GTV-380
User Manual

Version 1.0
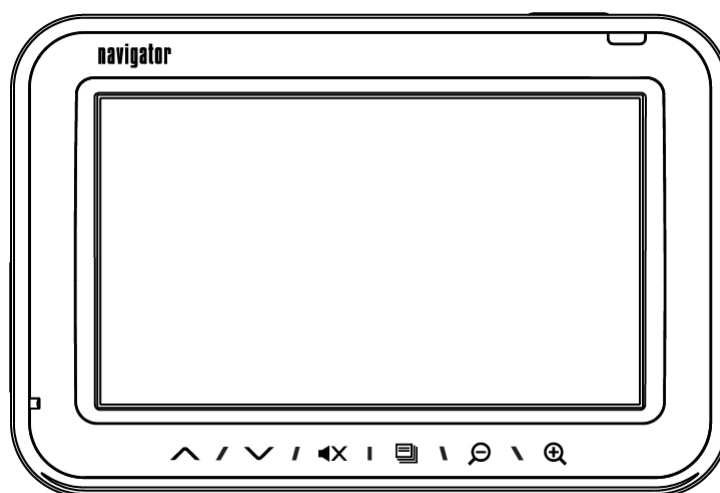
Table of Content

Chapter 1
Features and Specification

Features

- Complete car navigation solution in one box including car mount
- Simple touch-screen operation
- 4.3″ screen, 65536 colours, bright TFT LCD
- Smart and easy:
  - Attach, switch it on and go
  - Large Function icons design for easy touched
  - User-Friendly keypad
  - Clear, high quality voice-guided instruction
  - Powered by cigarette lighter or long-life rechargeable battery
  - Easy to be mounted and removed
- Built-in antenna; MMCX-type connector for optional external antenna
- SD storage card expansion slot
- Supports music playback function for "**wma**" file format.
- Supports photo view function for "**jpg**" file format.

Bluetooth
- Auto-Reply mode
- Profile: Headset/ HandsFree/ A2DP/ AVRCP/ OPP
- Phonebook download
- Music playback via Bluetooth

Digital TV
- Build-in EPG Functions（English、Germany、French、Italian、Spanish、Swedish、Finnish、Traditional Chinese）
- Support MTS and Subtitle (Base on Region)
- Support Auto Scan/ Manual Scan mode
- Mobility and Receivability

Specification

► System

| Electrical Characteristics	
Processor	Samsung S3C2440, 400MHz
OS	WinCE.NET 5.0
Flash Memory	Default 64 MB, can up to 2GB
SDRAM Memory	64MB
Memory Card Slot	SD/MMC
GPS	SiRF Star III , built-in 18x18 Patch Antenna
DISPALY	
Display	4.3", TFT LCD with Touch Screen
Pixels H*W	480*272 (WQVGA)
Display Type	COLOR TFT Transmissive
Color Number	65536 colors
Backlight Type	LED x 7
Brightness	Typ. 320 cd/m²
View Angle	50/55/60/60 (U/D/L/R)
Touch Panel	Resistive Type, 30% Haze film
AUDIO	
Internal Speaker	built-in Stereo Speaker, 1W / 8 ohm x 2
Earphone Jack	3.5 mm, Stereo Output
USB	
USB	Support USB 1.1, Mass Storage Driver
USB Connector	Mini USB
POWER SOURCE	
Car Charger	DC 5.0V / 2A
Power Switch	Slide Switch (Battery ON/OFF)
BATTERY	
Battery Cell Type	Built-in Lithium Polymer rechargeable Battery
Battery Capacity	2200mAh
Charging time	4 hours
Operation time	Up to 5 hours
Suspend time	180 hours
ANTENNA	
GPS Antenna Type	18 x 18 mm, Patch Antenna
External GPS Antenna	Active external antenna (MMCX)
Sensitivity	-159dB

KEY BUTTON	
Power	Press the power button to turn on the device, press it again to close any open windows and turn it off (enter a standby mode)
Reset	Use the stylus tip to press down the reset button through the hole to reset the system.
Battery Slide Switch	(ON/OFF switch) Slide to "OFF" to disable battery power supply to the system.
TOUCH PAD	
Touch PAD	support 6 Key with LED indicator
Zoom IN	Press Zoom In button to zoom in (Car Navigation Only)
Zoom Out	Press Zoom Out button to zoom out (Car Navigation Only)
Mute	Press Mute button to mute voice or resume voice
Volume UP	Volume up
Volume Down	Volume down
Menu	Press Menu button to go back to System menu
Mechanical	
Dimension	126.5mm(L) x 84.6mm(W) x 24mm(H)
Main Unit Weight	250g
DVBT Unit Weight	121g
Temperature	
Operating	0°C ~ 50°C
Storage	-20°C ~ 70°C
Humidity	Operational up to 95% non-condensing
Safety & EMI	
	FCC Approved, CE marked, BQB Approved
Bluetooth	
Chip	CSR, BC03 multimedia
Profile	Support: Headset / Handsfree / A2DP / AVRCP / OPP
Sensitivity	-75 dBm @0.1% BER
Accessory	
Car charger	5V / 2A
Travel charger	5V / 2A
DVBT IR remote	26 Key, Name Card Type
DVBT antenna	X 2, Length: 1.5m

