JOYING USER MANUAL

for Automotive Navigation Systems using Android 4.4

At Joying we have over 11 years as professional auto parts manufacturers, and currently manufacture and sell premium Android based products for a wide range of auto manufacturers, including Toyota, Volkswagen, Hyundai, Honda, Opel, Nissan, Ford, and others. We also provide Android based products for BMW, Mercedes Benz, Mazda, Fiat, Suzuki, SSang your, Skoda, Kia, Chevrolet, Subaru and others.

This User Manual will explain the features of your new head-unit, provide suggestions for the installation and setup of the head-unit, and how you can safely operate it while driving.

To ensure safe driving, many of the advanced features should only be used while your vehicle is stopped.

Please watch our Installation Guide video at http://www.carjoying.com/video/InstallGuide and read through this User Manual before installing your new head-unit.

Installation and setup of your Head-Unit 6
Removing the standard head-unit 6
Identifying trim removal steps for your vehicle 7
Unplug the cables from the current head-unit 7
Reconnecting the cables into the Joying head-unit 8
Testing the Joying head-unit 10
Install the GPS Application 10
Replace the trim components 11
Controlling your new head-unit 12
Touch screen operation 12
Using the Remote Control 13
Connecting with WiFi and Bluetooth 16
Setting the Date and Time 19
Creating a Portable Hotspot 21
Controlling the system Sound 23
Amplifier Settings 25
Changing Language and Input methods 26
Controlling the screen display 29
Bluetooth 31
Changing the Head-Unit button color 33
Using your steering wheel controls 34
Other configuration options while driving 35
GPS functionality 36
Application and Data Storage 37
Application Management 38
Accessibility functions 40
Screen Capture 41
Security Settings 42

Backing up your head-unit settings 43
Controlling Desktop Widget's 44
Using the Joying applications 45
Radio 46
Music 47
DVD 48
Video 50
A/V In 52
iPod 53
Photo 54
Browser 55
Weather 56
File Manager 57
Car Recorder 58
Bluetooth 59
Vehicle 63
Factory Settings 64
Enhance your experience with Third-Party App's 68
Music Players 68
Video Messaging 69
Vehicle Diagnostics 69
Troubleshooting problems 70
Contacting Customer Support 70
Restore to Factory Settings 71
Upgrading the Firmware and Android Operating System 72
Requesting an update to the IGO GPS Map's 74
Creating a new GPS image for your SD storage 74
Updating an existing GPS SD card 75

Common Questions & Answers 76

Installation and setup of your Head-Unit

Your Joying Android head-unit has been designed to be easy to install, and for many people this can be completed in around 30 to 45 minutes with just a few simple hand tools. If you are not comfortable using hand tools, it can be installed by your local car audio shop, or your local mechanic for a fee.

Regardless of your auto manufacturer the installation process is basically the same for all auto's:

- Remove the trim from the dashboard around the current head-unit.
- Unplug the cables from the current head-unit.
- Reconnect the cables into the Joying head-unit
- Test the Joying head-unit to make sure all cables are reconnected.
- Replace the trim back onto the dashboard.

If you have purchased any of the optional accessories, such as a rear-view camera, or front DVR camera then some additional time will be required to place them in the correct location, and then install the cables from these accessories back to the head-unit in the dashboard.

To demonstrate this process we have created an online video that shows all of these steps. Please go to http://www.carjoying.com/InstallGuide to watch our Installation and Configuration video before starting your head-unit installation.

Removing the standard head-unit

On many auto's the plastic, metal or wood trim components are attached to the dashboard by simple pressure connectors that will release when pulled on using a plastic trim removal tool. However, on other auto's there may be a few small hidden screws that hold the trim components in place, and pulling on the trim before removing the bolt's will not release the trim and may even damage it.

To assist with removing dashboard trim we have a Trim Removal kit available on our web site in the Other Car Accessories page. This contains all the tools required to remove dashboard trim, plus door panels and other interior pieces. It can be found at http://www.carjoying.com/car-accessories/other-car-accessories/12pcs-central-dash-panel-refit-installation-removal-pry-trim-kit-tools-for-car-gps-navigation-radio-audio-stereo.html

Identifying trim removal steps for your vehicle

To understand how the dashboard trim pieces are attached we strongly recommend using an internet search site to look for video's that show how to remove the trim components from your specific vehicle.

To find them, try searching on the name of your manufacturer and model along with the word's "radio removal", or "change stereo". For example, typing **"vw jetta radio removal"** returns many different video's showing how to remove the trim on these vehicles.

If you do not find a video that is specifically for your vehicle, try adding the model year to your search, say "**vw jetta 2014 radio removal**" to narrow your search.

Before installing your new head-unit we recommend removing the key from the ignition. To be totally safe you should also disconnect the power cables from the battery.

Once you have found one or more video's for your model and year, watch it at least twice to understand the steps you must take to remove the dashboard trim. If you are not confident in your abilities you should take the vehicle to your local car audio shop, or local mechanic.

Now remove the dashboard trim and expose the factory head-unit.

Most head-units are attached by 2 or 4 screws, and these should be carefully removed so the screws do not fall inside the dashboard! Place the screws you have removed into a safe area as you will need them later to install the new Joying head-unit. Gently slide the factory head-unit out so you can examine the back side of the head-unit where the cables are attached.

Unplug the cables from the current head-unit

You current head-unit will have at least one main cable connected, and may also have a number of other cables attached to the head-unit. We recommend taking a photo of the cables while still connected to the factory head-unit in case you ever decide to replace the factory head-unit.

Grip each cable by the connector and gently disconnect or remove it from the factory head-unit. Some connects simply pull out, while others have a small clip that you press down on to release. If you are unsure here go back and watch the internet video for your model and year.

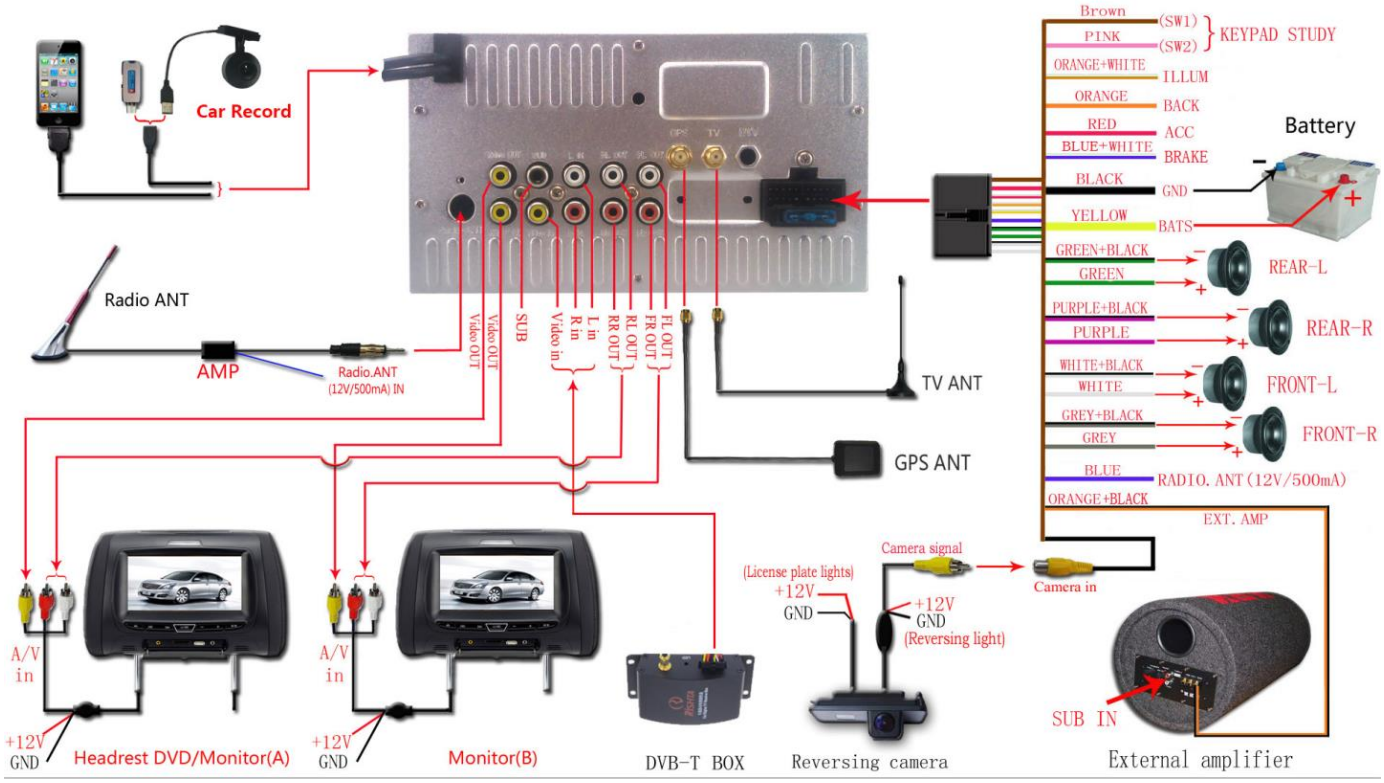
The largest cable is the main cable containing power, speaker and other connections. As with the other connectors, these often have a clip that must be pressed, or pulled to remove the large connector.

Once all cables have been removed from the factory head-unit you can place the factory head-unit in a safe place, and remove your Joying head-unit from it's packaging.

Reconnecting the cables into the Joying head-unit

There are two main cables that must be connected to the Joying head-unit - the large main power and speaker cable, and the radio antenna. If the vehicle's radio antenna has a blue wire it should be connected to the blue wire from the Main Cable.

You may also have cables from the optional rear-view camera, and the optional front DVR camera to connect.



Your Joying head-unit comes with a protective layer of plastic around the sides of the unit, plus covering the display screen. We recommend removing the plastic from the sides, but leaving the display screen plastic in place until the installation has been completed.

Testing the Joying head-unit

Before you screw the Joying head-unit into the dashboard it is a good idea to put the key into the ignition and test the head-unit. The most common mistake people make is not connecting the vehicle cables into the head-unit firmly, so check this before you replace the trim components.

Insert your key and start the vehicle. You should see the start-up screen appear on the head-unit in a few seconds. After a while the start-up process will complete and you should see the default dashboard screen. If the temperature is very cold during the installation, the screen may be dark but it will get lighter once the vehicle has warmed up and the screen has reached a normal temperature.

Tap on the icon marked Radio and the radio application will start. At this point it does not know what radio channels are available in your location, so press the magnifying glass icon on the lower, left side and it will search for available radio channels.

You should hear a local radio channel playing now, and the preset buttons will be set to the radio channels found.

If you do not hear anything, please increase the volume control on the head-unit by turning the dial (if present) or tapping the volume area on the touch screen.

If you still do not hear

anything slide the head-unit out and check the antenna cable is connected correctly.

Install the GPS Application

Many Android users will be happy with the Google Maps application that is already installed on your head-unit, but we have also included the IGO GPS application for you. Before you can use IGO it must be installed from the GPS SD storage device.

From the desktop, tap the XXX icon and scroll to the File Manage application. On the left side of the screen, tap the GPS entry, and then scroll down to the IGO directory and tap it. Scroll down to the IGO_NF.APK extension, and tap on it. You will be warned that the application is not signed and can not be installed. Tap 'Open' and enable the 'Unknown sources' option from the Settings page.

Press the Home key and select the File Manager again. Navigate back to the APK file, and tap again to install. When the installation has completed, tap the 'Open' button and the IGO application will start.

Replace the trim components

Retrieve the 2 or 4 screws that held the factory head-unit in place, and use them to securely attach the new Joying head-unit to the dashboard.

Gently attach the factory trim components in the reverse order they were removed, so the last trim piece you removed should be the first one you reattach. Complete this process for all the trim components and the head-unit installation is complete.

Congratulations - you now have a new Android based head-unit to explore!

Controlling your new head-unit

Touch screen operation

Your new Joying head-unit is a sophisticated Android 4.4 computer, but operation is simple by tapping icons, selection fields and boxes on the screen.

To start an application you simply tap on the required application icon from the main dashboard screen.

The Status Bar at the top of the screen will change depending upon the applications that are running, and any system settings you may have changed during configuration.

To re-organize the position of the application icons you simply touch and hold on the icon for about 3 seconds, and then you can drag the application icon to the main screen, or to the left or right edge of the desktop to move to a different page.

No matter which interface is currently being displayed you can click the Home button at the top, left corner of the screen and you will be returned to the home page.

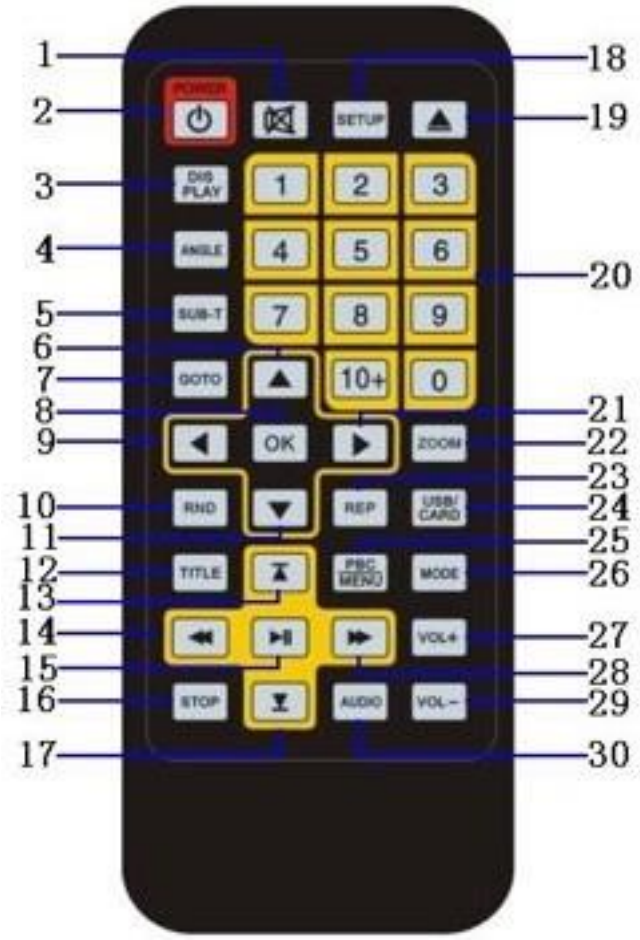
To return to the previous screen you simply press the Return button at the top, right corner of the screen.

This button will display the menu options for the current application.

To scroll the desktop display to the left or right, simply press on the screen and swipe to the left or right. Many of the Menu's can be scrolled up and down, so simply press the screen and swipe up or down.

This display's all the applications installed, rather than just the automotive specific app's.

Using the Remote Control



Your Remote Control can be used to safely control the operation of your head-unit while driving. The following will describe the functionality of each button on the remote:

1 - **MUTE** - Pressing this once will silence the audio, and pressing it a second time will restore the volume to the previous level. When the audio is silenced pressing the Volume + button will also restore the volume.

2 - **POWER** - Press this button to place the machine into a low-power standby mode.

3 - **DISPLAY** - When playing a DVD this button will show the remaining playback time.

4 - **ANGLE** - For DVD's with multiple playback angles included, this button will allow you to toggle between the different angles.

5 - **SUB-TITLE** - For DVD's with subtitles included, this button will allow you to toggle between the included subtitles.

6 - **CURSOR UP** - Move the on-screen curser to the item above the current item.

7 - **GOTO** - For DVD's with multiple chapters, this button allows you to select a certain chapter manually for playback.

8 - **OK** - Select an item or Confirm the current operation.

9 - **CURSOR LEFT** - Move the on-screen cursor to the item on the left of the current item.

10 - **SHUFFLE** - If the current active application supports this functionality, this button will enable the random playback of songs rather than sequentially.

11 - **CURSOR DOWN** - Move the on-screen cursor to the item below the current item.

12 - **TITLE** - Pressing this button will pause playback and return you to the DVD Title menu.

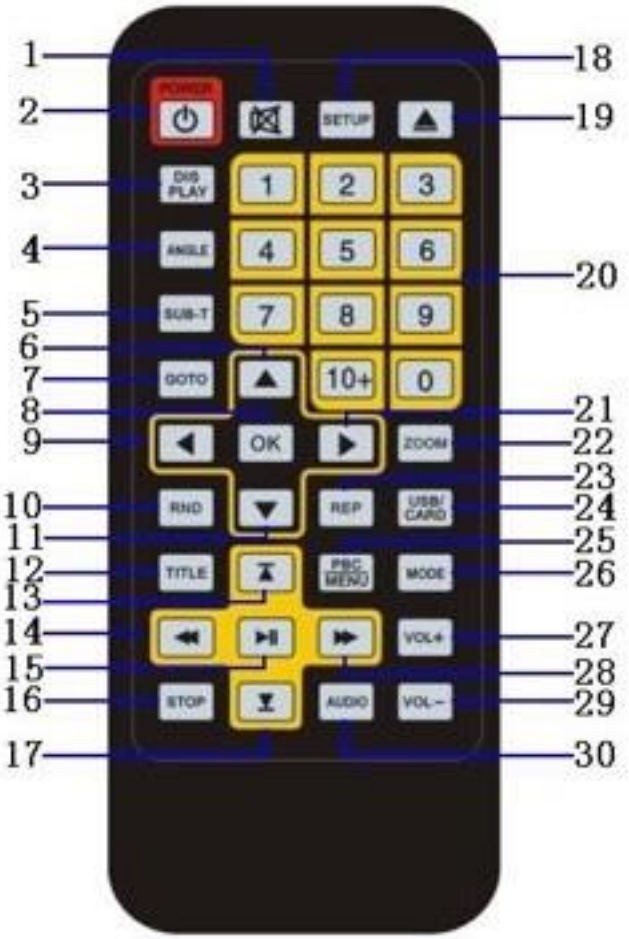
13 - **PREV** - Pressing this button during playback will move the play position to the start of the previous chapter or song, unless you are currently on the first chapter or song.

14 - **REW** - Pressing this button during playback will move the play position back in the current chapter or song. Pressing the button multiple times will increase the speed it moves the play position backwards. The speed will vary depending upon the type of file being played.

15 - **PLAY / PAUSE** - This button will pause the playback of the current chapter or song. Pressing it a second time will resume normal playback.

16 - **STOP** - Press this button during playback to stop the current song, movie or DVD.

17 - **NEXT** - Pressing this button during playback will move the play position back in the current chapter or song. Pressing the button multiple times will increase the speed it moves the play position backwards. The speed will vary depending upon the type of file being played.



