

MIDWINTER



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Reuters International News Agency....23 November 2015....News Flash....

PRESIDENT ESCAPES ASSASSINATION ATTEMPT

Miami, Florida, U.S.A 1430 hrs. An unsuccessful attempt to assassinate the President of the United States was made early this morning on the seafront at Miami beach.

Three security guards were murdered as they protected **President Ed Jackson** from eight hooded gunmen, believed to be from the **Global Green Army** who

last month bombed the **Supreme Soviet Congress of Peoples Deputies**, injuring the Premier.

President and **Mrs. Jackson** were both unharmed, but shaken by the attack. Two of the gunmen were shot dead, and the others arrested.

The Vice-President, **Michael Baker**, later condemned the attack. "*We have today witnessed another attempt on a world leader by a terrorist group intent on furthering their cause by murder. The cold-blooded killing of members of*

the security services will only strengthen the resolve of the President, and the people of the United States, to resist the demands of this group, and to progress with our stated plans for the controlling of current climatic trends. We are determined that justice be done. Terrorists will pay with their lives, whatever their cause."

He was anxious in his statement to denounce the growing support for the "**Global Green Army**", who have recently attracted publicity for their aims, to see governments acting together to combat the problems of the greenhouse effect, by a campaign described by the **GGA** as "**educational terrorism**".



Reuters International News Agency...4 April 2017...Newsflash...

WASHINGTON, MOSCOW, AND BRUSSELS DISCREDITED IN "ICEGATE" SCANDAL

Washington D.C, Maryland, U.S.A. 1300 hrs. Following the agreement issued jointly by the governments of the United States, Soviet Union, and Europe in January, stating their plans for combatting global warming, it has been reported that a classified section of the document has been leaked to an American Newspaper, "The Boston Correspondent".

The study, entitled "**The Midwinter Report**", appears to be the findings of a **KGB/CIA** commission charged with examining mechanisms by which

world cooling could be triggered. It is claimed that if the leaked documents are genuine, they amount to an international conspiracy to create a belief that a

'mini ice age' may be the solution to the climatic crisis. The **Global Green Army** have issued the following statement: *"The governments of the world have taken no effective action to stop the accelerating climatic crisis endangering life on Earth. They are obviously so desperate for a solution that they have produced a report which is sinister in implication, and implausible in practice. It is a discredited document, borne of corruption. and indicative of the fact that governments will not save the world from overheating."*

THE MIDWINTER REPORT



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PART 1

DOCUMENT STATUS: TOP SECRET

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THE CLIMATIC CRISIS

SECTION III

"THE MIDWINTER REPORT"

TOP SECRET

'The Climatic Crisis' was jointly commissioned by the governments of the United States of America, the Soviet Union, and the Federation of European Nations, as a part of a wide-ranging study into the causes, effects, and possible solutions to global warming.

This particular briefing - *"The Midwinter Report"* - is part of the third section, examining possible short-cuts to accelerated global cooling.

Part One deals with natural causes of accelerated global cooling, or ice-ages. An appendix, Part Two has been prepared, outlining possible manufactured routes to the same end. This document is available separately, and is for the eyes of heads of state only.

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PART 1

DOCUMENT STATUS: TOP SECRET

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THE FORMATION OF ICE-AGES

A) The lessons of history

B) A combination of causes

- i)The location of continents
- ii)A cooling of world climate ?
- iii)The reduction of the radiation traps
- iv)An increase in reflectivity

C) Detonating the Dynamite

- i)Volcanic activity
- ii)Meteor strikes

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THE FORMATION OF ICE-AGES

A) The lessons of History

Glaciation (the formation of ice) occurs if one basic environmental condition is fulfilled: More snow must fall and accumulate in the winter than can be wasted or eroded by melting the following summer. If this imbalance continues for a few years, a period of glaciation will follow.

Close examination of the start of previous ice-ages has led us to believe that two main factors combine to initiate glaciation.

i) Continental land-masses 'wander' across high latitude areas, where ice sheets are normally expected. Ice will affect the land surface whilst it remains in this position; but if the land-mass then drifts away to

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lower latitudes the glaciation ceases.

ii) Under the influence of external factors, the world's climate cools so that snowlines are lowered everywhere. In the mountains, glaciers develop and ice sheets expand into the middle latitudes. The sea-level falls, as the area of sea ice is increased, and many parts of the globe not actually affected by glaciers become areas of permafrost. Ice, in some shape or form, starts to affect greater areas of the worlds surface.

There are other factors which may possibly contribute:

iii) Mountain ranges are built up until they reach the regional snow-line. If this happens, ice begins to affect the higher parts of mountains and flows into glacial valleys.

iv) A slight warming of the Earth's surface causes the base of the Antarctic ice sheet to start melting, which releases great amounts of ice into the Southern Ocean, to be trapped in wide ice shelves. This causes the ocean to cool, and then the air above it, in turn

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freezing the Antarctic and other ice sheets, building them up to ice age proportions again. This is called the ice sheet surge theory

v) A reduction in solar radiation received in the polar regions may be caused by the Earth's geometrical relationship with the Sun changing. As a result of complicated relations between small but systematic variations in the inclination and orientation of the Earth's rotational axis, coupled with changes caused by its elliptical orbit, these changes occur constantly. Milankovich, a Yugoslav geophysicist, showed the calculated temperature changes associated with this "wobble", indicating four main groups of low temperatures within the last 600 000 years, corresponding roughly to the onset of ice-ages. But there has been much heavy criticism of Milankovich's ideas, on the grounds that the variations considered would have much less effect on world climate than he claimed, and so his calculations were of dubious worth.

It is seldom possible to recognise these mechanisms working independently of one another. Most Ice Ages

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have probably had very complicated causes, with a contribution from several factors.

To predict the onset of the next ice-age, we must estimate the next time at which two or more of these factors will be exerting a strong enough impact to trigger the onset of global cooling.

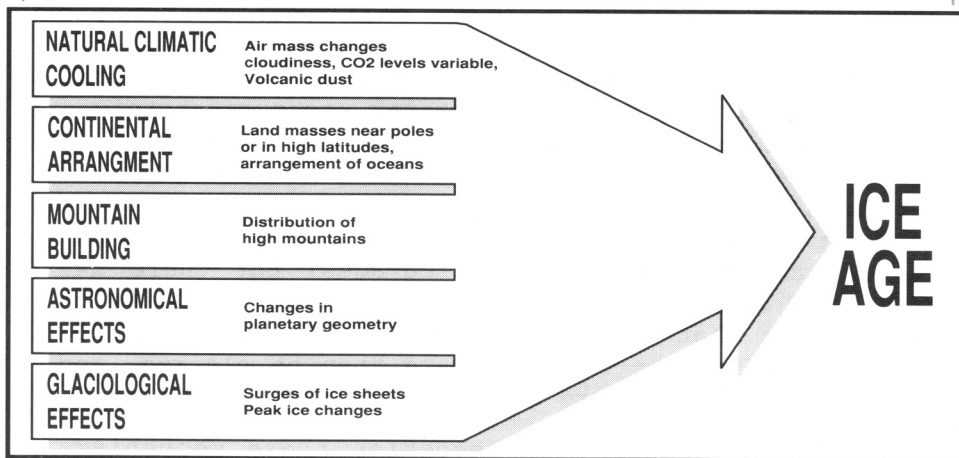


Diagram 1: Factors combining to cause an ice-age

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B) A Combination of Causes

1) The location of Continents

"The primary geophysical requirement for continental glaciation is the presence of large land masses in sufficiently high latitudes to catch and hold a lot of snow"

The present location of continents and their expected geological characteristics as a result of their locations do not always appear to match, as the following two examples illustrate.

A cursory glance at an atlas will show that the Sahara desert today lies on the equator, and its climate is as far removed as one can imagine from glacial conditions. But scientists have found that great expanses of ice-scratched bedrock, striated erratic boulders and melt-water channels, all characteristic of a glaciated environment are present.

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When the first accurate maps were drawn, in the eighteenth century, it was seen that the west coast of Africa corresponded closely with the east coast of South America. In the nineteenth century, geologists started to 'date' rocks, and found rocks of similar ages on the west coast of Africa and the east coast of South America which fitted together when the coast lines were matched.

Both of these unexpected discoveries have come to be explained by a theory known as "Continental Drift", the slow movement of the continents from some previous alignment to their present positions, on a deep-lying plastic substratum.

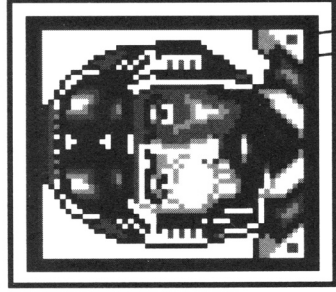
In 1912, it was suggested by Alfred Wegener that Continental Drift started with the break up of the great supercontinent of Pangea.

PERSONNEL FILE

Captain John Stark
Peace Officer
Age 33 years
Current Location: On Patrol

In recent years, John Stark has made the FVPF into a disciplined and effective force. He is a fair man but equally a man convinced that his way is best. He has never had much time for romance and many were surprised when he fell for Sarah Maddocks. Stark's nearest friends are Howard

Courtenay and Karl Rudinski.



QUALITIES AND SKILLS

MORALE.....	GOOD
ENERGY.....	EXCELLENT
ALERTNESS.....	EXCELLENT
ENDURANCE.....	EXCELLENT
STURDINESS	GOOD
OPTIMISM.....	GOOD
STRENGTH.....	GOOD
STAMINA.....	EXCELLENT
SHARPNESS.....	EXCELLENT
SKIING.....	GOOD
HANG-GLIDING.....	GOOD
DRIVING.....	EXCELLENT
SNIPING.....	GOOD
SABOTAGE.....	POOR

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Diagram 2: The supercontinent of Pangea

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About 100 million years ago the present day continents began to drift away from one another, leading to the creation of the South Atlantic and North Atlantic Oceans and the Indian Ocean. Antarctica was now migrating towards the south pole while Australia moved east and India moved north, from their initial positions illustrated in Diagram 3.

In the Northern Hemisphere at the time the north pole lay somewhere near the Bering Strait off the coast of Alaska. Those land masses now in 'convenient' positions were bound to be affected by glaciation, and so the glaciers of Alaska and Antarctica were formed.

It has been predicted that the continuation of Continental Drift will lead to the continents being in the position illustrated in Diagram 4; but at the present time, their positions fulfill the first criterion for glaciation - there are currently sufficient land masses in high latitudes for the onset of glaciation.

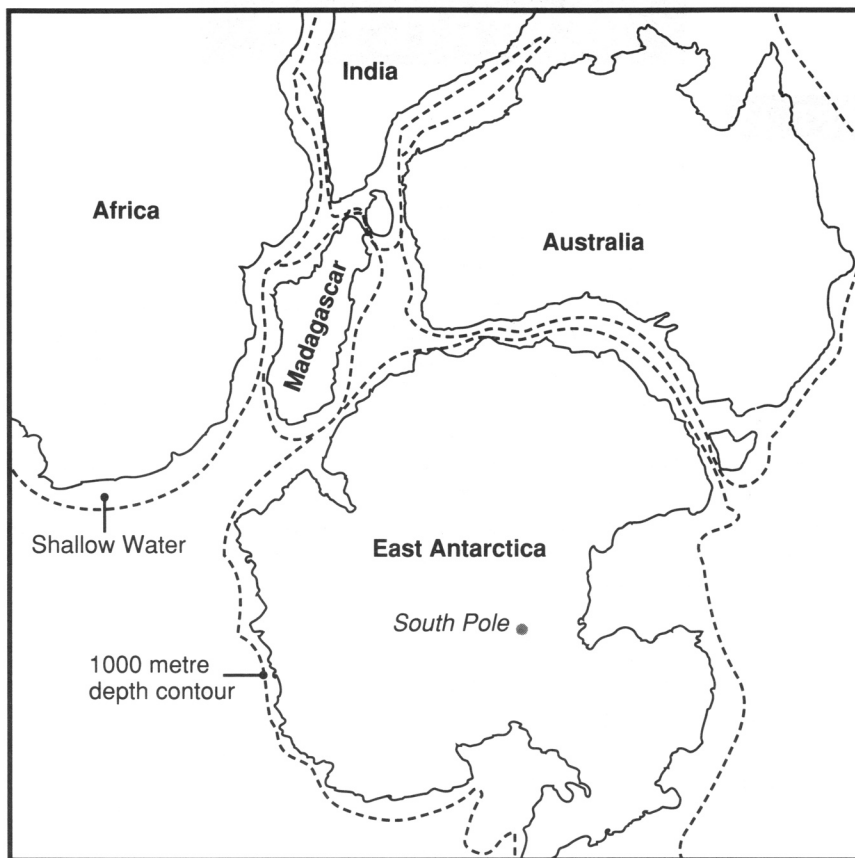
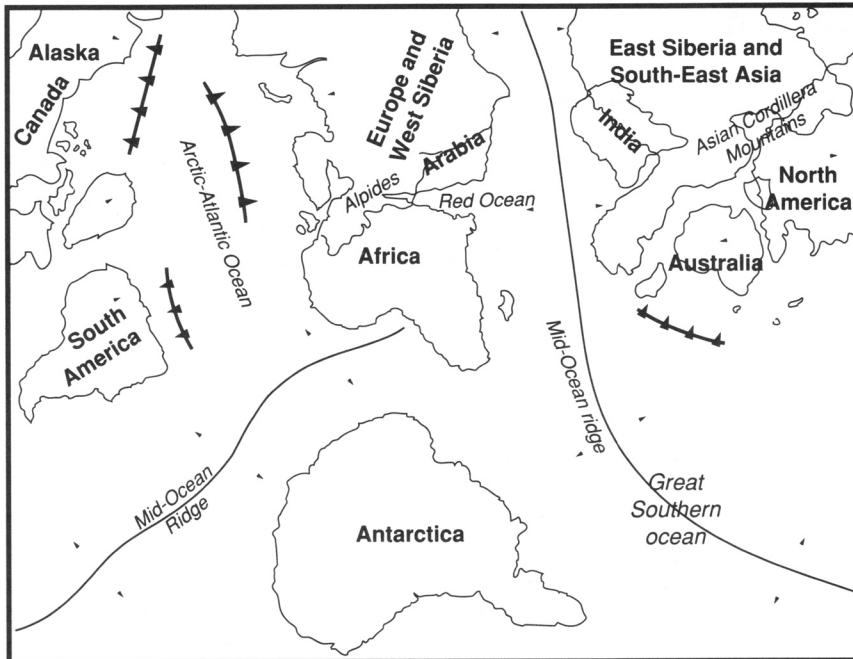


Diagram 3: Geological fit of Africa, Antarctica and Australia

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- Directions of plate movement

↘ Destructive plate margin with direction of underthrusting

Diagram 4: The predicted position of the continents in 150 million years

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2) A cooling of world climate

When viewed from space, and as seen in photographs taken from the moon, the Earth appears to be blue. This is caused by the scattering of light by air molecules in the earth's atmosphere. Part of the blue light from the sun is scattered forward to Earth, which is why the sky usually appears blue to us, and part is scattered back into space, which is why the Earth appears blue to anyone on the moon. It is estimated that the scattering by air molecules has the effect of reflecting 9% of the energy of all the sunlight incident on the Earth.

The strongest reflection of sunlight (about 90%) is caused by snow; clouds have an average reflectivity of about 50%; ice and deserts about 35%; land areas between 20% and 10%, depending on the vegetation; and the oceans only 3% (which is why they appear dark in pictures of the Earth taken from space).

When all the sources of reflection are added together, we find that the Earth, on average, reflects some 36%

PERSONNEL FILE

Constable Harvey Pringle
Peace Officer

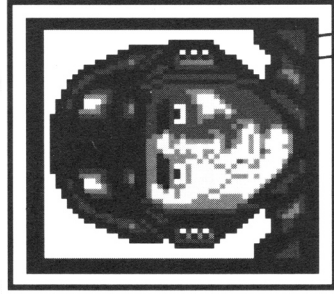
Age 28 years

Current Location: Dogstar Bay

Easily taken in, Harvey Pringle has been swindled many a time by Flint without even realising it. He regards Macleod and Flynn as good friends but, in truth, they have little time for him. Pringle blames Chabrun entirely for leading his wife astray and now suspects, quite falsely, that Rudinski and Jessop have the same intentions.

QUALITIES AND SKILLS

MORALE.....	GOOD
ENERGY	GOOD
ALERTNESS	FAIRLY GOOD
ENDURANCE.....	BELOW PAR
STURDINESS.....	AVERAGE
OPTIMISM	BELOW PAR
STRENGTH	AVERAGE
STAMINA.....	AVERAGE
SHARPNESS	POOR
SKIING.....	AVERAGE
HANG-GLIDING	POOR
DRIVING	AVERAGE
SNIPING	FAIRLY GOOD
SABOTAGE.....	POOR



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of the solar radiation falling on it. It therefore follows that the Earth has available 64% of the energy of incident sunlight.

It would be possible to calculate the degree of heating caused by the sun, although this calculation would be anything but precise, since the Earth is a very complex body, and a complete calculation including every factor would be very complex.

We can approximate the calculation by considering the Earth to be a small spherical body which;

- i) absorbs all solar radiation received.**
- ii) is a good radiator of heat at all wavelengths.**
- iii) has the ability for equilibration of heat rapidly.**

If we suppose the object moves around the sun in the same orbit as the Earth - about 150 million kilometres, it is possible to calculate that we would expect the body to have a temperature of 280 Kelvin (7°C), a result close to the actual average temperature of the

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Earth 287 Kelvin (14°C). The error in the calculation is 3%.

To upgrade our model we must make the imaginary body more realistic. If we suppose that it reflects 36% of the sunlight incident upon it, as explained earlier, but otherwise keeps the same conditions, the calculated temperature is about 250 K (-23°C), giving a 13% error. This worsening of the error suggests that the Earth must have a mechanism which compensates for the reflection of sunlight.

That compensating factor is that the Earth is not a perfect heat radiator. The atmospheric gases of the Earth generate a radiation trap, mainly made up by two gases, water vapour and carbon dioxide. This is what is known as the "*Greenhouse Effect*".

The Carbon Dioxide trap absorbs strongly in the wavelength range from 14 micrometres to 16.5 micrometres (1 micrometre is one millionth part of one metre), and the water vapour trap blocks the escape of heat with wave-

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lengths longer than 20 micrometres.

When the wavelength falls into one or other of those blocked ranges, scarcely any radiant heat generated at ground level succeeds in penetrating the trap. There is essentially no escape through the trap into the higher atmosphere and thence into space. Blocked radiation is either re-admitted (after being absorbed into the trap) downward into the ground immediately, or absorbed again by the gas entering the trap, in which case there is a further re-emission. Sooner or later, perhaps after many absorbtions and re-emissions, the trapped radiation reaches the ground, where it is removed by ground absorbtion, so returning the heat to where it started.

Heat radiation from the Earth occurs at wavelengths both within and outside the wavelengths of the traps. The fraction of the energy of the radiation within the traps is 42%, with the carbon dioxide blocking about 15% of the heat energy, and the water vapour about 27%. The effect of the traps is therefore to reduce the radiating efficiency of the surface of the Earth to

PERSONNEL FILE

Constable Fergus Flynn
Peace Officer

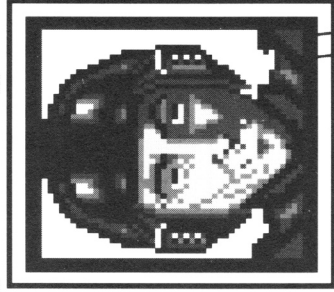
Age 26 years

Current Location: Eagle Mountain

Fergus Flynn sees the funny side of most things. He has a sharp wit, and a knack of deflating more pompous men, his favourite targets being Lt. Gaunt and Dr. Revel. Flynn and his wife are still wildly in love and Flynn has just learnt that he's going to be a father soon. Chabrun, Macleod and Gregory Flint are all good friends of his.

QUALITIES AND SKILLS

MORALE	EXCELLENT
ENERGY	GOOD
ALERTNESS	EXCELLENT
ENDURANCE	FAIRLY GOOD
STURDINESS	FAIRLY GOOD
OPTIMISM	EXCELLENT
STRENGTH.....	GOOD
STAMINA.....	AVERAGE
SHARPNESS	GOOD
SKIING	GOOD
HANG-GLIDING.....	BELOW PAR
DRIVING.....	POOR
SNIPING	FAIRLY GOOD
SABOTAGE	GOOD



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about 58% of the imaginary body used in the calculations above. The surface of the Earth cannot cool itself as efficiently as the imaginary body would be able to do.

The inability of the Earth to cool itself is compounded by partial trapping at wavelengths outside those just considered. As well as the more or less total trap for wavelengths greater than 20 micrometres, water vapour generates a partial trap at wavelengths between 16.5 and 20 micrometres, while Carbon Dioxide creates a partial trap between 13 and 14 micrometres. A partial trap is one in which a significant amount of radiation does get away into space, although a considerable fraction also returns to the ground, where it is reabsorbed.

There is additional partial trapping of all wavelengths if there happens to be an appreciable quantity of water droplets or ice crystals suspended in the atmosphere. This is most marked when cloud is heavy, which is the effect which produces a hot, stifling effect before a thunderstorm. The air is 'cleared' with heavy rainfall, removing the radiation trap caused by water droplets.

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The partial traps are usually estimated to increase the blocking of heat energy from the 42% given above to approximately 63%. The calculation cannot be exact, because the cloud distribution varies around the Earth. We can say that, of the heat energy radiated from the heats surface, approximately one third escapes into space and two-thirds are reabsorbed.

This is not quite the complete picture. There is way in which the heat traps can be circumvented, involving evaporation of water from the ocean surface. When water evaporates, it cools the ocean surface. The water vapour rises with updrafts of air, producing clouds. When the clouds are big enough a fraction of the water vapour is carried above the radiation trap. That water vapour condenses into water droplets, or into ice crystals, with a release of latent energy (energy which was trapped within it). Because this happens above the radiation trap, the energy is released into space, and cannot be reabsorbed. This bypassing of the traps is by no means complete, but it has the effect of reducing their blocking ability from the previous 63% back to about 40%.

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We now have an equation to balance. We have earlier seen that the earth's surface receives 36% less solar energy per square metre because of reflection, and we have now seen that this is compensated by a 40% reduction in the

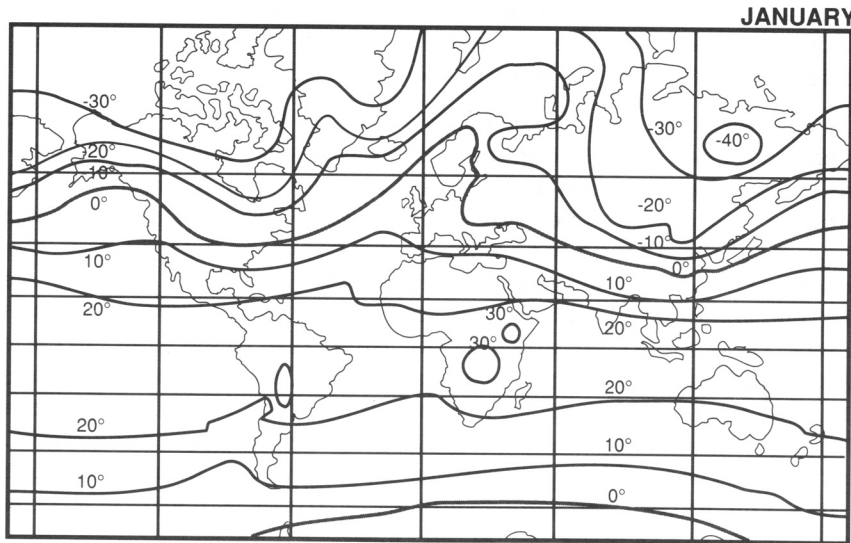


Diagram 5: World temperatures for January

PERSONNEL FILE

Sergeant George Tasker

Peace Officer

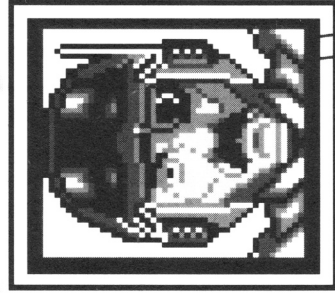
Age 36 years

Current Location: Fox Valley

Tasker is stern but reliable, a man who has devoted his life to his job. His young son died of pneumonia some years ago and Tasker has not forgiven Dr Revel for allowing a blizzard to prevent him from reaching the boy. The sergeant disapproves of 'time-servers and faint-hearts', in particular both Jeremiah Gunn and Sgt. Ambler.

