

# LX-LC200 toyota

## ANDROID INTERFACE

2019.01.28



2018.11.28

2018.03.28

2018.04.26

# COMPONENTS – LC200

<b>LC200</b>		
LX	Capacitive Touch Cable	Universal Cable
AV Cable	IR Cable	Speaker
External GLONASS GPS Antenna	WiFi/BT Antenna x 2	MIC
Key Pad	GVIF OLD TYPE	Power Toyota
Power Default		

## TOUCH COMPONENTS

Option (LC200 Touch In/Out)

<b>LC-TOUCH</b>	<b>TOUCH-to-ANDROID</b>	<b>TOUCH-SUB</b>
<b>TOUCH-OUT (4Pin)</b>	<b>TOUCH-IN (4Pin)</b>	<b>FFC Cable (4Pin)</b>

## TOUCH COMPONENTS

Option (LX570 Touch In/Out)

<b>LX-TOUCH</b>	<b>TOUCH-to-ANDROID</b>	<b>TOUCH-SUB</b>
<b>TOUCH-OUT (8Pin)</b>	<b>TOUCH-IN (8Pin)</b>	<b>FFC Cable (8Pin)</b>

# SPEC

## ※ ANDROID

<b>OS</b>	Android 7.1.2(Nougat)
<b>CPU</b>	Six-Core 64bit Server Class Cortex-A72 Core @2.0Ghz, Mali-T860 Quad-Core GPU (Total Ten-Core)
<b>VPN</b>	H.264/H.265/VP9 up to 4Kx2K@60fps (4K Video)
<b>Memory</b>	2GB DDR3
<b>USB</b>	USB2.0 High Speed Port x 1
<b>USB 3.0</b>	USB3.0 5.0Gbps Port x 1
<b>Wireless</b>	2.4GHz/5GHz Dual-Band WiFi, Support 802.11a/b/g/n/ac, Bluetooth 4.1
<b>GPS</b>	Ublox8 GPS(GLONASS/BEIDOU/GALILEO/QZSS/SBAS)
<b>HDMI OUT</b>	HDMI 2.0, Support maximum 4K@60Hz display
<b>Speaker</b>	2W
<b>I/O</b>	Mic (voice recognition),
<b>Temperature</b>	-20°C ~ 80°C
<b>Operating</b>	-15°C ~ 70°C

## ※ INTERFACE

<b>Input Spec.</b>	1 x HDMI IN (1280x720), 2 x A/V Input ( external video source ) 1 x CVBS ( Front Camera ) 1 x CVBS ( Rear Camera )
<b>Output Spec.</b>	1 x Audio L/R Output 1 x LVDS Output ( LCD Operation )
<b>Power Spec.</b>	Input Power : 12V DC ~ 24V DC Consumption Power : 12 Watt Max
<b>I/O</b>	Input : 10P Dip Switch Output : 12V Output ( 3A Max ) DVB-T IR ( Remote Control ) DVD IR ( Remote Control )

# CONNECTOR PIN ASSIGNMENT – LC200

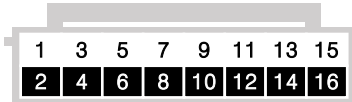
Power Cable  
(POWER/CAN)



1	3	5	7	9	11	13	15
Red	Green	Purple	Blue		Purple	Purple	
ACC	REVERSE IN	TOUCH_SW	ST ADC2		PAD_CAN IN_H	T-BUS P	
2	4	6	8	10	12	14	16
Black			Orange		Brown	Brown	
GND		N.C	RELAY B/L		PAD_CAN IN_L	T-BUS M	

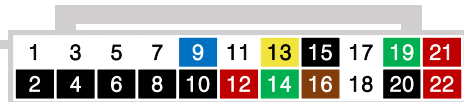


AV Cable  
(AV IN)



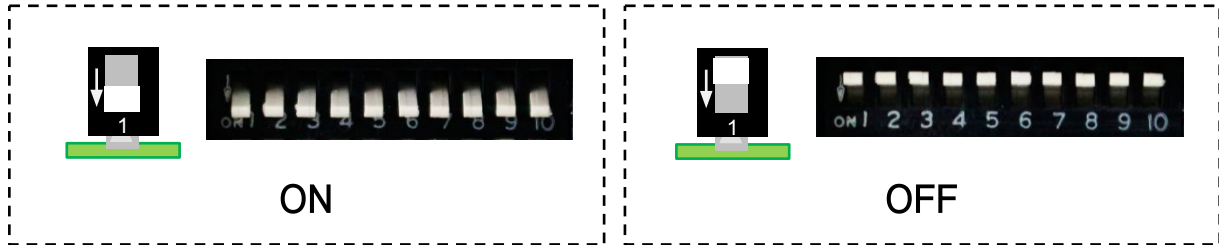
1	3	5	7	9	11	13	15
White	White	White	White	White	White	White	White
AV1_IN_V	AV1_IN_R	AV1_IN_L	AV2_IN_V	AV2_IN_R	AV2_IN_L	FRONT_IN	REAR_IN
2	4	6	8	10	12	14	16
Black	Black	Black	Black	Black	Black	Black	Black
GND	GND	GND	GND	GND	GND	GND	GND

Universal Cable  
(AV IN/OUT)



1	3	5	7	9	11	13	15	17	19	21
White	White	White	White	Blue	White	Yellow	Black	White	Green	Brown
SPK_P	AUX_OUT_R	AUX_OUT_L	MIC_P	Capacitive Touch SCL	Capacitive Touch SDA	Capacitive Touch Interrupt	Resistive Touch X-	Resistive Touch Y-	Resistive Touch X+	Resistive Touch Y+
2	4	6	8	10	12	14	16	18	20	22
Black	Black	Black	Black	Black	Red	Green	Brown	White	Black	Red
SPN_N	GND	GND	MIC_N	GND	Capacitive Touch 3.3V	Capacitive Touch Reset	DVBT-IR	IR_IN	IR_GND	IR_POWER

# DIP S/W INFORMATION – LC200



Pin No.	ON	OFF
1	Capacitive Touch	Resistive Touch, UART Touch
2	GOODIX Capacitive Touch	ILITEK Capacitive Touch
3	Android Resolution (ON)	

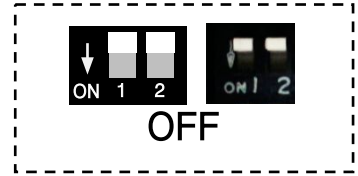
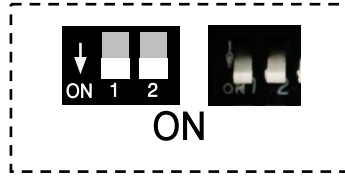
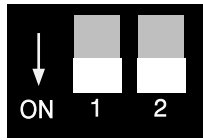
4	5	6	7	8	9	10	Car Model
Off	Off	Off	Off	Off	Off	Off	Lexus RX
Off	Off	Off	Off	On	Off	Off	Lexus RX200T
Off	Off	Off	On	Off	Off	Off	Lexus LX570 (2013 – 2015)
Off	Off	Off	Off	Off	On	Off	Lexus LX570 (2016 – 2018)
Off	Off	Off	On	Off	On	Off	Lexus ES350
Off	Off	Off	Off	On	On	Off	TOYOTA LC200

RX200T = RX model small monitor

LC200 = TOYOTA LAND CRUISER 200

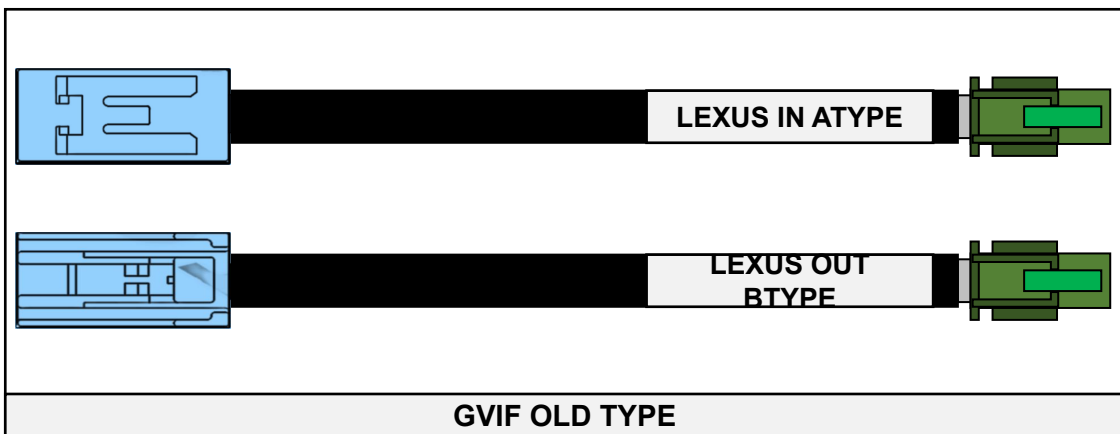
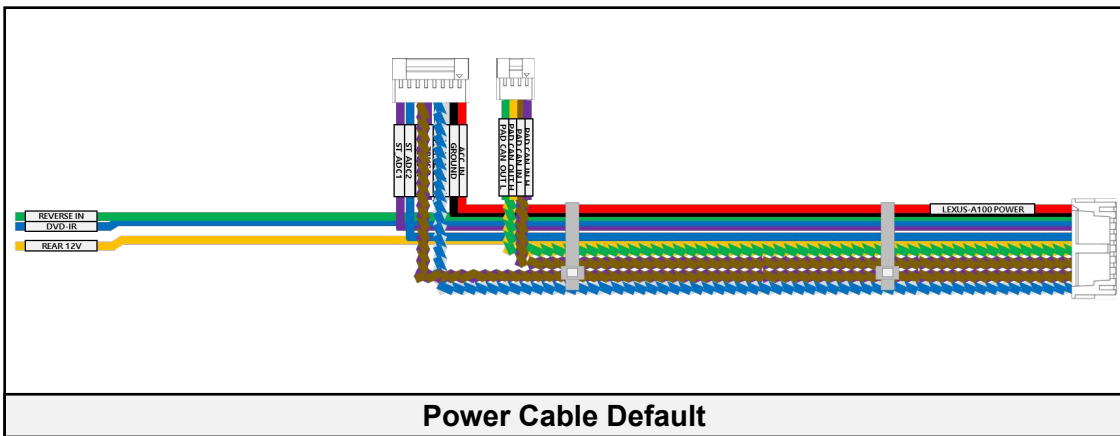
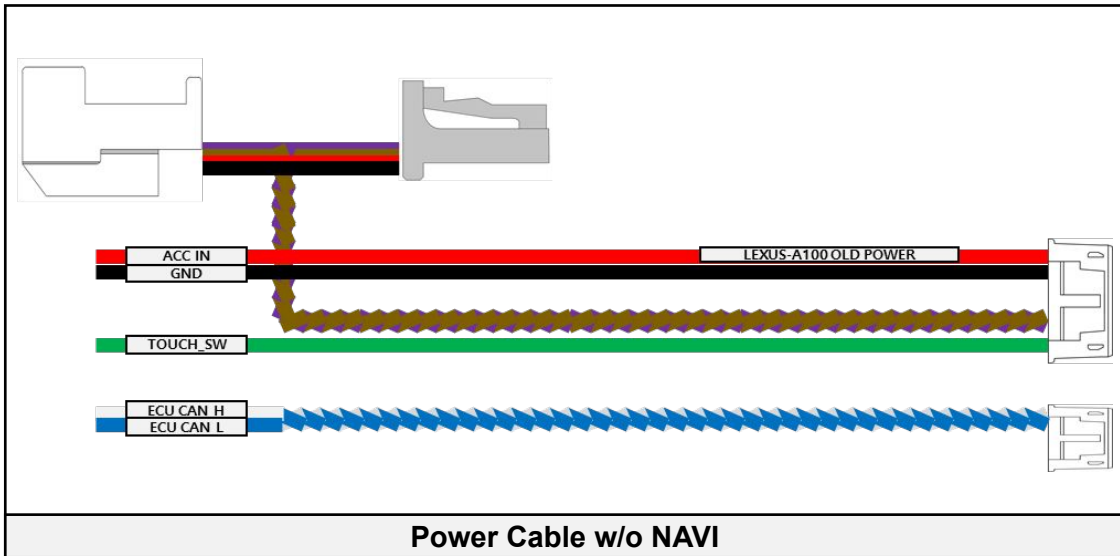
TOUCH IN/OUT BOARD IS OPTIONAL PART