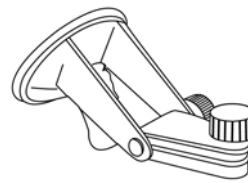| DVBT	
Tuner	Built-in Dual Tuner, EPG Function Support
Channel Frequency	UHF / VHF (470~862 MHz / 174~230 MHz)
Channel Band Width	6 / 7 / 8 MHz
Demodulation	COFDM with 2K / 8K FFT
Receive Sensitivity	-85 dBm
IR Remote Control	26 Key

► GPS Specification

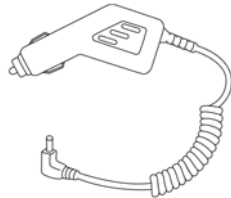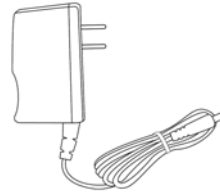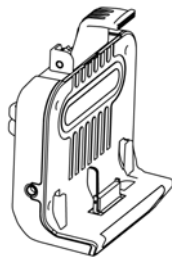| Electrical Characteristics	
GPS Chipset	SiRF Star III
Frequency	L1, 1575.42 MHz
C/A Code	1.023 MHz chip rate
Channels	20 channel all-in-view tracking
ACCURACY	
Position Horizontal	10 meters, 2D RMS 1-5 meters 2D RMS, WAAS corrected
Velocity	0.1m/sec
Time	1 micro-second synchronized to GPS time
DATUM	
Datum	Default: WGS-84
ACQUISITION RATE	
Hot start	1 sec., average
Warm start	38 sec., average
Cold start	42 sec., average
Reacquisition	0.1 sec. average
PROTOCOL	
GPS Protocol	Default: NMEA 0183 (Secondary: SiRF binary)
GPS Output format	GGA(1sec), GSA(1sec), GSV(5sec), RMC(1sec), GLL, VTG is optional
DYNAMIC CONDITION	
Acceleration Limit	Less than 4g
Altitude Limit	18,000 meters (60,000 feet) max.
Velocity Limit	515 meters/sec. (1,000 knots) max.
Jerk Limit	20 m/sec**3

Accessories
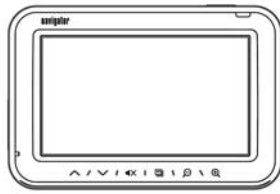
|	
GTV-380 Main Unit	Mount
DC charger	AC adapter
DVB-T module	USB cable
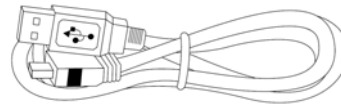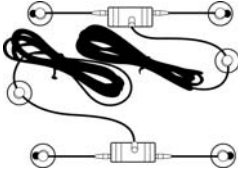
|	
CD or DVD (user manual, driver, Application, map data…)	SD card (optional)
Quick Guide	Remote control
DVB-T Antenna	

Note:

1. If any item is missing or damaged, please contact with your local retailer.
2. DVB-T antenna graphical representation meets and the material object differs from, please take actual attach the antenna as
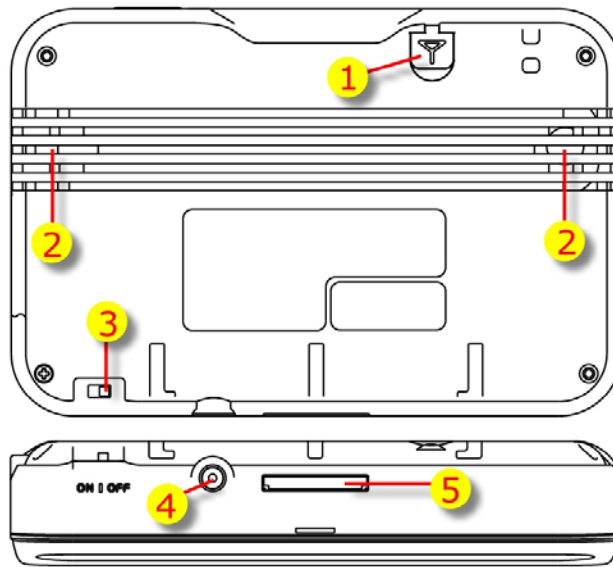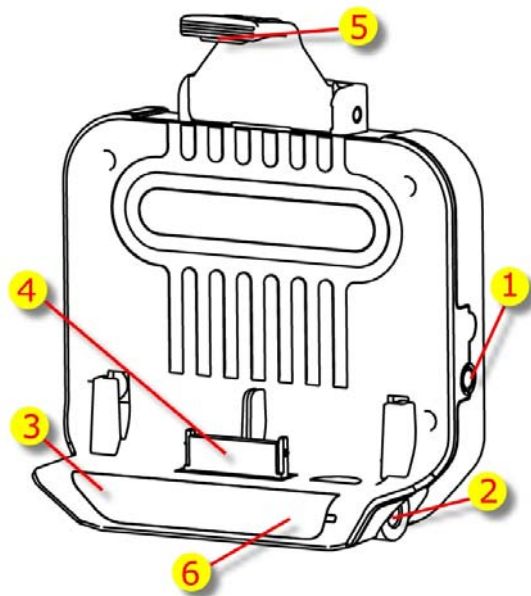
Overview
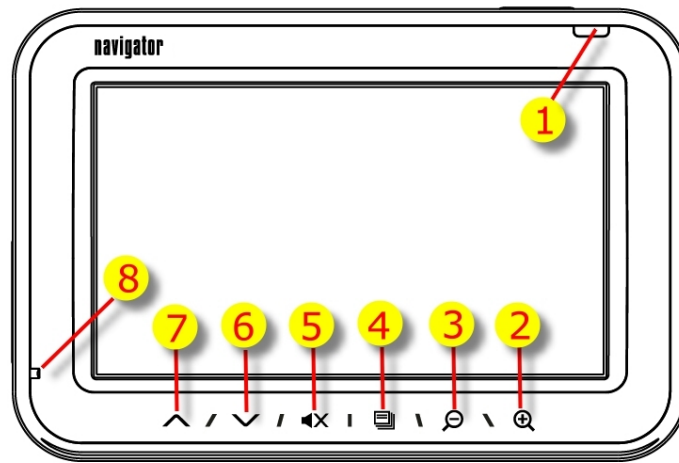
Front View		
❶	Power LED	Solid Red – Battery is lower than 40%. Solid Amber – Battery is being charged. Solid Green – Battery full charged.
❷	Zoom in	Zoom in button. (For Car Navigation Only)
❸	Zoom out	Zoom out button. (For Car Navigation Only)
❹	Menu button	Press the Menu button to go directly to Main Menu of the application.
❺	Mute	Press to mute the audio, press again to resume.
❻	Volume down	Volume down button.
❼	Volume up	Volume up button.
❽	Microphone	Microphone is enabled when you connect GTV-380 with your Bluetooth cell phone.
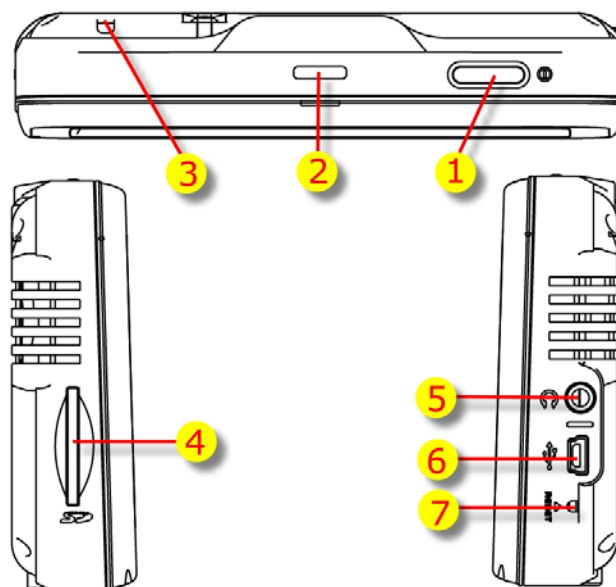
Side View and Top View		
❶	Power button	Press the **Power** button to turn on the GTV-380, press it again to turn it off (enter the standby mode).
❷	Clip groove	For the cradle to clip tight to the main unit.
❸	Lanyard Hook	For you to attach a hand cord to the main unit.
❹	SD card slot	The Navigation software, map data and other media files can be stored in the SD card.
❺	Earphone jack	Plug the earphone or headset to the socket, you can listen to the navigation voice guide or enjoy your favorite music.
❻	Mini USB port	Connect the GTV-380 to PC via an USB cable for data transfer.
❼	Reset button	Use the stylus tip to press down the reset button through the hole to reset the system.

Bottom View and Rear View		
❶	External Antenna connector	For you to connect an optional MMCX-type external antenna.
❷	Speaker	For output the music or navigation voice.
❸	Battery Slide Switch	Slide the switch to "OFF" position to prevent from accidentally turning on the device by touching the power button. If you want to use this device, be sure to slide the switch to the "ON" position. ① The purpose of the **Battery Slide Switch** is to cut off power to the unit. It is used to disable the unit in transit from the factory and if the unit will be in storage for long periods of time. Be sure that the switch is in the "ON" position when you remove the unit from the box. The GTV-380 will **NOT** charge if the switch is in the "OFF" position.
❹	Charging connector	For power supply and battery charging.
❺	Docking connector	Docking connector for DVB-T module.

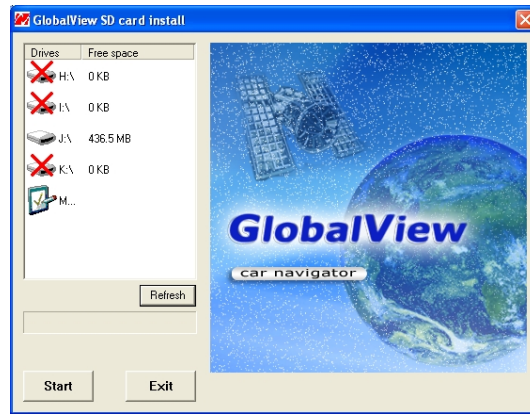| DVB-T module		
❶	DVB-T Antenna connector	For you to connect to DVB-T antenna. (on both sides)
❷	Charging connector	For power supply and battery charging.
❸	Infrared sensor	Infrared sensor for receiving signal from remote control.
❹	Docking connector	Docking connector for DVB-T module.
❺	Clip hook	For clip into the groove of the main unit.
❻	DVB-T LED	The blue LED will light when DVB-T function is operating.

Chapter 2
Getting Started

Before you start to use the GTV-380, please connect it with the AC adapter and plug to power socket for battery charging. When it is in charging, the status indicator will be amber. If the battery is fully charged, the status indicator will be lit on green.

