

Pioneer

DMH-G220BT

DMH-G120

RDS AV RECEIVER

English

DIVX

 **Bluetooth**

Operation Manual

Contents

Thank you for buying this Pioneer product.
Please read through these instructions so you will know how to operate your model properly. After you have finished reading the instructions, keep this document in a safe place for future reference.

Important

The screen shown in the examples may differ from actual screens, which may be changed without notice for performance and function improvements.

■ Precaution	3
■ Parts and controls	7
■ Basic operation	8
■ Bluetooth	11
■ AV source	17
■ Smartphone connection for AV source	18
■ Radio	19
■ Compressed files	21
■ AUX	24
■ Settings	25
Displaying the setting screen	25
System settings	26
Theme settings	31
Audio settings	31
Video settings	33
■ Favourite menu	34

■ Other functions	35
■ Appendix	37

Precaution

Certain country and government laws may prohibit or restrict the placement and use of this product in your vehicle. Please comply with all applicable laws and regulations regarding the use, installation and operation of this product.



If you want to dispose this product, do not mix it with general household waste. There is a separate collection system for used electronic products in accordance with legislation that requires proper treatment, recovery and recycling.

Private households in the member states of the EU, in Switzerland and Norway may return their used electronic products free of charge to designated collection facilities or to a retailer (if you purchase a similar new one).

For countries not mentioned above, please contact your local authorities for the correct method of disposal.

By doing so you will ensure that your disposed product undergoes the necessary treatment, recovery and recycling and thus prevent potential negative effects on the environment and human health.

⚠ WARNING

Slots and openings in the cabinet are provided for ventilation to ensure reliable operation of the product, and to protect it from overheating. To prevent fire hazard, the openings should never be blocked or covered with items (such as papers, floor mat, cloths).

⚠ CAUTION

This product is evaluated in moderate and tropical climate condition under the Audio, video and similar electronic apparatus - Safety requirements, IEC 60065.

Important safety information

⚠ WARNING

- Do not attempt to install or service this product by yourself. Installation or servicing of this product by persons without training and experience in electronic equipment and automotive accessories may be dangerous and could expose you to the risk of electric shock, injury or other hazards.
- Do not allow this product to come into contact with liquids. Electrical shock could result. Also, damage to the product, smoke, and overheating could result from contact with liquids.
- If liquid or foreign matter should get inside this product, park your vehicle in a safe place, turn the ignition switch off (ACC OFF) immediately and consult your dealer or the nearest authorised Pioneer

Service Station. Do not use this product in this condition because doing so may result in a fire, electric shock, or other failure.

- If you notice smoke, a strange noise or odour from this product, or any other abnormal signs on the LCD screen, turn off the power immediately and consult your dealer or the nearest authorised Pioneer Service Station. Using this product in this condition may result in permanent damage to the system.
- Do not disassemble or modify this product, as there are high-voltage components inside which may cause an electric shock. Be sure to consult your dealer or the nearest authorised Pioneer Service Station for internal inspection, adjustments or repairs.

Before using this product, be sure to read and fully understand the following safety information:

- Do not operate this product, any applications, or the rear view camera option (if purchased) if doing so will divert your attention in any way from the safe operation of your vehicle. Always observe safe driving rules and follow all existing traffic regulations. If you experience difficulty in operating this product, pull over, park your vehicle in a safe location and apply the handbrake before making the necessary adjustments.
- Never set the volume of this product so high that you cannot hear outside traffic and emergency vehicles.
- To promote safety, certain functions are disabled unless the vehicle is stopped and the handbrake is applied.
- Keep this manual handy as a reference for operating procedures and safety information.
- Do not install this product where it may (i) obstruct the driver's vision, (ii) impair the performance of any of the vehicle's operating systems or safety features, including air bags or hazard lamp buttons or (iii) impair the driver's ability to safely operate the vehicle.
- Please remember to fasten your seat belt at all times while operating your vehicle. If you are ever in an accident, your injuries can be considerably more severe if your seat belt is not properly buckled.
- Never use headphones while driving.

To ensure safe driving

WARNING

- **LIGHT GREEN LEAD AT POWER CONNECTOR IS DESIGNED TO DETECT PARKED STATUS AND MUST BE CONNECTED TO THE POWER SUPPLY SIDE OF THE HANDBRAKE SWITCH. IMPROPER CONNECTION OR USE OF THIS LEAD MAY VIOLATE APPLICABLE LAW AND MAY RESULT IN SERIOUS INJURY OR DAMAGE.**
- **Do not take any steps to tamper with or disable the handbrake interlock system which is in place for your protection. Tampering with or disabling the handbrake interlock system could result in serious injury or death.**
- **To avoid the risk of damage and injury and the potential violation of applicable laws, this product is not for use with a video image that is visible to the driver.**
- In some countries the viewing of video image on a display inside a vehicle even by persons other than the driver may be illegal. Where such regulations apply, they must be obeyed.

If you attempt to watch video image while driving, the warning **“Viewing of front seat video source while driving is strictly prohibited.”** will appear on the screen. To watch video image on this display, stop the vehicle in a safe place and apply the handbrake. Please keep the brake pedal pushed down before releasing the handbrake.

To avoid battery exhaustion

Be sure to run the vehicle engine while using this product. Using this product without running the engine can drain the battery.

WARNING

Do not install this product in a vehicle that does not have an ACC wire or circuitry available.

Rear view camera

With an optional rear view camera, you are able to use this product as an aid to keep an eye on trailers, or backing into a tight parking spot.

WARNING

- SCREEN IMAGE MAY APPEAR REVERSED.
- USE INPUT ONLY FOR REVERSE OR MIRROR IMAGE REAR VIEW CAMERA. OTHER USE MAY RESULT IN INJURY OR DAMAGE.

CAUTION

The rear view mode is to use this product as an aid to keep an eye on the trailers, or while backing up. Do not use this function for entertainment purposes.

Handling the USB connector

CAUTION

- To prevent data loss and damage to the storage device, never remove it from this product while data is being transferred.
- Pioneer cannot guarantee compatibility with all USB mass storage devices and assumes no responsibility for any loss of data on media players, iPhone, smartphone, or other devices while using this product.

In case of trouble

Should this product fail to operate properly, contact your dealer or nearest authorised Pioneer Service Station.

Visit our website

Visit us at the following site:

<http://www.pioneer-car.eu>

- Register your product. We will keep the details of your purchase on file to help you refer to this information in the event of an insurance claim such as loss or theft.
- We offer the latest information about PIONEER CORPORATION on our website.
- Pioneer regularly provides software updates to further improve its products. Please check the support section of the Pioneer website for all available software updates.

About this product

- This product does not work correctly in areas other than Europe. The RDS (Radio Data System) function operates only in areas with FM stations broadcasting RDS signals. The RDS-TMC service can also be used in the area where there is a station that broadcasts the RDS-TMC signal.
- The Pioneer CarStereo-Pass is for use only in Germany.

Protecting the LCD panel and screen

- Do not expose the LCD screen to direct sunlight when this product is not used. This may result in LCD screen malfunction due to the resulting high temperatures.
- When using a mobile phone, keep the aerial of the mobile phone away from the LCD screen to prevent disruption of the video in the form of spots, coloured stripes, etc.
- To protect the LCD screen from damage, be sure to touch the touch panel keys only with your finger and do so gently.



