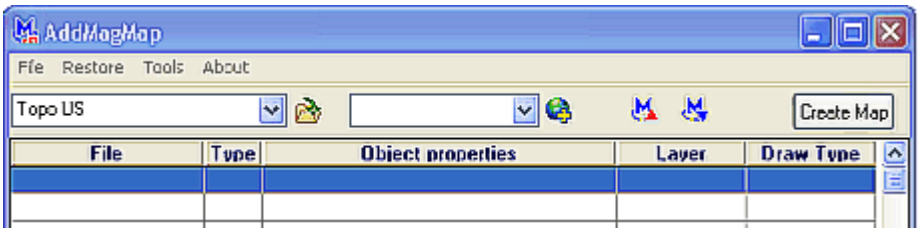
Examples

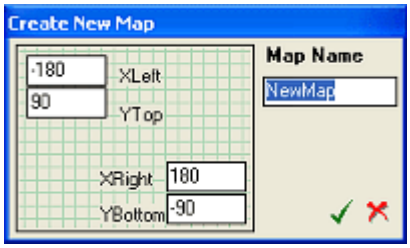
1. How to get started, the very first try

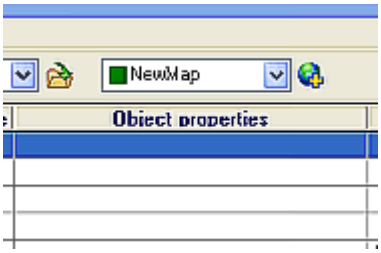
There are several simple objects (lines and polygons) in the SAMPLES folder of the AddMagMap. The objects are located in Central Africa at the equator.

1. Close all MapSends (if opened). Run AddMagMap. In the drop-down list at the top-left you will see all MapSend programs installed on your computer. Please select the MapSend application where you would like to add the objects. After selection of the MapSend "MapSend structure analyzing" progress bar will be shown (during this time AddMagMap analyzes structure of the database, paths, collects drawing types and other information to be used for map creation). In several second dialog disappears and the other control becomes enabled.

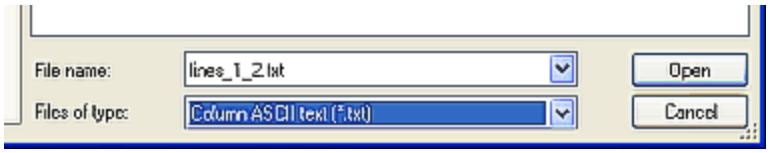


2. Push the button , Map dialog appears. Push OK button (✓) (in this example we will use -180 – 180; -90 -90 (all world) bounding rectangle and the default "NewMap" name. "NewMap" will be shown in the drop-down list with the green square at left (green square indicates that map is defined but not yet exist in the MapSend). The range of the map can be checked by placing the mouse cursor over this drop-down box.

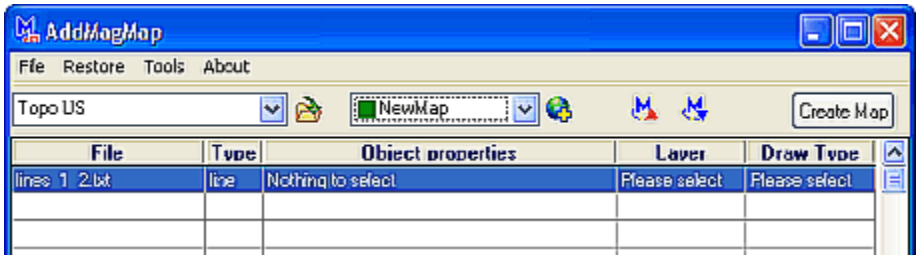




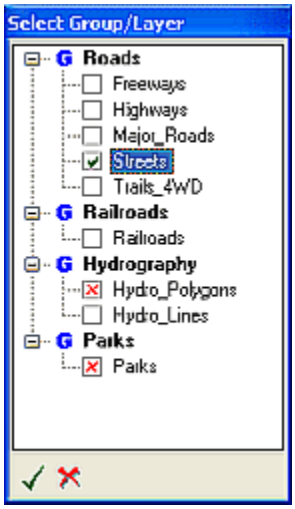
3. Click menu “File”-“Import File”-“Line”; “Open File Dialog” appears. Browse to the SAMPLES folder. Select “Column ASCII text (*.txt)” from the “Files of type” drop-down list and select “line_1_2.txt” file.
4.



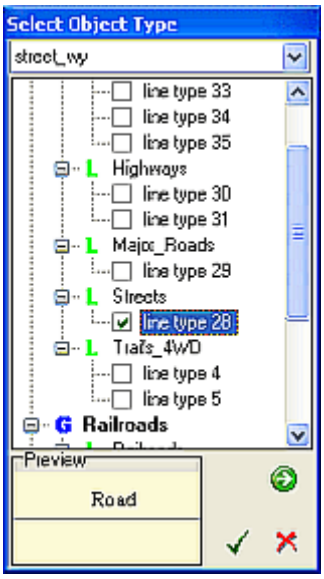
Selected file appears in the AddMagMap grid:



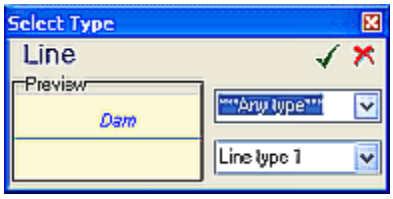
In the first column there is a file name; in the second is a type of the imported file (line, area, point). In the third column there is “Nothing to select”, this mean that for this format there is no additional control for object selection. The 4th and 5th columns show “Please select”.



5. Double click cell in the 4th column (Layers). You will see all available layers for this specific MapSend (empty boxes denote selectable items of the line type, the layers where the object of this type can not be exported are marked with red crosses (areas)). Select desired layer. In this example (MapSend Topo US) we select the “Streets” layer. Labels will be placed to the “Roads” group and the object will follow the properties of the “Streets” layer in the receiver (i.e. will be drawn by solid thin line and will be shown in the range of zoom specific to this layer).

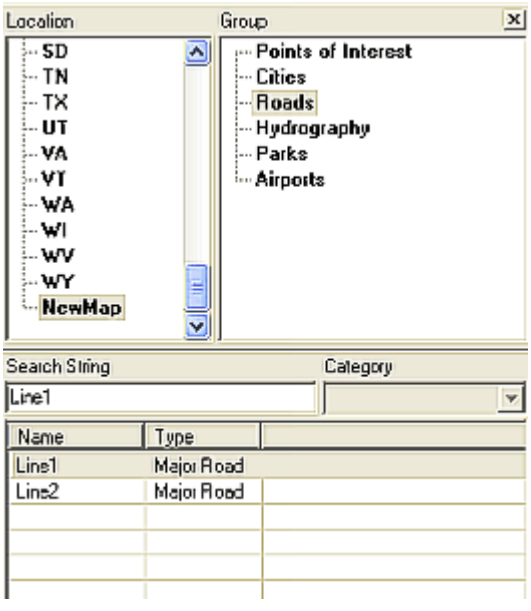


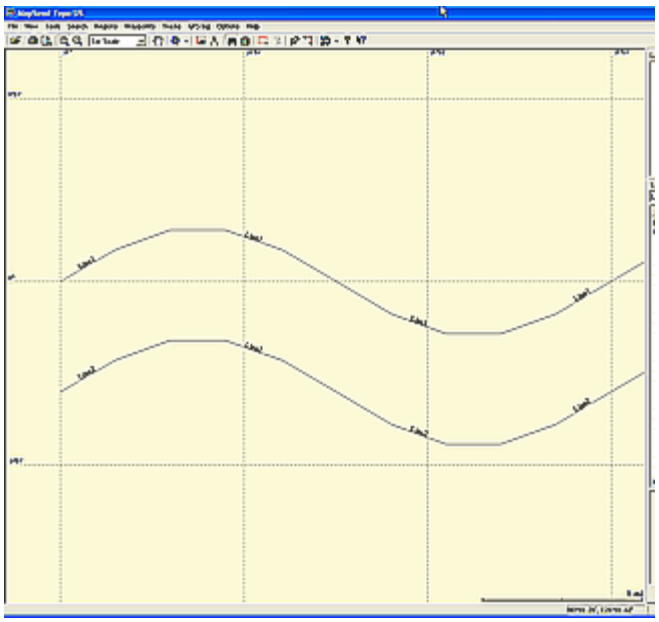
6. Double click to the 5th column ("Draw Type"). Select one of the drawing types (shown in the insert at the bottom). Drawing types can be selected from used in this MapSend maps (select the map from the drop-down list at the top) or from all types defined in this specific MapSend. To select from any type push the green arrow at right.



