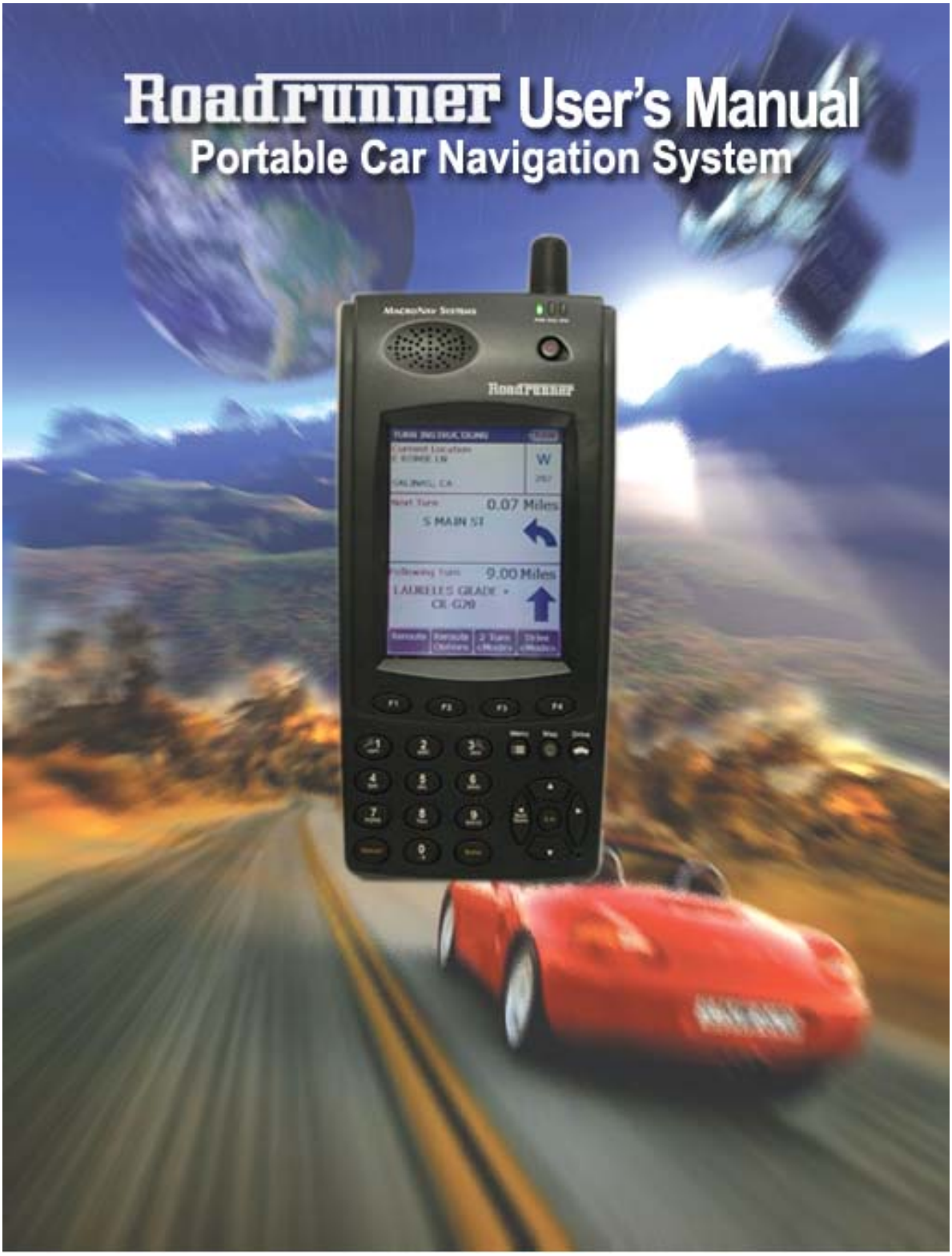
Roadrunner User's Manual

Portable Car Navigation System



About manual

Thanks for purchase the RoadRunner what is the first portable car navigation system in Korea.

Should be fully known well the application after read this manual to make yourself familiar with the RoadRunner's new function.

It will be possible to use this product more conveniently after known well the installation and notice before use.

It is possible to be shown differently between the actual drawing and image, color of this manual according to the time of making this manual.

It is prohibited to reprint, copy, transfer, circulate with any reason without manufacturer's allowance.

The contents of this manual will be changed without any preannounce. The manufacturer has the right to adjust, improve the contents without notify to personal or any organization.

FCC RF
INTERFERENCE STATEMENT

NOTE :

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules.
These limits are designed to provide reasonable protection against harmful interference in a residential installation.

This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.
However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does 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 to correct the interference by one or more of the following measures.

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected
- Consult the dealer or an experienced radio, TV technical for help.
- Only shielded interface cable should be used.

Finally, any changes or modifications to the equipment by the user not expressly approved by the grantee or manufacturer could void the users authority to operate such equipment.

The users manual or instruction manual for an intentional or unintentional radiator shall caution the user that changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

THIS DEVICE COMPLIES WITH PART 15 OF THE FCC RULES.
OPERATION IS SUBJECT TO THE FOLLOWING TWO CONDITIONS :
(1)THIS DEVICE MAY NOT CAUSE HARMFUL INTERFERENCE, AND
(2)THIS DEVICE MUST ACCEPT ANY INTERFERENCE RECEIVED,
INCLUDING INTERFERENCE THAY MAY CAUSE UNDESIRED OPERATION.

FCC ID : Q5MPN-100 MADE IN SEOUL, KOREA

Notice & Warning for Safety use

Please carefully read this manual and use this product according to manual to keep user's safety and protect property from accident.

About AC Adapter

1. Do not make damage by curve the Power cord with force or pressing with heavy things.
2. Do not use damaged power cord & plug, loose-fitting consent.
3. Do not touch or pull out the power plug or part of cord with wet hands.
4. Use the right AC Adapter supplied with product by manufacturer.

About operating under driving

1. Operate this product after stop driving car to the safe area it may cause car accident under driving operation.
   It is only user's responsibility to keep safe driving and protect from accident by using this product under driving.
2. User's are responsible for protect this product from damage under driving by using the Car Cradle supplied by manufacturer.

About product maintenance

1. Be careful not to leave this product alone in the car for long time because indoor temperature sometime possible to go up to 80 degree.
2. Do not reconstruct, disassemble or repair by only yourself.
3. Electromagnetic waves signal can make something wrong or disoperating the electronic system in the car. Please check in advance with your car manufacturer whether the car is influenced by RF wave energy.

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1. Product Instruction

RoadRunner is portable CAR Navigation system.
It means designed possible to use portable and fax on the car.

For CAR Navigation system, there are GPS engine and antenna, also close electronic map inside of this product.
RoadRunner can unify GPS engine, antenna and computer system for data processing as one and has PocketNavi™ made by Geoandspace™ as software for Car Navigation system. PocketNavi User's Manual will guide application and instruction of Car Navigation system's software.

Notice: PocketNavi™ user's manual is explained for common PDA and will be some different about the contents for hardware system.
In this case, be referred to this user's manual.

RoadRunner is possible to be used not only in the car but also outside of the car as worker's mode. In addition, built in the convenient & superior capability MP3 Player. Finally, it is car entertainment system that containing Calculator, Calendar, Voice Memo, etc., for user's convenience.
Details are referred to the manual.

Notice: This product is minute machinery and the user should use it carefully.
Roadrunner is not only for driving assistance but also portable use designed.
But the user have responsibility to protect damage by using car cradle manufacturer is supplying.

Warning: User should be in take a responsibility to be careful for safe driving during this product is used.
It is dangerous to operate this product during car driving.

1-1. Composition Instruction

Please confirm the composition same as follows.

If there is un-matching or lack of composition, contact to the selling agency.

RoadRunner Body

Cradle for Car

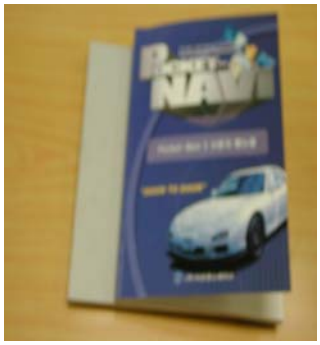
DualLock for Cradle

Cigar Jack

AC Adapter

USB Sync Cable

External Antenna



User's Manual

USB ActiveSync. CD

1-2 Name of each Parts

Name of each parts basically have to know for using the system.

