THE TRACKER

snapXYZ

Aerial Survey Coordinates Entry Utility

USERS MANUAL

TABLE OF CONTENTS

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1 - ABOUT THIS MANUAL

Please note that this manual might not exactly match the software you are using.
As the system is being changed and improved all the time, the written material might become slightly different from the current software release. Manuals are regularly updated to reflect changes made to the software.

UPDATES

Pages numbers include the chapter number and the page number, E.G. 15 - 3, meaning page 3 of chapter 15.
You will receive updates that consist of complete chapters. Simply discard the old chapter pages and replace them with the new chapter.

CHAPTERS

Chapters are in no particular orders. Newly written chapters are added at the end of each manual.

2 - OVERVIEW

snapXYZ is a digitizing utility used when a list of the coordinates of the areas or photo lines already exists or is easy to prepare.

- Includes a text editor which allows typing the project coordinates or editing an existing text file.

- Accepts coordinates for photo runs, limits of project areas and any background information.

- The editor supports the most common text editing functions (search and replace, copy, paste, etc.)

- The text file can be saved and reloaded for later changes.

- Accepts most types of geographic or grid coordinates without conversion or calculation.

- Includes a graphic viewer to visually check the correctness of the text input.

- Can also be used to import the coordinates of special airspace and restricted areas from aeronautical documents (copy or scan). These graphics can be shown as background during the planning or the flight.

- Optionally, it imports drawings prepared by other programs in ASCII format (i.e. DXF).

snapXYZ has two main windows, a text editor in which the coordinates are typed and a graphical viewer where the user can check visually the result of the entries.
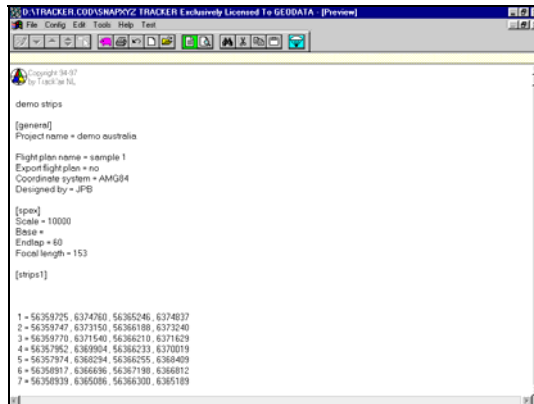
Figure 2-1
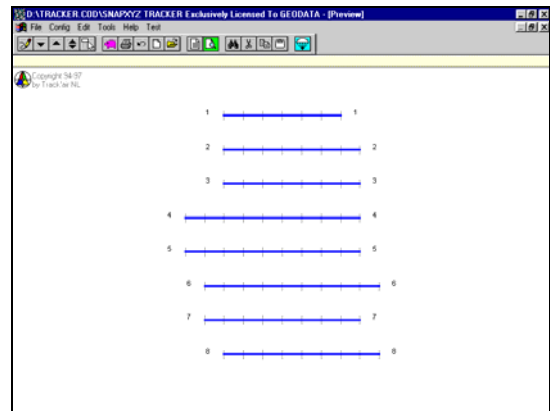
   Figure 2-2

3 - QUICK TOUR

The following will assist you to run the program the first time and to get familiar with its operation. The directory **TEXTXYZ** contains several examples that can be loaded and edited for practicing with the system.

1) Start the program by clicking its icon .
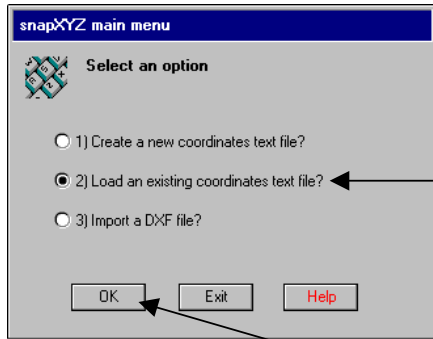
2) Select **options 2)**
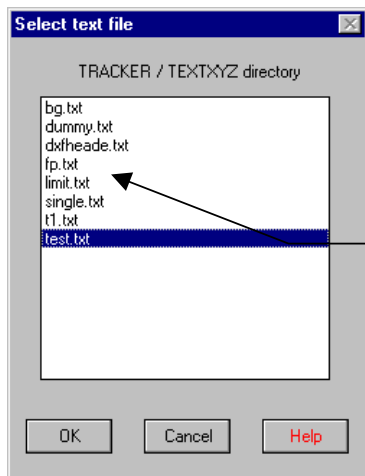
3) Press **OK**.

Figure 3-1

4) Select the file named **fp.txt** (or any other) from the list box and press **OK.**

Figure 3-2

5) A sample flight plan will be loaded in the text editor. The text consists of the header which contains the basic information and the start and end coordinates of the actual runs. Do not modify the text at this stage.
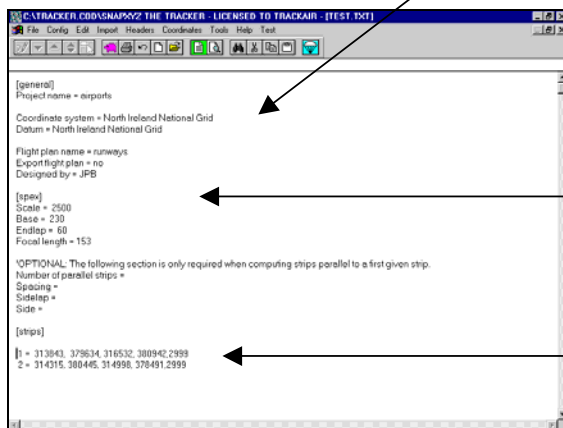
Header.

Coordinates.

Figure 3-3

6) Now, press the preview button ![preview icon] on the main toolbar.
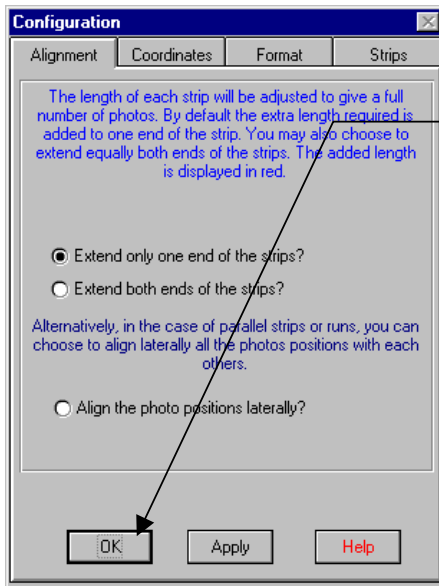
7) The configuration form will be displayed. At this stage, press **OK** to accept the defaults.

Figure 3-4
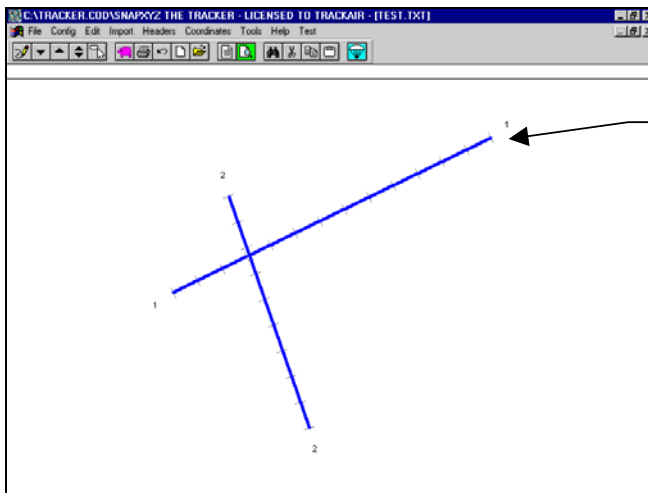
8) The textual description has now been converted to graphics (you can use the display zoom and drag functions to inspect the drawing).

Figure 3-5

9) Press the Exit button ![exit icon] to leave the program

4 - ABOUT THE COORDINATES

WHAT IS NEW SINCE VERSION 1.86?

- Tracker is progressively changing the way it deals with coordinates. This is imposed by the incredible amount of coordinates systems around the world (some say 12 000!). The coordinate systems added to version 1.86 are somewhat different from the previous. This is totally transparent to you but the new systems might duplicate what you could already do before.
- Support for international WGS84 coordinates. Worldwide lat/long WGS coordinates can be entered.
- Support for international geographic coordinates. Worldwide lat/long coordinates can be entered.
- Support for International datum, for example: Santa_Braz,International,6378388,297,-203,+141,+53.
- Support for International UTM coordinate system.

WHAT'S THIS DATUM STUFF GOT TO DO WITH ME?

The datum are the shift parameters which allow Tracker to transform your coordinates from your local mapping system to the WGS84 system used by the GPS. The datum parameters are required when using most coordinates. Few coordinates systems (NAD83) use the WGS84 ellipsoid itself and do not required datum shift parameters. There is no way for a program to know which datum you are using unless you report it yourself. Erroneous datum information are the No 1 cause for errors when flying aerial survey with GPS, please make sure that you select the right datum for your planning.

DATUM LIST

The list of available datum is kept in the file **TRACKER\INIS\DATUMS.INI**
This is plain text file that you can edit at will. You can change the parameters or add new datum. Just make sure that the parameters are entered correctly, otherwise the system might hang. Please make a backup copy before any modification.
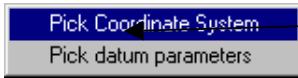Tip: You can reduce the size of the list by deleting the datum that you are unlikely to use.

Extract from the datum.ini file:

Astro_Beacon_"E"=International,6378388,297,+145,+75,-272
Astro_Pos_71/4=International,6378388,297,-320,+550,-494
Astronomic_Stn._'52=International,6378388,297,+124,-234,-25
Australian_Geodetic_1966=Australian_National_66,6378160,298.25,-133,-48,+148

5 - USING THE WORLD GEOGRAPHIC COORDINATES

1) Place a header (flight plan, area limit or background) on your editor

```
Pick Coordinate System
Pick datum parameters
```
2) Select the Pick coordinate system.

Figure 5-1

```
Available Coordinate Systems                    [X]
Select the coordinate system from the list, then press
            the OK button to insert it into the text.

  LCO SOUTH ZONE                          [▲]
  Lebanon
  North Ireland National Grid
  South Africa
  Spain UTM-ED50 system
  Switzerland
  UK OS National grid
  USA State Plane Coordinate System (SPCS)
  UTM coordinate system north hemisphere
  UTM coordinate system south hemisphere
  World geographic latitude-longitude
  World WGS 84 coordinate system          [▼]

        OK              Help
```

3) select the **World geographic lat/long coordinates.**
4) Press **OK**.

3) select the **World WGS coordinates.**
4) Press **OK**.

Figure 5-2

```
Datums list                                     [X]
Select the datum from the list, then press the OK button to insert it
                      into the text.

  Mexico_(NAD27)                          [▲]
  Midway_Astro_1961
  Mindanao
  Minna
  Montjong_Lowe
  Nahrwan
  Naparima_BWI
  North_America_1927_east
  North_America_1927_mean
  North_America_1927_west
  North_America_1983
  Observatorio_1966
  Old_Egyptian                            [▼]

        OK              Help
```

5) Select your datum.
6) Press **OK**.

Figure 5-3

7) Proceed as described in the manual to enter geographic coordinates.

Example:
Coordinate system = World geographic latitude-longitude
Datum = north_america_1927_mean,clarke_1866,6378206.4,294.9786982,-8,160,176

6 - USING THE WGS COORDINATE SYSTEM

For the WGS coordinates it is not necessary to enter the reference datum because in it is known.

1) Place a header (flight plan, area limit or background) on your editor
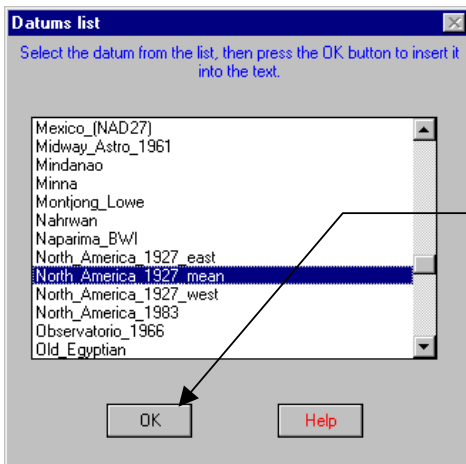

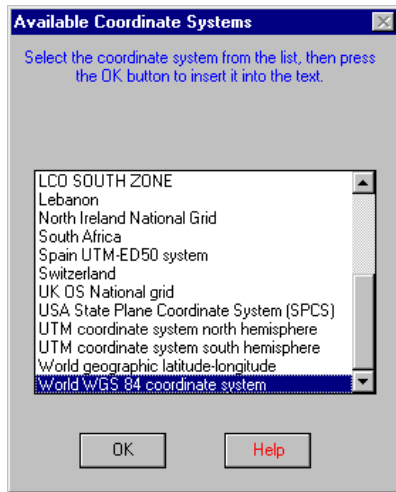2) Select the Pick coordinate system.