QUALITIES AND SKILLS

MORALE	EXCELLENT
ENERGY	EXCELLENT
ALERTNESS.....	GOOD
ENDURANCE	FAIRLY GOOD
STURDINESS.....	AVERAGE
OPTIMISM	AVERAGE
STRENGTH.....	GOOD
STAMINA	EXCELLENT
SHARPNESS.....	AVERAGE
SKIING.....	AVERAGE
HANG-GLIDING	BELOW PAR
DRIVING	FAIRLY GOOD
SNIPING.....	GOOD
SABOTAGE.....	BELOW PAR



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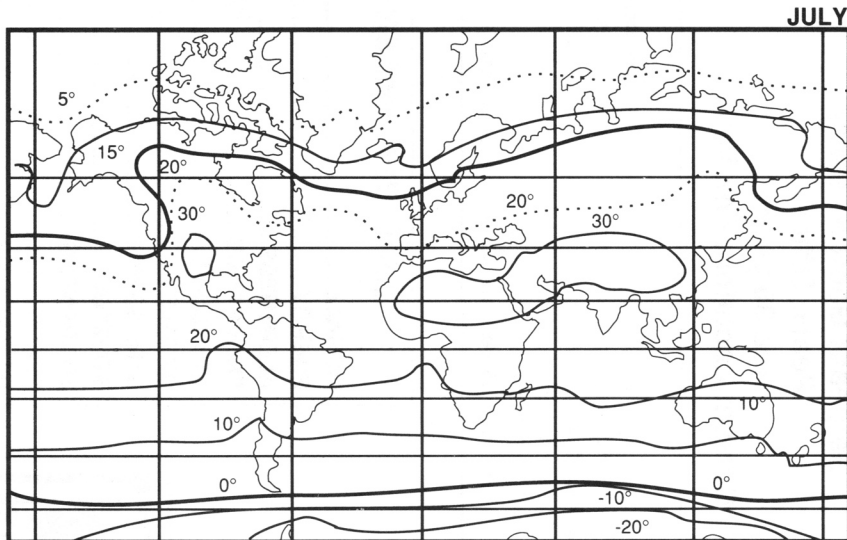


Diagram 5: World temperatures for July

rate of heat radiation. This small energy profit of 4% raises the temperature of 280K obtained for the imaginary body to about 283K (10°C) for the average temperature of the Earth.

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The above diagrams show world temperatures for January and July. Considering that half the total surface of the Earth lies in an equatorial belt between latitudes 30° south and 30° North, it is clear that the average temperature of the Earth is in fact about 14°C . Indeed, the average annual temperature in the equatorial zone is about 25°C , in mid-latitudes about 10°C , and in high latitudes about -10°C , so that, by weighting these three areas 3:2:1, one obtains 14°C (287K) for the average temperature. It would be possible to close the gap between observation (287K) and calculation (283K) still further in a more detailed calculation. But we have illustrated the two important points: The heat radiation traps in the lower atmosphere, "the greenhouse effect" compensate very closely for the loss of solar radiation due to the reflectivity of the Earth; and that about one-fifth of the incident solar energy goes in the evaporation of water vapour.

We have now reached a crucial question. We must ask how a planet with an average temperature of 14°C above the freezing point of water could develop an ice-age. Either it must arise spontaneously, or one of the important quantities used in the above calculations must change. It seems unlikely that it could possibly occur spontaneously, as the Earth is very efficient at transferring heat from one region to another, namely

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from temperate equatorial regions to polar regions, via wind and oceanic currents. This enables the Earth to keep a climatic equilibrium in a steady state. Some external factor must be influential in altering one of the mechanisms which keeps the Earth's climate so finely balanced - either or both the radiation traps in the atmosphere must be reduced, or the reflectivity of the Earth must be increased.

The reduction of the radiation traps

With an average temperature of 14°C (and 25°C at the tropics), the evaporation rate of water into the atmosphere must always be very much greater than is necessary to maintain the water vapour trap. Therefore we need only consider the carbon dioxide trap. We have seen that carbon dioxide blocks radiation over a particular wavelength, reducing the earth's radiating capacity by 15%. If this trap were removed, it has been calculated that the average temperature of the Earth would fall back to 270K (-3°C), at which point an ice age certainly could occur. Two factors lead us to the conclusion that this is an unlikely cause of past or future ice ages. Firstly, if the Carbon Dioxide in the atmosphere were to be so significantly reduced, it would have a catastrophic effect on plant life, which need carbon dioxide for photosynthesis, the means by which they, and ultimately we, as they are a vital part of the

PERSONNEL FILE

Sergeant Tom Llewellyn

Peace Officer

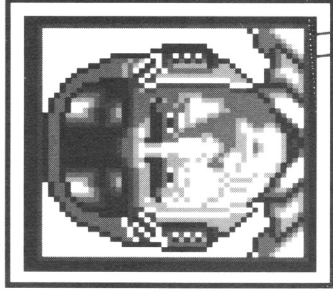
29 years

Current Location: Barefoot Valley

Tom Llewellyn is happily married, with five young children. He's a man who bears few grudges and can count most of his colleagues as his friends. Gaunt, however, dislikes his light-hearted manner, imagining he lacks moral fibre. Gregory Flint bears a grudge against Llewellyn, who jailed him once for selling watered-down whisky as best malt.

QUALITIES AND SKILLS

MORALE	EXCELLENT
ENERGY	GOOD
ALERTNESS	GOOD
ENDURANCE	FAIRLY GOOD
STURDINESS	GOOD
OPTIMISM	EXCELLENT
STRENGTH	BELOW PAR
STAMINA	AVERAGE
SHARPNESS	FAIRLY GOOD
SKIING	FAIRLY GOOD
HANG-GLIDING	AVERAGE
DRIVING	AVERAGE
SNIPING	FAIR
SABOTAGE	BELOW PAR



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food chain, survive. And secondly, the major current concerns to environmental scientists, and the reason for the preparation of this report, is the effect our output of carbon dioxide is having on the atmosphere, and the way it is increasing, not decreasing the very radiation trap we have been discussing.

An increase in reflectivity.

As warm air rises from the Earth, it cools. And as it cools, the water vapour within it tends to condense into liquid droplets or into ice crystals - the higher it goes, the cooler it gets, until saturation point is reached. The height and temperature at which saturation is reached depends upon the initial water vapour content and temperature of the air. Humid air becomes saturated low in the atmosphere, with a condensed swarm of tiny water droplets (it would take 1000 such droplets to cover 1 centimetre if placed end to end), which scatter light, behaving as a 'fog'.

Drier air has to rise higher before its water vapour becomes saturated. When the air is particularly dry, the temperature may have to fall below freezing point before saturation occurs, and then the vapour would be expected to form ice crystals. However, this does not happen automatically. Nor do water droplets freeze automatically at such temperatures. If

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left undisturbed, they remain as liquid, becoming "supercooled".

In the higher atmosphere, (at temperatures of about -20°C), there are a comparatively small number of particles called condensation nuclei, which act as a catalyst to freeze supercooled droplets, forming ice crystals as they pass over them. The ice crystals will then grow and begin to fall back to Earth under gravity, but may occur rising air which lifts them up again, causing a swirling motion, during which they will collide with other water droplets, freeze them, and grow bigger still. Eventually, the ice crystals grow large enough to break free of this swirling effect, and fall back to Earth. If the ice melts before it reaches the ground it will fall as rain. In winter, however, the lower air may be too cool to melt the ice, in which case it will fall as snow. It is because of the processes of swirling and freezing other water droplets in a slow build up of ice crystals that snow flakes have such beautiful and intricate patterns.

The crucial condensation nuclei are formed by ice surrounding around what are called "freezing nuclei", which are often tiny grains of salt sprayed up from the sea. However, if they are not present in sufficient quantity to act as a catalyst, the supercooled water vapour will rise still further, and cool as it rises. If its temperature becomes lower than -40°C , it will

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eventually change from droplets into ice crystals, themselves being "freezing nuclei" around which more ice condenses. These are the ice particles known to Arctic Explorers as "Diamond Dust".

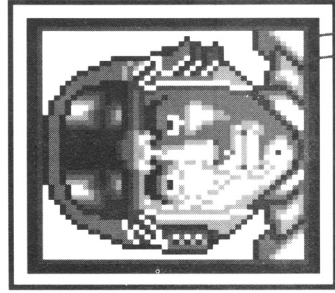
Ice crystals reflect and refract light, just like diamonds. Refraction produces a separation of light into its particular colours, giving the familiar spectrum of red, orange, yellow, green, blue, indigo, and violet. The reason you cannot see this effect from falling snow is because of the random joining of the ice crystals to form snow flakes as described. The crystals tend to jumble up the effects of refraction, so all we see is a whitish haze. "Diamond Dust" is astonishingly reflective of sunlight. If a layer of water with a thickness as little as one-hundredth of a millimetre were turned into tiny ice-crystals it would be so reflective as to reflect all the sunlight back into space, were it present everywhere in the upper atmosphere. To an observer on the Moon, the Earth would then appear featureless and white, just as Venus does to us on Earth.

We have calculated that the loss of solar energy caused by normal reflection is slightly more than compensated for by radiation traps - however, "Diamond Dust" adds nothing to the radiation traps, as only a tiny amount is present, despite its high reflectivity.

PERSONNEL FILE

Sergeant Victor Grice
Peace Officer
Aged 40 years
Current Location: Badger Heath

Grice is a bitter man. He has seen John Stark and Barnaby Gaunt, men with less years of service than himself, promoted above him and he resents the two of them deeply. The one man he respects is Lt. Courtenay who was his sergeant when Grice was just a young constable. Grice has no friends to speak of and his wife finds him dull and dreary.



QUALITIES AND SKILLS

MORALE	POOR
ENERGY	GOOD
ALERTNESS	GOOD
ENDURANCE	AVERAGE
STURDINESS	AVERAGE
OPTIMISM	POOR
STRENGTH	AVERAGE
STAMINA	AVERAGE
SHARPNESS	AVERAGE
SKIING	BELOW PAR
HANG-GLIDING	POOR
DRIVING	AVERAGE
SNIPING	AVERAGE
SABOTAGE	AVERAGE

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We need not search any longer for the phenomena which would cause an ice age. Turning only 0.1% of the amount of water normally present in the Earth's atmosphere into fine ice crystals would have an immediate, catastrophic effect on the world's climate. The temperature of the land would collapse in a few weeks and the temperature of the oceans within a few years. Advanced global cooling would be upon us.

What is apparent is that "Diamond Dust" is not widespread at present. This is because the water vapour in the atmosphere does not attain a temperature as low as -40°C easily. The main sources of water vapour in the atmosphere are the oceans; it is the surface temperature of the oceans which determines the temperature of the water vapour as it begins its ascent into the upper atmosphere. Whilst the temperature of the oceans are warm, the water vapour will not become cool enough to form "Diamond Dust" in the upper atmosphere, so sunlight will still be able to penetrate to Earth to keep the surface of the oceans warm, and so on, in a self-maintaining cycle. This state of events is aided by the fact that the oceans, due to their enormous size,

The only possibility of "Diamond Dust" forming would be if a second agent were to temporarily lower the amount of sunlight reaching the oceans, to cool them, for a considerable length of time. We need a detonator for our dynamite.

RESTRICTED

PART 11

have a "heat supply" which will last up to about ten years, even if a significant reduction in the amount of sunlight occurred.

This detonator must be a process which injects a sufficient quantity of small particles into the atmosphere at a height above 12 kilometres, the region known as the stratosphere. Fine particles have an interesting and significant property. They do not stay aloft indefinitely. Gravity pulls them downwards through the air. Large, heavy particles fall quickly, whilst very small ones remain suspended for much longer. What is remarkable is that particles of the sizes most effective for the reflection of sunlight (about half a micrometre) take about ten years to fall through the upper atmosphere. Once they get below 12 kilometres, they fall very much quicker, as they become incorporated into much larger ice crystals and water droplets. This ten year process is of just the right 'fuse length' for our potential detonator.

When Mount St. Helens volcano, Washington State, erupted in June 1980, an Eastern Airlines pilot was the first to spot a plume of ash and steam at a height of 15 000 metres, creating violent lightning displays and darkening the whole sky. The eruption affected large areas of the Western States, with acidic ash accumulating to a depth of 1.5 cm at a distance of 800 km. In East Washington the ash fell so thickly that automatic street lighting was switched on. Within five days, the ash had reduced visibility to 5 km in parts of Canada, 2000 km away.

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The St. Helens eruption was mild compared to that of Mount Tambora in the Dutch East Indies (now Indonesia) in 1815 when an immense amount of fine dust was thrown into the atmosphere. It had far reaching effects on the world's climate. In New England, Canada and Western Europe the summer of 1816 was extraordinarily cold. A meteorological record kept for New Haven since 1779 records June 1816 as the coldest June in that city, with a mean temperature that would normally be expected some 200 miles north of the city of Quebec. The Lancashire plain in England had its coldest July, and the summer as a whole ranks as the coldest on record in the Swiss city of Geneva for the period from 1753 to 1960. In New England the loss of most of the staple crop of Indian Corn and the great reduction in the hay crop caused so much hardship on isolated subsistence farms that the year became enshrined in folklore as "Eighteen Hundred and Froze to Death".

Climatologists rank the eruption as the greatest producer of atmospheric dust between 1600 and the present. The dust circled the air for several years, reflecting the sunlight back into space and reducing the amount of it reaching the ground.

It is highly conceivable that in the next couple of decades, with tectonic plates constantly shifting, that such a huge volcanic explosion might occur. If it were to, and consequently led to a significant cooling of the oceans, the world's climate would be teetering on the brink of catastrophe. The formation of "Diamond Dust" would explosively accelerate global cooling. It is possible that past ice ages were caused by volcanoes bigger than any which

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has erupted over the past ten millenia. With the continents located in their present positions, it could mean the onset of "Midwinter". However, we must consider other potential detonators.

It has been estimated that about 5000 giant meteorites with diameters of more than a kilometre have hit the Earth over the past 600 million years, with an average strike rate of one per 120 000 years. Meteorites with a diameter greater than 300 metres must hit the Earth once in every 10 000 years, producing a crater similar to those found on the surface of the moon. It is the size of the meteorite which would be crucial for detonation of an ice age.

A tiny micrometeorite experiences a sudden flash of heating as it enters the Earth's atmosphere. For a typical particle, 1 micrometre in size, the temperature rises to about 500K in two seconds. The flash heating becomes stronger as the size of the meteorite increases, until for a meteorite the size of a pinhead the temperature becomes sufficient to vapourise it completely. It becomes a trail of bright light, seen as a 'shooting star'.

If the incoming body is the size of a clenched fist, the air pressure on the body is large enough to slow down its very high speed, happening before the heat can evaporate the whole of the material. A residue remains which cools and falls to the ground at a comparatively low speed. The pressure of air on the incoming body grows in proportion to its size. When the pressure becomes great enough, (at a size of a few metres), the body will burst into fragments which fall as a meteorite shower. If the body is several hundred metres across, the body no longer bursts into fragments, as there is insufficient time for them to fly apart as

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PART 11

the body crashes down through the atmosphere, to create an explosion pit or crater where it lands. The explosion causes material torn from the ground to be splashed outwards and upwards with the disintegrating meteorite, radiating from the point of impact.

Entry speeds of 30 kilometres per second are typical, but in exceptional cases the speed can be as high as 70 kilometres per second. If the body were 300 metres in diameter, with an entry speed of 300 kilometres per second, the energy per ton of meteorite (typical mass = 50 million tons) would be enough to throw 1000 tons of debris up to a height of 50 kilometres, or a total of 50,000 million tons. Only a few per cent of the particles, in the form of tiny dust particles would be ample to cause an ice age. The dust particles would spread gradually over the earth, reflecting much of the sun's radiation, over a period of ten years as it fell back to Earth. A giant meteorite is potentially more dangerous than a volcano because, although the amount of material in a giant meteorite is no greater than that blown off by a volcano, each ton of material has about a thousand times more energy, and is far more capable of being blown up into the upper atmosphere.

The possibility of such an object colliding with the Earth is high due to the orbits they have. At times they pass closer to the sun than the Earth ever does, and at other times they are further away from the sun than the Earth. In other words, they have to cross our path twice in every orbit they make. There are probably 10 000 of them with such a path. The odds seem stacked against us escaping for ever - and if there were to be impact, the detonator would explode, the deadly dust would form, and a new ice age would have dawned.

THE STORY SO FAR...



THE FIRST TEN YEARS



On Friday 8th September 2039, New York Radio's early evening news bulletin carried reports of a fast-moving white light, seen travelling east over Florida. Eye-witnesses claimed that the size and velocity of the light ruled out the possibilities of known military or commercial aircraft. Strangely, most seemed happy to assume it was an alien life-form, rekindling tales from their youth, and at the same time giving the media a much needed story. They wanted light relief from the politicians, endlessly glorifying the centenary of the outbreak of the last World War, overstated by the new President of the Federation of Europe as "a celebration of a hundred years of global

alliance." As always, the politicians preferred to highlight their achievements, such as their united environmental policies, which looked like thwarting the "greenhouse effect", and ignore the diplomatic Cold War still present in many parts of the world. That light in the sky was about to give "Cold War" a totally different connotation.

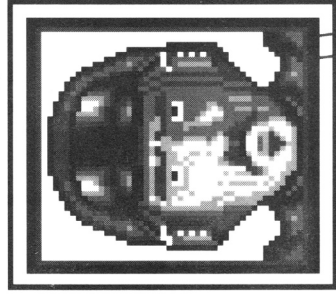
The shock waves were felt as far afield as London and Sydney. In Beijing and Bombay, buildings were rased to the ground, and near the epicentre, on the eastern border of Burma, there was little chance of surviving the initial blast. Forty-eight hours later, the tidal wave hit the west coast of North

MIDWINTER

PERSONNEL FILE

Constable Frederico Garcia
Peace Officer
Age 24 years
Current Location: Sierra Garcia

Frederico Garcia and Kurt Muller grew up together in the same village. They remain the firmest of friends, despite the fact that Garcia married Muller's ex-wife. Garcia is quick to take offence, once slugging Harry Cropper for a joke about moustaches. Muller and Doughty often have to restrain him.



QUALITIES AND SKILLS

MORALE	EXCELLENT
ENERGY	EXCELLENT
ALERTNESS	FAIRLY GOOD
ENDURANCE	GOOD
STURDINESS	GOOD
OPTIMISM	FAIRLY GOOD
STRENGTH	EXCELLENT
STAMINA	EXCELLENT
SHARPNESS	POOR
SKIING	GOOD
HANG-GLIDING	GOOD
DRIVING	POOR
SNIPING	FAIRLY GOOD
SABOTAGE	ABYSMAL



America, and daylight never came over Moscow.

The political tension mounted as nations searched for the aggressor, aiming swift retribution. Despite having hundreds of thousands of its own people killed, the Soviet Union was eyed nervously by the West. And although the most densely populated areas of the flooded western seaboard of the United States could not be contacted from Washington, the Kremlin pointing an accusing finger at the Pentagon. The peoples of Asia and the Pacific Islands struggled for survival, where millions of people were reported to have perished in dark, flooded, chaotic villages, towns and cities. Alliances crum-

bled at the time they were needed most - man was about to go to war with the Earth.

Satellites had shown the super-powers that the devastation caused by the explosion was that expected from a ten thousand megaton hydrogen bomb. Over one hundred square kilometres of forest had been laid to waste; burnt and charred buildings lay in ruins up to 300 kilometres from the blast; there were no signs of human life. Millions of tons of dirt and dust had been ejected into the atmosphere, already blanketing half the globe, and spreading. Out of the blue, another holocaust had occurred.



MIDWINTER

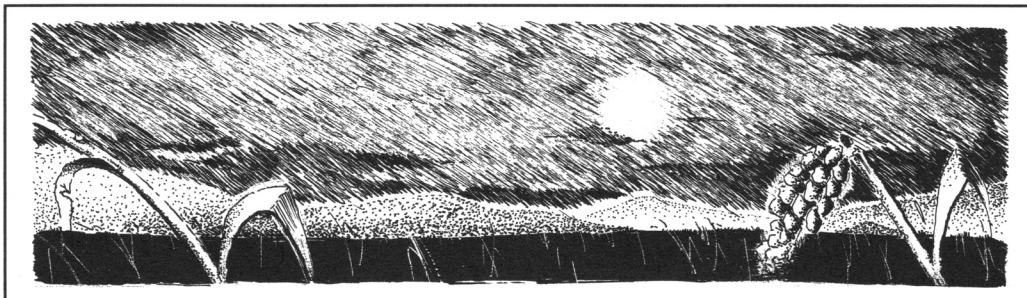


It was not until the following Christmas that stories began to emerge from China, recounting that horrific night when it all began with "the ball of fire from space". Word of mouth passed on tales of the death of millions after a giant rock had crashed to Earth in the night. The news backed theories that the detonation of a huge nuclear weapon could not have taken place due to the absence of any significant amount of radioactive

fallout. It dawned on the world that it had been struck by a meteorite of enormous proportions, and that it's effects would be felt for a long time to come.

The following year's grain harvest was largely destroyed in the Soviet Union due the falling back to earth of thousands of tons of debris, and the near total darkness which had only just begun to ease. The Kremlin had, for several years,

2040



MIDWINTER



been building up their grain stores, as western agricultural technology was now widely used following the raising of the iron curtain in the 1990's, and were sure that they could survive a freak year. What was more worrying to them was news that the tundra of the Siberian plains seemed to be suffering a cruel drop in temperature, which was leading to its spreading south.

European countries in high latitudes were also become worried as temperatures had remained at those usually experienced in February for the whole summer - and were now starting to drop again. The Scottish government had appealed to their counterparts

in London to allow their people free access across the border, to the warmer climes of Southern England, which was refused as the area was, in the words of the Home Office, "becoming dangerously overcrowded". Mediterranean countries had found that their economies were in danger of collapse, with no visiting trade, and north-east Africa was still seriously flooded hundreds of miles either side of the Nile.

The religious wars of the middle east intensified, as Arab states realised that, despite their huge wealth, no-one was looking to export commodities to them which were needed at home. Australia and

MIDWINTER

PERSONNEL FILE

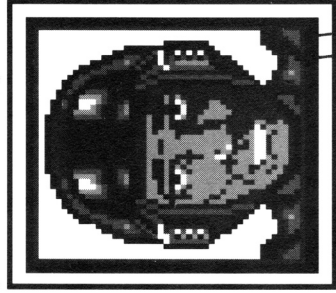
Constable Homer Wright

Peace Officer

Age 27 years

Current Location: Mountains of Summer

A quiet and thoughtful man, Homer Wright is devoted to his wife and his small daughter. His unassuming ways and impartial kindness have made him popular throughout the community. Wright has three loyal friends, Muller, Jessop and Iwamoto. He is loathed intensely by PC Jackson, who can't stand his infuriating niceness.



QUALITIES AND SKILLS

MORALE	EXCELLENT
ENERGY	GOOD
ALERTNESS	GOOD
ENDURANCE	FAIRLY GOOD
STURDINESS	FAIRLY GOOD
OPTIMISM	FAIRLY GOOD
STRENGTH	FAIRLY GOOD
STAMINA	FAIRLY GOOD
SHARPNESS	FAIRLY GOOD
SKIING	FAIRLY GOOD
HANG-GLIDING	FAIRLY GOOD
DRIVING	FAIRLY GOOD
SNIPING	FAIRLY GOOD
SABOTAGE	FAIRLY GOOD



New Zealand were deluged with refugees who had survived in south-east Asia and the Pacific islands, and had made the arduous crossing by a variety of means. But it was in the United States and Canada that the breakdown of law and order was the most marked.

The President of the United States, on the advice of top scientists, had decided to go on national television to explain what was expected to happen to the world's climate over the coming decade. The following day's newspapers screamed "Diamond Dust to end life as we know it", as the full effects of global cooling became known. Hundreds of thousands of Canadian immigrants were seeking

shelter in the northern United States, attempting to escape the falling temperatures which had driven most of its population as far south as Toronto, and the American people were preparing to defend their territory. Elsewhere in the country shops were looted in the search for tinned foodstuffs, and the army were deployed on the streets of the cities. Then the marines invaded Mexico.

2045

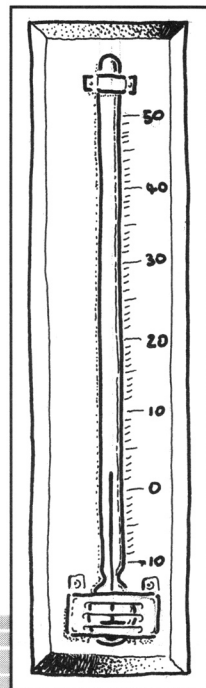
Over the next five years the average temperature across Europe dropped to 2°C, often freezing the major rivers. Throughout

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Scandinavia, and across the Pyrenees and Alps, huge areas of permafrost and ice developed. Harvests failed repeatedly, and people tried in vain to travel from one country to another in search of more clement conditions. Attempts to cultivate large areas of Africa were partly successful, and developed nations hungrily eyed the previously "Third World" countries. On the continent of America, the peoples of the United States were following their troops south, leaving behind food crises and freezing lands. The inhabitants of the Soviet Union had nowhere to go - to the south lay the most damaged areas of Asia, and to the north, expanding glaciers. Some

managed to escape to western Europe, but a fierce war was now raging along Eastern bloc borders with a re-unified Germany, Austria and Italy. The economies of all countries concerned were falling apart under the strain of food shortages and sustained military conflict. Man was beginning to ignore his battle with the Earth as he fought with himself. Then the Earth upped it's fire-power.

