

STREETS AHEAD

MAPS AND GPS MADE EASY

Getting Started

Guide for Version 2.X



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User Support

Usually your software supplier will be the immediate avenue for support. However Osprey Computing - the developer of *Streets Ahead* - offers customer support on a fee per incident or an annual subscription basis.

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Feedback

We are committed to continuing improvement and are keen to hear of innovative uses and suggestions through ideas@ospreycomputing.com.au

Updates

For the latest updates and availability check our website -

WWW.ospreycomputing.com.au

In-Built Help

Pressing F1 at any time will open the Help file. Browse the contents to expand your knowledge of Streets Ahead.

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1. What is Streets Ahead?

Streets Ahead is an affordable, easy to use package for recording and presenting information geographically. It was initially written in response to a need by the Australian Landcare movement to document environmental conditions and to plan individual and neighbourhood actions. However *Streets Ahead* can be used for all types of GIS/GPS requirements

Streets Ahead is a useful tool for businesses and individuals who need geographic analysis in fields as diverse as farm and environmental management, recreation, sales areas, trips etc. Positional information can be uploaded / downloaded and streamed to *Streets Ahead* from GPS units.

In *Streets Ahead* you can display existing map layers and create your own layers. Multiple layers can be displayed simultaneously – much as if they were drawn on transparent sheets layered on top of one another. Layers can be turned on or off or moved up or down to create different views of the same area. Aerial photographs, satellite images or scanned maps can be used as backgrounds to other layers.

You can create your own data files linked to any map display to show text, memos, dates, numeric data or photos.

The magnification, and position of a map can be changed by moving, zooming in and zooming out.

2. Some Important Terms

Map

Streets Ahead uses the word Map to refer to the overall view of the map display on the computer screen or on a printout. There are two independent Maps which you can work on at the same time. We refer to these as Map Red and Map Blue. These maps can each be made up of one or more layers.

Layer

Each Layer will usually represent one or more aspects of the Map view – e.g. the AUSTWATEREAST layer supplied with *Streets Ahead* consists of blue lines which represent rivers and streams, the AUSTMAINROADS layer has red lines representing roads and highways, AUSTAIRFIELDS uses white symbols to show the positions of airfields. The Map Layer Control is used to turn layers on or off for each of the two Map views. See Section 11

Streets Ahead comes complete with a number of Layers, such as the World and Australian layers. Osprey Computing can organise the supply of other map layers for you, or you can create your own.

Object

Objects are the visual things drawn onto layers. An object may be a point [shown by any of a range of symbols], a line [known as a Polyline as it can be made up of a number of line segments], a shape [Polygon] which has an area, or text [words written onto the layer]. Each object on a layer will be a separate record in that layer's table

Table

Each layer has a corresponding Table which consists of a separate record [or row] for each object on that layer. Data about the object can be stored in the table record. E.g. The AUSTTOWNS layer consists of points and polygons representing townships. The corresponding AUSTTOWNS table has a separate row for each town. This holds the town's name. The Data View page gives a direct view of these records. Non-mappable tables which do not have a corresponding map layer can also be created.

3. Starting Streets Ahead



When *Streets Ahead* is installed, an icon like this one is placed on your desktop. Move your mouse over the icon and double click the left mouse button to launch Streets Ahead.

For best results it is recommended that your screen be set at a resolution of 1024 x 768 with the font size set at 'Small Fonts'

Showing The Maps Supplied with Streets Ahead

The first time you run Streets Ahead you will see a tool bar and blank display area. To display any of the layers supplied with *Streets Ahead* use your mouse to click on the Map Layer Control icon. [See Section 11]



This lists the layers available to you. Click on the box to the left of a layer to activate it. Then click on the 'Apply' button to save this selection and the 'Close' button to close the Map Layer Control and draw the Map.

It is advisable to only select one layer, such as AUSTRALIA, when initially starting Streets Ahead. If you turn on a number of layers, especially ones with a great deal of detail, the redrawing of the map display may take a considerable time depending upon the speed of your PC.

Once you have layers displayed you can try out the other tools described in Section 5.

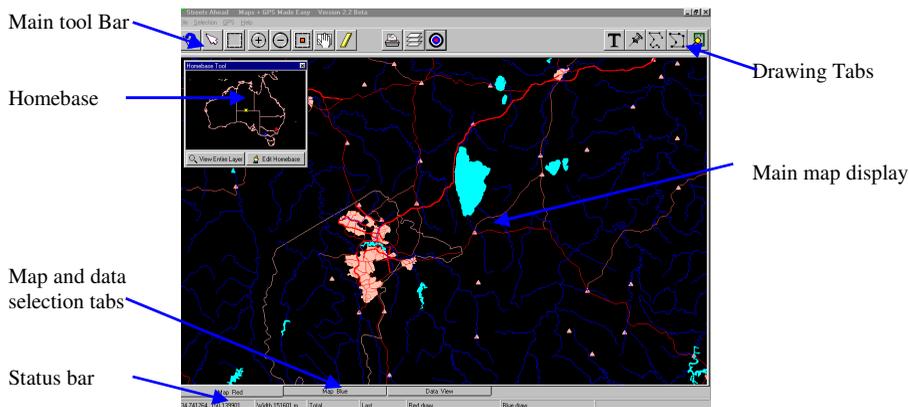
4. Finding Your Way Around

Map Red / Map Blue

Streets Ahead can show two separate map displays. These displays are identified as being Map Red and Map Blue. This ability is useful if you want to view an area two different ways. For example, you might show your entire farm as paddock outlines on Map Red, and your House Paddock with soils and vegetation on Map Blue.

Which layers will appear on each of the displays is determined via the Map Layer Control – see Section 11

The Map and Data View Tabs at the bottom of the display allow you to switch between the ‘Red’ map, the ‘Blue’ map and the Data View page. The two map views can be set up to work on different areas and different layers. Each map display can be moved, zoomed and have layers turned on or off without affecting the view on the other map display. From the Data View tab you can view data in tabular form.



Homebase

Clicking on the Activate Homebase tool in the Main toolbar will display the Homebase [see the figure above] if it is not displayed, or close it if it is displayed. The yellow ‘X’ represents the centre of the display [your ‘Home Point’], and the red and blue dots represent the current centre points of each of the two main map displays.

Clicking anywhere in the Homebase will automatically move the active map display [e.g. Map Red] to that position while the other map display [Map Blue] will be unchanged. This provides a fast and easy way of moving around an area.