FRONT

GPS Antenna

Speaker

LED

Power Switch

LCD Screen

Keypad

NAME	FUNCTION
GPS Antenna	Receive GPS Satellite Signal.
LED	Show Power/Charging/Status of GPS Receiving Satellite.
Power Switch	Use for Power on or Initialize the system.
Speaker	Speaker for Voice guidance.
LCD Screen	Showing the screen.
Keypad	Input the letter or Number / Using the given function

Signal Light (LED) Instruction

LED NAME	STATUS	FUNCTION

PWR	GREEN	Operating System
	OFF	System Power Off
CHG	RED	Under Battery Charging
	ORANGE	Stop Battery Charging
	GREEN	Finish Battery Charging
	OFF	Under Battery Discharging
GPS	ORANGE	Searching GPS Satellite
	GREEN	Fix Present Location
	OFF	GPS Receiver Power off

REAR

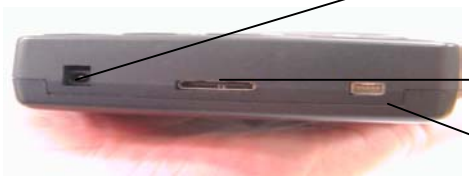
NAME	FUNCTION
External GPS Antenna Connecting Port	Port for External GPS Antenna Connecting when use External GPS Antenna
RESET	Switch for System Reset (Use after cut off the External Power)
Position of DualLock Attaching	Position of DualLock Attaching

SIDE

NAME	FUNCTION
Audio Jack	Stereo Audio Jack for enjoying MP3
Volume	Volume Up /Down Button
LCD Light Control Button	LCD Light Control Button
CF Slot	Port for Insert MP3 CF Card

.

BOTTOM



NAME	FUNCTION
External Power Port	Port for Connecting Cigar Jack Power or AC Adapter
USB Port	Port for Connecting USB Sink Cable
I/O Port	Port for System debugging

1-3. Installation (Cradle)

Method for mounting RoadRunner and recommended position for mounting to the car.

<Picture1>

<Picture2>

1. Firstly attach the Duallock™ tape made by 3M to the position of Cradle bracket & RoeaRuuner's backside position. (Picture2)
2. Mount the Cradle to the car dashboard at the recommended position using the 3M tape. (Picture1)
3. Mount after put together the RoadRunner's Duallock™ position & car cradle braket's Duallock™ position.
4. Set to the easy position to see using the set screw of car cradle.
5. Connect the power cable for car to the RoadRunner's DC-IN(External Power Port). Mounting is finished.
6. <Picture3> Feature after mounting <Picture4> Recommended position on car dash board

<Picture 3: Feature after mounting> < Picture 4: Recommended position on dashboard>

Notice : After 72 Hours attaching on dashboard 3M™ Tape will be strongly mounted and will be impossible to re-mounting the other position.

2. Start

2-1 Notice Before Use

Point to know before using RoadRunner.

POWER SWITCH

Power Switch of RoadRunner is multi-functional Power Switch and supplying the following function.

1) Fast Power ON : RoadRunner, usually power off using power switch, will be off storing the state program operated before power off.
Later power on again, the system will start with the program was operated before power off.
This makes the user operating the RoadRunner within 1~2 seconds after push the power button and this will be repeated until the internal battery is charging out.

2) Full power OFF/ON: If you want to initialize the RoadRunner in case of abnormal operating or stop program due to system error, push the power switch during more 6 seconds.
Then, all the power of system will be off.
RoadRunner, after power on again, will delete all the contents of memory and will start with early menu.

RESET BUTTON

This button is positioned on the rear side of RoadRunner and make system initialize when the power switch is not operated due to any electric shock from the outside.

Notice: Use reset button after release the DC-IN.

GPS External Antenna Connecting Cable

It is possible to use External Antenna in case of unable to mount internal antenna to the recommended position due to car interior construction.

Insert GPS External Antenna Connecting Cable we are supplying to the GPS External Antenna Connecting Port of RoadRunner and connect SMA type external antenna.

Purchase external antenna at the market or from us separately.

< Feature after mounting the External Antenna >

Battery

Battery is built in into the RoadRunner because it is designed portable use.

Thus, it will be charging out during transporting and safe keeping even it is produced full charging condition.

First time after unpacking, use AC Adapter or Cigar power cable.

Especially, using RoadRunner in the car, recommend you to use the Cigar power cable.

It will be possible to happen automatically stop charging for data protection when you use at high temperature and high humidity.

Refer to Manual 3-3, for Battery Using & Charging time information.

Notice: Use after connecting DC-IN when it appeared battery low due to battery discharging. RoadRunner will go automatically to power off mode within 2~5 minutes for data protection in case of continuous using after low battery appeared.

Reception of GPS Satellite

Once operating the CAR Navigation. RoadRunner starts satellite reception GPS is an equipment to supply present location, speed, height, time, etc., using 24 Satellites that were sent by U.S. Department of Defense.

To see present location by GPS, should receive signal from at least 3 satellites.

Notice: 1. It should be possible to see the wide sky without obstacle for GPS satellite reception.

The obstacles same as high building area, cliff and leaves what can cover the sky makes it need additional time to calculate exact location than normal areas.

Locate the GPS Antenna always to the place good to see the sky.

2. Rainy day (especially, with thunder and lightening) cause delay time to calculate location than normal weather.

3. Especially, in case of metal coating on the glass of car front, it is impossible to show location due to the Satellite signal blocking by metal coating. (Satellite signal can't pass the metal)

GPS Initialization

It needed GPS Initialization when this product is used firstly.

GPS needed at least 3 satellite signal to calculate location and calculate the location usually within 2~3 minutes.

GPS Initialization is needed for using Roadrunner first time after moving long distance (over 150 ~ 200 km).

If you operate Car Nav program by pressing the Car Navigation button on the menu, it will be appeared Map screen. Then select GPS Icon. It will be initialized if you select 'Initialization' on the left top.

GPS Initialization is positively necessary for the following cases.

1. When use the Roadrunner first time after buying.
2. When use first time after moving long distance (over 150-200km)
3. Roadrunner is impossible to inform the location for 10 minutes

After GPS Initialization, when the user using the Roadrunner's car navigation, it will be possible to inform the location within 2~3 minutes.

Notice : In case of GPS initialization, it will be appeared on the screen of car

navigation within 2 ~3 minutes after calculation the location. But, if user push the initialization button, recommend to wait for 10 ~15 minutes after power on. This is for making the GPS keeps the tracking report for 24 satellite. Once finish tracking 24 satellites, location guiding time will be shorter time to use the Roadrunner.

Speaker & Audio Jack

The Speaker included in RoadRunner is Max. 2W Mono speaker.

This speaker is designed for voice introduction of car navigation.

When the user enjoying MP3 music through this speaker, it will be happened sound crushing in the high volume according to the sound source condition.

This is caused the mp3 file is not guarantee for the size of sound source.

Recommend to enjoying the MP3 music through Stereo Audio Jack.

Will be nice to enjoy MP3 music to use headset or earphone for portable using and car speaker after connecting to AUX-IN terminal or car-pack.

< Feature of MP3 Player operating>

CF Slot

RoadRunner has 2 CF Slots.

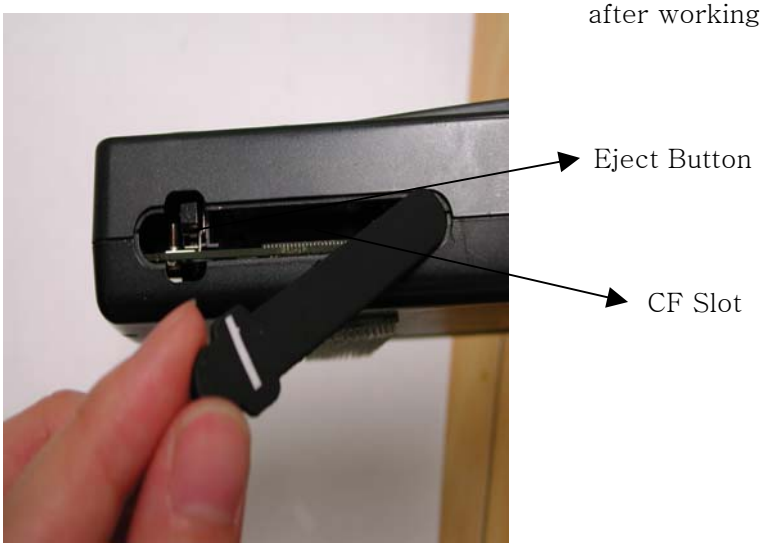
The one is built in and used to connecting CarNavi software and Electronic Map to the internal CF Slot.

The other is outside and side position of system. (Refer to 'Name of Parts – SIDE')

Refer to followings when insert or pull out the CF Card.

<Picture 1>

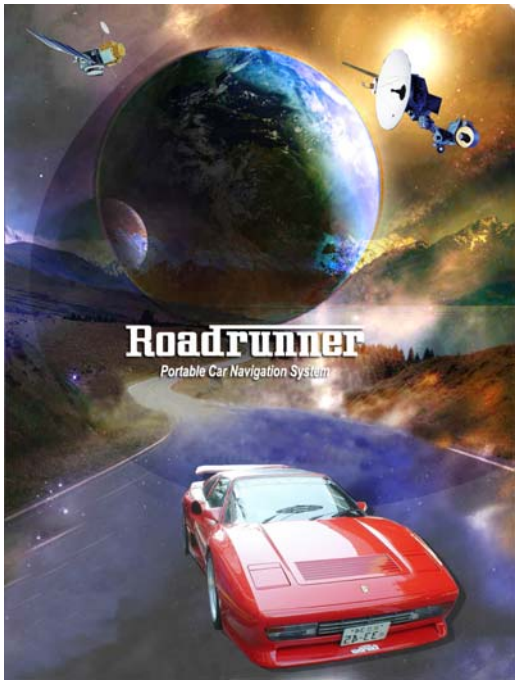
1) Push the marked point of CF Slot cover same as picture left.
2) The end parts of CF Slot cover will pop out after pushing the marked point.
3) Will take off the CF Slot cover same as <Picture2> after pulling the pop out point.
4) Can see the CF Slot & Eject button after the CF Slot cover pop out.
5) Insert or Pull out the CF Card using CF Slot & Eject button.
6) Push in the CF Slot cover to fix the hole after working finished.

