

# Printing and Creating Electronic Maps *Tutorial*

## Purpose

To configure and print maps directly from TUMONZ and to export electronic maps into Graphics software and Microsoft Word.

## Background

TUMONZ provides print capability via both the *File/Print/Preview* menu (OR *Ctrl P* OR *Display* Toolbar button OR *right mouse menu* ) and capability to create electronic maps and images to use in other applications.

*Printing.* You may either Print directly from TUMONZ or export the electronic map to another application such as a graphics package and print from there. To print from TUMONZ you may need to make some decisions about how you would like the printed map to appear (e.g. Portrait or Landscape) via the buttons that are available in the 'Print preview' window. You will be printing the visible onscreen map, however since Tumonz produces printed maps at a higher detail level than what is viewed onscreen some new layers may switch on in the printed map. This is normal behaviour – all map layers have a zoom level where they switch on. If you don't want a specific layer to appear in the printed map (e.g. contour lines), you can simply switch it off or change the Show Scale in the Map Legend for that layer (see Help; 'Window/General Tools/Map Legend'). It is recommended that you save these settings within your own 'Print Scheme', which you can then use only for printing (See Using Colour Schemes).

*Creating and copying electronic maps.* There are 4 ways of creating and copying electronic maps for use in other applications (or storage or export); the first three use the 'clipboard' while the fourth creates a pdf file.

## Quick Printing & Creating Electronic Maps

*Printing.* Use your preferred Colour Scheme and zoom and pan so that the surface you wish to print is on screen. Select the *File/Print Preview* menu (OR *Ctrl P*). You may need to make some settings decisions (such as Selecting the Printer, and deciding on Portrait or Landscape). To avoid creating costly experimental maps open '*Map Print Options*' and make sure '*Show/Detailed Print Preview*' is ticked. This will display a Preview of the map without having to print. The default print settings should allow you to print satisfactorily. However, to have real control over your printing you need to understand the Print Settings. For printing aerial photos and user information, see below.

*Creating and copying electronic maps.* Use your preferred Colour Scheme and zoom and pan so that the surface you wish to print is on screen. Select the *Edit/Copy* menu and select '*Copy Map to Clipboard*'. To paste into MS Word, open the appropriate page and position on page and Paste (*Ctrl V*).

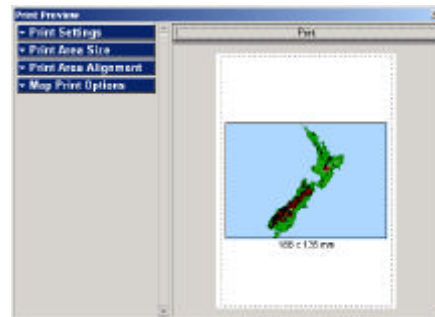
## Printing in Detail

You will need to undertake four sets of actions:

- create the map on-screen,
  - configure the print using the print settings,
  - add additional detail, for instance aerial photos, and
  - Print
1. **Create your onscreen map.** Use your preferred Colour Scheme and zoom and pan so that the surface you wish to print is on screen. If you want to print a different 'shape' (i.e. a thin vertical strip), you can resize the TUMONZ Main Window.
  2. **Open the Print Preview.** Select the *File/Print Preview* menu (or *Ctrl P*). Or click the *Display* Toolbar button and select *Print*.



The print preview window is comprised of print settings (on the left), a small page preview (on the right) and a Print button. NOTE. If you don't have a printer installed, you will see an error message since Print Preview requires an installed printer! The Page Preview on the right-hand side of the Print Preview, gives a good indication of what the final printed page will look like. It automatically updates as you zoom around on the Main Map (showing you what will print), and make print setting changes (showing you how it will print). (You can force it to update by re-sizing the Print Preview window – ie. left click and drag a corner.) Keep an eye on the Page Preview when you change settings.

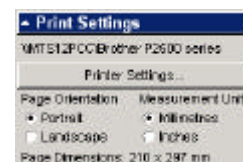


### 3. Some essential Print Settings.

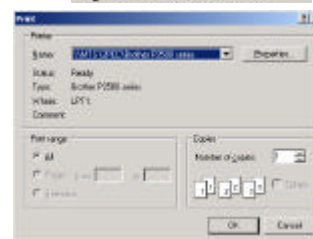
There are four main pages of settings in the Print preview window.

#### 3.1 Print Settings.

Choose Printer, portrait or landscape and the print size dimension indicator units.