Notes on internal memory

- The information will be erased by disconnecting the yellow lead from the battery (or removing the battery itself).
- Some of the settings and recorded contents will not be reset.

About this manual

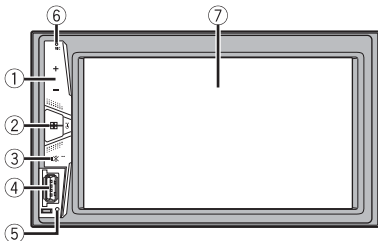
This manual uses diagrams of actual screens to describe operations. However, the screens on some units may not match those shown in this manual depending on the model used.

Meanings of symbols used in this manual

G000BT	This indicates model names that are supported by the described operations.
	This indicates to touch the appropriate soft key on the touch screen.
	This indicates to touch and hold the appropriate soft key on the touch screen.

Parts and controls

Main unit



①	VOL (+/-)	
②	■ (HOME)	Press to display the top menu screen. Press and hold to power off. To power back on, press any button.
③	🔇 (MUTE)	Press and hold to display off.
④	USB port	
⑤	RESET	Press to reset the microprocessor (page 8).
⑥	Microphone (DMH-G220BT)	The Bluetooth microphone is built in the grill of the product. Speak towards the microphone when you make a call. NOTE Depending on the usage condition of the vehicle such as the wind from the air conditioner when using the hands-free function, it may be difficult for the other party to hear your voice at their end.
⑦	LCD screen	

Basic operation

Resetting the microprocessor

CAUTION

- Pressing the RESET button resets settings and recorded contents to the factory settings.
 - Do not perform this operation when a device is connected to this product.
 - Some of the settings and recorded contents will not be reset.
- The microprocessor must be reset under the following conditions:
 - Prior to using this product for the first time after installation.
 - If this product fails to operate properly.
 - If there appears to be problems with the operation of the system.

- 1 Turn the ignition switch OFF.**
- 2 Press RESET with a pen tip or other pointed tools.**
Settings and recorded contents are reset to the factory settings.

Remote control


The remote control is sold separately. For details concerning operations, see the remote control manual.

Starting up the unit

- 1 Start the engine to boot up the system.**
The [Select Program Language] screen appears.

NOTE

From the second time on, the screen shown will differ depending on the previous conditions.

- 2 Touch the language.**
- 3 Touch .**
The top menu screen appears.









Using the touch panel

You can operate this product by touching the keys on the screen directly with your fingers.






NOTE

To protect the LCD screen from damage, be sure to touch the screen only with your finger gently.

Common touch panel keys

	Switches between playback and pause.
	
 	Skips files/tracks/chapters forwards or backwards.
	Performs fast reverse or fast forwards. Touch again to change the playback speed.
	Stops playback.
Text information	When all characters are not displayed, the rests are automatically scrolled on the display. The characters are displayed by touching the text information. NOTE This function is available only when you stop your vehicle in a safe place and apply the handbrake.
	Returns to the previous screen.
	Close the screen.

Operating list screens

	Touching an item on the list allows you to narrow down the options and proceed to the next operation.
	Appears when all characters are not displayed on the display area. If you touch the key, the rests are scrolled for display. NOTE This function is available only when you stop your vehicle in a safe place and apply the handbrake.
	Appears when items cannot be displayed on a single page. Touch  or  to view any hidden items.

Operating the time bar









You can change the playback point by dragging the key.

NOTE

The time bar function may vary depending on the activating source.

Top menu screen







①	Source icons
 21:48	Setting the time and date (page 35)
	Settings (page 25) and Favourite menu (page 34)
	Hands-free phoning (page 13) (DMH-G220BT)
	AV source off
	If you select , you can turn off almost all functions. The unit turns on by operating following functions: <ul style="list-style-type: none">• An incoming call is received (only for hands-free phoning via Bluetooth). (DMH-G220BT)• A rear view camera image is input when the vehicle is in reverse.• A button on this unit is pressed.• The ignition switch is turned off (ACC OFF), then turned on (ACC ON).

Bluetooth


G220BT

English

Bluetooth connection

- 1 Turn on the Bluetooth function on the device.
 - 2 Press .
 - 3 Touch  then .
 - The Bluetooth menu screen appears.
 - 4 Touch [Connection].
 - 5 Touch .
 - The unit starts to search for available devices, then displays them in the device list.
 - 6 Touch the Bluetooth device name.
- After the device is successfully registered, a Bluetooth connection is established by the system. Once the connection is established, the device name is displayed on the list.

NOTES

- If three devices are already paired, [Memory Full] is displayed. Delete a paired device first (page 12).
- If your device supports SSP (Secure Simple Pairing), a six-digit number appears on the display of this product. Touch [Yes] to pair the device.
-  is invalid when the device is already connected, also is invalid during connecting or disconnecting.
- Before connecting from the Bluetooth device, make sure that the connection of this product and other Bluetooth device is disconnected.

TIP



The Bluetooth connection can also be made by detecting this product from the Bluetooth device. Before registration, make sure that [Visibility] in the [Bluetooth] menu is set to [On] (page 12). For details on Bluetooth device operations, refer to the operating instructions supplied with the Bluetooth device.

Bluetooth settings

- 1 Press .
- 2 Touch  then .

CAUTION

Never turn this product off and disconnect the device while the Bluetooth setting operation is being processed.

Menu Item	Description
[Connection]	<p>Connect, disconnect, or delete registered Bluetooth device manually. Touch  to delete registered device. To connect a registered Bluetooth device manually, touch the name of the device. To disconnect the device, touch the name of the connected device in the list.</p> <p>NOTE Connect the Bluetooth device manually in the following cases:</p> <ul style="list-style-type: none"> • Two or more Bluetooth devices are registered, and you want to manually select the device to be used. • You want to reconnect a disconnected Bluetooth device. • Connection cannot be established automatically for some reason.
[Auto Connect] [On] [Off]	<p>Select [On] to connect the last connected Bluetooth device automatically.</p> <p>NOTE If two Bluetooth devices were connected the last time, the two devices are connected to this product automatically in the order that they are registered in the device list.</p>
[Visibility] [On] [Off]	Select [On] to make this product visible to the other device.
[PIN Code Input]	<p>Change the PIN code for Bluetooth connection. The default PIN code is "0000".</p> <ol style="list-style-type: none"> 1 Touch [0] to [9] to input the pin code (up to 8 digits). 2 Touch .
[Device Information]	Displaying the device name and address of this product.
[Bluetooth Memory Clear]	Touch [Clear] then [OK] to clear the Bluetooth memory.

Switching the connected Bluetooth device

You can switch among the connected Bluetooth devices using the switch devices key in the Bluetooth menu.

- You can register up to three Bluetooth devices on this product (page 11).
- The Bluetooth audio player can be switched to other Bluetooth devices on the Bluetooth audio playback screen.
- Only one device can be connected as a hands-free phoning.

- The hands-free phoning is also switched when the connected device via Bluetooth is switched.

Hands-free phoning











To use this function you need to connect your mobile phone to this product via Bluetooth in advance (page 11).

CAUTION

For your safety, avoid talking on the phone as much as possible while driving.

Making a phone call

- 1 Press , then touch .
The phone menu screen appears.
- 2 Touch one of the call icons on the phone menu screen.

