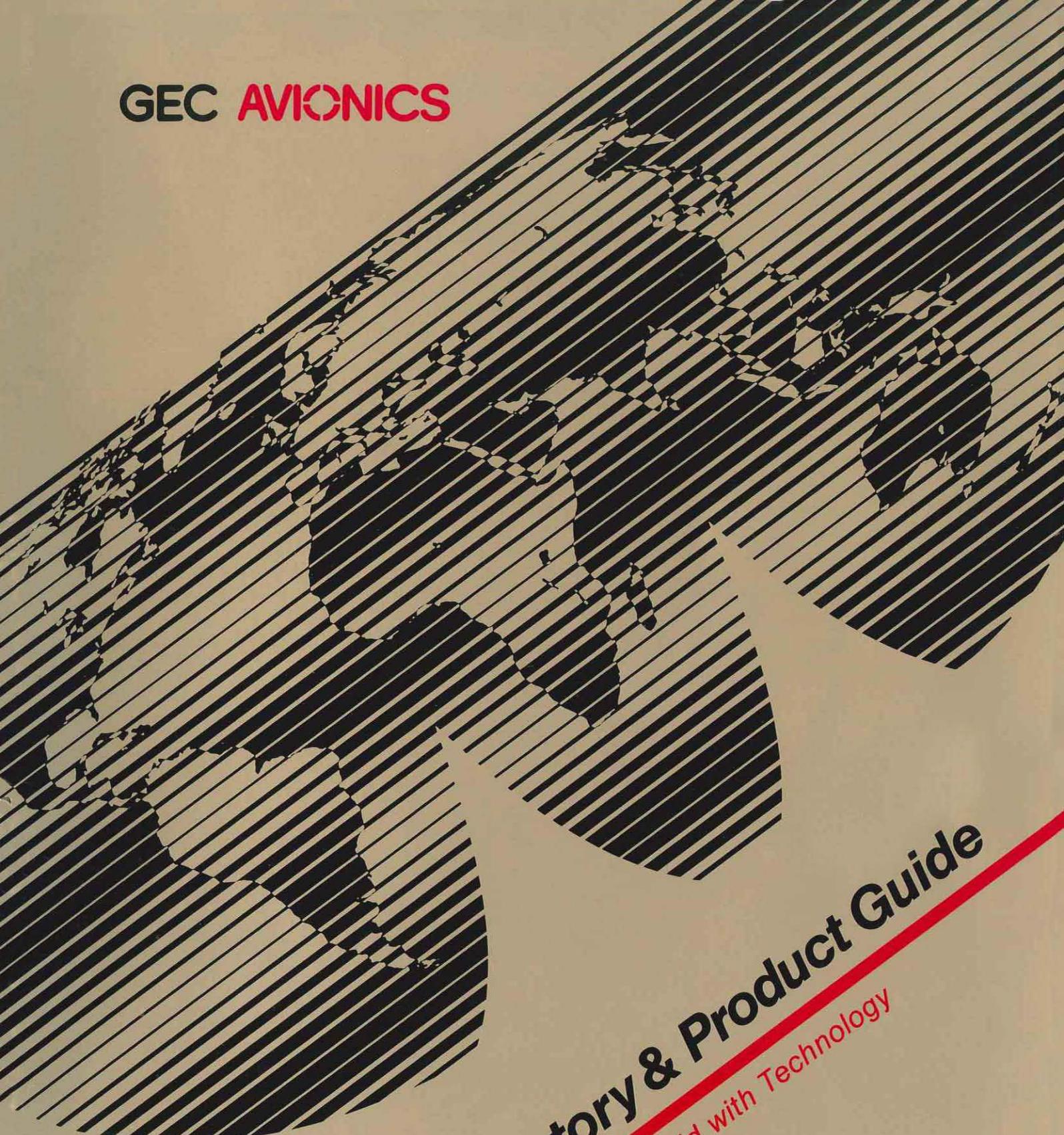


GEC AVIONICS



Sales Directory & Product Guide

Serving the World with Technology

Our capabilities at a glance

Airborne Communications

LF, HF, VHF, UHF and Microwave Systems*
Tactical Systems*
Communication Control*
Antenna Couplers*
Data Link Systems*
Communication Systems Integration*
Secure Systems*
Low Cost Anti Jam Communication Systems*
JTIDS*

