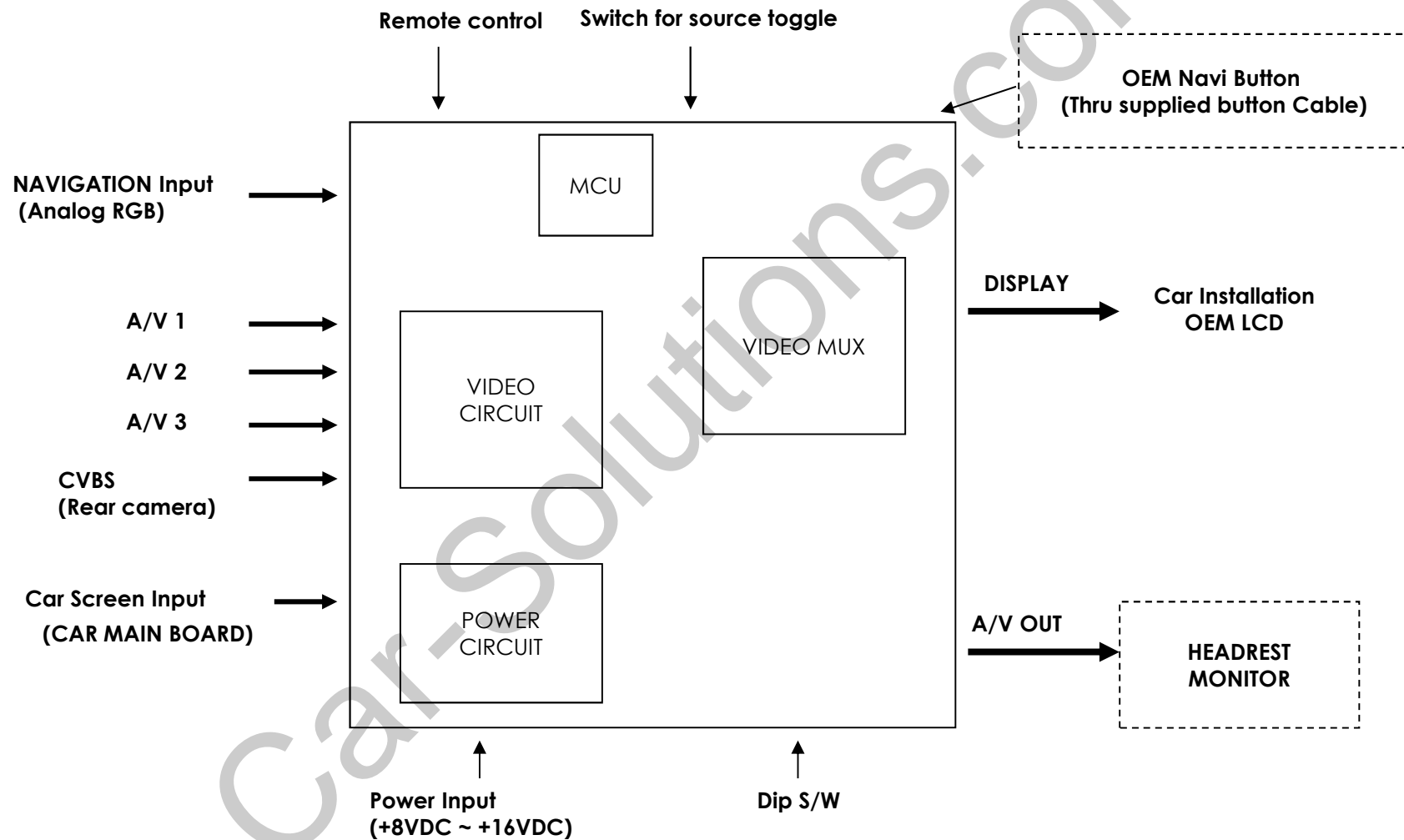
- Input video skip function  
: able to select whether to use the respective input video sources or not via DIP switch.
- Able to change input modes via the remote control.
- Able to switch modes via the Toggle switch.
- Able to switch modes via Original button(Navi button) of the car through Button cable.

## 1.2 Feature

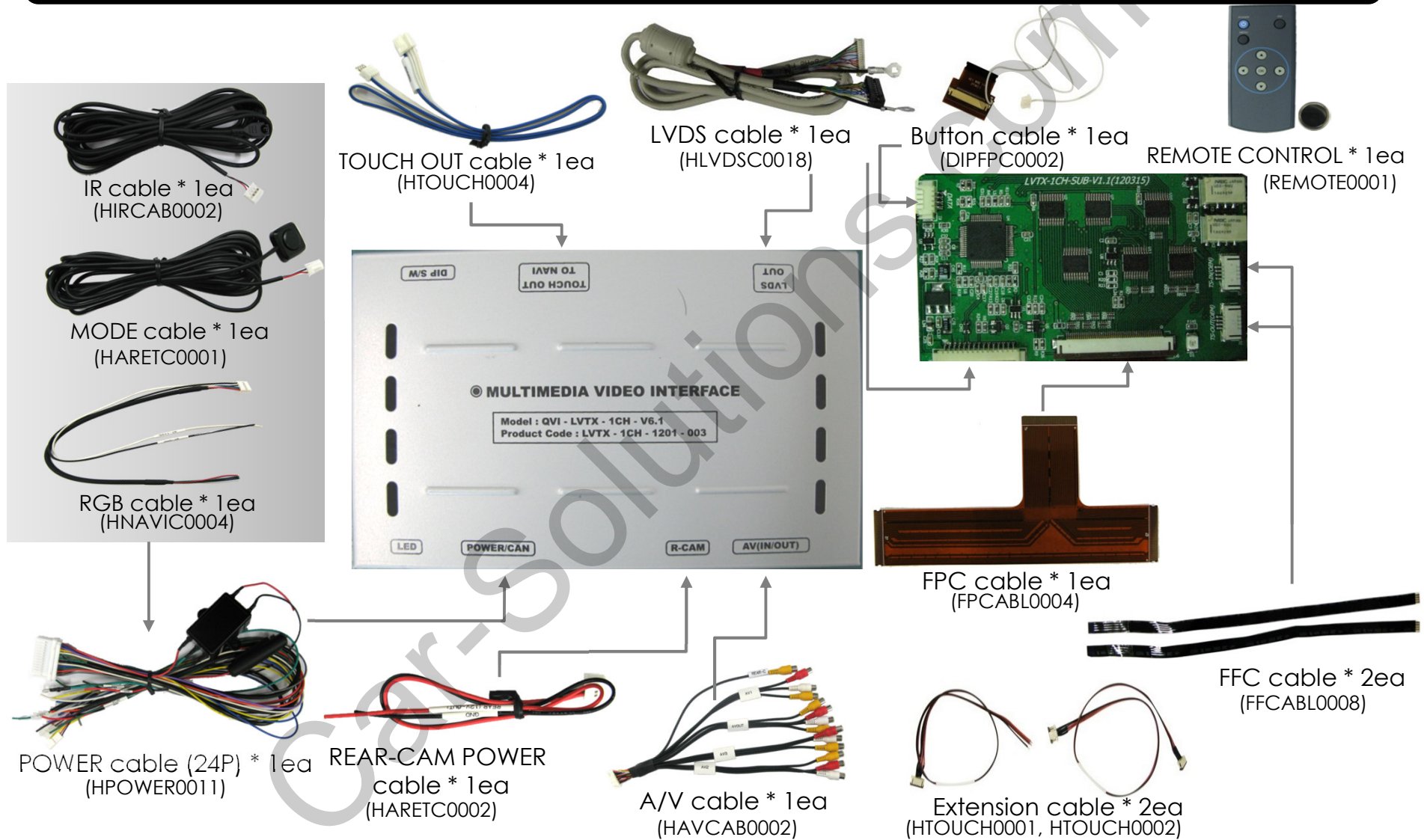
- Able to move the displayed position of DVD, Navigation.
- Offered Remote control for OSD settings.
- Add a safe function (show the main screen while driving)
- Able to change the external display input via Original button
- Able to change and control external devices via Touch screen

