



SERIAL NUMBER: _____
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INSTALLATION TECHNICIAN: _____
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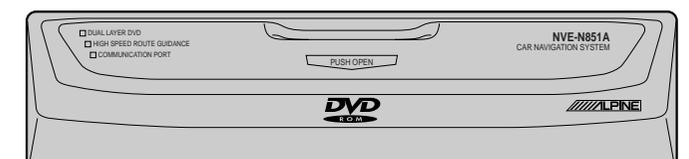
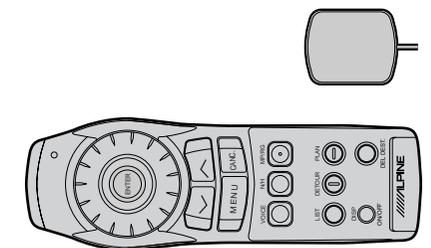


NVE-N851A

DVD Car Navigation System

HARDWARE MANUAL

Please read before using this equipment.



PRECAUTIONS

IMPORTANT INFORMATION, PLEASE READ CAREFULLY BEFORE USING THIS PRODUCT.

This product is intended to safely provide turn by turn instruction to get you to a desired destination. Please read the following precautions to ensure that you use this navigation system correctly.

- ☛ ***This product is not a substitute for your personal judgment. Any route suggestions made by this navigation system may never supersede any local traffic regulations or your personal judgment and/or knowledge of safe driving practices. Do not follow route suggestions if the navigation system instructs you to perform an unsafe or illegal maneuver, places you in an unsafe situation, or routes you into an area which you consider unsafe.***
- ☛ ***Glance at the screen only when necessary and safe to do so. If prolonged viewing of the screen is necessary, pull over in a safe and legal manner and location.***
- ☛ ***Do not input destinations, change settings, or access any functions requiring a prolonged view of the monitor and/or remote control while you are driving. Pull over in a safe and legal manner and location before attempting to access the system.***
- ☛ ***Do not use the navigation system to route you to emergency services. Not all locations of emergency service providers such as police and fire stations, hospitals, and clinics are contained in the database. Please use your own judgment and your ability to ask for directions in these situations.***
- ☛ ***The map database contained within the media (DVD-ROM) in which it is stored is the most recent map data available at the time of production. Because of changes in streets and neighborhoods, there may be situations where the navigation system may not be able to route you to your desired destination. In these cases, use your own personal judgment.***
- ☛ ***The map database is designed to provide you with route suggestions, it does not take account the relative safety of a suggested route, or of factors which may affect the time required to reach your destination. The system does not reflect road closures or construction, road characteristics (i.e. type of road surface, slope or grade, weight or height restrictions, etc.), traffic congestion, weather conditions, or any other factors which may affect the safety or timing of your driving experience. Use your personal judgment if the navigation system is unable to provide you with an alternate route.***

- 🌀 ***There may be situations where the navigation system may display the vehicle's location erroneously. Use your own driving judgment in this situation, taking into account current driving conditions. Please be aware that in this situation, the navigation system should correct the vehicle's position automatically; however, there may be times where you may have to correct the position yourself. If this is the case, pull over in a safe and legal manner and location before attempting operation.***
- 🌀 ***Make certain that the volume level of the monitor is set to a level which still allows you to hear outside traffic and emergency vehicles.***
- 🌀 ***Position the monitor so that glancing at the screen can be performed quickly and easily by the driver. If any adjustments are necessary, pull over in a safe and legal manner and location.***
- 🌀 ***The monitor used with this system should not be placed in a location which hinders the driver's view of any critical elements necessary to operate the vehicle properly (i.e. the road, mirrors, instruments, vehicle's surroundings). In addition, the monitor should not be placed in a location which may obstruct the air bags should they deploy.***
- 🌀 ***Remember to wear your seat belt at all times when the car is in motion. This will help you avoid impact with anything in the car's interior, including the system itself.***
- 🌀 ***Be sure to reset the system before starting operation whenever the system is reinstalled on another vehicle. The navigation system measures the distance with the speedometer pulse. Since the speedometer pulses depend on the vehicle manufacturer and the tire size, when you buy a new vehicle or replace your tires, the speedometer pulses are compared with the distance measured with GPS waves and the distance coefficient is automatically recalibrated.***
- 🌀 ***Do not use a portable telephone or transceiver near the system. Using them may cause noise or operating error to the system, or prevent for the portable telephone or transceiver from proper communications. Use them away from the system.***
- 🌀 ***Please make certain that any other person who intends on using this navigation system reads these precautions and the following instructions carefully.***
- 🌀 ***If there is anything in the manual which you do not understand or are uncertain about the operation of the navigation system, please contact your local Alpine authorized navigation dealer or 1-888-NAV-HELP before using the navigation system.***
- 🌀 ***Should the system become necessary for service or repair, make sure the DVD-ROM is removed from the main unit. Place the DVD-ROM in its case and ship it along with the main unit.***

