iFly GPS

iFly 520

Extra Features Manual

⦿ **Welcome!**

- **Thank you for purchasing this product.**
- This user manual is for your convenience and safety when using this product.
- Before operating the product and to take full advantage of navigation system, please read the manual carefully and follow its instructions.
- Depending on the navigation system model type, the contents of this owner's manual may vary.
- The navigation system and the owner's manual are subject to changes in function or performance without prior notice for the convenience of users.
- Adventure Pilot will not be responsible for any equipment damage resulting from improper installation or use.

⊙ Precautions while using

- Make sure that the unit is installed securely to prevent the stand from coming off or moving during operation. It might cause an accident.
- The GPS receiver might not function normally in some panels with excess interference, limited view of the sky or recessed into the panel.
  In these cases, please contact our sales representative to buy an external GPS antenna which is sold as an optional item.
- GPS signals might be affected in some areas due to weak electrical waves or during high solar activity.
- Use the navigation unit only for situational reference only. Map data must be updated to avoid erroneous data.
- Do not use it where it is hot and humid. Store product out of direct sunlight to prevent it from damage due to prolonged UV exposure.
- Make sure that water or other liquids do not get inside the product. This could cause fire or electric shock.
- To reduce the risk or electric shocks, do not open the cover (or back). There are no user-serviceable parts inside.
- The GPS receiver operates optimally at 0℃ to 50℃. If the temperature inside of the plane is too low or too high, the product might not function optimally.
  Make sure that the optimal temperature is maintained.
- If the windshield mount is attached to the glass of the windscreen for a long time, it might come off due to reduced adhesiveness.
- The memory card (SD or SDHC) could be damaged if used with any other devices.
- Do not remove the memory card (SD or SDHC) while the product is in operation. All Data and Software is contained on the SD card.
- Do not touch the product with wet hands. This might cause electric shock or damage.
- Do not disassemble or drop the product. It might cause damage or a mechanical breakdown.
- Use only the specified power adaptor or a 12 -28 volt source. Using a different type of adaptor might cause damage or a mechanical breakdown.
- Touch the LCD with fingers or blunt devices only. Avoid sharp metal objects and they might cause screen damage.
- Use only soft and dry cotton cloth when cleaning the product. Do not use strong solvents such as alcohol, benzene, or thinners, as these might
  damage the surface of the product

● Table of Contents

● GETTING STARTED

● BASIC OPERATION

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GETTING STARTED

iFly GPS

Basic Components

MAIN UNIT

**SD CARD READER,
MICRO SD CARD**

MOUNT HOLDER

STICKY PAD DASH MOUNT

CIGAR CHARGER

※ Due to improvement in better quality and performance, the real enclosed SD card reader is subject to change without notice.

