TYPWiz 5

vers 5.96

For a German version of TYPwiz4 manual click
www.pinns.co.uk/osm/docs/TWzM4_DE.pdf

*'Our main aim is to make TYP files more accessible so that **anyone** can enjoy customising their own maps.'*

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TYPWiz 5....1
Loading TYPWiz5....7
TYPWiz on Windows 7 & 10....7
What is TYPWiz5?....9
TYPWiz5 and other TYP editors....9
TYPWiz on Youtube....9
How do I get a TYPWiz5 Key?....10
Important Preferences....11
Language / Font....11
Set default language....11
Label Options....11
Show Font colours on thumbnail labels....11
Colours / Icons....12
Change Background Colour....12
Magenta Transparency....12
Elements....12
New POI,Polygon or Lines from 0 X....12
Polygon Auto Tiling....12
Extra POIs as Hex....12
Advanced....13
Software Auto TYP....13
Text Editor....14
Change text fontsize....14
256 Color Palette....15
What are TYP files?....17
How do I send TYP files to my Garmin?....18
Mapsource/Basecamp....18
Gmaptool....19
How do I extract TYP files from my TOPO IMGs?....19
How do I extract TYP files from my Mapsource / Basecamp Maps?....19
How to add a TYP file to a map which does not have a TYP file....19
Getting started....20
Show / Hide Text Code Panel....20
Transparency....20
Copy a Polygon, Line or POI....21
Undo and Redo....22
Import Pictures....22
Select Area to copy and paste....22
Copying & Pasting....22
Paste into selected areas....23
Editing tools....23
Pencil ,Lines, Rectangles & Ellipses....23
Fill....23
Select Colour....23
Horizontal & Vertical Mirror....23
Rotate by 90º....24
Add a colour....24

Clear bitmap....24
Add Text....24
Colour Control....25
Changing Palette Colours....25
Change colours of grid or crosshairs....25
Pattern Fill....25
Brightness Control....25
Contrast Control....25
Hue , Brightness & Saturation....25
Colour Balance....26
Black and white are not affected....26
Change Grid colour....26
Type numbers....27
Garmin Type number ranges....27
Levels of Opacity (alpha values)....28
Give Pixel Opacity....28
Give Same Colour Opacity....28
Polygons....29
Preview tiled polygons....29
Adding & Deleting....29
Polygons with more than 2 Colours....30
Draworder....31
If you want a bigger gap between draworders then click the 'add' draworder button - see below....32
Error message ‘draworder?’....32
Editing,Adding and Removing Draworder....32
Search for a type number....33
Bulk Deleting of ‘empty’ placeholders....33
Checking Duplicated Draworders....34
TOPOs with NO draworder....34
Filters....35
Pattern Fill....35
Repeat pixel fill....36
Night colours....36
Text/Labels/Languages....36
Language 0x00 , a special case....37
Note:....38
We do not recommend you use 0x00 as a replacement for 0x01 – 0x2E....38
Languages in the Editor....38
Adding Carriage Return to Labels....39
Extended Font styles & font sizes....40
Custom Font Colours....41
Transparency of polygons....41
Reverse colours....42
Lines....43
a) Non-bitmap Lines....43
b) Bitmap Lines....43

Night Colours....44
Extended Line types 0x100+....44
Reverse button....45
Copying & Pasting Bitmap....45
Draworder of Lines....45
Resize Lines....45
Lines with more than 2 colours....46
Creating Mkgmap Code....48
POIS....49
Adding....49
Deleting....49
Copying POIs....49
Borrowing bitmaps from another TYP file....49
Pasting Bitmaps....49
Night BMP....50
Resizing Night POIs....50
How to make your POIs bigger or smaller....50
POI zoom....51
Deleting unused colours....51
POI number of colours & True Colours....51
RGB with colormode 16....51
RGB with colormode 32 - opacity....51
POI colormodes....52
256 Colours....53
Active Routing....54
Same border colour for each activity....55
Extra (CITY Navigator) Pois....56
How does it work?....56
How can I obtain an EXTRA POIs ID ?....56
How do I add and extra poi....57
What are the additional icons for?....57
How do I know if my map contains extra pois?....57
Can I add or edit extra pois to my map?....57
Changing number of extra POIs on display....58
Night colours for POIs+....58
Extra Labels Data....59
Editing RGB pois....60
Memory Problems....60
When to use RGB?....61
Saving POI as bmp....61
a) for nuvi....61
b) for waypoint symbols....61
Changing geocache symbols in a gpx file....62
Changing size of icons....62
Zero colour POIs (advanced)....63
No bitmap example:....63
Colour Palettes....64

Selecting Icons using SHIFT or CTRL....64
TYP Format....65
Updates....65
Loading the program....65
Loading TYP Files....65
FID & PID....66
Codepages....66
....66
For more information download TYPWiz5 & Unicode Manual....67
Headers....67
Load Options....68
Loading Text Files....69
Loading MapTK prj Files....69
Loading Garmin's Theme Files (kmtf)....69
Saving TYP Files....69
Saving as text (.txt)....70
Saving as Theme (.kmtf)....70
Save a Copy as....70
Save Picture....70
Print....70
Batch processing....70
TYP files and OSM....72
Checking Style types....72
Load Style Editor....72
TYP File Health Check....73
Fix Unused Colours....73
Check Lines for Non-Bitmap Conversion....73
Tips....74
Settings....74
POI TYPE Search....75
Search using green text box....75
Right click on your POI icon and Search TYPE....76
Tools....77
Text File Errors....77
Most common errors....77
Other problems:....78
IMG2TYP....80
Creating Logs....80
Languages....81
Commands....81
Messages....81
FAQs....82
I've created some POIS and they don't show on my Garmin/Nuvi....82
My POIs show up on Mapsource but not on my Garmin/Nuvi....82
I've created some highways and they don't show on my Garmin/ Nuvi....82
Some of my polygons don't show on my Garmin/ Nuvi....82

Why are my pois,highways only shown on my Garmin/ Nuvi ,not on Mapsource? 82
How do I quickly change a TYP in Mapsource?.....82
Can I use any TYP file with ANY IMG?.....82
How do I know which types have been used by an IMG file?.....83
How do I define zoom levels?.....83
Which mode is best for transparency?.....83
How do I make the city etc names larger?.....83
Gmapsupp.img.....84
gmp2typ.....84
GPSMapEdit & TYPWiz.....85

Loading TYPWiz5

TYPWiz5 runs on Windows 10 ,XP,Vista & windows 7 both 32 & 64 bit .

TYPWiz on Windows 7 & 10

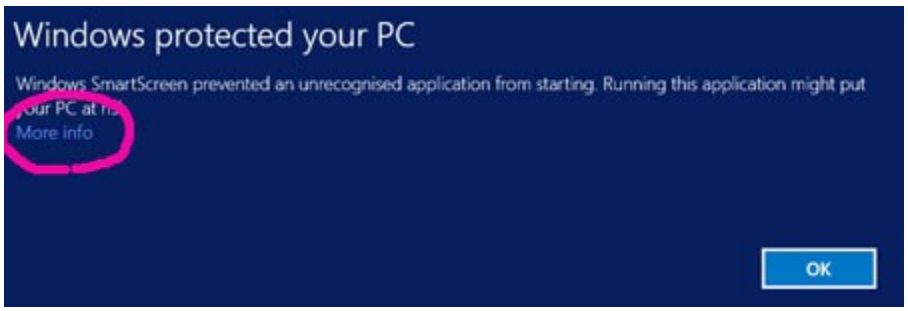
Windows 10 'by default' denies new programs any permission to save data or create folders.

Right click on the typwiz setup and select 'Run as Administrator'

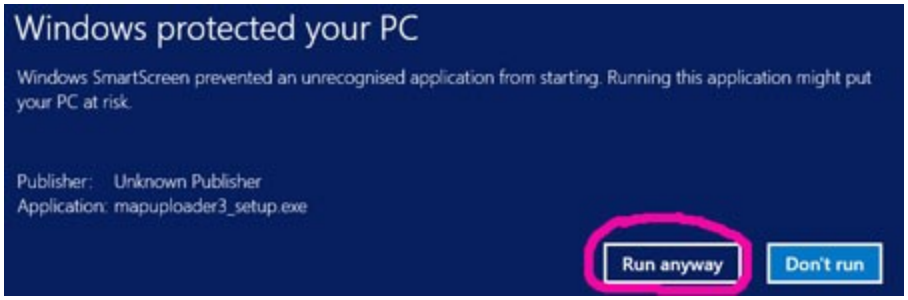
You could play around with permissions but this may not always work.

All our programs can be used on Windows 10 using the following procedure:

1) Click 'More info'



2) Click 'Run anyway'

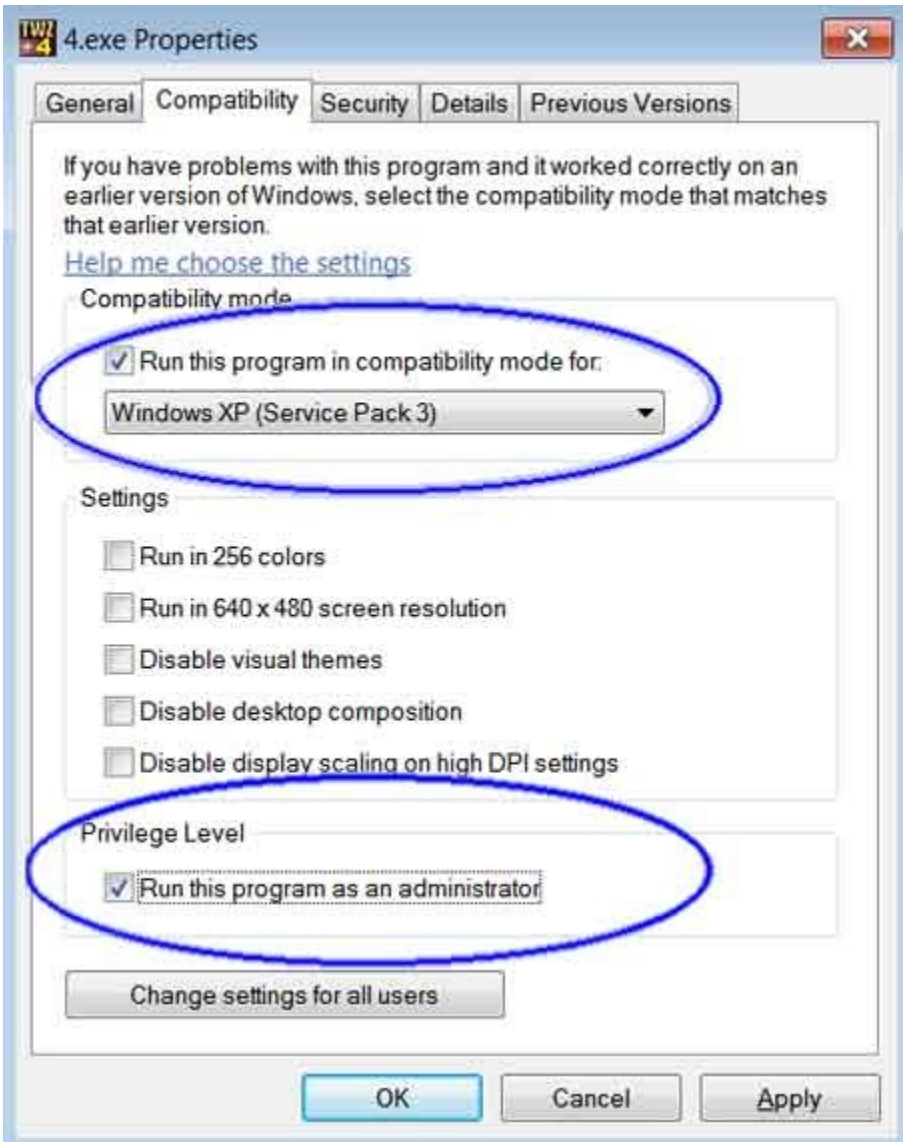


3) Right click on the 'exe' file & click on Properties

4) Tick Compatibility TAB

5) Tick 'Run this etc'

6) Select Windows XP (service Pack 3)



7) Click Apply
THIS ONLY NEEDS TO BE DONE ONC

Windows will remember your new settings.

8) Double click on your exe to launch the program

What is TYPWiz5?

With TYPWiz5 you can *quickly* edit TYP files - see Youtube.
It includes some 'wizard' tools to speed up and simplify the often laborious editing process.

TYPWiz5 has been developed over 2 years and is designed to cater for current GPS devices. ***Some more advanced POI features may not work on older Garmin models.***

TYPWiz5 and other TYP editors

It takes *full advantage of Garmin's recent 2014 NT TYP developments, ie offering RGB POIs with 16 levels of opacity and maximum sizes of 128x128.*

As a consequence, you may find that some TYP editors are unable to accurately read TYP or TXT files which include RGB pois – see pois.

Mkgmap's TYP file compiler correctly parses TYPWiz generated text files .

TYPWiz on Youtube

There are various tutorials to be found on Youtube ; Just search for TYPWIZ.

How do I get a TYPWiz5 Key?

Go Registration --> Obtain Premium TYPWiz5 Licence.

Purchase is via PayPal which accepts most cards.

You do NOT need to have a paypal account!

1) Click the 'Add to Cart' button.

2) We shall send you your serial number/key allowing you full access to all features within 6 hours of purchase.

IF YOU HAVE NOT HEARD FROM US WITHIN 6 HOURS:

Educational & Commercial Licences

For details contact us at osm@pinns.co.uk

Important Preferences

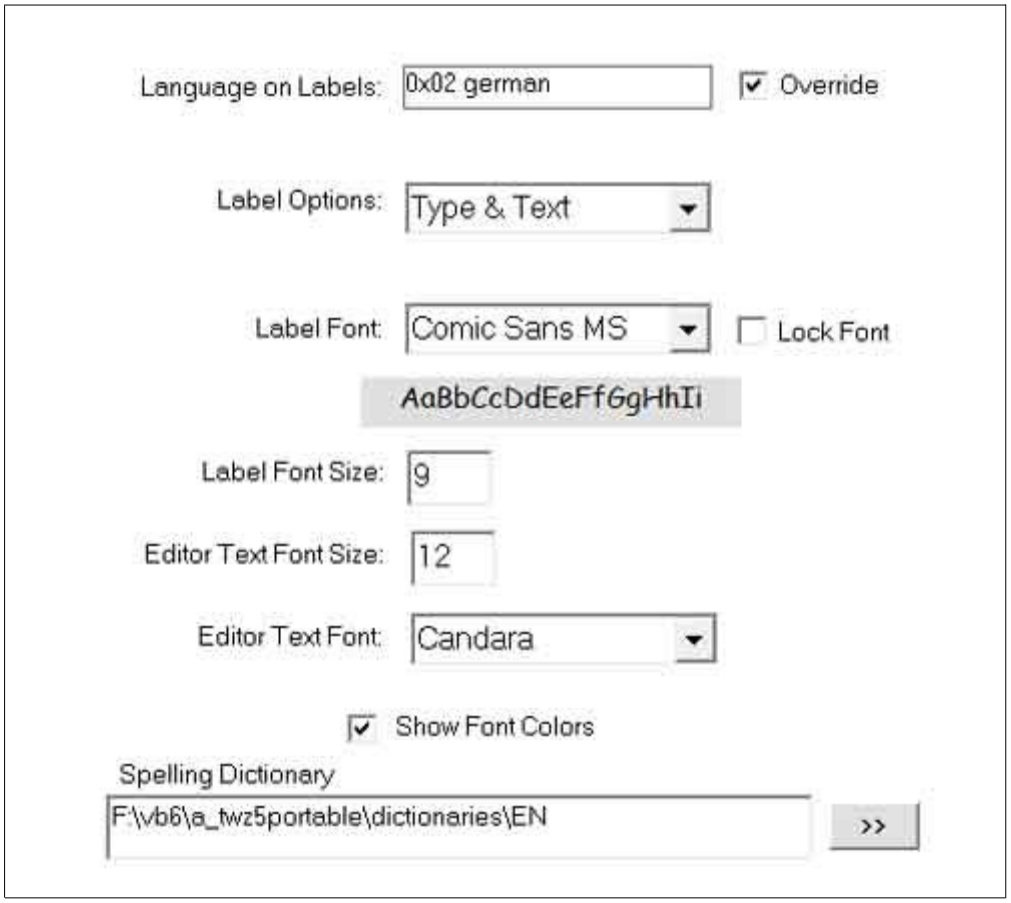
Click Settings → Preferences

Language / Font

Set default language

You can set the default language string for all your thumbnails.

If the default language string is not found, the label of a thumbnail displays the unspecified or final language string entry encountered



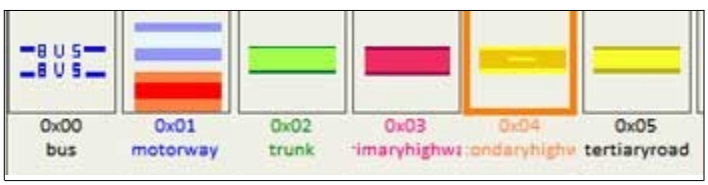
Label Options

You can select to show text and type separately. You can also change the font name and size of your thumbnail labels.

