

MLEP Intermediate GPS Workshop

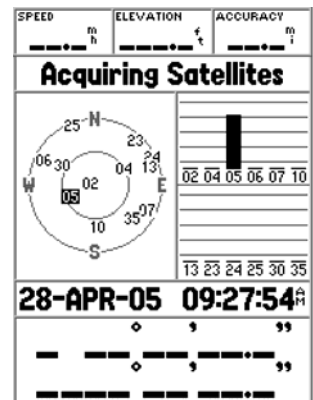
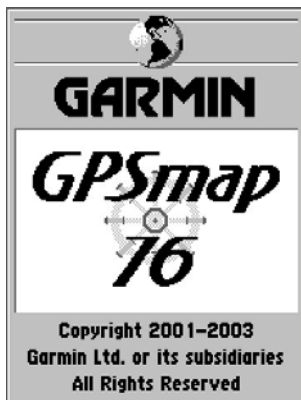
Exercise Three

Formatting the Receiver

Sometimes, it is necessary to change the way the receiver operates or displays information. During this exercise we will disable/enable WAAS, change the time zone, set the north reference, change coordinate systems, and setup the 'Map View' screen.

Part 1: *When you buy your new receiver, the WAAS feature may be set as disabled from the factory. This part of the exercise will show you how to disable/enable WAAS.*

1. *If you have not done so already, power on your GPS receiver. The receiver goes through the advertisement (Splash) screens. Pressing the <ENTER> key moves you through them to get to the 'Satellite' screen.*
2. *While the receiver is gathering satellites, we can proceed.*



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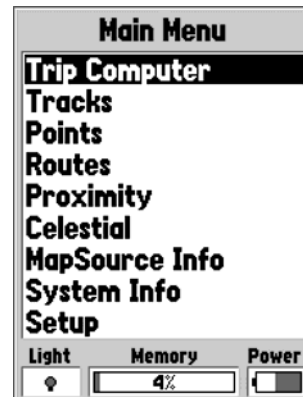
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3. Press the <MENU> key once and the receiver will display the 'Satellite' menu.

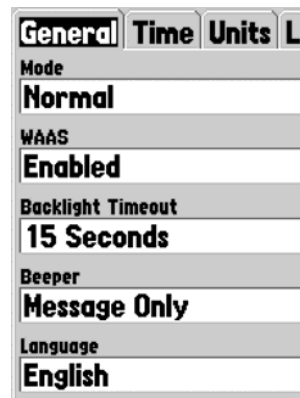
4. Press <MENU> again and you will be at the 'Main Menu'.



5. Using the center <ROCKER> key, make sure 'Setup' is highlighted and press the <ENTER> key.



6. A row of tabs appears at the top of the screen. You can move to the 'General' tab by pressing the <ROCKER> key either left or right.



7. The General tab contains settings for the Receiver 'Mode', 'WAAS', 'Backlight Timeout', 'Beeper', and 'Language'.

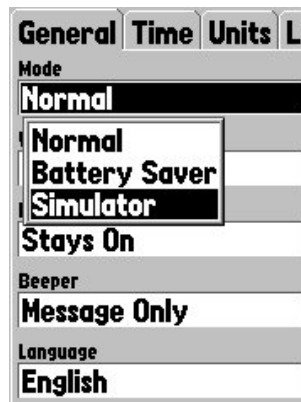
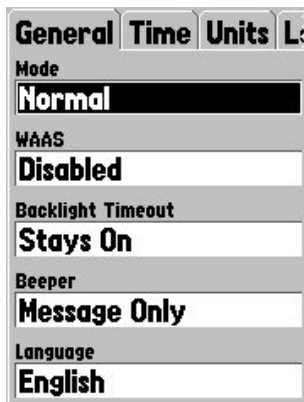
8. To change a setting, use the <ROCKER> key to highlight the field to change and press the <ENTER> key to display the choices. Use the <ROCKER> key to highlight your choice and then press the <ENTER> key to accept your choice.

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9. *If we are in the classroom, we must start the simulator. If we are outside skip to step 12.*
10. *To start the 'Simulator Mode', highlight the 'Mode' parameter, press the <ENTER> key, highlight 'Simulator' and press the <ENTER> key again to accept your choice.*



11. **NOTE:** *When 'Battery Saver' is selected, you may experience slower screen updates. The receiver does not receive WAAS in 'Battery Saver' mode.*

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12. We are now ready to set the WAAS option. Use the <ROCKER> key to highlight the 'WAAS' field.
13. Press the <ENTER> key to display the 'WAAS' field options and highlight 'Disabled' then press the <ENTER> key. The 'WAAS' field will now indicate that WAAS is disabled. This is how WAAS may be set when you first acquire your receiver.

