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User's Manual



Car DMB & Navigation System

- * Thank you for buying ZAMM product.
- * Please read user's manual carefully before using ZAMM product.

Greetings

Thank you for buying ZAMM product.

When used correctly, ZAMM product which is Car Multimedia System enhances your driving experience. You and your passengers can enjoy T-DMB, Navigation, Movie, Music, Photos and etc in the car.

Please use this product after reading this manual carefully.

www.zamm.co.kr

We give you all the supports and information through the above web site. You can download the newest patch files and manuals from the web site. Please register the customer information card in our web site for best service.

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Before Usage

Warnings & Notifications

1. For better performance tuning of our product, the specifications can be changed without notice.
2. For better performance tuning of our product, this user's manual can be changed without notice.
3. There might be some mistakes of technical issues and edition in this user's manual.
4. Please read user's manual carefully before usage.
5. This product is designed to be used in a car with proper installation.
6. The rights of hardware, software, and data of this product belong to 2MTECH Inc. The rights is protected by copyright law and international treaties. Unauthorized duplication or distribution of this rights, or any portion of it, may result in severe civil or criminal penalties, and will be prosecuted to the maximum extent possible under the law.
7. This product is designed to use DC12V power.

Before Usage

Warnings & Notifications

1. For safety, please stop or park the car to operate this product.
2. The voice and map information in this product cannot be guaranteed accurate as road layout may change. Always follow the posted road signs and traffic laws.
3. Do not mount this product in a position which may obstruct the driver's view or prevent the safe operation of the vehicle.
4. Do not watch this product continuously. It may cause an accident.
5. Please adjust the sound volume & LCD brightness properly.
6. Do not use this product in the car when you turn off the engine. It may cause your car battery flat.
7. Please use the provided accessories with this product. We only guarantee the performance of this product with provided accessories.
8. For the initial power up it may take up to 15 minutes to secure satellite information on outdoor place.
9. GPS signal cannot be received properly in following conditions; the inside of car with special metal coating, the inside of a building, the place under a bridge, the place in a tunnel, and etc.
10. T-DMB can be work properly in the good signal areas. If you are in the bad signal areas, the screen quality may looks no good.

Before Usage

Warnings for system

1. Do not disconnect the power cable during operation and do not disassemble this product. It may cause break-down or fire or explosion.
2. Do not disconnect the cigarette power cord during operation. It may cause break-down or fire or explosion.
3. Do not put the product near water. It may cause break-down or fire or explosion.
4. If there is any failure of product, please don't use it and call to A/S center immediately.
5. Do not drop the product and do not give an attack to the product. It may cause break-down or fire or explosion.
6. Do not put the product under sunshine and moisture in long term. It may cause break-down or fire or explosion.

Before Usage

Minimum specifications of computer

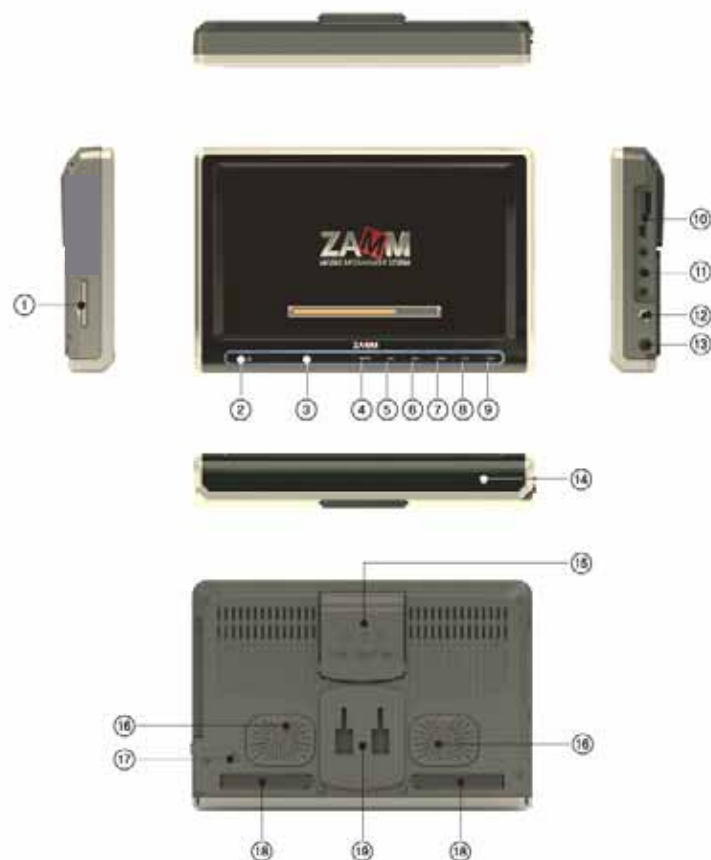
You need a computer to use this product properly.
Please check the minimum specification of computer.

