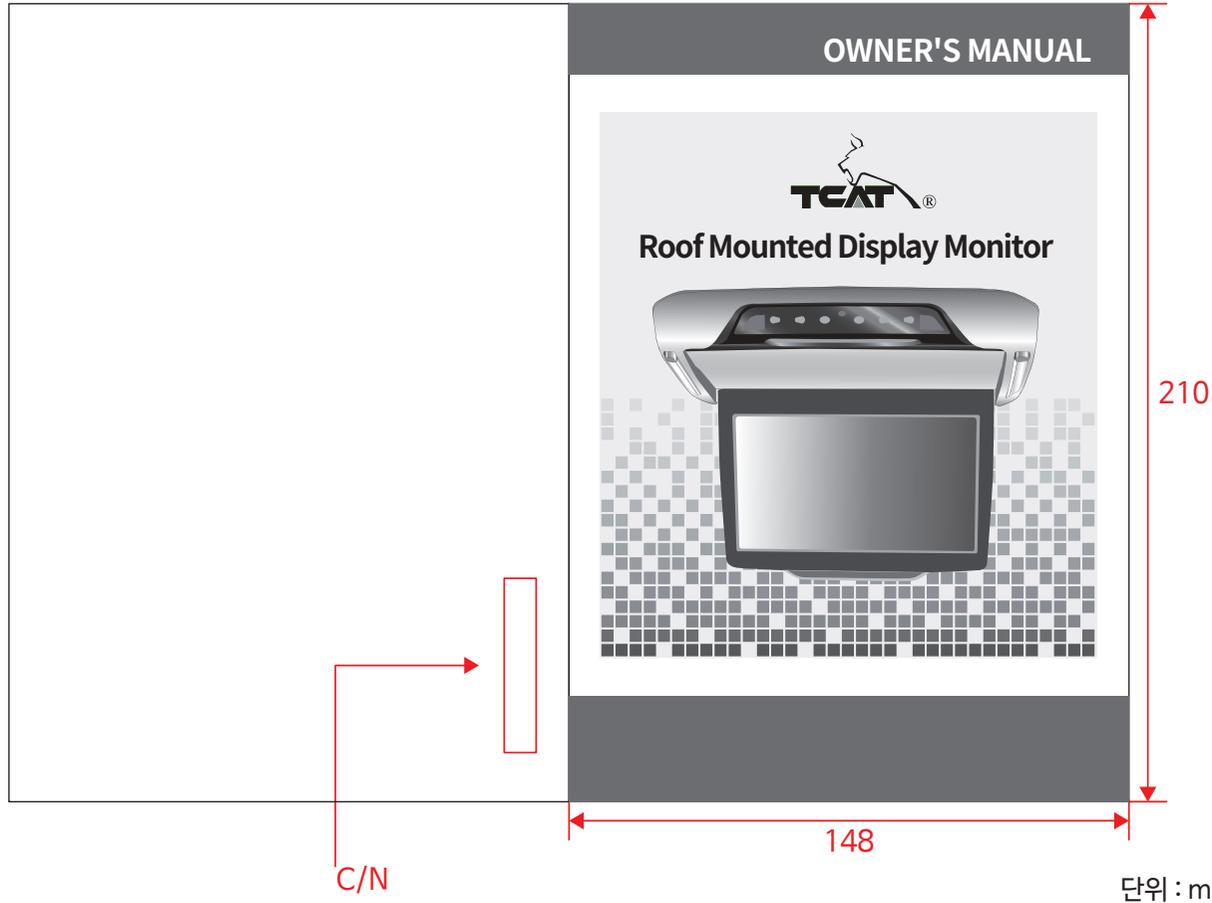


사양인검통보서

2017년 03월 일

결 재	작성	검 토			승 인
	/	/	/	/	/

품 명	MANUAL	규 격	XCM-1021 (10.1"CM_ENG,TCAT,22XM10MC00)
CODE NO	미지정	업 체 명	



특기 사항	
금형 NO.	
MATERIAL	모조지 80G
COLOR	
SIZE	(W)148 X (H)210(±2mm)
기 타	

주의 사항	

배 포 처	조달, 품질보증, 연구소(개발), 업체
-------	-----------------------



Roof Mounted Display Monitor



■ Caution	04-05
■ Name And Function Of Each Parts	06
– Unit	06
– Button	07
– Multimedia ports	07
– Remote Control	08
■ Power And Mode Selection	09
– Power On and Off	09
– Adjusting Monitor Angle	09
– Mode Selection	10
– Multimedia Mode	10
■ Picture control	11
– Picture Mode	11
– Color Temperature	12
– Aspect Ratio	13
– Noise Reduction	14
■ Sound control	15
– Sound Mode	15
– Sound Balance	16
– Auto Volume Control	17
– Surround	18
■ Setup Control	19
– OSD Transparency & OSD Time Out	19
– Restore Default	20
■ Multimedia Playback Function	21
– Basic Operation	21
Main Screen	21
Playback via USB Storage Device	21
Playback Menu	22
Function of Playback Menu	23
and Compatibility with File Formats	
■ USB Port Usage Caution	28
■ Unit Specifications	29
■ Terms and Conditions of Warranty	29

Caution

Please read and observe all warnings and instructions in this owner's manual and those marked on the unit. Retain this booklet for future reference. There are two kinds of alarm symbols as follows:



WARNING

The lightning flash with arrowhead symbol within an equilateral triangle is intended to alert the user to the presence of "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to people.



CAUTION

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the product.

WARNING



Do not try and service these products yourself, seek only a qualified service center or factory service center.



Be careful not to drop or apply under pressure to the front panel of your video monitor. If the screen cracks due to misuse, your warranty will be void!



Be careful not to overload your cigarette lighter plug by adding more than one device at a time.



Use extra caution with any liquids in your car. If you or your child spill any liquid on these products, pull your vehicle to the roadside and turn the key off to disconnect or wipe the products with a towel. Do not operate the equipment until all liquids have either evaporated or you have had the monitor inspected at a service center by a qualified technician. Severe harm or danger can be occurred.