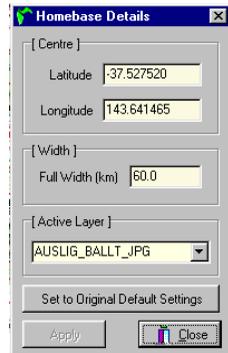
The Homebase can be moved by clicking and holding down the left mouse button over the blue title bar and then dragging to another position.

Defining display centre and width (Edit Homebase)

The layer shown in the Homebase can be modified by using the Edit Homebase button. This allows you to define the centre point and width of your display and the active map layer which is shown in the Homebase view. The centre point is defined by Lat/Long coordinates to two decimal places.

The view width defines the scope of the area shown in the Homebase view.

You can set any layer which is available in the current work area as the active map layer.



Viewing an entire map layer

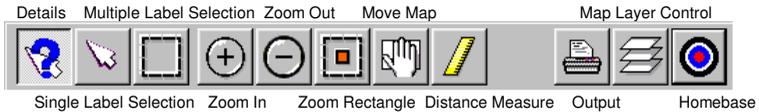
To make the current display zoom in or out to the extents of a single map layer, click on the View Entire Layer button and select which layer you require.

Data View

Name	Area	Notes
AUSLIG_MAP_REF.DB	21,110729	A. J. Smith 5 Stars
AUSLIG_MAP_REF.DB	5,130462	A. J. Smith 5 Stars
AUSLIG_MAP_REF.DB	3,130366	M Crawford
AUSLIG_MAP_REF.DB	4,181974	M Crawford
AUSLIG_MAP_REF.DB	2,155188	K C Rogers
AUSLIG_MAP_REF.DB	1,148436	N Casley
AUSLIG_MAP_REF.DB	2,155183	K C Rogers
AUSLIG_MAP_REF.DB	2,161136	A Hiebel
AUSLIG_MAP_REF.DB	1,148401	R G Sullivan
AUSLIG_MAP_REF.DB	1,148403	R G Sullivan
AUSLIG_MAP_REF.DB	3,172419	L Sullivan
AUSLIG_MAP_REF.DB	3,168377	L Sullivan
AUSLIG_MAP_REF.DB	2,163196	D Ewan
AUSLIG_MAP_REF.DB	1,156586	D Ewan
AUSLIG_MAP_REF.DB	0,179789	D Ewan
AUSLIG_MAP_REF.DB	0,172718	W Mori
AUSLIG_MAP_REF.DB	1,157301	W Mori
AUSLIG_MAP_REF.DB	1,149113	G Moss
AUSLIG_MAP_REF.DB	1,367913	R France
AUSLIG_MAP_REF.DB	1,463995	J Thompson
AUSLIG_MAP_REF.DB	1,60129	H Balguy
AUSLIG_MAP_REF.DB	1,373395	K McPhee
AUSLIG_MAP_REF.DB	1,73386	W Eastcott
AUSLIG_MAP_REF.DB	1,647379	G Vincent
AUSLIG_MAP_REF.DB	1,473073	W Ewan
AUSLIG_MAP_REF.DB	1,643164	W Ewan
AUSLIG_MAP_REF.DB	1,483344	B Wirth
AUSLIG_MAP_REF.DB	1,77929	G Wain

The Data View Page allows you to view the data about a map in tabular form. This page also gives access to the Table Design and Query pages.

5. The Main Tool Bar



Moving the mouse slowly over a tool on the tool bar will display a brief description of the tool's purpose. Select a tool by moving the mouse over its icon and clicking the left mouse button, the background to the icon will change. Once a tool has been selected it will be active until you turn it off by pressing it again or until another tool is selected.

Details

Activate this tool, then click on an object on the map display. A dialog box will appear with details of the data attached to that object. This is explained in greater depth in Section 12.

Single Label Selection

This tool is used to select an object within the selection layer (see Section 11) as well as to show labels for objects within the labels layer if labels are turned on (see Section 12). First activate the Single Label Selection tool, then click on the object required.

To deselect all selected objects, click on a blank area of the map or use the Clear Selections option from the Selection Menu. To clear labels use the Clear Labels option in the Selection Menu

To individually select multiple objects, hold down the Shift key while clicking on the objects to be selected. Clicking on an object already selected will 'deselect' it.

Multiple Label Selection

This tool allows multiple objects to be selected or labelled. First activate the Multiple Label Selection tool. Then click on the display and hold down the left mouse key and drag the mouse to form a rectangle. All objects within the rectangle in the selection layer will be selected / or if labels are turned on all objects within the rectangle will be labelled].

Zoom In

Select the Zoom In tool then click on the map display at the point which you wish to be at the centre. The map display will redraw at double the magnification centred on that point. [Version 2.3 onwards – You can also use the number pad '+' key to zoom in. Allow time for the map display to be redrawn before pressing a second time.]

Zoom Out

Select the Zoom Out tool then click on the map display at the point which you wish to be at the centre. The map display will redraw at half the magnification centred on that point. [Version 2.3 onwards – You can also use the number pad ‘-’ key to zoom out. Allow time for the map display to be redrawn before pressing a second time.]

Zoom to a Rectangle

Select the Zoom Rectangle tool, then hold down the left mouse key and drag the mouse to form a rectangle. Release the mouse button and the area you chose will be enlarged to full screen.

Move Map

Select the Move Map tool, then click on the map. Hold down the left mouse button and drag the map in the direction you want to move it. Release the mouse button and the map will be redrawn.

Output

This tool sets up for printed output for tables, queries or maps (See Section 17).

Distance Measure

Select the Measure Distance tool then use your left mouse button to click on the starting point. Move your mouse to the point you want to measure to and click the left mouse button again. The distance will be displayed on the Status Bar at the bottom of the screen. Clicking on a further point will show both the distance from previous point and the cumulative distance from the first point. To zero the counter, double click on the starting point for the next measurement.