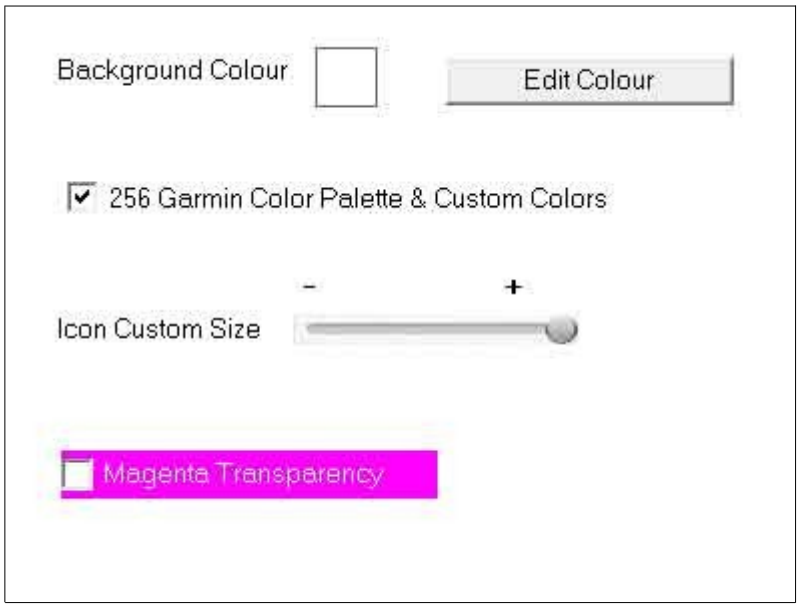
For more information download *TYPWiz5 & Unicode* Manual

Show Font colours on thumbnail labels

Thumbnail Labels for Polygons and POIs are given a day or night colour, if available.
This does not apply to codepage 65001.



Colours / Icons



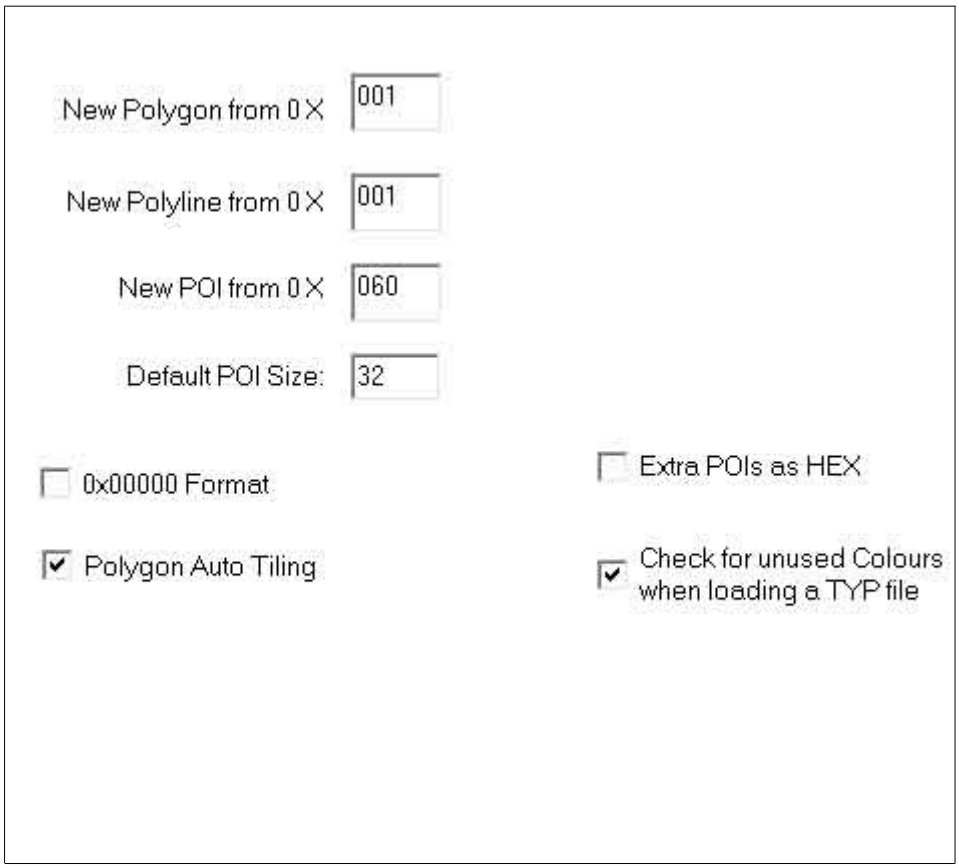
Change Background Colour

You can change the background colour by clicking on Edit Colour. Colour preference is saved automatically.

Magenta Transparency

Tick this box if you prefer to see the transparent squares of a bitmap more clearly as Magenta.

Elements



New POI,Polygon or Lines from 0 X

New elements are calculated from this type value .
Enter a hexadecimal value between 1 and 1FF depending on element.

The program automatically checks if a type number exists.

Polygon Auto Tiling

Deselect this option if you do not want to your changes to be updated in the preview shape

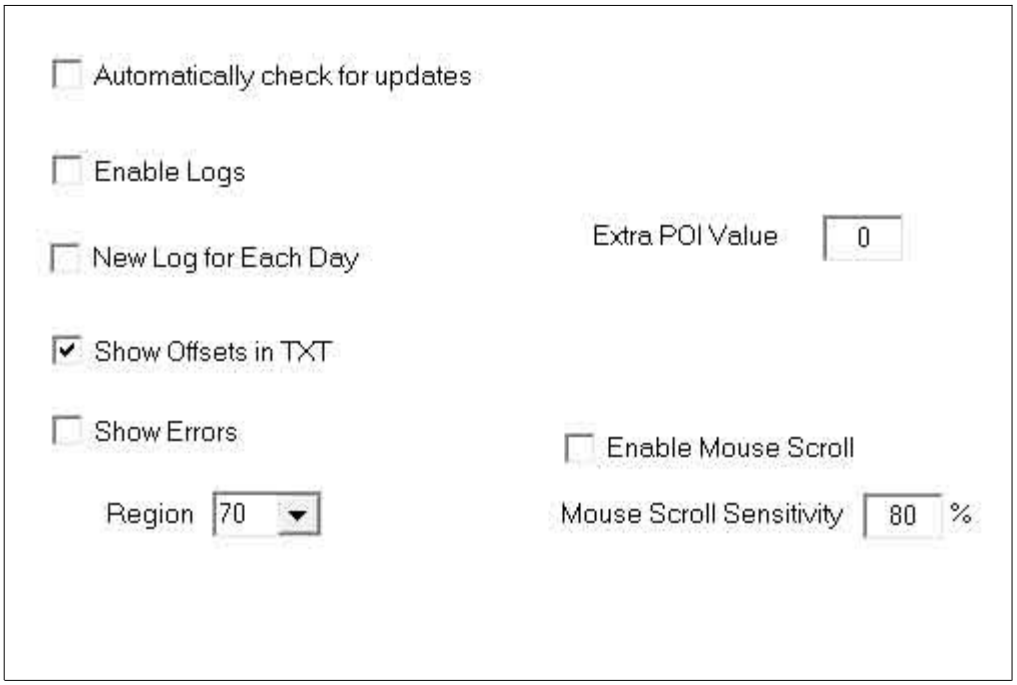
Extra POIs as Hex

The id for extra pois can be set to decimal (default) or hexadecimal.

0x00000 Format

Tick this option if you prefer 5 digital type numbers

Advanced



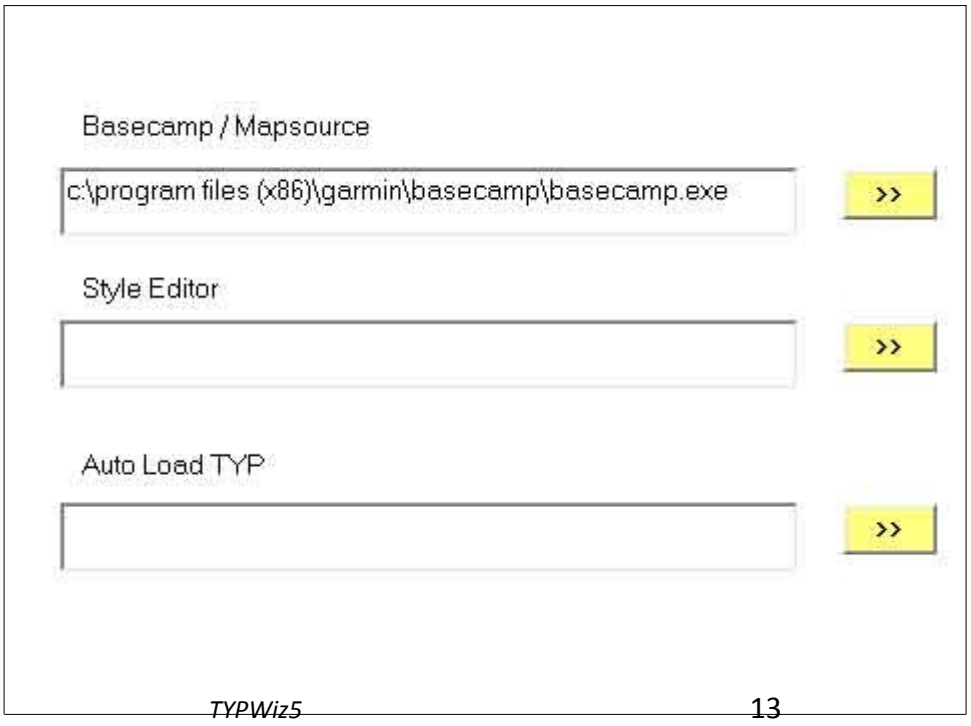
Region Value
Garmin uses this value to identify a region

Show Offsets in TXT
This adds the offset value encountered in a TYP file

Logs
This keeps a log of changes made

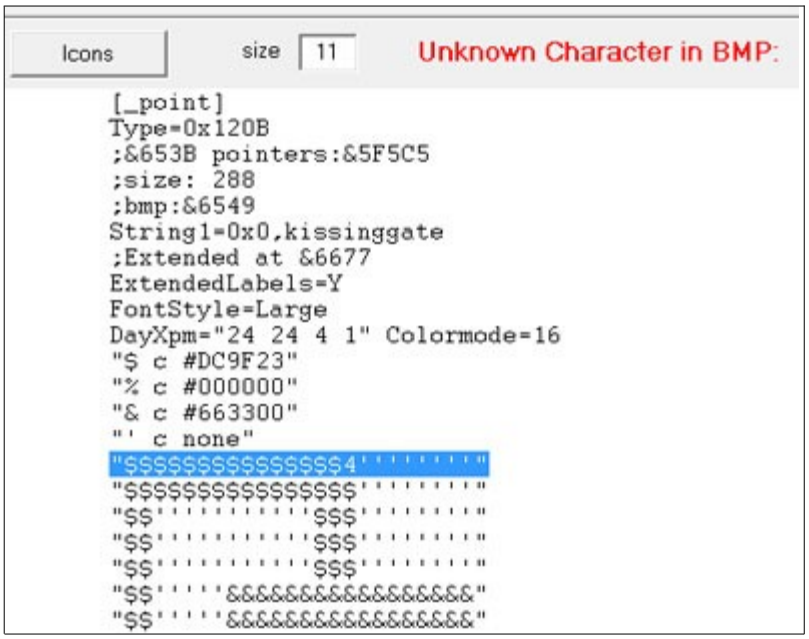
Software Auto TYP

Auto Load TYP
Add a TYP file you Would like to automatically load from start up



Text Editor

The latest TYPWiz5 includes a basic text editor for all Garmin friendly codepages. This means you can edit icons using text only.



Errors a are highlighted - see example.

ie there is no colour matching '4'.

If you tick the 'Set' box , TYPWiz5 will **open the text editor** when clicking on an icon.

Save Changes
This button will turn to red when changes have been made. Click to apply changes.

Note : the TYP file still has to be saved!

Change text fontsize

Text font is always set to courier to enable sensible alignment of bitmaps. However, you can change its fontsize to values between 6 and 18.

256 Color Palette

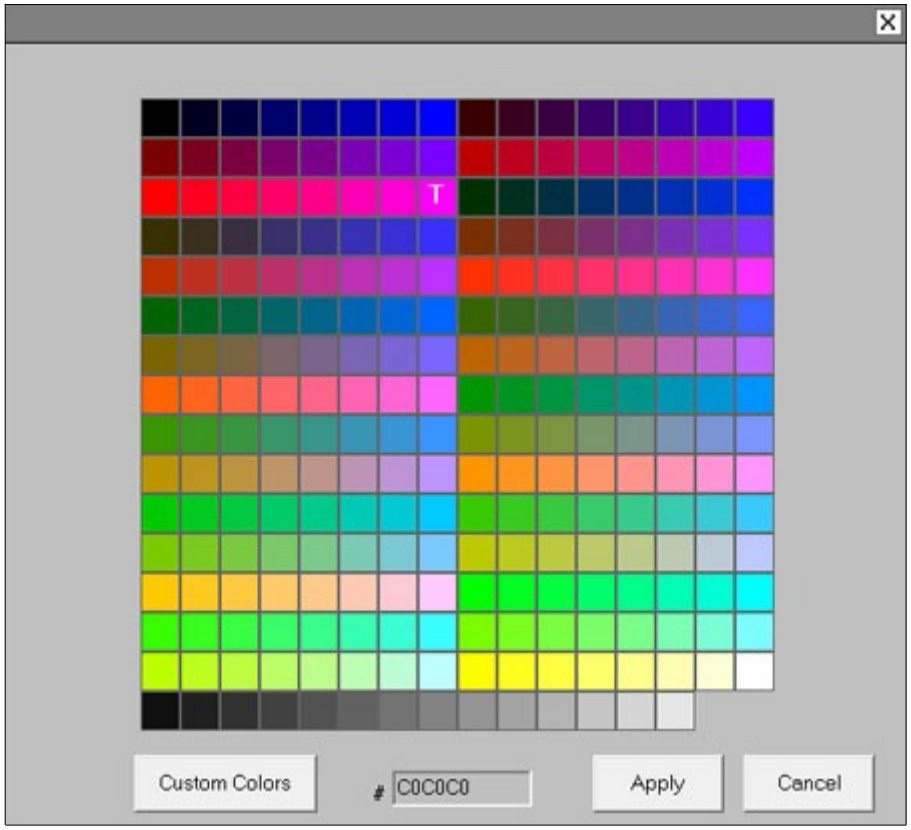
Some Garmin devices are limited to a specific 256 colour palette used by MAPTK.

Click a colour and click Apply.

The custom Colors button enables you to select RGB.

In preferences, you can disable the 256 color option.

Values can be entered manually as well.



Note : ***Clicking on the '25 Colours' button reduces the image to a palette of 256 colours - this could be useful when importing pictures or after using colour filters.***

FREE Mapuploader 5

With this most popular GUI you ***can create your own img maps*** from Openstreetmap FREE data .

Imagine having free maps of your own country!

For more details see :

https://www.pinns.co.uk/osm/mapuploader.html

or search Youtube.

What are TYP files?

A few years ago, Garmin introduced a new TYP file format to make their maps look more readable. This was a big step forward – at long last, you were able to distinguish between ,say , different types of track , and 'incredibly', woods were not just faint horizontal lines – see 'before & after' pictures below.

Garmins default , NO TYP, map

Highways are much clearer.
Blue dotted cyclepaths are now visible.
the Golf course doesn't look like a wood.
by design, 'farm polygons' have not been rendered

So, with a TYP file you can decide ***which elements are shown and how***.

TYP files cater for POIs (points of interest) ,highways & other lines and polygons.
Each element has a unique type number (ie 0 x number) and although you can play around with the numbers, it is generally *advisable* to stick to Garmin's list.
If your TYP files does not include a particular poi, highway or polygon , it more than likely won't appear on your Garmin *unless it can use its own default icon*.
Again , it seems that *not all Garmin devices behave the same* – so there are no hard & fast rules.
TYP files make a big difference. However, many of us want to customize these files to suit our own personal needs; walkers and cyclists generally do not share the same interests and ensure their maps highlight different features.
Unfortunately, customizing TYP files , given many current TYP editors, requires a great deal of time and effort : often , you have to enter pixels ,one at a time and there is no way of copying and pasting images.

This manual will show you how to:

1) Create your TYP file
2) Send your TYP file to your Garmin Device

How do I send TYP files to my Garmin?

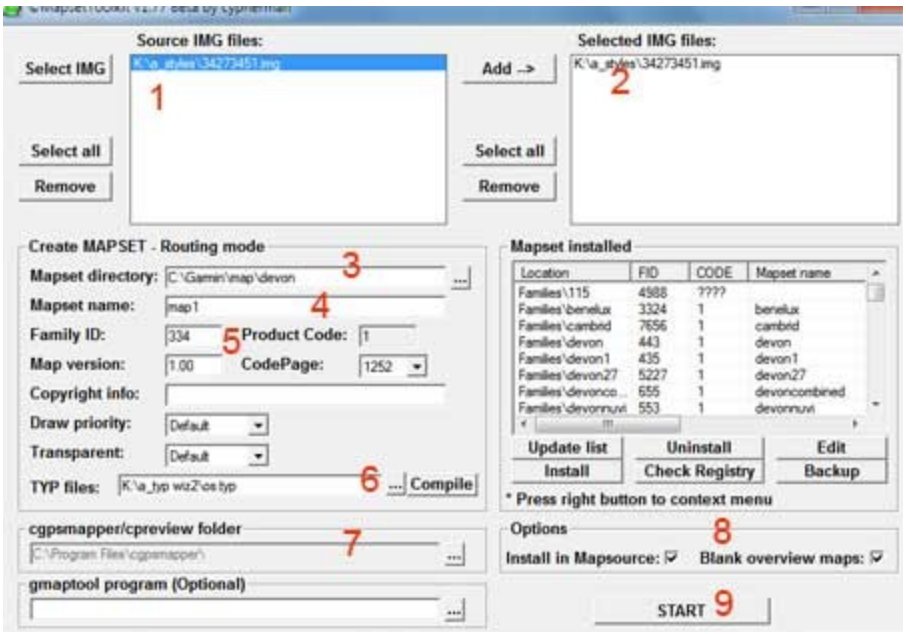
A TYP file gets bundled in with Garmin img files into **one** file called gmapsupp.img – multiple TYP files are NOT allowed. If you save a TYP file onto your Garmin it won't work – it has to be included in a gmapsupp.img - see section on Gmapsupp.