# DIP S/W INFORMATION



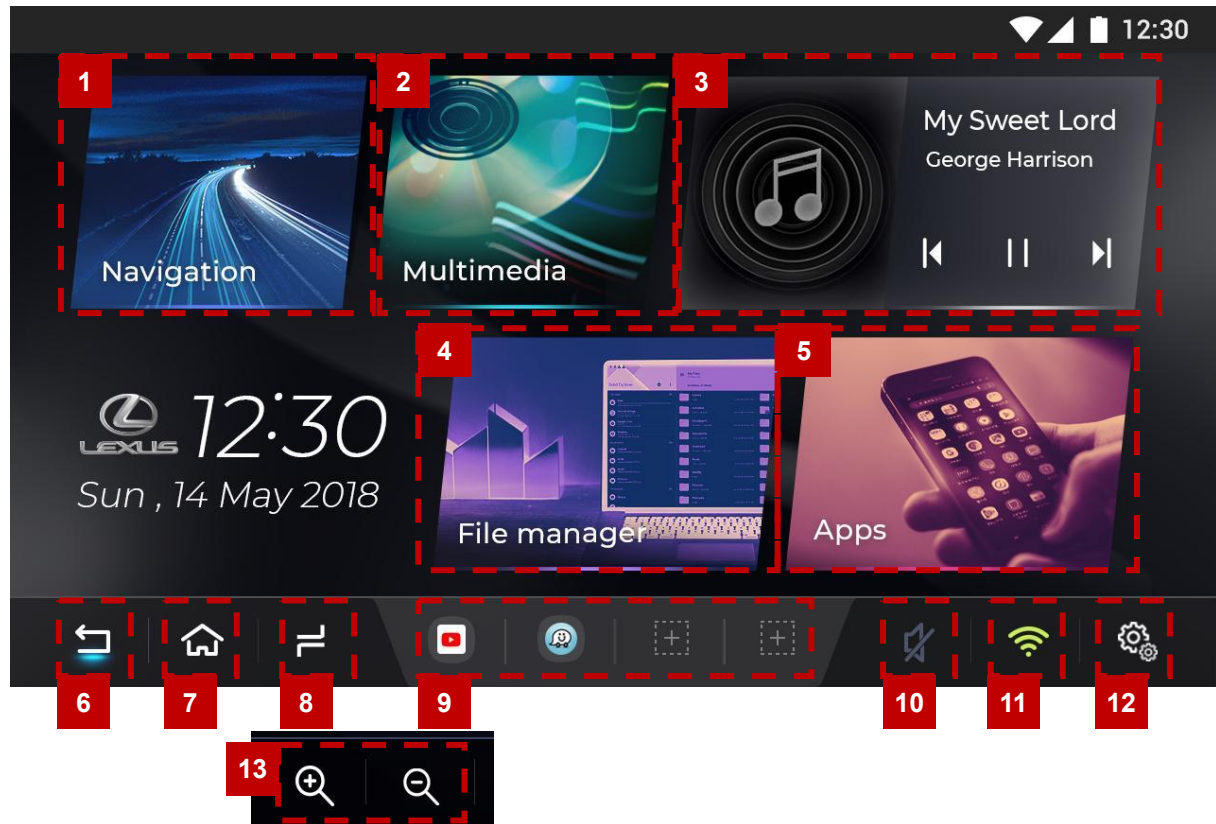
Pin No.	On	Off
1	N.C.	N.C.
2	Use External GPS Antenna (DIP S/W 2 Must ON)	Use Car GPS Cable (Option)

# POWER CABLE INFORMATION - LC200



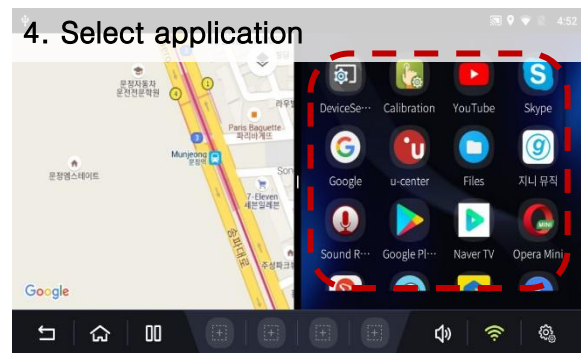
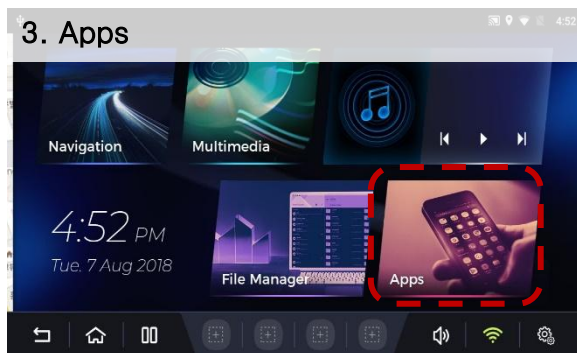
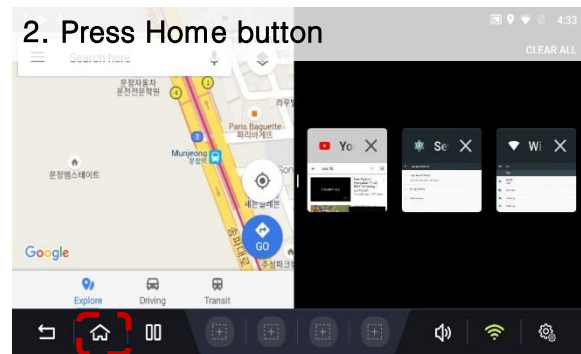
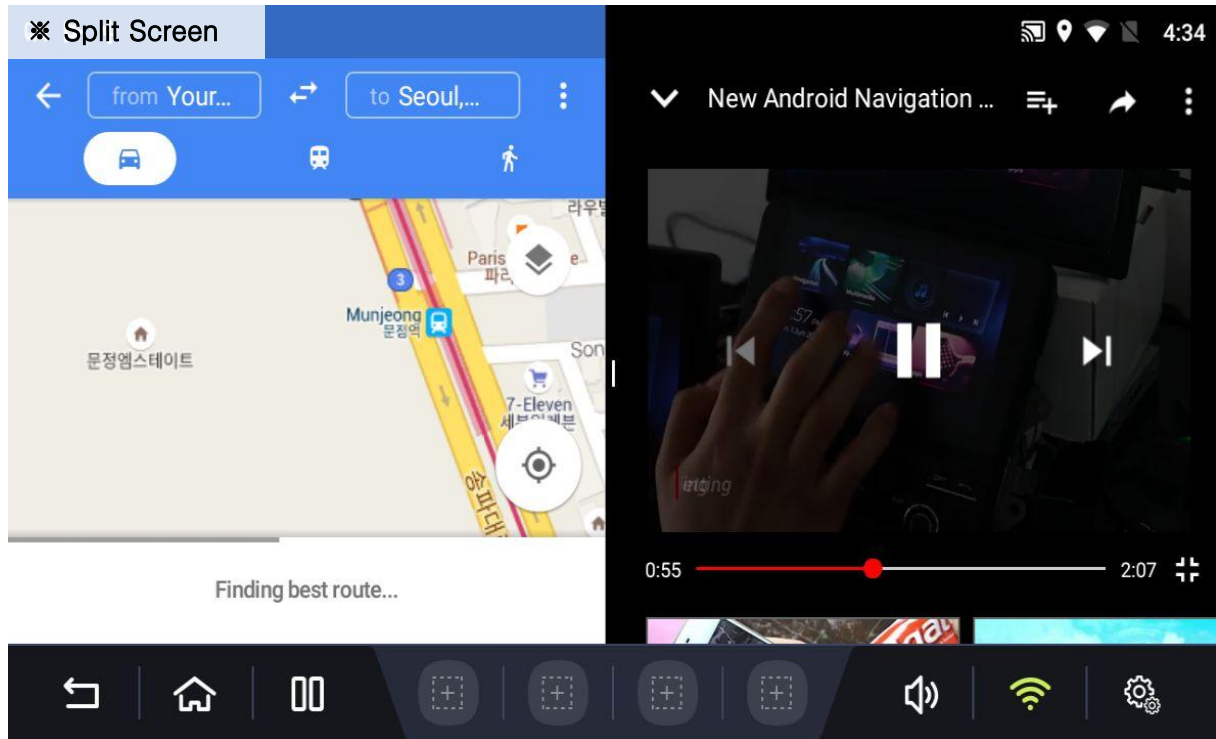


# SCREEN VIEW



1	NAVIGATION	Quick icon for Navigation Application
2	Multimedia	Quick icon for Multimedia Application
3	Music Player	Music player Widget
4	File Manager	Quick icon for File Manager Application
5	APPS	Application List
6	Back Button	Return
7	Home Button	Home
8	Multitasking	1. Multitasking 2. PIP Mode by Long Press
9	APP Shortcut	Quick icon
10	Sound	Volume control
11	WiFi	Open Wifi setting screen
12	Settings	Open Android Settings
13	Zoom Tool	Screen Zoom in / out * This icon will show when car monitor have "Resistive Touch",

# SCREEN VIEW – Split Screen Mode



※ Some apps are not work on Split Screen Mode

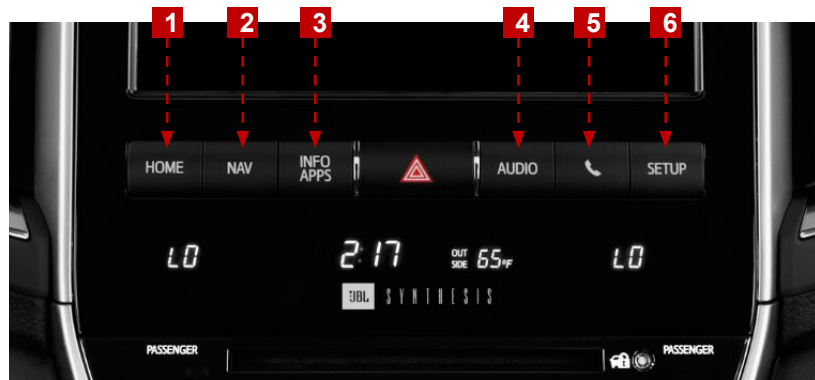
# OEM BUTTON USAGE

## LX570 (2016 - 2018))



No.	Button	Press	Mode	Function
1	MAP	Short Press	ROiK	to Oem screen
		Long Press (2sec)	OEM	to ROiK screen
2	BACK	Short Press	ROiK	Back key for Android
3	MENU	Short Press	ROiK	to Oem screen
4	▲(UP)	Short Press	ROiK	Seek up down
5	▼(DOWN)	Short Press		
6	JOG	Short Press	ROiK	Mouse

## LC200



No.	Button	Press	Mode	Function
1	HOME	Short Press	ROiK	to Oem screen
2	NAV	Short Press	ROiK	to Oem screen
		Long Press (2sec)	OEM	to ROiK screen
3	INFO	Short Press	ROiK	to Oem screen
4	AUDIO	Short Press	ROiK	
5	PHONE	Short Press		
6	SET UP	Short Press	ROiK	

# OEM BUTTON USAGE

## RX200T



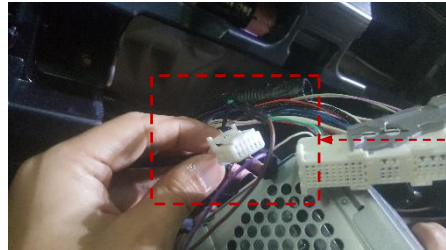
No.	Button	Press	Mode	Function
1	AUDIO	Short Press	ROiK	to Oem screen
2	MENU	Short Press	ROiK	to Oem screen
3	BACK	Long Press (2sec)	OEM	to ROiK screen
4	DIAL	Short Press	ROiK	Mouse

## LX570 (2013 - 2015)

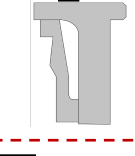
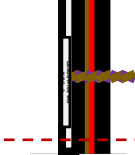
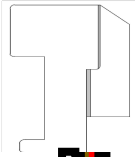