Optional Components

EXTERNAL GPS ANTENNA
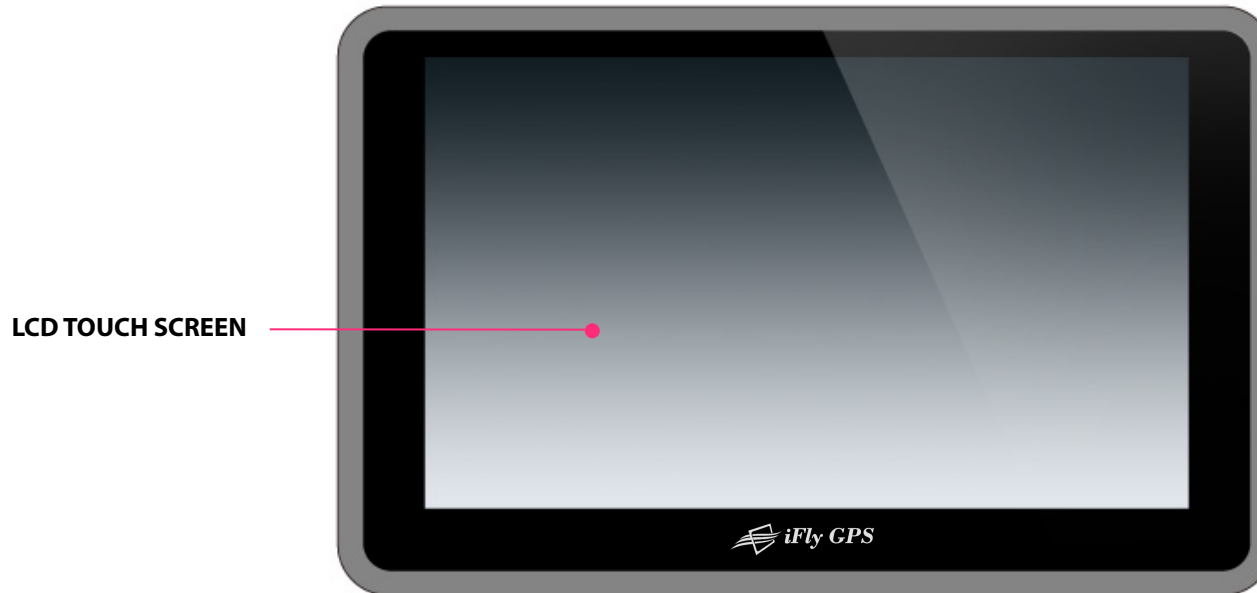
RAM Mount Adapter

RAM Yoke Mount Kit

External Battery

USB – Serial Cable

External Appearance

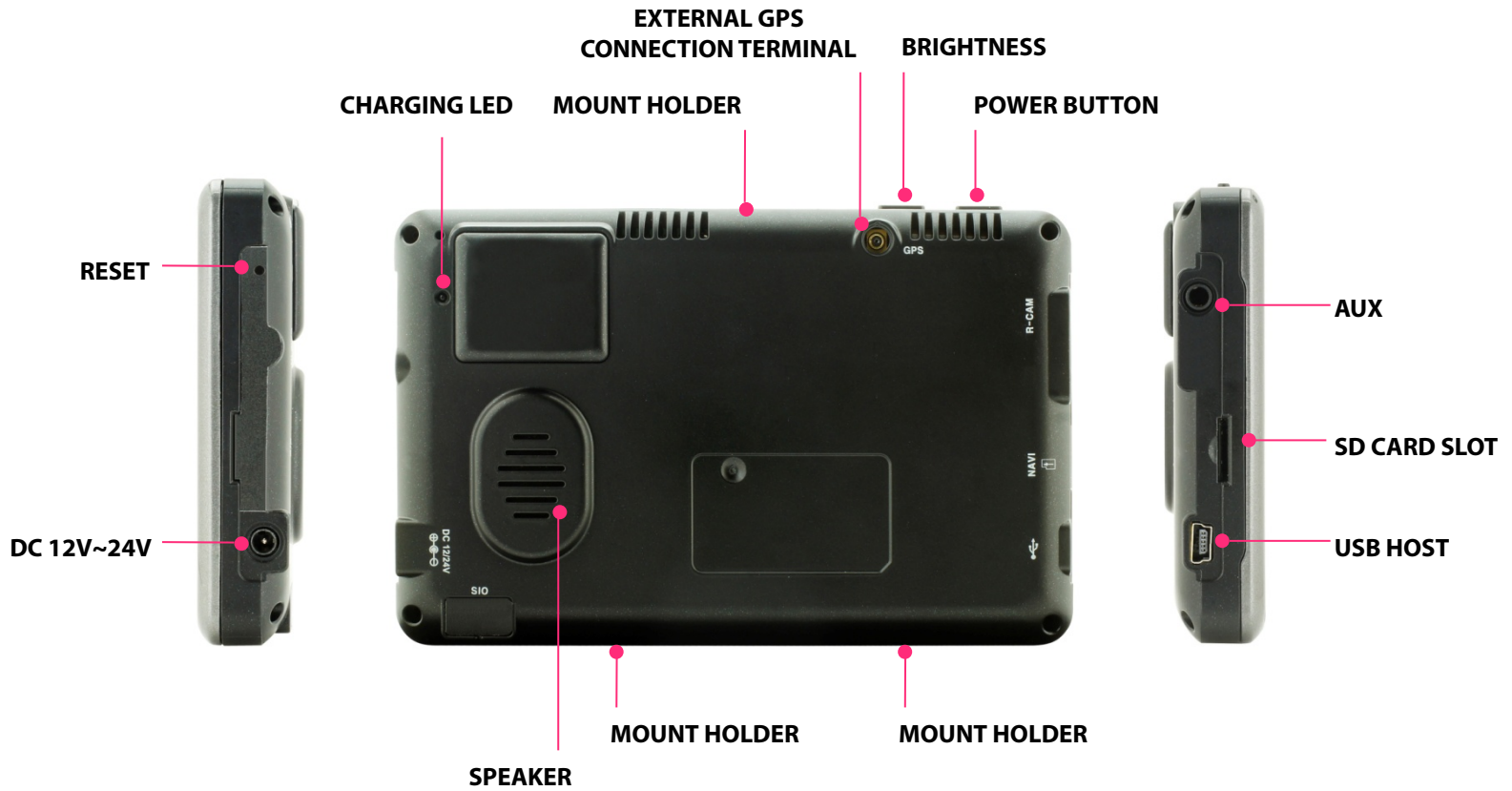⊙ **Front View**

LCD TOUCH SCREEN ————————●

iFly GPS

● **LCD TOUCH SCREEN**

Operate all functions by touching the screen.
Record any sounds and pictures that you see on the screen.

External Appearance

⊙ **Rear View / Side View**

RESET

DC 12V~24V

CHARGING LED

MOUNT HOLDER

EXTERNAL GPS
CONNECTION TERMINAL

BRIGHTNESS

POWER BUTTON

AUX

SD CARD SLOT

USB HOST

SPEAKER

MOUNT HOLDER

MOUNT HOLDER

External Appearance

⦿ Rear View / Side View

- **LED LAMP**
  Indicating battery charging status.

- **MOUT HOLDER**
  To mount on the cradle.

- **EXTERNAL GPS CONNECTION TERMINAL**
  External connection in order to improve reception efficiency of GPS.

- **BRIGHTNESS**
  To control brightness.

- **POWER BUTTON**
  To switch power on and off.

- **SPEAKER**
  Vocal guidance and audio output.

- **RESET**
  Resetting your product battery.

- **DC 12V~24V POWER SOCKET**
  Connect the dedicated cigar charger or Home AC-DC adaptor only; do not use the standard cigar charger or AC-DC adaptor. (AC-DC adaptor is an optional and sold separately.)

- **AUX**
  Audio out and for connecting a external speaker

- **SD CARD SLOT**
  Insert a micro SD card.

- **USB HOST**
  To connect USB – Serial for external device integration.

Installing Instructions

Connect mount holder

1. Press and lock mount holder into mount holder bracket. (See picture A)
2. Lock navigation into mount holder bracket firmly. (Put bottom side of product into mount holder bracket firstly, and then push top side slightly)
3. Lifting the little handle firstly and then fix the mount holder into window screen firmly.
   (It will be more solid if you put enclosed sticky pad dash mount on the mount holder before fixing. See picture B)
4. Put down the little handle to fix the mount holder after you choosing the proper install location.
   (Fix the mount holder firmly, or else it may suddenly become detached during your driving)
5. After fixing the mount holder, then adjust the best angle view of navigation by turning screws;
   Make sure you don't block view. (See picture C)
6. Once the installation has completed, you can turn on the product when you connect to the power supply and some other external components.

[PICTURE A]

Mounting hole of the mount holder bracket

Insert 4pcs projecting parts of mount holder into the mounting hole of bracket, and then lifting up the mount holder to fix it firmly.

[PICTURE B]

Little handle

Sticky pad dash mount

Put enclosed sticky pad on the mount holder firstly, then you may fix it into windscreen more stable.

[PICTURE C]

Screws

Adjust the navigation angle by turning 2pcs screws in clockwise or counter clockwise.

Installing Instructions
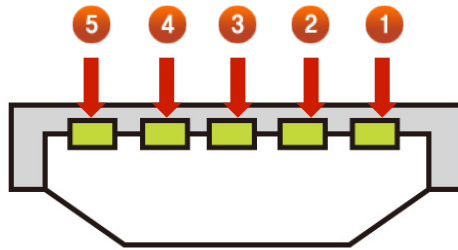
◉ Caution during installation

1. Do not install where pilot or driver view is blinded.
2. Do not install on the unsafe glare shield or dashboard.
3. For Auto: Do not install in front of airbag system.
4. For Auto: Do not install where airbag is expanded.

◉ Others

1. Please make sure that mount holder is securely fixed to the windscreen,
   as it may become detached due to severe vibration during flight.
2. We highly recommend you connect product by car cigarette charger during flight or driving.
3. Do not expose the product under extreme temperature (too high or too low) especially during summer and winter season,
   or else damaged may occur.
4. Don't leave the product in your plane or vehicle for a long period of sun exposure.
   In fact a few simple precautions can dramatically decrease the possibility of you being a victim of theft.
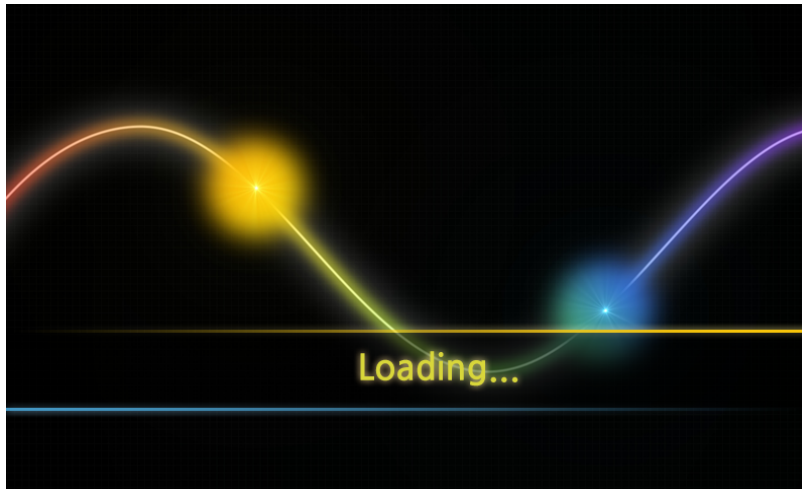
USB Pin

USB 5PIN   (Mini USB Socket)

5 4 3 2 1

1 VCC
2 D-
3 D+
4 ID
5 GND

Turning Power On

Connect power supply to the product by car cigar charger or AC-DC adaptor.

