

Creating custom maps for Garmin BMW Nav VI & V and Zumo 595 from Basecamp on Windows 10

These instructions assume you are familiar with the basic operations of Garmin Basecamp

Basic steps for map creation:

- 1) Create map line fonts (personal preferences) for your Garmin GPS custom maps (TYPWiz)
- 2) Create and export the Basecamp track(s) into GPX format (Garmin Basecamp export)
- 3) Convert the GPX tracks to the Garmin custom map format (IMGfromGPX)
- 4) Import (load/copy) the custom maps into your Garmin GPS (using the SD Micro card or USB)
- 5) Verify that the maps loaded and display properly

You need three FREE programs to create the tracks, GPX files, and IMG map files.

- 1) Garmin Basecamp - free program that creates and edits tracks, download from Garmin (<https://www.garmin.com/en-US/shop/downloads/basecamp>)

- 2) IMGfromGPX - free program that converts GPX tracks into maps in the "gmapsupp.img" format (http://www.javawa.nl/imgfromgpx_en.html)

NOTE: You may need to load a current version of Java for your computer. IMGfromGPX will tell you if you need to load Java when you run it the first time. Follow the link on the IMGfromGPX page or go directly to the Java website (<http://java.com/en/download/manual.jsp>)

- 3) TYPWiz - free program that lets you edit the line styles (what they will look like on the Garmin GPS) for your custom maps. Downloaded the installer using the "TYPWiz 6.53 LI setup" link. (<https://www.pinns.co.uk/osm/typwiz6.html>)

DISCLAIMER: I used TYPWiz5 ver. 5.88 for this tutorial but version 6 essentially works the same way.

As always, if you see value in the free/shareware programs you should consider making a purchase or donation to encourage the authors to continue creating and supporting these awesome utilities.

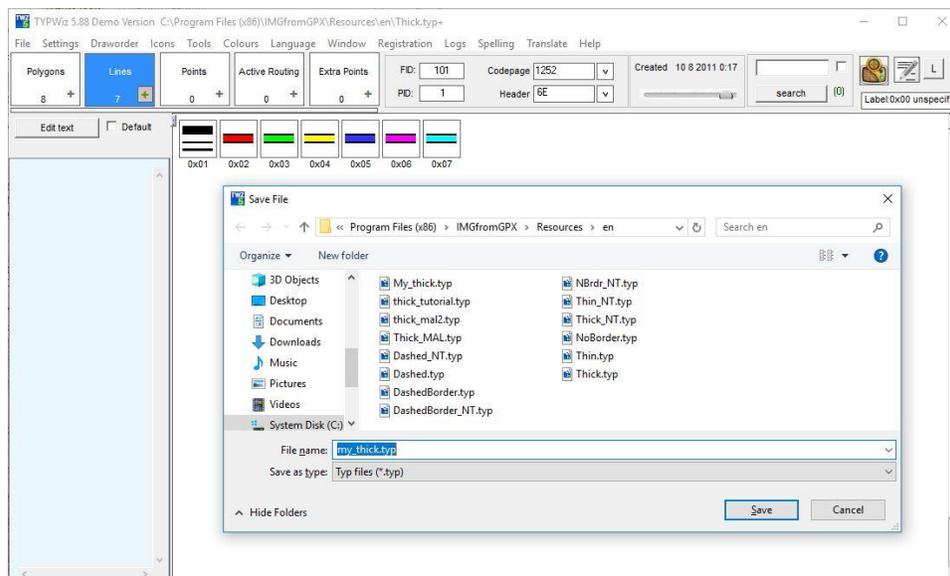
STEP 0: First get all three programs loaded and verify that they all run.



STEP 1: Create the custom line fonts that will display on your Garmin GPS.

NOTE: IMGfromGPX comes with several default fonts but I found them all to be too narrow to easily follow on the Garmin GPS, especially if you have an active route. This step shows you how to modify the default fonts to create custom ones of your liking. You can skip this entire step if you don't want to mess with custom map fonts. One important reason to create custom fonts is that if you make them very WIDE you can still see them under a Garmin route. A second is to give the map a "direction" so you know which way to turn upon entering a map midstream.

1. Launch TYPWiz. You should **"Run as administrator"** (by clicking on the TYPWiz icon using your right-hand_mouse_button [RMB]) to ensure you will be able to save your "new" font in the same (default) font folder.
2. Go to **File, Open TYP** and navigate to the IMGfromGPX font folder (on my computer they are in the "C:\Program Files (x86)\IMGfromGPX\Resources\en" folder). I picked the **"Thick.typ"** font.
3. Next you want to save the TYP file with a new name, but the free version only allows you to save a **TYP** file with 8 or less "things" in it so I deleted all the "Polygons" & "Points" (CTRL-A followed by). I also deleted the 8th font (it is the gray colored one - 0x08). After you get down to 8 or less items in the TYP file do the **File, Save TYP As** and give it a **custom name** (e.g., **garmin_map.typ**) so you don't risk messing up any of the default fonts.