- Microsoft Windows 2000/XP
- At least Pentium III 800MHz
- At least 128MB Main Memory
- At least 2GB Hard Disk Space
- USB* Port

* It's necessary when using the card reader provided.

Before Usage

Parts & Features



Before Usage

Parts & Features

- | | |
|-------------------------|---------------|
| ① SD Card | ⑭ Main Power |
| ② LCD ON/OFF | ⑮ Stand |
| ③ Remote Receiver | ⑯ Glass Mount |
| ④ Mute | |
| ⑤ OK | |
| ⑥ Volume Down | |
| ⑦ Volume Up | |
| ⑧ Channel Down | |
| ⑨ Channel Up | |
| ⑩ USB Host / USB Device | |
| ⑪ AV IN / Headphone | |
| ⑫ DMB Antenna | |
| ⑬ DC IN | |
| ⑭ Air Vent Hole | |
| ⑮ GPS Antenna | |
| ⑯ Stereo Speaker | |

Before Usage

Accessories



Main system



Remote Controller



User's Manual



AV Cable



Cigarette Power Cord



Glass Mount



Protection Cover



T-DMB Antenna



Multi Card Reader



1GB CF Card

Before Usage

Installation



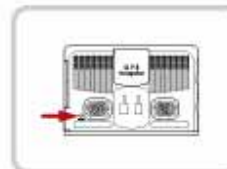
Clean the surface of the location you wish to place the mount bracket. Do not mount where the driver's view will be obstructed .



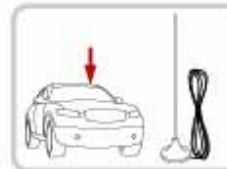
Slide the main system onto the mount clip and adjust the angle properly. Please check the mount and main system in proper position.



Insert DC plug of Cigarette lighter lead into the fused +12V socket of main system and connect the other end to the +12V cigarette lighter socket.



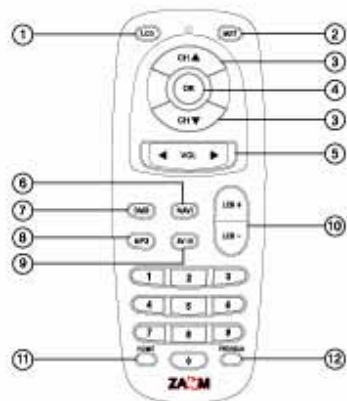
After starting the engine, push the power button on the back side to start the main system.



Put the T-DMB antenna on the top of the car for best performance. It will stick to the top of the car because of magnets, however please be careful of falling of antenna during fast driving.

Before Usage

Remote Controller Usage



- | | |
|--------------|------------------|
| ① LCD ON/OFF | ⑧ MP3 |
| ② Mute | ⑨ AV IN |
| ③ CH +.- | ⑩ LCD Brightness |
| ④ OK | ⑪ Main Menu |
| ⑤ VOL +,- | ⑫ List |
| ⑥ Navi | |
| ⑦ DMB | |

Before Usage



T-DMB/DAB

You can listen and watch T-DMB and DAB services.



Navigation

You can use Navigation system with GPS.



Video Player

You can watch movie files.



Audio Player

You can listen music files.



AV Input

You can connect DVD player, DivX players, and rear camera.



Utility

You can use calendar and photo album.



Multitasking (PIP/NIP)

Playing DMB, MP3, AV IN on navigation



Setting

You can adjust configurations for the system.