	<p>The following items are displayed.</p> <ul style="list-style-type: none"> • Name of the current mobile phone • List number of the current mobile phone • Reception status of the current mobile phone • Battery status of the current mobile phone
	<p>Initial searches the phone book. Touch the list area to stop initial search.</p>
	<p>Using preset dial list (page 14)</p>
	<p>Using phone book Select a contact from the phone book. Touch the desired name on the list then select the phone number.</p> <p>TIPS</p> <ul style="list-style-type: none"> • The contacts on your phone will be automatically transferred to this product. • Update the phone book manually.
	<p>Using call history Make a phone call from the received call , dialled call , or missed call .</p>
	<p>Direct phone number input Enter the number keys to enter the phone number then touch  to make a call.</p>



► To end the call

- 1 Touch .

Using the preset dial lists


► Registering a phone number

You can easily store up to six phone numbers per device as presets.


1 Press , then touch .

2 Touch  or .

On the [Phone Book] screen, touch the desired name to display the contact's phone number.

3 Touch .



► Dialling from the preset dial list

1 Touch .

2 Touch the desired entry on the list to make a call.

The dial screen appears and dialling starts.


► Deleting a phone number


1 Press , then touch .

2 Touch  then .



3 Touch [Yes].

Receiving a phone call




1 Touch  to answer the call.

Touch  to end the call.

TIPS

- Touch  while getting a call waiting, switch to the talking person.
- Touch  while getting a call waiting to reject the call.

Phone settings



1 Press , then touch  and .

Menu Item	Description
[Auto Answer] [On] [Off]	Select [On] to answer an incoming call automatically.
[Ring Tone] [On] [Off]	Select [On] if the ring tone does not come out from the car speakers.

Menu Item	Description
[Invert Name]	Select [Yes] to change the order of the first and last names in the phone book.


Setting the private mode

During a conversation, you can switch to private mode (talk directly on your mobile phone).

1 Touch  or  to turn private mode on or off.

Adjusting the other party's listening volume

This product can be adjusted to the other party's listening volume.

1 Touch  to switch between the three volume levels.

Notes for hands-free phoning

► General notes

- Connection to all mobile phones featuring Bluetooth wireless technology is not guaranteed.
- The line-of-sight distance between this product and your mobile phone must be 10 metres or less when sending and receiving voice and data via Bluetooth technology.
- With some mobile phones, the ring sound may not be output from the speakers.
- If private mode is selected on the mobile phone, hands-free phoning may be disabled.

► Registration and connection

- Mobile phone operations vary depending on the type of mobile phone. Refer to the instruction manual that came with your mobile phone for detailed instructions.
- When phone book transfer does not work, disconnect your phone and then perform pairing again from your phone to this product.

► Making and receiving calls

- You may hear a noise in the following situations:
 - When you answer the phone using the button on the phone.
 - When the person on the other end of the line hangs up the phone.
- If the person on the other end of the line cannot hear the conversation due to an echo, decrease the volume level for hands-free phoning.
- With some mobile phones, even after you press the accept button on the mobile phone when a call comes in, hands-free phoning may not be performed.
- The registered name will appear if the phone number is already registered in the phone book. When the same phone number is registered under different names, only the phone number will be displayed.

►The received call and dialled number histories

- You cannot make a call to the entry of an unknown user (no phone number) in the received call history.
- If calls are made by operating your mobile phone, no history data will be recorded in this product.

►Phone book transfers

- If there are more than 1 000 phone book entries on your mobile phone, not all entries may download completely.
- Depending on the phone, this product may not display the phone book correctly.
- If the phone book in the phone contains image data, the phone book may not be transferred correctly.
- Depending on the mobile phone, phone book transfer may not be available.

Bluetooth audio

Before using the Bluetooth audio player, register and connect the device to this product (page 11).

NOTES

- Depending on the Bluetooth audio player connected to this product, the available operations with this product may be limited to the following two levels:
 - A2DP (Advanced Audio Distribution Profile): Only playing back songs on your audio player is possible.
 - A2DP and AVRCP (Audio/Video Remote Control Profile): Playing back, pausing, selecting songs, etc., are possible.
- Depending on the Bluetooth device connected to this product, the available operations with this product may be limited or differ from the descriptions in this manual.
- While you are listening to songs on your Bluetooth device, refrain from operating the phone function as much as possible. If you try operating, the signal may cause noise for song playback.
- When you are talking on the Bluetooth device connected to this product via Bluetooth, it may pause playback.

1 Press .

2 Touch  then .

The system setting screen appears.

3 Touch [AV Source Settings].





4 Confirm that [Bluetooth Audio] is turned on.

5 Press .

6 Touch [Bluetooth Audio].

The Bluetooth audio playback screen appears.

Description of Bluetooth audio playback screen

	Track number indicator
	Sets a repeat play range.
	Plays files in random order.
	Switches the devices.

AV source

Supported AV source

You can play or use the following sources with this product.

- Radio
- USB



The following sources can be played back or used by connecting an auxiliary device.

- Bluetooth® audio*
- AUX

* DMH-G220BT

Selecting a source

Source on the AV source selection screen

- 1 Press .
- 2 Touch the source icon.
When you select , the AV source is turned off.

Source on the source list

- 1 Touch  on the AV Source screen.

2 Touch the source key.

When you select [AV OFF], the AV source is turned off.

Smartphone connection for AV source

When using a smartphone with this product, the settings are automatically configured according to the device to be connected.

NOTES

- Operation methods may vary depending on the smartphone and its software version.
- Depending on the version of smartphone OS, it may not be compatible with this unit.

Smartphone (Android™ device)

These are the methods to connect a smartphone to this product. The available sources vary depending on the connection method.

- Connecting via Bluetooth* (page 18)
- Connecting via USB (page 18)

* DMH-G220BT

Compatible smartphones

Compatibility with all smartphones is not guaranteed. For details about smartphone compatibility with this product, refer to the information on our website.

Connecting via Bluetooth

G220BT

The following sources are available when a smartphone is connected to the unit via Bluetooth.

- Bluetooth audio


1 Connect a smartphone with this product via Bluetooth (page 11).

2 Press .

3 Touch compatible desired source.

Connecting via USB

The following sources are available when a smartphone is connected to the unit via USB.

- USB storage device
- 1 Connect a smartphone with this product via USB (Refer to the Quick Start Guide).
 - 2 Press .
 - 3 Touch compatible desired source.






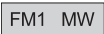





Radio

Starting procedure

- 1 Press .
- 2 Touch [Radio].
The Radio screen appears.

Basic operation

Description of Radio screen

	 Recalls the preset channel stored to a key from memory.
	 Stores the current broadcast frequency to a key.
	Displays the preset channel list. Select an item on the list ([1] to [6]) to switch to the preset channel.
	Selects the FM1, FM2, FM3, MW, or LW band.
	Performs BSM (best stations memory) function (page 20).
	 Manual tuning
	 Seek tuning or non stop seek tuning Releasing the key in a few seconds skips to the nearest station from the current frequency. Keep holding the key for long seconds to perform, performs non stop seek tuning.

Storing the strongest broadcast frequencies (BSM)

The BSM (best stations memory) function automatically stores the six strongest broadcast frequencies under the preset channel keys [1] to [6].

NOTES

- Storing broadcast frequencies with BSM may replace those you have already saved.
- Previously stored broadcast frequencies may remain stored if the number of frequencies stored has not reached the limit.