No.	Button	Press	Mode	Function
1	HOME	Short Press	ROiK	to Oem screen
2	AUDIO	Short Press	ROiK	to Oem screen
3	HOME	Short Press	ROiK	to Oem screen
4	NAV	Short Press	ROiK	to Oem screen
		Long Press (2sec)	OEM	to ROiK screen
		Long Press (2sec)	HDMI	to ROiK screen
5	INFO	Short Press	ROiK	to Oem screen
6	PHONE	Short Press	ROiK	to Oem screen
7	SETUP	Short Press	ROiK	to Oem screen

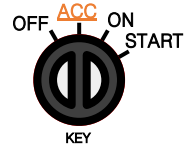
# CONNECT CAN/POWER DIAGRAM



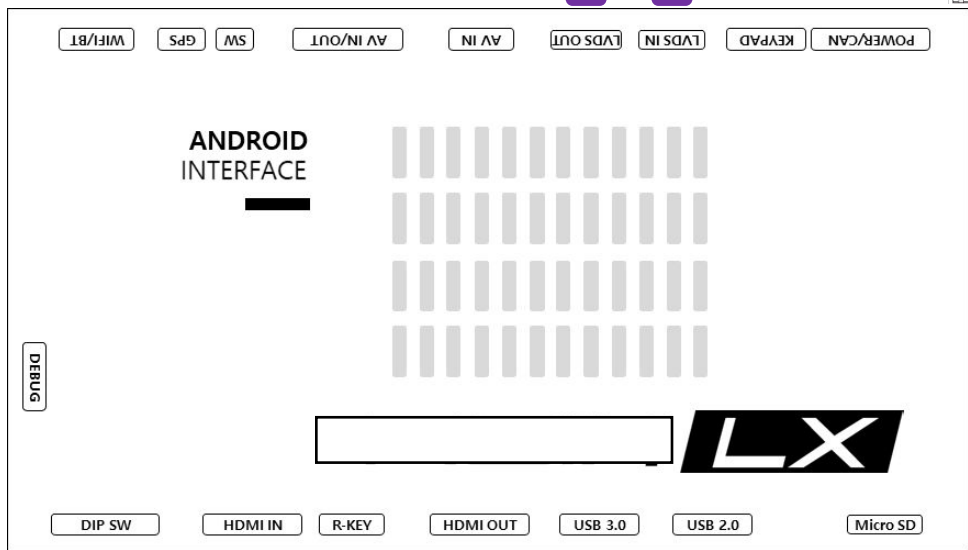
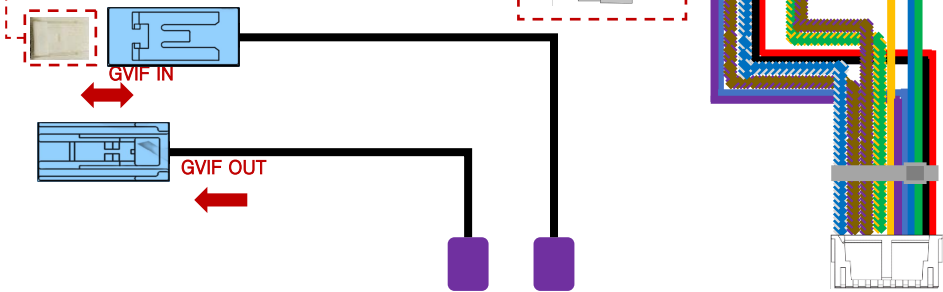
Original cable



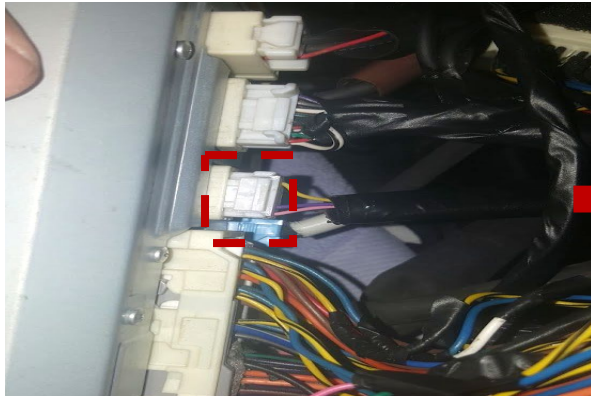
※ Connect "ACC", "GND" to ACC, GND



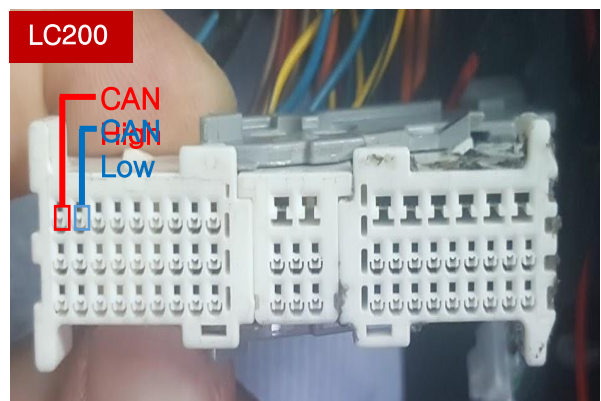
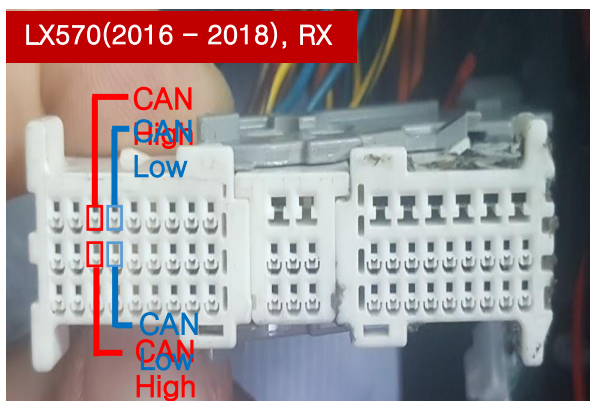
※ Connect CAN wire to behind Audio-headunit



# CONNECT CAN/POWER CONNECTOR

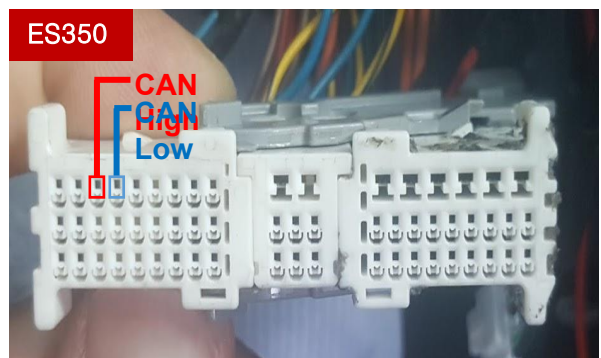


- Remove original connector.
- Connect supplied connector to audio and original connector.



※ Depending on the type of vehicle, the position of "can" may be different.

- Connect "CAN High/Low" to the original connector from supplied connector

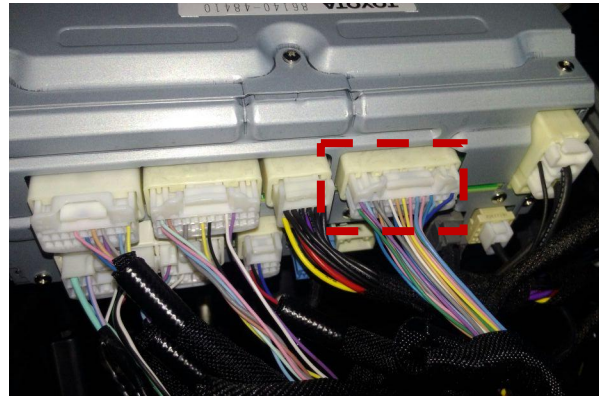
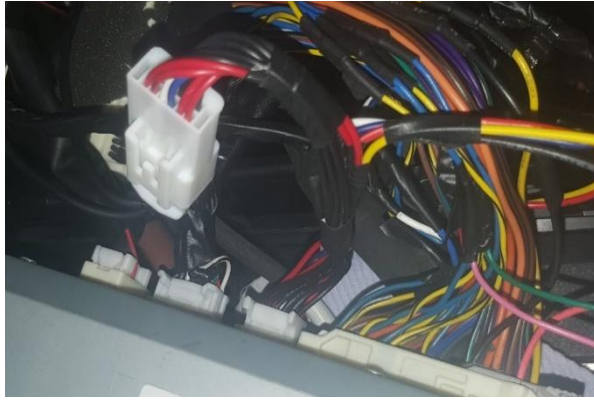


1	3	5	7	9	11	13	15
2	4	6	8	10	12	14	16

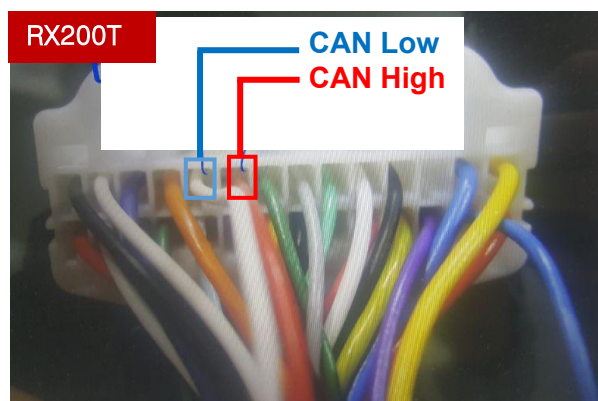
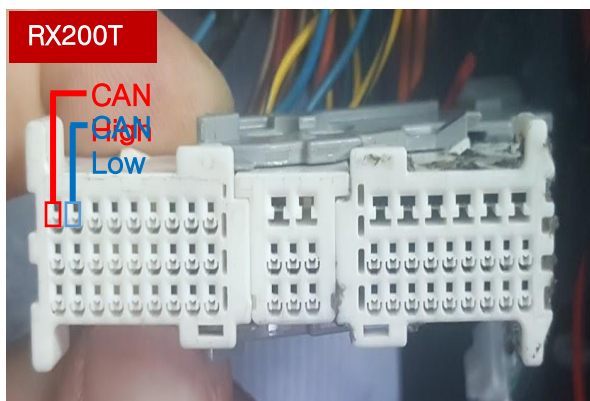
※ Please connect power of interface to ACC.  
 ※ If connect to BAT. There is case of that Rear camera would be not working.

- Connect supplied connector to connector on HeadUnit
- Connect "CAN High/Low" to the original connector from supplied connector

# CONNECT CAN/POWER CONNECTOR

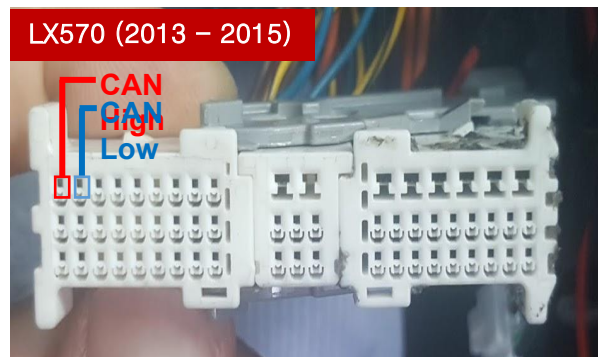
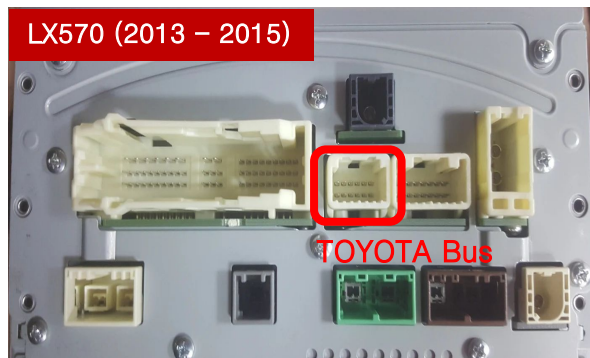


- Remove original connector.
- Connect supplied connector to audio and original connector.



※ Depending on the type of vehicle, the position of "can" may be different.