(IR Scan Function)

## 1.3 System diagram



# 1.4 Components



# 1.5 Exterior



## Dimension

Horizontal length 125mm  
Vertical length 105mm  
Height 21mm

- ① LED
- ② POWER
- ③ R-CAM
- ④ AV(IN/OUT)
- ⑤ DIP Switch
- ⑥ TOUCH OUT TO NAVI
- ⑦ LVDS OUT

## - SUB BOARD -



- ⑧ LVDS-IN
- ⑨ FPC
- ⑩ TS-OUT(OEM)
- ⑪ TS-IN(OEM)
- ⑫ DATA



## 2.1 DIP switch

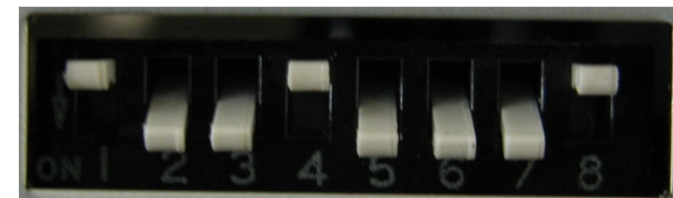
PIN	Function	Dip S/W Selection
1	RGB INPUT MUTE	ON : Skipping RGB Mode OFF : RGB Display
2	A/V 1 MUTE	ON : Skipping A/V 1 OFF : A/V1 Display
3	A/V 2 MUTE	ON : Skipping A/V 2 OFF : A/V2 Display
4	A/V 3 MUTE	ON : Skipping A/V 3 OFF : A/V3 Display
5	N.C	
6	N.C	
7	Rear Mode	ON : External Rear Camera OFF : OEM Rear Camera
8	ON : OEM Navigation OFF : External Navigation (Default)	

※ ON : DOWN / OFF : UP

※ DIP S/W usage example

- Input Mode : A/V3, Navigation (RGB)
- When original Navigation is not installed
- Rear camera : When to be installed on CVBS 4

- ▷ DIP S/W : 1 → OFF
- ▷ DIP S/W : 2,3 → ON (INPUT MODE SKIP)
- ▷ DIP S/W : 4 → OFF (displaying A/V3)
- ▷ DIP S/W : 5,6 → ON
- ▷ DIP S/W : 7 → ON (displaying CVBS4)
- ▷ DIP S/W : 8 → OFF





## 2.2 Remote control

Key	Function
POWER & PIP	Unavailable
MENU	Activating OSD menu
OK	Making a selection, changing image display
▲	Moving upward
▼	Moving downward
◀	Moving leftward (If you press this button 5 seconds long, you can get access to the factory mode.)
▶	Moving rightward (If you press this button 2 seconds long, you can reset all the data about user environment.)

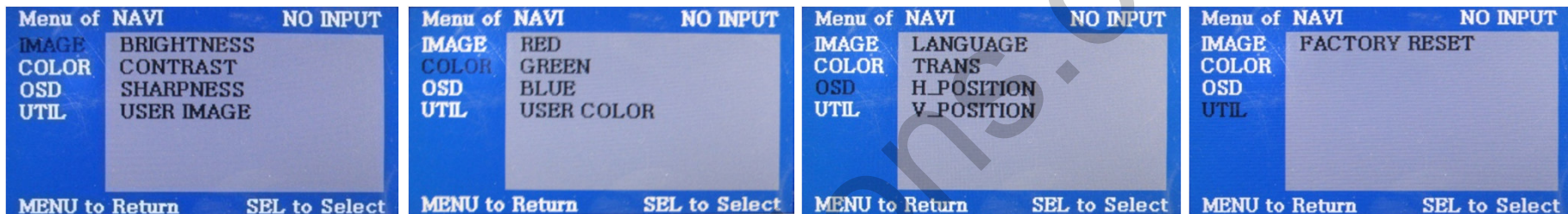


\*FACTORY MODE (Interface setting for **installer**)

: Operated by pressing ▲ → ▼ → ▲ → MENU button or press ◀ more than 5seconds long on the remote control.

## 2.3.1 OSD (on screen display)

Analog RGB Mode



### IMAGE

- \* BRIGHTNESS
- \* CONTRAST
- \* SHARPNESS
- \* USER IMAGE  
: Selecting one among  
4 color options.

### COLOR

- \* RED : Adjusting red
- \* GREEN : Adjusting green
- \* BLUE : Adjusting blue
- \* USER COLOR  
: Selecting a color option  
among set color options

### OSD

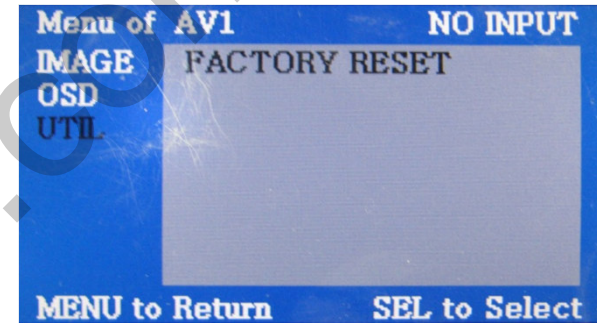
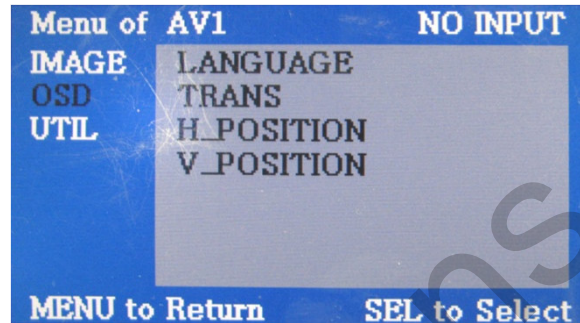
- \* LANGUAGE :  
Choosing OSD language  
while using Touch OSD  
(English, Chinese only)
- \* TRANS : Adjusting  
transparency of OSD
- \* H\_POSITION, V\_POSITION :  
Positioning OSD menu

### UTIL

- \* FACTORY RESET :  
Resetting all the data about  
the relevant mode that  
applicable to navigation,  
DVD mode respectively.  
(Impossible to reset of screen  
position, only available for  
color, OSD setting)

## 2.3.2 OSD (on screen display)

Video mode



### IMAGE

- \* BRIGHTNESS
- \* CONTRAST
- \* SATURATION
- \* HUE
- \* SHARPNESS
- \* USER IMAGE  
: Selecting one among 4 color options.