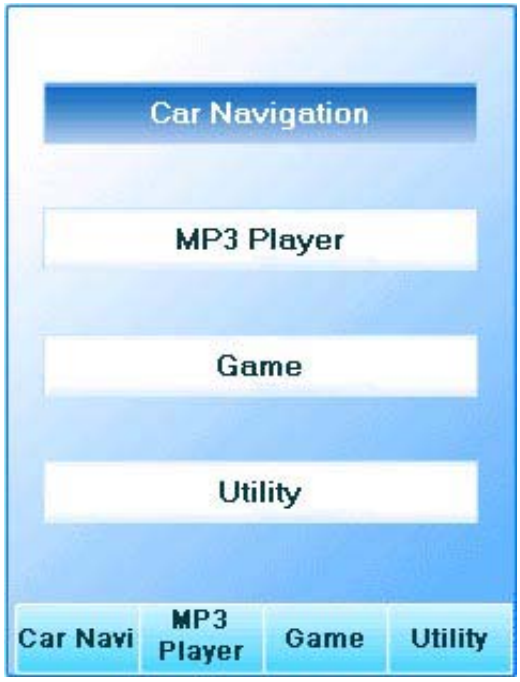


<Picture 2>

2-2. Start

If you power on the Roadrunner by pushing power button, the first menu will be appeared same as below.





2-2-1. Detailed Instruction of Menu

A. CAR NAVIGATION

If you Press CAR Navigation key, Car Navigation software will be operated and possible to get the screen & voice guide with real time to destination by searching & setting up the destination.

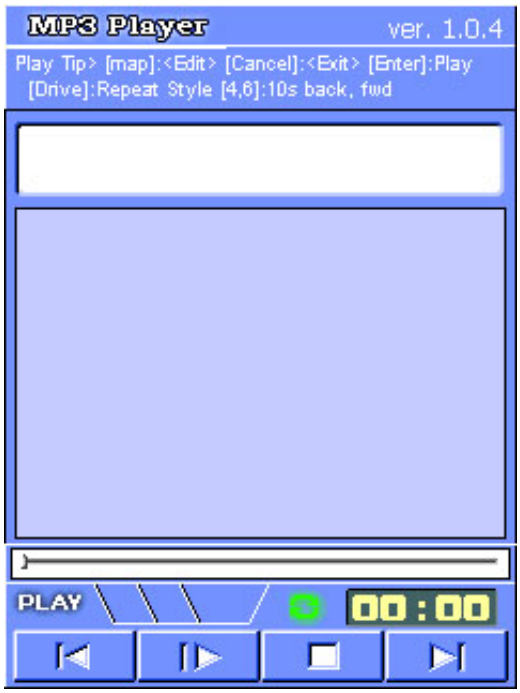
RoadRunner is containing PocketNavi™ Car Navigation software made by Geoandspace™.

Refer to PocektNavi™ User's manual for details of Car Navigation software.

B. MP3 PLAYER

B-1. Operating – Press MP3 Player key and then MP3 Player will be operated.

< mp3 player selection>



< mp3 player initial screen>

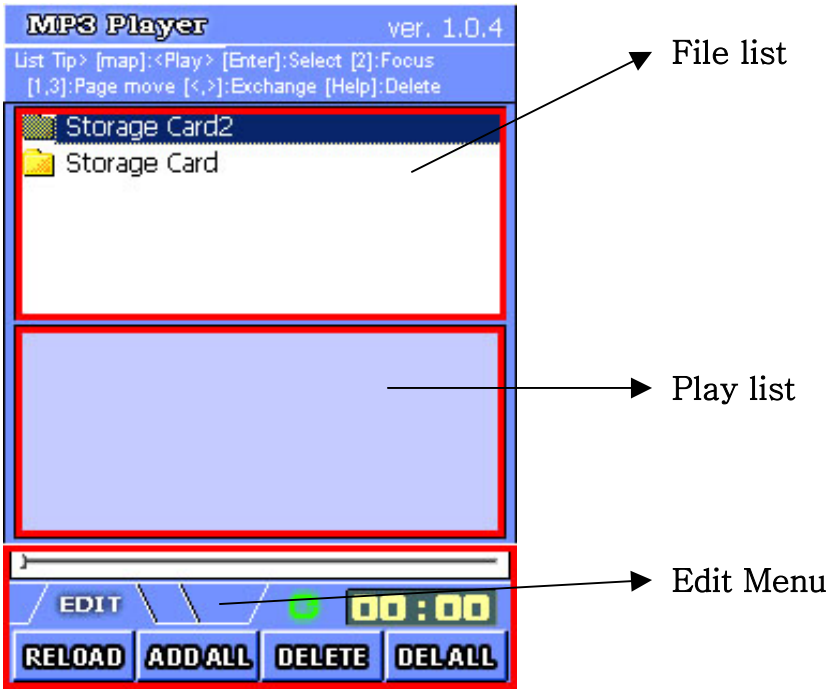
Play Mode will be firstly shown on the screen. Playing the music on the Play list at Play Mode

< Play Mode screen>

B-2. Select Music Contents

If you operate this software first time. Play list would be empty. Change to **Edit Mode** for adding the music to the Play list. Go to Edit Mode by pressing **Map** (Select Music) key after insert Storage Card (MP3 file is saved) to the Slot.

Tip) Possible to convert from Play Mode to Edit Mode by pressing Map key, or from Edit Mode to Play Mode.



< Edit Mode screen >

RELOAD: Reloading Storage Card.

ADDALL: Add MP3 file in present directory to the Play list.

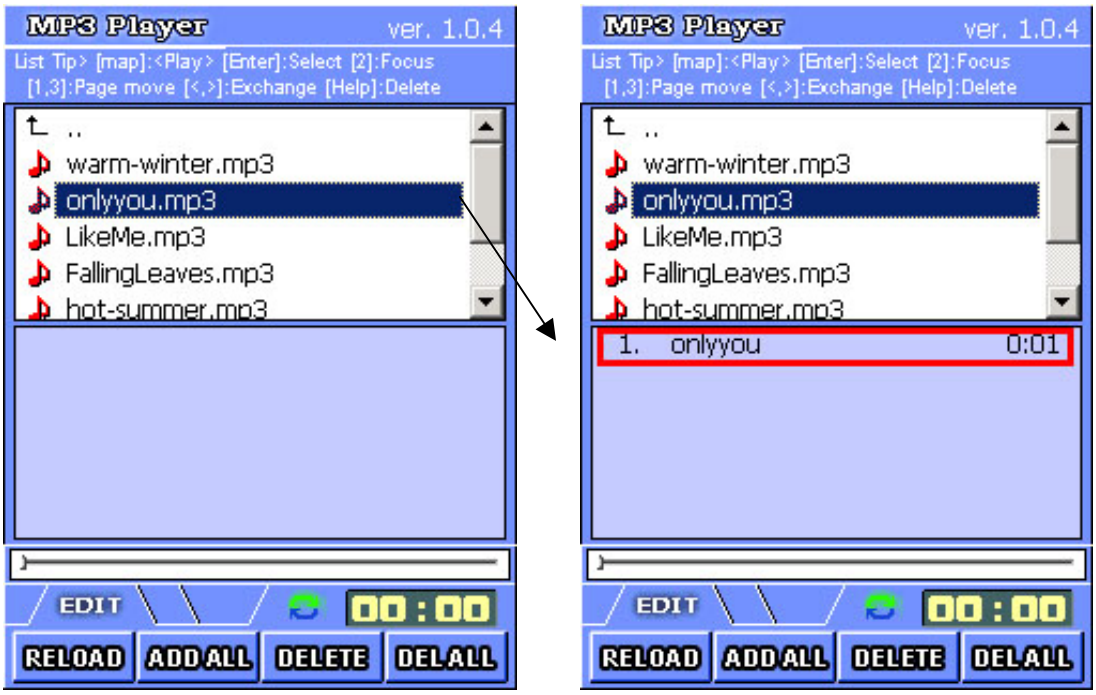
DELETE: Delete selected music from Play list.

DELALL: Delete all music in the Play list.

B-2-1. Select music content

If you move the selected box to the directory wanted by using the up, down key onto File list, and then press Enter key, possible to go to selected directory. If you want to go previous directory, press left arrow key or key.