- **Printer Settings**  
Opens the Printing settings window shown to the right.
- **Orientation**  
The two standard layouts, portrait stands tall while landscape sits wide.
- **Measurement Unit**  
Depending on your preference for length display. Metric (millimetres) or imperial (Inches).



#### 3.2 Printing to Fit and to Scale. Select 'Print Area Size'

As what you are viewing on your computer screen and your print page won't necessarily align, three 'Fit' options and a Scale option allow you to best fit the desired print surface with the printable page surface.

- **Fit Auto** Fits the current map view into the printable area of the page.
- **Fit Width** Fits the full width of the current map within the printable width of the page. Is effected by Scale setting – see below.
- **Fit Height** Fits the full height of the current map within the printable height of the page. Is effected by Scale setting – see below.
- **Scale** Changes the printable area of the page and rescales the map to fit.
- **Select 1:X Scale** Changes the scale of either the onscreen map OR the printed map.



You may choose a print scale (e.g. 1:25000). The two settings determine whether the map zooms to the entered scale or the Print preview adjusts to the scale. If the difference between the current scale and your new selected scale is to big, Tumonz will adjust the Main Map view.



#### 3.3 Print Area Alignment

These are a simple set of settings defining the alignment of the printed area within the potentially printable page surface.

#### 3.4 Map Print Options

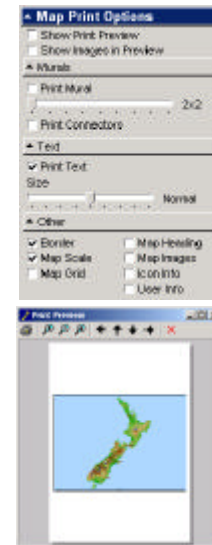
The Map Print Options contain a number of important general settings and some advanced options.

## Print as Image

This setting allows the print to be converted to a bitmap prior to sending to the printer. If you are having troubles printing a map (particularly with aerial photos) then use this setting. You can experiment with the slider bars that will reduce the size of the image.

The first tick box, 'Show Print Preview' requires special mention. With this tick box checked, on selecting the Print button an additional window will open that displays a view of the print. This window has zoom and pan buttons and also supports Default Tumonz browsing (with left Mouse button and Shift key actions). Its purpose is to allow you to view what will be printed without the need to print. When the 'Show Print Preview' checkbox is not checked, pressing Print immediately sends a map to the printer.

- **Show Print Preview**  
Displays a view of the printed map prior to printing. See the window to the right. When you are happy with the view and wish to print, select the Print button.
- **Show Images in Preview**  
For users with high end computers who wish to show aerial photos in the print preview window, check this box.



The Map Print Options contains various other settings, some simply include additional elements in the map (Map Border, Map Grid, & Map Scale) while others require further explanation.

### Map Print Options: Murals

A mural print is in effect a large high-detail map printout of the current Main Map view broken into a number of individual print pages. These can be assembled to create a continuous large map. Check the *Print Mural* checkbox (*Murals* sub-category in *Map Print Options*) and use the mural slider bar to determine how many pages the map should be broken into. The Page Preview will show how the mural will be printed – simply click on a page in the Preview (it will be selected) and press the Print button (repeat for all pages).

### Map Murals - Print Connectors

All other settings e.g. scale and alignment applies to murals just as they do for a single page printout. There are a few more settings. The *Print Connectors* checkbox can be used to turn on arrows on each mural printout. These indicate each pages relative position (up, down, left and right) – each page is also numbered. They are particularly useful if the mural maps will be used in a book format.

### Map Murals – Recommended Settings

If you want to create one large seamless map, it is recommended that you switch off 'Connectors', 'Border' and 'Scale' (in the *Other* sub-category). If you leave these options turned on, each individual map will have a border and scale bar which are superfluous when you create a seamless map. Turning of Text (in the *Text* sub-category) will also help, since individual names may be clipped at page borders. Give it a try.

- **Murals**
  - **Print Mural**  
Check this box to print your map as a mural consisting of multiple pages  
Use the slider bar to select the number of pages to be used in the mural
  - **Print Connectors**  
Adds print connectors onto each page to assist assembly of the mural.

### Map Print Options: Text Size

The printed map may contain more detail (and therefore more text) than appears on screen. To ensure that additional text doesn't clutter up the map, you can use the text Size slider bar (in the *Text* sub-category) to make printed text smaller (or bigger if you wish). If printed text is too small, use the slider bar to print larger text. The high-detail print preview is useful in this case to preview the result of your changes without wasting a printout.

