Garmin Street Pilot 2610/2620/2650/2660 Undocumented Features and Useful Tricks Software Version 4.70, Audio File 2.1 Collected By DiverHank Updated 9/02/06

The information herein is collected through various sources. Some are my own. The accuracy of the features is not guaranteed. Use them at your own risks.

Note: 6/11/04 – Originally I wanted to keep this document purely "undocumented", but I decided to make this into a guide.

I'd love to hear your comments. Send your comments and suggestions to diverhank@gmail.com

Currently (January 2005) for, Garmin loads the new and newly-repaired 26X0 units with software version 4.2. However, Garmin only makes available for download version 3.90.

Version 4.2 users reported difficulties in renaming the saved routes – causing the 26x0 to freeze then reboot. Garmin recommends changing back to version 3.90.

Note 1/15/05 Add "use DETOUR to avoid a road (one-time)".

Note 1/17/05 Add 2650 pin-outs as info became available on a forum for the first time - thanks to Jacques Bouchet

Note 1/18/05 Add picture showing the insides of a 2610. This picture is linked via www.GPSriders.net

6/20/06 It has been quite a long since the last update. This update corrected a few errors thanks to users' inputs.

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http://www.google.com/language_tools?hl=en

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1. GARMIN

a. Manuals

The latest Garmin 2610/2650 manual is a very good source of information. The latest version is Rev. C, published 12/2005. It can be downloaded from: http://www.garmin.com/products/manual.jsp?product=010-00273-03

The latest Garmin 2620/2660 (Rev. B, 12/2005) can be downloaded from: <u>http://www.garmin.com/products/manual.jsp?product=010-00357-03</u>

b. Firmware Update

The latest Garmin 2610 firmware can be downloaded from: <u>http://www.garmin.com/support/collection.jsp?product=010-00273-03</u>

The latest Garmin 2650 firmware can be downloaded from: <u>http://www.garmin.com/support/collection.jsp?product=010-00273-00</u>

The latest Garmin 2620 firmware can be downloaded from: http://www.garmin.com/support/collection.jsp?product=010-00357-03

The latest Garmin 2660 firmware can be downloaded from: http://www.garmin.com/support/collection.jsp?product=010-00357-00

c. Where Do I Report Map Errors?

Inevitably, you will discover map errors. The 26x0 City Navigator maps are provided to Garmin by a mapping company called NavTeq (formerly known as NavTech). It is more effective if you report map errors with NavTeq. When in doubt (whether it's map error or software error, then report to Garmin)

NavTeq: <u>http://www.navteq.com/updates/mapfeedback.html</u> Garmin: <u>http://www.garmin.com/cartography/mapSource/errorForm.html</u>

Undocumented Features 2.

Diagnostic Screens а.

Hold down "MENU" and "FIND" buttons then turn on the unit. The 26x0 will boot up to a diagnostic screen. This screen tells you information like software and firmware versions, unit temperature, what type data card you have in it. When on the diagnostic screen you can press "PAGE" repeatedly to see different testing screens.

Caution It does not do it every time but your current position might be reset to Kansas, USA and the next time you use the unit, it would go into Auto Locate mode.

StreetPilot 2610 Software Version Americas Autoroute	3.50 RTC Drift 0.0%	Min ADC O	Reverse Light OFF	Sine Wave Freq O
SP26xx Audio Pkg 1 Street Pilot 26XX Splash	ROM Pass Basemap Pass 2.10 2.10 Solash Sorn Pass	Max ADC O	Recent ADC O	Sqr Wave Freq O
Since Reset 0138:07:18 Time 17:16:30 Temperature 23%	Audio Pass IRDA rx Unknown	Angle -3895.92	Bias Angle 0.00	Set Bias Angle
X0 Drift Signal SNR	size: 512.483x10^6 bytes serial: 111721D1604H5647 firmwr:HDX 2.15	Corrected Velocity – 100.08	Clockwise Fail	(SPEAK)
Vexternal 16.21° Vphotocell 1.74°	model: SanDisk SDCFB-512	Angular Velocity — 100.08	Counter Clockwise Fail	Gyro Test (FIND)

Auto Locate b.