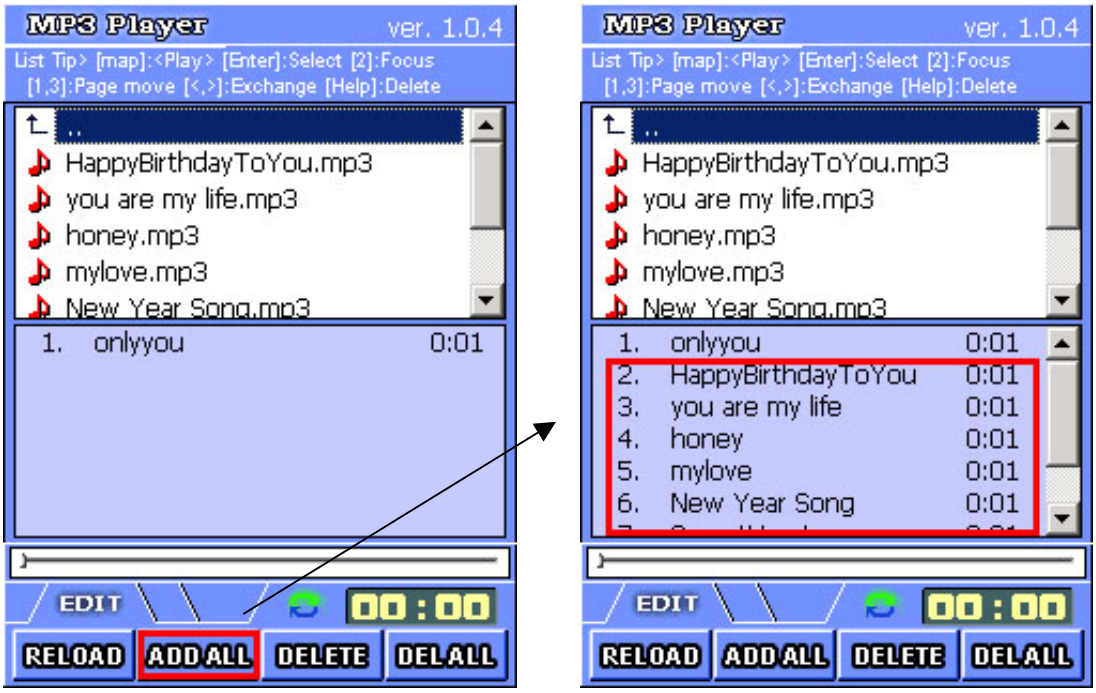
For adding the MP3 file in the File list to the Play list, move the select bar to the music and then press Enter key.



Tip) Onto List (File list, Play list) number of keypad 1, 3 keys functions Page Up, Page Down. In case of propriety use, you can make it move faster.

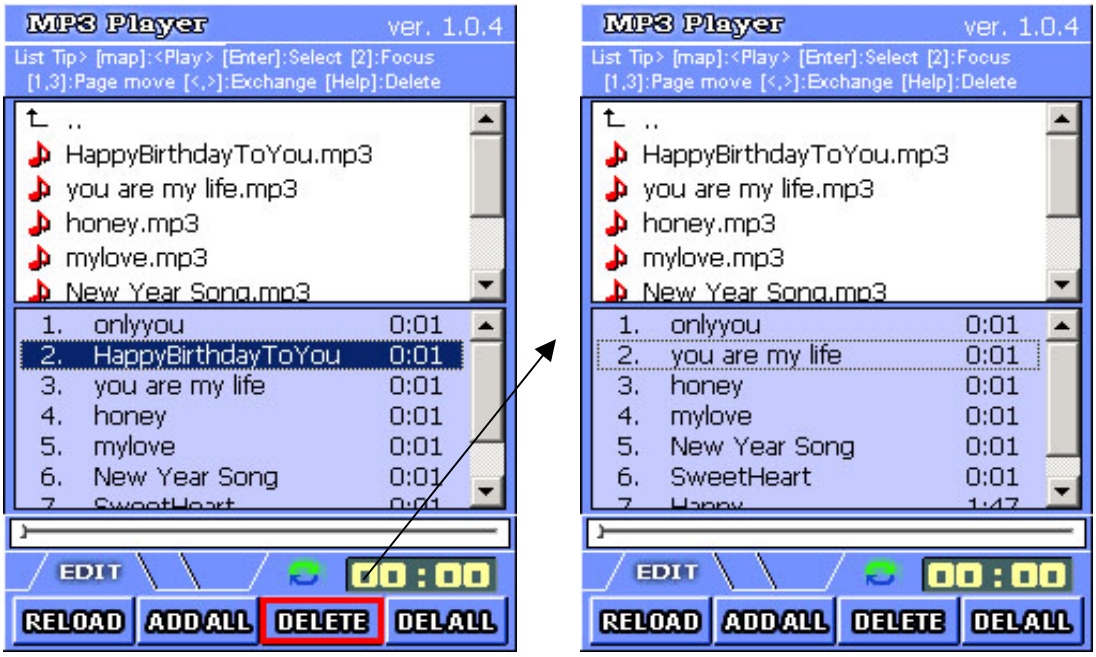
B-2-2. Select All Music Contents

If you like to add all music contents in current directory, press F2 (ADD ALL).



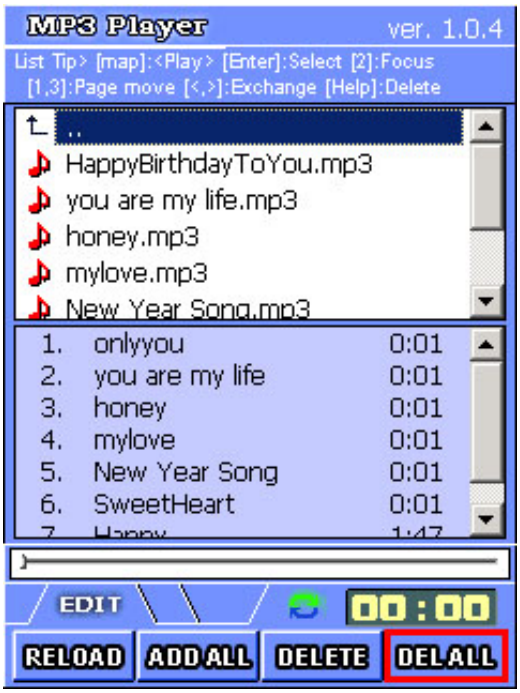
B-2-3. Delete Music Contents

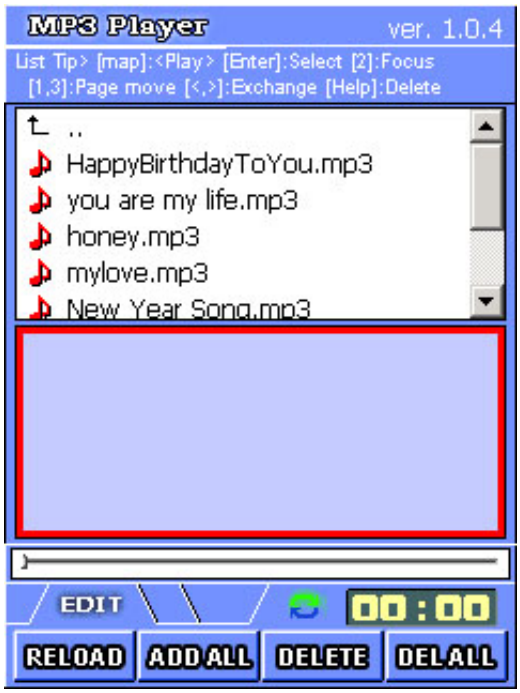
If you like to delete a certain music contents in the Play list, select the music contents in the play list and press F3(DELETE) to delete the music contents from the Play list



B-2-4. Delete All Music Contents

Press F4(DELETE ALL) key to delete all the music contents in the play list.



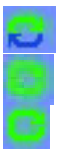


B-2-5. Play

After organizing your own Play list, you are ready to play music you want. Press **Map** (Select music) key to move onto **Play Mode**. In the Play Mode, press **F2** key to play the music contents you want.

- Once you started, the detail information of music contents, such as music title will be displayed on the Play list
- Press **F2** key to temporarily stop playing. Press **F2** key again to re-play.
- Press **F3** key to stop playing.
- Press **F1** key to play a previous music.
- Press **F4** key to play a next music.

Tip) Press **Drive** key to change the mode of Repeat Style. The different modes are explained below:



: Play all the music contents in the Play list from the first to end only once.

: Playing all the music contents again.

: Repeat function to play the music again.

Tip) Press **Left Arrow** key to change the order of music in the Play list. For example, the order of selected music will be replaced with previous music. Press **Right Arrow** key to replace the order of music contents with next music.

Tip) Press keypad no. 4, 6 keys to 10 seconds forward and backward the music contents playing.

Tip) Please refer the Tip section on top of MP3 player. In the Play Mode, you can refer Play Tip, and Edit Tip in the Edit mode.