Use only a damp cloth to clean the screen and use only purified water on the cloth, wring out all excess water prior to wiping the screen. Do not use any cleaners or chemicals to clean the screen. In most cases a dry cloth will do!

Caution

CAUTION



Don't touch the unit when there is a flash of lightning. It may receive an electric shock.



Do not cover or stop up heater ducts or vents. It may be the origin of a fire or receives an electric shock.



Do not bring magnetic devices such as credit card or magnetic card near the magnets.



Watching the monitor for an extended period of time without the engine running may deplete the vehicle's battery charge.



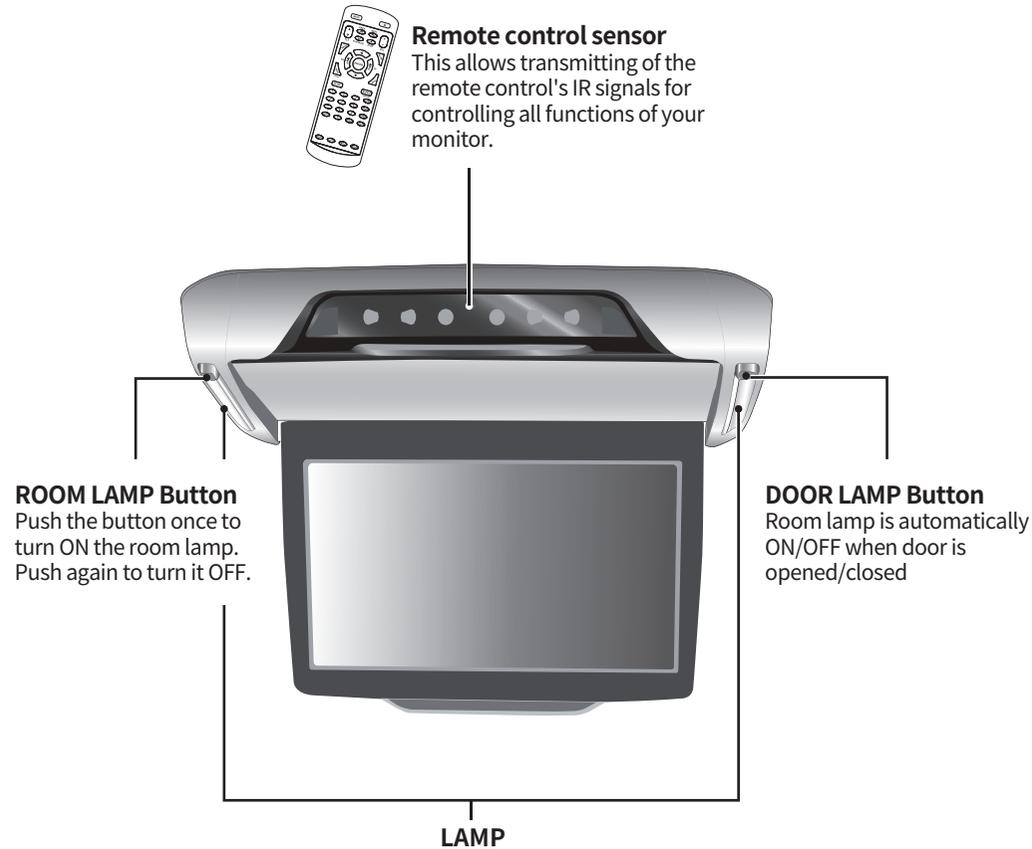
This product is designed for operation with a 12 Volt DC, negative ground vehicle. It is not suitable for operation under other conditions or voltages.

Check Point

1. The operating temperature of this product is limited to $-10^{\circ}\text{C} \sim +70^{\circ}\text{C}$.
Non operating temperature of this product is limited to $-10^{\circ}\text{C} \sim +85^{\circ}\text{C}$
2. From time to time when your vehicle is extremely hot or cold.
You must allow time for your air conditioner or heater to cool or heat the vehicle for operating temperature to return to normal operating ranges.
Your monitor will return to its normal functions when these operating ranges are achieved.
3. Your optimum picture quality is achieved when you are directly in front of the monitor (± 30 degrees).
4. Do not open covers and repair yourself. Refer servicing to qualified personnel.