General	Time	Units	Language
Mode	Normal		
WAAS	Enabled		
Backlight Timeout	15 Seconds		
Beeper	Message Only		
Language	English		

General	Time	Units	Language
Mode	Normal		
WAAS	Enabled		
Backlight Timeout	15 Seconds		
Beeper	Message Only		
Language	English		

General	Time	Units	Language
Mode	Normal		
WAAS	Disabled		
Backlight Timeout	15 Seconds		
Beeper	Message Only		
Language	English		

14. Ensure WAAS is enabled because we need it for the rest of the exercises. To accomplish this, repeat steps 13 and 14 above to reset WAAS to 'Enabled'.

General	Time	Units	Language
Mode	Normal		
WAAS	Disabled		
Backlight Timeout	15 Seconds		
Beeper	Message Only		
Language	English		

General	Time	Units	Language
Mode	Normal		
WAAS	Disabled		
Backlight Timeout	15 Seconds		
Beeper	Message Only		
Language	English		

General	Time	Units	Language
Mode	Normal		
WAAS	Enabled		
Backlight Timeout	15 Seconds		
Beeper	Message Only		
Language	English		

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Part 2: Now we will change the time zone. Setting the time zone is only necessary to display the correct local time. It serves no other purpose.

1. To set the time zone, press the <ROCKER> key to the right to highlight the 'Time' tab.
2. On this screen, you can change the 'Time Format', 'Time Zone', and 'Daylight Savings Time'. The GPS satellites control the 'Current Date' and 'Current Time'.

General	Time	Units	Loc
Time Format			
12 Hour			
Time Zone			
Central			
Daylight Savings Time			
Auto			
Current Date			
13-MAY-05			
Current Time			
01:42:40 ^{PM}			

General	Time	Units	Loc
Time Format			
12 Hour			
Time Zone			
Central			
Daylight Savings Time			
Auto			
Current Date			
13-MAY-05			
Current Time			
01:43:10 ^{PM}			

3. Note the 'Current Time' at the bottom of the screen.
4. Use the <ROCKER> key to highlight the 'Time Zone' field.
5. Press the <ENTER> key to display time zone options.

General	Time	Units	Loc
Time Format			
12 Hour			
Time Zone			
Central			
Daylight Savings Time			
Auto			
Current Date			
13-MAY-05			
Current Time			
01:43:10 ^{PM}			

6. Use the <ROCKER> key to highlight 'Pacific'. Press the <ENTER> key. Note the impact on 'Current Time' at the bottom of the screen.

General	Time	Units	Loc
Time Format			
12 Hour			
Time Zone			
Pacific			
Daylight Savings Time			
Auto			
Current Date			
13-MAY-05			
Current Time			
11:43:55 ^{AM}			

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7. *Not all of the World's time zones are in the drop down list. To set the time zone for areas not included in the US and its territories, you will set the 'Time Zone' to 'Other' and enter the correct hour offset. (UTC stands for Coordinated Universal Time.) Note the impact on 'Current Time' at the bottom of the screen.*

General	Time	Units	Lo
Time Format			
12 Hour			
Time Zone			
Pacific			
Mountain		Time	
Pacific			
Alaska			
Hawaii			
Samoa			
Other			

General	Time	Units	Lo
Time Format			
12 Hour			
Time Zone		UTC Offset	
Other		+00:00	
Daylight Savings Time			
Current Date			
13-MAY-05			
Current Time			
06:44:45 ^P			

8. *Ensure you reset the time zone back to Central by highlighting the 'Time Zone' field, pressing the <ENTER> key to display the time zone options, using the <ROCKER> key to highlight 'Central' and pressing the <ENTER> key.*

General	Time	Units	Lo
Time Format			
12 Hour			
Time Zone		UTC Offset	
Other		+00:00	
Central		Time	
Mountain			
Pacific			
Alaska			
Hawaii			
Samoa			

General	Time	Units	Lo
Time Format			
12 Hour			
Time Zone			
Central			
Daylight Savings Time			
Auto			
Current Date			
13-MAY-05			
Current Time			
01:45:39 ^P			

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Part 3: Set the north reference to your choice.

