

FLIGHT SIMULATION

These will be a series of programs concerning aircraft flight. There will be a program similar to PSION's "Flight", however there will be an option for joystick control and sound. The program acts as a framework for more complicated "scenarios" that can be loaded in.

The framework provides the basic cockpit display and the mathematical structure for flight simulation.

The separate program scenarios are as follows:-

1 Spitfire Pilot

Aircraft has the handling characteristics of a spitfire. One airfield and rudimentary landscape. Facility to have combat with an enemy aircraft. This will entail finding aircraft, attacking from a variety of positions. You will be shot down if the aircraft gets on your tail (seen in the mirror) and you have not taken suitably violent evasive action. Return to airfield to complete mission.

Option to take off again. You have to return to airfield to refuel. Victories are shown on the screen. The objective is therefore to see how long you can survive. Option to save position on tape.

Facility in flight to look down to see enemy. Counter on screen shows bearing of an enemy, if at same level or just above. Enemy is never directly above. Other option is to have radar screen.

2 Ground Attack

Aircraft has the handling characteristics of a Skyhawk. One airfield and rudimentary landscape. Facility to attack ground targets with bombs and rockets. Target area to have detailed graphics. Shot down if too long and steady over target.

There are a number of targets, in fact too many to successfully attack without having to return to base to refuel.

Counter on screen shows targets successfully destroyed.

Objective to get as high a score as possible before being shot down or crashing.

Targets show up on radar screen. As do attacking aircraft or missiles using Radar Warning Receiver (RWR). Attacks are evaded using violent turns etc at appropriate time.

3 Flight Deck

Aircraft has characteristics of a Phantom. Launch from aircraft carrier. Simple map with approximate area of enemy ship. Attack with rockets. Enemy ship fires back. You are shot down if remain straight and level too long. Return to carrier and land on flight deck.

- 3. If possible have an air attack on the way back from attacking the enemy ship.

Or else have several ships to attack, score for number sunk. Have to return before running out of fuel. Targets show up on radar.

#### 4 Cross Country Navigation

Exercise of flying between airfields. Detailed landscape on ground requiring identification to establish position and course setting.

Weather effects such as clouds and winds - i.e. instrument flying required.

Radio Beacons included.

Detailed Map is not on screen but is provided as hard copy.

A very rough map is on the screen with approximate position shown. Refuel and re-take off capability. Plus any other sophistication that the computer can take (i.e. IBM's Flight Simulation).

#### 5 Aerobatics

Only one airfield - no cross country requirements. Several rudimentary reference points on the ground.

Aircraft handles like a Pitts Special.

The Program documentation is extensive with details of how to do aerobatic manoeuvres.

There is a demonstration routine in the program which puts the plane through a variety of aerobatic manoeuvres.

#### MACHINES

Commodore 64

Spectrum 48K

BBC 32K (although graphic resolution limits memory to 10K)

Versions between each machine do not have to be identical but should make the most of each machines capabilities.

Disk drives not required for first products. However it may be an idea to program with the thought of producing a second version that uses the potential of drives.

Products required in order above.

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21 program.  $\div$  7 man years  $\div$  84 man months  
1 person  $\cdot$  12 mo. = 240 man days / 8 hours, 96000 \$  
10% delay - 10% urgency