Let us select "line type 28" – black line used for the roads.

7. Click "Create Map" button. Answer "Yes" to the "New map "NewMap" will be created. Proceed?' After some progress indication the "Done, no errors detected" message appears if everything went OK.
8. Click the (Launch MapSend). MapSend will be opened. Go to menu "Search"-"By Name". Search window will be shown. The very last map in the list is just created "NewMap" , select "Roads" (the group where "Streets" layer is). You will see 2 objects with the labels "Line1" and "Line2" defined in the "line_1_2.txt" file. Click to any of the labels. The objects will be shown on the map (two sine lines)

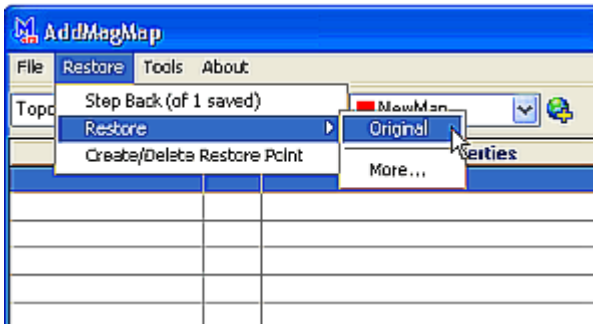




Close MapSend manually or click (Close Mapsend) button.

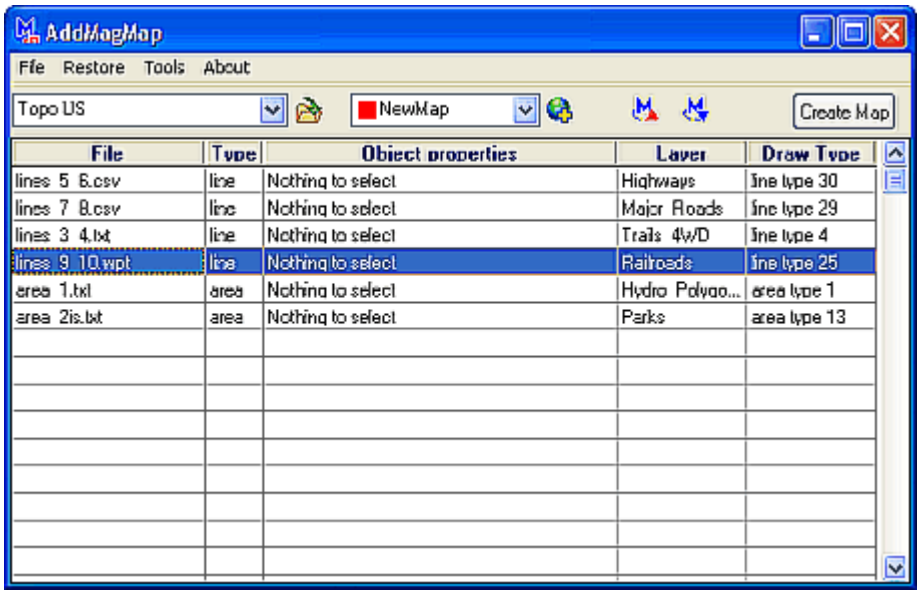
Note: Red square appeared at the “NewMap” name in the drop-down list indicating that the “NewMap” is already created and included to Mapsend.

When the map was created the “Original” restore point was saved automatically (it happened at the very first map creation), one “Step back” was also saved. If you like you can restore MapSend to its original state by either click to “Step back”, or “original” restore point (at this step they do the same, because only one map was created).



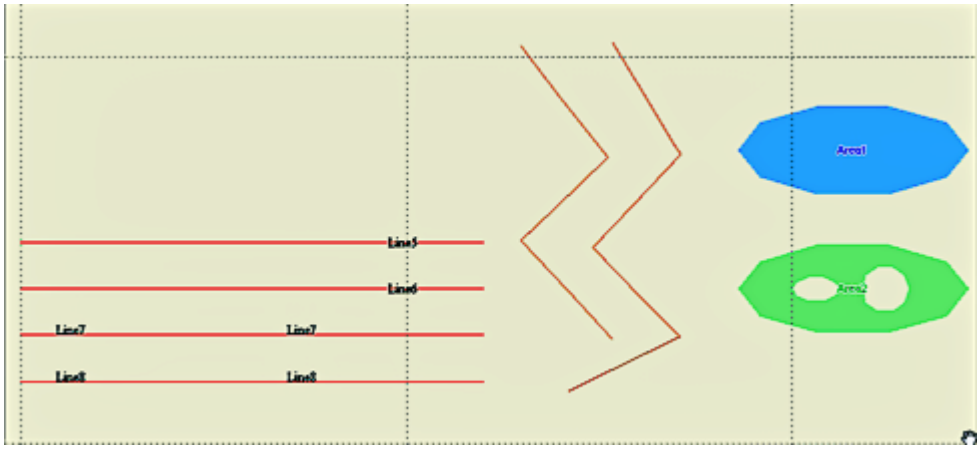
Let us continue this example without any restore or step back.

Try with more objects. Add them to the NewMap (since we add them to the existing map no map definition is needed , the objects will be added to the map shown in drop-down list ("NewMap" in this example)::



In the example we added many objects of both line and area type in one step. (In the SAMPLES folder files with *.csv are “Row ASCII type”, *.txt are “Column ASCII type”, *.wpt is a “MapSend route file”). In this example 8 lines (since each sample file contain 2 lines, and we already created 2 lines at the previous step) will be in the “Roads” group, 1 area will be in the “Hydrography” group and one object will be in

the “Park” group. Lines_9_10 will be shown on the map, but will not be included to any search group on PC, because this specific MapSend (Topo US) does not include the “Railroad” group to the search list (but they will be included to the Railroad group in the receiver). The object behavior is exactly the same as for all other MapSend objects, zoom appearance, groups, etc. The behavior depends on the specific MapSend.



Note: at the zoom level shown, lines 1,2,3 and 4 are not visible (streets, trails). They will be visible at higher zoom. The layers visibility properties are set in dependence on specific MapSend (Topo US in this example)

Now “Step back” contains two records: first for the first run and second for the second run. To get back to the original state “Step back” should be clicked twice, or “original” restore point should be clicked once. If the “original” restore point was clicked, the 2 “Step back” operations will disappear because with “original” we erased all custom maps.

We created NewMap with the -180-180; -90 – 90 (all the world) bounding box, with this setting the accuracy at the equator is about 15 m. With smaller map the accuracy will be proportionally higher.

2. Import MapSend routes and trails

When we do some trip or hiking Magellan receiver creates some track object. Track mode can be set to have different detail level; typically for more less long trip there are hundreds and thousands track points. To minimize number of points there is another object which is called “Route”. When track is converted to the Route; number of used points becomes much less because straight parts of the track are approximated with a straight line (only 2 points required).

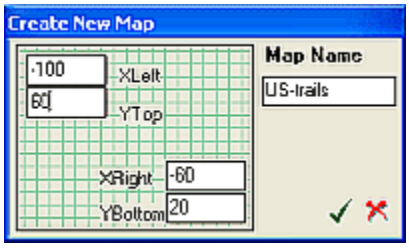
To make a track a permanent objects on the MapSend it must be first converted to the Route (alternatively, the Route can be created manually in the MapSend). Track

conversion can be done by two different ways: a) convert track to the route in the receiver or 2) import track to the MapSend and convert track to the route in the MapSend).

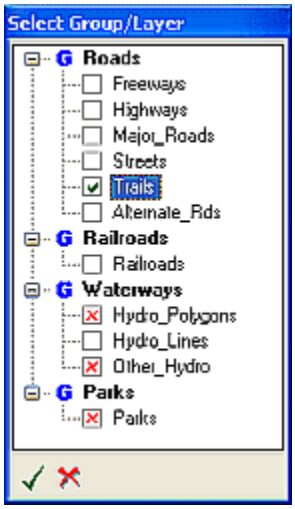
1. Import track to MapSend (for Explorist it must be converted first to MapSend format using converter manager).
2. Convert track to the route. Change name of the Route to the name you would like to see on the map. Save the road in the MapSend route format (the same format is used for both waypoints and routes)
3. Open AddMagMap, select desired MapSend (e.g MapSend Topo US). Define the map, in this example we create "US-trails" map with the rectangle XLeft= - 120, XRight= - 60; YTop=60; YBottom=20. If you are importing the route to some already existing map, just select this map from the drop-down list.
4. Import data as a line (menu File-Import File-Line ("MapSend routes (*.wpt)" type))
5. Select layer where the data will be placed (dbl click the Layer column)

6. Select drawing type, how the data will look on PC (dbl click the Drawing type column). In the example we selected line type 5 (how trails are drawn in the WY map), alternatively you can select any type from any layer of any map or from any drawing type ("green arrow" button at the right of the dialog).