2-1. T-DMB



DMB Service List Screen

- ① TV Service List
- ② Radio Service List
- ③ Channel List
- ④ Channel Register
- ⑤ Registered List
- ⑥ Channel Scan
- ⑦ Play
- ⑧ Return to channel

* When you play the DMB for the first time, or when there is no channel list, Channel List Screen starts.
 * This product may not work well when the DMB signal is weak. It will take some time for DMB initialaizing.

2-1. T-DMB



DMB Service List Scanning Screen

- ① Scanned Channel
- ② Scanning Status
- ③ Cancel scanning

2-1. T-DMB



DMB TV Screen

- | | |
|------------------------|-------------------|
| ① Open channel list | ⑧ Color setting |
| ② Close | ⑨ Signal status |
| ③ Previous channel | ⑩ Channel Info. |
| ④ Next channel | ⑪ Channel hot key |
| ⑤ TV, Radio switch | ⑫ Channel List |
| ⑥ Control screen ratio | ⑬ Volume control |
| ⑦ Mute | |

* If the DMB signal is weak, the screen and sound may not work well.

2-1. T-DMB



DMB Radio Screen

- | | |
|-------------------|-------------------|
| ① Channel shift | ⑦ Signal Status |
| ② Mute | ⑧ DLS |
| ③ DMB TV | ⑨ Full screen |
| ④ Channel List | ⑩ Service list |
| ⑤ Volume | ⑪ Close |
| ⑥ Channel Hot Key | ⑫ JPEG slide area |

* If the DMB signal is weak, the sound may not work well.

2-2. Video Player



File List Screen

- | | |
|----------------------------|-------------|
| ① USB | ⑨ Play |
| ② SD Card | ⑩ List Up |
| ③ Directory & Files | ⑪ List Down |
| ④ Add all in sub-directory | ⑫ Close |
| ⑤ Add all files | |
| ⑥ Add selected file | |
| ⑦ Delete Selected file | |
| ⑧ Delete all | |

* You can edit the playing list for MP3 and Video player.

2-2. Video Player



Video Player Screen

- | | |
|-----------------|----------------------|
| ① Previous File | ⑧ File List |
| ② Stop | ⑨ Close |
| ③ Play/Pause | ⑩ Playing time |
| ④ Next File | ⑪ Playing status |
| ⑤ Mute | ⑫ Total playing time |
| ⑥ Text Service | ⑬ Volume |
| ⑦ Color setting | |

* Support AVI, WMV format files (Other video formats may not be supported.)

2-3. Audio Player



Audio Player Screen

- | | |
|-----------------------|---------------------|
| ① Play/Pause | ⑨ Volume |
| ② Mute | ⑩ File Information |
| ③ Previous File | ⑪ Playing time |
| ④ Next File | ⑫ Current File List |
| ⑤ Stop | ⑬ Close |
| ⑥ Repeat current file | ⑭ Playing Status |
| ⑦ Equalizer | |
| ⑧ Volume control | |

* Support MP3, WMA, WAV format files (Other audio formats may not be supported.)

2-4. AV INPUT



AV INPUT Screen

- | |
|-----------------|
| ① AV INPUT 1 |
| ② AV INPUT 2 |
| ③ Screen ration |
| ④ Color setting |
| ⑤ Mute |
| ⑥ Volume status |
| ⑦ Close |
| ⑧ Volume |

2-5. Photo Album



Photo Album Screen

- ① Folders & Files
- ② USB Folder
- ③ SD Card Folder
- ④ Show the Photos
- ⑤ Preview
- ⑥ Close

2-5. Photo Album



Photo Album Playing Screen

- ① Fit to Screen
- ② Enlarge
- ③ Reduce
- ④ Previous File
- ⑤ Next File
- ⑥ Rotate to counterclockwise
- ⑦ Rotate to clockwise
- ⑧ Slide Show
- ⑨ As Wall Paper
- ⑩ As Booting Image
- ⑪ List
- ⑫ Close

* You can register the wall paper and booting image with your favorite images.

2-6. PIP



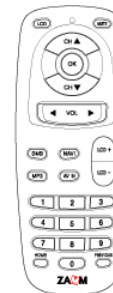
Select menu is shown on navigation if you press OK button or CH+/CH- button when navigation runs

- ① T-DMB
- ② Audio Player
- ③ AV IN

2-6. PIP



When it's PIP mode, you can change PIP screen size by remote controller.
If you press Navi button on PIP mode, PIP windows will be closed.