1. Press the power button on the top side for one or more seconds to apply power. If battery is fully charged, the product can be used without external power connection. However we strongly recommended you to connect power by car cigar charger or AC-DC adaptor.
2. After power is turned on, you will see the logo screen in the LCD screen.
3. After for more seconds, main menu consisting of 6 icons will be displayed. Each function can be operated by touch screen method.
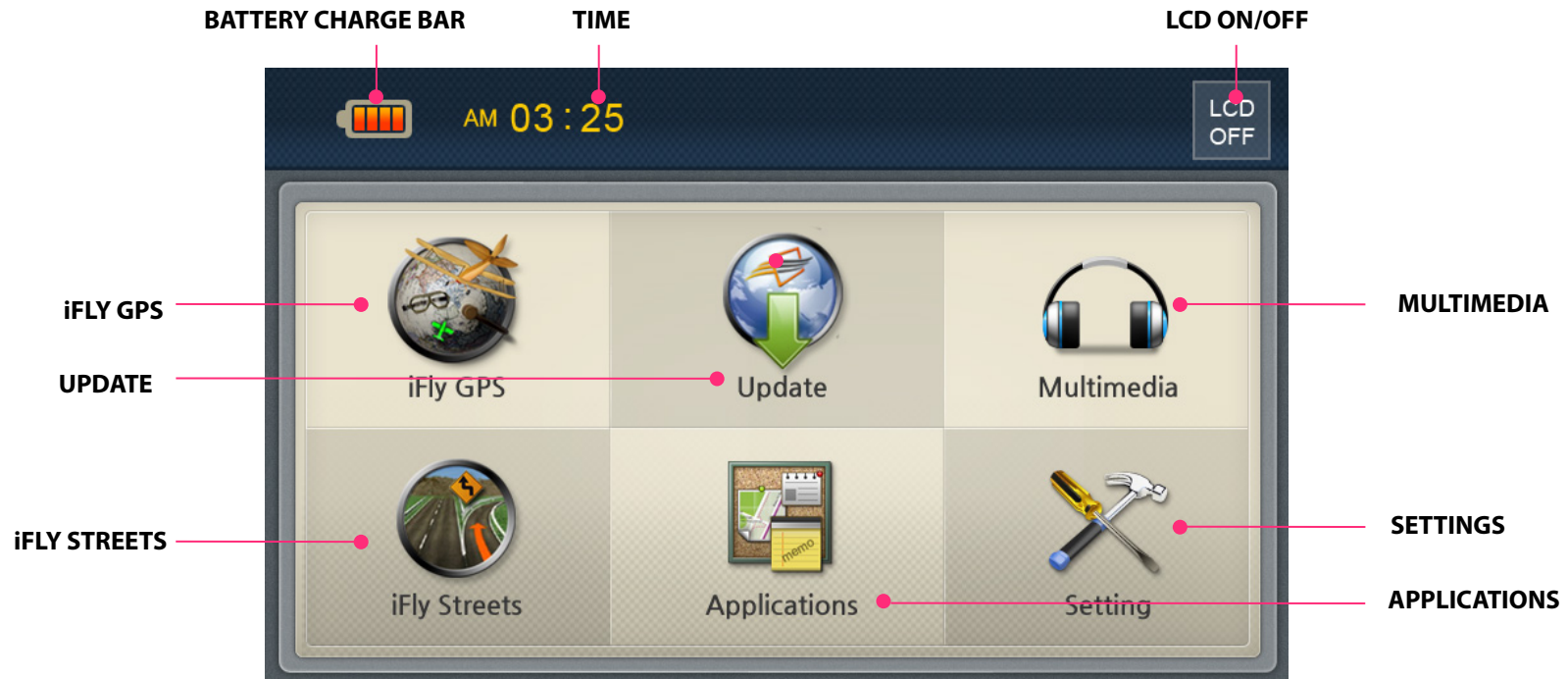
[LOGO SCREEN]   **[MAIN MENU SCREEN]**

Main Menu Screen

BATTERY CHARGE BAR   TIME   LCD ON/OFF

iFLY GPS   MULTIMEDIA

UPDATE

iFLY STREETS   SETTINGS

                                                                                     APPLICATIONS

- **BATTERY CHARGE BAR**
  Shows the current battery status.

- **TIME**
  Display current time.

- **LCD ON/OFF**
  Click the button once to turn off backlight.
  Click any spots to turn on LCD screen.

- **IFLY GPS**
  An icon to call navigation.

- **UPDATE**
  An icon to update operation system.

- **MULTIMEDIA**
  An icon to call multimedia.
  It may play music, video and photo.

- **IFLY STREETS**
  An icon to call navigation

- **APPLICATIONS**
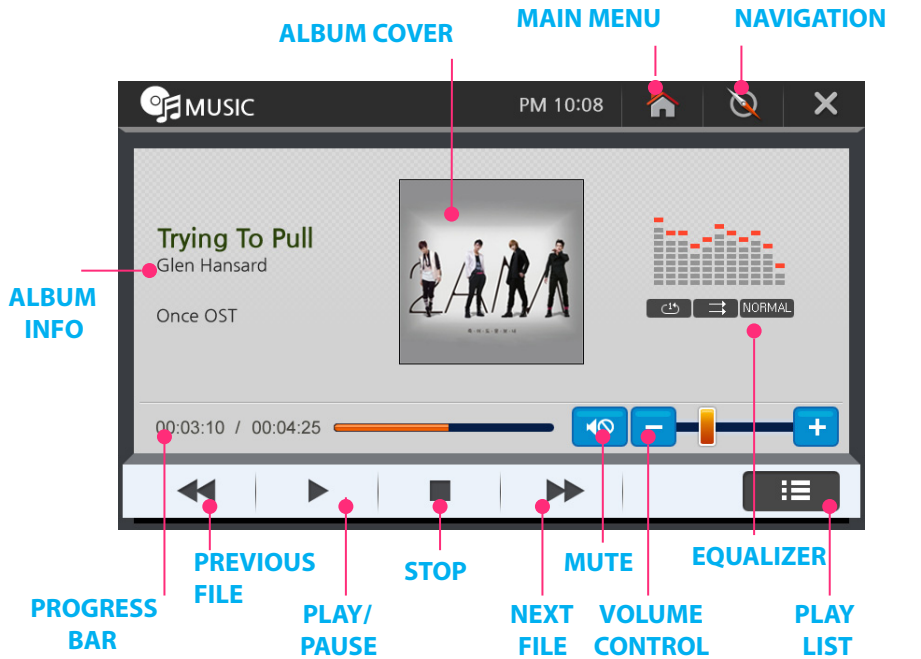 An icon to call application, including calculator and memo.

- **SETTING**
  An icon to call application.
  Including sound, screen brightness, option, reset and system icons.

