

# smartnav<sup>®</sup>

by **Trafficmaster**<sup>TM</sup>

intelligent navigation and more...

## USER MANUAL

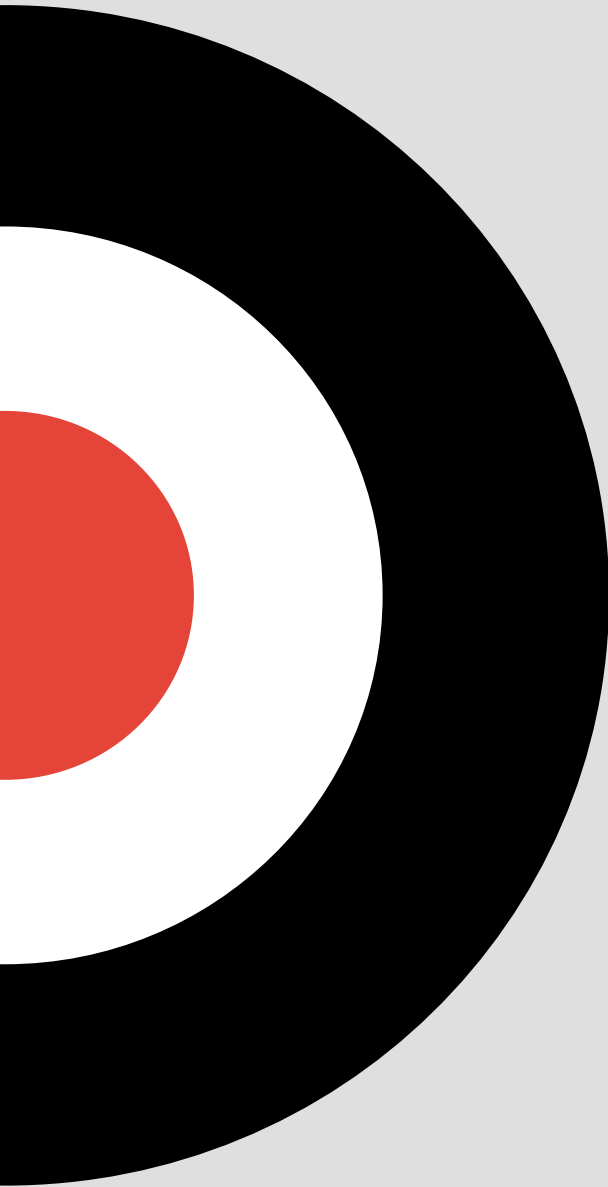
The first satellite navigation system that automatically reacts to live and predictive traffic conditions.

**Trafficmaster** Plc

**smart**nav







intelligent navigation and more...

by **Traffic***master*<sup>™</sup>



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## 🕒 SYSTEM OVERVIEW

Smartnav is Trafficmaster's full feature, in-car navigation system, combining a powerful Motorola navigation server with a GPS (Global Positioning System) based satellite tracking and state-of-the-art digital speech synthesis.

The navigation computer, which is located at the Smartnav centre, calculates the best route to your destination, taking into consideration current traffic conditions, historic and forecast information and incident reports. The route is then sent via GSM (Global System for Mobiles) to your in-car unit, which will then intelligently guide you turn-by-turn to your destination using the most efficient route.

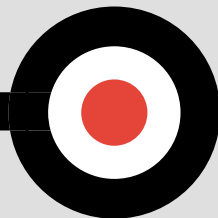
## Attention!

### IMPORTANT SAFETY INFORMATION

The Highway Code and current traffic conditions must always be observed and take precedence over the instructions issued by the navigation system. The driver should be aware of situations where current traffic conditions and the instructions from the navigation system may be in conflict.

The use of the navigation system does not relieve the driver of his/her responsibilities. The driver is ultimately responsible for the vehicle under his/her control and should be aware of the surroundings at all times. For traffic safety reasons, it is recommended that routes should be set-up in a stationary vehicle before starting a journey.

In certain areas, one-way streets, turn restrictions and entry prohibitions (e.g.



pedestrian zones) are not recorded.

Particular attention must be paid to one-way streets, turn restrictions and entry prohibitions.

## Registration

Following your purchase of Smartnav, please complete the enclosed reply card and return it to the address indicated.