For half a decade, politicians had been warned by natural scientists that conditions would get worse before they got better. The politicians paid lip service to their requests for a massive injection of funds into climatic research, offering encouragement at the expense



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of hard cash, which was diverted for military and agro-scientific purposes. The price was about to be paid for ignoring their real enemy.

South America had, despite the deaths of millions of its inhabitants, maintained its population level as refugees swarmed through Mexico from the United States. It was almost as if the Earth could feel the concentration of people on the Central American isthmus when, in December 2045, as global temperatures were nudging an all time low, the strain that had been building between the Cocos and South American plates was released. The earth shuddered, heaved, bucked and split for ten days, spewing its insides over

inhabitants and volcanic dust high into the atmosphere, blackening the skies again in a cruel reminder of the events which first plunged the world into chaos, compounding their effects.

The repercussions of the 'quake spread quickly, as sub-oceanic ridges widened, and previously dormant volcanoes were uncorked across Europe, and down into the Pacific Basin. The most spectacular sight occurred near the triple joint of the African, North American, and the Eurasian plates, 2,000 kilometres off the coast of Portugal, where a string of islands, from Madeira to the Azores went off like a row of Roman candles at a fireworks dis-

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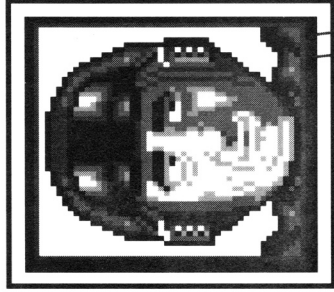
PERSONNEL FILE

Constable Harry Cropper
Peace Officer

Age 32 years

Current Location: Cormorant Cove

The jovial Harry Cropper is a popular officer and has a host of friends. Although he loves a good joke, there is a serious side to Harry Cropper. In his spare time he studies philosophy and devotes a lot of hours to charity. He has a devoted wife, a young son and another baby due in the next three months.



QUALITIES AND SKILLS

MORALE	EXCELLENT
ENERGY	FAIRLY GOOD
ALERTNESS	EXCELLENT
ENDURANCE	POOR
STURDINESS	FAIRLY GOOD
OPTIMISM	EXCELLENT
STRENGTH	POOR
STAMINA	POOR
SHARPNESS	GOOD
SKIING	POOR
HANG-GLIDING	ABYSMAL
DRIVING	AVERAGE
SNIPING	POOR
SABOTAGE	GOOD



play. The few who survived the initial storms and flooding of the islands fled to watch from the Portuguese mainland, from where the plumes of ash and dust were clearly visible. Spots of uncontrollable heat were speckling the rapidly freezing globe.

2056

The winter of 2056 saw temperatures in London drop, and stay below -25°C . Rainfall across parts of Southern Europe reached a total of 10 metres for the year, freezing as it fell, and accelerating the formation of ice-sheets, as the glaciers crept south. The sea level had dropped by over 500 metres in places, creating sheer cliffs where

sloping beaches had been, as the glacial land masses rose. The ice-sheet in North America had stretched as far south as Kentucky, submerging the greater part of the North American continent beneath a mantle of ice over a thousand metres thick. The Scandinavian ice-sheet covered Denmark and was approaching Poland and Germany. In Britain the area above a line from The Wash to Cheshire was under permanent glaciation. The landscape of the Northern Hemisphere had changed completely. Billions of people had died from cold, famine and war. In the tropics 300 million people lived an existence closer to medieval

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times than the twenty-first century.

The Earth was calming down, and its inhabitants, having learnt that when the planet led, they must follow, were becoming more peaceful. Old political structures had broken down. Nation states had fragmented into local thinly-spread communities, scavenging for food. The only borders not crossed were those between hunting grounds, defended to the death by people struggling for survival. As the temperature fell, time was running out for mankind, and he had nowhere to hide.

2060

The worsening conditions had led to the continuing movement

towards the equator of the peoples of many lands. Much of southern Europe, around the Mediterranean, was heavily overpopulated, and the shortage of habitable space, as well as the shortage of food was becoming acute.

Where the sea levels had fallen dramatically, more land for occupation was created, but the coasts of France, Spain and Portugal were drawing refugees who arrived daily, in their thousands, with the fading hope of getting a passage across to the haven of Africa by boat, or to chance crossing the land which was reported to be rising out of the sea across the Straits of Gibraltar.

Local boat owners sold places on

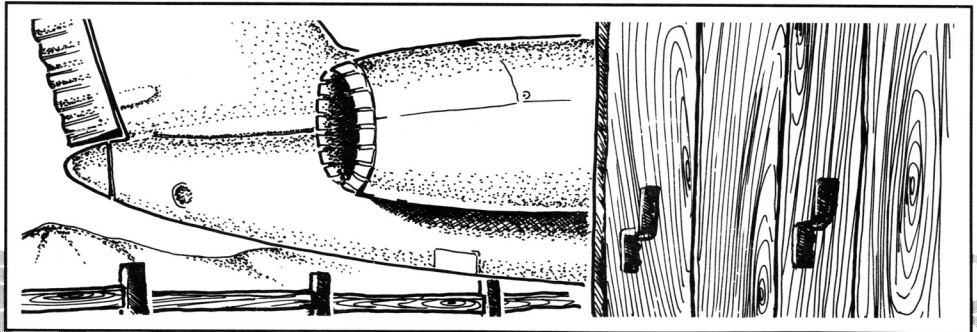
MIDWINTER

over-laden out-dated craft, many of which never made the difficult journey. Some resentful refugees put this down to the weight of money carried by the boatmen, who were often found murdered or beaten, robbed of money and boat. Attempts to capitalise on the new found tourist trade were not, on the whole, successful.

Near the Portuguese coastal town of Viana do Castelo, seventeen-year-old Carlos Garcia waited in his father's wheat field,

which had not seen crops harvested for six years, watching the skies. Straining his eyes against the setting western sun, he picked out a tiny speck wobbling in the distance. The man from Denmark was late.

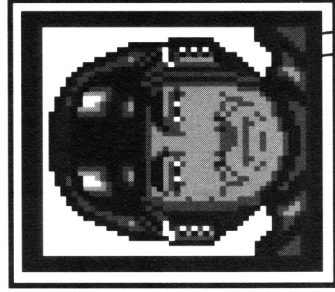
The Jaguar Tomahawk bumped to a stop five metres from the road. The fifty year old 'plane turned through ninety degrees and crept into the cowshed which served as its home. Carlos bounded into the



PERSONNEL FILE

Constable Shigeru Iwamoto
Peace Officer
Age 20 years
Current Location: Millpond Flats

Shigeru Iwamoto is probably the fittest man in the Peace Force and certainly the only Zen Buddhist. He lives alone and spends most of his spare time in physical training or in meditation. When he relaxes, Iwamoto enjoys a quiet game of Go with his friend and colleague, Homer Wright.



QUALITIES AND SKILLS

MORALE	EXCELLENT
ENERGY	EXCELLENT
ALERTNESS	EXCELLENT
ENDURANCE	EXCELLENT
STURDINESS	EXCELLENT
OPTIMISM	EXCELLENT
STRENGTH	EXCELLENT
STAMINA	EXCELLENT
SHARPNESS	EXCELLENT
SKIING	GOOD
HANG-GLIDING	GOOD
DRIVING	AVERAGE
SNIPING	GOOD
SABOTAGE	ABYSMAL



gloom after it.

"The doors. Shut the doors !" cried the emerging pilot, his wild blond hair as excited as his words. He gasped for air, and hugged the boy.

"I think we've found it", he whispered.

They stared at each other in the cold darkness, their breathlessness sending plumes of condensation upwards, as a second man clambered from the two-seater 'plane.

"Hello Arthur" grinned Carlos.

Arthur Randles drew himself up to his full height, puffed out his chest, and saluted.

"Young man, prepare yourself for an adventure. The professor and I have

found the promised land. We're going to Atlantis."

The three men poured over the map, and Arthur scratched his head.

"So much of this bit looked different from up there" he said, waving his hand up and down the Portuguese coast.

"But look ! That island is completely new. There's no land mass big enough marked. It must have been two or three hundred miles across."

"Is it really Atlantis ?", asked Carlos, wide-eyed with excitement.

"It must be the Azores", mused the

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professor. *"But the Azores were an archipelagos, not one island"*

"What ?", said Carlos, puzzled at the language used by the older men. The Englishman explained,

"The Azores were a group of nine small islands, but the seas around them were very shallow. With all the volcanoes that erupted there, and the sea level dropping, I suppose that the island we saw could have been the Azores. Atlantis has risen higher !"

The professor screwed his forehead into a frown. You could almost hear him thinking, the wheels of his mind forming yet another plan. *"Is it habitable ?"*, he asked, knowing the answer. Randles shrugged.

"What we need is a source of energy. Heat mines." Randles was a trained engineer, and liked turning his hand, and his mind, to all aspects of science.

"Nothing is hot anywhere, not since the rock" offered Carlos, eager to help.

"Old mother earth is still burning up inside 'though" explained Randles. He could have told the boy anything, from the puzzled look on his face.

"Yes, Olaf, I remember. Heat mines, like in Iceland. Especially with all that volcanic activity bringing the stuff near the surface....Shall we go ?"

"We have to get out of this place. It



MIDWINTER



seems as good as anywhere. And if we keep it quiet, maybe only take a dozen, we might just survive. We might be the only ones."

It took them six days to find a suitable boat, and six hours to fill it. Carlos and his sister, Randles, Professor Kristiansen, the Italian boatowner, an American and his wife, two young Japanese children, a French soldier (a friend of Carlos), an English nurse (on the professor's advice), and her stunningly attractive friend, Amelia (on Randles' insistence).

It was a difficult journey. On the fifth night, with storms lashing the trawler, "Lindberg", one of the children sighted a light, glowing with such ferocity that most of the sky began to light up as they neared. Cliffs loomed out of the darkness. The boatowner battled against the forty

foot waves which tossed the vessel relentlessly towards the shore. A land-lung looked out of the question in such conditions.

"It would be suicide to try to get close" yelled Grazzini, his voice barely audible.

"And it will be curtains if we stay at sea any longer." cried Randles, as a huge surge of water crashed onto the deck, as if to underline his point, and their desperate plight.

"Head for that Cove" begged the professor. *"It may be calmer in the shelter of the cliffs"*

"Not a chance of it. But the seas are deciding that it is our destination."

The Italian crossed himself.

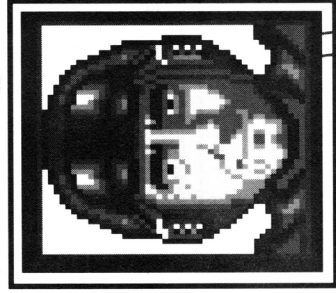
As he took pleasure in reminding them some hours later, the professor was right.

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PERSONNEL FILE

Constable Bill Doughty
Peace Officer
Age 29 years
Current Location: Glen Darrow

Hard-working and staunchly loyal to his friends Muller and Garcia, Bill Doughty is the driving force behind the Constables Union and is a dry-witted spokesman in pay talks. Courtenay considers him a noisy troublemaker. Doughty was suspended briefly last year after breaking Chabrun's nose in a fist-fight over Doughty's wife.



QUALITIES AND SKILLS

MORALE.....	GOOD
ENERGY.....	FAIRLY GOOD
ALERTNESS.....	GOOD
ENDURANCE	GOOD
STURDINESS	GOOD
OPTIMISM.....	GOOD
STRENGTH.....	BELOW PAR
STAMINA.....	BELOW PAR
SHARPNESS.....	AVERAGE
SKIING.....	FAIRLY GOOD
HANG-GLIDING.....	ABYSMAL
DRIVING.....	BELOW PAR
SNIPING	FAIRLY GOOD
SABOTAGE.....	POOR

THE COLONISATION OF THE ISLAND



2060 - The first few days

"The Lindberg" was finally made secure after a treacherous night spent by several of the men diving into the chilling waters, and clambering over the jagged rocks. In the Quiet Cove, as Kristiansen had dubbed the inlet, it was finally possible to float the four-man rowing boat, and shuttle the twelve pioneers ashore, where they huddled together, exhausted and

hungry. They erected tents, lit a fire, and ate plenty of the food they had brought.

After a couple of hours rest, Randles, Kristiansen and Charles Stark, the American, set off to climb the cliffs and survey the surrounding land. Carlos pleaded to be allowed to tag along, but was persuaded that he should stay and watch over the others. The men were greeted after their climb by





the sight of three mountains filling the westward and northern horizons. There was little vegetation and no sign of life. To the south lay miles of snowcovered flatlands.

"Where to ?" asked Stark.

"We'll head north, to the highest peak. We should be able to see more from there." Randles was warming to his assumed role of leader.

They had walked slowly for about half an hour, battling against the drifts and wind. The omnipotent glare of the snow and their crunching footsteps in the snow, rhythmically disturbing the deafening silence, were mesmeric. They spoke rarely, all overawed by

the landscape.

A loud roar thundered around the hilltops, and ahead of them they saw the snow begin to slide towards them.

"It's an avalanche !" yelled Kristiansen.

They were transfixed. Amidst the tumbling snow they could pick out a speck of brown, thrashing as it fell, and finally coming to a halt, about two hundred metres in front of them. The creature reared up and let out a deep cry, before turning tail and fleeing.

"What was that ?" asked Stark, wide-eyed.

"It looked like a bear, but it couldn't

MIDWINTER



have been, not here" said Randles, trying to convince himself as well as his comrades.

"I think we'd better head back" spluttered the professor.

The return journey was made in half the time.

The story was relayed to the others on their return, who listened in amazement. Even Stark, who had kept them amused with his anecdotes throughout the crossing, was finding it difficult to convey the scale of the white landscape they had seen. With three mountains to describe, as well as miles of flatlands, everyone was getting confused.

"What we need are names for everything. Then we would be like real explorers", suggested Amelia.

"My dear, we are real explorers. I'm looking forward to quite an adventure together", said Randles with a wink. Amelia blushed.

"We could call it Bear Mountain" chirped the nurse.

Bear mountain it was. Whilst the men began the arduous task of unloading the ship, the children were kept busy by the thinking of names for other things they had seen, arguing incessantly over them. The nearest mountain was named White Fell, and Mrs. Stark

MIDWINTER

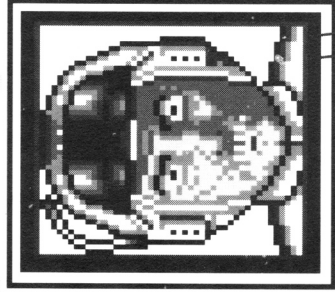
PERSONNEL FILE

Lieutenant Howard Courtenay
Peace Officer
Age 54 years
Current Location: Salyut Flats

Howard Courtenay is the longest serving officer in the Peace Force and had a lot to do with Stark's promotion to Captain. He believes that the Force should be given a wider authority. Married, but childless, Courtenay treats his niece, Virginia Gaygill, like a daughter. He is unaware of her contempt for his friend, Dr. Revel.

QUALITIES AND SKILLS

MORALE	FAIRLY GOOD
ENERGY	FAIRLY GOOD
ALERTNESS	EXCELLENT
ENDURANCE	POOR
STURDINESS	BELOW PAR
OPTIMISM	FAIRLY GOOD
STRENGTH	BELOW PAR
STAMINA	BELOW PAR
SHARPNESS	GOOD
SKING	FAIRLY GOOD
HANG-GLIDING	ABYSMAL
DRIVING	GOOD
SNIPING	FAIRLY GOOD
SABOTAGE	GOOD





persuaded them to call the remaining peak Mount Charles, after her husband. Everyone wanted to name something after the ship, and as no agreement could be reached, both the sea and the lowlands were called Lindberg Bay and Lindberg Plateau.

The following day the party set off south, away from Bear Mountain, and across the Lindberg Plateau. Excitement grew as they sighted a cluster of buildings on the horizon.

"It looks like a settlement" said Chabrun, the French soldier.

"And there's smoke rising" exclaimed Grazzini, peered ahead.

They nervously advanced within

thirty metres of the six wooden huts, and watched for signs of life. Nothing penetrated the silence. Stark whispered quietly to Kristiansen,

"I think we're being watched"

A loud click swung their heads to the right, as Chabrun flung himself to the ground, rolled, and stiffened himself prone on the ice. In his hands was a revolver.

"Get Down" he yelled.

In a flash they were all flat on their stomachs. It dawned on Randles that the click was the sound of a gun hammer being cocked, as Chabrun whispered

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"You were right. And who ever is watching us has us well and truly in his sights."

Randles managed a forced grin, more in response to their predicament than the soldiers humour.

"Is anybody there ?", he shouted.

After the longest few seconds of his life, relief came.

"Tell him to throw his gun", said a calm voice from the shadows.

"Do it, Chabrun", barked Randles.

He addressed the invisible voice.

"We are friendly, we do not want a fight"

"Where have you come from ?", asked

the voice.

Randles explained, at some length, their arrival from the mainland, which eventually dragged the gunman from his lair. Randles offered his hand, which was shaken warmly. The stranger was gaunt and shivering.

"Are you alright ?", asked the nurse.

"Hungry and cold, and our baby son is dying", he replied, his eyes dropping to the ground.

"I am a nurse. Take me to him." she said.

His face beamed as he scurried off towards one of the huts. Everyone followed.

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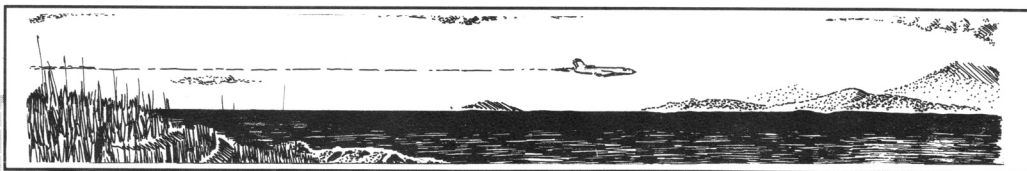


The life of Victor Grice was saved, and the relieved group, along with their food, were welcomed heartily by the fifteen members of the settlement on Lindberg Plateau.

The two groups spent a couple of days swapping tales of life on the mainland and life on the island. The leader of the settlers, Randolph Courtenay, was a British exile, and he and Randles got along famously. Courtenay explained that the onset of the ice-age had led to the sea levels dropping drastically around the islands of the Azores, and that the prodigious volcanic activity had built up the land to create new glaciated hills and valleys. His

village were a combination of stranded travellers and refugees, and they knew of no other settlement on the island. It had been a slice of luck that Randles' group had landed where they had, for both parties.

The settlers were able to explain the geography of the island as they knew it. The Azores islands of Pico, Sao Jorge and Terceira now formed the highest mountains, with a huge volcanic upgrowth dominating the south-west of the island. The coast was a combination of creeks, coves and wide sweeping bays, but no boats had been seen landing. They had seen a low flying aircraft about a week ago.



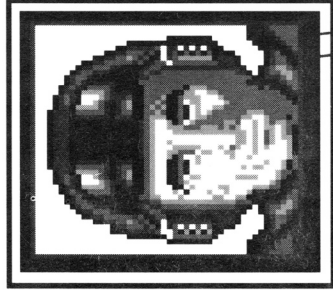
PERSONNEL FILE

Constable Bob Hammond
Peace Officer
Age 30 years

Current location: Mackenzie Head

Bob Hammond is an affable man, having a friendly word for everyone but deep down he's a born worrier. He has lots of acquaintances but only has one real friend, Harry Cropper.

His wife is a pushy, ambitious woman who nags him about promotion but he now suspects she's planning to leave him for Dr. Revel.



QUALITIES AND SKILLS

MORALE	GOOD
ENERGY	GOOD
ALERTNESS	FAIRLY GOOD
ENDURANCE	GOOD
STURDINESS	AVERAGE
OPTIMISM	POOR
STRENGTH	AVERAGE
STAMINA	FAIRLY GOOD
SHARPNESS	BELOW PAR
SKIING	AVERAGE
HANG-GLIDING	BELOW PAR
DRIVING	FAIRLY GOOD
SNIPING	AVERAGE
SABOTAGE	BELOW PAR



They had no source of power except fire, and they hunted some wild animals, but they were becoming fewer. Fishing was difficult without boats, although they had seen seals in a creek to the north, and otters in lakes to the south. Life was tough in the small community, and, they explained, they would be happy for the newcomers to stay as long as possible, even to join forces as a larger settlement.

Randles was happy to rest awhile after the long journey. It made sense to keep a large group, for tasks could be easily divided, and it gave a ready made base for hunting and exploration. And it would give him some time to get to

know Amelia.

2063 The early years

Through the following two years, the south-eastern area of the island was explored, which proved to be well populated with wildlife. Otters, Seals, Snowgeese and Beavers were all hunted, and small areas of Spruce and Pines were found, in which some edible vegetation was found. The children enjoyed each new discovery, as it gave them a new site to name. Two newborn additions, Charles Ambler and Konrad Rudel, were the focus of much attention, and friendships and bonds of trust flowered within the community,

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not to mention a growing romance between Randles and Amelia.

Kristiansen had a meeting of minds with Dr. Nansen, a Swedish chemist, and they worked avidly on schemes to farm crops and source power. They knew that the hunted food supply was finite, and that, with the climate likely to worsen, a source of heat other than fire was vital. Kristiansen was sure that the volcanic activity was certain to mean that utilisable heat must be close to the surface, but without a turbine it would be difficult to tap. Nansen had devised a system of growing crops without sowing them in the ground, on a small scale. By feeding seeds in water, it was possible to harvest

edible beans by a system known as hydroponics. The settlement was subsisting, if not thriving.

The land which had been above sea level twenty years ago was difficult to explore, as it meant an arduous journey into territory which was littered with the remains of the previous habitation, and despite the extreme cold, the scientists were wary of disease and infestation. It was during May 2063, on one such exploration in the west foothills of the Terceria Mountains, that they made an amazing discovery.

The few buildings which had withstood the turmoil of the previous twenty years were buried deep beneath snow and compacted ice.



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Whilst descending into the Vale of Fools, Francois Revel, at the rear of the scouting party, fell through the soft snow into a hidden ravine, where he lay motionless. The other men, in their haste to reach him, caused several feet of snow to cave in above him. He was buried.

They struggled frantically to rescue him, digging with their bare hands, and calling to him. Eventually they dug down to a depth of about ten feet, where they found him, just alive, laying on the flat roof of a submerged building. He was hauled out and tended to by Dr. Nansen, and was pronounced unhurt, but suffering from the extreme cold. The party returned quickly to Lindberg

Plateau, where Revel could receive expert attention from Nurse Maddocks, but not before the Professor had carefully marked the spot where the incident occurred. The others thought it a sensible precaution, to warn others of the danger. The professor had other ideas - he was coming back to examine the building.

That subsequent examination yielded the most significant discovery made during the colonisation of the island. It took nearly a week to clear sufficient snow to allow access, which even then was difficult as much of the inside of the building was filled with the freezing white dust which crept



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PERSONNEL FILE

Constable Oliver Jessop

Peace Officer

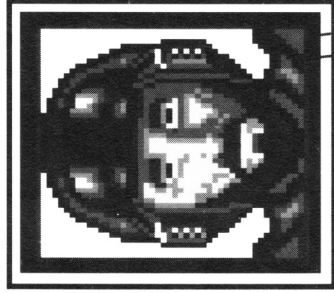
Age 32 years

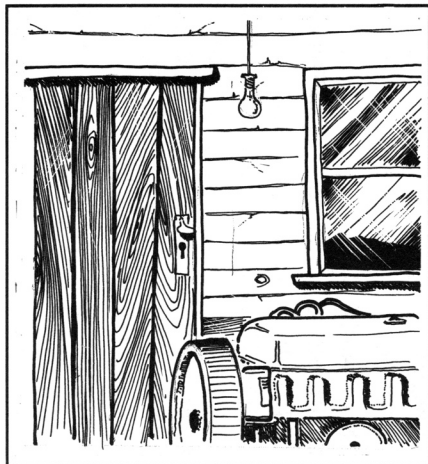
Current Location: Mull of Tears

In his youth, Jessop was cruelly betrayed in love and ever since he has held a deep distrust of women. Jessop is an easy man to antagonise and he dislikes Flynn and Macleod intensely for the way they joke about him. Jessop, however, is fiercely loyal to his closest comrades, Homer Wright and Shigeru Iwamoto.