## Download Application Software to memory card by card reader

Insert the SD card into your card reader which is connected to your PC. Insert the CD/DVD into the CD/DVD-ROM drive; the installation program will automatically start. (If your autorun feature is disabled, please manually execute this program by double click the **"auto.exe"** from the root directory of CD/DVD.) Click **"Make System Disk"** button for downloading the application and map into SD card.

Click on the drive letter which your SD card is inserted, and click on "**Start**" button. After the download process is finished, please remove the SD card from card reader, insert it into your GTV-380 and restart it.

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Attach GTV-380 to Cradle (DVB-T module)

Release
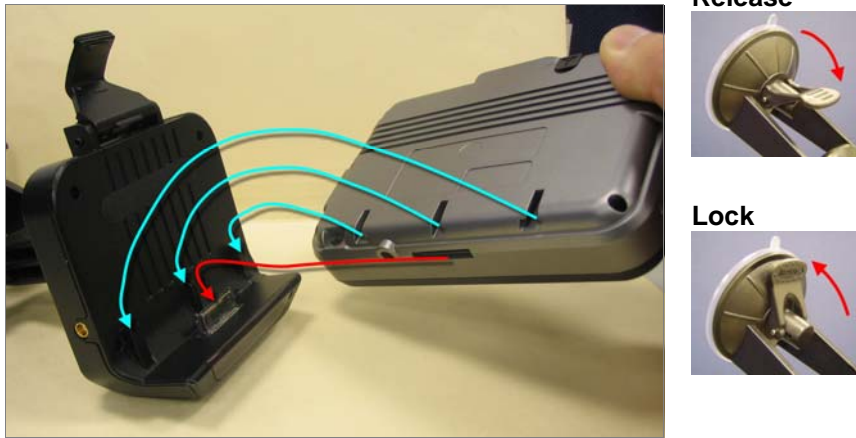
Lock

1. Place the GTV-380 at a downward angle into the base of the cradle.

2. Align three grooves and docking connector to push down GV-388 inward until the top clip locks into place.

3. Clean windshield glass thoroughly with glass cleaner.

4. Moisten suction cup and attach mount to the windshield.

5. Lock mount lever by moving forward.

- To release, bring lever back and pull on the suction cup's clear tab to release suction. Never pull on mounting arm to remove from glass.

- It is suggested that you attach the mount in the appropriate place in your car. Do not mount in front of an airbag panel, or block the driver's vision.

Charging your GTV-380
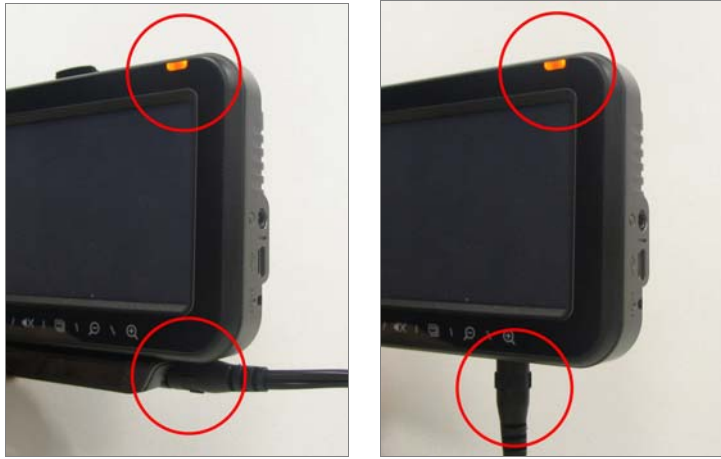
Plug the end of AC adapter or DC charger into the charging connector of GTV-380 or DVB-T module. The power LED will light. When battery is fully charged, the LED becomes green.
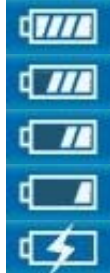
Chapter 3
Software Application

Main Screen

Main Screen
● Tap on the **Navigation** icon to start the Navigation application.
● Tap on the **TV** icon to start the **DVBT** function.
● Tap on the **HandsFree** icon to start the Bluetooth HandsFree application.
● Tap on the **Media** icon to enter the sub-screen which contains the music player and photo viewer.
● Tap on the **Setup** icon to enter the sub-screen which you can do the settings of the device.
● Tap on the date and time on top right corner of screen; it enters the date and time adjustment screen.
● Battery capacity is 75%~100%. Battery capacity is 50%~75%. Battery capacity is 25%~50%. Battery capacity is below 25%. AC adapter is connecting to the device. Tap on the battery icon on top right corner of screen; it enters the power setting screen.

Media Mode

Media Screen
● Tap on the **Music** icon to start the music player.
● Tap on the **Photo** icon to start the photo viewer.
Go back to Main Screen.

Music Player

Music Player	
●	In the center of screen, it shows the music title, the timer and the total length of this music.
	Tap this button to play the next song.
	Tap this button to play the current song.
	Tap this button to pause the playing.
	Tap this button to play the previous song.
	Tap this button to stop the playing.
	Sequentially play the songs from playing list.
	Randomly play the songs from playing list.
	Play all songs form playing list once and then stop playing.
	Continuously play the songs from playing list without stop.
	Edit the playing list.
	Go back to Media Screen.