### 🎯 TO ENTER A DESTINATION

**Please wait for ten seconds after you have turned on the vehicle ignition and ensure that you are not in an underground car park, tunnel or in other conditions where the Smartnav unit cannot receive the signal from the GPS satellites.**

Note: If the vehicle is parked for long periods of time, it may take a few moments before the signals from the satellites are re-acquired and analysed after the ignition has been switched on again.

Press the Smartnav button for approximately 2 seconds. This will establish a mobile phone link to the Smartnav Control Centre. A Smartnav Personal Assistant (PA) will answer your call and see your current position displayed on their control screen. The PA will ask you where you wish Smartnav to navigate you to. This can be in the form of

- a) a house number and street address, plus town and county OR
- b) a postcode OR
- c) a point of interest such as 'Reading Railway Station', 'Terminal 4 Heathrow Airport', etc. OR
- d) a stored location set up on your personal preference page at [www.smartnav.com](http://www.smartnav.com)

## Download of Data to your Vehicle

Once you have given the Smartnav PA your intended destination, it will be entered into the Smartnav navigation computer and it will calculate the best route to your destination taking into account current traffic conditions. This takes just a few seconds. Upon completing the call, a GSM (mobile phone) data message will be automatically transmitted, in which the navigation instructions are downloaded to your Smartnav unit. This typically takes 10 to 15 seconds. You will then hear a message saying:

"Smartnav is now checking traffic conditions and preparing your route."

Followed by a short summary of the route Smartnav has planned for you, your estimated time of arrival and any traffic conditions that Smartnav has taken into consideration in calculating your route, e.g.

"Your route of 12 miles will take you on the A508, A43 and A6, to avoid traffic on the A14. Your estimated time of arrival is 11:05"

If your route takes you through central London, no ETA will be provided

## USE OF SMARTNAV WHILST DRIVING

Please note that where available, Smartnav will issue spoken instructions that include road numbers, e.g. M25, A34, B3400.

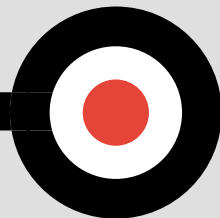
It is possible for you to receive up to five different types of spoken instruction at various points on your journey. These are:

### Preparation For Manoeuvre Instructions

"In half a mile prepare to turn right at the junction to join the A406."

### Warning Instructions

"In 300 yards turn right at the junction to join the A406."



## **Manoeuvre Instructions - Immediate**

### **Proximity**

“Please turn right at the junction to join the A406.”

### **Continuation/Confirmation Instructions**

“Continue to follow the A6 for the next five miles.”

### **Compound Manoeuvre Instructions**

When two turnings are positioned close to each other, for reasons of clarity the system will continue with the next instruction:

“Please turn right at the junction and then turn immediately left.”

## **On Arrival**

When you reach your planned destination the unit will tell you:

“You are arriving at your destination”

## **🎯 BASIC OPERATION**

Smartnav is designed to be simple to use - the simple press of a button gets you under way:

### **Request/Cancel Route: Long Press**

**(approximately 2 seconds)**

Connects to the Smartnav Control Centre (new GSM call) **OR** hangs up from the Control Centre (disconnects an existing GSM call) **OR** requests a new route when you deviate from the original route (in manual re-route mode, see **Manual Re-route**).

### **Cancel Route: Four Short Presses**

Should you wish to cancel your route before Smartnav confirms your arrival, please press the Smartnav button four times in quick succession and listen to the instructions.

### **Repeat/Mute: Short Press**

Repeats the most recent message (route instruction or traffic news) **OR** silences any speech currently being vocalised.

### **Take me to my favourite destination: Double Press (When navigation is not active)**

Two quick presses of the Smartnav button when guidance is not active will automatically download a route to your favourite destination. This is the destination stored in position number one on your personal preference page at [www.smartnav.com](http://www.smartnav.com)

### **Volume Mode: Triple Press**

Three short presses in quick succession will access the volume controls. These are vocalised to you, increasing from the current setting to a maximum of '8' before decreasing to '1'. A further single press during this sequence at the preferred

volume will select a new unit volume level, confirming your choice with, for example, "Volume four selected".

### **Quiet Mode: Double Press (When navigation is active)**

Two short presses in quick succession will access the quiet mode.

This mode reduces the volume level by approximately half.

