

# **RYDEEN**<sup>®</sup>

find your road



**Owner's Manual**

**MN450S**

**Smart Mirror**

V1.0



---

# Contents

1. Welcome Statement & Warnings .....	2
2. What’s in the Box.....	4
3. Product Overview.....	5
4. Installation.....	7
5. User Interfaces .....	10
6. DVR Operations .....	12
7. Music Operations .....	13
8. Specifications .....	14
9. Maintaining Your GPS .....	16
10. Technical Support Contact Info .....	16
11. Warranty .....	16
12. Warranty Services.....	17
13. FCC Compliance Statement.....	18
14. End User License Agreement.....	18
15. Disclaimer .....	21

# 1. Welcome Statement & Warnings

Congratulations and thank you for purchasing MN450S, the smart Mirror Car Navigation Unit. We hope you will enjoy using this exciting product and trust that it will make your driving experience more comfortable and hassle-free.

The MN450S provides an easy-to-use touch screen user interface, clear and easy-to-understand spoken instructions, and innovative functionality in a stylish housing that replaces the factory mirror.

Please read this Owner's Manual carefully. If you have any further questions about your MN450S operation, feel free to call RYDEEN, Toll Free at 1-877-777-8811 (within USA only) for product support, or visit our website: [www.rydeenmobile.com](http://www.rydeenmobile.com)

## PRECAUTIONS & WARNINGS

### **IMPORTANT INFORMATION** **PLEASE READ CAREFULLY BEFORE USING THIS PRODUCT**

This product is intended to provide accurate turn-by-turn directions that will help you quickly reach your desired destination. Therefore, we recommend that you read and follow all information, and instructions in this Owner's Manual for the best performance and satisfaction of your MN450S.

- Your MN450S **IS NOT** a substitute for personal judgment. The route suggestions should never supersede any local traffic regulation, personal judgment or knowledge of safe driving practices. Before making any maneuvers (for example, a U-turn or a left turn) suggested by the MN450S system, please be sure that such a maneuver can be completed legally and safely. Do not follow route suggestions that could put you or your vehicle in a potentially unsafe or illegal circumstance.
- You should not depend on MN450S to locate emergency services (such as police, fire stations, hospitals and clinics). The database may not include all emergency service providers. It is the best to call your local police department and ask for directions in these situations.
- Set the unit volume at a level that will allow you to hear outside traffic and emergency vehicles.
- The MN450S should not be programmed while driving. The driver can only program the unit while the vehicle is parked in a safe location. Otherwise, a passenger may program and operate the unit while the vehicle is in motion.
- **SEVERE INJURY RISK -DO NOT** mount your MN450S on the surface of, or in the deployment field of your vehicle's driver and passenger airbag units.
- Position the unit in a location that does not obstruct the driver's view of the road, instruments or vehicle controls.

- Position the unit so the screen can be viewed with just a quick glance. Glance at the unit screen or manipulate the in-route touch screen controls *ONLY WHEN VEHICLE IS COMPLETELY STOPPED AND IT IS SAFE* to do so.
- Be sure the MN450S unit is securely attached to the windshield of your vehicle with the supplied bracket.
- *DO NOT* attempt to modify or disassemble the MN450S unit. Personal injury or damage could result. If a problem occurs, stop using the system immediately and contact RYDEEN. Changes or modifications to the MN450S will void the warranty and its compliance with FCC rules thus making it illegal to use.
- If you notice any of the following: (unidentified liquid on the unit; smoke rising out of the unit; unusual odor emanating from the unit) – **STOP USING THE UNIT IMMEDIATELY.** Contact the nearest RYDEEN retailer or call RYDEEN Customer Service for assistance Toll Free @ 1-877-777-8811 (within USA only).
- *DO NOT* mount your MN450S on any non-automotive form of transportation (motorcycles, bikes, ATV's, watercraft).

 **WARNINGS** 

- Avoid dropping your MN450S unit or subjecting it to excessive shock and vibrations as this may cause it to malfunction.
- DO NOT use any sharp object to operate your unit's touch-screen display. Excessive force could damage the LCD display.
- Keep the MN450S unit out of reach of small children. Removable parts (microSD memory card) can be a choking hazard.
- The MN450S unit IS NOT WATERPROOF.** Avoid exposing it to rain or other forms of excessive moisture. **Water damage is not covered under the warranty.**

 **WARNINGS** 

- **THE FOLLOWING INSTRUCTIONS ARE INTENDED FOR AUTHORIZED RYDEEN MOBILE INSTALLERS ONLY**
- **PROFESSIONAL INSTALLATION BY AUTHORIZED RYDEEN RETAILER REQUIRED TO BE COVERED UNDER WARRANTY**

## 2. What's in the box?

Your MN450S system comes complete with everything you need to get set up and get going. Please take a moment to review the contents of your system.