18 - **SETUP** - Pressing this button will switch into the DVD menu while a movie is playing.

19 - **EJECT** - If a CD or DVD is in the head-unit pressing this button will eject it.

20 - **Number Pad** - In DVD mode the Number Pad can be used to select a song or chapter number for playback.

21 - **CURSOR RIGHT** - Move the on-screen cursor to the item on the right of the current item.

22 - **ZOOM** - While playing a DVD this button will allow you to zoom in or zoom out.

23 - **REPEAT** - Pressing this button will toggle the Repeat mode between current song to repeat, all songs to repeat, or no songs to repeat.

24 - **USB / CARD** - Pressing this button will switch you from the CD / DVD source, to the USB or SD card as the playback source.

25 - **MENU** - Pressing this button will return you to the CD or DVD menu.

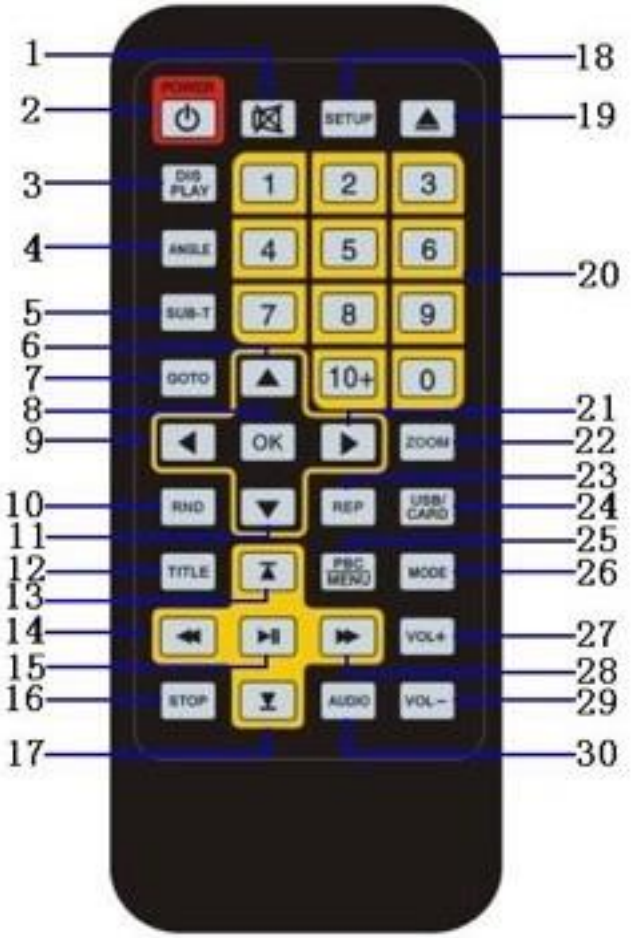
26 - **MODE** - Pressing this button will toggle the active application between the DVD, Music, Video and A/V-In applications.

27 - **VOL +** - Pressing this button will increase the volume.

28 - **FAST FORWARD** - Pressing this button during playback will move the play position forward in the current chapter or song. Pressing the button multiple times will increase the speed it moves the play position forward. The speed will vary depending upon the type of file being played.

29 - **VOL -** - Pressing this button will decrease or lower the volume.

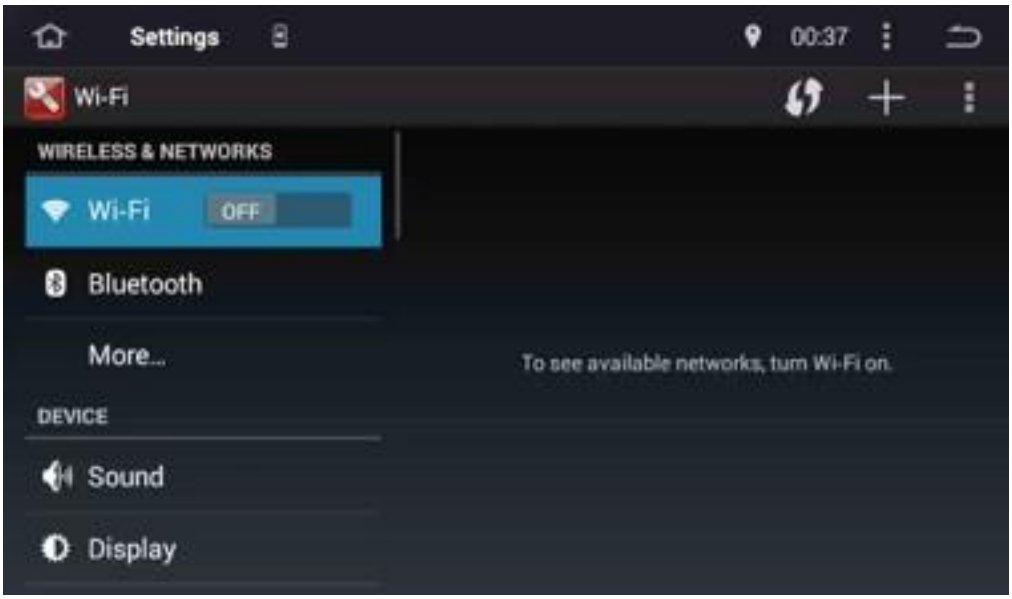
30 - **LANGUAGE** - In DVD playback mode this button changes the Language being played. With a VCD it changes the active channel.



Connecting with WiFi and Bluetooth

While your new head-unit is an excellent music and movie player for locally stored content, most customers will want to enable the WiFi or 3G/4G Portable Hotspot functionality to provide internet access while driving. With internet access you have complete access to music streaming services such as Spotify, email, messaging, or just general web sites for browsing.

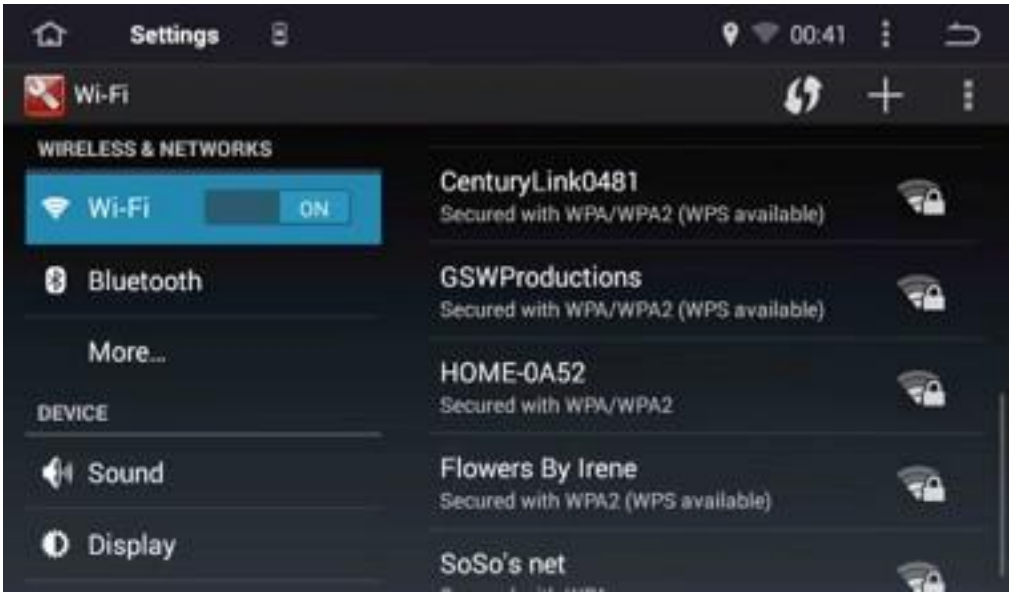
To setup WiFi or 3G/4G Portable Hotspot functionality we go into the system **Settings** application. This is done from the Settings application, so click on the **Settings** application to start it. If the **Settings** application is not visible, scroll the desktop left or right to locate it.



Please note that WiFi functionality is included with your head-unit, but 3G / 4G internet and hotspot functionality requires an optional USB-3G / 4G adapter to operate correctly.

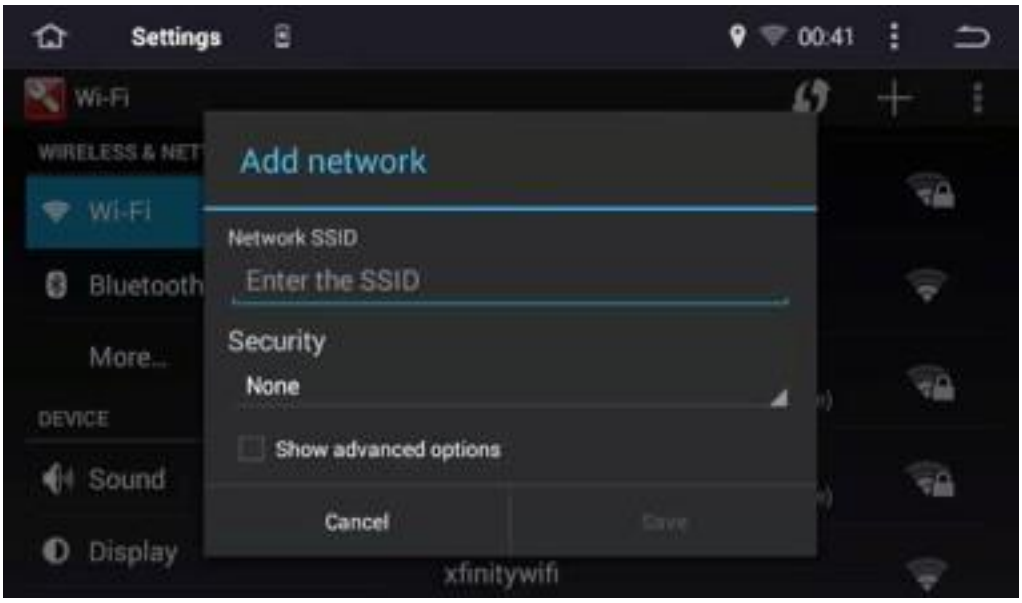
WiFi

If the Wi-Fi option is disabled it must be enabled by tapping the 'Off' slider control, which will turn the WiFi on.



Once the WiFi option is enabled, select your WiFi network name (SSID) from the list of available networks displayed.

If your Network SSID name is hidden you must tap the '+' button on the top, right side of the screen and enter the details of your WiFi network here.



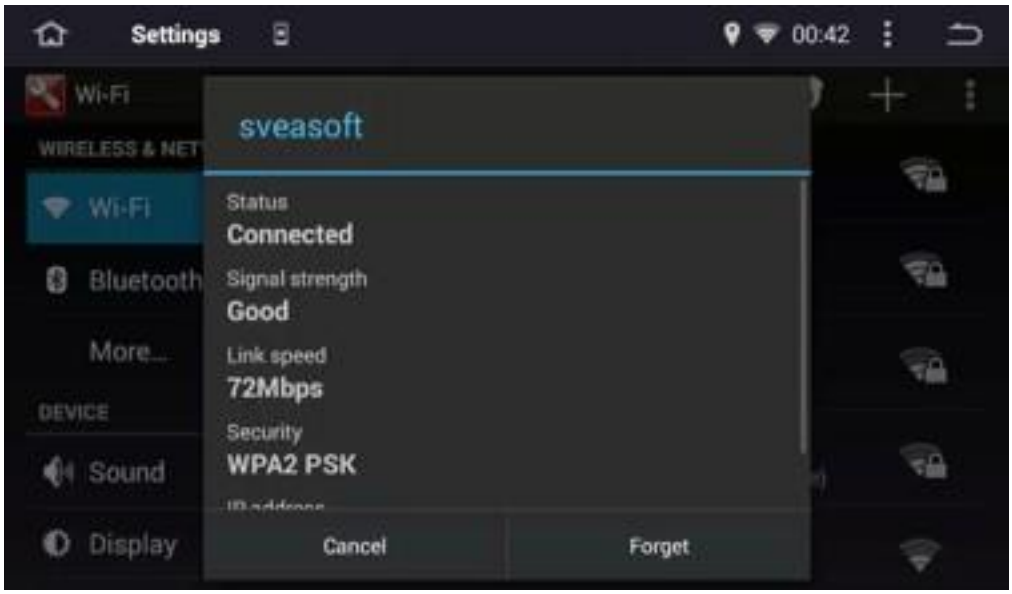
Type the SSID name of your network into the 'Network SSID' field, and then tap the 'Security' list to select the correct network security for your network.

After selecting the 'Security' type a 'Password' field will appear. For WiFi networks with no password, simply click 'Save', or type in the required password and then tap "Save'. This information is stored and will be used to automatically connect to the WiFi network in future.

After connecting to the WiFi network the status bar at the top of the screen will be updated to show a wireless network icon, and the number of bars will reflect the signal strength.

Delete Saved Access Points

To review the WiFi connection details, or to forget the save details simply tap the network SSID name from the list of WiFi access points. A dialog will appear showing the connection information, and you can tap 'Forget' to remove the stored SSID and password for this WiFi access point.



3G / 4G

Plug in your optional USB-3G adapter, and go back into the Settings application. After approximately 15 seconds the USB-3G adapter should be recognized, and a new item will appear below the WiFi option.

Make sure this is enabled and turned On before continuing.

Bluetooth

Your Joying head-unit can pair to different Bluetooth devices, including phones, tablets, and our optional OBD2 diagnostic device. From the **Settings, Bluetooth** page you can show the status of the head-unit itself, show connected devices, search for available devices, make a connection, break a connection, make a phone call, or stream music from your BT device.

The default name for the head-unit is ‘CAR KIT’ and the default password is ‘0000’.

For security reasons you should change the default password from ‘0000’ to a more secure value.

For additional information on the Bluetooth application please refer to the section later in this User Manual.

Setting the Date and Time

To set the current date and time, plus the Time-Zone that you are located in you should run the Settings application and then tap on the **Settings** application to start it.

If the **Settings** application is not visible, scroll the desktop left or right to locate it.

From the **Settings** application scroll down to 'Date & time'.

The date and time can be set in any of three different methods:

- Automatically using the date and time information transmitted to the GPS antennae
- If connected to the internet by WiFi or 3G/4G, from an Network Time Protocol (NTP) Time Server.
- By manually setting the date & time directly on the head-unit yourself.

In the example shown above the date & time is being set automatically from an Internet NTP Time Server. If you do not have an active internet connection the head-unit will not be able to retrieve the correct date & time, and the information shown may not be correct.

Setting via GPS

To set the date and time using data received from the GPS system, select the 'GPS automatic update time' option. Initially it may take some time as the GPS antenna must lock on to all satellites before these values can be set.

Setting via Internet Time Server

If you have an active WiFi or 3G / 4G internet connection you can set the date and time from an Internet Network Time Server (NTP). This is done by selecting the ‘Automatic date & time’ and ‘Automatic time zone’ options.

Setting manually

To set the date and time directly on the Joying head-unit, de-select the ‘Automatic date & time’ and ‘Automatic time zone’ options and tap on the ‘Set Date’ field. This will start a entry dialog where the date can be set.

After setting the date, tap the ‘Set Time’ field and enter the correct time into the entry dialog that appears.

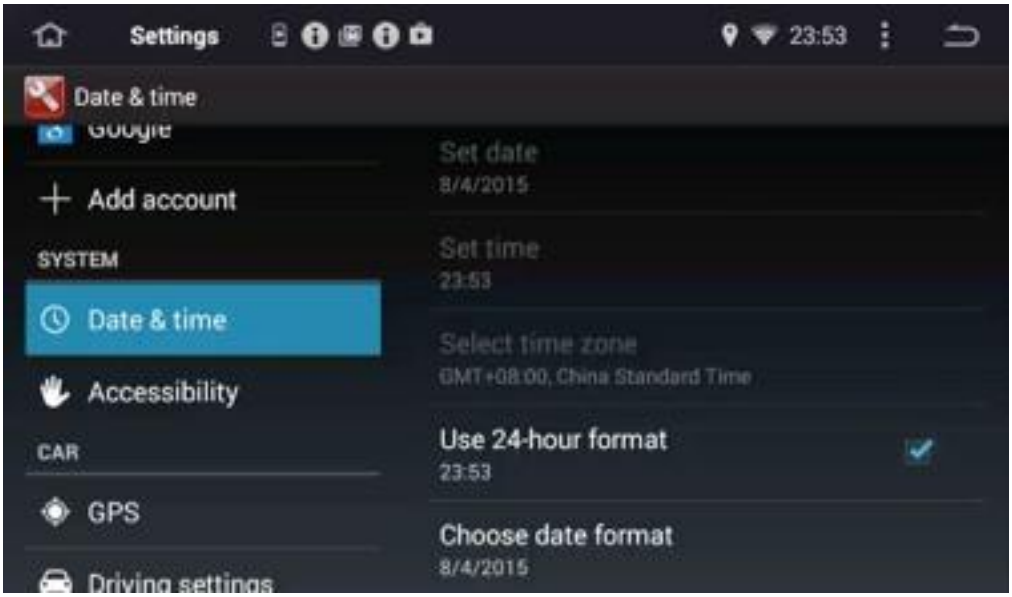
After setting the time, tap the ‘Time Zone’ field and scroll down to the correct time zone for your location.

Date Format options

You have full control over the date format that will be displayed, and you can change the display format by tapping the ‘Choose date format’ field.

Scroll through all the valid display formats and select the value you want to use.

Tapping the ‘Use 24-hour format’ allows you to toggle between a 12 hour and 24 hour format for the time display.



Creating a Portable Hotspot

With the optional 3G / 4G adapter your head-unit has internet access for the applications under Android. If you want to provide a portable WiFi internet hotspot for your passengers, you select the 'More…' option in the **Settings** application, and then tap the 'Tethering & portable hotspot' option.

This feature creates a new WiFi Access point inside your vehicle that other devices or passengers can connect to. Those connected devices will then have access to the Internet through the optional 3G / 4G USB device connected to the head-unit.