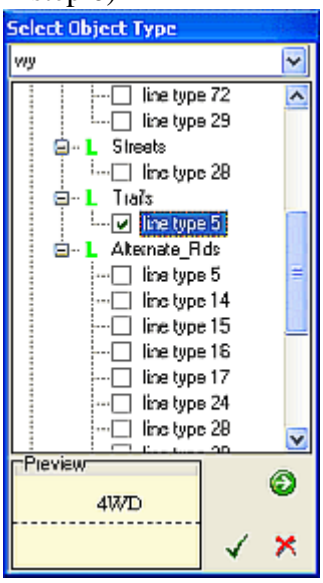
step 3)



step 5)

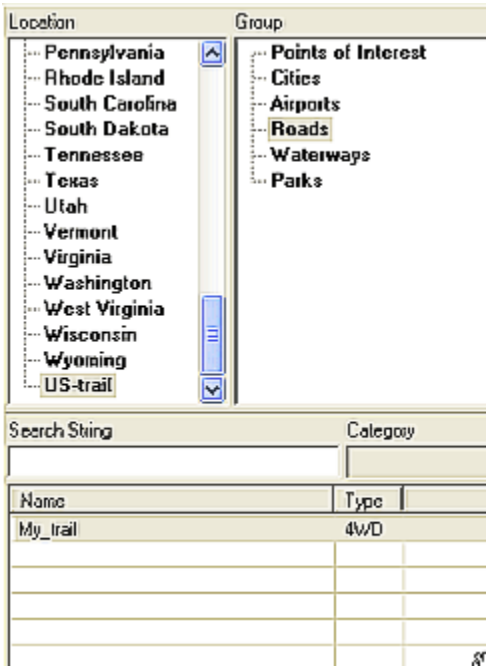


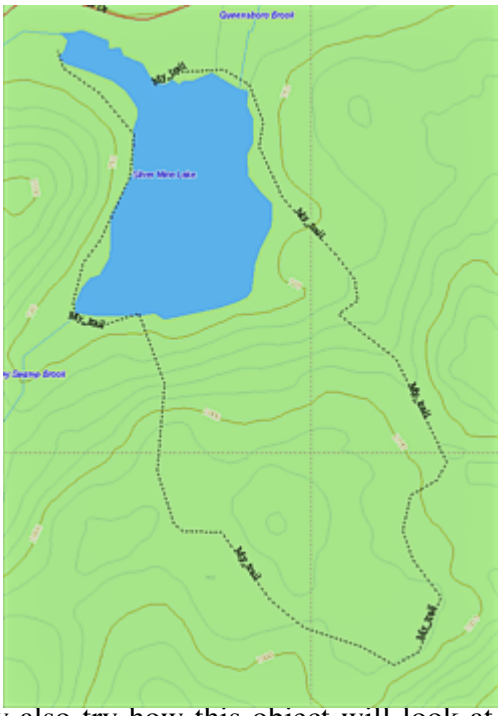
step 6)



7. Click "Create map" button

Click button to launch MapSend and see the result.





Close MapSend or Click to close. You may also try how this object will look at different layer/drawing type setting. For that click menu "Restore"-"Step back" to undo the map, import data again and select different layer and/or drawing type.

Note: although this trail was created in the custom "US-trail" map, this trail will be seen whenever this area of the map is browsed and zoomed to the correct level. This trail will be exported whenever it is contained within the uploaded region. ***S***ubdivision of maps is logical; MapSend considers all smaller (logical) maps as parts of one large map.

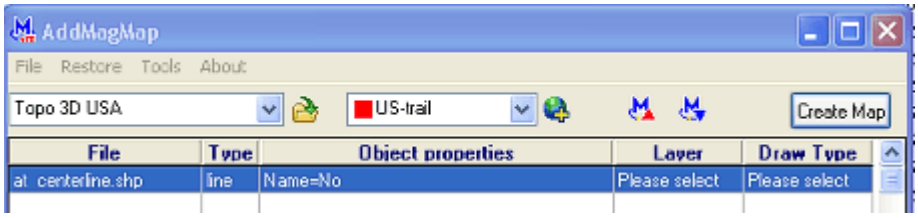
3. Import ESRI shape files (Appalachian trail)

Appalachian trail is a few thousand miles length hiking trail over the top of Appalachian mountains (North-East of the USA). Strange enough that this famous trail is not included to the Topo versions of the MapSend US. Let us do it with AddMagMap.

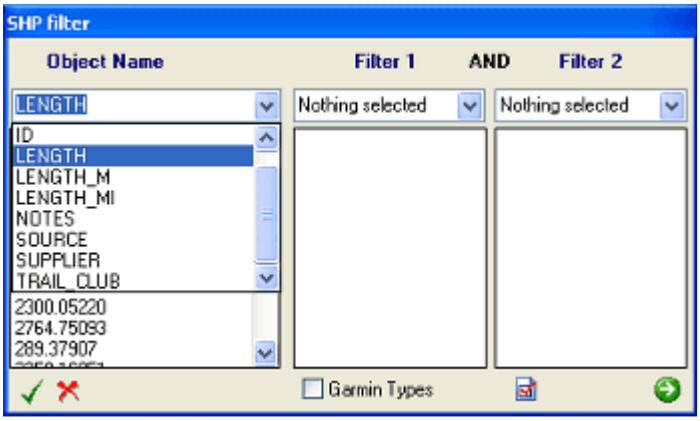
ESRI shape file for the Appalachian trail is available for free at http://www.appalachiantrail.org (more precisely, at the moment the data are at http://www.appalachiantrail.org/site/c.jkLXJ8MQKtH/b.851255/k.4226/Appalachian_Trail_GIS_and_GPS_Data.htm).

After download and unzip we get the ESRI shape files: at_centerline.shp, at_centerline.shx, at_centerline.dbf (these 3 files are parts of ESRI shape file standard format).

1. Run AddMagMap, select the MagSend to where we are going to insert this data (e.g. US topo 3d from the previous example).
2. Define new, or select from the drop-down list custom map name (e.g. "US-trails" from the previous example).
3. From the menu "File"-"Import File"-"Line" ("ESRI shape files (*.shp)" file type) browse to the at_centerline.shp file.
4. At the AddMagMap grid you will see 1st raw with the file name, type, object properties etc. The 3rd column ("Object properties") shows "Name=No" (compare to "Nothing to select" for simple type of data, this means we can tune the input parameters (see next)). Also the SHP type of data allows seeing the bounding box coordinates. Double click to the cell "at_centerline.shp" (1st column) to see.



5. Double click the cell ("Name=No") in the 3rd column ("Object properties"). The SHP filter dialog will be shown:

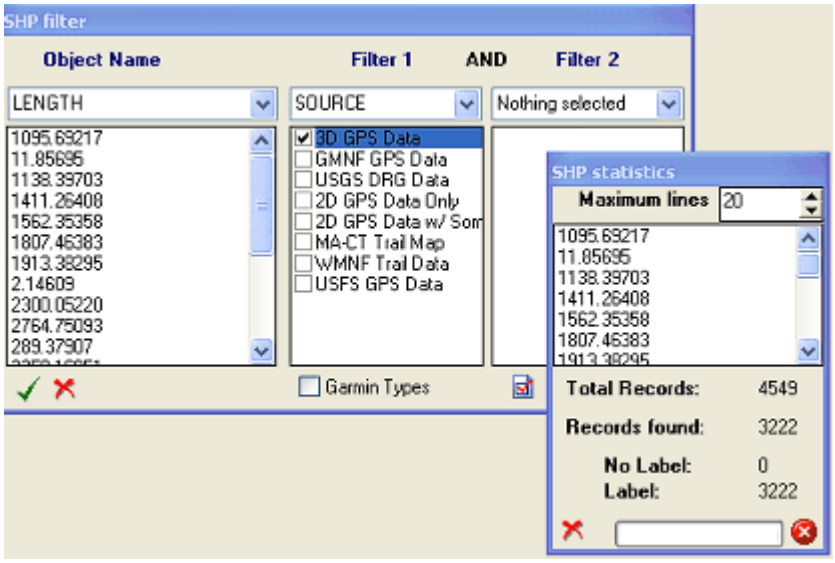


Click "Object Name" drop-down list to see all fields available for this file. For example, filed "ID" contains some id number of the trail parts, "LENGTH" ("LENGTH_M","LENGTH_MI") contains length of each leg, etc. Note: only first 20 *unique* names sorted alphabetically are shown by default (the default number of lines shown and sort properties can be changed from the dialog called by the click on the "green arrow" button at the left). For example in the SUPPLIER filed we see 3 different sources of data ("Appalachian trail conference", "Green Mountain National

Forest", "White Mountain National Forest"), many parts can have the same names, but only unique are shown.