Main Unit

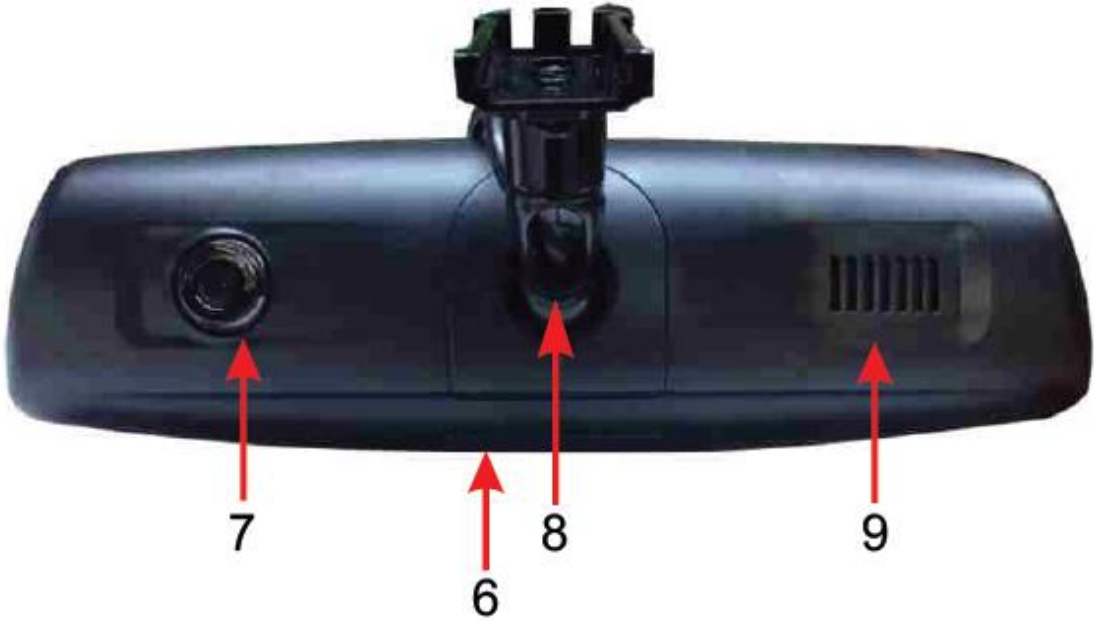


Wire Harness for MN450S

**For vehicle specific mount options, contact Rydeen Tech Support at 1-877-777-8811 or [techdept@rydeenmobile.com](mailto:techdept@rydeenmobile.com)**