B-2-6. Closing Mp3 Player

Press Cancel key to closing MP3 Player. (Able to close in both Play Mode, Edit Mode)

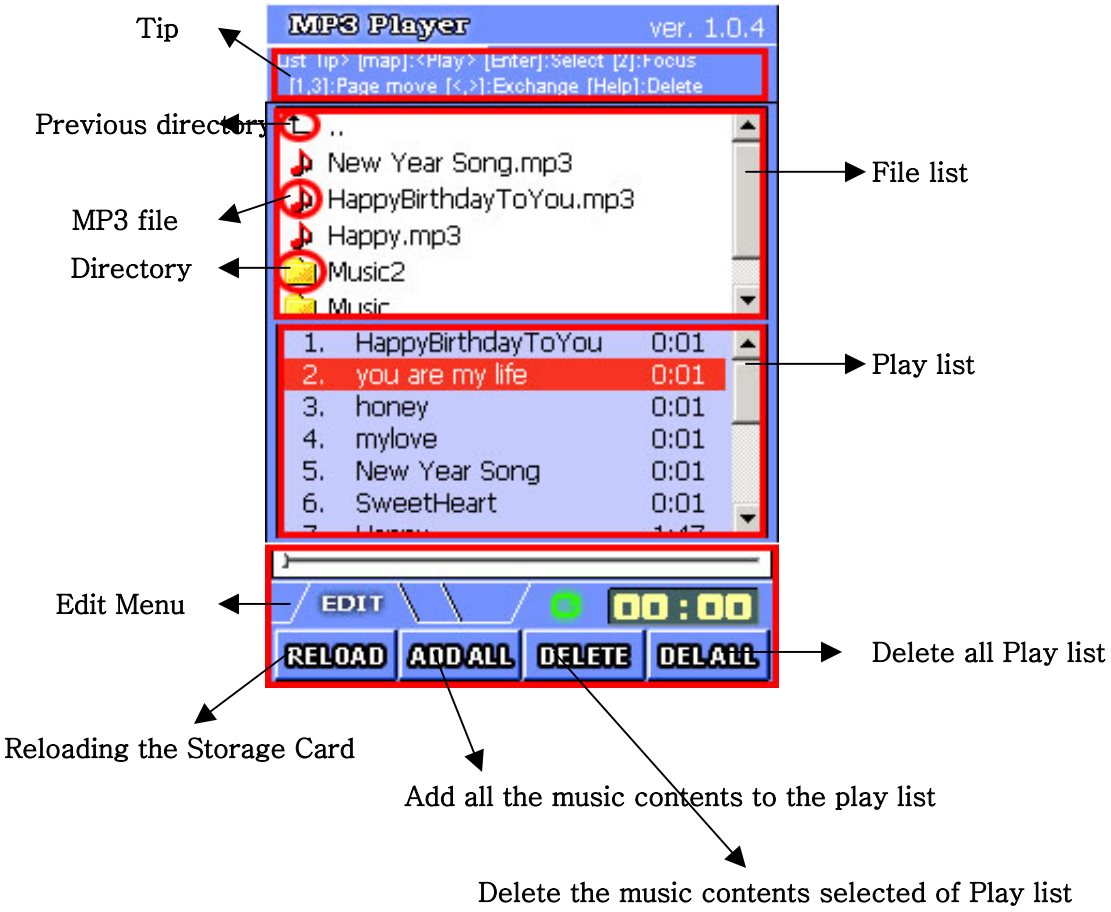
- Press F3 key, and select "Yes" to close MP3 Player.
- Press F4 key, and select "No" to move back to previous menu.

Tip) Press Menu key to see the menu list while in the MP3 Player mode.

B-2-7. Summary

- Play Mode

- Edit Mode


Tip
Previous directory
MP3 file
Directory
File list
Play list
Edit Menu
Delete all Play list
Reloading the Storage Card
Add all the music contents to the play list
Delete the music contents selected of Play list
MP3 Player
ver. 1.0.4
New Year Song.mp3
HappyBirthdayToYou.mp3
Happy.mp3
Music2
1. HappyBirthdayToYou 0:01
2. you are my life 0:01
3. honey 0:01
4. mylove 0:01
5. New Year Song 0:01
6. SweetHeart 0:01
EDIT
00 : 00
RELOAD
ADD ALL
DELETE
DEL ALL

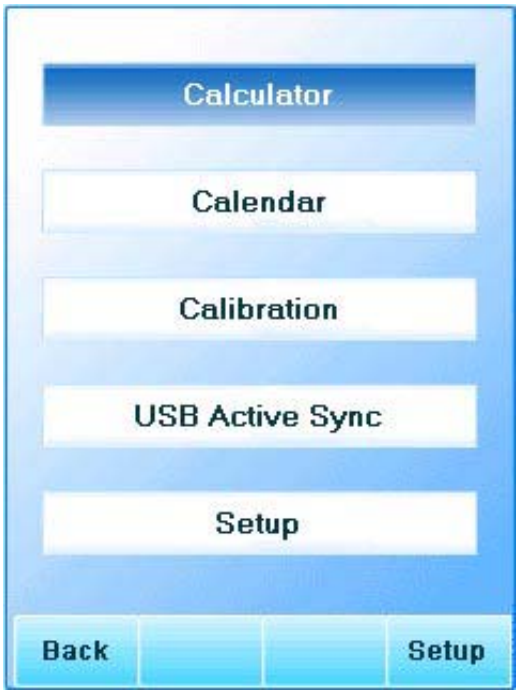
C. Voice Memo

In the Voice Memo, you can store and manage the voice as file after simply recording it.

C-1. Operation

If press Voice Memo key, will start.

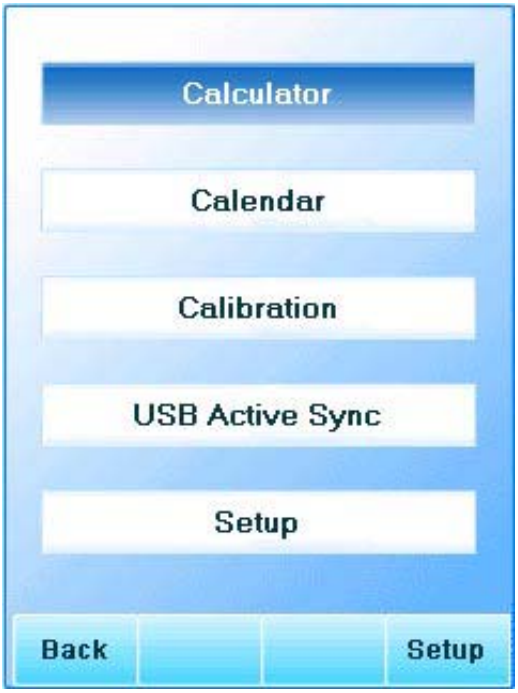
< Select Voice Memo >



<Initialized Voice Memo Screen>

C-2. Recording

Recording will start if press F1 key. Processing will be shown at the below menu. Press F1 key when hope to finish recording. The file just finished recording will be added to the file list when the recording is finished.

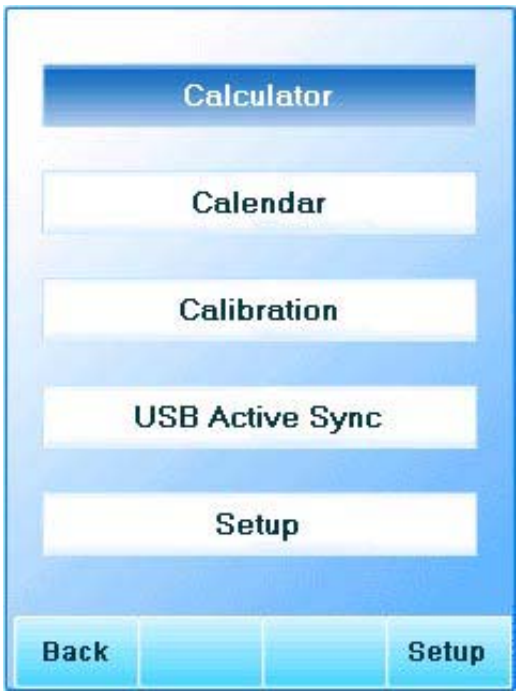


C. Listen to the record

When you want to listen to the recorded, press F3 key after move select bar to the wanted file.

It is possible to stop to press F3 during Listen the record for a little while.

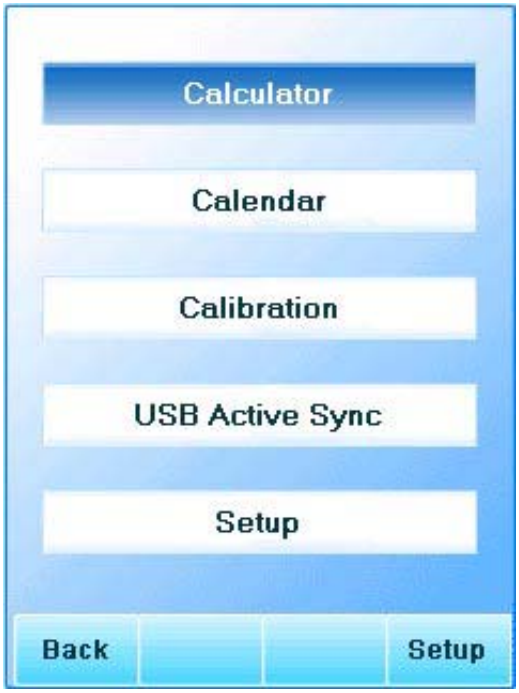
Pressing F3 key again, will start from the stop after.