Edit Playing list

●	Music Player will search for the "Music" folder of the SD card for all music files and display them on screen. Tap directly on the file name of the song to add or remove it from playing list. The song has been added to the list becomes blue. The song has been removed from the list becomes black.
	Use up or down arrow buttons to highlight the song. Tap this button to add this song to playing list.
	Use up or down arrow buttons to highlight the song. Tap this button to remove this song from playing list.
	Tap this button to add all songs to the list.
	Tap this button to remove all songs from the list.
	When you are done with the editing, tap this button to save and go back to Music Player screen.
	Tap this button to cancel editing and go back to Music Player screen.

Photo Viewer

Photo Viewer
● Photo Viewer will search for the "Photo" folder of the SD card for all supported image files and display in thumbnail mode. Use up or down arrow buttons to scroll the page.
Tap to select an image and tap the **Full Screen** button on left side to view this image in full screen.
Go back to Media Screen.

Full Screen mode
● Tap up or down arrow buttons on the right side to view previous or next image.
Tap the close button on left top corner to end full screen mode.

Setup Mode

Setup Screen
● The details of these setup programs will be described in following pages.
Go back to Main Screen.
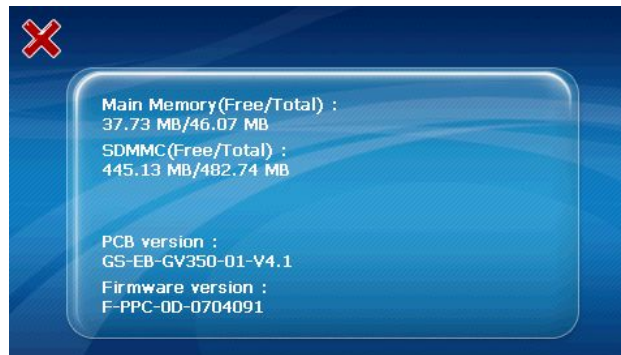
System Information
● Display the Flash memory capacity, SD card capacity, the PCB version and the firmware version information.
Go back to Setup Screen.

Power	
●	Display remaining capacity of battery power. When AC adapter is connected to the device for charging, the battery icon will flash from right to left
●	The auto shut down function is only valid when GV-388 is not connected to external power. If it is connected to the AC adapter, the system will not be shut down even if you have checked this setting.
	Cancel and go back to Setup Screen.
	Save the setting you made and go back to Setup Screen.
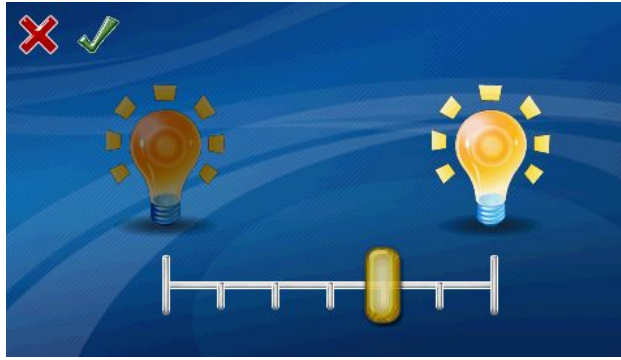
Brightness
● You can change the backlight brightness by tapping on the two bulb icons. Tap the left bulb to make the screen darker, or the right bulb to make the screen brighter.
● The backlight brightness has 0~6 levels from left to right. The default is set to the 4th level.
❌ Cancel and go back to Setup Screen.
✅ Save the setting you made and go back to Setup Screen.

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	Regional Setting
●	Setup the **time** and **date** of your local area.
●	Select the User Interface **Language** and make sure your local **Timezone** is correctly set.
✖	Cancel and go back to Setup Screen.
✔	Save the setting you made and go back to Setup Screen.
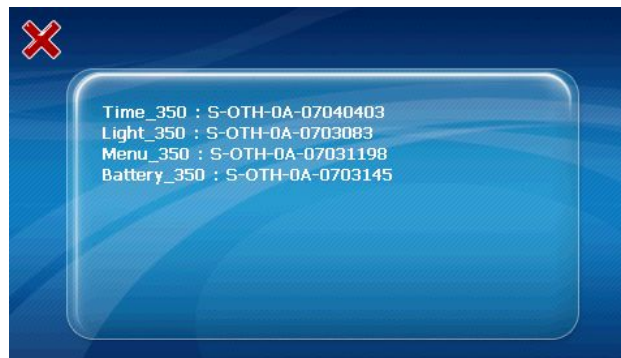
	About
●	Display the program version information.
✖	Go back to Setup Screen.

```
Carefully press and briefly hold stylus
on the center of the target.
Repeat as the target moves around the screen.


                    +
```

```
New calibration settings have been measured.
Tap the screen to register saved data.

Wait for 30 seconds to cancel saved data and
keep the current setting.



Time limit : 29 sec
```

Screen

●   Run the screen calibration program. Press and hold the stylus on the center of the target. Repeat on four corners.

When the new calibration is done, tap the screen to save the setting or wait for 30 seconds to cancel the calibration.

Chapter 4
Bluetooth HandsFree

Bluetooth main screen

HandsFree	
	Phone Dialer: Tap on this button, GTV-380 will search and connect to the previous paired HandsFree device. After connection is established, it enters Phone Dialer mode.
	Phone Book: Tap on this button, GTV-380 will search and connect to the previous paired HandsFree device. After connection is established, it enters Phone Book mode.
	Tap on this button to activate the Bluetooth function and automatically search and connect to the previous paired HandsFree device. If connection is established, you will see the device name shown on the right upper corner of screen. Tap on this button again to disable the Bluetooth function.
	Tap on this button to enter device list screen. You can select a device to connect A2DP/AVRCP profile. If connection is established, it shows the A2DP screen.
	Tap on this button to enter the Bluetooth setup mode.
	Go back to Main Screen.