Next, you upload this gmapsupp.img to your Garmin.

This is done automatically if you use Basecamp/Mapsource. Basecamp is free and Mapsource is no longer supported by Garmin.

Mapinstall
Mapinstall (free) is Garmin's preferred method to create files for your device.
If an error appears telling you there is not enough space on your device then select partial install and select the tiles you want to download.

Mapsource/Basecamp
One way is to use a very useful program ,readily available , called MapsetToolkit.
This program allows you to select your IMG file(s) **AND TYP** file.



1) Select IMG file(s)
2) Click Add
3) Select a folder , must show path , ie c:\garmin\maps
4) Give it a name
5) Enter new FID number for each map – see FID . Leave Product Code to 1
6) Locate your TYP file
7) Locate cgpsmapper.exe (free download) , ie c:\program files\cgpsmapper

8) Tick ‘Install in Mapsource’ and ‘Blank overview maps’
9) Click START Click “Yes” if prompted.

After a few seconds it will be installed.

You can also use Mapuploader which makes the process somewhat easier if you are using OSM maps.

Once uploaded to Mapsource you can send it to your gps unit – follow Mapsource’s instructions.

Gmaptool

With this useful tool you can create a gmapsupp.img by joining your TYP & IMGs.
For more information see my img2typ manual.

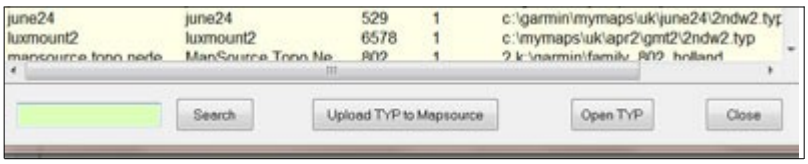
How do I extract TYP files from my TOPO IMGs?

From the main menu go Tools --> Extract TYP file from Gmapsupp. It loads *gmp2typ* which comes with the latest setup.

How do I extract TYP files from my Mapsource / Basecamp Maps?

From the main menu go Tools --> TYP files from Mapsource Maps and click on one of the TYP files. If the TYP file does not match the FID used by Mapsource the message 'FIDs clash . Correct this?' appears. By clicking OK you change the current TYP file's FID , matching the one held by Mapsource. It is important to keep both FIDs the same.

Use the search button to look for a map then click Open TYP.



How to add a TYP file to a map which does not have a TYP file.

Some maps do not come with a TYP file.
Load a suitable TYP file (use IMG2TYP) then go Tools --> TYP files from Mapsource and click Upload TYP to Mapsource / Basecamp.
Your TYP file will acquire the appropriate properties and added to the registry.

Getting started

Download the OS50.TYP file from https://www.pinns.co.uk/osm/TYPWiz3.html

Click on Polygons,Lines & POIs buttons to display thumbnails.

Click on each icon to reveal text code & double click to enter editor.

Show / Hide Text Code Panel

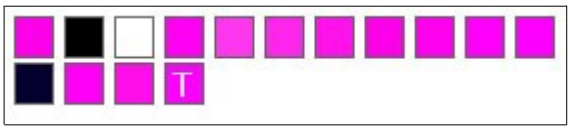
If you want a larger screen to display your elements you can hide the text code panel .

From main menu go:
Window → Hide Code Panel
or
Window → Show Code Panel.

Transparency

The editor shows transparency as grey or magenta; if the palette does not include transparency a 'Make Transparent' button appears, top right.

The element must contain a bitmap. This button is not be shown in colormode 32 as transparency is done using alpha=15 – see later.



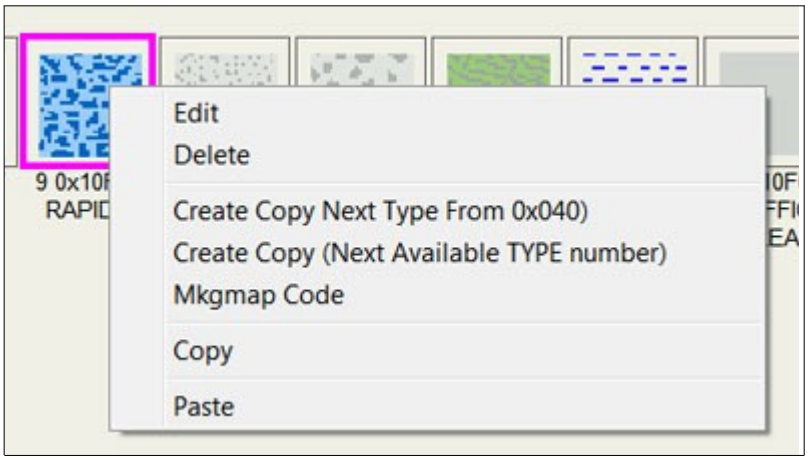
To avoid confusion with other possible shades of magenta/grey, a **T** in the box indicates colour used for transparency.

Go Settings - Preferences to set transparency colour.

Copy a Polygon, Line or POI

There are 3 options

Right click on the icon



- **Create Copy Next Type From 0x[type number]**

Type number for each element is set in Preference --> Settings

Use this option if you want to select a TYPE number within a certain range

- **Create Copy (Next Available TYPE number)**

This would find the next 'free' type number starting from the element you selected

- Copy

This will copy the element you selected into memory so you can paste it in another TYP file , ideal if you want to quickly create new TYP files.

Use Paste to paste it into another TYP file - right click on an icon or the space below all the icons.

Undo and Redo

You can to undo or redo the pattern of a bitmap.

You can only undo any size changes when you see the undo/redo icon.

You can also click CTRL Z to undo or CTRL R to redo.

Note: When changing from Highcolors to RGB and vice versa previous undos are lost. When using the crop tool with POIs , undos are lost as well.

Import Pictures

To import a picture click the cream coloured 'Import Pictures' button.
You can also select an area using selection tool or click CTRL A to select the whole area . Next, from the Editor select File → Import Picture
TYPWiz automatically optimizes the palette to the maximum colours allowed.

When importing into polygons or lines, the palette is reduced to 2 or 6 - if you are using the multicolored option. TYPWiz5 uses the most frequently used colours and those which are not too close together to avoid a lack of contrast. However, when limited to 2 colours, one cannot expect miracles.

Select Area to copy and paste

Use this tool to select part of your bitmap. Key in CTRL A to select all.
Press ESC or click on frame surrounding bitmap to cancel selection.

Selections at present do not work with the 'Fill' tool.

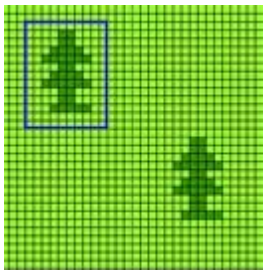
Copying & Pasting

You can copy from one TYP file to another, or just copy an image from say the internet.

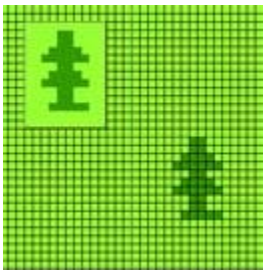
1) Use selection tool to select an area .
2) (press CTRL C to copy selection into memory)
3) Enter CTRL V to paste copied area.
4) Double click on pasted area to stamp into bitmap.

You can copy bitmaps from the internet or copy polygons etc from one TYP file to another.When pasting , TYPWiz optimizes the palette to its maximum colours.
When pasting into 2 colour elements (polygons & lines) it reduces the palette to the 2 most contrasting colours.

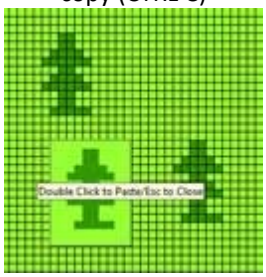
Paste into selected areas



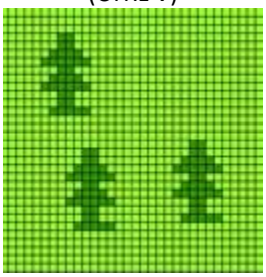
Draw around shape and copy (CTRL C)



Paste into blue rectangle (CTRL V)



CTRL V



result

Editing tools

This type editor uses various tools to speed up the editing process.
Right Click or press Esc to cancel

Pencil ,Lines, Rectangles & Ellipses

You can draw lines,rectangles & ellipses or enter one pixel at a time.
You can draw rectangles or ellipses as outlines or filled.

Please note that . when rendering lines, ellipses or text, the result is affected by the number of pixels in a bitmap, ie the width and or height. You may have to select the pencil tool obtain the required effect.

Fill

This option fills a region with your selected colour. Use CTRL Z to undo.

Select Colour

Use the pipette tool to select a colour from your bitmap. The selected colour is highlighted in your palette.

Horizontal & Vertical Mirror

Click these buttons to mirror the current bitmap . This also applies if you select part of an image using the select tool and paste an image, ideal for polygons.

Rotate by 90º

You can rotate by 90º the whole image or a bitmap pasted into a selected area. Click on the rotate button at the top.

Add a colour

This option is only available when additional colours can be added. Polygons and Lines are limited to 2 colours , day and / or night.

Clear bitmap

Select the 'fill' colour and from Menu go File → Clear Icon
This option does not apply to non bitmap lines.

Add Text

Text or individual letters can be added in any font, **bold** or *italic* when available .
Double click to paste onto bitmap. Try different symbol fonts or font sizes.
For best results we recommend a bold font type and font sizes higher than 150.

Right click and select 'Close' to return to Pencil Tool.

Crop Tool

This tool can be used to crop part of a picture.
When used with POIs, the POI is automatically reset. The action cannot be undone,

Colour Control

Changing Palette Colours

You can change your palette by **right** or **double** clicking on a palette colour.

You can also enter a hexadecimal number , right click and select ‘ Enter Hex Colour ’ followed by ENTER – ie FFA000 , no need for # or &.

Click frame to cancel.

Change colours of grid or crosshairs

Click on the small square next to grid or crosshairs and select a colour

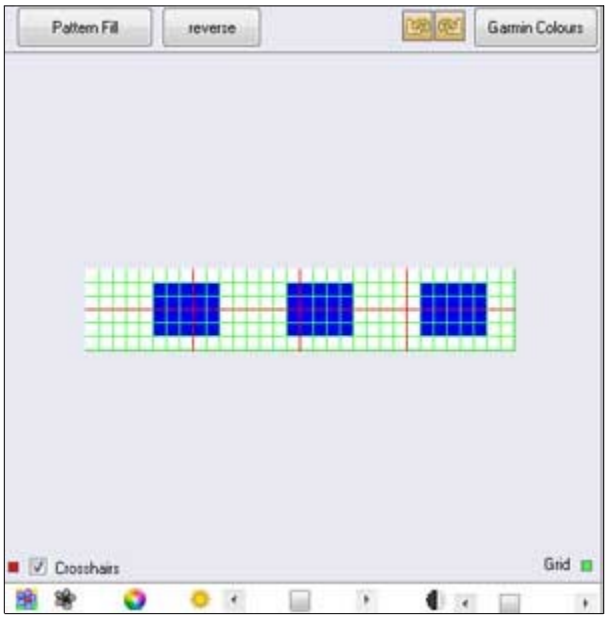
Pattern Fill

Pattern fill applies to polygons or lines only.
It might be an idea to change the default grid colour to say green to highlight the crosshairs.

1) Select as small area as a pattern .

2) Click Pattern Fill button to tile the whole **polygon or line** with this pattern.

With this tool you can create amazing patterns very quickly and help you obtain regular patterns for your highways.



Brightness Control

You can alter the brightness of your image by using the slider. The trim colours option will be disabled.

Contrast Control

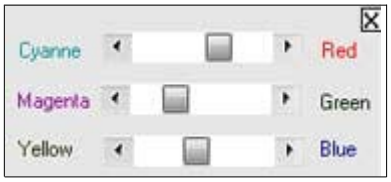
You can alter the contrast of your image by using the contrast slider. The trim colours option will be disabled.
Tip: Darken the image then apply contrast.

Hue , Brightness & Saturation

Click to adjust colour hues ,brightness and saturation of an image.

Colour Balance

Click to adjust Colour Balance



Black and white are not affected.

TIP: If you want to keep your whites make sure its 100% white. If in doubt change it to white .

Change Grid colour

Click on the colour next to 'grid' and select a different colour;colour will be saved.

Type numbers

Type numbers are always expressed in hexadecimal , ie dec 10 = A , dec 15 =&1F.

Subtypes

The highest supported *subtype* is &1F and **NOT** &FF as you would expect .

However, an img map sometimes contains lines and polygons with subtypes higher than &1F . They are used in NT maps as masks mostly with types &100 implying as yet unknown properties - they are not supported by TYPWiz.

Garmin Type number ranges

Lines types can be between 01 (00) & 3F (1F) or 100 (00) and 13F (1F)

Polygon types can be between 1 & 7F or 100 and 17F

POI types can be between 1(00) & 7F(1F) or 100(00) and 17F1F

An error message will appear it your entry falls out side a range.

The ranges are determined by the special use/significance of the 6th or 7th bits. - ie with line type numbers the 6th and 7th bits indicate the possible existence of a one way system and/or whether the length of the line exceeds 256 bytes.

Since the highest type shown in Basecamp is 0x1391F , we presume higher numbers are used to represent as yet unknown features.

We therefore, do not recommend them.

When present IMG2TYP 4 shows such types and subtypes , ie 0x17D00 or 1D522

Elements with number values of &100+ are called ‘extended’ – see Extended Types and a list of Garmin’s extended POIs **.**

Levels of Opacity (alpha values)

Mapsource and Basecamp are capable of showing pois with degrees of opacity. Such POIs are saved in 32 bit colormode.

Unfortunately, most GPS units ,it seems, only show opacity with alpha values 0 or 15.

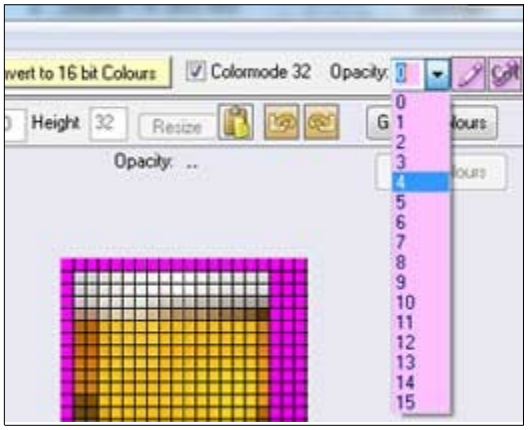
First, convert your poi to 'RGB' by clicking 'Convert to RGBs'

Next, check colormode 32 option to reveal 16 levels of opacity (0-15) and two new tools, coloured pink.

Note: alpha value 0 means totally opaque , 15 totally transparent.

Give Pixel Opacity

This gives selected pixels an opacity value.
First, select a value from the opacity dropdown menu, ie 11.
Next click on pink pencil then select a pixel of the poi. When you hover over the image, you should see the opacity value of that pixel.



Give Same Colour Opacity

This option is more commonly used ; it gives opacity to all pixels of the poi with the same selected colour. You can check this by moving your mouse over the image.

Unfortunately, not many gps systems seem to cope with degrees of opacity, but you can see the effect in Mapsource or Basecamp.

Note: POIs can not be edited in RGB, so click 'convert to 16 bit colours', make your changes, then click 'convert to true colours'.

Polygons

There are 2 types of polygons:

a) Non-bitmap
b) Bitmap

Non Bitmap Polygons

These were the original polygons before Garmin added transparency; they can only have one day colour and a night colour. Initially they had no draworders.

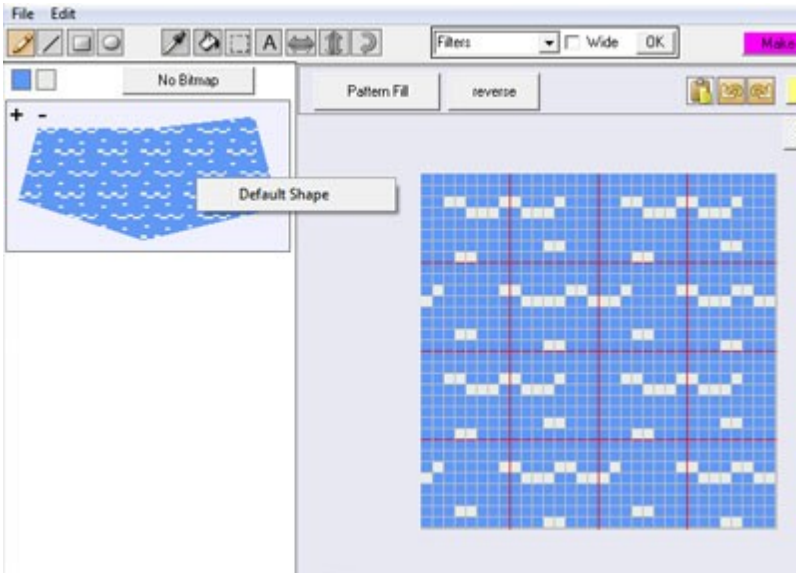
Bitmap Polygons

These were introduced later to allow for patterns & transparency. Transparency also introduced the idea of layering and draworders.

To see all the polygons click the polygons button.
Polygons are labelled showing draworder & type ,ie 3 0x10B03
Pasting onto bitmaps has been disabled as most clipboard images have more than 2 colours.

Preview tiled polygons

It is often difficult to imagine how a polygon is tiled over a larger often irregular area.



Customize the area by left clicking near a point or right click and select 'Default Shape' to return to it's default shape.

Shapes are saved for future use.

Click the + and – sign to zoom in or out.

In preferences you can deselect the Polygon Auto Tiling option.