C-3. Delete Recorded File

For continuous recording, delete old recorded file because it is limited size possible to recording.

When you want to delete recorded file, press F4 key after moving the select bar to the wanted file.

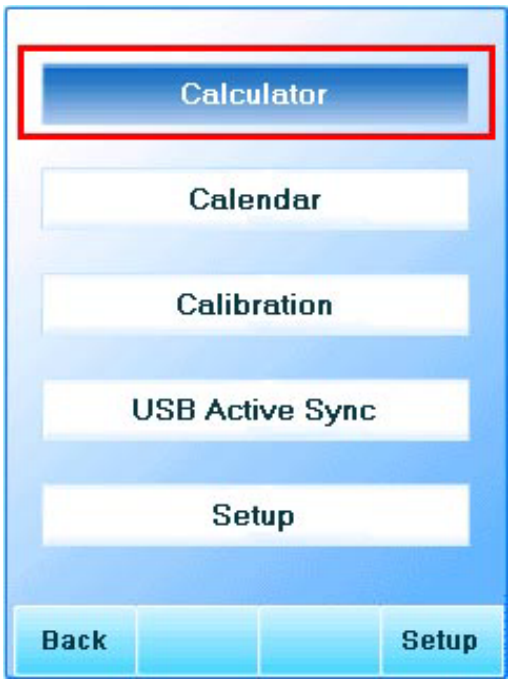


2-2-2. Instruction Utility Menu

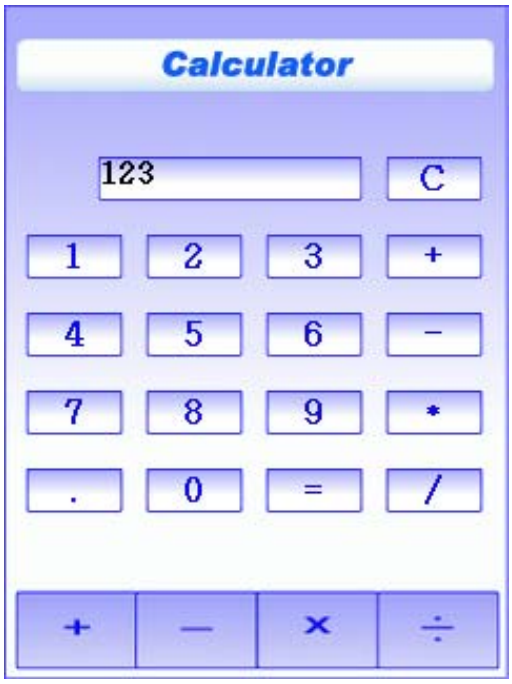
Press Utility menu to see the details.

A. CALCULATOR

In the Utility menu, you can have select Calculator bar.



< Select Calculator>



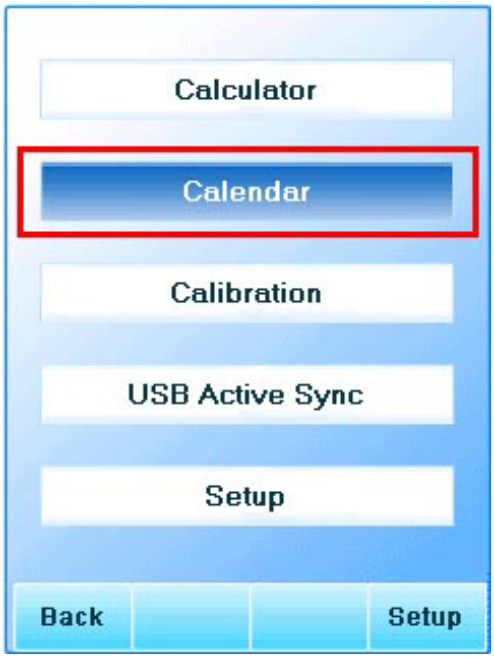
<Calculator>

The method will be basically same as normal calculator. The simple application is as below:

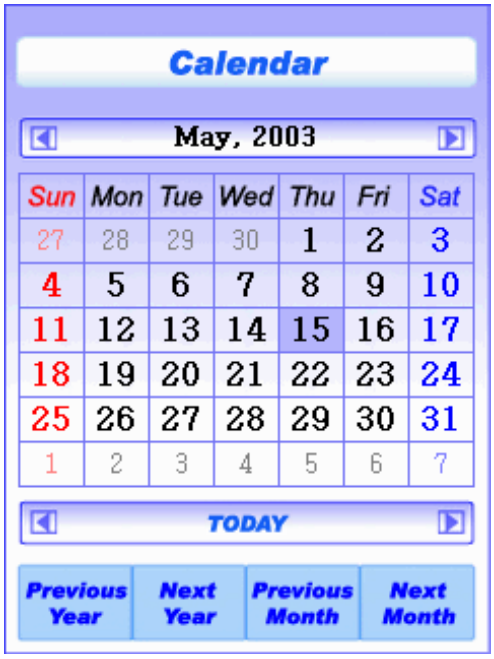
- After typing a figure, press four arithmetical operations(+, −, ×, ÷) to move on.
- Press **Enter** key to get a result.
- After calculation, press **Drive** key to reset.
- Press **Menu** to close the calculator, and display menu screen.

B. CALENDAR

In the Utility menu, you can have choice as Calendar.



< Select Calendar >



< Calendar >

The simple application is as below:.

- Add one additional year by pressing F1 key, 1 key(Numeric), and Arrow ↓ key respectively
- Minus one additional year by pressing F2 key, 3 key(Numeric), and Arrow ↑ key respectively.
- Add one additional month by pressing F3 key, 7 key(Numeric), and Arrow ← key respectively.
- Minus one additional year by pressing F4 key, 9 key(numeric), and Arrow → key respectively
- Move to the current date by pressing 5 key(Numeric).
- Press Menu key to close the Calendar, and display menu screen.

C. CALIBRATION (OPTIONAL)

- Modifying the setting of Touch Screen.

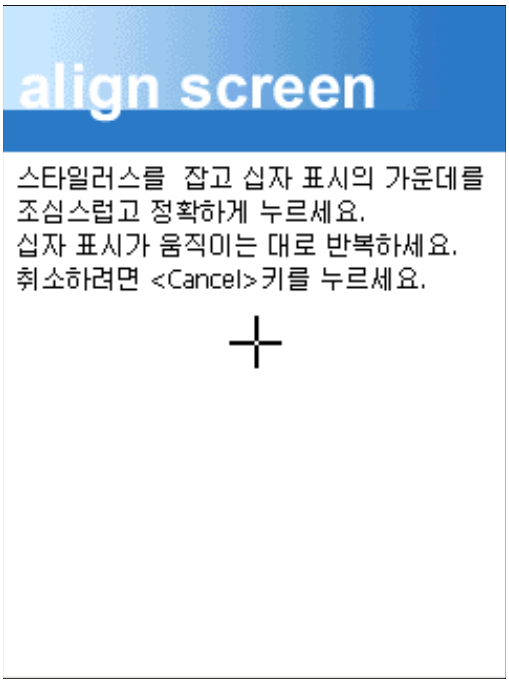
(Notify) This function is only available in the model supporting touch screen.

If you just buy this RoadRunner or operating the system in the Full Power Mode, it will be happen un-accurately.

For making it accurately, must operating Calibration. Once Calibration just 1 time, it will be working accurately even in case of Fat Power Off/On but

In the Utility menu, you can have a choice as Calibration.

< Select Calibration>



< Calibration >

As an instruction on the screen, accurately click the CROSS sign several times. The Calibration procedure will be completed shortly, and will ask you to save this new setting. If you apply this new setting, click the screen or press ENTER key within 10 seconds. If not, just wait for 10 seconds restore the previous setting.

D. USB ACTIVE SYNC

D-1. USB Active Sync

This product is possible to communicate with Computer using Active Sync. It means possible to move the RoadRunner's data to the computer or computer data to the RoadRunner. Using this function, update to new version Car Navigation software and updating MP3 player program, copy MP3 files to the RoadRunner.

Following process is drawn up based Windows XP. It is possible to install with same process in case of different operating system. But details of Installation or Operating process, the messages on the computer screen can be different with the drawing on the manual.

Microsoft Active Sync version finished testing by us is ver.3.7 and recommend to use the latest version consider operating environment.