BASIC OPERATION

iFly GPS

Using Multimedia

● Music Menu Screen

ALBUM COVER   MAIN MENU   NAVIGATION

ALBUM INFO

PROGRESS BAR   PREVIOUS FILE   PLAY/ PAUSE   STOP   NEXT FILE   MUTE   VOLUME CONTROL   EQUALIZER   PLAY LIST

Execute this function by pressing MUSIC icon on Multimedia screen.

● **ALBUM COVER**
Shows album cover artwork.

● **MAIN MENU**
Return to main menu.

● **NAVIGATION**
Go back to navigation screen while audio file is still playing in the background.

● **ALBUM INFO**
Shows the album art associated with the song or album, including track name, artist, album name, and various other information about the song.

● **PROGRESS BAR**
Shows the process time of the current playing file or skip to any point in a song by dragging the play head along the progress bar.

● **PREVIOUS FILE**
Play the previous audio file.

● **PLAY OR PAUSE**
Toggle between play and pause of the current playing file.
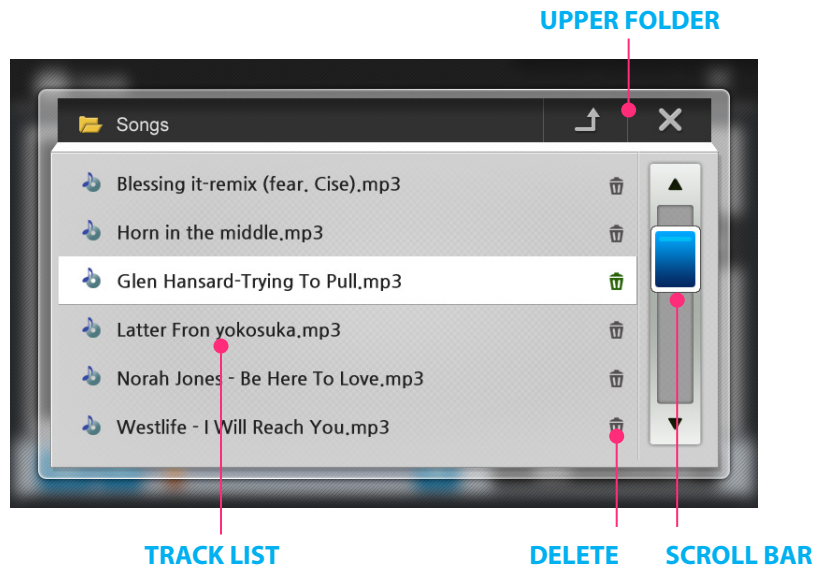
● **STOP**
Stop playing audio file.

● **NEXT FILE**
Play the next audio file.

● **MUTE**
Mute the sound.

● **VOLUME CONTROL**
Adjust the audio volume.

● **EQUALIZER**
Equalizer bars move up and down as the music plays.
Five equalizer types are supported: Classic/Pop/Dance/Live/Normal
Play mode: Repeat all /Repeat one/Shuffle play/In order play

● **PLAY LIST**
You can play any track on the playlist. **(See next page)**

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Using Multimedia

● Music Playlists

UPPER FOLDER

	Songs	↱	✕
♪	Blessing it-remix (fear. Cise).mp3	🗑	▲
♪	Horn in the middle.mp3	🗑	
♪	Glen Hansard-Trying To Pull.mp3	🗑	
♪	Latter Fron yokosuka.mp3	🗑	
♪	Norah Jones - Be Here To Love.mp3	🗑	
♪	Westlife - I Will Reach You.mp3	🗑	▼

TRACK LIST   **DELETE**   **SCROLL BAR**

Press PLAYLIST icon to select audio files to play.

● **UPPER FOLDER**
   Move to the upper folder.

● **TRACK LIST**
   All tracks show on the track list.

● **DELETE**
   Select a song, then tap Delete icon to delete a song form the track list.

● **SCROLL BAR**
   Move to the previous or next page of track list by dragging it.

● Conditional Convert

| Bit Rate: 64kbps   Sampling Rate: 44KHz   Mode: stereo   Codec: mp3

● Available File Format & Codec

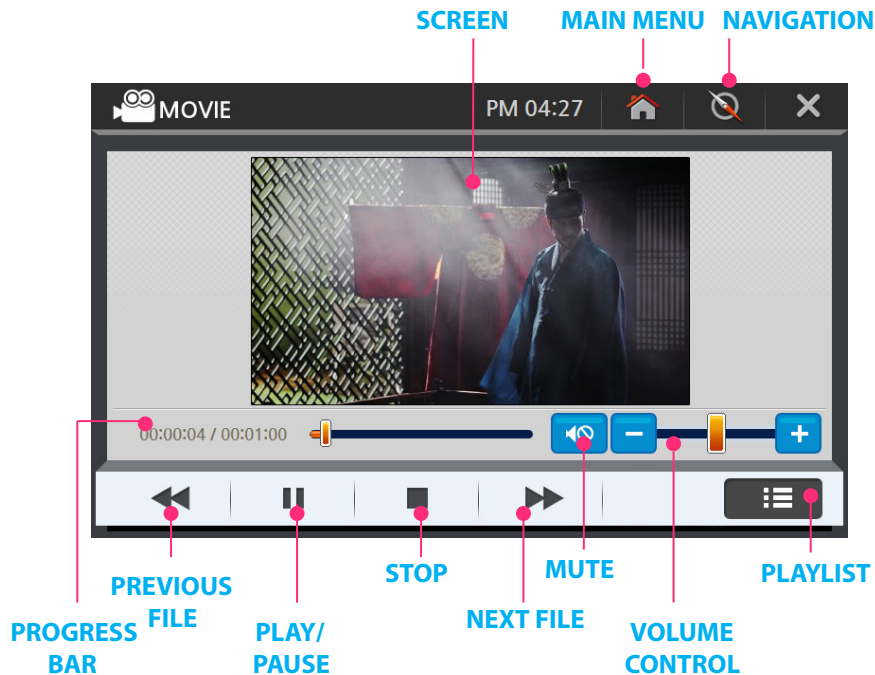Supported Codec: MP2, MP3, MIDI, OGG, AAC, WAV, FLAC, BSAC, DTS
 File Format: Ogg Media (*.ogg) / MP3 (*.mp3) / WAV
(※Not all of the codec are supported due to codec licensing issue.
   For unsupported file formats, you need to covert to one of our supported codec.)
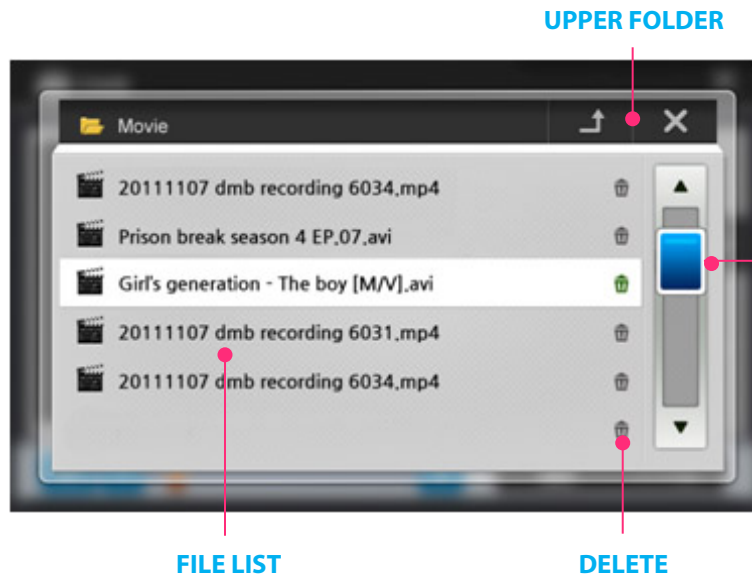
Using Multimedia