### OSD

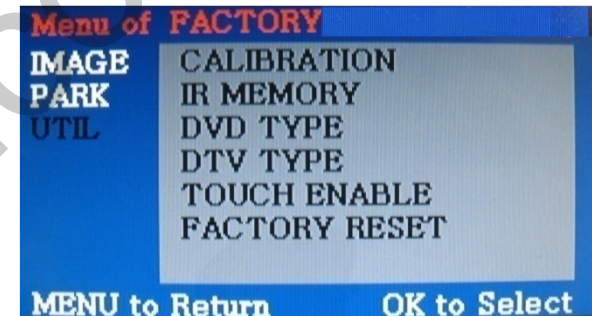
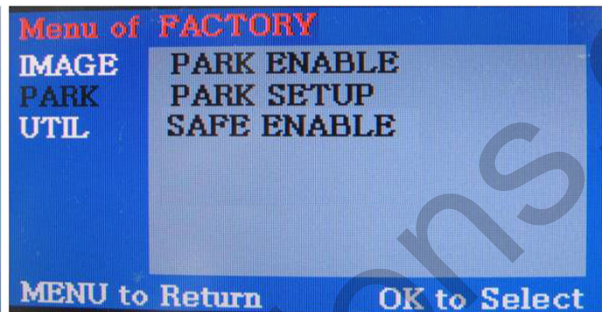
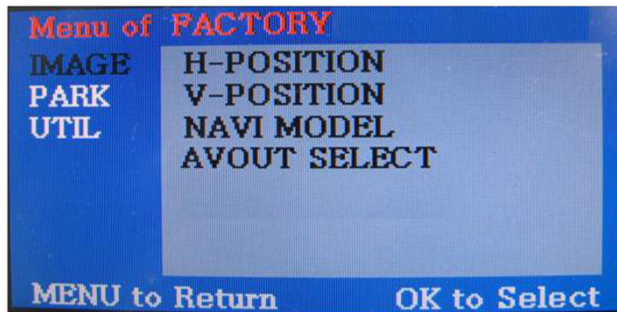
- \* LANGUAGE : Choosing interface language while changing mode between A/V and DVD
- \* TRANS : Adjusting transparency of OSD
- \* H-POSITION  
: moving in horizontal direction
- \* V-POSITION  
: moving in vertical direction

### UTIL

- \* FACTORY RESET : Resetting all the data about the relevant mode that applicable to navigation, DVD mode respectively.  
(Impossible to reset of screen position, only available for color, OSD setting)

## 2.4 FACTORY MODE

FACTORY mode – Press ◀ button 5 seconds long on the remote control.



### IMAGE

Adjusting the position of navigation

- \* H-POSITION  
: moving in horizontal direction
- \* V-POSITION  
: moving in vertical direction
- \* NAVI MODEL : DEFAULT,  
KD900(WVGA), MD7000(WVGA),  
MYVI(WVGA),PAPAGO(WVGA)
- \* AVOUT SELECT : DEFAULT, AV1,  
AV2, AV3

### PARK

- PARK ENABLE :  
Setup of rear view parking guide line
- PARK SETUP :  
Control over position of rear view parking guide line
- SAFE ENABLE :  
To select whether to use SAFE function(NOT to allow watch video while driving) or not

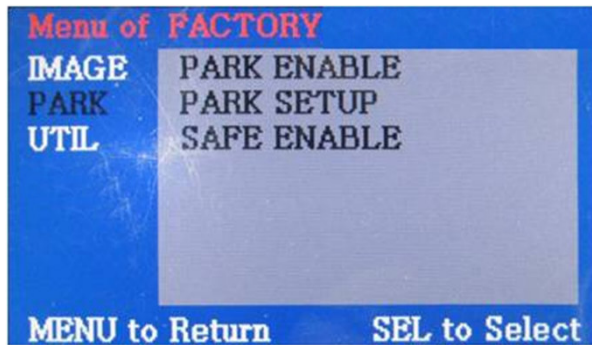
### UTIL

- \* CALIBRATION : Touch calibration
- \* IR MEMORY : To register value of buttons on the remote control
- \* DVD TYPE  
: Setup for the type of DVD
- \* DTV TYPE  
: Setup for the type of DTV
- \* TOUCH ENABLE :  
Set up Touch enable
- \* FACTORY RESET : To reset all the value in factory mode



## 2.5 Parking guide line setting

**FACTORY mode** – Press ◀ button 5 seconds long on the remote control.



### **PARK**

- \* **PARK ENABLE** : Selecting whether to display the parking guide line or not on rear gear (default : OFF)
- \* **PARK SETUP** : Adjusting the position of the parking guide line (available in PARK SETUP -> V-POSITION, H-POSITION)
- \* **SAFE ENABLE** : In case of Connecting "Safe" wire from the power cable to the hand break,  
ENABLE – OEM Picture displays in Drive gear position  
DISABLE – No display locked in any gear position

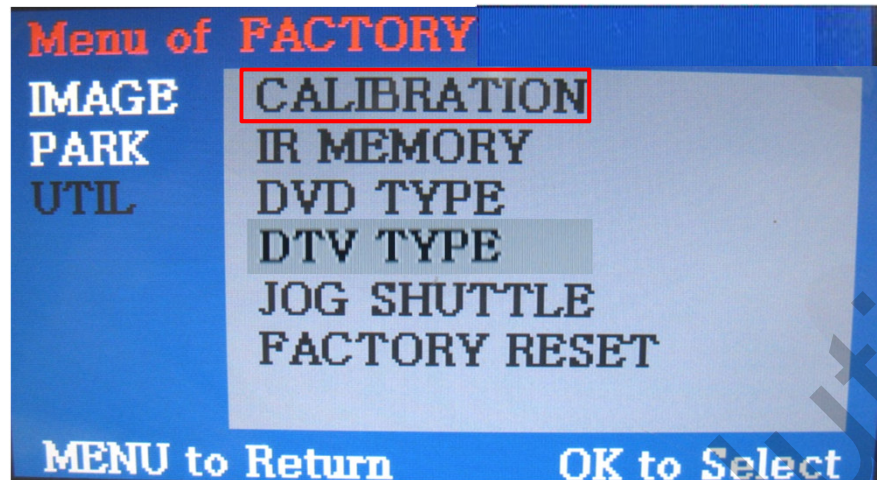
### **PARK - ENABLE**

- If you set 'PARK ENABLE' as "ON" state, there will be the rear view parking guide line. (as shown left picture)
- Press the OK button of remote control, 'H\_POS' will be shown on the right and control moving in horizontal direction.