D-2. Composition for Installation

Microsoft Active Sync Install file (MSASYNC.EXE)

RoadRunner device driver (wceusbsh.inf, wceusbsh.sys)

Microsoft Active Sync Install file can be downloaded the newest version of Active Sync install program at the below Microsoft home page.

http://www.microsoft.com/mobile/pocketpc/downloads

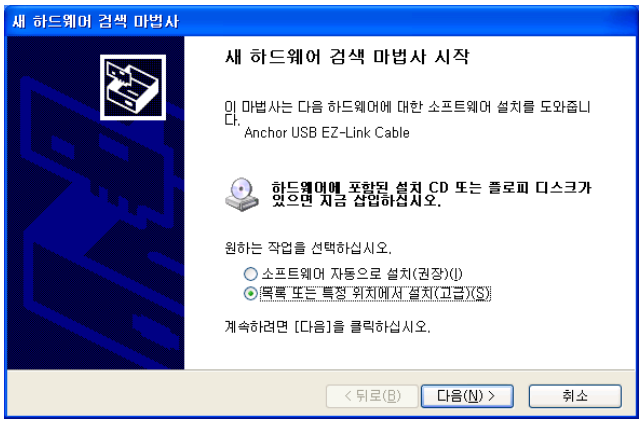
Also, RoadRunner device driver is in the CD we are supplying and possible to download from the following homepage in case of CD loss.

http://www.digitalsis.com

D-3. Install

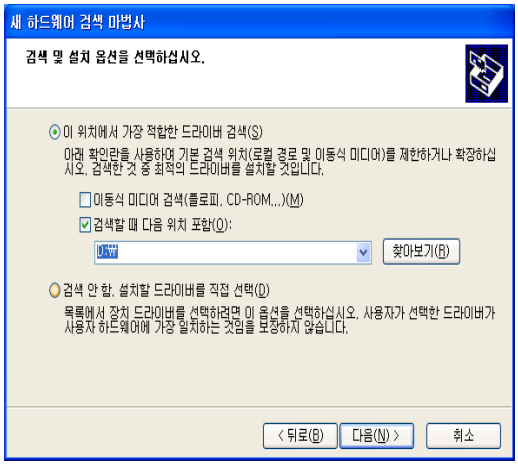
D-3-1. RoadRunner Device driver Instabll.

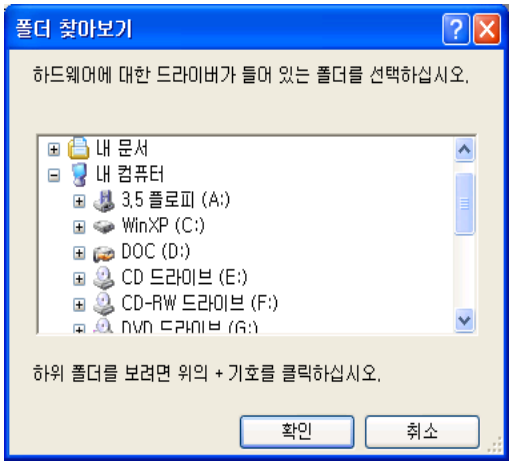
1) Power on the RoadRunner and connecting computer & RoadRunner with USB cable appears “Searching new hardware”. Select Install(High level) and press next key onto List or Select position.



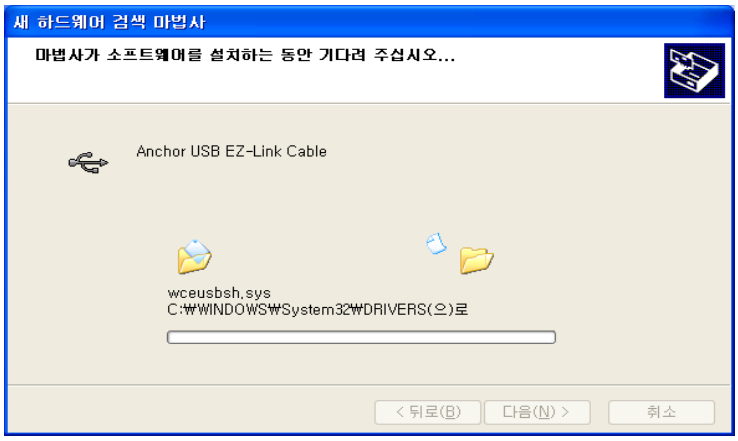
2) Press Searching select the path there is RoadRunner’s device driver.

If you have CD, select the location of CD or if you download due to lose, select the path the device drive exist.

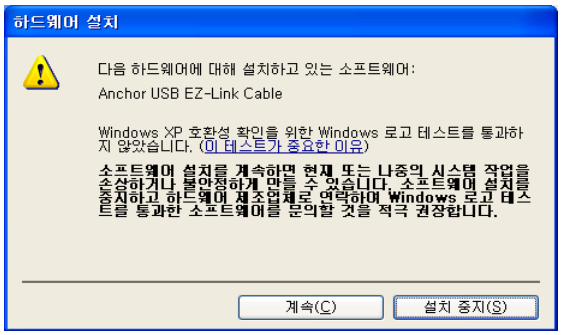




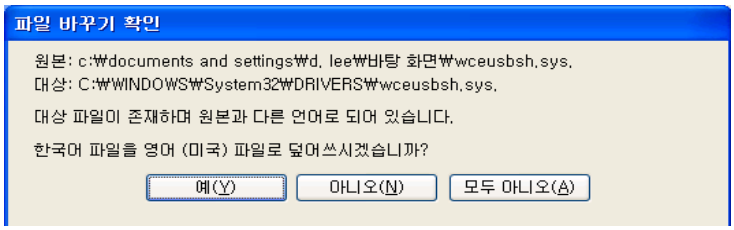
3) After select the path and press next, will install automatically device drive same as follow.



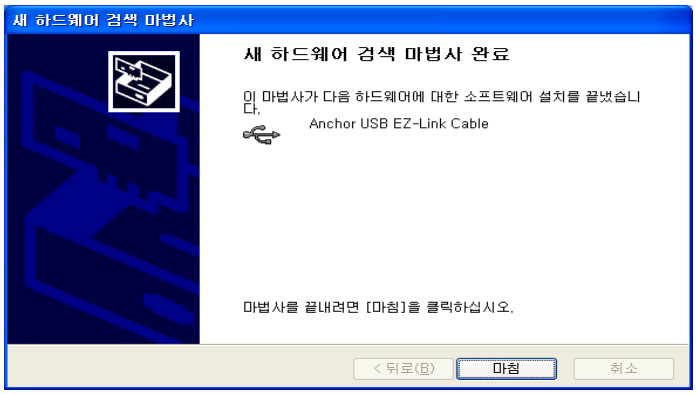
4) If the warning message, press 'continue' key.



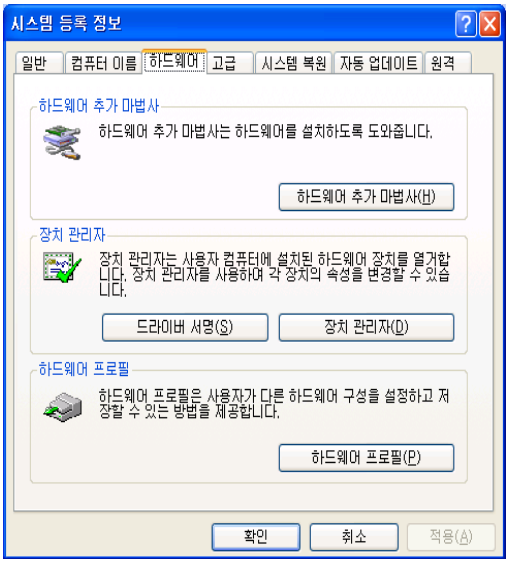
5) Press 'Yes' key when the message appears same as below.
(It will not appears depend on the user's computer condition)

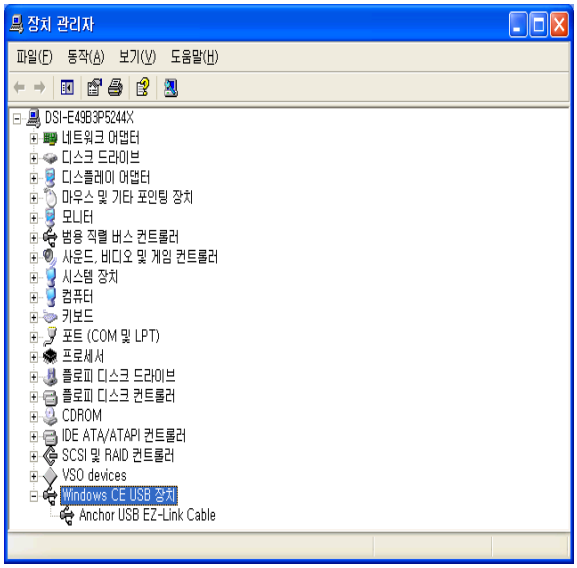


6) After adding new hardware and press ‘Finished’ will finish Install.



7) Once normally installed Controller → System → Construction Manager and can see following.