Hold down "PAGE" and "FIND" then turn unit on to force auto locate

C.

Clear User Settings Hold down "PAGE" and "MENU" then turn unit on to clear user settings

Master Reset d.

Hold down "PAGE", "MENU", and "FIND" then turn unit on to perform a Master Reset

a. LOADING NEW MAP IMAGES ONTO CF CARDS

- Launch Mapsource
- Select the maps you want on your CF card.
- Download them to the CF card via a CF Reader/Writer
- Open Windows Explorer, browse to the CF card [it's listed as a hard drive].
- COPY the file "GMAPSUPP.IMG" to your hard drive.
- rename it to "EAST_COAST_GMAPSUPP.IMG" [or another more meaningful name].

- - -

- Now back in Mapsource, build another/different set of maps.
- Download these to the CF card.
- Again: Open Windows Explorer, browse to the CF card.
- COPY the file "GMAPSUPP.IMG" to your hard drive.
- I then rename this one to "WEST_COAST_GMAPSUPP.IMG"

- - -

Now you have two map "images" that can be copied directly onto the CF card whenever you need a different set of detailed maps.

- - -

You copy the "xxx.img" file you want to the CF card (under the Garmin directory), and then RENAME IT back to Garmin's "required" name "GMAPSUPP.IMG".
Put the CF card back into the GPS, and you instantly have access to this set of compiled maps.

NOTE: For a new CF card that is previously not known to the Garmin 26x0, you need to create a directory named Garmin then place the file *.IMG into this directory.

b. Interested In Making Screenshots as you see used herein?

A. Use the **<u>G7toWin</u>** freeware program:

G7toWin Link

B. **XImage**. What is xImage? XImage allows you to retrieve and update images on your GPS. For example, xImage makes it possible to get a screenshot from most GPS models. Screenshots are in bmp file format.

In addition, with certain newer models, xImage allows you to update some images (splash screen, waypoint symbols, etc.) with your own creations. Unfortunately, you cannot do this with the 26x0.

Download it from:

http://www.garmin.com/support/agree.jsp?id=545

c. How Much Memory Can I load Onto the CF?

Before you can use the 2610 or the 2650, you'd have to load the maps into the 2610/50 Compact Flash card using Mapsource. The Garmin 2610/50 will not allow all of the memory to be used. If you specify more memory than a certain size of Compact Flash card will allow, Mapsource will refuse to load it. However, Mapsource will not tell you this until near the end of its map compiling, wasting precious minutes if not hours. The following are the numbers you should not exceed.

Compact Flash Size	Mapsource Map Size		
128 MB	122 MB		
256 MB	249 MB		
512 MB	499 MB		
1 GB	990 MB**		
2 GB	2000 MB		
de de	0 111 000MD 1 1		

Could be 999MB but have not verified

d. What Compact Flash Brands?

Many people feel that brand is meaningless because companies simply slap their names on a third party product and claim as their own. So the product under the same brand name can be totally different. While this is true to some extent, I do not believe that reputable companies will risk damaging their good names doing this without stringent acceptance test procedures to ensure a certain standard. I do believe that brand name matters.

Brand of Compact Flash – A very common question people ask is what brand of compact flash they should use to ensure compatibility. The universal answer for the best brand is SANDISK. This is the same brand that Garmin chose to supply the unit with. To date, I have not heard of any incompatibility with this brand of CF in any sizes.

Some mentioned that they have successfully used Dane Electric, Kingston and Toshiba. Most users stated that any brand of compact flash seems to work just fine. However, I myself had one bad experience with a 512MB PNY brand. The Garmin 2610 (with firmware 3.40) refused to recognize this Compact Flash while the PC recognized it just fine. Firmware 3.50 fixed some incompatibility with compact flash but Garmin did not elaborate.

Most recently, when asked about 2GB CF brands that work great with the 2610, here are the ones listed: Sandisk, Sandisk Ultra II, Toshiba, Kingston Elite Pro, Kingston Pro, 120x Transcend.