Adding & Deleting

To add a new polygon , click the + button below the polygon button.
To delete right click on a thumbnail and select delete.

To delete a night version, click on its ‘day’ version and untick the ‘night colours’ option. All new elements are given a unique type which you can change using the editor.

Any new polygon with a draworder has to be sorted – this may take some time if you have 100+ polygons. This only gets done once.

You may also which to check if you have collected ‘empty’ draworders/ placeholders – see Bulk Deleting of ‘empty’ placeholders.

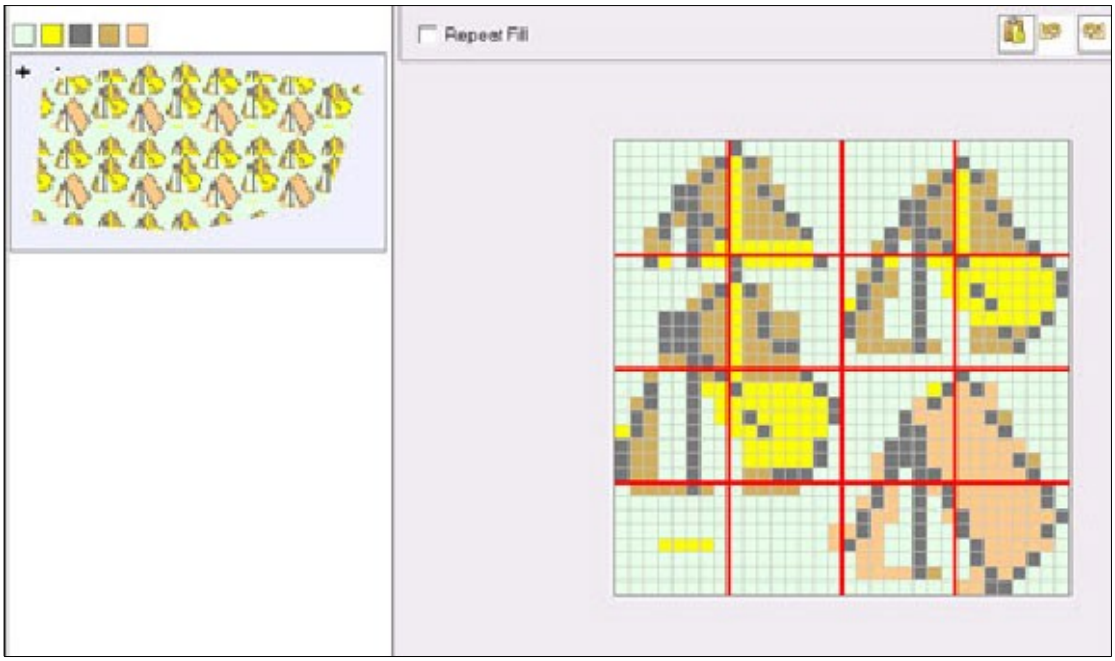
When you delete a polygon , by design TYPWiz5 does not remove the placeholder.

Polygons with more than 2 Colours

A special pdf document has been written to achieve polygons with up to 6 colours

Download 'How to get multi-coloured polygons' from
www.pinns.co.cuk/osm/TYPWiz5.html

See below : Lines with more than 2 colours

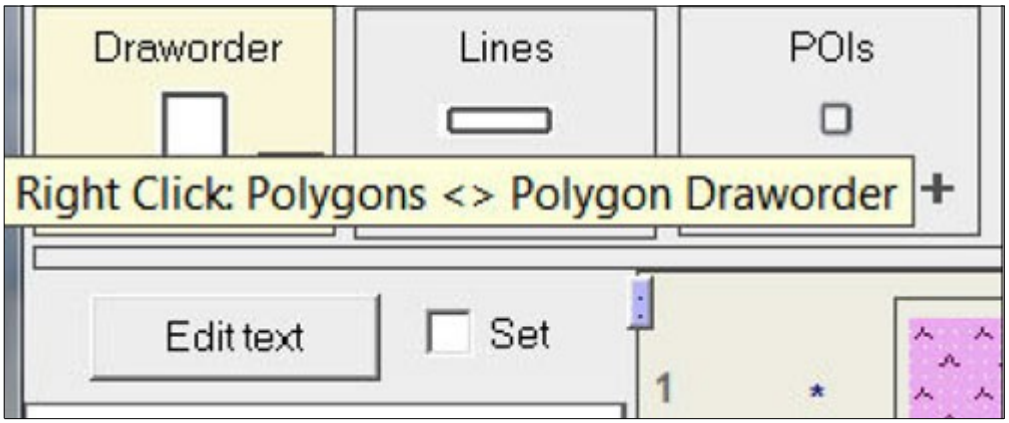


Draworder

Polygons can appear at different levels . The higher the number, the higher the level. An incorrect draworder may lead to a polygon being obscured by another, ie buildings , generally 0 x 13, could be hidden by another polygon (ie residential).

- only polygons can have different draworders
- Solid polygons can have draworders set to zero; the effect , however, is unknown but more than likely relates to the polyugon's type number.. Such polygons have been found in old Garmin imgs.
- Polygons with transparency must NOT have zero draworders
- Draworders can exist without a matching polygon, ie draworders can have a typenumber NOT matching any polygon found in a TYP file - as seen in many TOPO files.
- Draworders can't have gaps - you can't have draworder 2 followed by draworder 4
- The highest draworder is the highest level without gaps.
- Levels with gaps are allowed for editing purposes only . The gaps disappear in a saved TYP file.

To show icons sorted according to their draworders click on the 'Polygons ' label.
When displaying draworders, polygons without draworders are not shown.



Polygons are shown in the order they appear in the polygon data block, which may not correspond to the draworder block.

Draworder number is shown before type: ie 3 0x13. Some may not have a draworder!
To remove a polygon's draworder go → Draworder →Edit Draworder from the main menu – see below.
Polygon's without draworder will not be rendered, whereas those included in the draworder list but not created/defined by the user ,will by rendered using a Garmin default if there is one! These 'empty' polygons are known as placeholders.
In TOPOs you would find quite a few ; even if a solid polygon became associated with such a placeholder they would not be rendered.

Note: **Polygons with type 0x100 (with or without subtype) do not have a draworder. There are others ie 0x13508 which not only have no draworder, but colours could appear inverted as well for no apparent reason !** They could be reserved for marine charts. Their behaviour is still to be investigated.

In all fairness, solid polygons should not overlap ; the reason they do is often due to poor mapping data.

Note**: draworders for polygons must be sequential , without 'gaps'**.
So, if you insert a new polygon with draworder of 8 it gets reset to one above current highest level(ie 3)

Not:

Polygons	0x1	0x2	0x3	New 0x6
Draworder	1	2	2	8

But

Polygons	0x1	0x2	0x3	New 0x6
Draworder	1	2	2	3

If you want a bigger gap between draworders then click the 'add' draworder button - see below

Error message 'draworder?'

The error message 'draworder?' appears if no draw order was found for a specific polygon. Use the editor to add a draworder.

Editing,Adding and Removing Draworder

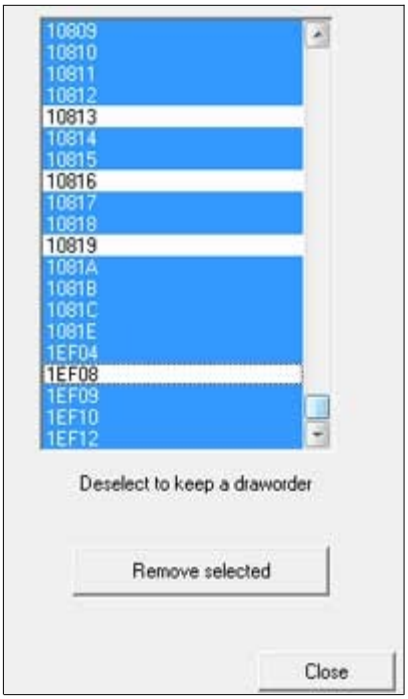
Editing,Adding and Removong Polygon Draworders

To edit or remove a polygon's draworder, double click on a polygon and change the polygon level or set it to 'none'.

Editing,Adding and Removong Extra Draworders

To add an 'empty' draworder click the '+' button.
To edit or remove: Click to select an extra draworder , then Right Click:

Some TYP files contain additional draworders used as 'placeholders'.You can add,edit or remove draworders using the draworder menu at the top of the main screen. Polygons are NOT deleted when removing draworders.



Use the Add option to add a placeholder.

Search for a type number

Enter type number ; ie 023 or 10342 and scroll up or down to locate draworder. This feature is useful when you have lots of polygons.

Bulk Deleting of 'empty' placeholders

Go Draworder → Hidden draworders

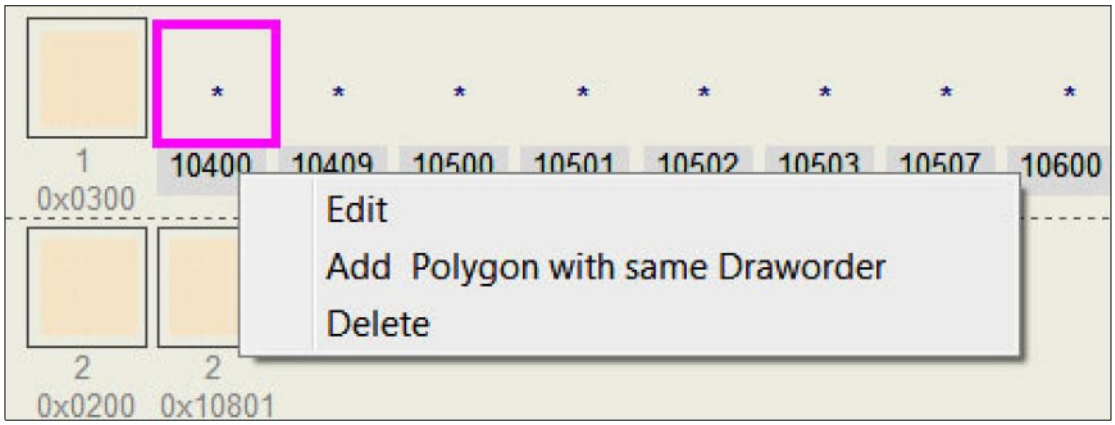
There are times when it is more convenient to remove placeholders which have no matching polygons. This can happen when you delete polygons **and forget** to remove the draworder. A whole list can build up ; most of us do not require such empty placeholders.
Removing them reduces the time it takes to sort new polygons. In addition, it reduces the size of your TYP file.
By default all empty placeholders are selected.
Unclick any which you do NOT want to remove, ie
in our example 0x10813,0x10816, 0x10816 and 0x1EF08

Click Remove Selected

Checking Duplicated Draworders

From then main Menu Go Draworder → Checking Duplicated Draworders

With some TYP file draworders may have been duplicated. This could lead to unwanted effects, ie a polygon may have a draworder of 1 only to find that a duplicate placeholder exists with a higher draworder.



TOPOs with NO draworder

Some topos are so carefully constructed that no polygons have a draworder , ie none overlap! This often happens with CNN TOPOs.

If give some a draw order , you may get some unexpected results.

Filters

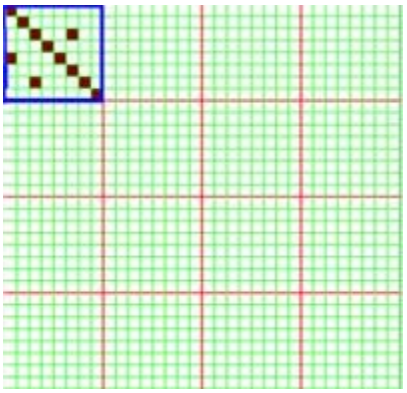
Filters are available to produce different background textures. Current filters are:

"Random"
"Vertical"
"Horizontal"
"Diagonal left"
"Diagonal Right"
"Mesh"
"Squares"
"Diamond"
"Chess"
“Wave horizontal”
“Wave vertical”
"Wave both"

Check or uncheck the ‘wide’ option *before* you select your filter.

Click the OK button to affect change.

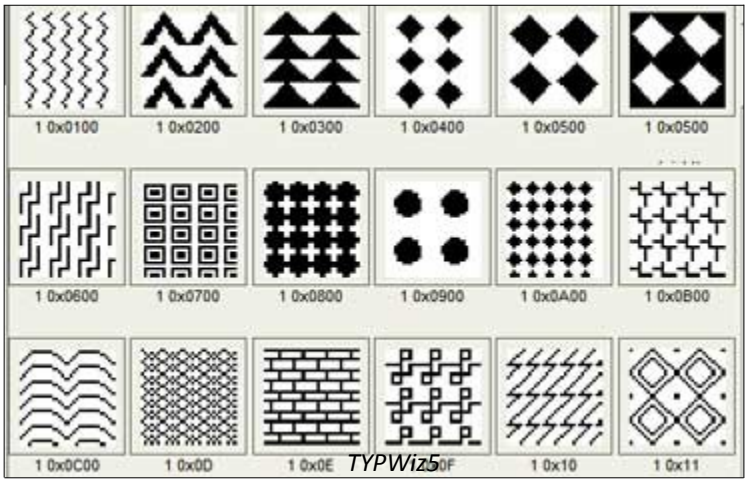
Pattern Fill



1) Select as small area as a pattern .

2) Click Pattern Fill button to tile the whole **polygon or line** with this pattern.

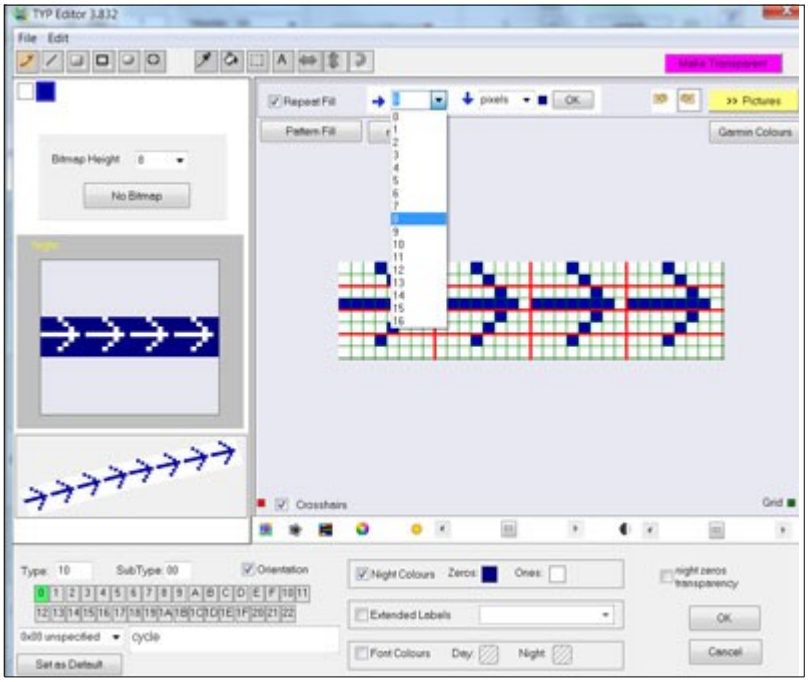
You can download the pattern.typ file from www.pinns.co.uk/osm/TYPWiz5.html



Repeat pixel fill

Tick Repeat Fill to create your own patterns - applies to lines and polygons only.

Click OK to apply.



Night colours

Many new GPS devices seem to ignore night colours altogether except nuvis or when your gps is in nautical marine chart mode. Tick Night Colours.
Click 'Night Zeros Transparency' to ensure all bitmaps 'zero' colours are transparent

Text/Labels/Languages

Select a language and add text; you can select multiple languages.

Languages can be changed by using the dropdown menu top right

When selecting a language TYPWiz5 selects the appropriate language label
The **L button** shows languages contained in your current TYP file.

Spanish	German
French	Greek
Russian	Japanese

Language 0x00 , a special case

This is reserved for languages which are not included in the Garmin 0x01 – 0x2E list

For Example : Hebrew

It is recommended to use 0x00 for Hebrew ; if you do not the results may produce a series of question marks (ie ???)

There are 2 methods for showing Hebrew labels.

1) Use code page 1255 (reserved for Hebrew)

Use this if all your other languages are ANSI ie do not require special characters
The problem with this method is that languages are encoded using codepage 1255 .

If you change this TYP file to another codepage say 1252, the Hebrew won't make sense – see picture

2) Use codepage 65001 (recommended)

Use this method if other languages use special characters

Note:

We do not recommend you use 0x00 as a replacement for 0x01 – 0x2E

Instead ,use it for Hebrew, Vietnamese or any other language not listed.

Remember, on a device when you change language it initially searches for the appropriate language number, if it doesn't exist then it searches for 0x00.