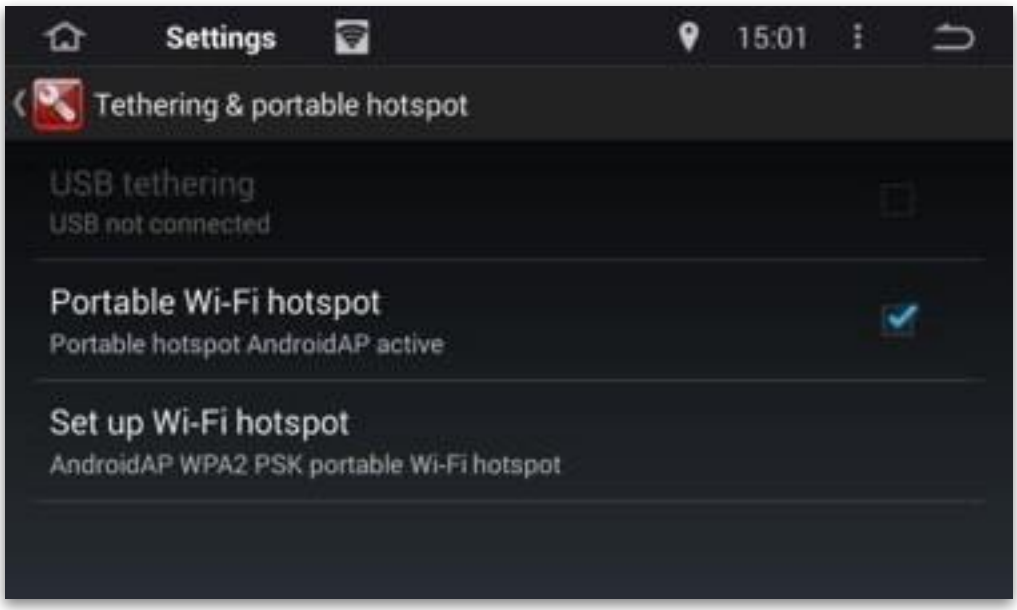
To control access to your WiFi Hotspot for only authorized passengers, tap the 'Set up Wi-Fi hotspot' line and enter the network name (SSID) you want to present to them, a security type, and the password you want to assign.

The WEP security type is very insecure, so we recommend WPA or better.

When you are happy with these entries tap 'Save' to store the settings.

To start the HotSpot service, enable the ‘Portable Wi-Fi hotspot’ option.

At this point other phones, tables, and computers can access the internet through your WiFi hotspot by entering the network name, security type and password you have specified.

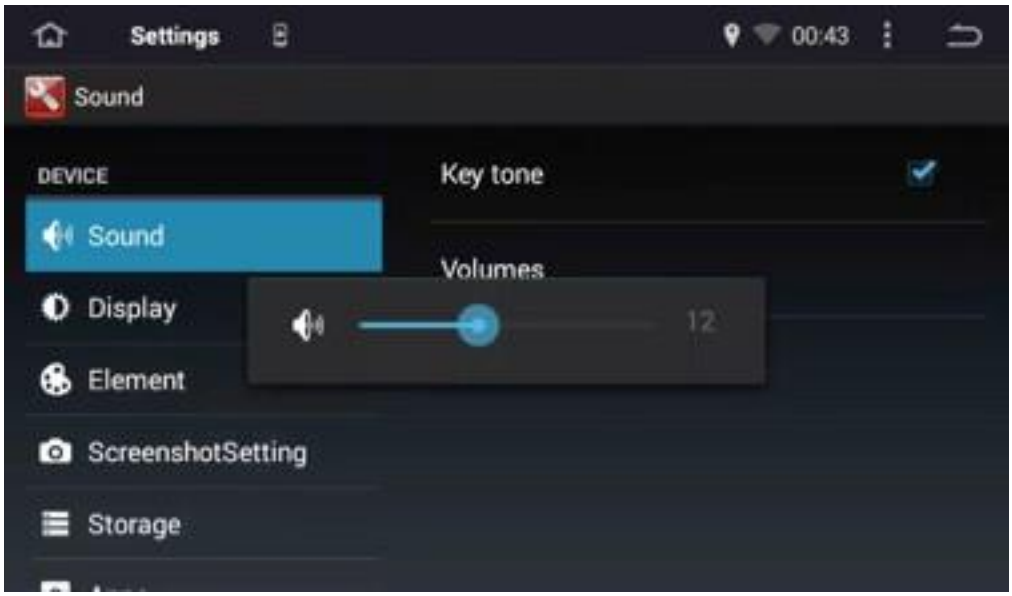


Controlling the system Sound

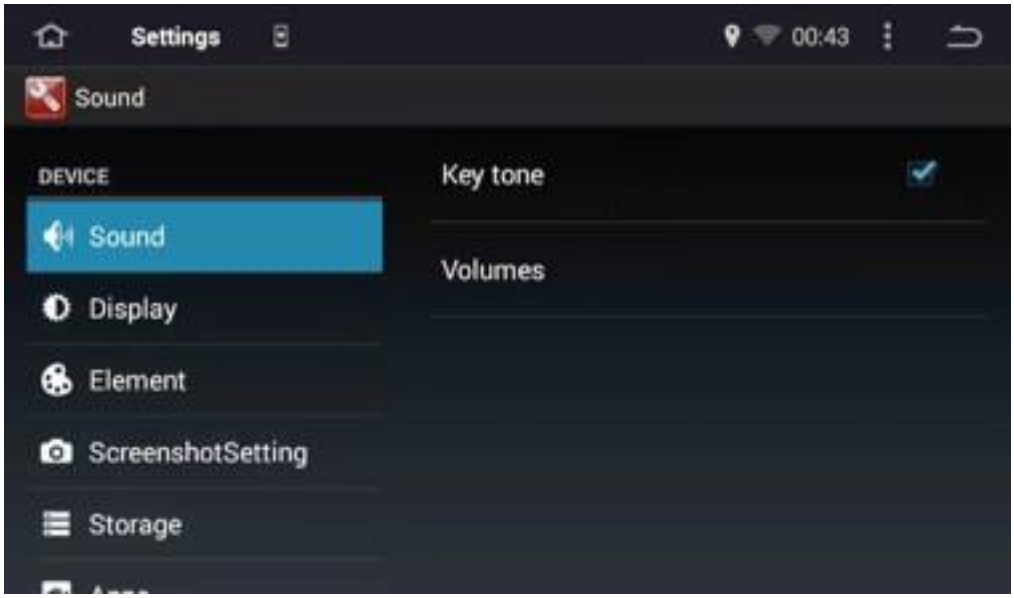
Changing the head-unit volume can be done in different ways, depending on the specific head-unit purchased, and whether your car has steering wheel controls:

- Turning the Volume dial
- Pressing the Volume + or - areas on the touch screen
- Pressing the steering wheel controls
- Selecting the 'Volumes' line in the **Settings, Sound** application.

Tapping the 'Volumes' field allows you to increase or decrease the volume levels, but it is normally easier with the Volume dial or touch control area of the screen. The safest way to change the volume is through the use of the steering wheel controls.



By default the head-unit plays a short tone when taping the screen to select or enter a value. This can be enabled or disabled by tapping the 'Key tone' option under the **Settings, Sound** application



Tip: Do you hear audio from more than one application at a time?

The Radio, Music, Video, iPod and A/V In applications provided with your Joying head-unit are all designed to operate in a co-operative manner, and the volume from one application will stop when you start a different application that also generates audio output.

For example, if you are listening to a Radio channel and start the Music application, the Radio sound will stop once the Music application starts. If you switch back to the Radio application, the sound from the Music application will stop.

If you install a different music or video player application from the Google Play store, and then switch from the Joying provided Radio application to your new music or video application, then you might hear both the Radio and new application audio mixed together.

To stop this from occurring we suggest switching from Radio to the Joying Music or Video application first, and then tapping the Pause or Stop button. Then switch to your new music or video application, and that should be the only audio you hear.

Amplifier Settings

From the **Settings, Amplifier** page the user has the ability to boost the low frequency (Bass) sound with the 'Loud' selector, and adjust the overall sound quality with a multi-band equalizer.

This allows you to adjust the audio characteristics of the head-unit specifically for your vehicle, and can often improve the sound quality.

Drag each of the individual slider controls up or down to adjust that frequency range.

The sliders to the left control the lower (Bass) frequencies, while the sliders to the right control the higher (Treble) frequencies. The frequencies in the middle control the frequencies for voices, so there are many different adjustments that you can try.

We provide a number of preset audio settings that can be switched using the left and right arrows. Please test these preset's and decide which is closest to the sound you would like.

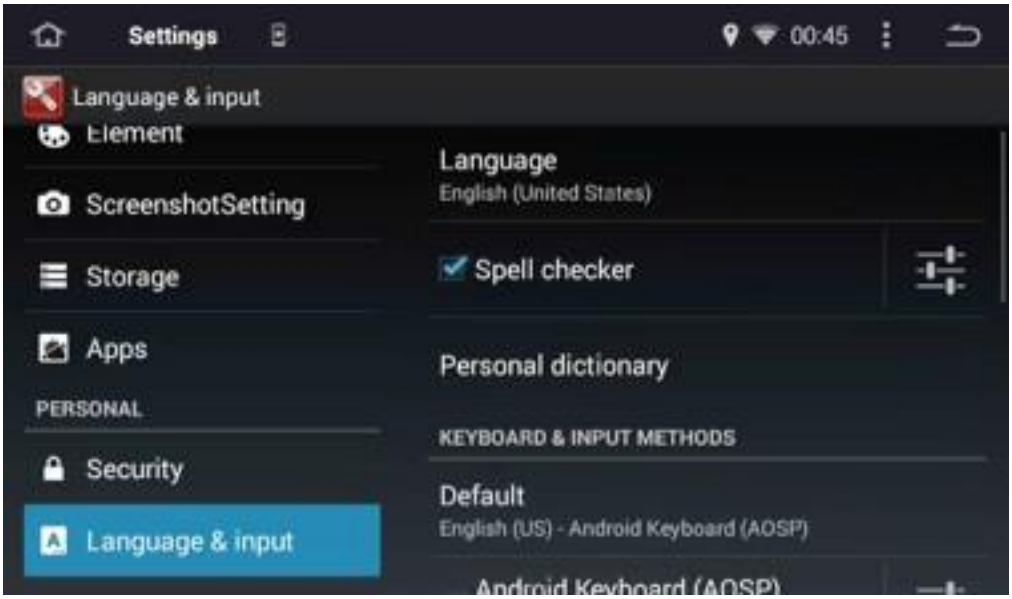
The 'Field' option allows you to adjust the location of the sound between the left and right side, and front and rear speakers.

To reset back to the center position, tap the 'All' button.

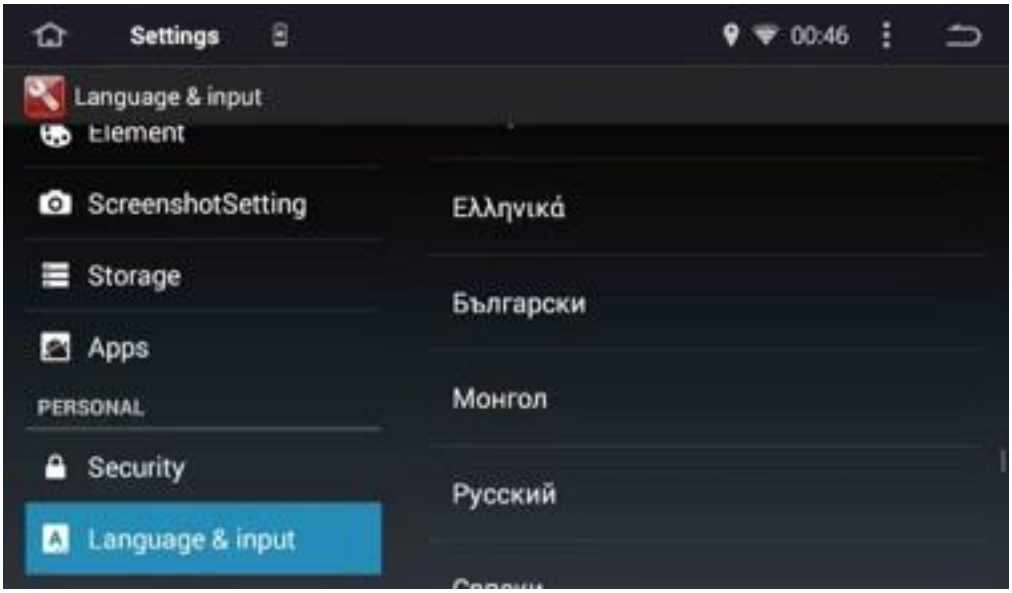
Changing Language and Input methods

Your Joying head-unit and the Android operating system can support a number of different screen display languages. The current language can be changed from the **Settings, Language & input** page, plus various options to enhance your user experience.

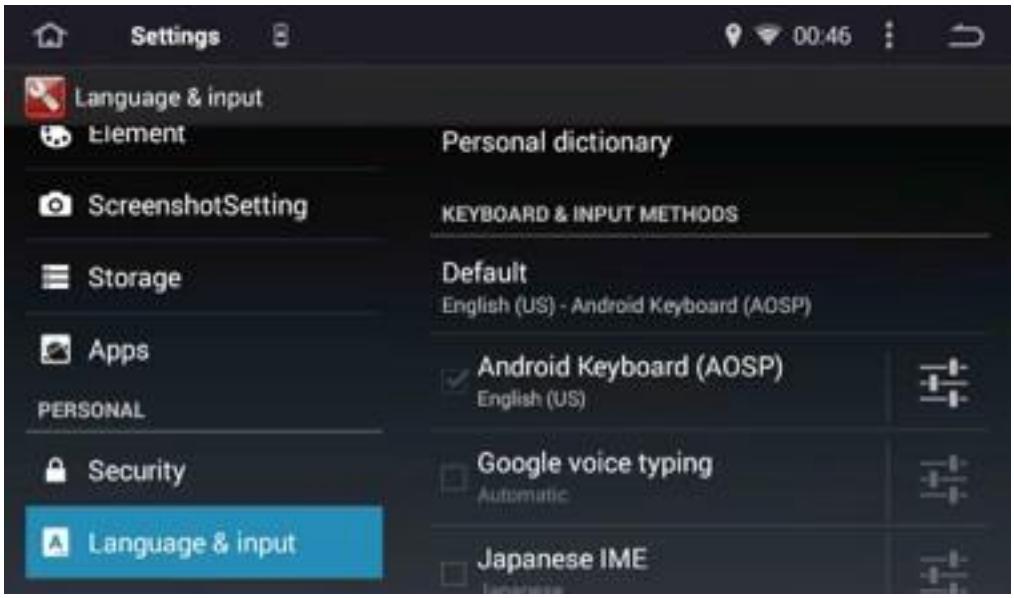
Scroll down for the 'Keyboard & input Methods' section where you can select a different keyboard definition, enable the Spell Checker for your language, or select an alternate keyboard definition.



To select a different language simply tap on the 'Language' field and scroll up and down through the list of languages to select the new language you wish to use.



To select a different keyboard and input method, scroll the right side of the display down to review the options available.

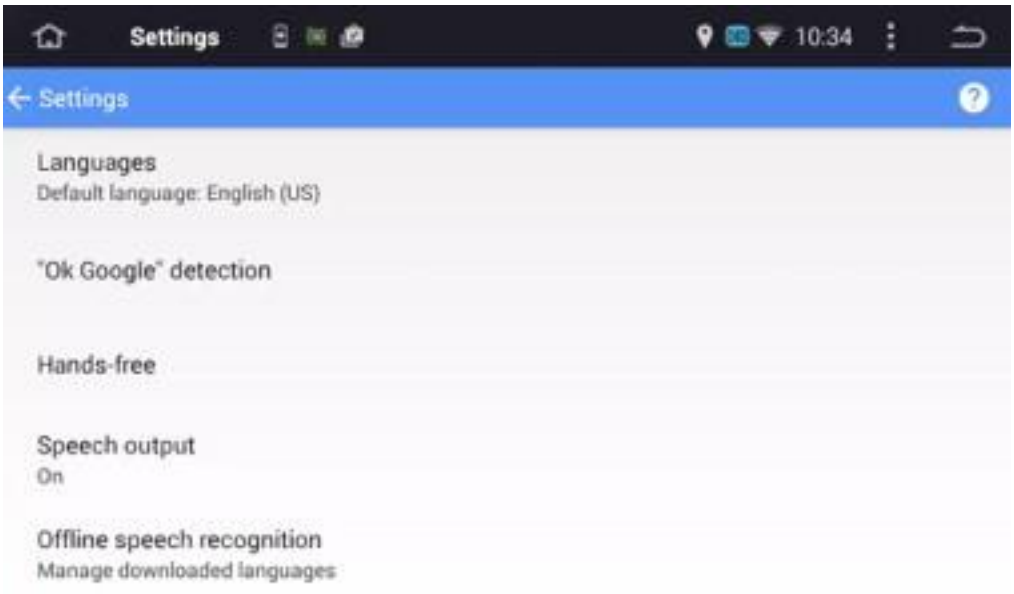


Below the 'Keyboard & Input Methods' are the Speech controls.

The 'Voice Search' option allows you to speak requests which will be used by the operating system to either search the internet or access things on your head-unit.

If you have an active internet connection you will be taken to a Google search page with any results based upon what you said, or suggestions it thinks you might have said.

Tap on the 'Voice Search' field to bring up the settings for Voice Search.



Changing the current language can be done from the ‘Languages’ field, and the speech output can be enabled or disabled from the ‘Speech output’ field.

By default the speech software requires an internet connection, but you can download the language files for offline access from the ‘Offline speech recognition’ field. Note that these language files can be large, so you should very the amount of internal storage that is currently available.

The ‘Text-to-speech output’ option allows the selection of the poem language, the speed of the speech, and a sample to verify that it is working as you expect.

The ‘Text-to-speech output’ option can be a very useful safety feature while driving, and allows the driver to remain focused on driving rather than looking at the screen to read information being displayed.

Controlling the screen display

For the head-unit display you have the option of adjusting the display brightness, what appears for the display wallpaper, and how your mobile phone display should appear on the head-unit display. This is changed from the **Settings, Display** page.