QUALITIES AND SKILLS

MORALE	FAIRLY GOOD
ENERGY	GOOD
ALERTNESS	EXCELLENT
ENDURANCE	GOOD
STURDINESS	FAIRLY GOOD
OPTIMISM	GOOD
STRENGTH	AVERAGE
STAMINA	FAIRLY GOOD
SHARPNESS	EXCELLENT
SKIING	FAIRLY GOOD
HANG-GLIDING	GOOD
DRIVING	BELOW PAR
SNIPING	BELOW PAR
SABOTAGE	FAIRLY GOOD





everywhere. To most of the settlers it would have looked like a run down factory. To the scientists it was a treasure trove.

From the machinery left in the one-storey building, the professor deduced that its purpose had been the manufacture of the small-engined bikes which had

been the commonest mode of transport in the Azores before the meteorite struck. But more exciting was the fact that it had its own generator, now defunct, but seemingly

undamaged.

2070 The island grows up

The generator was to prove the key which unlocked the problems of developing technology to survive in the harsh climate. It gave a means of harnessing the power of the sub-surface heat, and utilising it to run the machinery on which equipment could be built. It took three years to site the first heat mine, in White Horse Valley, and two years to sink it. Finally the power was unleashed for the construction of transport, buildings and arms, and with them the further colonisation of the island.

The settlers moved westwards across the island, at last thriving as

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the hydropics plants were developed, new villages constructed, and new sights seen. There were marriages, including that of Arthur and Amelia Randles, births, including sons to the Revels, Starks, and newly-wed Chabruns, and the sad death of Randolph Courtenay. Arthur Randles built around him a team of strong leaders, each helping to develop settlements, and teach the youngsters the skills of construction, farming and hunting. Heat Mines were sunk at Storm Head, Thunder Mountains, Snowgoose Valley and Shining Valley, and the Professor and Dr. Nansen worked tirelessly to develop motorised buggies to allow the flourishing communities

to have easier access between one another, over the hundreds of miles now discovered.

Life was improving for the brave adventurers. They began to refer to the island as home, and with every new birth, the sense of a bright future on the isle increased. There was no contact from the mainland; nor was it possible for them to return. The "Lindberg" was holed and sunk as she was sailing close to Devils Head, in Dynamite Bay, when she probably collided with a mine layed over twenty years earlier - the island was peaceful, but it served as a timely reminder of the war man was fighting elsewhere on the globe.



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2081 The next generation

The population of the island now stood close to five hundred, and, with an average age of about twelve, the society was very different to that which the older settlers were used to. The birth rate was high, and child care took much of the time of the women.

Consequently, the young males were quickly taught the life-skills required for survival on the island, and began work. They were far more adept at survival than many of their older counterparts, having known no other life-style, and explored the island expertly; to master the environment they had to know its layout and its dangers.

It had claimed lives with its harsh climate and deadly terrain. Charles Stark was mauled to death by a savage animal on Wildcat Heath, which his son, John later shot. Carlos Garcia had perished when an avalanche swamped him on Snowstorm Pass, and the valley in which his body was found was renamed after him. And John Rudel, the most gifted hunter and explorer, was lost and presumed dead whilst trying to find an impassible route through the Sao Jorge range. The blocked route was cruelly named Mad John's Pass, and the moor he had discovered earlier was similarly renamed.

Randles and Kristiansen, along

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PERSONNEL FILE

Lieutenant Barnaby Gaunt
Peace Officer

Age 35 years

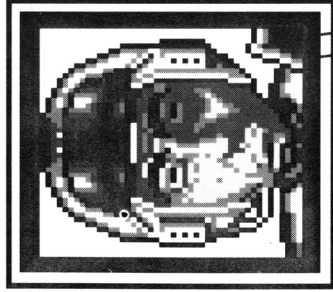
Current Location: White Horse Valley

Brought up by strict and puritanical parents, Barnaby Gaunt is a humourless and ambitious man. He respects Stark and Tasker for their devotion to duty but he is openly scornful of those he sees as frivolous. Llewellyn, Ambler, Flynn and

Cropper all fall into this category

QUALITIES AND SKILLS

MORALE	AVERAGE
ENERGY	GOOD
ALERTNESS.....	GOOD
ENDURANCE	FAIRLY GOOD
STURDINESS.....	AVERAGE
OPTIMISM	BELOW PAR
STRENGTH.....	GOOD
STAMINA	AVERAGE
SHARPNESS.....	FAIRLY GOOD
SKIING.....	ABYSMAL
HANG-GLIDING	FAIRLY GOOD
DRIVING	GOOD
SNIPING	AVERAGE
SABOTAGE.....	BELOW PAR





with Courtenay's son, Howard, had organised a dozen of the men into a law-enforcement team. They also organised the health care for the villagers, and were well accepted as a vital link in the network between the settlements. The society forming on the island was a peaceful one, but as the number of inhabitants grew, individual feuds and quarrels sometimes broke out, and the peace force were seen, by consensus, to work with the right blend of gentle persuasion and good humour.

This balanced equilibrium was violently disturbed one November night in 2081. The settlement at Redwitch Lowlands announced on the island radio that a ship had

weighed anchor five hundred yards off Whales Point, and appeared to be carrying hundreds of people. They did not know whether they were armed. Randles organised the settlements around the coast to watch for any movement from the ship, and the islanders prepared themselves for any inevitability. The following morning the ship sailed west, around the Southern Shore, and into Halfmoon Bay, where again it rested, as the skies darkened. A storm was coming.

The islanders watched warily as the ship battened down its hatches for the coming rain, and began to be tossed about the bay by the swell. The first pioneers whispered

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to each other, remembering the foul weather in which they had arrived, hoping that the visitors were not here hoping to capture their prize. Then the heavens opened.

The first survivors made it ashore an hour after dawn, and five minutes after the mast top of their ship was covered by the ocean. The welcoming party was fronted by the business end of a rifle, closely followed by Randles. The shipwrecked passengers scrambled ashore by a variety of means, with survival their only thought. There was to be no danger to the island, and gun-sights were lowered, to be replaced by comfort and medicine. Nearly four hundred people of all ages and nation-

alities had been aboard. About half made it ashore.

The huge influx of people, many of them injured, meant more mouths to feed and homes to find. The islanders worked hard at caring for the newcomers, whose tales of death and devastation from the mainland were quickly spread, convincing the settlers that their island home was the only safe haven. They heard how people in Europe had known about the islands existence, but had assumed that it was uninhabitable. It had been dubbed "Midwinter Isle", a name which quickly caught on.

The arrival of the newcomers was resented by some people, most notably Professor Kristiansen, who



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was upstaged by a fine young
scientist

from Germany,
who helped the islanders to
develop snow buggies for the
flatlands and construct cable cars
on hillsides. The Professor with-
drew from social contact for many
years, living in his laboratory with
his wife and children, and even
after the German was killed by a
freak accident at a heat mine, the
Professor was reluctant to
rekindle friendships.

2089

Fifty years after the grounding of

the giant meteorite, life in one
part of the world was as normal as
possible in an environment where
temperatures rarely rose close to
freezing. Over fifty settlements had
been built, across the whole island,
and each was home to families,
friends and workmates, employed
at the dozen heat mines, in syn-
thesis plants which produced fuel,
and at hydroponics farms or in
hunting parties. The Free Villages
Peace Force had been moulded in
to an effective, friendly policing
body under Arthur Randles. He
was, however, desperately ill, and
as Amelia had been unable to bear
children, there was no obvious suc-

MIDWINTER

PERSONNEL FILE

Constable Kurt Muller

Peace Officer

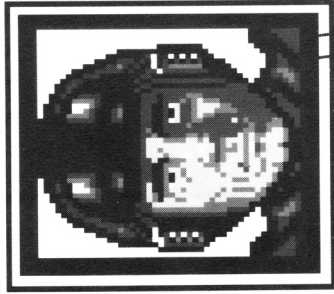
Age 25 years

Current Location: Sao Jorge Plateau

Muller is dependable, slow to anger but fearsome when roused. Divorced five years ago, he lives with his elderly mother and his two small sons. His ex-wife married PC Garcia but Muller was glad to be rid of her. Garcia, Doughty and Muller are all close friends. Muller dislikes Iwamoto, finding him too smug and self-righteous.

QUALITIES AND SKILLS

MORALE	EXCELLENT
ENERGY	GOOD
ALERTNESS	AVERAGE
ENDURANCE	GOOD
STURDINESS	EXCELLENT
OPTIMISM	GOOD
STRENGTH	FAIRLY GOOD
STAMINA	AVERAGE
SHARPNESS	ABYSMAL
SKIING	GOOD
HANG-GLIDING	POOR
DRIVING	AVERAGE
SNIPING	BELOW PAR
SABOTAGE	ABYSMAL





cessor to his leadership. Howard Courtenay, his deputy, was reluctant to assume the reins of power, and he suggested that John Stark, son of the first American pioneers, was the best man for the job. Youth was on his side, and he had proved himself to be an able, conscientious and popular officer. With the death of Arthur Randles on 5 August 2089, the island went into mourning. The stories of his leadership during the colonisation of "Midwinter Isle" passed into folklore.

Amelia Randles was heart broken. She had always been happy to play second fiddle to her husband, but his death left her with a deep feeling of emptiness,

and she began to think of home often. John Stark, as Arthur's successor, took it upon himself to counsel and care for Amelia, partly from a sense of duty, and partly because her knowledge of the island was unparalleled. He knew he could learn a lot from her, and picked her brain on numerous occasions when a particularly thorny problem arose. Stark realised that to be truly effective, the FVPF needed the help of ordinary members of the community who would be prepared to serve alongside the peace officers in times of emergency, and so invited Amelia to help him list possible volun-

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teers from the villages.

However, Stark was surprised by some of the names Amelia suggested. Could Kristiansen be coaxed back into the fold ? Would Gunn remain sober for long enough to be of any help ? She even suggested Gregory Flint, a petty crook of no scruples ! Amelia was adamant.

"They may not be paragons of virtue, John, but they're all good hearted people", she insisted.

The potential of the Force was strengthened and with it prosperity on the island spread. The land had been fully mapped, and potential sites for new settlements

and heat mines found. The disaster of the meteorite faded in the memories of the older settlers, but the constant reminder of the climate occasionally jogged them back to remember the harsh early days of colonisation. It was as if life on Earth was evolving all over again - but this time man had the benefit of modern technology and a whole string of mistakes from which to learn.

2095

As the years passed, the people of Midwinter became increasingly certain that there's was the only peaceful land left on Earth. They welcomed refugees and helped

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most of them enthusiastically to build settlements and make a new life for themselves on the island.

Most of the indigenous population had migrated towards the north-west of the island where the volcanic beds were most accessible. Life was kinder near the Heat Mines. As the population grew, the south-east corner of the island began to house more and more new settlers, whose attitudes to life were often tainted by their experiences on the mainlands. Some resented the life-styles enjoyed by Stark and his people over the past ten years. Feuds and disputes were more commonplace in the region they had come to inhabit, but the Peace Force

concentrated its attention elsewhere, turning a blind eye to much of the goings-on around Shining Hollow. Stark had heard rumours that an individual calling himself General Masters was trying to set up an alternative agency of law enforcement in the settlements of the south-east. So long as Masters remained where he was, and the Free Villages remained unaffected, Stark thought that he would let things ride.

2099

General Masters twitched.

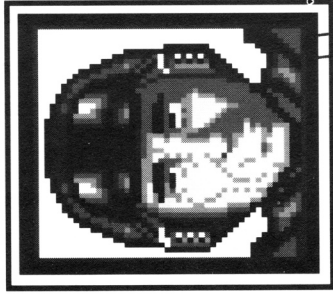
"Prisoners ?" he rasped, "of course we take prisoners, De Falco".

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PERSONNEL FILE

Constable Luke Jackson
Peace Officer
Age 27 years
Current Location: Devils Valley

Jackson is a surly, ill-tempered man. Two years ago he was nearly thrown out of the Peace Force by Captain Stark, who suspected him of stealing goods. He has hated Stark ever since. Jackson cannot abide kids, foreigners or preachers and has few friends. Only Garcia, Flint and his timid wife have any time for him.



QUALITIES AND SKILLS

MORALE	POOR
ENERGY	AVERAGE
ALERTNESS	EXCELLENT
ENDURANCE	POOR
STURDINESS	BELOW PAR
OPTIMISM	ABYSMAL
STRENGTH	AVERAGE
STAMINA	ABYSMAL
SHARPNESS	GOOD
SKIING	POOR
HANG-GLIDING	POOR
DRIVING	FAIRLY GOOD
SNIPING	BELOW PAR
SABOTAGE	GOOD



Colonel De Falco looked both surprised and disappointed. The General smiled briefly before continuing.

"I need a rapid victory, De Falco. We have limited fuel, limited munitions. We must do everything we can to encourage surrender. We will take prisoners and we will treat them well. Is that understood ?"

De Falco nodded curtly.

"There will be no executions, sir," he said.

"And no experiments, De Falco," hissed Masters.

"No sir. No experiments."

Masters gazed out of his window.

*"When Midwinter is mine, De Falco, there will be great celebrations. I shall drive in triumph through every village in the land ! Then is the time to deal with our prisoners. Discipline is what these people need, De Falco, **discipline !**"*

"John"

Stark swivelled round and near-

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ly fell off his bar stool in amazement.

"Kristiansen ! How nice to see you" blurted Stark, incredulous at the appearance of the hermit professor in the Marianbad Inn.

"To what do we owe the pleasure", sneered Courtenay. The three men eyed each other, knowing that Kristiansen had little time for either of the FVPF officers.

"John, I'm a little worried. Please listen to what I have to say carefully", whispered the professor through pursed lips.

"Go ahead. What's the problem"

said Stark, halfheartedly.

"I've been trying to contact the radio stations in the south-east. It took me three hours to get through."

"Probably just some local difficulty with the weather", shrugged the Captain.

"I think not" , insisted Kristiansen. *"Whilst I was trying to find an open frequency I overheard something which shook me."*

"Tell me more," Stark grunted.

The first message was faint and

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crackly. It sounded like *"Sierra Garcia is all quiet. One Peace Officer only."*

The reply came through loud and clear.

"Message received. Operation Snowstorm to proceed as planned."

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PERSONNEL FILE

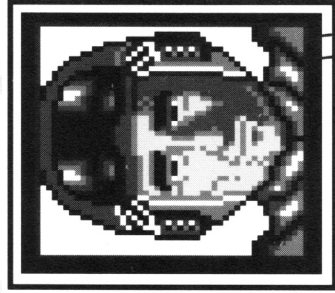
Sergeant Charles Ambler
Peace Officer
Age 38 years
Current Location: Otter Valley

An easy going sort, Charles Ambler allows few things to worry him. He is fond of children but he and his wife have tried without success to start a family. His favourite pastime is a game of poker, usually with Rudinski and Cropper. Ambler gets on well with most people but finds

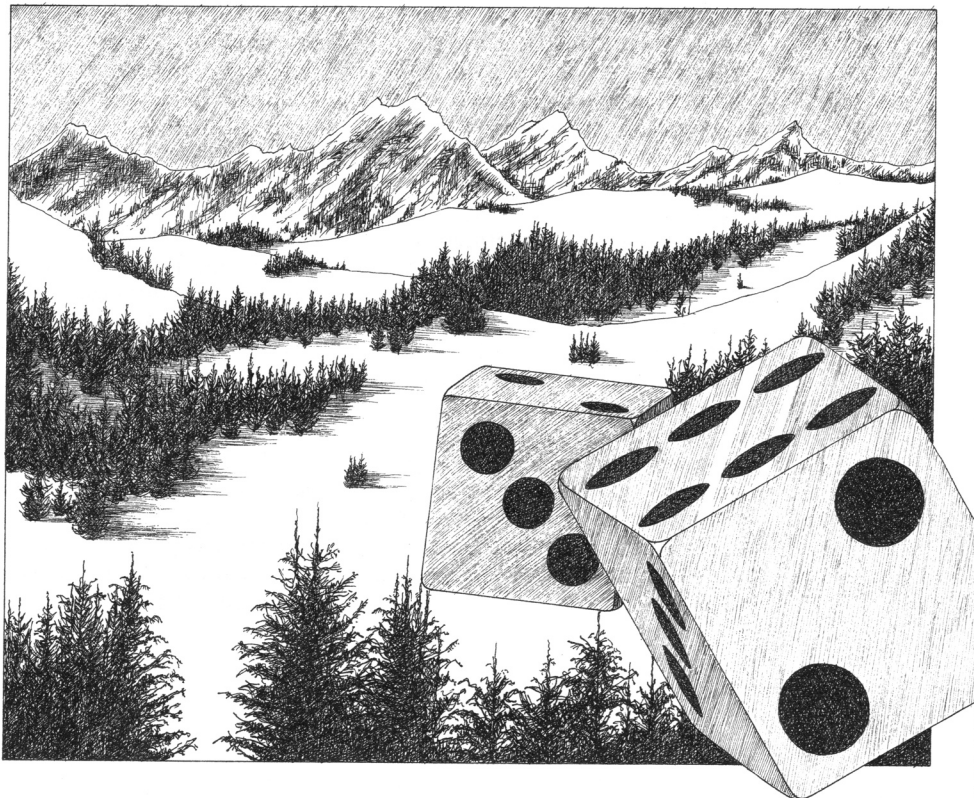
Barnaby Gaunt too over-bearing.

QUALITIES AND SKILLS

MORALE.....	GOOD
ENERGY.....	FAIRLY GOOD
ALERTNESS.....	GOOD
ENDURANCE.....	FAIRLY GOOD
STURDINESS.....	AVERAGE
OPTIMISM.....	GOOD
STRENGTH.....	BELOW PAR
STAMINA.....	BELOW PAR
SHARPNESS.....	FAIRLY GOOD
SKIING.....	ABYSMAL
HANG-GLIDING.....	FAIRLY GOOD
DRIVING.....	BELOW PAR
SNIPING.....	AVERAGE
SABOTAGE.....	AVERAGE



THE GAME



STARK



Captain John Stark swiftly and silently skied down a steep slope. The ease with which he moved belied his strength and ability. He was a true expert. An innocent spectator watching Stark that day in the wintry ice-clad wilderness of Midwinter could have been forgiven for presuming Stark was merely rejoicing in his athletic prowess. But he was not out for a day's sport.

He was travelling with a purpose; the fate of Midwinter rested on his shoulders and despite all his manly strength, it was a responsibility which weighed him down. Stark knew this landscape well - he knew it, loved it and respected it and longed to enjoy it. But he could find no pleasure in it whilst the population which he served was threatened with enslavement.

At that moment, Stark was a man obsessed with a hatred and fear and that hatred and fear could be summed up in two words: General Masters. He hated Masters for turning the Midwinter environment against him.

For all his life he had felt at home in this terrain. He had felt at one with the arctic landscape. Now because of Masters he felt alone, isolated and exposed. The ice-clad hills and valleys were no longer a thing of beauty. They were freezing obstacles which maliciously hampered his movements.

He hated Masters for keeping him away from Sarah. It was because of Masters that he spent days, sometimes weeks patrolling the south-eastern border. He hated Masters for his cruelty and he feared him too. He

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PERSONNEL FILE

Franco Grazzini
Pilot

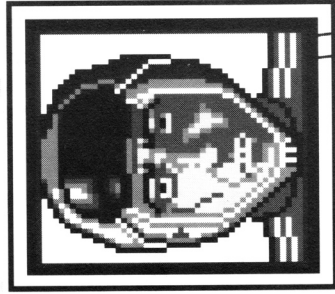
Age 29 years

Current Location: Lindberg Plateau

Grazzini is a fearless flier. Rather boastful by nature, he is not overly popular amongst the menfolk of the Free Villages but he has a certain charm for the ladies, especially Nurse Maddocks. Grazzini is in love with Virginia Caygill and nurses a jealous hatred of Rudinski. He drowns his sorrows nightly with Jeremiah Gunn.

QUALITIES AND SKILLS

MORALE	ABYSMAL
ENERGY	GOOD
ALERTNESS	FAIRLY GOOD
ENDURANCE	GOOD
STURDINESS	AVERAGE
OPTIMISM	ABYSMAL
STRENGTH	GOOD
STAMINA	FAIRLY GOOD
SHARPNESS	BELOW PAR
SKIING	FAIR
HANG-GLIDING	EXCELLENT
DRIVING	ABYSMAL
SNIPING	BELOW PAR
SABOTAGE	FAIRLY GOOD





feared for the peaceful people of Midwinter. What would happen to them if Masters invaded ?

In his heart, Stark knew it wasn't "if" but "when". How was he to protect the whole population with a force of 19 Peace Officers including himself ? If the worst came to the worst, there was only a dozen or so of the civil population whom he could rely on - and half of them weren't talking to one another. In fact, some of them weren't even talking to him !

He feared for Sarah. Sarah the nurse, Sarah the healer. If Midwinter were overrun, what fate would Masters have in store for her ?

Stark skied on for several miles. There was a lot of uphill climbing and he was getting tired. He had just side-stepped his way up an almost vertical snow wall, arriving at a

small plateau where a lone pine tree grew.

He was so tired he started to greyout - he would have to rest, otherwise he'd lose consciousness completely.

He leant against the tree trunk for ten minutes and gradually his vision returned to normal. He looked at his watch. It was just on twelve o'clock. Time to contact his team for the two hourly situation report. Over the past few days, even this simple task had become a chore. The air was full of static. Messages had to be repeated over and over again before they were understood. Professor Kristiansen, the cantankerous scientist at Diamond Valley had warned Stark that Masters was jamming the Free People's radio network. Just for once, Stark hoped that it was just another of Kristiansen's attempts to aggravate him. If there was jam-

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ming, the invasion was imminent.

Stark took the radio from his back pack and turned to Garcia's frequency. He always started with Garcia whose station was closest to Masters' frontier. The indicator on the set showed that the correct frequency had been selected but instead of Garcia's friendly voice responding with his call-sign, Stark's radio emitted a piercing, high-pitched squeal. Although concerned, Stark was not unduly worried.

Transmissions had been bad.

However, over the course of the next half hour Stark tried to raise over 30 stations. No-one on Midwinter was receiving or transmitting radio messages. For the first and last time in his life, Stark experienced mortal terror.

The invasion had started. He was on his own in the wilderness. He

had no radio communication, no snow-buggy, no hang-glider. It couldn't have been worse. Stark got a grip on himself. He had been made leader of the Free Villages Peace Force because of his qualities as a leader and lead he would. His destiny was at hand !

He packed away his gear and got ready to move off. He had just reached the edge of the plateau when he heard the drone of an aero-engine. Looking above him, he saw a small remote-controlled aircraft. The next thing he knew all hell let loose. To the left of him a pattern of mortar bombs went off. He moved to the right and a further pattern went off. He was in trouble.

The enemy had moved with astonishing speed and caught him out in the open. The hovering plane was calling down fire on him.

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Shrapnel was flying all around him, but he wasn't harmed. If he didn't do something quickly he would be dead. He took the standard issue sniper's rifle from his back and took careful aim. One shot and the small plane exploded with a bright flash and a bang. Quickly Stark climbed the tree looking through the telescopic sights.

Far into the distance, coming out of the perpetual Midwinter mist shroud was one of Masters' attack vehicles. What was worse, Stark could see quite clearly that it had just launched a guided missile and it seemed reasonable to assume it would be coming his way.

Stark reassessed his predicament with cool determination. He had to make contact quickly with his men and organise resistance. He looked at his map and worked out the best

route to the various stations. With luck he would make it before the enemy had a chance to strike hard.

MIDWINTER

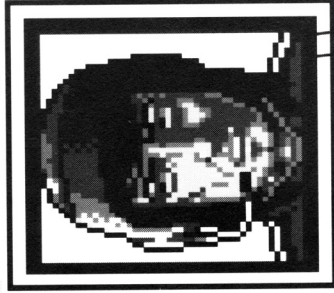
PERSONNEL FILE

Karl Rudinski
Snowbuggy Driver
Age 24 years
Current Location: Western Plains

Intelligent and fiery, Rudinski is reckoned to be the fastest snowdriver in the Free Villages. His engagement to Virginia Caygill has quietened his temper a little but he still rages at Gunn and Grazzini whose self-pity he finds despicable. As a boy, Rudinski was taught to drive by John Stark, and the two are closest of friends.

QUALITIES AND SKILLS

MORALE	FAIRLY GOOD
ENERGY	EXCELLENT
ALERTNESS	EXCELLENT
ENDURANCE	EXCELLENT
STURDINESS	EXCELLENT
OPTIMISM	FAIRLY GOOD
STRENGTH	GOOD
STAMINA	GOOD
SHARPNESS	EXCELLENT
SKIING	POOR
HANG-GLIDING	AVERAGE
DRIVING	EXCELLENT
SNIPING	GOOD
SABOTAGE	GOOD



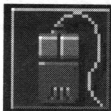
PLAYING MIDWINTER



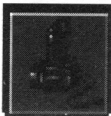
Please refer to the Technical Supplement accompanying this manual for Loading Instructions.