Figure 6-1

Figure 6-2

5) Proceed as described in the manual to enter geographic coordinates.

7 - USING THE UTM COORDINATE SYSTEM

The UTM system is a fully defined mapping system that covers the entire world. Here, all the map parameters are known but two: the reference datum and the hemisphere (we are strongly supporting the implementation of a really universal UTM system based on a single ellipsoid with a unique grid coordinate for each point on the earth)
Here again it is necessary to indicate which is the datum used for the map. In addition, if you are entering grid coordinates, you have to tell whether the coordinates are in the northern or Southern Hemisphere as the same coordinate represents 2 different points on the globe!
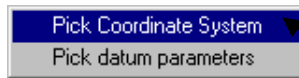
2) Select the Pick coordinate system.

Figure 7-1
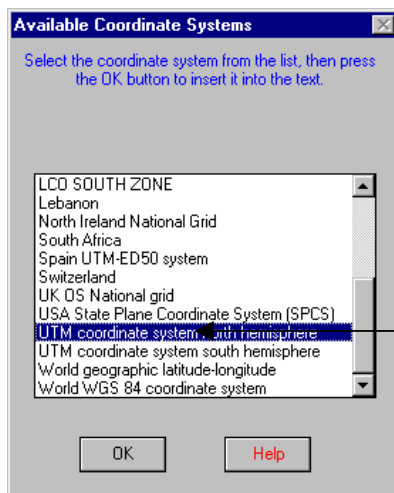
3) select the **World UTM coordinates** north or south hemisphere.
4) Press **OK**.

Figure 7-2

Figure 7-3

5) Select your datum.
6) Press **OK**.

7) Depending whether you are entering grid or geographic coordinates, proceed as described in the manual to enter grid coordinates (do not forget the zone number in front of the easting), otherwise proceed as described in the manual to enter geographic coordinates.
Example:
Coordinate system = UTM coordinate system
Datum = north_america_1927_mean,clarke_1866,6378206.4,294.9786982,-8,160,176

8 - STATE PLANE COORDINATE SYSTEM (USA ONLY)

Each State has its own coordinate system. Tracker keeps a database of information for all States. It is necessary to indicate to Tracker the State, the zone name or number and the ellipsoid of reference (NAD27 or NAD83). All this information is to be found at the bottom left corner of the USGS large-scale topographic map.

Note: Although the NAD27 polyconic projection used on early USGS maps is not part of the SPCS, we have included it to this form.

Select the Pick coordinate system.

Figure 8-1

Select the **USA State plane coordinate system.**
Press **OK**.

Figure 8-2

Select the datum (NAD27 or NAD83) as indicated on the map.

Select the State

Select the zone as indicated on the map.

Verify that the projection is correct.
If not, make sure that your map is actually an SPCS maps, otherwise contact Track'air.

8) Press **Apply**, then **Close**.

Figure 8-3

TRACK'AIR © 1995 - 2002   (vers. 4/29/2002)
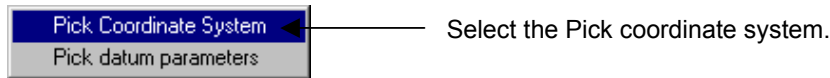
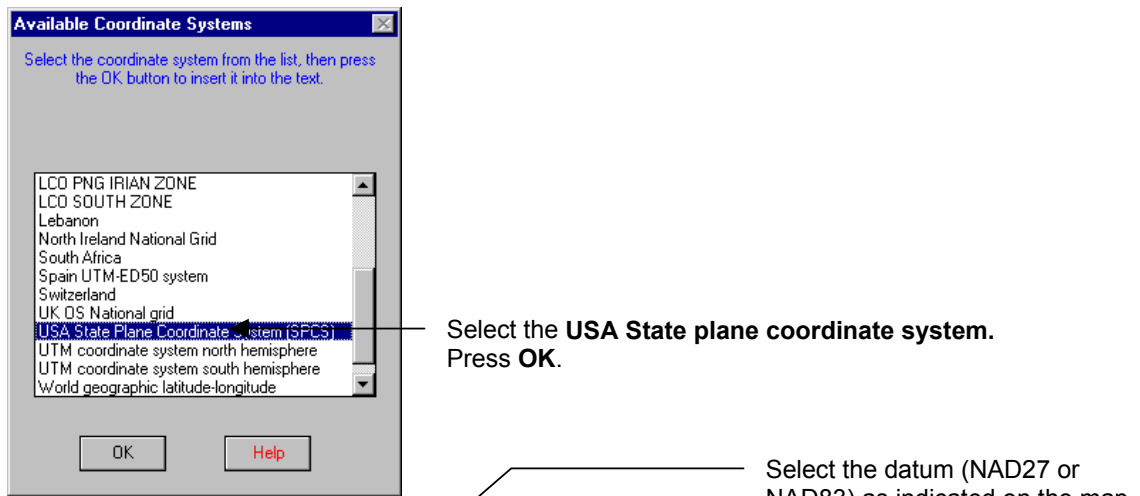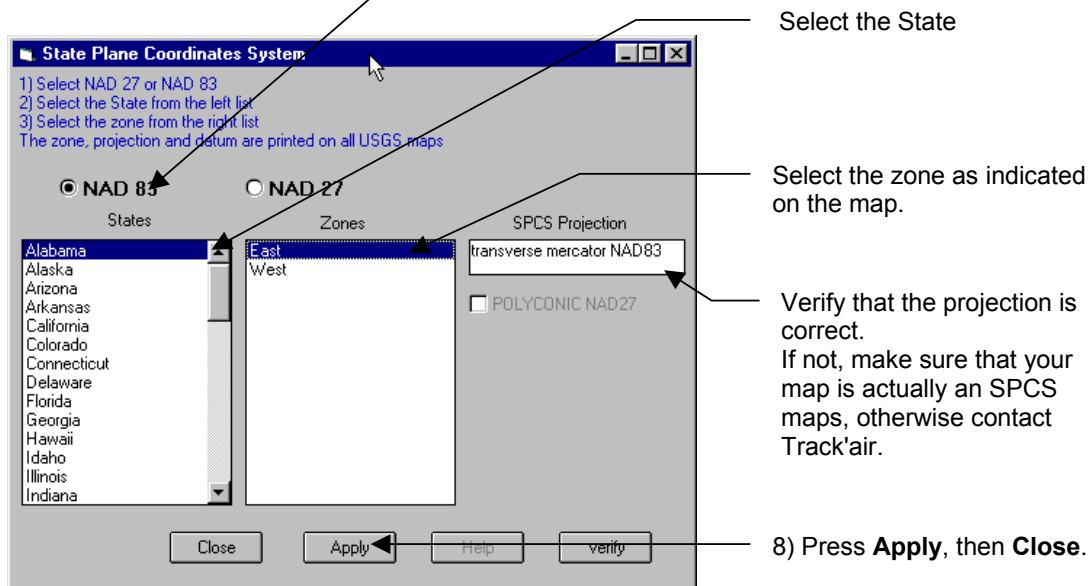**NAD27 POLYCONIC PROJECTION**

The polyconic projection is only available with the NAD27 datum.

SAMPLE FLIGHT PLAN

Depending whether you are entering grid or geographic coordinates, proceed as described in the manual to enter grid coordinates (**without zone number in front of the easting**!), otherwise proceed as described in the manual to enter geographic coordinates.

Note: If possible, it recommended entering geographic coordinate only (lat/long).

Sample flight plan.

[general]
Project name = USA test
Coordinate system = USA State Plane Coordinate System (SPCS)
Datum = Pennsylvania,North,lambert NAD27,12381
Flight plan name = spcs sample flight plan
Export flight plan = no
Designed by = JP

[spex]
Scale = 15000
Base = 1380
Endlap = 60
Focal length = 153

[strips]
1 = 41.40280,-075.63296,41.43810,-075.58643,
2 = 41.44044,-075.62793,41.37483,-075.52870,
3 = 41.38701,-075.54341,41.44099,-075.50249,
4 = 41.48077,-075.57019,41.40499,-075.51337,
5 = 41.46497,-075.59184,41.49338,-075.51835,

9 - LOADING AN EXISTING TEXT FILE

Start the program.

Figure 9-1
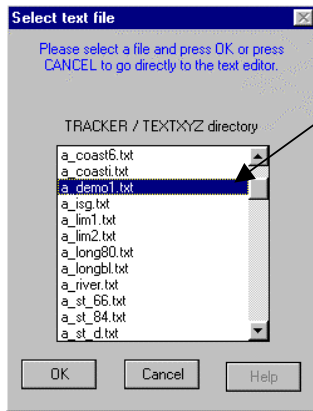
Select a file from the list. All the files required and created by the **snapXYZ** are placed in the **TRACKER\TEXTXYZ** directory. The files are plain ASCII text file ending with a **.TXT** file extension. The files can be created in the **snapXYZ** or with any other text editor such as notepad.

Figure 9-2
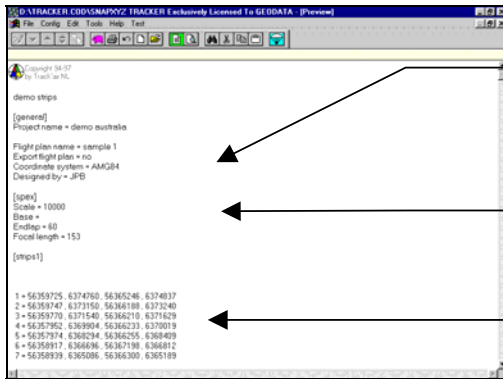
The text file is shown on the editor. A text file consists of a header section that contains the specifications and a coordinate section.

Header.

Coordinates.

Press the graphic preview button to check the drawing.

If the file contains runs, the following configuration dialog will be shown. Refer to the chapter **CONFIGURATION MENU** for details about this form.
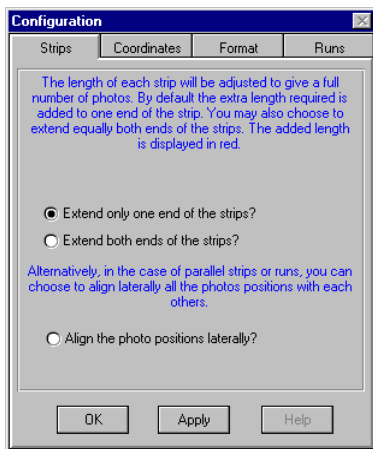
Figure 9-3

10 - CREATING NEW TEXT FILES
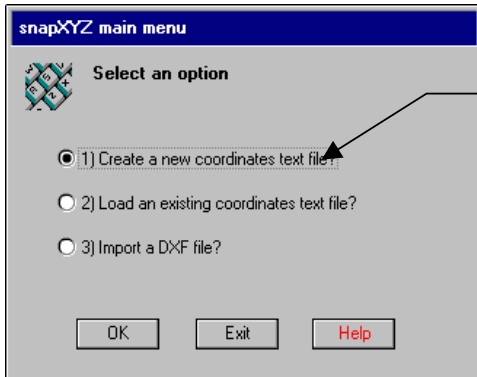
Select option 1, then press OK.

Figure 10-1

You have the choice to prepare a text file containing either the coordinates of photo runs , project area limits, single photos, background details, etc.

- Run coordinates are the coordinates of the beginning and end of each run. In addition to coordinates, snapXYZ will need to know the required scale and the forward overlap (or the photo base).
- Project area limits are the coordinates of the line segments delineating the limit of the projects.
- Background details are the coordinates of line segments that delineate a feature (road, river, restricted airspace, etc.).
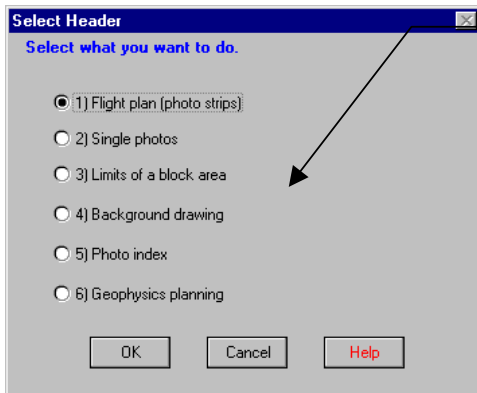
Select one of these options, then press OK.

Figure 10-2

In each case, the text includes a distinct header and the coordinates are differently formatted. The required headers can be copied and pasted from the **TOOLS | ADD HEADER** menu. The format of the coordinates is described in the following pages.

Note: snapXYZ uses text file to input the coordinates. These files are only an intermediate step in the process of inputting coordinates into Tracker. Saving the text file to disk does not mean that the flight plan or area is saved into the Tracker database system. You must also save the your work to the database!

Examples of strips created in snapXYZ.

Figure 10-3

Figure 10-4

Example of an area limit created in snapXYZ.

Figure 10-5

   Figure 10-6

Example of a complex background created in snapXYZ.

