

FLIGHTBYTE COMPUTING

User manual for Pattern Planner V1

Welcome to the Pattern Planner manual. Here we will discuss:

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1. Disclaimers

Put the wrong data in and you'll get the wrong data out. We've aimed to make the planner as flexible as possible.

The actual results you achieve will depend on your flying accuracy. The package gives results based on steady state winds and other conditions. None of the information here is a substitute for making your own local decisions but it is a good guide for establishing yourself.

Remember to do a sense check that the answer seems reasonable. If not, then check your entries or assumptions.

You're flying it, you get it right!

2.1 Using PC connections

If downloaded, run the file to extract the contents.

If received on CD, insert the CD in a PC's CD drive,

Connect the Pocket PC to the PC.

Copy the file 'Pattern CAB' to your PC using windows explorer.

In your mobile device, double-click the file 'Pattern CAB' to install it.

Should your Pocket PC object to the program, that is because it is running Pocket PC 2002 or earlier. The program requires .net compact framework 2.0. It needs .net compact framework. Run .NETCFSETUP.exe.

2.2 Via memorycard

If downloaded, run the file to extract the contents.

If received on CD, insert the CD in a PC's CD drive,

Copy the file 'Pattern CAB' to your memory card using windows explorer.

In your mobile device, double-click the file 'Pattern CAB' to install it.

Should your Pocket PC object to the program, that is because it is running Pocket PC 2002 or earlier. The program requires .net compact framework 2.0. It needs .net compact framework. Run .NETCFSETUP.exe.

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3. Overview

The package allows you to perform the functions that you require to fly holding patterns, approach an airfield and calculate winds aloft from actual performance.

4. Using the program

A. Entering winds

This is the initial screen and is the core of the program. Here you enter wind speed and direction and your TAS. It is also used to calculate winds aloft, which is described in the next section.

On the screen you will enter four pieces of data:

- predicted wind direction
- Predicted wind speed
- TAS
- Magnetic variation (- for east, + for West)
Enter 0 if all directions are true

These are required for nearly all calculations

The screenshot shows the 'Pattern planner' software interface. The title bar includes the Windows logo, the text 'Pattern planner', and system icons for signal strength and time (9:03). The main window contains several input fields: 'Heading', 'GPS Track', 'GPS GS', 'TAS', 'Mag Var -E+W', 'Wind Dir', and 'Wind Speed'. A large 'Get Wind' button is positioned to the right of the 'Heading' and 'GPS Track' fields. Below the input fields, there are three buttons labeled 'Wind', 'Hold', and 'Circuit', and a 'Help' button. The status bar at the bottom right shows a keyboard icon and a mouse cursor.

B. Calculating Winds aloft

The screenshot shows the 'Pattern planner' software interface. The title bar includes the Windows logo, the text 'Pattern planner', and system icons for signal strength and time (1:36). The main window contains several input fields: 'GPS GS', 'TAS', 'GPS Track', 'Heading', 'Mag Var -E+W', 'Wind Dir', and 'Wind Speed'. A large 'Get Wind' button is positioned to the left of the 'Mag Var' field. Below the input fields, there are three buttons labeled 'Wind', 'Hold', and 'Circuit', and a 'Help' button. The status bar at the bottom right shows a keyboard icon and a mouse cursor.

This is an alternative way to deduce wind direction and speed. By completing all the boxes in the upper section of the screen, pressing



will place an estimate of the wind direction and speed into the lower boxes. However, the degree of accuracy depends on the accuracy of the data entered. In most cases it is good enough for VFR navigation.

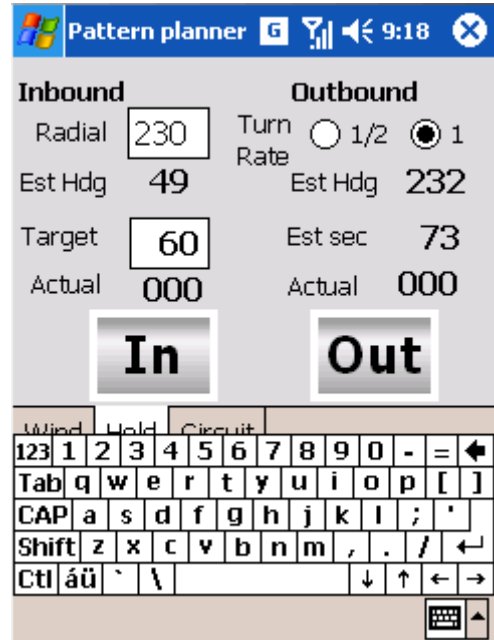
C. Holding patterns

One of the biggest problems with holding is getting the leg headings and timings right. By typing the leg requirements into this screen, you will get headings and timings for both inbound and outbound legs. It allows for wind drift on legs and also drift during turns to provide good estimates to fly an accurate hold pattern from entry.

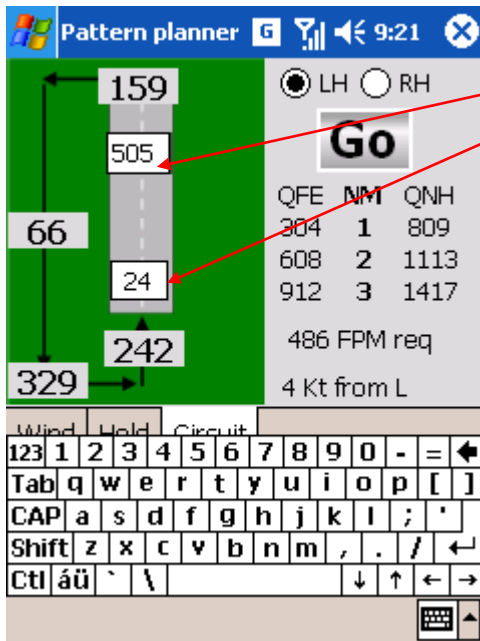
You can select any inbound target time in seconds and either rate one or rate half turns.

The buttons at the bottom provide easy access to stopwatches for timing your legs. Press to start or stop. Pressing 'Out' will stop the inbound timer and vice versa.

Remember that the radial is NOT the track you fly inbound, but the radial from the hold on which you require to be established - i.e. the reciprocal of your inbound track.



D. Circuit patterns



This screen helps planning a circuit into an airfield.

If you know it, type in the runway altitude
Type in the runway that you will land on

Press **Go** and the Pocket PC will calculate headings for cross wind, downwind, base and final - all based on the wind direction and speed that you supplied.

It will also display the calculated crosswind on Final.

As a power and glider pilot, my approaches are rarely less than 20 degrees, but if you fly IR or want to pretend you've got a 747 then we display QFE at 1,2 and 3 NM out for 3 degree approaches as well as a descent rate for this slope. If you have entered an altitude then we also show heights as altitudes AMSL for QNH settings.

Clicking the LH and RH buttons will display the appropriate headings for LH or RH circuits.

E. Help

Context sensitive help is always available by pressing the button beneath the keyboard