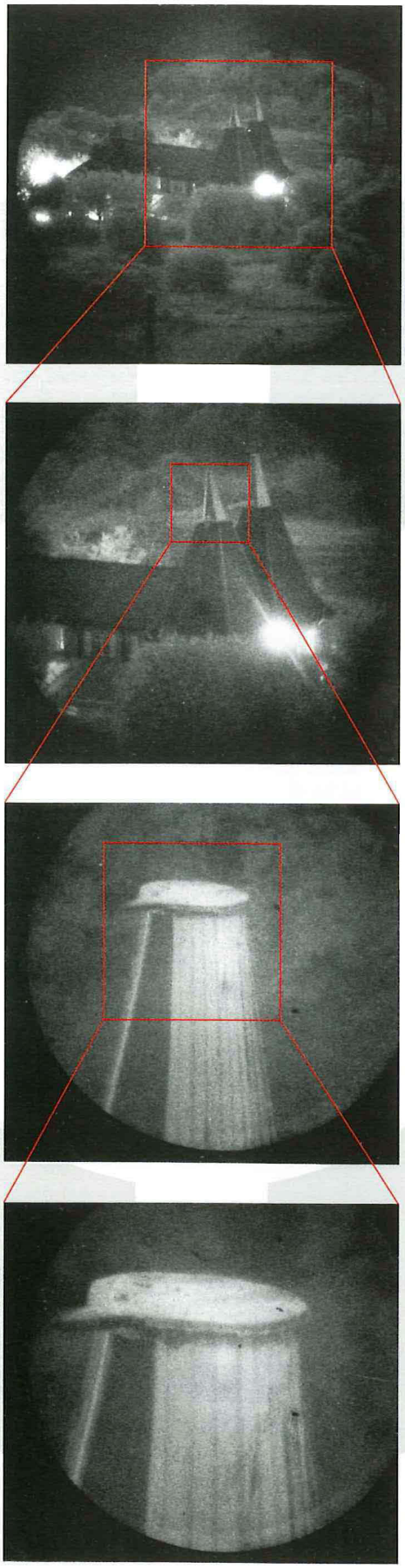
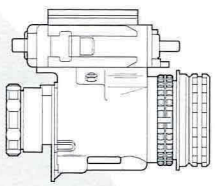
GEC-Marconi
AVIONICS

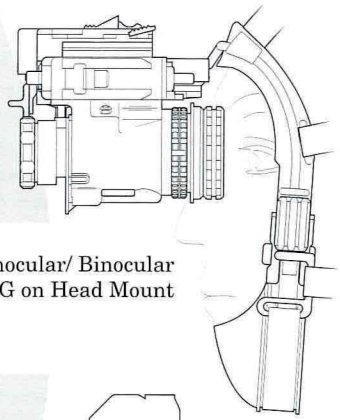
The Ground Owl Night Vision Modular Device Family



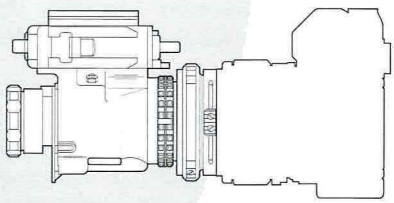
Actual pictures using Ground Owl in starlight conditions with $^1/_8$ cloud cover.



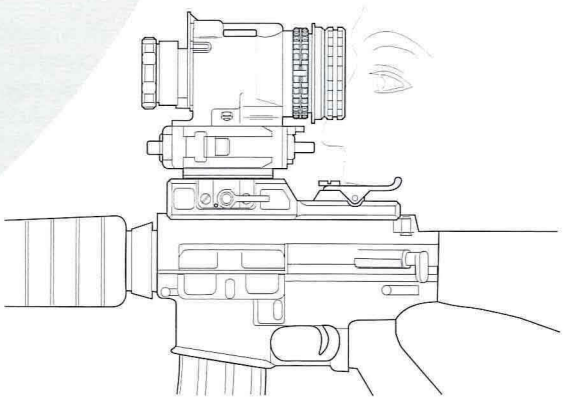
Hand Held
Monocular/ Binocular



Monocular/ Binocular
NVG on Head Mount



Camera Mounted NVG +Magnifier up to > x160



Weapon Mounted x1 or +Magnifier x2/ x3

Displays Division

The Ground Owl Night Vision Modular Device Family

The Ground Owl Night Vision Modular Device Family is designed to offer the night vision goggle user greater mission flexibility by adopting a modular approach.

This modularity has been achieved by designing a Monocular Assembly which can interface with a binocular assembly utilising a quick release mechanism, thus providing the user the ability to remove and replace monocular assemblies without any tools.

In its primary role, the monocular assembly with its self contained power module can be used as a hand held night viewing device.

The monocular assembly has five major sub-assemblies :-

- Eyepiece
- Objective lens
- Monocular body with "bayonet" quick release
- Image intensifier tube (generation II or III)
- PCB module assembly

The monocular body which houses the image intensifier has a bayonet quick release mechanism fitted at the objective end to facilitate interchangeability of x1 objective with x3 magnifier or with x2 converter giving x6 magnification (x2 with x3). In addition by fitting a camera adaptor lens, various lenses of users choice can be fitted, giving greatly increased magnification capability.
(as shown overleaf)

The monocular assembly is capable of being fitted to a camera for night photography or used on a NATO weapon via the gun rail adaptor provided as part of the kit. When used in conjunction with the binocular assembly the monocular assembly is also capable of being head mounted or worn over a S10 or SF10 respirator.
When working in confined spaces at light levels approaching absolute darkness, where no image intensifier system can work, the user is able to select an infra red torch built into the monocular assembly. A safeguard is provided to prevent its inadvertent selection.
In addition, the monocular assembly contains an auto-brightness sensor and low battery indicator.
The binocular housing assembly consists of a central mechanism and saddle mounts. The saddle mounts are fitted with "quick release" mechanisms which enable monocular assemblies to be fitted and removed without the need to use any tools. The central mechanism is fitted with a bracket for fixing to the head mount and enables the equipment to automatically power off in "flip-up" position (monocular or binocular). By fitting an additional identical monocular this assembly can be transformed for use as a full binocular night vision goggle incorporating the facility of providing interocular separation to suit the user. The additional monocular assembly may be borrowed from the user's "Buddy" or separately procured if required.

At a temperature of 20°C, the battery will provide continuous operation for at least 20 hours with the IR torch switched off. For operation at temperatures below -10°C where alkaline batteries have a limited performance, the option of using a single lithium cell is provided.

The Image Intensified Night Vision System described is capable of being used and supplied in various configurations to meet the differing mission requirements of the special operations/paramilitary forces.

This fully ruggedised equipment is now in service with UK military forces.

Specification (with x1 objective lens fitted) **:-**

Field of View	>40° circular	
Resolution	>0.8 cm/mR	
Eye relief	25 mm	
Exit Pupil	8 mm	
Focus Range	30 cm to ∞	
Dioptre	+1 to -6	
Image Intensifiers	Anvis Standard Generation II or III	
Battery	Single AA size	1.5V Alkaline, 1.5V Lithium or 3.0V Lithium

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