Points to Observe for Safe Usage

- Read this manual carefully before using this navigation system. It contains instructions on how to use this product in a safe and effective manner. Alpine cannot be responsible for problems resulting from failure to observe the instructions in this manual.
- This manual uses various pictorial displays to show you how to use this product safely and to alert you to potential dangers resulting from improper connections and operation. Following are the meanings of these pictorial displays. It is important to fully understand the meanings of these pictorial displays in order to use this manual and the system properly.

● Meaning of displays

 Warning	This symbol will precede important instructions. Failure to heed them can result in serious injury or death.
 Caution	This symbol precedes important instructions. Failure to heed them can result in injury or property damages.

 Tips	This indicates supplementary explanation of operation of this system.
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Warning

DO NOT OPERATE THE PRODUCT WHILE DRIVING

Operating the product may distract the driver from looking ahead of the vehicle and cause an accident. Always stop the vehicle in a safe location before operating the product.

MINIMIZE MONITOR VIEWING WHILE DRIVING

Viewing the monitor may distract the driver from looking ahead of the vehicle and cause an accident.

DO NOT FOLLOW ROUTE SUGGESTIONS IF THE NAVIGATION SYSTEM INSTRUCTS YOU TO PERFORM AN UNSAFE OR ILLEGAL MANEUVER, OR PLACES YOU IN UNSAFE SITUATION OR AREA

This product is not a substitute for your personal judgement. Any route suggestions by this system should never supersede any local traffic regulations or your personal judgement or knowledge of safe driving practice.

KEEP SMALL OBJECTS SUCH AS BATTERIES OUT OF THE REACH OF CHILDREN

Swallowing them may result in serious injury. If swallowed, consult a physician immediately.

DO NOT DISASSEMBLE OR ALTER

Attempts to disassemble or alter may lead to accident, fire or electric shock.

USE THE CORRECT AMPERE RATING WHEN REPLACING FUSES

Replace fuses only with fuses of the same ampere rating. Failure to do so may result in a fire and/or damage to the vehicle.



Caution

USE THIS PRODUCT FOR MOBILE 12V APPLICATIONS

Other uses may result in electric shock or injury.

HALT USE IMMEDIATELY IF A PROBLEM APPEARS

Failure to do so may cause injury or damages to the product. Return it to your authorized Alpine dealer or the nearest Alpine Service Station for repairing.

DO NOT PLACE FINGERS OR FOREIGN OBJECTS IN CD/DVD-ROM INSERTION SLOTS OR GAPS

Doing so may result in injury or damage to the product.

DO NOT MIX NEW BATTERIES WITH OLD BATTERIES. INSERT WITH THE CORRECT BATTERY POLARITY

Do not mix new batteries with old batteries and do not replace with other than specified batteries. When inserting the batteries, be sure to observe proper polarity (+ and –) as instructed.

Battery rupture or chemical leakage can cause an injury or equipment malfunction.

