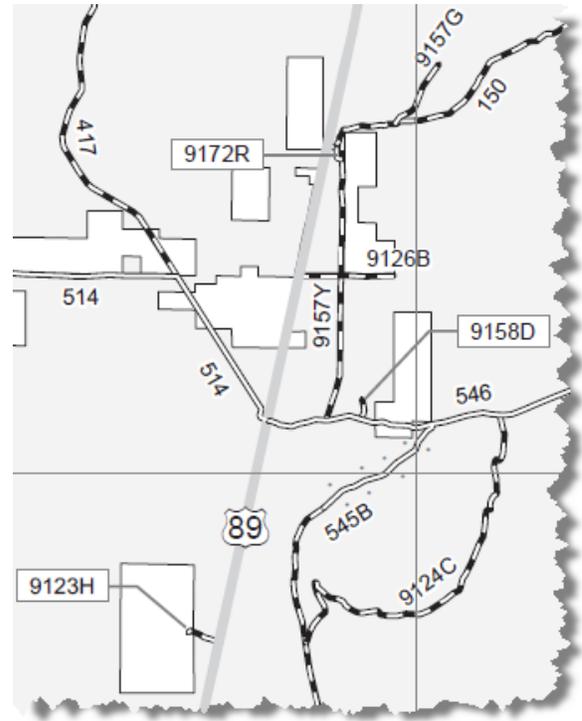


## Guidance On Installation And Use Of A Travel Aid For Garmin GPS Receivers

**Background** - The published Motor Vehicle Use Map (MVUM) is the official document-of-record that designates roads, trails, and areas open to public motorized use on Coconino National Forest. An example is illustrated at right.

The published MVUM contains important information about road, trail, and area designations that motorists should always have close at hand. However, the MVUM's large size could make it difficult to handle, or refer to, while travelling, and some motorists have found that the MVUM's small scale and sparse design make it difficult to locate themselves with confidence along the roads and trails that it portrays.



In response to these issues, Coconino National Forest has developed a Travel Aid for Garmin GPS receivers (left) that is designed to help motorists:

- Locate their position along designated roads or trails,
- Identify areas open to motorized cross-country travel,
- Identify motorized dispersed camping corridors, and
- Identify areas open to motorized elk retrieval.

**Install the Travel Aid** – Follow these steps to install the Travel Aid.

1. Keep this document handy, as it provides guidance on installation of the Travel Aid.
2. Refer to **Appendix A** to determine if a supported Garmin GPS receiver is available.

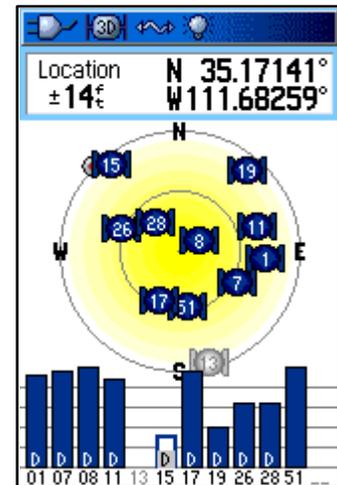
3. Click **Start – Control Panel – Add or Remove Programs** on the Windows PC (2000, XP, Vista, or 7) that will be used to perform the installation, and determine if a **Garmin USB Drivers** entry is present. If not, the drivers must be installed on the PC before proceeding. Garmin USB drivers can be obtained from these sources:
  - CD shipped with a new Garmin GPS receiver,
  - Garmin MapSource or BaseCamp software CD or installation package, or
  - Garmin website at [http://www8.garmin.com/support/download\\_details.jsp?id=591](http://www8.garmin.com/support/download_details.jsp?id=591).
4. Download the `Travel_Aid_Garmin.exe` file (~7 MB) to the PC from:
  - `http://blah`
5. Turn on the Garmin GPS receiver, and connect it to the PC with its USB cable.
6. Double-click the `Travel_Aid_Garmin.exe` file, and note, or execute, the numbered items as illustrated and described below.