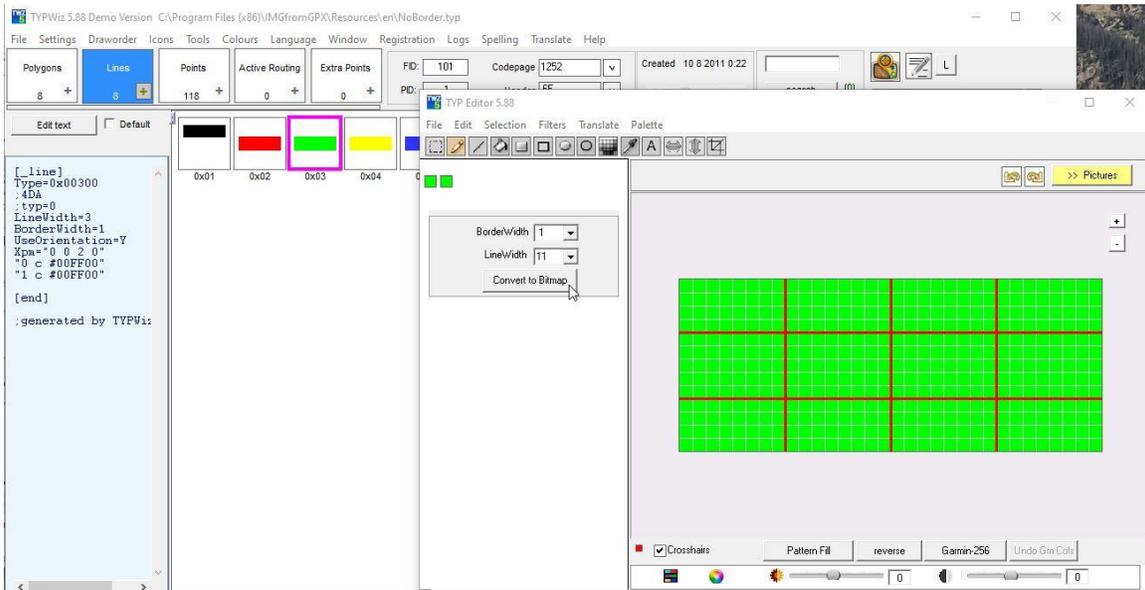


- Next, edit the 7 fonts to have a custom bitmap pattern and simple colors (B/W, red, green, blue, cyan, magenta, and yellow). I wanted my Garmin custom maps to display much wider than default and have dashed edges

NOTE: I also recommend creating a directional arrow in the font, this helps to ensure that you will travel in the right direction when you enter a custom map somewhere in the middle.

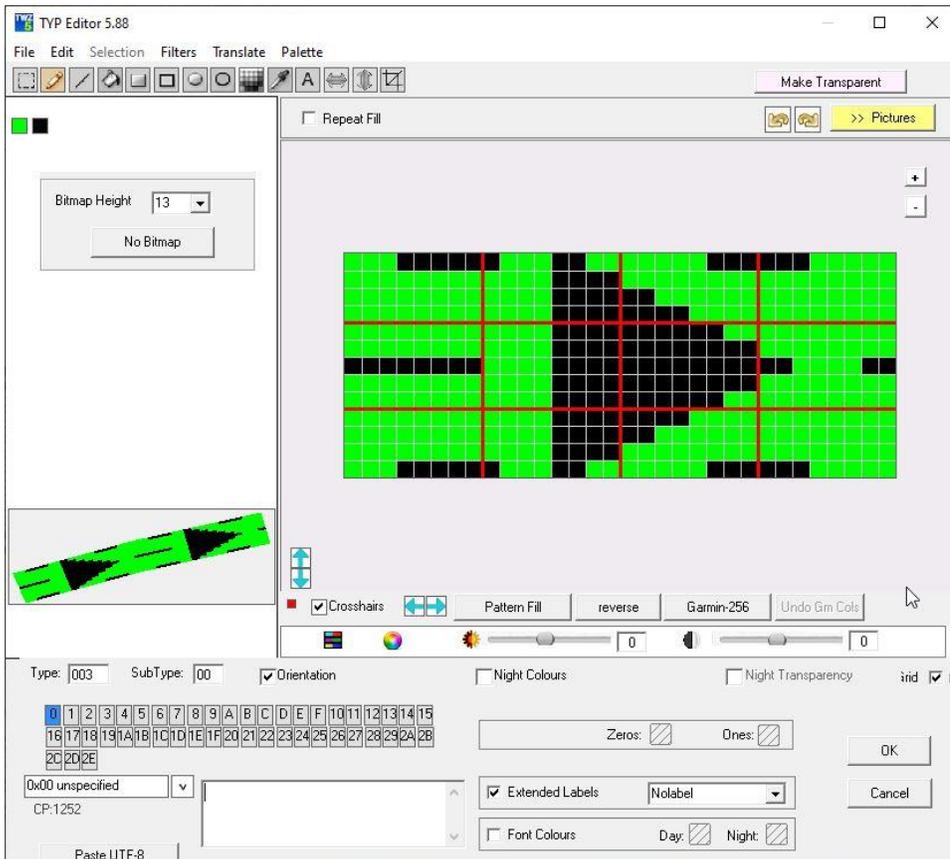


- First double-click on one of the existing “line” fonts
- In the line editing form I set the **BorderWidth** to 1, and the **LineWidth** to 11 (13 pixels total)
- Next click on the **[Convert to Bitmap]** button