Table of Contents

Precautions	Precautions	2
	Points to Observe for Safe Usage	4
	Warning/Caution	5
Preface	Navigation systems	8
Before Using This System	Remote control (RUE-4119)	
	Names of Parts	10
	Replacing the batteries	11
	Remote Control Holder Installation	11
	Main unit	
	Inserting the DVD-ROM	12
Removing the DVD-ROM	12	
Operation	Turning the System On	13
Reference	In case of difficulty	14
	Error messages	15
	Specifications	16

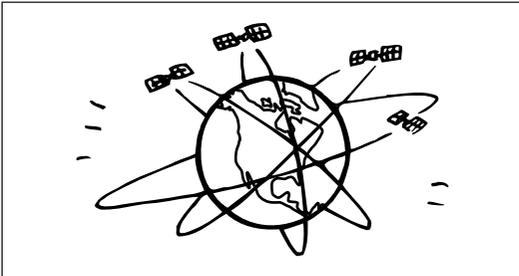
Preface

Navigation systems

This navigation system uses three different sensing devices to determine the present location and to track the progress of the vehicle. These three sensors are: a GPS (Global Positioning System) sensor which uses satellites to determine the current position of the vehicle, a gyroscope which determines which direction the vehicle turns, and speedometer pulses which determine how far the vehicle has traveled. Because this system incorporates a gyroscope and a speed sensor, the system will be able to display the vehicle's position and track the vehicle's progress even in areas where the GPS signal may be blocked.

All map data is contained on a removable DVD-ROM. This system integrates this unique map database with the sensors to automatically plot out a route when a destination is entered. While driving, the navigation system guides you along the route with pictorial displays and verbal prompts.

GPS (Global Positioning System)



This system receives signals from 3 or more GPS satellites (operated by the United States Department of Defence). They orbit at an altitude of 13,100 miles (21,000 kilometers) and determine the vehicle's position through principles of triangulation.

Error from the actual position of the vehicle

When GPS signals can be received from four or more satellites, three dimensional positioning (the latitude, longitude, and altitude) of the vehicle can be determined. In this case, the error from the actual position of the vehicle is in the range of 100 to 655 feet (30 to 200 meters). When GPS signals can only be received from three satellites, only two dimensional positioning (latitude and longitude) can be determined, resulting in a slightly increased error. When GPS signals can only be received from less than three satellites, positioning of the vehicle through GPS is not possible. In addition to the inherent errors from GPS, the error rate can also be increased if the United States Department of Defense deliberately changes the accuracy rate.

There may be a delay before the actual vehicle's position is displayed

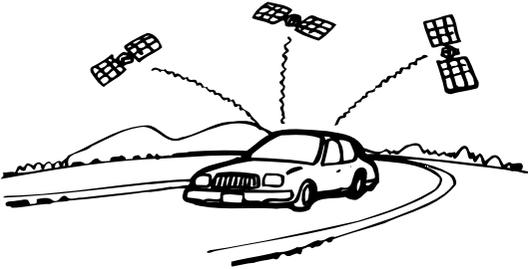
Determination of the present vehicle's position starts when the ignition key is turned to the ACC or ON positions and ends when the key is turned OFF. When the key is first turned to the ACC or ON positions, there is a slight delay of approximately one to two minutes before the present vehicle's position can be displayed.

Gyroscope

The gyroscope is a sensor that accurately measures the angle by which the direction of a vehicle or other moving body changes. Gyroscopes are used in inertial navigation systems for airliners and ships. In this navigation

system, the gyroscope is used together with the speed sensor, making it possible to display the present position of the vehicle even in locations where GPS signals may be blocked.

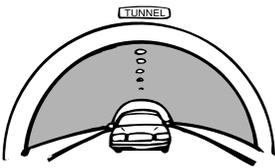
Locations where GPS signals are received easily



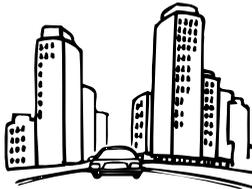
GPS signals are received best in areas where there are no tall buildings, trees, or other tall objects that can obstruct the signals.

Locations where GPS signals cannot be received

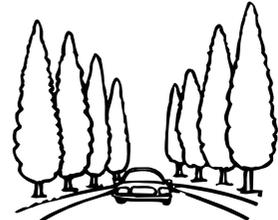
GPS signals cannot be received in areas listed below. However, the gyroscope and speed sensor will continue to provide data to track the vehicle's progress along the route without interruption.