● Video Menu Screen

SCREEN   MAIN MENU   NAVIGATION

MOVIE   PM 04:27

00:00:04 / 00:01:00

PREVIOUS
FILE
PROGRESS
BAR
PLAY/
PAUSE
STOP
NEXT FILE
MUTE
VOLUME
CONTROL
PLAYLIST

● **VOLUME CONTROL**
Adjust the audio volume.

● **PLAY LIST**
You can play any video files on the playlist. **(See next page)**

Execute this function by pressing VIDEO icon on Multimedia screen.

● **SCREEN**
Show the current playing video.

● **MAIN MENU**
Return to main menu screen.

● **NAVIGATION**
Go back to navigation screen while file is still playing in the background.

● **PROGRESS BAR**
Shows the process time of the current playing file or skip to any point in a song by dragging the play head along the progress bar.

● **PREVIOUS FILE**
Play the previous audio file.

● **PLAY OR PAUSE**
Toggle between play and pause of the current playing file.

● **STOP**
Stop playing audio file.

● **NEXT FILE**
Play the next audio file.

● **MUTE**
Mute the sound.

Using Multimedia

⊙ Video Playlists

UPPER FOLDER

FILE LIST   DELETE

Execute this function by pressing PLAYLIST icon on Video menu.

● **UPPER FOLDER**
Move to the upper folder.

SCROLL BAR

● **TRACK LIST**
All video files show on the file list.

● **DELETE**
Select a file, then tap Delete icon to delete a file form the file list.

● **SCROLL BAR**
Moves to the previous or next page of file list by dragging it.
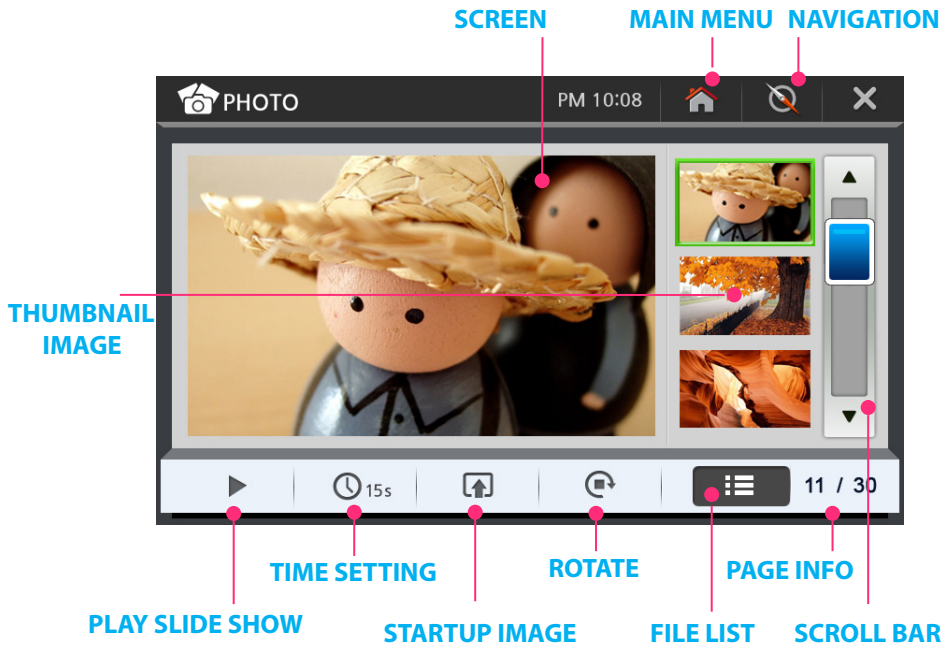
⊙ Available File Format & Codec

Supported Codec: - MPEG-1/2/4, H.263, H.264
File Format: - 3GP, MP4, AVI, MKV, MPG, M2TS, TS/TP, FLV

(※Not all of the codec are supported due to codec licensing issue.
For unsupported high quality or high definition video file formats, you need to covert to one of our supported codec.)

Using Multimedia

● Photo Menu Screen

SCREEN   MAIN MENU   NAVIGATION

THUMBNAIL IMAGE

PLAY SLIDE SHOW   TIME SETTING   STARTUP IMAGE   ROTATE   FILE LIST   PAGE INFO   SCROLL BAR

● Available File Format

JPG, JEPG, PNG, BMP, GIF
(For unsupported file formats, you need to covert to one of our supported codec.)

Execute this function by pressing PHOTO icon on Multimedia screen.

● **SCREEN**
Display the current playing image.

● **MAIN MENU**
Return to main menu screen.

● **NAVIGATION**
Go back to navigation screen.

● **THUMBNAIL IMAGE**
Show reduced-size versions of pictures as thumbnails. .

● **PLAY SLIDE SHOW**
See the images as a slide show.

● **TIME SETTING**
Click on the time tap and set the default duration of each slide.
(Slide show can be set with3sec / 5sec / 7 sec / 10 sec / 15sec time interval.)

● **STARTUP IMAGE**
Allows you to set the boot logo to any image you'd like. (See next page)

● **ROTATE**
Rotate the image to 90° clockwise.

● **FILE LIST**
To add and delete images for playing.

● **PAGE INFOMATION**
Show the total number of pages along with the current page number.

● **SCROLL BAR**
Move to the previous or next page by dragging it.

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Using Multimedia
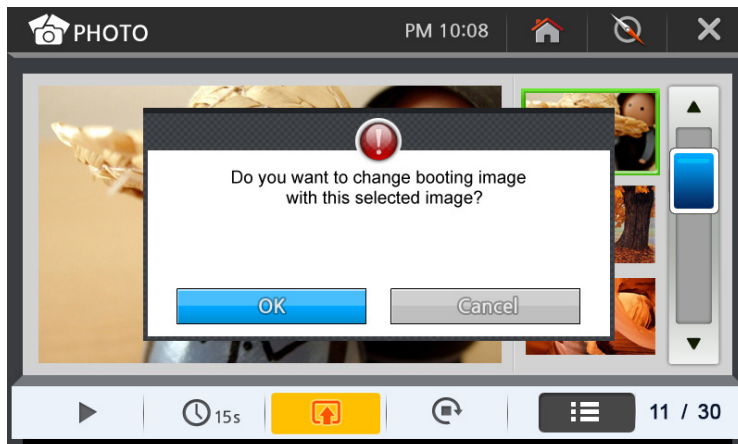
◉ Full Screen Image

Click the image once for a full screen view.
Click on any spot on the image once, it will return to PHOTO menu screen.