Faster read/write Compact Flash – Users' opinions and actual experiences indicate that there are no perceivable differences between faster CF and standard CF.

5/20/06 Update: A long time SP2610 user, Jerry Moorhead, recently has done a timing

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experiment between a standard 2GB Sandisk card and a 2GB Sandisk Ultra II. He concluded that the above statement is untrue. He used the two cards with identical map sets and a chosen route. After 5 calculations, he found that the standard Sandisk card took an average of 46 seconds while the Ultra II took only 25 seconds. Map redraws using the Ultra II were also much faster.

e. GET VOICE INDOORS -

Garmin provides two power adaptors with the Garmin 26x0. One is the car cigarette adaptor with a built-in speaker. The other, the AC Adaptor, converts household voltage to 12 VDC. Sadly it does not have a built-in speaker so you can't hear voice guidance while simulating routes.

Instead of using the AC ADAPTOR while using your GPS indoors, you can purchase an "AC to 12V converter" with a 12V cigarette lighter socket and use your Garmin's car cigarette adaptor with its 'speaker'. That way you can hear all the directions, some messages, or play with the many language options the GPS is loaded with.

f. 2650 PINOUTS – Thanks to Jacques Boucher

Garmin 2650 pin-out is shown below. The pin-out should be identical for the 2610, 2620, 2660. For the 2610 and 2620, pins 3, 4, 5 and 6 do not connect to anything. For the 2650 and 2660, pins 3 and 4 are for Dead Reckoning connection and pins 5 and 6 are for NMEA output (connect to the DB9 connector).

Note: The standard 26x0 (including 2650/60) power cables do not have the wires for pins 5 and 6. To use NMEA, you need to purchase a special cable from Garmin

http://shop.garmin.com/accessory.jsp?sku=010%2D10542%2D00



330-00339-10	AWG	DB-9	LOOSE WIRES
1 (RED)	24		+12V
2 (BLACK)	24	5, DRAIN (BLACK)	GND
3 (ORANGE)	28		SPEED
4 (GREEN)	28		REVERSE
5	24	3 (UNIT RX)	
6	24	2 (UNIT TX)	
7 (WHITE)	28	/	SPKR -
8 (BROWN)	28		SPKR +



³³⁰⁻⁰⁰³³⁹⁻¹⁰

g. 2610 Internals - Thanks to http://www.GPSRiders.net



Garmin 2610 internal is shown below.

n. Ride a bike? Make a tether for your GPS

John Q <johnq@cox.net> made a tether for his GPS to prevent accidental disconnect. This is probably a good idea. Check it out via the following website:

http://www.gadgetjq.com/gps_tether.htm

4. Control of The Unit

a. Volume Control.

- 1. Press and hold SPEAK button, the control for volume shows up, volume at current setting.
- 2. Press it again; the volume is set to Maximum.
- 3. Press it again, the volume is set to Minimum
- 4. Press it again, the volume is set to current setting (step a).



b. Get Popup Message At Any Time

If you ever wonder what the next turn instruction will be, all you have to do is press the SPEAK button at any time. A message will pop up showing you the next turn. The example picture below shows the next turn instruction at 6.7 miles.



c. Go Home.

Pressing FIND button twice : Option to Route HOME. HOME is any waypoint you create and name HOME.



d. Viewing Map with Track Up or North Up

The 26x0 is one of few GPS' that allows you to quickly switch between the "Track Up" mode and "North Up" Mode. The two pictures below show Track Up mode and North Up mode. Observe the striking differences of the same map.

The default orientation is North Up. You can change the default by using Map Setup option, under Map, Orientation. I don't bother because to switch between the two modes, you simply press the North compass square on the upper left corner. The chosen mode will remain even after power off until you change it by pressing it again.

In a strange area, I orient myself by using North Up. It looks much like a paper map. When I'm familiar with the area, I prefer Track Up mode, much the same way I'd rotate the map so the direction I'm going is up.



North

e. Percentage of Route Re-Calculation -- Thanks to Sylvain Levacher

You can find out the percentage of the route calculation by simply touching the recalculating button on the lower left corner.