Brightness

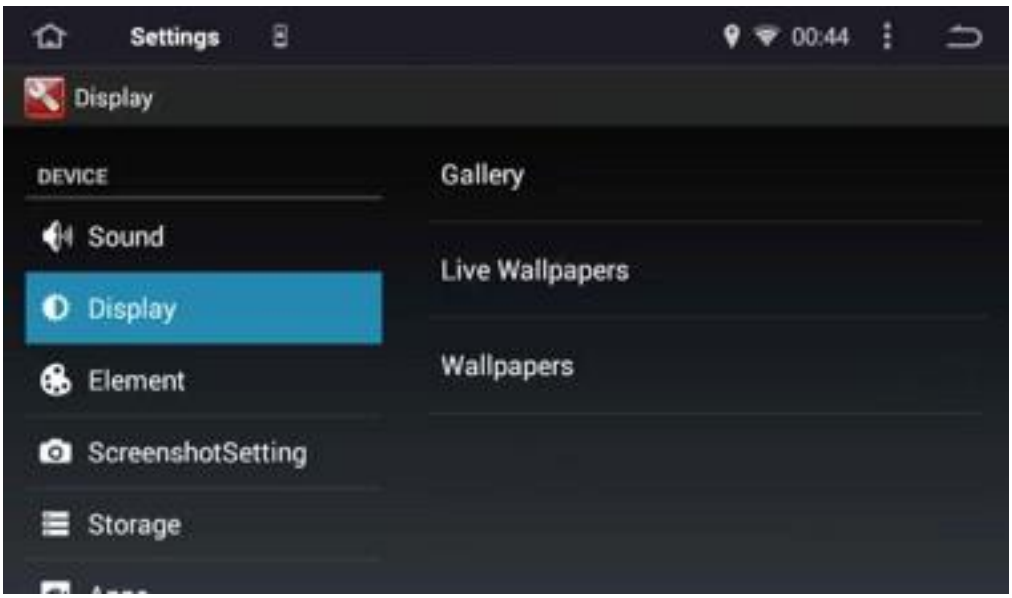
To increase or decrease the display brightness, tap the 'Brightness' line and then drag the slider control to the desired value.

Brightness Mode

The 'Brightness Mode' setting controls the overall brightness of the screen, with full brightness during daylight hours, and lower brightness during the evening hours when the vehicle lights have been turned on.

The default setting for the 'Brightness Mode' is 'Auto', but you can manually change this to 'Light' or 'Dark' as required.

Wallpaper



Your head-unit supports both normal JPEG image files and animated (active) files to appear as the background wallpaper.

Tap 'Gallery' to view the current Photo images stored on your head-unit, and

tap on the image you wish to use as the Wallpaper.

Tap ‘Live Wallpapers’ to view the current animated wallpapers stored on your head-unit.

Tap ‘Wallpapers’ to view the Joying provided wallpaper images.

Cast Screen

Screen Casting is the ability to display the desktop of your Android or iPhone mobile phone on the head-unit display through the WiFi interface. For Cast screen functionality you must start the **Cast** application and then enable WiFi on your mobile phone.

From the WiFi setup screen of your phone navigate to the list of available devices, and click on the device displayed on your phone for a connection. If you do not see a list of available devices you can click on “Search Display Device” and the head-unit should appear.

Tap the Return button on the Status Bar to go back to the desktop.

Bluetooth

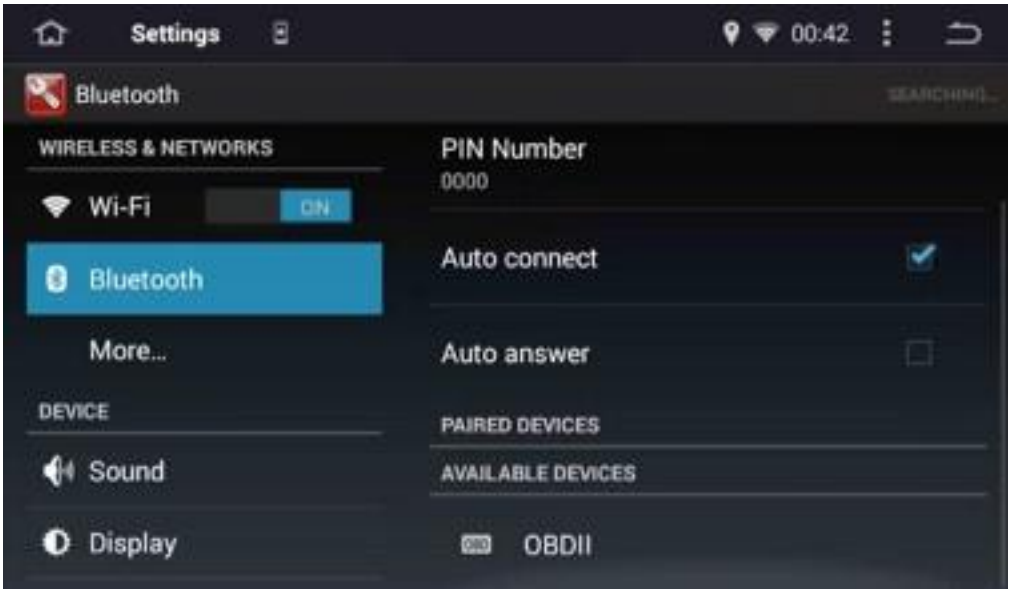
The Bluetooth name of the head-unit is ‘CAR KIT’ by default. This name can be changed by tapping on the ‘Device Name’ field, and entering the new name.

For security reasons we recommend changing the default ‘PIN Number’ from ‘0000’ to a more secure number.

Enable the ‘Auto Connect’ option and the head-unit will attempt to automatically connect to paired devices when they are within range.

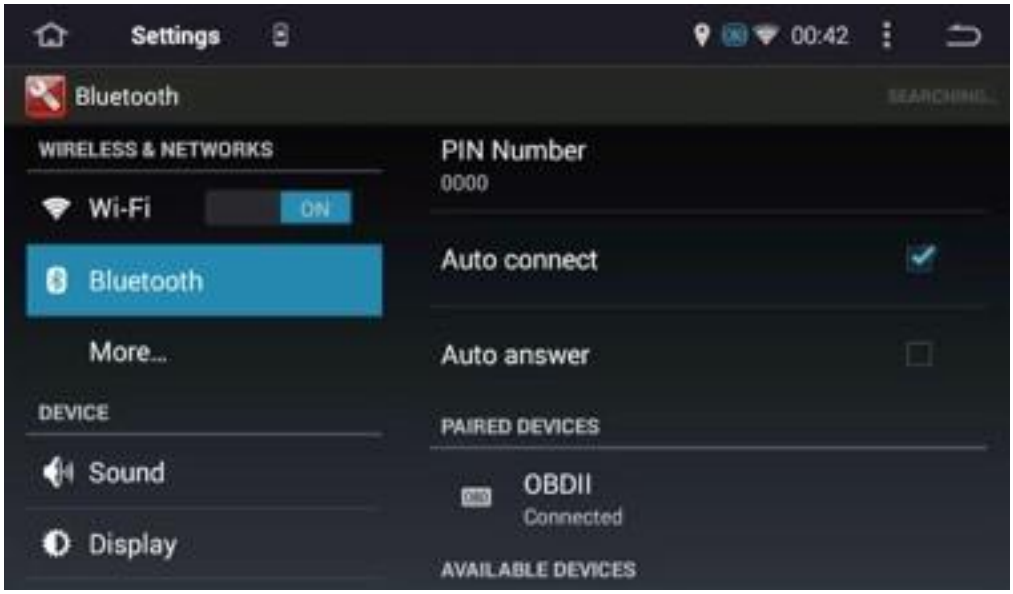
The ‘Auto Answer’ option determines whether a phone will automatically answer an incoming call, or whether you must manually answer the incoming call.

To view a list of the discoverable Bluetooth devices within range, scroll down to ‘Available Devices’.



In this example the optional OBD-2 interface from the Joying web site has been installed, and it is ready to be connected to the head-unit. This OBD-2 interface is used by third-party applications such as Torque and Torque Pro to display performance and fuel utilization information from your vehicle in real-time.

To connect a Bluetooth device from the ‘Available Devices’ list you simply tap the device and a ‘Pair & Connect’ dialog will appear. You can confirm you want to connect by tapping ‘Yes’, or refuse the connection by tapping ‘No’.



In this example we have selected ‘Yes’ and after a few seconds the OBD-2 interface has established a Bluetooth pair and connection to the head-unit.

To disconnect a connected device, simply tap on the device name in the ‘Paired Devices’ list.

Changing the Head-Unit button color

Your Joying head-unit has the ability to change the color for the buttons or touch screen control area, and this is changed through the **Settings, Element** page.

You can select a pre-defined color from the right side of the screen, and then adjust the selected color using the Red, Green and Blue slider controls on the left side of the screen.

Once you have adjusted the slider controls to the color you want, select 'Save' to store your selected color.

When you turn on the vehicle's head light's the Joying head-unit buttons or control area will light up with the selected color.

Using your steering wheel controls

Many vehicles have controls mounted on the vehicle steering wheel that are used to control audio and phone functionality with the factory head-unit. Your Joying head-unit can also use those steering wheel controls and you can change what each button does through the **Settings, Steering Wheel** page.

To remap a physical button you tap the function button on the Settings screen, and then press the physical button that should invoke that function. If the remap operation was successful the function button will have a colored border to indicate it has been remapped.

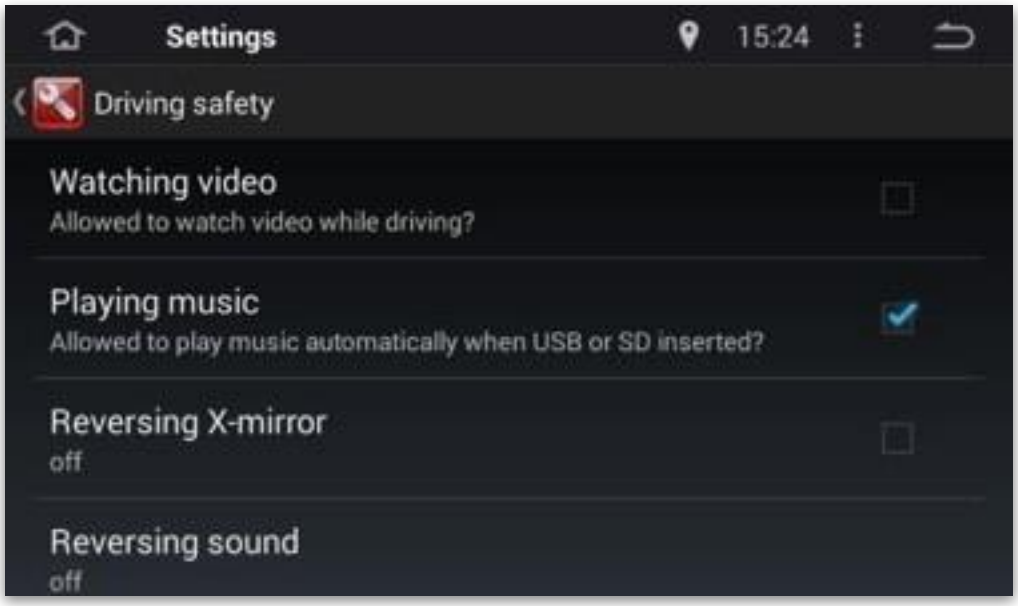
If you make a mistake simply tap the Reset button to clear your remapped buttons, and remap them again.

When you have finished remapping the buttons you want, tap the Save button to store your new configuration.

Other configuration options while driving

The **Settings, Driving Safety** page has a number of useful configuration options that are related to your safe driving. These include:

- Playing music - Should the music songs on an external storage device such as an SD card or USB stick start to play automatically when you insert a new storage device?
- Reversing sound - When selected Music will continue to play while your vehicle is in reverse. When deselected the music will be silenced while the vehicle is in reverse.
- Reversing X-mirror - Should the image from the (optional) rear-view camera be reversed, so left is on the right of the screen, and vice-versa.
- Watching video - When selected Video content will be played while the vehicle is moving. When deselected a warning message will be displayed if you attempt to play a video file.



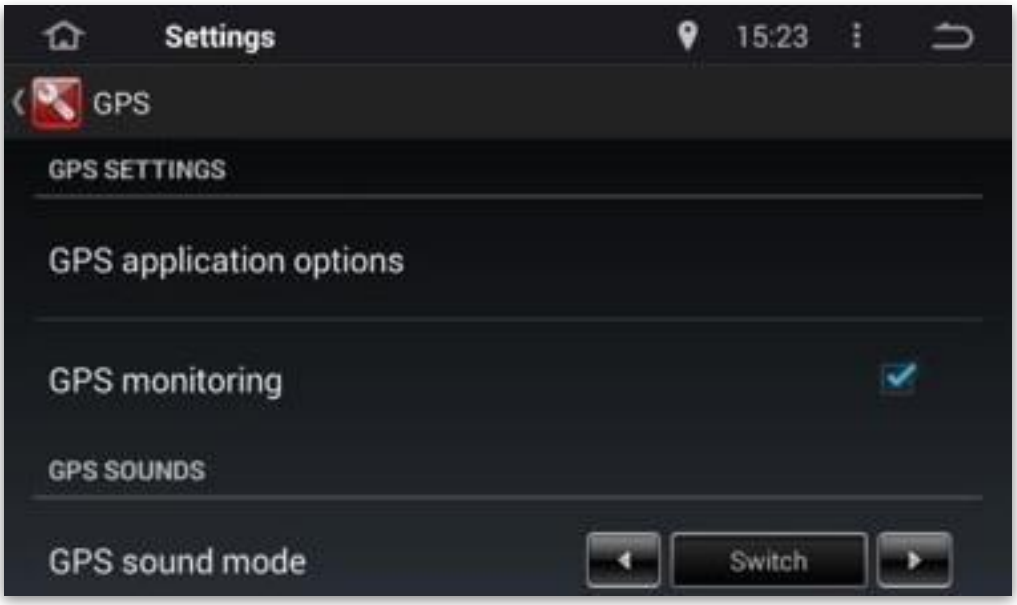
To enable or disable any of these configuration options, tap on the check box to the right side.

Please remember that watching video files while a vehicle is moving may be illegal in your location, and it will certainly be a distraction to safe driving. Joying does not encourage any head-unit usage that may distract the driver at any time!

GPS functionality

Your Joying head-unit can support many different Global Positioning System navigation applications, including the application we provide with your head-unit. If you will be using our GPS application you must insert the supplied SD card into the slot marked GPS or MAP on the head-unit. If you are going to use a different GPS application it must be copied into a directory called GPS on a SD card, and inserted into the GPS slot before it can be used.

If you have copied you own GPS application to a SD card, and installed in the GPS slot you must then select the navigation application in the Android settings. This is done from the **Settings, GPS** page with the 'GPS application' and you will navigate to the GPS SD card and select the application to use. This is normally a file with an APK file extension.



The 'Sound Mode' option allows you to decide whether you want to mix the music with the GPS sound, or whether you want to disable the music while the GPS is giving it's spoken instructions. Select Switch and the GPS sound will be the only thing you hear, or select Mix to have the GPS sound and radio sound mix together.

If you select Mix you can adjust the sound level of the GPS sound with the 'GPS Mix ratio', and a value of 6 or 7 should provide a good balance between music and GPS sounds.

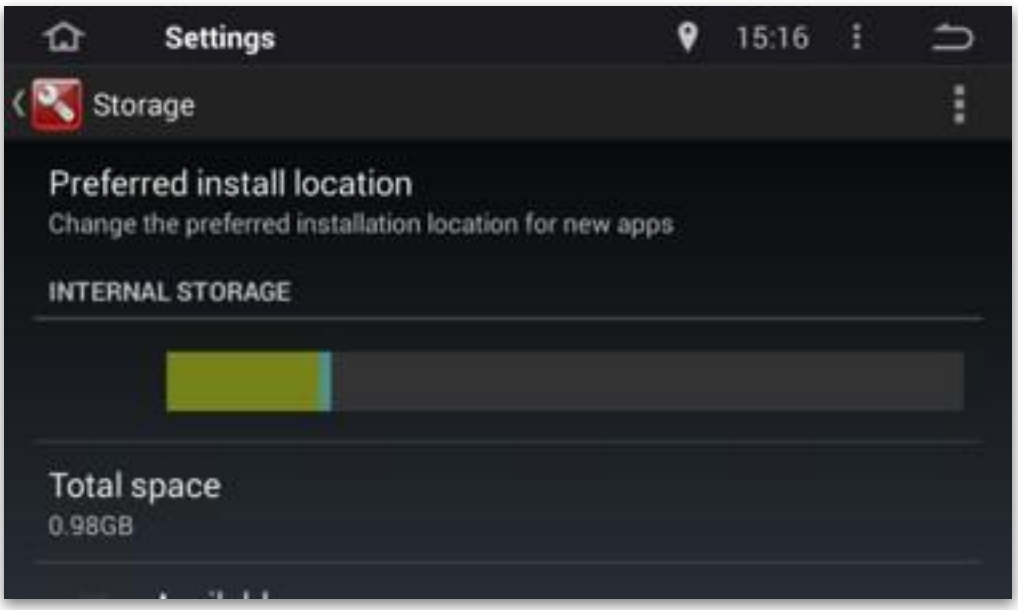
Application and Data Storage

There are two types of storage with your head-unit - internal and external. Internal storage is the 8Gb or 16Gb provided by Joying with the purchase of your head-unit.

External storage is any FAT32 formatted SD or USB flash memory card up to 128Gb that you have attached to the head-unit after purchase. Any devices formatted with NTFS, Ex-FAT, HFS, EXT2/3/4 or other file systems will not be recognized when attached, and must be reformatted as FAT32 before they can be used.

Attaching a USB or plugging in an SD card can be done at any time, but you must unmount these external storage devices before removing them, or data may be lost and the storage device contents lost.

To do this select **Settings, Storage** and scroll down to the storage device you want to remove and tap the 'Uninstall TF card', then confirm you want to remove it. At this point you can safely remove the external storage card.



By setting the 'Preferred install location' you can decide whether applications and data are stored on the head-unit's internal or external memory. This can be useful when installing applications such as multiple GPS application that have large data files and use a lot of storage space.

Application Management

There are many thousands of third-party Android applications that you can downloaded and install onto your head-unit, extending the built-in functionality in a wide range of different ways.

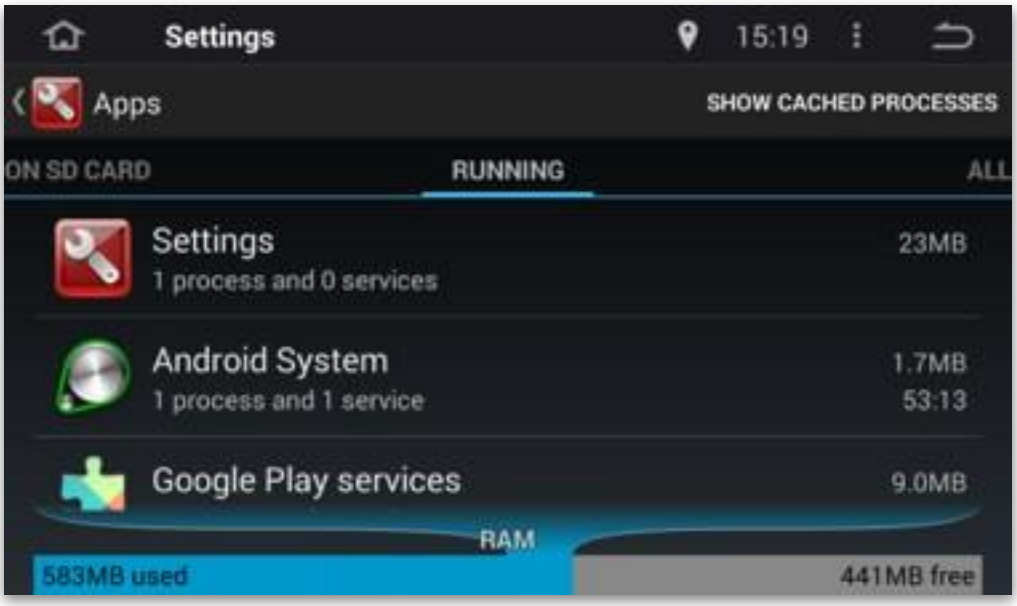
Applications can be installed from the Google Play store, or some Android APK files can be installed from the SD or USB external storage devices.