### **PARK - ENABLE**

- Press the OK button of remote control one more, 'V\_POS' will be shown on the right and control moving in vertical direction.

## 2.6 Touch calibration



① First of all, press ◀ button on remote control 2 seconds long. Then you can access to the FACTORY mode.

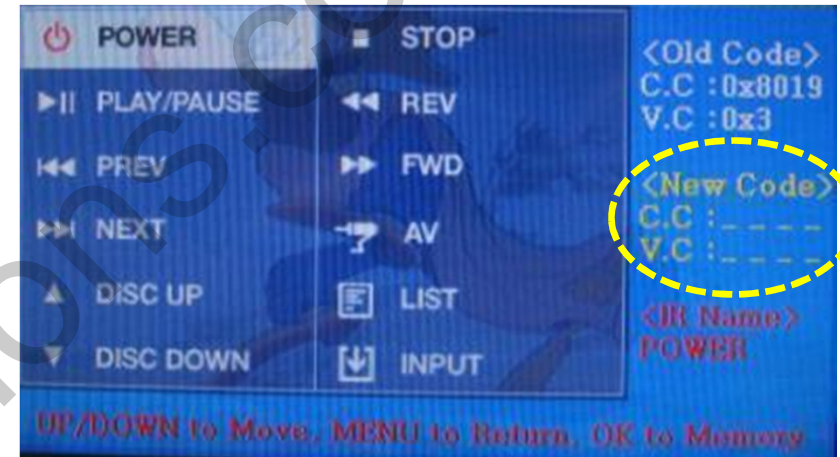
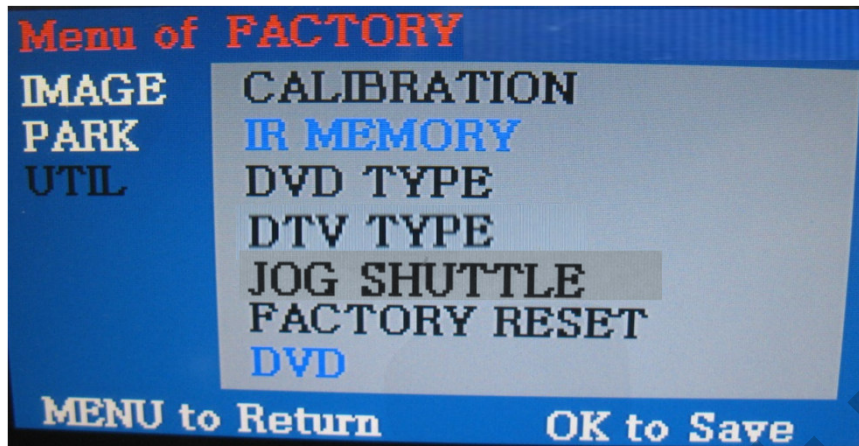
② Register "YES" when the CALIBRATION option is selected as shown above.

③ Then you can see "touch calibration" on screen **about 2 seconds long** as shown above. After the word "touch calibration" disappear, touch calibration function will implement. (Just touch "+" shape on screen.) If you succeed, you can see "success". If not, you will see "failure".

## 2.7.1 Remote control button

### Registering value of remote control buttons?

When you want to control DVD and DTV via touch screen (using OSD menu) with other models besides already registered option-SANYO and NECVOX, you can register value of DVD and DTV' s remote control which you have. Then you can control DVD and DTV via touch screen.



① First of all, press ◀ button on remote control 2 seconds long. Then you can access to the FACTORY mode. And go to IR MEMORY, UTIL.

There are two options in IR MEMORY as shown above; DTV and DVD.

Then you select AV source that you want to set among them.

② This is a window for register of DVD' s remote control button value. At the moment just select a menu that you want to save.  
(Select "DTV in options of IR MEMORY" if you want to save values of DTV' s remote control. And follow the instruction below.)

Instruction>

- Select "POWER" in OSD menu, then press "OK" on remote control. (as shown above)
- If the marked area flickers as shown above, press "POWER" button on the remote control of DVD that you want to use. (continued in the next page)



## 2.7.2 Remote control button



Instruction> continued...

c. The values that you registered will appear as green text in the marked area on pressing the button. And the values will be saved automatically.

d. Register remain buttons' value in OSD menu like the above-mentioned.

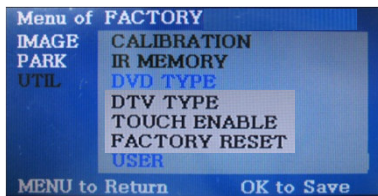
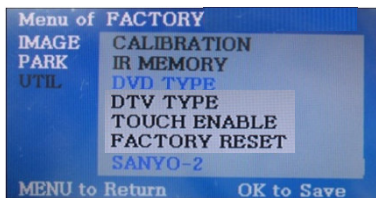
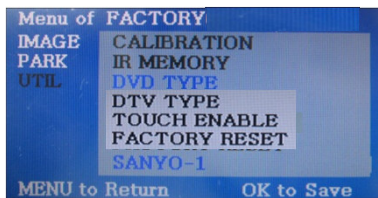
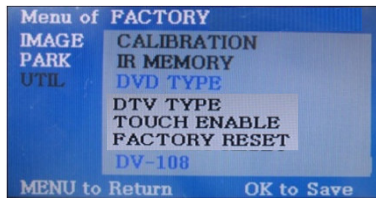
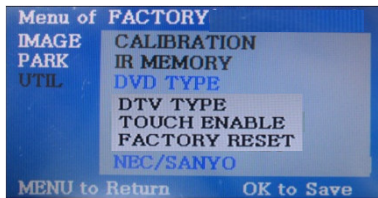
③ After register, select "INPUT" in OSD menu and press "OK". Then you can see confirmation window as shown above. At the moment, if you choose "YES", all the values that you entered will be saved. If you select "NO", the values won't be saved.

(If data is saved, DVD TYPE and DTV TYPE will be changed to "USER" automatically.)

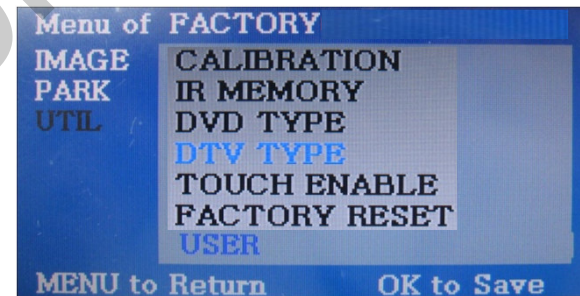
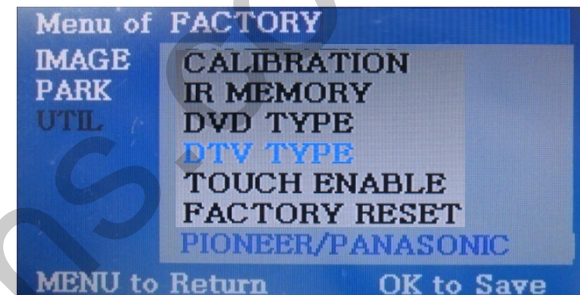
If you see "SUCCESS" on screen, the data is saved clearly and you can control DVD via touch screen. BUT, you MUST change the option in DVD(DTV)/UTIL/FACTORY to "USER". (Refer to page18.)