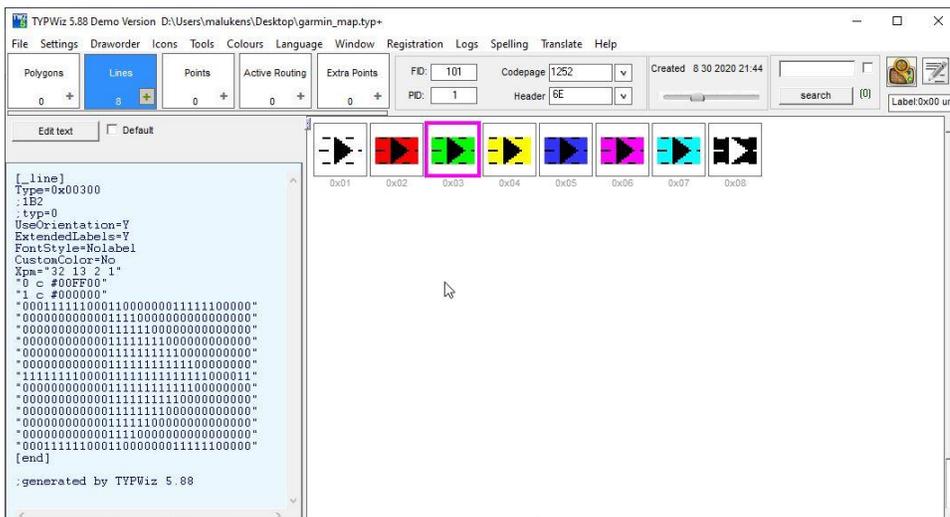


- You may have to change one of the bitmap colors to black, do that by double clicking on the small colored box in the upper left-hand corner of the TYP Editor window and select black.

- e) Now select one of the two default colors (above the Bitmap Height pull down). Simply start by “drawing” the font (choose color, hold down LMB and “paint”).



- f) After you make all your modifications click on [OK] button in the lower right corner.
 g) After you have edited all your line fonts, save your work using the “File, Save” menu pick.



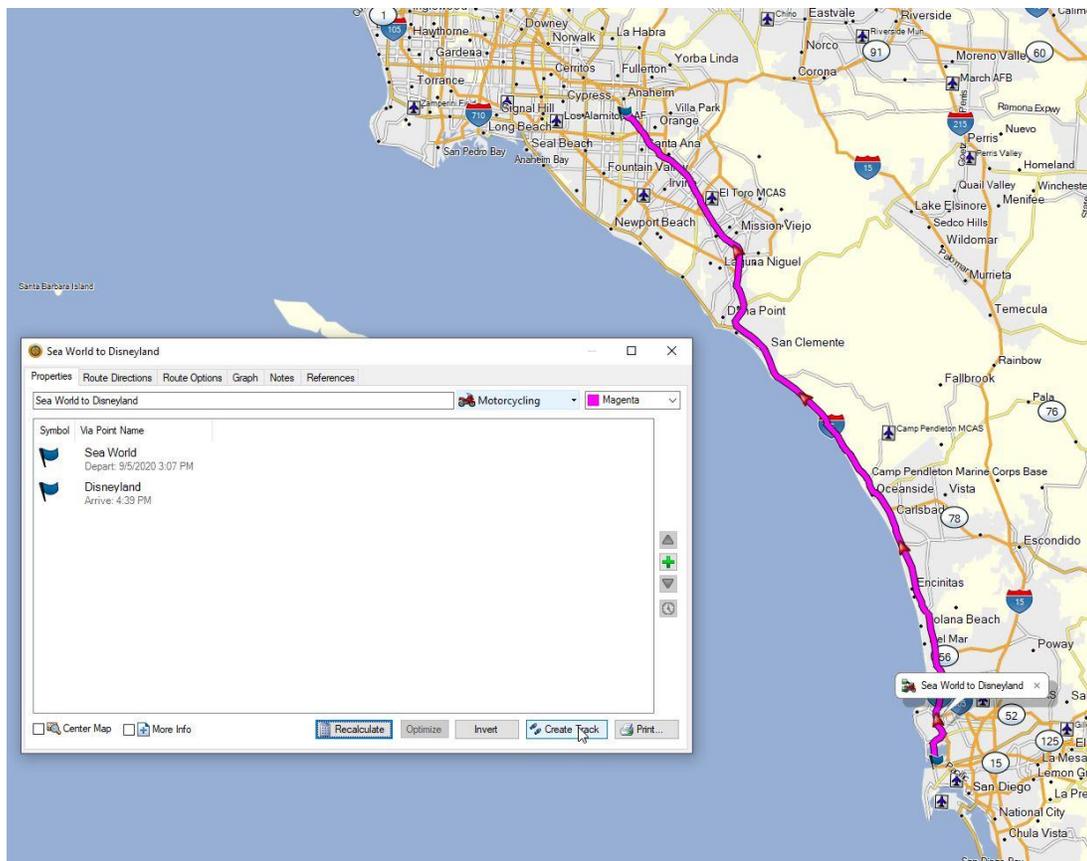
NOTE: You only must do this font creation setup step once.