Figure 10-7
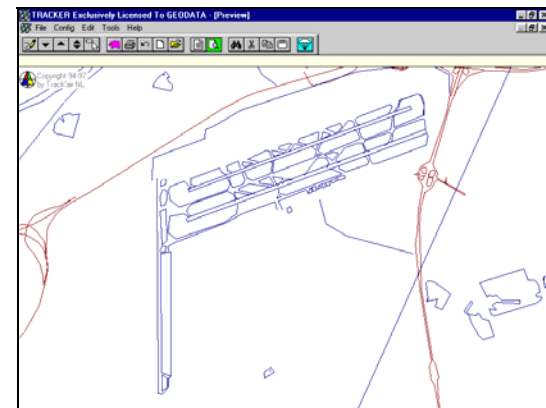
Figure 10-8

11 - PHOTO RUNS

HEADER

Select the **HEADERS > FLIGHT PLAN HEADER** menu to paste a blank header into the editor. The blank header will look like this:
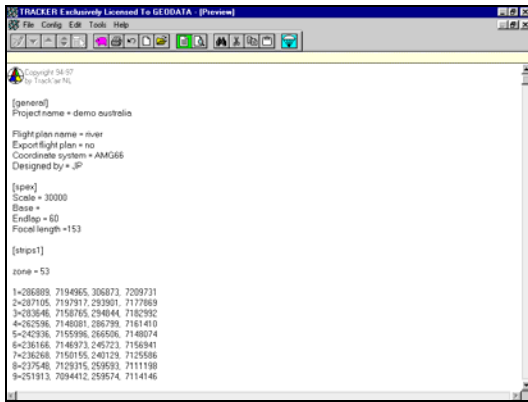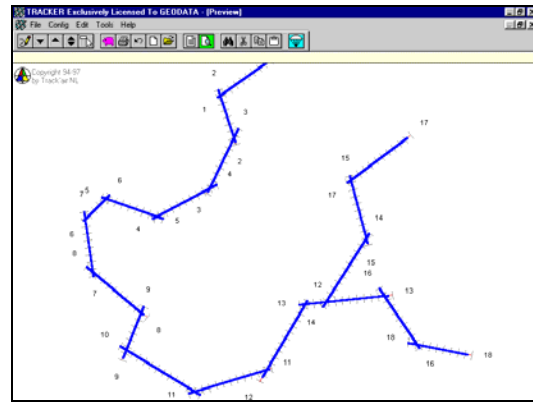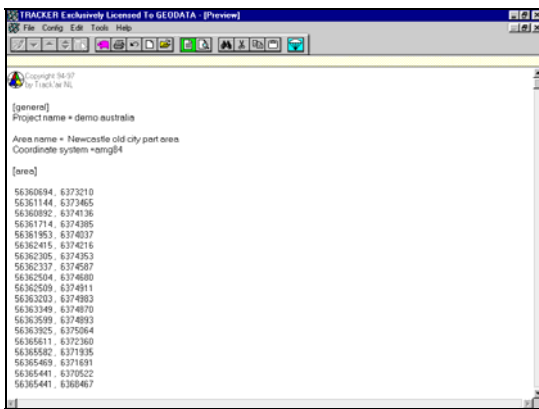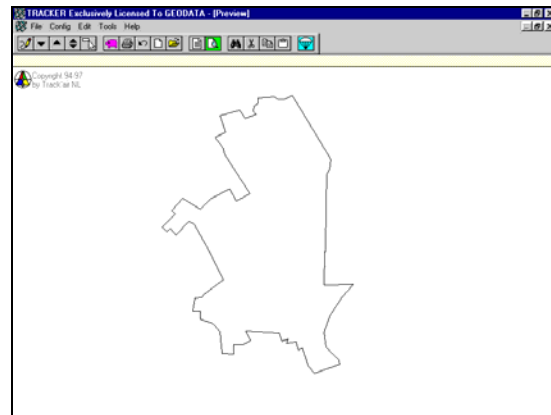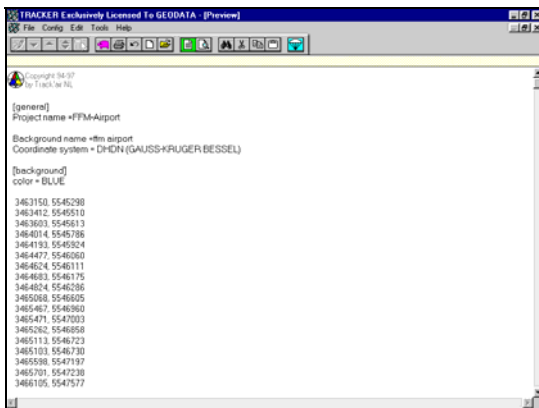
[general]
Project name = 30 characters maximum. For example: *Coastal infrared survey*

Coordinate system = Select the coordinates system from the COORDINATES > PICK COORDINATES SYSTEM menus.

Datum = If applicable, select the datum system from the COORDINATES > PICK DATUM PARAMETERS menus.

Flight plan name = 30 characters maximum. For example: *Low level*

Export flight plan = yes or no. Answer yes if the flight plan has to be exported to another computer. In this case the flight plan will be automatically copied to a floppy.

Designed by = Optional

[spex]
Scale = Photo scale. From 2000 to 90000.

Base = Enter the base in meters. If you enter the base, the % forward overlap will be ignored.

Endlap = Forward overlap in % (60, 80, etc.).

Focal length = Camera focal length in millimeters (153, 300, etc.)

' Optional
Use this section to create an array of runs parallel to a given run. In this case you should only type the coordinate of 1 strip, all the other will be automatically computed.

Number of parallel strips = Enter the amount of runs, E.G. 20

Spacing = Enter the spacing in meters. If you enter the spacing, the % sidelap overlap will be ignored.

Sidelap = Side overlap in % (20, 30, etc.).

Side = Indicate here on which side of the run the array has to be generated. Enter L for left and R for right. Obviously this depends on the way you are looking at the run, so is the result is not what you want, simply try the other side…

[strips]
Start entering the coordinates here. The format depends on the type of coordinates in use.

AVERAGE GROUND HEIGHT

Optionally it is possible to add the terrain height after the coordinates of each run:
1 =682000 , 6125000 , 773000, 6125000, 1200
This altitude will be used by **snapSHOT** to display the required flight altitude.

The altitudes can either be entered in meters or feet. Select the CONFIG > SNAPXYZ CONFIGURATION menu and the page RUNS to select meter or feet.

entering Grid coordinates (X,Y).

1 =682000 , 6125000 , 773000, 6125000, 1200
run number = start easting, start northing, end easting, end northing, ground altitude (optional)

Zones
If applicable, you must indicate in which zone the coordinates are. In this example, the zone number **52** applies to all the following coordinates. If a few coordinates in the block are located in a different zone, then add the zone between bracket (53) before the easting coordinates.

Run numbers
A unique run number is mandatory for each strip. Even if a single run consists of several segments, each segment has to have a distinct number.

[strips]

zone **=** 52

| **Zone number**. In case the coordinate system uses zone numbers (UTM, Lambert, etc.), the zone must be indicated before the list of coordinates. |

1 =682000 , 6125000 , 773000, 6125000,1200
2 =682000, 6120000 , 773000 , 6120000,1200
3 =682000 , 6115000 , (53)317000 , 6115000,1200
4 =682000, 6110000 , (53)317000 , 6110000,1400

| In case a coordinate is located in another zone than the one that was indicated at the top of the list, add the zone number between brackets before the Easting value. |

ENTERING GEOGRAPHICAL COORDINATES (LAT, LONG).

1 = -29 49 00.00 , 143 00 00.0 ,-29 39 00.00 , 143 00 00.00,12000
run number = start latitude, start longitude, end latitude, end longitude, ground altitude (optional)

snapXYZ automatically recognizes the following coordinates:

* Degrees, minutes, seconds and decimals of seconds: **29 49 30.12345**

* Degrees, minutes and decimals of minutes : **29 49.12345**

* Degrees and decimals of degrees: **29.12345**

IMPORTANT:
All the coordinates in a file have to expressed in the same format, Dd, DMd or DMSd
1 = -29, 143 0,-29 39 , 143 0 will not work!!
You need 1 = **-29 0, 143 0,-29 39 , 143 0**

Latitudes South are negative.
Longitudes West are negative.

[strips]

1 = -29 49 00.00 , 143 00 00.0 ,-29 39 00.00 , 143 00 00.00,1200
2 = -29 49 00.00 , 143 03 00.0 ,-29 39 00.00 , 143 03 00.00,1200

12 - BLOCK AREA LIMITS

HEADER

Select the **TOOLS | ADD HEADER | BLOCK AREA HEADER** menu to paste a blank header into the editor. The blank header will look like this:

[general]
Project name = 30 characters maximum. For example: *Low level area*

Coordinate system = Select the coordinates system from the COORDINATES > PICK COORDINATES SYSTEM menus.

Datum = If applicable, select the datum system from the COORDINATES > PICK DATUM PARAMETERS menus.

Area name = 30 characters maximum. For example: *Low level*

[area]
Start entering the coordinates below [area]. The format depends on the type of coordinates in use.

ENTERING GRID COORDINATES (X,Y).

Zones
If applicable, you must indicate in which zone the coordinates are. In this example, the zone number **52** applies to all the following coordinates. If a few coordinates in the block are located in a different zone, then add the zone between bracket (53) before the easting coordinates.

[area]

zone = 52

682517, 6155116
(53)317483, 6155116
(53)317483, 6105116
682517, 6105116

Zone number. In case the coordinates system use zone numbers (UTM, Lambert, etc.), the zone must be indicated before the list of coordinates.

In case a coordinate is located in another zone than the one that was indicated at the top of the list, add the zone number between brackets before the Easting value.

All the points are entered in a column, one below the other.

ENTERING GEOGRAPHICAL COORDINATES (LAT, LONG).

snapXYZ automatically recognizes the following coordinates:

- Degrees, minutes, seconds and decimals of seconds: **29 49 30.12345**

- Degrees, minutes and decimals of minutes : **29 49.12345**

- Degrees and decimals of degrees: **29.12345**

Latitudes South are negative.
Longitudes West are negative.

IMPORTANT:
All the coordinates in a file have to expressed in the same format, Dd, DMd or DMSd
1 = -29, 143 0,-29 39 , 143 0 will not work!!
You need 1 = **-29 0, 143 0,-29 39 , 143 0**

[area]

-29 49 00.00 , 143 00 00.0
-29 39 00.00 , 143 00 00.00
-29 49 00.00 , 143 03 00.0
-29 39 00.00 , 143 03 00.00

The points are entered in a column, one below the other.

13 - BACKGROUNDS

HEADER

Select the **TOOLS | ADD HEADER | BACKGROUND DRAWING HEADER** menu to paste a blank header into the editor. The blank header will look like this:

[general]
Project name =30 characters maximum. For example: *Coastal infrared survey*

Coordinate system = Select the coordinates system from the COORDINATES > PICK COORDINATES SYSTEM menus.

Datum = If applicable, select the datum system from the COORDINATES > PICK DATUM PARAMETERS menus.

Background name = 30 characters maximum. For example: *coast line.*

[background]

color = The available colors can be copied and pasted from the **TOOLS > PICK BACKGROUND COLORS** menu.

682517, 6155116
(53)317483, 6155116
(53)317483, 6105116
682517, 6105116

color = red ◄────────────

682517, 6155116
(53)317483, 6155116
(53)317483, 6105116
682517, 6105116

> It is possible to change the line color by adding a new **color =** in the text. Each time a line is finished, you must add a color = to indicate that a new line has to be started. A line consists of several segments.

ENTERING GRID COORDINATES (X,Y).

Zones
If applicable, you must indicate in which zone the coordinates are. In this example, the zone number **52** applies to all the following coordinates. If a few coordinates in the block are located in a different zone, then add the zone between bracket (53) before the easting coordinates.

[background]
color = red
zone = 52

Zone number. In case the coordinates system use zone numbers (UTM, Lambert, etc.), the zone must be indicated before the list of coordinates.

682517, 6155116
(53)317483, 6155116
(53)317483, 6105116
682517, 6105116

In case a coordinate is located in a different zone than the one that was indicated at the top of the list, add the zone number between brackets before the Easting value.

All the points are entered in a column, one below the other.

ENTERING GEOGRAPHICAL COORDINATES (LAT, LONG).

snapXYZ automatically recognizes the following coordinates:

- Degrees, minutes, seconds and decimals of seconds: **29 49 30.12345**

- Degrees, minutes and decimals of minutes : **29 49.12345**

- Degrees and decimals of degrees: **29.12345**

Latitudes South are negative.
Longitudes West are negative.