Airborne Computing

Air Data Computers
Task-Orientated Computers
Central Processors
Mil-Std-1553B Bus Systems
Mil-Std-1750 Computers
Helicopter Air Data Systems
Ejector Seat Sequencers
Utility Management Systems

Automatic Testing

Combined Analogue/Digital In-Circuit/
Functional Automatic Test Systems
Testability in Design
Test Program Generation
Databus Test Systems

Civil Security Systems

Fixed-Site Seismic and IR Perimeter Security
Systems
Access Control Systems
Microprocessor Controlled Data Handling
High Integrity Perimeter Security Systems
Security Alarm Management Systems
Integrated Security Systems

Display and Interfaces

Head Coupled Viewing Systems
Electronic Head Up Displays
Electronic Head Down Displays
Multi-mode and TV Tabular Displays
Helmet Mounted Displays
Situation Displays
Projected Map Displays
Digital Scan Converters
Speech Recognition Systems
Standby Instrument Panels
Common Control Unit
Engine Instruments
Reversionary Displays
Night Vision Goggles

Electro-Optical Systems

Armoured Vehicle Sights*
Thermal Imaging and LLTV*
Missile Guidance, Gathering and Tracking*
Secure Command and Video Data Links*
Passive Surveillance and Target Designation*
Surveillance from Aircraft, Helicopters and
RPVs*
Industrial Control and Surveillance*
Underwater Imaging and Acoustic Signal
Processing*
Electro-Optical Counter Measures*

Flight Control Systems

Primary and Secondary Flight Control Systems
Fly-by-Wire
Fly-by-Light
Stability Augmentation
Autopilots/Flight Directors/Autothrottles
Automatic Landing
Target and Surveillance RPV Controls
Space Plane Control Systems
Hydraulic and Electric Actuators

Laser Devices

Eye Protectors
Carbon Dioxide Lasers, Pulsed and CW Optical
Beam Riders
Stabilised Frequency Lasers

Laser Systems

Carbon Dioxide Rangefinders
Laser Velocity Measurement
Laser Obstacle and Cable Warning
Optical Signal Processing

Maritime Surveillance

Sonobuoy and Dipping Sonar Data Processing
and Display Systems
Tactical Navigation and Data Display Systems
MAD Processing and Display
Knowledge Based Systems

Training Systems (Maritime)

Basic Systems Trainers
Airborne Crew Trainers

Military Surveillance Systems

Battlefield Surveillance and Target Acquisition
RPV Systems
Battlefield Surveillance and Target Acquisition
Radars
Battlefield Remote Ground Sensor Systems
Border Surveillance Systems
RPV Surveillance Systems
Surveillance Instrument Mounting Systems

Motion Sensors

Doppler Speed Sensors*
Muzzle Velocity Radar*
Low Airspeed Sensors
Gyros
Accelerometers
Attitude and Heading References
'Strapdown' Inertial Measurement Units

Navigation

Global Positioning Systems*
Navigation Computers*
VOR/ILS and DME*
TACAN*
Doppler Systems*
Inertial Systems
Automatic Direction Finders
OMEGA*
Stabilised Gyrocompasses
Scene Matching*

Continued, inside back cover

**These Products and Systems are now
marketed by GEC Sensors Ltd, formerly
Sensors Group of GEC Avionics Ltd,
at Basildon*

Sales Directory & Product Guide

GEC Avionics Limited
Head Office
Airport Works Rochester Kent ME1 2XX England
Telephone: Medway (0634) 44400
Telex: 96333 GECROC G

General Information

Please contact the Company Information Executive at
Head Office (address above)

Sales Enquiries

Our business is conducted by trading Divisions, each of
which is expert in its own field. **Contacts are listed
on pages 8 and 9.**

- If you require a product or service, please refer to the
Index (Part 3). The key shows which Division(s) can
supply.
- For new requirements you can discover which
Division can best help you from:
the general description of our capabilities and
organisation (Part 1) or
the general description of each Division's business
(Part 2, grey pages).
- To contact any Division, please refer to the index on
pages 8 and 9
- If in doubt, please contact the Company Information
Executive at Head Office who will be pleased to help
you.