[Version 2.3 onwards – moving the mouse within the last few mm of the edge of the map display while measuring will scroll the display]

Open/Close Homepage

Select Activate Homepage tool to display the Homepage. The Homepage may be closed by clicking on the close button [‘X’] or by clicking the Activate Homepage tool again. See Section 4

6. Layers and Data Tables

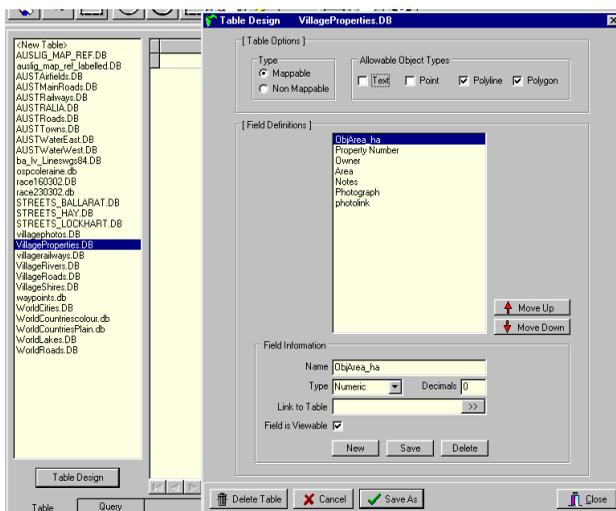
An important difference between a computerized map and a paper map is that a computerized map can have information about Objects attached to it.

In Streets Ahead, each layer has a matching data table which can contain information about the objects which appear on that layer. This means that each object can have descriptive information or even photographs attached. In the Data View the tables appear very much like lists of information. Each row represents an object [e.g. a paddock], and every column describes something about that object [e.g. its pasture variety, the date it was sown, or who sowed it].

Creating/Editing Layers and Tables

To create a new layer and data table or to edit the structure of an existing table, use the Data View Tab, highlight <New Table> or the name of the table to be edited and click the Table Design button.

The default is to create a Mappable table which will initially be a blank layer on which you can draw objects. For mappable tables you can define which type of objects you want to be able to draw on that layer [i.e. Text, points, Polylines, Polygons.]



The Table Design dialog .

Tables can have any number of fields [columns]. Mappable tables will automatically have two numeric fields. ObjArea_ha contains the area of a polygon object in hectares and ObjLength_m contains the length of a line object (e.g. a fence) or the perimeter of a polygon object (e.g. a paddock) in metres. The values of length and area will be automatically inserted into these fields when objects are drawn on the map layer.

When creating the table it is necessary to define what type of information you want to store in the table. Although it is possible to store most types of information in an alphabetic field this is not necessarily the most efficient method.

Field types available:

Alpha	Use if the contents of the field will be any combination of alpha numeric characters (A to Z and 0 to 9 and spaces). E.g. names, addresses and phone numbers. You must define a length for these fields.
Numeric	Use where only numeric values are to be entered. For example, costs, lengths and weights. You must define the number of decimal places you intend to use. E.g. If you were entering costs you would normally specify two decimal places to represent cents.
Integer	Use where only whole number values are to be entered. E.g. number of trees, population etc.
Note	Allows unlimited open ended comments to be entered. [Version 2.2 restricts entry to the length you define]
Image	Allows an image such as a scanned photo to be attached to an object and actually stored within the data table. Note that this can create large files.
Image Link	Allows a link to an image which is stored in the Streets Ahead Photos sub-directory. This may be a better option than using an Image field if your table is likely to have a large number of records.
Date	Use for entry of dates in DD/MM/YYYY format.
Link	Links this field to a field in another table. This allows the creation of lookup tables for the easy entry of data. The table to which the field is linked should be created first.

Example of creating a linked table

1. Create a non-mappable table of PestCodes with a field called PestName which contains records such as Rabbit Foxes etc.
2. Create a file for Pest Locations which is mappable and which has a Link field PestType linked to the PestName field in PestCodes.
3. When records are entered into the PestLocations table, the PestType field will show a dropdown list of pests from which you can choose.

7. The Drawing Toolbar

The Drawing Toolbar has tools to draw four types of objects – text, points, lines and polygons. In addition, there is a tool to set the default style for each object.



Text Point Line Polygon Drawing Toll Settings

To use a drawing tool, click on it with the left mouse button and then move to the part of the screen at which you want to draw and begin drawing. Drawing Buttons are only active if a layer has been set as being a ‘Draw Layer’ via the Map Layer Control. (see Section 11).

When you create your own layers, the types of objects that can be drawn on these must be defined, and only drawing tools that match this definition will be active for the layer. E.g. if you create a layer and define it as only allowing Point Objects, then only the point drawing tool will be active when you draw on that layer (see Creating New Map Layers in Section 6)

All layers have a corresponding table which holds the data for any objects you create. This data can be viewed via the Data Page of the Details tool. Adding an object onto the layer automatically adds a record to the table for you.

A default style applies to all objects of that type when they are drawn. Every time you draw an object it will have the same appearance. This is a sensible principle because a map with consistency of representation is easier to understand. You can also edit the style of individual objects after they have been drawn by using the Details tool.
[Version 2.3 onwards – moving the mouse within the last few mm of the edge of the map display while drawing polylines or polygons will scroll the display]

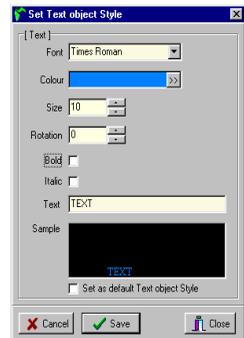
Drawing text



When the text tool is active you can place text on the Drawing layer. For example you might want to annotate a paddock as being ‘The House Paddock’.

Click on the text tool to activate it. Then move your mouse to the point on the map where you want to place text and click the left mouse button again.

The dialog box at right will appear. Enter the wording which you want in the text entry field, modify the style if required, and then click on ‘Save’. The words you entered will appear on your screen. The Details tool (see Section 13) can be used to attach data to this text object or to change its style.



Drawing points



When the point tool is active you can create points on the Drawing Layer. Move your mouse to the point on the map where you want the point to be, click the left mouse button and a point will be drawn on your screen. The Details tool (see Section 13) can be used change the style of the point and to add information to any data fields attached to that object.

Drawing polylines



When the polyline tool is active you can draw lines on the Drawing Layer (e.g. a fence or track). To draw a polyline, Activate the polyline tool, then move your mouse to the point on the map where you want the start of the line to be, click the left mouse button. Move the mouse and click again at the first bend of the line, then at the second bend etc. At the end point either double click the mouse or move to the Polyline tool and click to deactivate it. A straight line consists of only the start point and the end point.

The Details tool (see Section 13) can be used change the style of the line and to add information to the data fields attached to that object.

Drawing polygons



When the polygon tool is active you can draw a polygon on the Drawing Layer (e.g. a paddock or a soil type). Polygons are different to polylines because they are enclosed. This means that you can determine the area of objects such as a paddock.