1 Touch to begin search.

While searching, the six strongest broadcast frequencies will be stored under the preset channel keys in the order of their signal strength.

To cancel the storage process

1 Touch [Cancel].

Radio settings

1 Press .

2 Touch then .

The system setting screen appears.

3 Touch [AV Source Settings].

4 Touch [Radio settings].

The menu items vary according to the source.

Menu Item	Description
[Local] [Off] FM: [Level1] [Level2] [Level3] [Level4] MW/LW: [Level1] [Level2]	Local seek tuning allows you to only tune into radio stations with sufficiently strong signals. NOTE [Level4] for FM and [Level2] for MW/LW are available only with the stations with the strongest signals.
[FM Step] [100kHz] [50kHz]	Select the seek tuning step for the FM band. NOTE The tuning step remains at [50kHz] during manual tuning.
[Regional]* [On] [Off]	Switches whether the area code is checked during the Auto PI search.

Menu Item	Description
[Alternative FREQ]* [On] [Off]	Allow the unit to retune to a different frequency providing the same station.
[Auto PI] [On] [Off]	Searches for the same PI (Programme Identification) code broadcast station from all frequency bands automatically when the broadcasting station contains RDS data. NOTE Even if you set to [Off], the PI search is automatically performed when the tuner cannot get a good reception.
[TA Interrupt]* [On] [Off]	Receives the traffic announcement from the last selected frequency, interrupting the other sources.
[News Interrupt]* [On] [Off]	Interrupt the currently selected source with news programmes.
[Tuner Sound]*	Switches the sound quality of the FM tuner.
[Music]	Gives priority to the sound quality.
[Talk]	Gives priority to noise prevention.
[Standard]	Gives no effect.

* This function is available only when you receive the FM band.

Compressed files

Plugging/unplugging a USB storage device

You can play compressed audio, compressed video, or still image files stored in an external storage device.

Plugging a USB storage device

- 1 Open the USB port cover.
- 2 Plug in the USB device/smartphone (Android device) using an appropriate cable.

NOTES

- This product may not achieve optimum performance with some USB storage devices.
- Connection via a USB hub is not possible.

⚠ CAUTION

Use a USB cable (sold separately) to connect the USB device as any device connected directly to the unit will protrude out from the unit, which could be dangerous.

Unplugging a USB storage device

- 1 Pull out the USB storage device from the USB cable.

NOTES

- Check that no data is being accessed before pulling out the USB storage device.
- Turn off (ACC OFF) the ignition switch before unplugging the USB storage device.

Starting procedure

- 1 Plug the USB storage device into the USB cable (page 21).

TIP

If the USB is already set, select [USB] as the playing source.

Basic operation

TIP







You can set the screen size for the video and image files (page 35).






Audio source

Description of Audio source screen

TIP

When you touch text information, all information is displayed by scrolling only when the handbrake is applied.

	Sets a repeat play range for all files/the current folder/the current file.
 	Plays files or does not play in random order.
 	Displays the hidden function bar.
	Switches the following media file types. [Music]: Compressed audio files [Video]: Compressed video files [Photo]: Image files

	<p>Selects a file from the list. Touch a file on the list to playback.</p> <p>TIP Touching a folder on the list shows its contents. You can play a file on the list by touching it.</p>
	<p>When you touch the memory select icon while connecting an Android device, it switches between internal memory and external memory.</p>
 	<p>Selects the previous folder or the next folder.</p>
	<p>Switches the current music information display.</p>

Video source







⚠ CAUTION


For safety reasons, video images cannot be viewed while your vehicle is in motion. To view video images, stop in a safe place and apply the handbrake.

Description of Video source screen

TIP

Touch anywhere on the screen, the touch panel keys appear.

	 Performs frame-by-frame playback.
	 Performs slow-motion playback.
	Sets a repeat play range for all files/the current folder/the current file.
	Switches the audio/subtitle language.
	<p>Switches the following media file types.</p> <p>[Music]: Compressed audio files</p> <p>[Video]: Compressed video files</p> <p>[Photo]: Image files</p>










	<p>Selects a file from the list. Touch a file on the list to playback.</p> <p>TIP Touching a folder on the list shows its contents. You can play a file on the list by touching it.</p>
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Still image source

Description of Still image screen

TIP

Touch anywhere on the screen, the touch panel keys appear.

 	<p>Selects the previous folder or the next folder.</p>
	<p>Rotates the displayed picture 90° clockwise.</p>
 	<p>Sets a repeat play range for all files/the current folder.</p>
 	<p>Plays all files in the current repeat play range or does not play them in random order.</p>
	<p>Switches the following media file types. [Music]: Compressed audio files [Video]: Compressed video files [Photo]: Image files</p>
	<p>Selects a file from the list. Touch a file on the list to playback.</p> <p>TIP Touching a folder on the list shows its contents. You can play a file on the list by touching it.</p>

AUX

The video image or sound can be played via the device connected to AUX input.





CAUTION

For safety reasons, video images cannot be viewed while your vehicle is in motion. To view video images, stop in a safe place and apply the handbrake.

NOTE

A Mini-jack AV cable (sold separately) is required for connection. For details, refer to the Installation Manual.

Starting procedure

- 1 Press .
- 2 Touch  then .
- 3 Confirm that [AUX Input] is turned on.
- 4 Press .
- 5 Touch [AUX].
The AUX screen appears.

Basic operation

Description of AUX screen

TIPS

- Touch anywhere on the screen, the touch panel keys appear.
- You can set the screen size for the video image (page 35).










Switches between the video input and audio input.

Settings

You can adjust various settings in the main menu.

Displaying the setting screen

- 1 Press .
- 2 Touch .
- 3 Touch one of the following categories, then select the options.
 -  System settings (page 26)
 -  Theme settings (page 31)

-  Audio settings (page 31)
-  Video settings (page 33)
-  Bluetooth settings (page 11)

System settings

The menu items vary according to the source.

[AV Source Settings]

Menu Item	Description
[Radio settings]	(page 20)
[Bluetooth Audio]* [On] [Off]	Setting Bluetooth audio source activation.

* DMH-G220BT

[AUX Input]

Menu Item	Description
[AUX Input] [On] [Off]	Set to [On] for AUX source (page 24).

[Camera settings]

A separately sold rear view camera (e.g. ND-BC8) is required for utilising the rear view camera function. (For details, consult your dealer.)

►Rear view camera

This product features a function that automatically switches to the full-screen image of the rear view camera installed on your vehicle when the gearstick is in the REVERSE (R) position.

Camera View mode also allows you to check what is behind you while driving.

►Camera for Camera View mode


Camera View can be displayed at all times. Note that with this setting, the camera image is not resized to fit, and that a portion of what is seen by the camera is not viewable. To display the camera image, touch [Camera] on the AV source selection screen (page 17).

NOTE

To set the rear view camera as the camera for Camera View mode, set [Back Camera Input] to [On] (page 27).

CAUTION

Pioneer recommends the use of a camera which outputs mirror reversed images, otherwise the screen image may appear reversed.

- Immediately verify whether the display changes to the rear view camera image when the gearstick is moved to REVERSE (R) from another position.
- When the screen changes to full-screen rear view camera image during normal driving, switch to the opposite setting in [Camera Polarity].
- If you touch  while the camera image is displayed, the displayed image turns off temporarily.