In tunnels and indoor parking lots



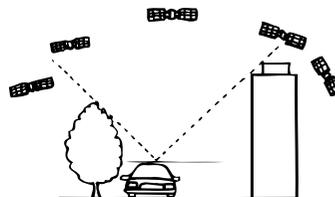
Locations surrounded by tall buildings



Locations surrounded by tall trees



On the bottom level of double-decker expressways



When a GPS satellite is low on the horizon (angle below 10°), obstructions sometimes make normal reception impossible

Before Using This System

Remote control (RUE-4119)

Names of the Parts

Remote Control transmitter

This section transmits the remote control signals. Aim the remote control toward the display monitor for operation.

Joystick

Selects items from menus and moves the map in eight directions.

ENTER button

Selects a highlighted item when the button is pressed. Press this button until a click sound is produced to execute your selection.

MENU button

Displays the main menu screen.

VOICE button

Press this button for voice guidance. (Real time voice guidance)

LIST button

Displays list of the streets currently set for the route. To return to the guidance mode, press the MP/RG button.

DETOUR button

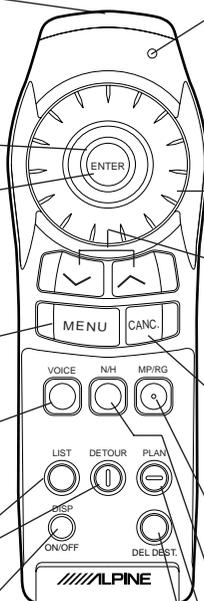
Pressing this button in the guidance mode activates the automatic detour mode. The system automatically recalculates the detouring route.

DISP ON/OFF buttons

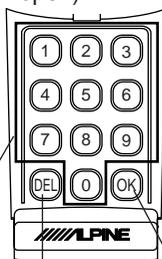
Turns the pictorial display on or off.

Numeric Keypad

- Use these buttons to enter phone numbers, address numbers or street names containing numbers (i.e., 42nd St.).
- Please refer to the NVD-A101 OWNER'S MANUAL (included with DVD-ROM) for software operating instructions.



(When the flip cover is open)



DEL button

Deletes the character previously input.

Transmitter indicator

Lights up to show that a remote control function is being utilized.

Rotary encoder

This has multiple functions. In map displays, zoom in or out; in list displays, scrolls list pages; in coordinate inputting, moves cursor; in alphabet inputting, moves alphabetical characters.

Zoom/Quick Scroll buttons

Changes the map magnification ratio upward or downward in 9 steps (1/32, 1/16, 1/8, 1/4, 1/2, 2, 8, 32 and 128 miles).

CANC. (Cancel) button

Returns the navigation system to the previous screen. When scrolling in the Map mode, pressing this button returns the screen to the present vehicle location.

MP/RG (Map/Route Guidance) button

Press to switch between the map and guide (with arrow) modes.

N/H button

Toggles between Noth Up and Heading Up orientation.

PLAN button

Can delete the route set by Today's Plan function.

DEL DEST. button

Deletes current destination.

OK button

Executes numeral inputtings and starts searching.



- If an operation is not accepted, the navigation system beeps.
- Adjust the volume with the control on display monitor etc.

Remote control (RUE-4119)



Tips

- Avoid dropping this remote control or placing it in pants pockets. Doing so may cause damage to the case or buttons, shorten battery life or cause the system to malfunction.
- To clean this device, wipe it with a dry cloth. (If it is extremely dirty, wipe it with a wrung damp cloth.) Never use benzene, paint thinner or harsh chemicals which can cause deterioration of the case or paint.
- Do not expose this remote control to direct sunlight (i.e. on the dashboard) for extended periods of time.

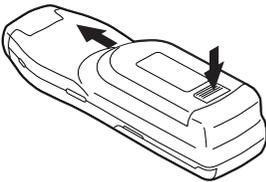
Replacing the batteries

Use two AA-type batteries.

1 Open the cover

Opening the battery cover.