- **Item 1** – The Travel Aid’s map is already pre-loaded. No further action is required.
- **Item 2** – Check this box to merge the Travel Aid’s map content with maps already installed on the GPS receiver. If the box is not checked, any existing maps (including all purchased map content) will be permanently over-written! An alternative to merging the receiver’s existing maps with the Travel Aid, is to install the Travel Aid on a separate micro-SD card, and swap the micro-SD cards as needed. There is no need to check the box if no map content is currently installed on the receiver.
- **Item 3** – Click the **Upload to GPS** button to install the Travel Aid’s map content.
- **Item 4** - Note the status messages, and wait for the “Transfer complete” message before proceeding. Do not operate the GPS receiver during the Travel Aid’s installation. Map content totals ~2.6 MB.
- **Item 5** – Click **Exit** to complete the Travel Aid’s installation.

**Use the Travel Aid** – The following topics describe general procedures for operation and use of the Travel Aid.

**GPS session** - Turn the GPS receiver on outdoors, and wait for it to establish a position fix. Receivers vary, but most provide a skyplot view, as illustrated at right. A minimum of four satellites are required to establish a reliable position. In this example, a “3-D” icon is also displayed, indicating a good position fix.



**Map page** - Display the Map page (left) by cycling through the receiver’s page sequence, or by opening it from the receiver’s page menu.

**Feature display** – Refer to **Appendix B** to view the symbols used to represent the Travel Aid’s features.

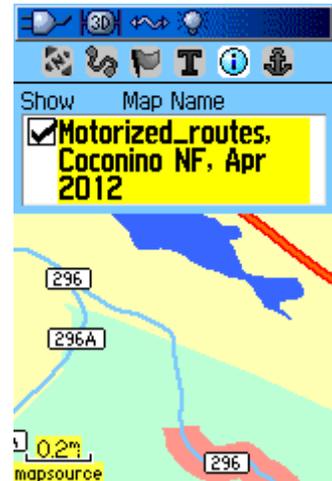
The map’s color scheme was designed for daytime use, so it is recommended that users manually set their receiver’s Display Mode to the “Daytime” setting.

**Position and direction of travel** - The receiver’s current position will be indicated by an arrowhead pointing in the direction of travel. In the example above, travel is towards the northeast along Road 237, a road that has been designated for highway-legal vehicles only.

**Feature identification** – Use the receiver’s Map Pointer to identify unlabeled features. In the example above, the pointer is identifying an area designated for motorized elk retrieval. Identifying an unlabeled road will reveal its road number and season of use.

**Zoom levels** – Different feature types will appear at different zoom levels. When zooming in, for instance, roads designated for highway-legal vehicles will be visible prior to the appearance of roads designated for all vehicles. The map may be viewed at any convenient zoom level, but the 0.2-mile through 0.5-mile zoom levels are typically preferred for general use.

**Hide the map** – Users can hide the Travel Aid’s map by un-checking its “Show” entry in the receiver’s Map Setup section, as at right.

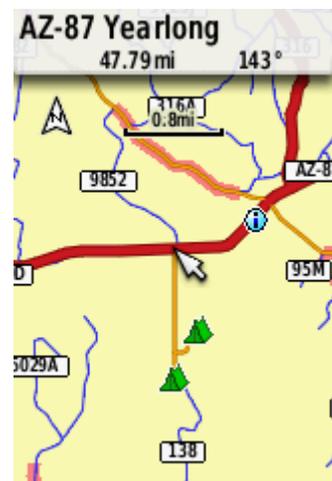
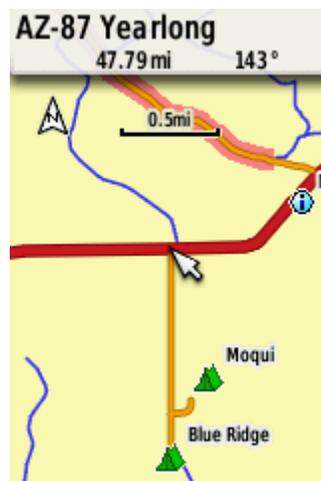
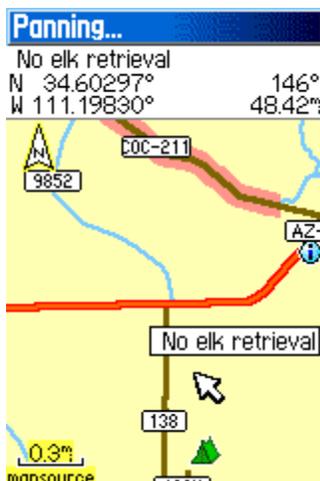


**Travel Aid limitations** – Unfortunately, the Travel Aid is not a perfect solution. The following topics describe some of its limitations.