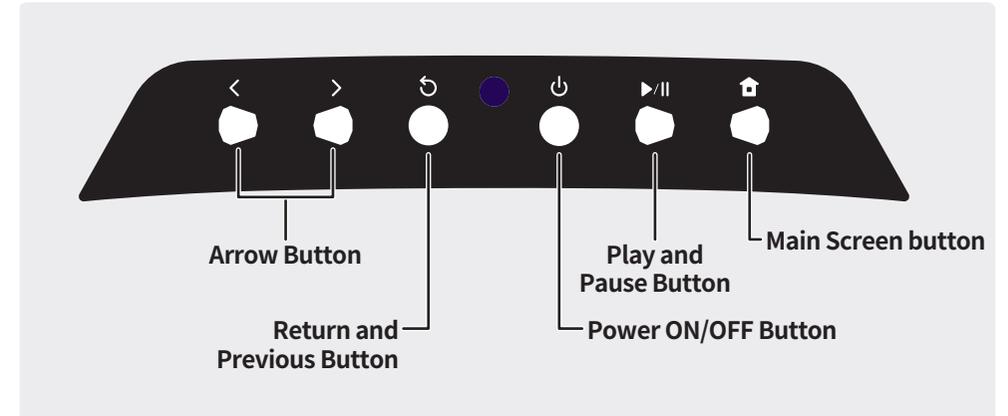
Name And Function Of Each Parts

Unit

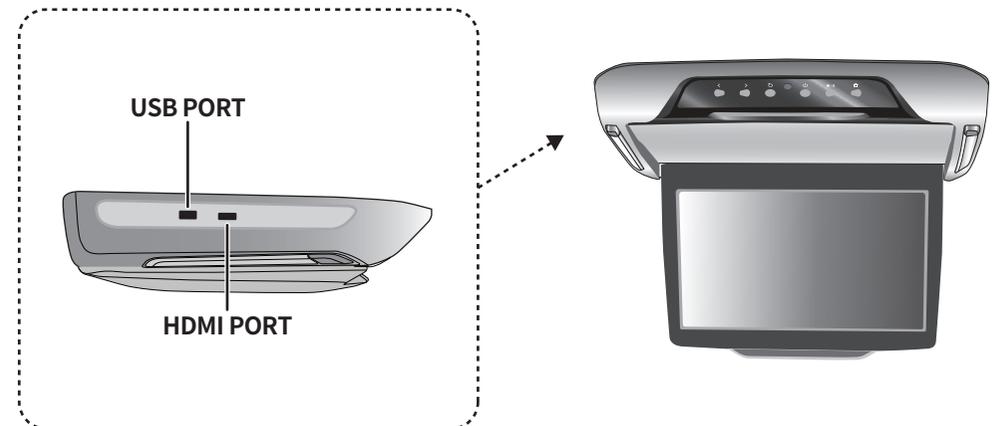


Name And Function Of Each Parts

Button

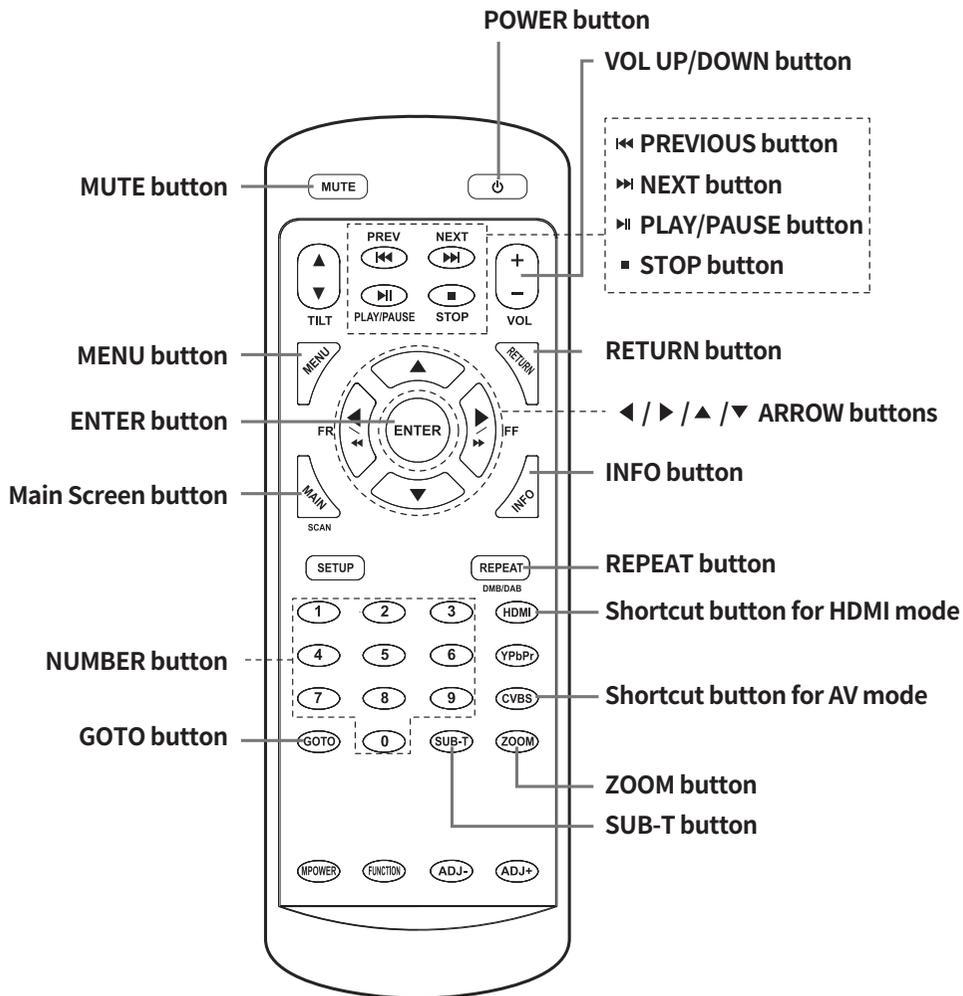


Multimedia ports



● Name And Function Of Each Parts

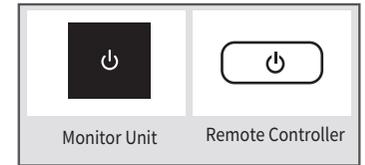
● Remote controller



● Power And Mode Selection

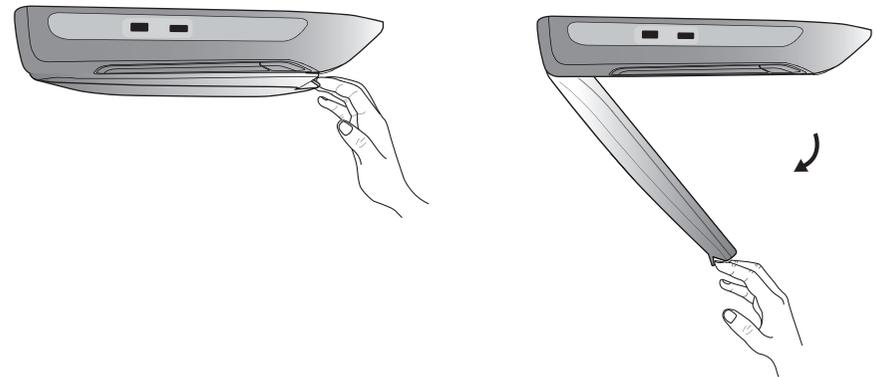
● Power ON/OFF

1. Press the **POWER** button on either the remote controller or the unit once to turn the power on. Press the same **POWER** button to turn the power off.
2. Power on the external devices and play.