1. Use the <ROCKER> key to highlight the 'Location' tab.
2. Next, use the <ROCKER> key up or down to highlight the 'North Reference' field. Then press the <ENTER> key to display 'North Reference' options.

Time	Units	Location	A
Location Format			
hddd°mm'ss.s"			
Map Datum			
WGS 84			
North Reference			
True			
Magnetic Variation			

Time	Units	Location	A
Location Format			
hddd°mm'ss.s"			
Map Datum			
WGS 84			
North Reference			
True			
Magnetic Variation			

the

Time	Units	Location	A
Location Format			
hddd°mm'ss.s"			
Map Datum			
WGS 84			
North Reference			
True			
Magnetic Variation			
True			
Magnetic			
Grid			
User			

True provides headings based upon a true north reference to pole star (Polaris). Use this setting when you do not have a compass or if your compass has the declination set.

Magnetic provides headings based upon the Magnetic Pole like your compass. You cannot change the 'Magnetic Variation' (also called declination). This is a calculated value by the GPS receiver based on your current position. This choice allows you to compare directly with your compass readings if the declination has not been set.



Time	Units	Location	A
Location Format			
hddd°mm'ss.s"			
Map Datum			
WGS 84			
North Reference			
Magnetic			
Magnetic Variation			
019°E			

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***Grid** provides headings based upon a grid north reference of the coordinate system you have chosen.*

Time	Units	Location	A
Location Format			
hddd°mm'ss.s"			
Map Datum			
WGS 84			
North Reference			
User			
Magnetic Variation			
012°W			

***User** allows you to specify the magnetic variation at your current location, and provides magnetic north heading references based on the value you entered for the 'Magnetic Variation'. This is useful on the Iron Range where there are magnetic anomalies; however, delving into this is beyond the scope of the time available for this class.*

Time	Location	Alarms	A
Location Format			
British Grid			
Map Datum			
Ord Srvy GB			
North Reference			
Grid			
Magnetic Variation			
097°W			

3. For the class we want to make sure that the 'North Reference' is set to 'True'.

Time	Units	Location	A
Location Format			
hddd°mm'ss.s"			
Map Datum			
WGS 84			
North Reference			
True			
Magnetic Variation			
True			

Time	Units	Location	A
Location Format			
hddd°mm'ss.s"			
Map Datum			
WGS 84			
North Reference			
True			
Magnetic Variation			

4. After the 'North Reference' is set to 'True', press the <PAGE> key to accept all of your changes.

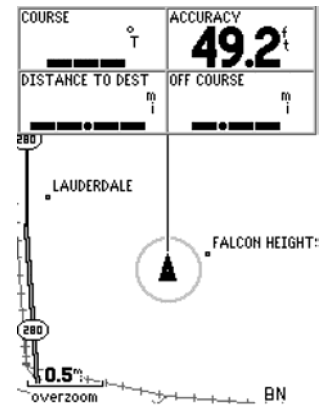
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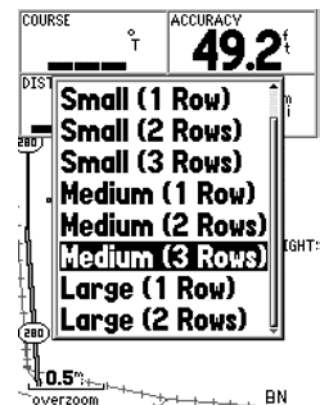
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Part 4: Set the 'Map View' parameters in the GPS receiver. We will change the map direction, the page layout, and data displayed in the layout fields.

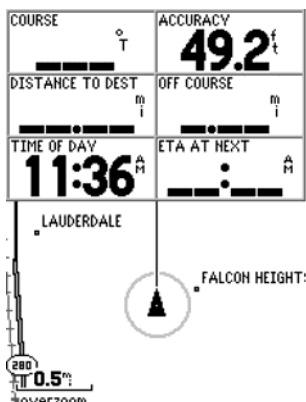
1. Press the <PAGE> key until you are at the 'Map View' screen. Note the number of rows of data fields presented at the top of the screen. Each field contains a unique type of data that you can change.
2. Press the <MENU> key to display the 'Map View' menu and use the <ROCKER> key to highlight 'Setup Page Layout'.



3. Press the <ENTER> key to display the options for the text size and number of rows presented.



4. Use the <ROCKER> key to highlight 'Medium (3 rows)' and press the <ENTER> key to accept and return to the 'Map View' screen.