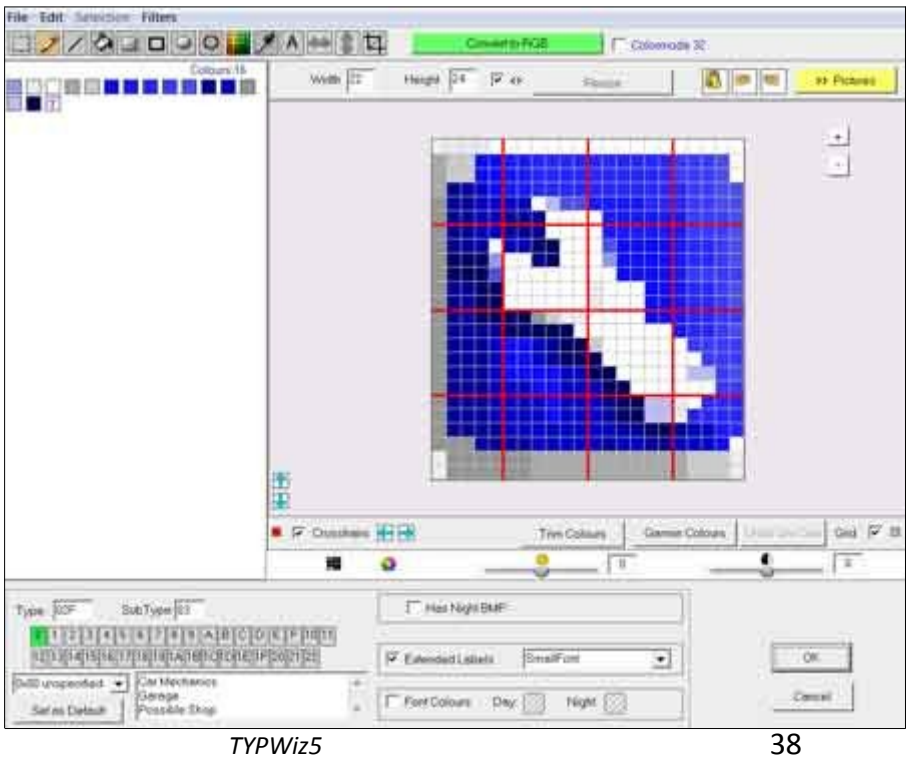
When you switch languages on a device to searches for the appropriate language code , if its not there then it seatrches for 0x00.

Many devices come with Hebrew installed and when selected it searches for 0x00.

Languages in the Editor

You can set your default language by clicking the Set as Default button.

Highlighted in green are the language numbers associated with the labels attached to the element currently edited.
Click on the green to show the label.

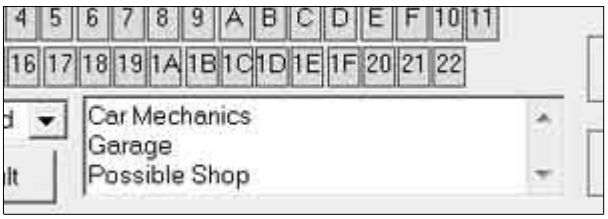


Adding Carriage Return to Labels

With TYPWiz5 you can add a carriage return to your labels.Applies to polygons,lines and POIs but NOT Extra POIs.

Please note

a) Only works if element has not been given a label in the IMG (map).
   In other words, it works for general and not specific cases.
   A work around is to create a separate map and a new TYP file showing specific Garages , ie VW, Ford,Toyota,Kia etc
b) Mapsource shows the effect correctly.
   Basecamp drops 'Garage and Possible Shop' below Tooltiptext
c) Your GPS device might now show the effect at all.



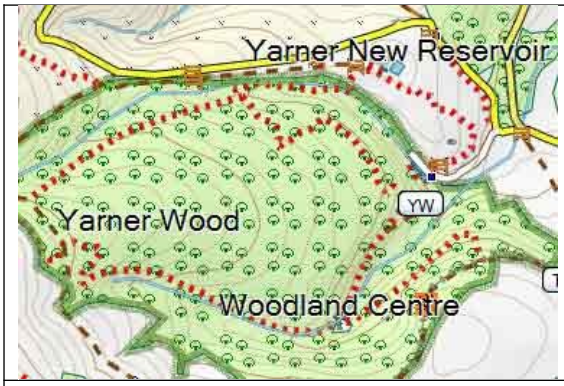
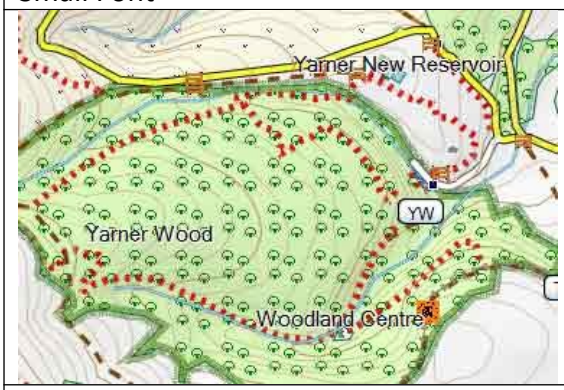
Extended Font styles & font sizes

You can change the font styles of your tag labels. Fundamentally, they are like font sizes.

We have change the fonts for **woods** only , nothing else! But, notice how Basecamp alters the font colour and size of Yarner New Reservoir, a lake.

Checkout the labels : Yarner Wood and Woodland Centre

Garmin Options are:

	
default	nolabel
Small Font	Normal
	
Large	

- Default (This depends on the size default Garmin size ; ie 0x 1502)
- No label (this makes a tag label invisible; ie the operator/brand name is often obvious - Shell,Esso. However, most garmin units may by default suppress the labels,unlike mapsource or Basecamp)
- Small Font
- Normal
- Large

This works for most gps models – nuvis tend not to show labels.

Custom Font Colours

To change the default day and night colours of tag labels click Font Colours and double click on a day or night colour. In theory,you can alter the default font colour even when a no label option has been selected.

You can see the effect in Mapsource & Basecamp.

Oregons/Dakotas etc tend to override this option except when rendering polygon texts and highway or route references.

Transparency of polygons

Bitmap polygons can have transparency.
Click 'Create Bitmap' to create a bitmap polygon.

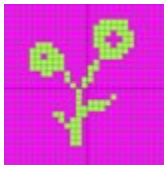
Only the background colour,ie the first colour, can be transparent, unlike lines.

This is no problem if your background colour happens to be the first colour.
If it isn't, then in the past you had to redraw your polygon!
However, there is now a work around by clicking the 'reverse' button after making the first colour transparent. See below.

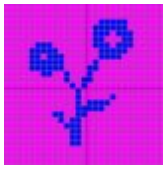
Reverse colours

Original : blue is bk colour!

Click ‘reverse’ button



Make bk colour transparent



Make forecolour blue

Lines

To see all the lines click the lines button.

Lines are by default labelled showing type & description, ie '0x0E , Track'.
This can be altered in Preferences.

Lines should not have types between &40 and &FF as these are reserved for one way systems, ie type 0x41 refers to a one way case of type 0x1 , 0x49 to a one way case of 0x09.

Pasting into bitmaps has been disabled, as most clipboard images contain more than 2 colours.

There are basically 2 kinds of lines:

a) Non-bitmap Lines

Main highways are generally of this type. A line's width is defined by line & border widths.

Lines can have zero borders and have a zero width ; this creates a transparent non bitmap line . Transparent lines are useful for various reasons: eg if you make a transparent line routable it could serve as a routable basis for other highways. Non-bitmap transparent lines are , in theory, quicker to parse.

Borders do not need to be black! They can be any colour.

You can increase or decrease multiple linewidths by clicking +1 or – 1 button at the top -zero linewidths are not affected,.
Caution, large linewidths take longer to process on a GPS and check pylon and contour widths – it's better to keep the 'length' at 1 unit.

b) Bitmap Lines

Use this option if you want to say draw footpaths,tracks,embankment, one way systems or anything which includes transparency ,ie when one colour is made invisible.

TYPWiz5 renders all know lines,both bitmap and non bitmap.

Orientation

Check this option to enable orientation, bitmap rotation. Lines are drawn the direction they are plotted. It has to be said, that most modern gps devices have this option set by default! Non bitmap lines should have this unticked.

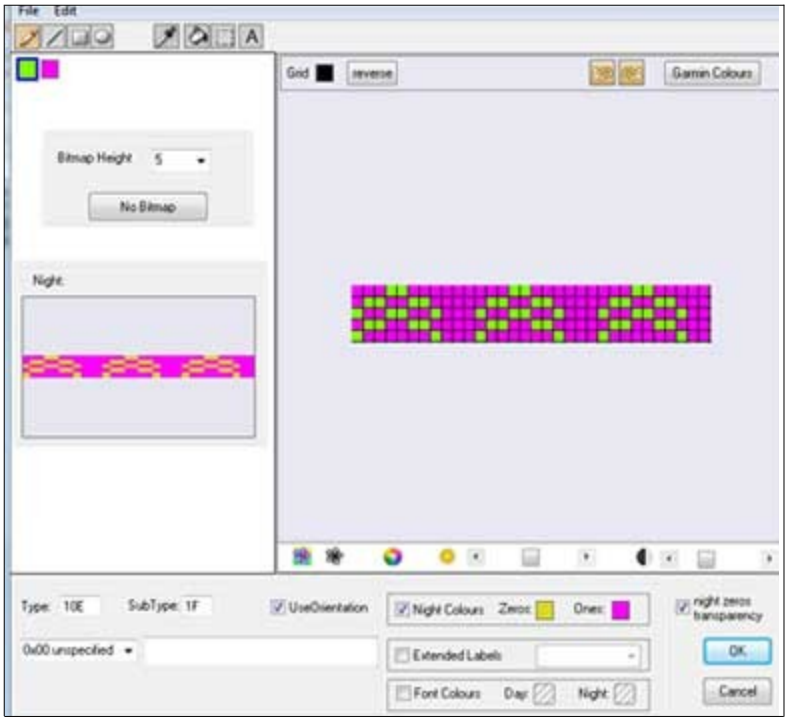
Night Colours

The following applies to bitmap lines.

To include a different colour scheme for your unit to be used at night , depending on model, click Night Colours.

Note: both day and night versions use *one and the same* bmp.

Click Night zeros transparency to add transparency to all zero values in your bitmap – check text code.



Extended Line types 0x100+

You can create special overlay effects by using extended types 0x100+.

For example, highways can have bridges; you could have a different 'bridge' line for each highway with types <&100 or create just one universal bridge with transparency which can be placed on top of the highway. However, it should be said that draworders of lines are in general not supported.
Line Types can have a maximum of 0x1FF with subtype &1F.

Polygon and Line Subtypes

TYPWiz5 supports lines & polygons with types < &100 and subtypes > 0 , ie

0x0201 , 0x5102

There seems to be no evidence that these types are actually plotted as such , ie as 0x0201 or 0x5102

Instead, the subtype indicates levels.

Reverse button

To swap foreground and background colours click ‘reverse’.
Note:this also applies to night versions.

Copying & Pasting Bitmap

Select the whole bitmap (CTRL A) or a smaller area using the selection tool and copy or paste your image. Remember, bitmaps can only have 2 colours.

Draworder of Lines

Strangely, *Garmin does not allow you to edit or stipulate the draworder of lines ,* unlike polygons.
As yet,there is no block in the img or typ file reserved for such a purpose.
To some extent ,the lower the typ number the higher the draworder - this applies to lower numbers (0x1 - 0x4) only and depends on your gps model!

To ensure bridges are rendered at the highest level, they need to be placed in a separate img file with a high priority, ie 27.

Resize Lines

When changing the width of bitmap lines , bitmaps are automatically resized - detail may disappear when reducing width.

Lines with more than 2 colours

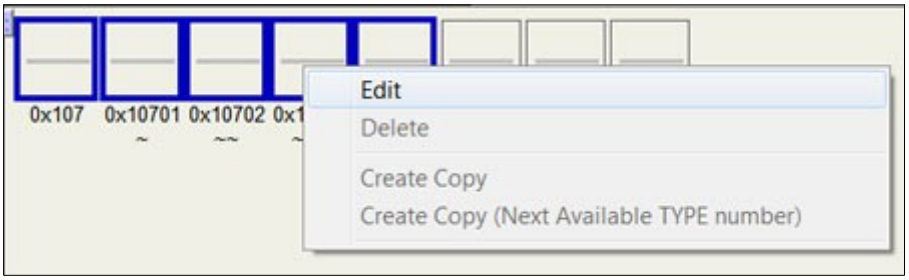
Garmin has restricted the line bitmaps to only 2 colours. This can be quite limiting .

Many non Garmin satnavs allow for more colours to give their lines depth or a 'shine'.

If you are able to customize your maps, or can create your own maps using mkgmap or cgpsmapper you can create the same effect by overlapping lines.
Unfortunately, this can be very tricky, unless you can clearly envisage your image.

TYPWiz5 enables you to select up to 5 lines so they overlap in the editor. This gives you a palette of 6 colours, always one more than you select.

- CTRL Click on the lines you want to group.
- Right Click and click Edit



Note:

- *Only lines with bitmaps can be used*
- *Only lines without nightcolours can be used*
- *When grouping , lines must have the same height*
- ***Any editing applies to the group you have selected***
- *You can edit colours, height of lines,font colour and fontstyle*
- *The palette must have a transparent colour*
- *You can import or paste pictures*
- *Colour palette of picture is reduced to the number available*
- *When importing or pasting ensure height is at least 10 else the image might become quite chunky or even a blank colour.*

We advise the following procedure:

Make sure the lines you used are easily identifiable:

Give them type numbers which follow each other, ie

0x10300 , 0x10301,0x10302 etc

NOT : 0x23 , 0x 56, 0x102

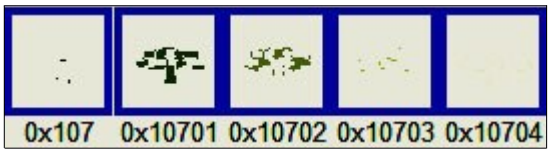
For overlapping lines use type numbers greater than 0x100,

ie 0x10200,0x10201,0x102,02

NOT ;0x32,0x33,0x34 etc

Give each group a different font colour

Don't worry if the lines look odd when viewed individually.



When parsed they will look like

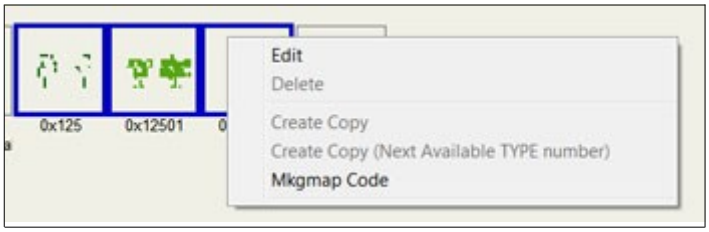
Using mkgmap define your tree-row as such

natural=tree_row [0x10700 resolution 24 continue]
natural=tree_row [0x10701 resolution 24 continue]
natural=tree_row [0x10702 resolution 24 continue]
natural=tree_row [0x10703 resolution 24 continue]
natural=tree_row [0x10704 resolution 24]

See below ...

Creating Mkgmap Code

Right click on the icons you have selected and click on Mkgmap Code

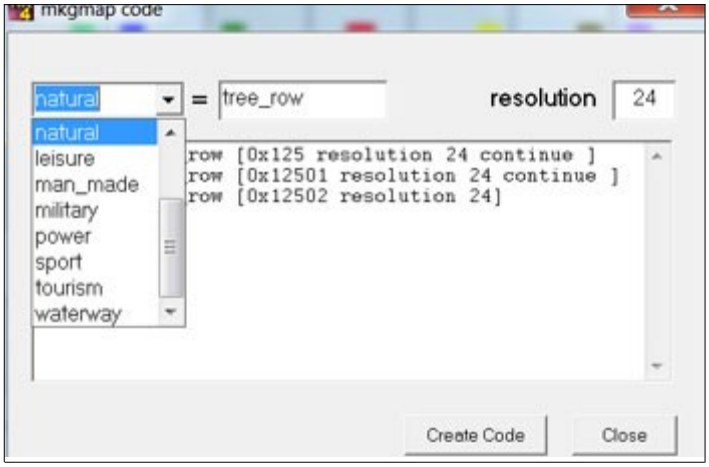


Select your category and fill in the empty box:

natural = tree_row

Click Create Code:

Select text and paste into your 'lines' file.



POIS

Click the POIs button.
POIs are labelled showing type and label ,ie 1201 , Traffic Lights. Again, change default settings in Preferences

Adding

Click the + button below the POIS button and select size of length and width, with a maximum of 128.

Deleting

Right click on a bitmap and select delete.

Copying POIs

Right click on bitmap and select 'Create Copy"

To copy elements see Copy POIs,Lines Polygons

Borrowing bitmaps from another TYP file

Use the select tool to draw an area or select all (CTRL A), followed by CTRL C.
Right click and select Copy or enter CTRL C.
Next, load a different TYP file and select all or select an area paste (CTRL V) your previous selection into a poi bitmap – see below.

Pasting Bitmaps

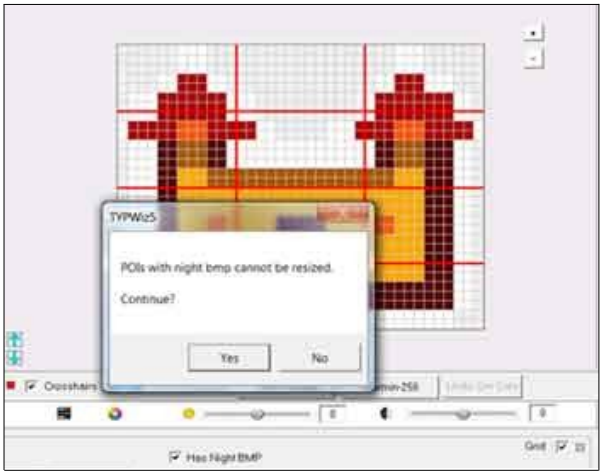
Select an area and click the Paste button or enter CTRL V.

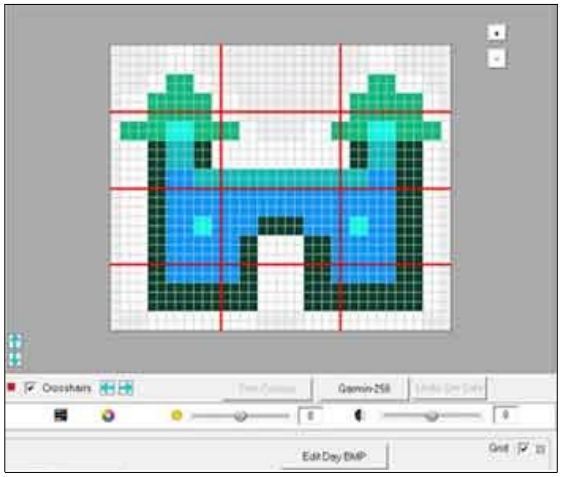
You can copy bitmaps from say Google and paste them onto a POI. It will automatically reduce its colour palette and resize to your bitmap dimensions, if necessary. However, remember that your colour palette will change and cannot be retrieved by clicking the undo button.