● Monitor Angle Adjustment

You can pull down the monitor manually and also adjust the viewing angle.

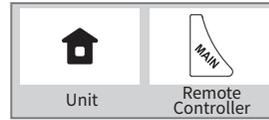


Power And Mode Selection

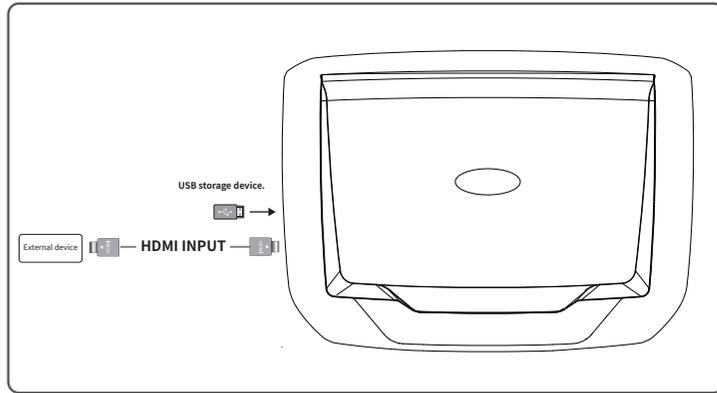
Mode Selection

Press the **home button** (🏠) on the unit or main screen button on the remote controller to show the MODE screen.

Use the directional keys to select the desired Mode. (refer to page 21 for more information)



Multimedia Mode

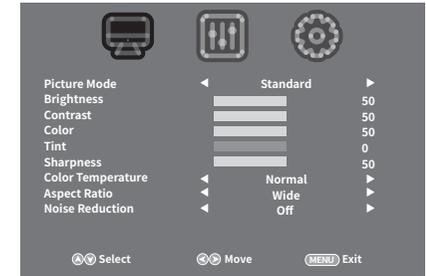


1. Turn on the power of unit and external device.
2. Press the **MAIN button** on the remote control to move to main screen and select desired mode.
3. Play the external device.

Picture Control

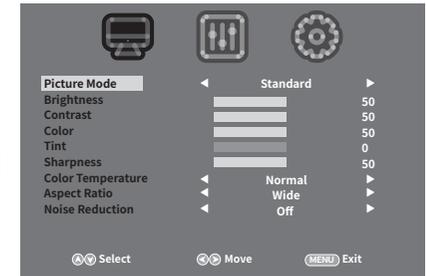
- **Picture Mode** Select either Brightness / Contrast / Color / Tint / Sharpness to change the picture settings.

1. Press the **MENU button** on the remote control.

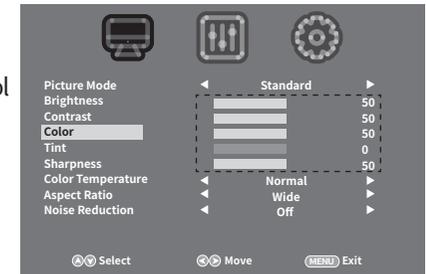


2. Press the **▼ button** on the remote control to select the picture setting to be adjusted.

3. Press the **◀/▶ button** on the remote control to adjust the values and settings.



4. To create Custom settings, select user mode and adjust each settings individually by pressing the **◀/▶ button** on the remote control and press the **ENTER button** to confirm it.

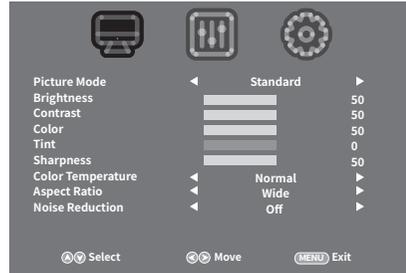


5. After the adjustment, press the **MENU button** on the remote control to return to the previous screen.

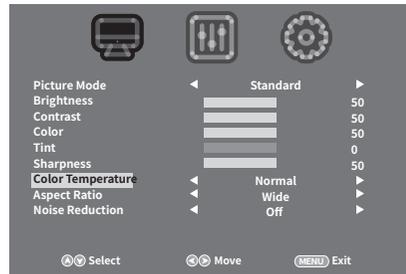
Picture Control

● Color Temperature Adjust the color tone.

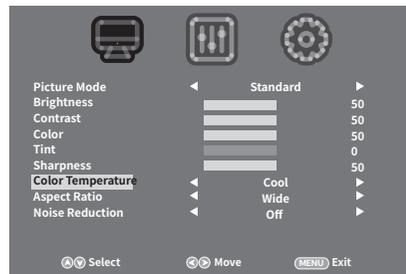
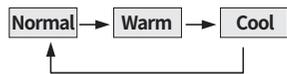
1. Press the **MENU button** on the remote control.



2. Press **▲/▼ button** on the remote control to select the Color Temperature.



3. Press the **◀/▶ button** on the remote control to adjust the values and settings.

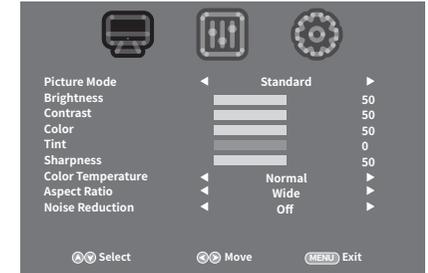


4. After the adjustment, press the **MENU button** on the remote control to return to the previous screen.

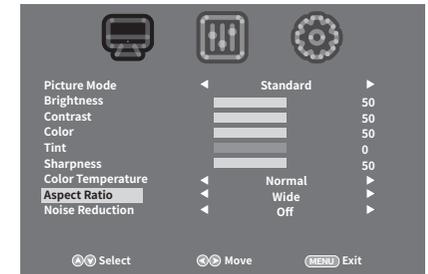
Picture Control

● Aspect Ratio Adjust the picture size

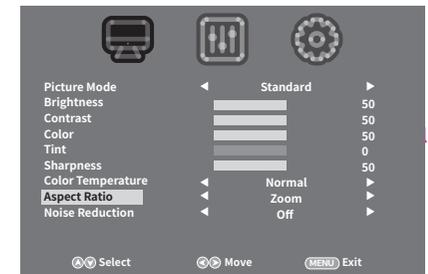
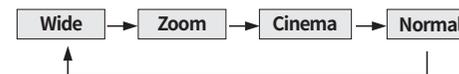
1. Press the **MENU button** on the remote control.