Phone Dialer			
	Backspace button		Call record
	Dial button		Phone book
	Go back to HandsFree Screen.		
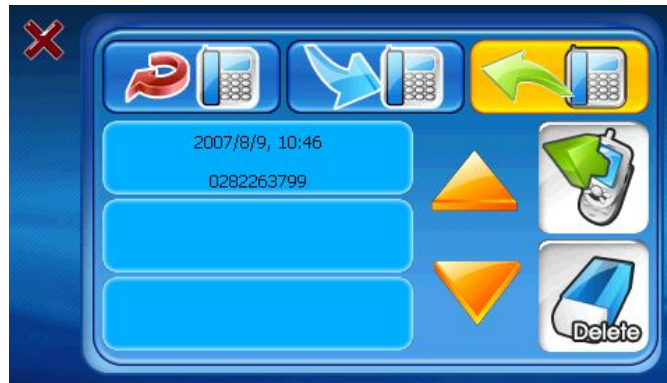
Call Record

	Display the missed call.		Dial button
	Display the received call.		Delete record
	Display the dialed call.		Go back to Setup Screen.

Talking mode

	Press this button to mute your voice. The other party could not hear your voice. Tap it again to resume.		Press this button to hang up the phone.
	Press this button to show the extension number input screen.		Press this button to switch calling source between cell phone and GTV-380.

Setup	
	Search Device: Tap on this button to search the Bluetooth device nearby. Up to 10 devices can be searched. If pairing process is finished, it returns to Main screen. If pairing process is failed, it returns to Pin Code screen. Up to 4 Bluetooth paired devices can be stored in the list of PND.
	Device List: Tap on this button to enter the device list. Select the device to connect to Handsfree profile. If connection is established, it returns to Main screen. If the Bluetooth device you select does not support Handsfree, you will see a warning message on screen.
	Set PND Name: Tap on this button to set the PND name.
	Version: Tap on this button to display the hardware and software version of Bluetooth module
	Reset: Tap on this button to enter Reset mode.
	Go back to HandsFree Screen.
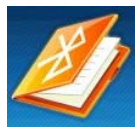
Device List

●	Up to 4 Bluetooth paired devices can be stored in the device list. You can select a Bluetooth device from this list. The selected device will be highlight.
	Connect: Connect to the selected device and go back to main screen. If the Bluetooth device you select does not support Handsfree, you will see a warning message on screen.
	Delete: Delete the device from list.
	Go back to Setup Screen.
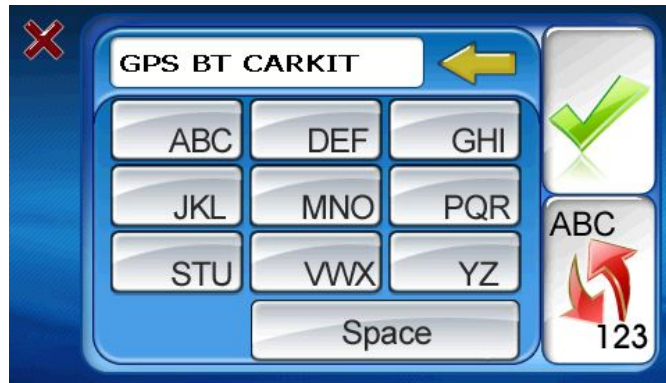
	Set PND Name
●	The default name of the PND is "GPS BT Carkit". You can change it as your wish.
	When you finish editing, press this button to confirm.
	Press this button to switch between alphabetical and numerical keypad.
	Backspace key to delete from the last character.
	Go back to Setup Screen.

Version info	
●	Display the hardware and software version of Bluetooth module.
	Go back to Setup Screen.

Reset	
	Default: Restore the factory default settings of Bluetooth.
	Clean Phone Book: Clean the phone book data which downloaded from you Bluetooth cell phone.
	Auto-Reply Setup, Default: 10 sec
	Go back to Setup Screen.

Search and connect to your Bluetooth phone

Tap on Setup icon to enter Setup mode.

Tap on Search Device icon to search your Bluetooth cell phone.
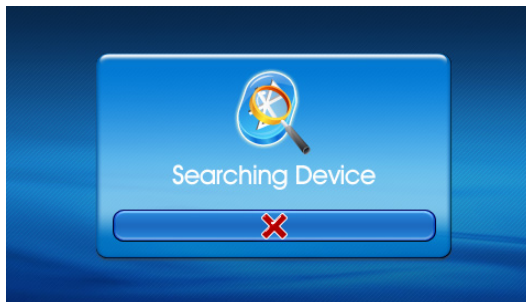
GTV-380 begins to search the device.
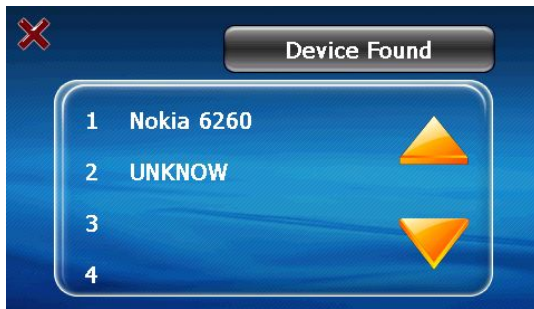
The found device is shown on the list. Tap on the device you want to connect with.