Press Recalc button while Route is being recalculated Percentage of Calculating Route is shown

r. Satellite Status Page Access via Recalculating

Button – Thanks to Dwillens

While there is a recalculating button as shown in the percentage of Route Re-Calculation and the Garmin has not acquired GPS signal, instead of getting the Calculating Route Percentage, you will get the Satellite Status Page instead.



5. Waypoints Manipulation

a. Relocate Your Position

While the GPS is turned off, it is sometimes useful to change your current location to a different location or city. This desirable as a start for a route you want to create that is not where the 26x0 thinks you are at.

While you are at the Satellite Status Page, press Menu, there will be an option "New Location", you can change your location using "USE MAP".



Satellite Page

New Location



b. Define Waypoint by entering Lat/Long.

Press and hold the page key until a new waypoint is created. Then tap on the location and edit it for the new lat/long. You can only use the dd mm.mmm in WGS 84 format.





Edit Waypoint Lat/Long



c. Delete All Waypoints.

Press FIND, scroll down to find and select WAYPOINTS. While viewing a list of waypoint, press MENU. An option will appear to delete all waypoints.

d. Waypoint Averaging.

This feature was in Rev. A of the manual but was taken out in Rev. B. When you define a **new** waypoint, you have an option to save the waypoint by averaging the position. By averaging, the unit will pick the center of the scatter as the "true" position. This allows more accurate position for that particular waypoint. The longer you let it average, the better the accuracy will be.

After you **mark** a waypoint, a "New Waypoint" dialog box appears. While this dialog box is displayed, press MENU and select "Average Location". The unit shows a measurement count and estimate accuracy. Select "Update waypoint Location".

<u>Note</u>: This feature only works for new waypoint created by using the "PAGE" ("MARK") button. Measurement Count is seen to be working (incrementing) in firmware 3.80.



e. Move an Existing Waypoint -- Thanks to SlotCAR

- FIND the waypoint you want to move.

- Find --> Waypoint --> [Near/Map/Spell] --> Show Map

- Using the REMOTE, put the arrow on it, it highlights and shows you the name of the waypoint.

- SELECT the WP by clicking on the waypoint with the joystick [pushing down]

- The Garmin responds with "MOVE".

- Again using the joystick, scroll to a new location.

- As you are moving the arrow a "Rubber band" will appear.

- When you get the arrow to the new position for the waypoint, once again select the new location by pushing down on the joysticks button.

- The waypoint will move to this new location.



Moved to New Location

GRNDCANYON at new location

f. Waypoints and Routes Transfer from Mapsource

Using Mapsource, if you modify a waypoint or a route uploaded from the 26x0 and save it using the same name, when you transfer it to the 26x0, it will simply ignore the changes. You must first delete the waypoint or route in the 26x0 (Mapsource 6.5 & 26x0 version 3.90).

6. Navigation and Maps

a. Turn By Turn Direction

The turn by turn direction page, as shown below left, can be accessed by pressing the PAGE key. When you press one of the turns, it will show the detailed turns graphics. You can cycle through (up and down) all of the graphics by using the joystick on the remote control.



b. Use of Turn By Turn Direction When Lost Satellite Reception

The problem is if you lose satellite reception and unable to get it back (it happened to me for two days straight), the Turn By Turn direction, unfortunately goes blank as shown below left. This can be used as a form of an electronic version of "Map Quest map" if it weren't blank.

You can get it back by activating the USE INDOORS option (one way is by pressing PAGE key several times until you get the Map display, then press MENU.



c. Multiple Destinations.

You can create multiple destinations by adding and arranging the VIA points. See the user manual (rev. B) for how to create VIA points.

VIA points created by using waypoints and Point of Interests will be announced when reached.

You must realize that the Garmin absolutely respects your wish that the VIA points be honored. In another word, you must sequence each of the VIA point or it will insist on routing you back to it 3 times before giving up. If you change your mind, you must remove the VIA point.

d. What's the Difference Between City Select and City Navigator?.