2. Press **▲/▼ button** on the remote control to select the Aspect Ratio.



3. Press the **◀/▶ button** on the remote control to adjust the values and settings.

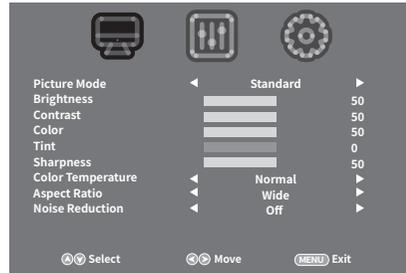


4. After the adjustment, press the **MENU button** on the remote control to return to the previous screen.

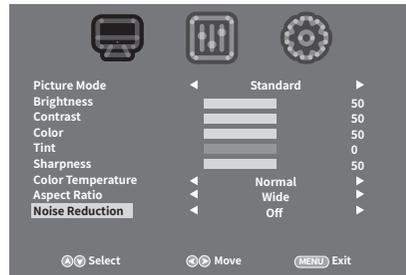
Picture Control

- **Noise Reduction** Adjust the level of noise reduction function.

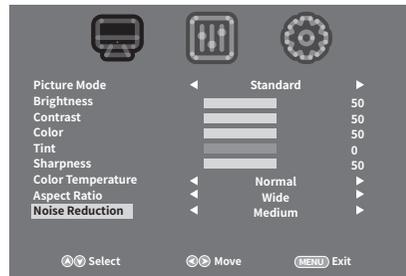
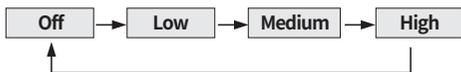
1. Press the **MENU button** on the remote control.



2. Press the **▲/▼ button** on the remote control to select the noise reduction.



3. Press the **◀/▶ button** on the remote control to select desired level of the function.

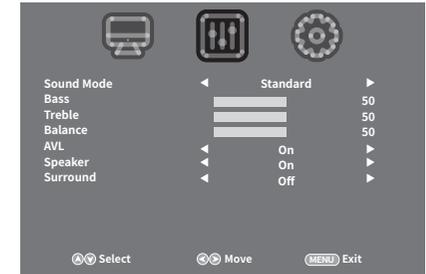


4. After the adjustment, press the **MENU button** on the remote control to return to the previous screen.

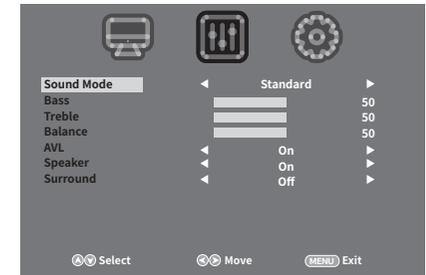
Sound Control

- **Sound Mode** Adjust sound mode

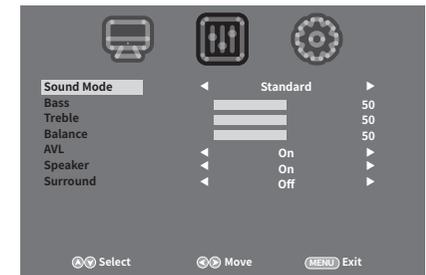
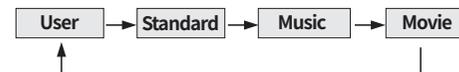
1. Press the **◀/▶ button** on the remote control to move to Audio mode (Speaker icon) after pressing the **MENU button** on the remote control.



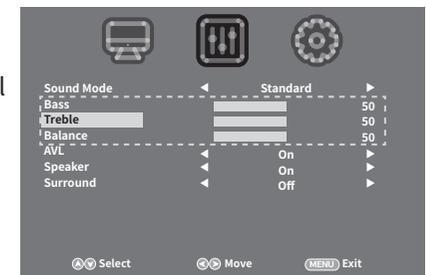
2. Press the **▲/▼ button** on the remote control to select the Audio setting to be adjusted.



3. Press the **◀/▶ button** on the remote control to adjust the values and settings.



4. To create Custom settings, select **User mode** and adjust each settings individually by pressing the **◀/▶ button** on the remote control and press the **ENTER button** to confirm it.

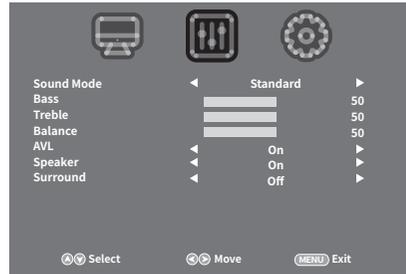


5. After the adjustment, press the **MENU button** on the remote control to return to the previous screen.

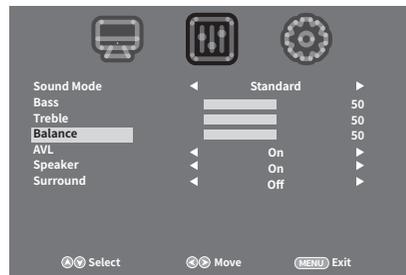
Sound Control

● Sound Balance Adjust left and right sound of audio.

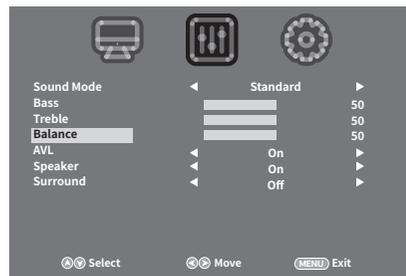
1. Press the ◀/▶ **button** on the remote control to move to Audio Mode(🔊) after press the **MENU button** on the remote control.