**Map visibility** – Small screen size, limited screen resolution, and certain lighting conditions may impair map visibility. Zoom in, and increase screen backlight levels to improve map visibility.

**Feature display** - Different Garmin GPS receiver models display feature symbols differently, and at different zoom levels, depending upon their version of installed firmware.

**Road and trail labels** – Newer model receivers display fewer labels, and drop labels altogether as they zoom in. In the examples below, an older 60CSx receiver (left) retains road labels at all zoom levels. A newer 62sc receiver (center and right) drops road labels when zooming in from the 0.8-mile level to the 0.5-mile level. Use the Map Pointer to identify unlabeled features.

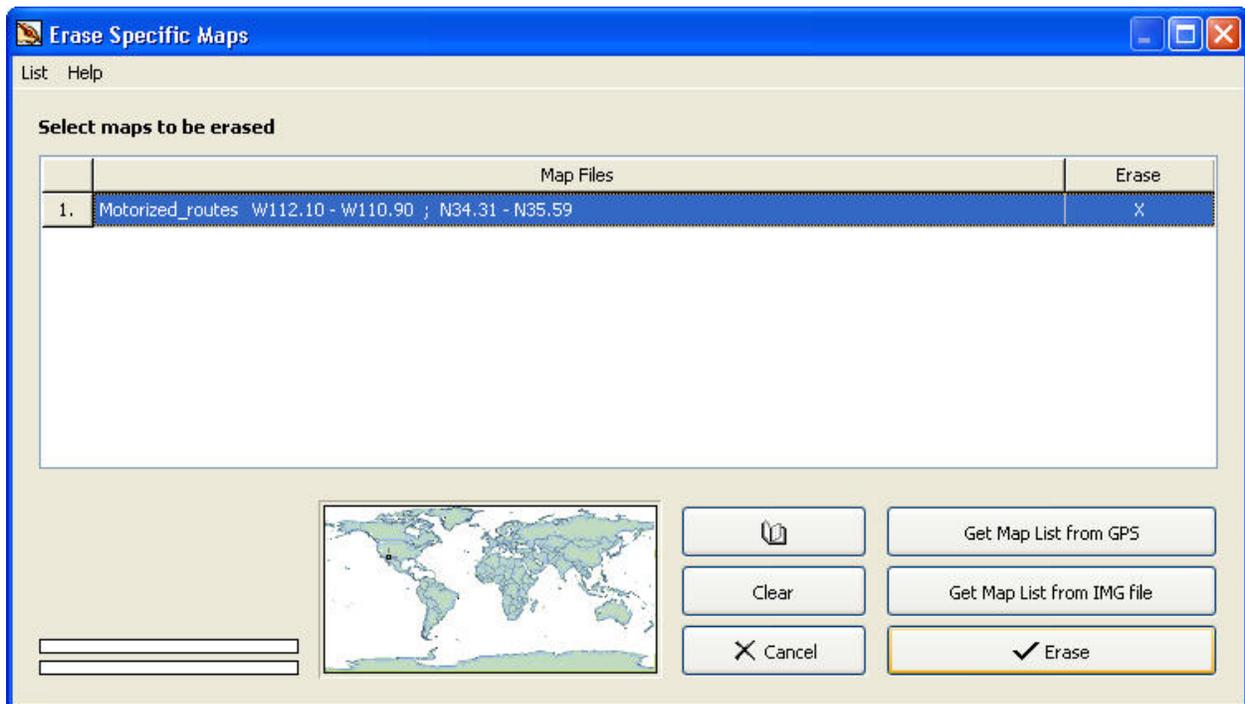


Roads and trails are not “routable” – Unlike commercial map content for the Garmin Nüvi, Tom Tom, Magellan RoadMate, and so on, the Travel Aid’s roads and trails are not “routable”.