IMPORTANT:
All the coordinates in a file have to expressed in the same format, Dd, DMd or DMSd
1 = -29, 143 0,-29 39 , 143 0 will not work!!
You need 1 = **-29 0, 143 0,-29 39 , 143 0**

[background]
color = red

-29 49 00.00 , 143 00 00.0
-29 39 00.00 , 143 00 00.00
-29 49 00.00 , 143 03 00.0
-29 39 00.00 , 143 03 00.00

The points are entered in a column, one below the other.

color = green

Each time a line is finished, you must add a color = to indicate that a new line has to be started. A line consists of several segments

-29 49 00.00 , 143 00 00.0
-29 39 00.00 , 143 00 00.00
-29 49 00.00 , 143 03 00.0
-29 39 00.00 , 143 03 00.00

14 - TOOL BAR

Figure 14-1

SAVE.
Press this button to save your work to the database. This function does not save the text file.

PRINT.
Same as the **TOOLS | QUICK PRINT** menu (see the MENUS section).

UNDO.
Undo the last action when this is possible.

NEW TEXT.
Press this button to clear the text editor and start a new entry.

OPEN TEXT FILE.
Same as the **FILE | LOAD TEXT FILE FROM DISK** menu (refer to the MENUS section).

TEXT EDITOR MODE.
Switch to the text editor window.

GRAPHIC VIEWER MODE.
Switch to the graphic viewer window.

FIND AND REPLACE.
Same as the **EDIT | FIND** menu (refer to the MENUS section).

CUT.
Press this button to cut the current text selection and send it to the clipboard.

PASTE.
Press this button to insert the contents of the clipboard at the insertion point.

COPY TO CLIPBOARD.
Press this button to copy the current text selection to the clipboard.

EXIT THE PROGRAM.

15 - BUTTONS SHARED BY ALL MODULES

The following describes the buttons shared by all the Tracker modules:

REFRESH
Click this button to redraw the screen if it has not been properly painted or to remove garbage.

ZOOM IN (REDUCE SIZE).
Clicking this button will increase the scale of the drawing. Click until the drawing is at the required size. A beep and no effects will indicate that the limits have been reached. The maximum scale depends on the original size of the area.

ZOOM OUT (ENLARGE).
Clicking this button will decrease the scale of the drawing. Click until the drawing is at the required size. A beep and no action will indicate that the limits have been reached. The minimum scale depends on the original size of the area.

RESTORE
Clicking this button will restore the drawing to its first size and position.

ZOOM WINDOW.
Press this button down and draw a rectangle around the area to be enlarged.

Note: To draw a rectangle, position the mouse pointer on the rectangle upper left corner position, press the mouse button and while keeping it down, drag the mouse towards the right and down. A rectangle is displayed while this operation is taking place, when its size is satisfactory, release the mouse button.

OPEN NEW PROJECT
Click this button to return to the project selection dialogue box.

EXIT THE PROGRAM.
Click this button to shut down the program.

16 - FEATURES SHARED BY ALL MODULES

The following describes features and behaviors that are common to all TRACKER modules.

DRAGGING THE DISPLAY

To move the entire drawing area, **PRESS AND HOLD** the **LEFT** mouse button anywhere on the map area, drag the mouse to an other spot and release the button. The whole map will be shifted. While the mouse button is held down, the cursor changes to a 4 heads arrow.
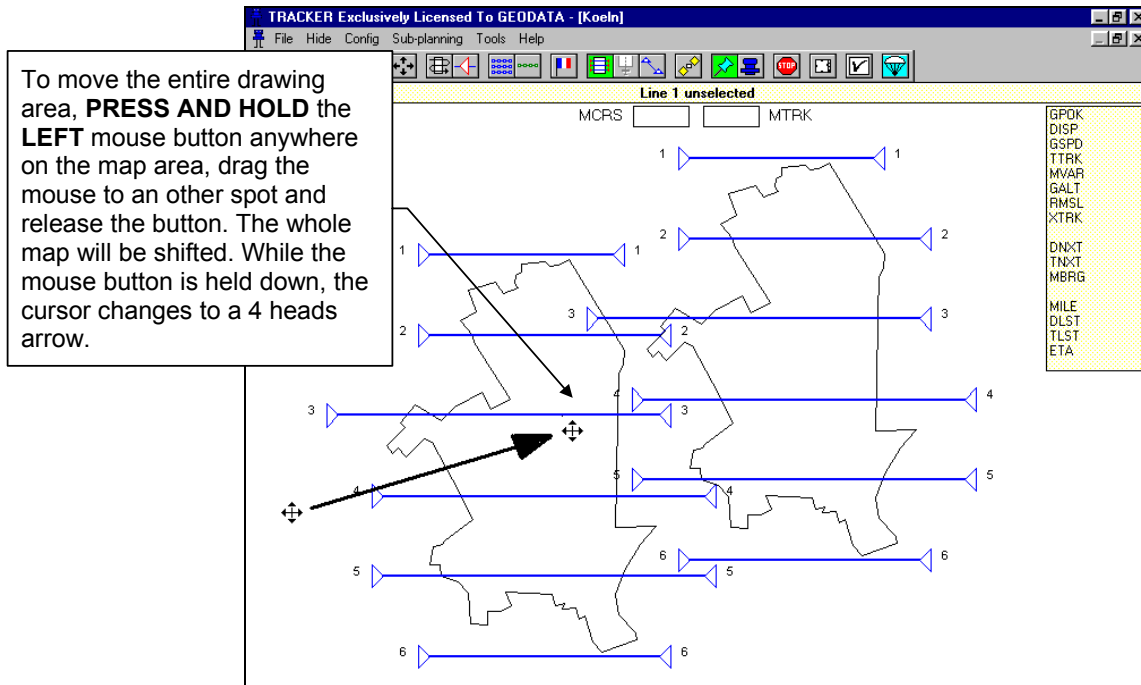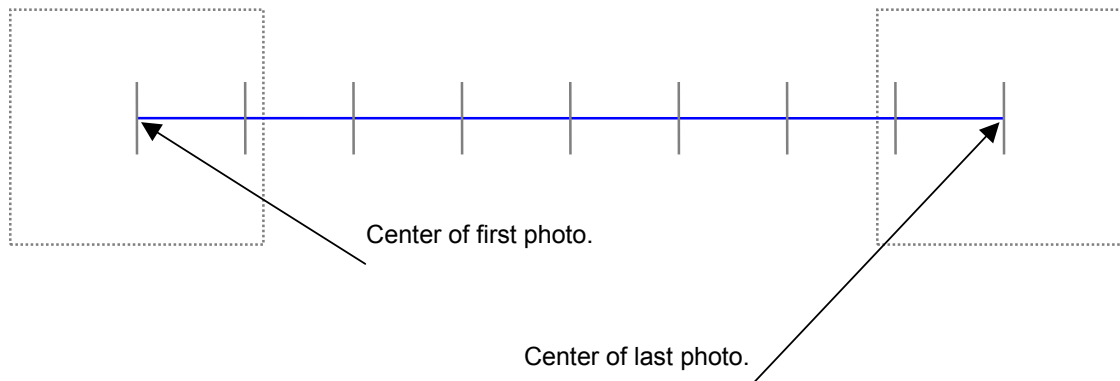
Figure 16-1

GRAPHIC REPRESENTATION OF RUNS

Tracker represents runs and strips by their centerline and crosswise ticks which represents the photo positions.

Center of first photo.

Center of last photo.

17 - IMPORTING DXF FILES

Simple drawings can be imported in DXF format (Autocad exchange format). Imported DXF drawings can be converted to any of the 3 types of drawings recognized by TRACKER: Closed block area, Background drawings, runs and strips.

The import of DXF is very simple: Once one of the 3 main headers, area, background or flight plan has been selected and is printed on the editor, pick the **Import** menu and the **DXF** menu, then select the DXF to be imported. The coordinates will be automatically converted into the snapXYZ format.

Please note that the DXF format is an interchange format that has been created by Autodesk, the maker of Autocad.
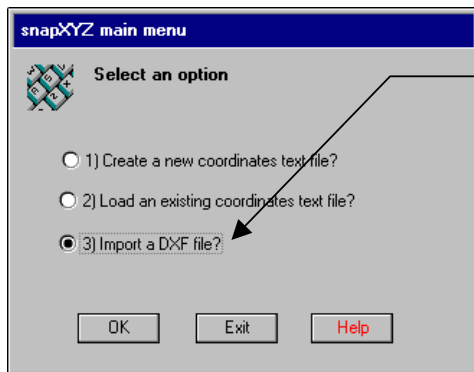
Select Import DXF from the main menu and press OK.

Figure 17-1
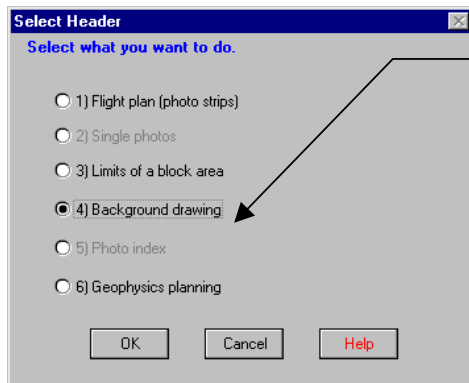
Select one of these 3 options:

1) Flight plan (photo strips) if the DXF contains lines.
3) Limits of a block area if the DXF contains the limit of an area (polygons).
4) Background drawing in all other cases when you want to use the drawing as a background for your planning (lines + polygons).

Figure 17-2

Select the DXF to be imported and press OK

Figure 17-3

Figure 17-4
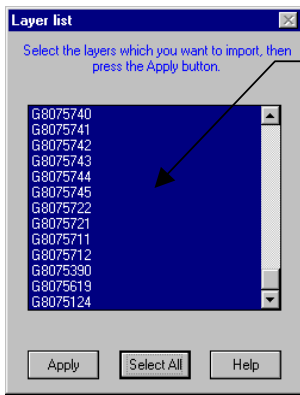
Select here which layers you want to import into Tracker.
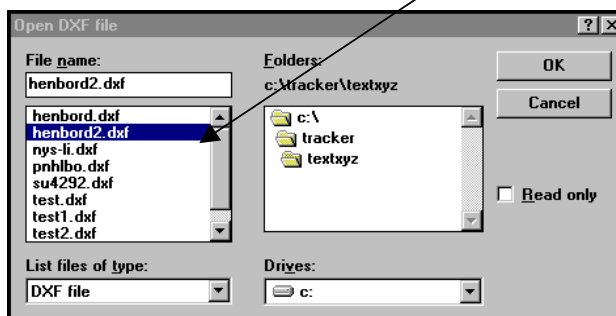
It is desirable that the imported drawing is as small as possible, therefore you can pick here the layers which are really necessary for your planning.

Tips:
In case of doubt, choose select all.
If your file is too large for Tracker, you can use this feature to split your DXF into several background drawings by selecting part of the layers each time. The backgrounds can be merged in snapPLAN for the planning.

Figure 17-5
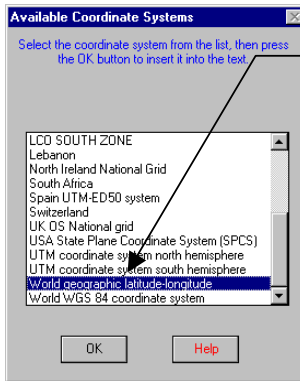
Select here the coordinate system used by the coordinates of the DXF.
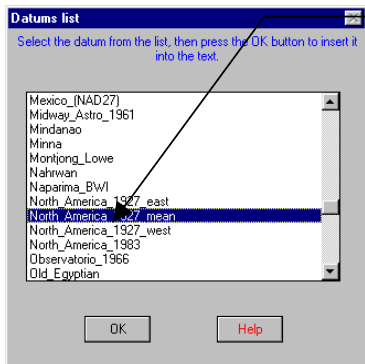
Figure 17-6

If applicable, select here the datum system used by the coordinates of the DXF.
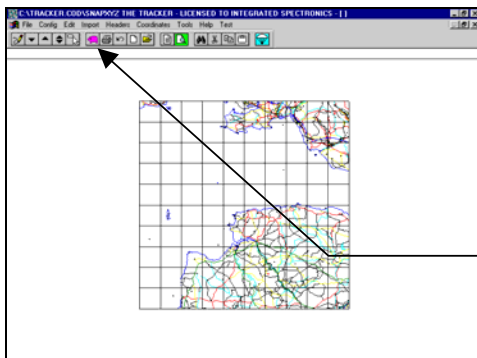
Figure 17-7

Press the save button (piglet) to finalize the import of your import your drawing into Tracker

ALTERNATIVE METHOD

From the editor screen:
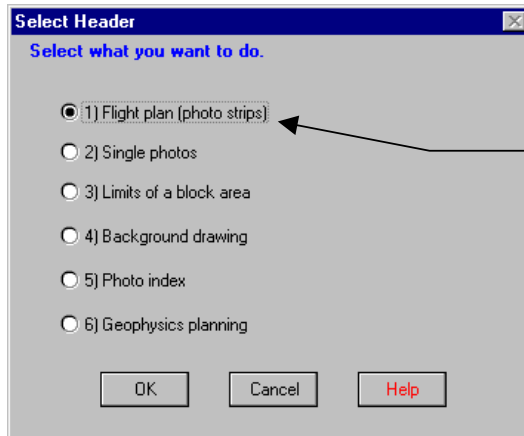
1) Select the **Headers**, then select what you want to import.