## 2.8 DVD, DTV model selection

Factory Default : DVD TYPE – NECVOX/SANYO (For Chinese DVD)  
DTV TYPE – CMMB (For Chinese DTV)



DVD TYPE



DTV TYPE

### UTIL – DVD/DTV TYPE

If DVD/DTV type that you want to use is not NECVOX or SANYO, you have to register values of the remote control that you want to use in the "IR MEMORY" section and set the "DVD TYPE"/"DTV TYPE" to "USER". Unless you do this process after saving the data, you can NOT control DVD/DTV via touch screen.

DVD TYPE : NEC/SANYO, DV-108, SANYO-1, SANYO-2, USER

DTV TYPE : PIONEER/PANASONIC, USER, CMMB

※ If you enter data in "IR MEMORY" section in FACTORY mode, "DVD TYPE"/ "DTV TYPE" will **automatically** be saved to "USER".

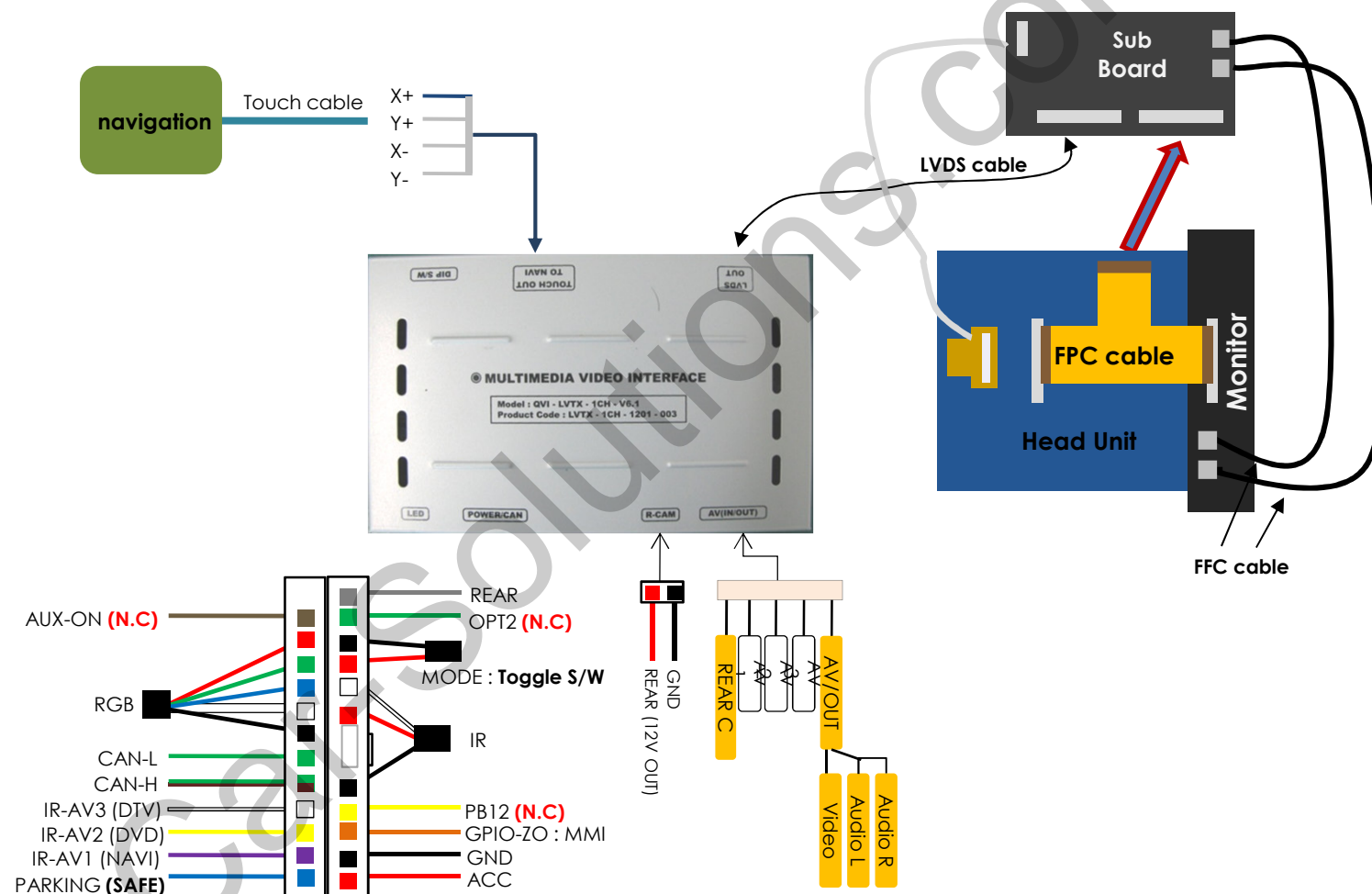
## 2.9 Switching mode via Button cable

After wiring offered Button cable with original cables, you can switch A/V mode by the OEM button as below.



- \* NAVI : Switching modes
- \* The rest buttons : Switching the main display

## 3.1 Installation diagram



## 3.2 Cautions on installation

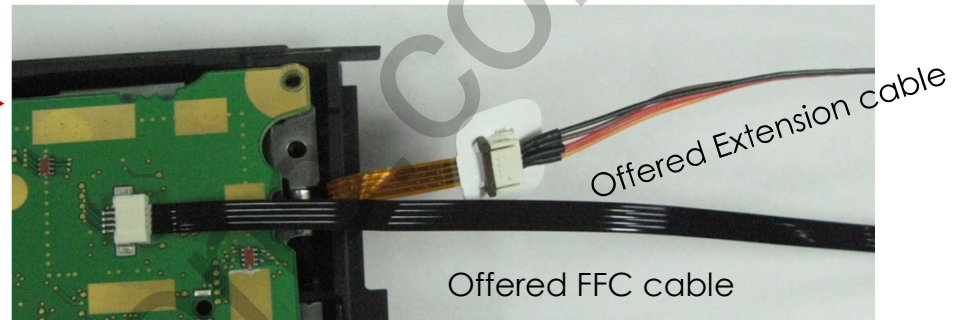
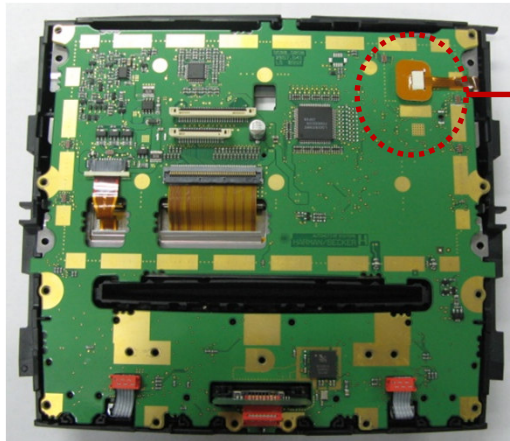
- Ignition key should be taken off before starting installation, interface power connection must be the last step in installation.
- Power cable should be separated when connecting interface.
- Should be no any electronic devices or magnetic pole around installation place.
- All steps of installation should be done by well-trained specialist.
- Dismantling without manufacturer's permission can not be guaranteed, (No permission to break attached label on the board.)
- Kindly check all parts are in the box, when receiving the product, if anything missing, inform to the supplier or manufacturer.
- According to our sales policy, any problems caused by user's mistake, careless can not be guaranteed.