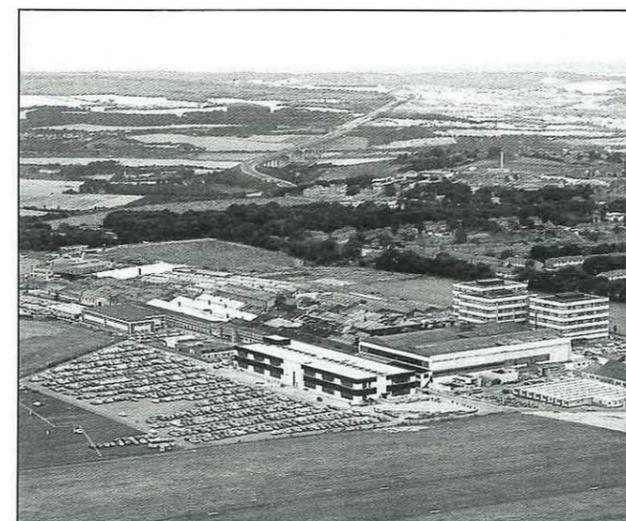
After-Sales Support

Arrangements are usually agreed at the time of purchase.
If there are difficulties, however, please contact:

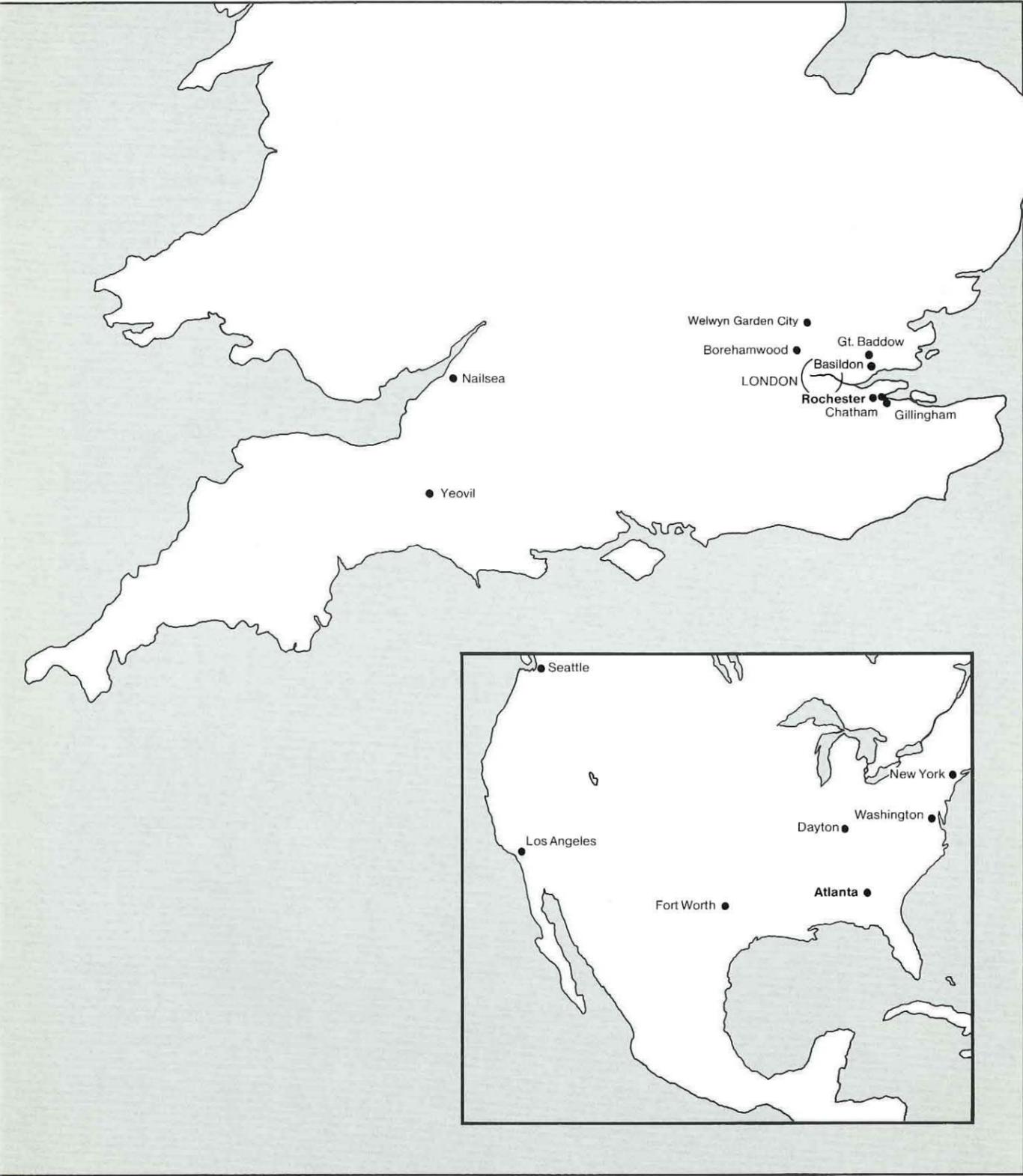