Menu Item	Description
[Back Camera Input] [Off] [On]	Setting rear view camera activation.
[Camera Polarity]	Setting the polarity of the rear view camera.
[Battery]	The polarity of the connected lead is positive.
[Ground]	The polarity of the connected lead is negative.
	NOTE This function is available when [Back Camera Input] is set to [On].

[Safe Mode]

Menu Item	Description
[Safe Mode] [On] [Off]	Set the safe mode that regulate operating some functions only when you stop your vehicle in a safe place and apply the handbrake.

[System Language]

Menu Item	Description
[System Language]	Select the system language.
	NOTES <ul style="list-style-type: none"> • If the embedded language and the selected language setting are not the same, the text information may not display properly. • Some characters may not be displayed properly.

[Restore Settings]

Menu Item	Description
[Restore Settings]	<p>Touch [Restore] to restore the settings to the default settings.</p> <p>⚠ CAUTION</p> <p>Do not turn off the engine while restoring the settings.</p> <p>NOTES</p> <ul style="list-style-type: none"> • This setting is available only when you stop your vehicle in a safe place and apply the handbrake. • The source is turned off and the Bluetooth connection is disconnected before the process starts (DMH-G220BT).

[Beep Tone]






Menu Item	Description
[Beep Tone] [On] [Off]	Select [Off] to disable the beep sound when the button is pressed or the screen is touched.

[Touch panel calibration]

If you feel that the touch panel keys on the screen deviate from the actual positions that respond to your touch, adjust the response positions of the touch panel screen.





NOTES

- Do not use sharp pointed tools such as ballpoint or mechanical pens. They may damage the screen.
- Do not turn off the engine while saving the adjusted position data.
- This setting is available only when you stop your vehicle in a safe place and apply the handbrake.

Menu Item	Description
[Touch panel calibration]	<ol style="list-style-type: none"> 1 Touch [Yes]. 2 Touch four corners of the screen along the arrows. 3 Press . <p>The adjustment results are saved.</p> <ol style="list-style-type: none"> 4 Press  once again. <p>Proceed to 16-point adjustment.</p> <ol style="list-style-type: none"> 5 Gently touch the centre of the [+] mark displayed on the screen. <p>The target indicates the order.</p> <ul style="list-style-type: none"> • When you press , the previous adjustment position returns. • When you press and hold , the adjustment is cancelled. <ol style="list-style-type: none"> 6 Press and hold . <p>The adjustment results are saved.</p>

[Dimmer Settings]

Menu Item	Description
[Dimmer Trigger]	Setting the dimmer brightness.
[Auto]	Switches the dimmer to on or off automatically according to your vehicle's headlight turning on or off.
[Manual]	Switches the dimmer to on or off manually.
[Time]	Switches the dimmer to on or off at the time you adjusted.
[Day/Night]	Setting the dimmer duration by day or night. You can use this function when [Manual] is set to [Dimmer Trigger].
[Day]	Turns the dimmer function to off.
[Night]	Turns the dimmer function to on.





Menu Item	Description
[Dimmer Duration]	<p>Adjust the time that the dimmer is turned on or off by dragging the cursors or touching  or .</p> <p>You can use this function when [Dimmer Trigger] is set to [Time].</p> <p>TIPS</p> <ul style="list-style-type: none"> • Each touch of  or  moves the cursor backwards or forwards in the 15 minute width. • When the cursors are placed on the same point, the dimmer available time is 0 hours. • When the cursor for off time setting is placed on the left end and the cursor for on time setting is placed on the right end, the dimmer available time is 0 hours. • When the cursor for on time setting is placed on the left end and the cursor for off time setting is placed on the right end, the dimmer available time is 24 hours. <p>NOTES</p> <ul style="list-style-type: none"> • The time display of the dimmer duration adjusting bar depends on the clock display setting (page 35). • This setting is available only when you stop your vehicle in a safe place and apply the handbrake.

[Picture Adjustment]

You can adjust the picture for each source and rear view camera.

CAUTION

For safety reasons, you cannot use some of these functions while your vehicle is in motion. To enable these functions, you must stop in a safe place and apply the handbrake.

To adjust following menu, touch , , ,  to adjust.

Menu Item	Description
[Brightness] [-24] to [+24]	Adjust the black intensity.
[Contrast] [-24] to [+24]	Adjust the contrast.
[Colour]* [-24] to [+24]	Adjust the colour saturation.
[Hue]* [-24] to [+24]	Adjust the tone of colour (which colour is emphasised, red, or green).
[Dimmer] [+1] to [+48]	Adjust the brightness of the display.

* With some pictures, you cannot adjust [Hue] and [Colour].

NOTES

- The adjustments of [Brightness], [Contrast], and [Dimmer] are stored separately when your vehicle's headlights are off (daytime) and on (nighttime).
- [Brightness] and [Contrast] are switched automatically depending on the setting of [Dimmer Settings].
- [Dimmer] can be changed the setting or the time to switch it to on or off (page 29).
- The picture adjustment may not be available with some rear view cameras.
- The setting contents can be memorised separately.

Theme settings











Menu Item	Description
[Background] [Home] [AV]	Select the wall paper from the preset items in this product. The wall paper can be set from selections for the top menu screen and AV operation screen.
Preset Display	Select the desired preset background display.
<input type="checkbox"/> OFF (off)	Hides the background display.
[Theme]*	Select the theme colour.

* You can preview the top menu screen or the AV operation screen by touching [Home] or [AV] respectively.

Audio settings

The menu items vary according to the source. Some of the menu items become unavailable when the volume is set to mute.

Menu Item	Description
[Graphic EQ] [Super Bass] [Powerful] [Natural] [Vocal] [Flat] [Custom1] [Custom2]	Select or customise the equaliser curve. Select a curve that you want to use as the basis of customising then touch the frequency that you want to adjust. TIPS <ul style="list-style-type: none"> • If you make adjustments when a curve [Super Bass], [Powerful], [Natural], [Vocal], or [Flat] is selected, the equaliser curve settings will be changed to [Custom1] mandatorily. • If you make adjustments when the [Custom2] curve is selected for example, the [Custom2] curve will be updated. • [Custom1] and [Custom2] curves can be created common to all sources.
[Preout] [Rear] [Subwoofer]	Select the rear speaker output. This function is available when the source is off.

Menu Item	Description
[Fader/Balance]	<p>Touch  or  to adjust the front/rear speaker balance. Set [Front] and [Rear] to [0] when using a dual speaker system. Touch  or  to adjust the left/right speaker balance.</p> <p>TIP You can also set the value by dragging the point on the displayed table.</p> <p>NOTE Only the fader can be adjusted when [Rear] is selected as the speaker mode.</p>
[Source Level Adjuster] [-4] to [+4]	<p>Adjust the volume level of each source to prevent radical changes in volume when switching between sources other than FM.</p> <p>Touch  or  to adjust the source volume after comparing the FM tuner volume level with the level of the source.</p> <p>TIP If you directly touch the area where the cursor can be moved, the SLA (source level adjustment) setting will be changed to the value of the touched point.</p> <p>NOTES</p> <ul style="list-style-type: none"> • Settings are based on the FM tuner volume level, which remains unchanged. • This function is not available when the FM tuner is selected as the AV source.
[Subwoofer] [On] [Off]	Select enable or disable subwoofer output from this product.
[Speaker Level] [Front Left] [Front Right] [Rear Left] [Rear Right] [Subwoofer] [Listening Position]	<p>Adjust the speaker output level of the listening position.</p> <ol style="list-style-type: none"> 1 Touch  or  to select the listening position then select the output speaker. 2 Touch  or  to adjust the selected speaker output level. <p>NOTE For rear speaker, this function is available only when [Rear] is selected in [Preout].</p>
[Subwoofer Settings]	Select the subwoofer phase and LPF cut-off frequency (page 33).
[Listening Position] [Off] [Front Left] [Front Right] [Front] [All]	Select a listening position that you want to make as the centre of sound effects.
[Bass Boost] [0] to [+6]	Adjust the bass boost level.