To access the Google Play store you must create a Google account in the **Settings** application and then tap the Google Play icon from the desktop. This will allow you to browse the Google Play app store, and download and install both free and commercial paid applications.

By default all applications are installed into the internal storage, unless you have changed the default installation location.

Apps

You can browse the list of installed applications from **Settings, Apps** and this will show the amount of internal storage each application is currently using.



File Manager application

From the desktop you can start the File Manager application and use it to examine the internal and external storage devices on your head-unit, and copy or delete files from each storage device.

We do not recommend customers using this application unless they are very sure of the files or folders they are working with. If you delete or move the wrong files or folders your head-unit may fail and not start up correctly the next time it is powered on.

Please see the File Manager section later in this User Manual for a description of this application.

Accessibility functions

In the Android operating system the Accessibility functions provider voice feedback for blind and visually impaired users, but many of the functions included in Accessibility can be useful for driver's who must focus on the road rather than the head-unit.

To enable the voice feedback enable the 'Text-to-speech output' on the **Settings, Accessibility** page.

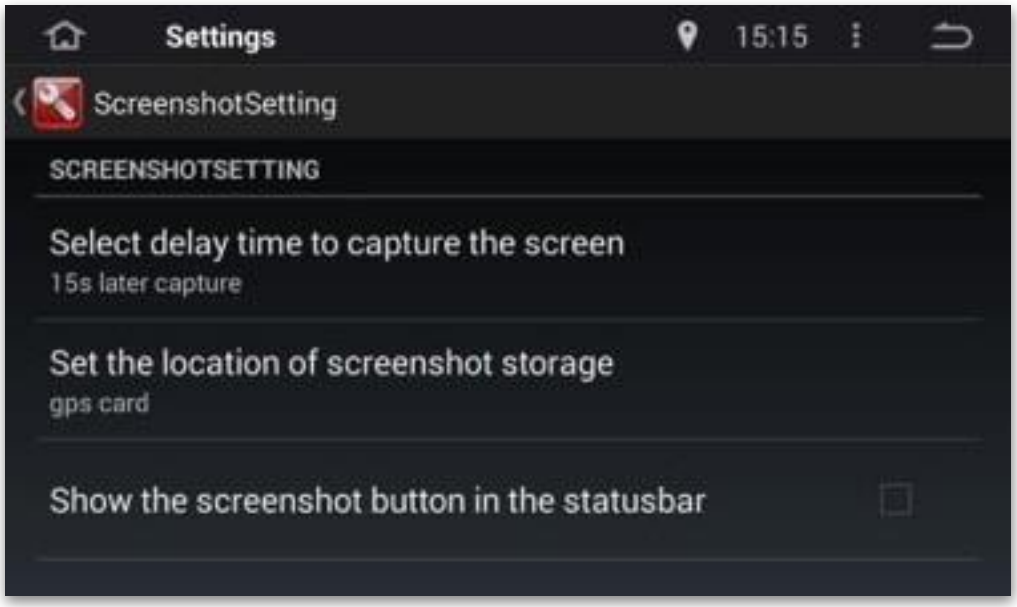
Entering a complex password into the head-unit can be difficult and potentially dangerous while driving.

To help with password entries you can enable the 'Speak passwords' option. Since passwords are not visible normally, having your passwords spoken may be a security problem if there are passengers in your vehicle.

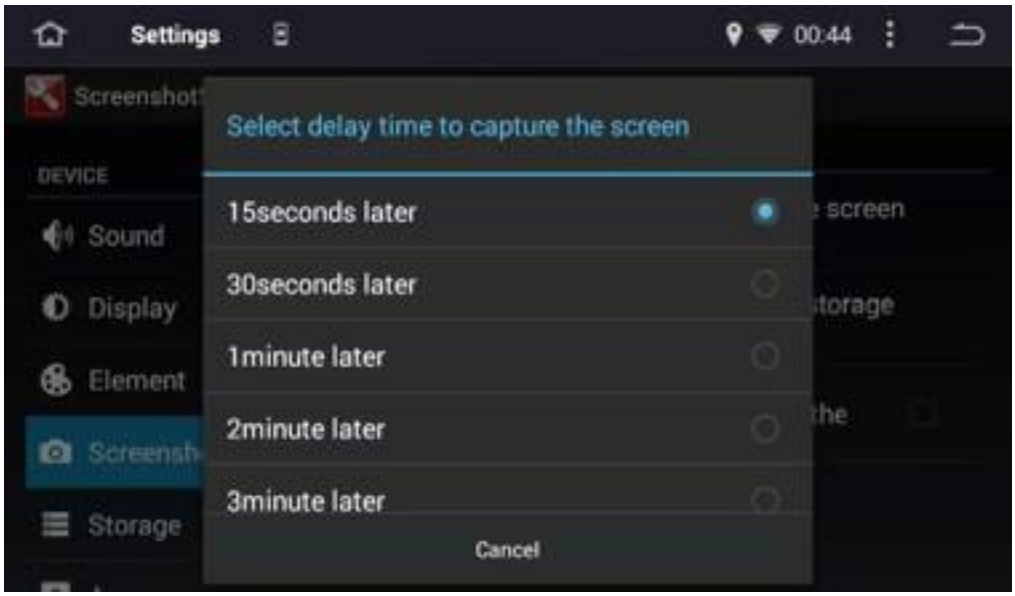
Screen Capture

If you want to save a screen snapshot you can setup this functionality in the **Settings, Screenshot** settings option.

Before attempting to save a screen shot you must select the storage location for the captured files with the 'Set the location of screenshot storage' option. This can be an internal storage location, or an external SD or USB memory card that has been correctly formatted.



After selecting the storage location use the 'Select delay time to capture the screen' to set the number of seconds to wait before capturing the screen. This will allow you sufficient time to star the application you want to capture a screen from.



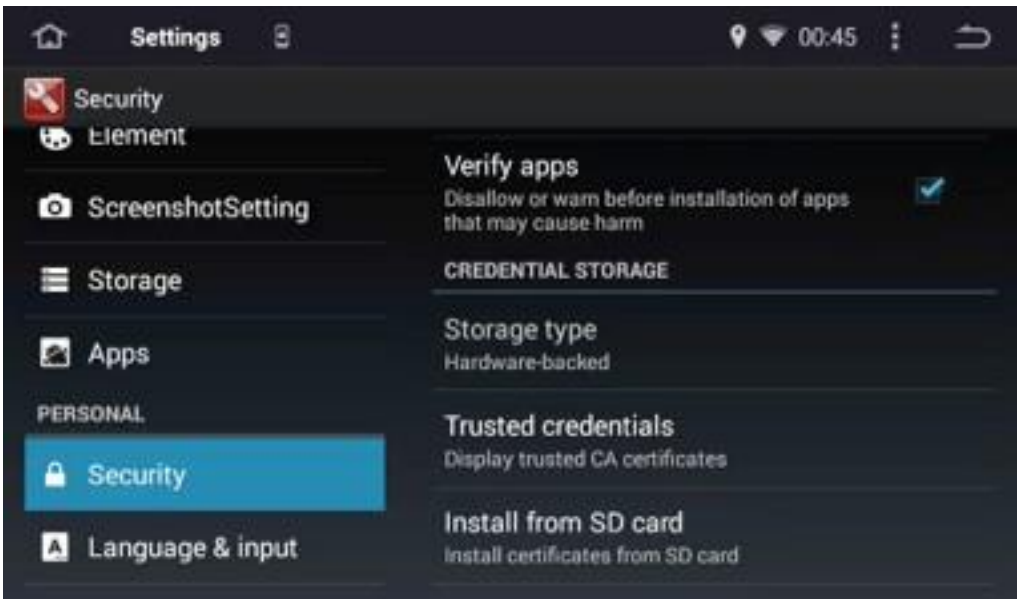
If you plan to take more than a few screen captures you can enable a Screen Capture button on the status bar by tapping the 'Show the screenshot button on the status bar' line.

Security Settings

There are a number of Android Operating System options available to administer the security of the applications and data installed onto your head-unit, and these are selected from the **Settings, Security** page.

The options available may change as the Android Operating System is upgraded, so please check the Joying web site for updated versions of this User Guide.

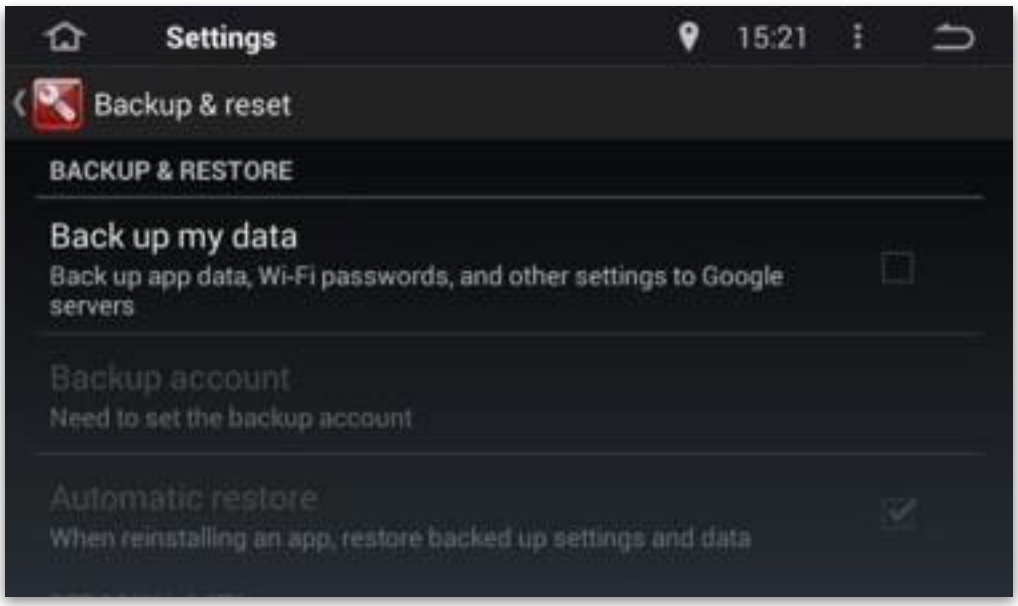
If you are installing app's from the Google Play Store you should not need to change anything. However, if you are installing app's directly from local SD or USB storage devices you might need to enable the 'Unknown Sources' option to install your app. Please note that app's from unknown sources may have potential security issues, and care should be taken before allowing app's from unknown sources to be installed.



Normally the other options on this page will not need to be changed.

Backing up your head-unit settings

Once you have your Joying head-unit configured with all the settings you want, it is a good idea to make a backup of these settings. This I can be done from the **Settings, Backup & Restore** page.



Backups can be saved to your SD or USB external storage devices.

Controlling Desktop Widget's

Many customers want to have the current weather displayed on the desktop, and this is easy with the Desktop widgets included with your head-unit.

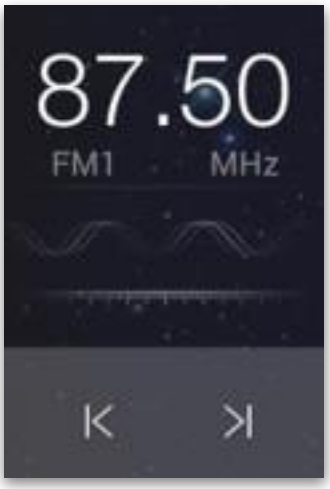
To enable, or configure the weather widget you start the **Settings** application and ensure there is an active internet connection through WiFi or the optional 3G / 4G USB adapter. An easy way to verify internet connectivity is to tap on the **Chrome** browser from the desktop.

Tap the x button and locate the **Weather** icon, and tap it to start it. Using the icon on thee top right of the status bar, you can tap the '+' item and a search field will appear. Type the name of your city and select the correct city from the results list. When you return to the desktop you should see the current weather for the city you selected in the widget panel, on the left side of the desktop.

The information display in the widget panel will change depending on which application's have been started.

For example, after starting the **Music** application the widget panel will display the current song, and forward, back and pause play controls.

After starting the **Radio** application the widget panel will display the current radio channel, and controls to switch the current channel.



Using the Joying applications

The Joying Research and Development engineering staff have included a wide range of applications with your head-unit that are designed to provide our customers with a superior driving and entertainment experience. All of these application can be found on the on the desktop and are described on the following pages.

Application	Description
Radio	AM / FM Radio application supporting Radio Data Services
Music	
DVD	
Video	
A/V In	
iPod	
Photo	
Browser	
Weather	
File Manager	
Car Recorder	
Bluetooth	
Vehicle	
Settings	

Radio

The Radio application allows you to store up to 18 AM and 18 FM stations that you listen to, and quickly switch between them by simply tapping the Preset buttons on the screen.

Swipe the screen left of right to move between each set of 6 Preset stations.

A short press on this button will jump back down the frequency range to the previous radio station. A long press will increment to the next frequency, regardless of whether there is a station available at that frequency or not.

A short press on this button will jump forward up the frequency range to the previous radio station. A long press will step up incrementally, regardless of whether there is a station available at that frequency or not.

The Automatic Station Search function scans for all available stations, and assigns them to the Preset buttons P1 through P18. Interrupt the scan by tapping a second time.

This is the Stereo / Mono toggle button.

Your Joying head-unit support Radio Data Systems (RDS) which enables many ‘smart radio’ features. This button is used to switch between Remote and Proximity modes.

This button is used to switch to the AM frequency bands.

This button is used to switch to the FM frequency bands.

Using RDS a radio station can broadcast a list of alternative frequencies to receive their station. Pressing this button will enable or disable the reception of these substitute frequencies. When enabled, this will allow the head-unit to switch to the strongest signal being received for the current station.

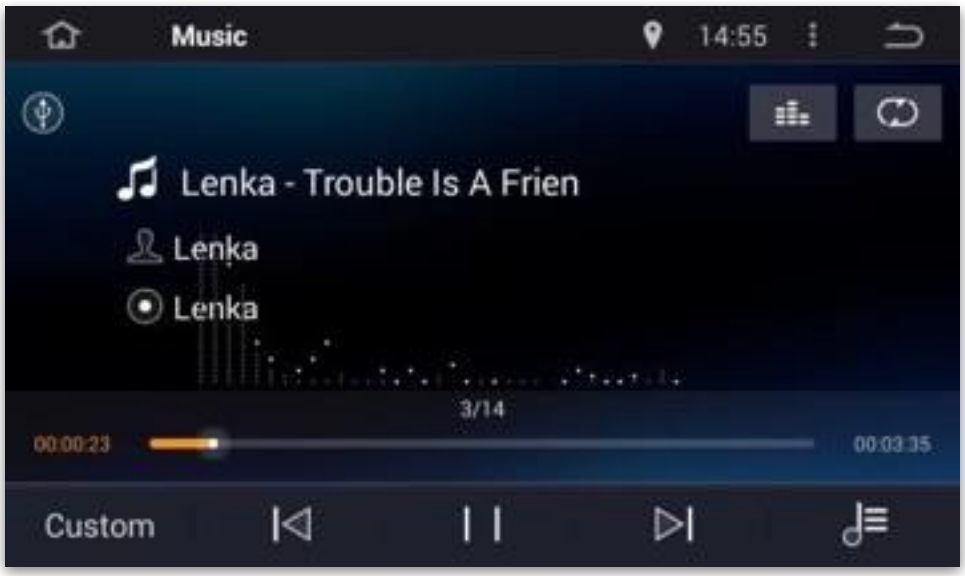
When RDS is active this button will search for any Traffic Bulletin information being broadcast. If it detects any information the head-unit will switch to that station automatically.

This button search for stations broadcasting a specific style of music or spoken content, and switches to that station if found.

Music

The Music application is a standard Joying head-unit application that can be used to play a wide range of different industry standard music file formats with an entertaining animated background display.

If your music files have ID Tag information included it will be used to display the name of the Artist, and Song.



On the top of the screen you have controls that allow you to change the animated background for the player, and select the Song Repeat mode.

Song Repeat will toggle between No Repeat , Current Song Repeat, and All Songs Repeat modes when pressed.

The main part of the screen displays information about the current song, either the ID3 Tag information from the song file, or the name of the song file on the storage device if there are no attached ID3 Tags present. Tap this button to switch between the song display modes.

It also shows the length of time the current song has been playing on the left, a song position slider control, and the remaining time on the right side of the screen. By tapping and sliding the position of the song slider you can move forward or back in the current song.

The lower part of the screen shows the standard audio play controls, allowing you to change the sound profile between pre-set modes, jump back to the previous song, pause or play the current song, jump forward to the next song, or show a menu of options.

You can tap this or swipe to the left to change the storage device you are playing from.

DVD

If your Joying head-unit has a DVD drive you can use this drive to play audio CD's and video DVD's.

The hardware in a DVD drive must be set to a specific Region before video DVD's can be played.

The is done automatically the first time you insert a DVD into the drive, and the Region settings will be permanently assigned.

When you are playing a DVD the movie is displayed on the head-unit display, and it is also sent to the A/V Output connections on the back of the head-unit. This is used to allow rear seat passengers to watch the movie with one or two headrest monitors.

This button will toggle between the Play controls and the other Function keys described below.

PREV - During playback the Previous button will jump back to the previous chapter or song.

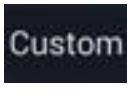
REW - During playback the Rewind button will move the playhead back through the current chapter or song. Tapping the button multiple times increases the rewind speed.

PLAY / PAUSE - Pressing this button once will start playback, and a second time will pause the playback.

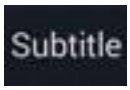
STOP - Pressing this button during playback will stop the current chapter or song.

FFWD - During playback the Rewind button will move the playhead forwards through the current chapter or song. Tapping the button multiple times increases the speed.