To draw a polygon, activate the Polygon tool, then move your mouse to the point where you want the polygon to start. Click the left mouse button to start the border of the polygon. Move the mouse clockwise and click again at the first bend of the boundary line, then at the second bend etc. At the end point double click the mouse. You do not have to click back on the start point to complete the polygon. the program automatically connects the start point to the last point drawn.

It is important that you only use a single mouse click at each intermediate point, and that you draw the polygon in a clockwise direction. Drawing in an anti-clockwise direction will cause the calculated area to have a negative value.

The Details tool (see Section 13) can be used to change the style of the polygon and to add information to the data fields attached to that object.

Drawing Tool Settings

This tool allows you to set the default styles for each of the drawing tools as well as for Labels, Selections and the objects chosen by the Details tool. Objects created after the default style is changed will have that default style. [Note that the style of individual objects may be changed after creation by using the Details tool.]

Default text style

Click on the Drawing Tool Settings Tool, then on the Text tab. You can change five aspects of the default text style. A sample of the text in the default style is displayed.

- Text Font Arial, Courier New, Times Roman fonts are available.
- Text Colour Choose from any of the colours displayed or create a custom colour.
- Text Size Choose any font size from 6 to 60.
- Text Type in the text that you want to be displayed
- Rotation Enter the angle of rotation anticlockwise from horizontal. You can rotate the text to follow a feature such as a road or river.

Default point style

Click on the Drawing Tool Settings Tool, then on the Point tab. You can change three aspects of point style

- Symbol You can choose any one of twenty symbols from a drop down list (circle, cross, square,...).
- Colour Choose from any of the colours displayed or create a custom colour.
- Size The symbol can be displayed in any size from 1 to 60. The bigger the number the bigger the symbol will appear on your screen.

Default polyline style

Click on the Drawing Tool Settings Tool, then on the Polyline tab. You can change the three aspects of polyline style.

- Style What the line looks like (solid, dashed,...). You can choose any one of styles from the drop down list.
- Colour Choose from any of the colours displayed or create a custom colour.
- Width The line can be displayed in any size from 1 to 10. The bigger the number the fatter the line. Note that width settings of greater than 1 will cause the polyline to be a solid line.

Default polygon style

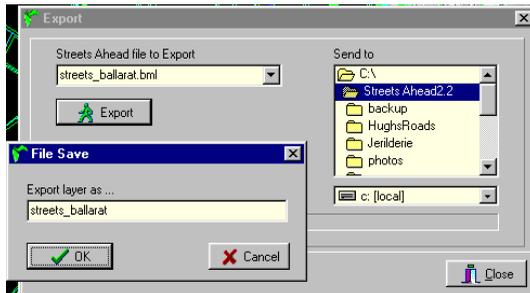
The two components of a polygon style are the style of the line that surrounds it, and the style of the fill that goes in the middle. These are detailed below.

- Line Style What the surrounding line looks like (solid, dashed,). You can choose between any one of five styles from the drop down list.
- Line Colour Choose from any of the colours displayed or create a custom colour.
- Line Width The boundary line can be displayed in any size from 1 to 10. The bigger the number the fatter the line.
- Fill Style The polygon can have any one of eight fill styles in the drop down list.
- Fill Colour Choose from any of the colours displayed or create a custom colour.

8. The Menus

The File Menu

- **Import** Allows the import and translation of MIF / MID format map files into Streets Ahead format. **[Pro Version Only]**
- **Export** Allows any BML layer to be exported in MIF / MID format for use within other systems or for transferring to another Streets Ahead user. **[Pro Version Only]**



- **Work Area** Allows you to define a number of work areas [each of which can access files in a separate directory], and to switch Streets Ahead to run in one of those work areas. **[Pro Version Only]**
- **System setup** Allows entry of the registration code for Streets Ahead.
- **Exit** Exits from the program

The Selection Menu

- **Show on Map Red** Selections of records within the Data View can be shown highlighted on the Red Map.
- **Show on Map Blue** Selections of records within the Data View can be shown highlighted on the Blue Map.
- **Show on Data View** Selections of records made on Maps Red or Blue or via the Query can be shown highlighted on the Data View.
- **Clear Selection** Clears selections on the current map view.
- **Clear Labels** Clears labels on the current map view
- **Clear All** Clears both selections and labels on the current map view

The GPS Menu [Requires GPS Module] See using GPS on Section 16

- **Manager** Allows download / upload of Waypoints[Landmarks], Routes and Tracks from the GPS unit to the PC as well as editing of this data, showing it on the map display and saving to data files.
- **Tracking** Allows setup of the GPS / PC link and streaming output from the GPS unit whilst moving to be sent to a notebook computer and shown on the map display.

The Help Menu

- **Help** Allows access to the onscreen Help program. Click on any of the topics listed under the Contents page or use the Search Button to find the topic which you want. The Help program can also be activated by hitting the F1 key at any time.
- **About** Displays the 'About Streets Ahead' window which shows the version number.

9. The Status Bar

The status bar at the bottom of the map display shows

- the Lat/Long co-ordinates of the mouse pointer.
- the width of the current map view in metres.
- the total distance and last intermediate distance when using the measuring tool.
- and which map layer is the active drawing layer on each of the two map displays.

10. Mouse Right Click

Clicking the right hand mouse button when the mouse is anywhere on the map display opens up a menu which allows definition of labels (see Section 12), clearing of selections and labels and the setting of the map width.

The 'Set Map Width' option allows you to zoom to a specific magnification [e.g. setting the map width at 10000 metres will produce a screen display of an area which is 10km from East to West]. This can be used in conjunction with the Scale Bar option in the print out of a map so that the scale bar is consistent. The length of the scale bar is automatically set by the program at 20 % of the map width

11. The Map Layer Control Dialog Box



This dialog shows a list of available layers. Each of these layers can be set on or off so that it can be displayed as part of a map view, or moved up and down relative to other layers, or set as the Draw, Selection or Labels layer. Once you click 'Apply' these settings become active for either Map Red or Map Blue.

To display a map layer click the box beside the name.

Any changes made will apply to Map Red only

Register Image

Allows images such as Aerial photos to be georeferenced

Hide/Unhide allows you to remove or add map names to the list on this form.

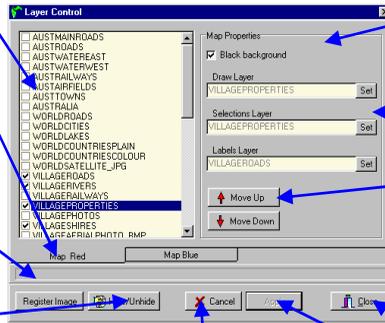
Cancel any changes made since last Applying.

