

# Setup

## Setup Operation

### To display the Setup Menu screen:

Your vehicle must be parked with the ignition key in the ACC or ON position. To do this, follow the procedures below.

- 1 Bring your vehicle to a complete stop at a safe location.  
Engage the parking brake.
- 2 Release the parking brake. (For safety, release the parking brake while depressing the foot brake pedal).
- 3 Engage the parking brake again.

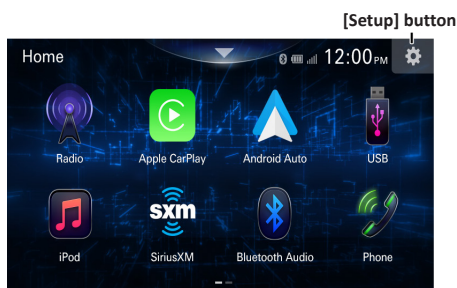
- For automatic transmission vehicles, place the transmission lever in the Park position.
- "Sound Setup" (page 34) can be set even not engaging the parking brake.

Now, the locking system for the Setup operation has been released. Engaging the parking brake can reactivate the Setup Menu, as long as the car's ignition has not been turned off. It is not necessary to repeat the above procedure (1 through 3).

Each time the ignition is turned OFF, perform the above procedure.

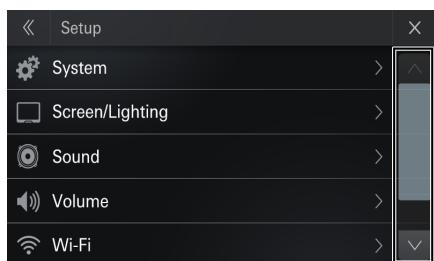
### 1 Touch the [ ] (HOME) button.

The HOME screen is displayed.



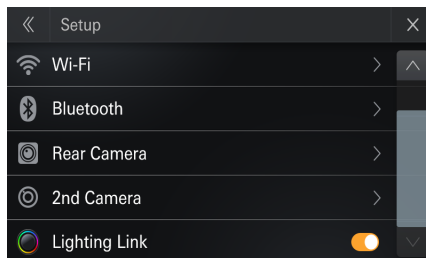
### 2 Touch [Setup] button.

The Setup main screen is displayed.



Scroll Bar

\* Touch [ ] or [ ] to show further hierarchies.



### 3 Touch the required setting list, then touch the setting item.

#### Setting items:

System: See "System Setup" (page 29).  
Screen/Lighting: See "Screen/Lighting Setup" (page 33).  
Sound: See "Sound Setup" (page 34).  
Volume: See "Volume Setup" (page 39).  
Wi-Fi: See "Wi-Fi Setup" (page 39).  
Bluetooth: See "Bluetooth Setup" (page 40).  
Rear Camera: See "Rear Camera Setup" (page 41).  
2nd Camera: See "2nd Camera Setup" (page 42).  
Lighting Link ON/OFF: See "Lighting Link" (page 42).

## System Setup

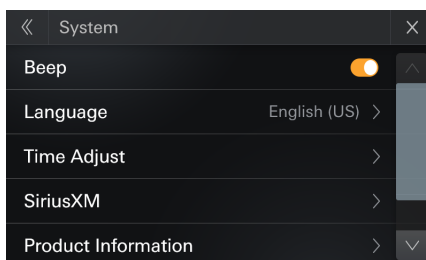
[System] is selected on the Setup menu screen.

#### Setting items:

System

#### Setting contents:

Beep, Language, Time Adjust, SiriusXM, Product Information, Software License, Connection Status, Steering Wheel Control, Demo ode, Reset



#### Beep Setup

You can change the volume of the sound heard when a button is touched.

#### Setting items:

Beep

#### Setting contents:

Off, On (Initial setting)

## Language Setup

[Language] is selected on the System Setup Menu screen. The Setup menu, feedback information, etc. for this unit can be changed to appear in the selected language.

**Setting items:**

Language

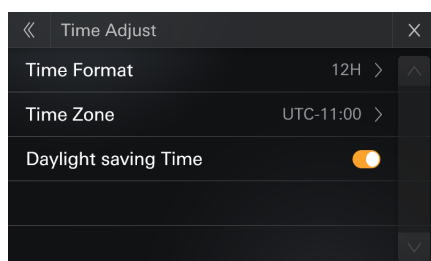
**Setting contents:**

English (US), French, Spanish, Portuguese

- The currently selected language is displayed.

## Time Adjust Setup

[Time Adjust] is selected on the System Setup Menu screen.



**Time Format**

**Setting item:**

Time Format

**Setting contents:**

12h, 24h (Initial setting)

**Time Zone**

**Setting items:**

Time Zone

**Setting contents:**

UTC-12.00h~UTC+14.00

**Daylight saving Time ON/OFF**

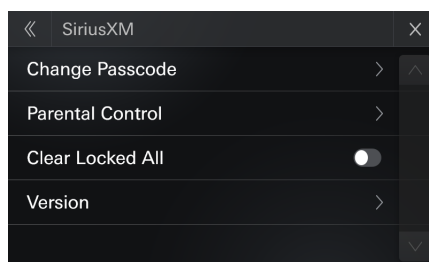
**Setting items:**

Daylight saving Time

**Setting contents:**

Off (Initial setting), On

## SiriusXM Setup



**Change Passcode**

**Setting items:**

Change Passcode

**Setting contents:**

Edit the passcode.

- 1 Enter the current passcode and then touch [OK].
- 2 Enter the new passcode and then touch [OK].
- 3 Enter the confirm passcode and then touch [OK].

## Parental Control

You can lock out channels with passcode protection. Channels that are locked cannot be accessed without entering the passcode. You can unlock a channel or change the passcode using this menu option.

**Setting item:**

Parental Lock On/Off

- 1 Touch [Parental Control].  
A passcode input screen is displayed.
- 2 Touch the numeric keypad to input a 4-digit passcode  
The initial default 4-digit passcode is set to 0000.

After entering the digit, it is displayed as “●”.

Touch [Clear] to delete all entered numbers.

- 3 Touch [OK].  
The channels list screen is displayed.

**Setting the Lock status of individual channels**

- 4 Touch [Channels].  
A passcode input screen is displayed.
  - To lock the channel, touch the appropriate channel.
  - When you touch the locked channel, the channel is unlocked.  
🔒 appears and the channel is locked.

## Clear Locked All

### Setting item:

Clear Locked All

### Setting contents:

Off (Initial setting) / On

- Touch the switch, enter the current passcode then touch [OK].
- All stations will be cleared when Off. Locking again will change to ON automatically

## Changing the Lock Passcode

### 1 Touch [Change Passcode].

The numeric keypad screen is displayed.

### 2 Use the keypad to enter the current (old) 4-digit passcode, and then touch [OK].

The initial passcode is set to "0000."

After entering the digit, it is displayed as ●.

Touch [Clear] to delete all entered numbers.

### 3 Use the keypad to enter the new 4-digit passcode, and then touch [OK].

### 4 Use the keypad to enter the new 4-digit passcode a second time to verify it, and then touch [OK].

Remember to keep a note of the passcode in a safe place in case you forget the code.

## Version

Version	
Model Brand:	Alpine
Model Number:	iLX-W770
Firmware Version:	2.0.1
Hardware Version:	1.0.0

### Setting item:

Version

### Setting contents:

Model Brand, Model Number, Firmware Version, Hardware Version.

## Product Information

Product Information	
Model Number:	iLX-W770
MCU:	APN-MCU-2.0.04
SOC:	APN-SOC-230414
Interface FW Version:	2.2.0
Interface HW Version:	1.0.0

### Setting item:

Model Number, MCU, SOC, Interface FW Version, Interface HW Version

## Updating the firmware version

Product Information	
MCU:	APN-MCU-2.0.04
SOC:	APN-SOC-230414
Interface FW Version:	2.2.0
Interface HW Version:	1.0.0
Update	

### 1 Download the firmware update file into your computer.

### 2 Inset a USB with FAT32 format into your computer, copy the correct upgrade file to the root directory

### 3 Connect the USB storage device to this product.

### 4 Touch [setup]>[System setup]>[Product Information]>[Update] .

The firmware update file information will be read

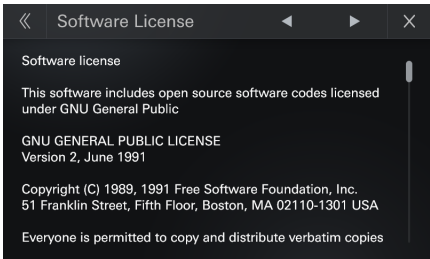
### 5 After reading Touch [Update]

Follow the on-screen prompts to update the firmware.

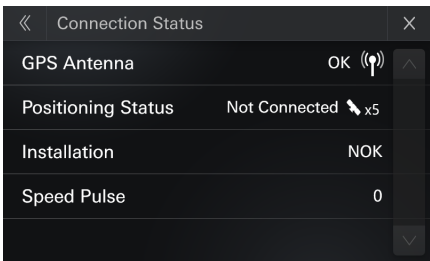
- This product will reset automatically after the firmware update is completed if the update is successful.
- If an error message on the screen, Repeat the preceding steps.

## Software License

[Software License] Displaying the open source software license.

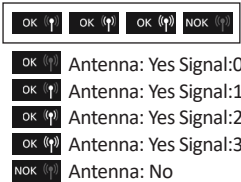


## Connection Status



### GPS Antenna

- Display when there is an antenna [OK]
- Display without antenna [NOK]



### Positioning Status

- Display [position]: When there is positioning
- Display [Not Available]: When there is no positioning
- Display [Not Connected]: When the serial port of the GPS module is not available

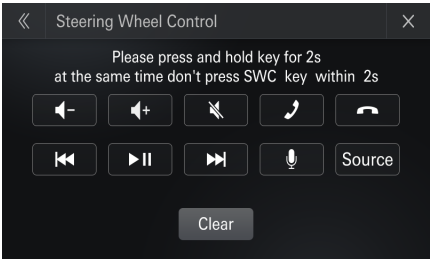
### Installation

- Install and learn to successfully display [OK],
- No learning success display [NOK]

### Speed Pulse

- Display pulse number "XXX" in unit time, and display "0" if not obtained.

## Steering Wheel Control



Some Vehicles may require a 3rd party module to achieve steering wheel control functions (Sold Separately)

### Setting item:

*Steering Wheel Control key learning*

### Setting contents:

⏮ Vol. Up/ ⏭ Vol. Dn, 🎧 ON HOOK, 📞 OFF HOOK, ⏮ Seek Up, ⏭ Seek Dn, 🔇 MUTE, ⏮ Play/pause, 🗣 Voice Recognition, Source (Mode)

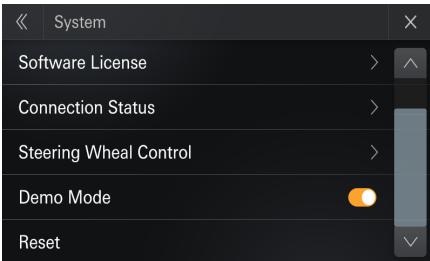
**1** Please press and hold key for 2s at the same time don't press SWC key within 2s  
The numeric keypad screen is displayed.

**2** Follow the on-screen prompts to complete the operation

**3** Key Learning Success:  
When operation finished ,If you want to continue other key learning , please repeat the operation

- Please perform key learning while parked with e-brake active.
- Keys only support learning 1 time. If you need to change the key please clear all learned keys.
- Touch the clear key to clear all the learned function.
- No time limit for key learning.

## Demo Mode



[Demo Mode] When you don't operation screen within 120 seconds, the pre-stored 8 images is displayed and played in a loop.

### Setting contents:

*On,Off(Initial setting)*

## Reset

[Reset] is selected on the System Setup Menu screen. You can initialize all data, to restore the factory settings.