The unit will return to the previously stored volume if any of the following occurs:

- Single press of the Smartnav button
- Receipt of a Smartnav Traffic Alert
- Detection of vehicle being off planned route

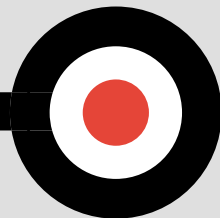
## **LED Indicator**

The LED on the Smartnav button visual indicates the following: -

### **Constant Green**

Guidance is active, i.e. route downloaded





and journey under way.

### **Constant Red**

Off planned route, i.e. driver is no longer following the planned route.

## **🕒 ADDITIONAL FEATURES**

### **Smartnav ‘Smart Start’**

Smartnav features an intelligent ‘Smart Start’ function. The download of the route to the vehicle will include several alternative route-start options. In consequence, irrespective of which direction you start driving, Smartnav instructions will begin shortly after driving has commenced.

### **Manual Re-route**

If the manual re-route facility has been selected on your Smartnav website preference page, the system will instruct as follows:

“You are off the planned route, please do a U turn when safe to do so.”

It is suggested that you turn around **when safe to do so** and return to the preceding junction.

The unit will tell you when you have rejoined the original route:

“You are back on the planned route – continue to follow the A61 for one and a half miles.”

If you are unable to recover your route, the unit will instruct as follows:

“You are still off the planned route, please press and hold the Smartnav button for re-routing to your destination.”

If you choose to press and hold the Smartnav button, your in-car unit will be connected to the Smartnav navigation computer, which will send a re-route to your vehicle. If you choose not to request a re-route, Smartnav will detect the point at which you return to the planned route and continue guidance.

## **Auto Re-route**

If the automatic re-route facility has been selected on your personal preference page

at [www.smartnav.com](http://www.smartnav.com) (see page 12), the system will instruct as follows:

“You are off the planned route, Smartnav is automatically calculating a new route to your destination.”

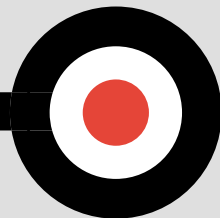
This message will be followed after a few seconds by:

“Your new route is now active.”

Normal navigation instructions will then re-commence.

## **Where’s my Nearest?**

The Smartnav database contains not only road, house number and postcode information but thousands of points of interest including airports, hotels, banks (and cash machines), restaurants (including fast food), car parks and a full range of tourist attractions. You can request the nearest or, if you know the destination, an actual point of interest, in the same way as you would a normal address.



## **Emergency and Breakdown call**

Should your vehicle break down or be involved in a road accident that requires the emergency services, you can contact the Smartnav Control Centre for assistance with a single press of the Smartnav button.

The Smartnav operator will contact your user's roadside assistance organisation or the appropriate emergency service with full details of the vehicle location and extent of the problem. The selected emergency service or roadside assistance organisation will then act accordingly.

## **Traffic Guard**

The Smartnav computer will always calculate the best route to your destination when you commence your journey, taking traffic conditions into account. However, if a new traffic problem occurs on your prescribed journey, the server will contact

your Smartnav unit and check your position.

If the traffic problem is relevant to your position, you will be given a traffic message, for example:

"Smartnav Traffic Alert. There are six miles of stationary traffic between M1 junction 14 and M1 junction 11 – expect 30 minutes delay. Smartnav has calculated that a better route is now available. Please press and hold your Smartnav button now to download a new route to your destination."

You can simply ignore the message if you wish to continue on the original planned route, or by pressing the Smartnav button, a new route is downloaded without having to speak to the Control Centre.

## How Smartnav Works

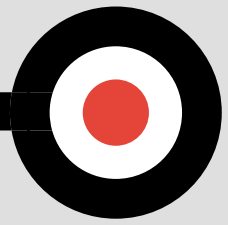
The Smartnav navigation system works in a unique way. It relies on navigation information being sent from the Smartnav Control Centre to you via the Smartnav Unit. You link with the Smartnav Control Centre at the start of a journey by pressing the Smartnav button on the dashboard of the vehicle. Your Smartnav unit is then connected to the Control Centre via the unit's dedicated GSM mobile phone module. On answering the call, the Smartnav PA talks to you and inputs your destination into the navigation computer which calculates the best route available at that time, allowing for known traffic conditions measured by the Trafficmaster network of road sensors. The call is then ended and the calculated route is transmitted to the unit. Your unit is configured so that a summary of your planned route, estimated time of arrival and any traffic conditions that have

been taken into account in calculating the route will precede your spoken instructions. If you wish to turn this function off, you can do so via your personal preference page at [www.smartnav.com](http://www.smartnav.com) (see Page 12)

As your vehicle travels, its position on the road is continuously tracked via the network of satellites that make up the GPS satellite network. Should your vehicle deviate from the planned route, you will be notified and be given instructions on how to return to the route. If traffic conditions change you will be offered the option to have the route re-calculated if a quicker alternative route is available; taking account of the reported delays.

