

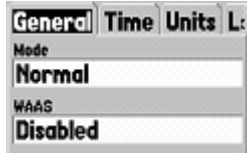
Setup

Press the **POWER** Key to turn the GPS unit on.

Press the **MENU** Key twice to open up the Main Menu.

Use the **ROCKER** Key to highlight the 'Setup' option. Press **ENTER** Key to open Setup Menu.

Check the following settings:

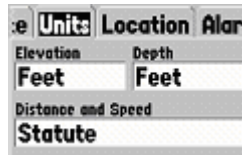


General Tab
WAAS set to 'Disabled'
WASS set to 'Enable'
without the backpack

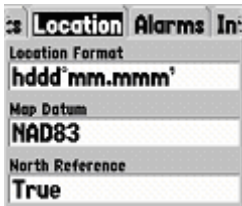


Time Tab
Time Format set to '12 hr'
Time Zone set to 'Central'
Daylight Savings Time set to 'Auto'

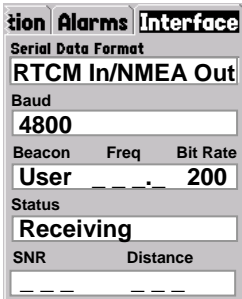
Interface Tab
Serial Data Format set to 'RTCM In/NMEA Out'
Beacon set to 'User'
Beacon set to 'User'
Frequency set to a GPS Broadcast site based on your current location and quality of reception (see the next page)
Bit Rate set to '200'
Serial Data Format set to 'Garmin' without the backpack



Unit Tab
Elevation set to 'Feet'
Depth set to 'Feet'
Distance & Speed set to 'Statute'



Location Tab
Location Format set to 'hdddmm.mmm'
Map Datum set to 'NAD83'
North Reference set to 'True'



Acceptable Accuracy Ratings

Review the following items to verify that the GPS unit is receiving data at an appropriate level of accuracy.

On the GPS Information page
Accuracy - 5 meters (16.4 feet) or less
Receiver status - receiving

Main Menu Options



- Press the **MENU** Key twice to display the Main Menu page.
- Use the **ROCKER** Key to highlight the menu option desired.
- Press the **ENTER** Key to display the page for the selected option.

Trip Computer – Provides eight trip information data fields and allows you to reset the fields.
Tracks – Allows you to 'Save' or 'Clear' the Track Log, display list of Saved Tracks, and setup the Track Log recording options.
Points – Allows you to select Waypoints, Points of Interest, Cities, Exits, Addresses, and Intersections using your current location.
Routes – Allows you to create routes, determine how many routes you have left, view a list of existing routes, and review and edit routes.
Proximity Waypoints – Allows you to enter a waypoint and radius to alert you when approaching a predetermined area.
Celestial Menu – Allows you to view information on Tides, Sun and Moon, and Hunt and Fish times.
MapSource Information – Displays a list of MapSource data stored in the unit and allows you to turn On/Off the display of each map.
System Information – Displays the software version and unit ID number.
Setup Tabs – Allows you to set unit features such as time, units of measure, location, alarms, interfaces, etc.

Differential GPS Broadcast Sites for Iowa

OMAHA, NE
Transmission Frequency: **298 KHZ**
Transmission Rate: **200 BPS**

KANSAS CITY, MO
Transmission Frequency: **305 KHZ**
Transmission Rate: **200 BPS**

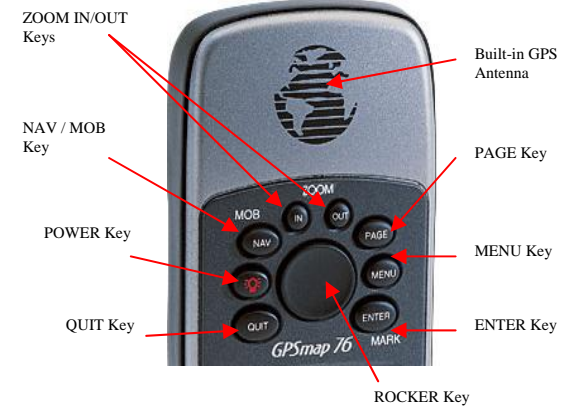
ST. PAUL, MN
Transmission Frequency: **317 KHZ**
Transmission Rate: **200 BPS**