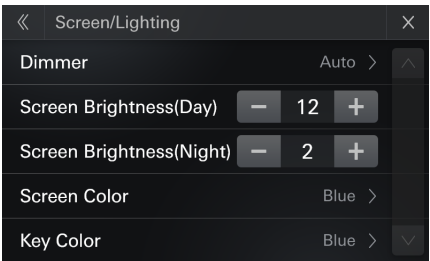
Setting item:  
Reset

- 1 Touch [Reset].
- 2 After the confirmation message appears, touch [Yes].

The system starts initialization.

- Do not turn on/off the power, change the ignition key position or until system restart is completed.

## Screen/Lighting Setup



Setting item:  
Screen/Lighting

Setting contents:  
Dimmer, ScreenBrightness(Day), ScreenBrightness(Night), Screen Color, Key Color

## Dimmer

You can set day, night and auto three modes in dimmer

- 1.The screen backlighting brightness can be set in day/night mode
- 2.Auto Mode adjusts the backlighting brightness to the appropriate day/night brightness setting value based on the current ambient brightness

Setting contents:  
Day, Night, Auto(Initial setting)

Day:  
The backlight brightness is adjusted by setting the screen brightness setting(Day)

Night:  
The backlight brightness is adjusted by setting the screen brightness setting(night)

Setting contents:  
Automatically adjust the backlight brightness and select the Screen brightness(Day) or Screen Brightness (Night) setting value as the backlight brightness value based on the Day/Night lighting threshold

### Screen Brightness(Day)

Setting item:  
Level

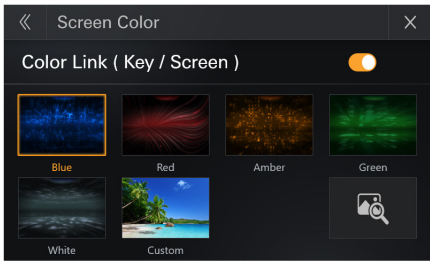
Setting contents:  
1 to 32

### Screen Brightness(Night)

Setting item:  
Level

Setting contents:  
1 to 32

## Screen Color



**Setting item:**


Background Picture

**Setting contents:**

You can set blue, red, amber, green, white five colors or other background pictures, you can also select the background picture to be set from the USB flash drive

**Setting item:**

Background custom

- 1 Insert a USB flash drive.
- 2 Touch [  ] to the Wallpaper screen.
- 3 Select the custom picture.

**Setting item:**

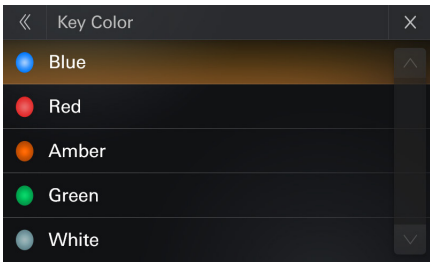
Color Link (Key/Screen)

**Setting contents:**

Color link ON (Initial setting)

- You can select ON/OFF whether the button light and background picture linkage.

## Key Color



**Setting item:**

Key Color

**Setting contents:**

blue, red, amber, green, white

- Key color Settings can be set blue, red, amber, green, white five colors
- When the Color Link is ON, key Color is grayed out and cannot be selected.
- When the Lighting Link function is used, that selection takes precedence and all colors are switched (page 28).
- You can change the Key Color individually after selecting the color with the Lighting Link function.

## Sound Setup

[Sound] is selected on the Setup menu screen.

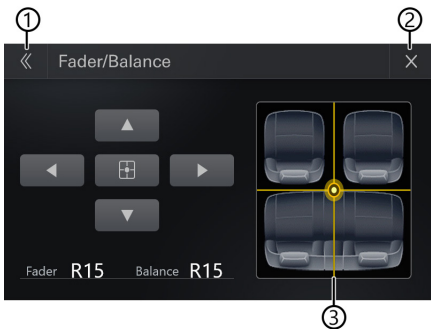
You can set up items related to the sound quality.





<Setting item>

Fader/Balance (page 34)
Bass/Treble (page 35)
EQ Setting (page 35)
Preset EQ (page 35)
X-Over (page 36)
Speaker Level (page 37)
Time Correction (page 36)
Sub Woofer (page 36)
Defeat (page 37)

\* Touch [  ] or [  ] to show further.

## Setting the Fader/Balance



- ① Back  
Exit[Fader/Balance]Return [SOUND].
- ② Close  
Close the current screen and return to the source screen
- ③ Fader/Balance Image area  
Touch the desired point within the image area, or touch [  ], [  ], [  ] or [  ].

**Fader:**

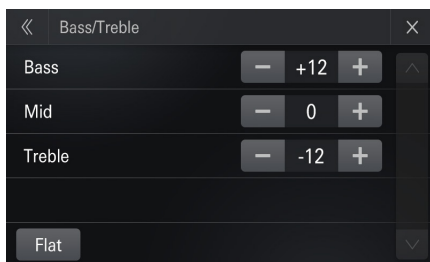
[15]Front to [15]Rear

**Balance:**

[15]Left to [15]Right

- To reset to the initial setting (Fader: F=R, Balance: L=R), touch [  ].

## Adjusting the Bass/Middle/Treble



Touch [ + ] or [ - ] for each item to be adjusted.

### Setting item:

Bass, Middle, Treble

### Setting contents:

-12 to 12 (Initial setting: 0)

- To reset the initial setting (Bass: 0, Middle: 0, Treble: 0), touch [Flat].
- When the Defeat setting is [On], you cannot perform the set up.

## Adjusting the Graphic Equalizer Curve (EQ)

### Setting item:

EQ

### Setting contents:

-12 to 12 (Initial setting: 0)

- When the Defeat setting is [On], you cannot perform the set up.

### 1 Adjust the EQ to your preference.



### Adjusting the Band

Touch [Band] to select the band to be adjusted.

Band1 → Band2 → ... → Band8 → Band13 → Band1

- You can select a band directly by touching the screen.

### Adjusting the Frequency

Touch of "Frequency" to adjust the frequency of the selected band.

### Adjustable frequency bands:

Band1:	50 Hz
Band2:	80 Hz
Band3:	125 Hz
Band4:	200 Hz
Band5:	315 Hz
Band6:	500 Hz
Band7:	800 Hz
Band8:	1.25k Hz
Band9:	2k Hz
Band10:	3.15k Hz
Band11:	5k Hz
Band12:	8k Hz
Band13:	12.5k Hz

## Adjusting the Level

### 1 Select Band Slide up or down to adjust the level of selected band.

### Setting contents:

-12 to 12 (Initial setting: 0)

### 2 To adjust another band, repeat step 1, and adjust all bands.

### 3 To store the adjusted setting value, touch and hold [Preset 1], [Preset 2], or [Preset 3] for at least 2 seconds.

- Band2, Band7 and Band12 are the same as the Bass and Middle controls. For details on setting Bass and Treble, see "Adjusting the Bass/Middle/Treble" (page 35).
- Settings exceeding the frequency of adjacent bands are not available
- While adjusting the EQ Setting, you should consider the frequency response of the connected speakers.
- When you apply the adjusted Band in the EQ setting screen, Preset EQ (page 35) is unselected
- Touch [Flat] to initialize all values.

### Calling the EQ Setting adjusted value

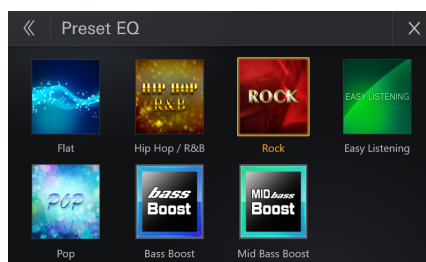
Calling the pre-set EQ Setting adjusted value.

Touch [Preset 1], [Preset 2], or [Preset 3] on the EQ Setting screen.

The setting stored in the Preset will be recalled.

## Setting an Equalizer

6 typical equalizer settings are preset at the factory for a variety of musical source material. You can also preset an equalizer by customizing.



### Setting item:

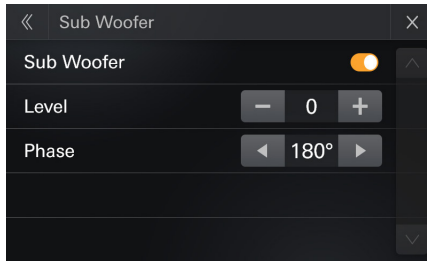
Preset EQ

### Setting contents:

Flat (Initial setting), Hip Hop/R&B, Rock, Easy Listening, Pop, Bass Boost, Mid Bass Boost

- When the Defeat setting is [On], you cannot perform the set up.
- Only one type can be set .
- you can set [preset1/preset2/preset3 ]in the EQ setting screen. (page 35)
- When you set [preset1/preset2/preset3 ]in the EQ setting screen.(page 35). Preset EQ is unselected

## Setting the Subwoofer



### Turning Subwoofer ON/OFF

If an optional subwoofer is connected to the unit, make the following setting.

#### Setting item:

Sub Woofer

#### Setting contents:

Sub WooferOff (Initial setting), On

### Adjusting the Subwoofer Level

#### Setting item:

Level

#### Setting contents:

0 (Initial setting) to 15

- This setting is only available when "Sub Woofer" is set to [On].

### Setting the Subwoofer Phase

The subwoofer output phase is toggled Subwoofer Normal (0°) or Subwoofer Reverse (180°).

#### Setting item:

Phase

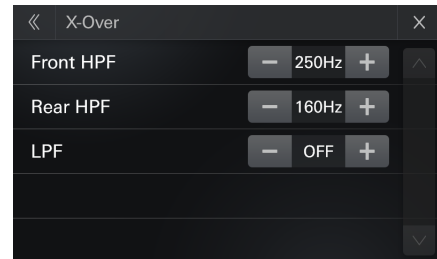
#### Setting contents:

0° (Initial setting), 180°

- This setting is only available when "Sub Woofer" is set to [On].

## Adjusting the Crossover Settings (X-Over)

Before performing the following procedures, see "About the Crossover" (page 36).



### Selecting the Front HPF

#### Setting item:

Front HPF

#### Setting contents:

Off (Initial setting) / 25 / 32 / 40 / 50 / 63 / 80 / 100 / 125 / 160 / 200 / 250 Hz

### Selecting the Rear HPF

#### Setting item:

Rear HPF

#### Setting contents:

Off (Initial setting) / 25 / 32 / 40 / 50 / 63 / 80 / 100 / 125 / 160 / 200 / 250 Hz

### Selecting the LPF

#### Setting item:

LPF

#### Setting contents:

Off (Initial setting) / 25 / 32 / 40 / 50 / 63 / 80 / 100 / 125 / 160 / 200 / 250 Hz

- This setting is only available when "Sub Woofer" is set to [On].

## Adjusting the Time Correction (TCR)

Before performing the following procedures, see "About Time Correction" (page 38).



#### Setting item:

TCR

Touch [ — ] or [ + ] for each item to be adjusted.

0.0 msec to 10.0 msec (0.1 msec/step)

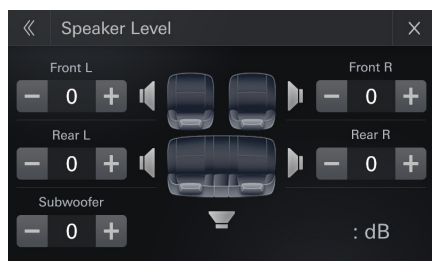
- If the Subwoofer setting is [Off], the Subwoofer setting cannot be edited (page 36).



## Setting the Speaker Level

### Setting item:

Speaker Level



Touch [—] or [+] for each item to be adjusted.

-24dB to 10dB (0.1 dB/step)

## Setting Defeat

If Defeat is [On], the EQ and Equalizer setting are turned Off. This disables any settings made for these functions.

### Setting item:

Defeat

### Setting contents:

Off (Initial setting) / On

## About the Crossover

### Crossover (X-Over):

This unit is equipped with an active crossover. The crossover limits the frequencies delivered to the outputs. Each channel is controlled independently. Thus, each speaker pair can be driven by the frequencies for which they have been optimally designed.