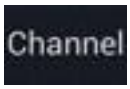
NEXT - During playback the Next button will jump forward to the next chapter or song.



Audio Effects - This will switch between predefined audio modes.



SUBTITLE - Pressing this button during playback will switch between the different sub-titles included with your DVD.



CHANNEL - Pressing this button during playback will switch between any alternative video angles that are included on your DVD.

MENU - Pressing this button will return you to the DVD contents menu.

MP4	MPEG 1/2/3/4
H264	DIVX
H263	VP8
VC1	AV8 Stream
RMVB	Other formats

REPEAT - Pressing this button will toggle between Random Play, Single Repeat, All Repeat and Random play.

MODE - For DVD Menu's that require arrow keys or numeric values, use this button to display the Arrow Keys or the Numeric Keypad.

Video

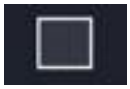
The Video application is a standard Joying head-unit application that can be used to play a wide range of different industry standard video file formats from both internal and external storage devices.

Video files that are larger than the screen resolution of your head-unit will be automatically scaled down to the correct screen resolution.

The main part of the screen display's the video file, and the following commands are available to control the video file:

Repeat mode toggles between Single file repeat, All files repeat and No Repeat.

Jump back to previous video file

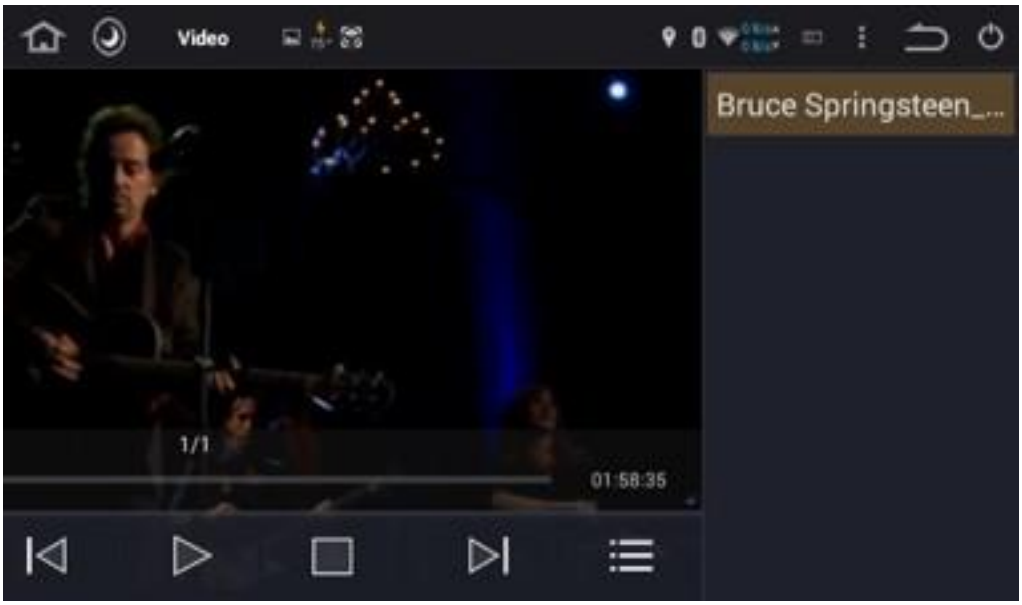


Stop the current video playing

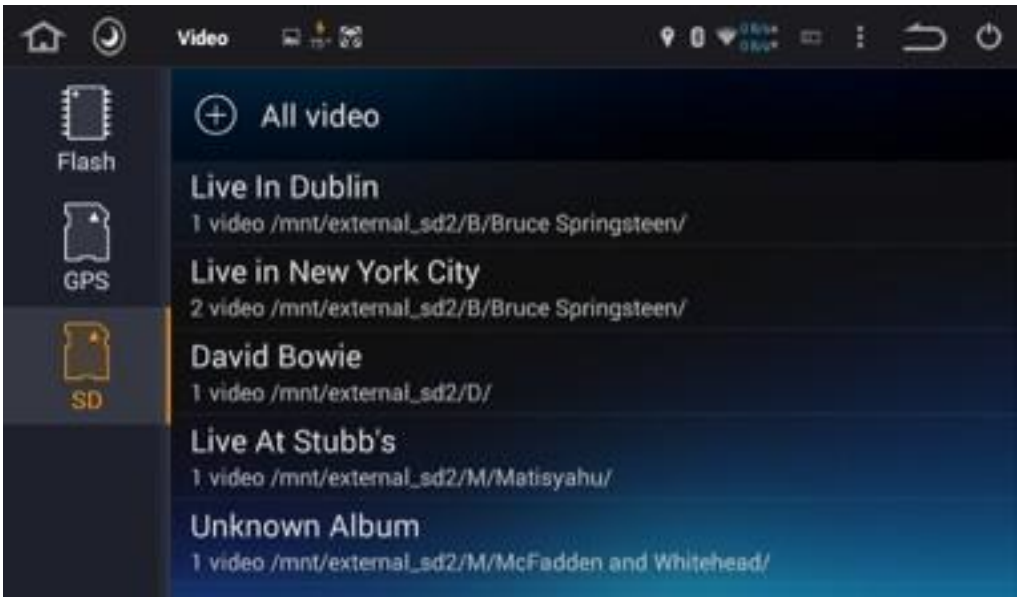
Jump forward to the next video file

-Show the internal and external storage devices and any video files in those devices.

When a video file is playing you can swipe to the right to see a list of all the video files on the current storage device.



To switch to a different storage device, swipe left or press the menu button on the right side of the play controls.



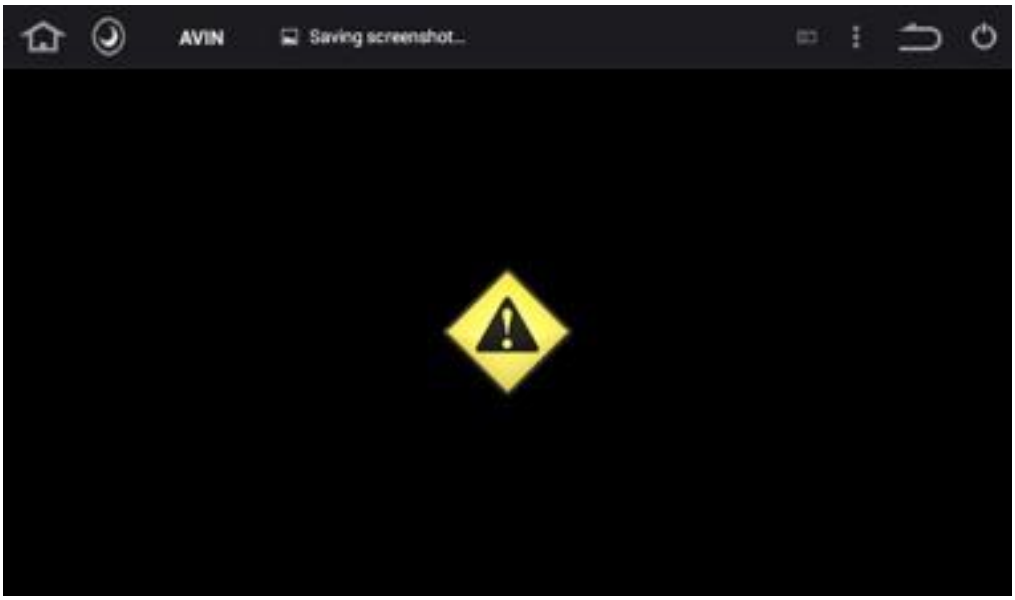
A/V In

The Joying head-unit has cable connections on the rear of the unit for a set of Video and Audio Inputs. These can be used to display the video and audio from another device such as a game console, video camera, or external DVD player.

It also supports the optional DVB-T2 receiver which is used to display TV stations on your head-unit. Please check the Wiki at https://en.wikipedia.org/wiki/DVB-T2 for a list of the countries and territories using DVB-T2 before you purchase the accessory.

If you have connected an external device or DVB-T2 device to these cables, start the AVIN application to display any valid audio and video content that is being sent to these cable inputs.

If there is no valid video or audio signal the AVIN application will display simply stop and return you to the Desktop.



iPod

The iPod application requires an optional cable that is available from the Joying web store. If you have purchased this optional cable you can attach an iPod device using the Apple 30-pin Dock connector to your head-unit.

If you have a newer iPod device with the 8-pin Lightning connector you must purchase the Apple 30-pin to 8-pin adapter to allow your device to connect to the USB cable.

When you attach your iPod the application program should start automatically, and the music play controls will appear along with the name of your iPod device.

If the iPod application does not start after connecting your iPod device, check that you have enabled the iPod option in the **Settings, Factory Settings, Applications** page, and then powered your head-unit off and on again.

Start the iTunes app on your iPod, and after a short delay the music content of your iPod should be available to play through the head-unit.

Photo

The Photos application allows you to view individual images, or play a series of images as a Slideshow.

The application can display JPG, PNG, GIF and TIFF images from both internal and external storage devices.

Tap on the pictures to be selected, then tap the Play button to start the Slideshow.

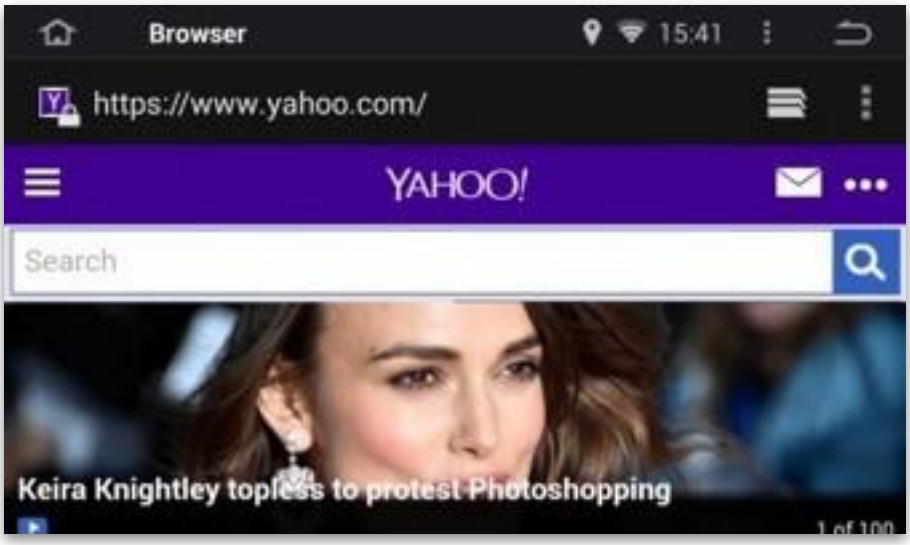
Tap on the screen to stop the Slideshow.

Use the button to select the storage device and folder you wish to view, and then select individual images from that device or folder to be displayed.

Once you have selected the images to display, tap the Slideshow button to start the slide-show.

Browser

The Browser application is used when you have an active WiFI or USB-3G / 4G internet connection, and allows you to navigate to any web site.



It should be noted that browsing internet web sites while driving is very unsafe and Joying do not encourage this while your vehicle is moving.

To ensure your safety the vehicle should always be stopped before the driver focuses on browsing the internet.

Clicking this menu item will allow you to select additional options, including the following:

Refresh -Tapping this will force a refresh of the current web page.

Bookmark - Tapping this will allow you to view any saved Bookmarks, and display a history of your most frequently visited web sites.

Others - Tapping this gives additional options:

Option	Description
Save to bookmarks	Saves the current web page to your Bookmarks
Share webpage	
Search on the web	Used to enter a search term for the Google web site.
Request desktop website	Tell the web site you are accessing that this is a desktop rather than mobile device.
No Sleep while browsing	This option is only for mobile devices, and is not applicable to head-units.
Save for offline reading	Save a copy of the page for viewing when not connected to the Internet.

Weather

The Weather app can be configured to display current and future weather for a number of different locations.

To add your location to the app, tap the + button and enter the name of your current city and country.

You can repeat this for multiple locations, and switch between saved locations by swiping left and right.

File Manager

The File Manager application is used to browse and move or delete files and folders stored on the internal and external storage devices connected to your head-unit.

To display the folder and file contents of a storage devices, tap on the storage device from the list of devices on the left side of the screen.

The main display on the right will change to reflect the contents of the storage device you have selected.

to copy the selected files. After tapping this you select the Target storage device from the list on the left side, and then tap on the icon again to write the files to the target location.

to 'cut' the selected files from this folder.

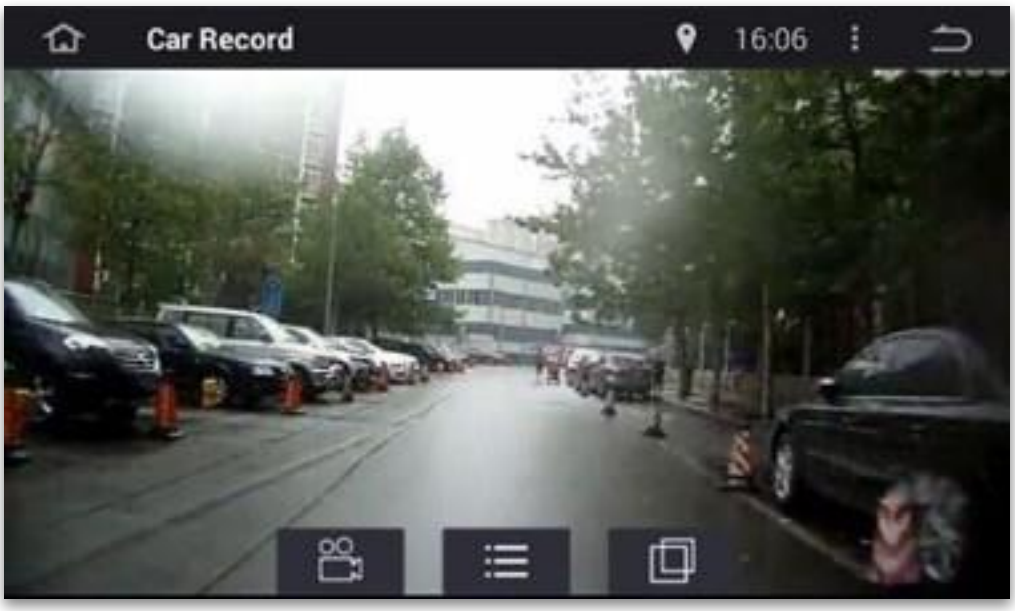
to delete the selected files from this folder.

We do not recommend customers using this application unless they are very sure of the files or folders they are working with.

Car Recorder

If you have purchased and installed the option Front DVR Camera from our website, the Car Recorder application can be used to record front-facing video while your head-unit is running. This can be very useful if you are involved with a traffic accident or other problems, and can be shown to Law Enforcement to prove what occurred.

This application creates large files while recording, and these files are automatically saved to the GPS SD storage device.



Because of this we strongly recommend purchasing a large capacity SD storage card, with a Class 10 or UHS-1 speed rating.

Use of a slow SD storage card will cause frequent drop-outs and delay's during your recordings.

This button toggles the recording mode On or Off. When recording there will be an entry on the top Status Bar showing 'Rec'.

This button will show a list of saved video recording files. It will also show the amount of recording time that is left on the GPS storage device. Tap on a save file to play it back for review.

If you have multiple USB camera's installed this button will toggle between the available camera's. It will NOT switch to the optional rear-view camera, if one is installed.

When you start your vehicle the Car Recorder app will resume into whatever mode it was in when the vehicle was shut-down. If you start recording, shut-down the vehicle then it will continue recording automatically the next time you start the vehicle.

Bluetooth

The Bluetooth application allows you to review the current Bluetooth configuration settings, display paired devices, search for devices, search the address book, and make or receive phone calls.

Enable the 'Auto Connect' option and the head-unit will attempt to automatically connect to paired devices when they are within range.

The 'Auto Answer' option determines whether a phone will automatically answer an incoming call, or whether you must manually answer the incoming call.

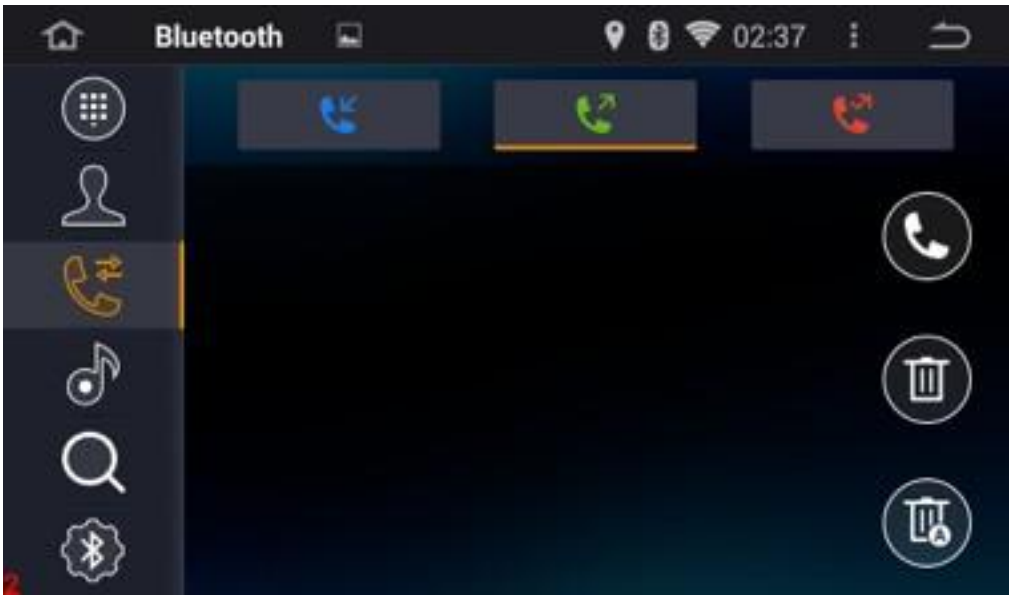
The Device Search icon on the left side of the screen shows any devices that are currently paired and also any devices that are in range and available for use.

To stream audio from your paired device, simply tap the music icon on the left side of the screen.

The Audio controls at the bottom of the screen allow you to jump back to the previous song, jump forward to the next song, and to pause the current song.

Tap the phone icon on the left side of the screen to see a list of calls make, received and missed.