Show maps on a black or a white background.

Set Draw , Selection and Labels Layers.

Change the order in which layers appear on the map.

Closes the dialogue box. **Applies** any changes.



Layer Activation

The names of all the available layers are displayed with a small box to their left. Clicking in this box will make the layer active so that it will display. All files of the types handled by Streets Ahead which are in the active directory will be available to you. [See compatible file types Section 14]

Setting the Map Properties

Highlight the layer name and click the Set button for the Draw layer, Selection layer and/or Labels layer. The name of the layer set with that property will appear in the box.

Draw Layer

To enable objects to be drawn on a layer you must have that layer set as the Drawing Layer. It is only possible to draw on one layer at a time, but you can change which layer is set as the Drawing Layer at any time.

Selections Layer

To define the layer in which objects will be selected by the Selection tools.

Labels Layer

Defines which layer will be able to show labels. See Show Labels Section 12.

Move up / Move down

The ability to move a layer up or down is important to assist in map presentation. E.g. AUSTTOWNS urban areas are of solid fill, AUSTRoads displays roads as red lines. The AUSTRoads layer should be put higher on the list than AUSTTOWNS otherwise the roads in urban areas will be covered by the solid fill colour and not be able to be viewed.

Highlight the name and click on Move Up or Move Down as many times as you need to move the layer to the position you require.

Imagining the various layers as if they were drawn on clear plastic sheets which can be placed on top of one another will help you determine the order they should be in.

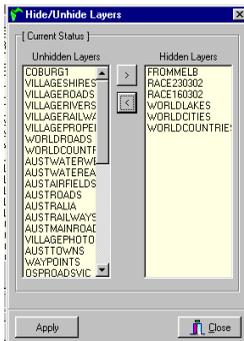
Show black background

The Map Layer Control also allows the background of the maps to be switched from black to white. Which one you choose is mostly personal preference, but sometimes the color scheme of your mapping will mean that different backgrounds will provide greater ease of viewing. If you want to paste a map image into another application a white background may be preferable.

Register an image [Pro and Traveller Versions]

If aerial photos or other image layers are to be shown in Streets Ahead it will be necessary to georeference them so they will display correctly. (see Section 15).

Hide / unhide



The list of layers on view in the Map Layer Control may be simplified by 'Hiding'. Hiding a layer makes the layer control box easier to work with when you have a lot of layers in the active directory. In the dialog box use your left mouse button to highlight a layer and then click on the arrows to move it between the 'hidden' and 'unhidden' columns.

This procedure does not delete the layer. Any layers 'hidden' may be brought back again at any time.

Cancel

Cancel any actions and revert back to the settings that were there when you first opened the dialog box or last pressed Apply. This is handy for when you make a mistake and don't want to apply any of the settings changes that you have made.

Apply

Apply any changes you have made.

Close

Close the dialog box.

12. Show Labels

- First make sure that you have set the required layer as the 'labels layer' via the Map Layer Control.
- Using your mouse, right click on the map display. The menu shown will enable you to define which field of that layer's data table will be used as the label for objects.
- To label an object use the Single Label Selection tool or the Multiple Label Selection tool to select an object or group of objects. The object(s) will be labeled with the field chosen when defining the labels.

The font type, colour and font size of the labels can be set via the Miscellaneous page of the Drawing Tool Settings tool

Example:

To label the towns on the AUSTTOWNS layer.

1. Open the Map Layer Control. Highlight the layer required – AUSTTOWNS – and click on the Set button beside the Labels Layer box. Then click Apply and Close.
2. Using your mouse, right click on the map display. From the menu which appears choose 'Labels Define'. The fields in the AUSTTOWNS data file which can be used as labels are listed. Highlight NAME then click OK
3. Click on the Single Label Selection tool or the Multiple Label Selection tool. Now select some towns. The names of the towns selected will appear beside them.

To show labels of different styles simultaneously, change the style in between applying labels using the Single Label Selection tool only.

13. Show Details

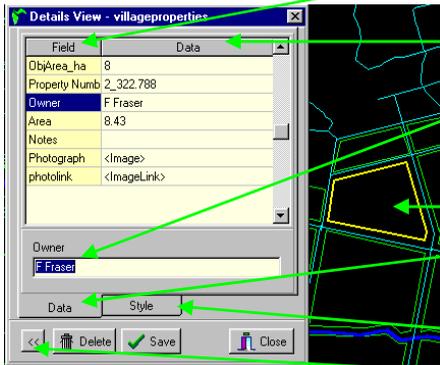


The Details tool displays a dialog box that allows you to display and edit an object's attributes. When the tool is activated, clicking on an object (e.g. a road, paddock or tree) will show you two important pieces of information about the object - what data is associated with it, and its style.

The Data Page displays all the attribute data that is attached to the object that was selected. You can view and change your data here (such as a road name).

The Style Page allows the style settings for the object [the way it is displayed -colour, size etc.] to be viewed and changed.

The selected object (and associated data) can also be deleted.



Left hand column shows the names of the fields in the table.

Right hand column shows the data within each field.

If a field is highlighted, its contents are displayed in the edit box so that they can be edited.

This is the object that was selected.

Data Page shows the data table information.

Style Page shows the style settings.

<< or >> contracts or expands the dialogue box.

Data Page

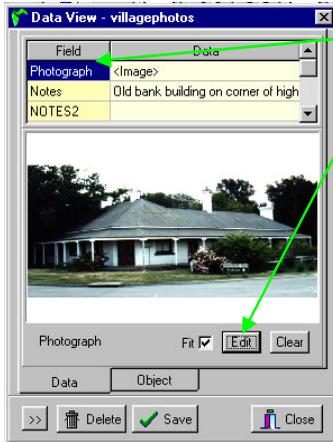
Allows the user to view the various data fields. The form has a field column and a data column. The left hand column contains the names of fields and the right hand column displays the data within the fields.

Clicking on a data field in the list displays the contents in an edit box below the list. You can change the associated data in the edit box. Click the 'Save' button to save your data entry.

Connecting Photographs to map objects

Data tables which have Image or ImageLink fields can have images attached to any object on that layer. See Creating New Tables Section 6 for details about the two image field types.

The Details tool is used to view and edit any linked images.



Highlighting the image field name will display the photo.

Click on the 'Edit' button to bring up a dialogue box which will allow you to search your computer for the image file required.



Style Page

Allows you to edit the style of the currently selected object. Also see Default Object Style - Section 7

Delete button

Click this button to delete an object and its attribute data. A warning will appear as this process is not reversible.