- Connect 'CAN High/Low" to the original connector from supplied connector

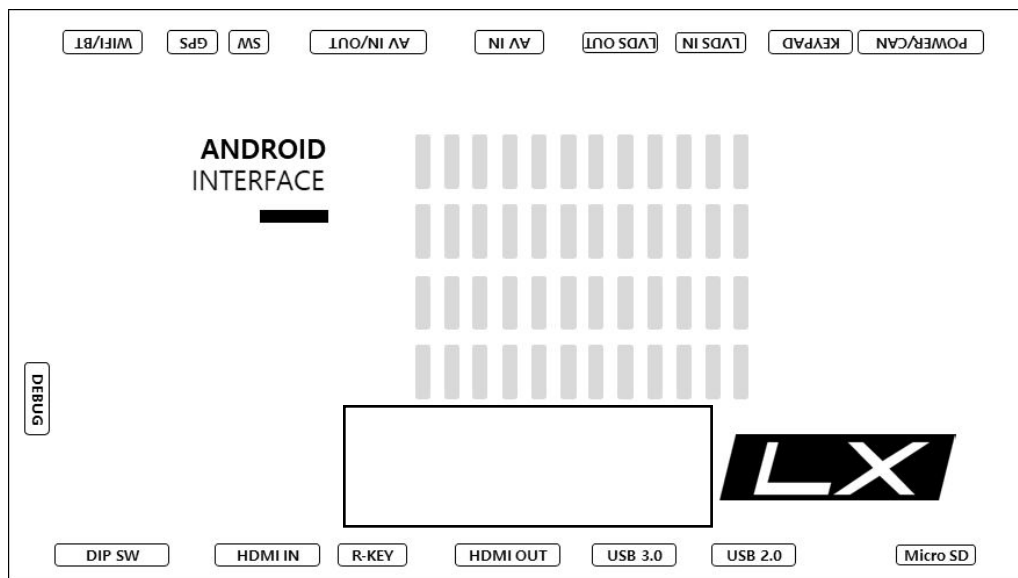
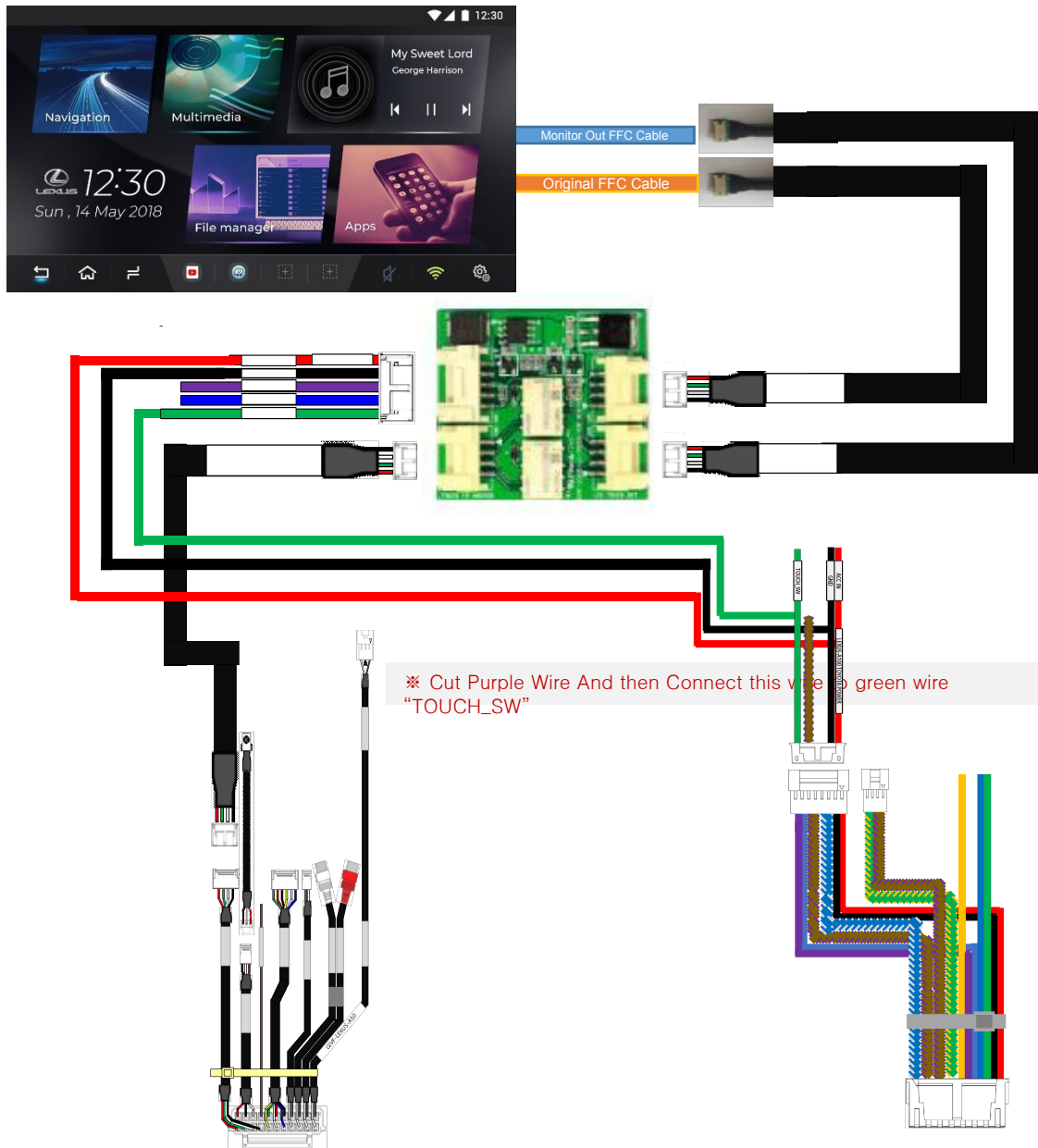


※ Please connect power of interface to ACC.

※ If connect to BAT. There is case of that Rear camera would be not working.

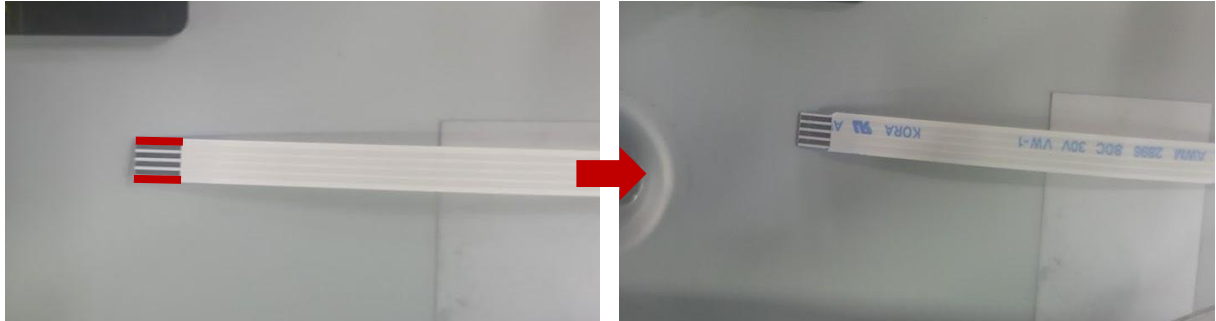
- Connect supplied connector to connector on HeadUnit
- Connect 'CAN High/Low" to the original connector from supplied connector

# TOUCH CABLE DIAGRAM – LC200 / LX570

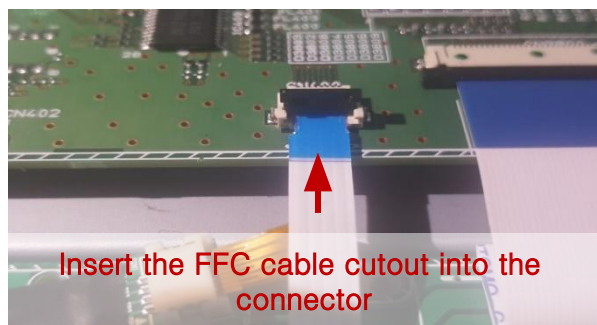
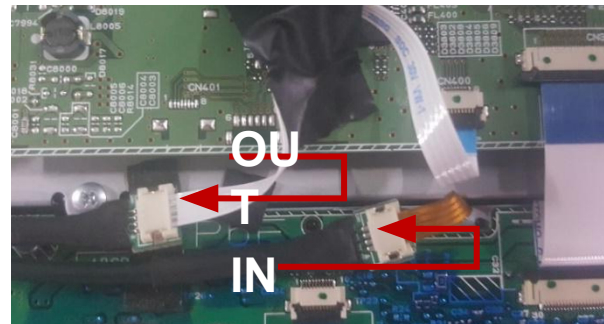
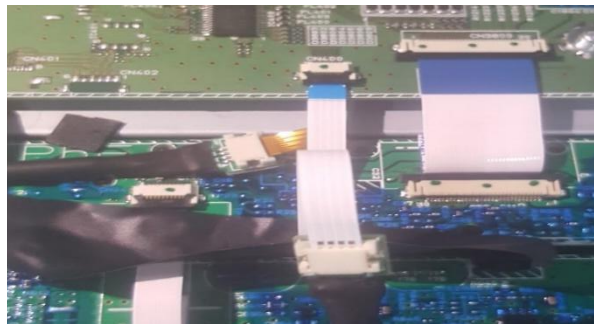
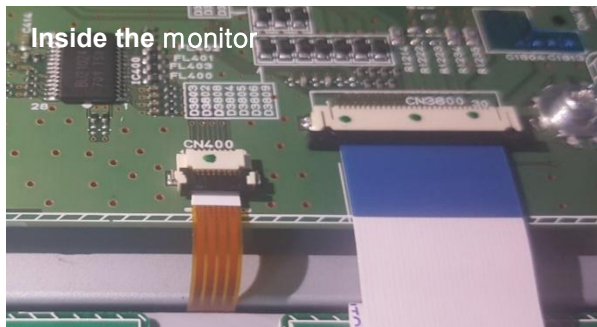




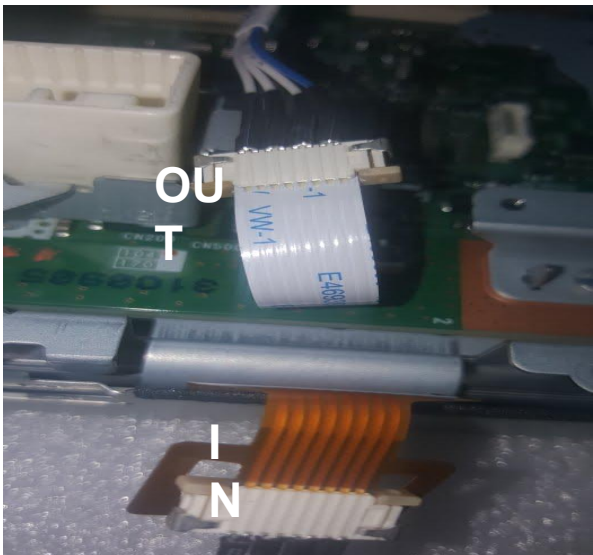
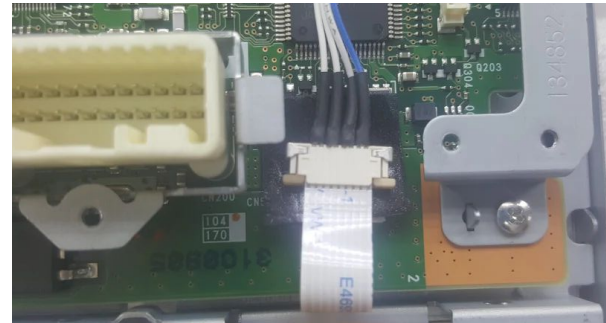
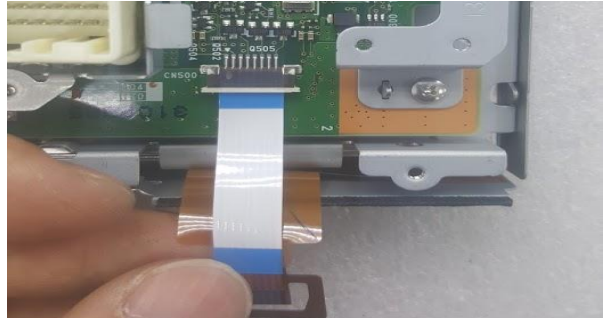
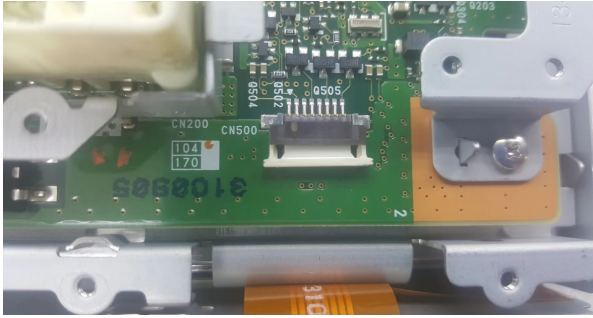
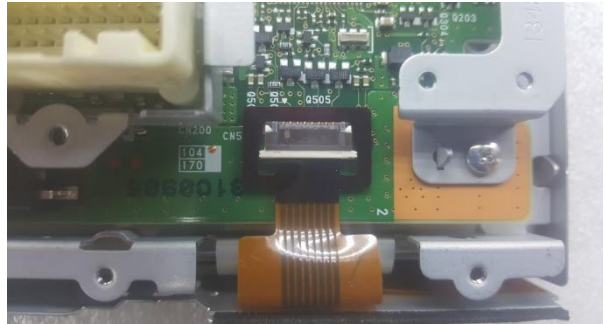
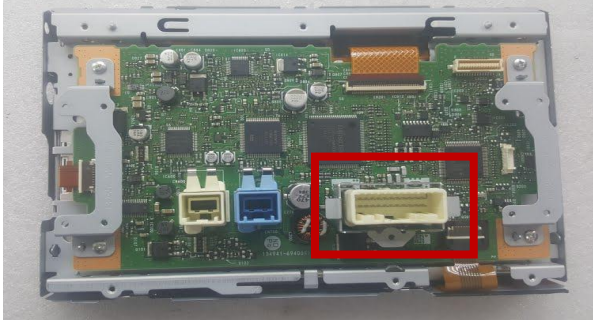
# MONITOR FFC SETTING – LC200