The crossover adjusts the HPF (high pass filter) or LPF (low pass filter) of each band.

Adjustments should be made according to the reproduction characteristics of the speakers. Depending on the speakers, a passive network may not be necessary. If you are unsure about this point, please consult your authorized Alpine dealer.

25 Hz, 32Hz, 40Hz, 50Hz, 63Hz, 80Hz

	Cut-off frequency	
	HPF	LPF
Subwoofer (LPF)	---	25Hz, 32Hz, 40Hz, 50Hz, 63Hz, 80Hz, 100Hz, 125Hz, 160Hz, 200Hz, 250Hz
Rear speaker (HPF)	25Hz, 32Hz, 40Hz, 50Hz, 63Hz, 80Hz, 100Hz, 125Hz, 160Hz, 200Hz, 250 Hz	---
Front speaker (HPF)	25Hz, 32Hz, 40Hz, 50Hz, 63Hz, 80Hz, 100Hz, 125Hz, 160Hz, 200Hz, 250Hzz	---

- **HPF (high pass filter):** Cuts the lower frequencies and allows the higher frequencies to pass.
  - **LPF (low pass filter):** Cuts the higher frequencies and allows the lower frequencies to pass.
  - Do not use a tweeter without the HPF on or set to a low frequency, as it may cause damage to the speaker due to the low frequency content.
  - Adjustment should be made according to the recommended crossover frequency of the connected speakers. Determine the recommended crossover frequency of the speakers. Adjusting to a frequency range outside that recommended may cause damage to the speakers.
- For the recommended crossover frequencies of Alpine speakers, refer to the respective Owner's Manual.
- We are not responsible for damage or malfunction of speakers caused by using the crossover outside the recommended value.

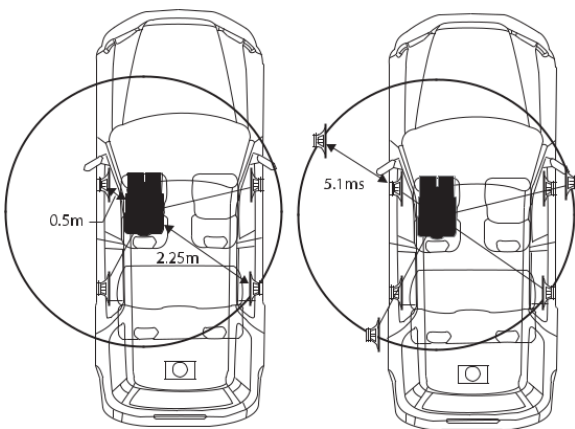
About Time Correction

The distance between the listener and the speakers in a car vary widely due to the complex speaker placement. This difference in the distances from the speakers to the listener creates a shift in the sounds image and frequency characteristics. This is caused by the time delay between the sound reaching the listener's right versus the left ear.

To correct this, this unit is able to delay the audio signal to the speakers closest to the listener. This effectively creates a perception of increased distance for those speakers. The listener can be placed at an equal distance between the left and right speakers for optimum staging. The adjustment will be made for each speaker in 3.4 cm steps.

Example 1. Listening Position: Front Left Seat

Adjust the time correction level of the front left speaker to a high value and the rear right to zero or a low value.



The sound is not balanced because the distance between the listening position and the various speakers is different. The difference in distance between the front left speaker and the rear right speaker is 1.75 m (68-7/8"). Here we calculate the time correction value for the front left speaker in the diagram on the above.

Conditions:  
Farthest Speaker – listening position : 2.25 m (88-9/16")  
Front left speaker – listening position : 0.5 m (19-11/16")  
Calculation:  $L = 2.25\text{ m} - 0.5\text{ m} = 1.75\text{ m}$  (68-7/8")  
Time correction =  $1.75 \div 343 \times 1,000 = 5.1\text{ (ms)}$   
\* Speed of sound: 343 m/s (765 mph) at 20°C

In other words, giving the front left speaker a time correction value of 5.1 ms makes it seem as if its distance from the listener is the same as the distance to the farthest speaker.

Time correction eliminates the differences in the time required for the sound to reach the listening position.

The time of the front left speaker is corrected by 5.1 ms so that its sound reaches the listening position at the same time as the sound of other speakers.

Example 2. Listening Position: All Seats

Adjust the time correction level of each speaker to almost the same level.

- 1 Sit in the listening position (driver's seat, etc.) and measure the distance (in meters) between your head and the various speakers.
- 2 Calculate the difference between the distance correction value to the farthest speaker and the other speakers.

$L = (\text{distance to farthest speaker}) - (\text{distance to other speakers})$   
These values are the time correction values for the different speakers. Setting these values to make each sound reach the listening position at the same time as the sound of other speakers.

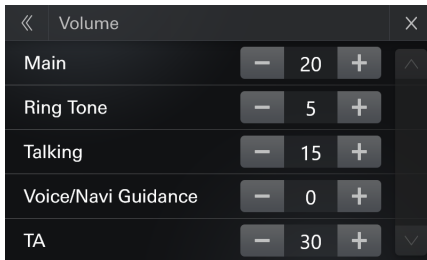
Time Correction Value List

Time Difference (msec)	Distance (cm)	Distance (inch)	Time Difference (msec)	Distance (cm)	Distance (inch)
0.0	0.0	0.0	5.1	173.4	68.3
0.1	3.4	1.3	5.2	176.8	69.7
0.2	6.8	2.7	5.3	180.2	71.0
0.3	10.2	4.0	5.4	183.6	72.4
0.4	13.6	5.4	5.5	187.0	73.7
0.5	17.0	6.7	5.6	190.4	75.0
0.6	20.4	8.0	5.7	193.8	76.4
0.7	23.8	9.4	5.8	197.2	77.7
0.8	27.2	10.7	5.9	200.6	79.1
0.9	30.6	12.1	6.0	204.0	80.4
1.0	34.0	13.4	6.1	207.4	81.7
1.1	37.4	14.7	6.2	210.8	83.1
1.2	40.8	16.1	6.3	214.2	84.4
1.3	44.2	17.4	6.4	217.6	85.8
1.4	47.6	18.8	6.5	221.0	87.1
1.5	51.0	20.1	6.6	224.4	88.4
1.6	54.4	21.4	6.7	227.8	89.8
1.7	57.8	22.8	6.8	231.2	91.1
1.8	61.2	24.1	6.9	234.6	92.5
1.9	64.6	25.5	7.0	238.0	93.8
2.0	68.0	26.8	7.1	241.4	95.1
2.1	71.4	28.1	7.2	244.8	96.5
2.2	74.8	29.5	7.3	248.2	97.8
2.3	78.2	30.8	7.4	251.6	99.2
2.4	81.6	32.2	7.5	255.0	100.5
2.5	85.0	33.5	7.6	258.4	101.8
2.6	88.4	34.8	7.7	261.8	103.2
2.7	91.8	36.2	7.8	265.2	104.5
2.8	95.2	37.5	7.9	268.6	105.9
2.9	98.6	38.9	8.0	272.0	107.2
3.0	102.0	40.2	8.1	275.4	108.5
3.1	105.4	41.5	8.2	278.8	109.9
3.2	108.8	42.9	8.3	282.2	111.2
3.3	112.2	44.2	8.4	285.6	112.6
3.4	115.6	45.6	8.5	289.0	113.9
3.5	119.0	46.9	8.6	292.4	115.2
3.6	122.4	48.2	8.7	295.8	116.6
3.7	125.8	49.6	8.8	299.2	117.9
3.8	129.2	50.9	8.9	302.6	119.3
3.9	132.6	52.3	9.0	306.0	120.6
4.0	136.0	53.6	9.1	309.4	121.9
4.1	139.4	54.9	9.2	312.8	123.3
4.2	142.8	56.3	9.3	316.2	124.6
4.3	146.2	57.6	9.4	319.6	126.0
4.4	148.6	59.0	9.5	323.0	127.3
4.5	153.0	60.3	9.6	326.4	128.6
4.6	156.4	61.6	9.7	329.8	130.0
4.7	159.8	63.0	9.8	333.2	131.3
4.8	163.2	64.3	9.9	336.6	132.7
4.9	166.6	65.7			
5.0	170.0	67.0			

## Volume Setup

### Volume Setup

[Volume] is selected on the Setup menu screen.



**Setting item:**

Main.Ring Vol.Talking.Voice/Navi Guidance.TA

**Setting contents:**

Main :01 to 35(Initial setting: 10)

Ring Vol :01 to 35(Initial setting: 18)

Ring Vol :01 to 35(Initial setting: 18)

Voice/Navi Guidance :01 to 35(Initial setting: 18)

TA :01 to 35(Initial setting: 10)

## Wi-Fi® Setup

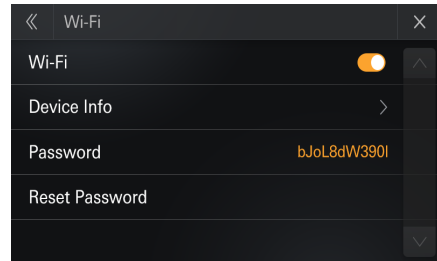
[Wi-Fi] is selected on the Setup menu screen

**Setting item:**

Wi-Fi

**Setting contents:**

Wi-Fi, Device Info, Password, Reset Password



Wi-Fi

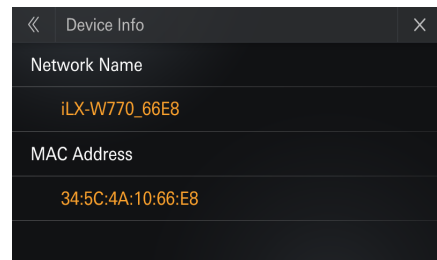
- You can turn Wi-Fi on or off

Reset Password

- You can reset the Wi-Fi password

### Device Info

It displays the Network Name and MAC Address of Wi-Fi.



### About Wi-Fi

The unit just supports 5G Hz Wi-Fi, and supports to connect the smart mobile phone while using the Apple CarPlay or Android Auto.

## Bluetooth Setup

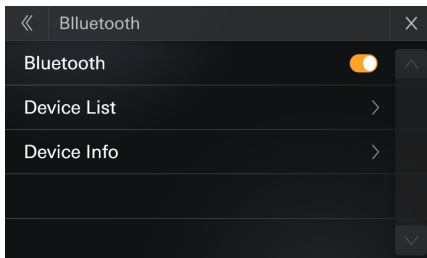
[Bluetooth] is selected on the Setup menu screen.

### Setting item:

Bluetooth

### Setting contents:

Bluetooth, Devices List, Devices Info,



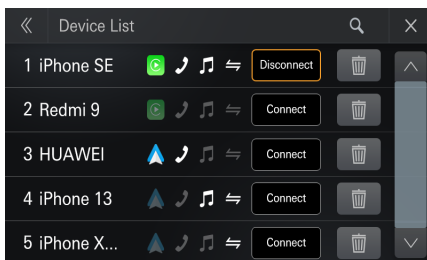
Bluetooth

- You can turn Bluetooth on or off

## Device List

[Devices] is selected on the Bluetooth Setup Menu screen.

You can register and set up Bluetooth compatible devices.



## Pairing the Bluetooth Device

- 1 Touch [Q] to enter [Search] screen to search for Devices.
- 2 Select a device and follow the on-screen prompts to connect devices
- 3 Screen prompts 6 character Numeric passkey to pair  
When the device registration is complete, a message appears and the device returns to [Device List].
  - The Bluetooth registration process differs depending on the device version and SSP (Simple Secure Pairing). If a 4 or 6 character Numeric Comparison appears on this system, enter the Numeric Comparison on the Bluetooth device.
  - If a 6 character Passkey appears on this system, make sure the same passkey is displayed on the Bluetooth device, and follow the screen.

## Fast pairing the Bluetooth Device

Select one of 5 paired Bluetooth compatible devices that you previously registered.

- 1 Touch [Connect] on the Bluetooth Setup Menu screen.