Most likely, you don't want to have any label displayed (in this case just select "Nothing selected"; as an example you may select one of the fields in the "Object Name" to display labels from this field); we are going to have all the data imported (alternatively, for example, you can set filter(s) drop-down list(s) to one of the fields and check the desired value (for example (select SOURCE from the "Filter1" drop-down list and check "3D GPS data" to import only those parts that are marked as a "3D GPS data").

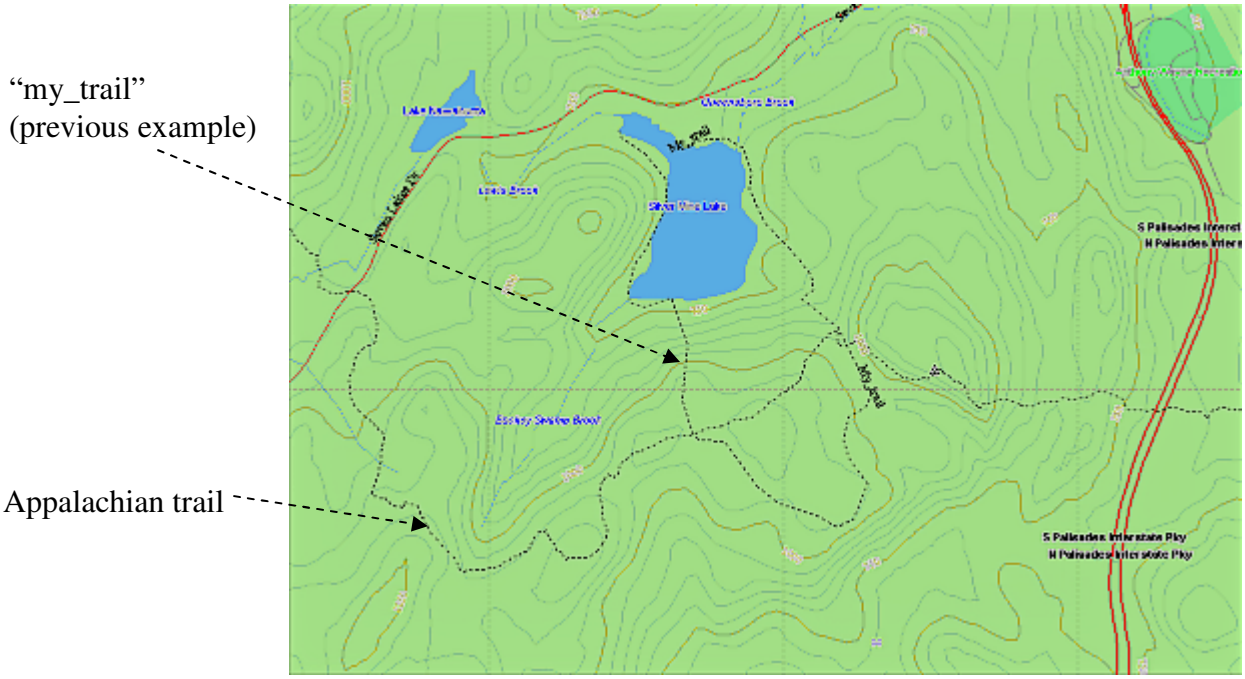
To check how many objects are in the file with the selected filter settings click button, the statistics dialog will be shown:



In this example there are 3222 labeled objects (LABEL is taken from the "LENGTH" field) with the SOURCE=3D GPS Data; there are 4549 objects total (parts of the trail) in the file.

Let us set "Object Name","Filter1" and "Filter 2" to "Nothing selected" to import all objects without any labels. If we do so we will see the same "Name=No" indicating that there will be no labels shown and there are no filters applied.

6. Select "Trails" layer and "line type 5" the same way we did in the previous example at steps 5) and 6). Click "Create Map". In several second the job will be done. Run MapSend ( ). We will see the same custom map "US-trails" in the search window (since we did not created new map, but used the map created in the previous example) and the same "my_trail" object name in the search output of the group "Roads" (from previous example, because we imported Appalachian trail with the settings to show no labels).



If we browse and zoom to the "my_trail" (previous example) we see now 2 objects "my_trail" and part of the Appalachian trail that is in this area (Hurriman State park, NY)

Click menu "Restore" - "original" to return to the original MapSend installation, this will erase all custom maps created in the examples (unless you want to keep them).

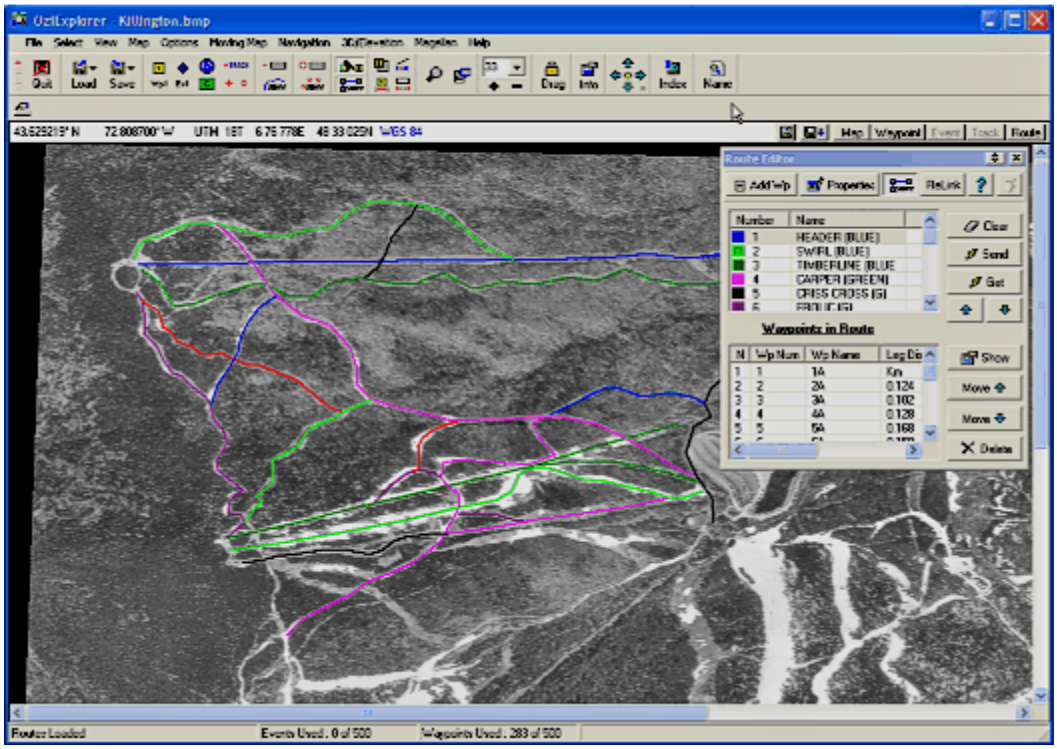
4. Import OZI Explorer routes (Create objects from photo image)

OZI Explorer is a popular program to work with many different types of GPS receivers and raster maps (the pictures (*.bmp. *.tif, *.gif etc) in contrast to vector data in Magellan and Garmin maps). Many other similar programs are available for similar purposes. The OZI route format was chosen because of popularity of the program, most of the converters support this format.