## 3.3 Installation

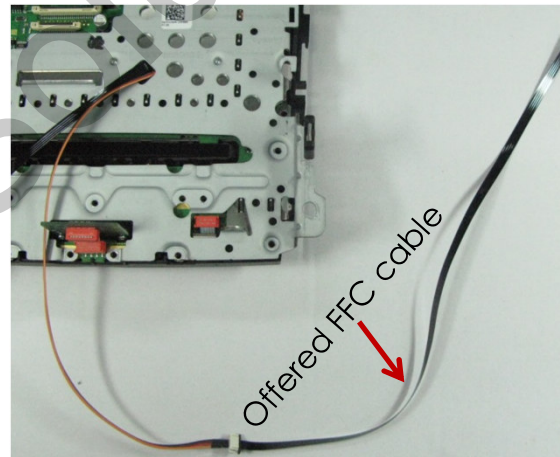
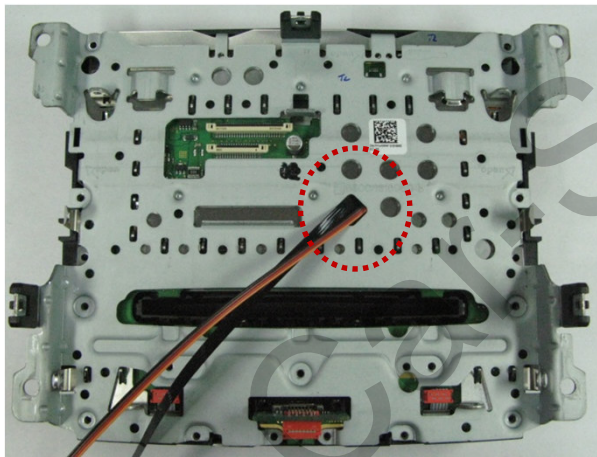
### 1. Connect cables on the backside of Monitor

①



Disassemble the original cable which the marked point as shown left and connect to offered Extension cable. Put the offered FFC cable in where the original cable was.

②



<Left image>

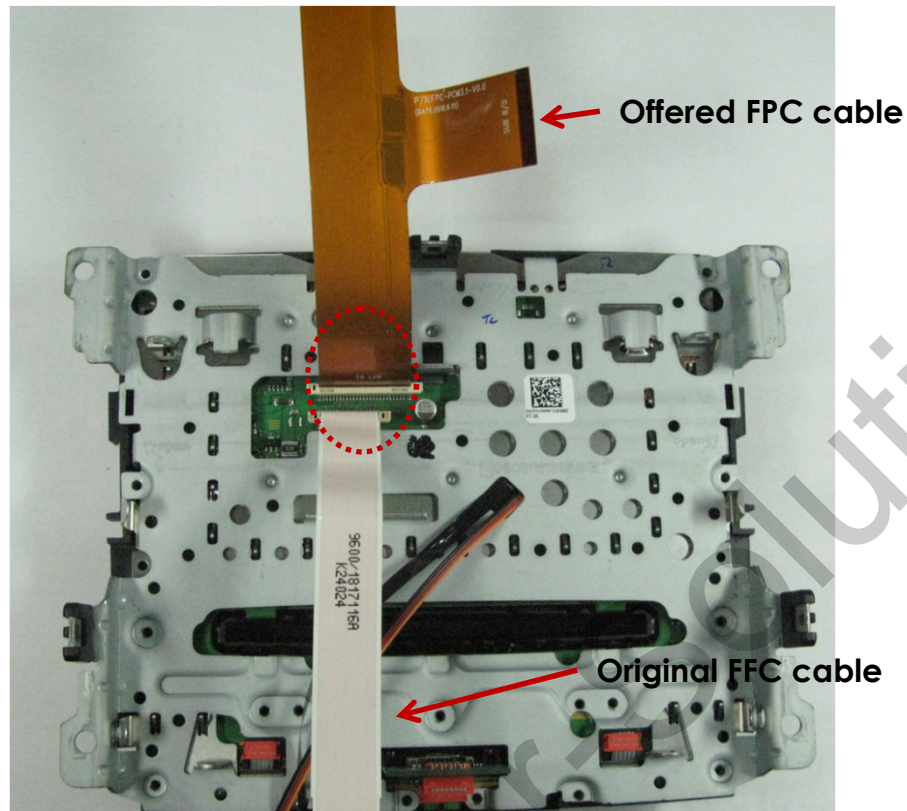
Assemble the bracket as shown left and pull the Extension cable and FFC cable of Image ① out through the marked point.

<Right image>

Connect the offered FFC cable to the Extension cable.