2. Press ▲/▼ **button** on the remote control to select the **Audio Balance**.



3. Press the ◀/▶ **button** on the remote control to adjust the values and settings.

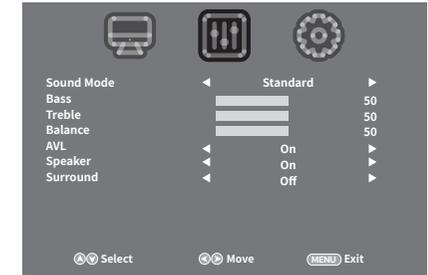


4. After the adjustment, press the **MENU button** on the remote control to return to the previous screen.

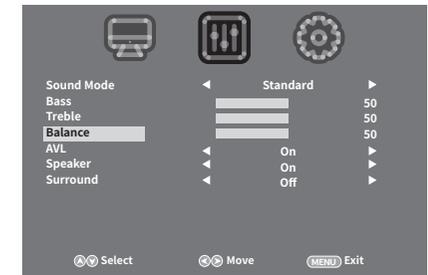
Sound Control

● Auto Volume Control Adjust auto volume control

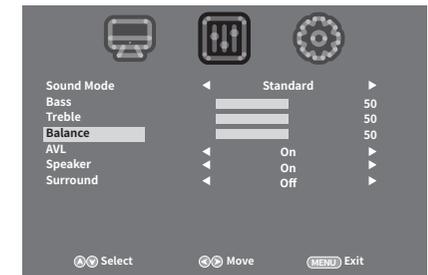
1. Press the ◀/▶ **button** on the remote control to move to Audio Mode(🔊) after press the **MENU button** on the remote control.



2. Press ▲/▼ **button** on the remote control to select the auto volume control.



3. Press the ◀/▶ **button** on the remote control to adjust the settings.

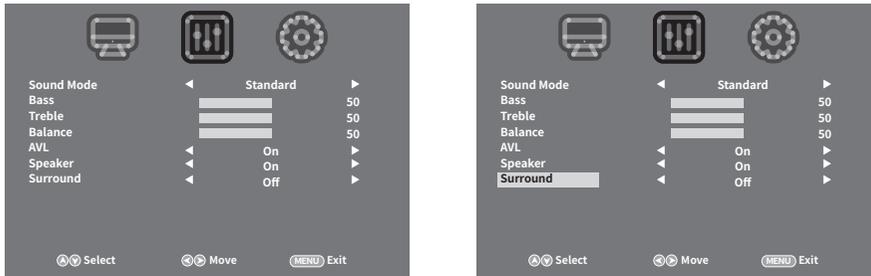


4. After the adjustment, press the **MENU button** on the remote control to return to the previous screen.

Sound Control

● Surround Adjust surround of audio.

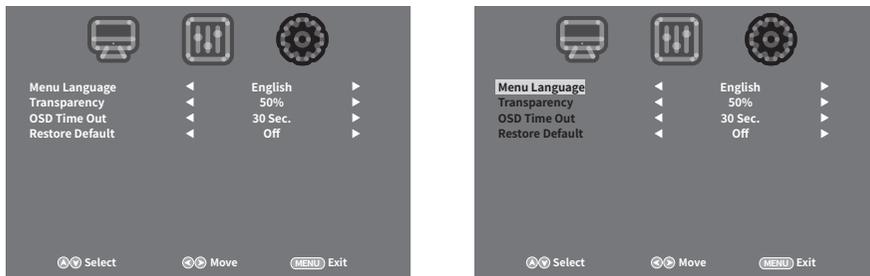
1. Press the **◀/▶** button on the remote control to move to Audio Mode (🔊) after press the **MENU** button on the remote control.



2. Press **▲/▼** button on the remote control to select the **Surround**.
3. Press the **◀/▶** button on the remote control to select the Surround on or off.
4. After the adjustment, press the **MENU** button on the remote control to return to the previous screen.

● Language Selection. Select your desired language. Menu can be shown on the screen with the selected language.

1. Press the **◀/▶** button on the remote control to move to SETUP mode (⚙️) after press the **MENU** button on the remote control.



2. Press **▲/▼** button on the remote control to select the Language.
3. Press the **◀/▶** button on the remote control to select the desired Language.
4. After the adjustment, press the **MENU** button on the remote control to return to the previous screen.

Setup Control

● OSD Transparency Adjust the transparency of the Menu page.

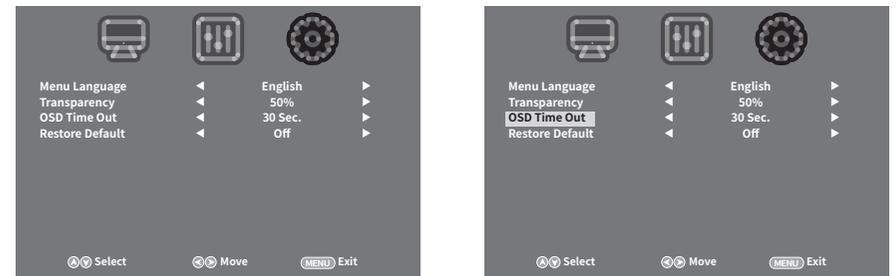
1. Press the **◀/▶** button on the remote control to move to SETUP Mode (⚙️) after press the **MENU** button on the remote control.



2. Press **▲/▼** button on the remote control to select the **OSD Transparency**.
3. Press the **◀/▶** button on the remote control to adjust the transparency of the Menu page.
4. After the adjustment, press the **MENU** button on the remote control to return to the previous screen.

● OSD Time Out Adjust the duration time of MENU display

1. Press the **◀/▶** button on the remote control to move to SETUP Mode (⚙️) after press the **MENU** button on the remote control.