STEP 2: Create “.GPX” files of the tracks you want to convert to Garmin Maps

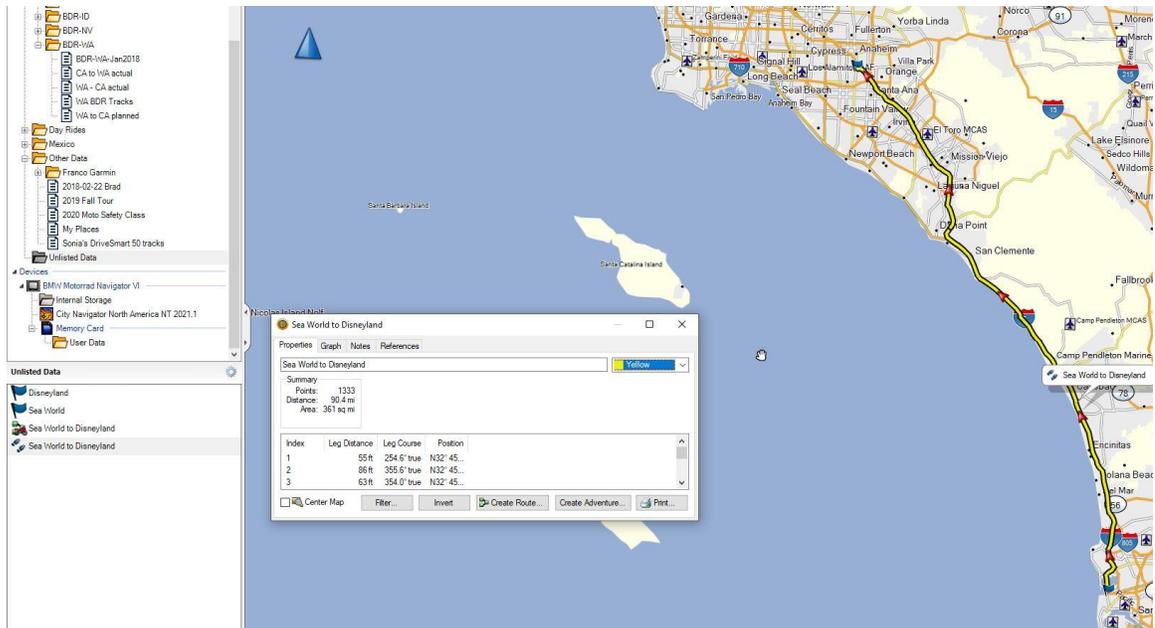
1. Launch Garmin Basecamp (with or without your GPS connected)
2. Create the tracks you want to convert by:
 - 1) Selecting an existing track
 - 2) creating a new track by merging several existing tracks
 - 3) creating a new track from a route.

NOTE: I follow this procedure for creating new tracks from a route:

- a) Create waypoints for the places you want to go through
- b) Create a route through the waypoints (you can add route points and change activity profiles to help with auto-routing)
- c) Modify the route to follow your desired path (i.e., pick on the route using the RMB: then select insert into route, split route here, invert route, etc.)
- d) For each route created, open the route’s form (double-click on the route) and select the “**Create Track**” button on the bottom of the form.



- e) For each track, open the track’s form (**double-click on the track**) and change the color to one of the basic line colors (B/W, red, green, blue, cyan, magenta, and yellow) that you set in TYPWiz.

