

FLEET MANAGEMENT • SHIPPING CONTROL • AVIATION APPLICATIONS EMERGENCY SERVICES • SECURITY ORGANISATIONS • RAILWAY TRAFFIC

Internav®

Internav® is an Automatic Vehicle Location and Tracking System, which utilises the Navstar Global Positioning System (GPS).

Internav® will monitor, track, follow or find *your* vehicles on *your* maps which you can scan and register yourself or have the maps prepared for you.

Internav® will show distances in metres, kilometres or nautical miles.

Internav® will warn you when your vehicles are too close to each other (collision detection).

Internav® will warn you when your vehicles are facing danger upon entry into restricted areas (alarm zones), when they are outside designated safety areas (corridor zones) or when they approach designated waypoints (waypoint proximity).

Internav® will allow you to define areas on the map within which collision detection warning will not be activated (blind zones).

Internav® will allow you to record all vehicle positions for later playback and analysis.

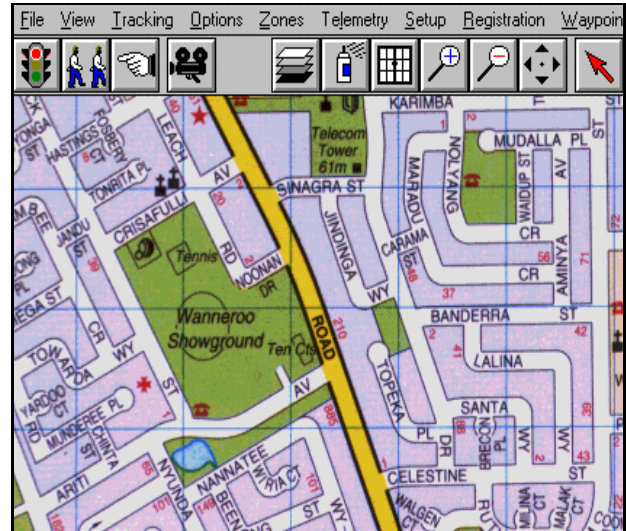
Internav® will allow you to read and update textual information about specific locations on the map (waypoints). Waypoints are colour coded dots which are placed on the map by the user.

Internav® will allow you to retrieve and store a picture and textual information about every vehicle in your fleet.

Internav® telemetry displays the mobile speed as well as the distance and bearing to a selected destination.

Internav® will automatically page selected vehicles notifying of waypoint proximity.

Internav® will automatically record all safety and emergency events into a log file. These can be later analysed and printed.



Distributed by:

Internav® will help you ensure the **safety** of your fleet, increase the **efficiency** of your operation and give you **greater control** whether on *land*, in the *air* or at sea.

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Internav[®] displays the current mobile position as an icon (various sizes), continuous track or a trail of points. Clicking on a trail point with button 2 will display the Mobile ID, date, time, latitude and longitude.

Location Accuracy

The basic tracking system gives position accuracy in the order of 15 to 30 metres (when subject to the effects of selective availability 100 metres).

The supply of RTCM 104 correction information to the mobile GPS units from a differential base station can improve the tracking accuracy to within 1 to 5 metres of the actual location.

Base Station Computer

The recommended minimum hardware specification is:

- 486 DX2/66 MHz min.;
- 16 Mb RAM minimum;
- MS Windows 3.1, 3.11, 95, NT;
- 1 serial communications port;
- 1 parallel port
- SVGA(800x600x256) graphics card;
- 1 1.44 HD 3.5" diskette drive;
- 100 Mb HDD;
- Microsoft Mouse.

System Components

Internav[®] uses various communication methods for polling and transmission of positional information:

HF Radio Option (Codan or Barrett)

Vehicle Equipment

- Mobile Radio and Aerial with GPS unit connected
- (Optional) Colour Laptop or Notebook Computer for on-board navigation.

Base Station Equipment

- Base Station Computer
- Base Station Radio with aerial
- **Internav**[®] Location and Tracking System

Satellite Phone Option

Vehicle Equipment

- Westinghouse S 1000 satellite phone with modem and data port
- Motorola Oncore 8-channel GPS (standard NMEA 0183 output)
- (Optional) Colour Laptop or Notebook Computer for on-board navigation.

Base Station Equipment

- Base Station Data Modem (Hayes compatible)
- **Internav**[®] Location and Tracking System
- Base Station Computer

GSM Option

Vehicle Equipment

- GSM modem with data number
- Any GPS with RS232 output supporting NMEA 0183.

Base Station Equipment

- Base Station Computer
- Base Station Data Modem (Hayes compatible)
- **Internav**[®] Location and Tracking System

UHF/VHF Radio Option

Vehicle Equipment

- Mobile GPS / Modem unit
- Mobile Radio and aerial
- (Optional) Colour Laptop or Notebook Computer for on-board navigation.

Base Station Equipment

- Base Modem
- Base Station radio with aerial
- Base Station Computer
- **Internav**[®] Location and Tracking System
- 12V DC Power Supply

INMARSAT-C Option

Mobile Equipment

- Standard mobile installation with GPS for position polling

Base Station Equipment

- Base Station Data Modem (Hayes compatible)
- **Internav**[®] Location and Tracking System
- Base Station Computer