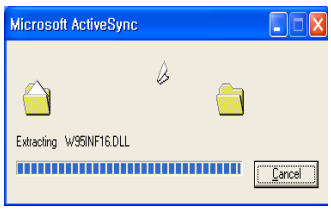


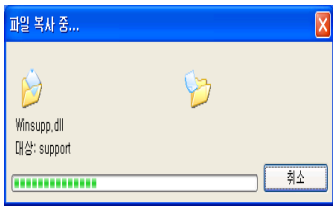


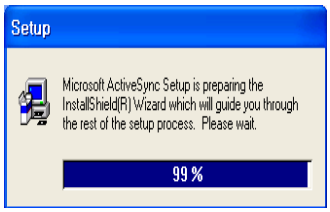
D-3-2. Install Active Sync

1) After power on the RoadRunner, connect Computer and RoadRunner using USB cable, operating the Active Sync install program.

2) If you operate Active Sync install program, will release the compression.



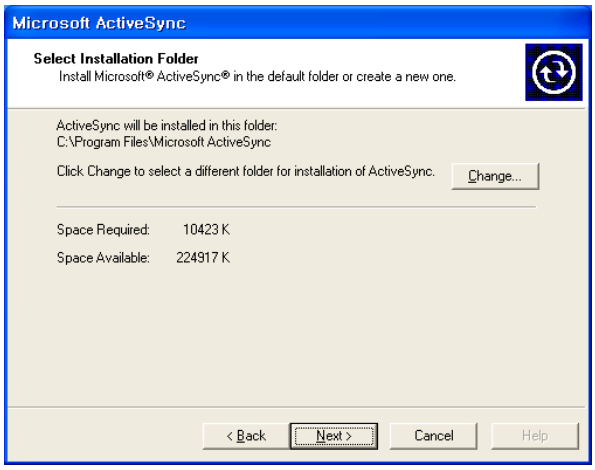




3) After release the compression, to go next step pressing the 'Next' key

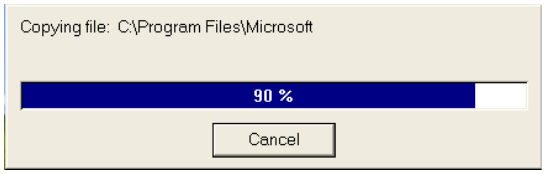
4) Set up Install folder, press 'Next, and go to next step.

You can change install folder this time.



5) Starting file copy. It will take long time at processing 91%.

Following window will be automatically disappeared after finishing install.



6) Following window will come out when you installed Active Sync without connecting USB cable. Selecting 'Cancel' and connect USB cable in advance. Operate Active Sync program again.

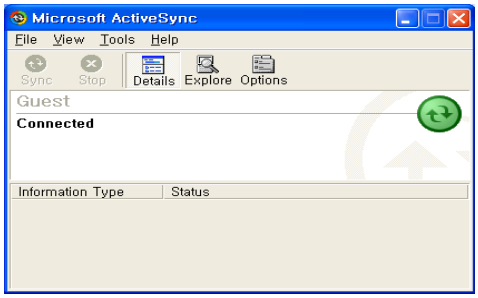
D-3-3. Active Sync Operating

If you select Active Sync onto Utility Menu, it appear “Connecting with Host” message.

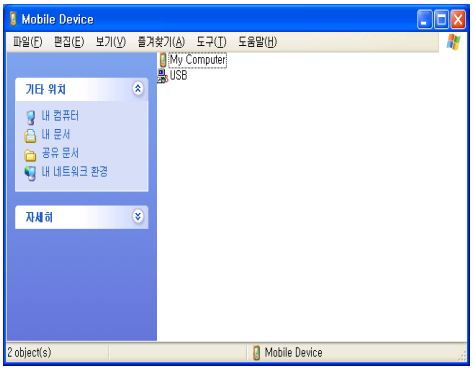
< USB Active Sync Selection >

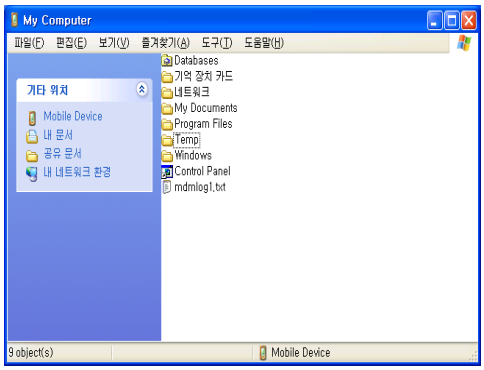
1) Connecting is succeed, sound will coming out and activated Active Sync program of Computer.

2) Right screen appears when select ‘No’ and press ‘Next’ onto partnership set up window.



3) When you press Explore, can see the contents of RoadRunner's directory.



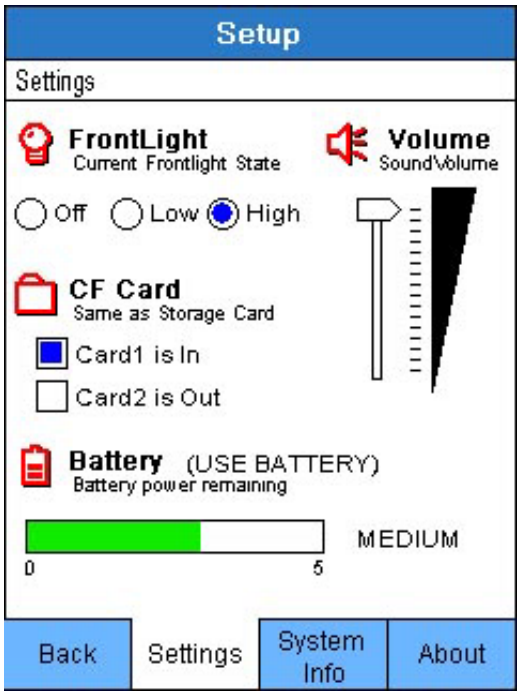


4) Error message at RoadRunner will be appeared when it failed connection. Then check the condition of USB cable connection. In case of continuous fail to connect, Reset the RoadRunner or Full Power Off. Then try again. Still it is failed rebooting the computer.

E. SETUP

If you select Setup on Utility Menu will go over to the Setup screen. Possible to see information related with RoadRunner's setting up.

< Select Setup >



< Setup Screen >

- There are 3 menus onto Setup. First screen is **Settings.**
- Onto the Set up window, possible to check or change the LCD Front-Light, Storage Card presence, Sound Volume, Battery Charging status.
- On **System Info** possible to get RoadRunner's System information.
- On **About** show you the rest information.
- Moving by pressing F2 ~ F4 key to each pages matching. (F2 – Settings, F3 – System Info, F4 – About)

3. SPECIFICATION

3-1. Main

DEVISION	SPECIFICATION
C P U	Intel StrongARM 206Mhz
MEMORY	8/16(Optional) Flash, 32/64(Optional) SDRAM
DISPLAY	3.5 inch 240x320 TFT 64K color LCD
STORAGE	2 CF card support
SOUND	16bit Stereo Sound/Stereo Jack support
SPEAKER	MAX.2W Mono Speaker (Car-Navi Voice Guide)
KEYPAD	4개의 Function Key / Alpaha-numeric key support Exclusive key support for Car-Navi (Menu/Map/Drive/Cancel/Enter/Map extend/reduction etc., support)
GPS	High capability 12 or 18 channel GPS Engine
ANTENNA	High sensitive Helical Active Antenna Support External Antenna connecting port (option)
BATTERTY	Lithium Polimer Rechargeable 3.7V ,2100mAH(Internal)
I/O Port	1USB port/ 1DC-IN /1 Serial(Option)/ 1 CF Slot / External Antenna Port/ 1 Stereo Audio Jack
CONTROL BUTTON	Volume up, down/ LCD Lighting Control button 1 reset button

3-2. Accessory

DIVISION	SPECIFICATION
AC ADAPTER	7.5V @1.1A AC 100 ~ 240V, 50/60Hz
CIGAR POWER JACK	For car 12V /24V Connecting Cable
CRADLE &	Cradle
ATTACHING TAPE	DualLock™ attaching/release 1000 times Tape : 1 time use
USB CABLE	PC-RoadRunner Connecting Cable
EXTERNAL ANTENNA CONNECTING CABLE	External Active Patch Antenna Connecting Cable / Connector : SMA

3-3. Battery Running & Charging Time

DIVISION	SPECIFICATION
<Running Time>	
GPS Satellite Receive	3 Hours
MP3 Playing	3 Hours
Utility/ Game	5 Hours
<Charging Time>	
Battery Charging Time	4-5 Hours

Notice: 1. Battery life is Charging/Discharging 500 times.
Running time will be reduced after running 500 times.
2. Battery life can be different depend on running temperature, life itself, user.
3. Recommend you to make possible to Battery charging with connecting Cigar jack cable when use it in the car.
Possible to go charging mode once you connect the Power because the Charging circuit is built in the Roadrunner.

3-4. Using Environment

DIVISION	SPECIFICATION
Temperature	-15 ~ 50C (keeping), -5 ~ 40C (running)
Humidity	5% ~90 %(keeping), 20 ~ 80 %(running)