● **PREVIOUS / NEXT FILE**
Drag the image from left to right you will get the next image in full screen;
On the contrary you will get the previous image in full screen.

◉ Startup Image

● **SET IMAGE AS BOOT LOGO**
Allows you to set the boot logo to the image you'd chosen.
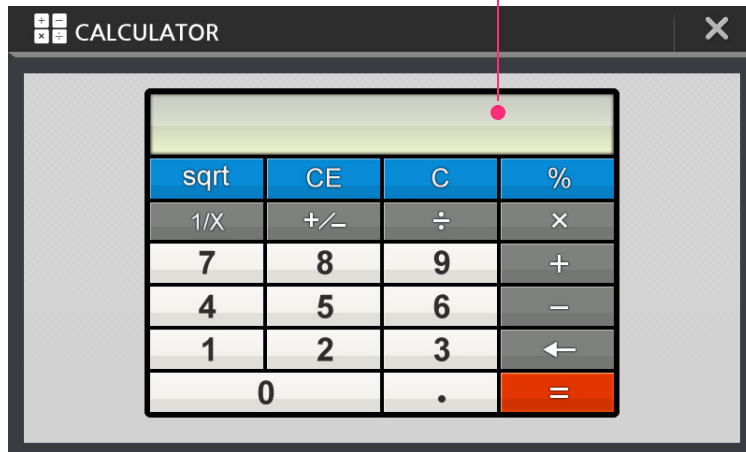
● **SUPPORTED IMAGE FILE FORMATS**
JPG, JEPG, PNG, BMP, GIF
(For unsupported file formats, you need to covert to one of our supported codec.)

Using Applications

⦿ Calculator

DISPLAY SCREEN

CALCULATOR

sqrt	CE	C	%
1/X	+/−	÷	×
7	8	9	+
4	5	6	−
1	2	3	←
0		·	=

7	8	9
4	5	6
1	2	3
0		·

NUMBER ENTRY KEYS

÷	×
	+
	−

BASIC ARITHMETIC KEYS

● **DISPLAY SCREEN**
Show the contents of the calculator.
Insert the number or symbol on the display.

sqrt
● **SQUARE KEY**
Square the value on the display.

CE
● **CE KEY**
Clear the number or symbol at the cursor.

C
● **C KEY**
Clear the data or all internal values.

%
● **PERCENTAGE KEY**
Calculate the percentage of the value.

1/X
● **INVERSE KEY**
Calculate the inverse of the value on the display.

+/−
● **DATA ENTRY KEY**
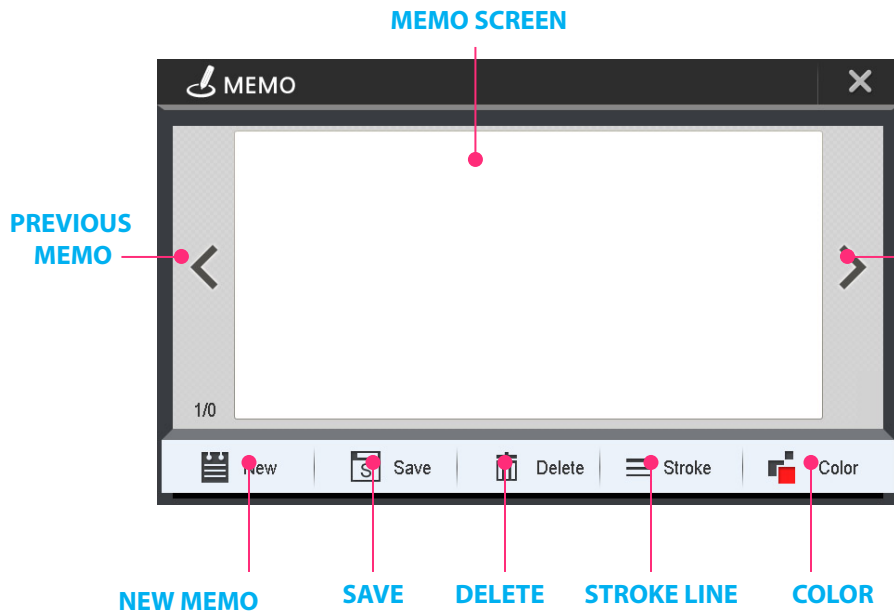Change positive numbers to negative or negative numbers to positive.

←
● **BACKSPACE KEY**
Clear the last entered number or symbol.

=
● **SUMMATION KEY**
Get sum of all values.

Using Applications

● Memo

MEMO SCREEN

PREVIOUS
MEMO

⚡ MEMO   ✕

1/0

💾 New | 📱 Save | 🗑 Delete | ☰ Stroke | 🎨 Color

NEW MEMO   SAVE   DELETE   STROKE LINE   COLOR

NEXT MEMO

● **MEMO SCREEN**
  Drag your finger over the screen to start drawing,
  and then save it as a image file.

● **PREVIOUS / NEXT MEMO**
  Click the arrow icon to call the previous or next memo.

● **NEW MEMO**
  Create a new blank memo.

● **SAVE**
  Save your drawn memo as image files before creating a new memo.
  Or else the drawn memo will be deleted directly.

● **DELETE**
  Delete the drawn memo.

● **STROKE LINE**
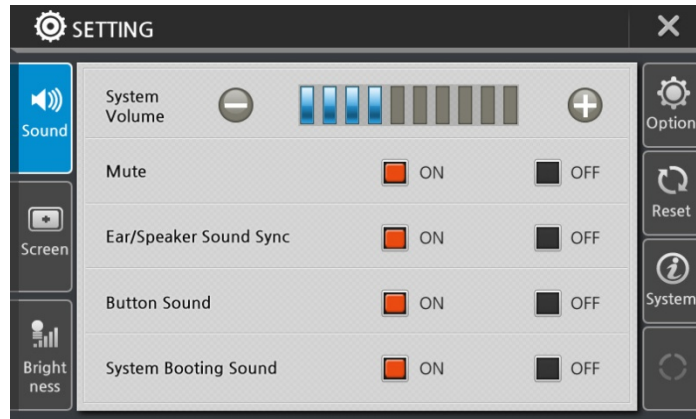 You can set the width of the stroke.

● **COLOR**
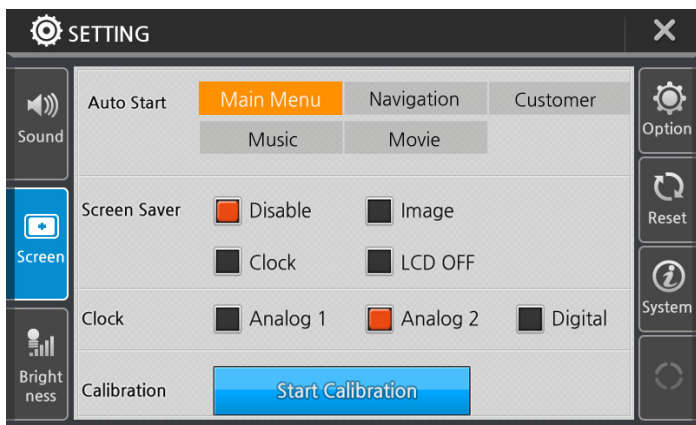 You can pick any color from your screen.