Night BMP

Some GPS models are capable of showing 16 bit night pois.

Click ‘Has Night BMP’.





A new Button ‘Edit Night BMP’ appears and part of the screen becomes light blue.

Click on the button to edit your night bmp colours or picture.
To return to your day bmp click on ‘Edit Day BMP’

Garmin does not allow day and night dimensions to be different; so, if you change the width of your day poi, *TYPWiz* automatically adjusts the width of your night bmp. Day and night bmps do not have to share the same bitmap or number of colours. If you click ‘Has Night BMP’, TYPWiz will copy the current bitmap to your new night poi. Click on the night bmp to edit.

You can also tick the ‘night bmp’ option when you create a new poi.

To delete a night poi enter the day poi and untick ‘ Has Night BMP’

Edit Night BMP

Resizing Night POIs

Untick the ‘Has Night BMP’ , then change width/height ;finally reselect ‘Has Night BMP’ and click OK.

How to make your POIs bigger or smaller

Often, we feel that some POIs are either too big or too small.

Enter new width or height and click ‘Resize’

A poi is set to resize itself proportionally.

If you didn't want this to happen untick the box next to '< >'

POI zoom

Click + or - buttons on right of poi to increase or decrease POI picture when editing

Deleting unused colours

Click 'Trim Colours' to discard colours not used in the bitmap but listed in the xmp. This can not be undone.

POI number of colours & True Colours

TYPWiz5 supports colormode 16 pois with up to 254 colours up to 64x64.
Most pois of in any TYP file are of this genre.

However, if you want more colours there are 2 options:

1) RGB with colormode 16
2) RGB with colormode 32

RGB with colormode 16

You can have as many colours as you like
When editing true colour POIs you must convert the bitmap to 16 bit first – click on 'Convert to 16 bit Colours'. Once edited, click on the RGB button

RGB with colormode 32 - opacity

TYPWiz5 supports degrees of opacity for RGBs.

POI colormodes

TYPWiz5 supports all 'colormodes':

Colormodes	transparency	opacity	RGB
Colormode 0			
Colormode 16	√		
Colormode 32		√	
Colormode 0			√
Colormode 16	√		√
Colormode 32		√	√

Colormodes are not to be confused with the 4th number in an xpm which stipulates the number of characters needed to define a pixel.

16 16 250 1 Colormode 0
16 16 250 2 Colormode 16
16 16 250 1 Colormode 32

If your Garmin gps does not support levels of opacity then stick to colormode 0 or 16.

To minimize TYP files,TYPWiz 3 saves non RGB POIs as colormode 0 if no transparency or opacity is found.

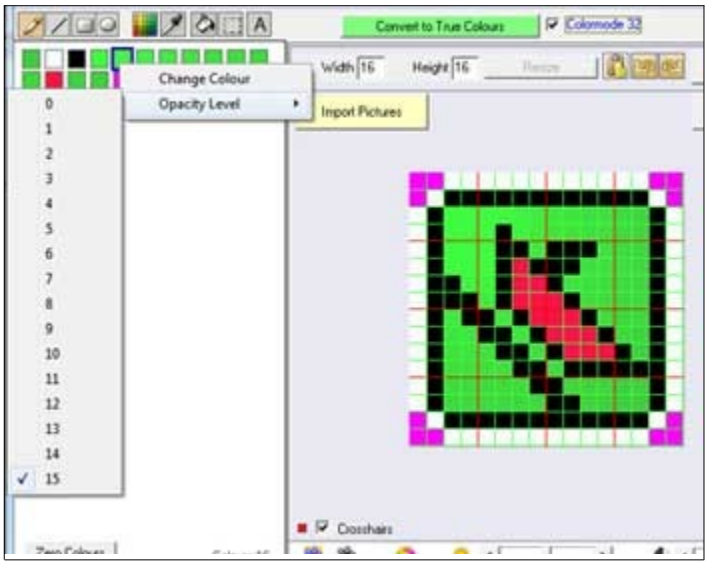
Colormode 32 POIs (non RGB)

Tick the 'Colormode 32' box, then right click on a palette colour (left of icon) and wait for the popup menu.

Select Opacity Level.

Note, all pixels with this colour will aquire the set opacity.

As stated earlier,the effect will be visible in Mapsource / Basecamp ; most gpx units do not parse alpha values 1-14.



To return to colormode 16 unclick the Colormode 32 box.

256 Colours

The editor enables you to find the nearest match to the rather limited Garmin (MAPTK) Palette of 256 colours. This is only useful for older Garmin models particularly when importing pictures or after using any colour filter. Colours are trimmed when necessary.

Active Routing

Garmin has introduced a new feature, called 'ActiveRouting'. They are only found on some TOPO maps: ie

TOPO Germany V6 PRO
TOPO Transalpin
OSM-Garmin
TOPO Southern Africa 2013 PRO
TOPO Belux Pro
TOPO Nederland Pro
TOPO Austria Pro

At present the only modes available are cycling and walking and therefore not to nuvis.

You will notice that ,when displayed, the order is somewhat unusual :

1) walking
2) cycling
3) hiking
4) tour cycling
5) mountaineering
6) mountain-biking

You can edit all active route highways by changing their colour and size.
There is no point changing the type number. If you do, the highway type may not appear.

Please note:

- TYPWiz5 will automatically create the correct order
- type numbers must be routable **(0x01-0x13; 0x1a,0x1b)**
- these routes are not overlays but replace existing polylines (highways)

BEFORE

AFTER using TYPWiz5

This allows you to switch between different routing activities ,ie hiking,cycling etc .
You can see its effect in Basecamp and on most current GPS devices - not NUVI.

To create a new route click the plus sign.

'Create 6 default Activities? Y/N' . Click Yes to get:

Notice the order of activities. If you are not interested in Hiking then you can always delete the hiking lines. Click on icon then press Delete on the keyboard.

Most TOPO maps with active routes have lines (highways) from 0x01 to 0x9.
1 being motorway, 5 being residential highway.

When saving, the header automatically adjusts to &AE.

Same border colour for each activity

You can give each active route highway the same colour provided the highway does not contain a bitmap with 2 solid colours.

Edit a non bitmap highway, ensure it has a border and tick 'Apply Border Color for All xxx'

Extra (CITY Navigator) Pois

City Navigator and most modern TOPO TYP files contain extra pois used to show important services,buildings or hotels etc. They can also be edited.

With TYPWiz5.6+ you can add and delete extra pois

As such they do not have a type reference but an id set by a poi with an type number.

How does it work?

Older maps just have one symbol for fuel (petrol pumps)
With extra pois you can create icons for as many fuel companies you like **EVEN if they are not included in the TYP file, such as**

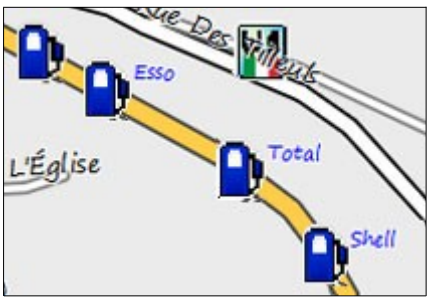
Shell,Esso,Jet, Texaco etc

Each (fuel) extra poi refers to a 'placeholder' or parent icon which is also plotted to for its location,font style and font colours. Both are plotted, so make sure the parent icon is transparent.

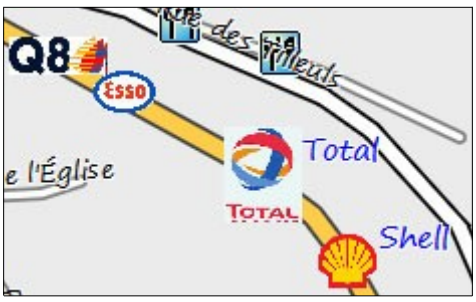
Example:

The default 'fuel' parent icon = 0x11001

So, to change the font size and colour of your Shell,Texaco icon , you need to change the font size and colour of its parent icon , 0x11001.



Default TYP file

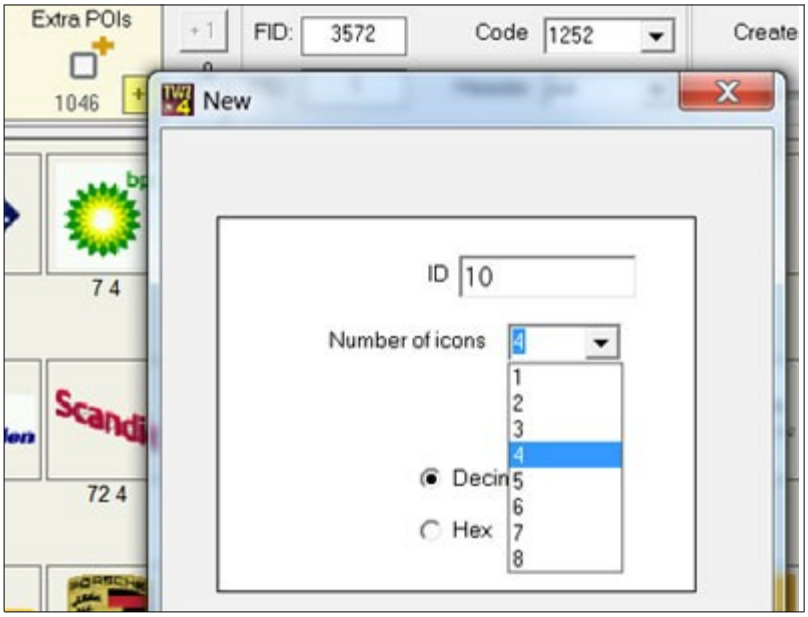


Extra POIs added to CN 2015 toTYP file

How can I obtain an EXTRA POIs ID ?

To some extent, the DATA 1 list will provide a clue - see below

How do I add and extra poi



The ID for Shell = 10 (decimal)

We have selected 4 icons in total in common with all the other extra pois in this TYP file

However, there is no need for this.
You just select 1 - see below.

What are the additional icons for?

These are sometimes used when searching.
The First icon is *normally* selected but this depends on the size of the other icons.
ie Basecamp doesn't like dimensions higher than 32x32. If the firts icon is ,say, 48x48 and the second,16x16 it will opt for the second icon , 16 x 16.

How do I know if my map contains extra pois?

Extra pois need a TYP file - in TYPWiz5 you can check the total below the Extra POIs icon.

Can I add or edit extra pois to my map?

You can , IF your map contains extra pois.
With TYPWiz 4.6 (currently tested) you can create new EXTRA POIs

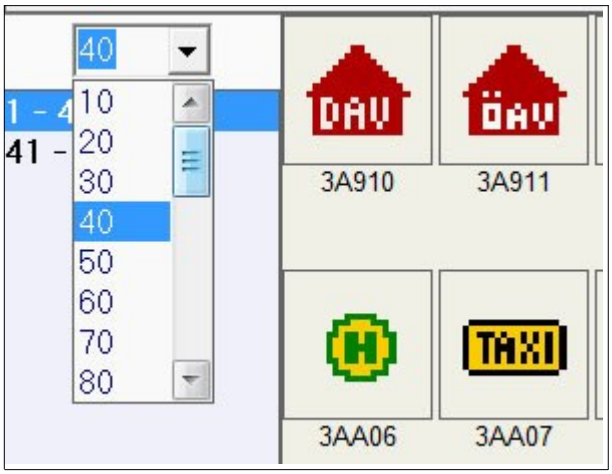
Such pois only appear on NT maps and because its structure is not understood there is no point adding extra pois to an img.

Please note , most CITY Navigator TYP files contain **no** highways(lines),no, pois no polygons and no active routes , just extra pois but these can be added

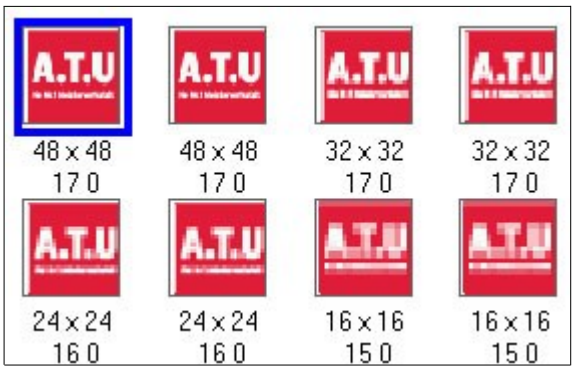
With older city navigator maps you can try adding highways with types 0x1 to 0x16 - with the more recent typ files the types are often higher than 0x100 ,ie 0x10A00 - img2typ can help - see youtube.

Changing number of extra POIs on display

Some large typ files contain over 1000 extra often large icons.
To speed up the process you can determine how many icons you want to have displayed at one time - see right picture.



Many TYP files contain extra pois with each poi containing smaller pois used for different purposes.



This shows a main icon with 7 extra ones all with the same type number. Most icons only have up to 3 additional icons.
Some may have night colours and very occasionally a different night bmp.

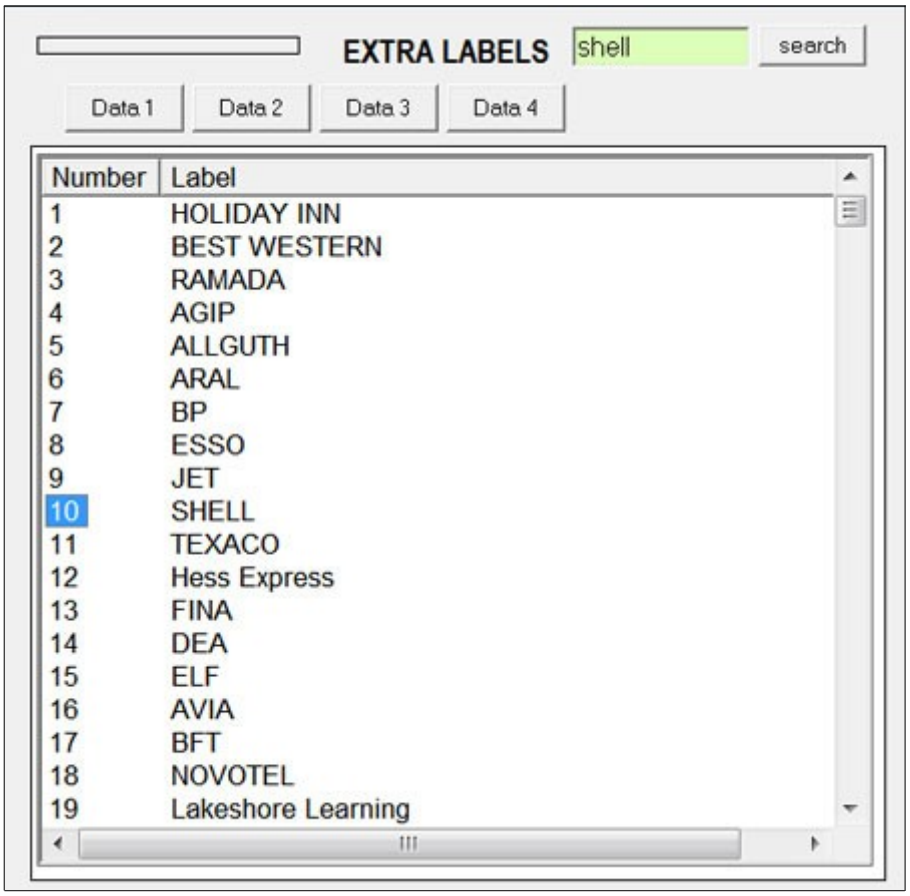
Night colours for POIs+

Click Night Colours to enable night colours.
To alter night colours click Edit Night Colours'. Use the colour filters to quickly change their colours.

Note: If a poi does not have true colours, it is recommended not to change to a RGB colormode.

Extra Labels Data

Some TYP files contain a list of labels, often referring to various amenities - ie



hotels,banks,restaurants etc

It cannot be edited as it is only used in searches.

Some TYP files contain no pois,polygons & lines but just this data.

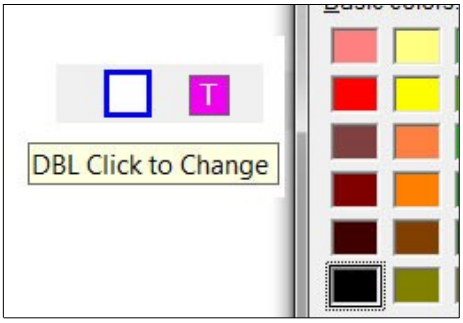
Modern TYP files use an SQL folder,instead.

To find out the ID of an EXTRA POI not included in the default TYP file, the list produced by data 1, might help.

Editing RGB pois

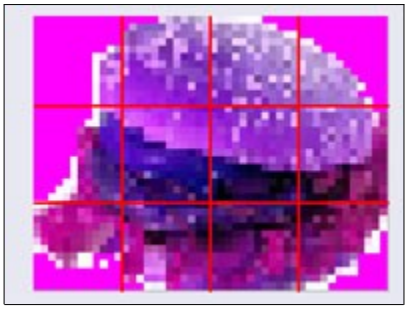
TYPWiz5 enables you to import and edit RGB pois.

Because there could be up to 128x128 colours the method for adding or changing colours is different.



Click on the 'white' colour to set the current brush color.
Double click on the 'white' square to change the brush colour.

Click in the magenta T to select transparency.



Only rotation, vertical & horizontal buttons have been disabled.

When importing pictures the palette does *not* have to be recalibrated, and possibly reduced to 256 colours.