Figure 17-8
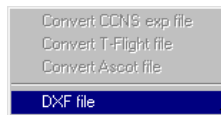
2) Select the **Import / DXF** menus

Figure 17-9
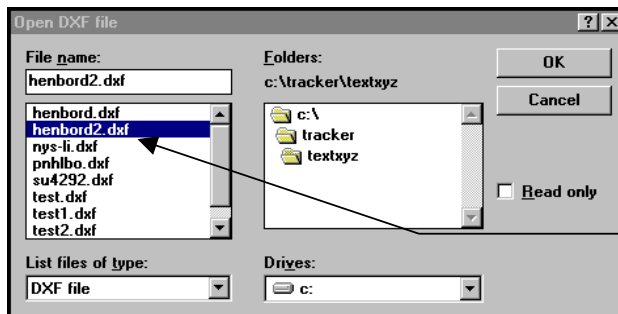
3) Select the file that you want to import and carry on as described above.

Figure 17-10

IMPORT LIMITATIONS

- The maximum size of the DXF file are approximately 8000 points for a block area and 32000 points for a background.
- DXF files generated by some software do not to follow Autodesk standards and might not load properly or even might cause the system to hang (some version of Microstation in particular). If this is the case, email a sample to TRACK'AIR and we will check it out for you.
- TRACKER only imports lines and polylines. For the moment, the rest of the drawing (text, etc) is ignored.

18 - MENUS

This section describes the menus and their use.

File Config Edit Import Headers Coordinates Tools Help

Figure 18-1

FILE MENU

Click this menu to print the content of the editor.

Text file...
Print the text file
Print a planning report

Save Work To Database

Load from database as text

Exit Program

Figure 18-2

Click this menu to create a planning report (quantities, etc).

Click this menu to save the flight plan to the database.

Load from database as text:
Use this menu to convert an existing project into a snapXYZ text file.

TEXT FILE MENU

Load Text File From Disk
Save Current Text to Disk
Rename Text File As...

Figure 18-3

Load text file from disk:
Select this menu item to load a new text file.

Click these menus to save the current text file to disk.
Do not forget that the text file is not the **TRACKER** flight plan. This menu does not save the flight plan.

CONFIG MENU

The length of each strip is adjusted to give an integer number of photos. By default the extra length required is added to one end of the strip. You may also choose to extend equally both ends of the strips. The added length is displayed in red in the preview (see the **SNAP FUNCTION** chapter)

In the case of parallel strips, you can choose to align laterally all the photo positions with each other. (This function may result in up to 2 additional photos per strip). This function is only working if the runs are truly parallel.

Figure 18-4
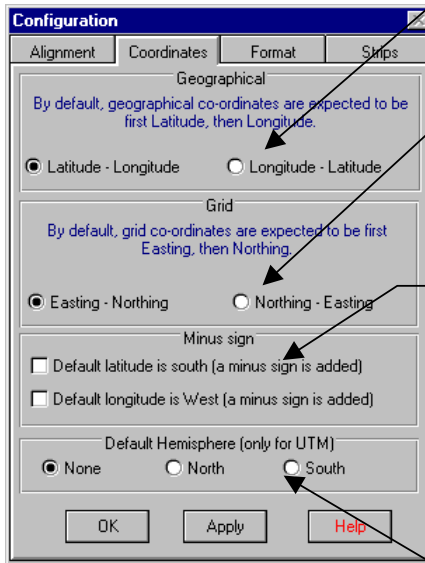
By default, geographical coordinates are expected to show first the Latitude, then the Longitude. Click the other option if you use the reverse convention.

By default, grid coordinates are expected to show first the easting, then the northing. Click the other option if you use the reverse convention.

Default latitude and longitude.
You can set the system so that all longitudes or latitudes are considered to be negative, even if the minus sign is not typed.
For example if you are in the USA, then it is handy to select negative longitude, and in Australia it is handy to select negative latitude.

Select here the default Hemisphere if all your projects are in the same hemisphere (only affects UTM coordinates).

Figure 18-5
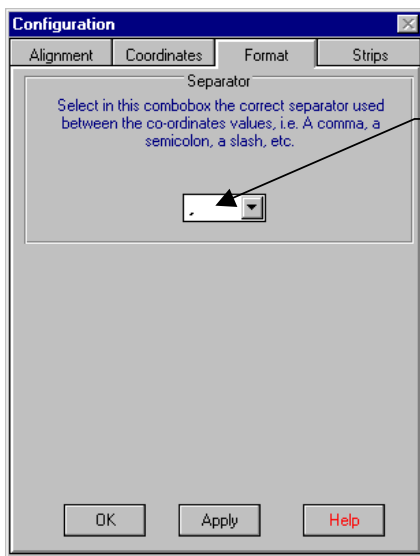
Select the correct separator used between the coordinate values, i.e. a comma, a dash, a slash, etc.
The default is a comma.

Figure 18-6
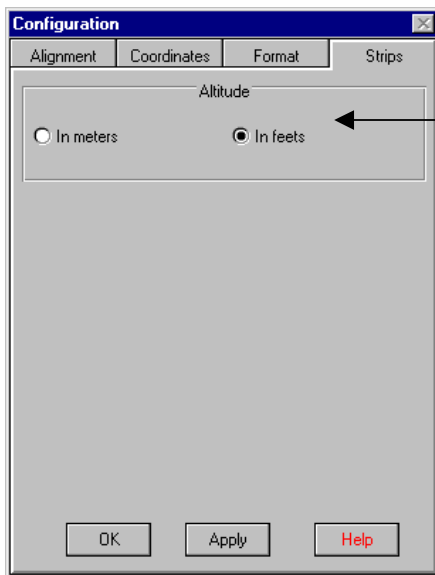
Indicate here whether the altitude entered in the text are in feet or in meters.

Figure 18-7

EDIT MENU

Cut — Remove the current selection and place it on the clipboard.

Copy — Copy the current selection to the clipboard.

Paste — Place the content of the clipboard at the insertion point.

Undo — Undo the last change, if possible.

Figure 18-8

Clear editor — Clear all text from the text editor.
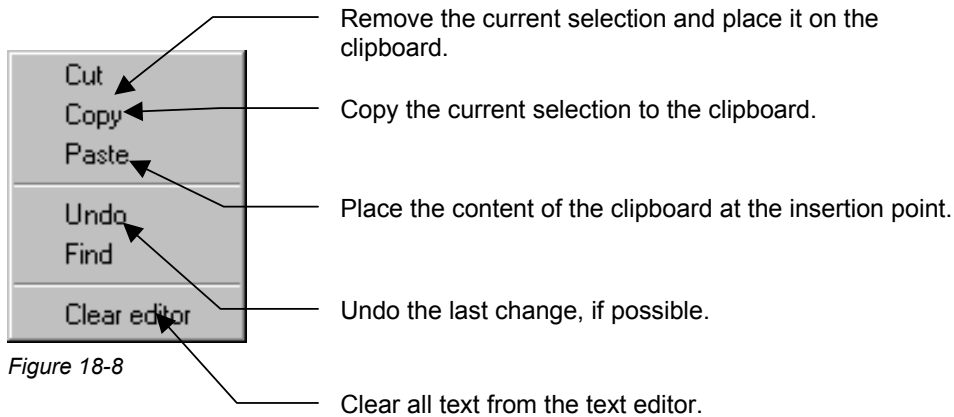
FIND AND REPLACE

Press the find and replace button 🔍 or select the **EDIT > FIND** menu.

1) The same dialog is used for the search as well as for the replace function.
Enter in the top box the word, group of letters or symbol to be searched.
If required, enter the new word in the bottom box.

Search For: 6
Replace With: 7

Find   Verify   Replace all   Cancel

Figure 18-9

4) Press the replace all button when you are certain that the result of the replacement is correct.

3) Press the verify button to do one change at a time and check the result of the replacement.

2) Press the find button to find a word which matches the word entered in the search for text box.
Press again to find the next match.

TOOLS MENU

Figure 18-10

List existing projects:
Select this menu to display a list of the projects name and numbers currently in the database.

Pick background color:
You can select here the colors of background details.

LIST EXISTING PROJECTS
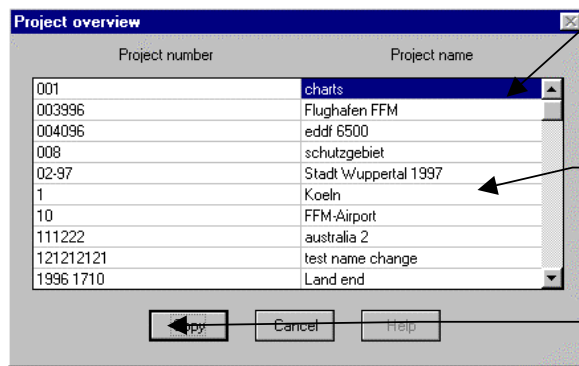
Figure 18-11

This list is used to get the right spelling of a project name or number and to copy it directly into the text.

1) Select a project number or a project name.

2) Press copy.

3) To paste into the text, place the cursor at the required insertion point and press the CTRL+ V keys or select the **EDIT | PASTE** menu.

PICK BACKGROUND COLOR
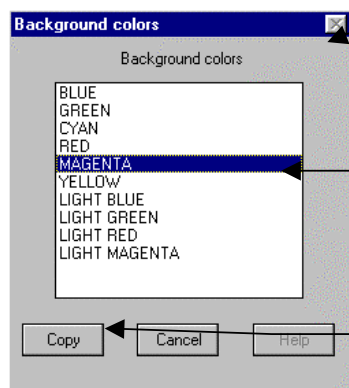
Figure 18-12

You can select here the colors that are available for background details.
Different colors may be used to differentiate and identify the various parts of a drawing (rivers, railroad, borders, restricted areas, etc.)

1) Select the required color.

2) press copy to place the text on the clipboard.

3) To paste in the text, place the cursor at the required insertion point and press the CTRL+ V keys or select the **EDIT | PASTE** menu.

COORDINATES

Pick Coordinate System
Pick datum parameters

PICK COORDINATE SYSTEMS

You can copy the coordinate system from this list and paste it into the text.

Available Coordinate Systems

Select the coordinate system from the list, then press
the OK button to insert it into the text.

Select the coordinates system and press apply.

amg66
amg84
Argentina
DHDN (Gauss-Kruger Bessel)
Holland RD-system
Ireland National Grid
isg
Lambert 2 extended
LCO EQUATORIAL ZONE
LCO PNG IRIAN ZONE
LCO SOUTH ZONE
Lebanon

OK   Help
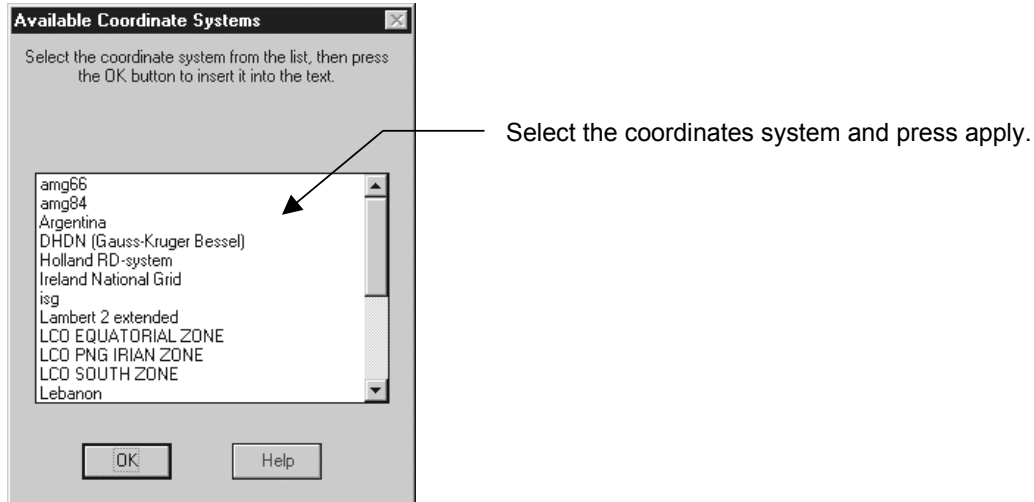
Figure 18-13

PICK DATUM PARAMETERS

You can copy the datum from this list and paste it into the text.

Datums list

Select the datum from the list, then press the OK button to insert it
into the text.

Select the datum and press apply.

