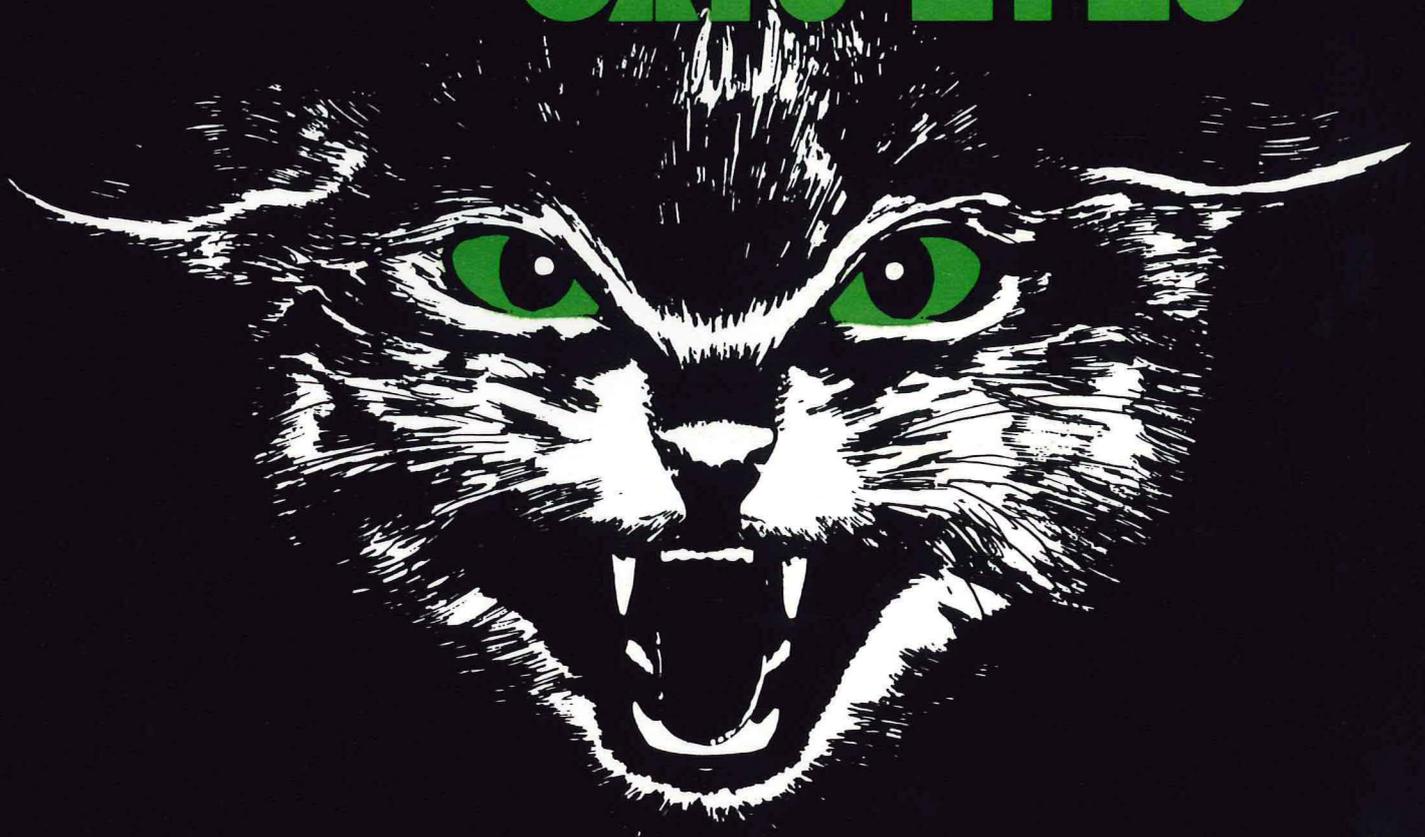


MARCONI
AVIONICS

CATS EYES



**The New
Night Vision System for
Round-the-Clock Operation**

www.rochesteravionicarchives.co.uk

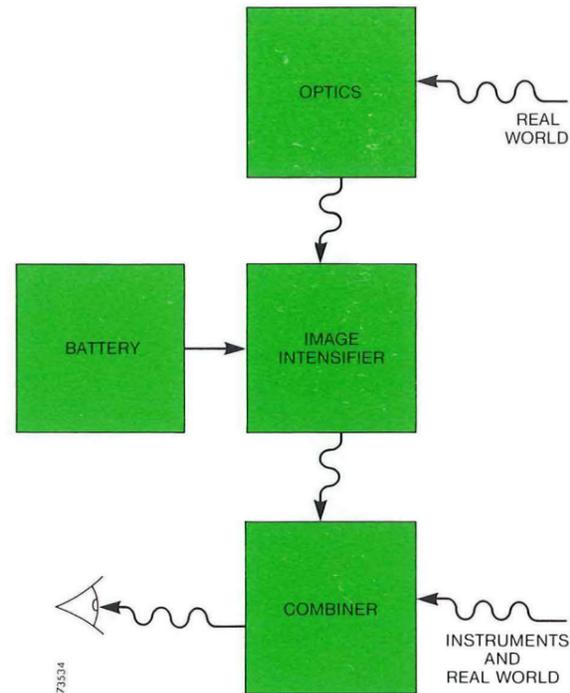
Cats Eyes.....