Close button

Click this button to close the dialog.

14. Maps and Tables from Other Sources

Tables that have been created on another copy of *Streets Ahead* or from other sources, can be automatically added to the Map Layer Control list by putting the relevant files into the directory from which you are running *Streets Ahead*. If you accept the standard setup when installing *Streets Ahead* this will be C:/Osprey/*Streets Ahead*.

Compatible file types

- *Streets Ahead* layers with a BML extensions
- MapInfo Interchange Formatted layers - MIF / MID (viewing only).
To make a MIF/MID layer editable you must use the 'Import' option in the File Menu. [**Pro Version Only**] This will translate the file into *Streets Ahead* format.
- Map layers in other formats - DWG, DXF, DGN or SHP
(these will be displayed as viewable layers only)
- Image files such as aerial photographs and drawings can be of type BMP, JPG or TIF. An RSF file is created by *Streets Ahead* when the image is georeferenced and contains the details of the registered points for the image. If the RSF file is not present then the image will need to be registered manually. [See Section 14]

The program will find the files when next started and add them to the Map Layer Control list. Removing the files from the directory will also remove them from this list.

Note: *Streets Ahead* requires map layers to be in a Projection of Longitude / Latitude, WGS84 Datum.

15. Aerial photos/Satellite images

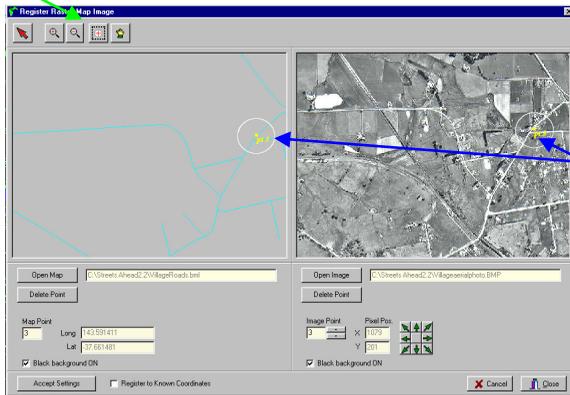
Images such as aerial photographs or satellite images can be viewed as a background to other layers.

In their digital form, air photography (often from a desktop scanner) and satellite images come in many formats. If your digital photo is in some other format than BMP, TIF or JPG, then you should use an image editing program to open the image and convert it. In general BMP and TIF files are larger, but may provide better presentation quality while JPG files will be much smaller.

Streets Ahead requires the position of the image to be registered against identifiable latitude / longitude points. You access this through the 'Register Image' button in the Map Layer Control(see Section 11).

Initially an empty version of the dialog shown below is displayed.

Tools for Selection, Zoom In/Out, Zoom to Rectangle and Move Map



Points indicate the same location on map layer as on the image.

Two methods of position registration are available.

Each requires at least three points on the image to be matched with known positions.

Registering to Known Coordinates [found by use of GPS unit]

1. Use the Open Image button to open an air photo in the right box.
2. Click on 'Register to Known Coordinates' at the lower left of the dialog box.
3. Use the Select tool on the right display to mark a clearly identifiable point.
4. Type in the latitude and longitude of the marked point.
5. Use the arrows on the Image Point identifier to advance to the next Point number.
6. Repeat tasks 3 to 5 at least two more times, preferably clockwise at well separated points in a rectangular pattern.
7. When you are satisfied that the points on the display represent exactly the same locations as the latitude / longitude values entered, press the 'Accept Settings' button then close the dialog box..

Registering Relative to an Existing Layer

1. Use the Open Image button to open an air photo in the right hand box.
2. Use the Open Map button to open a layer in the left hand box.
3. Use the zoom in, zoom out and pan tools to arrange the displays so that they approximately cover the same locations.
4. Use the Select tool on the right display to mark a clearly identifiable point.
5. Use the Select tool on the left display to mark the same location on the layer.
6. Use the arrows on the Image Point identifier to advance to the next Point number.
7. Repeat tasks 4 to 6 at least two more times, preferably clockwise at well separated points in a rectangular pattern.
8. When you are satisfied that the points on each display represent exactly the same locations press the 'Accept Settings' button then close the dialog box..

The accuracy with which you register the positions of these points will determine how closely the image relates to the map layers when displayed in the main map display.

Because *Streets Ahead* warps the base layers to match the image it is essential that the image is one which has true North at the top of the image. It may be necessary to use a graphics program to rotate the image into the correct orientation.

Note: The points used for registering need to be added in a consistent clockwise order – otherwise drawing objects will not be placed exactly at the position which you try to draw them.

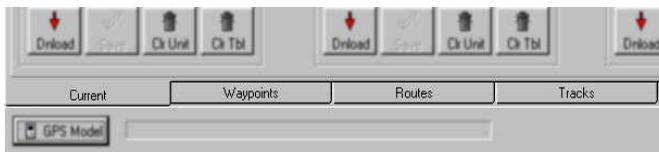
16. Using GPS [requires the GPS Module installed]

The **GPS Module Menu** has two options.

1. **GPS Manager** enables you to upload and download from the GPS unit, and to organise the data associated with the unit, such as waypoints, routes, and tracks.
2. **GPS Tracking** enables streaming output to be received from the GPS and shows your movement on a moving map display if the GPS unit is connected to a laptop in a vehicle.

GPS Manager

The GPS Manager has four tab pages



Current

This page gives details of the data currently held in your GPS unit, the ability to upload/download, and save this data to permanent files.

Waypoints

This page provides the functions for creating/editing/deleting waypoints [also called Landmarks], uploading, and creating a layer based on all or a selection of waypoints. The 'Select Waypoints' button will allow you to filter the range of waypoints in view. In the edit box next to it enter the first few characters of the waypoint name, then click on the button. Your waypoints list will change to only show those with the characters you have entered. This smaller selection can then be uploaded, ignoring the rest of your waypoints. Check that the GPS model you are using allows the number of waypoints entered.

Routes

You can create routes with any number of waypoints. The route selected can be uploaded.

Tracks

These cannot be uploaded, but you can save your tracks as a layer, or simply show the track on the map base. You can keep as many tracks as you like for future reference.

The GPS unit does not need to be attached to use some of the features of the Manager. To test your connection while in the Manager, click on the GPS Model button. If the unit is attached and the connection is established the model will be found and displayed. If not the message 'Connection failed. Check your settings/connections.' will be displayed instead. Note that not all units have the capability for upload/download. In these cases this module can be ignored except as a means of creating waypoints and routes for general use, or to key in directly to the unit.