# 3. Product Overview

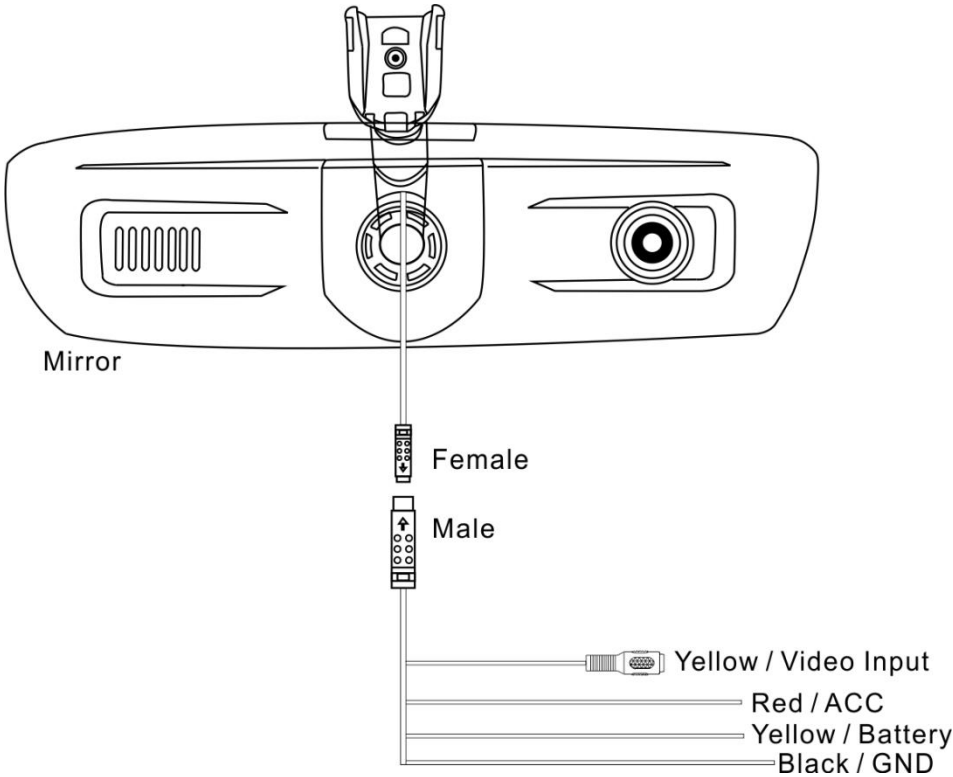
## MN450S



**Panel Spread Sheet**

NO.	Item	Description
1	LCD	4.3" TFT, Touch Panel
2	Decrease	Short Press- Decrease Volume While in Volume settings Short Press- Decrease Brightness While in Brightness settings
3	Home	Short Press- Go to Home Menu Long Press- Turn On / Off Screen
4	Increase	Short Press- Increase Volume While in Volume settings Short Press- Increase Brightness While in Brightness settings
5	Mirror	Reflective Area for Rear Viewing
6	Micro SD Card Slots	Micro SD Card Slot 1 (left side, MUSIC) Micro SD Card Slot 2 (right side, DVR)
7	Front Camera	Front View DVR Camera
8	Mirror Mount	Standard Mirror Mount VSM-AS (Included)
9	Built-in Speaker	Built-in Speaker for audio instructions

**Wiring Diagram**





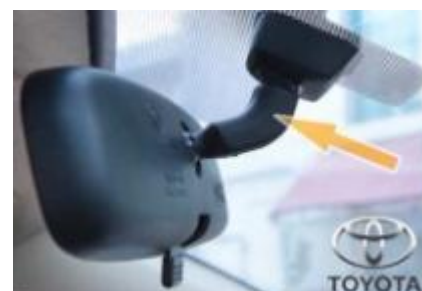
## 4. Installation



- **THE FOLLOWING INSTRUCTIONS ARE INTENDED TO GIVE YOU A BRIEF GUIDANCE FOR INSTALLATION.**
- **Please guarantee professional operations during the whole installation process.**
- **Dropping your MN450S unit or subjecting it to excessive shock and vibrations as this may cause it to malfunction and is not covered by warranty.**
- **The MN450S units ARE NOT WATERPROOF. Avoid exposing it to rain or other forms of excessive moisture. Water damage is not covered under the warranty.**

**Most vehicles have the mirror mounted directly onto the glass; therefore improper tools or techniques used in the installation could result in a damaged or broken windshield. Rydeen is not responsible for damages to windshield caused by installation processes.**

- 1) Remove the existing mirror and unplug a connector, if one exists.  
(Note: All vehicles use different mounting solutions. If necessary, consult your local automotive dealer or installation professional for specific instructions.)



- 2) Mount the MN450S using supplied screws. Slide or twist it onto the factory mounting base and carefully tighten the screws until secure.



3) Route the mirror cable along the headliner and down the pillar. Then make power, ground and accessory connections.



**Yellow - Constant 12V+ source**

**Red - Ignition controlled ACC 12V+ source.**

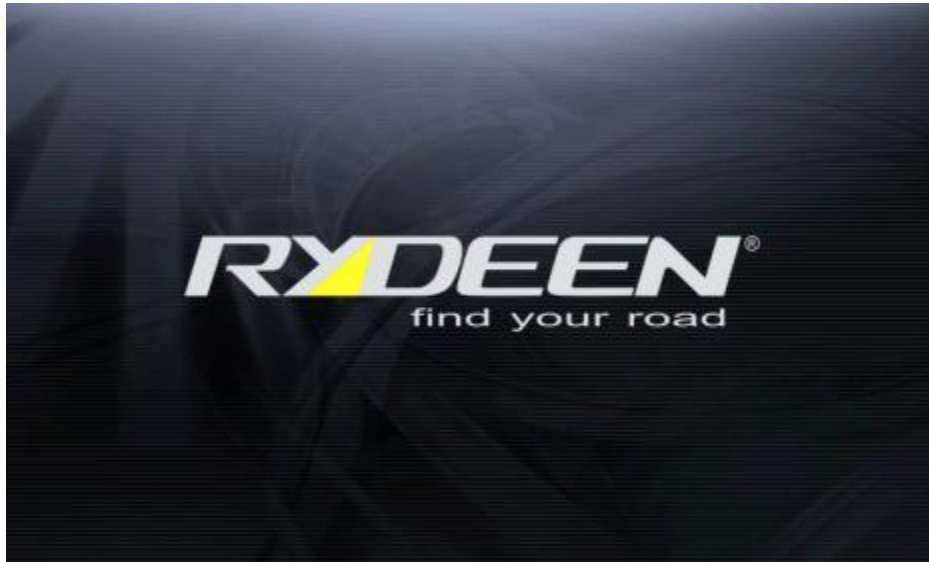
**Black - Ground (-) Polarity (Connecting to car chassis works the best)**

4) Solder or T-taps on pre-tested and verified wires. Note: No reverse trigger input required; the screen switches to rear-camera view when camera sends a video signal input senses video voltage.