2. Press **▲/▼** button on the remote control to select the **OSD Time Out**.
3. Press the **◀/▶** button on the remote control to select the desired duration time of MENU display.
4. After the adjustment, press the **MENU** button on the remote control to return to the previous screen.

Setup Control

● Restore Default Return to the default factory settings.

1. Press the ◀/▶ **button** on the remote control to move to SETUP Mode (⚙️) after press the **MENU button** on the remote control.



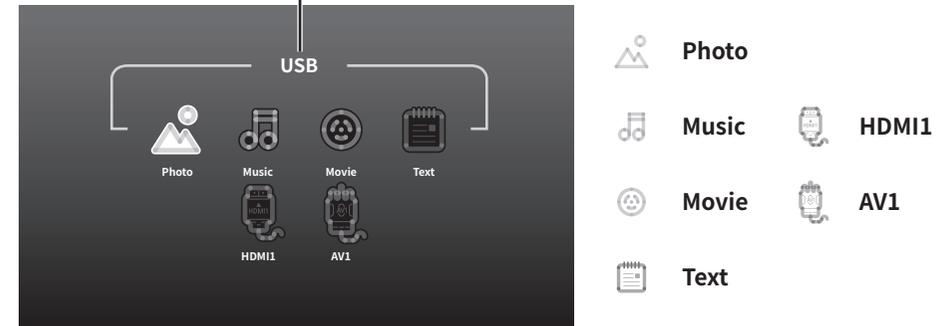
2. Press ▲/▼ **button** on the remote control to select the **Restore Default**.
3. Press ▶ **button** on the remote control to start the **Restore Default**.
4. Select "YES" to confirm it.

Multimedia Playback Function

● Basic operation

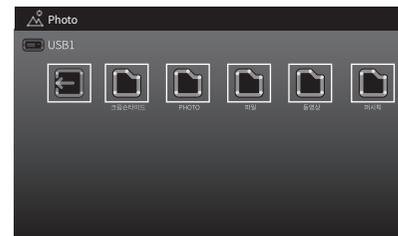
1. Main Screen

Display whether USB device is detected or not.



2. Playback via USB Storage Device

Select either picture, music, movie or text icon in the main screen by pressing the ◀/▶ **button** on the remote control and press the **ENTER button**. The system will automatically show whether the USB storage device is detected or not. If no device is connected, the icons will not be displayed.



[Contents of USB Storage device.]



[File management screen for music.]

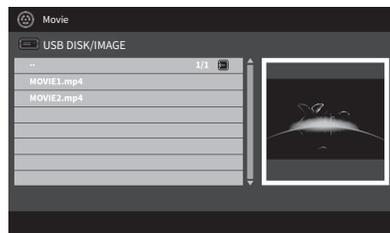
Multimedia Playback Function

After selecting the picture, music, movie or text file, the preview screen will be displayed.

1. Press the **PLAY/PAUSE** or **ENTER** button to select the file and start the playback.



[File management screen for picture]



[File management screen for movie.]

3. Playback Menu

During playback, control menus will be displayed at the bottom of the screen by pressing **ENTER** button on the remote control.



[Playback menu screen for picture]



[Playback menu screen for movie.]

※ Playback menu options may be limited, depending on the file format.

Multimedia Playback Function

4. Function of Playback Menu and Compatibility with File Formats

Mode	Photo	Music	Movie
Support	○	○	○

PLAY/PAUSE

During playback, press **PLAY/PAUSE** to pause playback. Press again to resume playback.

STOP

During playback, press **STOP** to stop the playback. if photo file was being displayed, system will be back to the browser mode or file management mode. if movie file was being displayed, system will be back to the file management mode.

F.B

Mode	Photo	Music	Movie
Support	✕	○	○

During playback, Press **"F.B"** and the playback speed will increase and the system will search backwards. Speed settings: from x2(double the original speed) to x16(16 times the original speed). Under x16, you can go back to normal playing speed by pressing **"F.B"** once again. Press **"PLAY/PAUSE"** under any speed and you will return to normal playing speed.

F.F

Mode	Photo	Music	Movie
Support	✕	○	○

During playback, Press **"F.F"** and the playback speed will increase to search forward. Speed settings: from x 2 (double normal speed) all the way to x16(16 times normal speed). Under x16, you can go back to normal playing speed by pressing **"F.F"** once again. Press **"PLAY/PAUSE"** under any speed and you will return to normal playing speed.

Multimedia Playback Function

PREV : Go to the previous file 

Mode	Photo	Music	Movie
Support	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

During playback or when the system is stopped, press “PREV” and the system will jump back to the previous file and play it.

NEXT : Go to the next file 

Mode	Photo	Music	Movie
Support	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

During playback or when the system is stopped, press “NEXT” and the system will jump to the next file and play it.

REPEAT : Repetitive Playback 

Mode	Photo	Music	Movie
Support	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

During playback, whenever press the repeat, repeat section will be changed as below



MUTE 

Mode	Photo	Music	Movie
Support	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Press “MUTE” once and the system will mute, press it again and sound will be restored.

Multimedia Playback Function

Info : Display the file information 

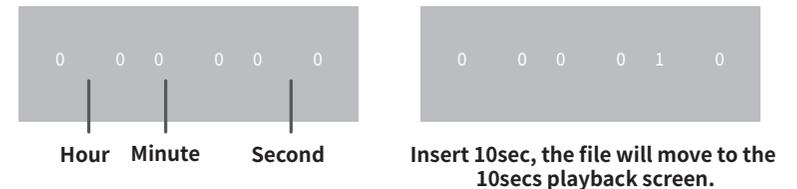
Mode	Photo	Music	Movie
Support	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>

During playback, press info to appear file information of the playback.

Goto time : Move to the playback time 

Mode	Photo	Music	Movie
Support	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>

The user select any time of playback by selecting Goto time mode on playback file. Select Hour/Minute/Second as your taste by the number on the remote control as the picture shown below. The playback will move to the selected time.