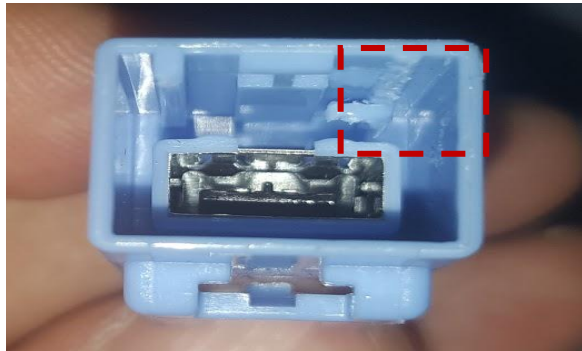
Cut off the supplied FFC cable



# MONITOR FFC SETTING - LX570



# CONNECT LVDS IN/OUT

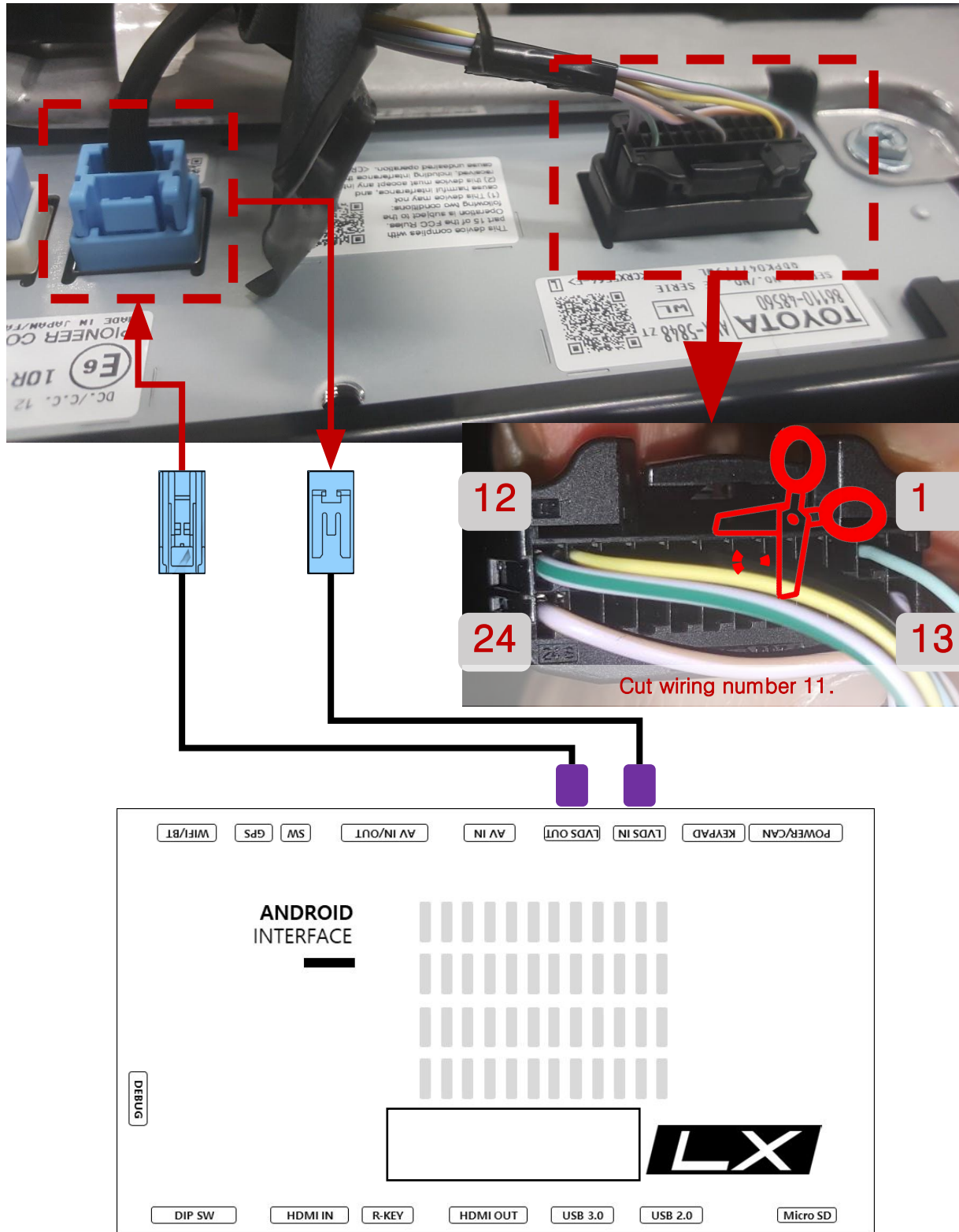


- Remove white connector on behind of monitor.
- Cut plastic of white connector and supplied connector
- Connect white connector to supplied connector and supplied connector to behind of monitor.

Car Model	GVIF IN/OUT Connector Color Behind Monitor
Lexus RX	White
Lexus LX570 (2013 – 2015)	Blue
Lexus LX570 (2016 – 2018)	White
Lexus RX200T	Blue
Lexus ES350	Blue
Toyota LC200	White

※ Different In/Out GVIF according to Car Model

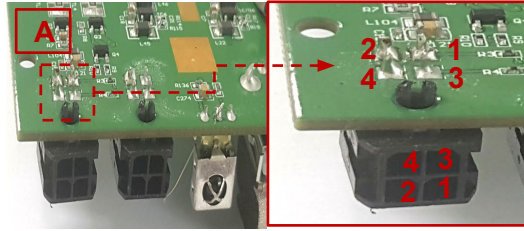
## CONNECT LVDS IN/OUT



### ※ RX200T

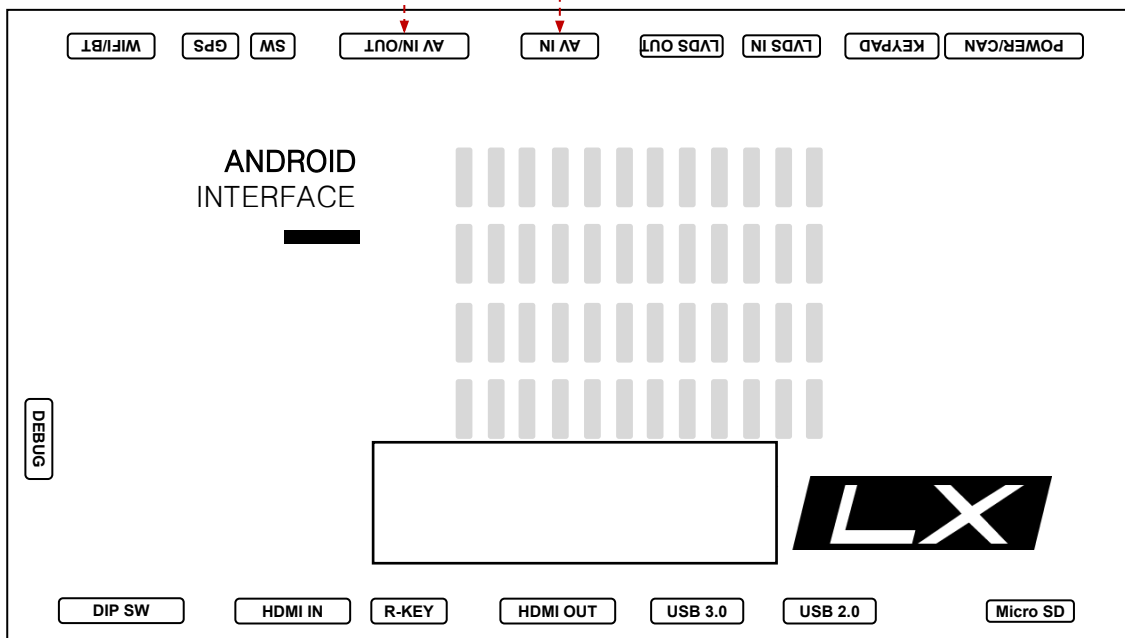
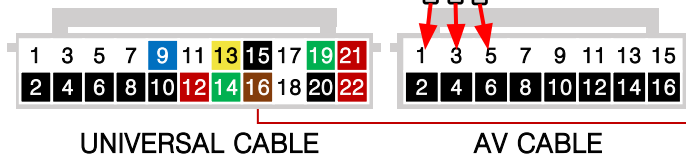
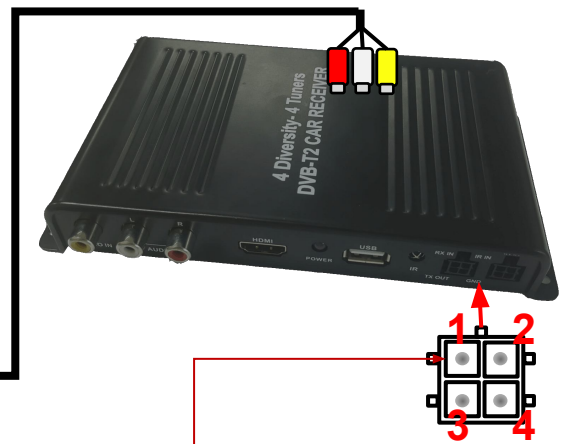
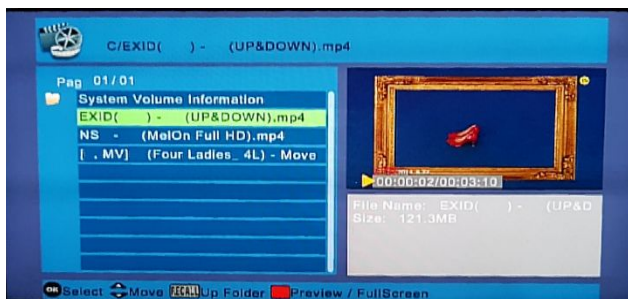
- Remove blue connector on behind of monitor.
- Cut plastic of blue connector and supplied connector
- Connect blue connector to supplied connector and supplied connector to behind of monitor.