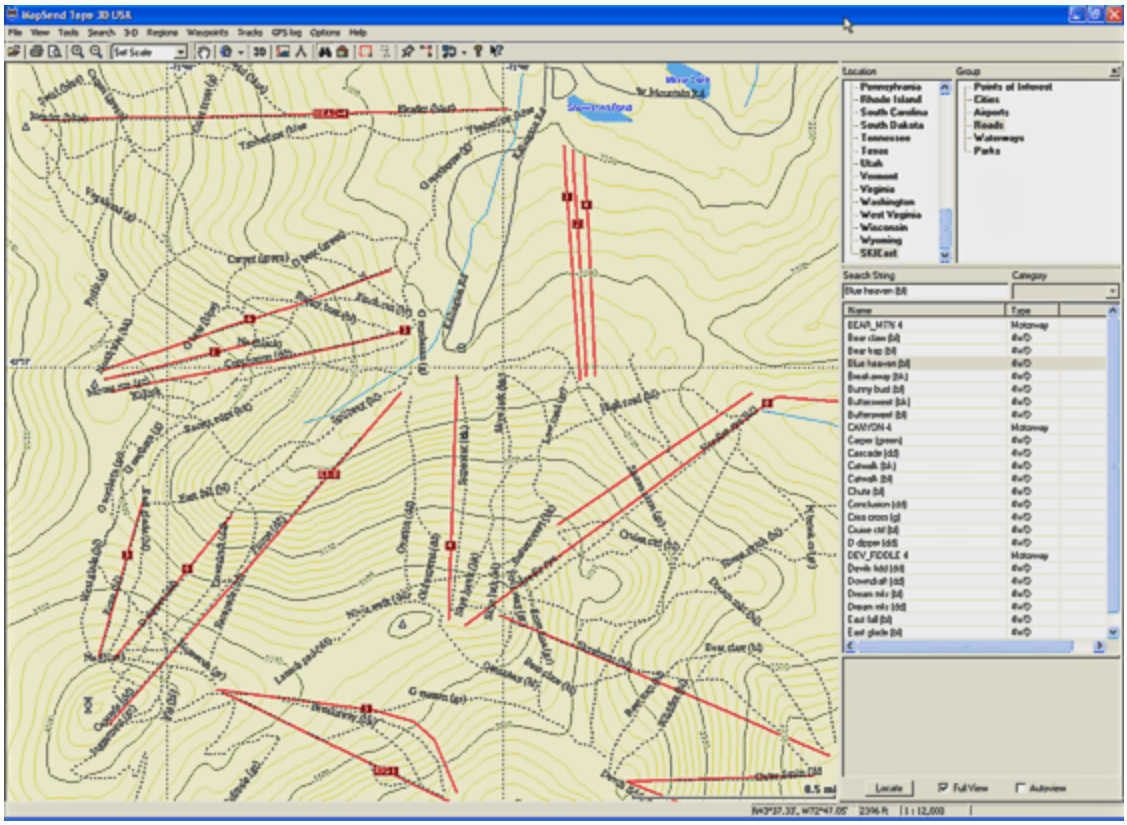
Here is a basic description how to draw map of trails and lifts at Killington Ski resort (VT, USA).

1. The aerial image of Killington ski resort was downloaded with USAphotoMaps program; the image was converted to WGS84 Lat/Long. For details please see http://www.msh-tools.com/general.html

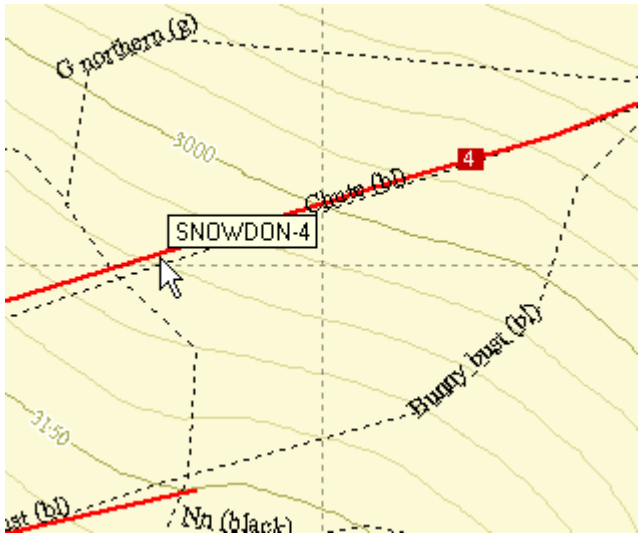
2. The image was imported to the OZI Explorer and calibrated.
3. The routes (trail and lifts) were drawn with the mouse over all trails and lifts. 5 files with the trail and 2 files with the lifts were created (because the OZI explorer has a limit on number of routes and number of waypoints)



4. The corresponding trail and lift files were imported to AddMagMap; for trails Name conversion was set to display names with lower case (OZI routes are only in CAP); for lifts no name conversion was selected. Trails were imported to the "Trails" layer (will be shown in thin black dash lines (this is a setting of Topo 3d US for the "Trails" layer). Drawing type was selected to be "line type 5" (dashed line). Lifts were imported to "Highways" layer (to be shown by thick red solid line in the receiver) with the drawing type "line type 48" (Note: this line type does not exist in any map of the Topo 3d US and was selected with "any drawing type" dialog; this line type shows red thick line with the labels in red squares).



5. Note the labels: as described in the manual, specific MapSends have special rules for labels with digits. In this example, Topo 3d US has a rule to display label with digits as just a digit; the following figure shows this in more details, the lift has a label “SNOWDON-4” but only “4” is displayed in the red square.

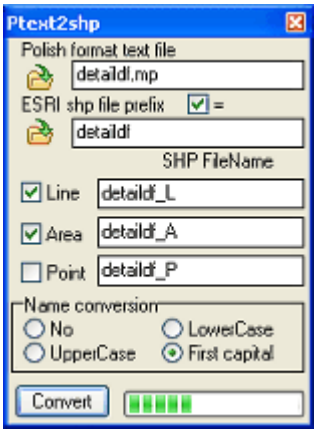


6. When exported to the receiver the labels will be shown in full if name before digits has more than 3 characters (e.g. SNOWDON-4 will be displayed as SNOWDON-4); if there are 3 or less characters, the label will be displayed in red square (e.g. K1-8 will be displayed as K1-8 in red square). Please see the manual for more description. Please note also that different MapSend and receivers have different rules for the display of the labels.

Click menu item “Restore” - “original” to return to the original MapSend installation.

5. Import Garmin maps (Mexico city map, simple example)

At http://mapcenter.cgpsmapper.com/ there is a repository of hundreds of free custom Garmin maps. In the repository there are maps of two types: a) Garmin *.img maps and b) maps in Polish Map Format ((PMF) source of custom Garmin maps). AddMagMap uses PMF to build maps. If map is in *.img format it can be converted to PMF with GPSMapper program (in GPSMapper open the *.img and Save As “polish text”).



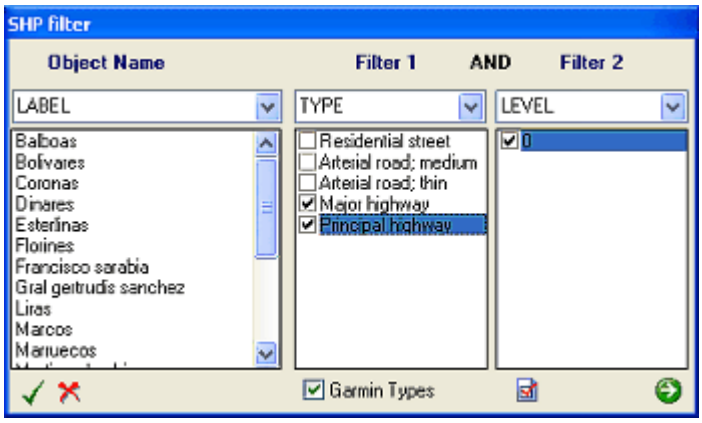
In this example map of Mexico (Mexico DF - Citymap by Pablo Reyna) will be imported to MapSend US Topo 3d. Map contains over 50000 Mexico streets and is very detailed; I called this example simple because there is only one origin level for all objects (please see Garmin format description in the manual).

Run AddMagMap program, select the MapSend where to import the map (in this example Topo 3d US). From the Tools menu click “Garmin source (polish text) converter”. Browse to the “detaildf.mp” file, check “=” checkbox to convert to the file with the same prefix. Check “Line” and “Area”, Topo3d has no point levels, so we don’t need them. Click “First capital” to make labels in lower case with the first character in capital. Click convert. Conversion takes 15-20 sec.

As a result we have 2 sets of (*.shp, *.shx, *.dbf) files (“detaildf_L.*” and “detaildf_A.*”) as required by shape file format. Close the converter.

1. Import “detaildf_L.shp” file (File-Import Files-Line (ESRI shape files)). Double click to the cell in the 3rd column (“Object properties”). The SHP filter dialog appears. All shape files created with ptxt2shp converter (Tools menu) have 3 fields: LABEL (for object labels), TYPE (for Garmin types of drawing (some hex values)) and LEVEL (indicates the level of origin, 0 is the most detailed). Please see manual for more detail description of the Garmin format. In this example LEVEL=0 for all objects, so we can set (Filter 2=”Nothing selected” or Filter 2 =LEVEL=0), the meaning is the same: objects will be imported independent on Level (they are all =0).