## Deleting a Bluetooth Device from the list

You can delete the information of a previously connected Bluetooth compatible device.

- 1 Touch [ ] on the Bluetooth Setup Menu screen.
- 2 Touch [Yes].
- 3 Screen prompts 6 character Numeric passkey to pair.
  - Touching [No] will cancel the setting.

## Searching for a Bluetooth Device

### Setting item:

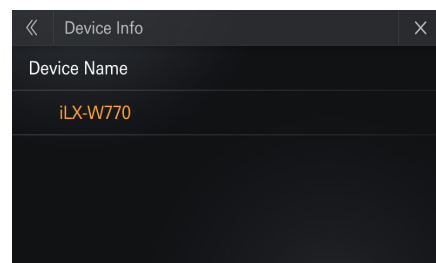
Search

- 1 Touch [Q] on the device list interface in Bluetooth Setup.  
The Bluetooth devices can be searched are displayed in a list.
- 2 Touch the device you want to connect from the list.  
You can register up to 5 Bluetooth compatible mobile phones.
- 3 When the device registration is complete, a message appears and the device returns to [Device List].
  - Connect to new Bluetooth compatible device when there are 5 paired devices registered, the system will delete the last paired device automatically

## Displaying Bluetooth Information

[Info] is selected on the Bluetooth Setup Menu screen.

You can display the Bluetooth device name and device address of this unit.



## Auto Connection

When the ACC is turned ON, the Bluetooth Hands-Free device is automatically connected. After connecting to the Hands-Free device, the Bluetooth Audio device is also connected automatically.

## Downloading the Phonebook

If PBAP is connected, you can download the phonebook from the device.

- When the device is disconnected, the downloaded phonebook is not shown.

## Rear Camera Setup

[Rear Camera] is selected on the Setup Menu screen.

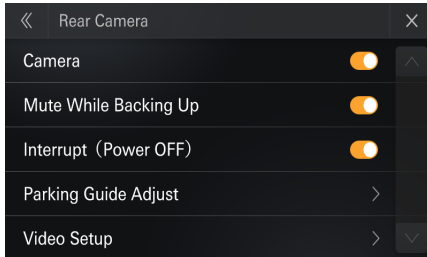
You can set up items related to the Rear Camera.

### Setting item:

Rear Camera

### Setting contents:

Camera, Mute While Backing Up, Interrupt(Power OFF), Parking Guide Adjust, Video Setup



### Camera

#### Setting item:

Camera

#### Setting contents:

Off, On (Initial setting),

- The rear camera initial setting is ON, when you turn off the camera, you cannot open and setup the camera.

### Mute While Backing Up

#### Setting item:

Mute While Backing Up

#### Setting contents:

Off (Initial setting), On

### Interrupt (Power OFF)

#### Setting item:

Interrupt(Power OFF)

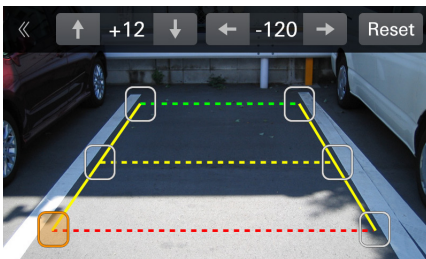
#### Setting contents:

Off, On

- If the switch is on, as long as the reverse signal is triggered, the pow off state is interrupted and the reverse screen is entered.
- If the switch is off, trigger the reverse signal, do not interrupt pow off state and open the reverse screen

## Parking Guide Adjust Setup

You can adjust the camera guide position.



#### Setting item:

Parking Guide Adjust

#### Setting contents:

Touch the icon you want to move.

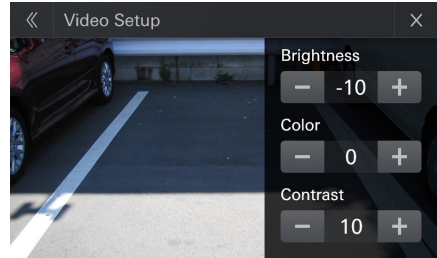
1 Touch the icon you want to move.

2 Touch [↑][↓][←][→] to move the icon.

Touching [Reset] clears adjustments and returns to the setting before guide line alteration.

3 Touch [X] to complete the adjustment and return to the previous screen.

## Video Setup



### Adjusting Brightness

#### Setting item:

Brightness

#### Setting contents:

-10 to 10 (Initial setting: 0)

- You can adjust the brightness of USB Video and reverse video between MIN(-10)and MAX(10)

### Adjusting Color of Display

#### Setting item:

Colors

#### Setting contents:

-10 to 10 (Initial setting: 0)

- You can adjust the color of USB Video and reverse video between MIN(-10)and MAX(10)

### Adjusting Display Contrast

#### Setting item:

Contrast

#### Setting contents:

-10 to 10 (Initial setting: 0)

- You can adjust the Contrast of USB Video and reverse video between MIN(-10)and MAX(10)

## 2nd Camera Setup

[2nd Camera] is selected on the Setup Menu screen.

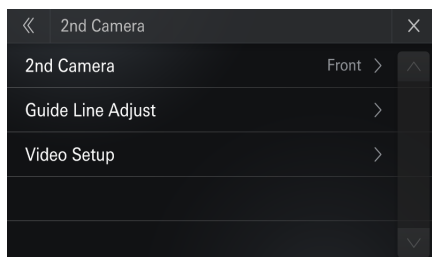
You can set up items related to the 2nd Camera.

### Setting item:

2nd Camera

### Setting contents:

2nd camera, Guide Line Adjust, Video Setup



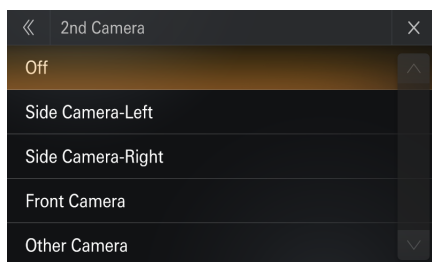
### 2nd Camera

#### Setting item:

2nd Camera

#### Setting contents:

Off, Side Camera-Left, Side Camera-Right, Front Camera, Other Camera

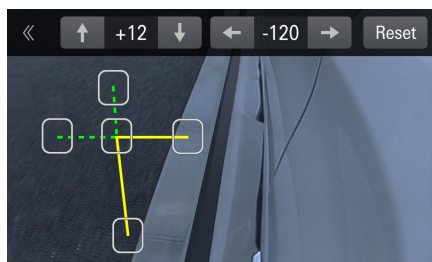


## Guide Line Adjust

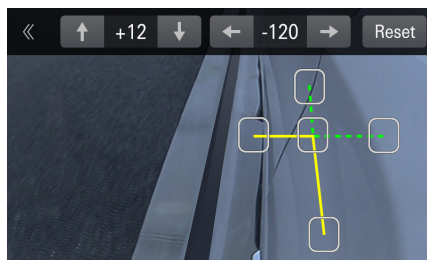
You can adjust the selection camera guide position.



Front Camera



Left camera

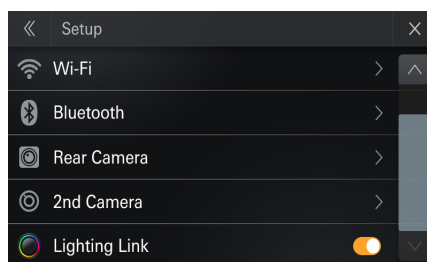


Right camera

If the 2nd camera was set to Other camera, [Guide Line Adjust] is unavailable.

## Lighting Link ON/OFF

[Lighting link] is selected on the Setup menu screen.



### Setting item:

Lighting Link

### Setting contents:

On:

Lighting link icon displayed on sound boost screen

Off:

The Lighting link icon on the sound boost screen is not displayed

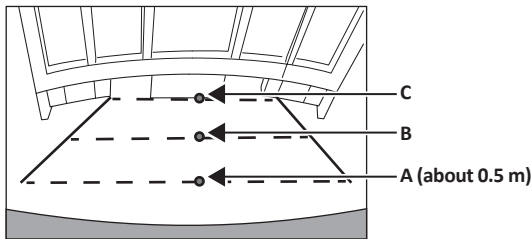


## Distance guidance mark

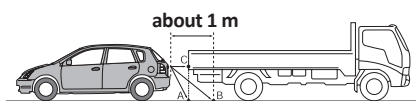
The distance guides represent the ground level distance from the rear bumper. It is difficult to accurately estimate the distance to objects above ground level.

In the following example, the distance to A is 0.5 m and the distance to B is 1 m.

<Screen>



<Positions of A, B and C>



In the screen, according to the distance guidance marks, the truck seems to be parked about 1 m away (at the position B). In actual fact, however, if you reversed to position A, you would collide with the truck.

In the screen, positions A, B and C seem to be located in order of proximity. However, in actual fact, the position A and C are the same distance, and B is farther away than positions A and C.

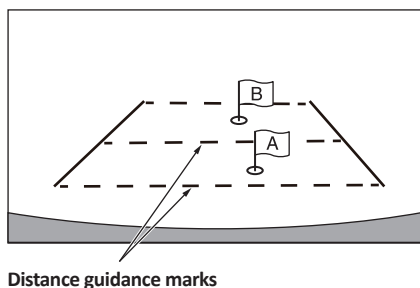
- The car width extension mark represents the distance to the road surface.  
The distance to an object on the road is not accurately represented by the guides.

### Error between the screen and the actual road surface

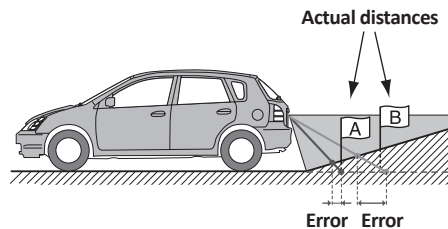
In the following conditions, errors are produced between the screen guidance and the actual road surface. (The illustrations represent a case when the camera is installed in the standard position.)

## When there is a steep upward slope behind the car (example)

<Screen>



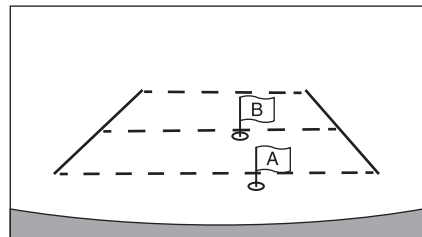
<Situation of the car>



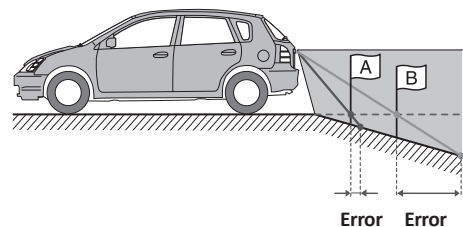
The distance guidance mark represents the distance to a flat road surface. Therefore in the case of an upward slope behind the car, the distance guides are displayed closer to the rear bumper than the actual distance. For example, if there is an obstacle on the upward slope, it may appear farther away than its actual position. Also, an error may occur between the guidance and the actual path of the car on the road surface.

## When there is a steep downward slope behind the car (example)

<Screen>



<Situation of the car>



In the case of a downward slope behind the car, the distance guides are displayed farther from the rear bumper than the actual distance. If there is an obstacle on the downward slope, it seems closer than its actual position.

Also, an error may occur between the guidance and the actual path of the car on the road surface.



# Information

## About the Supported Formats

### CAUTION

Except for private use, duplicating audio data or distributing, transferring, or copying it, whether for free or for a fee, without permission of the copyright holder is strictly prohibited by the Copyright Act and by international treaty.

## About Audio Format

### **Method for creating WAVE/WMA/AAC/AC3/MPEG/Ogg/FLAC/APE (USB Flash drive) files**

Audio data is compressed using software with WAVE/WMA/AAC/ AC3/ MPEG/Ogg/FLAC/APE (USB Flash drive) codecs. For details on creating WAVE/WMA/AAC/AC3/MPEG/Ogg/FLAC/APE(USB Flash drive files, refer to the user's manual for that software.  
WAVE/WMA/AAC/AC3/MPEG/Ogg/FLAC/APE (USB Flash drive) files that are playable on this device have the file extensions.