If connection is established, the name of the connected device will appear on the upper right corner of screen.

Answer or hang up a incoming call
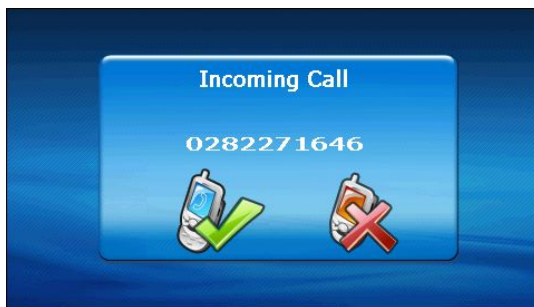
When you receive a incoming call, you can press the left icon to accept the call or press the right icon to refuse and hang up the call.

Make a call

Tap on the Phone Dialer icon.

The dialing screen appears. Input the number and tap on Dial button.
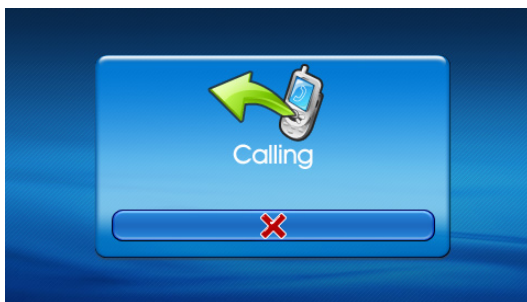
The dialing screen appears.
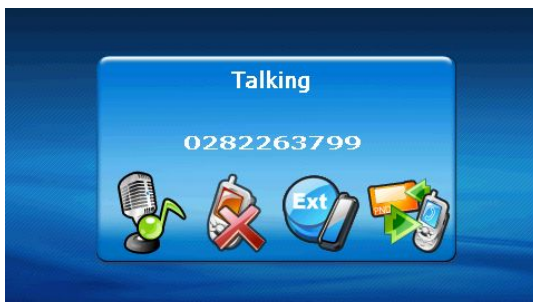
Phone call is established.

Bluetooth Stereo Playback

Tap on the Stereo Playback icon, and then select your device from device list.
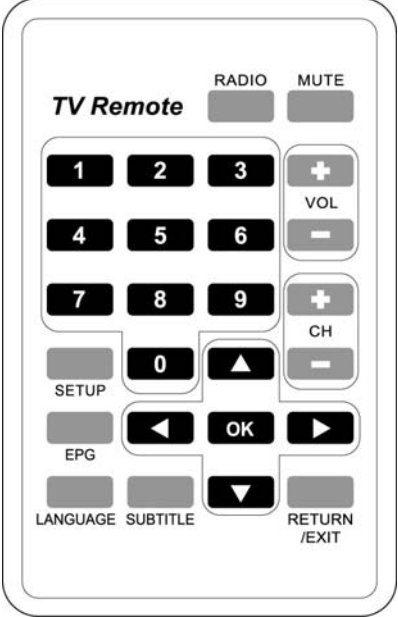
If connection is established, it shows the A2DP screen. You can play, pause or stop music from screen buttons. Buttons for Next and Previous are also supported.

Chapter 5 DVB-T

DVB-T

DVB-T is the abbreviation of **Digital Video Broadcasting - Terrestrial**. It is a broadcast transmission standard for digital terrestrial television mainly used in European area.

Remote Control

	RADIO	Switch to Radio channel, press it again to resume TV mode.
	MUTE	Mute the volume output. Press it again to resume.
	VOL +	Volume up
	VOL -	Volume down
	CH +	Channel up
	CH -	Channel down
	OK	Confirm for selecting item.
	RETURN/ EXIT	Return to previous channel or Exit.
	SETUP	Enter Setup mode.
	EPG	Electronic Program Guide
	LANGUAGE	Switch language
	SUBTITLE	Switch subtitle
	NUMERIC KEY	For input the channel number

Enter TV Mode

- If you want to watch TV program, you have to attach GTV-380 main unit onto DVB-T module and plug in the charging adapter.
- Tap on TV icon, GTV-380 begins to search

- While you are in TV mode, you can touch anywhere on screen to display the OSD (On Screen Display) menu.
- If there is no touch action within 3 seconds, the OSD menu will disappear automatically.
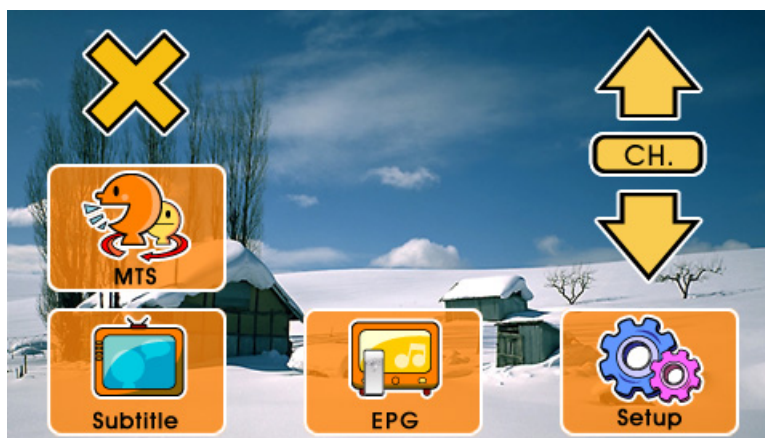
Main Setup screen		
	Close and back to previous screen.	Enter Electronic Program Guide.
	Enter Multichannel television sound.	Enter Setup screen.
	Select subtitle language.	Switch channel.