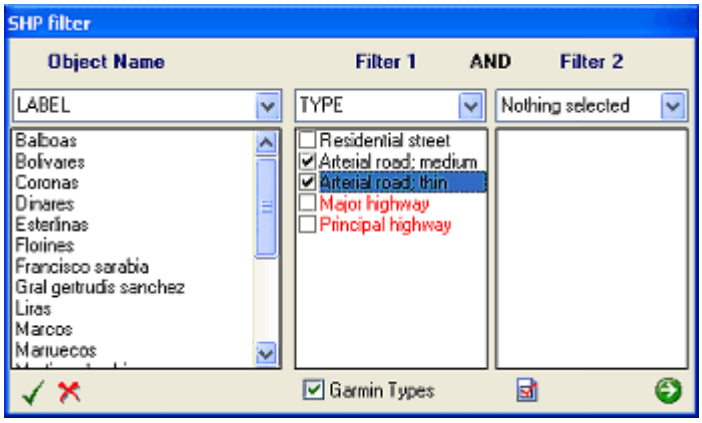
In the Filter 1 select TYPE and click “Garmin Types” checkbox, hex values of Garmin types will be replaced in this dialog with explicit description. This map of Mexico has the following 5 types of lines: “Principal highways”, “Major highway”, ”Arterial road, thin”,”Arterial road, medium”,”Residential street”.



Let us select “Major highway” and “Principal highway”. Click OK.

Now we see in the first row in 3rd column of the AddMagMap grid:NAME=LABEL (F1=TYPE:0x1,0x2) AND F2=LEVEL:0). This is settings we selected in the dialog.

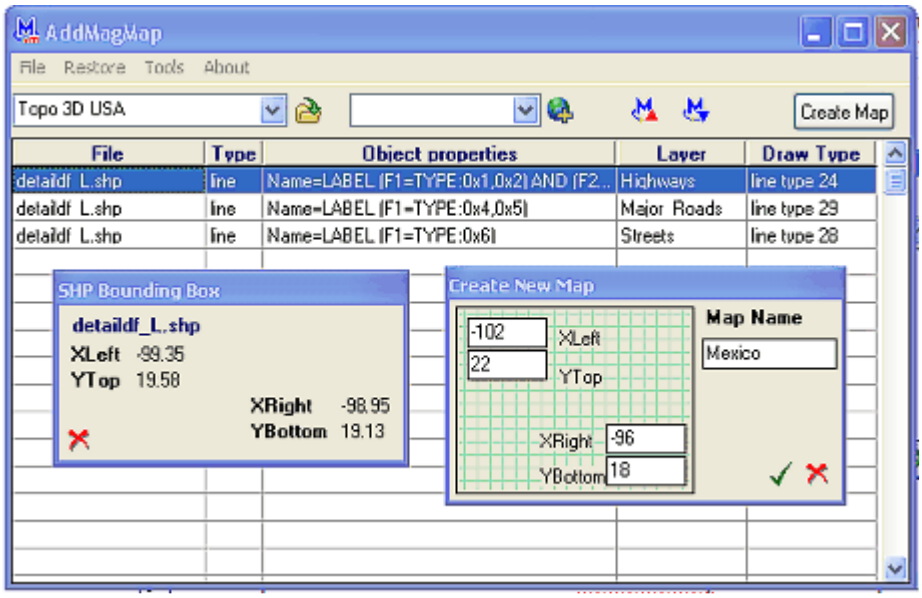
2. Import another instance of the detaildf_L.shp (Import File-Line menu), double click to the 3rd column (the same way we did at the first step). The same dialog appears, select the same fields for the LABEL and FILTER 1. Values taken at the first step are shown in red. Let us select “Arterial road, medium” and “Arterial road, thin”. Filter 2 is “Nothing selected”, as it was discussed for this map this is equal to Filter 2=LEVEL=0.



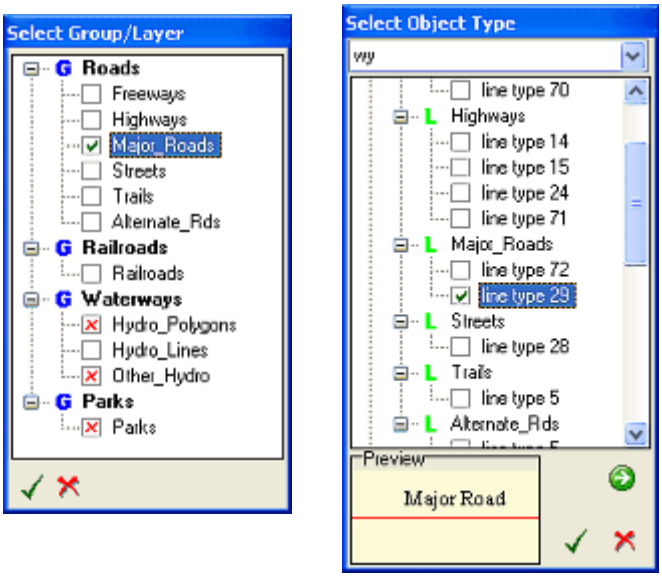
Click OK.

3. Import the third instance of the detaildf_l.shp. Similar to steps 1) and 2) select “Residential street” and “Nothing selected”. Click OK.

4. Double click to any cell with the data in the 1st column to check the bounding box. We see that the data are in a X:-99.35 - -98.95 and Y: 19.58 – 19.13 degree range. As it was discussed in the manual some MapSends are sensitive to the density of objects; so let us create the map with the rectangle close to this area. Click and enter -102, -96, 18, 22 coordinates for rectangle corners as shown in the following figure, Click OK in the map dialog, close SHP bounding box dialog.

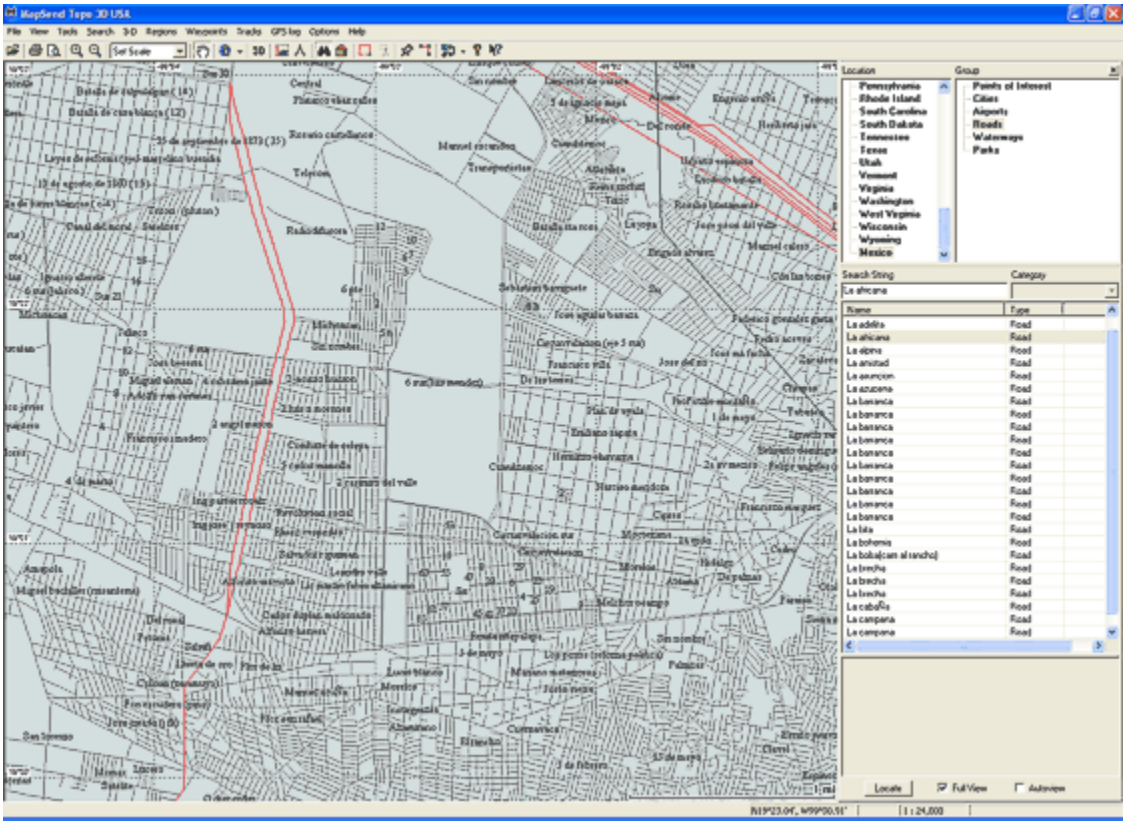


Similar to other examples assign “Highway”, “line type 24”; “Major Roads”, “line type 29”; “Streets”, “line type 28” for the first second and third rows, correspondingly. Figure shows the dialog setting for the second raw as an example:



At this step you may want to save the job (File, Save job) menu. All settings you do at the previous steps will be saved.

5. Click “Create Map” button. In 20-40 sec map will be ready (50000 objects!). Map is done (you can check that area shape file detaildf_A contain no objects, this map has only streets). Run MapSend with .