GAME OPTIONS

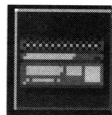
Once the game has fully loaded, the Game Options Screen will be displayed. This shows six icons which are used to select your method of control and difficulty options. "Midwinter" can be played by using mouse, joystick or keyboard controls by selecting the appropriate icon shown below;



Mouse



Joystick



Keyboard

Please note that throughout the manual, the game description refers to mouse control mode. It is recommended that you use a mouse, if you have one, to play "Midwinter". For details of joystick and keyboard controls, please refer to the Technical Supplement.

There are three difficulty options to choose from, which can be selected in any combination. Training allows you to play the game against unarmed enemy vehicles which can do no damage to the Free Villages Peace Force

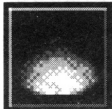
MIDWINTER

members. If the *Bombers* icon is selected before play, the enemy have additional fire power in the form of unmanned bomber aircraft. Mortars allows the enemy to direct long-range shelling at your forces, guided by unmanned spotter planes which will seek out and circle your forces.

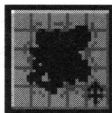
For the ultimate challenge select *Bombers* and *Mortars* but skip *Training*!



Bombers



Mortars



Training

Finally, click over the *Play* area to start the game.

You are now in control of Captain John Stark, leader of the Free Villages Peace Force on the island of Midwinter. Your people are in trouble, and time is against you. Your territory has been invaded by thousands of hostile troops under the dictatorship of General Masters. His troops are heavily armed and have travelled inland by ski and snow-buggy from their Headquarters in Shining Hollow. General Masters and his men have reconnaissance drones, which are unmanned



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computer controlled gliders, aiding them in their searches as they probe across the island and unmanned bombers for long-range attacks on your forces.

Enemy units are already advancing on your settlements, heading for their final objectives, the heat mines of the Free Villages. Heat mines are the source of the very life-blood of the island, the power by which your people survive. If they are all captured or put out of action you will have no choice but to surrender.

Enemy radio stations at Deathwatch Crag, Snowgoose Fell and Sierra Madre are now being used to broadcast a jamming signal which is preventing the transmission of radio messages anywhere

on the island.

You, as Captain Stark, therefore have no immediate means of contacting the other members of the Free Villages Peace Force, who are on duty, at work, or at home. You know where they should be, and you have a detailed map of the island. You know that General Masters will continue to advance across the island in search of his ultimate goal - the domination of the last oasis in the icy desert which the world has become. You know you will have to cross hundreds of miles of bleak wilderness before you can mobilise the Peace Force. Only then can you launch the counter-attack that will bring Masters to his knees !



MIDWINTER

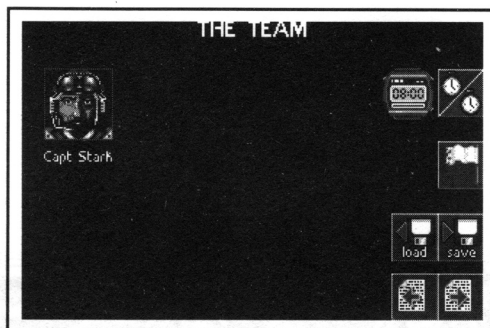
THE TEAM



TEAM DISPLAY



Team Display

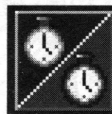


When you have selected *Play* on the **Game Options** screen, you will be shown the **Team Display**. At the start of the game, Captain Stark is the only member of the team under your control- it's up to you to use him to recruit the

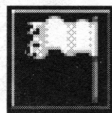
others. His portrait is displayed, along with seven icons, as explained below;



The team's next report time. (See the section on '**The Situation Report**' for further details)



Synchronise Watches. (See the section on '**The Situation Report**' for further details)



Surrender. Selecting this icon hoists the white flag of

MIDWINTER

surrender, and hands control of the Midwinter isle to the enemy. The game is over - you have lost. You then have the opportunity to try again.

This is the only way to abandon a game and start afresh.



Save Game. (See the section on 'Saving and Loading the game' for further details)



Load Game. (See the section on 'Saving and Loading the game' for further details)



Scroll to previous page of **Team Display**



Scroll to next page of **Team Display**

When you recruit additional team members the **Team Display** includes their portraits. Up to six portraits are displayed on one page. Use the **Scroll** icons to view other pages.

At the start of the game you should move the on-screen pointer over Captain Stark's portrait and click once on the left mouse button, to show Captain Stark's **Personality Display**.



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THE PERSONALITY DISPLAY



The 32 **Personality Displays** give all the essential personal information about the members of the Free Villages Peace Force whom you have recruited, and your ability to understand and utilise this information is the key to playing and winning "Midwinter".

For each individual the display shows his or her name, occupation (and rank if they are a Peace Officer), age, current location and portrait. Also included is a brief biography, a state of health diagram, and an assessment of the individual's fourteen qualities and skills. At the bottom of the display are two clocks, a muscle power indicator,

and six option icons.

Personality Display

Captain John Stark
Peace Officer
Age 33 years
Current Location
Harvest Plans

In recent years, John Stark has made the FVPF into a disciplined and effective force. He is a fair man but equally a man convinced that his way is best. He has never had much time for romance and many were surprised when he fell for Sarah Maddocks. Stark's nearest friends are Howard Cowteney and Karl Rudzinski.

Morale	Excellent
Energy	Excellent
Alertness	Excellent
Endurance	Excellent
Sturdiness	Excellent
Optimism	Excellent
Strength	Excellent
Stamina	Excellent
Sharpness	Excellent
Shining	Excellent
Gliding	Excellent
Driving	Excellent
Sneaking	Excellent
Sabotage	Excellent

00:00 06:00

Icons: ? (Health), [Muscle Power], [Clock 1], [Clock 2], [Option 1], [Option 2], [Option 3], [Option 4], [Option 5], [Option 6]

BIOGRAPHIES

These biographies, which are reproduced on the Personality Profile pages found throughout the manual, give many clues to

MIDWINTER

PERSONNEL FILE

Jean-Luc Chabrun
Hunter

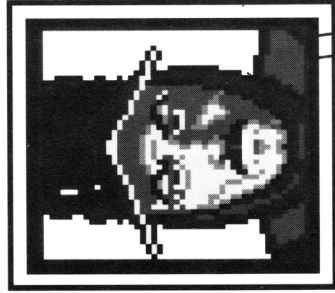
Age 31 years

Current Location: Thunder Coast

Unruly and obstinate, Chabrun is equally at home deep in the solitude of the mountains or spinning wild yarns to the crowd in a smoke-filled tavern. His favourite drinking companions are Flynn and Macleod, who can match him glass for glass. His fondness for other men's wives has earned him the hatred of Grice, Pringle and Doughty.

QUALITIES AND SKILLS

MORALE	GOOD
ENERGY	EXCELLENT
ALERTNESS	EXCELLENT
ENDURANCE	EXCELLENT
STURDINESS	GOOD
OPTIMISM	EXCELLENT
STRENGTH	FAIRLY GOOD
STAMINA	EXCELLENT
SHARPNESS	EXCELLENT
SKIING	FAIRLY GOOD
HANG-GLIDING	GOOD
DRIVING	BELOW PAR
SNIPING	EXCELLENT
SABOTAGE	GOOD





the individual's personalities and traits. Significantly, each biography mentions some of the person's friends and enemies. This information is vital when planning your recruiting campaign. People are much more likely to join the resistance if they're asked by one of their friends.

STATE OF HEALTH

The state of health of an individual is shown by the physical damage sustained by each of the four limbs, the body and the head, displayed by the outlined figure behind the '**Qualities and Skills**' display. When a particular limb is in fine health, it shows green. When it is hurt it shows orange, and when it is out of action it

shows red. Hurt limbs may still be used but the individual runs the risk of putting the hurt limb out of action, when it becomes useless. An out of action head renders the individual unconscious, making any movement impossible.

Different activities are curtailed according to whichever limb is out of action. **Sniping** needs two arms. **Skiing** needs two functioning legs. **Hang-gliding** needs all four limbs, whilst **Snow-buggy** needs at least one arm and one leg. **Sabotage**, likewise, needs one arm and one leg.

All activities are influenced to some degree by the individual's overall state of health. Damage to

MIDWINTER

a particular part of the body is more critical in some activities than in others. For example, in skiing, damaged legs will reduce performance more than damaged arms, but in sniping the opposite applies.

Recovery from injury is basically by rest, but can be accelerated by receiving **First Aid**. See the section on 'First Aid' for further details.

QUALITIES AND SKILLS

Every individual has nine qualities and five skills which are detailed on his personality display. All fourteen may, at any given time, be rated as Excellent, Good, Fairly Good, Average,

Below Par, Poor or Abysmal. Three of the qualities (Morale, Energy and Alertness) associated with a particular individual may vary throughout the game, depending on what he does and what happens to him. The other six qualities are fixed for a particular individual, but govern the individual's response to actions and events, and hence influence the three variable qualities. The action skills of skiing, hang-gliding, snow-buggy driving, sniping and sabotage ability are fixed for each particular individual. Actual performance depends both upon skill and upon state of health.



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MORALE

Morale influences every aspect of an individual's performance, with those individuals whose morale is high performing better in every way. Morale is determined by a combination of the overall successes of the Free Villages Peace Force and individual success.

ENERGY

An individual's Energy level is an indication of his energy reserves, which may be used to replenish the individual's **Muscle Power** when it is low (see "**Muscle Power**" section below). When an individual rests or sleeps, energy is transferred from Energy reserves to Muscle Power. Energy reserves can only be replenished by eating.

ALERTNESS

An individual's Alertness influences his technical performance rather than muscle performance so that skills such as sabotage, sniping and snow-bugging are influenced more strongly than skiing and hang-gliding. Alertness depends fundamentally on how much sleep an individual gets.

ENDURANCE

The individual's Endurance, which is fixed, determines the rate at which his Energy and Alertness are depleted.



MIDWINTER

PERSONNEL FILE

Dr. Pierre Revel

Physician

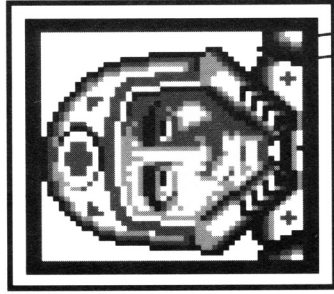
Age 35 years

Current Location: Coldheart Pass

Revel is a competent doctor but he lacks self-control. Despite being married with two children, he has had a number of passionate affairs with female patients. Bob Hammond's wife is his latest conquest. Revel is a keen chess player, and his closest friend, Howard Courtenay, is also his toughest opponent.

QUALITIES AND SKILLS

MORALE.....	GOOD
ENERGY	FAIRLY GOOD
ALERTNESS	EXCELLENT
ENDURANCE.....	BELOW PAR
STURDINESS.....	EXCELLENT
OPTIMISM	EXCELLENT
STRENGTH	FAIRLY GOOD
STAMINA.....	POOR
SHARPNESS	GOOD
SKIING	POOR
HANG-GLIDING.....	ABYSMAL
DRIVING	GOOD
SNIPING	EXCELLENT
SABOTAGE.....	POOR



STURDINESS

The individual's Sturdiness, which is fixed, determines his rate of recovery from physical damage and how great a benefit he derives from rest or sleep in terms of Energy and Alertness.

OPTIMISM

The individual's level of Optimism, which is fixed, determines how much his morale is affected by setbacks or failures encountered personally or by the whole Peace Force.

STRENGTH

The individual's Strength level, which is fixed, determines how easily he becomes physically damaged.

STAMINA

The individual's Stamina quality, which is fixed, determines his

maximum level Energy.



SHARPNESS

The individual's Sharpness, which is fixed, determines his maximum level of Alertness.

When sending individuals on missions or using them to perform difficult functions, it is important to determine that they have the qualities or skills necessary for its successful completion. Remember that the biographies give vital clues for the solving of such problems.

THE MUSCLE POWER INDICATOR

The Muscle Power Indicator

MIDWINTER

shows the amount of energy available to the individual for movement and activity. Muscle Power is used up when you are skiing, sniping, driving a snow-buggy or hang-gliding. It is used up more quickly if you lack the necessary skill or if you're in a poor state of health.

Individuals whose energy falls to zero must rest or sleep. Whilst resting or sleeping, energy is transferred from the individual's Energy reserve to Muscle Power. It is therefore important that Energy reserves are also kept topped up by eating.

When at maximum value, the indicator is red. The red drains away leaving the figure white at

zero Muscle Power. *You should not allow an individual's Muscle Power to fall to zero whilst in action mode.* If this occurs, the individual is liable to faint from exhaustion. As a individual faints, colour drains from the scene, and the world is seen in shades of grey for a few moments before finally fading away to black. You should bring the individual to a standstill and exit to the Decisions Display as soon as he begins to faint. If he is still moving when he loses consciousness, he will fall over or crash, with injury resulting.

It is possible to rest an individual for a period of five minutes from the Decisions Display, with a resulting gain in Muscle Power.



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Simply click on the Muscle Power indicator. Muscle Power will increase, Energy Reserves will decrease slightly and five minutes will be added to the individual's personal clock.

The Muscle Power gained by rest depends on the individual's surroundings. Resting in cosy buildings is more beneficial than in harsh, cold factories or warehouses, but even these are preferable to resting out of doors. An individual automatically rests for the whole of a cable-car journey.

THE WATCHES

"Midwinter" is a race against time. The enemy forces which have invaded will try to overrun your villages and capture

your heat mines, moving steadily from their base in the south-east across the island in a general north-westerly direction. Your objective is to capture the enemy Headquarters at Shining Hollow. However, if you allow the enemy free passage across the island, they will probably capture your last heat mine before you reach Shining Hollow. You must attempt to delay their progress whilst advancing to your goal.

Achieving this will require the careful deployment of your 32 individuals, once you have recruited them, and they will often be carrying out independent tasks many miles apart from

MIDWINTER

PERSONNEL FILE

Konrad Rudel
Hunter

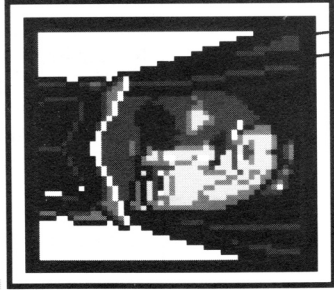
Age 38 years

Current Location: Whispering Mountains

Rudel, a tough and skilful hunter, resents township folk. He despises the Peace Force, saying that the law of nature is the only law men should follow. The one person he has a friendly word for is Davy Hart. Rudel sees in the boy some of the steel of a true hunter and harbors hope that one day the boy will follow in his footsteps.

QUALITIES AND SKILLS

MORALE	AVERAGE
ENERGY	EXCELLENT
ALERTNESS	EXCELLENT
ENDURANCE	EXCELLENT
STURDINESS	GOOD
OPTIMISM	POOR
STRENGTH	EXCELLENT
STAMINA	EXCELLENT
SHARPNESS	EXCELLENT
SKIING	GOOD
HANG-GLIDING	POOR
DRIVING	FAIRLY GOOD
SNIPING	EXCELLENT
SABOTAGE	AVERAGE



each other. To keep track of all these individuals moving around independently, two types of clock are used for the timing of the game, which are be periodically synchronised. The synchronising of watches takes you automatically to the "Situation Report" screen, which is described in the "Situation Report" block shown in this section.



Each individual has a brown watch which shows his personal time. The blue watch shows the team's next report time.

The team's report time is simply the time when the next situation report is due and when watches are due to be synchronised again.



A team member's personal time

THE SITUATION REPORT

The Situation Report is due every two hours. The time when one is next due is always shown by the blue report time watch. The Situation Report is made when you decide to synchronise team members' watches. To do this, click on the synchronise watches icon shown on the Team Display.

The Situation Report lists F.V.P.F. successes and enemy successes, concentrating on items of strategic importance. In particular, you should keep a close check on the number of Heat Mines held by the F.V.P.F. When this falls to zero your surrender is inevitable.

F.V.P.F.		ENEMY	
HEATMINES	19	PRISONERS	0
DESTROYED		HOT	
FACTORIES	0	FACTORIES	5
SYNTH PLANTS	0	SYNTH PLANTS	5
WAREHOUSES	0	WAREHOUSES	3
RADIO STATIONS	0	RADIO STATIONS	0
ENEMY UNITS	1	MOBILE UNITS	31
ENEMY VEHICLES	57	MOBILE VEHICLES	1735

Watches synchronized! Your team has two hours before the next situation report is due.



shows the time of day for that particular person. This primarily depends upon the amount of time he or she has spent in action or attack mode (i.e. skiing, driving, hang-gliding, travelling by cable-car, sniping or sabotaging).

If a team member's personal time has overrun the report time he or she has to wait until the next situation report before he or she

can do anything further. They can, however, finish whatever they are doing in their current action or attack mode.

If a team member's personal time has not reached the report time, he or she has spare time. This can be used up in any of the action modes.

When watches are synchronised, by clicking on the synchro-

When a Situation Report is received you get fresh information about the enemy dispositions and when you next look at the Main Map, it too has been updated accordingly.

Your team members' watches are synchronised each time a Situation Report is received. Team members with spare time automatically rest, so make sure you have moved everyone you want to move ! Team members who have over-run the report time will have less spare time in the following two hours.

The watch at the bottom of the Situation Report Display shows the **next** report time, not the current report time.

You always receive a situation report before you win or lose the game. Even when you have achieved your goal by blowing up the enemy HQ, or Masters has achieved his by capturing all your Heat Mines, you must receive confirmation of your success or failure.

You click on the synchronise watches icon. You read of your success or failure and assess how well or badly you have done. Then, after clicking on the team icon, victory or defeat will unfold.

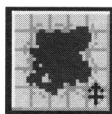


nise watches icon shown on the "Team Display", team members with spare time automatically rest for that period of time which is spare, and their personal watches are synchronised to the report time.

Note that the game starts with personal watches showing 12:00 hrs. The enemy have already advanced from their base at Shining Hollow for the equivalent of twelve game hours.

THE OPTION ICONS

The six option icons which are present on the **Personality Display** mode are;



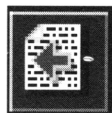
Selects the **Main Map**



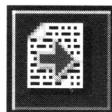
Selects the '**Decisions Display**'



Selects the '**Team Display**'



Selects previous '**Personality Display**'



Selects next '**Personality Display**'

MIDWINTER

PERSONNEL FILE

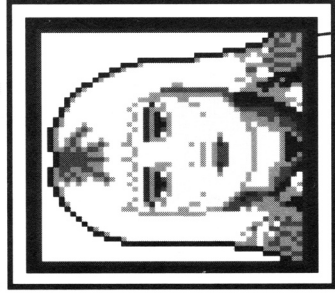
Virginia Caygill

Ski Teacher

Age 21 years

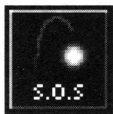
Current Location: Snowstorm Valley

Virginia Caygill travels from village to village giving skiing lessons to the children of each community. Both Davy Hart and Jenny Adams are pupils of hers. She is engaged to Rudinski, the snowdriver, but has many admirers. Virginia despises Revel, having been the unwilling subject of the doctor's affections in the past.



QUALITIES AND SKILLS

MORALE	EXCELLENT
ENERGY	EXCELLENT
ALERTNESS	EXCELLENT
ENDURANCE	EXCELLENT
STURDINESS	FAIRLY GOOD
OPTIMISM	GOOD
STRENGTH	GOOD
STAMINA	EXCELLENT
SHARPNESS	EXCELLENT
SKIING	EXCELLENT
HANG-GLIDING	FAIR
DRIVING	GOOD
SNIPING	AVERAGE
SABOTAGE	ABYSMAL



Triggers
'Emergency
Rescue'. (See the

section on 'Rescue'
on page 173.)

At the start of the game, select
the '**Main Map**' icon so that you
may ascertain your whereabouts
and those of the other members
of the FVPE.

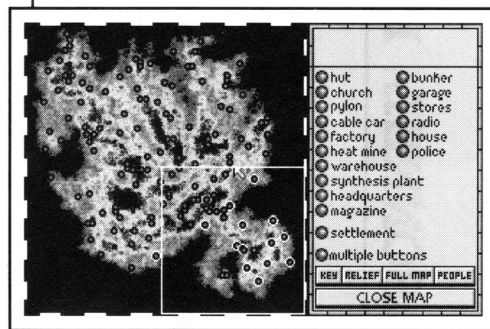
THE MAIN MAP

The main map display screen is
used frequently throughout the
game, and it is worth spending
some time familiarising yourself
with its appearance and layout,
and learning to use it to your
advantage. With nearly 160,000

square miles of
playing area, it's
easy to get lost !




*Main Map Display with
buttons key*



The display is divided into two
sections. The left hand section
shows the map of the island in

MIDWINTER



colour relief form, with the colour used to indicate height above sea level (as often seen in atlases). The map is at its lowest magnification (1 x 1) when the display is first accessed, showing the whole of the island, with locations of major strategic importance as green dots. Magnification is increased by moving the white box surrounding the on-screen pointer over the area which you wish to magnify, and clicking once on the left mouse button. The section of the map previously enclosed in the white box will expand to fill the left hand section of the display, at 2 x 2 magnification. This process may be repeated three times, to give a maximum

magnification of 16 x 16. At this magnification every significant detail is marked out on the map, and the white box disappears. By clicking on the right mouse button the map may be shrunk back to the next lowest magnification (8 x 8), and so on back to the full map.

The right hand section shows the key for the map, five option selectors, and the name of a location. As the pointer is moved around the map, you will notice the place name shown at the top of the right hand section change; this is the name of the location under the pointer. If the pointer is moved over any green dot you are told what it represents.

The centre part of the right



MIDWINTER



hand section shows either of two keys which are used to read the map. The first is an indicator board with buttons for each type of building in "Midwinter". Clicking on a button lights up all buildings of that type on the current map. For example, if the button labelled "*Heat Mine*" is selected, by clicking with the left mouse button, all of the heat mines visible on the map will be illuminated. Buttons are turned off by clicking on them again. When the whole island is displayed, only the settlements and the enemy held radio stations are visible. Increasing magnification will reveal increasing detail !

With the indicator board

accessed, it's easy to identify the buildings at any location. Just move the pointer over a green dot on the map. Immediately, various buttons on the key will light up, showing you what types of building are to be found at that spot.

There are two special buttons labelled "*Settlements*" and "*Multiple Buttons*". These allow you to control the indicator board in four different ways;

i) SETTLEMENTS OFF, MULTIPLE BUTTONS OFF

Only one type of building can be lit up at a time. Selecting another button automatically switches the previous type off.

MIDWINTER

PERSONNEL FILE

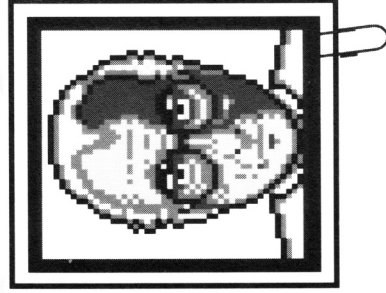
Professor Olaf Kristiansen
Electronics Researcher

Age 60 years

Current Location: Diamond Valley

Kristiansen finds little solace in companionship. He has a deep distrust of those who lay claim to authority and dislikes Stark and Courtenay in particular. In accord with his beliefs, he gives his grandson Davy a good deal of freedom. Kristiansen has an unlikely friendship with

Gregory Flint, the pedlar.



QUALITIES AND SKILLS

MORALE	POOR
ENERGY	FAIRLY GOOD
ALERTNESS	EXCELLENT
ENDURANCE	POOR
STURDINESS	ABYSMAL
OPTIMISM	BELOW PAR
STRENGTH	POOR
STAMINA	BELOW PAR
SHARPNESS	EXCELLENT
SKIING	ABYSMAL
HANG-GLIDING	ABYSMAL
DRIVING	GOOD
SNIPING	BELOW PAR
SABOTAGE	EXCELLENT

ii) SETTLEMENTS ON, MULTIPLE BUTTONS OFF

Initially all settlements are lit. After selecting a building type, only settlements with that type of building are lit. Again, only one type of building can be lit up at a time.

iii) SETTLEMENTS OFF, MULTIPLE BUTTONS ON

Many types of building can be lit up at one time. For example, if you click on "church", "factory" and "house", all churches *and* factories *and* houses on the map will light up.

iv) SETTLEMENTS ON, MULTIPLE BUTTONS ON

Initially all settlements are lit. After selecting a building type,

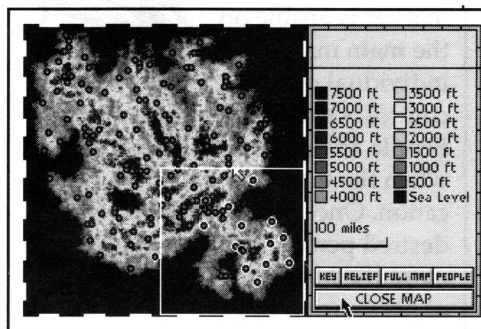
only settlements with that type of building are lit. Then, further building types can be selected and settlements with those types of building will also light up. For example, if you click on "*church*", "*factory*" and "*house*", all settlements with churches *or* factories *or* houses will be illuminated.