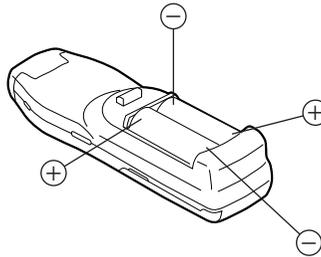
Push on the cover and slide it as indicated by the arrows then the cover will be removed.



2 Replace the batteries

Replacing the battery.

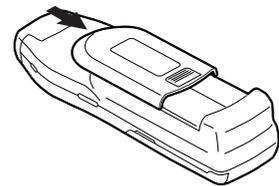
Remove the old batteries. Insert new ones matching the (+) and (-) polarities as shown in the diagram inside the remote control.



3 Close the cover

Closing the cover.

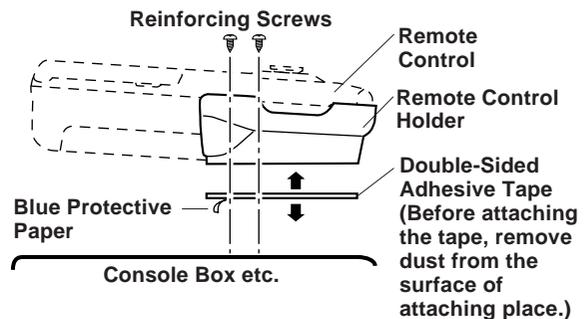
Push the cover in the arrow direction until a click is heard.



Remote Control Holder Installation

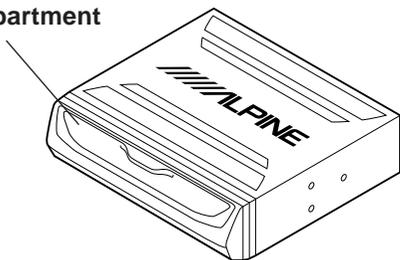
- If direct sunlight reaches the remote control mounted on the holder, remove the remote control from the holder and put it in the glove compartment.
- If double-sided adhesive tape cannot install the holder securely, use screws.

Note: Attach the blue protective paper side of double-sided tape onto the console box, etc.



Main unit

DVD-ROM compartment door



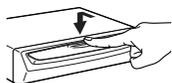
- Keep the door closed except when changing the DVD-ROM.
- Before inserting or removing the DVD-ROM, always turn the ignition key to ACC or ON. You cannot remove or insert the DVD-ROM with the ignition key turned OFF.
- Do not insert any DVD Video discs or map DVD-ROM.



Tips

Inserting the DVD-ROM

- 1 Press the door in gently then slide it downwards.**



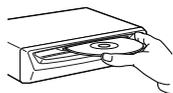
If a DVD-ROM is already in the main unit, the DVD-ROM is automatically ejected part way.

- 2 Insert the DVD-ROM with the label side facing up.**

When you insert the DVD-ROM into a certain position, it is automatically pulled into the navigation system.



Do not touch the surface of the disc directly with your fingers.

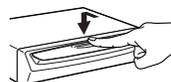


Removing the DVD-ROM

- 1 Press the door in gently then slide it downwards. The DVD-ROM is automatically ejected part way.**

If the DVD-ROM is not removed, it is automatically drawn back into the player after a while.

Caution Never close the door while the DVD-ROM is being unloaded. Doing so could scratch the DVD-ROM or damage the player.



- 3 Close the door.**

Be sure to close the door to prevent dust from getting inside.



- The DVD-ROM is a delicate device. Avoid dropping or scratching it.
- Keep the DVD-ROM away from dust and moisture.

Operation

Turning the System On

The logo for ALPINE, featuring the word "ALPINE" in a bold, sans-serif font with four slanted parallel lines to its left.

Navigation Technologies Co.
InfoUSA Inc. Omaha, NE

1 Turn the ignition key to the ACC or ON position.

The opening screen appears on the monitor display.

2 Insert your DVD-ROM. For instructions on inserting the DVD-ROM, see page 12.

3 After completing the above steps, please refer to the DVD-ROM user's guide to learn more about your navigation system software.