- If your TV program supports Multichannel television sound, you can choose to listen the different language or audio.

- You can choose to display a different subtitle if the TV program supports this function.

- Tap on the up or down arrow icon to switch channel. The channel information will display for seconds and disappear automatically.

- EPG displays the program title, descriptive information and the time schedule of previous and next program.

Setup screen

- Display the related information of the program.

- Select your country location.
- Select the OSD language.

- Automatically search the channel of your local area.
- Manually search the channel signal.

- Select from the TV program list or Radio program list.

- Reset the system to Factory default.
  Tap on [✓] to confirm.
  Tap on [✗] to Cancel.
- Display system version information.

Chapter 6 Troubleshooting

If the GTV-380 does not boot up successfully or does not function properly

1. Please check if the **Application software** is properly installed in the SD memory card.
2. Please check if the **SD memory card** is inserted into the SD expansion slot.
3. Please check the **battery power**. (The red light indicates the battery power is low and needs to be charged. The amber light indicates that it is in charging status, and the green light will be on when the battery is fully charged.)
4. Perform the "**Reset**" to restart the device.

Reset

If your GTV-380 is down or it encounters an unexpected error, you can reset it. You will need to use a stylus or pencil to press the reset button. Pressing the reset button will restart the system retaining all the information stored on the device.

ⓘ	If your car windows equipped with Window Films for reducing heat and blocking the harmful UV rays, it may also slightly affect the receiving of GPS signal. Thus, the cold start time will take longer then usual.
ⓘ	If the car is moving, it may also affect the time for GPS fix. We suggest that you stop the car while you turn on the GTV-380 for a quicker GPS fix time.
ⓘ	Please avoid excessive heat and humidity. Please do not leave the GTV-380 in your car under the direct sunshine with windows closed. Place it in a high temperature environment may damage its LCD display or the device.

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Safely Remove Hardware

Before you remove the memory card from the card reader, or before you unplug the USB cable from the device or USB port, please safely remove the hardware by the following processes:

1. Double click the "**Safely Remove Hardware**" icon from the task bar on the right bottom corner of desktop.
2. Select the hardware device and then click the "**Stop**" button.
3. Confirm by selecting the device again and click "**OK**" button.
4. When you see a message showing "**Safe To Remove Hardware**" on desktop, then you can remove the memory card or unplug the USB cable.
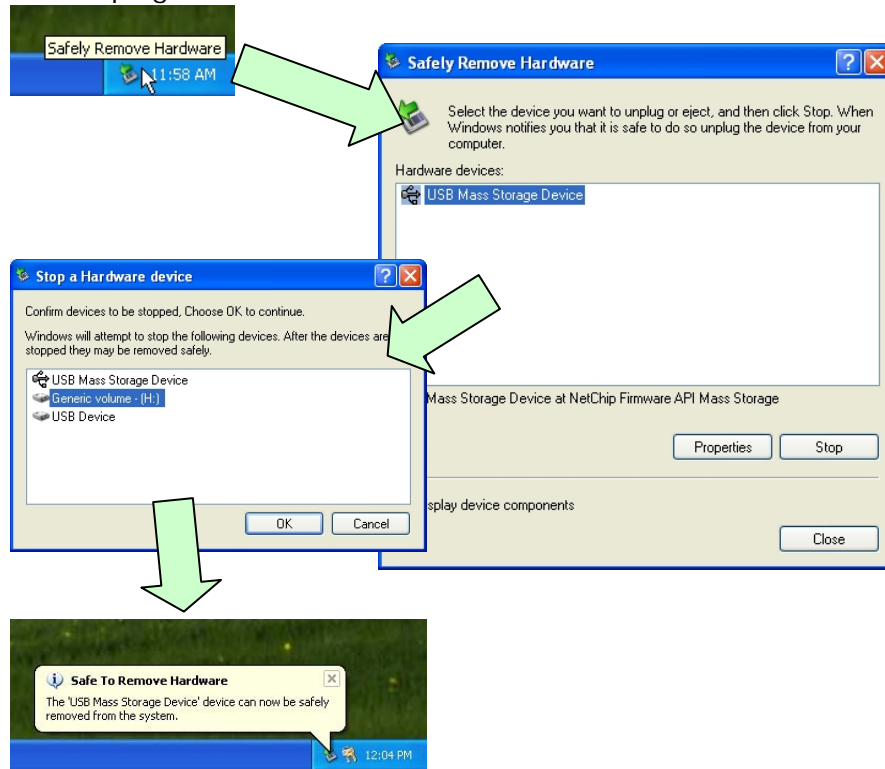
FCC Notices

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 that may cause undesired operation.

FCC RF Exposure requirements:

This device and its antenna(s) must not be co-located or operation in conjunction with any other antenna or transmitter.

NOTE: THE MANUFACTURER IS NOT RESPONSIBLE FOR ANY RADIO OR TV INTERFERENCE CAUSED BY UNAUTHORIZED MODIFICATIONS TO THIS EQUIPMENT. SUCH MODIFICATIONS COULD VOID THE USER'S AUTHORITY TO OPERATE THE EQUIPMENT.