## The Digital Road Map

In order to calculate a route to a destination address, the navigation system requires the current position of the vehicle and a digital



road map. This map stores the destination address itself and the roads leading to the destination address. The digital road map is stored within the navigation computer at the Smartnav Control Centre.

The road system is stored on the map as a line model, i.e. large junctions have only one focal point that is approached by all roads in point-to-point fashion. The navigation system will therefore indicate the distance to the turn off point as the distance to the centre of the junction.

## **GPS (Global Positioning System)**

Positioning accuracy is attainable to within approximately 5 metres. The integrated GPS receiver can receive the signals from up to twelve satellites concurrently. Accuracy of the calculated position normally increases as more satellites, beyond the minimum of three are received.

## **Traffic Information Coverage**

Trafficmaster's comprehensive network of traffic information sensors is established on over 8000 miles of the UK road network, including all motorways and trunk roads. The traffic information derived from this network covers the vast majority of longer distance and cross-country journeys but not necessarily those made within city centres. However, the Smartnav traffic information database includes details on roadworks, road closures and incident information where known for the full UK road network, all of which are employed in the calculation and download of Smartnav's most appropriate journey.

## The Smartnav Website

[www.smartnav.com](http://www.smartnav.com)

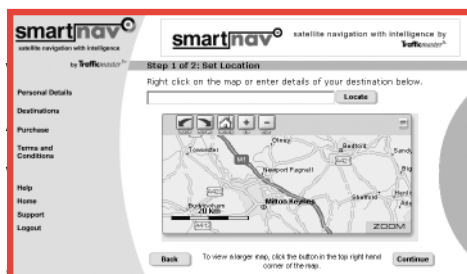
The Smartnav website enables the user to enter:

- Personal details
- Standard destinations which may then be retrieved by name when using Smartnav

**Note:** You can request a route to your 'favourite' destination (number 1 in this list) by pressing the Smartnav button twice when navigation is not active)

- Routing preferences, e.g. motorways/non motorways
- Purchase of credits and personal account management
- Purchase of additional services subscriptions

The website also carries information on the latest Smartnav developments along with product updates.



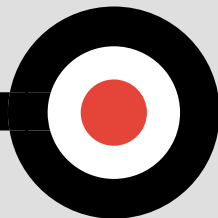
Smartnav Website

## Crossroads and Junctions

Under normal circumstances, Smartnav will always give an instruction based upon your next manoeuvre. In the event of receiving no instructions, you should continue straight ahead.

## Mini Roundabouts

Smartnav only recognises roundabouts that are kerbed. Mini roundabouts that are painted onto the road surface are treated as a junction. If the route being followed passes straight across this type of mini roundabout, Smartnav will not give an instruction. If the route being followed



requires a turn, Smartnav will give a normal turn left or turn right instruction.

obtain better GSM coverage.  
(See Troubleshooting).

## **GPS / GSM Coverage**

Poor GPS satellite tracking reception will impair performance. The accuracy of position measurement can be impaired by a poor or interrupted GPS signal.

In tunnels, underground car parks and in similar conditions, the vehicle will be unable to receive the signal from at least three satellites, and guidance will not be available.

Mobile phone networks have incomplete coverage and there may be occasions, due to geographical conditions or a busy network, when you are unable to communicate with the Smartnav Control Centre. During this period it may help to move the vehicle a short distance to



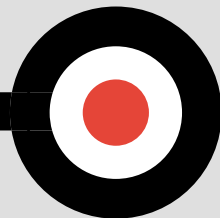
# Troubleshooting

Smartnav has been designed to be fail-safe. The driver is always responsible for ensuring safe operation of the vehicle. The use of the navigation system does not relieve the driver of their responsibilities for

the safety of themselves, passengers or other road users. The Highway Code and current traffic conditions must always be observed