Reference

In case of difficulty

If you encounter a problem, please review the items in the following checklist. This guide will help you isolate the problem if the unit is at fault. Otherwise, make sure the rest of your system is properly connected or consult your authorized Alpine dealer.

Symptom	Cause	Solution
No operation/ No display	Blown fuse	Replace with a fuse of the same rating.
	Ambient temperature over 122°F (50°C)	Lower the temperature in the vehicle below 122°F (50°C) by driving with the windows open or air conditioner on.
	Moisture condensation	Allow enough time for condensation to evaporate (about 1 hour, depending on ambient temperature and humidity).
The present vehicle position cannot be measured correctly.	The vehicle position changed after the ignition was switched off. <ul style="list-style-type: none">• Movement on a ferry boat• Rotation of a parking lot turntable• Movement by tow truck	Drive the vehicle in an area of good GPS reception to allow the unit to recalibrate itself.
Vehicle position is displayed incorrectly on the screen	Poor satellite configuration	Move to a location where GPS satellite reception is easy.
	Measurement is 2 dimensional	
Screen not displayed	The navigation monitor is turned off.	Press the ON button on the remote control.
"CANNOT READ DISC" is displayed for a certain operation.	The disc is dirty.	Clean the disc.
	The pickup lens is dirty.	Have the pickup lens cleaned periodically.
Unstable operation	The remote control batteries are wearing out.	Replace the remote control batteries.

Error messages

Various messages are displayed on the screen during operation. In addition to the messages telling you the current status or providing guidance for the next maneuver, the following error messages may appear. If one of these error messages is displayed, carefully follow the instructions in the solution column.

Message	Cause	Solution
Please insert DVD-ROM/map data disk.	<ul style="list-style-type: none"> • The disc has been removed. • There was no disc in the system when the power was switched on. 	Insert the disc (sold separately).
DVD-ROM unreadable. Please check DVD-ROM.	<ul style="list-style-type: none"> • A disc that the system cannot read has been loaded. • The disc is dirty or upside down. • The disc cannot be read because of condensation. 	Insert the map disc. Take out the disc, check if it was upside down, clean it if necessary, then re-insert it. Take out the disc, allow enough time for condensation to evaporate (about 1 hour), then re-insert the disc.
DVD-ROM being checked.	<ul style="list-style-type: none"> • A disc was just inserted • Vibration or the like made it impossible to read the disc. 	When the disc check is complete, the following screen is displayed automatically.
Menu inoperable while driving. Please bring vehicle to stop at safe place and pull parking brake before using this function.	<ul style="list-style-type: none"> • The MENU button was pressed while the vehicle was running. • A menu selection operation was carried out while the vehicle was running. 	Move the vehicle to a safe location, stop, and engage the parking brake, then carry out this operation.

Specifications

Power requirement	14.4 VDC (11 – 16 V allowable) negative ground	
Operating temperature (main unit)	14°F to 122°F (–10°C to +50°C)	
Antenna type	Micro-strip planar antenna	
Reception frequency	1575.42 ± 1 MHz	
Reception sensitivity	–130 dB max.	
Reception method	Parallel 8 channels	
Current consumption	Typical: 1.0 A	
	Maximum: 1.3 A	
External dimensions (W × H × D)	Navigation unit	$7\frac{3}{4} \times 2 \times 7\frac{9}{16}$ " (196 × 50 × 191.5 mm)
	Antenna	$1\frac{5}{8} \times \frac{9}{16} \times 2$ " (42 × 14 × 51 mm)
	Remote control	$1\frac{3}{4} \times 1\frac{3}{4} \times 5\frac{1}{4}$ " (45 × 45 × 135 mm)
Weight	Navigation unit	3 lbs. 12 oz (1.7 kg)
	Antenna	4.6 oz (0.13 kg)
	Remote control	2.5 oz (0.070 kg)

Accessories

Product	Q'ty	Product	Q'ty
Installation parts	1 set	Hardware Manual, card	1 set
Antenna	1 set		
Remote control	1 set		
Batteries (AA)	2		
Power connector	1		
Display connector	1		