ROCK ISLAND, IL
Transmission Frequency: **311 KHZ**
Transmission Rate: **200 BPS**

ST. LOUIS, MO
Transmission Frequency: **322 KHZ**
Transmission Rate: **200 BPS**

This document was developed by the USDA-NRCS, Des Moines, Iowa and was derived from the *Garmin GPSMap 76 Quick Reference Guide*.

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- ZOOM IN** – The **ZOOM IN** Key is used to decrease the map scale. This allows you to view a smaller area of the map, but with greater detail.
- ZOOM OUT** – The **ZOOM OUT** Key is used to increase the map scale. This allows you to view a larger area of the map, but with less detail.
- NAV** – The **NAV** Key is used to begin or stop navigation. When pressed and held down, the GPS stores the current location and allows immediate navigation to that point (MOB).
- PAGE** – The **PAGE** Key is used to cycle through the five main pages. It also ends an operation-in-progress and returns you to a main page.
- POWER** – The **POWER** Key is used to turn the unit on and off, press and hold key. Press and release this key to access the window for backlighting and contrast adjustment.
- MENU** – The **MENU** Key is used to display page option menus. Press twice to display the Main Menu.
- QUIT** – The **QUIT** Key will cycle through the five main pages in reverse. It will end an operation-in-progress and return to the previous page.
- ENTER** – The **ENTER** Key is used to activate a data field or confirm a selection. When pressed and held, the unit will store the current location and display the Mark Waypoint Page.
- ROCKER** – The **ROCKER** Key is used to control the Up/Down and Left/Right movement of the cursor and for data entry.

Collecting Point Data

- To mark your present location, press and hold the **ENTER** Key until the 'Mark Waypoint' page is displayed.
- Press the **MENU** Key to open the Mark Waypoint Menu.
- Use the **ROCKER** Key to highlight the Average Location, press the **ENTER** Key to turn open the Average Location page.
- Watch the Estimated Accuracy reading (should be less than 5 meters or 16.4 feet) and the Measurement Count reading (should be at least 10).
- When both criteria are met, press the **ENTER** Key to save the waypoint.
- Press the **ROCKER** Key to highlight the data field.
- Press the **ENTER** Key to activate the data field. The field will become active and the first character will be highlighted.
- Press the **ROCKER** Key to the Left to clear the field, if desired.
- Press the **ROCKER** Key Up or Down to scroll through the alphanumeric characters until the first character to be entered is selected.
- Press the **ROCKER** Key to the Right to place the character and move to the next placeholder.
- Use the **ROCKER** Key to scroll to the next character to be entered.
- Repeat the previous step until all desired characters have been entered to a maximum of 10.
- With the last character highlighted, press the **ENTER** Key to accept the entered data.
- To mark a specific location on the map, use the **ROCKER** Key to move the Map Pointer to the location.
- Briefly press the **ENTER** Key to display the 'New Waypoint' page.
- Press the **ENTER** Key to save the new waypoint.

Waypoints may also be gathered directly from the Mark Waypoint Page without using the Averaging function; by pressing the **ENTER** Key to save. However, the data collected will have a lower level of accuracy and this method is not recommended.

Collecting Line Data

Line data is gathered by collecting a waypoint at the start of the line feature, at each successive turn in the line, and at the end of the line feature.

Give each waypoint a unique and identifiable name that also indicates the order in which the point falls. For example, name the first point 100, the second 101, the third 102 and so on. Take accurate notes so that your data will be interpretable when it is taken back to the office.