Memory Problems

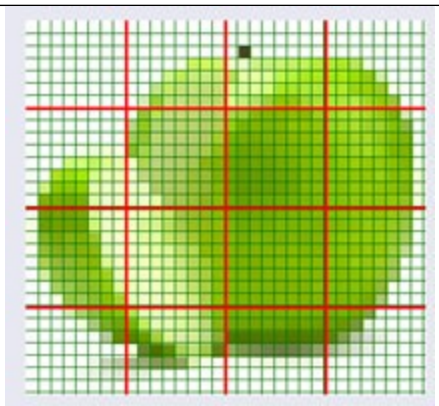
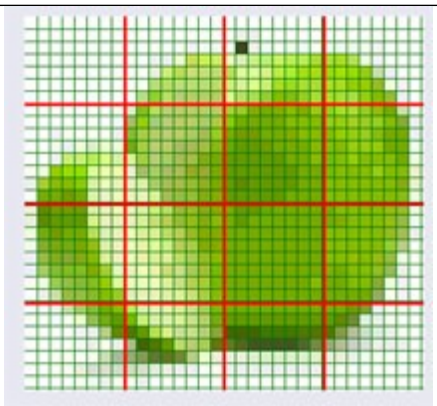
Please note:

Very large TYPfiles >70 mb containing mainly buildings could make TYPWiz5 running out of steam.
A memory warning appears.
It is best to reduce some of RGB icons to HIGH Color.

When to use RGB?

RGB processes shades much better than other color modes.
However, it can increase the size of your TYP file quite considerably.

The difference between RGB and high color,in theory, can only be seen if the area of the poi is >256.
Even then, for the human eye to distinguish any difference the poi needs to be at least 32 x 32 - see below

	
RGB	High Color

Saving POI as bmp

a) for nuvi

Nuvi owners can use Garmin's POI Loader to upload poi details & icons. To help you create correctly dimensioned icons double click on a POI and from the Editor select File → SAVE as POI BMP. Ensure the bmp has the same title as the folder.
Those of you who use osm data can use ***nuvi osm2pois*** , a gui which enabled you to select pois and send them to your nuvi.

b) for waypoint symbols

All you waypoint symbols are stored in:

My Documents\My Garmin\Custom Waypoint Symbols.

The are numbered 000.bmp , 001.bmp etc up to a max of 063.bmp and have sizes of 16x16 and 24x24.

Create a new poi size 24x24 and click the yellow >>Pictures button . Point the the above named directory and click on a .bmp file. Make changes and go File → Save as POI BMP to save icon – make sure you've backed up your icons first.
The way these bmps can be transferred to your gps depends on your device.
With Oregons,Dakotas etc you need to rename your bmps:

001.bmp → Custom 0.bmp

Changing geocache symbols in a gpx file

At present Garmin's geocache symbols can not be customised.
Replacing existing **<sym>Geocache</sym>** in your gpx file with say **<sym>Custom 0</sym> has no effect.**
However,if you are keen on replacing the symbols, you could extract the coordinates for each geocache , save your data as an .mp file and thus create a new img file using cgpsmapper or mkgmap.

Another solution, which defeats its purpose, is to save your data as a gpx file, replacing any reference to the cache other than the coordinates , so it won't appear as a cache, but more as a poi/waypoint .

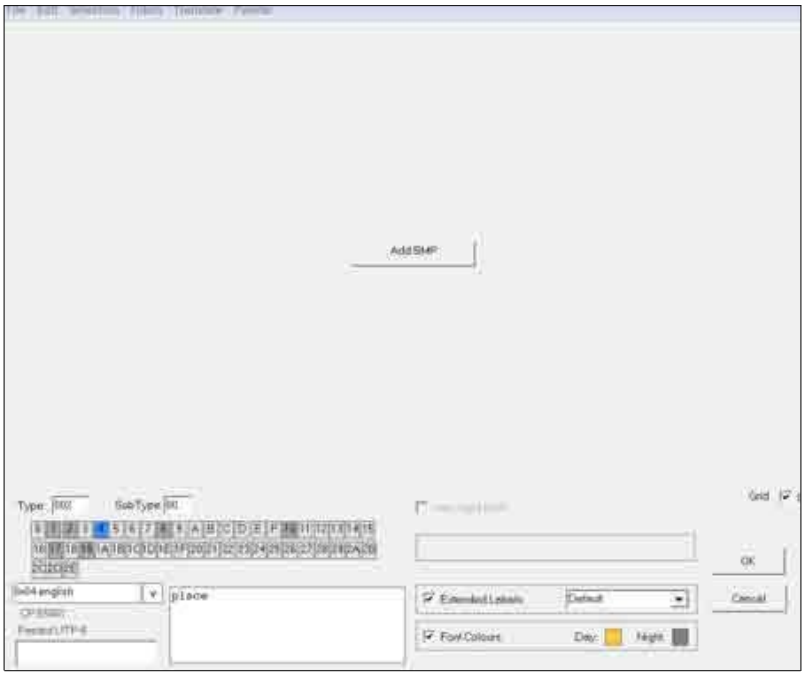
Changing size of icons

From the main menu click on 'Icons' and select a size (small to extra large) or use the slider at the top of the main screen. You can determine your own size in Preferences and select Custom to view your elements or drag slider right on to dark red.

Zero colour POIs (advanced)

TYPWiz5 supports POIs with no colours. These are ideal for text align purposes. Confusingly, RGB POIs can have the same xpm as zero color pois.

No bitmap example:



In Colormode 0 you can get :

```
[_point]
 ---------
DayXpm="0 0 0 0"
Colormode=0
 ---------
[end]
```

This POI has no width , no length and no bitmap

Use this method to align your names of cities,towns ,villages or regions centrally.

Although Mapsource cannot parse such zero bitmap POIs, Basecamp and your gps should have no problems.

1) Create a new poi of any size and double click on icon to enter the editor
2) Change both width and height to **zero** OR click X right of Resize Button
3) Click resize
4) If need be, change font colours
5) Select a 'no poin't type,ie 0x1E 00 – ie type:1E subtype:00 - see below

0x1400-0x153F Region name (no Point, big)
0x1E00-0x1E3F Region name (no Point, middle)
0x2800-0x283F Region name (no Point, small)

If you are using mkgmap to create your img file ,experiment with any of the above:

Click OK to finish

Click Add Bitmap to either return to original bmp or if this is not possible to create a new BMP.

Colour Palettes

From the main menu select Colours . The following options are available:

- Convert to Black & White
- Convert to 256 colours
- Convert to 64 Colours
- Convert tom 16 Colours
- Convert to Custom Palette
- Create 2 colour Palette
- Fix unused colours
- Convert All Font Colours

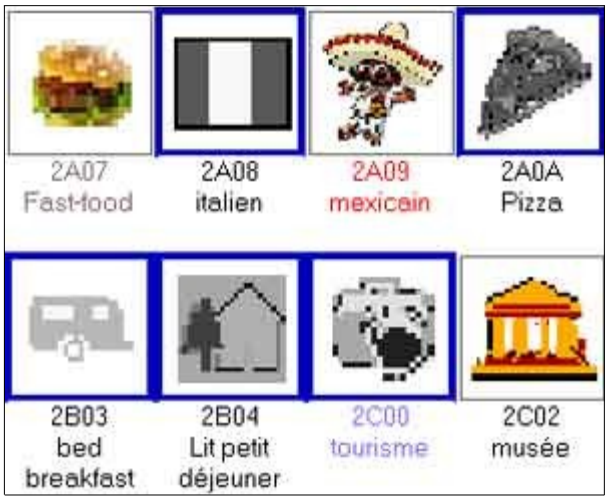
All conversions apply to the current display of icons.

Selecting Icons using SHIFT or CTRL

You can SHIFT or CTRL select your icons.

To deselect All just press t**he ESC key.**

Only Selected icons are converted – see image below



TYP Format

TYPWiz was produced as a result of unravelling the TYP file structure - details can be found on www.pinns.co.uk/osm

Updates

The program is updated regularly with new features or bug fixes.

By sending an email to the address found on the TYPWiz5 download page you can obtain the latest TYPWiz5 and are guaranteed future updates.

Loading the program

When clicking on the *TYPWiz5* shortcut you may have to run it in XP mode.
Right click on the shortcut , select Properties, then click on Compatibility tab and tick the Run this program in compatibility mode: Windows XP (highest service pack).

Loading TYP Files

From main menu select File Open. Recently Garmin has introduced a new TYP file format which caters for 64 x 64 commercial POI bitmaps . TYPWiz5 supports RGB pois. - for more information see my TYP Format.

You can also drag & drop TYP files on to the main window.

FID & PID

These define the family & product id of your map; they are shown at the top and can be altered; however**, it is recommended you leave the PID as 1**.

FID's can have 5 digits with max value of 65535.

It is essential that FIDs and PIDs match those required by the IMG file.

If you create a TYP file for any (TOPO) IMG make sure the FID and the PID of your TYP file **are the same** as contained in the IMG.

MapsetToolit will automatically do this for you when uploading to Mapsource.

Codepages

This option enables you to select your character set.

code	language
1250	Central & Eastern European
1251	Cyrillic, mainly Slavic
1252	West European
1253	Greek
1254	Turkish
1255	Hebrew
1256	Arabic
1257	Baltic
1258	Vietnamese
932	Japanese
936	Simplified Chinese
949	Korean
950	Traditional Chinese
874	Thai
65001	UTF-8

NOTE

Select codepage 65001 when your TYP file uses languages with mixed codepages, ie Russian and Greek

For more information download TYPWiz5 & Unicode Manual

- A TYP file does not allow you to mix code pages >1252, ie Greek with Hebrew etc
- You can combine west European with any other language, ie English and Arabic.
- A TYP file's codepage does not affect names embedded in an IMG file, so you could have a Chinese map with 'Russian' TYP file.

Headers

Headers are set to &5b but this can be altered in Preferences.

It is our advise to not change the headers. When starting a new TYP file,*nothing is gained by changing your header to &6E,&9C etc.*

When increasing headers you are preparing your typ file to include additional information, such as extra labels,icons or active routing.
Such information cannot be supplied by a typ editor as it depends on the IMG file.

If you lower NT 2012 header sizes ,you may lose a great deal of information!

There is no need to lower the header sizes ,unless you desperately need to reduce the size of your typ file!

Header Size	Information
5B	Basic entry
6E	Extra icons if any
9C	Extra POI Labels
A4	Indexing a selection of POIs
AE	Active Routing

The larger the header the more information it contains; however ,imgs not created by Garmin , at present , are unable access such additional information.

Load Options

You can filter out elements by deselecting options. They only apply when you load TYP files

examples:

1) To ensure all line night versions are filtered out, untick the night option below 'Lines'.

2) If you wish to import , say POIs, from one typ file into another, then deselect lines and polygons and load your TYP file. Now save them as a txt file. Once saved as a txt file you can merge them into another txt file taking care only to delete any [ ] which does not contain [_point]

Loading Text Files

You can load text files provided they conform.
Caution: if text contains errors , some elements will be displayed wrongly. Should this happen it is prudent to double click on the offending element,edit and press OK.
For more information - see **TextFile Errors.**

Note: when more advanced POI options are included, other editors may struggle to read the txt file correctly,with one exception: mkgmap TYP compiler.

Loading MapTK prj Files

From Main menu select Files --> Open txt/prj

Caution: MapTK offers limited TYP options. It does not handle nightversions,RGB, alpha colors etc.

It is best to use prj files created by your self, rather than prj files generated using the 'TYP analysis' option . Problems tend to arise when parsing POIs created by other TYP Editors and reimported into MapTK.

Loading Garmin's Theme Files (kmtf)

- From Main menu select Files --> Open txt/kmtf
- TYPWiz5 converts file to a TYP file
- Save Fiile
- Go Tools,Add & Replace Basecamp/Mapsource TYP files
- Find your City Navigator Map
- Click Add or Replace TYP button .
- Reload Basecamp/Mapsource to see change.

Saving TYP Files

Click Save TYP to save typ file. TYPWiz5 adds twz if you prefer to keep the original – this can be unticked , see preferences.
A 'permission denied' error message appears when the current TYP file is used by another program, ie Mapsource or Basemap. Close 'offending' program and save again .

Saving as text (.txt)

Save your work as a text file so it can be loaded into your favourite compiler – however there is at present only one compiler which can parse RGB POIs with colormode 32, showing degrees of opacity , ie mkgmap.
By design, pois are **not** saved as colormode 0 .

Caution: always create a backup of your original txt file if it hasn't been generated by TYPWiz. Like other editors, TYPWiz creates its own textfile.

Saving as Theme (.kmtf)

Load TYP file and TYPWiz5 searches file for any compatible Theme elements.
For more information checkout this webpage

Save a Copy as

Use this option to create a backup file.

Save Picture

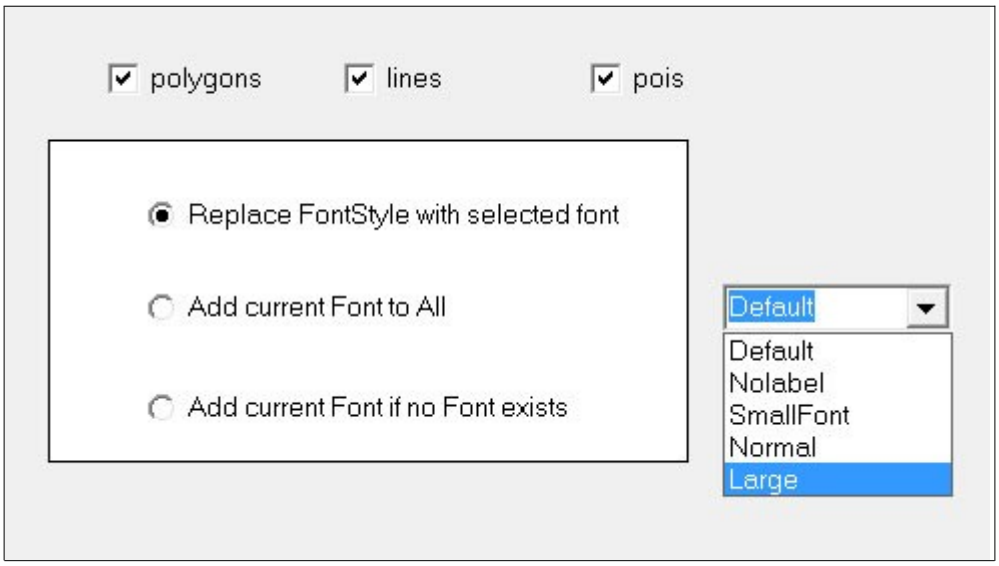
Select this option to create a snapshot of current thumbnails.
You can select black or coloured labels.

Print

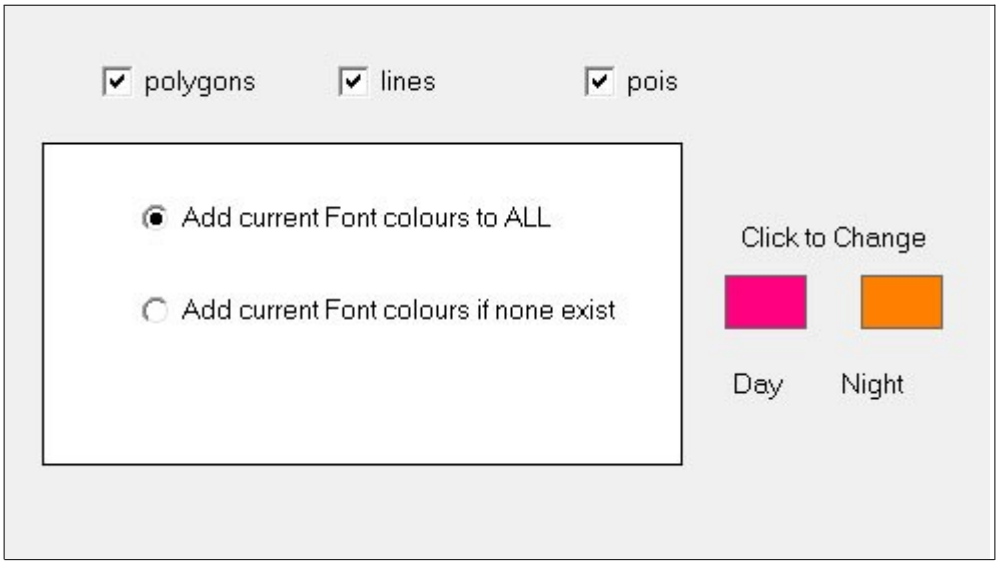
Print gallery of current thumbnails. You can select black or coloured labels.

Batch processing

You can change the font styles of all elements,pois,lines & polygons in a single click.
In this example any elements with existing fontstyles are now changed to 'Large'.



You can also add fontcolors to all the elements.
Click on the colours to change the font colour



TYP files and OSM

When converting osm into img files you can use mkgmap.jar and 'styles' to customize your own maps.
Styles contain 3 essential files, polygons,lines and points to determine which type is rendered.
Without specifying a specific style, img files are rendered using a default style.
This default style doesn't include one way systems, platforms, hedges etc so they need to be defined separately in your own 'lines' file. For more information check out
http://wiki.openstreetmap.org/wiki/Mkgmap/help/Custom_styles and
http://wiki.openstreetmap.org/wiki/Mkgmap/help/Custom_styles

TYP files define the colour & look of your polygons,highways and pois.

Problem is, 'all type numbers' defined in a TYP file MUST be the same as those defined in a style:
If your TYP file defines a park as 0x21 then make sure it's defined as 0x21 in your polygons file. If not, it ain't gonna show on your Garmin.

Checking Style types

To simplify this process, go Tools → 'Check Style Types' and load the correct file ; it will tell you , if it's not the correct one.

This basic checker lists anything found in your TYP file but **not** in the corresponding style file.

Load Style Editor

Go Tools → Load Style Editor to launch the editor.