The City Navigator comes with the 26X0 but City Select can also be used with it. This prompts the question of why not used the City Select Upgrade since it only costs half as much.

City Select Maps and City Navigator Maps both come from NavTeq. City Navigator comes with all available road attributes while City Select does not have all attributes. This explains why it's cheaper. Also, the City Navigator address search works on 3 administration levels versus only 2 levels for City Select. The bottom line is 26X0 route calculation and address search can be more effective with City Navigator than with City Select.

SlotCar, a very sharp gpspassion forum member – sometimes I suspect he works for Garmin or knows someone there-- gave the following explanation (those in italics are my expansion):

NavTeq basically sells 3 different 'levels', or qualities, of vector navigation data.

The basic level [Metroguide] does not support automatic route generation.

The intermediate level [City Select] supports automatic route generation, but does not contain certain 'high end' road attributes such as truck restrictions, time of day restrictions (*City Select will avoid roads with time restrictions while City Nav will use them during the open hours*), stop signs per mile, *mid-road barrier awareness*, and various other road attributes.

The highest level [City Navigator] contains all those things, and is targeted for Garmin's higher end GPS's.

Garmin has about 8 different levels of street classifications, all the way from pedestrian and animal pathways to multilane controlled access highways. For each roadway, there can be up to 60 invisible attributes, indicating the number of lanes, number of stop signs or traffic lights per mile, speed limits, presence of medians, time of day restrictions, heavy vehicle, pedestrian and bicycle restrictions, and so forth.

Whether these 60 pieces of data are included in the software or used by the GPS for its calculations is part of the feature set of the 3 map packages offered by Garmin.

- You get what you pay for ...

The following came from Seagull on Usenet.

1. City Navigator provides more detailed driving directions. This includes the text that is present on highway exit signs, giving you directions that include the sign text. e.g., you get:

"Exit 61 onto Helvetia Rd towards City Center"

instead of just

"Exit 61 onto Helvetia Rd".

2. City Navigator provides special handling for roundabouts, giving special directions. e.g.:

"Enter roundabout and then take second exit" instead of

"turn right"

3. City Nav has more fine-grained routing properties for road classifications and speeds. This provides, in theory, better ETAs and sometimes different route choices.

e. Maps for South America

Glenn jones <<u>glennjones376@hotmail.com</u>> provided the following links. You can get these maps for use with the 26x0. Glenn said the maps open in Mapsource

Argentina/Chile <u>http://www.aprs.com.ar/modules/mylinks/singlelink.php?cid=5&lid=63</u> this one has a English version you need to register but no payment. Not routable.

- Brazil <u>http://www.tracksource.org.br/index.php?id=1,0,0,1,0,0</u> and it is the 7th down? Not routable
- Venezuela <u>http://www.gpsve.net/autoruteable.htm</u> this one I think is routable ?

7. FINDING THINGS

a. Find Cities – Switching Maps

You can switch maps to find cities. This is helpful to find cities that exist only in the routable base maps since the Garmin won't automatically include it in the search.

Cities N	lear Here	•	Filter	×	Cit	ies		Me	nu	×	ter
Huntington Beach	h	S	1.1		•	Hunti	50				1.19
 Fountain Valley Midway City 		E N	3.3¶ 3.7¶		•	Foun Midwr	Select Map				3.3¶ 3.7¶
 Sunset Beach Westminster Surfside 		NW N NW	4.2° 4.7° 5.2°		•	Suns Westi Surf:	Route	Options	Info	Display	4.2° 4.7° 5.2°

While in this page, press MENU

Option to Select Map will appear



Choose Base Map then use Filter to search

b. Find Address – Keep It Simple

Like most new SP26x0 users, by now you might have found that sometimes it's not possible to find the street addresses as easily as you'd like. The following guidelines should help you. You might have heard the term KISS principle (Keep It Simple Stupid). This principle applies herein.

KEEP IT SIMPLE. When performing a street address search, keep the search simple.