- **Text**
  - **Print Text**  
Prints text displayed onscreen. Use the slider bar to adjust the size of the text

#### Map Print Options: Other

##### Printing Ortho-photos (Images)

You can include ortho-photos (if you have some installed) on the printed map. Simply check the *Map Images* checkbox before printing. Images are normally big data sets, and your printer may not be able to support such large print files (if this is the case, try adjusting the size of the map with the Scale slider bar – *Print Area Size* category). You can also choose to show images in the high-detail Preview (check the *Show Images in Preview* checkbox) – this setting obviously depends on whether the Map Images checkbox is checked. If you have trouble Printing Images then you may need to Export your map – see the next section.

##### Printing Icon Information

This feature writes to file all MapBook Icon text for Icons located within the view (loaded or not) (i.e. Fishing Spots). Tumonz will label all the onscreen icons on the printed map and produce a corresponding list of icon text descriptions (i.e. Fishing Point detail). This enables you to have a handy reference of icons (labelled on the map) and their associated text (saved to a file – you will be prompted for a filename before printing) which you can print out in any word processor. Open a map book (i.e. NZ Fishing Spots / NZ Camping Grounds etc), check the Icon Info checkbox (in the Other sub-category), zoom into a spot with some icons, and try out this feature. **Please Note:** Number of items has been deliberately restricted. Contents associated with icons within many of the MapBooks e.g. Fish Points are the intellectual property of the joint-venture owner of the module (in this example the New Zealand Fishing News Magazine) and are subject to their copyright.

##### Printing User Information

This feature works exactly like Icon Information printing. Tumonz allows you to associate text to any of your user-defined map objects (see Map Editing). You can choose to let Tumonz label all of your map objects visible in the current view, and produce a corresponding list of text descriptions.

- **Other**
  - **Border**  
Prints a black border around the map.
  - **Map Scale**  
Prints a scale bar at the bottom of the map.
  - **Map Grid**  
Prints a grid over the map. The grid that is printed is determined by the settings in the [Map Options](#).
  - **Map Heading**  
Add a heading to your printed map by checking this box.
  - **Map Images**  
To print aerial photos.
  - **Icon Info**  
To create a file that includes icon text.
  - **User Info**  
To create a file that includes text attached to map objects under the 'Attach Comments' feature.

## Creating Electronic Maps in Detail

Besides printing maps directly from TUMONZ it is often very useful to create and copy a map to another application. The most usual need is to illustrate a Word document with a map, perhaps with personal detail included such as lines, shapes and icons. You are also able to create composite maps and control resolution when exporting to other graphics software. There are 4 ways of creating and copying electronic maps; the first three use the 'clipboard' while the fourth creates a pdf file.

### 1. Quick Copy/Paste. Use 'Tools' Toolbar Button/'Copy Map to Clipboard'

The current map view is copied as a bitmap to clipboard. If you have aerial photos, icons and map objects (lines shapes and text) displayed in the view they will also be included in the bitmap.

*(The size of the bitmap will depend on how many pixels your screen is comprised of and what proportion of the screen the map covers. Internally TUMONZ creates a bitmap with 24 bits per pixel.)*

### 2. Composite map Copy/Paste. Use 'Tools' Toolbar Button/'Create Composite Map'

The Composite map provides capability to include multiple map views within the same map. These are configurable in terms of size of the inset maps and annotation. They are very useful in showing location of the main map surface. The Composite Map window also include two slider bars which allow you to set the pixel resolution vertically and horizontally. Use the slider bars to increase the pixel number and Paste into Word or a Graphics package. 'Composite map' does not currently support Aerial Photos.

*(The Composite map re-creates the onscreen view in virtual space allowing the pixel number to be specified. Note that as the detail can now be increased, you may find additional layers that are now included in the export but not shown onscreen.)*

**3. Print Screen.** The Keyboard Print Screen command OR Alt + Print Screen (to print the active window only) copies the screen view to clipboard whereby it can be passed into another application.

**4. Creating a pdf.** This will require specialist software for instance, Acrobat Distiller. Use the *Print* Toolbar button and open '*Print Settings*', select '*Printer Settings*' and choose Acrobat Distiller or similar. You will then be able to print to pdf file. (This is essentially just another form of printing a map.)

Note: once you have copied the TUMONZ map into a graphics package you will be able to save the map in whatever file type supported by the graphics package.