Go to 'Settings' → Locate Style Editor' to select your editor. Your selection will be saved when exiting *TYPWiz*.

Make sure your editor is NOT Notepad, as it corrupts the file.

Use Notepad+.

In our style editor search for the type number or a given name ,ie 'park' or 0x21 and make appropriate changes ensuring that the type numbers match.

Please note, after changing your style you need to recompile your osm file.

TYP File Health Check

TYPWiz5 comes with 2 checks found in the Tools Menu

Fix Unused Colours

This checks for unused or duplicate day colours in polygons,lines and pois .

It lists elements which contain unused or duplicate day colours and gives the option to automatically reduce the number of colours.

Lines and polygons are set to non-bitmap if only one colour was found making them quicker to render and in the case of lines giving them a higher quality and draw priority!

Check Lines for Non-Bitmap Conversion

Garmin devices have a problem drawing bitmap lines , particularly when at an angle! There does not seem to be a problem with non-bitmap lines.

This option creates a list of bitmap lines with borders which could be converted to non-bitmap.

Lines which are converted to non-bitmap

a) have a higher draw priority
b) do not suffer from fuzziness when drawn at an angle
c) are drawn much quicker
d) save batter life

There may have been a reason why such lines have been given a bitmap – some were even found in Garmin TOPO TYP files - and so it is up to the user to convert such lines.

Click the 'No Bitmap' button when editing a line.

In Preference → Elements

tick or untick *'Check for unused colours when loading a TYP file'*

Tips

Often POI bitmaps are framed by wasted transparency, grey space. Use the select tool to select the 'picture' and press CTRL C to copy followed by CTRL V to paste.

Double click the selection.

Settings

Click settings to locate your style editor – for mkgmap.jar only

Searching

A basic search facility allows you to search all icon labels of any part of the code, ie text ,color etc

Enter some text and press RETURN or click Search.

Each result is highlighted and screen scrolled to the element found.
Press RETURN to find next result. Perhaps reduce your icon size to small . See below.

Extended Types , 0 x 100+

Polygons,lines and even pois can have type numbers : &100+ .

These are located 'outside' the RGN subdivisions of an IMG file (which hold the rest of the elements) and when parsed are placed at the top.

You need to be aware that your GPS Mapsource / Basecamp may not show some extended pois – for more information see my **Exploring IMG Format.**

Pois can have a type with max of **2FF1F** , so there is plenty of scope.

POI TYPE Search

If you are keen to ensure your points of interest (POIs) appear under the correct category in Basecamp/Mapsource or gps device this search facility might be helpful.

The following table show the *basic searchable types for your gps-device*

0100 to 1F00	Cities / towns/ villages
2A00 to 2A1F	Food / Restaurant
2B00 to 2B1F	Hotels
2C00 to 2C1F	Amenities
2D00 to 2D1F	Leisure
2E00 to 2E1F	Shops
2F00 to 2F1F	Services
3000 to 301F	Official Buildings
6400 to 641F	Man-made

Note: ***Basecamp & Mapsource also use 0x10b to 0x111***

Note:Basecamp and Mapsource categories may differ slightly from those found on your gps device.

Search using green text box

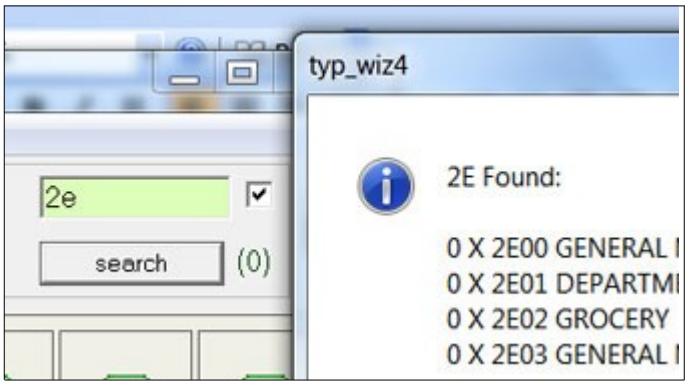
1) Tick the checkbox next to the green search text box

The following are valid:

0x2e00
2e00

NOT

'what is 2e?'



Wild cards

Wild cards are useful as they give the whole available range: ie

2e

This gives you 2e00 to 2e1F

Messages

'.... not included'

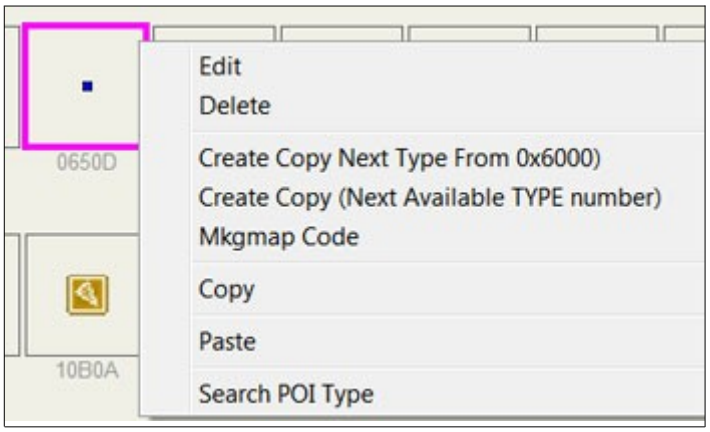
Some types are not included mainly because they are used for marine purposes.

Some types are still unknown despite intensive research.

Right click on your POI icon and Search TYPE

This matches up your icon type number with the 'default' list.

A quick way to discover what some of the more mystifying icons are !



Note: ***When you are given a list of possible types always select the lowest type***

Tools

Text File Errors

Some considerable effort has been made to parse text files from other editors. As a rule, no commas or comments (;) should be included to mark the end of a line.

Most common errors

1) bitmap does not have the correct number of pixels:

```
xpm="32 3 2 1"
"0 c #C0C0C0"
"1 c none"
"00000000000000000000000000000000"
"00001111111000001111100001111100000000"
"00000000000000000000000000000000"
```

2) **colour references are not included in the list of colours:**

```
xpm="32 3 2 1"
"0 c #C0C0C0"
"1 c none"
"33333000000000000000000000000000"
"00001111111000001111100000111100000"
"00000000000000000000000000000000
```

In this example there is no reference to a colour “3”

3) the xpm contains the wrong width,height,number or colours or characters to represent a pixel:

```
xpm="32 4 3 1"
"0 c #C0C0C0"
"1 c none"
"00000000000000000000000000000000"
"00001111111000001111100000111100000"
```

4) speech marks are left out from colours or bitmaps:

```
xpm="32 2 1 1"
```

"0 c #C0C0C0 ←
"0000000000000000000000000000000"
"0000000000000000000000000000000 ←

5) Number of characters to represent a pixel in a POI is incorrect :

DayXpm="3 3 2 2" Colormode=16
"$ c #FFFFFF"
"% c #C0C0C0"
"$$$"
"$$$"
"$$$"

5) Carriage returns are essential for bitmaps and colours

6) If you are expecting degrees of opacity in RGB pois with colormode 32 you must include a reference to its opacity next to or as part of the colour:

DayXpm="24 40 0 1" Colormode=32
"#FF00FF" alpha=15
"#FF00FF" alpha=10
"#FF00FF" alpha=1
"#FF00FF" alpha=9
"#FF00FF" alpha=0

Or alternatively

DayXpm="24 40 0 1" Colormode=32
"#FF00FFFF"
"#FF00FFAA"
"#FF00FF11"
"#FF00FF99"
"#FF00FF00"

Other problems:

1) colours are not properly defined with a space on either side of the 'c'.

"% c#C0C0C0" or "%c #C0C0C0"

Should be: "% c #C0C0C0"

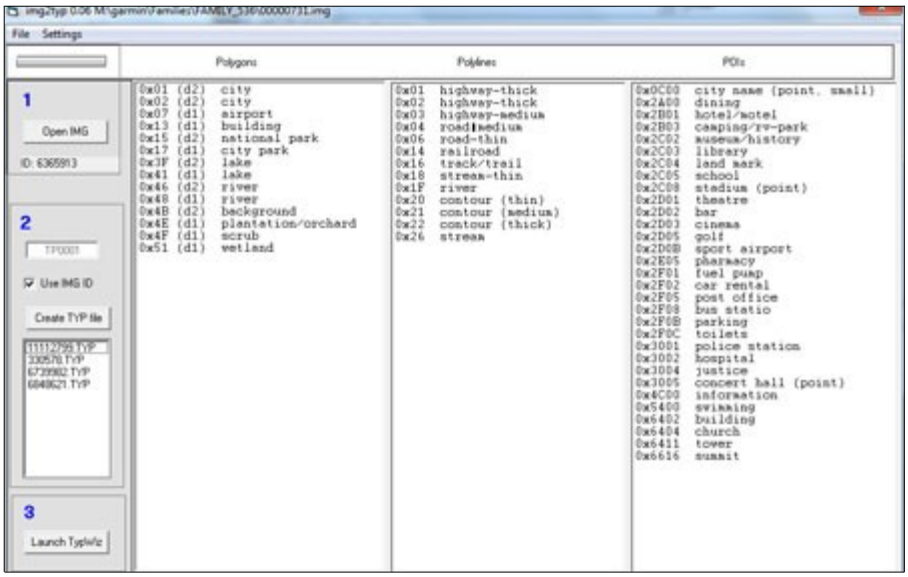
2) type number does not have 0x ie

type=2 should be : type=0x2

IMG2TYP

This GUI for windows reads IMG files, locked or unlocked and creates a **unique** TYP file
which you can edit in ***TYPWiz5***.

Now you can add your own palette to any TOPO map.



If a matching TYP file does not exist an IMG is rendered using a default style, which is very basic and should show all polygons,lines or pois ,even extended types &100+ ,embedded in the IMG.

Does my IMG contain a certain polygon or poi? With IMG2TYP you can quickly check if your element has been rendered.

Use *Gmaptool* to join your IMG and TYP file into a gmapsupp.img . For more information see img2typ manual or search Youtube.

Creating Logs

In Preference tick 'enable logs'. This will log & archive key changes.
If you wish TYPWiz5 to create a new log for each new day then tick 'New Log for each Day'

To access you log go Logs --> Read Logs

This will point to the directory where your logs are kept, ie <TYPWIZ5> \logs

To delete the 'main' log go Logs --> Clear Main Log

Languages

TYPWiz5 is written in English but supports different languages.

From the main menu select Language → French etc

You need to restart TYPWiz when changing INTO English.

All language files are and should be placed in the 'languages' folder.

Please feel free to change any translation.

Download the French.zip file and modify contents accordingly.
Save file as <mylanguage>.**lan** , ie greek.lan and place in the languages subfolder of TYPWiz5.

Contact us if you are willing to share your file.

Commands

[command]=[translation] # [English equivalent]
mfile=Fichier#File
mnewtyp=Nouveau#New
mopentyp=Ouvrir TYP#Open TYP
etc

Messages

[number] : [translation] # [English equivalent]

3:Pas de données#No Data

Please note:

- Message Numbers shouldn't be changed.
- Message Numbers are followed by a single colon ' : '
- Length of Text ideally should not be longer then English equivalent

TYP converted to TXT retains English Command vocabulary

FAQs

I've created some POIS and they don't show on my Garmin/Nuvi

This is caused when

1) the type number (0 x something) does not correspond to a one used by your Garmin. With mkgmap use the style editor to change the type number
2) the type number has been reserved by Garmin for something else; try numbers 0x60 + ; this is at present a matter of trial and error.

You can check whether your img file contains your unrendered POI by downloading our img2typ . Simply load your IMG file into img2typ and check if your POI is listed. If you are using mkgmap.jar to create your img files then check whether your typ number is included in the points style file. If not it won't be generated.

My POIs show up on Mapsource but not on my Garmin/Nuvi

Not all Garmins behave the same – some are more 'flexible' than others – Change the offending POI typ number

I've created some highways and they don't show on my Garmin/ Nuvi

See questions above; but also check at *all zoom levels* . It may be set to show a certain highway at the highest zoom level.

Some of my polygons don't show on my Garmin/ Nuvi

Make sure your draworder is high enough – set it to the highest level,compile and try again.
See questions above; but also check at *all zoom levels* . It may be set to show a certain polygon at the highest zoom level. Check your Garmin display settings –is it set to 'highest / most'?

Why are my pois,highways only shown on my Garmin/ Nuvi ,not on Mapsource?

Mapsource is not as advanced it seems as many Garmins. Try Basecamp.

How do I quickly change a TYP in Mapsource?

You can quickly change the look of an IMG on Mapsource by using MapSetToolkit.

Find the list of mapsets loaded into Mapsource – under Mapset Installed. Select one and click the Edit button . Select a TYP file – click button opposite 'TYP file:' label - and click apply.

Can I use any TYP file with ANY IMG?

Yes and NO . An img file consists of polygons,highways & pois, each with specific type number (0 x number). IF and this is a big 'if', these type numbers are ALSO found in your TYP file then your gps will make use of the information found in your typ file for a matching type.

How do I know which types have been used by an IMG file?

You can use img2typ (windows only). Latest version includes extended types.

How do I define zoom levels?

Zoom levels are between 0 and 24; they are stored as chunks of elements in an img; you cannot change the zoom level with recompiling your img.
The easiest method is to change the mkgmap style sheets – look for the value after 'resolution' , ie resolution 24.
The lower the value the more you zoom out.
No need to have all the pois showing when zooming out – set their zoom levels to 24.
You may want to change the width of various highways when zooming out, ie make them smaller.

Which mode is best for transparency?

The easiest and just as effective is the default colour mode 16 – no need for all these alpha values, as most gps devices cannot parse opacity.

How do I make the city etc names larger?

Some gps devices , ie Oregon , allow you to change the sizes. If they don't, create pois with fonts set to large - you can even play around with colours, using types ranging from 0x0100 ,0x0200,0x300 ...0x0900,0x0a00 etc to 0x0f00.

Note: Mapsource/Basecamp do not support font colors for certain poi types , ie &100.

Gmapsupp.img

As stated earlier, your TYP file gets combined with img files.

Why is it that on rare occasions, your TYP file seems not to work - all you get is map rendered in a default Garmin style, built in the device..

The answer more than likely is a clash of FIDs and PIDs.
FIDs & PIDs are encrypted in the TRE subfile of an IMG - in a gmapsupp they are *also* stored without such encryption in a subfile (mapsourc.mps) . For more info read my 'IMG Explorer'
Unless you know what you're doing, it is best to alter the FID and PID in your TYP file.
To obtain the FID and PID of your img files load the gmapsupp.img into Gmaptool and click 'Detail'.

gmp2typ

This is a simple gui designed to extract any TYP file if it's included in a gmapsupp.img or any img found on your garmin.
gmp2typ.exe can be downloaded free from TYPWiz5 homepage. Place it in the same directory as your TYPWiz5 exe so it can be accessed via TYPWiz5
Tools --> Extract TYP file from Gmapsup

1) Locate gmapsupp

This will locate the typ file if found.

2) Click 'create TYP file'

This creates the typ file

3) Launch TYP

This will show the TYP file in TYPWiz5 if TYP files are associated with the latest TYPWiz5

GPSMapEdit & TYPWiz

You can view non NT IMG files in *GPSMapEdit* .

It is not immediately obvious that you can also import your own TYP file into this program, be it as a txt file.

Save your TYP as txt and follow these instructions:

1) Go Tools → Options
2) Click on the View tab.
3) Click on the 'Map Skins' button
4) Click on Add & locate your txt file.

Note: GPSMapedit does not handle POIs in 32 or RGB modes, nor does it use the TYP file for its highways.

Alphabetical Index

16 bit Colours....51
ActiveRouting'....54
activity....55
Basecamp....18p., 27p., 41, 52, 55, 63, 74, 82p.
Batch processing....70
Borrowing bitmaps from another TYP file....49
Clone and Stamp....22
Colormode 32 POIs....52
colormodes....52
Colour....12, 23
Copy....21, 49, 70
Copying & Pasting....22, 45
Create Copy (Next Available TYPE number)....21
Create Copy Next Type....21
delete a night poi....50
Draworder....31p.
Draworder of polylines....45
Exploring IMG Format....74
extended....27, 74, 80
extra pois....12, 56pp.
FID....66
Filters....35
Font....40p.
Font Colours....41
format....17, 65
Garmin....17p., 53, 72
geocache....62
gmapsupp....18p., 80, 84
gmp2typ....19, 84
GPS....36, 43
GPSMapEdit....85
headers....67
Hex Colour....25
highways....43p., 72
Horizontal & Vertical Mirror....23
icon size....74
IMG....80, 82
img2typ....19, 58, 80, 82p.
kmtf....69
languages....36, 81
Loading Text Files....69
Mapsource....19, 82
mapuploader....16

Mapuploader....16, 19
mkgmap....46p., 62p., 69p., 72, 74, 82p.
mkgmap.jar....72, 74, 82
night....11, 24, 30, 36, 41, 44p., 50, 68
Night....36
nuvi....61
nuvi osm2pois....61
opacity....51
Pasting....29, 43, 49
Pasting Bitmaps....49
PID....66
placeholders....30p., 33
POI as bmp....61
POI TYPE Search....75
POIS....49
POIs with no colours....63
Polyline types 0x100....44
Polylines....43
preference....12
Preferences....11
Print....70
prj....69
resize....49p., 63
reverse....41p., 45
Rotate by 90º....24
Save Picture....70
Saving as text....70
Saving TYP Files....69
Searching....74
Style Editor....72
subtypes....44
tiled polygons....29
Tips....73p.
Transparency....20
true color....51, 65
TYP files....17p., 33, 72
TYP Format....65
Type numbers....27
Typwiz 3....65
Undo and Redo....22
unused colours....51
Use Orientation....43
youtube....58
Yout*ube*....80