The other key shows the heights above sea level represented by each of the colours used to shade the main map and an indication of scale. Use the "**Key**" icon to select and toggle between the two keys.

Main Map with colours key
OVERLEAF



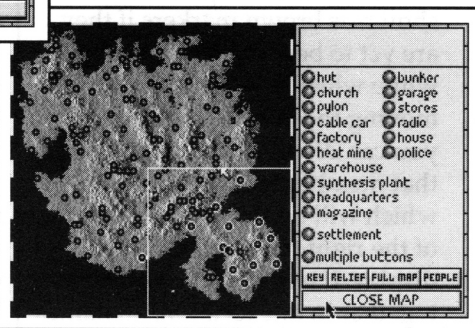
MIDWINTER



which is useful information when planning a journey across unfamiliar terrain. (At maximum magnification each pixel corresponds to a facet of the solid graphics landscape.)

Main Map in relief

The "Relief" icon toggles between the colour relief map described earlier and a photographic relief map showing the light source shaded landscape viewed from above. This satellite view shows greater ground detail, and incorporates every ridge and gully of the landscape,



MIDWINTER



Selecting the **"Full Map"** icon immediately displays the full map of the island at 1 x 1 magnification.

Selecting the **"People"** icon will show the current location of all 32 members of the Free Villages Peace Force and the enemy attack units.

The Peace Force members are shown as brown markers if they are yet to be recruited, becoming white when they join the team. By moving the pointer over a marker you can discover the identity of that member and his location, which will be shown in the centre of the right hand section of the display. If two or more people are together in one location, all names will be listed, even if only one

marker is visible on the main map. The individual currently under your control is shown as a green arrow. People are located most easily when the map is at 1 x 1 magnification. Once you have found the desired person, the map may be magnified to reveal greater detail of his surroundings.

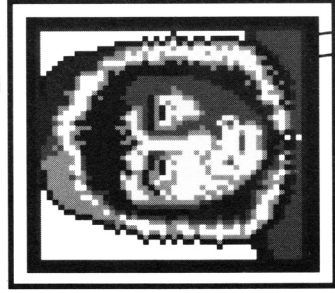
You can directly select a recruited member's personality display by illuminating the 'select' button, moving the on-screen mouse pointer over the white marker showing his location, and clicking the left mouse button. This option is **not** open to you if you have accessed the map during an action mode.

MIDWINTER

PERSONNEL FILE

Jeremiah Gunn
Mining Engineer
Age 33 years
Current Location: Morgans Cove

A widower for some years, Gunn has still not come to terms with the loss of his wife. He is given to bouts of black despair, during which he drinks himself senseless. The only two people he has any time for are Franco Grazzini, whose moods are sometimes blacker than his own, and the understanding Nurse Maddocks.



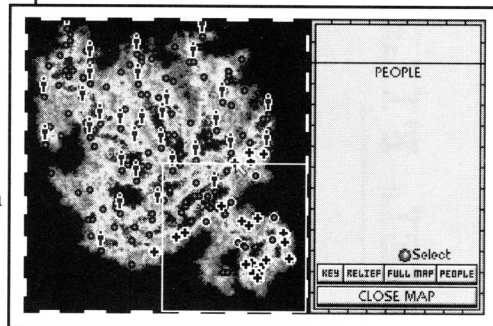
QUALITIES AND SKILLS

MORALE	POOR
ENERGY	GOOD
ALERTNESS.....	GOOD
ENDURANCE	FAIRLY GOOD
STURDINESS.....	BELOW PAR
OPTIMISM	ABYSMAL
STRENGTH.....	GOOD
STAMINA.....	FAIRLY GOOD
SHARPNESS.....	FAIRLY GOOD
SKIING	ABYSMAL
HANG-GLIDING	ABYSMAL
DRIVING	GOOD
SNIPING	BELOW PAR
SABOTAGE	EXCELLENT

The enemy attack units are shown as black crosses. Each unit may consist of up to a hundred vehicles, details of which can be found in the "**The Enemy and their movements**" section on page 184. If a settlement or building has been captured by the enemy, it is shown as a green dot with a white border.

At the start of a new game you will notice that Captain Stark (represented by the green arrow), is on top of, and under attack from an enemy unit ! This puts you immediately into the thick of the action, so make sure you know where the nearest place of safety is !

*Main Map with
People*



Finally, selecting the "Close Map" option returns you to the display from which you accessed the main map.

MIDWINTER

PERSONNEL FILE

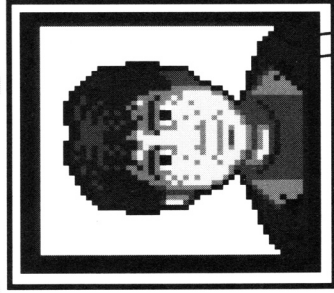
Davy Hart
Schoolboy
Age 12

Current Location: Devils Valley

Davy lives with his grandfather, Professor Kristiansen, who leaves the boy much to his own devices. Davy's hero is Rudel the hunter and the boy often tags along with him on expeditions. Davy has a girlfriend, Jenny Adams, who lives in the next valley, but he has a secret crush on his ski teacher, Virginia Caygill.

QUALITIES AND SKILLS

MORALE	EXCELLENT
ENERGY	EXCELLENT
ALERTNESS	EXCELLENT
ENDURANCE	FAIRLY GOOD
STURDINESS	EXCELLENT
OPTIMISM	EXCELLENT
STRENGTH	EXCELLENT
STAMINA	EXCELLENT
SHARPNESS	GOOD
SKIING	GOOD
HANG-GLIDING	POOR
DRIVING	BELOW PAR
SNIPING	GOOD
SABOTAGE	BELOW PAR

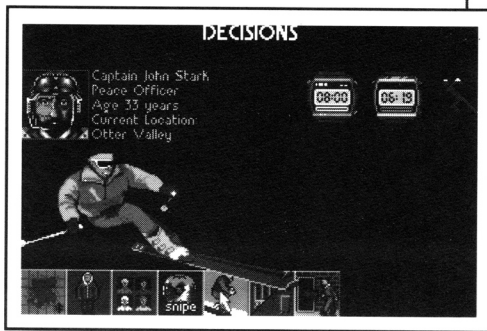


THE DECISIONS DISPLAY



The **Decisions Display** may be accessed from the **Personality Display** by selecting the **Decisions** icon.

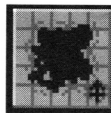
Decisions Screen



The **Decisions Display** shows the individual's portrait, name, occupation (and rank if a Peace Officer), age and current location.

The report time watch and personal time watch are shown along with the **Muscle Power** indicator at the top-right of the screen. The central picture shows the individual's mode of transport, or which building they are in. The options open to you in Decisions mode will vary according to the location and state of health of the person you are controlling. The decision icons which *may* appear are;

INFORMATION DISPLAYS



Selects **Main Map**

MIDWINTER



Selects **Personality Display**



Selects the **Team Display**

ACTION MODES



Selects **Skiing**



Selects **Snow-Buggy**.
(Any of the three

types of buggy may be displayed.
The Wolf is shown here.)



Selects **Cable-Car**



Selects **Hang-gliding**



Selects **Sniping**

SPECIAL ACTIVITIES



Enter Building

MIDWINTER



Recruiting



Companions



Sabotage



Eat



Sleep



First Aid



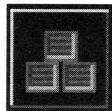
Repair Vehicle



Refuel Vehicle

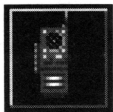


Re-arm Vehicle



Supplies

MIDWINTER



Radio Messages

INFORMATION DISPLAYS

Options to select the Main Map, Personality Display or Team Display are always open to you, even if the individual has over-run the team report time or if he is badly injured or even unconscious. Whilst on the Team Display, Personality Display or Decisions Display, assistance in identifying any of the solid objects can be sought by pressing the "H" key on the keyboard. This **HELP**

sequence will run through all buildings, snow-buggies and enemy aircraft, identifying each by name.

ACTION MODES

The action mode options open to you will depend on the individual's location and state of health. As explained in the "**State of Health**" section on page 108, injury and damage to particular limbs may make it impossible for him to perform certain functions. As long as his health permits, skiing will always be an option wherever he is, and is the 'default' mode of movement. Travelling by snow- buggy is facilitated by entering a garage and selecting the appropriate icon. Garages are found both in settle-



MIDWINTER

ments and singly in the wilderness. Cable- car stations are found in pairs on mountainsides, with one near the top and one at the bottom. By entering either station the individual can travel to its pair by selecting the cable-car icon. At top stations you will find hang-gliders, which are selected similarly for quick mountain descents !

SPECIAL ACTIVITIES

If an individual is near to a building or in a settlement, the enter building icon will appear. If he has dynamite with him the Sabotage icon will also appear. Entering inhabited buildings allows him to recruit new team members. Once

he is in the company of one or more people you will have the option to select the Companions Display.

The First Aid icon will automatically appear if the person you are controlling is in the company of an F.V.P.F. member who has been injured. Other options are only available once he has entered specific buildings. Eating will be possible in houses or stores, whilst sleeping is possible in a wide variety of buildings. Vehicles may be repaired, refuelled and rearmed whilst at garages and supplies may be collected at stores, warehouses and magazines.

The Radio Message icon only appears when Professor



MIDWINTER

PERSONNEL FILE

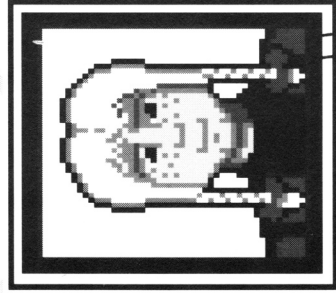
Jenny Adams
Schoolgirl
Age 11 years

Current Location: Deathwatch Pass

Jenny is the youngest of three sisters. She resents being treated as the baby of the family and is always trying to prove herself to people. The person she admires most is Sarah Maddocks, but Jenny plans to be a doctor, not a nurse, when she is older. She's fond of her boyfriend, Davy Hart, and envies his freedom.

QUALITIES AND SKILLS

MORALE	EXCELLENT
ENERGY	EXCELLENT
ALERTNESS	EXCELLENT
ENDURANCE	GOOD
STURDINESS	EXCELLENT
OPTIMISM	EXCELLENT
STRENGTH	GOOD
STAMINA	GOOD
SHARPNESS	EXCELLENT
SKIING	GOOD
HANG-GLIDING	ABYSMAL
DRIVING	POOR
SNIPING	BELOW
SABOTAGE	ABYSMAL



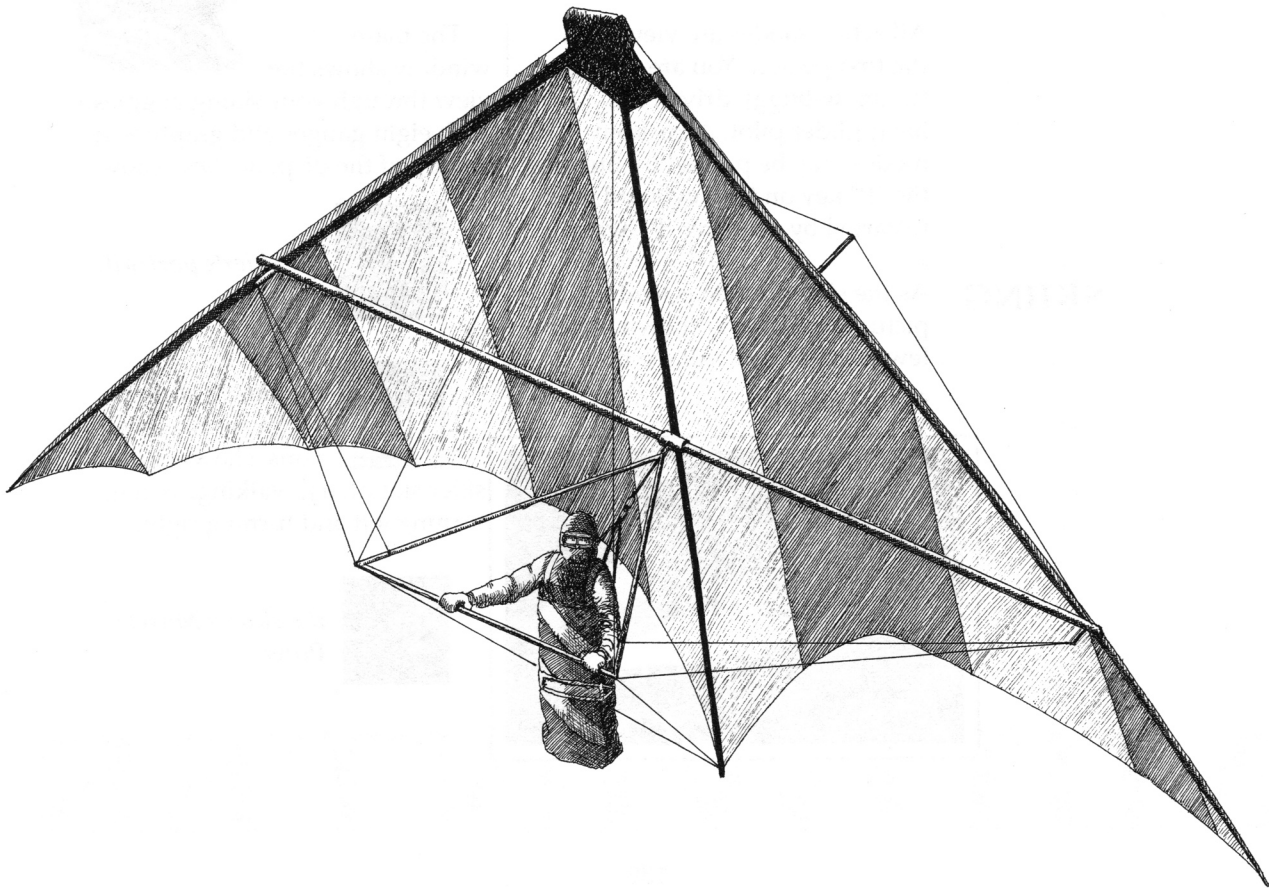


Kristiansen enters a radio station.

Professor Kristiansen, an electronics researcher, has a wide and detailed knowledge of radio operation. If he can get to a radio station which is not enemy held, he has the chance to recruit Peace Force members by over-riding the enemy's jamming signal with a message of his own. The power needed for such transmissions is such that Kristiansen is limited to recruiting up to four colleagues, and as the signal is sent out at random, it is impossible to predict which F.V.P.F member will receive it. The signal is sent by selecting the radio icon on Kristiansen's Decision Display.

MIDWINTER

THE ACTION MODES



THE ACTION MODES

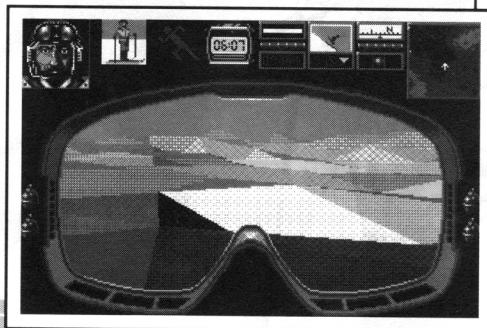


All action modes are viewed in the first person. You are the skier, the snow-buggy driver, the hang-glider pilot. All action modes may be paused by pressing the "P" key on the keyboard, and restarted by pressing "P" again.

SKIING

As the skiing mode is loading, a picture of a skier is shown. After a few seconds you will see the

Skiing Display.



The main window shows the view through your skiing goggles, with eight gauges and graphics at the top of the display. These show;



the skier's portrait.



the skier's stance.

There are five positions, showing the skier stationary, walking, skiing, turning left and turning right.



the skier's Muscle Power



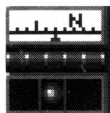
the skier's personal watch,



the speed at which the skier is travelling, displayed as a speed bar and in figures.

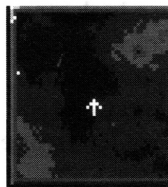


the slope encountered by the skier, shown by the incline of the white slope in the box; and the skier's height above sea level, shown in tens of feet.



the compass direction in which

the skier is travelling, displayed by the rotating bar with North (N), South (S), East (E) and West (W) indicated, and a 'spirit' level **turn indicator** displaying which direction the skier is turning in. If the red dot is centred between the two red lines, the skier is travelling in a straight line, and the rotating compass will be stationary. If the red dot is to the left or right of centre, the skier is turning in the direction indicated, and the compass will be rotating.



the mini-map. This is a section of the main map showing your immediate

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surroundings. Your position and direction are indicated by the arrow. The locations of buildings are shown by white dots.

In addition, your remaining stock of hand grenades is shown to the left and right of the goggles.

Each graphic represents five grenades.

HOW TO SKI

The view through the skiing goggles shows the realtime action of your movements. Initially the speed indicator will be at zero, and it is wise to have a look at your surroundings before setting off. You may turn around 'on the spot' by moving the mouse to the left or the right. The icy landscape has no truly flat plains.

Everywhere you look you will see gently undulating slopes, ridges and gullies, or steep mountainsides. The 3-D light-source shading techniques used in generating the landscape, as developed by Maelstrom Games in association with Microprose over six man-years, show distant features as hazy, shadowy shapes, which loom out of the mist as you hurtle towards them and swiftly attain a sharp and terrifying solidity.

You will also notice that the shading on the slopes range from nearly black, through a whole range of greys and blues, to white, and that the shadowing effect is darkest on north-facing sides of

MIDWINTER

PERSONNEL FILE

Nurse Sarah Maddocks
Nurse

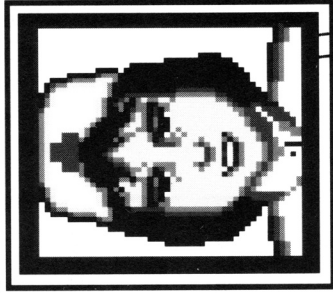
Age 24 years

Current Location: Mount Shackleton

Sarah Maddocks is full of warmth and good humour and she is devoted to her work as a nurse. Sarah tends to fall for older men. She and Captain Stark have been lovers for some time and plan to marry next year. Sarah is still very fond of Franco Grazzini, her previous love. She has little regard for amorous Dr. Revel.

QUALITIES AND SKILLS

MORALE.....	GOOD
ENERGY	EXCELLENT
ALERTNESS	EXCELLENT
ENDURANCE	EXCELLENT
STURDINESS.....	EXCELLENT
OPTIMISM	EXCELLENT
STRENGTH	POOR
STAMINA	GOOD
SHARPNESS	GOOD
SKIING.....	AVERAGE
HANG-GLIDING.....	GOOD
DRIVING	FAIRLY GOOD
SNIPING	BELOW PAR
SABOTAGE.....	ABYSMAL





slopes and hills. This directional effect is created by the 'light-source shading' used, in which the sunlight is always coming from the south of the island, nearest to the equator, and the resulting shadows are faithfully created. Therefore, when you are moving in a southerly direction, most of the hillsides will appear dark. When moving in a northerly direction, most will appear pale.

Luckily, this is not your sole method of navigation. As you turn, you will notice that the compass is revolving, the 'spirit level' turn indicator is off-centre, and the directional arrow on the mini-map rotates through eight points depending on compass orienta-

tion. Whilst skiing, take care not to get carried away by the breathtaking views through your goggles - remember to glance at these indicators to ensure that you are not going round in circles !

Depending on your location, you may be able to see a variety of buildings and vehicles. (Consult the sections on buildings and vehicles for identification). To familiarise yourself with the techniques of skiing, ignore the buildings and vehicles for a while and set off on a quick tour around your surroundings.

Please study carefully the next five paragraphs before starting to ski - noting carefully guidance on

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how to stop, as it is difficult to read the manual at 60 m.p.h. !

TURNING

Your direction is controlled by moving the mouse left or right. As you turn, the 'spirit level' indicator will move off-centre, the com-

pass will revolve, the directional arrow will rotate, and the stance indicator will show all but the gentlest of turns. More immediately, the view through your goggles will change.

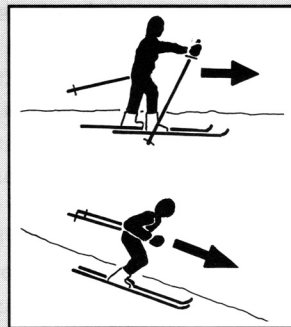
You cannot stop skiing immediate-

STOPPING

WALKING AND SKIING

When starting to ski, unless you are standing on a steep slope, it is necessary to begin by 'walking', pushing yourself along with your ski sticks and gliding forward rather like an ice-skater until you reach a slope steep enough to allow you to tuck your sticks under your arms, bend your knees, and let gravity do the hard work.

Click on the left mouse button once to start walking. Your speed will remain at a steady 'walking speed' until you reach a downward slope. Once the slope is steep enough you automatically stop walking and begin to ski properly. Travelling downhill your speed will increase, but if you meet an incline you will slow down, eventually coming to a halt. The stance indicator shows whether you are walking or skiing, and both motions have a distinctive sound. Your skiing speed can be modified slightly by pushing forward with the mouse (to increase your speed) and pulling back on the mouse (to decrease your speed).





ly, as the low friction between your skis and the ground mean that, whilst on the flat, your speed will decrease quite slowly. You must turn sharply to the left or right and dig the edge of your skis into the snow to increase friction.

Execution of this technique is effected by clicking once on the right mouse button. You will hear the scrape of your skis on the snow as you quickly come to a stop. If you approach a steep incline your speed will quickly drop as you meet the rising ground. If your speed drops below walking speed, clicking on the left mouse button will set you walking again.

FALLING OVER

You will fall over and crash if you collide with a building or vehicle. You will also fall over if you ski too fast into a steep gully. The steeper the gully, the slower you must ski to stay on your feet - a very sharp upward turn of slope throws you off balance. Expert skiers, of course, find it easier to stay upright at high speeds.

SKILL

How well you perform is governed by a combination of skill and state of health. Your performance influences your maximum speed both skiing and walking

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PERSONNEL FILE

**Gregory Flint
Pedlar**

Age 36 years

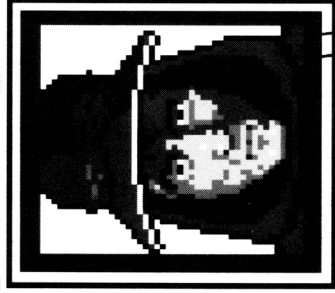
Current Location: Garcia Valley

Gregory Flint has few scruples when there's a profit to be made and is as much a confidence trickster as a pedlar. He claims the Peace Force victimize him, blaming Stark, Gaunt and Llewellyn most of all. He sometimes helps Kristiansen with his experiments, and is also friendly with Luke

Jackson and Fergus Flynn.

QUALITIES AND SKILLS

MORALE	FAIRLY GOOD
ENERGY	FAIRLY GOOD
ALERTNESS	EXCELLENT
ENDURANCE	AVERAGE
STURDINESS	POOR
OPTIMISM	BELOW PAR
STRENGTH	EXCELLENT
STAMINA	POOR
SHARPNESS	EXCELLENT
SKIING	BELOW PAR
HANG-GLIDING	ABYSMAL
DRIVING	GOOD
SNIPING	ABYSMAL
SABOTAGE	GOOD





MUSCLE POWER

and also determines how easily you fall over in difficult terrain.

Walking uses up a lot of Muscle Power, especially if you're going up a steep hill. Skiing smoothly downhill uses a moderate amount of Muscle Power but turns and bumps use up extra power, especially if you are going fast. You use no Muscle Power when standing still.

The more skilful and healthy you are, the less Muscle Power is used when you move.

THE MINI-MAP

If you are in a settlement, and ski away from it, you will notice the

arrow on the mini-map move as you do, to reveal a white dot. This dot shows the position of the settlement you have just left, and you should practice skiing away from it, turning in a 180° arc, and skiing back to your original position. If you ski a certain distance away from the settlement, the buildings will have disappeared over the horizon when you turn around, and you will have to use the dot on the mini-map for reference.

Depending upon your location, other white dots may be visible on the mini-map. These represent other features, which may be identified by reference to the

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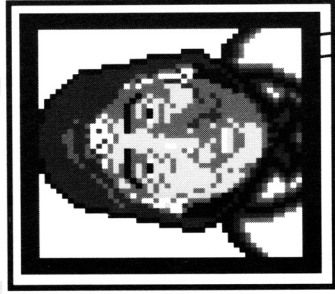
PERSONNEL FILE

Mrs. Amelia Randles
Storekeeper
Age 68 years
Current Location: Harpers Lake

Amelia Randles and her late husband Arthur were two of the earliest pioneers. Amelia knows everyone in the Free Villages, remembering most of them as small children, and is respected and liked throughout the community. Despite her frail looks, Amelia Randles has hidden reserves of strength and courage.