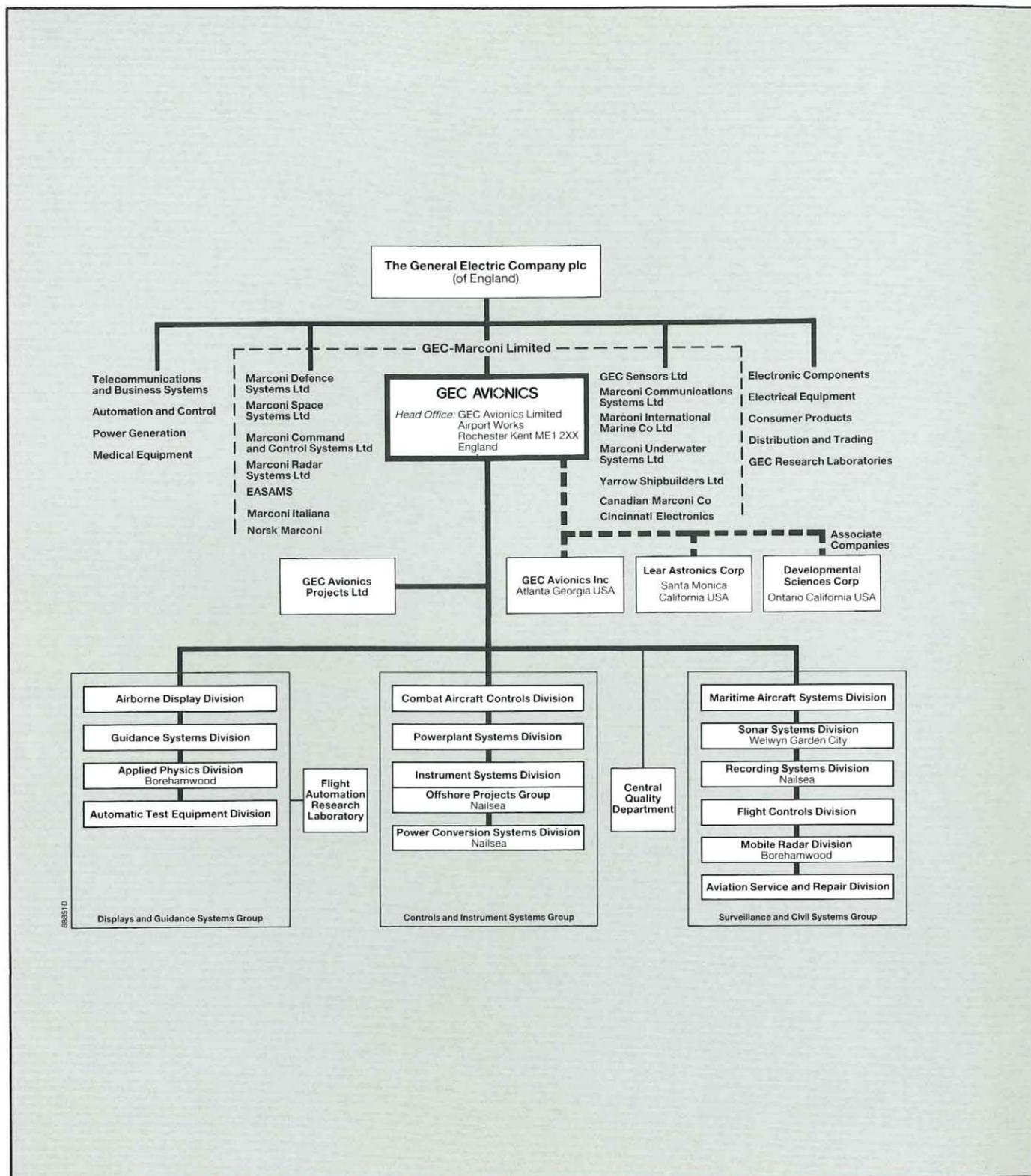
- Aviation Service and Repair Division (for avionics,
other than radio or radar), or
- The Division which supplies the product concerned,
or
- The Company Information Executive at Head Office