To calculate the length of a line (Route) in the field:

- Press the **MENU** Key twice to open the Main Menu page.
- Press the **ROCKER** Key to highlight Routes.
- Press the **ENTER** Key to open the Routes Page.
- Select the New button on the Routes Page and press **ENTER** to create a new route. A blank Route Page will open.
- Add waypoints to the route by pressing the **ROCKER** key to highlighting the blank line in the middle portion of the screen and pressing the **ENTER** Key. This will open the Points Menu.
- Use the **ROCKER** Key to highlight the Waypoints option from the Points Menu, press **ENTER** to open the Waypoints by Name screen.
- Select a point from this screen by entering or beginning to enter a waypoint name into the top field of this page and then pressing the **ENTER** Key to send the cursor to the lower field of the screen.
- Add a point to the route by selecting it from this list by highlighting it using the **ROCKER** Key and pressing the **ENTER** Key.
- The Waypoint Page will open to display the properties of the waypoint that you wish to add to your route.
- Highlight the OK button and press the **ENTER** Key to accept the waypoint. OR Press the **QUIT** Key to decline the point and go back to the Waypoints by Name page.

Repeat this process until you have added all the waypoints that define the measured line feature.

Once all of the waypoints have been added to the route, the total route distance will be displayed on the Route Page. Leg distance between waypoints as well as other route characteristics can be displayed by highlighting the Route name (in the top field of the Route Page) and then pressing left or right with the **ROCKER** Key.

To calculate the length of a line (tracklog) in the field:

- Press the **MENU** Key twice to open the Main Menu.
- Press the **ROCKER** Key to highlight Tracks.
- Press the **ENTER** Key to open the Tracks Page.
- Press the **MENU** Key to open the Tracks Menu.
- Use the **ROCKER** Key to highlight the Setup Track Log, press the **ENTER** Key to open the Setup Track Log Menu.
- Check the following items:
 - Recording set to 'Stop When Full'
 - Record Method set to 'Auto'
 - Interval set to 'Most Often'
- Use the **ROCKER** Key to select the OK button and press the **ENTER** Key to exit the setup Track Log Menu.
- Start walking/driving, when finished walking/driving; Use the **ROCKER** Key to select the Save Button and press the **ENTER** Key.
- Use the **ROCKER** Key to select 'save back through (time you started walking)', and press the **ENTER** Key.

- The Track Log opens and displays the date, distance, number of points taken and the total area.
- Use the **ROCKER** Key to select the OK button and press the **ENTER** Key to complete the Track.

To view the Track on a map, at the Track Log screen use the **ROCKER** Key to select the Map button and press the **ENTER** Key. A map will be displayed. To exit the map, press the **QUIT** Key.

Collecting Polygon Data

Polygon data is gathered the same way as line data, either as waypoints manually entered and added to a Route or as automatically generated waypoints along a Track.

To capture a polygon feature using waypoints:

Collect a waypoint at a starting point on the perimeter of the polygon feature that you will recognize when you return to it. Collect waypoints at each successive corner of the polygon. You do not need to re-collect the position of the start point of the polygon feature.

To capture a polygon feature using tracks:

Set the track recording method in the same way that you would for collecting a line feature. Turn on track recording at a recognizable starting point for the polygon and begin navigating along the area boundary. Turn off track recording when you return to the start point or when the boundary of the area is a straight line from where you stand back to the start point.

Creating "Saved Tracks" and calculating areas in the field:

Open the Tracks page, select the Save button and press the **ENTER** Key.

You will be given the choice to save the entire track log or to save a portion of the log from the most recent track point to one of the breaks in the log caused by turning track recording on. Remember, you put these breaks in on purpose by turning track recording on at the start of a feature and whenever you returned to the boundary of the feature after making a detour.

Choose one of the break points in the drop down list by highlighting it with the **ROCKER** Key and then pressing the **ENTER** Key.

Saving that portion of the track log as a track will bring up the Track Page. The Track Page will display the acreage and perimeter of the saved track.

NOTES:

Saved Track area may not match that of ArcView for the same area using the same points; use the GPS area only for reference in the field.

When using the Backpack GPS Receiver, the location of the receiver on the backpack is where the GPS data will be recorded. Try to keep the receiver on the backpack as close to the location of the point that you want to record. When using just the Garmin the 'globe' on the unit is the receiver.