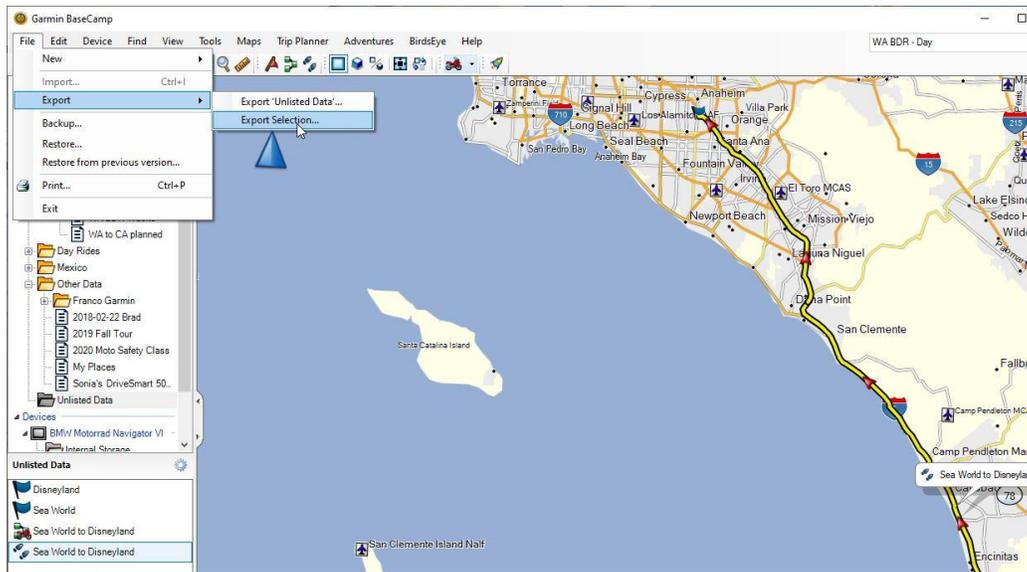


NOTE: Yellow, Cyan (light blue) and Red are the most visible colors on the Garmin GPS. Green is difficult to discern as you enter park areas that have a green background. Magenta is nearly the same color as Garmin active routes.

3. Export your tracks as single or multiple .GPX files using the **File, Export** menu.
 - a) Select the track(s) you want to export (convert to maps)

NOTE: If you want to be able to be able to turn your custom maps on/off individually on the Garmin GPS then select the tracks that you want combined into each custom map and export them as a unique GPX file. Otherwise select and export all the tracks at once.
 - b) Using the file, Export menu, choose either **Export 'listname'** (all tracks in list) or **Export Selection** (only selected tracks).
 - c) Select a save location but remember which folder (e.g., desktop, My Documents, etc.) you export to so you can find them later.

NOTE: I create a new folder (e.g., Conversion) to "save to" since IMGfromGPX creates lots of other files when it creates the IMG file and they can be kind of messy to clean up later.



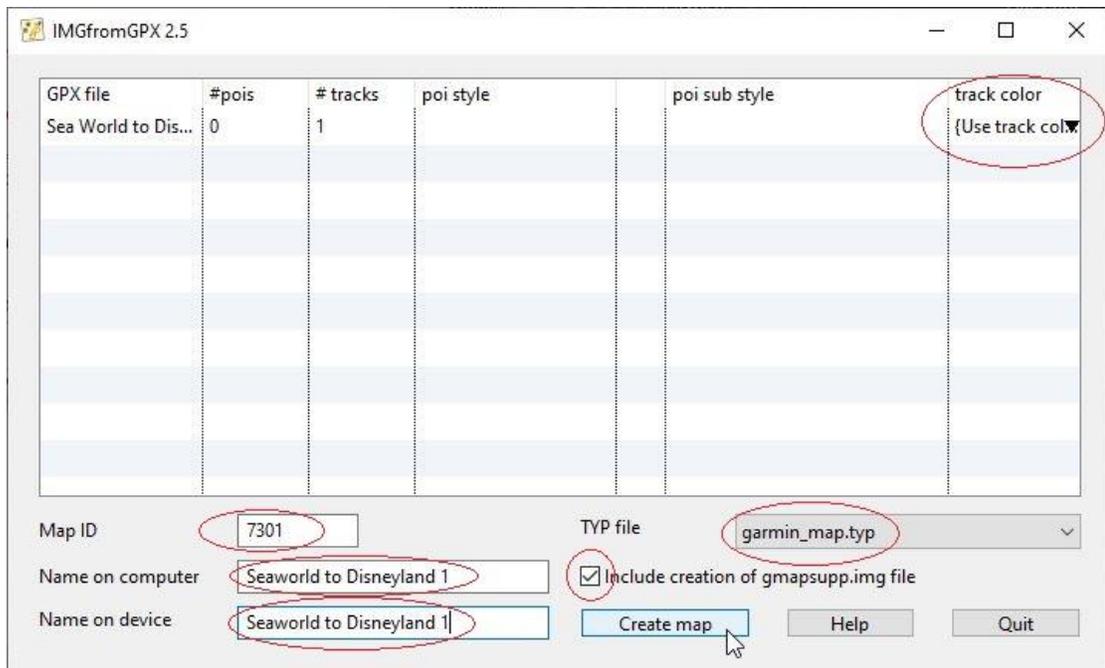
STEP 3: Convert the tracks from GPX format to the Garmin map (.img) format