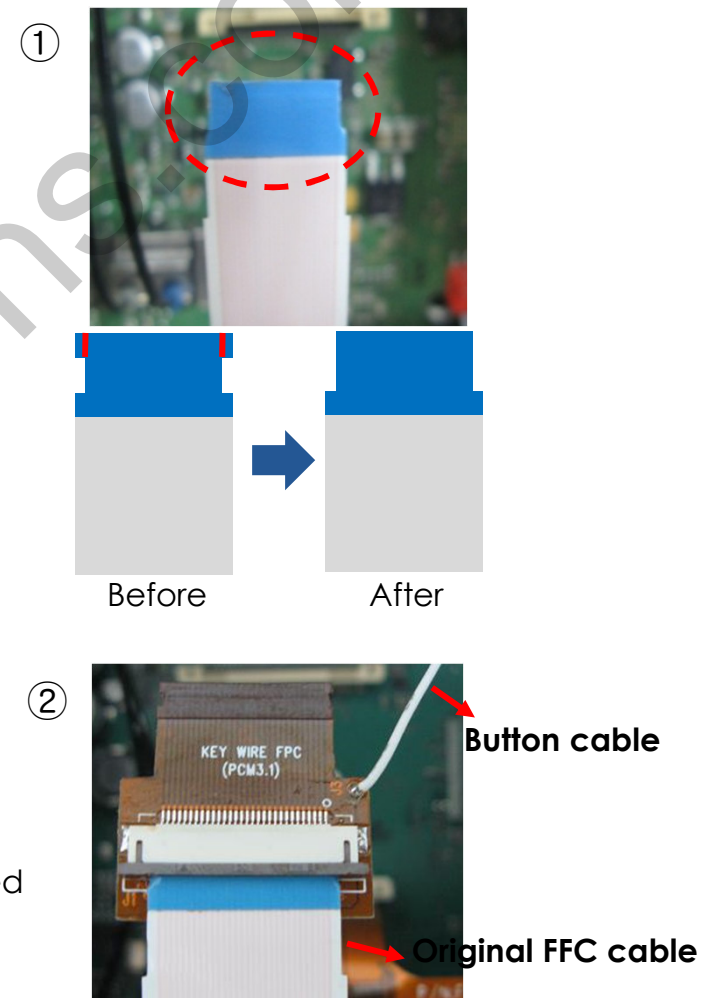
## 3.3 Installation

### 2. Cut the Original FFC cable and connect to button cable



- Image (1) -

Put the offered FFC cable and the original FFC cable on the marked point of Image (1). Trim edges of the opposite side of the original FFC cable as shown Image ① and connect to the offered button cable. (Image ②) Be sure not to damage PIN on the FFC cable.



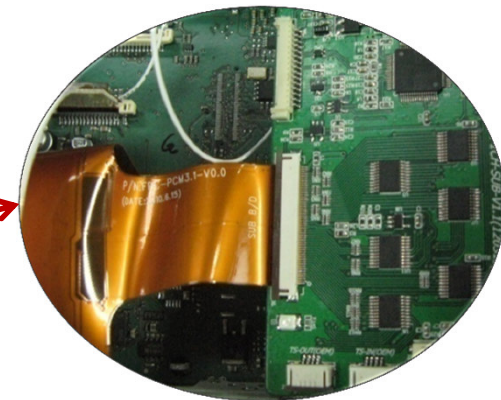
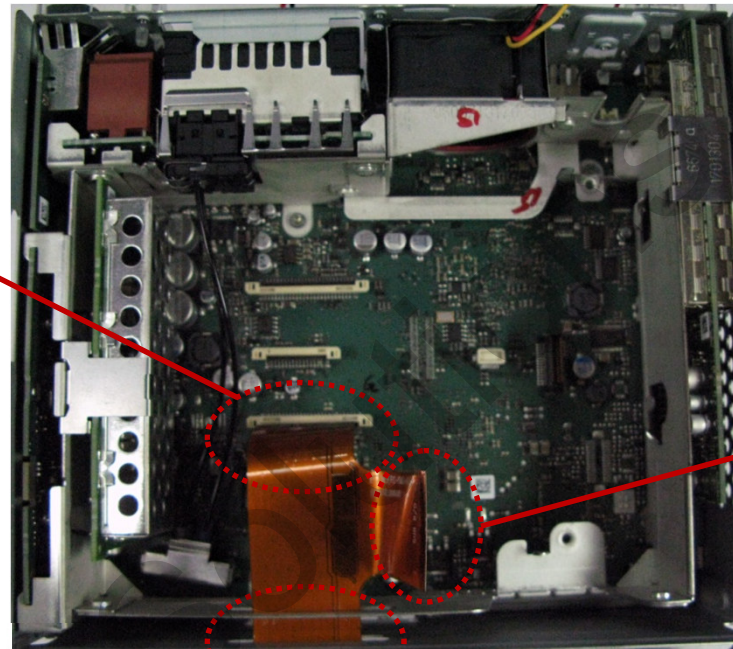


## 3.3 Installation

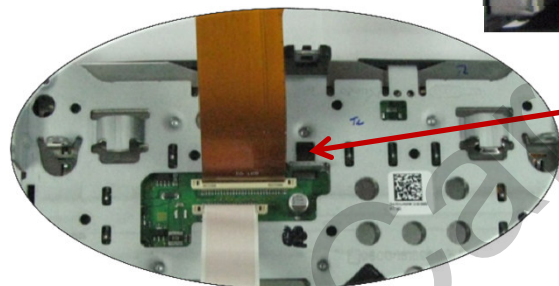
### 3. Remove the original FPC cable



Connect to Head Unit



Connect to Sub Board

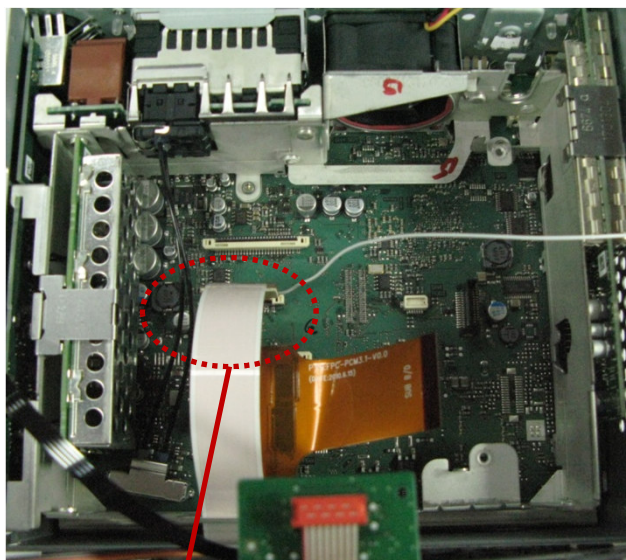


Connect to backside of Monitor

Connect T-shaped FPC cable to supplied sub-board and head unit, after removing the OEM FPC cable as shown up. (Be sure not to connect the opposite side. This can damage the whole unit.)

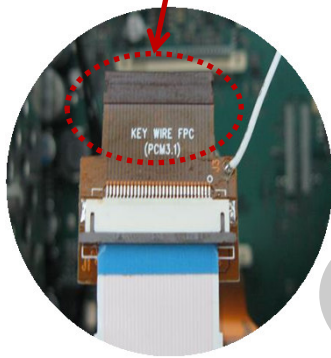
## 3.3 Installation

### 4. Connect Button cable and FFC cable

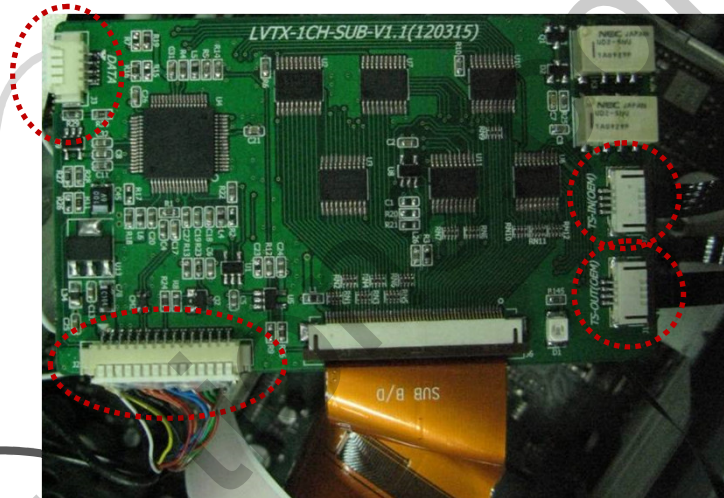


Head Unit

LVDS cable



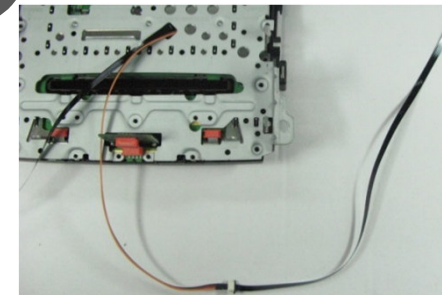
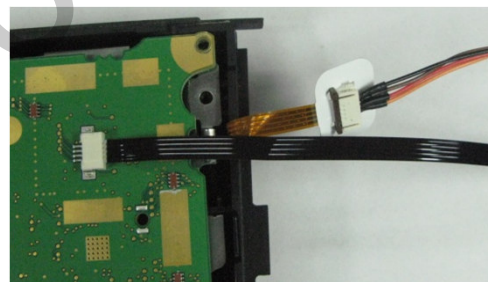
Button cable + FFC cable