5) Turn the key to ACC and the unit will turn on. Hide the cable and assemble the vehicle.




## 5. User Interfaces

### Opening Screen



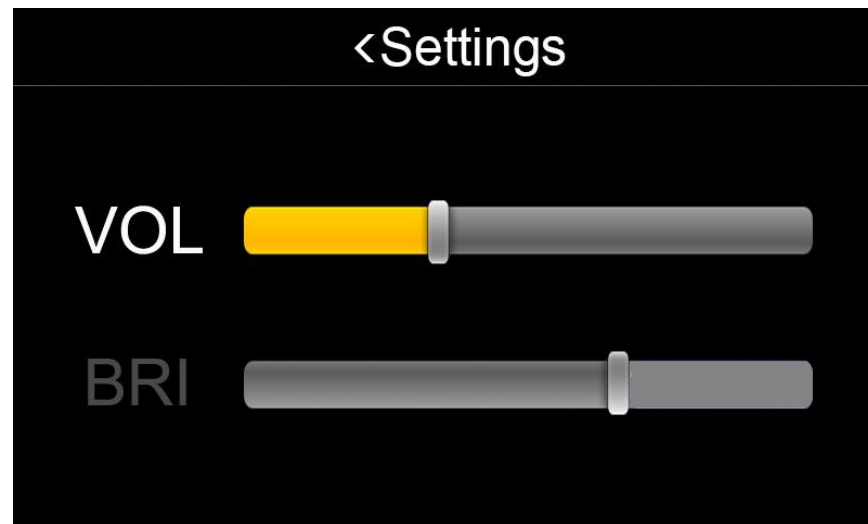
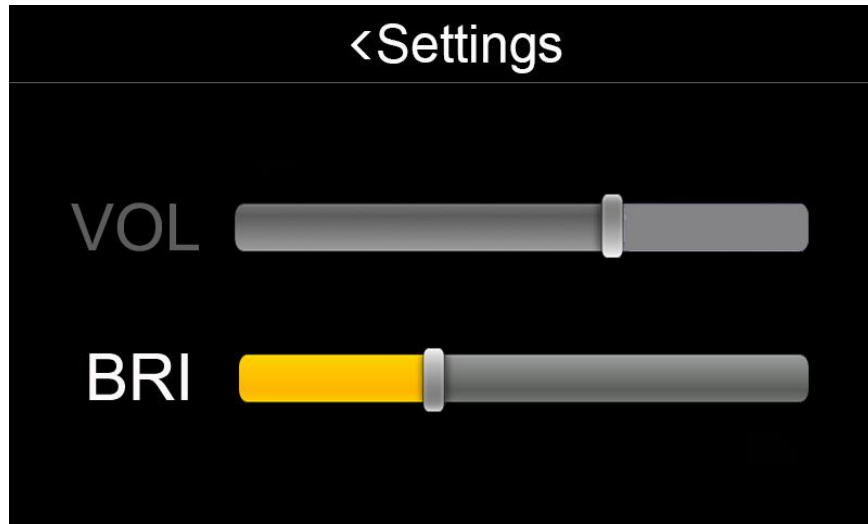
### Main UI



On the main menu, you can touch the icon to enter the corresponding operation that you want to use. (GPS:  DVR:  Music: )

Touch the Home button on the panel to return to the main menu (no matter what the current user interface you are using).

## Volume / Brightness Settings




Press the ">" or "<" button to increase and decrease volume or brightness (regardless what the current user interface you are using).

Touch / swipe the bars on the settings screen to change settings choices between volume and brightness.

The unit will remember the last operation of the settings choices and status.

Touch the "<Settings" on top to return.

## 6. DVR Operations

Touch the icon  on the main menu to enter into DVR interface.