WAVE:.WAV  
WMA:.WMA,.asf  
AAC:.aac  
AC3:.ac3,.ec3  
MPEG:.mp1,mp2,mpa,mp3,.mp4,m4a  
Ogg:.ogg  
FLAC:.flac  
APE:.ape

WMA is not supported for the following files, Windows Media Audio Professional, Windows Media Audio 10 std or Windows Media Audio 10 Pro Lossless.

There are many different versions of the AAC format. Confirm that the software being used conforms to the acceptable formats listed above. It's possible that the format may be unplayable even though the extension is valid.  
Playback of AAC files encoded by iTunes is supported.

### **WAVE (USB Flash drive)**

Filename : .wav  
Container: Waveform Audio File Format(base on RIFF)  
Audio Coding: LPCM,IMA-ADPCM

### **WMA (USB Flash drive)**

Filename : .wma,.asf  
Container: Advanced Systems Format(ASF)  
Audio Coding: WMA STD  
\* Support object:  
Content Description Object: only  
Title,Artist

### **AAC (USB Flash drive)**

Filename : .aac  
Container: Audio Data Transport Stream (ADTS)  
Audio Coding: AAC-LC/HE-AAC

### **AC3 (USB Flash drive)**

Filename : .ac3,.ec3  
Container: AC3 bit streams  
Audio Coding: AC3

Container: Enhanced AC3 Bit Stream  
Audio Coding: E-AC3

### **MPEG (USB Flash drive)**

Filename : .mp1  
Container: MPEG PS  
Audio Coding: MP1  
  
Filename: .mp2,.mpa  
Container: MPEG PS  
Audio Coding: MP2

Filename : .mp3  
Container: MPEG PS  
Audio Coding: MP3

\* Support Tag:ID3V1 ID3v2.3 : only  
TPE1, TALB, TCONTIT2, TYER

Filename : .mp4,.m4a  
Container: MP4 File Format  
Audio Coding: AAC-LC,HE-AAC

### **OGG (USB Flash drive)**

Filename : .ogg  
Container: Ogg  
Audio Coding: Vorbis

### **FLAC (USB Flash drive)**

Filename : .flac  
Container: FLAC  
Audio Coding: FLAC

### **APE (USB Flash drive)**

Filename : .ape  
Container: APE (Monkey's Audio Lossless Audio File)  
Audio Coding: Monkey's Audio

## About Video Format

Files that are playable on this device have the file extensions.

AVI: .avi  
MPEG 1/2: .mpeg,.mpeg.vob(with.info),.dat  
MPEG4: .mp4,.mpeg4,.m4v  
Flash:.flv,.swf  
QuickTime:.mov,.qt  
Matroska Video:.mkv  
TS Stream:.ts,.tp,.trp,.m2ts <BD>,.MTS<AVCHD>  
3GP:.3gp  
WMV:.wmv  
ASF:.asf

### **Format: AVI**

Filename : .avi  
Video Coding: MPEG-4 SP/ASP(FMP4), Sorenson H.263(FLV1), H.264, Xvid, WMV 9 / VC - 1, MJPEG (Maximum resolution:1280x720), MPEG-2 Video, MPEG-1 Video  
Audio Coding: MP3, AC3, WMA St, LPCM /ADPCM

### **Format: MPEG 1/2**

File Name:.mpg .mpeg  
Video Coding: MPEG-1 Video, MPEG-2 Video, H.264  
Audio Coding: MP1 / MP2 / MP3, AAC-LC, AC3, LPCM  
File Name:.vob (with.info)  
Video Coding: MPEG-2 Video Main  
Audio Coding: MP1 / MP2 / MP3, AC3, LPCM  
File Name:.dat  
Video Coding: MPEG-1 Video  
Audio Coding: MPEG-1 Audio Layer II

### **Format: MPEG4**

File Name:.mp4,.mpeg4  
Video Coding: MPEG-2 Video, MPEG-4 SP/ASP, H.264, MJPEG (Maximum resolution:1280x720)  
Audio Coding: MP3, AAC-LC/HE-AAC, AC3, LPCM  
File Name:.m4v  
Video Coding: H.264  
Audio Coding: AAC-LC / HE-AAC, AC3



#### **Format: Flash**

##### **File Name:.flv**

Video Coding: Sorenson H.263 (FLV1), H.264

Audio Coding: MP3, AAC-LC, ADPCM

##### **File Name:.swf**

Video Coding: Sorenson H.263 (FLV1), H.264

Audio Coding: MP3, ADPCM

#### **Format: QuickTime**

File Name:.mov .qt

Video Coding: MPEG-4 SP/ASP, H.264,  
MJPEG (MJPEG(Maximum resolution:1280x720))

Audio Coding: MP3, AAC-LC / HE-AAC, LPCM

#### **Format: Matroska Video**

File Name:.mkv

Video Coding: MPEG-1 Video, MPEG-2 Video, MPEG-4 SP/ASP, H.264,  
Xvid, WMV9 / VC-1

Audio Coding: MP3, AC3, LPCM, AAC-LC / HE-AAC

#### **Format: TS Stream**

File Name:.ts .trp

Video Coding: MPEG-1 Video, MPEG-2 Video, MPEG-4 H.264,  
WMV 9 / VC-1

Audio Coding: MP1 / MP2 / MP3, AC3, AAC-LC / HE-AAC

##### **File Name:.m2ts <BD>**

Video Coding: MPEG-2 Video, H.264, WMV 9 / VC-1

Audio Coding: AC3, LPCM

##### **File Name:...MTS <AVCHD>**

Video Coding: H.264

Audio Coding: AC3, LPCM

#### **Format: 3GP**

File Name:.3gp

Video Coding: MPEG-4 SP/ASP, H.263, H.264

Audio Coding: ACC-LC / HE-ACC

#### **Format: WMV**

File Name:.wmv

Video Coding: VC-1

Audio Coding: WMA Std

#### **Format: ASF**

File Name:.asf

Video Coding: VC-1 Audio Coding: WMA Std

## About Photo Format

#### **Format: Jpg,jpeg**

Resolution ratio: Maximum 4096 x 4096, minimum 32x32

#### **Format:Png**

Resolution ratio: Maximum 576 x 720 minimum 32x32

#### **Format:bmp**

Resolution ratio: Maximum 936 x 1920 minimum 32x32

#### **ID3 tags/WMA tags**

If the music supports ID3 tag and track title ,music title, author, album name and album cover are to be displayed.

If there is no track title , "No Name" will be displayed.

If there is no album name, the name of the folder will be displayed, if the song name is not recognized, it will be garbled, if there is no album cover, it will not be displayed.

#### **Playing back file**

- The files are prepared, then written to a USB flash drive.
- Connect iPod/Android MSC

#### **Maximum numbers of playable files/folders**

##### **Maximum files numbers of device:**

USB Flash drive(Audio/Video/):9999

USB Flash drive(Photo):999

iPod:2000

Android MSC: Same as USB

##### **Maximum files numbers of folders:**

USB Flash drive (Audio/Video/Photo):999

iPod:No folder , only a playlist is available with up to 100 files

Android MSC: Same as USB

##### **Maximum folders numbers of device:**

USB Flash drive(Audio/Video/Photo):1000

iPod:No folder ,up to 100 playlists

Android MSC: Same as USB

• Supports a maximum of 256 GB USB

##### **• Largest playable file size:**

Audio files :4GB

Video files: 4 GB

Photo files: 10K-6M

Playback may not be performed if a disc exceeds the limitations described above.

#### **Media supported**

The media that this device can play back a USB flash drive.

#### **Corresponding File Systems**

This device supports FAT 16/32, NTFS.

The maximum nested folder depth is 8 (including the root directory).

#### **Order/Search of files**

Display and sort according to the head character

Display in the order of 1 -> 2 -> 3 below.

0: Folder :When there are folders, the folders are displayed ahead of the files

1: Number ( represented by "#" on the Right Search Bar )

2: English Alphabet

3: Shorting order of Unicode

Right Search Bar (order of list )

1: Number ( represented by "#" on the Right Search Bar ) 2: English Alphabet

•Search only the files with numeric or English alphabetic headers

#### **Terminology**

##### **Bit rate**

This is the "sound" compression rate specified for encoding. The higher the bit rate, the higher the sound quality, but also the larger the files.

##### **Sampling rate**

This value shows how many times per second the data is sampled (recorded). For example, music CDs use a sampling rate of 44.1 kHz, so the sound is sampled (recorded) 44,100 times per second. The higher the sampling rate, the higher the sound quality, but also the larger the volume of data.

##### **Encoding**

Converting music CDs, WAVE (AIFF) files, and other sound files into the specified audio compression format.

##### **Tag**

Song information such as track titles, artist names, album names, etc., written into MP3/WMA/AAC/FLAC/WAVE/Ogg/APE (USB flash drive) files.

##### **Root folder**

The root folder (or root directory) is found at the top of the file system. The root folder contains all folders and files. It is created automatically for all burned discs.

## In Case of Difficulty

If you encounter a problem, please turn the power off, then on again. If the unit is still not functioning normally, please review the items in the following checklist. This guide will help you isolate the problem if the unit is at fault. Otherwise, make sure the rest of your system is properly connected, or then consult your authorized Alpine dealer.

### Basic

#### No function or display.

- Vehicle's ignition is off.
  - If connected according to the instructions, the unit will not operate with the vehicle's ignition off.
- Improper power lead connections.
  - Check power lead connections.
- Blown fuse.
  - Check the fuse on the battery lead of the unit; replace with the proper value if necessary.

#### No sound or unnatural sound.

- Incorrect setting of volume/balance/fader controls.
  - Readjust the controls.
- Connections are not properly or securely made.
  - Check the connections and firmly connect.

#### Screen not displayed.

- Brightness/Contrast control is set at the minimum position.
  - Adjust the Brightness/Contrast control.
- Temperature in the vehicle is too low.
  - Increase the vehicle's interior temperature to operation temperature range.
- Connections to the Auxiliary Device are not securely made.
  - Check the connections and firmly connect.
- The Parking Brake Lead is not connected.
- The Parking Brake is not engaged.
  - Connect the Parking Brake Lead, then engage the Parking Brake.

#### Movement of displayed picture is abnormal.

- Temperature in the vehicle is too high.
  - Allow the vehicle's interior temperature to cool.

### Radio

#### Unable to receive stations.

- No antenna, or open connection in the antenna cable.
  - Make sure the antenna is properly connected; replace the antenna or cable if necessary.

#### Unable to tune stations in the seek mode.

- You are in a weak signal area.
  - Change the radio frequency manually.
- If the area you are in is a primary signal area, the antenna may not be grounded and connected properly.
  - Check your antenna connections; make sure the antenna is properly grounded at its mounting location.
- The antenna may not be the proper length.
  - Make sure the antenna is fully extended; if broken, replace the antenna with a new one.

#### Broadcast is noisy.

- The antenna is not the proper length.
  - Extend the antenna fully; replace it if it is broken.
- The antenna is poorly grounded.
  - Make sure the antenna is grounded properly at its mounting location.
- The station signal is weak and noisy.
  - If above solution does not work, tune in another station.

### USB Audio

#### Unit does not operate.

- Condensation.
  - Wait a while (about 1 hour) for the condensation to dry.

#### Picture is unclear or noisy.

- Vehicle's battery power is weak.
  - Check the battery power and wiring.  
(The unit may malfunction if the battery power is under 11 volts with a load applied.)

---

## If this Message Appears

---

Various messages are displayed on the screen during operation. In addition to the messages telling you the current status or providing guidance for the next operation, there are also the following error messages. If one of these error messages is displayed, carefully follow the instructions in the solution column.