# DVB-T CONNECTION DIAGRAM FOR AV INPUT



Open the cover of DVB-T.  
Connect 'DVB-T-IR' provided to 'A' on picture

1	IR - DVB-T
2	DO NOT USE.
3	DO NOT USE.
4	DO NOT USE.



# DVB-T CONNECTION DIAGRAM FOR ASUKA



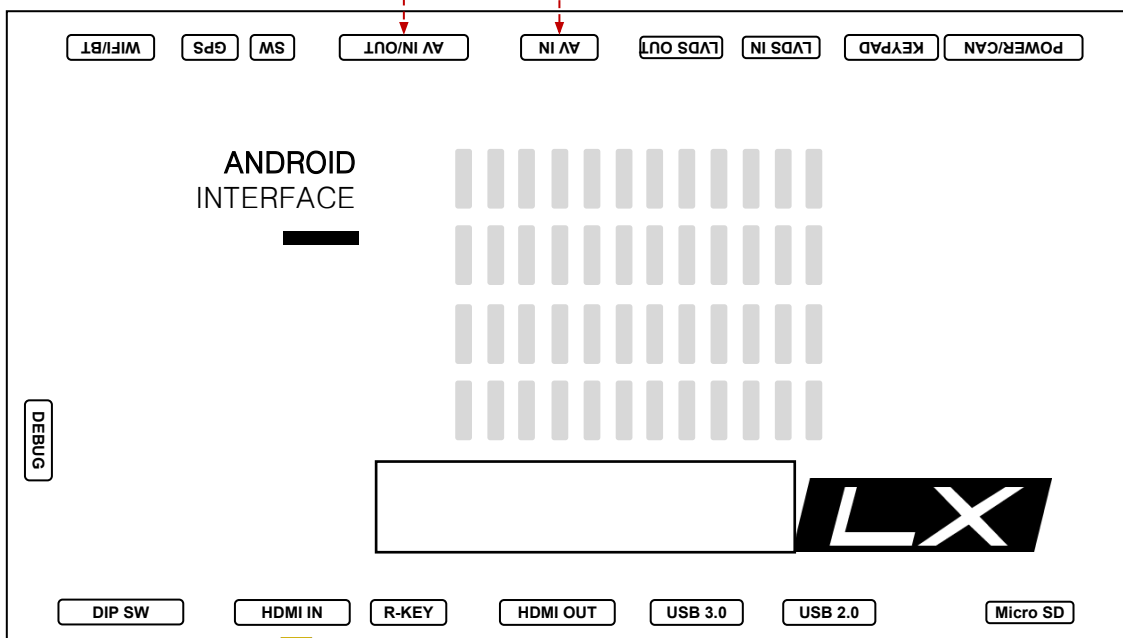
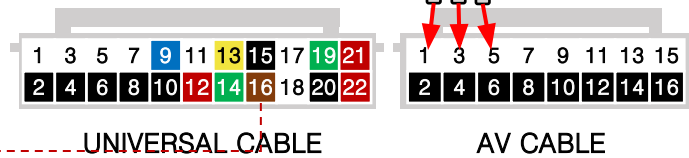
SETTINGS		ROIK-LX
ANDROID	ON / OFF	<input type="checkbox"/> NORMAL
HDMI	IMAGE DISPLAY	<input checked="" type="checkbox"/> ASUKA DVB-T
DVB-T	SOURCE	
DVD		
FRONT		
REAR		
SYSTEM INFO		

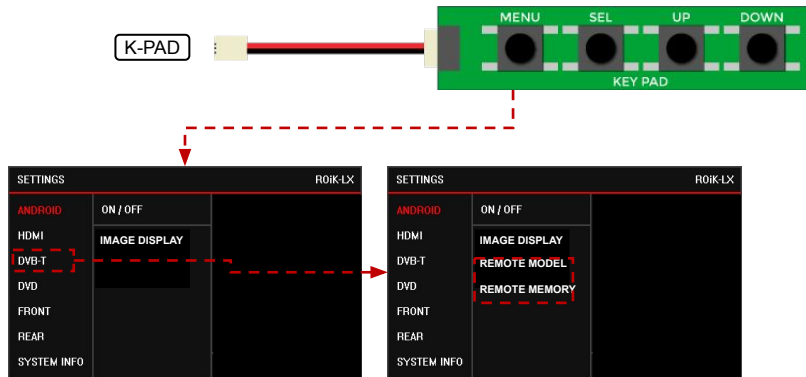
SETTINGS		ROIK-LX
ANDROID	ON / OFF	<input type="checkbox"/> Gex909
HDMI	IMAGE DISPLAY	<input type="checkbox"/> ANT019
DVB-T	REMOTE MODEL	<input type="checkbox"/> HFT2A
DVD	REMOTE MEMORY	<input type="checkbox"/> DhaS690
FRONT		<input type="checkbox"/> Dvh570
REAR		<input checked="" type="checkbox"/> ASUKA
SYSTEM INFO		

**ASUKA DVB-T in SETTINGS**

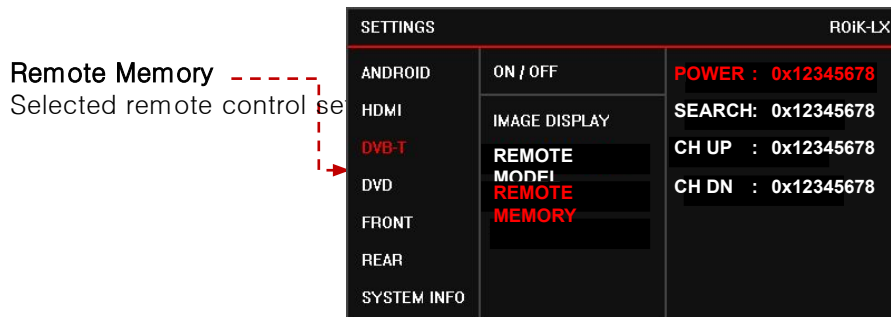
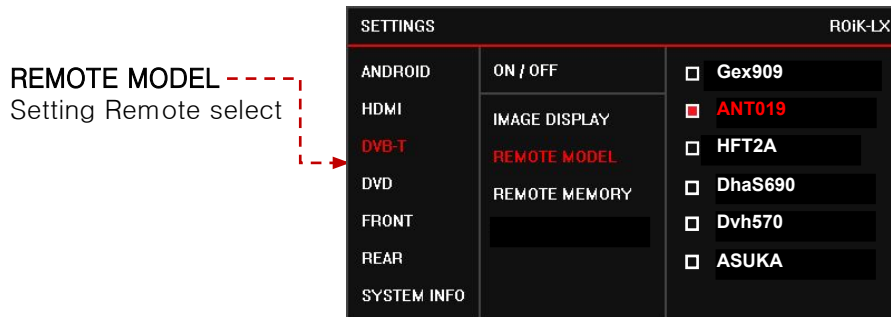
- Use Joystick of Car as mouse for controlling DVB-T
- Use Touch panel for controlling DVB-T Touch be activated in 20 sec after turn on ACC.



# ADD REMOTE CONTROLLER





Enter the setting menu. And DVB-T select.



# TOUCH PAD GESTURE -RX



 **Click**  
Push Joystick and release

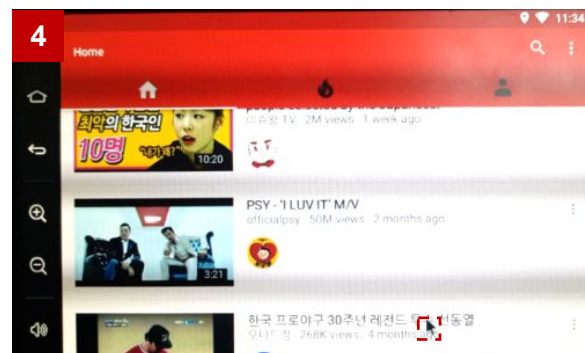
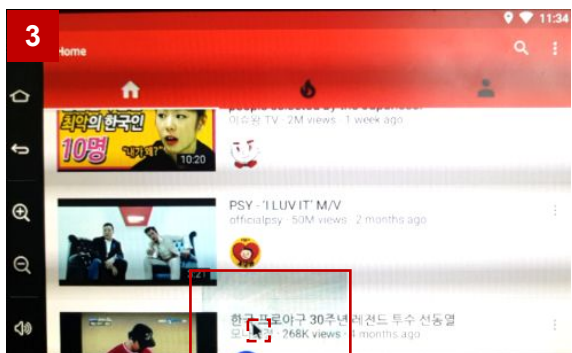
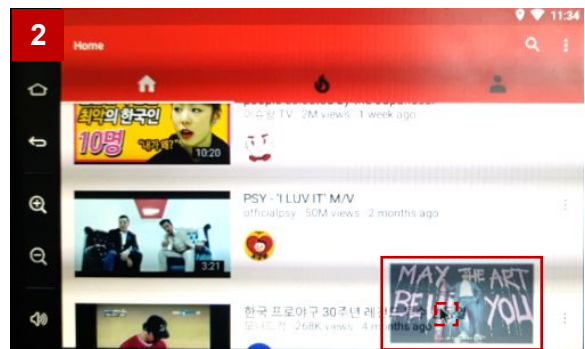
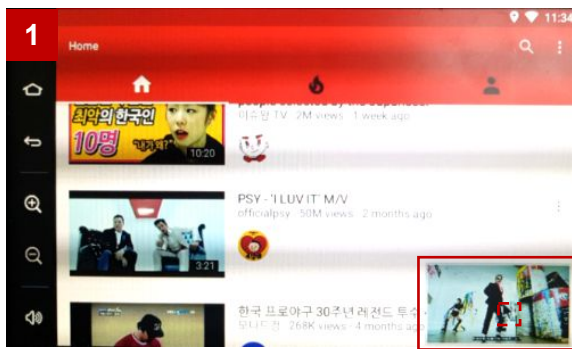
 **Scroll**  
Push Joystick and move Joystick to scroll.

## YouTube



### Apply YouTube gesture

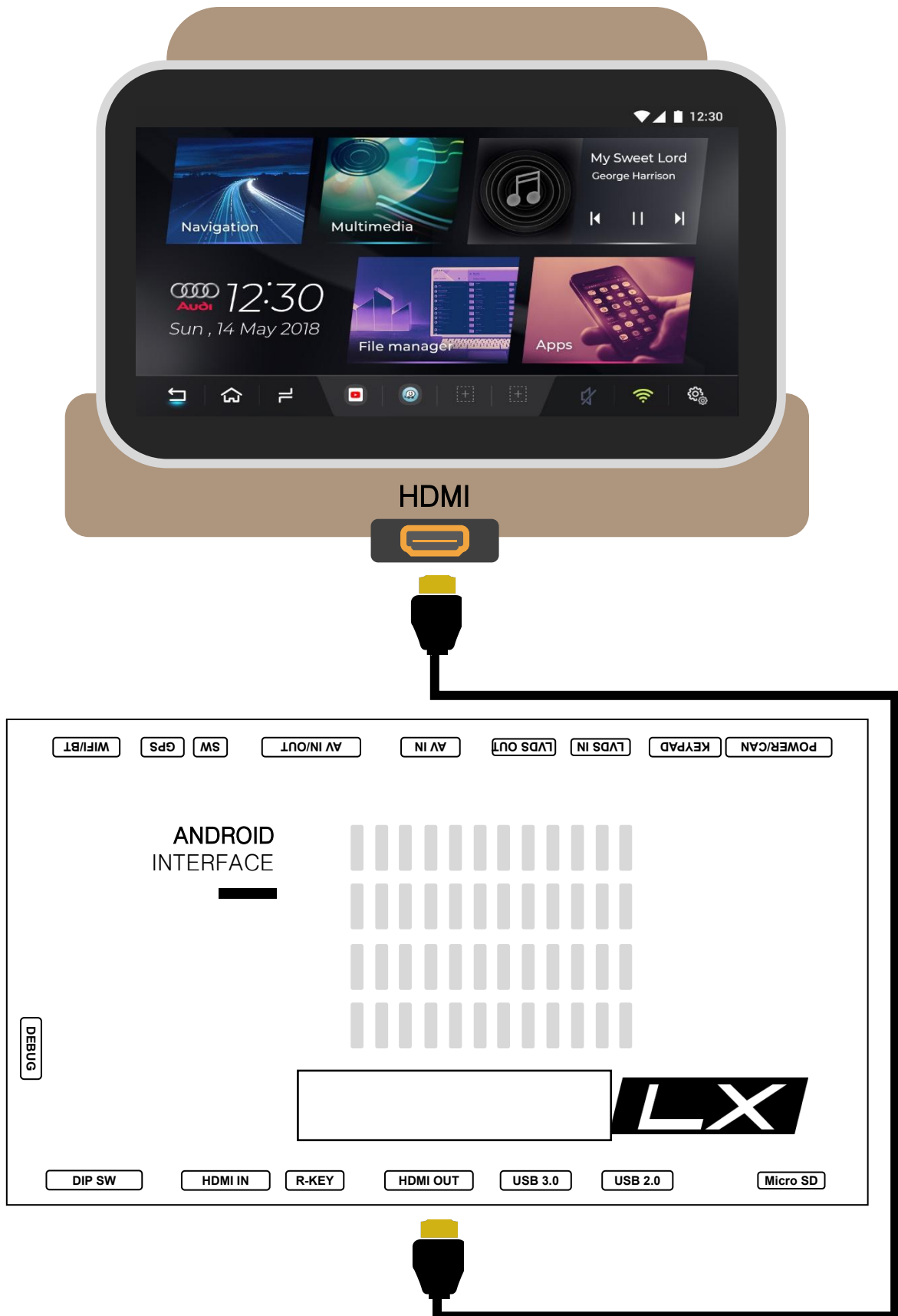
By watching video on YouTube, press the Touch pad and Slide Touch Pad to close Video.