Menu Item	Description
[Loudness] [Off] [Low] [Mid] [High]	Compensates for deficiencies in the low-frequency and high-frequency ranges at low volume. NOTE This function is not available while you make or receive a call using the hands-free function. (DMH-G220BT)


Adjusting the LPF cutoff frequency value

You can adjust the LPF cutoff frequency value for subwoofer.

NOTE

[Subwoofer Settings] is available only when [Subwoofer] is [On].

- 1 Press .
- 2 Touch  then .
- 3 Touch [Subwoofer Settings].
- 4 Touch  or  to set the cutoff position.
The following items can also be set.

	Switches the subwoofer phase between normal and reverse position.
LPF	Switches the LPF setting to [On] or [Off].

Video settings

The menu items vary according to the source.

[Time Per Photo Slide]

Menu Item	Description
[Time Per Photo Slide] [5sec] [10sec] [15sec] [Manual]	Select the interval of image file slideshows on this product.

[Video Signal Setting]

Menu Item	Description
[AUX] [Auto] [PAL] [NTSC] [PAL-M] [PAL-N] [SECAM]	Select the suitable video signal setting when you connect this product to an AUX equipment.
[Camera] [Auto] [PAL] [NTSC] [PAL-M] [PAL-N] [SECAM]	Select the suitable video signal setting when you connect this product to a rear view camera.



Favourite menu

Registering your favourite menu items in shortcuts allows you to quickly jump to the registered menu screen by a simple touch on the [Favourites] screen.

NOTE

Up to 12 menu items can be registered in the favourite menu.




Creating a shortcut

- 1 Press  then touch .
- 2 Touch the star icon of the menu item.
The star icon for the selected menu is filled in.

TIP



To cancel the registration, touch the star icon in the menu column again.

Selecting/removing a shortcut

- 1 Press  then touch .
- 2 Touch .
- 3 To select, touch the menu item.
To remove, touch and hold the favourite menu column.
The selected menu item is removed from the [Favourites] screen.

Other functions

Setting the time and date

- 1 Touch the current time on the screen.
- 2 Touch  or  to set the correct time and date.
You can operate the following items: Year, month, date, hour, minute.

TIPS

- You can change the time display format to [12hour] or [24hour].
- You can change the order of date display format: Day-month, Month-day.

Changing the wide screen mode

You can set the screen mode for AV screen and image files.

- 1 Touch the screen display mode key.



Screen display mode key

- 2 Touch the desired mode.

[Full]	Displays 16:9 images on the full screen without changing the ratio. NOTE Enlarges and displays images of USB sources keeping the ratio of the original source image.
[Zoom]	Displays the images enlarging them vertically.
[Normal]	Displays images without changing the 4:3 aspect ratio. NOTES <ul style="list-style-type: none">• For USB sources, 4:3 aspect ratio may not be displayed.• Devices connected with USB MTP are not supported.
[Trimming]	An image is displayed across the entire screen with the horizontal-to-vertical ratio left as is. If the screen ratio differs from the image, the image may be displayed partly cut off either at the top/bottom or sides. NOTE [Trimming] is for image files only.

TIPS

- Different settings can be stored for each video source.

- When a video is viewed in wide screen mode that does not match its original aspect ratio, it may appear different.
- The video image will appear coarser when viewed in [Zoom] mode.

NOTE

Image files can be set to either [Normal] or [Trimming] in wide screen mode.

Restoring this product to the default settings

You can restore settings or recorded content to the default settings from [Restore Settings] in the [System] menu (page 28).

Appendix

Troubleshooting

If you have problems operating this product, refer to this section. The most common problems are listed below, along with likely causes and solutions. If a solution to your problem cannot be found here, contact your dealer or the nearest authorised Pioneer service facility.

Common problems


A black screen is displayed, and operation is not possible using the touch panel keys.

- Power off mode is on.
 - Press any button on this product to release the mode.

Problems with the AV screen

The screen is covered by a caution message and the video cannot be shown.

- The handbrake lead is not connected or the handbrake is not applied.
 - Connect the handbrake lead correctly, and apply the handbrake.
- The handbrake interlock is activated.
 - Park your vehicle in a safe place and apply the handbrake.

The icon  is displayed, and operation is impossible.

- The operation is not compatible with the video configuration.

Problems with the phone screen

G220BT

Dialling is impossible because the touch panel keys for dialling are inactive.

- Your phone is out of range for service.
 - Retry after re-entering the range for service.
- The connection between the mobile phone and this product cannot be established.
 - Perform the connection process.
- Of the two mobile phones connected to this product at the same time, if the first phone is dialling, ringing or a call is in progress, dialling cannot be performed on the second phone.
 - When the operation on the first of the two mobile phones is completed, use the switch devices key to switch to the second phone and then dial.

Error messages

When problems occur with this product, an error message appears on the display. Refer to the table below to identify the problem, then take the suggested corrective action. If the error persists, record the error message and contact your dealer or your nearest Pioneer service centre.

Common

AMP Error

- This product fails to operate or the speaker connection is incorrect; the protective circuit is activated.
 - Check the speaker connection. If the message fails to disappear even after the engine is switched off/on, contact your dealer or an authorised Pioneer Service Station for assistance.

USB storage device

Error-02-9X/-DX

- Communication failed.
 - Turn the ignition switch OFF and back ON.
 - Disconnect the USB storage device.
 - Change to a different source. Then, return to the USB storage device.

Skipped

- The connected USB storage device contains DRM protected files.
 - The protected files are skipped.

Protect

- All the files on the connected USB storage device are embedded with DRM.
 - Replace the USB storage device.

Bluetooth

G220BT

Error-10

- The power failed for the Bluetooth module of this product.
 - Turn the ignition switch to OFF and then to ON.

If the error message is still displayed after performing the above action, please contact your dealer or an authorised Pioneer Service Station.

Detailed information for playable media

Compatibility

Common notes about the USB storage device

- Do not leave the USB storage device in any location with high temperatures.
- Depending on the kind of the USB storage device you use, this product may not recognise the storage device or files may not be played back properly.
- The text information of some audio and video files may not be correctly displayed.
- File extensions must be used properly.
- There may be a slight delay when starting playback of files on an USB storage device with complex folder hierarchies.
- Operations may vary depending on the kind of an USB storage device.
- It may not be possible to play some music files from USB because of file characteristics, file format, recorded application, playback environment, storage conditions, and so on.