QUALITIES AND SKILLS

MORALE	EXCELLENT
ENERGY	GOOD
ALERTNESS	EXCELLENT
ENDURANCE	POOR
STURDINESS	FAIRLY GOOD
OPTIMISM	EXCELLENT
STRENGTH	GOOD
STAMINA	AVERAGE
SHARPNESS	EXCELLENT
SKIING	BELOW PAR
HANG-GLIDING	ABYSMAL
DRIVING	ABYSMAL
SNIPING	POOR
SABOTAGE	ABYSMAL





main-map. To access the main map directly from skiing mode, press the "M" key on the keyboard. Closing the map will return you directly to skiing mode.

TACTICS

If the gentle swishing of your skis on snow becomes interrupted by either a low-pitched drone or a loud fizzing, beware ! These are your first indications that the enemy is nearby, and you must decide whether to switch to sniping or to ski off in an attempt to avoid the trouble.

The low-pitched drone is the sound of an enemy vehicle, and if you turn whilst the vehicle is within earshot, you will hear the volume of its sound change. When you are facing directly towards the vehicle the sound is at its loudest.

This means that you can actually hear the *direction* of the sound. (On the Amiga this effect is stereophonic as well !)

If the vehicle is still out of sight, use the directional sound to locate its approximate position. But don't waste time ! Having made a decision whether to stay and fight or ski away, act on it. The enemy vehicle may have spotted you. If it has, there's probably a homing missile bearing down on you right now. Whilst skiing you are at your most vulnerable, having only three forms of defence, and nowhere to hide. The first is to ski away. The second is the rifle strapped to your back, and the third are the grenades you carry.

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SELF-DEFENCE

Grenades can be thrown whilst skiing, by pressing the Space Bar on the keyboard. They are effective only at close range, and are usually used as the last line of defence if you come under attack. Your supply is limited.

To use your rifle, you must select sniping mode. First you must stop. Then just press the "S" key on the keyboard. You can return to skiing from sniping mode at any time by pressing "S" again.

To quit skiing mode, and return to the "Decisions Display", you must first stop, and then press the "X" key on the keyboard. Unless you need to rest, it is advisable to ensure that you are close by a building when quitting skiing

mode, so that you can enter its relative safety.

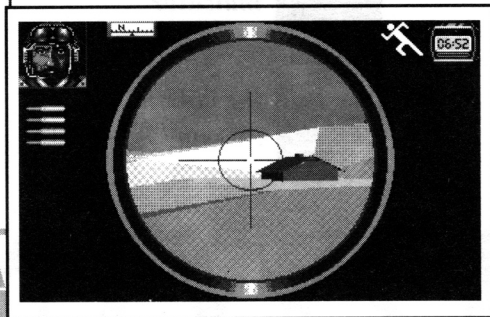
The option to select sniping mode is available to an individual whenever he is out of doors (but not whilst hang-gliding) or in a church or a bunker, providing his health permits.

A picture of a sniper is shown as sniping mode loads. The **Sniping Display** will then appear;

The main window shows the view through your telescopic rifle sight, with the red cross-hairs



SNIPING

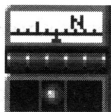


*Sniping
Display*

centred on your line of fire. The five information icons around the main window show the following;



*the individual's
portrait*



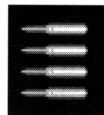
the compass



*the individual's
Muscle Power
indicator*



*the individual's
personal time clock*



*the supply of
bullets he has left.*

Each bullet represents a clip of five.



CONTROLS

The telescopic sights have a zoom lens. You can zoom in or zoom out on your target by holding down the left or right mouse button respectively.

The sights are moved in the following way;

Move the sights right - move the mouse to the right

Move the sights left - move the mouse to the left

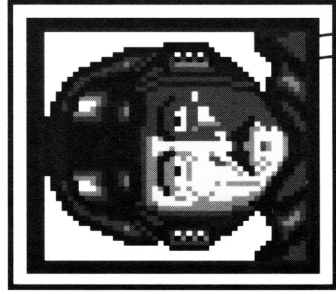
Move the sights up - push the

MIDWINTER

PERSONNEL FILE

Constable Gordon Macleod
Peace Officer
Age 30 years
Current Location: Heavens Gate

Gordon Macleod is a man never afraid to speak his mind, a trait which has not endeared him to everyone. Grazzini in particular dislikes Macleod and the feeling is mutual. He is well thought of by Sergeant Tasker and Captain Stark and has hopes of promotion. Macleod's two friends, Flynn and Chabrun hold him in high regard.



QUALITIES AND SKILLS

MORALE.....	GOOD
ENERGY	EXCELLENT
ALERTNESS	EXCELLENT
ENDURANCE	GOOD
STURDINESS	GOOD
OPTIMISM	FAIR
STRENGTH.....	GOOD
STAMINA	EXCELLENT
SHARPNESS	GOOD
SKIING.....	FAIRLY GOOD
HANG-GLIDING.....	GOOD
DRIVING	GOOD
SNIPING	BELOW PAR
SABOTAGE.....	AVERAGE



mouse forwards

Move the sights down - *pull the mouse back*

When you have spotted your target, use the mouse to line up the cross-hairs on it, magnify its image if necessary, and fire. Bullets are fired by pressing the space bar on the keyboard. Your high-velocity rifle is of such power that it only takes a single accurate shot to disable an enemy vehicle or bring down an enemy aircraft.

SKILL

The steadiness of the rifle sights depends upon the individual's sniping ability and his overall state of health. It may be seriously impaired by any damage done previously to his arms.

MUSCLE POWER

Very little Muscle Power is used when sniping. Violent movements of the rifle use up some, the kick-back of the rifle butt when you fire a bullet uses up a little more. Muscle Power is used up more quickly if you lack the necessary skill or if you're in a poor state of health.

TACTICS

Your supply of bullets is limited, but your stocks can be replenished at a magazine.

If you enter a church you will be given the option to snipe from its steeple, affording you a much better view of the surrounding area. Bunkers are also designed for snip-

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ing from, and their sturdy concrete walls offer a degree of safety from enemy attack. If you are near an enemy unit whilst skiing in the wilderness advantage may be gained by skiing up close to a tree, and pressing the "S" key on the keyboard to select sniping mode. You will find yourself sniping from the tree-top, with a better view of your attackers.

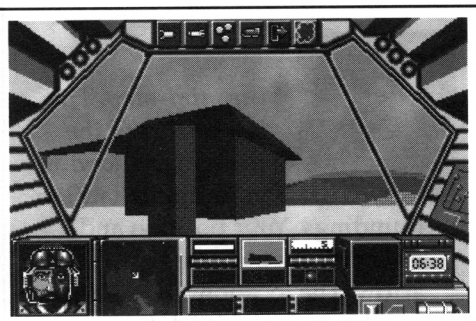
If you accessed the sniping display from skiing mode, you can return by pressing the "S" key on the keyboard. To quit sniping mode and return to the Decisions Display, press the "X" key on the keyboard.

THE SNOW-BUGGY DISPLAY

As the snow-buggy mode is load-

ing, a picture of a snow-buggy will be displayed. After a few seconds you will see the **Snow-Buggy Display**, as shown below.

Snow-Buggy Display



The screen shows the view from the cockpit of the snow-buggy. Below the main window are ten gauges and graphics.

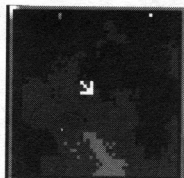


MIDWINTER

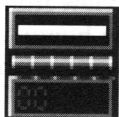
These icons show;



the driver's portrait



the mini-map. This is a section of the main map showing your immediate surroundings. Your position and direction are indicated by the arrow. The locations of buildings are shown by white dots.



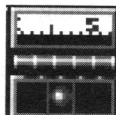
the speed at which the buggy is travelling, displayed as a

speed bar and in figures



the approximate angle of slope encountered by the

buggy, and the height above sea level of the land, shown in tens of feet



the compass direction in which the buggy is travel-

ling, and the rate of turn of the buggy, shown by the 'spirit-level' turn indicator.



the driver's personal time.



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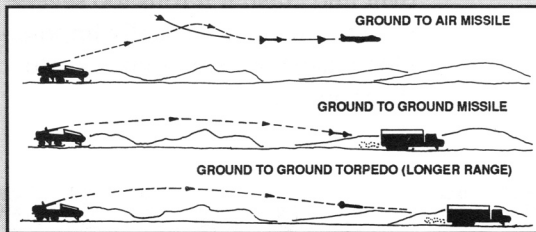
The fuel gauge is shown as a bar graph next to the 3 ammunition indicators. The numbers tell you how many racks of ground-to-ground missiles, surface-to-air missiles and snow torpedoes you have left. There are five missiles or torpedoes to a rack.

There are three types of snow-buggy available to you. The snow-fox is a two-person vehicle. It is the quickest, but carries the least weapons; the snow-cat can seat up to four people, and is slower than the fox but carries more missiles; and the snow-wolf can

MISSILES AND TORPEDOES

Buggies are the best mode of transport from which to attack enemy vehicles and 'planes, being armed with three types of weapon. The surface-to-air missiles are used to take out attacking planes, and are launched by clicking the right mouse button. Enemy vehicles may be destroyed with Ground-to-Ground missiles, launched by clicking the left mouse button, or with Torpedoes, launched by pressing the Space Bar on the keyboard.

Surface-to-Air and Ground-to-Ground missiles are high velocity weapons which travel in straight lines until locking-on to enemy vehicles or planes, which they will then chase and hopefully destroy. However, their radar range is limited in comparison to the Torpedo, which can lock onto enemy vehicles at greater distances. The Torpedo is very difficult for the enemy to dodge, despite the fact that it moves more slowly than the missiles, and is often effective even when firing 'blind' with only the noise of the enemy's engines to help you.





CONTROLS

transport up to six, being the slowest in speed but strongest in fire-power.

The buggies are controlled in the following way;

Mouse pushed forward - *accelerate*

Mouse pulled backward - *brake*

Mouse moved left - *steer left*

Mouse moved right - *steer right*

ROUGH TERRAIN

Your vehicle tilts and rolls as it goes over rough terrain. It will grind to a halt if you attempt to climb too steep a hill. Worse still, it will tip over and crash if it rolls too severely ! This makes it virtually impossible to take your snow-buggy into the mountains.

SKILL

Your skill and state of health govern your maximum speed and determine how steep a slope you can coax your snow-buggy up.

MUSCLE POWER

Very little Muscle Power is used when driving, but the more violently you manouevre, the more is used. It is used up more quickly if you lack the necessary skill or if you're in a poor state of health.

TACTICS

The buggies, which are powered by high efficiency fan-ducted engines, can be driven quickly by

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excellent drivers on flat ground, but find it difficult to negotiate rough or mountainous terrain at any great speed. Planning a route which avoids steep inclines is advisable if you want to lessen the risk of crashing, but may bring you into contact with more enemy units.

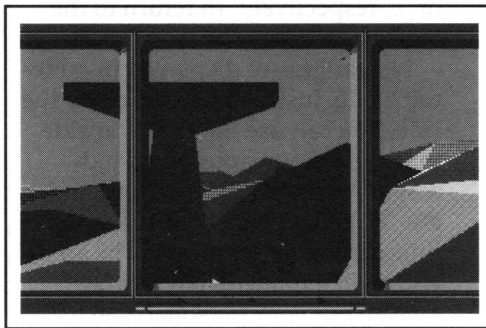
It is wise to take good care of your vehicles. Once they have been hit by enemy fire or crashed by reckless drivers they are rendered useless. If you manage to survive such events with limbs intact, you'll be back on skis.

You can find a snow-buggy by going to a garage. It may be fully operational already, or it may be in need of repair (in which case you may have to wait four and a half hours before it's fixed). You will

also need to visit a garage to refuel or re-arm your buggy. Garages are few and far between, so plan your route carefully.

As cable-car mode is loading, a picture of a cable-car is shown. Once loaded, you will see the **Cable-Car Display**;

Cable Car Display



THE CABLE-CAR DISPLAY

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The cable-car will immediately begin to move out of the cable-car station and travel automatically along its route to the destination station. Some of the most stunning views in 'Midwinter' can be seen whilst travelling by cable car. Initially you view the scene directly ahead of you. The view behind you, to the right of you, or to the left of you may be seen by pressing 'B', 'R', or 'L' respectively. To return to the view ahead, press 'A'.

No gauges are displayed in cable-car mode. Just sit back and enjoy the ride. You can use the cable-car ride to survey the surrounding landscape. Alternatively you can press the "X" key on the keyboard at any time during your journey. The scene will switch immediately to your arrival, but your personal watch

will have been updated in accordance with the time normally taken for the journey.

Cable-car journeys are both safe and beneficial. You never come under enemy attack in a cable-car. Also you automatically rest for the duration of the journey.

On arriving at the top or bottom station you will return to the Decisions Display. You can't take a vehicle with you on the cable-car, so on arrival you will only be able to ski, or hang-glide. Hang-gliders are only available at top stations.

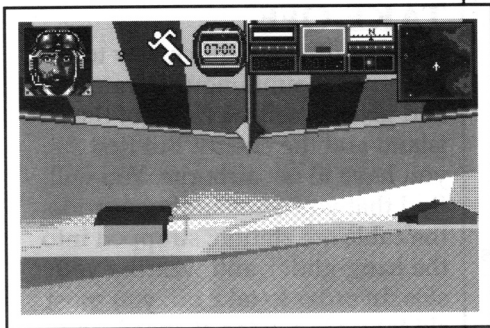
THE HANG-GLIDING DISPLAY

Whilst hang-gliding mode is loading, a picture of a hang-glider is

MIDWINTER

shown. After a few seconds you will see the Hang-Gliding Display;

The Hang-gliding Display



The view shown is that seen by you whilst hang-gliding, with the canopy of the glider at the top of the screen, overlaid by seven gauges and graphics. These show;



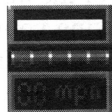
the pilot's portrait.



the pilot's Muscle Power indicator.



the pilot's personal time.



the speed at which the hang-glider is travelling, displayed as a speed bar and infigures.

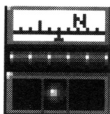


the approximate angle of ascent or descent of

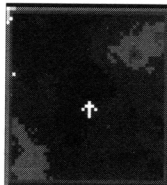


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the hang-glider, and the hang-glider's height above the ground in tens of feet.



the compass direction in which the hang-glider is travelling, and the rate of turn of the hang-glider, indicated by the 'spirit-level' turn indicator



the mini-map. This is a section of the main map showing your immediate surroundings. Your position and direction are indicated by the arrow. The locations of buildings are shown by white dots.



HOW TO HANG-GLIDE

TAKE-OFF

Hang-gliding is a quick way to negotiate mountainous terrain and gives excellent views of the island and the enemy. But first you have to get airborne. You will find that you are standing outside the cable-car station, strapped into the hang-glider, and wearing your skis. In order to take off, you must ski towards a ledge at speed, and launch yourself. Once again, it is worth reading through the next eight paragraphs before attempting to hang-glide, as things happen very quickly once the thermal currents fill your canopy !

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Begin by clicking the left mouse button, which starts the launch sequence. Your speed will increase until you reach the takeoff speed of 24 miles per hour. At this speed your feet will leave the ground as horizontal velocity quickly translates into vertical lift. If possible, keep the nose of the hang-glider level for a few moments until you have gained some height. For this reason, it's wiser to avoid taking off uphill !

In terrain where there's a very strong updraught, you'll take off with great ease. Where the updraught is not so strong, taking off is much trickier. As the hang-glider rises, it begins to lose lift and speed. To counteract immediate stalling, you must adjust the nose of the hang-glider down-

wards as it rises. If the speed drops below 15 miles per hour the glider will stall and the nose will drop, causing you to plummet to earth.

This delicate balancing act is what makes hang-gliding so exhilarating and so dangerous. At take-off point there is an immediate huge swing of power away from you, the pilot (having provided the force to reach take-off speed), to the glider, leaving you helpless for a split second until you take control, edging the nose down until your speed and lift steadies.

Learning the art of takeoff will probably take some practice, let alone developing the knack of using the thermal currents and updraughts to greatest effect and honing to perfection the techniques needed to land smoothly and safely. Once you are airborne the hang-glider is controlled

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CONTROLS

in the following way.

Moving the mouse to the left -
banks the hang-glider to the left.

Moving the mouse to the right -
banks the hang-glider to the right.

Moving the mouse backwards -
lifts the nose of the hang-glider in order to gain height, but lose speed.

Moving the mouse forwards -
dips the nose of your hang-glider to lose height but gain speed.

Hold the Space Bar on the keyboard down - *View the ground below at an angle of 45°*

TURNING

Hang-gliding demands gentle mouse movements as the controls are very responsive. When banking, the golden rule is that the sharper the turn, the more height

you are likely to lose and the greater the danger of stalling. It is far better to anticipate any changes of direction which you may need to make during the course of a flight and bank gently in good time.

LEVEL FLIGHT

If your speed begins to drop in level flight, gently nudge the nose down; you will lose a little height but regain speed. Once you have gained speed, gently level off again - it's a delicate balancing act with dire consequences if you get it wrong.

Keep an eye on your height indicator at all times. Remember that the higher you are, the more potential speed you have in reserve.

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CRASHING

Hang-gliders will crash if they hit the ground at too steep an angle or if they land on water ! Once a hang-glider has crashed it is useless and you will have to ski instead.

SKILL

Your skill and state of health govern how well you hang-glide. Your maximum speed is influenced by these, and also your lift. Expert

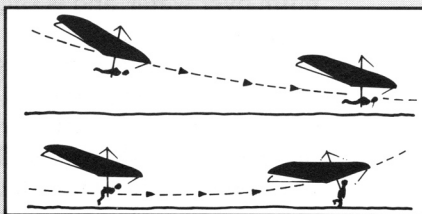
pilots make better use of the updraughts and so get more lift. Grazzini, for instance, is able to take off even from low ground, but Amelia Randles would need to start high in the mountains.

MUSCLE POWER

A lot of Muscle Power is used in taking off. Thereafter, each twist and turn takes its toll. Muscle Power is used up more quickly if you lack the necessary skill or if

LANDING

If you are attempting to land near a building or settlement, it is pointless approaching at great height. In the course of losing height you'll gain speed, and it is difficult to land a rapidly accelerating hang-glider. Come in to land as level as possible with the ground; let yourself gently sink rather than dive towards your objective. Landing is far easier on relatively flat ground, and it may prove safer to land a little distance from your objective and ski the last few yards rather than 'attacking' the target directly. If you land successfully, you will be able to take off again, providing you've got sufficient lift at that location.





TACTICS

you're in a poor state of health.

The secret of successful hang-gliding is the use of the thermal currents and updraughts to best effect. These rising currents of air give your hang-glider lift. Thermals and updraughts are accurately simulated in "Midwinter". They are strongest over high ground and over the cliffs around the coast-line. Over the tallest mountain ranges you can soar thousands of feet into the air. However, uplift is at a minimum over water, and is slight over valleys and flat plains.

The closer you fly to the ground, the stronger the updraught, enabling you to fly faster or further, but at greater risk. As you fly low or come into land you will notice the wind begin to have greater

effect, roaring loudly and cushioning you slightly from the ground.

If you plan a long journey, the most direct route may not be the easiest. "Hopping" from mountain range to mountain range, flying along ridges or hugging the coast-line can extend your range dramatically.

Whilst in the air you may encounter enemy planes, or see enemy snow-buggies on the ground below you. The hang-gliders used on "Midwinter" have been especially developed by the F.V.P.F. and are armed with air-launched homing missiles. To launch a missile at an airborne target simply press the left mouse button. You cannot launch a missile until you are airborne.

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SPECIAL ACTIVITIES



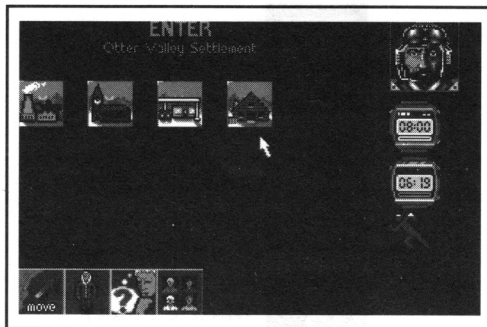
ENTERING BUILDINGS

When an individual is near a building or in a settlement the enter building icon will appear in the Decisions Display. Click on that icon.

If there is only one building in the vicinity, he will automatically enter that building and the Decisions Display will update to show any new options which are now available, with the interior of the building pictured in the centre of the screen.

If the individual is at a settlement, the **Enter Buildings** display will appear. A typical screen is shown below;

Enter Buildings Display



Icons indicating which buildings are in the settlement are displayed across the top of the screen. Please refer to the **Buildings** section for identification.

Other icons which are displayed are;



individual portrait

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personal time clock



*situation report
time*



*Muscle Power
indicator*



*return to last action
mode*



*select Personality
Display*



*select Decisions
Display*



select Team Display



Click on a building and the individual will enter it (returning to the Decisions Display) unless it is held by enemy troops. During the course of the game, the enemy will capture numerous settlements (marked with white circles on the main map). Troops will be left to guard buildings of strategic importance - Police Stations, Heat Mines, Factories, Synthesis Plants, Warehouses, Radio Stations and, of

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course, General Masters' HQ ! The F.V.P.F. cannot enter these (but can sabotage them). Other types of building in an enemy held village can still be freely entered.

A red man next to a building indicates that another F.V.P.F member is inside. This may be a recruit or a potential recruit. You may find that the potential recruit is in an enemy held building which you can't enter ! You can rescue him by blowing up the building. It becomes a ruin, which you can then enter.

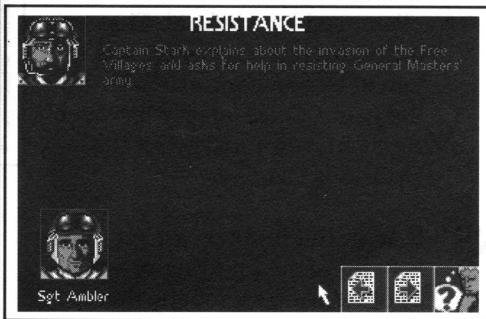
Each time an individual enters a building, one minute is added to his personal time.

RECRUITING

Fellow F.V.P.F. members can be

asked to join the fight against General Masters army. Enter the building the potential recruit is in. Then click on the 'join' icon (on the Decisions Display). The **Resistance Display** now appears.

Resistance Display



The lower portrait shows the potential recruit. He is asked if he will join

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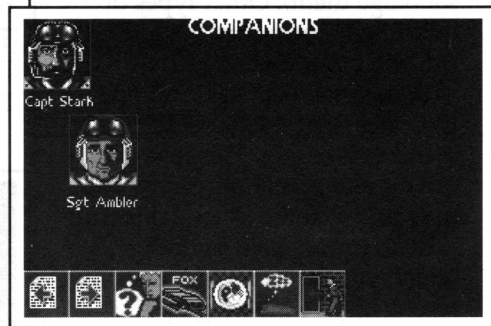
the resistance. Click on his portrait to discover his response.

He is more likely to agree if he is friendly with the person asking the question. Remember that there are complicated personal relationships within the game - don't be surprised or too dismayed by a refusal. That individual can be persuaded to join in by someone else later in the game. Once a reply has been received, you must select the Decisions Display.

COMPANIONS

If an individual you are recruiting is in the same building or vehicle as other team members, the Companions icon will appear on the Decisions Display. Click on it to access the **Companions Display**.

Companions Display



Using this display team members can take part in some activities as a group. They can travel together by snow-buggy or by cable-car. They can eat or sleep or enter other buildings. It is also possible to use First Aid from the Companions

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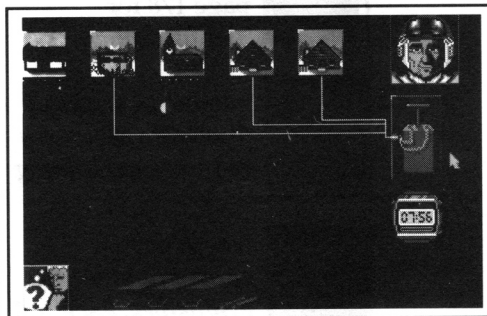
Display. Note that the snow-buggy icon **only** appears if the buggy is large enough to carry **all** the companions ! (Snow-Foxes can carry two people, Snow-Cats can carry four, and Snow-Wolves can carry six).

The individual you are controlling is shown in the top left hand corner with his companions shown below him. It is this individual who leads the others. When the group is travelling by snow-buggy, he is the driver, and it is his skill which applies. If you don't feel that he is the best leader for the party, he can be swapped with any of his companions by clicking on the companion you wish to become leader.

When you select the Decisions Display, it will always be that of the leader.

Whenever a character is in a settlement, or close to a building, the sabotage icon appears on the Decisions Display. Click on this to access the **Sabotage Display**.