1. Launch IMGfromGPX
 - a) Use the **TYP file** pull-down menu to select the TYP file that you saved in STEP 1
 - b) Check the box next to **“Include creation of the gmapsupp.img file”**
2. Select a GPX file to convert to a map
 - a) Drag a GPX file from its folder into the IMGfromGPX app

NOTE: If you drag multiple GPX files into the app it combines them into a single map. I have had problems getting the track colors to convert properly when doing multiple maps at a time.
 - b) Go to the “track color” column and select “{Use track color}” or select a specific color from the pull-down menu
 - c) Enter a “Map ID”. Every map you have loaded on the Garmin GPS at the same time must have a unique Map ID. Pick any number between 1 and 65535, except 2041

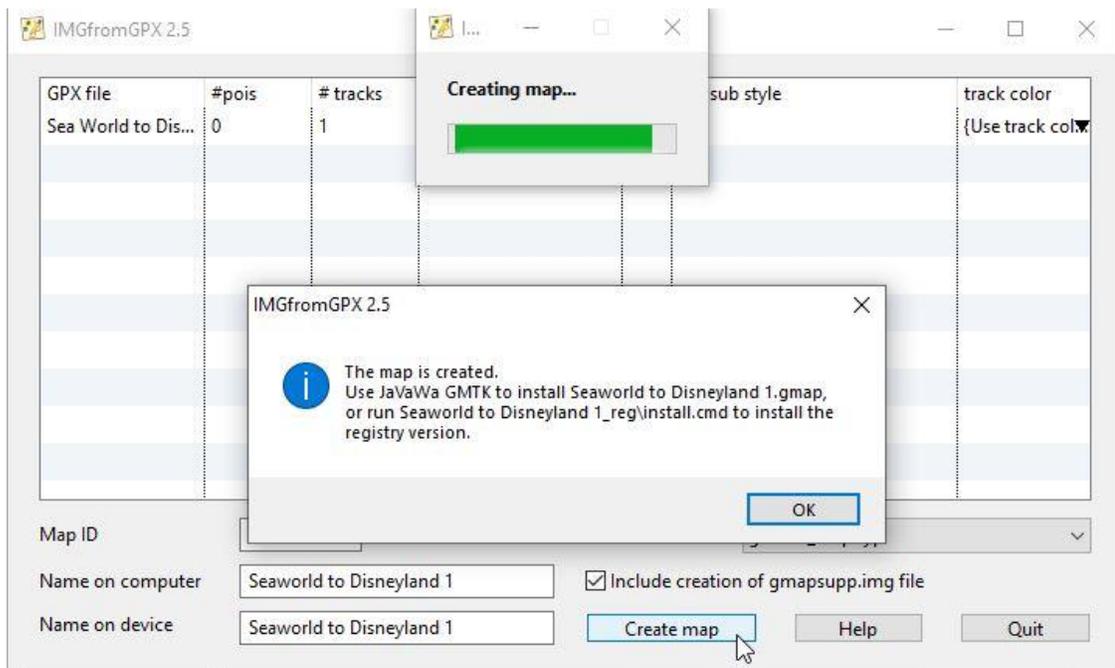
HINT: I’ve been using the phone keypad to translate an appropriate 2-letter name and map sequence number into the map ID (e.g. SeaWorld to Disneyland map 1 >> SD01 >> 7301)
 - d) Enter a “Name on computer”. It doesn’t really matter for our purpose because the gmapsupp.img file is the only file we are going to use.
 - e) Enter the “Name on device”. This is the name displayed on the Garmin GPS in the “myMaps” app.