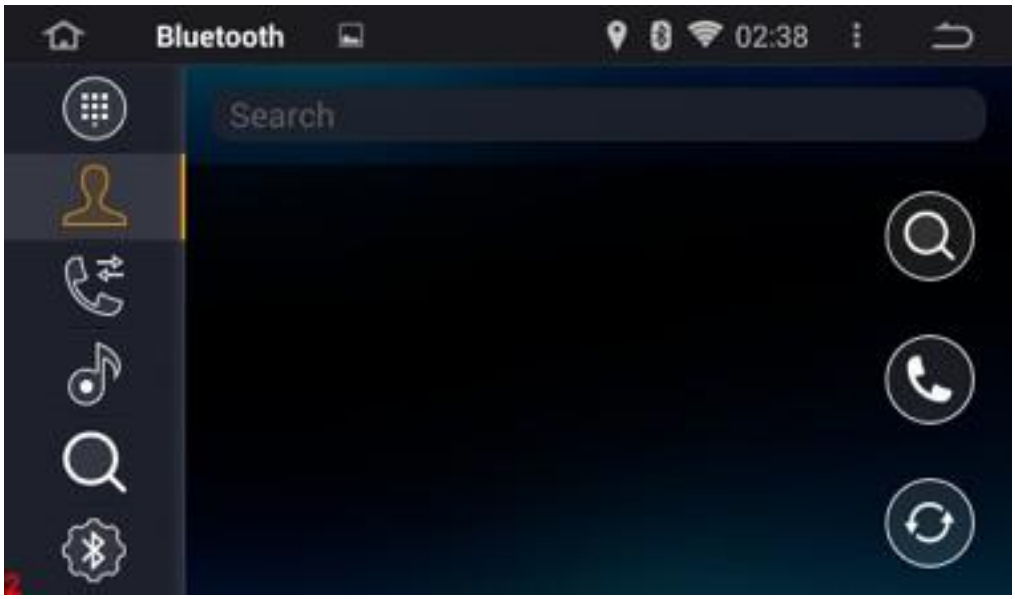
Tap the blue icon on top for a list of all incoming calls. Tap the green icon for a list of all outgoing calls placed, and the red icon for a list of calls that failed.



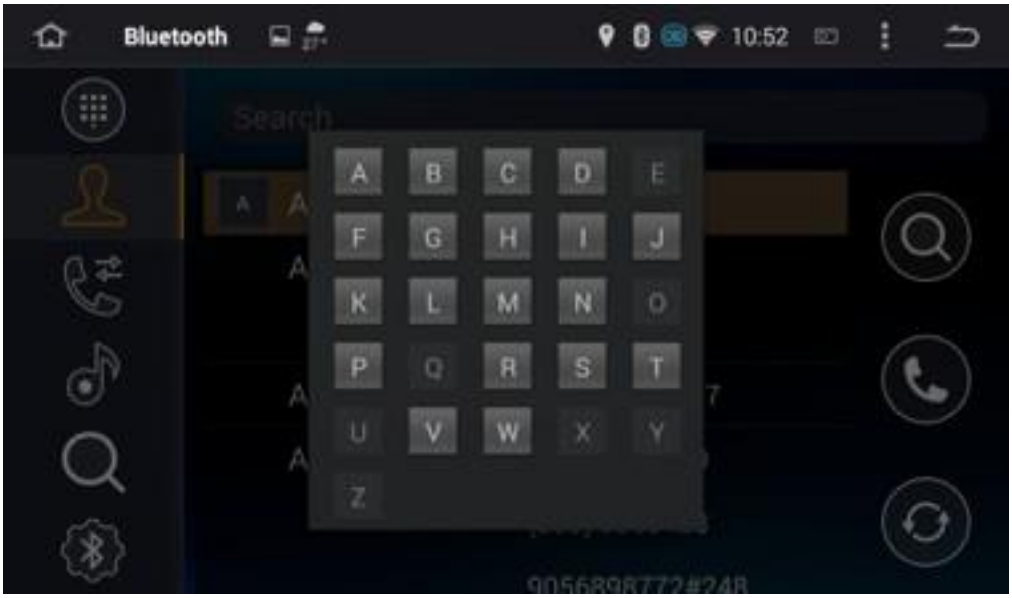
You can tap to select a call entry and then tap the phone icon on the right side to call that number again. You can also tap the trash icon to delete the selected entry, or the bottom trash icon to delete all entries from the list of calls.

To display the address book from your phone, tap the person icon on the left side of the screen.

From the address page you can tap the refresh icon on the bottom, right side to refresh the address book from your phone. When the address book has been refreshed you can select an entry and tap the phone icon on the right side to place a call to that person.



To search your address book for a specific person, tap the search icon on the right side of the screen and type the first letter of their name.



To place a call by typing the number directly, tap the keypad icon on the left side of the screen.

Once you have typed the number to call, tap the green phone-up icon on the right side of the screen.

To terminate a call, tap the red hangup button on the right side of the screen.

Vehicle

The Vehicle application is designed to retrieve current data about the status of your vehicle, using the CANBus adapter included with some of the Joying head-units. If your head-unit did not arrive with a CANBus adapter this application will not return any data when run on your vehicle.

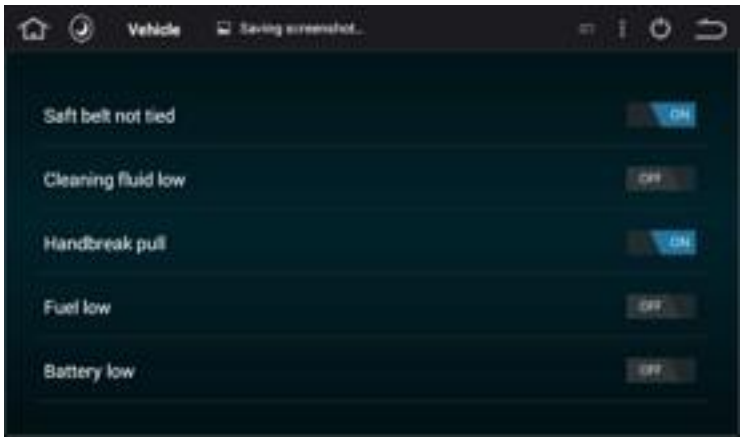
To display the active data tap on the 'Vehicle' entry on the main screen.

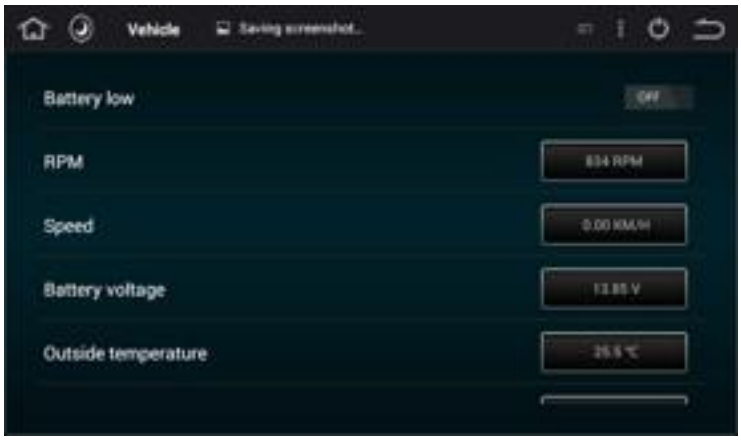
This will display a single screen window that you can scroll up and down through to display the current data on your vehicle.

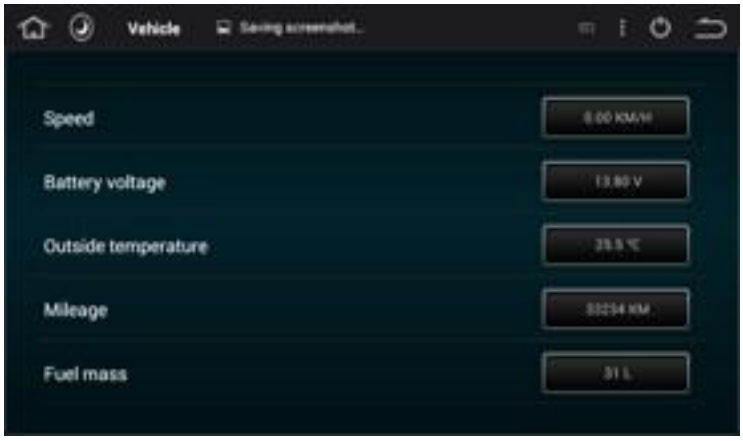
Although it looks like you can toggle some of the values between On and Off, these are all retrieved values and can not be changed from this screen.

Many modern vehicles have a limited number of display gauges, so some of these values can be very useful in monitoring the status of your vehicle:

- Battery Voltage.
- Windshield Cleaning Fluid level.
- Volume of Fuel in tank.
- Outside Temperature







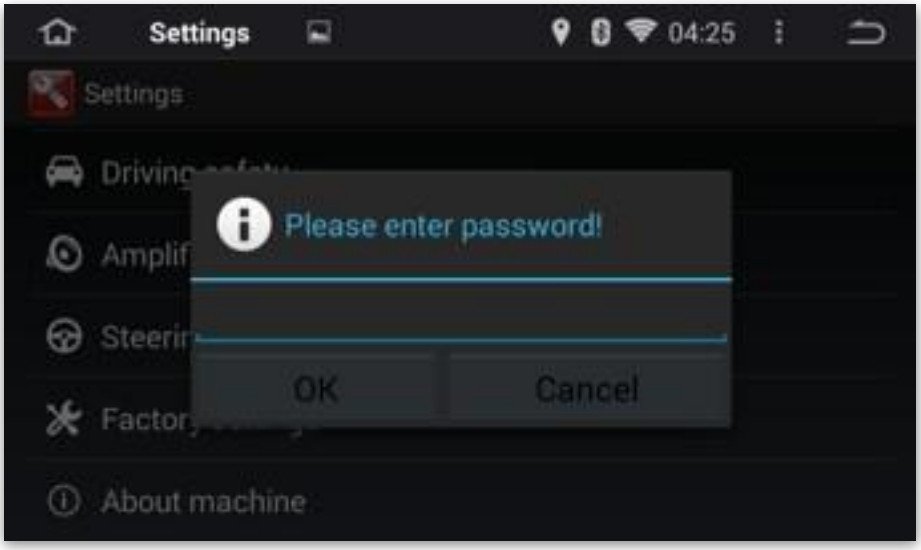
Factory Settings

All of the normal configuration options can be found under the Settings application, and normally changing these options should never cause problems with your head-unit.

One special option is the 'Factory Settings' which contains low-level hardware configuration options, such as the frequency band that radio stations broadcast on in your country or region, plus the component type of the Radio and Audio chip components.

It also contains manufacturer graphics for many popular vehicles that can be displayed during the head-unit start up process.

Since many of the configuration options here can cause significant problems with your head-unit, access to the Factory Settings is password protected.



If you are moving your vehicle between regions, such as Europe to Russia, or have been instructed to do so by our Technical Support staff, you can access these settings by entering the password '126' when prompted.

Application

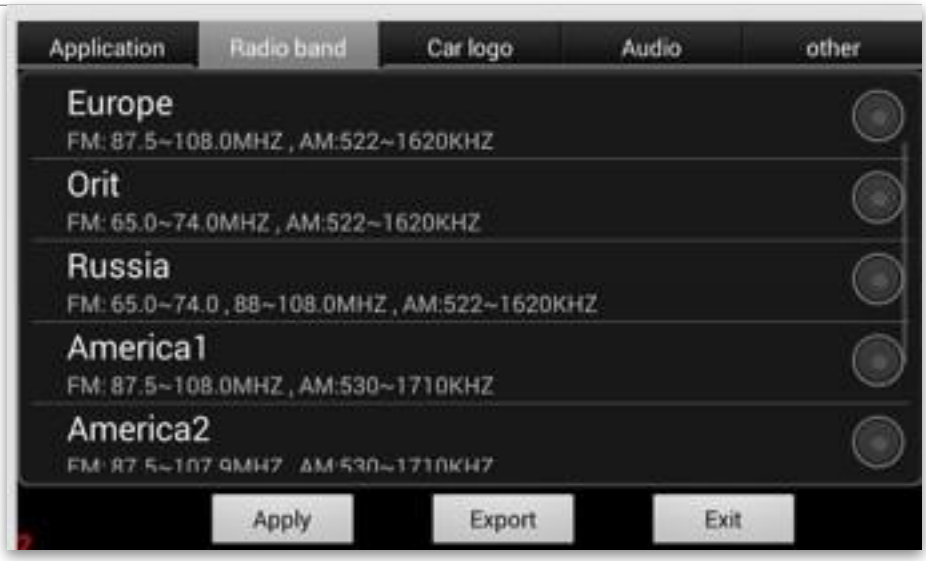
Once the password has been entered you will see the different tabs.

If you have purchased a Joying head-unit designed for a specific manufacturer the settings on the Application page should all be correct and will not need to be changed.

If you have purchased a generic unit you may need to change the CanBus setting to reflect the manufacturer of the vehicle it is being installed into.

Radio Band

The most common reason for accessing this page is that you have purchased the optional iPod cable, and you must enable the iPod support here before it will function correctly. Another common reason is the vehicle is being moved between regions, such as Europe and Russia.



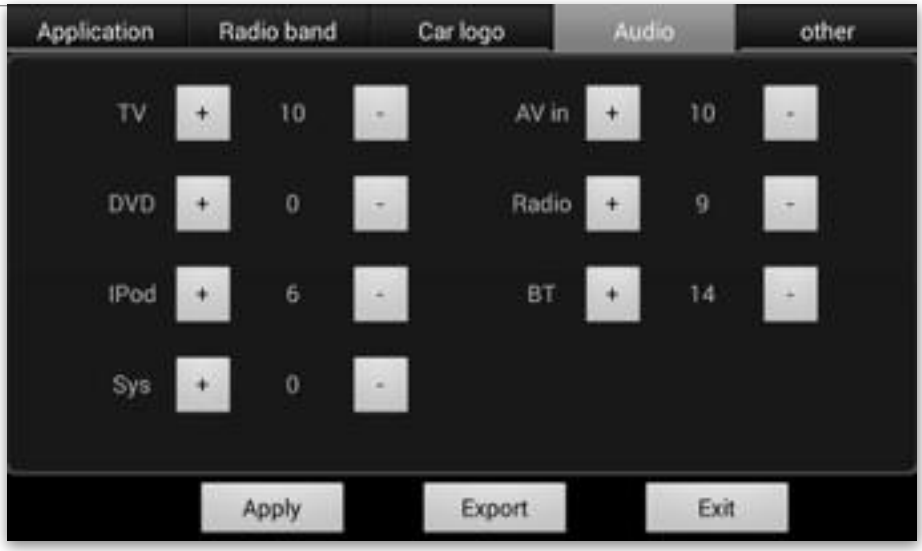
Car Logo

You can also change the start-up animation to a manufacturer specific one, and enable or disable the animation of the logo.

It is also possible to load your own start-up logo from either internal or external storage, and to use that for future start-ups.

Once you have selected the logo to be used, be sure to tap the ‘Apply’ button before you tap ‘Exit’.

Audio



The Audio page allows you to control the volume between the different audio sources.

For example, the volume level from the iPod input was lower than from the DVD input, so we have increased the volume from the iPod input by 6 here.

We have also done the same for Bluetooth, Radio, TV, and the A/V Inputs as well. It may take some time to experiment with the different levels per input, but eventually you can balance the volume across all inputs.

Other

The 'Model' value is assigned at the factory and should normally never change.

The Radio Data System (RDS) functionality is enabled from the factory, but can be disabled here if required. Remember to tap 'Apply' if you have changed this option.

The 'RGB LED' will be enabled from the factory if your head-unit supports this functionality. Normally this option should never be changed.

If you have purchased the optional Front View Camera, you should enable the 'Front camera' option and tap 'Apply'.

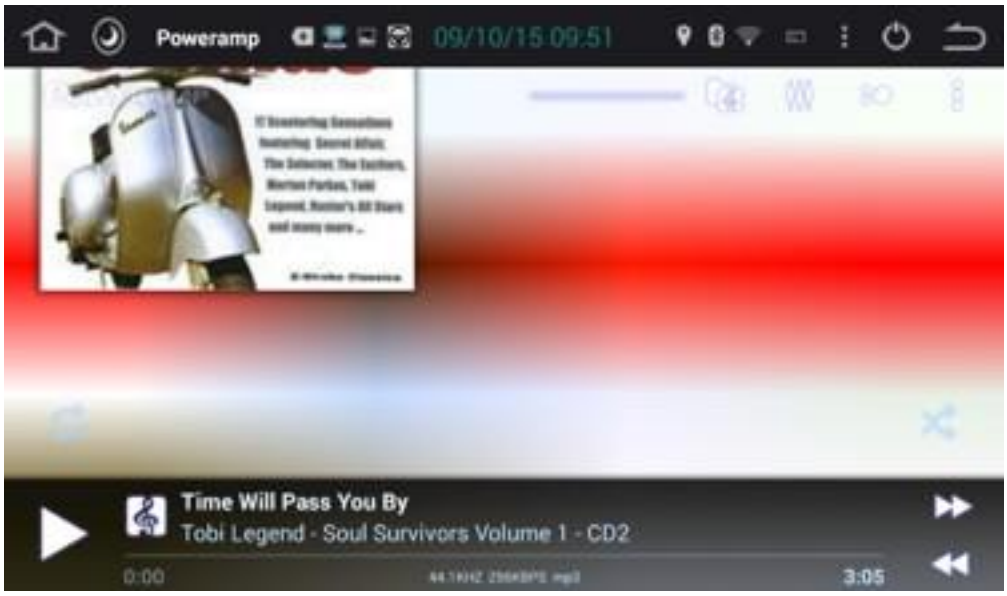
The ‘Wheel3’ option changes the behavior of the Volume control dial. Normally turning this dial clockwise will increase the volume, and counter-clockwise will reduce the volume. Normally you should never change this setting unless directed to do so by our Support staff.

The ‘Rudder’ option is used to indicate Left-Hand drive or Right-Hand drive. For Left-Hand drive vehicles the option should be enabled, and disabled for Right-Hand drive vehicles. Remember to tap ‘Apply’ if you change this option.

Enhance your experience with Third-Party App's

Music Players

For many customers the Music application that is provided with your head-unit is sufficient to play the music files stored locally on your SD and USB storage devices. If you are looking for a music player with additional features such as Album Artwork, multiple Playlists, Lyrics, etc then we recommend the PowerAmp application from the Google Play Store.



The Spotify service is very popular with customers around the world, and the Spotify app can be installed to deliver the streaming music service already used by millions of customers world-wide. For internet streaming while you are driving, you must have the optional 3G / 4G USB adapter installed, or are using your phone as a persona hotspot with the head-unit connected to it.