Sub Board

FFC cable

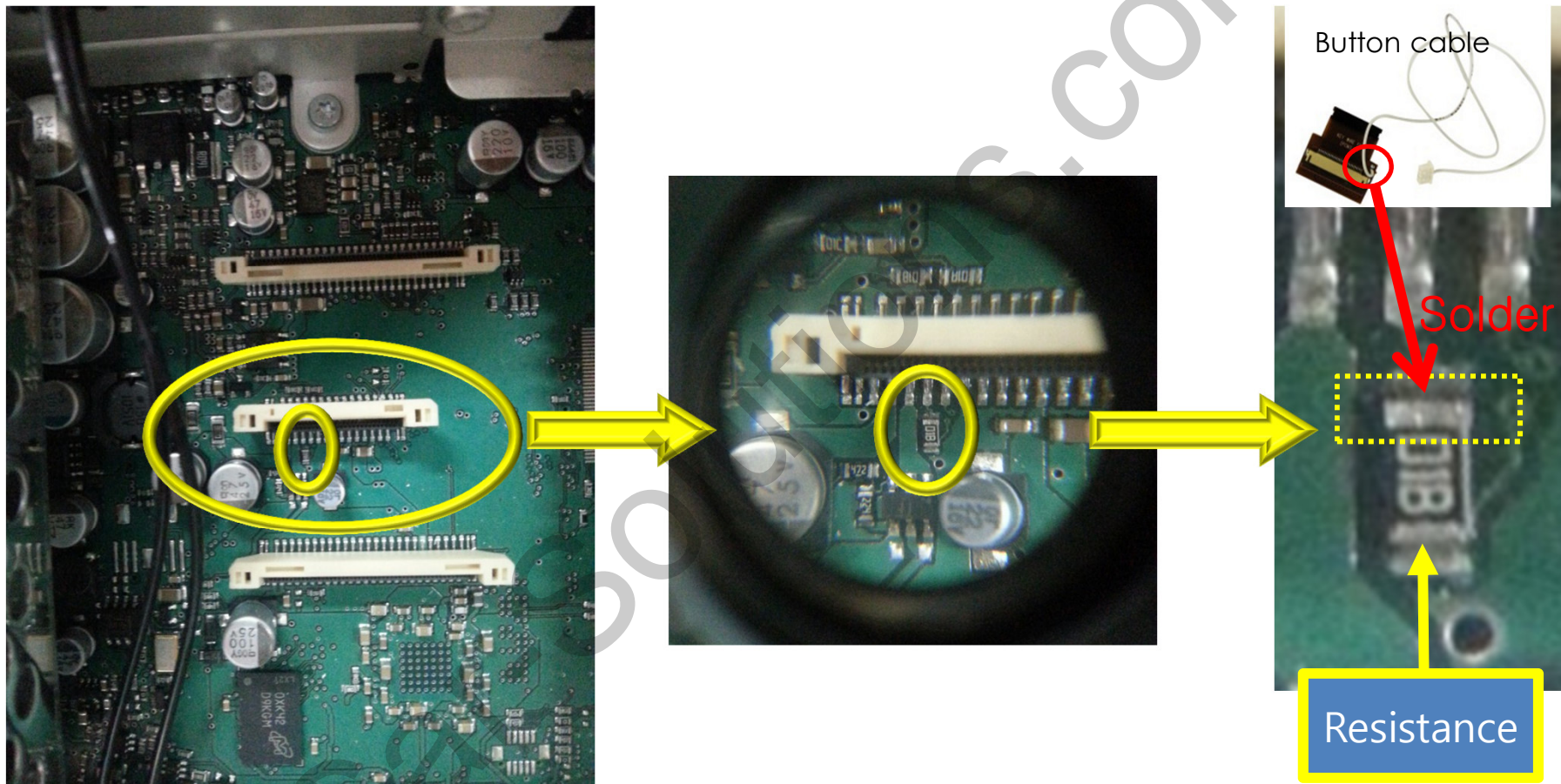
Extension  
cable  
+ FFC cable





## 3.3 Installation

### 5. Connect Button cable(Optional)



In order to avoid from cutting an original FFC cable(Head Unit can get damaged by this process), You can solder the button cable on electrical resistance marked a yellow dotted line box as above.

## 4. Troubleshooting

Q. I can not switch A/V sources

A. Check IR or Ground cable connection. Check LED lamps in the interface, if it is not on, check power cable.

Q. All I got on the screen is black.

A. Check second LED lamp of the interface is on, if not, check A/V sources connected are working well. (Second lamp indicates AV sources connected works well.) Check interface connection has been done well.

Q. Displayed image color is not proper (too dim or not suitable color)

A. Try to select "INITIAL" in OSD menu, if it does not work, inform to manufacturer.)

Q. I can watch the rear camera on the screen

A. Set the DIP switch #7 as state "ON".

Q. Unwanted A/V mode is displayed. (A/V source switching order : OEM->RGB->AV1->AV2->AV3)

A. Check DIP Switch Setting.

Q. OEM image is not displayed.

A. Check interface's LCD In/Out cable connection. If the status keeps on, inform to manufacturer.

Q. Screen only displays white color.

A. Check LCD out cable is connected well, if this status keeps, inform to manufacturer.

Q. After setting PIP function, I got only half OEM image at the right in the screen.

A. This is not an error, just caused by user's setting mistake, user should set to "Split Screen" in the OEM menu.

Q. Rear CAM does not appear, when car is in reverse after CAN wiring.

A. Operate "FACTORY MODE" like left picture, then select "UTIL → Rear Select" If it is set as "LAMP", change it to "CAN" by remote or keypad.

※ LAMP : In case of connecting "Rear-C" wire of Power Cable to Rear Lamp in vehicle.

CAN : In case of detecting Rear Cam thru CAN signal. (CAN must be wired)

Q. After moving gear to "P" or "D" from "Reverse", I can't get navigation, but half PDC Image in the screen.

A. Once, you starts driving, the screen displays navigation right away, this is not an system error.