NOTE: I always make these two names the same just to reduce confusion

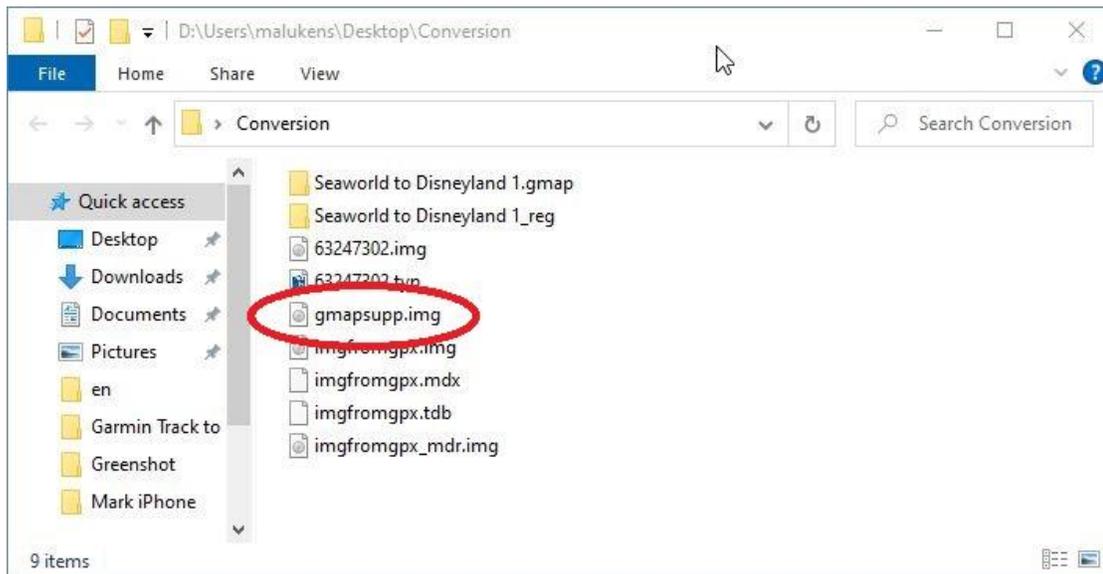


3. Create the Garmin GPS map file

- Click on [Create map]
- Select a folder, I suggest that you use the same folder where you stored the GPX files since IMGfromGPX will create several files and folders during conversion that will make a bit of a mess
- After the message comes up saying "The map is created", click on [OK]



d) The “gmapsupp.img” file created in the selected folder and is the map file.



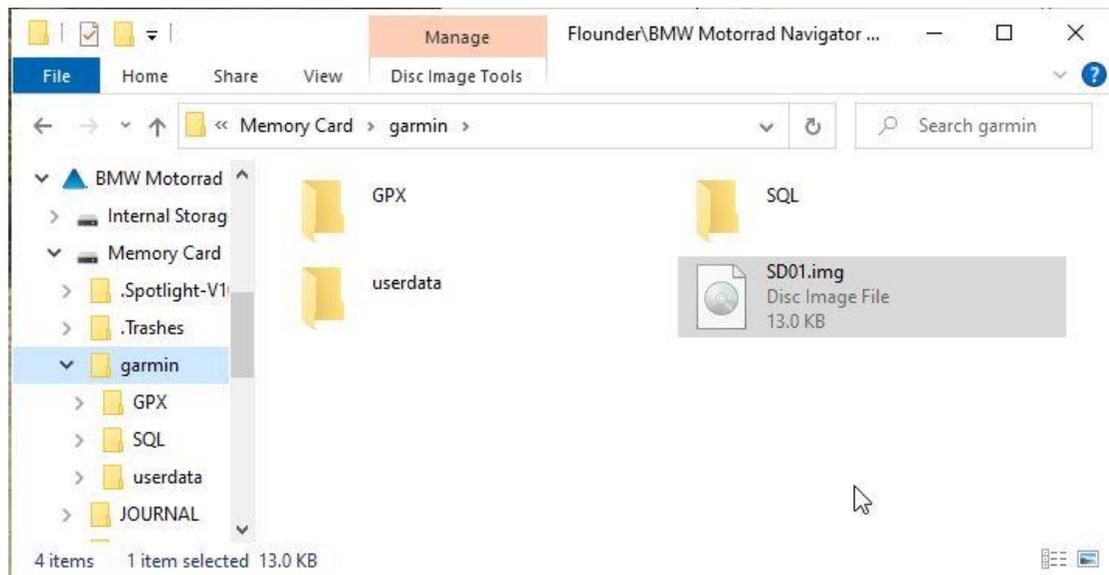
4. I suggest that you rename the “gmapsupp.img” to correspond with the name above (e.g., SD01.img) for future reference.

NOTE: You must rename gmapsupp.img before you convert another GPX file or the file will be overwritten. If you are going to create several custom map files make sure you change the “Map ID” and map names, otherwise the GARMIN GPS gets confused.

5. Repeat steps 2-4 for each GPX file you want to convert

STEP 4: Move the Garmin custom map files (.img) to the Garmin GPS

1. Connect with the SD Micro card
 - a) Make sure your SD Micro card was formatted on your Garmin GPS before you begin.
 - b) Insert the micro SD card into your computer or connect the Garmin GPS using the USB connection.
2. Copy the new “.img” files to the GPS
 - a) On the Garmin NAV V & VI and Zumo 595 - Navigate to the SD Micro card and open the “Garmin” folder. You can also load the custom maps into the “Map” folder on the internal storage though you may have to create the “Map” folder.
 - b) On the Garmin DriveSmart 50 - Navigate to the “Internal Storage” and open the “MAP” folder
 - c) Drag the “.img” file(s) into that folder