GPS Tracking

The Tracking module has two tab pages



Tracking

This allows you to start the tracking process, after completing the setup options. The Tracking form can be shifted anywhere on the screen. You can resize it by clicking on the << button. If you want to change the magnification of the map display, use the toolbar options on this form to zoom in/out.

Click on 'Start' to activate automatic connection to your GPS unit and begin tracking. The first GPS fix will centre your map base automatically, and as you move, the map display will readjust to show the current position at the centre so that you will always have a view ahead in the direction you are moving.

Note: The Coordinate System of your GPS unit should be set to LAT/LON and the Map Datum to WGS84. This is the default on Magellan units and is required for correct map control within *Streets Ahead*.

Setup

This page has options associated with setting up the connection to your GPS unit.

Setting the correct comm port

This is required so that communication to the unit can be established. If the Comm port setting is correct and connection still cannot be made, check with your computer supplier as the cause will be a physical or Windows issue. It is important that the unit is switched on **after** all appropriate cables are connected and Windows is running

Saving your track

You can decide whether or not to save the track as you move – and also to define the file name which you wish to use. You can also define the intervals at which points are to be saved.

Creating Waypoints on the Computer Map Display

- Open the Layer Control and set the WAYPOINTS layer as the Draw Layer. Apply, then Close.
- The points style to be used can be modified via the Drawing Tool Settings tool.
- Click on the Point Drawing tool.
- Click on the map at the point where you want to create a Waypoint. This box will be displayed.



- Enter the full name of the waypoint, or if you want to create a series of points with the same prefix, put in a prefix only and check the 'Auto increment Waypoint Name' box. This allows you to create as many uniquely named points as you like without having to manually assign a name to each one. The 'Last Used' box indicates the last value used for this method.
- Cancel will result in a waypoint not being created.
- Waypoints created here can be edited, deleted or used in routes via the GPS Manager.

17. Printing / Output

Map Print [If either Map Red or Map Blue pages are in view]

The Output tool allows the printing of the current map view to a printer or to the Windows clipboard so it can be pasted into other applications such as a word processing document. An onscreen preview is not available.

Map printout to paper can include a Scale Bar which can be positioned at top left or right or bottom left or right. The bar will be 20% of the width of the output. To set the scale bar to a specific value use the 'Set Map Width' feature to define the width of the screen display to 5 times that value. (see Section 10)

The scale can be printed as black on a transparent background so that the map can be seen through the bar – or on a white background [useful for output to the clipboard].

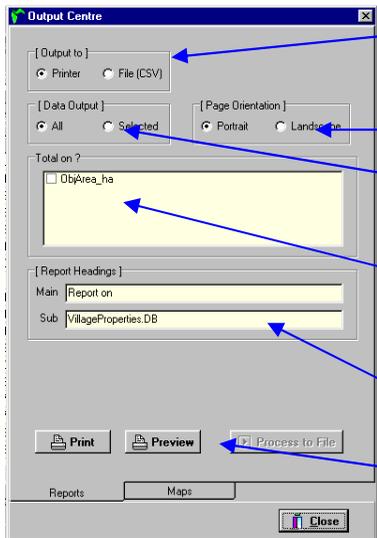
When printed, *Streets Ahead* automatically changes the black background to white in order to reduce the use of ink or toner.

Reports [If the Data View Page is in view]

This allows the listing of records from any one of the data tables or from queries.

The table or query to be used needs to be opened on the Data View Page first.

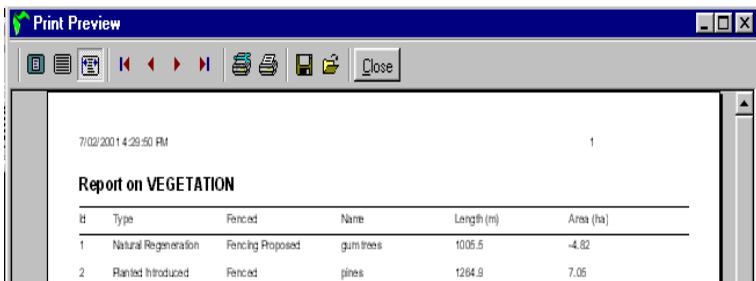
Click the Output tool to open the Output Centre Dialog box.



The screenshot shows the 'Output Centre' dialog box with the following settings and annotations:

- [Output to]:** Radio buttons for 'Printer' (selected) and 'File (CSV)'. Annotation: 'Choose whether report is to be printed or saved to a CSV [comma separated format] file for use in spreadsheets etc.'
- [Data Output]:** Radio buttons for 'All' (selected) and 'Selected'. Annotation: 'If some records of the table have been selected choose whether to include all records or just the selected ones.'
- [Page Orientation]:** Radio buttons for 'Portrait' (selected) and 'Landscape'. Annotation: 'Print in portrait or landscape format.'
- Total on ?:** A list box containing 'ObjArea_ha'. Annotation: 'The contents of numerical fields may added to produce totals which print at the end of the report.'
- [Report Headings]:** Text boxes for 'Main: Report on' and 'Sub: VillageProperties.DB'. Annotation: 'The user may define the report heading and subheading.'
- Buttons:** 'Print', 'Preview', and 'Process to File'. Annotation: 'Send report directly to printer or show as a preview before printing.'
- Footer:** 'Reports', 'Maps', and 'Close' buttons.

Previewing Reports

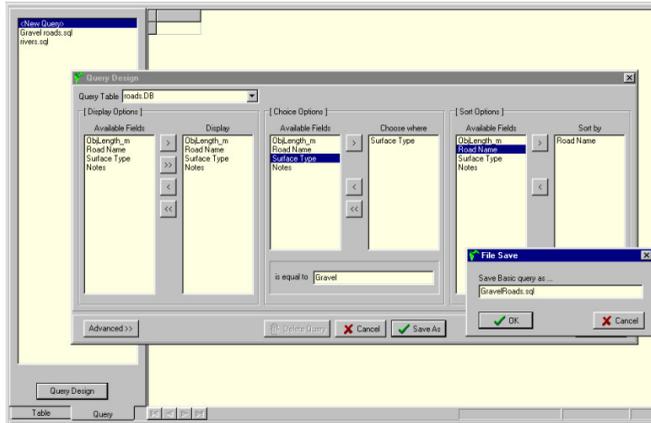


The Tool Bar of the Report Preview has the following tools:

- **Zoom to fit, 100%, Zoom to Width** which change the size of the screen preview.
- **First Page, Previous Page, Next Page and Last Page** which move to the relevant page of the output.
- **Printer Setup and Print** which define the printer to be used, the page range to be printed, and send the output to the printer.
- **Save Report and Load Report** which allow the output to be saved as a report file {*.QRP} and previously saved QRP files to be read in and displayed. The Save Report tool also allows the report to be saved to either a straight text file [*.TXT] or to a Comma Separated file [*.CSV] which facilitate the transfer of the data to word processor or spreadsheet programs.