Video source will depend on:

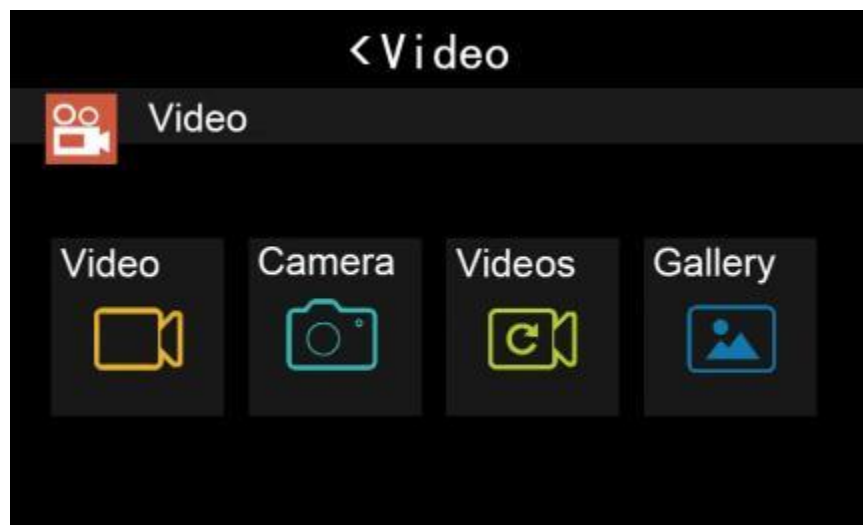
1. If extra video in is triggered (unit detects video signal), the video source will be extra video input (backup camera or other video input);
2. If extra video in is not triggered (unit didn't detect video signal), the video source will be the front view camera.

Touch "Video" to start recording.


Touch "Camera" to take a photo.

Touch "Videos" to review / playback the recorded videos.

Touch "Gallery" to review / open the instored pictures.



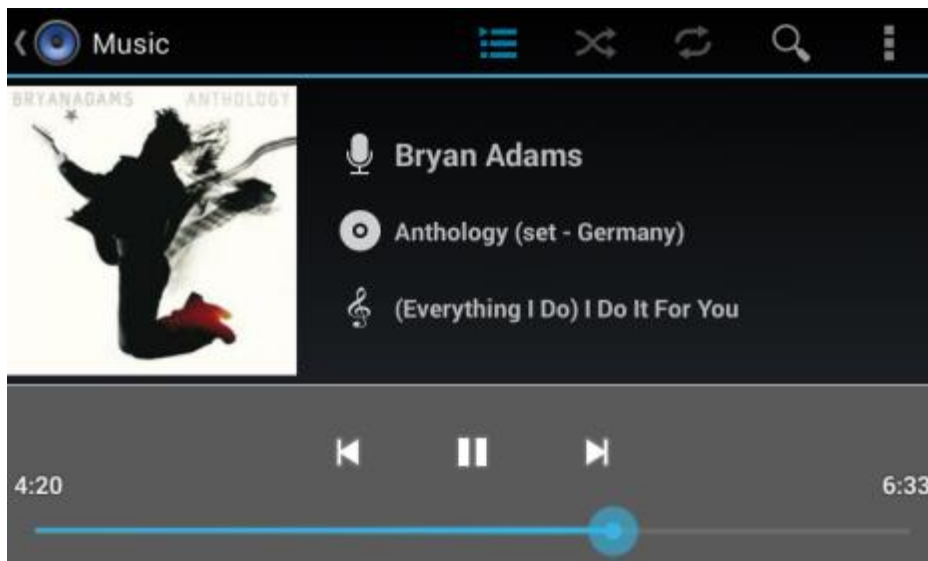
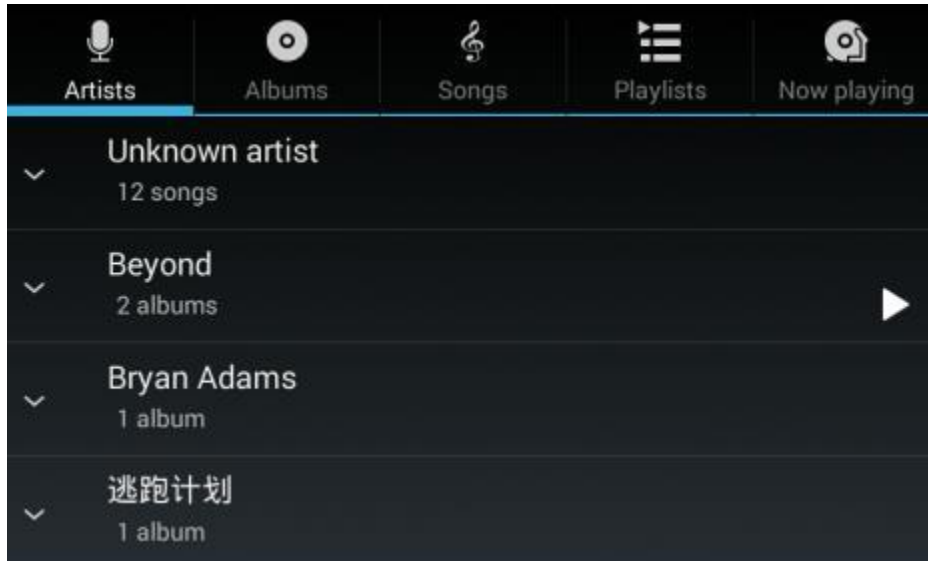
## 7. Music Operations

Touch the icon  on the main menu to enter Music interface.