TROUBLESHOOTING	
Problem	Possible causes/solutions
When trying to contact the Smartnav control centre, three beeps are heard from the system.	This will signify that the call has failed - it will be redialled automatically. Failure to connect could be due to poor GSM coverage at the current location, or simply that the network is busy. Try moving position.
The Smartnav switch LED illuminates red after a route has been downloaded.	If after starting to drive, the LED changes to Red, this indicates that you have departed from the intended route. The LED should revert to Green when you rejoin the correct route or a new route is delivered.
What happens if I don't receive my requested route?	Smartnav will continue to try to deliver the route until successful. You will be given the option to cancel your request.
What happens if my unit stops giving me instructions when I have not arrived at my chosen destination?	Contact the control centre by pressing the Smartnav button and an operator will assist you.
When I start the ignition and press the Smartnav button, the unit fails to respond.	After starting the ignition, please wait 10 seconds before requesting a route.
The unit gives instructions from my previous journey.	This may happen if you have switched off the ignition prior to receiving the final 'you have arrived at your destination' message. Please press the Smartnav button four times to cancel the remainder of the route.
What happens if the LED remains green after the ignition is switched off?	There is still an active route stored in the unit. Please press the Smartnav button four times if you wish to cancel this route.
What happens if I stop for a break on my journey?	The route will be retained for up to 60 minutes. It will then be deleted from the memory of the unit.
Guidance lacks precision.	A tolerance of 30 metres is allowed for. If there is a greater degree of inaccuracy, please contact your Smartnav dealer.





## 🎯 SMARTNAV OPTIONS

### Option 1: Safe Speed option

The Safe Speed option is designed with safe driving as a priority. The system works by alerting you when you approach zones monitored by fixed safety cameras, variable safety cameras and multi-camera detectors (also known as Specs). The system will help you to drive in accordance with the speed limits by warning you as you approach the monitored zone.

#### For Fixed Single Cameras

Two levels of warning are provided — one as you approach the monitored zone (3 short beeps) and a second (5 beeps) immediately before the monitored zone.

**For Specs Cameras, where your speed is recorded through the**

### monitored zone

On approach to a Specs system, you will also receive two levels of warning — one as you approach the monitored zone (3 long beeps) and the second immediately before the monitored zone (5 long beeps).

For both types of camera, if you drive over the speed limit for that zone, your unit will emit continuous beeps at a higher volume until you return to the safe legal limit.

#### For Variable Speed Limit areas (e.g. M25)

The system alerts you to the monitored zone in exactly the same manner as for a fixed zone. There is, however, no 'over speed' warning for these sites.

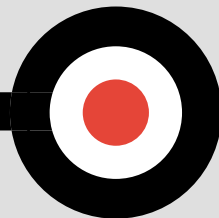
**For Temporary Safety Cameras  
(e.g. where road markings exist but a  
speed camera is not permanently  
present in the zone)**

These are **not** incorporated within the service, hence no alerts will be given when approaching these zones.

The database of safety camera zones is continuously updated by our data research team. The data within your Smartnav unit will be automatically updated once a month, when you next use your Smartnav unit for navigation.

Safe Speed option is operational every time you make a journey, with or without navigation active. Warnings can be disabled or reactivated via [www.smartnav.com](http://www.smartnav.com) or by speaking directly to the Smartnav PAs.

If you have not already subscribed to this service, you can purchase a subscription via [www.smartnav.com](http://www.smartnav.com), or through the Smartnav Control Centre, by pressing your Smartnav button.



## Option 2: RAC Trackstar Plus Option

RAC Trackstar has been developed so that if the worst happens and your car is stolen, we can help to locate it.

Once you have obtained your crime reference number from the police, a dedicated PA will send a signal to the Smartnav unit in your car to activate the tracking function. Your Smartnav unit will then keep us informed of the car's exact location every 20 seconds, and we will work with the police, continuously updating them of the car's location in order to help them recover the car.

## Operation

- Obtain a crime incident report number from the police.
- Telephone Smartnav on 0870 600 9990,

quoting your crime reference number.

- A dedicated Smartnav PA immediately contacts the police in the area where the car is located, providing exact location details.
- Any change in location is reported to the police until the vehicle is recovered.

The service is operational 24 hours a day, 365 days a year.

If you have not already subscribed to this service, you can purchase a subscription via [www.smartnav.com](http://www.smartnav.com), or through the Smartnav Control Centre, by pressing your Smartnav button.

### Option 3: Extended Warranty

Smartnav Extended Warranty has been designed to provide you with complete peace of mind.

This option protects you against any fault with your hardware for an additional 36 months after expiry of the inclusive 12 month warranty and includes all call out and repair costs. A standard diagnostic call out charge is £72 pounds alone and if your unit requires any modification could rise to hundreds of pounds.