GEC Sensors Limited

Since the previous edition of this guide, the activities
of Divisions at Basildon have been centred in GEC
Sensors Limited. For your convenience the products
still appear in the Product Service Guide (Part 3) and
a contact for enquiries is given on pages 8 and 9.



Part 1 Organisation, Locations and Facilities

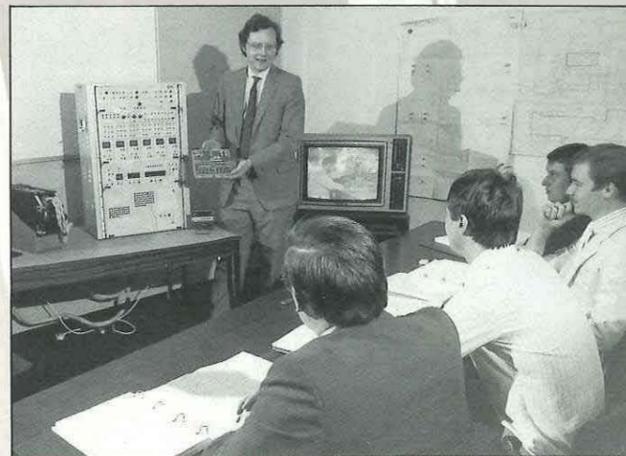


A worldwide operation...

GEC Avionics, a member of the GEC-Marconi group, is a world leader in producing electronic systems for aviation and is by far the UK's biggest supplier of avionics for the world market.

We are organised to innovate across the whole of our large product range and are an established supplier in some of the world's most competitive markets. Our Divisional organisation enables us to match our service to the needs of individual customers, to meet the most demanding technical specifications and delivery requirements.

The products and services we supply are backed by our full facilities for research, design, development, manufacture, quality assurance and after-sales support.



Research

Applied research is backed by the extensive facilities of GEC and includes the Flight Automation Research Laboratory at Rochester and the Research Laboratories at Great Baddow.

As these organisations also carry out research and development work for customers, their details are included in the Directory (Part 2).

Design

Every manufacturing Division has its own design teams specialising in meeting customers' requirements. Extensive use is made of computer aids.



with full facilities...

Development

Engineering development is a service provided by every division to ensure that our customers' installations are completed on time and to specification. A large proportion of our workforce is professionally qualified – mainly in engineering. Our extensive facilities for software design and development are staffed by our own highly-qualified programmers and our specially-trained Software Engineers.

Manufacture

Every Division's production organisation is backed by Central Manufacturing Services, including the latest kinds of automated machinery and assembly techniques.

Support

Aviation products are supported by the GEC Avionics Aviation Service and Repair Division and the Airadio Spares and Service Unit of GEC Sensors Ltd. We offer the full range of product support, including manuals, training, warranty administration, reliability guarantees, spares supply and repairs, including exchange schemes, and logistic support 'packages' to individual customer requirements. For support details concerning a specific product, please contact the relevant support or manufacturing Division.

Project Management

We have wide experience in managing systems projects right through from specification to commissioning, in all fields of our business, both as 'design and build' and as 'turnkey' projects. We apply these skills to integrated systems, mission avionics, and weapon aiming and control systems, for applications which include aircraft retrofits.



