

BBC DOMESDAY SYSTEM

INTERACTIVE VIDEODISC



PILOT'S GUIDE

A MULTI-ROLE

EDUCATIONAL

ADVENTURE





PILOT.

Even with all the modern equipment and techniques, flight in the Arctic presents exceptional difficulties, but your role is of vital importance in supplying, and, if necessary, evacuating the team in an emergency.

Your ski-equipped aircraft would typically be operating at the limits of its capability and therefore must be scrupulously maintained in circumstances which are far from ideal. Navigational aids such as the radio beacons of the ice team would help you to locate them when you are within 40 miles but it is no easy task to locate the group, even with the best on-board instruments, or to spot them amongst the ice rubble even when relatively close. Having located the team however, a decision as to whether or not to land must be taken by you in consultation with the team leader, with disastrous results if you are wrong and damage the plane.

A parachute drop or even free drop of supplies are also alternatives and then the return to Base on limited fuel reserves with little or no prospect of a landing or alternative airfield should weather problems arise.

The Arctic has very few meteorological stations for weather monitoring/reporting and local weather conditions can change rapidly because of the presence of mountains and open stretches of water at higher temperatures. The mists caused by this flux or sudden whiteout conditions can result in a deadly lack of perspective for the pilot of an aircraft.

Crucial decisions as to the amount of fuel and payload to be carried will make the difference between success and failure of your mission.

A simulation of the loading up of the aircraft with fuel and supplies is provided. First of all you are required to estimate and enter the magnetic variation between Magnetic North and "True North" in order to set the aircraft compass. You must then estimate and enter the compass bearing to the Ice Team. Then you are required to estimate the distance to the Ice Team in Nautical miles, with the help of the yellow line, extending towards the Pole, their location being at the end of the yellow line. Note that the Pole is 450 miles from Alert.

It is now necessary to calculate the amount of aircraft fuel, in lbs. weight needed to get to the Ice Team and back safely. All the necessary factors are shown on the screen and are based on the real loads carried by Twin Otter aircraft in these Latitudes. Note that International Convention requires that all the weights associated with air transport are expressed in pounds weight or lbs. Essentially you will need to work out the number of hours flight to the Ice Team and then multiply that figure by the number of lbs. weight of fuel consumed during each flight hour to get the total number of lbs. of fuel required.

The next screen simulates the loading up of the "payload" of fuel, food and supplies to be carried on the aircraft to the Ice Team.

You are then required to work out how much fuel you can take out for the skidoos, (aircraft fuel is of a much higher octane than skidoo fuel so is not interchangeable) in cans. You will note that the total weight in lbs. is incremented in the bottom right hand box. You must then load up the food boxes and finally the other (medical, mechanical, etc.) supplies., all of which would add to the total payload weight. Note that at maximum ranges extra aircraft fuel must be taken on board as "payload" to allow a safe return.