Video Messaging

The Skype app has been installed by many customers, and can be used with a webcam to make and receive both voice and video calls.

As with music streaming, you must have the optional 3G / 4G USB adapter installed, or are using your phone as a persona hotspot with the head-unit connected to it.

Vehicle Diagnostics

If you are interested in monitoring the operating parameters of your vehicle in real-time, the Torque and Torque Pro applications will use the OBD2 accessory available from the Joying website. This accessory plugs into a connector under your dashboard and with an application such as Torque installed, you have the ability to read both performance data and any vehicle problems that have been identified and stored on your vehicle.

Troubleshooting problems

Contacting Customer Support

Although your Joying head-unit is an extremely high quality product, there are many small problems that can arise during installation, initial setup and in day to day use. Our Technical Support staff are always ready to assist you with any problems that may arise, but we have also included some of the common customers questions in the following pages in case they might help you identify the problem yourself.

If you do not find a solution to your problem in the “Common Questions & Answers” at the end of this User Manual, we encourage you to email our Technical Support staff at support@carjoying.com or carjoying@gmail.com and we will respond to your question.

To speed up the process, it is helpful if you can include the following information in your email message to us:

- Your First and Last Name
- Your Order Number, if purchased from our web site. If purchased elsewhere, the company name and web site ordered from.
- The Date the head-unit was purchased.
- What vehicle the head-unit is installed into (Manufacturer, Model and model Year)
- A Description of the problem you are having, and when the problem started.
- A picture of the **Settings, About** page which shows hardware and Android information.

Our Technical Support staff are also interested in your thoughts and comments on your Joying head-unit, and we invite you to send us your feedback.

Restore to Factory Settings

You may be requested to do a “Factory Reset” by the Joying Technical Support staff as they work with to to identify any issues that might arise. This is a significant event and it effectively returns the head-unit to the state it was in when your purchased it.

This process will erase any of your recently installed applications, settings and configurations, so it is important to ensure you have a Backup of all your settings. Please review the section titled ‘Backing up your head-unit settings’ and make sure you have a current backup. Note that this process DOES NOT backup your application programs, only the settings and configurations.

If you have saved your Backup to SD or USB external storage, then unmount and remove the external storage BEFORE running the Factory Reset process. This will ensure your backup remains safe during the reset process.

To start the reset process, go to **Settings, Backup & reset** then scroll down to the ‘Factory data reset’ and tap it. You will be prompted to confirm that you wish to do a ‘Factory Reset’, and you should confirm the operation.

It is very important that you do NOT remove the key from the ignition during this process, and that there is no interruption during the reset process as this could result in your head-unit failing to start correctly.

Once the reset process has completed the head-unit will reboot, and you can either restore your backup, or start entering new configuration settings. Restoring from your backup is done from **Settings, Backup & reset.**

Upgrading the Firmware and Android Operating System

Occasionally our Research & Development engineering staff will release a software update for your head-unit. These updates are created for a number of different reasons, including:

- Changes may be required to resolve problems with the operation of your head-unit
- Additional new or updated functionality is being added
- There has been an updated release of the Android operating system.

If you are notified of an upgrade from our web site, Facebook page, or by email, you should follow the instructions to download the upgrade files. All your settings, applications and data will be erased as part of the update process, so we strongly recommend you follow the "**Backing up your head-unit settings**" section in this manual before starting the upgrade.

You will need a FAT32 formatted SD card with at least 2Gb capacity. There should be no other files or folders on this SD card, and we recommend formatting it first to ensure no other files are present.

1. Uncompress the download file onto your hard drive, and copy the UPDATE.IMG and MCU.IMG files to the root folder of the FAT32 formatted SD card.
2. With your vehicle turned-off and the key out of the ignition, remove the SD card that is mounted in the GPS SD slot on your head-unit.
3. Insert the new SD card with the upgrade files
4. Insert the key and start the vehicle.

As the head-unit starts up it will recognize the upgrade files on the SD card and prompt you to start the Upgrade process. Select the option to perform the upgrade.

It is very important that you do NOT remove the key from the ignition during this process, and that there is no interruption during the reset process as this could result in your head-unit failing to start correctly.

If you are not prompted to upgrade after 5 minutes you can manually force the upgrade by finding a small narrow wooden or metal pin and using it to push the Reset button.

1. Push and hold the Reset button for 8 to 10 seconds and the head-unit will reboot.
2. When the lights start to flash, release the pin.
3. When the Recovery / Reboot menu is shown, quickly press the pin in again to switch menu options.
4. Select the ‘Update from SD card’ option and hold the pin in for a few seconds to select it.

The update will be applied and the head-unit will reboot when it has completed the update.

Once the upgrade has completed the head-unit will restart and you can remove the new SD card from the GPS slot, and insert the GPS SD card again. If you do not remove the SD storage device the system may attempt to update again.

Requesting an update to the IGO GPS Map's

Each year the IGO map's are updated with new roads, Points Of Interest, and other changes. You can download the latest Map data for your country from the Joying website, and update the contents of the GPS SD storage device on your head-unit.

To receive the latest download URL for your location, please email our Customer Support staff at support@carjoying.com and make the subject of the email "GPS update link requested". Your email should also contain the following information:

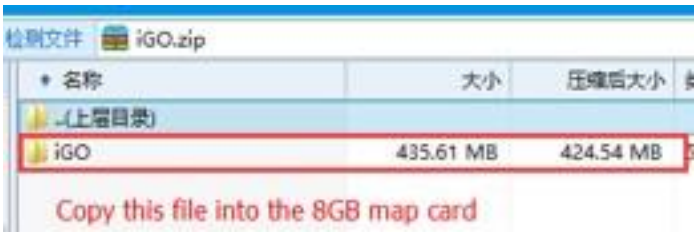
- Your First and Last Name.
- Your Order Number, if purchased from our web site. If purchased elsewhere, the company name and web site ordered from.
- Your Country or Region.

Our Customer Support staff will send you the current download URL after verifying your purchase information. You may receive two download URL's, and if so, the smaller one contains the IGO software and the larger one contains the IGO Map data. To operate correctly the Map data must be copied into the \Contents folder of the IGO software.

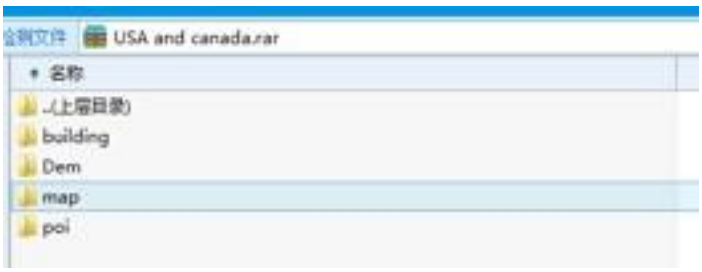
Creating a new GPS image for your SD storage

To create a new GPS SD storage device you will need an 8Gb or larger SD card.

Using the URL(s) provided, connect to the website from a PC or Mac and download the two files. The smaller file contains the IGO software, so unzip it first. This will create a folder called 'iGO' and the application files will be extracted to that folder.



The larger file you downloaded contains the Map Data and should be unzipped next. Please note that the extracted Map Data may be over 2 Gigabytes in size, so please make sure you have sufficient free space before starting to unzip the files.

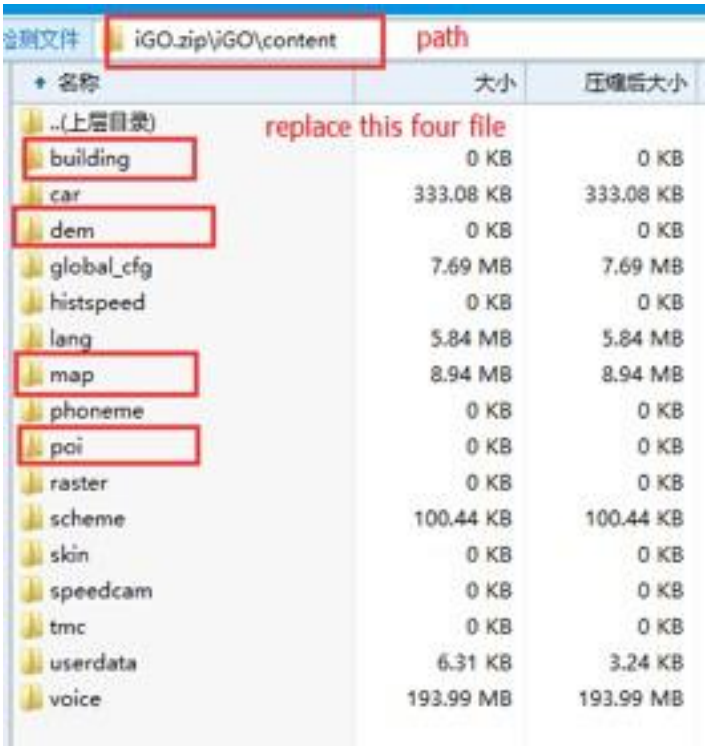


Once extracted the Map Data must be placed inside the iGO\contents folder for correct operation in your head-unit.

With the four Map Data folders copied into the \content folder you are now ready to copy the complete iGO directory to your SD storage device.

If your PC has an SD slot simple insert the SD card into the PC, and copy the 'iGO' directory to the SD card. If your PC does not have a SD slot you can use one of the many low-cost external SD interfaces that attach to the PC through a USB connection.

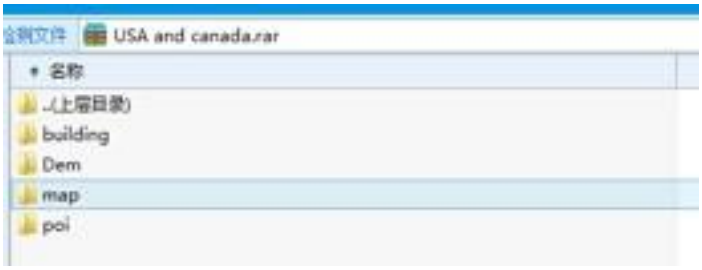
Once the 'iGO' folder has been written to the SD card it can be removed and inserted into the GPS SD slot on your head-unit. We recommend inserting the new GPS SD storage device when the vehicle and head-unit are both powered off.



Updating an existing GPS SD card

When updating the GPS SD card you are only required to download the updated Map Data, and it can be copied directly onto the iGo\contents directory on the SD card.

Please note that the extracted Map Data may be over 2 Gigabytes in size, so please make sure you have sufficient free space before starting to unzip the files.



Once extracted the Map Data must be copied into the iGO\contents folder of the existing SD card, over-writing the existing folders. As you will be over-writing the existing folders and files, you might have to confirm that you want the current content replaced.

Start the ignition and allow the head-unit to restart. When it has restarted, tap the GPS button and let IGO start up with the new Map Data.

Common Questions & Answers

Q: Can I install third-party applications onto my head-unit?

A: Yes you can! App's can be installed from the Google Play Store, or directly from an APK file stored on an SD or USB storage device.

Q: You have head-units for a lot of different vehicles, but not my vehicle. Can I install this into my vehicle?

A: Yes, if your current head-unit has a standard double-DIN then you can install our generic double-DIN sized head-unit can.

You will also need to purchase a third-party wiring adapter specific to your vehicle that converts your vehicle wiring to a standard ISO socket connector. These can be found at your local car audio shop, or from common auction sites. One end of this wiring adapter connects to your vehicle's wiring harness, and the other end connects to the ISO connector included with your Joying head-unit.

Q: Can I "root" my head-unit?

A: Yes you can, but you must be aware of the additional potential security problems this can introduce before you do so. Systems that have been "rooted" provide additional opportunities for application's to both extract information from your head-unit, and to send that information to other systems through WiFi or 3G /4G connections.

If you choose to "root" your head-unit our Support staff can only assist you with questions about the applications we provided on your head-unit, and they might ask you to undo the "root" process if you are having problems.

If you decide to go ahead and "root" your head-unit, go into the Settings, Factory Settings app and when prompted for a password type: ***#hct#root#**

Your head-unit is now rooted and you may install any application that you wish on the system.

Q: Can I install a different ROM on my head-unit?

A: Yes you can, but our Support staff will not be able to assist you with this process, or if you have problems with a replacement ROM installed.

The instructions for installing a replacement ROM are the same as 'Upgrading the Firmware and Android Operating System' earlier in this User Guide. It is critical that the MCU.IMG file you install was created for the Joying head-units as an incorrect MCU image will result in the buttons and Radio, Music, DVD, Video and other app's failing to operate.

Also note that the iPhone and Android screen cast functionality will be lost with any third-party ROM replacement.

Q: There are 4 updates for my head-unit on your website. Do I have to install each one?

A: No, simply download the latest update files and apply them using the instructions in the "Upgrading the Firmware and Android Operating System" section of the User Guide.

Q: Every time I start my vehicle the Music application starts with the first song on my SD card. How do I make it continue with the last song that was playing?

A: At this time the music application scans the SD and USB devices when an external storage device is mounted, and will start playing the first song it finds. Unfortunately any SD card or USB memory stick will be remounted when the head-unit power's on and this means the Music application will rescan the devices for songs.

Our R&D staff are looking at different methods to change this, but you could consider downloading a third-party music player such as PowerAmp which can be configured to not rescan the external storage devices on startup. That means the PowerAmp program will start playing the song that was playing when you last turned your vehicle off.

Q: I do not hear any sound from any of the applications.

A: Your head-unit could have the audio Muted, so toggle it to make sure it is Off. The other possibility is that you are using the Music or Video app, and the current song or chapter has been Paused.

Q: My Head-unit does not power on, the screen is blank, and the buttons do not light up when headlights are turned on

A: Most likely the fuse has failed. This can be confirmed by looking at the fuse to see if it is damaged, and if it is to replace it with a fuse of the same value.

Q: The screen is very dark or almost black.

A: If the temperature in your vehicle is very cold the LCD screen will not be able to correctly display any images. With the engine running and the interior heat on, the screen should return to normal after a few minutes.

Q: None of the buttons or touch areas on the screen are working.

A: The micro-processor in the head-unit is in a confused or hung state and must be reset. This is done by pressing the Reset button on the head-unit, which may be a physical button, or a small hole on the upper, right side of the head-unit.

Q: I installed a third-party ROM and now none of the buttons or touch areas on the screen are working.

A: The update for the micro-processor in the head-unit is incorrect. When installing third-party ROM's you must use the MCU.IMG file for the Joying head-unit that is part of the Joying firmware upgrade. Go to our website and download the latest Joying update for your head-unit, and copy the MCU.IMG file from the Joying download onto the SD card with your the UPDATE.IMG file for your third-party ROM and do the upgrade again.

Q: Remote Control does not work correctly.

A: Either the Remote is not being pointed directly at the head-unit, or the battery in the Remote needs to be changed.The batteries are CR2032 units that should be readily available at your local stores.

Q: The DVD / Movie / TV that I am trying to play is not showing anything on the screen.

A: Displaying video content from DVD, Movie app or the optional TV Tuner can only be done when the vehicle is stopped, and the handbrake has been applied. The video will be displayed once the handbrake has been applied.

It is possible to change this behavior using the Settings, Driving Safety, Watching Video option but this might be illegal in your country and is not recommended.

Q: I have installed rear headrest monitors but when I use the Video app to play movie's from the SD card it does not show on the headrest monitors.

A: Sorry, but only DVD movies will be displayed on the rear headrest monitors, so you can not play any movies stored on SD or USB storage devices.

Q: I am getting poor AM / FM radio reception or a lot of background noise.

A: There are a few possible solutions here - first is where the radio antenna was not plugged into the head-unit correctly. The second is when you also have the optional TV Tuner, and the two antenna's for the Radio and TV Tuner are placed to close together. Simply move them further apart.

The third possibility is that some electrical noise is being picked up by the antenna connection on the rear of your head-unit. To correct this you can remove the head-unit and use electrical tape to wrap around the antenna cable.

Please note that you DO NOT wrap the electrical tape around the metal portion of the plug, as that must make a good metal-to-metal connection to the head-unit, but you should wrap the tape around the rest of the antenna cable.

Wrap as much of the cable as you can to reduce the possibility of picking up any signal noise while driving.

The last option is to purchase the Joying Radio Antenna Signal Booster from our website, and install that between your antenna and the head-unit.

This can be ordered from our website at http://www.carjoying.com/car-accessories/other-car-accessories/ant-208-universal-car-fm-am-radio-aerial-antenna-signal-amplifier-booster.html

Q: When I try to change Sub-Titles on a DVD nothing happens.

A: You can only change Sub-Titles if the DVD has more than one subtitle stored on it.

Q: I plugged my iPod into the USB cable but it does not work

A: iPod support requires a special cable that can be purchased from the Joying web store. This cable connects to the main circuit board inside your head-unit and will require the head-unit to be removed from your dashboard.

To order this cable, go to http://www.carjoying.com/car-accessories/other-car-accessories/ipod-harness-cable-wire-play-music-transmitter-on-joying-android-4-4-4-kitkat-head-unit-car-radio-stereo-gps-navigation-system.html

Q: I bought the optional iPod cable, but my iPod is not recognized when I plug it in.

A: First enable iPod support under **Settings, Factory Settings, Applications** page and the head-unit will reboot. After the reboot your iPod should be visible. Please note that we have tested iPod's with 8 and 16Gb capacity, but older iPod's with higher capacities may not function correctly.

Q: When I start my vehicle the next day all my configuration settings have been lost and must be recreated.

A: This is caused by a problem with the Accessory Power wire not being connected, and means the head-unit loses all configuration settings. Please refer to the wiring diagram in the Installation section and ensure both your +12 Power, and Accessory Power wires are connected correctly.

Q: I plugged my game console into the Video In, and Audio In but nothing is showing up.

A: The Video and Audio In connectors on the head-unit are for the optional DVB-T television accessory only.

Q: My music or video sounds very soft. How can I improve it?

A: There are a couple of possibilities here - Your Audio settings should have the sounds coming from all 4 speakers, and not just from the Left or Right sides so adjust the Balance. The second is to ensure the Loudness setting has been enabled under **Settings, Amplifier** page.

Q: When I switch to PowerAmp I can still hear the Radio being played - how do I stop this?

A: The Joying applications are designed to stop outputting audio when another Joying application is run, but this does not work when switching to a third-party music or video application.

The solution is to switch to the Joying Music or Video application before starting PowerAmp, press the Pause button, and then switch to PowerAmp.

“Thank you very much for your support of Joying over the last 11 years, and we hope to be your automotive electronics source for the next 11 years!”

The Joying Research, Development, and Support staff.