18. Querying Data [PRO Version Only]

This allows the selection of data from any one of the data tables. The user selects which table to use, which fields are to be displayed, the basis of choosing records and the order in which records are to be displayed.



The Query may then be saved using any name you wish.

You can open a saved query at any time to display those records of the data table which meet the criteria of the query. The display may be printed or viewed as a highlighted selection on the full data table page or on either of the map views.

The 'Advanced' option allows users who have experience with Structured Query Language to directly modify the SQL code to create more complex custom queries or to create original SQL queries with Joins, etc. Instructions on creation of complex queries is outside the scope of this introductory guide book.

19. Backup – Data Security

It is impossible to over emphasize the importance of making regular backups of any data which you could not afford to lose. As with any software the integrity of *Streets Ahead's* data is vulnerable to such things as power fluctuations, operating system problems and hard disk errors.

The default directory [folder] for Streets Ahead data files is the C:\Osprey\Streets Ahead directory. Photos used in Image Link fields are placed in a 'Photos' subdirectory of this main directory.

20. Notes on the Map Data

Notes on the Map Data supplied with *Streets Ahead* @ January 2002

GENERAL

All of the data is supplied under licence arrangements which in general permit you to use this data within *Streets Ahead*. You are not permitted to use this data in another application, convert it for use in any format or form which may enable it to be used within any other application, electronic process, or manual process, other than those applicable to *Streets Ahead* and its general usage.

While efforts are made to check the validity and accuracy of the data to a level suitable for general usage, Osprey Computing makes no claim that the data is error free and assumes no responsibility for decisions, assumptions, predictions, or any data modelling carried out using this data.

WORLD DATA

This data derives from MaconUSA under licence from Blue Marble Geographics to Osprey Computing.

The country boundaries are current as at June 1996 and conform to ISO-3166 standards.

- World Countries Plain
- World Countries Colour
- World Cities
- World Roads
- World Lakes
- World Satellite Image

The purpose of this data is to provide a very broad 'World Atlas View'.

AUSTRALIAN DATA

This data derives from the Global Map Data Australia, scale 1:1M, under licence from National Mapping Division, Geoscience Australia, Department of Industry, Science and Resources [Formerly AUSLIG].

Some of the data will be modified by Osprey Computing under its internal program of Roads and other data capture using GPS technology. Other elements of the data have been altered to suit the particular simplicity and ease-of-use concepts in *Streets Ahead*.

- AUSTRALIA Coastline of mainland, islands and off shore territories as well as State boundaries.
- AUSTTOWNS 9495 named settlements and urban centres
- AUSTWATEREAST Includes all major rivers, creeks and aqueducts, many
- AUSTWATERWEST of which are named. The data is split into two files for speed of access. It is recommended that you zoom in quite close before opening either of these layers.

- AUSTROADS Not named. The surface type is specified. This layer shows both paved and unpaved roads.
- AUSTMAINROADS This is a subset of AUSTROADS showing the primary roads only. Useful for views of the whole of a state.
- AUSTRAILWAYS Shows the active railway lines and yard locations.
- AUSTAIRFIELDS 1516 Airfields by name.

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Please note that the maps and data as sourced from AUSLIG are not in the same format and projection as the derived maps and data which are supplied by Osprey Computing for direct use in *Streets Ahead*.

SAMPLE DATA

This data is based on a fictitious location called ‘Osprey Village’ to the southwest of Ballarat, Victoria. The layers are intended to be used for experimenting and becoming familiar with *Streets Ahead*.

They may be deleted or moved to another directory once you have become proficient with using *Streets Ahead*.

- VILLAGEPHOTOS
- VILLAGEPROPERTIES
- VILLAGERAILWAYS
- VILLAGERIVERS
- VILLAGEROADS
- VILLAGESHIRE
- VILLAGE AERIALPHOTO

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What's New In Version 2.4?

DataView Page

Active Grid display. Records may now be editing directly into the dataview grid. Notes, images and linked fields will appear in the grid.

Find Record. The Find button below the dataview grid displays the following form.



Using Find to show a town on the map.

- Make the AUSTTOWNS layer the Selection and Labels layer and define the label to be the Name field. See Getting Started - pages 17-19
- In the Dataview use the Find button to find the town, then close the Find Record form.
- Hold down the Ctrl key and click on the Town's name to select this record.
- In the Selection Menu choose 'Show on Map Red'.
- Switch to the Map Red page. The town will be displayed and labeled.

Details View / Editing Records

The data fields of a highlighted record are shown on the details view. Any number of fields may be edited – click 'Save' after all changes have been made.

Version 2.4 has Rich Text Format note fields – these allow the text font, size and colour to be varied as in the example at right.



You can update directly from version 2.2 to version 2.4. The Update is free if downloaded from our website www.ospreycomputing.com.au or \$10 if posted on floppy disk.

What's New In Version 2.6?

Appending Layers

The File menu now has an option 'Append'. This allows you to append all records of one layer into another layer. The original layer is retained.



Ideally the target layer should have the same structure as the original layer. However it is possible to append to a layer of a different structure provided some fields have the same name and are of the same type as the original layer.

- Where a field in the 'To Table' is shorter than the corresponding field in the original table the data for that field will be truncated.
- Where the field is of a different type the data for that field will not be transferred.
- If the target table has fields which do not exist in the original table they will be left blank.
- If the original table has fields that do not exist in the target table data in these fields will not be copied.

If the program finds that no layer already exists with the name entered for the target layer 'To Table' then a new layer will be created with identical structure as the original layer. This allows you to create a copy of a layer.

The Append procedure can be used to allow new GPS waypoints to be appended to an existing layer. Download the waypoints, then save them as a new layer. Then append the new layer to the existing layer.

Displaying Latitude / Longitude

Previously Latitude/Longitude fields of layers created from waypoints only displayed the integer value of the Lat/Long data. You can now edit the structure of such fields to make them numeric with 6 figures after the decimal point. These will then display the full latitude/longitude values.

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