Windows compatibility only – The Travel Aid’s installer package is compatible only with PCs running Windows 2000, Windows XP, Windows Vista, or Windows 7.

**Un-install the Travel Aid** – Unfortunately, the Travel Aid’s installer package does not include an uninstall utility. Follow these steps to remove the Travel Aid from a Garmin GPS receiver.

1. Download and install the Mapwel Demo software (<http://www.mapwel.net/down.htm>) on a Windows PC.
2. Turn on the Garmin GPS receiver, and connect it to the PC with its USB cable.
3. Start the Mapwel Demo software, click **No** when prompted to register, and:
  - a. Click **GPS – Erase Specific Maps**,
  - b. Click **Get Map List From GPS**,
  - c. Select the **Motorized\_routes** map, and
  - d. Click **Erase**.



## Appendix A – List of supported Garmin GPS receivers

The Travel Aid should be installed only on Garmin GPS receivers that are supported by the Travel Aid’s development software, as listed below.

Unfortunately, “supported” is a relative term, as these receivers may display feature symbols differently, and at different zoom levels, depending upon their version of installed firmware.

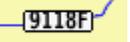
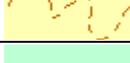
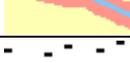
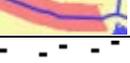
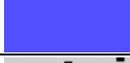
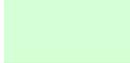
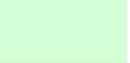
Although technically supported, receivers having a grey-scale (non-color) screen may not be suitable for using the Travel Aid.

Garmin® Nuvifone M20™  
Garmin® Mobile XT™  
Garmin® Aera™  
Garmin® Oregon™  
Garmin® Dakota™  
Garmin® Colorado™  
Garmin® Montana™  
Garmin® Astro™  
Garmin® Nuvi and Zumo (all models)™  
Garmin® Edge 605, 705, 800™  
Garmin® iQue M3, M4, M5™  
Garmin® eTrex 20, 30™  
Garmin® eTrex Summit HC™  
Garmin® eTrex Venture Cx, HC™  
Garmin® eTrex Legend C, Cx, HCx™  
Garmin® eTrex Vista, C, Cx, HCx™  
Garmin® Rino 120, 130, 520, 530, 520HCx, 530HCx™  
Garmin® GPS V™  
Garmin® GPSMAP 60C, 60CS, 60Cx, 60CSx, 62, 62s, 62st™  
Garmin® GPSMAP 76, 76S, 76C, 76CS, 76Cx, 76CSx, 78, 78s, 78sc™  
Garmin® GPSMAP 176, 176C, 276C, 376C, 378, 478C™  
Garmin® GPSMAP 96, 96C, 196, 296, 396, 496™  
Garmin® GPSMAP 620 - only routing maps in automotive mode™  
Garmin® Quest, Quest 2™  
Garmin® Street Pilot i2, i3, i5™  
Garmin® Street Pilot c320, c330, c340™  
Garmin® Street Pilot c530, c550, 580™  
Garmin® Street Pilot 2610, 2620, 2650, 2660™

## Appendix B – Travel Aid feature legend for older and newer models of Garmin GPS receiver

Unfortunately, different Garmin GPS receiver models may display feature symbols differently, and at different zoom levels, depending upon their version of installed firmware. This table displays the variations likely to be observed between older and newer Garmin GPS receiver models.

In addition to many others, older receivers include the GPSMap 60C and 76C series. Newer receivers include the Oregon, Montana, GPSMap 62, and GPSMap 78 series.

Type Of Feature	Older Receivers	Newer receivers
Public road or highway		
Road open to highway-legal vehicles only		
Road open to all vehicles		
Road sign		
Motorized trail open to all vehicles		
Motorized trail open to motorcycles only		
Motorized trail open to vehicles 50 inches, or less, in width		
Motorized trail sign		
Campground		
Picnic area		
Motorized trailhead		
Information site		
Area open to motorized dispersed camping (pink corridor)		
Area open to motorized cross-country travel		
Wilderness area		
Water body		
Non-National Forest land		
Area where motorized elk retrieval is permitted		
Area where motorized elk retrieval is not permitted	