A Unique Capability.....

Today, military forces and some civil operators need to be able to operate freely around the clock, by night as by day. Recent operations have demonstrated clearly the importance of a full capability to operate covertly at night. At the same time it is highly desirable to retain the operator's ability to see both illuminated instruments and the residual view of the real world, and to minimise system cost. Marconi Avionics Cats Eyes system is the first to fully meet these conflicting requirements.

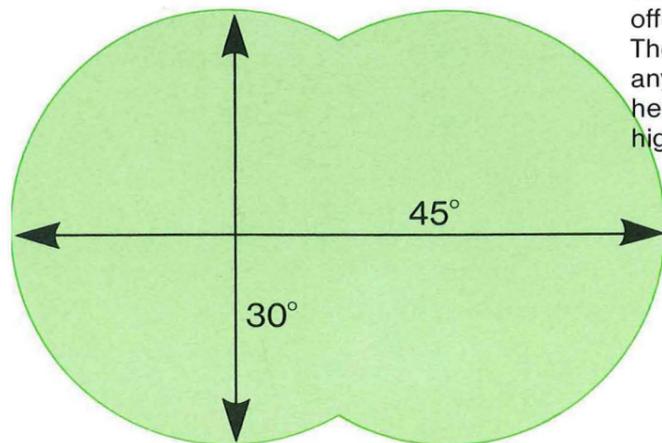
The Cats Eyes concept uses revolutionary new optical techniques to present an electro-optical low light image on a clear 'see-through' combiner in front of each eye. Light from the outside scene is passed through a pair of conventional image intensifier tubes. The intensified image is projected onto a plastic combiner in front of the operator's eye, giving a clear image scaled 1:1 with the outside world and superimposed on it. The result is a clear, bright binocular image, which permits full night operation but does not obscure the operator's direct vision. No other system can offer this capability.