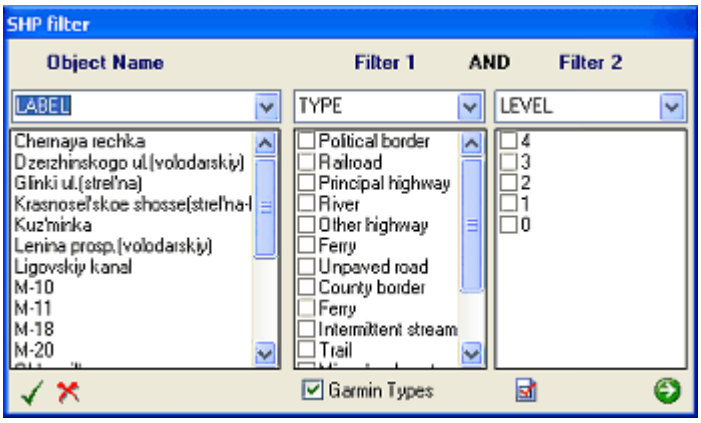
We see Mexico map in the list of maps with full search support for every object (“Roads” group).

6. Import Garmin maps (Saint_Petersburg map, more complex example)

This Garmin map was taken from http://mapcenter.cgpsmapper.com/ The map is Saint-Peterburg v 0.1 (Citymap by Ivan Hobanov). This is one of the most complex Garmin maps I could find. It contains several levels of streets, highways, railroads, rivers, water polygons, parks etc.

1. Convert “Saint-Petersburg.mp” to ESRI shape files (lines and areas, menu “Tools” of AddMagMap, similar to previous example).
2. Import the obtained file “Saint-Petersburg_A.shp” to AddMagMap (Import-Import Files-Lines). Double click to the “Object properties” cell. The shp

properties dialog will be shown, set LABEL for the “Object name”, TYPE for the “Filter 1” and LEVEL for the Filter 2, click “Garmin Types” checkbox:



This file contains 15 different types of objects, and in contrast to the Mexico map from the previous example it has 5 different Levels. As it was discussed in the manual, the same objects can belong to the different levels to show up at different levels of zoom. For example if some streets belong to the 0,1 and 2 levels it will be shown at the highest (most detailed) zoom (level 0), and at one- and two- steps off (zoom out). When the map gets zoomed less then 0,1,2 levels (less detailed) the object is not shown on the map. The other objects (e.g. highway may start at level 2 and higher to not to be shown at high zooms). Since Magellan layers works differently (please see manual for details) we must put only one instance of the object (say at the lowest level) to some of the Magellan layers. If there will be several duplicated instances of the object nothing very critical will happen, map will look the same, but in the Search object labels will be duplicated.

Our goal is to find the origin level for objects; apply filters to select single instance of the objects; assign the objects to some layer of Magellan map and define their look on PC screen.

We can do this job by several different ways. Let us try first with the assumption that author of the Garmin map used Garmin types correctly (i.e. streets are drawn as a “Residential street” type, trails are drawn as a “Trail” type and all objects starts form the very detailed level 0). This intuitive way works for most of the maps.

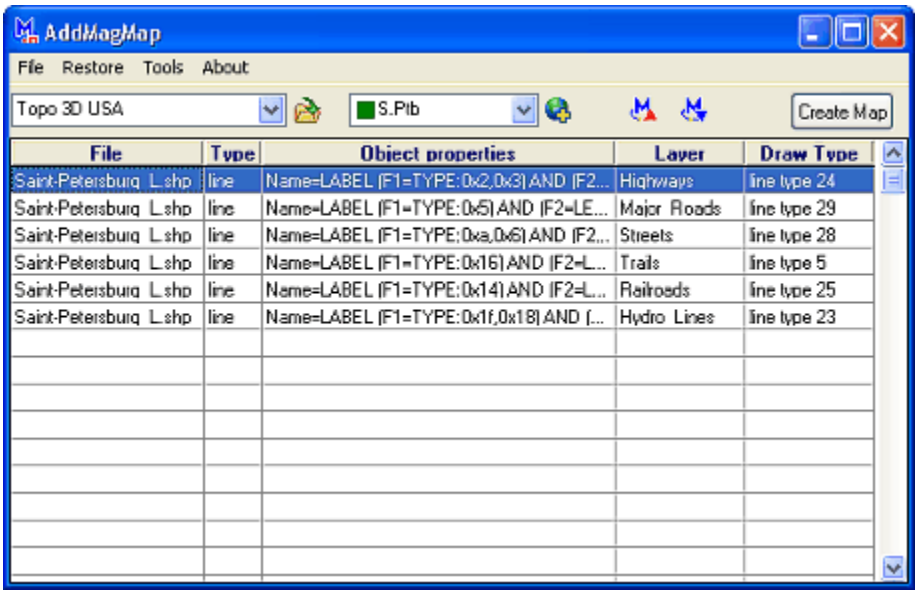
6.1 Intuitive way to import Garmin map

Let try from Level 0 (the most detailed level)

3. Let us select TYPE=”Principal highway” and “Other highway” for Filter 1 and LEVEL=0.
4. Import another instances of the file and select corresponding types in the SHP filter dialog. Assign Magellan objects and drawing types for each type of the line.

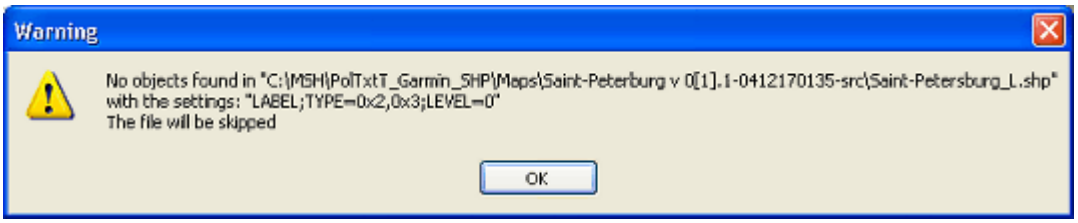
At this step we rely on the names of Garmin types.

SHP TYPE	SHP LEVEL	Magellan LAYER(Group)	Drawing type
Principal highway, Other highway	0	Highways (Roads)	24
Arterial road, thin	0	Major Roads (Roads)	29
Residential street, Unpaved road	0	Streets (Roads)	28
Trail	0	Trails (Roads)	5
Railroad	0	Railroads (Railroads)	25
River, Steam	0	Hydro_lines (Waterways)	23



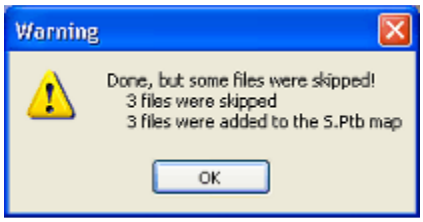
Double click to cells in the first column to see bounding box and define the Map S.Ptb with the coordinates that includes the bounding box: XLeft=28, XRight=32, YTop=62, YBottom=57.

5. Click “Create map” button. While execution you will see the messages like this 3 times:

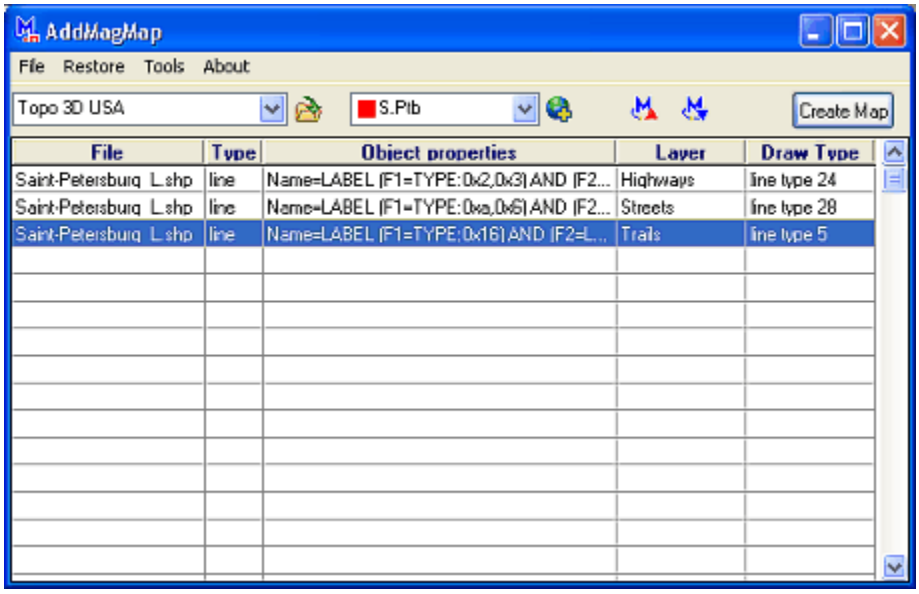


This happened because no objects were found with the filter settings (LEVEL=0) (I especially do this to show what will happen with wrong filter settings, alternatively you can do statistics (see below) to find where is the origin level for the object).