Using Settings

● Sound Setting

- ● **SYSTEM VOLUME**
  Adjust the sound level on a scale of 1 to 10.

- ● **MUTE**
  Mute the sound.

- ● **EARPHONE AND SPEAKER SYNC**
  The audio coming out of earphones is sync with speakers.

- ● **BUTTON SOUND**
  Get a sound effect by clicking a button or icon on LCD screen.

- ● **SYSTEM BOOTING SOUND**
  You can enable or disable the startup sound.

● Screen Setting 1

- ● **AUTO START (START PROGRAM)**
  Startup and directly enter to a program by choosing one of the icons among Main Menu/Navigation/Customer/Music/Movie

- ● **SCREEN SAVER**
  You can disable this function ;Or select a images/clock icon as screen saver; Or screen goes blank if you choose LCD OFF icon.(See next page)

- ● **CLOCK**
  You have three options: Analog1, Analog2, Digital(See next page)

- ● **CALIBRATION**
  If you notice the icon or image on LCD screen do not figure the correct message for the icon you selected, it will easily fixed by recalibrating. (See next page)
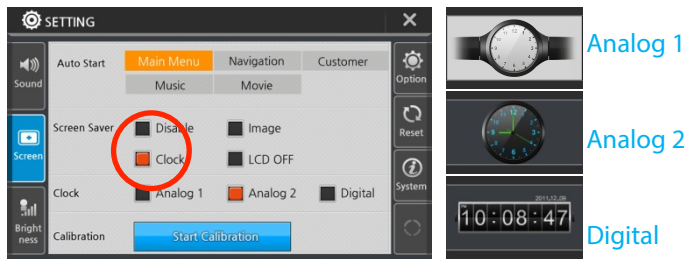
Using Settings

● Screen Setting 2

● **Change Screensaver Image**

The screensaver will auto start to run when the product has been idle for a set interval (10seconds or less) time.
After 10 seconds without touching LCD screen, normally it appears your saved clock image or your specific saved image as screensaver.
If you retouch any spots on LCD screen it will stop running the screensaver.
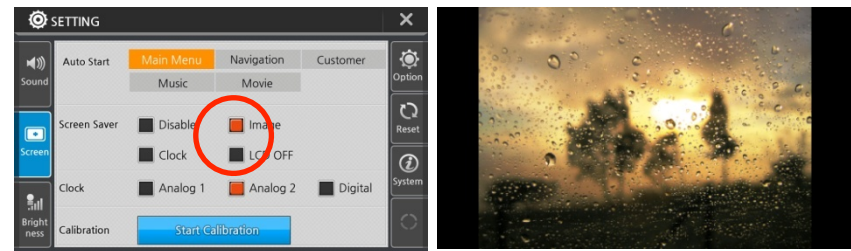In case you choose LCD OFF icon, then the screen goes blank.

Set the clock as screensaver

Analog 1

Analog 2

Digital

Move to SCREENSAVER SETTINGS of CONFIGURATION
on main menu.

Three types of clock is supported and you can click any one type
icon to set your screensaver,

Set a custom image as screensaver

Move to SCREENSAVER SETTINGS of CONFIGURATION on main menu.
Click on the image icon to set your screensaver.
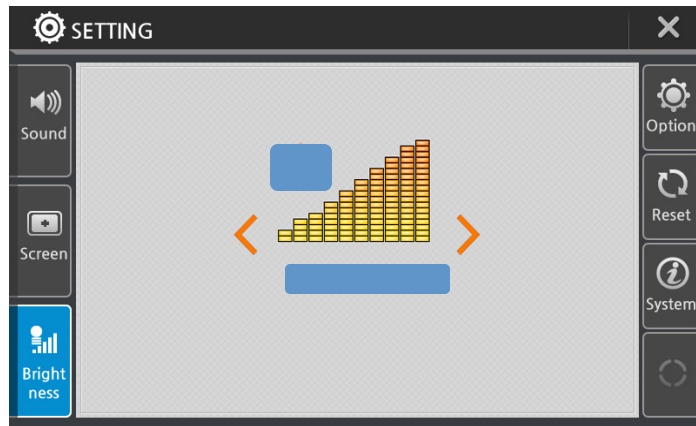
● **Change Screensaver Image**

Press on "+" icon and hold for some seconds.
After the cross moves to other section, just follow the cross to travel all points on the screen.

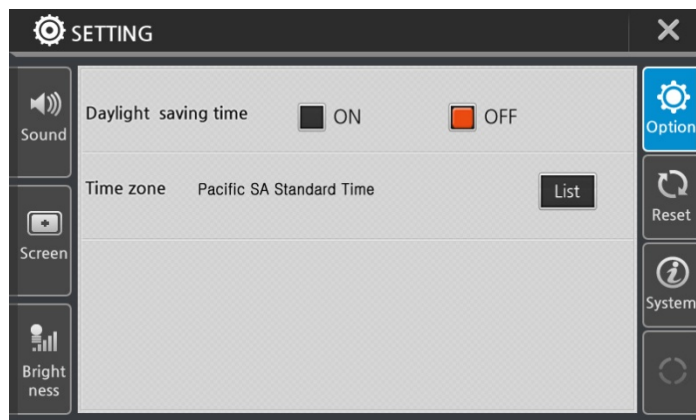Once the calibration is done, it will return to default settings.

Using Settings

● Brightness Setting

● **DAYTIME BRIGHTNESS**
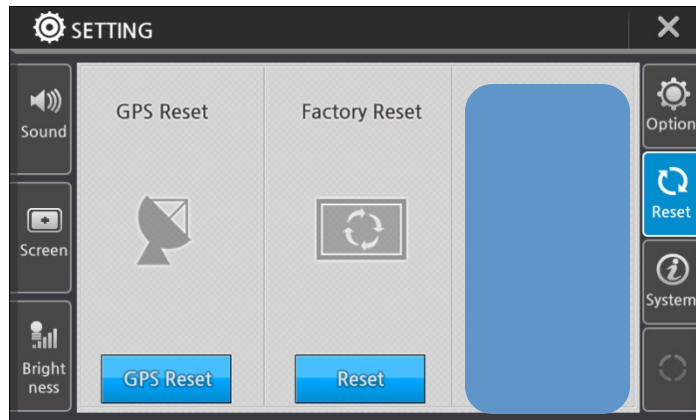Adjust the daytime brightness level on a scale of 1 to 10.

● Option

● **DAYLIGHT SAVING TIME**
Click the "on" or "off" button to activate the parking line function.