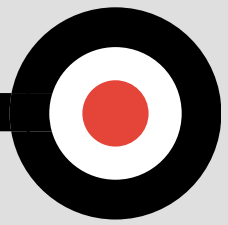
If you wish to subscribe to this option, please contact the sales team on 0870 050 3000, or visit [www.smartnav.com](http://www.smartnav.com)

### Option 4: Touch Screen

Smartnav Touch Screen is the perfect visual aid for your Smartnav. This stylish LCD is discrete in design and specifically designed for those drivers who would like the comfort of visual as well as the verbal instructions provided by the standard Smartnav unit.

The screen can be used to enter your destination by postcode, route to one of your top 10 favourite stored destinations or to contact the Smartnav Control Centre and make your request via the PA as per the standard Smartnav product.

When guidance is active the distance to your next manoeuvre, distance to your destination and estimated time of arrival will be displayed on the screen. As you approach road junctions and



roundabouts the screen will clearly display the manoeuvre that needs to be made in conjunction with verbal instructions

With Smartnav Touch Screen, access to the different Smartnav services and options are at your fingertips! A series of simple menus allow you to:

- Access safety and security options
- Customise the service
- Access additional features,

If you wish to purchase a TTouch Screen, please contact the sales team on 0870 050 3000, or visit [www.smartnav.com](http://www.smartnav.com)

## Summary of Warranty/Terms and Conditions of use

Smartnav is supplied with a 12-month warranty. **Trafficmaster Plc** warrants its products against defects in material and workmanship for a period of 12 months from the date of purchase.

Proof of purchase will be required before any warranty consideration by **Trafficmaster Plc**. A current subscription or pay-as-you-go credit is required to ensure continued use of this equipment. The purchase of a subscription or pay-as-you-go credit also represents your licence for the use of **Trafficmaster** traffic information. The information is the copyright of **Trafficmaster Plc** and no unauthorised broadcast or other public use of the information is permitted without written authorisation from **Trafficmaster Plc**. All warranty repairs must be forwarded to Trafficmaster Plc at the expense of the purchaser.

This warranty does not cover any damage

caused by negligence, failure to follow the instructions in the user manual, unauthorised modifications, or inappropriate installation.

**Trafficmaster** cannot be held responsible for any damage that may occur resulting from installation or modification by anyone other than a **Trafficmaster** technician or the company's appointed agents.

The warranty does not apply if the product has been damaged by accident, abuse, misuse, cosmetic wear and tear, or misapplication, or as a result of service to the product by anyone other than **Trafficmaster Plc**, or an approved **Trafficmaster** agent.

Your Smartnav unit has been fitted by an approved **Trafficmaster** technician or a **Trafficmaster** appointed agent. Altering the position of your Smartnav installation could interfere with the operation of driver or passenger airbags or the vehicle controls. **Trafficmaster** cannot be held responsible

for any malfunction of the vehicle or its systems resulting from incorrect fitment of the Smartnav unit. If you have any doubts, please refer to the vehicle manufacturer for assistance.

**Trafficmaster Plc** is not responsible for any financial loss, or other incidental or consequential damage arising out of the use of, or inability to use, this product. This includes damage to property and, to the extent permitted by law, damages for personal injury and death.

The Purchaser expressly acknowledges that the operation of Smartnav may from time to time be adversely affected by physical features such as buildings, underpasses, atmospheric conditions and other causes of interference beyond the control of **Trafficmaster Plc**, who will not be liable to the subscriber for any loss or damage incurred. This product must always be used in conditions that will not affect your ability

to drive safely or affect the safety of other road users. This warranty applies only to the Smartnav product and does not affect your statutory rights.

The Purchaser acknowledges that the purchase of the Smartnav Unit does not in any way mitigate his or her duty to obtain adequate insurance for the vehicle.

**Trafficmaster Plc** has the right to amend the above terms at any time without prior notification and current terms and conditions can be found at [www.smartnav.com](http://www.smartnav.com). Information in this manual is correct at time of printing.

**Trafficmaster Plc,**

University Way, Cranfield,  
Bedfordshire, MK43 0TR.

Smartnav Sales and General Enquiries:  
0870 050 3000

Full Terms and Conditions are on the reverse of your Tariff Agreement, and also available at [www.smartnav.com](http://www.smartnav.com)



intelligent navigation and more...

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