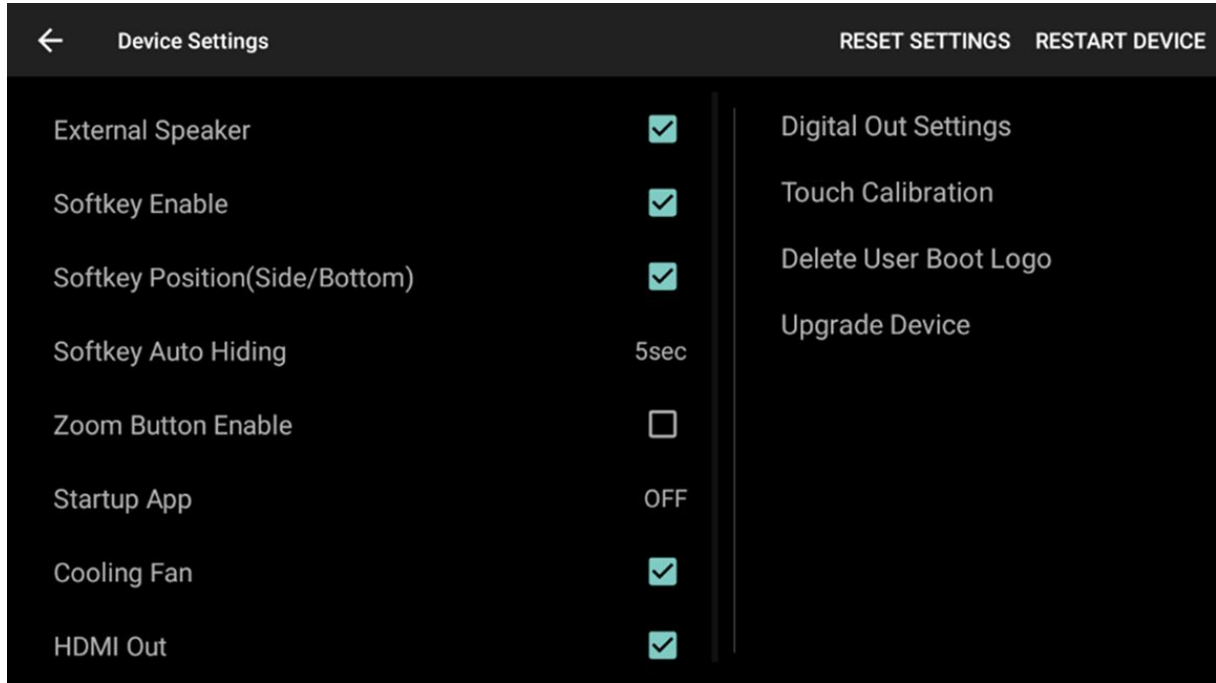


# HEADREST MONITOR

※ Headrest Monitor (HDMI Out)



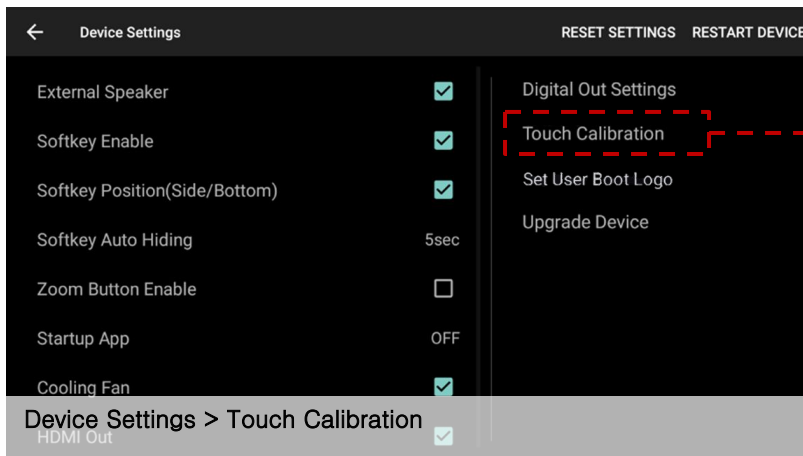
# DEVICE SETTINGS



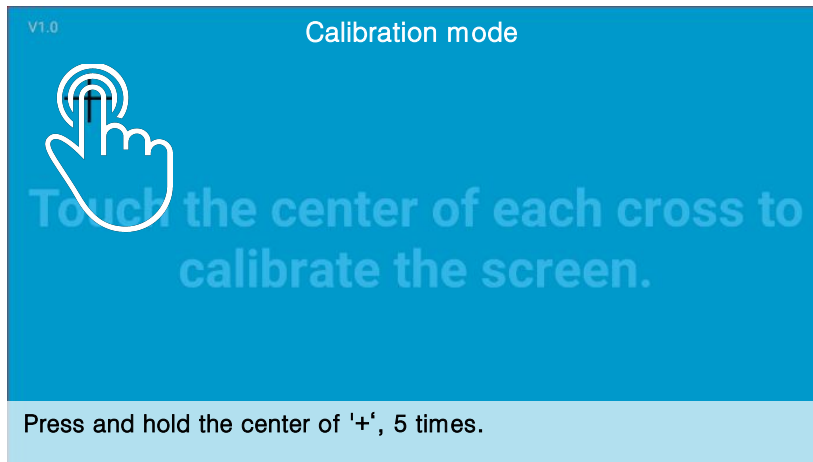
No.	Button	Function
1	<b>RESET SETTINGS</b>	Reset settings to default
2	<b>RESTART DEVICE</b>	System Reboot
3	<b>External Speaker</b>	Turn on/off external speaker
4	<b>Softkey Enable</b>	Use soft key or disable (Floating button when disabled)
5	<b>Softkey Position</b>	Soft key position setting (side, bottom)
6	<b>Softkey Auto Hiding</b>	Set softkey auto-hide time
7	<b>Zoom Button Enable</b>	Enable or Disable the Zoom Button on the Soft Key
8	<b>Startup App</b>	Select Startup APP
9	<b>Cooling Fan</b>	Turn on / off Cooling Fan
10	<b>HDMI OUT</b>	Turn on / off HDMI Out
11	<b>Digital Out Settings</b>	(Developer menu) DIGITAL LVDS only, Screen Settings – Position, Brightness, Contrast, Sharpness
12	<b>Touch Calibration</b>	Touch Calibration ( for UART Touch )
13	<b>Set User Boot Logo</b>	File Format : PNG, JPG, BMP Image Size : 1280 X 720 pixel
14	<b>Upgrade Device</b>	(Hidden menu) Firmware update is available.

## DEVICE SETTINGS – CALIBRATION (Capacitive, Resistive)

※ Capacitive touch panel no need set calibration



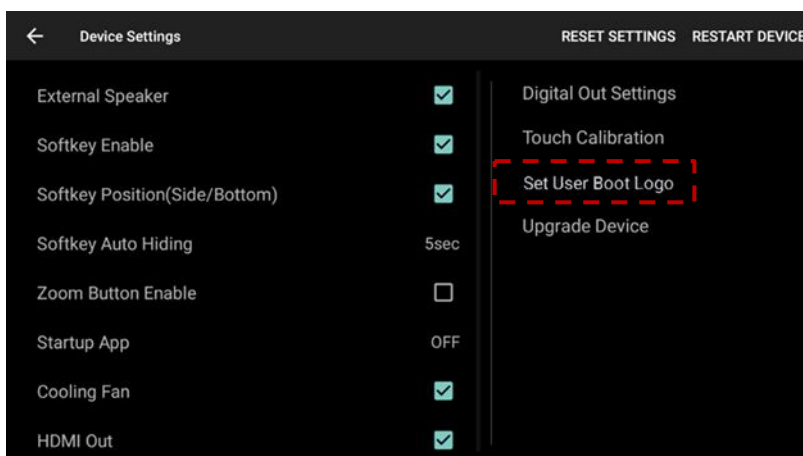
※ Press “Recovery Key” for 2 sec to set calibration



## DEVICE SETTINGS – USER LOGO UPDATE

*Set User Boot Logo Activate*

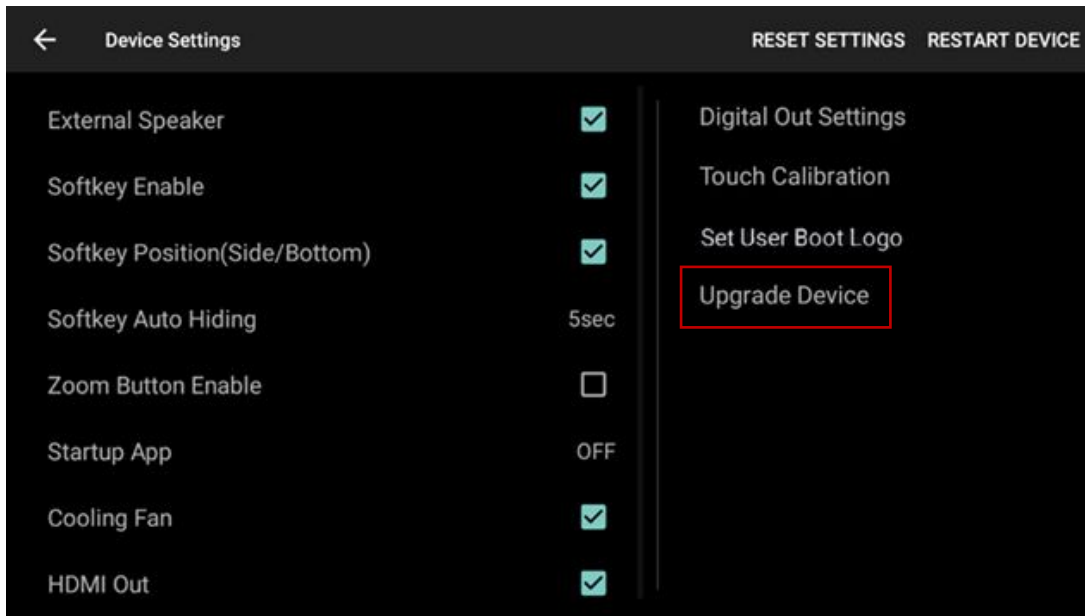
1. Device Setting
2. Click 'Set Use Boot Logo' and select boot logo image.



※ File Format : PNG, JPG, BMP  
※ Image Size : 1280px X 720px

# FIRMWARE UPGRADE

## A Recommended

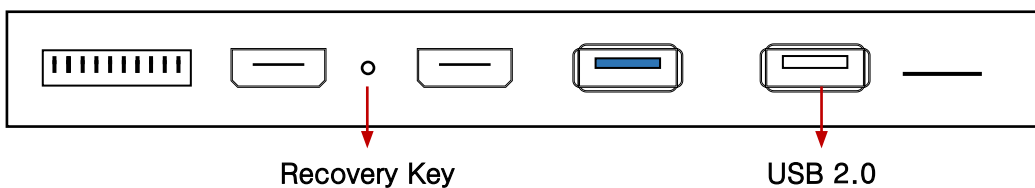


Copy 'system\_roik10' folder to USB Memory root and insert to USB1 Port.

Select Upgrade Menu, it will start upgrade

- ※ '/usb disk/system\_roik10' Folder have 'update.img' file
- ※ If there is no update file, "Upgrade Device" menu is not show
- ※ After firmware update, be sure to perform factory reset to apply the firmware.
- ※ Update Time will 3~4 min, after first time booting take 3~4 min.
- ※ USB format type = FAT32 / use on USB1 Port only.