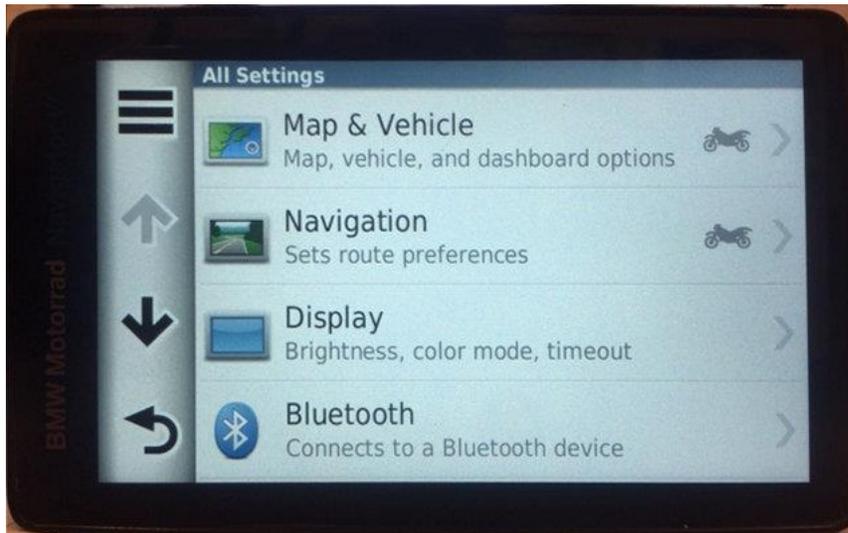
- d) Insert the SD Micro card into the Garmin GPS, or disconnect the Garmin GPS from the USB cable

STEP 5: Verify the map files loaded successfully.

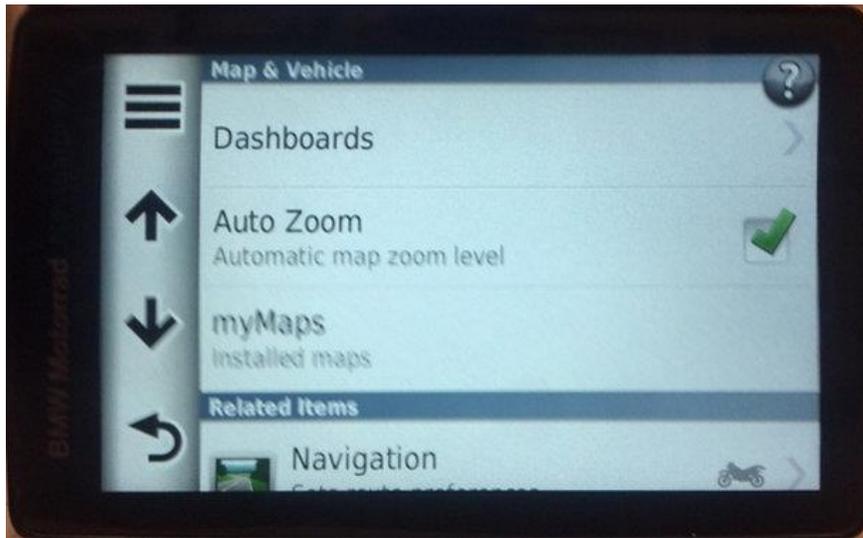
NOTE: You may have to get the GPS to do a “full” power down and startup before it will read the maps. I turn on the GPS, then hold down the power button until it displays the “Turn Off the Device?” message, select “Off”. After a complete power down and restart it should read the custom map files.



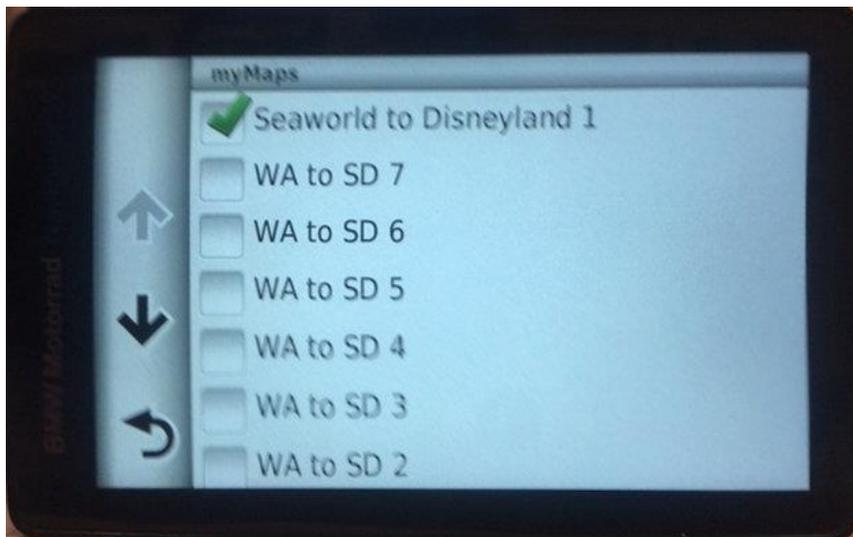
1. Power on the Garmin GPS and get to the main screen
2. Go into the **Settings** screen and select “**Map & Vehicle**”



3. Scroll down and select “myMaps”



4. Check/Uncheck the maps you want displayed when you go back to **View Map**



Congratulations! You now know how to create and load custom maps for your Garmin GPS.