All music files will be stored in Micro SD Card.

You can set the preferences by maintaining below interface.

You can adjust volume or brightness by pressing the ">" or "<" buttons on the panel.



## 8. Specifications

Screen	TFT	4.3-inch TFT
	Resolution	480×800 Pixel
GPS		Built-in GPS
Backup Camera		Backup view available while reversing
Audio decode		WAV, MP3, MP2, AAC, AMR-NB, AMR-WB, MIDI, Vorbis, APE
Audio code		AMR-NB, AMR-WB, AAC 6kHz~96kHz
Video decode		MP4 / VP8 / GP3 / H.264
Input & Output devices	Touch screen	4.3" Multi-touch control capacitive touch screen
	Built-in Speaker	Max power rate: 2 W
	Micro SD Card for music storage	Not included (Slot is on the bottom of "<"button side)
	USB	OTG USB 2.0
Record / Photo	VIDEO DSP	HD wide angle lens (120 degree) Resolution: 720P 30fps
		Support up to 32GB microSD card (8GB microSD card included) SD Card slot is on the bottom of ">"button side



Working Environment	Temperature	Operation	-20~+70 (degrees)
		Storage	-40~+85 (degrees)
	Humidity	Operation	4%~90%RH
		Storage	40%RH
(GPS SPEC)			Warm start time <= 3sec (outdoor, -130dBm)
			Cold start time <= 45sec (outdoor, -130dBm)
			Satellite time: 100s
			Sensitivity: < 2.5m (outdoor, -130dBm)

## 9. Maintaining Your GPS

### Cleaning the Unit:

1. Use a soft, dry cloth to wipe away dirt.
2. If the dirt cannot be wiped away, dampen the cloth with water to clean the unit.  
**NOTE: Do not wash the unit with running water as this unit is not water proof.**
3. Use a dry cloth to wipe away residual moisture when done.  
**NOTE: Do not use solvent, car cleaner or organic cleaners to clean the unit. These substances may damage the GPS unit.**

### Cleaning the LCD Display:

1. Turn off the system while cleaning the display to prevent static electricity.
2. Use a soft, dry cloth to wipe away dirt.
3. The display surface is easily scratched. Do not use hard objects to scrape or come in contact with the display surface.

## 10. Technical Support Contact Info

If you have other questions about the **RYDEEN MN450S**, please contact your retailer or Technical Support:

- Telephone: **1-877-777-8811 (within USA only)**
- Email: [techdept@rydeenmobile.com](mailto:techdept@rydeenmobile.com)
- Web Address: [www.rydeenmobile.com](http://www.rydeenmobile.com)

## 11. Warranty

RYDEEN MOBILE (a manufacturer of "RYDEEN" products) warrants this product (MN450S) only to the original purchaser as described following:

### Warranty Period

MN450S warrants this product for a period of Three (3) year from the original purchase date.

### Warranty Coverage

This warranty covers all defects in material and workmanship except as specified below.

1. Installation by anyone other than an authorized Rydeen Mobile Retailer voids the warranty.
2. Any products distributed outside of the USA by Rydeen Mobile Electronics (RYDEEN) or which is not purchased in the USA or Canada unless the product is purchased through the USA Military Exchange Service.

3. Any product(s) which are purchased from an unauthorized retailer (in store or online).
4. Any products in which the serial number label or the model number label are removed, torn, modified or replicated.
5. Any damage defects or malfunctions resulting from any of following:
  - a) When defect occurs during shipment of product (freight carrier's responsibility).
  - b) Installation or removal of product.
  - c) Accidents, act of nature, misuse, abuse, neglect, unauthorized product modification or failure to follow product owner's manual instructions.
  - d) Any repair or attempt to repair without RYDEEN authorization.
  - e) Any other cause which is not related to product defect.
  - f) Any cosmetic damages due to normal wear and tear.
  - g) Any consumable items (such as fuse or batteries).

If any problems develop with your Rydeen products during or after the Limited Warranty Period, or if you have any questions regarding the operation or installation of the product, you should contact your Rydeen retailer. If the problem or your question is not handled to your satisfaction, please contact Rydeen Customer Service Department at 1-877-777-8811 (within the USA only) Monday - Friday between 9:00 AM to 4:00 PM Pacific Standard Time or visit [www.Rydeenmobile.com](http://www.Rydeenmobile.com).