- 1. **Limit your search to a state** or a city only if you know the exact city (some people give you Los Angeles as their city when in fact it's Hollywood, this will cause headaches).
- 2. Enter a number for your street, just the number, nothing else.
- 3. Enter **just the street name** without North, South or PI or St. or Ave.

EXAMPLE:

You need to find an address in Utah. It is given to you as:

301 West 3000 North, Spanish Fork, Utah 84660

This is an actual address of a company I found on the internet and the above address was listed so I did not make this up. This address is strange. Is the number 301 West and the street 3000 North or West 3000 North? Luckily, we don't care. KISS!

Using the above guideline, you simply enter 301 as the Number and 3000 as the Street. Press find and you will get 9 matches, our address shows up as the fourth match (you need to scroll down to see it).

	Find Address 🛛 🔀	Select Address 🛛 🔀
Limit to	Utah	301 S 3000 W Selato, UT 84624
Number 301		301 N 3000 W
Street	3000	301 ¥ 3000 N
Hint	Enter "Main" instead of "E Main St".	Spanish Fork, UT 84660 🛛 💟
	Find	Search complete 9 matches found.

In the above example, when entering "3000", one of the choices showed up as **3000 North.** This is a perfect match for the address given us. **Resist this temptation. Do not select it –Keep It Simple.**

	Streets	×
Limit t	3000	
Number Street	3000 East 3000 North 3000 S	
	3000 W 3000 West	

Let's assume that we give in to the temptation and select 3000 North as shown below.

	Find Address 🛛 🔀	Select Address 🛛 🔀
Limit to	Utah	3000 North Paragonah, UT 84760
Number	301	¥ 3000 North St Fillmore, UT 84631
Street	3000 North	E 3000 North St
Hint	Enter "Main" instead of "E Main St".	Fillmore, UT 84631 📃
	Find	Search complete 4 matches found.

Four matches were found. None of them matches our search. As you can see, our address is listed in City Navigator as 301 W 3000 N while some addresses apparently have W 3000 North. There is not enough consistency in naming convention so the KISS principle is always best.

c. Find Filter – use it properly

Like most SP26x0 users, by now you might have found that sometimes it's not possible to find the points of interest as easily as you'd like. When use properly the FILTER function within the FIND is very useful.



In the above example, I want the nearest Marriott hotel near where I currently am.

<u>Note</u>: If you want to find things elsewhere, drag the map and put the cursor where you want to search near. The location of the cursor is the center of the search.

From the Find menu, I chose Lodging and get the list as shown above. The SP26x0, as default, displays a list of all lodgings from nearest to farthest (NEAR HERE option). It shows a list out to 6.2 miles in this example.

Marriott is nowhere to be found. To find Marriott, you can use the Filter function. **Do not spell the entire word** unless you are very sure of your spelling.

All Lodging 🔻 Near Here 🔉		With MAR	All Lodging 👻 By Name 👻 Spell
🖻 Courtyard By Marriott–Founta	Ε	3.07	🖻 Mar Don Motel 🛛 N 822'' 🧲
Marriott Ownership Resorts	Ē	5.0	🖾 Mar Gre Motel E 2162"
Palm Springs Marquis	ŚĒ	6.9	🖾 Mar Queen Hotel N 9887
📟 Marriott Costa Mesa	Ε	7.3 🛛 💟	🖻 Mar Vista Cottages At Anchor 🛯 🛛 🖓 🔛
			3355 Portland Rd NE, Salem, Oregon

Above left, I found the nearest Marriott hotel using the FILTER function with a "*MAR*" entry. In contrast, by entering the same "MAR" entry using BY NAME function, I get very different results, this time not too helpful.

8. GPS RECEPTION

a. WAAS- Enabling -

Starting with Firmware 2.95 Beta, the Garmin 2610 becomes WAAS enabled. WAAS stands for Wide Area Augmentation System. GPS errors are caused by a number of factors including those caused by the atmospheric conditions. Some clever persons found that if you have a GPS receiver located on the ground, at a precisely known position (lat/long/altitude) then the GPS errors can be computed. Somehow if these errors can be broadcast to other GPS units nearby then the errors can be subtracted, making these GPS units more accurate. The closer the GPS unit to the ground GPS station, the better the accuracy will be.