---

### System

#### ATTENTION!

##### Viewing of front seat video source while driving is strictly prohibited.

- A setup operation, etc., was carried out while the vehicle was running.
  - Move the vehicle to a safe location, stop, and engage the parking brake, then carry out this operation.

---

### Audio/Visual

#### This content cannot be played.

- Unsupported content .
  - Change to play supported contents type.

#### This device is not supported./Unsupport USB device

- Unsupported device.
  - Change to play supported USB device.

#### Device No Response.

- No response from the device.

#### USB Hub is not supported.

- The USB hub is not supported.

#### No Audio.

- There is no audio data in the current video file.
  - Download a video file with audio data in it .

#### Audio format not supported

- Not supported audio format.
  - Download supported audio format to USB flash drive.

#### Audio trick not supported/Video Trick not supported

- Prompts fast forwarding / reversing or jumping on current audio/video is not supported.
  - Change the current audio /video format.

#### Video other warning

- Prompts unexpected warning message.
  - Change to play other video.

#### Video format not supported

- Unsupported video format.
  - Change to play the supported video format.

#### Video other error

- Unknown error.
  - Change to play other video.

#### No Artist (/ No Song / No album)

- There are no tag-info in the USB Audio / iPod Audio.
  - Change to play audio-file with tag-info

#### No Date

- There are no data in the USB flash drive.
    - Download data to the USB flash drive and connect to this unit.
- 

---

### SiriusXM

#### Check Tuner

- The SiriusXM Tuner is disconnected or the unit is having trouble communicating with the Tuner.
  - Connect the Tuner or check the Tuner connection to the back of the unit.

#### Check Antenna

- The SiriusXM Satellite Radio antenna or cable is either damaged or not connected correctly to the SiriusXM Tuner.
  - Check that the SiriusXM antenna cable is connected to the SiriusXM Tuner and check that the antenna cable is not kinked or otherwise damaged. Replace the antenna if necessary.
  - SiriusXM products are available at your local car audio retailer or online at [www.shop.siriusxm.com](http://www.shop.siriusxm.com).

#### No Signal

- The SiriusXM satellite signal is too weak at the current location.
  - Move the vehicle to a location with a clear view of the southern sky.
  - Make sure the Satellite Radio antenna is properly mounted and not obstructed by metal objects.

#### Channel [xxx] Not Subscribed

##### Call SiriusXM to Subscribe

- The active channel has become unsubscribed or the requested channel is not available in your subscription package.
  - In the USA, you can activate online or by calling SiriusXM Listener care:
    - Visit [www.siriusxm.com/activatenow](http://www.siriusxm.com/activatenow)
    - Call SiriusXM Listener Care at 1-866-635-2349
  - For Canadian Subscriptions, please contact:
    - Visit [www.siriusxm.ca/activate](http://www.siriusxm.ca/activate)
    - Call SiriusXM Customer Care at 1-888-539-7474
  - The unit will revert to the previously selected channel or to channel 1 automatically.

#### Channel [xxx] Not Available

- The active channel is no longer in the SiriusXM channel lineup or the user has entered an invalid channel number.
  - Visit [www.siriusxm.com](http://www.siriusxm.com) for information on the current channel lineup.
- The unit will revert to the previous channel or to channel 1 automatically.

#### Subscription Updated

##### Press Enter to Continue

- Your subscription has been updated.
    - Touch [Enter] to clear this message.
- Password modified successfully
- Password entered incorrectly.
    - Enter the correct password
-

## **Bluetooth**

### **No Bluetooth device were found**

- The Bluetooth audio device was not connected correctly.
    - Check the settings for the unit and the Bluetooth audio device and reconnect
- 

## **Phone**

### **Empty**

- The phone book is empty.

### **Phone book access is not authorized**

- The phone book download is not supported.
  - On Enable phone book permission.

### **Handsfree device is not connected**

- Hands-Free Profile is not connected.
    - Connect Hands- Free Profile.
- 

## **AUX**

### **Picture off for your safety.**

- While the vehicle is moving.
    - Parking.
- 

## **HOME**

### **No devices available connect an Android Phone with USB cable.**

- When Android Auto is not connected , touch Android Auto icon, this message is displayed .

### **Caution! AMP Overload.**

- When two volume cables are connected ,this message is displayed.
  - Take apart the volume cable and reboot the unit.

### **Caution! USB Overcurrent.**

- Prompts USB Overcurrent
    - Remove the USB and reboot the unit
- 

## **Apple CarPlay**

### **The GNSS antenna is disconnected.**

- The GPS antenna is disconnected or bad connected.
    - Connect the GPS antenna.
- 

## **Setup**

### **Data check error.**

- Upgrade firmware check error
  - Exit upgrade progress

### **There is no photo in this device.**

- No photo in this device
    - Download the photo with supported format ((JPG,JPEG,PNG,BMP))to this device
-

# Specifications

## MONITOR SECTION

Screen Size	6.75"
LCD Type	Normally white, Transmissive
Operation System	a-Si TFT active matrix
Number of Picture Elements	1,152,000 pcs. (800 × 480 × 3(RGB))
Effective Number of Picture Elements	99% or more
Illumination System	LED

## FM TUNER SECTION

Tuning Range	87.7 – 107.9 MHz
Mono Usable Sensitivity	< 9 dBu (75 ohms)
50 dB Quieting Sensitivity	< 5 dBu (75 ohms)
Signal-to-Noise Ratio	65 dB
Stereo Separation	35 dB

## AM TUNER SECTION

Tuning Range	530 – 1710 kHz
Usable Sensitivity	34 dBu

## USB SECTION

USB requirements	USB 2.0
Max. Power Consumption	1,500 mA (CDP Support)
USB Class	USB (Play From Device)/ USB (Mass Storage Class)
File System	FAT16/32, NTFS
Number of Channels	2-Channels (Stereo)
Frequency Response <sup>*1</sup>	17 – 20,000 Hz (±1 dB)
Total Harmonic Distortion	0.05% (at 1 kHz)
Dynamic Range	90 dB (at 1 kHz)
Signal-to-Noise Ratio	85 dB
Channel Separation	75 dB (at 1 kHz)

*\*1 Frequency response may differ depending on the encoder software/bit rate.*

## Bluetooth SECTION

Bluetooth Specification	Bluetooth V5.0
Output Power	< +4dBm Ave. (Power class 2)
Profile	HFP (Hands-Free Profile) PBAP (Phone Book Access Profile) A2DP (Advanced Audio Distribution Profile) AVRCP (Audio/Video Remote Control Profile)

## Wi-Fi® SECTION

Wi-Fi Specification	Support IEEE 802.11a/n/ac
Model	Access point(AP)
Band	5G Hz

## GENERAL

Power Requirement	14.4 V DC (10.8 – 16 V allowable)
Operating temperature	-4°F to +140°F (-20°C to + 60°C)
Power Output	16 W RMS × 4 <sup>*2</sup>

*\*2 Primary amplifier ratings per CEA-2006 Standard*

- Power output: measured at 4 Ohms and ≤ 1% THD+N
- S/N: 80 dBA (reference: 1 W into 4 Ohms)

Weight	0.9 kg
Audio output level	
Preout (Front, Rear):	4V/10k ohms (max.)
Preout (Subwoofer):	4V/10k ohms (max.)

## CHASSIS SIZE

Width	178 mm
Height	100 mm
Depth	68 mm

- Due to continuous product improvement, specifications and design are subject to change without notice.
- The LCD panel is manufactured using an extremely high precision manufacturing technology. Its effective pixel ratio is over 99.99%. This means that there is a possibility that 0.01% of the pixels could be either always ON or OFF

---

# Installation and Connections

---

Before installing or connecting the unit, please read the following and pages 5 to 8 of this manual thoroughly for proper use.

## WARNING

---

### KEEP SMALL OBJECTS SUCH AS SCREWS OUT OF THE REACH OF CHILDREN.

Swallowing them may result in serious injury. If swallowed, consult a physician immediately.

### MAKE THE CORRECT CONNECTIONS.

Failure to make the proper connections may result in fire or product damage.

### USE ONLY IN CARS WITH A 12 VOLT NEGATIVE GROUND.

(Check with your dealer if you are not sure.) Failure to do so may result in fire, etc.

### BEFORE WIRING, DISCONNECT THE CABLE FROM THE NEGATIVE BATTERY TERMINAL.

Failure to do so may result in electric shock or injury due to electrical shorts.

### DO NOT ALLOW CABLES TO BECOME ENTANGLED IN SURROUNDING OBJECTS.

Arrange wiring and cables in compliance with the manual to prevent obstructions when driving. Cables or wiring that obstruct or hang up on places such as the steering wheel, gear lever, brake pedals, etc. can be extremely hazardous.

### DO NOT SPLICE INTO ELECTRICAL CABLES.

Never cut away cable insulation to supply power to other equipment. Doing so will exceed the current carrying capacity of the wire and result in fire or electric shock.

### DO NOT DAMAGE PIPE OR WIRING WHEN DRILLING HOLES.

When drilling holes in the chassis for installation, take precautions so as not to contact, damage or obstruct pipes, fuel lines, tanks or electrical wiring. Failure to take such precautions may result in fire.

### DO NOT USE BOLTS OR NUTS IN THE BRAKE OR STEERING SYSTEMS TO MAKE GROUND CONNECTIONS.

Bolts or nuts used for the brake or steering systems (or any other safety-related system), or tanks should NEVER be used for installations or ground connections. Using such parts could disable control of the vehicle and cause fire etc.

### DO NOT INSTALL IN LOCATIONS WHICH MIGHT HINDER VEHICLE OPERATION, SUCH AS THE STEERING WHEEL OR GEARSHIFT.

Doing so may obstruct forward vision or hamper movement etc.

## CAUTION

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### HAVE THE WIRING AND INSTALLATION DONE BY EXPERTS.

The wiring and installation of this unit requires special technical skill and experience. To ensure safety, always contact the dealer where you purchased this product to have the work done.

### USE SPECIFIED ACCESSORY PARTS AND INSTALL THEM SECURELY.

Be sure to use only the specified accessory parts. Use of other than designated parts may damage this unit internally or may not securely install the unit in place. This may cause parts to become loose resulting in hazards or product failure.

### ARRANGE THE WIRING SO IT IS NOT CRIMPED OR PINCHED BY A SHARP METAL EDGE.

Route the cables and wiring away from moving parts (like the seat rails) or sharp or pointed edges. This will prevent crimping and damage to the wiring. If wiring passes through a hole in metal, use a rubber grommet to prevent the wire's insulation from being cut and results in serious accident. by the metal edge of the hole.

### DO NOT INSTALL IN LOCATIONS WITH HIGH MOISTURE OR DUST.

Avoid installing the unit in locations with high incidence of moisture or dust. Moisture or dust that penetrates into this unit may result in product failure.

---

## Precautions

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- Be sure to disconnect the cable from the (–) battery post before installing your unit. This will reduce any chance of damage to the unit in case of a short-circuit.
- Be sure to connect the color coded leads according to the diagram. Incorrect connections may cause the unit to malfunction or damage to the vehicle's electrical system.
- When making connections to the vehicle's electrical system, be aware of the factory installed components (e.g. on-board computer). Do not tap into these leads to provide power for this unit. When connecting the unit to the fuse box, make sure the fuse for the intended circuit of the unit has the appropriate amperage. When in doubt, consult your Alpine dealer.
- The unit uses female RCA-type jacks for connection to other units (e.g. amplifier) having RCA connectors. You may need an adaptor to connect other units. If so, please contact your authorized Alpine dealer for assistance.
- Be sure to connect the speaker (–) leads to the speaker (–) terminal. Never connect left and right channel speaker cables to each other or to the vehicle body.

## Accessory List

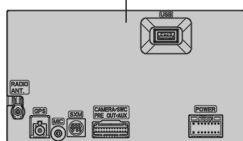
Main unit .....	1
Power cable .....	1
RCA cable .....	1
GPS antenna .....	1 set
Microphone .....	1
USB extension cable .....	1
Screw .....	4
Countersunk screw .....	4
Quick Reference Guidance .....	1
Card note1 .....	1
Card note2 .....	1
Warranty card .....	1

## Installation

### CAUTION

- Do not cover the heat sink to block air circulation, as heat can accumulate in the chamber and cause a fire.

