

Digital Colour Map

GEC AVIONICS



Military Systems

Digital Colour Map for military systems

The Digital Colour Map Unit (DCMU) as part of an onboard navigation mission system reduces operator workload and increases mission effectiveness. Displayed on a colour Head Down Display or Helmet Mounted Display the image rotates and scrolls smoothly relative to the vehicle's movements.

Facilities:-

- Instant scale change
- Zoom
- Display freeze
- Mark points of interest
- Look ahead/slew modes
- Night/day colour palettes
- Declutter
- Mission and Intelligence overlay
- Dynamic relative height information
- Threat position and intervisibility
- 2D and perspective displays
- Psuedo radar shadowing
- FLIR imaging enhancement
- Ground Proximity Warning System
- Route planning

Database Sources

These can be vector or pixels or a mixture of both eg

- DMA's DTED, VOD, DFAD, ADRG
- UK's SRP1(2), PAC(E)
- Digitised feature planes/paper charts
- Satellite imagery
- Photographs, computer graphics
- Any other vector or pixel database

Storage Medium

The DCMU comprises a map manipulator and mass memory. The memory medium may be: solid state (ie UVEPROMS, EEPROMS, QPROMS), optical disc, magnetic disc or customer memory unit.

The DCMU is tailored to meet customer requirements eg

- Single ½ ATR LRU containing map manipulator and database
- Weight 18.5 lbs (8.4 Kgms)
- Power consumption 60W
- Area of coverage 250 sq ft of chart
- On line update of database
- Rugged, reliable

If required the database may be held on a remote mass memory unit eg optical disc.

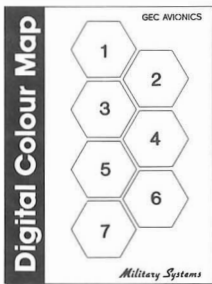
The DCMU can interface with MIL-STD 1553B, STANAG 3910 or ARINC 429 etc, and provide a video output of 525 lines 60Hz or 625 lines 50Hz.

The database may be shared with other terrain referenced avionics eg Ground Proximity Warning, Terrain Referenced Navigation, Passive Terrain Following, Threat Avoidance/Terrain Avoidance which together with the map form GEC Avionics Digital Terrain System (DTS).

The above functions may be treated independently or combined in a single ¾ ATR using a common external mass memory unit. DTS forms part of GEC Avionics Total Terrain Avionics (T²A) concept. See separate leaflets.

Successful extensive flight trials of the DCMU in fixed and rotary wing aircraft in the USA and UK have led to GEC Avionics winning the production contract for the RAF's Harrier GR7 digital map.

GEC Avionics also have the production contract to supply the DCMU for the British Army's Phoenix RPV Ground Station.



Front:
Examples of DCMU output from the various data sources.

- 1 Digitised Chart with Overlay
- 2 Digitised Chart/DTED/Relative Height Shading
- 3 Vector Data
- 4 Slope Angle Shading
- 5 Digitised Chart
- 6 Digitised Chart/DTED Overlay/Threat Zones
- 7 Perspective Display (DTED)



Vector Data (PAC(E)) ▲

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