GPS that uses correction is called Differential GPS. This is the principle behind WAAS, except that WAAS applies basic corrections to Clock, ephemeris, and ionosphere data, not pseudo ranges. This kind of corrections is less affected by the distance of units from the correction station. By having a number of ground stations located throughout the United States, errors at different locations can be measured.

To broadcast the errors, it is more efficient to use satellites to do it. So a number of WAAS satellites are used. They receive GPS corrections from the WAAS ground stations then relay them to GPS units. Due to their orbits, they rotate around the equator. So depending on where you are, you need clear line of sight to the equator to efficiently receive WAAS signals. Europe and Japan use similar augmentation system except they call them by different names (EGNOS for Europe, something else for Japan).



WAAS in Garmin 26x0: On the GPS Info Page, WAAS Disabled is the default. There are two ways to turn WAAS on. One is to simply touch the "WAAS Disabled" box. It will toggle Enabled. The other is to press MENU then choose the Enable WAAS option as shown above.

<u>WAAS Enabled:</u> Some have asked why with WAAS Enabled, they do not see an increase in accuracy. This is because enabling WAAS does not automatically mean that you are in differential GPS mode. When the unit is using WAAS signals, it will show: **3D Diff Nav** in the Satellite Status box. The best accuracy I observed with 3D Diff Nav is 7 feet.

<u>Cost of turning WAAS On</u>: Extra processing is needed but the Garmin SP26x0 is so fast, you will simply not be able to notice any performance degradation. Some believe that it slows satellite acquisition time but I have not personally noticed any differences so I chalked it up as urban legend. One important fact is that the Garmin will dedicate 2 channels out of the 12 to listen to WAAS signals. That leaves 10 channels to acquire regular GPS satellites. I seldom have more than 8 satellites visible at one time so 10 or 12 will not make a difference.

<u>WAAS Debate</u>: Many people feel that for the Garmin 26x0, having WAAS is of little value since the unit has a feature called road-lock. When near a road, it locks on to the nearby street, thus correcting GPS errors using the road. Generally I tend to agree with this. However, in many

areas of town where streets are so small and close to each other (e.g. Southern CA beach communities), in some cases the Garmin locks on to the wrong street and even when not, accuracy of 30-40 ft is inadequate. These are times I feel WAAS accuracy can really help out.

b. Use of an External GPS Antenna

I used to think that an external GPS antenna is not needed in most cases. I have rethought that. Recently I experienced a total loss of GPS signals in a strange city without paper maps. That was unsettling. I now have a Gilsson GPS antenna that I will not leave home without.

http://www.gilsson.com/mcx.htm

Note: Search for dealers on the internet. Their prices might be cheaper than directly from Gilsson. Price should be around US\$20.

I did a little test while parked in front of my house where the 2610 was partially blocked by the car, the house and a tree. Having an external antenna on the car roof is definitely the answer.

2610 On dashboard, without external antenna With antenna on dashboard next to 2610



With antenna on dashboard as far forward as possible

With antenna on the car roof

Satellite Status	Accuracy	Elevation	Speed 🗙	Satellite Status	Accuracy	Elevation	Speed X
3D Navigation	185	75%	0.0°	3D Diff Nav	16%	46%	0.0 "
S _11	15-001	[-04 0 9	9:30:56 ^A	S 11	15-00	F-04 0 9	9:1 8:5 18
	N 33° ₩118°(.558')0.300'	WAAS Enabled		N 33° W118°	.559' 00.301'	WAAS Enabled
25 N	01 03 04 11	1 13 16 20 23	25 27 35 47		D	D D D D 1 13 16 20 23	D D 25 27 35 47

Below is what I get while indoors in my computer room, with the external antenna on the window sill.



Page

Get GPS Indoors With External AntennaSelect Track or North Up

c. Satellite Status Page – Track or North Up

On the Satellite Status Page, you can view the satellite positions relative to North Up or with respect to your heading (track up). This setting is independent of your "live" map preferences.

