

Designed for applications where space and weight are at a premium, the PA3584 offers Solid State Flight Data Recording and Data Acquisition, with an additional option of integral SSCVR in a single 1/2 ATR long unit.

Suitable for helicopters, transport, business, regional and commuter aircraft, the combined unit simplifies installation and support requirements.

SOLID STATE ACQUISITION & RECORDER UNIT

Programmable Flexibility

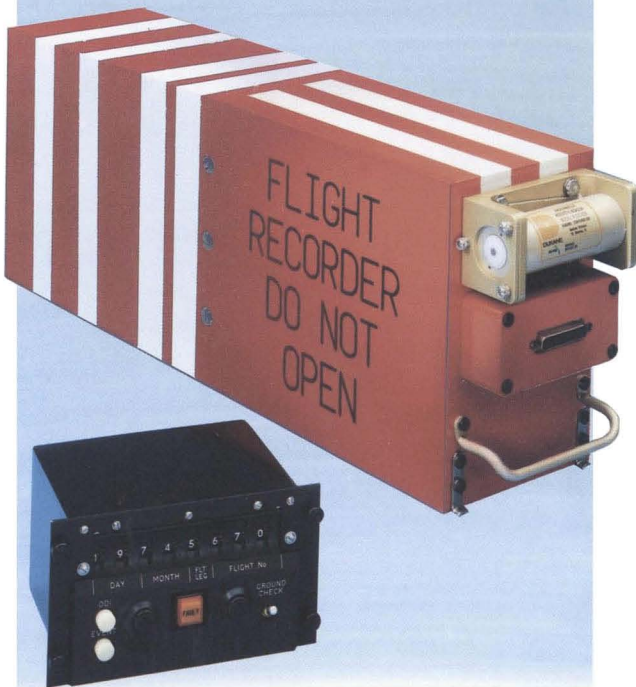
A Programmable Read Only Memory controls the sample sequence. This permits the user to define the content of all data words in the frame, except frame synchronisation words. Each data word may be individually defined for input pin and signal type.

Up to eight sample sequences can be stored in a unit. Selection of the programme is by means of up to three wire links (jumpers) in the aircraft installation, enabling the same part number unit to be used in a variety of aircraft types.

Built-In Tests (BIT)

The Solid State Acquisition & Recorder Unit (SSARU) provides comprehensive BIT, according to the principles laid down in EUROCAE ED-55. In addition to testing the internal functions of the unit, the FDAU checks that the acquired data is within predetermined limits.

- **Integral 33+ parameter data acquisition unit.**
- **Integral solid state 25 hour duration data recorder**
- **Additional option of integral SSCVR of up to 4 channels each of 2 hours duration**
- **Direct recording -no data compression or decompression techniques required**
- **Full compliancy with TSO C124, Eurocae ED55, ED56A and CAA specifications 10A and 18**
- **Fast data retrieval using 386 based PC**
- **115V AC or 28V DC operation**



PA3584 - SSARU

Electronic Systems Division

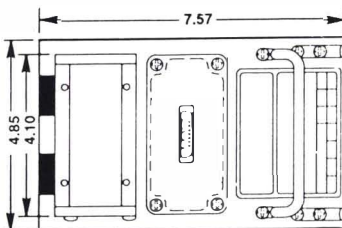
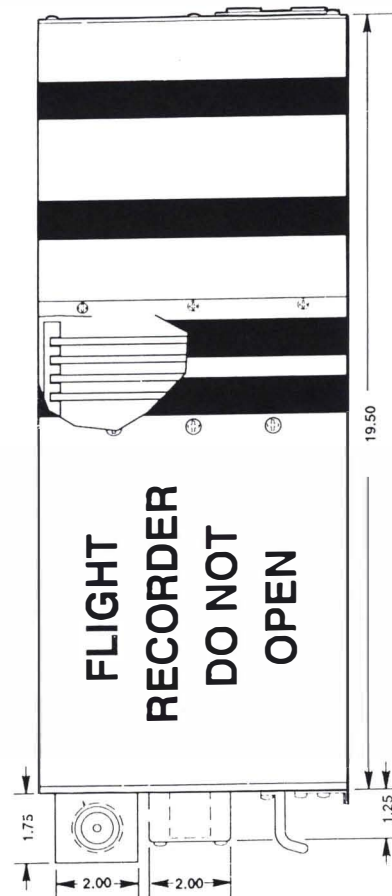
(A Division of GEC-Marconi Defence Systems)

Flight Line Test and Data Retrieval

A ruggedised portable computer available in support of calibration, troubleshooting and high speed on-aircraft data retrieval and analysis.



Dimensions



Input Capability

1 Analogue Signals

56 input wires in standard configuration for signals of the following types

- Synchro
- DC and AC Voltage Ratio
- High Level DC (0 to 32V)
- Mid Level DC (0 to 10V)
- Low Level DC (0 to 5V)
- Very Low Level DC ($\pm 400\text{mV}$)
- Bipolar DC ($\pm 5\text{V}$, $\pm 10\text{V}$ or $\pm 32\text{V}$)
- Potentiometer (SSARU excited)
- One 300 to 800 ohm thermobulb

2 Discrete Inputs

- Shunt (0V or open circuit)
 - Series (open circuit or 28V)
 - Marker Beacon
 - Latched Shunt
 - Latched Series
- In the standard configuration, 48 input wires are provided.

3 Digital Inputs

The SSARU provides a wide variety of combinations of digital and frequency inputs. All frequencies are programmable for frequency range typically 7 to 77Hz (Tacho) or 256 to 4352, 8448, or 16640Hz (Pulse Probe).

One or two of the following modules are provided in the standard configuration dependent on the aircraft signal sources.

- Eight ARINC 429 inputs (All programmable high or low speed)
- Eight frequency inputs
- Four ARINC 429 plus four Frequency
- Honeywell Avionics
- Standard Communications Bus (ASCB), Versions A, B and C
- Collins Commercial Standard Digital Bus (CSDB)
- MIL-STD-1553 A & B

4 Relative Time Counter

The SSARU also provides Frame (Relative Time) Counter.

Data Outputs

An Auxiliary data output in RZ format is provided for use with an optional Quick Access Recorder at a rate of 64 words per second, with an option to increase the data rate to 128 or 256 words per second. A Time Synchronisation output in Frequency Shift Key format is provided to synchronise the DFDR to the Cockpit Voice Recorder

Transducer Supplies

The SSARU provides the following supplies for transducers:
nominal 5V DC for potentiometers
nominal 28V DC for accelerometers

Environmental

To RTCA DO-160C	
Temperature	Category B2 (-45 to 70°C)
Temperature option	Category F2 (-55 to 70°C)
Temperature Variation	Category C
Humidity	Category A
Vibration	Category C
Magnetic Effect	Category A
Electromagnetic Compatibility	Category A

Power Input

115V AC or nominal 28V DC to DO-160C Category A
Maximum Consumption 25W max

Voice

Up to 4 channels of 2 hours each to ED56A quality crash protected.

Dimensions

The PA3584 SSARU is housed in a 1/2 ATR long case to ARINC 404A.

Weight

In a typical configuration the weight of the SSARU is 13.0kg (28.6lb)

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