## **13. Warranty Services**

If warranty service is required for your Rydeen product:

1. Please call Rydeen Customer Service Department at 1-877-777-8811 (within the USA only), Monday–Friday between 9:00 AM to 4:00 PM Pacific Standard time and obtain a Return Authorization Number ("RA") Number.
2. Please pay for any shipping charge to Rydeen Customer Service Department. Rydeen will pay the return shipping charge, if the repair or service was performed during the warranty period. Rydeen will ship freight collect (recipient is responsible for shipping charge) if Rydeen determine the service was performed outside of warranty period or exclusions described above. Rydeen will not accept warranty service requests from outside of the U.S.A. even if product was purchased in the USA.
3. Please include a copy of your original purchase receipt including Rydeen product model number, purchase date, retailer name/address and a RA Number whenever your product is sent for warranty service.
4. Rydeen will pay for all labor and material expenses for covered product during warranty period.
5. Shipping address for Rydeen Customer Service Department is following:  
Rydeen Mobile Electronics (a manufacturer of Rydeen products), 2701 Plaza Del Amo, Unit 705, Torrance, California 90503, USA

## 12. FCC Compliance Statement

This device complies with Part 15 of the FCC interference limits for Class B digital devices for home or office use. These limits are designed to provide more reasonable protection against harmful interference in a residential installation and are more stringent than "outdoor" requirements.

Operation of this device is subject to the following 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.

## 14. End User License Agreement

The contracting parties

1.1 Contracting parties to this Agreement are, on the one hand:

NNG Kft. (23 Bérc utca, H-1016 Budapest, Hungary; Hungarian reg.no.: 01-09-891838) as Licensor and the legal user (as defined in Section 2) of the object of this Agreement according to Section 4, hereinafter referred to as User on the other hand (hereinafter jointly referred to as Parties).

2 Conclusion of the Agreement

2.1 The Parties hereby acknowledge that this Agreement shall be concluded by implicit conduct of the Parties, without a signature of the Parties.

2.2 The User hereby acknowledges that following the lawful acquisition of the software product constituting the object of this Agreement (Section 4), any degree of use, installation to a computer or other hardware, installation of such hardware into a vehicle, pressing of the "Accept" button displayed by the software during installation or use (hereinafter referred to as Actions of Use) shall be deemed as implicit conduct resulting in the conclusion of the Agreement between the User and the Licensor.

2.3 This Agreement shall by no means entitle persons who unlawfully acquire, use, install on a computer, install in a vehicle or utilise in any manner whatsoever the Software Product.

2.4 The End User Licence Agreement between the Parties shall be concluded with terms set forth in this Agreement.

2.5 The time of conclusion of this Agreement is the time of executing the first Action of Use (commencement of use).

3 Applicable law

3.1 In issues not regulated by this Agreement, the jurisdiction of the Republic of Hungary shall be applicable, with specific reference to the Act No. 4 of 1959 on the Civil Code (CC) and to Act No 76 of 1999 on Copyrights (CA).

3.2 This agreement is issued in NOTE TO TRANSLATOR - PLEASE INSERT YOUR LANGAUGE and in Hungarian. In case of dispute the Hungarian text shall prevail.

#### 4 The object of the Agreement

4.1 The object of this Agreement shall be the navigation guidance software product of Licensor (hereinafter referred to as Software Product).

4.2 The Software Product shall include the operating computer program, its complete documentation, and the map database belonging thereto.

4.3 Any form of display, storage, coding, including printed, electronic or graphic display, storage, source or object code of the Software Product, or any other as yet undefined form of display, storage, or coding, or any medium thereof shall be deemed as part of the Software Product.

4.4 Error corrections, additions, updates used by the User as defined in Section 2 following the conclusion of this Agreement shall also be deemed as part of the Software Product.

#### 5 Owner of copyrights

5.1 The Licensor - unless contractual or legal regulations state otherwise - is the exclusive owner of all material copyrights vested in the Software Product.

5.2 Copyrights extend to the whole Software Product and its parts separately as well.

5.3 The owner(s) of the copyrights of the map database forming part of the Software Product is (are) natural person(s) or corporate entity(ies) as listed in the Appendix to this Agreement or in the "About/Map" menu item of the operating computer program (hereinafter referred to as Database Owner). Licensor hereby states that Licensor has obtained sufficient usage and representation rights from the Database Owner in order to utilise and give into further utilisation the map database as set forth in this Agreement.

5.4 In the conclusion and execution of this Agreement the Database Owner is represented by Licensor in relations to the User.

5.5 By concluding this Agreement, Licensor shall withhold all rights vested in the Software Product, except for those that the User is entitled to according to explicit legal regulations or that of this Agreement.