USB storage device compatibility

- For details about USB storage device compatibility with this product, refer to Specifications (page 42).
- Protocol: bulk
- You cannot connect a USB storage device to this product via a USB hub.
- Partitioned USB storage device is not compatible with this product.
- Firmly secure the USB storage device when driving. Do not let the USB storage device fall onto the floor, where it may become jammed under the brake or accelerator.

- There may be a slight delay when starting playback of audio files encoded with image data.
- Some USB storage devices connected to this product may generate noise on the radio.
- Do not connect anything other than the USB storage device.

The sequence of audio files on USB storage device.

For USB storage device, the sequence is different from that of USB storage device.

Handling guidelines and supplemental information

- This product is not compatible with the Multi Media Card (MMC).
- Copyright protected files cannot be played back.

Common notes about DivX files

Notes specific to DivX files

- Only DivX files downloaded from DivX partner sites are guaranteed for proper operation. Unauthorised DivX files may not operate properly.
- This product corresponds to a DivX file display of up to 1 590 minutes 43 seconds. Search operations beyond this time limit are prohibited.
- For details on the DivX video versions that can be played on this product, refer to Specifications (page 42).
- For more details about DivX, visit the following site: <https://www.divx.com/>

DivX subtitle files

- Srt format subtitle files with the extension ".srt" can be used.
- Only one subtitle file can be used for each DivX file. Multiple subtitle files cannot be associated.
- Subtitle files that are named with the same character string as the DivX file before the extension are associated with the DivX file. The character strings before the extension must be exactly the same.

However, if there is only one DivX file and one subtitle file in a single folder, the files are associated even if the file names are not the same.

- The subtitle file must be stored in the same folder as the DivX file.
- Up to 255 subtitle files may be used. Any more subtitle files will not be recognised.
- Up to 64 characters can be used for the name of the subtitle file, including the extension. If more than 64 characters are used for the file name, the subtitle file may not be recognised.
- The character code for the subtitle file should comply with ISO-8859-1. Using characters other than ISO-8859-1 may cause the characters to be displayed incorrectly.
- The subtitles may not be displayed correctly if the displayed characters in the subtitle file include control code.
- For materials that use a high transfer rate, the subtitles and video may not be completely synchronised.
- If multiple subtitles are programmed to display within a very short time frame, such as 0.1 seconds, the subtitles may not be displayed at the correct time.

Media compatibility chart

General

- Maximum playback time of audio file stored on an USB storage device: 7.5 h (450 minutes)

USB storage device

File system: FAT16/FAT32

Maximum number of directory: 8

Maximum number of folders: 300

Maximum number of files: 15 000

Playable file types: MP3, WMA, AAC, WAV, DivX, MPEG-2, MPEG-4, JPEG, BMP

MP3 compatibility

- Ver. 2.x of ID3 tag is prioritised when both Ver. 1.x and Ver. 2.x exist.

- This product is not compatible with the following: MP3i (MP3 interactive), mp3 PRO, m3u playlist
- tag information can be displayed with the language set by the system language setting.

USB storage device

File extension: .mp3

Bit rate: 8, 16, 24, 32, 40, 48, 56, 64, 80, 96, 112, 128, 144, 160, 192, 224, 256, 320 kbps (CBR), VBR

Sampling frequency: 16, 22.05, 24, 32, 44.1, 48 kHz

ID3 tag: ID3 tag Ver. 1.0, 1.1, 2.2, 2.3, 2.4

WMA compatibility

- This product is not compatible with the following: Windows Media™ Audio 9 Professional, Lossless, Voice

USB storage device

File extension: .wma

Bit rate: 8, 16, 24, 32, 40, 48, 56, 64, 80, 96, 112, 128, 144, 160, 192 kbps (CBR)

Sampling frequency: 8, 11.025, 12, 16, 22.05, 24, 32, 44.1, 48 kHz

WAV compatibility

- The sampling frequency shown in the display may be rounded.

USB storage device

File extension: .wav

Format: Linear PCM (LPCM)

Bit rate: Approx. 1.5 Mbps

Sampling frequency: 16, 22.05, 24, 32, 44.1, 48 kHz

AAC compatibility

- This product plays back only LC-AAC files encoded by iTunes.

USB storage device

File extension: .aac, .m4a

Bit rate: 8, 16, 24, 32, 40, 48, 56, 64, 80, 96, 112, 128, 144, 160, 192, 224, 256, 320 kbps (CBR), VBR

Sampling frequency: 8, 11.025, 12, 16, 22.05, 24, 32, 44.1, 48, 64, 88.2, 96 kHz

DivX compatibility

- This product is not compatible with the following: DivX Ultra format, DivX files without video data, DivX files encoded with LPCM (Linear PCM) audio codec
- If a file contains more than 4 GB, playback stops before the end.
- Some special operations may be prohibited because of the composition of DivX files.

Video files compatibility (USB)

- Files may not be played back properly depending on the environment in which the file was created or on the contents of the file.
- This product is not compatible with packet write data transfer.
- Folder selection sequence or other operations may be altered, depending on the encoding or writing software.

.avi

Format: MPEG-4/DivX

Compatible video codec: MPEG4 (part2)/DivX (Home Theater Profile)

Maximum resolution: 720 pixels × 576 pixels

Maximum frame rate: 30 fps

- Files may not be able to be played back depending on the bit rate.

.mpg/.mpeg

Format: MPEG-1 PS/MPEG-2 PS

Compatible video codec: MPEG-1/MPEG-2

Maximum resolution: 720 pixels × 576 pixels

Maximum frame rate: 30 fps

.divx

Format: MPEG-4/DivX

Compatible video codec: MPEG4 (part2)/DivX (Home Theater Profile)

Maximum resolution: 720 pixels × 576 pixels

Maximum frame rate: 30 fps

- Files may not be able to be played back depending on the bit rate.

Example of a hierarchy

NOTE

This product assigns folder numbers. The user cannot assign folder numbers.

Bluetooth

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Dolby

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WMA

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DivX

DivX® Home Theater Certified devices have been tested for high-quality DivX Home Theater video playback (including .avi, .divx). When you see the DivX logo, you know you have the freedom to play your favorite videos.

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This DivX Certified® device can play DivX® Home Theater video files up to 576p (including .avi, .divx).

Download free software at www.divx.com to create, play and cast digital videos.

AAC

AAC is short for Advanced Audio Coding and refers to an audio compression technology standard used with MPEG-2 and MPEG-4. Several applications can be used to encode AAC files, but file formats and extensions differ depending on the application which is used to encode. This unit plays back AAC files encoded by iTunes.

Notice regarding video viewing

Remember that use of this system for commercial or public viewing purposes may constitute an infringement on the author's rights as protected by the Copyright Law.

Using the LCD screen correctly

Handling the LCD screen

- When the LCD screen is subjected to direct sunlight for a long period of time, it will become very hot, resulting in possible damage to the LCD screen. When not using this product, avoid exposing it to direct sunlight as much as possible.
- The LCD screen should be used within the temperature ranges shown in Specifications on page 42.
- Do not use the LCD screen at temperatures higher or lower than the operating temperature range, because the LCD screen may not operate normally and could be damaged.

- The LCD screen is exposed in order to increase its visibility within the vehicle. Please do not press strongly on it as this may damage it.
- Do not push the LCD screen with excessive force as this may scratch it.
- Never touch the LCD screen with anything besides your finger when operating the touch panel functions. The LCD screen can scratch easily.

