MONITORING AND
CONTROL DIVISION

This compact unit has been
designed for low weight and
low power to fulfil civil and
military customers current and
future requirements.

The Control and Display Unit
consists of a main unit,
containing a display, electronics
and power supply, and a
number of remote keyboards
communicating with the main
unit via dedicated serial links.

The display module consists of
a dot matrix array with a pixel
array density of 85 per inch,
displaying a full set of ASCII
characters in 12 rows of 21 high
definition characters. Reverse
video and flashing of individual
or a group of characters is
available. The display medium
uses Supertwist Bi-refringement
Liquid Crystal Display
techniques to provide high
contrast ratio with a wide
viewing angle, allowing a high
degree of flexibility in cockpit
locations.

Main unit interfaces allow a
scan of up to 72 keys arranged
in a variety of keyboard
formats. Tracker Ball or Stiff
Stick inputs are also available if
required.

Control and Display Unit

The Control and Display Unit
(CDU) is an interactive
keyboard and display
designed to control avionic
systems, typically:

- Navigation and Flight Management Systems
- Control, Communications and Identification
- Moving Map Control
- In Flight Fault Analysis Systems
- Weapon and Sonar Buoy Control Systems
  via a variety of data buses.
Interfaces
The compatibility of the CDU with any system is enhanced by the variety of interfaces fitted as standard:
• MIL-STD-1553B
• ARINC 429
• RS423
Other interfaces can be incorporated, please consult GEC Avionics.

Inputs
Entry of data is achieved via the menu driver keyboard. Up to four individual keyboards with a maximum of 72 keys are available. Tracker ball or stiff stick inputs are also available.

Processing
The unit is based around a 16 bit processor and spare capacity for the program to be expanded by 192K bytes is available. The processor controls each of the bus interfaces, keyboards, the display lighting and heating. The extensive interactive test mode and CBIT checking ensure that over 95% of faults are detected at first line.

Power Supply
The unit is fitted with a power supply unit which allows the CDU to be operated from a single +28V dc supply which conforms to MIL-STD-704D.

Display
The display module consists of an addressable 250x250 pixel array, driver electronics, backlighting and heater, and temperature sensor. The incorporation of a heater on the LCD allows rapid start up from low temperatures (such as −40°C) with no degradation in performance. A backlight is fitted allowing display readability over the range 0.1 to 100,000 lux. The display is also designed to be compatible with Generation III Night Vision Goggles if required.

Flexibility
The simple software structure allows the CDU to be incorporated into any civil or military system.

Leading Particulars
Size:
Width 146mm
Height 133mm
Depth 134mm
Weight:
2.5kg
Power:
28V dc (MIL-STD-704) 20 watts
Temperature Range:
−40°C to + 55°C operating
−54°C to + 85°C storage
Legibility:
0.1 to 100,000 lux (backlight used in low ambient light)
MTBF:
10,000hrs
MIL-HDBK-217D (ARW)
Display:
Supertwist LCD
Contrast Ratio:
5:1 typical
Viewing Angle:
±40° horizontal
±60° vertical
Night Vision Goggle compatibility optional