Sabotage Display



The icons across the top of the screen show those buildings which you are near enough to sab-

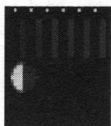
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otage. Each building icon is accompanied by the following information;



type of building (see **Buildings** section on page 178 for identification)



number of sticks of dynamite necessary to blow-up building

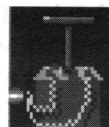


length of time needed to plant the explosives. Each full red circle represents one hour, with half and quarter red segments representing half and quarter hours respectively.

The other icons displayed are;



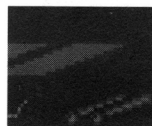
the individual's portrait



the detonator.



the individual's personal time watch.



the stock of dynamite available to you. Each box of dynamite contains two

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bundles of six sticks.



*selects Decisions
Display*

Sabotaging buildings involves strategically laying dynamite around them, wiring the explosives to a detonator box, retiring a safe distance and BANG ! Another building useful to the enemy has been eliminated.

The art of laying dynamite has been mastered by your 32 team members to differing degrees, and it is their level of sabotage skill and their state of health, combined with the size and strength of the building which determines how much

dynamite is needed. The time it takes to lay the explosives varies according to the type of building.

Plant the dynamite by clicking on the building you want to blow up. This wires the building to the detonator and adds the appropriate time to the personal watch. Your stockpile of dynamite dwindles.

The dynamite can be removed by clicking on the building again. The personal watch is reset to its previous time, and the sticks are returned to the stockpile.

Any number of buildings can be wired up simultaneously if the stocks of dynamite permit. When you are ready, click on the detonator icon to depress the plunger. The building, or buildings, will explode in sequence. The sabotage display then shows ruins where buildings



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once stood.

Some combinations of buildings take such a time to wire up that the saboteur's personal time over-runs the report time by several hours. After such sabotage, he will be unable to do anything else until the next report time.

Select the Decisions Display by clicking on the appropriate icon.

When you subsequently select one of the 3-D action modes, any buildings which you have destroyed will be found in ruins.

If the enemy have captured one of your Peace Officers and imprisoned him in the cells of a Police Station, he can be liberated by destroying the station. He may

REST

Muscle Power is drained by strenuous activities such as skiing and must be replenished from time to time by rest. Energy is then transferred from the Energy Reserves to Muscle Power.

You can rest for five minutes by clicking on the Muscle Power indicator on the Decisions Display. In other situations, rest is automatic. After a blackout in any action mode the individual you are controlling will always take five minutes rest. An individual rests for the whole duration of a cable-car journey, and also when he is eating or sleeping. Individuals with spare time when watches are synchronised automatically rest for that period.

The benefit given by rest depends on the individual's location. The cosier the building the quicker Muscle Power is restored. Resting out in the wilderness gives the least benefit.

EAT

All the individuals in the game need to eat from time to time to replenish their energy reserves. The level of energy reserves an individual has is shown as one of Qualities and Skills on his



then be recruited by entering the ruins and asking him for help in the normal way.

Sabotage is of great strategic importance. Blowing up Factories deprives the enemy of ammunition, blowing up Synthesis Plants deprives him of fuel and blowing up Warehouses deprives him of both ! Sabotage of all his radio sta-

tions enables you to recruit a full team of 32 members. Ultimately, to win, you must blow the enemy HQ to smithereens !

Rescue normally happens automatically. If an individual is so badly injured in a crash that he cannot move, after the crash he will find himself inside the nearest

RESCUE

Personality Display. Excessive use of Muscle Power soon makes demands on their energy reserves.

Meals can be taken in a House, a Store, a Police Station, or a Mountain Hut. When an individual enters one of these buildings, the 'eat' icon will be displayed. Clicking on this allows him to eat a meal, which will take him half an hour. The time will automatically be added to the individual's personal time and his Energy will be replenished. The individual is then free to select any further options available to him.

You can eat as much as you like, but there is little point once your Energy is at maximum.

SLEEP

Alertness gradually decreases during any action mode and must be replenished from time to time by sleep. Otherwise, an individual's performance can be severely affected. An individual can sleep in a House, a Hut or a Police Station. When he enters one of these buildings, the "Sleep" icon appears on the Decisions Display. Clicking on this allows him to sleep until the next Situation Report. Further time can be spent sleeping, but this is not automatic.



building. He has been rescued by members of the local population. Occasionally he'll find that he's been rescued by the enemy and imprisoned in a Police Station (if this happens another person will have to blow up the Police Station before he can move). Likewise, a person will always be rescued if he crashes into a lake or into the sea.

There are occasions when an individual is injured but not immobilised; he is forced to move very slowly. In this sort of situation it would be very useful to be rescued. For this purpose, each team member has a distress flare. This can be fired at any time during the game by clicking on the S.O.S. icon on the Personality Display. Once it is fired he will be rescued immediately. You

must choose your moment carefully because each team member only has one distress flare throughout the game.

FIRST AID

From time to time individuals may be injured in action. As explained earlier, the State of Health of a individual is shown on the Personality Display by the colour of the figure behind the Qualities and Skills list. If an individual becomes injured (i.e. one of his limbs turns orange or red), he can be helped in his recovery by receiving First Aid from a fellow Peace Force member. However, for this to be possible, the injured party must be in the company of

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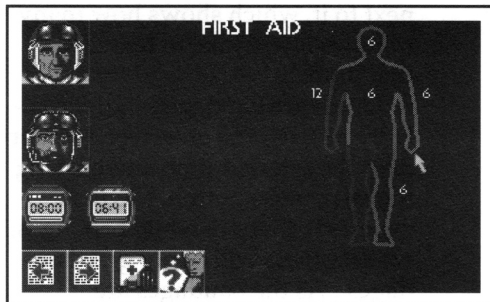
another individual.

The Peace Force members have all received First Aid tuition as part of their training, but Nurse Maddocks and Doctor Revel are obviously far more skilled than the others in the treatment of ailments. Receiving First Aid speeds up recovery from injury - it does not make an individual instantly healthy - and treatment from either of the experts will hasten recovery to a greater degree than if treatment is from non-specialists.

If an individual is in the company of an injured person the First Aid icon will appear on the Decisions Display. Selecting this will access the First Aid display, showing the individual's portrait in the top left hand corner, and

those of the injured companions below. Icons are also present allowing you to scroll pages (in case there is a party of wounded people !), and to return to decisions mode. Select the person you wish to treat by clicking on his portrait. The following screen will be displayed;

First Aid Display



The portraits of the 'nurse' and

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'patient' are displayed along with the personal time watch of the 'nurse', and the report time watch. The scroll icons allow you to select another patient. The state of health display of the 'patient' is shown, indicating in the usual way which limbs are damaged. Each damaged limb has a number next to it, which shows how many minutes it will take to bandage that limb.

Limbs are bandaged individually by moving the on-screen pointer over the selected limb and clicking the left mouse button. Medical experts will apply white bandages, whilst others will apply grey bandages ! As the bandages are applied, the personal time clock is updated.

REFUEL

If an individual has been driving a snow-buggy and he then enters a garage, the refuel icon will appear on the Decisions Display. Click on this to refuel the snow-buggy. Five minutes will be added to the driver's personal time.

RE-ARM

If an individual has been driving a snow-buggy and he then enters a garage or a magazine, the re-arm icon will appear on the Decisions Display. Click on this to re-arm the snow-buggy. Five minutes will be added to the driver's personal time.

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SUPPLIES

When an individual enters a magazine or a store, the supplies icon will appear on the Decision Display. Click on this and the individual will get a fresh stock of bullets, grenades and dynamite. Five minutes will be added to his personal time. Note that Stores only have limited stocks of dynamite. Also, an individual can carry more dynamite if he's got a snow-buggy.

RADIO MESSAGES

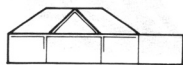
Professor Kristiansen is able to over-ride enemy jamming signals using his experimental equipment and specialist knowledge. When he enters a radio station (not held by the enemy) the radio message

icon appears. Click on this. The Radio Message Display then appears showing the first person Kristiansen manages to contact. Kristiansen can send up to three more messages by clicking on the radio icon, but after that his equipment overloads and breaks down completely.

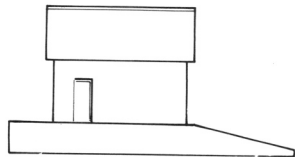
The people he contacts immediately join the team. If there is no one further left to recruit the radio message icon will not appear. Kristiansen's messages are crackly and faint, and it is impossible to predict who will actually receive them.

MIDWINTER

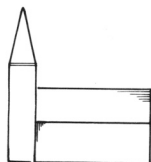
BUILDINGS



BUNKERS



CABLE CAR STATIONS



CHURCHES



BUNKERS

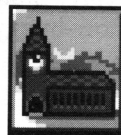
Bunkers are scattered at key points around the landscape, and their primary function is to provide a vantage point for sniping at the enemy through the slits in the concrete walls. The enemy are still likely to fire at you, but bunkers afford a greater margin of safety than sniping in open country. Bunkers may also be used to shelter in overnight.



CABLE-CAR STATIONS

Cable-Car stations are found in pairs, a bottom station and a top station, and are connected by a line of pylons.

It is unlikely that you will be able to see one station from another - but you can travel between them easily. At the top station you will always find a hang-glider. The stations themselves provide little comfort, and although safe from enemy attack there, there is little to be gained by sheltering in them.

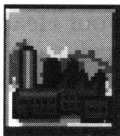


CHURCHES

Churches provide shelter and sanctuary. An individual's first visit to a church raises his morale somewhat. You can snipe from the church-steeple, which gives you an excellent view of the surrounding landscape. Churches are usually found in set-

MIDWINTER

lements, but a few are dotted around the wilderness or high in the mountains as chapels for the weary traveller.



FACTORIES

Factories are large industrial buildings, always found in settlements. They manufacture ammunition, making them valuable assets. The other goods they produce are of little strategic importance, but sabotaging them may reduce the firepower available to the enemy.

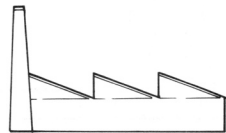


GARAGES

Garages are vital buildings to visit if you don't want to be

always skiing at a snail's pace around the island. The snow-buggies are found there, giving quick and safe transport for up to six people. The vehicles carry a range of weapons, and a subsequent visit to a garage allows your vehicles to be refuelled and rearmed. The enemy vehicles are supplied by the huge tankers present in their convoys, and so they will leave garages alone.

On arriving at a garage it may become apparent that one of your fellow F.V.P.F members has been there before you - and taken the snow-buggy ! If this is the case you will be presented with the option to "Repair" a snow-buggy. This involves using the facilities offered by the garage to repair wrecked or damaged buggies. Choosing "repair" is a gamble. You don't know before-

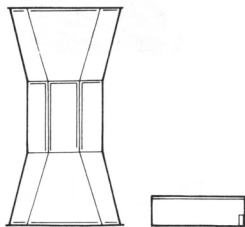


FACTORIES

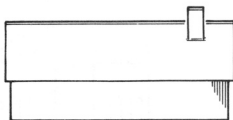


GARAGES

MIDWINTER



HEAT MINES



HOUSE

hand how long the repairs will take. You may find yourself spending up to four hours in the workshop; but, on the other hand, a fully functional snow-buggy could be yours within minutes.

HEADQUARTERS

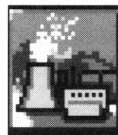
The enemy headquarters is located at Shining Hollow, and is guarded like a fortress. It is your goal to destroy it, eliminating General

Masters. Getting there will prove dangerous and difficult. But worth it. Use your cunning!

HEAT MINES

Heat Mines are the means by which all power is generated on the island, and as such are the

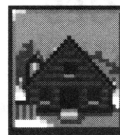
most sought after



assets in the game. They are the enemy's primary targets, and once all your Heat

Mines have been captured or destroyed, they will have total control of the island. Your people will be forced to surrender.

There is little point in sabotaging heat mines, even if they have been captured. When the enemy attack a settlement, the local heat mine will be their first port of call, so be wary of sheltering there. You may be caught out.



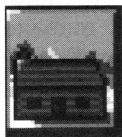
HOUSE

Houses provide warmth, shelter and food to your people.



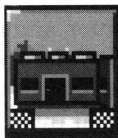
MIDWINTER

Civilian members of the Peace Force are often to be found at home in settlements, or occasionally in the wilderness. The enemy are not particularly interested in private houses, concentrating their attentions on buildings of strategic importance. Houses are good places to eat, sleep and find refuge from the rigours of battle.



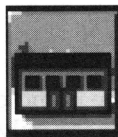
MOUNTAIN HUTS

These small buildings, set high in the hills, were built to offer shelter to stranded travellers. Food and a bed are present, and being in the mountains, the huts may offer a good base for ambushing enemy vehicles in the valleys below.



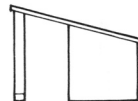
MAGAZINES

Mostly dotted around the hinterland, magazines provide vital stocks of ammunition for the traveller. Dynamite, bullets and grenades can be found in these tiny wooden shacks. Vehicles can also be re-armed with missiles and torpedoes.

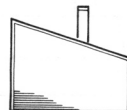


POLICE STATIONS

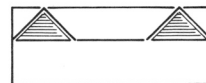
The Police Stations are the best places to visit to recruit a Peace Officer, and also provide a good meal and a place to sleep (even if the beds in the cells are a little uncomfortable). The enemy forces will storm any



MAGAZINES

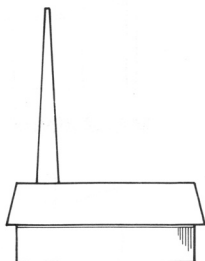


MOUNTAIN HUTS



POLICE STATIONS

MIDWINTER



RADIO STATION

Police Station they encounter, and if Peace Officers are caught whilst on duty they will suffer the embarrassment of being locked in their own cells. Rescuing such prisoners will require you to stealthily enter enemy held settlements to lay the dynamite necessary to reduce the Station to ruins and liberate its occupants.



RADIO STATIONS

The Radio Stations are strategically vital as, on the island of "Midwinter" they are often the only means of communication with remote settlements. Professor Kristiansen, one of the early pioneers, used all his expertise as an electronics researcher to build up the network of stations and to ensure that every home had

handsets (which were often needed in emergencies by the inhabitants).

The enemy hold three stations at the start of the game - those at Deathwatch Crag, Snowgoose Fell and Sierra Madre. As the game progresses, they will quickly capture others, strengthening the jamming signal which is preventing anyone in the F.V.P.F. from radioing for assistance. If you manage to destroy all enemy held radio stations, a message will automatically be broadcast to all unrecruited members of the F.V.P.F. You will then find a full team of 32 members on your side after the next Situation Report.

Kristiansen himself is also able to attempt to over-ride the jamming signal, if you can first recruit



MIDWINTER

him and get him to a radio station not held by the enemy. He may recruit up to four comrades, at random, by broadcasting a high-powered signal across all frequencies. After that his equipment overloads and breaks down completely.



STORES

The stores are good places to find a meal and personal supplies - bullets, grenades and occasionally dynamite. The stocks held in the stores are of little interest to the enemy however - they need the large warehouses to supply their huge army.

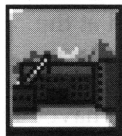
SYNTHESIS PLANTS

At the synthesis plants, energy from the heat mines is used to

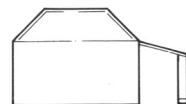


synthesize, amongst other things, fuel for the vehicles, making them key targets in the game. If the enemy captures a refinery, the mobility of their armoured units will be greatly enhanced. If you can get there first and destroy the plants, the enemy's advance can be slowed.

WAREHOUSES



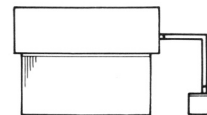
Warehouses are captured by the enemy for two reasons; to acquire stocks of fuel, and stocks of ammunition. If Warehouses fall into enemy hands they serve to increase the enemy's mobility and fire-power. This makes them key targets. Once they have been captured, your only option is to blow them up.



STORES



SYNTHESIS PLANTS



WAREHOUSES

MIDWINTER

THE ENEMY AND THEIR MOVEMENTS



THE ENEMY'S OBJECTIVES

The enemy forces under the control of General Masters consist of 32 mobile units, each of about 60 vehicles, and, (if you have selected them at the start of the game), long-range bombers and spotter planes directing mortar fire.

General Masters directs his troop movements from his headquarters in Shining Hollow. The mobile units are concentrated around this area in the south-east of the island at the start of the game. They advance across the island in a general north-westerly direction, causing havoc as they go. The enemy's primary targets are your heat mines, which are dotted around the island, each providing power to its region.

As the enemy only travel by snow-buggy, they are forced to keep

to the relatively flat lowlands. They move from settlement to settlement, advancing along the valleys and across the plateaus. When they capture a settlement they will occupy any buildings of strategic importance.

Each enemy unit has its own supply train of fuel tankers and ammunition trucks, which enables it to keep moving and to keep fighting. The unit gets its supplies from settlements held or captured by the enemy. If it ventures too far from its sources of fuel and ammunition it will move more slowly and open fire less frequently. The same happens if it loses too many tankers and ammo trucks.

Synthesis Plants are its sources of fuel, Factories its sources of ammu-

MIDWINTER

dition and Warehouses are a source of both.

One possible strategy for you is a 'scorched earth' policy, destroying any building which is of benefit to the enemy, sometimes in anticipation of the enemy's arrival at the settlement.

You are fighting a guerilla war. You are heavily outnumbered and outgunned. Some of your best men are able to engage the enemy head on, and may even wipe out an entire enemy unit on their own. However, cunning and stealth are equally important.

General Masters does not suspect that the civilians will fight for their freedom. Consequently, enemy units and enemy vehicles are less likely to attack the civilian members of your team. The innocent looking children

or the elderly Mrs. Randles can slip past an enemy attack unit where Captain Stark or his lieutenants are likely to fail. All the Peace Officers will be locked in their own cells if the enemy captures their villages before you recruit them.

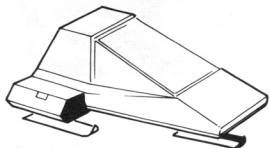
General Masters' army is led by six colonels. Each colonel commands a brigade of five attack squadrons. One squadron is under the direct command of the colonel, the other four each being led by a Captain. Each squadron consists of about 60 vehicles of 6 different varieties.

There are two ways of eliminating an enemy squadron. Firstly, wiping out its command vehicle will destroy its morale and the troops will desert. Secondly, wiping out a high propor-

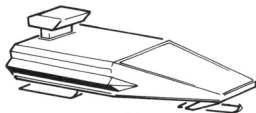


ENEMY MOBILE UNITS

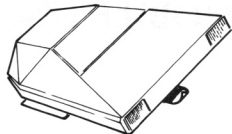
MIDWINTER



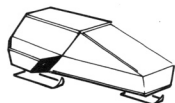
SNOW-WITCH



SNOW-WOLF



SNOW-CAT



SNOW-FOX

tion of the squadron's vehicles will demoralise the surviving troops and encourage them to flee. Some squadrons however will fight to the bitter end. If you destroy a Colonel's squadron, his whole brigade will disband.

Each type of enemy vehicle has a different function. The types of enemy vehicle are;

SNOW-WITCH

This well armed command vehicle is the brains for each squadron, carrying its Captain or Colonel. They are not easy to find, but if you do encounter one you will be able to strike a mortal blow.

SNOW-WOLF

The Snow-Wolves are the equivalent of heavy tanks. Armed to the teeth

with a vast array of military hardware, they are dangerous to engage but vital to destroy. Your best chance if you are in a buggy may be to turn-tail and attempt to outrun these lumbering vehicles. They are however vulnerable to a hill-top sniper.

SNOW-CAT

The equivalent of light tanks, Snow-Cats are well-armed and highly manouevrable, but are sometimes used as cannon fodder by over enthusiastic captains. The problem with picking them off is that no sooner have you taken out one, another arrives.

SNOW-FOX

The nippy Snow-Fox acts as a scout car for mobile units, often



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popping up from over a hillside at high speed before scurrying off to the nearest gully. They are lightly armed but difficult to out-run. As the eyes and ears of the mobile unit they are a valuable scalp, worth taking out before the big guns learn of your presence.

SNOW-BULL

The Snow-Bulls carry the ammunition and weaponry for the other vehicles in the convoy, and, although unarmed themselves, are protected by the other vehicles. Slow moving in comparison to the attack vehicles, taking them out will have a disastrous effect on the squadron's fire power.

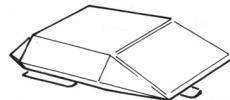
SNOW-BEAR

These massive fuel tankers are the

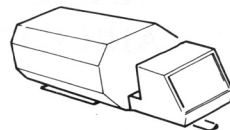
life-line of the enemy squadrons. Each unit's speed and mobility depends on its Snow-Bears. They are unarmed and slow moving.

Attack vehicles and command vehicles roam the countryside in search of targets. They can appear unexpectedly from behind any hillside and are deadly opponents. The supply vehicles move in convoy along a fixed route and are easy targets if you can find them. Because they move in convoy they are highly vulnerable to ambushes. Find one and you can be sure that another will be coming the same way shortly.

All enemy vehicles are vulnerable to sniper fire, grenades, ground missiles and torpedoes. The attack and command vehicles are armed with homing missiles which are of a similar specification to yours. These

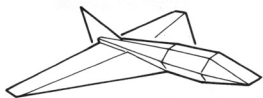


SNOW-BULL



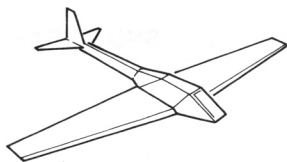
SNOW-BEAR

MIDWINTER



BOMBERS

THE ENEMY AIRCRAFT



SPOTTER PLANES

missiles can be dodged with violent evasive manoeuvres. They are fitted with a proximity fuse; sometimes they explode very close to you without a direct hit. If you are hit, whether on skis, in a buggy, or in a hang-glider, you are likely to be badly hurt.

General Masters and his troops have at their disposal two types of aircraft, both of which are unmanned and controlled by computer. The have on board sophisticated tracking and camera equipment, enabling them to locate your people even if they are skiing high in the mountains. They roam the whole of Midwinter, regardless of the positions of General Masters' ground forces.



BOMBERS

These aircraft are armed with free-fall bombs. You will see them approach from the distant horizon. They will circle a few times before spotting you and barrelling in on a bombing run. Then more bombing runs will follow. Although the accuracy of their bombing varies, your best chance of survival is to fire at the bomber whilst it is still circling.

SPOTTER PLANES

The spotter planes signal your position to the long-range mortar batteries. These batteries fire massive volleys of shells which land around you in deafening and sometimes deadly proximity, their

MIDWINTER

sheer number making them difficult to dodge. Each salvo falls in a straight line. After the second shell has landed, you should be able to predict roughly where the other three will land. This gives you some chance of avoiding them if you turn sharply enough. As with the bombers, however, your best form of defence is to shoot the plane down before it gets a fix on you.

Both types of aircraft are vulnerable to sniper fire, the surface-to-air missiles of your snow-buggies, and the air-launched missiles of your hang-gliders.

SAVING AND LOADING GAMES



SAVE

You can save your current game at any time. You must use a blank, formatted disk. "Midwinter" uses its own special disk routines which may corrupt other data.

To save a game, click on the "Save" icon on the Team Display. A message will appear asking you to "Insert game data disk". Remove the "Midwinter" graphics disk from the drive and insert your blank, formatted disk. Then press any key.

The Save Game Display then appears. After a few moments the saved game directory is displayed. You can save up to ten games on one disk. Each game is represented by its own icon, and is labelled "full" or "empty". Click on any "empty" icon and the game will be saved to disk. You can click on a "full" icon, but this will delete a previously saved game.

If you change your mind and decide not to save a game, click on the "Team" icon to leave this display.

LOAD

To load a saved game click on the "Load" icon on the Team Display. A message will appear asking you to "Insert game data disk". Remove the "Midwinter" graphics disk from the drive and insert the disk holding your saved games. Then press any key.

The "Load Game" Display then appears. After a few moments the game directory appears, allowing you to select the game you wish to load.

If you change your mind and decide not to load a game, click on the "Team" icon to leave this display.

MIDWINTER

THE END GAME



SURRENDERING

If you feel that your situation is hopeless and you want to start a fresh game, the only way to abandon the current game is by surrendering to General Masters. You can do this at any time by clicking on the "Surrender" icon on the Team Display. You will then be asked of confirmation of your decision by General Masters himself.

You can start a fresh game after surrendering by pressing any key.

LOSING

If your Situation Report shows that you have lost all your Heat Mines, you have also lost the game. Take as long as you like to peruse the Report, before clicking on the "Team" icon to watch General Masters gloat.

To start a new game, then press any key.

WINNING

If you manage to blow up General Masters' headquarters you have won the game, but you must synchronise watches one final time for confirmation of this. Take as long as you like to peruse the Report, before clicking on the "Team" icon to watch the victory celebrations.

To start a new game, then press any key.

There is a very rare situation which also gives you victory. If you can hold out for more than 40 days, General Masters' troops will rebel, and desert him entirely. There are no stalemates in "Midwinter"- only winners.

Good Luck !

MIDWINTER

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