Adindan
Afgooye
Ain_El_Abd_1970
Alaska/Canada_NAD-27
Alaska_(NAD-27)
Anna_1_Astro_1965
ARC-1950_mean
ARC-1960_mean
Ascension_Island_'58
Astro_B4_Sor.Atoll
Astro_Beacon_"E"
Astro_Pos_71/4
Astronomic_Stn._'52

OK   Help
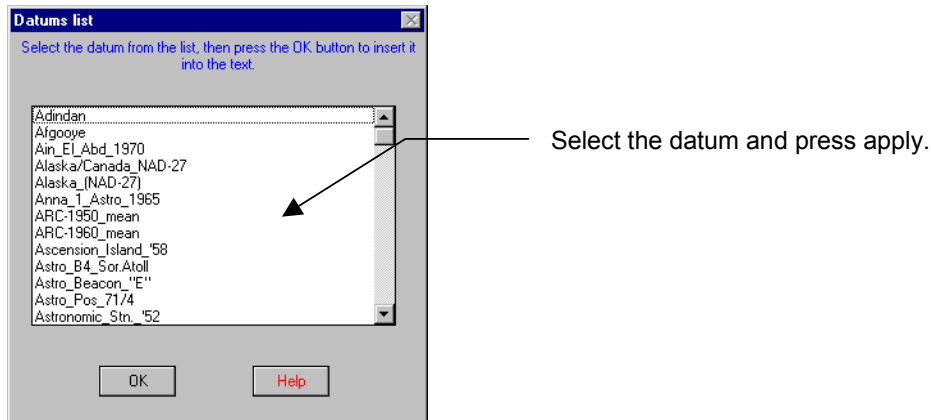
Figure 18-14

ADD HEADER

Pressing the header menu will display this form
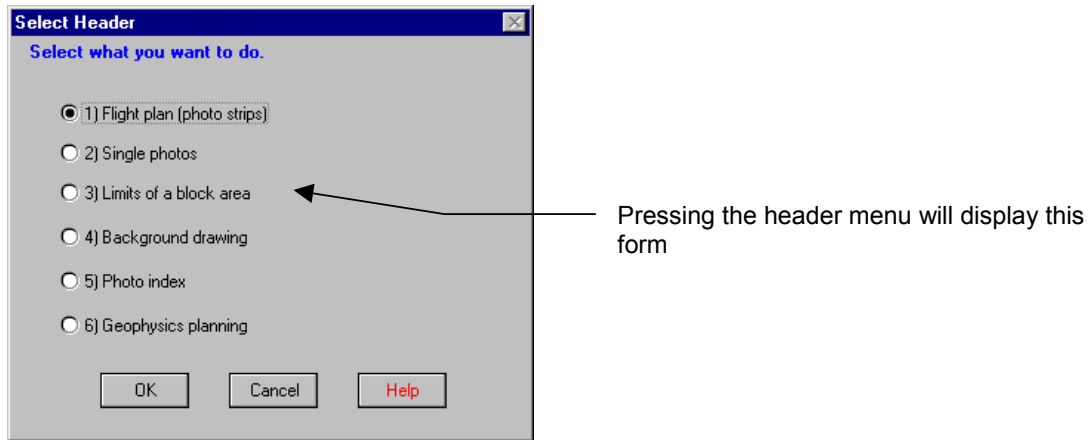
Figure 18-15

19 - SNAP BEHAVIOR

The snap function is an automatic adjustment of the strip length so that the runs have a whole number of photos. For example, If a strip length is 9700 meters and the base is 1000 meters, the length will rounded to 10000 meters (11 photos). For your information, the added distance is displayed as a thin red line. The original strip is displayed as a thick blue line.

Figure 19-1
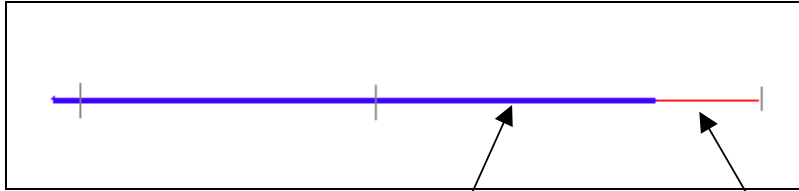
Extension added by
Tracker

Position of the run ends
entered in the text.

20 - PRINTING A REPORT

While In the Graphic viewer, press the print button 🖨 to bring up this dialog.
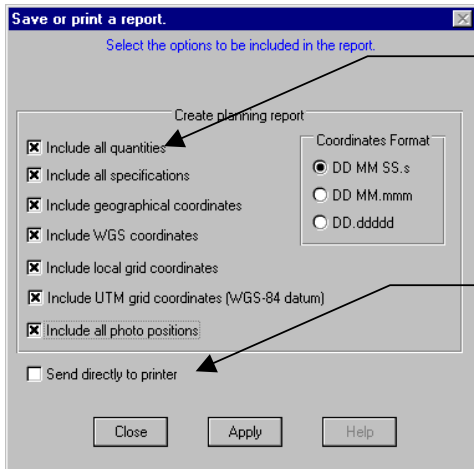
Figure 20-1

1) Select what you require:
Quantities.
Specifications.
Coordinates, etc.

Select this option if you want to send the data directly to the printer.

Figure 20-2
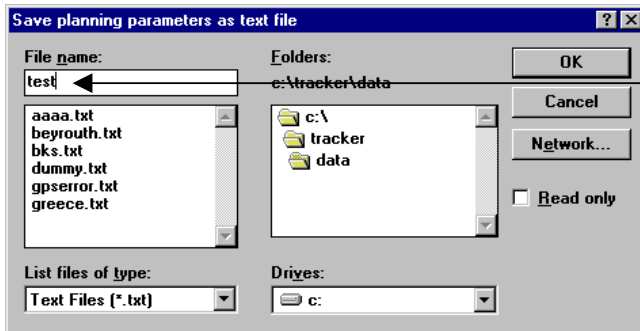
Type here the name of the file you want to save. (By default, the file will be saved in the TRACKER\DATA forder), then press OK

Figure 20-3
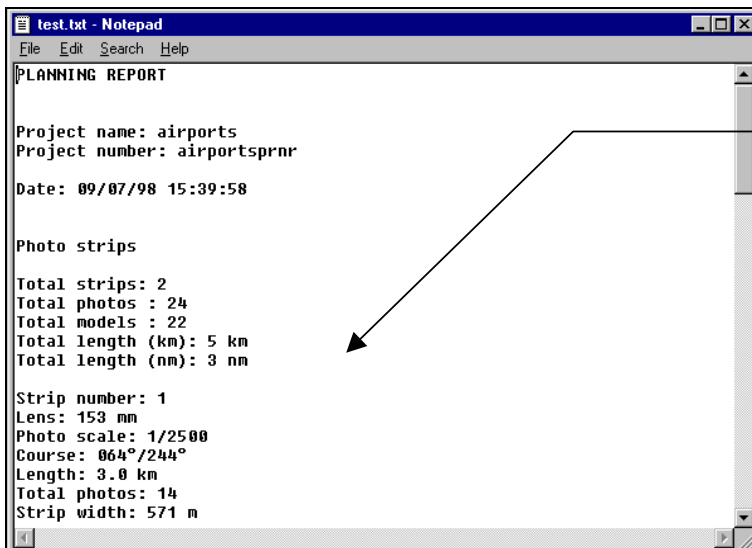
The Windows Notepad (or Wordpad) will be automatically displayed. You can also print from this application (File > print menus).

SAMPLE REPORT

PLANNING REPORT

Project name: airports
Project number: 1234

Date: 09/07/98 15:39:58

Photo strips

Total strips: 2
Total photos : 24
Total models : 22
Total length (km): 5 km
Total length (nm): 3 nm

Strip number: 1
Lens: 153 mm
Photo scale: 1/2500
Course: 064°/244°
Length: 3.0 km
Total photos: 14
Strip width: 571 m
Photo base: 230 m
Endlap: 59.71979%

Geo Start: 54 39 06.9 -006 14 09.6
Geo End: 54 39 47.0 -006 11 37.8

Grid Start: 313843 / 379634
Grid End: 316532 / 380942

WGS84 Start: 54 39 07.2 / -006 14 13.2
WGS84 End: 54 39 47.2 / -006 11 41.4

UTM Start: [29] 678 248 / 6059 573
UTM End: [29] 680 918 / 6060 919

Strip number: 2
Lens: 153 mm
Photo scale: 1/2500
Course: 161°/341°
Length: 2.1 km
Total photos: 10
Strip width: 571 m
Photo base: 230 m
Endlap: 59.71979%

Geo Start: 54 39 32.7 -006 13 42.2
Geo End: 54 38 29.0 -006 13 06.9

Grid Start: 314315 / 380445
Grid End: 314998 / 378491

WGS84 Start: 54 39 33.0 / -006 13 45.8
WGS84 End: 54 38 29.3 / -006 13 10.4

UTM Start: [29] 678 709 / 6060 391
UTM End: [29] 679 419 / 6058 447

TRACK'AIR © 1995 - 2002   (vers. 4/29/2002)

Run number: 1
section nr: 0
1 : 313843 379634
2 : 314050 379735
3 : 314257 379835
4 : 314464 379936
5 : 314670 380036
6 : 314877 380137
7 : 315084 380238
8 : 315291 380338
9 : 315498 380439
10 : 315705 380540
11 : 315911 380640
12 : 316118 380741
13 : 316325 380841
14 : 316532 380942

Run number: 2
section nr: 0
15 : 314315 380445
16 : 314391 380228
17 : 314467 380011
18 : 314543 379794
19 : 314619 379577
20 : 314694 379359
21 : 314770 379142
22 : 314846 378925
23 : 314922 378708
24 : 314998 378491

21 - SAVING THE TEXT FILE

If you want to preserve the original text file, select the **FILE > TEXT FILE > SAVE CURRENT TEXT TO DISK** or the **RENAME TEXT FILE AS**... menu.
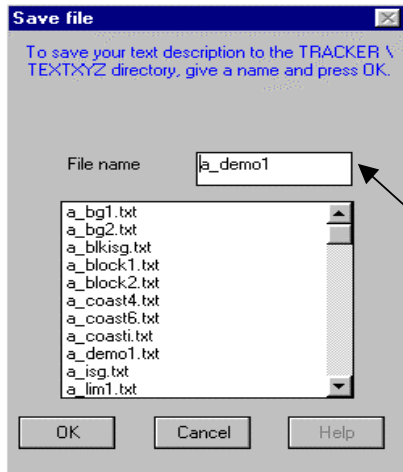
Give a name to the text file. All the files required and created by the **snapXYZ** are automatically placed in the **TRACKER/TEXTXYZ** directory.

Warning: Do not forget that the text file is not the **TRACKER** flight plan. Save your work to the database to convert the text file into a **TRACKER** planning.

Figure 21-1

22 - SAVE AND EXPORT

The following describes the saving and export procedures. Click the **FILE > SAVE WORK TO DATABASE** menu or press the SAVE button [icon] to save the flight plan to the database.

Remark: If the file contains runs, the configuration dialog will be displayed. Refer to the chapter CONFIGURATION MENU for details.
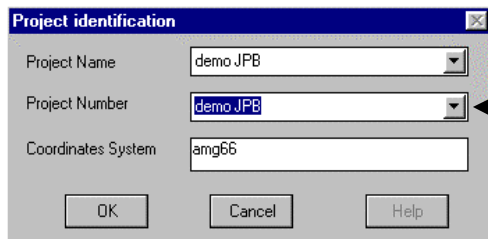
Figure 22-1

This dialog will only be displayed when you are creating a **new project**. The project name you have typed in the text file header will be used. If you are using a project number (optional), then type it in the second test box. Check also that the coordinate system is correct, otherwise return to the editor and change it.

If you typed **Export flight plan = Yes**, then this dialog box will now be displayed.
The flight plan to be exported has been placed in the **TRACKER\EXPORT** directory.
Answer **YES** if you want to transfer now the flight plan to another computer via floppy disk. This will automatically copy the flight plan to a floppy
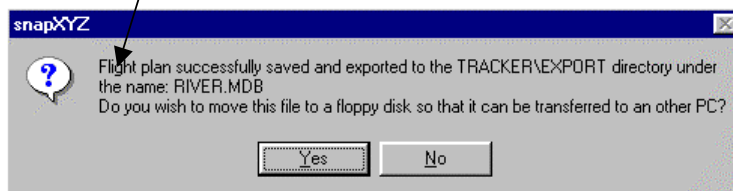
Figure 22-2

23 - MODIFYING AN EXISTING FLIGHT PLAN

If you want to re-work an existing flight plan that has been already used in flight, editing and modification conform to the following simple rules:

- All the photos are linked to a run number.
- A run or strip can be modified at will. The existing photos remain unchanged.
- If a run is deleted and replaced by another with the same number, the new run inherits all the existing photos of the previous run.
- If a run is deleted and its run number is not re-used, the existing photos remain with the flight plan.
- In **snapBASE** it is possible to reallocate groups of photos to another run number.

The above insures a maximum of flexibility to edit and modify existing flight plans.

24 - TEST RUN FOR SNAPSHOT

While testing the **snapSHOT** module, you might want to run the GPS receiver and check its position on the ground.
If the GPS is installed in an aircraft, simply read the airport coordinates from the AIRPORT chart of your JEPPESEN ™ and create a small dummy run.