Liquid crystal display (LCD) screen

- If the LCD screen is near the vent of an air conditioner, make sure that air from the air conditioner is not blowing on it. Heat from the heater may break the LCD screen, and cool air from the cooler may cause moisture to form inside this product, resulting in possible damage.
- Small black dots or white dots (bright dots) may appear on the LCD screen. These are due to the characteristics of the LCD screen and do not indicate a malfunction.
- The LCD screen will be difficult to see if it is exposed to direct sunlight.
- When using a mobile phone, keep the aerial of the mobile phone away from the LCD screen to prevent disruption of the video in the form of disturbances such as spots or coloured stripes.

Maintaining the LCD screen

- When removing dust from or cleaning the LCD screen, first turn this product off and then wipe the screen with a soft dry cloth.
- When wiping the LCD screen, take care not to scratch the surface. Do not use harsh or abrasive chemical cleaners.

LED (light-emitting diode) backlight

A light emitting diode is used inside the display to illuminate the LCD screen.

- At low temperatures, using the LED backlight may increase image lag and degrade the image quality because of the characteristics of the LCD screen. Image quality will improve with an increase in temperature.
- The product lifetime of the LED backlight is more than 10 000 hours. However, it may decrease if used in high temperatures.
- If the LED backlight reaches the end of its product lifetime, the screen will become dimmer and the image will no longer be visible. In that case, please consult your dealer or the nearest authorised Pioneer Service Station.

Specifications

General

Rated power source:

14.4 V DC (10.8 V to 15.1 V allowable)

Earthing system:

Negative type

Maximum current consumption:

10.0 A

Dimensions (W × H × D):

DIN

Chassis:

178 mm × 100 mm × 152 mm

Nose:

188 mm × 118 mm × 12 mm

D

Chassis:

178 mm × 100 mm × 159 mm

Nose:

171 mm × 97 mm × 5 mm

Weight:

1.3 kg

Display

- Screen size/aspect ratio:
6.2 inch wide/16:9 (effective display area:
137.52 mm × 77.232 mm)
- Pixels:
1 152 000 (2 400 × 480)
- Display method:
TFT Active matrix driving
- Colour system:
PAL/NTSC/PAL-M/PAL-N/SECAM
compatible
- Temperature range:
-10 °C to +60 °C

Audio

- Maximum power output:
• 50 W × 4 ch/4 Ω
- Continuous power output:
22 W × 4 (50 Hz to 15 kHz, 5 %THD, 4 Ω
LOAD, Both Channels Driven)
- Load impedance:
4 Ω (4 Ω to 8 Ω allowable)
- Preout output level (max): 2.0 V
- Equaliser (7-Band Graphic Equaliser):
Frequency:
50 Hz/125 Hz/315 Hz/800 Hz/2 kHz/5
kHz/12.5 kHz
Gain: ±12 dB (2 dB/step)
- Subwoofer/LPF:
Frequency:
80 Hz/120 Hz/160 Hz
Phase: Normal/Reverse
- Bass boost:
Gain: +6 dB to 0 dB (1 dB/step)
- Speaker level:
+6 dB to -24 dB (1 dB/step)

USB

- USB 1.1, USB 2.0 full speed, USB 2.0 high
speed
- Max current supply: 0.5 A
- USB Class:
MSC (Mass Storage Class), MTP (Media
Transfer Protocol)
- File system: FAT16, FAT32
- <USB audio>

- MP3 decoding format:
MPEG-1 & 2 & 2.5 Audio Layer 3
- WMA decoding format:
Ver. 7, 7.1, 8, 9, 9.1, 9.2 (2 ch audio)
(Windows Media Player)
- AAC decoding format:
MPEG-4 AAC (iTunes encoded only) (Ver.
10.6 and earlier)
- WAV signal format:
Linear PCM : wav
Sampling frequency:
Linear PCM:
16 kHz/22.05 kHz/24 kHz/32 kHz/44.1
kHz/48 kHz

- <USB image>
- JPEG decoding format:
.jpeg, .jpg, .jpe, .bmp
Pixel Sampling: 4:2:2, 4:2:0
Decode Size:
MAX: 8 192 (H) × 7 680 (W)
MIN: 32 (H) × 32 (W)
- BMP decoding format:
.bmp
Decode Size:
MAX: 1 920 (H) × 936 (W)
MIN: 32 (H) × 32 (W)
- <USB video>
- DivX decoding format:
Home Theater (Except ultra and HD): .avi,
.divx
- MPEG video decoding format:
MPEG1 (Low Level), MPEG2 (Main Level),
MPEG4 (part2) (Main Level)

Bluetooth

- (DMH-G220BT)
- Version:
Bluetooth 4.1 certified
- Output power:
3.0 dBm (-6 dB/+2 dB) (Power class 2)
- Frequency band(s):
2 400 MHz to 2 483.5 MHz

FM tuner

- Frequency range:
87.5 MHz to 108 MHz

Usable sensitivity:

12 dBf (1.1 μ V/75 Ω , mono, S/N: 30 dB)

Signal-to-noise ratio:

72 dB (IEC-A network)

MW tuner

Frequency range:

531 kHz to 1 602 kHz (9 kHz)

Usable sensitivity:

28 μ V (S/N: 20 dB)

Signal-to-noise ratio:

62 dB (IEC-A network)

LW tuner

Frequency range:

153 kHz to 281 kHz

Usable sensitivity:

30 μ V (S/N: 20 dB)

Signal-to-noise ratio:

62 dB (IEC-A network)

NOTE

Specifications and design are subject to possible modifications without notice due to improvements.

<http://www.pioneer-car.eu>

Visit www.pioneer-car.co.uk (or www.pioneer-car.eu) to register your product.

PIONEER CORPORATION

28-8, Honkomagome 2-chome, Bunkyo-ku,
Tokyo 113-0021, Japan

Корпорация Пайонир

28-8, Хонкомагомэ 2-чоме, Бункё-ку,
Токио 113-0021, Япония

Импортер ООО “ПИОНЕР РУС”

105064, Россия, г. Москва, Нижний Сусальный переулок,
дом 5, строение 19
Тел.: +7(495) 956-89-01

PIONEER EUROPE NV

Haven 1087, Keetberglaan 1, B-9120 Melsele, Belgium/Belgique
TEL: (0) 3/570.05.11

PIONEER ELECTRONICS (USA) INC.

P.O. Box 1540, Long Beach, California 90801-1540, U.S.A.
TEL: (800) 421-1404

PIONEER ELECTRONICS ASIACENTRE PTE. LTD.

2 Jalan Kilang Barat, #07-01, Singapore 159346
TEL: 65-6378-7888

PIONEER ELECTRONICS AUSTRALIA PTY. LTD.

5 Arco Lane, Heatherton, Victoria, 3202 Australia
TEL: (03) 9586-6300

PIONEER ELECTRONICS DE MÉXICO S.A. DE C.V.

Blvd. Manuel Ávila Camacho 138, 10 piso
Col.Lomas de Chapultepec, México, D.F. 11000
Tel: 52-55-9178-4270, Fax: 52-55-5202-3714

先鋒股份有限公司

台北市內湖區瑞光路407號8樓
電話：886-(0)2-2657-3588

先鋒電子（香港）有限公司

香港九龍長沙灣道909號5樓
電話：852-2848-6488

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