#### 6 Rights of the User

6.1 The User is entitled to install the Software Product on one hardware device (desktop, handheld, portable computer, navigation device) at a time, and to run and use one copy thereof.

6.2 The User is entitled to make one security copy of the Software Product. However, if the Software Product is operational after installation without the use of the original media copy, then the original media copy is deemed to be a security copy. In all other

cases, the User is only entitled to use the security copy if the original media copy of the Software Product has become unsuitable for proper and legal use without any doubt, such state thereof being supported by acceptable proof.

#### 7 Limitations of use

7.1 The User is not entitled

7.1.1 to duplicate the Software Product (to make a copy thereof);

7.1.2 to lease, rent, lend, distribute, transfer it to a third person with or without a consideration;

7.1.3 to translate the Software Product (including translation (compilation) to other programming languages);

7.1.4 to decompile the Software Product;

7.1.5 to modify, extend, transform the Software Product (in whole or in part), to separate it into parts, compose it with other products, install it in other products, utilise it in other products, not even with the aim of achieving interoperability with other products;

7.1.6 apart from using the computer program, to obtain information from the map database included in the Software Product, to decompile the map database, to use, copy, modify, extend, transform the map database in whole or in part or the group of data stored therein, or to install it in other products, utilise it in other products, not even with the aim of achieving interoperability with other products;

## 8 Non-warranty, limitation of responsibility

8.1 Licensor hereby informs the User that although the greatest care was taken in producing the Software Product, yet with respect to the essence of the Software Product and the technical limitations, the Licensor does not warrant for the Software Product being completely error-free, and the Licensor is not bound by any contractual obligation by which the Software Product obtained by the User should be completely error-free.

8.2 The Licensor does not warrant that the Software Product is suitable for any purpose defined either by the Licensor or the User, and does not warrant that the Software Product is capable of interoperating with any other system, device or product (e.g. software or hardware).

8.3 The Licensor does not assume any responsibility for damages incurred due to an error in the Software Product (including errors of the computer program, the documentation and the map database).

8.4 The Licensor does not assume any responsibility for damages incurred due to the Software Product not being applicable for any defined purpose, or the error or lack of interoperability thereof with any other system, device or product (e.g. software or hardware).

8.5 The Licensor shall hereby also draw the attention of the User with great emphasis to the fact that while utilizing the Software Product in any form of transportation, observing the traffic regulations and rules (e.g. use of obligatory and/or reasonable and suitable security measures, proper and generally expected care and attention in the given situation, and special care and attention required due to utilising the Software Product) is the exclusive responsibility of the User; the Licensor shall not assume any responsibility for any damages occurred in relation to utilising the Software Product during transportation.

8.6 By concluding this Agreement, the User shall especially acknowledge the information stated in Section 8 above.

## 9 Sanctions

9.1 The Licensor hereby informs the User that according to regulations of the CA, should the Licensor find its rights to be breached, the Licensor may

9.1.1 claim the acknowledgement of such breach by court;

9.1.2 claim ceasing the breach and ordering the person under breach from continuing such;

9.1.3 claim that the person under breach give proper compensation (even by way of publicity, to the expense of the person under breach);

9.1.4 claim the return of the increase of assets due to the breach;

9.1.5 claim ceasing the breaching situation, the restitution of the state before the breach, to the expense of the person in breach, and may claim the destruction of instruments and materials used for the breach, and that of the objects created by the breach;

9.1.6 claim damages.

9.2 The Licensor hereby also informs the User that the breach of copyrights and related rights is a crime according to Act IV of 1978 on the Hungarian Criminal Code, which may draw as a sanction a sentence of two years in prison in basic cases and up to eight years in prison in qualified cases.

9.3 For disputes arising from this Agreement, the parties hereby agree on the exclusive competence of - depending on value and title disputed - either the Central Court of Budapest Districts (Pesti Központi Kerületi Bíróság) or the Municipal Court of Budapest (Fővárosi Bíróság).

## **15. Disclaimer**

The information in this user manual is for general guidance. Images in the manual may resemble, but not exactly match the images that are displayed in the navigation software. Some features described in the manual may not be available or the features described may be limited, depending on the navigation software.



RYDEEN North American Inc.  
2701 Plaza Del Amo, Suite 705, Torrance, California 90503 USA  
Phone: 1-877-777-8811 Fax: 1-310-943-3778

Copyright © 2014 RYDEEN by Rydeen. All Rights Reserved.  
RYDEEN ® is a registered trademark of RYDEEN by Rydeen.

These materials are protected by copyright law and international treaties. Any unauthorized use, reproduction or distribution of these materials, or any portion herein, will result in severe civil and criminal penalties and fines. Violators will be prosecuted to the fullest extent of the law.