Example:
We can read from the GCLP Gran Canari, Canary Island page
N 27 55.8 W015 23.1

1) start snapXYZ
2) Select Flight plan header.
3) Fill the header as appropriate. Select any local coordinates system (this is not critical).
4) Enter some specs (Scale = 1:10000, Endlap = 60, Focal length = 153)
5) Under [strips1] type the coordinate read from the approach chart as start point an add or remove 10 minutes to generate the other side
1= 27 55.8, -015 23.1, 27 55.8, -015 33.1
6) Verify the EW run in the preview and save it to the database.

The small EW run will be just above the airport and will allow you to use **snapSHOT** to check the GPS transmission.

25 - SINGLE PHOTOS

snapXYZ allows you to enter the positions at which single photo should be fired.
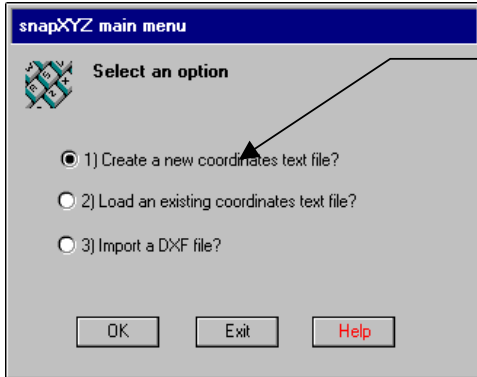
Select the 1) Create a new coordinates text file? option and press OK.

Figure 25-1
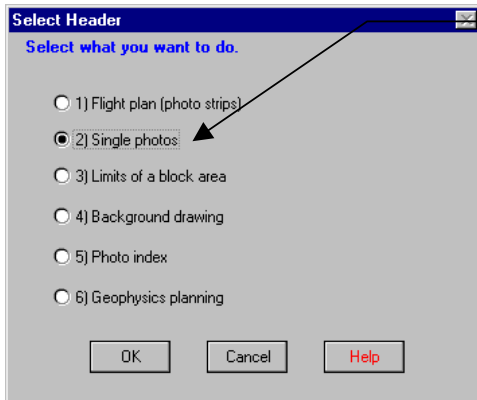
Select the 2) Single photos option and press OK.

Figure 25-2

The required header will be displayed for you.

Figure 25-3

```
[general]
Project name = airports

Coordinate system = North Ireland National Grid
Datum = North Ireland National Grid

Flight plan name = single shots
Export flight plan = no
Designed by = JPB

[spex]
Default scale =  2500
Focal length = 152

[single shot]

1 =  314321, 380343,159.9,8792,
2 =  316484, 380923,63.9,25118,
```

Fill the required parameters:

The default scale will be chosen if you do not indicate a scale in the [single shot] section below.

In the section [single shot], enter a unique photo number, the coordinates of each single photo position, the required approach heading and the required photo scale:

X= Easting (or latitude), Northing (or longitude), heading, photo scale

1=314321,380343,160,9000
2=314321,380343,160,4000

Figure 25-4

Press the save button (piglet) to save your work.

Figure 25-5

26 - IMPORTING INDIVIDUAL PHOTO POSITIONS

Last updated January 12, 1999

INTRODUCTION

It is possible to import an text file containing the coordinates and description of a photo flight which was not planned or flown with the EZtrack system. If the import is successful, the photo flight will behave as if it would have been planned or flown with the Tracker.

You can do any of the following:
- Import previously flown photo positions to create a photo index.
- Import previously flown photo positions to create a new flight plan.
- Import new photo position positions to create a new flight plan, etc.

PHOTO BASE

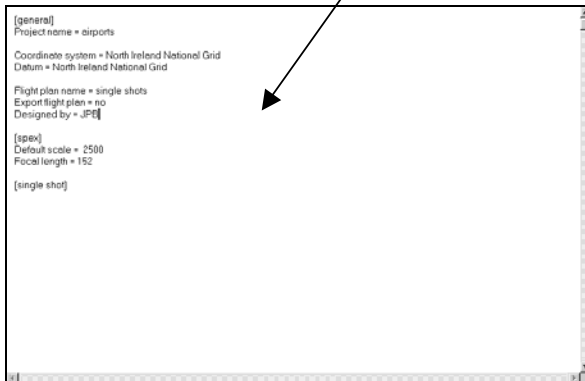The photo base (distance between photos) does not have to be fixed or regular, it can vary.

Note: The photo positions can be either associated with a run or be single shot. In case the photo positions are associated with a run, then each photo position will be projected on to a medium line. The system will not attempt to zigzag between photos.
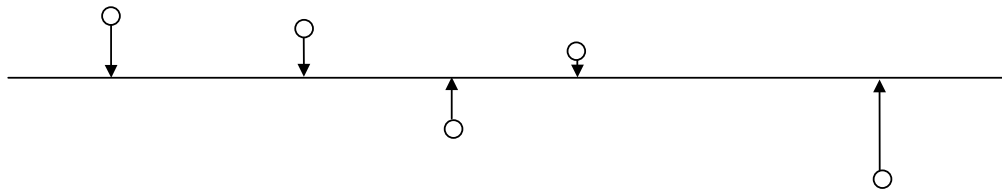
PROCEEDING
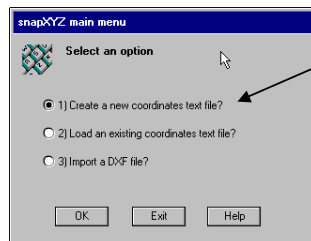
Start snapXYZ and select 1) Create a new coordinates text file?
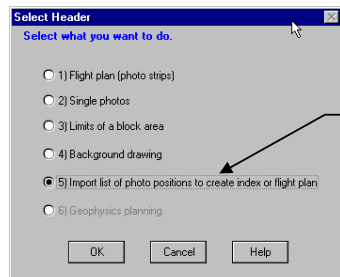
Select 5) Import list of photo positions to create index or flight plan.

The following header will be displayed. Follow the instructions in ***bold italic. P***lease refer to other sections of this manual for other explanations

[general]
Project name = ***30 characters maximum. For example: Coastal infrared survey. Required.***

Coordinate system = ***Select the coordinates system from the COORDINATES > PICK COORDINATES SYSTEM menus.***

Datum = ***If applicable, select the datum system from the COORDINATES > PICK DATUM PARAMETERS menus.***

Flight plan name = ***30 characters maximum. For example: Low level. Required***
Designed by ***= Optional***

[spex]
Scale = ***Photo scale. From 2000 to 90000. This entry is needed but it can be different for each runs (see below).***
Base = ***Not required***
Endlap***= Forward overlap in % (60, 80, etc.). This entry is optional.***
Focal length = ***For example 153. This entry is needed.***

[planning]
Create pinpoint flightplan = ***YES or NO. Answering Y(es) will attempt to create a flight plan from the photo positions.***
Create photo index = ***YES or NO. Answering Y(es) will attempt to create a photo index from the photo positions.***

Example.

[general]
Project name = import photo positions

Coordinate system = USA State Plane Coordinate System (SPCS)
Datum = Florida,East,transverse mercator NAD83,13091

Flight plan name = test pos
Designed by = JPB

[spex]
Scale = 10000
Base =
Endlap = 60
Focal length = 153

[planning]
Create pinpoint flightplan = YES
Create photo index = YES

The following describe how the information is formatted. The file must be of a comma delimited type, i.e. the data is formatted in fields separated by a comma. Here, the data fields are referred as columns. Each column contains one the information related to one photo. There are 10 possible column: In the following section, you must indicate in which column the corresponding data is located. For example, the northing might be located in the column 3 and the easting in column 4.

> *Note: To simplify your work if you always use the same column layout, the previous column numbers are remembered by the header and will be printed. This does not implies that you have to use the same column number for each new flight plan, you simply have to enter new column numbers if the layout is different.*

[column info]
Column run number **= Required. Each run have to have a unique number (no duplication).**
Column easting = **Required. This is the easting or longitude coordinates of the photo.**
Column northing = **Required. This is the northing or latitude coordinates of the photo.**
Column photo number = **Required. This is the number of the photos.**
Column film number = **Not required. Only if you want to create a photo index. This is the number of the film roll.**
Column scale **= Optional, otherwise the scale is taken from the default scale in the [spex] section. The scale should be the same for the entire run.**
Column zone **= Required when the coordinates are in a zone (UTM)**
Column date = **Optional. This is the date of the photo**.
Column time = **Optional. This is the time of the photos.**
Column course= **Optional. This is the flight direction of single photos. (This is not required for strips, only for single!). The default is N/S.**
Column accepted = **Optional. This is whether the photo has been accepted (by opposition to rejected).**

Accepted symbol = **This is the symbol which is used in the column accepted to indicate that a photo is accepted. For example you could use Y or S.**

Example

[column info]
Column run number = 5
Column easting = 7
Column northing = 8
Column photo number = 1
Column film number = 4
Column scale =10
Column zone =
Column date = 2
Column time = 3
Column course=11
Column accepted = 9

Accepted symbol = S

The following section contains the actual photo positions as well as the corresponding information. In this case the data is imported in UTM coordinates, hence the reference to zone 30.

[index]

zone = 30

1, 10-06-98, 12:20:33.0, flnr 1998 n12, 6, 2188, 593592, 6103502, S,15000
2, 10-06-98, 12:20:45.0, flnr 1998 n12, 6, 2189, 594966, 6103521, S,15000
3, 10-06-98, 12:20:57.0, flnr 1998 n12, 6, 2190, 596337, 6103543, S,15000
4, 10-06-98, 12:21:09.0, flnr 1998 n12, 6, 2191, 597708, 6103563, S,15000
5, 10-06-98, 12:21:21.0, flnr 1998 n12, 6, 2192, 599080, 6103582, S,15000

The above contains the photos belonging to run 6 (column 5).

6, 10-06-98, 12:21:49.0, flnr 1998 n12, 7, 2193, 600480, 6101200, S,20000
7, 10-06-98, 12:22:01.0, flnr 1998 n12, 7, 2194, 599106, 6101181, S,20000
8, 10-06-98, 12:22:13.0, flnr 1998 n12, 7, 2195, 597736, 6101160, S,20000
9, 10-06-98, 12:22:25.0, flnr 1998 n12, 7, 2196, 596362, 6101141, S,20000
10, 10-06-98, 12:22:37.0, flnr 1998 n12, 7, 2197, 594992, 6101121, S,20000
11, 10-06-98, 12:22:49.0, flnr 1998 n12, 7, 2198, 593620, 6101100, S,20000

The above contains the photos belonging to run 7 (column 5).

SINGLE PHOTOS

It is possible to include single photo shots, for example:

12, 10-06-98, 12:22:25.0, flnr 1998 n12, 7, 3000, 596362, 6101141, S,20000,90
In this case the last COLUMN indicates that the photo will be flown on a East West direction.

13, 10-06-98, 12:22:25.0, flnr 1998 n12, 7, 3001, 596362, 6101141, S,20000,180
In this case the last COLUMN indicates that the photo will be flown on a North South direction.

PHOTO SCALE

Each individual run can have different scales. If the scale is not mentioned in the column, then the default scale is selected from the [spex] section.

Note: It is sufficient to enter the scale once per strip as in:

6, 10-06-98, 12:21:49.0, flnr 1998 n12, 7, 2193, 600480, 6101200, S,20000
7, 10-06-98, 12:22:01.0, flnr 1998 n12, 7, 2194, 599106, 6101181, S
8, 10-06-98, 12:22:13.0, flnr 1998 n12, 7, 2195, 597736, 6101160, S

SAVING
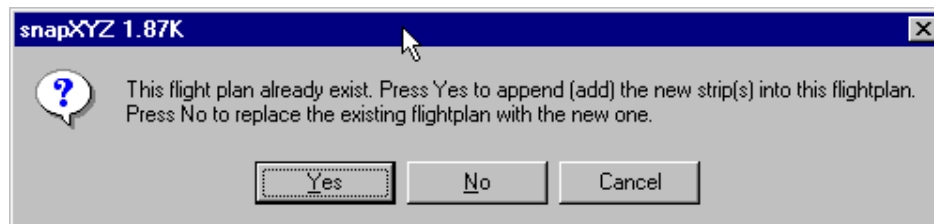
Press YES to append to an existing flight plan:
- Strips with new numbers are added.
- Strips with existing number are replaced.
- Other strips are no affected.

Press NO to replace the flight plan.
All existing strips are erased and replaced by the new strips.

COMPLETE EXAMPLE.

```
[general]
PROJECT NAME = variable pbase example

Coordinate system = USA State Plane Coordinate System (SPCS)
Datum = Florida,East,transverse mercator NAD83,13091

Flight plan name = variable pbase example
Designed by = JPB

[spex]

SCALE = 10000
Base =
Endlap =
Focal length = 152

[PLANNING]
CREATE PHOTO INDEX = no
CREATE PINPOINT FLIGHTPLAN =yes

[column info]
Column run number = 2
Column easting =5
Column northing = 4
Column photo number =1

Column scale =6

[index]

1, 1, filmnrusa,27.0090702343,-80.5069903056,15000
2, 1, filmnrusa,27.0090141667,-80.4745833365,15000
3, 1, filmnrusa,27.009111131,-80.4420077478,15000

4, 2, filmnrusa,26.9795797348,-80.3933775404,15000
5, 2, filmnrusa,27.009492641,-80.3932206419,15000
6, 2, filmnrusa,27.1536425551,-80.391422073,15000
7, 2, filmnrusa,27.1829170556,-80.3914329338,15000

8, 3, filmnrusa,27.1835124671,-80.3751984607,15000
9, 3, filmnrusa,27.1536234246,-80.3753632646,15000
10, 3, filmnrusa,27.1251137013,-80.3753591564,15000
11, 3, filmnrusa,27.0096067821,-80.3759347492,15000
12, 3, filmnrusa,26.9794964123,-80.3759301588,15000
13, 3, filmnrusa,26.9647252878,-80.375927906,15000

14, 4, filmnrusa,26.9644763618,-80.3444760111,20000
15, 4, filmnrusa,26.9794389661,-80.3446799702,20000
16, 4, filmnrusa,27.0095513407,-80.3438375579,20000
17, 4, filmnrusa,27.0390992318,-80.344249541,20000
18, 4, filmnrusa,27.0665533458,-80.3440329001,20000
19, 4, filmnrusa,27.0959009149,-80.343815528,20000
20, 4, filmnrusa,27.1259980477,-80.343807426,20000
21, 4, filmnrusa,27.1543862033,-80.3437991767,20000
22, 4, filmnrusa,27.1839062009,-80.3437874285,20000

23, 5, filmnrusa,27.1834914287,-80.3103889836,20000
24, 5, filmnrusa,27.1397765313,-80.3104227395,20000
25, 5, filmnrusa,27.0954817581,-80.3108740658,20000
26, 5, filmnrusa,27.0667005565,-80.3106888962,20000
27, 5, filmnrusa,27.0369700058,-80.310713519,20000
28, 5, filmnrusa,27.0085597414,-80.3109437773,20000
29, 5, filmnrusa,26.9797652425,-80.311176264,20000
30, 5, filmnrusa,26.9653673151,-80.3113955837,20000

31, 6, filmnrusa,26.9650911543,-80.2622409227,25000
32, 6, filmnrusa,26.9796842035,-80.2622196844,25000
33, 6, filmnrusa,27.0084908994,-80.2619692643,25000
34, 6, filmnrusa,27.0373382502,-80.2627177779,25000
35, 6, filmnrusa,27.0667101754,-80.2626752726,25000
36, 6, filmnrusa,27.110284587,-80.2621958574,25000
37, 6, filmnrusa,27.1532777778,-80.261505555,25000
38, 6, filmnrusa,27.1966372087,-80.2618609863,25000
39, 6, filmnrusa,27.2409322113,-80.2620041964,25000

40, 7, filmnrusa,27.1104848141,-80.2455639659,25000
```

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41, 7, filmnrusa,27.0667176914,-80.2460550308,25000
42, 7, filmnrusa,27.0369708207,-80.2461050574,25000
43, 7, filmnrusa,27.0094917107,-80.2463612048,25000
44, 7, filmnrusa,26.9784074953,-80.2464156416,25000

45, 8, filmnrusa,26.9641297256,-80.2145539665,25000
46, 8, filmnrusa,26.978727559,-80.2143144353,25000
47, 8, filmnrusa,27.0079243771,-80.2144607099,25000
48, 8, filmnrusa,27.0371201327,-80.2139813042,25000
49, 8, filmnrusa,27.0661248133,-80.2139206738,25000
50, 8, filmnrusa,27.0956931252,-80.2134401576,25000
51, 8, filmnrusa,27.124499863,-80.2131696775,25000
52, 8, filmnrusa,27.1533932805,-80.2131065284,25000
53, 8, filmnrusa,27.1977185059,-80.2125924068,25000
54, 8, filmnrusa,27.2403270255,-80.2122905064,25000

55, 9, filmnrusa,26.9647410435,-80.1828070365,25000
56, 9, filmnrusa,26.9935727554,-80.1829412768,25000
57, 9, filmnrusa,27.0083663294,-80.1820687379,25000

58, 10, filmnrusa,27.0519685398,-80.1656759156,25000
59, 10, filmnrusa,27.0957677099,-80.1651349979,25000
60, 10, filmnrusa,27.1395592467,-80.1643844827,25000
61, 10, filmnrusa,27.1829594305,-80.1636341042,25000
62, 10, filmnrusa,27.2070234288,-80.1635643397,25000

63, 11, filmnrusa,27.0081430377,-80.1497584205,25000
64, 11, filmnrusa,26.978358967,-80.150266121,25000

65, 12, filmnrusa,27.2081430377,-80.2497584205,25000
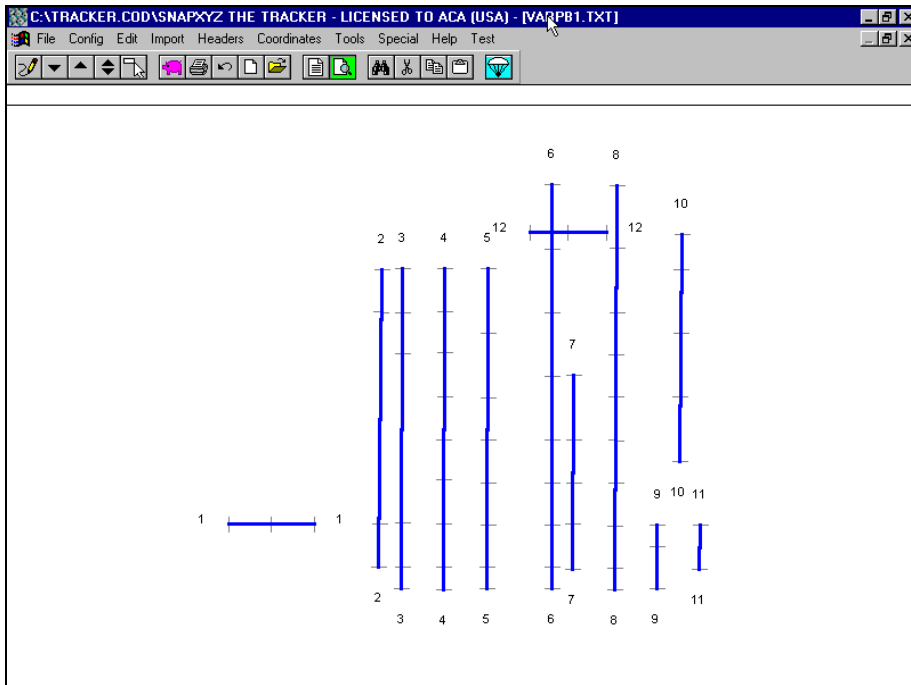
27 - RUNS SPECIFICATIONS

Last updated January 7, 1999

The run specifications can be defined in the [Spex] default section of the header and after each runs coordinates.

For example

```
1 = 55.06632,-001.51924,55.06632,-001.44767
2 = 55.05194,-001.53352,55.05193,-001.43333, Z4000,
3 = 55.03757,-001.51921,55.03755,-001.43339, Z4000, % 80
4 = 55.02317,-001.56210,55.02318,-001.43339, Z4100, S20000
5 = 55.00880,-001.54779,55.00880,-001.43341, Z4100
6 = 54.99443,-001.53349,54.99442,-001.41912, Z4100, S20000, %80
7 = 54.98005,-001.53345,54.98004,-001.43344, S25000
8 = 54.96568,-001.51917,54.96566,-001.43347,  Z4100, S25000
```

Z1234 means terrain height = 1234
%80 means endlap is 80 percent
S10000 means scale is 10000

The order of Z, % and S is not critical.

DEFAULTS (NEW!)
If a run has no Z, % or S, then the [Spex] default values are taken.

28 - HOW TO SAVE INDIVIDUAL ANNOTATION DATA FOR EACH PHOTO FRAME

Last updated 27 April 2000

The method use is based on the photo index function (refer to the chapter 26).

Prepare a photo index header has follows:

[general]
Project name = test

Coordinate system = World WGS 84 coordinate system
Datum = WGS84

Flight plan name =
Designed by = JPB

[spex]
Type of planning = AERIAL SURVEY PLANNING
Scale = 15000
Endlap = 60
Base =
Focal length =153
Negative size = 230

[planning]
CREATE PINPOINT FLIGHTPLAN = Y
CREATE PHOTO INDEX = N

Type Y or Yes to make sure a flight plan is created.

Type Y or Yes to create a photo index (in case this flight plan was already flown by an other system and needs to be imported in tracker).

[column info]
Column run number = 1
Column easting = 7
Column northing = 6
Column photo number = 2
Column film number =
Column scale =
Column zone =
Column course =
Column average ground elevation =
Column date =
Column time =
Column accepted =

Type the number of the corresponding column. The 4 first items are required, so it might be necessary to add a column run number and photo number

Accepted symbol =

NEW.
Type the number of the column containing the specific information for each photo

Column data1 = 3
Column data2 = 4
Column data3 = 5
Column data4 =
Column data5 =
Column data6 =

This example shows run number 1 and photo 1 and 2. The column 3, 4 and 5 contains specific data for each photo

[index]

1,1,FL,ALACHUA,12001_010601B,29 27 8.399866,-82 5 4.68624,79,May 15 - Jun 15,163,X,
1,2,FL,ALACHUA,12001_020601R,29 31 33.404199,-82 4 35.07681,82,May 15 - Jun 15,160,X,

This example shows 2 single photo runs number 11 and 12 with photo 234 and 235. The column 3, 4 and 5 contains specific data for each photo

[index]

11,234,FL,ALACHUA,12001_010601B,29 27 8.399866,-82 5 4.68624,79,May 15 - Jun 15,163,X,
12,235,FL,ALACHUA,12001_020601R,29 31 33.404199,-82 4 35.07681,82,May 15 - Jun 15,160,X,

29 - IMPORT PRJ FILES (FOR NLS ONLY)

Warning: As with all custom implementations, Track'air bv cannot give any assurance that this custom-made function will be operating correctly. It is the responsibility of the user to test this function and to make sure that it works as expected.

Start snapXYZ , select ⊙ 1) Create a new coordinates text file?

Select ⊙ 1) Flight plan (photo strips)

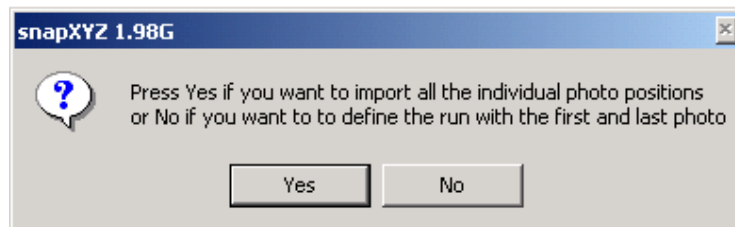Select the coordinates from the menu coordinates:

Coordinate system = Finnish national grid KKJ extended zone 3
Datum = Finnish National Grid Extended zone 3

Select the menu import, then import prj file

You can choose to create a flight plan either by importing all the individual photo positions or by creating a line from the first photo to the last.
If you choose to import the first and last photo, the resulting flight can further edited and merged with the other Tracker modules.
If you choose to import all photos, a flight plan will be created that will use the actual positions of each photo with the following restriction: To avoid making a zigzagging flight plan, the software will calculate the best fit straight line between all the photos and each photos that are not on this line will be perpendicularly projected on the line. Also the resulting flight cannot be further edited and merged with the other Tracker modules.

snapXYZ 1.98G

? Press Yes if you want to import all the individual photo positions or No if you want to to define the run with the first and last photo

[Yes]   [No]

If you absolutely need to re-fly exactly the same photo position, you need to select the import all photos method and to say Yes to Create a photo index. This way the photo positions are imported as if they had been flown before. You will later be able later to select an option in the snapSHOT program to refly exactly the same photo positions.
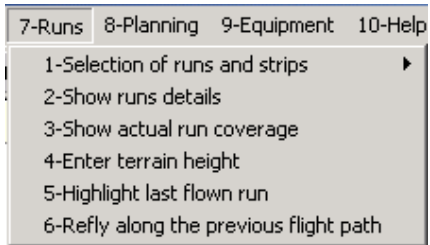
[planning]
Create pinpoint flightplan = Yes
Create photo index = Y|

Save your flight plan.

In snapSHOT, if you want to refly the previous photos position, the operator should select the menu 6-refly along the pervious flight plan. This will allow the pilot to guide the plane from one photo to the next.

7-Runs | 8-Planning | 9-Equipment | 10-Help

1-Selection of runs and strips   ▶
2-Show runs details
3-Show actual run coverage
4-Enter terrain height
5-Highlight last flown run
6-Refly along the previous flight path

30 - NOTES