- OK PIP Main Menu : Show/Hide
- CH+ / CH- PIP on / Size Change Normal>Full>Icon>Small
- NAV PIP off : Show/Hide
- 1 2 3 4 Channel Hot Key
- 5 PIP Window Position Shift
- 6 PIP Window hide/show
- 7 8 PIP Window volume control
- 9 PIP Window Mute
- 0 FM Trans. On/Off
- 10 Navigation Zoom

2-6. PIP



When navigation operates, push the CH+ button or DMB key on remote controller to start DMB.
If you push NAVI key on remote controller when DMB operates, you can watch DMB with Navigation.

- | | |
|-------------------|-----------------|
| ① Channel shift | ⑦ Signal status |
| ② Mute | ⑧ DLS |
| ③ TV mode | ⑨ Full screen |
| ④ Channel list | ⑩ Service list |
| ⑤ Volume control | ⑪ Close |
| ⑥ Channel hot key | |

2-6. PIP



When navigation operates, push the CH- button or MP3 key on remote controller to start MP3 player.
If you push NAVI key on remote controller when MP3 plays, you can listen MP3 with Navigation.

2-6. PIP



When navigation operates, push the AV IN key on remote controller to start AV IN player.
If you push NAVI key on remote controller when AV IN plays, you can watch AV IN with Navigation.

- ① Mute
- ② Close
- ③ AV IN 1
- ④ AV IN 2
- ⑤ Volume

2-6. PIP



When you choose full screen in the PIP mode with DMB/AV IN/Video Play, the PIP mode changes to NIP mode.

- ① Previous channel/file
- ② Next channel/file
- ③ Mute
- ④ Channel/File list
- ⑤ TV, Radio switch
- ⑥ Close
- ⑦ Volume

2-7. Setting



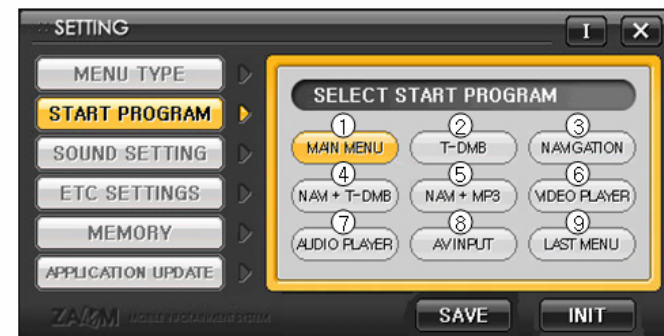
Main Menu Setting Screen

You can change the main menu type.

- ① Default Menu Type
- ② User Menu Type

* You can change the background image.

2-7. Setting



Start Program Setting Screen

You can select the start program.

- ① Main Menu
- ② T-DMB
- ③ Navigation
- ④ Navi+DMB
- ⑤ Navi+MP3
- ⑥ Video Player
- ⑦ Audio Player
- ⑧ AV IN
- ⑨ Last played function

2-7. Setting



Sound Setting Screen

You can change the main sound volume and FM transmitter.

- Volume Control
- FM Transmitter Control

* You can listen the sound with your car audio speaker when you select FM transmitter.
* It is useful when you watch the movie and listen the music.

2-7. Setting

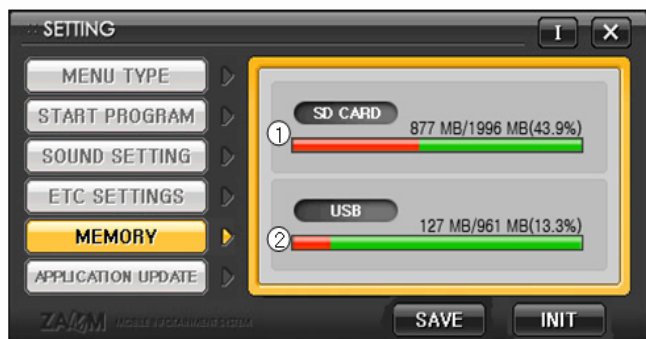


Etc Setting Screen

You can change the brightness of screen and calibration of touch screen.

