

VIPER

Helmet Mounted Displays

- *Visor projected helmet mounted display*
- *High brightness display on clear or dark visors*
- *Lightweight display module fits standard UK and US aircrew helmets*
- *Low Weight*
- *Centre of Gravity within safe limits*
- *Monocular or fully overlapped binocular*
- *20 or 40 degree field of view*
- *Integral lightweight colour camera*
- *Spherical visor*



Viper Helmet Mounted Displays

Viper is a family of low cost, lightweight, visor projected Helmet Mounted Displays designed for the complete spectrum of aviation requirements.

The Viper I Helmet Mounted Display provides a 20 degree field of view monocular capability using a standard aircrew visor and this has been complemented by the Viper II, providing a monocular or fully overlapped binocular, 40 degree field of view.

Viper III is an ejection safe, night vision visor projected Helmet Mounted Display system produced jointly with Delft Sensor Systems.

Further enhancements have been introduced to the Viper Helmet Mounted Display, including :-

- Lighter, fully composite display module
- New visor providing optimum uplook and peripheral vision
- Integral colour camera

This latest development of the range is designated Viper IV.

All Vipers use a highly efficient optical design which uses a neutral density reflection coating to provide a high brightness display and high outside world transmission without colouration. The design is engineered to ensure that the displayed image is stable and accurate, even when the visor is raised to perform the valsalva procedure.

The Viper display module can be fitted neatly onto all sizes of US and UK flying helmets and can be configured to provide stroke symbology only, display video from an external sensor or a combination of the two.

The Viper Series of Helmet Mounted Displays is part of a total Helmet Display System from GEC-Marconi Avionics.

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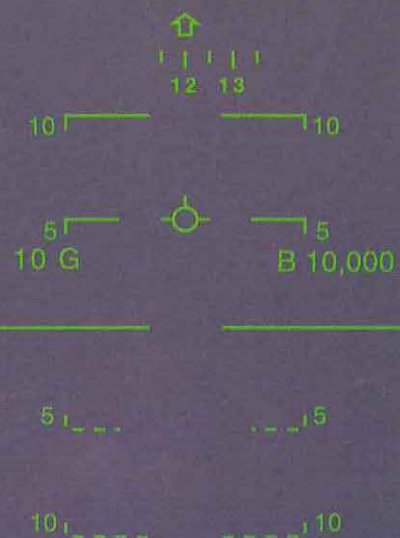
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The following system functions can be provided :-

- 1553 Bus interface
- Symbol generation (with reconfigurable symbology)
- Display drive
- High voltage power supply
- Display controls
- Video sensor interface
- Integrated head tracker system

Viper Performance Summary

- Field of view 20 or 40 degrees
- Exit pupil >15mm on axis
- Eye relief >70mm
- Resolution Better than 1mRad
- Transmission Real world >70%
(no outside world colouration)
- Visor Spherical visor with neutral density coating
- Weight 3.8 lbs (excluding oxygen mask)
- Display Full stroke, raster and hybrid capability
- Autobrilliance sensor providing automatic contrast control
- Adjustments include interpupillary range



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