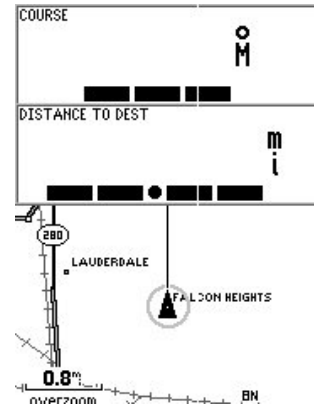
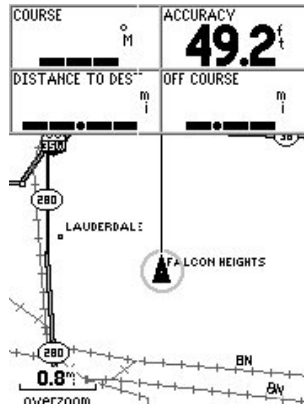
5. **NOTE:** Three rows of data are now displayed.

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6. **NOTE:** By selecting either 'Small' or 'Large', the row height and text size will be decreased (Small) or increased (Large).



7. Now we will change the data displayed in the fields.

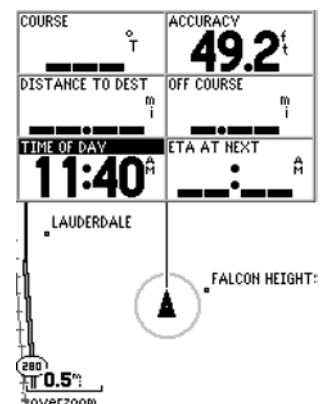
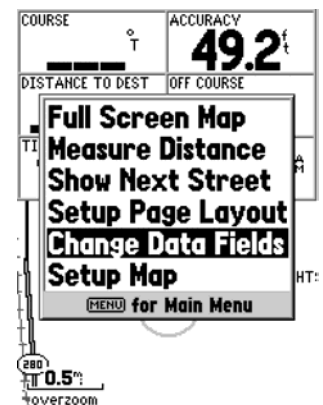
8. Press the <MENU> key to display the 'Map View' menu again.

9. Use the <ROCKER> key to highlight 'Change Data Fields' and press the <ENTER> key.



10. Note the name of the field in the upper left corner is highlighted.

11. Use the <ROCKER> key to highlight the bottom left field name.



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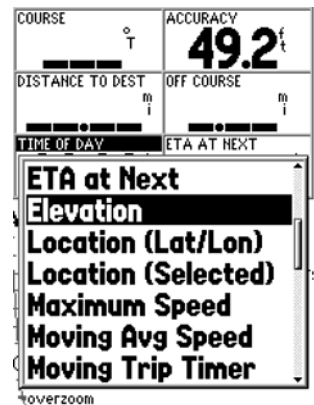
12. Press the <ENTER> key to begin editing the type of data presented in the data field.

13. Use the <ROCKER> key to scroll through the available selections and highlight 'Elevation'.



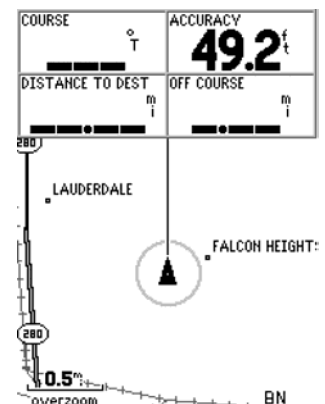
14. Press the <ENTER> key to accept.

15. In a similar manner, you could change the type of data displayed in the lower right field. PLEASE DO NOT CHANGE THE TYPE OF DATA DISPLAYED IN THE TOP TWO ROWS.



16. When you are finished changing the lower left and/or lower right data fields, press the <PAGE> key to accept the changes.

17. Reset the number of rows back to two by pressing the <MENU> key and highlight 'Setup Page Layout'. Next, press the <ENTER> key, highlight 'Medium (2 rows)'. Finally, press the <ENTER> key to return to the 'Map View' screen. There should again be two rows of data.