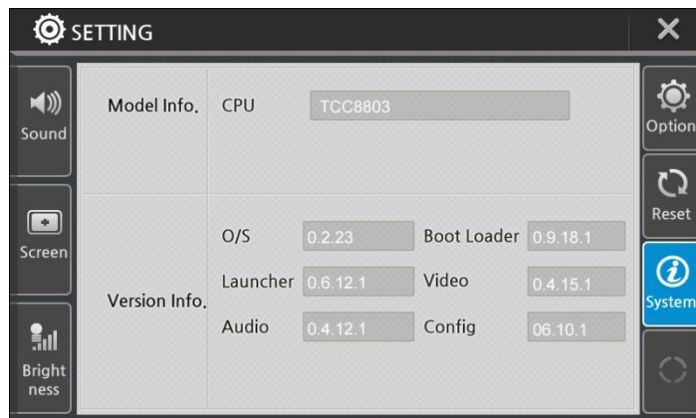● **TIME ZONE**
Customize your time zone.
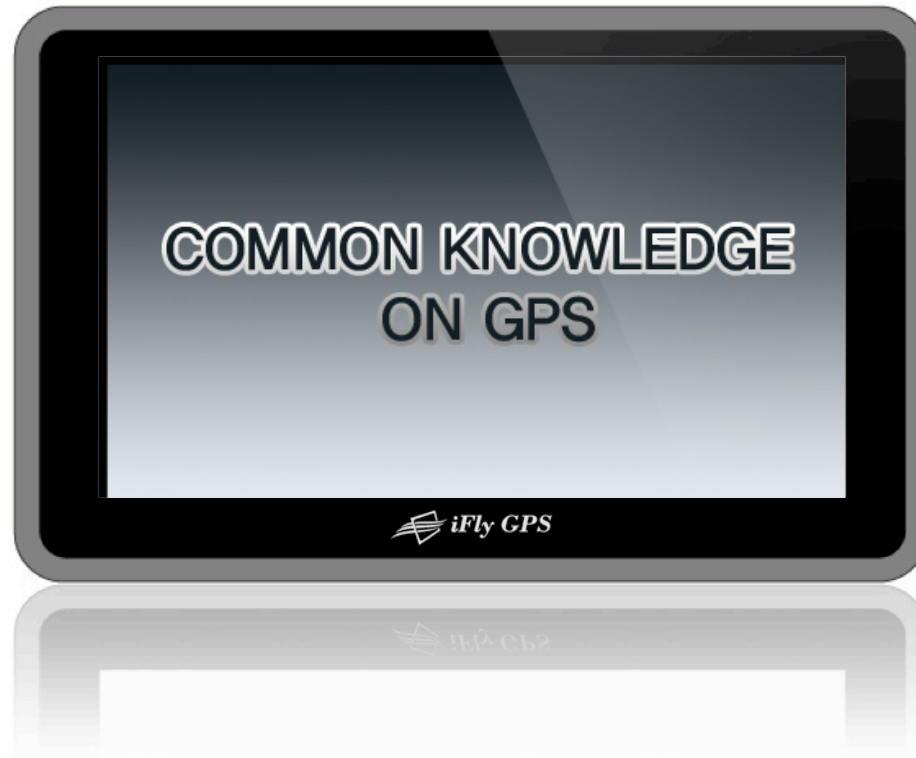
Using Settings

● Reset

- ● **GPS RESET**
  Click GPS reset back to factory defaults.

- ● **FACTORY RESET**
  Click reset button to factory default settings.

- ● **OS UPDATE**
  Click OS update button to upgrade to the latest version of the product.

● System Information

- ● **MODEL INFO**
  Shows model name of the product.

- ● **OS VERSION INFO**
  Show OS version of the product.

Cause of Error Occurrence in GPS

Factors dropping accuracy in position measurement of GPS can be largely classified into 3 parts.
First, errors occurring due to structure factors include satellite time error, satellite position error, refraction in ionosphere and troposphere, noise, multi-path, etc.; Secondly, there is geometrical error due to arrangement situation of satellite; and lastly, there is SA (Selective Availability) that is the biggest error factor.

Potential combination of all these factors brings about very big error result, which is called UERE (User Equivalent Range Error).
Each error varies greatly depending on time and place.

- Satellite time error   0-1.5 m/s
- Satellite position error   1- 5 m
- Refraction in ionosphere   0-30 m
- Refraction in troposphere   0-30 m
- Receiver noise   0-10 m
- Multi-path   0-1 m
- SA(Selective Availability)   0-70 m

In C/A code, horizontal error combined with all errors is 28m when SA does not activate and 100m when SA activates.
SA code means enlargement of error range so that United States may limit use by non-allowed GPS satellite users during military operation.

Basically, GPS is not much affected by weather. It cannot be said that there is no effect at all, but there is no absolute effect.
Depending on situation, as sunspot activity of sun becomes active, if magnetic field change around earth becomes severe, GPS reception cannot be well performed.

Cautions during Use of GPS

1. Do not dissemble, repair, or remodel it randomly.
2. Pay attention not to pour water or liquid.
3. Avoid use in environments with shock, high temperature, high humidity, etc.
4. Use it by avoiding the following conditions.

- Recessed Instrument Panels.
- Next to tall buildings, beneath bridge, beneath elevated road.
- Inside buildings, tunnels, ships etc.
- Beneath other objects blinding GPS antenna parts, etc.
- When covered by the palm of a hand.
- Do not put gold, metallic objects, or electric wave emitting objects around GPS.
- Do not leave GPS for long time where there is severely high or low temperature.

Self Check List

The following checklist will be helpful in solving problems encountered while using the product.
Before reviewing the following checklist, check the equipment connection and operation procedure.

● **Cannot hear any sounds.**
  Check if the mute function is activated.

● **LCD screen goes dim.**
  Tinted window glass can affect to the screen brightness.
  Check the better position the product or adjust the
  brightness settings on main menu.

● **Touch screen does not figure correct message.**
  Remove the protection film from LCD screen.
  Try to fix it by click the calibration button.

● **It cannot copy the files on SD.**
  Do not Format the SD Card, Contact Adventure Pilot Support.

● **SD card is not recognized.**
  Check if you are using the enclosed SD card with product.
  Check if the SD card inserted into product correctly.
  Check if there is no substance on SD card slot.
  Contact Adventure Pilot Support.

● **Navigation does not start.**
  Verify that SD card containing the navigation program is inserted into it.

● **GPS does not operate well.**
  Verify that there is no equipment blocking to the GPS antenna.
  Verify that the GPS has clear line of sight to the sky .
  (It is not in a recessed instrument panel. If so, use the optional external
   antenna)

● **Music does not play.**
  Double check the music file format. A defective file cannot play properly.
  Check if the music file plays well or not on your computer.

● **Video does not play.**
  Double check the video file format.
  For unsupported high quality or high definition video file formats,
  covert to one of our supported codec.

Specification

●	**CPU**	1.3gHz Dual Core Processor
●	**OS**	MS Windows CE 6.0
●	**LCD**	5" Sunlight Readable LCD (800 x 480)
●	**GPS**	WAAS Enabled - Fast Fix
●	**POWER INPUT**	DC12V / 24V
●	**CURRENT DRAW**	300-700mAh @ 12v
●	**OPERATING TEMPERATURE**	14°F to 140°F
●	**STORAGE TEMPERATURE**	-4°F to 158°F
●	**PHYSICAL DIMENSIONS**	5.25" x 3.3" x 0.75 »

● Business Contact Info:

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