Heat sink

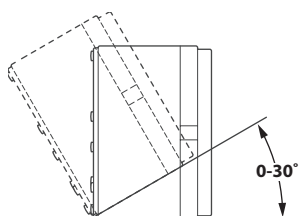


Rear of the Unit

### Caution concerning the installation location

#### Angle of installation

Install at an angle between horizontal and 30°. Note that installing at an angle outside of this range will result in a loss of performance and possibly damage.

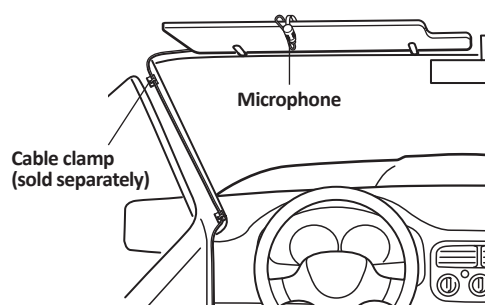


### Mounting the Microphone

For safe use, make sure of the following:

- Location is stable and firm.
- Does not interfere with safety equipment.
- Driver's view and operations are not obstructed.
- Microphone is located where the driver's voice can be easily picked up (for example, on the sun visor).

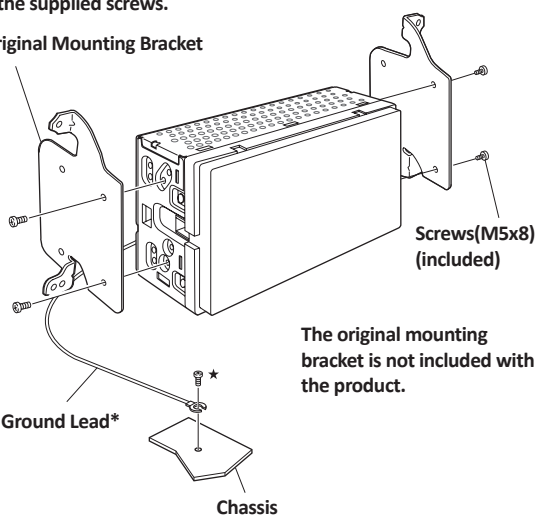
When you speak into the microphone, you should not have to change your driving posture. This may cause a distraction, taking your attention away from safely driving your vehicle. Carefully consider direction and distance while mounting the microphone. Confirm that the driver's voice can be easily picked up at the selected location.



### Installation example using the Original Mounting Bracket

- Mount the original mounting bracket to the unit using the supplied screws.

Original Mounting Bracket



Screws(M5x8)  
(included)

The original mounting bracket is not included with the product.

Ground Lead\*

Chassis

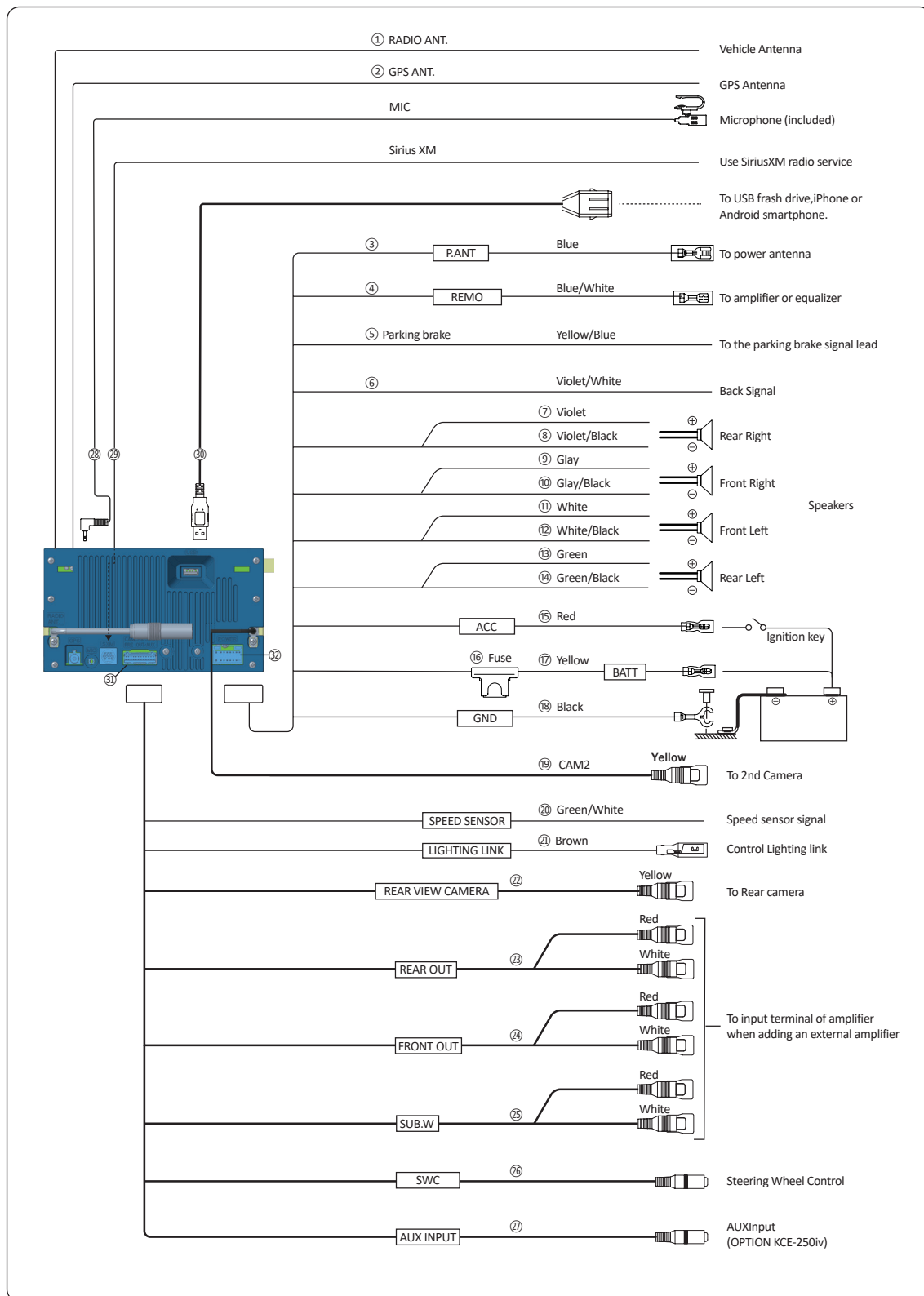
- Connect all other leads of the unit according to details described in the "Connections" (page 52).

- Mount the unit in a car.

- To securely connect the ground lead, use an already installed screw on a metal part of the vehicle (marked ( )) or a clean, bare metal spot on the vehicle's chassis.
- Fix the cables carefully. Do not damage them by mounting them into movable parts, such as the seat rail, or by locating them against sharp or pointed edges.

- Reattach the removed vehicle parts (panels, etc.) or other aftermarket dash kit back onto the vehicle.

## Connections

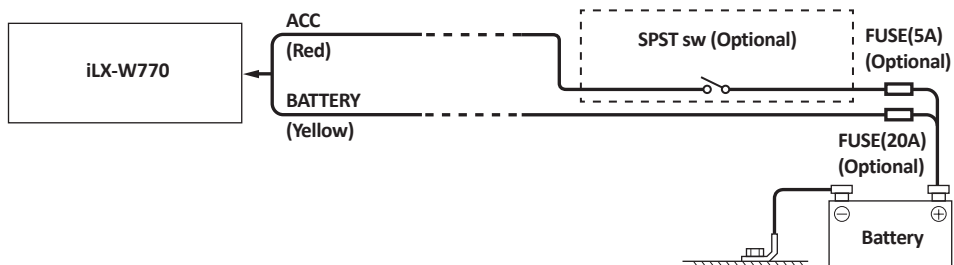




- ① **Radio Antenna Receptacle**
- ② **GPS Antenna Receptacle**
- ③ **Power Antenna Lead (Blue)**  
Connect this lead to the +B terminal of your power antenna, if applicable.
  - *This lead should be used only for controlling the vehicle's power antenna. Do not use this lead to turn on an amplifier or a signal processor, etc.*
- ④ **Remote Turn-On Lead (Blue/White)**  
Connect this lead to the remote turn-on lead of your amplifier or signal processor.
- ⑤ **Parking Brake Lead (Yellow/Blue)**  
Connect this lead to the power supply side of parking brake switch to transmit the parking brake status signals to the unit.
- ⑥ **Reverse Lead (Violet/White)**
- ⑦ **Right Rear (+) Speaker Output Lead (Violet)**
- ⑧ **Right Rear (–) Speaker Output Lead (Violet/Black)**
- ⑨ **Right Front (+) Speaker Output Lead (Gray)**
- ⑩ **Right Front (–) Speaker Output Lead (Gray/Black)**
- ⑪ **Left Front (+) Speaker Output Lead (White)**
- ⑫ **Left Front (–) Speaker Output Lead (White/Black)**
- ⑬ **Left Rear (+) Speaker Output Lead (Green)**
- ⑭ **Left Rear (–) Speaker Output Lead (Green/Black)**
- ⑮ **Switched Power Lead (Ignition) (Red)**  
Connect this lead to an open terminal on the vehicle's fuse box or another unused power source that provides (+) 12V only when the ignition is turned on or in the accessory position.
- ⑯ **Fuse Holder (15A)**
- ⑰ **Battery Lead (Yellow)**  
Connect this lead to the positive (+) post of the vehicle's battery.
- ⑱ **Ground Lead (Black)**  
Connect this lead to a good chassis ground on the vehicle. Make sure the connection is made to bare metal and is securely fastened using the sheet metal screw provided.
- ⑲ **CAN2 (Yellow)**  
To 2nd Camera
- ⑳ **SPEED SENSOR (Green/White)**
- ㉑ **LIGHTING LINK (Brown)**
- ㉒ **REAR CAMERA Input RCA Connector (Yellow)**  
Use when connecting a camera with RCA Output Connector.
- ㉓ **Rear Output RCA Connectors**  
Can be used as Rear Output RCA Connectors. RED is right and WHITE is left.
- ㉔ **Front Output RCA Connectors**  
Can be used as Front Output RCA Connectors. RED is right and WHITE is left.
- ㉕ **Subwoofer RCA Connectors**
- ㉖ **SWC**  
Steering Wheel Control
- ㉗ **AUX INPUT (Black)**  
Audio and video input.
- ㉘ **MIC Input Connector**  
To microphone (included)
- ㉙ **SiriusXM Tuner Input Connector**  
To SiriusXM Tuner (sold separately).
  - *For more information on how to install the SiriusXM Connect Vehicle tuner, consult the installation guide included with the tuner.*
- ㉚ **USB Connector**  
To USB flash drive, iPhone or Android smartphone.
- ㉛ **Power Supply Connector**
- ㉜ **CAMERA/SWC PRE OUT/AUX**

## If an ACC power supply is not available

### Connection Diagram of SPST Switch (sold separately)



- If your vehicle has no ACC power supply, add an SPST (single-pole, single-throw) switch (sold separately) and fuse (sold separately).
- The diagram and the fuse amperage shown above are in the case when the unit is used individually.
- If the switched power (ignition) lead of the unit is connected directly to the positive (+) post of the vehicle's battery, the unit draws some current (several hundred milliamperes) even when its switch is placed in the OFF position, and the battery may be discharged.

#### IMPORTANT

Please record the serial number of your unit in the space provided below and keep it as a permanent record. The serial number plate is located on the bottom of the unit.