After completion the message will be shown:



The successfully imported layers are deleted from the AddMagMap grid, the rest 3 objects were not added, because no objects were found at the filters settings:



It means that these objects do not start from Level 0. With the statistics window we can find that the origin level for these objects is 2. Change the Level to 2 and click create map. The objects will be added to the map. Run MapSend ( ) and see result. We will see that most of the streets are shown as a major roads the other wrong assignment is also obvious. This happened because we rely on the Garmin map type, but author of the map used them not straightforward.

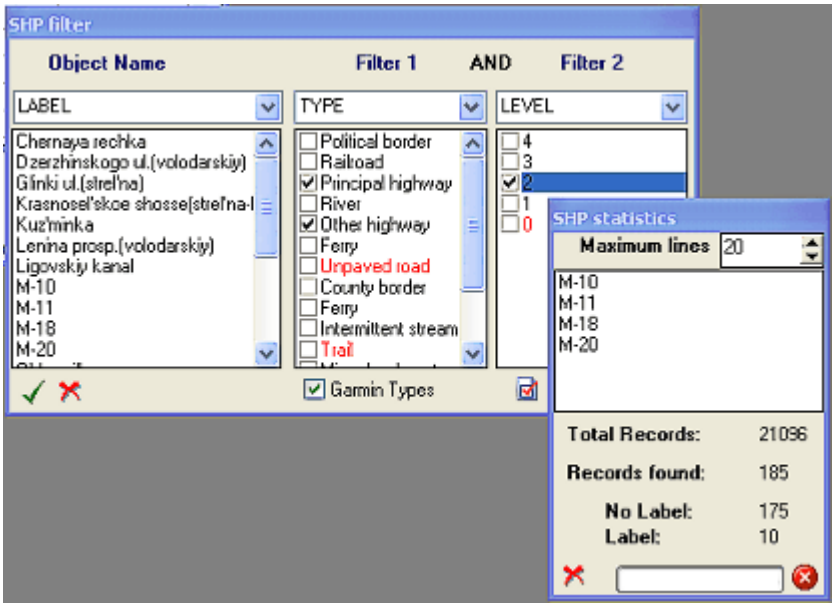
Perform “Step Back” 2 times (because we build this map in two steps, for each the “Step back” was saved. This will remove “S.Ptb” map from MapSend (or just click Restore point “original” if there are no other custom maps exist). Then you can open saved at the first step job, correct filter settings and assignments and build the map again.

6.2 Statistical way to import Garmin map

With the statistics window we can do some preliminary conclusion of what is the real type of the object and what is the level of origin (the most detail level where the object appears first time).

For the Saint Peterburg map import line shape file, double click to the “Object properties cell”, Select LABEL for “Object name”, TYPE for Filters 1 and LEVEL for Filter 2.

To find the levels where the specific objects are; we can use statistics screen of the AddMagMap. From the SHP filter dialog select one, or several types of interest, select some level (Filter 2) and click the statistics button (). Let us try “Principal highway” and “Other highway” (check the corresponding boxes for Filter 1. Set Filter 2 (“LEVEL’) to 0 (most detailed) we will find that there is no “Principal highway” and “Other highway” exist at level 0. Check LEVEL=2, press  . We found that these highway object appear starting from Level 2.



Do the same for other objects. We will find:

Garmin TYPE	Level	Objects without labels	Object with labels
Principal highway	2	42	10
Other highway	0	133	0
Arterial road, thin	0	4434	5742
Unpaved road	2	513	0
Trail	2	19	0
Residential street	2	221	0
Ferry	2	547	0
River	0	220	0
Stream	0	0	9
Intermittent stream	2	5	2

From the results shown in the Table we conclude that most probably, streets are drawn with "Arterial road, thin" Garmin type, because many of them exist at Level 0 and this object type is the most numerous. "Unpaved road" and "Trails" most probably some duplication or wrongly assigned types (there are too few of them and they starts at low zoom levels (remember, when Garmin maps are created some automated processes are used to draw objects, this can be the reason of wrong assignment).

Based on the obtained results we can do the following assignment of Garmin objects to Magellan objects.

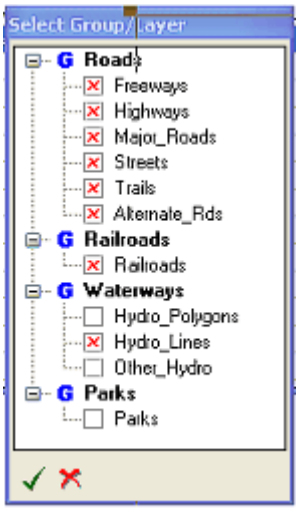
Garmin		Magellan	
Garmin type	Level	Layer(Group)	Drawing type
Principal highway, Other highway	2	Highways(Roads)	line 24
Unpaved roads, Residential Streets	2	Major_roads(Roads)	line 29
Artrerial roads, thin	0	Streets(Roads)	line 28
Railroad	0	Railroads(Railroads)	line 25
River, Stream	0	Hydro_lines(Waterways)	line 23
Intermittent stream	2	Hydro_lines(Waterways)	line 23
Ferry	2	Trails (Roads)	line 5

Note: Drawing types and layers are different for specific MapSend, this example is for Topo3dUD. There are no layers for Ferry in MapSend Topo3d, we put Ferry to the "Ttrails" layer (to be shown by dashed line in the receiver), the Ferries will be in a Roads search group.

Do similar for polygons objects (file Saint-Petersburg_A.shp). the statistics is:

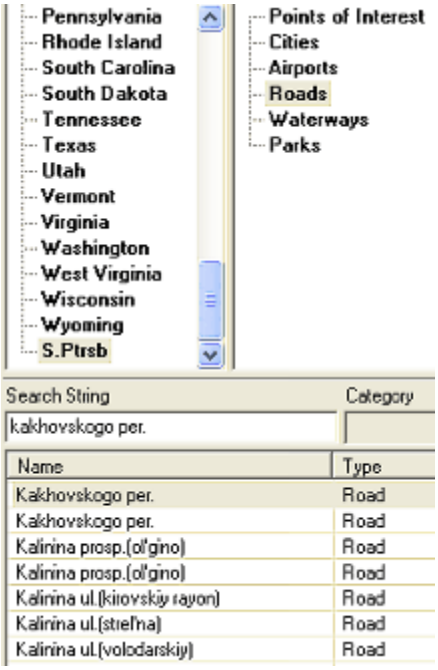
Garmin TYPE	Level	Objects without labels	Object with labels
River	0	93	606
Ocean	0	0	595
Forest	2	175	0
Lake	0	1187	32
Man-made area	0	20505	28804
Wetland/Swamp	2	205	0
Cemetery	2	24	70
Scrub	2	4	0
National park	0	5603	417
City park	0	14	6

We see that there is a huge number of objects of "man-made area" type. If we build the map with these objects we will see that they are houses. There are no layers in Magellan for similar type of objects, so let us do not import them at this stage. Based on statistics we assign the Garmin objects to Magellan objects the following way (taking into account available layers for this MapSend, for polygons we have only: "Hydro_polygons", "Other_Hydro" and "Parks"):



Garmin		Magellan	
Garmin type	Level	Layer(Group)	Drawing type
River, Ocean, Lake	0	Hydro_polygons (Waterways)	area 1
Wetland/swamp, Cemetery, Scrub	2	Parks(Parks)	line 68
National park, City park	0	Parks(Parks)	line 68

Below is the map we just created. Object labels will be in Roads, Waterways, Parks, Railroads search group as indicated in the table.



We may also want to add the houses ("man-made area" of the Gramin map); since there are no layers for such objects (MapSend topo3d). We must select between available

layers: “Hydro_polygons” (shown in blue in the receiver) or “Parks” (dotted green area). For PC map we can select some gray color area type. Here is part of the map on PC screen with houses (I don’t think this is a good idea to create Magellan maps with houses with using in the receiver; first, there is no good layers for them and second, drawing the houses slows down the map drawing)

Final remarks. In this tutorial some approaches on Garmin map export were demonstrated. Actually, many different ways, or combination of them can be used to decide how to assign Garmin objects to Magellan object. The most important features of the AddMagMap are: 1) it can add object-by-object (not necessary build the map in one step) and 2) you can always revert back to the previous step with “Step back” operation. So you can simply add some layer and try every time the result, if its OK then add the next layer, if not, step back and change the settings. At any moment you can also create Restore point. Garmin map can be seen with GPSMapper program it may help to find out the types of the objects.