To select, press "MENU" while the Satellite Status Page is displayed. Choose the TRACK UP or NORTH UP (toggled) option. See the picture on above right.

You can also toggle Track Up and North Up by touching the "double circle" graphic on the lower left of the satellite status screen. (Thanks to Vernon).

ROUTE MANIPULATIONS 9

a. Increase Your Simulated Speed, Sort Of.

While the GPS is off, you can change your 26x0 speed to anything you want instead of 0. The maximum speed appears to be 1010 miles per hour. Starting at 1000 miles per hour you lose the unit. On the map page you will be zooming across the map at the set speed, in the direction of the compass heading. This is the best way to view the "Snap to Road" feature.

To do this, starting from the middle of the screen, drag your finger up to increase speed; drag your finger down to decrease speed. Drag left to turn left, drag right to turn right (per compass indication). The catch is that this only works if you do not have an active simulated route. With an active route, the speed will simply revert back to the predetermined speed after a second. You can hold your finger up to keep the speed high longer, but I found it tedious and impossible.



Driving Speed 990 mh

You get this trying to go beyond 990 mh

b. TRACK LOG --

With the Garmin 26x0, you have the option to record track log which is a history of your locations. The default option is OFF. The Garmin manual tells you how to set the recording on and how to clear the track. While this track log is intended for off-road use, it is a convenient way to view where you've been on the streets. It can be used also to report map anomalies using your track to recall the positions of the anomalies. The Garmin 26x0 will record 2000 track points. After the track log is full, it will start to overwrite the oldest track info with new information.

How many track points? How many hours? The time and distance a track point will be recorded vary depending upon your speed and frequency of direction changes. On average, it's about one track point per 10 seconds. For 2000 track points, that will give you about 5 and half hours of track recording.

How can I view the track? The 26x0 has the option to turn the "bread crumb" trail on. When it is set on, the places you had been will be shown with a finely-dotted line. This is not useful because when you zoom out, you can hardly see it. The best way to view the track is to download them to Mapsource and view them there. The tracks will be superimposed on the street maps. You can also view your track altitude profile. With Mapsource, you can also export your track info for use with other applications. Third party programs such as the G7towin program can be used to view your track log.



To turn on the bread crumb, use MAP SETUP Turn the Track Log on. I use AUTO

How can I turn the track into a route? There is no easy or automatic way to do this. By using Mapsource, you can mark waypoints along the track and create a route from these waypoints then import the route into the SP2610 and 2650.

c. Use DETOUR Function to Avoid A Road (one time)

The DETOUR function is designed to route you away from the congested road you are on. You can tell the 26x0 to detour for ½ mile, 1 mile, 2 miles, 5 miles and 15 miles.

You can also use this function to shape your route by avoiding a road that you don't like – for example an interstate. You do not have to be on the road to be avoided. Here's how to do it:

- After the 26x0 computes a route, use your finger to drag the map to show the street you want to avoid. In my example, I want to avoid I-405.
- Tap the road and make sure the cursor is on the road. My cursor is on I-405, just above "Leisure World". You detour from whatever road the cursor is on.
- Hold down the "MENU" key to get the "ROUTE" menu. Choose "DETOUR" then 15 miles. Experiment with the detour distances to see the differences (if any). I set the option for the 26x0 to ask me each time whether I'd like to compute fastest or shortest route. Depending on your choice, your modified route may be different. In this example, I used "fastest route" and as a

result, it reroutes me via Pacific Coast Highway, the second fastest behind I-405. This is just what I want.

- You can do multiple detours on multiple roads to shape your route.
- CAUTION: I've been told that this DETOUR trick does not work most of the time. The scenario I gave is probably a fluke. Instead of deleting it, I decided to keep it here for fun.



The original route before detour

Route Menu. Choose Detour



Choose a distance, e.g. 15 miles

Modified Route Using Fastest Route

d. I lost the "SAVE" Icon on my Route page

The SAVE Icon (see the picture "1WORK" above) will disappear if you have saved 50 routes (maximum number), preventing you from saving new routes (Thanks Sandra and Gomez for the info)