Cats Eyes Visual System

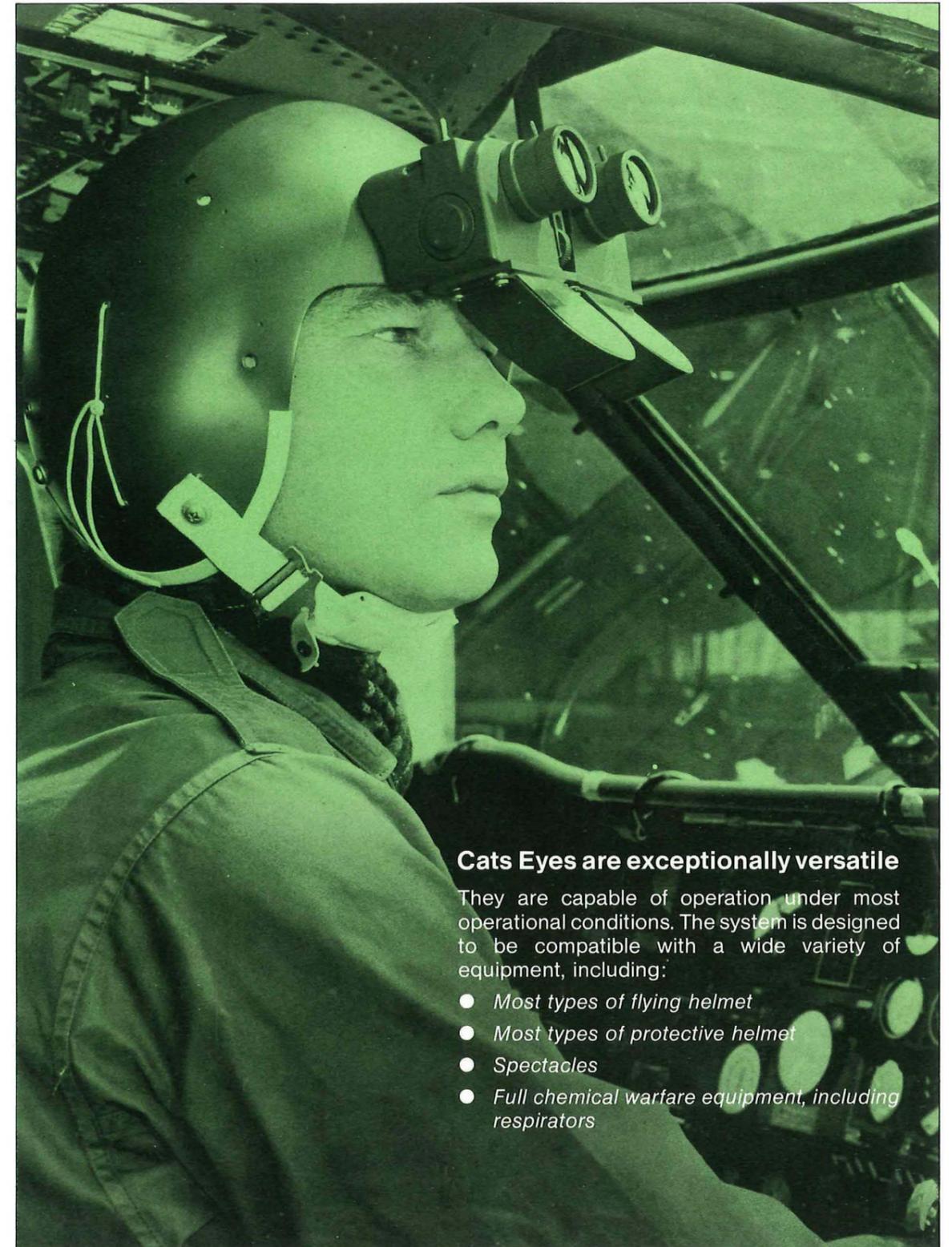
.....with Continuity of Vision

Cats Eyes offer a total electro-optical field of view of 45° in azimuth by 30° in elevation, with binocular vision. The operator retains full undistorted direct vision through the optical combiner and offers uninterrupted peripheral vision around the combiner. This field of view offers an unparalleled night vision capability. The horizontal field of view equals or exceeds any night vision HUD, night vision goggles or helmet mounted CRT system, while retaining high definition and good image brightness.



Field of View

Versatile.....