## B



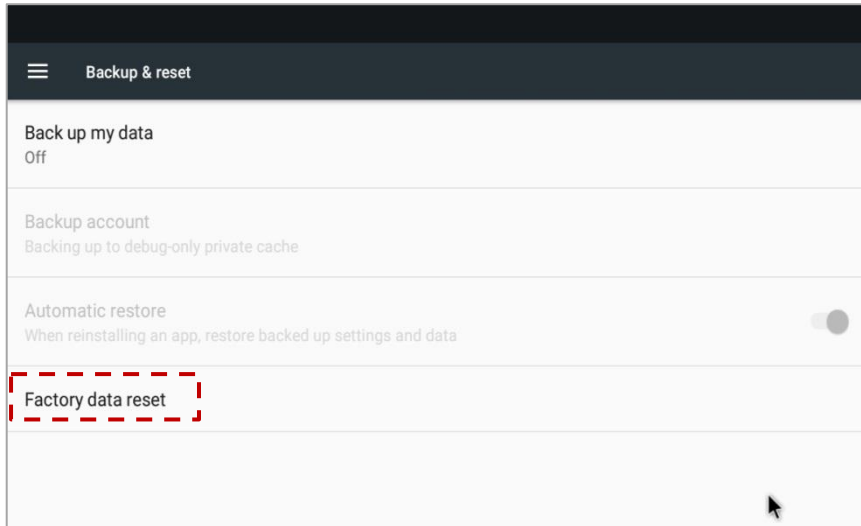
Copy 'system\_roik10' folder to USB Memory root and insert to USB1.

Push hold "R-Key" and turn on (re-connect power cable), it will start upgrade

- ※ '/usb disk/system\_roik10' Folder have 'update.img' file
- ※ After firmware update, be sure to perform factory reset to apply the firmware.
- ※ Update Time will 3~4 min, after first time booting take 3~4 min.
- ※ USB format type = FAT32 / use on USB1 Port only.

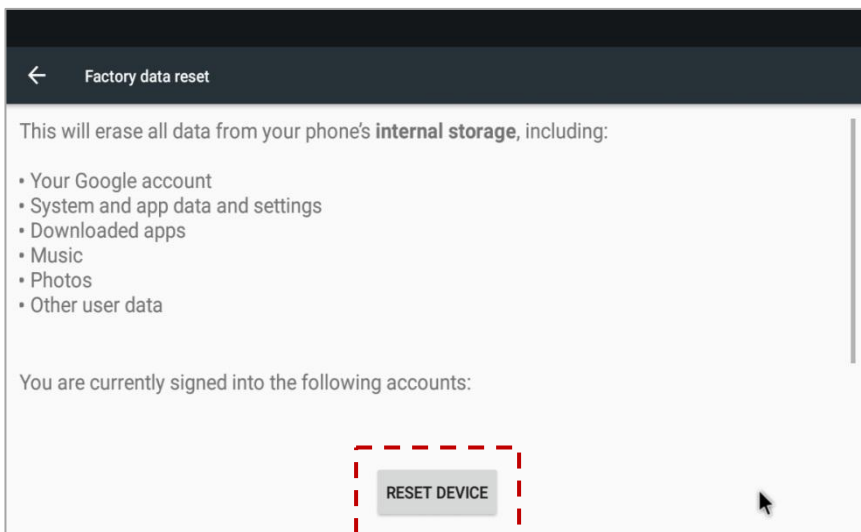
# FACTORY RESET

**A** Recommended



## 01. Setting

- ▶ Backup & Reset
- ▶ Factory data Reset

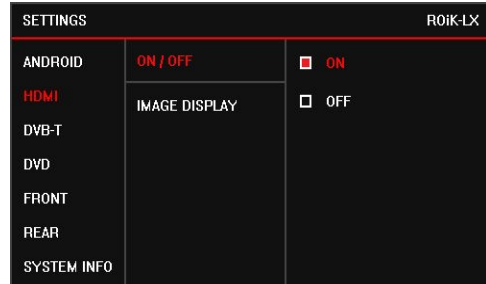
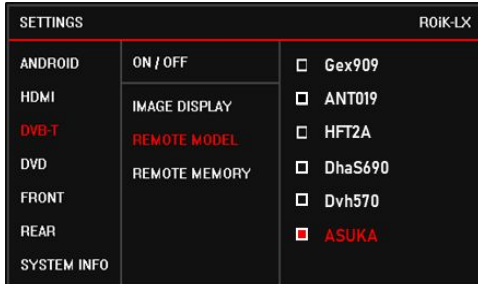
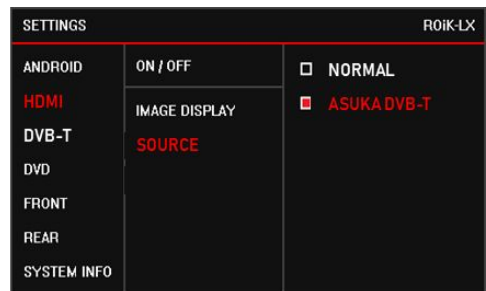
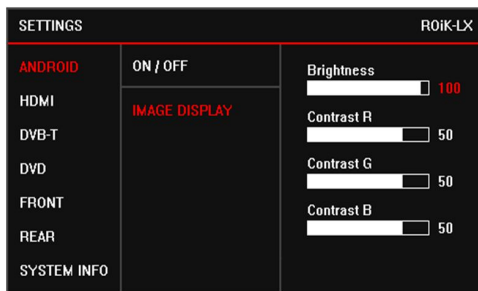
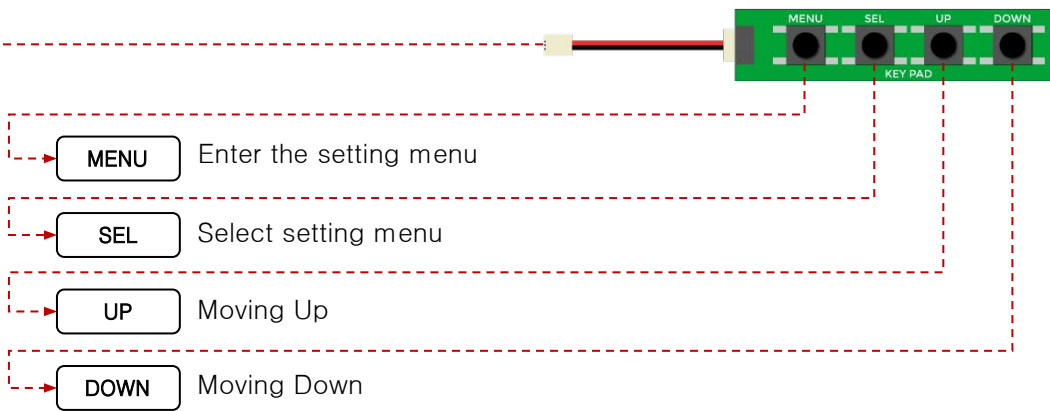
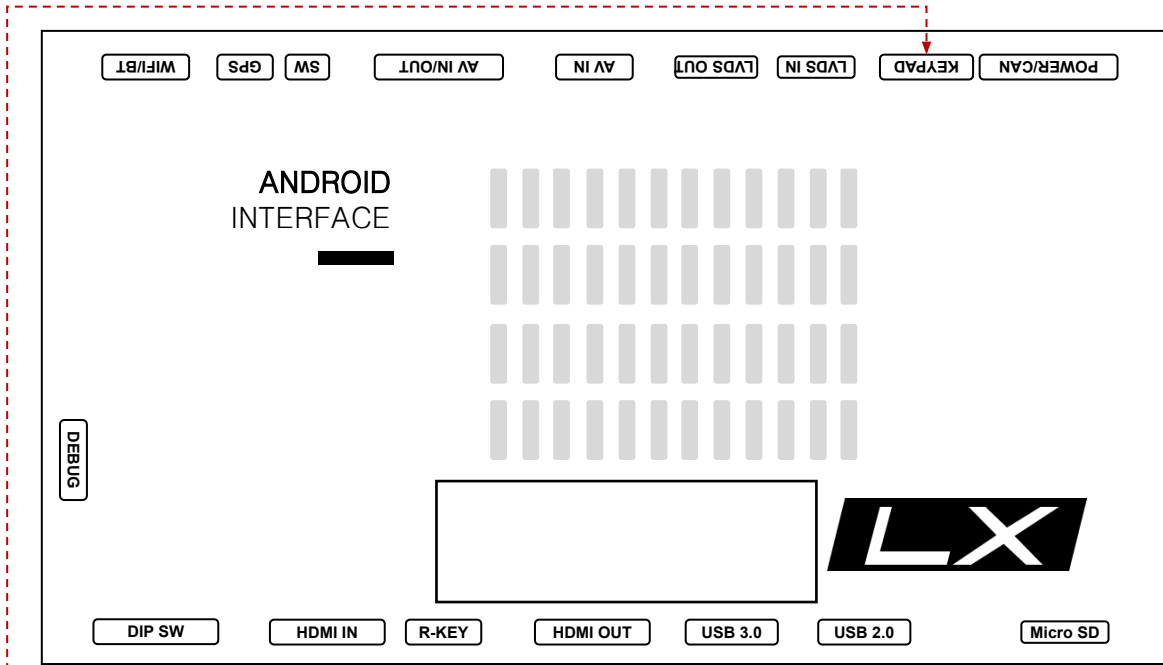


## 02. Select "RESET DEVICE"

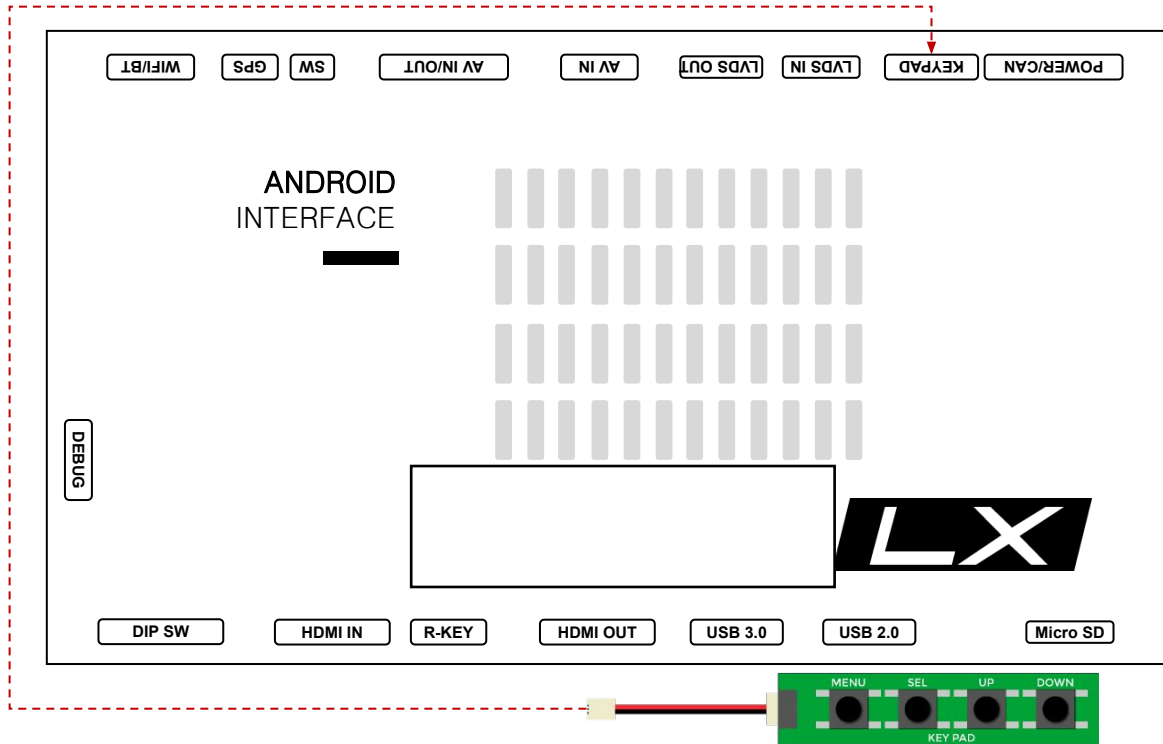
= Factory Reset  
Wait until restart unit

※ After reboot system, it takes 3~4 min

# INTERFACE SETTING



# QUICK INFO



To Enter Quick Info.

1. Press MENU Button to change OEM screen to Interface screen.
2. Press DOWN Button in the interface screen for 3 seconds.