- ① Touch Screen Calibration
- ② Screen Brightness Control

2-7. Setting



Storage Capacity Screen

You can check the storage Capacity.

- ① SD CARD Storage Status
- ② USB Memory Stick Storage Status

* There might be no information when CF/SD/USB slot is empty.

2-7. Setting

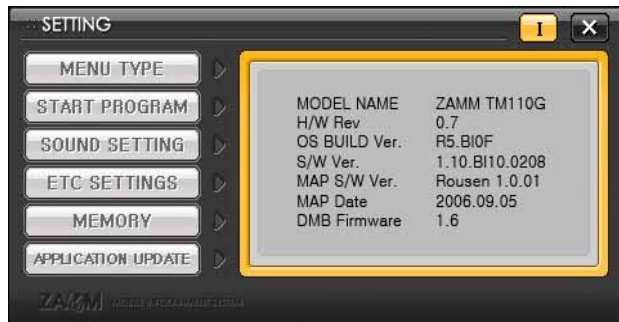


Firmware Update Screen

You can update the firmware.
There will be the manual and update file in our web site
in the near future.

* Please check the web site, www.zamm.co.kr for further information.

2-7. Setting



Product Information Screen

You can check the version of the product.

3-1. ETC

Product Specification

General Information

Model : ZAMM
Weight & Size : 187mm X 127mm X 26mm
Chipset : 400MHz ARM9 CPU
Memory : 64MB Nand Flash + 64MB SDRAM
OS : WIN CE 5.0 Core
LCD : DIGITAL 7" (480X234)
Power : DC 12V 1.5A
Storage : 1)SD slot
USB : 2)1.1 Host X 1

VIDEO

Supported File : MPEG, WMV
Text : SMI format
Frame : 30 Frame Per Second

AUDIO

Speaker : 8 Ohm 1W X 2
Supported File : MP3, WMA
Additional Function : FM Transmitter

VIDEO INPUT

Video Format : NTSC/PAL
Video Type : CVBS
Audio : AV 1(Stereo), AV 2(Mono)

3-1. ETC

Product Specification

T-DMB

Frequency : 174~240MHz
Video : H.264 AVC Baseline
Audio : BSAC and MPEG Layer2 (MUSICAM)

GPS

Frequency : L1 (1575.42MHz)
Receiving Type : C/A Code 12-Channel

FM Transmitter

Sending Frequency : 88.5MHz~107.5MHz
Channel : 190 channels
Antenna Power : 500 μ V/m
Antenna Type : Wire Antenna
Modulation Type : FM
Transmission Type : One Way Transmission

- ① Some SD card may not be supported.
- ② For emergency recovery purpose only.
- ③ For USB memory stick.
(Some USB memory stick may not be supported.)

3-2. Customer Support

Warranty

PRODUCT : T-DMB/DAB Navigation System
MODEL : ZAMM-TM110
Serial No. :
Purchased Date :
Purchased Place :

Elements of Warranty

2MTECH warrants to the original retail owner for the duration of this warranty; its ZAMM-TM1(hereinafter referred to as the Product) to be free from defects in materials and craftsmanship with only the limitations or exclusion set out below.

Warranty Durations

This warranty to the original retail owner only, shall terminate and be of no further effect ONE (1) Year after the date of original retail sale. This warranty will be deemed invalid if the Product is; (A) Damaged or not maintained as reasonable and necessary; (B) Modified, altered or used as part of any conversion kits, subassemblies, or any configurations not sold by 2MTECH, (C) Improperly installed, (D) Repaired by someone other than an authorised 2MTECH Repair Agent, (E) Used in conjunction with any equipment or parts or as part of a system not manufactured by 2MTECH, (F) Installed, programmed or serviced by anyone other than an authorised 2MTECH Repair Agent, (G) broken by fire, earthquake, flood and natural disaster, or (H) Where the Serial Number label of the product has been removed or damaged beyond recognition,

3-2. Customer Support

FCC Information

This device complies with Part 15 of the FCC results.
Operation is subject to the following two conditions;

- (1) This device may not cause harmful interface, and
- (2) This device must accept any interference received, including interference that may cause undesired operation.

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

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

WARNING

Changes or modifications not expressly approved by the manufacturer could void the user's authority to operate the equipment.

MEMO

MEMO