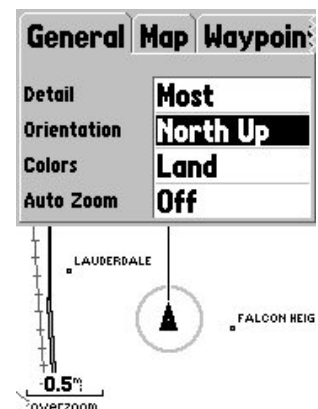
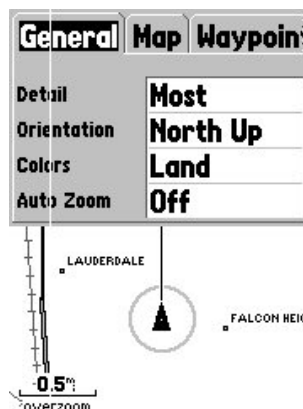


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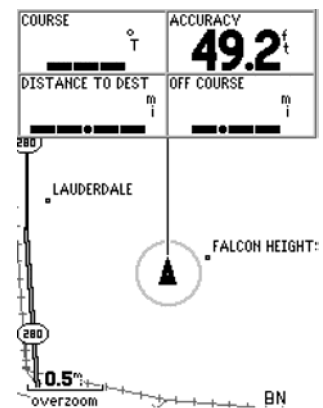
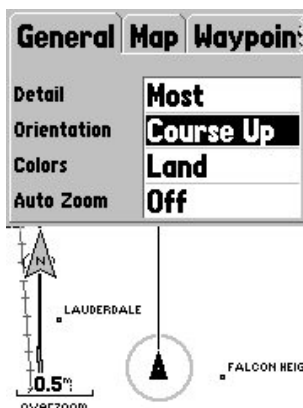
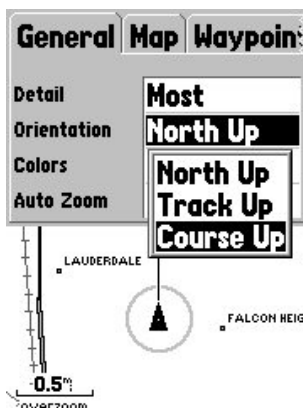
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18. Some people like to see the direction of travel at the top of the 'Map View' screen. This is especially true when navigating.
19. Ensure the 'Map View' screen is displayed and press the <MENU> key. Highlight 'Setup Map' and press <ENTER>.



20. Highlight the 'Orientation' field and press <ENTER> to view the options. Select 'Course Up' using the <ROCKER> key, press <ENTER> to accept your changes, and press the <PAGE> key to return to the 'Map View' screen.

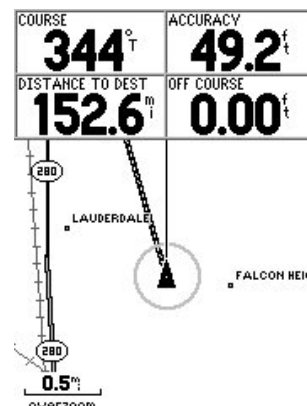
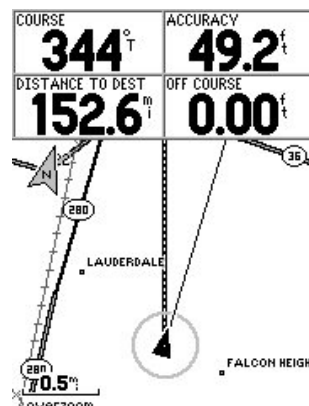


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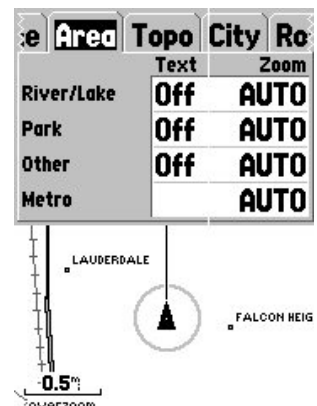
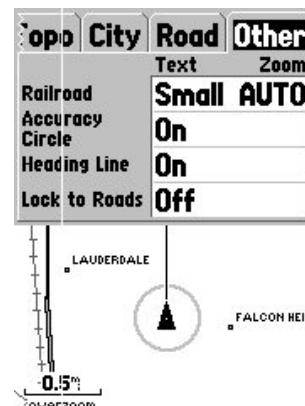
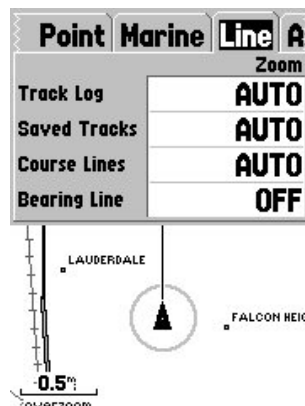
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21. To see what happens, press the <NAV> key and select the waypoint we named 'Scaled' in Exercise One. The screen to the left is 'Course Up' (displays active course line at the top of the page) and the screen to the right is 'North Up' (displays North at the top of the page).



