

## 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.

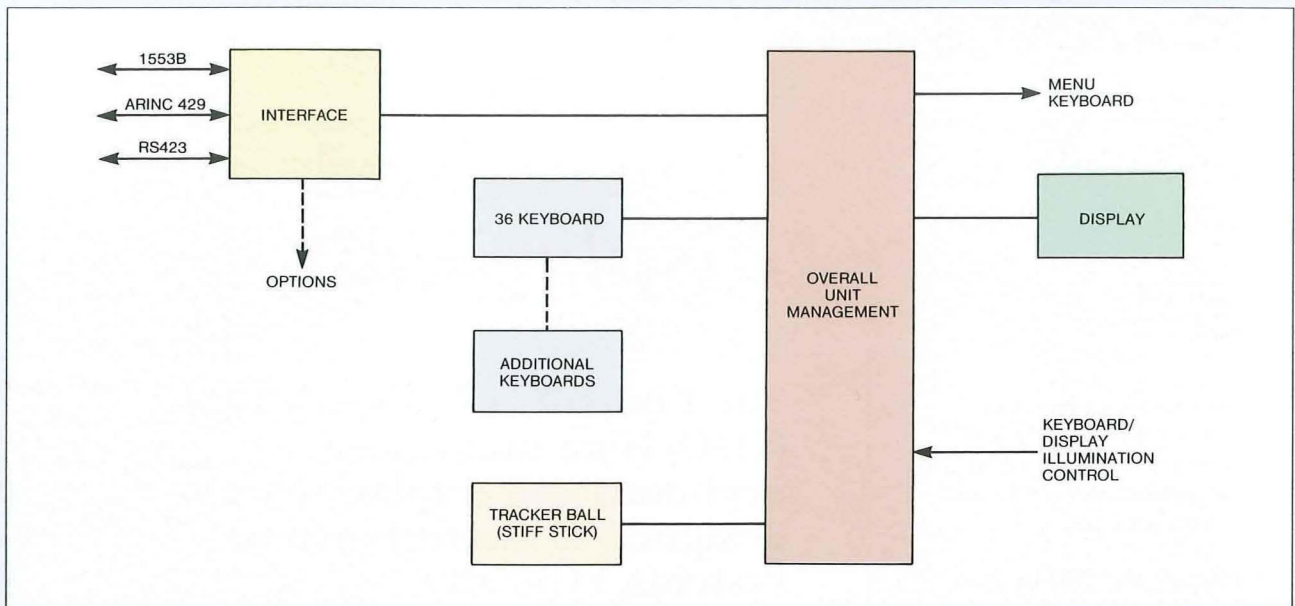
Main unit interfaces allow a scan of up to 72 keys arranged in a variety of keyboard formats. Tracker Ball or Stiff Stick inputs are also available if required.

# 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 230x230 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

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