SET A-B : Repeat A segment to B segment 

Mode	Photo	Music	Movie
Support	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>

Press “A-B” and the system will repeatedly play the segment between two selected points in the file. The starting point for the repeated segment will be the point where you pressed “A-B” for the first time, and the end point for the repeated segment will be the point where you pressed “A-B” for the second time. The OSD will display A-B Repetition and the chosen segment will be played continuously. Press the “A-B” button once again and the system will go back to normal playback.

Aspect ratio 

Mode	Photo	Music	Movie
Support	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>

Press the zoom button to adjust aspect ratio of screen. The screen will be changed as below



Multimedia Playback Function

Rotate : Rotate the image file.  

Mode	Photo	Music	Movie
Support	<input type="radio"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Select 90 Rotate on the left side, the image will rotate 90degrees to the left(clockwise)



Select 90 Rotate on the right side, the image will rotate 90degrees to the right(counter-clockwise)



ZOOM : Enlarge/Reduce the file on the screen.  

Mode	Photo	Music	Movie
Support	<input type="radio"/>	<input checked="" type="checkbox"/>	<input type="radio"/>

The image or video file will be showing in bigger or smaller when selected ZOOM Enlarge /Reduce mode. The file will be Enlarge or Reduce by up to 150%~200% on original image. (This function will be limited on video playback)

Move View : when enlarge the image, the image will move to the up/down/left/right side. 

Mode	Photo	Music	Movie
Support	<input type="radio"/>	<input checked="" type="checkbox"/>	<input type="radio"/>

Enlarged image will move to the up/down/left/right side by arrow button.

Multimedia Playback Function

Subtitle 

Select subtitle display on or off.

Mode	Photo	Music	Movie
Support	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="radio"/>

Background music 

Enjoy the background music in the picture mode.

Mode	Photo	Music	Movie
Support	<input type="radio"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Slide show 

Select slide show on or off.

Mode	Photo	Music	Movie
Support	<input type="radio"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Display time of picture image. 

In the picture mode, adjust display time of each file as below.

Mode	Photo	Music	Movie
Support	<input type="radio"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Repeat on and off  

During playback, playback all files in the folder.

Mode	Photo	Music	Movie
Support	<input type="radio"/>	<input checked="" type="checkbox"/>	<input type="radio"/>

USB port usage caution

Precautions for using the USB port

- Some USB device might not be supported. It depends on the the specifications of the device.
- If the USB storage device is connected through a USB hub, the device is not recognizable.
- An USB storage device using an automatic recognition program might not be recognized.
- The recognition speed of a USB storage device may depend on each device.
- Do not unplug the USB device while the music/movie/pictures are playing. Stop the playback first, otherwise the files may be corrupted.
- Connect power to a USB storage device which requires an external power supply. if not, the device might not be recognized.
- Connect an USB storage device with cable is offered by USB maker. If the connected cable is not offered by USB maker or an excessively long cable, the device may not be recognized.
- Please backup important files because data on USB device might be damaged. Data management is consumer's responsibility and as a result, the manufacturer does not cover the data damage.
- Searching time may be longer when files are located in many sub folders.
- This device does not support saving files to the USB Storage.
- Folder or file name is limited to 100 words.
- If the USB storage device requires high voltage more than 800mA or 5V, it might not be recognized.

Supported File Formats

Photo	File Format	JPG / BMP / PNG
Music	File Format	MP3
	Codec	MPEG Layer I, II, III
	Rate	Bit Rate : 32K ~ 320Kbps Sampling Freq : 8: ~ 48KHz
Movie	File Format	AVI/ dat/ vob/ mpg/ mp4/ mkv/ flv/ mov
	Video Codec	MPEG-4 MPEG-1,MPEG-2, AVC
	Audio Codec	MP3, PCM, AAC
	Resolution	1920x1080p @ 30fps
	Bit Rate	20 Mbps
	Subtitle	SAMI (*.smi)
Text	File Format	TXT
	Encoder	UNICODE, ANSI
Mass Storage	USB	USB 2.0 (FAT 32, NTFS)

Unit Specifications

Power	DC 12V
Screen Format	16 : 9
Screen Resolution	1024 X 600(WSVGA)
HDMI Input	1 EA
USB Input	1EA
Video input	1EA
AV Output	1EA
Remote control	Yes
Dimension	12.4"(W) X 9"(D) X 1.7"(H) / 316(W) X 230(D) X 45(H) mm



Terms and Conditions of Warranty

For systems purchased and installed AFTER vehicle registration, warranty is limited to 3 years or 100,000Km Whichever is earlier from the date of installation.

This Warranty is subjected to the following terms and conditions:

1. All servicing and repairing, if any, shall be carried out by TCEAS, TCAT and its authorised workshops or service outlets.
2. Any warranty service or repairing will be done upon presentation of a valid warranty book duly stamped or signed by any authorised Tan Chong Representative.
3. This warranty does not cover any damage caused by improper or negligent use, accident, Acts of God, alterations or repair by unauthorised party or parties, hence no claims shall be entertained by TC AUTO TOOLING SDN, BHD(TCAT).
4. This warranty does not cover the cost of accidents, theft or fire caused indirectly by the system, In such cases, TCAT shall not be held accountable.
5. Warranty shall be void if the serial number sticker on the system is removed or defaced or in the opinion of TCAT that it has been tampered with.
6. This warranty shall be limited only to the cost of repair or replacement of the defective parts and shall not cover any other such incidental costs incurred to the user.

Owner's Name	Vehicle Registration NO.
Tel No.	

Owner's Address :	Delivery Date :
Vehicle Model :	Chassis No :
Engine No :	Serial No :

Selling Branch or Dealer's Name and Address
(chop and sign)

I have clearly understood and accepted the terms and conditions of this warranty for the purchase of this system and i hereby confirm the system as delivered to me is in good condition.

Date:

Signature: