

DELTA WING

by Graham Johns

Orders for the day: seek out and destroy enemy bases and aircraft. Defend friendly territory from enemy attack.

It is a grey and windy day, and the war seems to have been going on for years. You strap yourself into the cockpit of your jet fighter and wonder if you'll see the end of it.

Today's is the mission you've been waiting for—your chance to help finish this war.

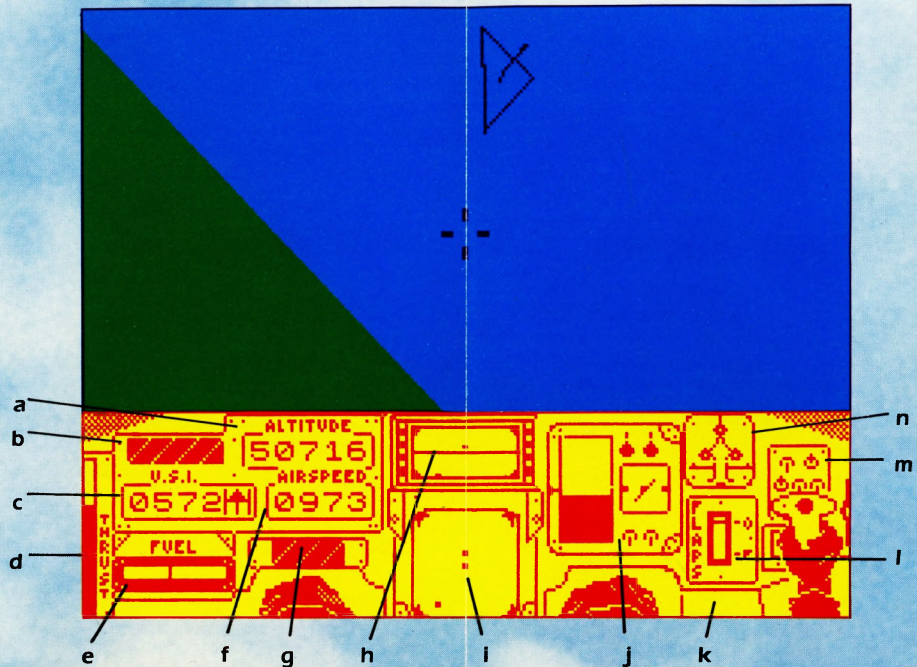
Your plane is performing like a dream as you soar through the clouds on course for an enemy base. But trouble lies ahead—hostile aircraft at two o'clock! You're not messing about today, and it's soon spinning earthwards, out of control.

Bombs gone, and it's time to turn around and defend one of your bases. Fuel and ammo are getting low, so if the bases are destroyed it could be the end for you! You must fight off the enemy bomber and land safely if you are going to survive for another mission.

SCRAMBLE

These loading instructions apply to the one player version only. The two player instructions are detailed later.

- 1 Before switching on the Spectrum, connect the joystick interface if this is to be used.
- 2 Connect the television to the computer and switch the television ON.
- 3 Connect the cassette recorder to the computer and switch the cassette recorder ON.
- 4 Place the one player version (side one) of the cassette in the recorder and rewind to the beginning.
- 5 Check that the EAR lead is connected correctly and that the volume level of the cassette recorder is set correctly.
- 6 Type `LOAD""` (do not leave a space between the quotes), then press ENTER.
- 7 Press PLAY on the tape recorder.
- 8 When the program has finished loading, press STOP on the cassette recorder.
- 9 If the program does not load successfully, try adjusting the volume setting of the tape recorder and repeat the above from step 3. If the problem persists, refer to chapter 6 of the Spectrum Introduction Manual.



INSTRUMENT CHECK

a ALTITUDE is in feet.

b BRAKE INDICATOR (above VSI)

When the brakes are being applied, the word BRAKE appears here. These can be used on the ground or in the air.

c VSI (vertical speed indicator)

This shows the rate at which you are climbing or diving in ft/sec. The arrow indicates which.

d THRUST (left of fuel gauge) Shows how much throttle is being applied. It goes from 0-100% in the green area and into the red when reheat is being used. Reheat will produce very fast speeds, but is heavy on the fuel.

e FUEL GAUGE shows how much you have left.

f AIRSPEED is in knots

g STALL WARNING (right of fuel gauge)

When you are within 50 knots of stalling, this lights up with the word STALL.

h VERTICAL POSITION LOCATOR (above the radar) This is, in effect, a radar in the vertical plane, the range of which will correspond to the range of radar currently selected. Each blip on the radar has an equivalent one on the VPL. The centre line of this instrument's display represents your current altitude, so anything above the line is flying higher than you, anything below is lower.

i RADAR (bottom centre) The central dot represents your plane and the other dots are enemy planes or bases within range. The radar (and VPL—see later) can be operated in short or long range mode, which correspond to 4 and 16 miles respectively. Pressing R changes the mode, with the word long or short appearing above the radar screen to confirm. Anything appearing above the central dot is ahead of you, anything below it is behind.

j ARTIFICIAL HORIZON (right of the radar) This Consists of two parts:

- (i) A bar showing the current pitch angle.
- (ii) The roll angle is shown to the left.

k COMPASS (below the flaps indicator) This shows the current bearing of your plane, and is used for navigating to enemy bases etc. North on the Map screen is directly up.

l FLAPS (bottom right of artificial horizon) This shows how much flap you are using from zero (at the top) to full flaps. It's function is to help avoid stalling at low speeds, which is essential when landing.

m BOMB INDICATOR is green when you can bomb, red when you have just dropped a bomb or you do not have any left.

n UNDERCARRIAGE INDICATOR (above flaps) If it is green, the undercarriage is down; it changes to red when the undercarriage is up. You must not travel at more than 320 knots with the undercarriage down.

OUT OF THE COCKPIT VIEW (top half of the screen)

You will see the ground (green) sky (blue), ground bases and enemy planes. The enemy bases are a different shape to yours and corresponds to the symbol used on map. In the centre of this view is a cross hair which you can use to aim at enemy planes.

TAKE THE CONTROLS

1 You can use any one of the following to control the plane

Keyboard, Sinclair, Kempston, Fuller, AGF/Protek.

Press J to change option. Corresponding keyboard controls are as follows:

I—left, P—right, Q—up, Z—down, N—fire.

2 Other controls are operated on the keyboard only:

U—undercarriage up or down

M—Map on or off

ENTER—drops bombs

B—this applies to the airbrakes only while the key is pressed.

T—increase throttle

G—decrease throttle

F—flaps up

V—flaps down

R—change radar range

S—turns on/off music.

This will also turn on/off sounds produced if a fuller box is connected, and selected.

CAPS SHIFT & SYMBOL SHIFT—Aborts current game.

3 Skill levels

(i) Press L to choose a level from: Trainer, Novice, Pilot, Ace.

In the Trainer mode the enemy aircraft will not move at all. There are no levels on the two player game.

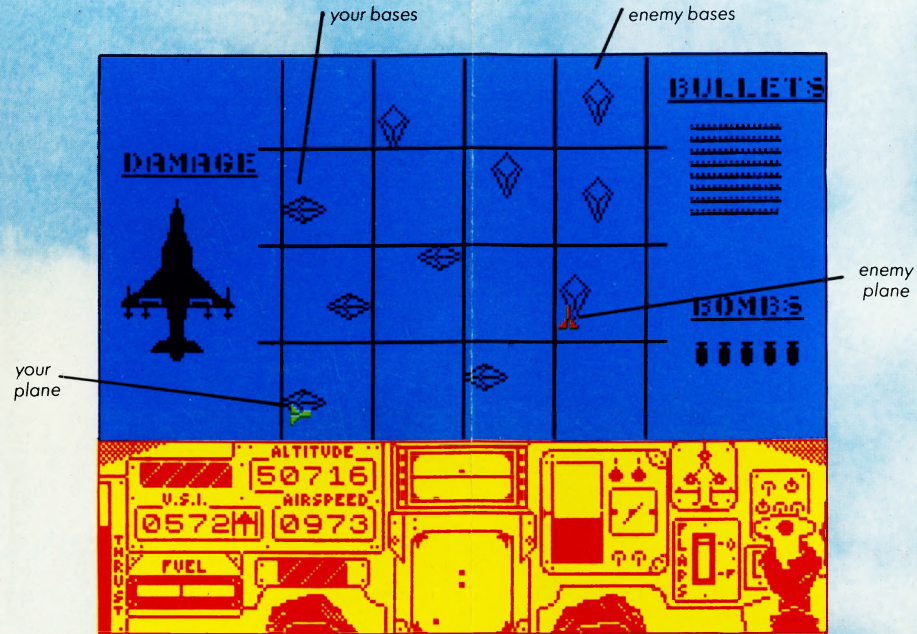
(ii) Within each of the above levels you can choose the number of enemy bases by pressing a number from 1 to 5. You will be allocated the same number of bases, and one bomb for each enemy base. The game will now start.

THE MISSION

1 To take off, taxi until your airspeed is above 83 knots (full flaps) or 87 knots (no flaps). At that point, if you pull back the joystick you will begin to climb.

2 Look at the map to find out where the enemy bases are located. Also included in the map screen is the status report showing damage and the amount of ammunition used. The objective is to destroy the enemy bases and protect your own from the enemy aircraft.

The map symbols have the following meanings:



The enemy plane is represented by a red symbol.

Your plane is represented by a green symbol.

Position of your bases.

Position of the enemy bases.

If the position of the two planes is the same then the symbols will be overlaid, and will appear red. It should be noted that at the start of the mission there is an enemy aircraft within radar range, which will overlay your symbol on the map screen.

Plane damage is indicated by the amount of the plane on the left of the screen that is coloured red. When the plane is completely red, you are destroyed!

The number of bullets and bombs are shown on the right.

3 When you have located the enemy bases, decide which to attack first and start flying in that direction. Watch out for enemy planes attacking your bases though. If all your bases get destroyed, you will not be able to land and refuel etc.

4 When an enemy aircraft is in range, you can try to shoot it down, using your 20mm cannon. When you have it positioned in your sights, press the fire button to shoot. Borders flashing yellow indicates you have hit the enemy plane; red

means that you have been hit. It takes seven hits for a plane to be shot down.

5 When you are over an enemy base, press the ENTER key to drop a bomb. Go easy on the bombs-you have only one for each enemy base. The bomb indicator must be green.

6 When you are damaged, running low on fuel, or out of ammunition, you can land close to one of your own bases to be repaired, refuelled and rearmed.

7 If you land at an enemy base, collide with a plane or base, you will be destroyed.

LANDING

To land successfully you must have a vertical speed (VSI) of less than 15ft/sec. If your speed is between 15 and 60 ft/sec, your plane will bounce; greater than 60ft/sec will destroy the plane.

Your speed should be less than 200 knots, and ideally around 100 knots, so flaps should be down to prevent stalling. The angle of attack should be less than 22%, which is equivalent to two notches, on the Artificial Horizon, below the centre line. The plane should not be banked, and the undercarriage must be down.

To be refueled and re-armed you must be within a $\frac{1}{4}$ mile of the base and stationary (and no thrust). If you have not landed close enough to your base, you can taxi up to it

HINTS

1 Dogfighting at low altitudes is dangerous! You may be better off to take on your adversary at higher altitudes.

2 To successfully bomb, locate the enemy base on the short range radar such that you are moving directly towards the base. When the dot of the base coincides with the centre of screen, pause a moment, and release a bomb. Do not fly lower than 250ft.

TWO PLAYER OPTION

1 To use this option, both players will require: 48K Spectrum Interface 1. A tape recorder should only be connected to one Spectrum. The two interface 1's should be connected as outlined in Chapter 7 of the Microdrive and Interface 1 Manual. It should be noted that no more than two Spectrum computers should be connected when using this program.

2 It is suggested that the two televisions should be placed such that neither player can see the other's screen.

3 After connecting up the two Spectrum's and positioning the TV's, load the program as follows:

i) Ensure the units are properly connected and that all the units are turned on.

ii) On the Spectrum without the cassette recorder type:- LOAD""n";1 then press ENTER.

On the Spectrum with the cassette recorder type LOAD"" (do not leave a space between the quotes), then press ENTER.

iii) Press play on the tape recorder.

iv) When the program has finished loading, press STOP on the tape recorder.

v) If the program does not load successfully, try adjusting the volume setting of the tape recorder and repeat the above from step i). If the problem persists, refer to Chapter 6 of the Spectrum Introduction Manual.

4 The objectives of the two player version is the same as the one player version (and for each player), with role of computer taken by the second player.

5 The number of bases should be selected by one player, then the other player should press a key 1 to 5 as instructed. The game will then begin. DO NOT UNDER ANY CIRCUMSTANCES PRESS THE SPACE KEY AS THIS WILL CAUSE THE NETWORK TO BE RESET. THE PROGRAM WILL THEN HAVE TO BE RE-LOADED.

OTHER VARIATIONS

An interesting way of using the two player option is to try flying in formation. You may think of some others.

WANTED

We are on the lookout for quality software. If you are currently developing original software for the C-64, Spectrum, VIC-20 or Atari and are looking to market it, we would like to hear from you, even if your program is not complete.

We can provide technical backup, game play ideas and should your program be acceptable, we will pay top royalties or buy your copyright.

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MANUFACTURED IN THE UK

CREATIVE SPARKS

FOR SPECTRUM 48K

DELTA WING

HI-TECH COMBAT TACTICS

PACKAGING DESIGN BY BLAKE SEARS