#### SERIAL

NUMBER: \_\_\_\_\_

INSTALLATION DATE: \_\_\_\_\_

INSTALLATION TECHNICIAN: \_\_\_\_\_

PLACE OF PURCHASE: \_\_\_\_\_

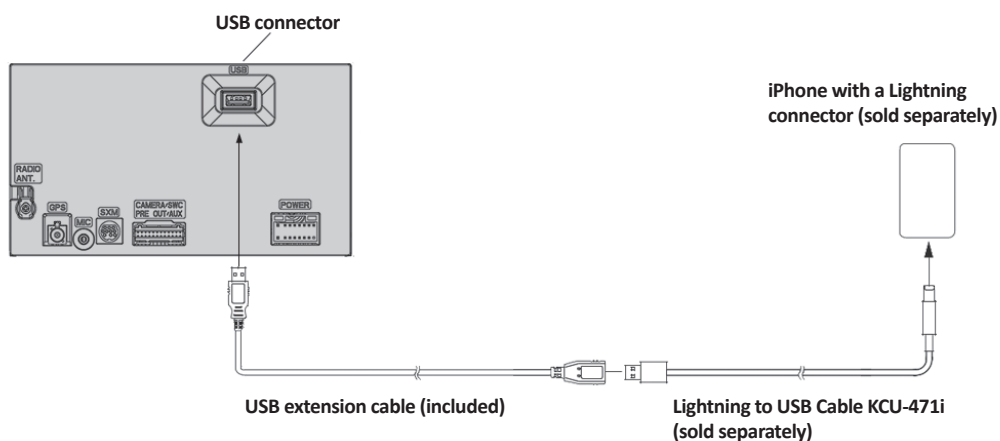
#### To prevent external noise from entering the audio system.

- Locate the unit and route the leads at least 10 cm away from the car harness.
- Keep the battery power leads as far away from other leads as possible.
- Connect the ground lead securely to a bare metal spot (remove any paint, dirt or grease if necessary) of the car chassis.
- If you add an optional noise suppressor, connect it as far away from the unit as possible. Your Alpine dealer carries various noise suppressors, contact them for further information.
- Your Alpine dealer knows best about noise prevention measures so consult your dealer for further information.

## System Example

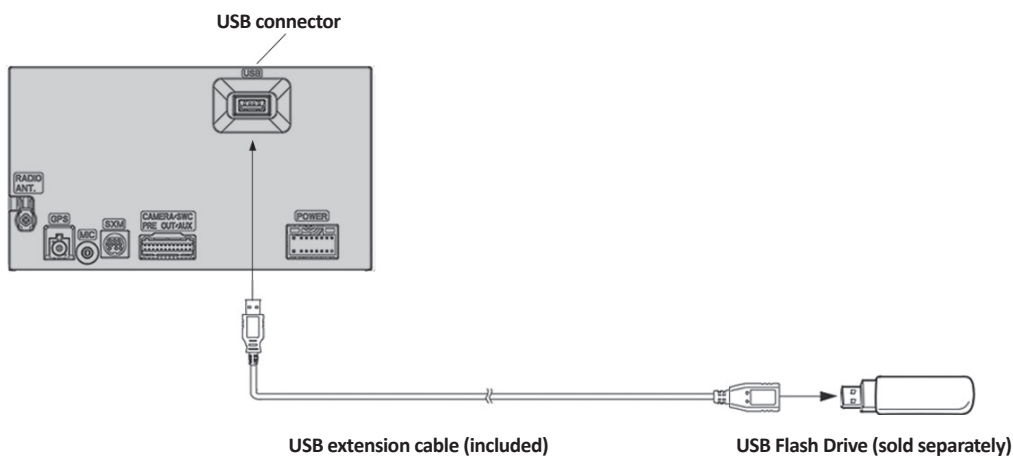
### Connection of an iPhone

- When connecting to an iPhone with a Lightning connector



- Do not leave an iPhone in a vehicle for a long time. Heat and humidity may damage the iPhone, and you may not be able to play it again.

### Connection of a USB Flash Drive



- Do not leave a flash drive in a vehicle for a long time. Heat and humidity may damage the flash drive.





## LIMITED WARRANTY

ALPINE ELECTRONICS OF AMERICA, INC. ("Alpine"), is dedicated to quality craftsmanship and is pleased to offer this Warranty. We suggest that you read it thoroughly. Should you have any questions, please contact your Dealer or contact Alpine at one of the telephone numbers listed below.

### ● PRODUCTS COVERED:

This Warranty covers Car Audio Products and Related Accessories ("the product"). Products purchased in the Canada are covered only in the Canada. Products purchased in the U.S.A. are covered only in the U.S.A.

### ● LENGTH OF WARRANTY:

This Warranty is in effect for one year from the date of the first consumer purchase.

### ● WHO IS COVERED:

This Warranty only covers the original purchaser of the product, who must reside in the United States, Puerto Rico, Mexico, Brazil, Argentina or Canada.

### ● WHAT IS COVERED:

This Warranty covers defects in materials or workmanship (parts and labor) in the product.

### ● WHAT IS NOT COVERED:

This Warranty does not cover the following:

Damage occurring during shipment of the product to Alpine for repair (claims must be presented to the carrier).

Damage caused by accident or abuse, including burned voice coils caused by over-driving the speaker (amplifier level is turned up and driven into distortion or clipping). Speaker mechanical failure (e.g. punctures, tears or rips). Cracked or damaged LCD panels. Dropped or damaged hard drives.

Damage caused by negligence, misuse, improper operation or failure to follow instructions contained in the Owner's manual. Damage caused by act of God, including without limitation, earthquake, fire, flood, storms or other acts of nature.

Any cost or expense related to the removal or reinstallation of the product.

Service performed by an unauthorized person, company or association.

Any product which has the serial number defaced, altered or removed.

Any product which has been adjusted, altered or modified without Alpine's consent.

Any product not distributed by Alpine within the United States, Puerto Rico or Canada.

Any product not purchased from an Authorized Alpine Dealer.

### ● HOW TO OBTAIN WARRANTY SERVICE:

① A You are responsible for delivery of the product to an Authorized Alpine Service Center or Alpine for repair and for payment of any initial shipping charges. Alpine will, at its option, repair or replace the product with a new or reconditioned product without charge. If the repairs are covered by the warranty, and if the product was shipped to an Authorized Alpine Service Center or Alpine, Alpine will pay the return shipping charges.

② You should provide a detailed description of the problem(s) for which service is required.

③ You must supply proof of your purchase of the product.

④ You must package the product securely to avoid damage during shipment. To prevent lost packages it is recommended to use a carrier that provides a tracking service.

### ● HOW WE LIMIT IMPLIED WARRANTIES:

ANY IMPLIED WARRANTIES INCLUDING FITNESS FOR USE AND MERCHANTABILITY ARE LIMITED IN DURATION TO THE PERIOD OF THE EXPRESS WARRANTY SET FORTH ABOVE AND NO PERSON IS AUTHORIZED TO ASSUME FOR ALPINE ANY OTHER LIABILITY IN CONNECTION WITH THE SALE OF THE PRODUCT.

### ● HOW WE EXCLUDE CERTAIN DAMAGES:

ALPINE EXPRESSLY DISCLAIMS LIABILITY FOR INCIDENTAL AND CONSEQUENTIAL DAMAGES CAUSED BY THE PRODUCT. THE TERM "INCIDENTAL DAMAGES" REFERS TO EXPENSES OF TRANSPORTING THE PRODUCT TO THE ALPINE SERVICE CENTER, LOSS OF THE ORIGINAL PURCHASER'S TIME, LOSS OF THE USE OF THE PRODUCT, BUS FARES, CAR RENTALS OR OTHERS COSTS RELATING TO THE CARE AND CUSTODY OF THE PRODUCT. THE TERM "CONSEQUENTIAL DAMAGES" REFERS TO THE COST OF REPAIRING OR REPLACING OTHER PROPERTY WHICH IS DAMAGED WHEN THIS PRODUCT DOES NOT WORK PROPERLY. THE REMEDIES PROVIDED UNDER THIS WARRANTY ARE EXCLUSIVE AND IN LIEU OF ALL OTHERS.

### ● HOW STATE/PROVINCIAL LAW RELATES TO THE WARRANTY:

This Warranty gives you specific legal rights, and you may also have other rights which vary from state to state and province to province. In addition, some states/provinces do not allow limitations on how long an implied warranty lasts, and some do not allow the exclusion or limitation of incidental or consequential damages. Accordingly, limitations as to these matters contained herein may not apply to you.

### ● IN CANADA ONLY:

This Warranty is not valid unless your Alpine car audio product has been installed in your vehicle by an Authorized Installation Center, and this warranty stamped upon installation by the installation center.

### ● HOW TO CONTACT CUSTOMER SERVICE:

Should the product require service, please call the following number for your nearest Authorized Alpine Service Center.

CAR AUDIO	1-800-ALPINE-1 (1-800-257-4631)
NAVIGATION	1-888-NAV-HELP (1-888-628-4357)

Or visit our website at; <http://www.alpine-usa.com>

ALPINE ELECTRONICS OF AMERICA, INC., 1500 Atlantic Blvd, Auburn Hills, Michigan 48326, U.S.A.

Do not send products to this address.

Call the toll free telephone number or visit the website to locate a service center.

## **About the Rules of Bluetooth Electromagnetic Radiation Regulation**

### **USA/Canada**

#### **FCC/IC CAUTION**

This device complies with Part 15 of the FCC Rules and Industry Canada's licence-exempt RSSs. Operation is subject to the following two conditions:

- This device may not cause interference; and
- This device must accept any interference, including interference that may cause undesired operation of the device.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This equipment complies with FCC/IC radiation exposure limits set forth for an uncontrolled environment and meets the FCC radio frequency (RF) Exposure Guidelines and RSS-102 of the IC radio frequency (RF) Exposure rules. This equipment has very low levels of RF energy that

it deemed to comply without maximum permissive exposure evaluation (MPE). But it is desirable that it should be installed and operated keeping the radiator at least 20 cm or more away from person's body.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes :

- l'appareil ne doit pas produire de brouillage;
- l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

Cet équipement est conforme aux limites d'exposition aux rayonnements énoncées pour un environnement non contrôlé et respecte les règles des radioélectriques (RF) de la FCC lignes directrices d'exposition et d'exposition aux fréquences radioélectriques (RF) CNR-102 de l'IC. Cet équipement émet une énergie RF très faible qui est considérée conforme sans évaluation de l'exposition maximale autorisée (MPE). Cependant, il est souhaitable qu'il devrait être installé et utilisé en gardant une distance de 20 cm ou plus entre le radiateur et le corps humain.

"La operación de este equipo está sujeta a las siguientes dos condiciones: (1) es posible que este equipo o dispositivo no cause interferencia perjudicial y (2) este equipo o dispositivo debe aceptar cualquier interferencia, incluyendo la que pueda causar su operación no deseada."

resolution 680: "Este equipamento não tem direito à proteção contra interferência prejudicial e não pode causar interferência em sistemas devidamente autorizados."

Don't forget to take a moment to protect your purchase by registering your product now at the following address: [www.alpine-usa.com/registration](http://www.alpine-usa.com/registration).

N'oubliez pas de consacrer un moment à la protection de votre achat en enregistrant votre produit dès maintenant à l'adresse suivante : [www.alpine-usa.com/registration](http://www.alpine-usa.com/registration).

Recuerde que con solo unos pocos pasos podrá proteger su producto, registrándolo a través de la siguiente dirección: [www.alpine-usa.com/registration](http://www.alpine-usa.com/registration).

# Open source licenses

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Version 2, June 1991

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## Preamble

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When we speak of free software, we are referring to freedom, not price. Our General Public Licenses are designed to make sure that you have the freedom to distribute copies of free software (and charge for this service if you wish), that you receive source code or can get it if you want it, that you can change the software or use pieces of it in new free programs; and that you know you can do these things. To protect your rights, we need to make restrictions that forbid anyone to deny you these rights or to ask you to surrender the rights. These restrictions translate to certain responsibilities for you if you distribute copies of the software, or if you modify it.

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This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.