22. You can explore the other options if you have time.



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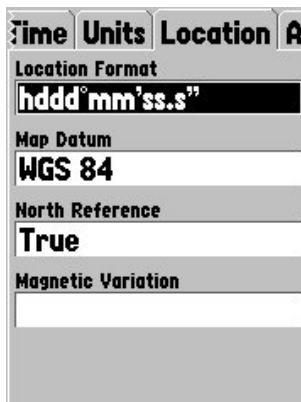
Part 5: Change the coordinate system in the GPS receiver.

1. We will now set the GPS receiver to display UTM coordinates. The UTM coordinate system may be used on some maps you receive.
2. Press the <PAGE> or <QUIT> key until the 'Satellite' screen is displayed. Note the latitude/longitude value at the bottom of the screen.

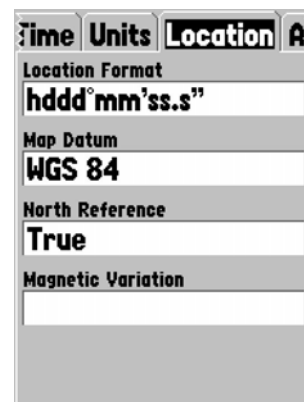
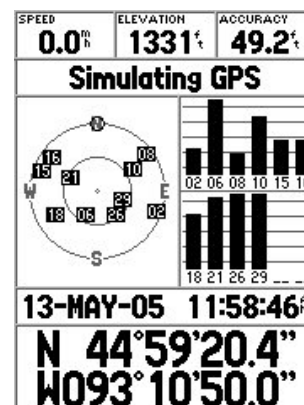


3. Now, press the <MENU> key twice to see the 'Main Menu' and highlight 'Setup' at the bottom.

4. Press the <ENTER> key to display the setup options and press the <ROCKER> key left or right until the 'Location' tab is highlighted.



5. Press the <ROCKER> key down to highlight the 'Location Format' box.

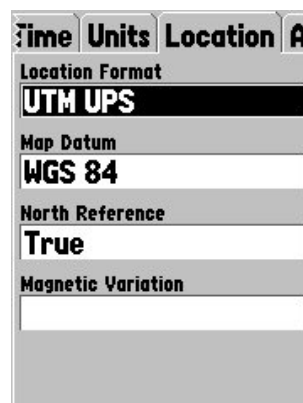


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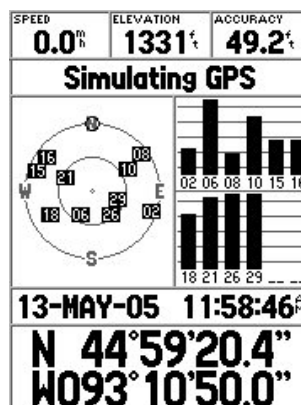
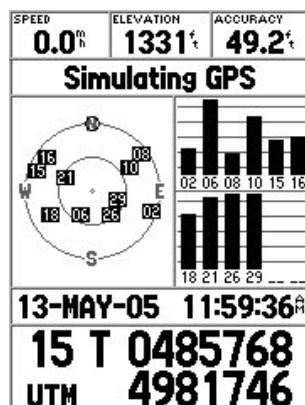
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6. Press the <ENTER> key and with the <ROCKER> key, highlight 'UTM UPS'. Press the <ENTER> key to accept.



7. Press the <PAGE> key to accept the changes and return to the 'Satellite' screen where you will see the UTM coordinates for the current position fix.
8. Look again at the coordinates at the bottom of the screen. The UTM coordinates are in meters. The GPS receiver allows you to set the distances and elevation to feet but you are not able to change the coordinate display.



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9. *Ensure that the 'Location Format' is reset to the hddd°mm'ss.s" as shown below. That is the format used on DNR timber sales.*

Time	Units	Location	A
Location Format			
UTM UPS			
Map Datum			
WGS 84			
North Reference			
True			
Magnetic Variation			

Time	Units	Location	A
Location Format			
hddd°mm'ss.s"			
hddd°mm'ss.s"			
British Grid			
Dutch Grid			
EOV Hungarian Grid			
Finnish Grid			
German Grid			
India Zone 0			
India Zone 1A			

Time	Units	Location	A
Location Format			
hddd°mm'ss.s"			
hddd°mm'ss.s"			
Map Datum			
WGS 84			
North Reference			
True			
Magnetic Variation			

10. *Press the <PAGE> key to accept the changes you have made.*