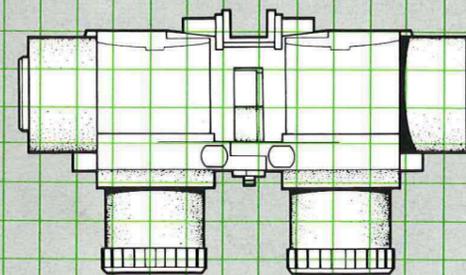
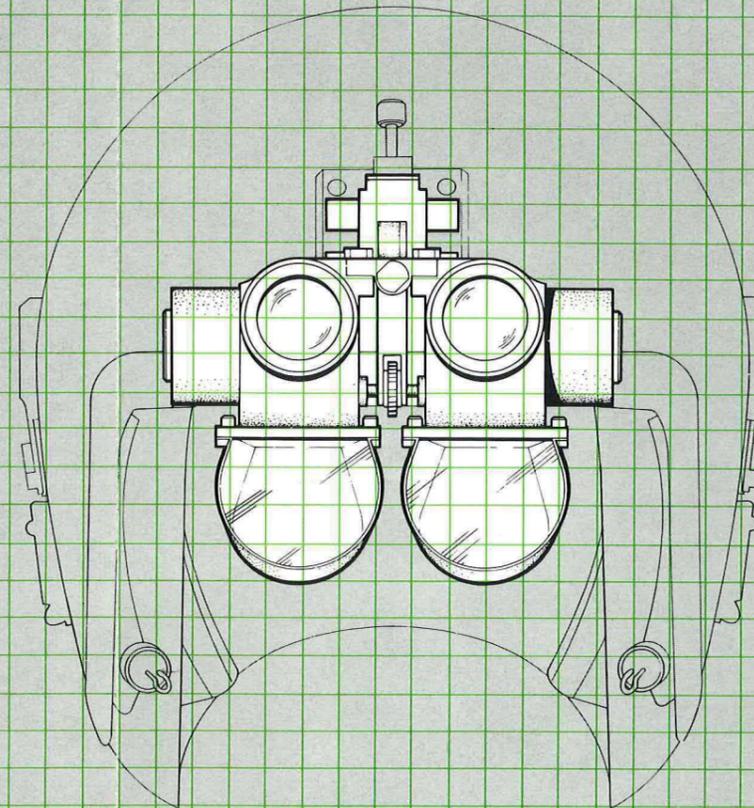
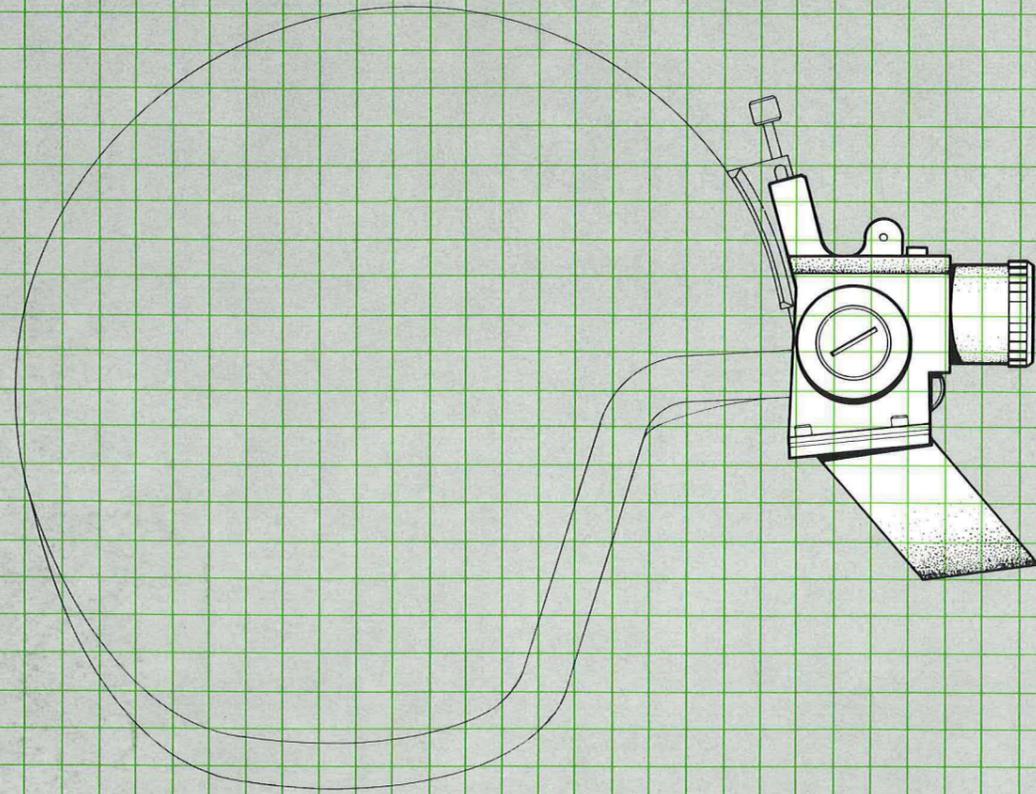
Cats Eyes are exceptionally versatile

They are capable of operation under most operational conditions. The system is designed to be compatible with a wide variety of equipment, including:

- Most types of flying helmet
- Most types of protective helmet
- Spectacles
- Full chemical warfare equipment, including respirators

Capable.....

- Operation down to starlight conditions
- 45° x 30° field of view
- See through vision without distortion
- Low weight - 1.9lbs (0.86kgs)
- Low Moment about the helmet - less than night vision goggles
- Can be adopted to display symbology overlaid on the electro-optical image



Safe.....

- Binocular Vision
 - Direct Vision
 - Peripheral Vision
- } For operator orientation
- Parallel Electrical and Optical Paths – For system integrity
 - Light Weight, low moment – For operator comfort
 - Designed to be compatible with ejection seats – For the widest range of applications, including fixed wing aircraft.

Flexible.....

Cats Eyes are designed to be compatible with all three types of image intensifier tube.

- Generation 2 – Good low light capability at minimum cost
- High Gain – Improved low light capability.
- Generation 2 – A cost-effective solution for extended operations.
- Generation 3 – Excellent low light capability and high image resolution. Effective in almost all light conditions.

Based on Experience.....

Marconi Avionics offer the widest range of night vision equipment and the most advanced optics in the world. These include:

- The only full production night vision head up display, for the A-7 Corsair.
- The LANTIRN HUD, the world's most advanced holographic night vision head up display, for the F-16 and A-10 aircraft.
- Advanced helmet-mounted displays, supplied to US and UK Defence Forces.



Adaptable.....

Cats Eyes permit full operation of equipment by night in a wide variety of environments.



- 1 Helicopters
- 2 Ships
- 3 Ground Attack Aircraft
- 4 Infantry Operations
- 5 Equipment Repair and Operation
- 6 Equipment Repair and Operation





- 7 Tactical Transports
- 8 Oil Rigs
- 9 Interceptors
- 10 Armour
- 11 Surface Skimmers
- 12 Anti-terrorist Operations



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Cats Eyes

.....Turn Night into Day

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MARCONI
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