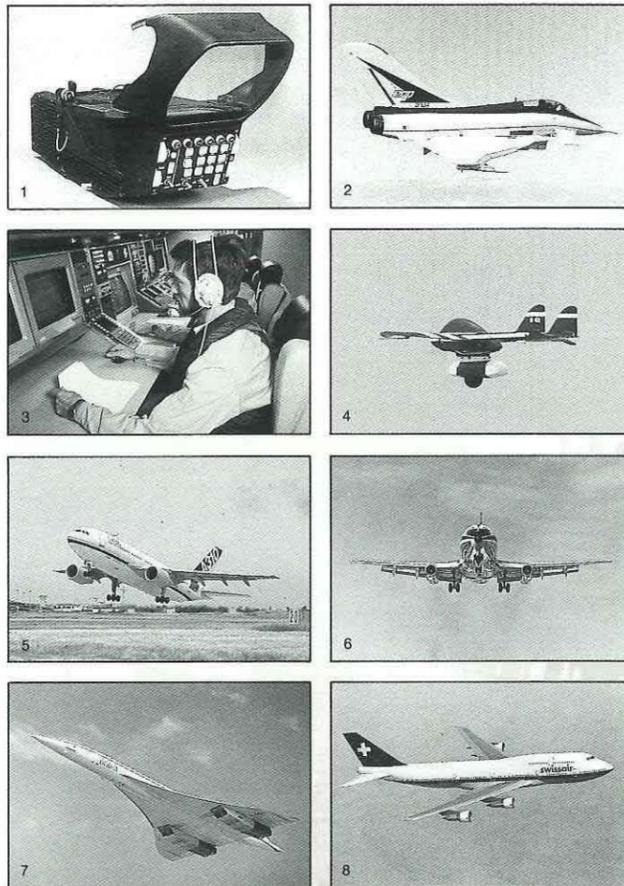
Civil Systems

We have been continuously associated with airborne systems and instrumentation since the earliest days of air transport. Today we supply the world's airlines with automatic flight control, radio navigation and communications, energy management, electronic displays, ground proximity warning systems and automatic test equipment.

Military Systems

Systems we supply include radio navigation and communications, flight and engine control, powerplant test, navigation and weapon aiming, cockpit television, acoustic processing and display, head up display, fuel measurement, radar, air data and mission systems in general for every kind of military aircraft. A few examples are illustrated.

- 1 We are the world's foremost producer of cockpit displays and head up display/weapon aiming computer systems. The latest is the holographic HUD for the US Air Force LANTIRN programme.
- 2 The 'fly by wire' system for the UK Experimental Aircraft Programme has demonstrated the benefits of full computer control for advanced combat aircraft. We are also producing advanced 'fly by light' systems.
- 3 The AQS 901 Acoustics Processing System is installed on anti-submarine aircraft of the Royal Air Force and the Royal Australian Air Force. The complementary lightweight AQS 902 system is in service with the Royal Navy 'Sea King' fleet and also with other forces. The next generation AQS 903 processing system is already under development.
- 4 The Phoenix system provides real-time battlefield surveillance data from an unmanned aircraft fitted with a thermal imaging system giving twenty-four hour, all weather coverage. The system, which includes launcher, data link and ground control station, is being provided for the British Army (photo courtesy RAE Larkhill).
- 5 Our 'intelligent' electronic controls for the wing slats and flaps of the A310, A300-600 and A320 European Airbus are the first of their kind in airline service.
- 6 Digital control electronics for the Rolls Royce RB211/535 engines are used by airlines throughout the world.
- 7 Our automatic flight control system for Concorde, produced with SFENA, is still the most operationally-advanced in airline service, including Mach 2 cruise and automatic blind landing.
- 8 The Boeing 747 is equipped with our full flight regime automatic throttle control system.



Inertial Measurement

- 1 Our inertial measurement units include gimballed platforms, such as the NCS-1 attitude and heading reference unit for ships and boats and a whole range of 'strapdown' IMU. The picture shows the micro-processor based units for the Spearfish torpedo and the Land Navigation System, as well as production units for the Sting Ray torpedo.

Security and Surveillance

- 2 We develop and supply advanced military sensors, such as battlefield surveillance radars and remote ground sensor systems. We also supply intruder alarm, perimeter protection and overall security supervisory systems for civil and military applications such as AIDA 2000 and SMS 2000.

Automatic Testing

- 3 Our extensive range of Automatic Test Equipment is based on over 25 years' experience in designing and manufacturing automatic test systems. Illustrated is an example of the ORION range of ATE, configured for functional digital and in-circuit testing.

Offshore and Subsea Systems

- 4 The illustration shows our MICROV remotely piloted subsea vehicle (ROV) jointly developed with OSEL. We also supply electro-hydraulic systems for subsea wellhead control, telemetry, platform electronics and remote viewing systems to the offshore oil and gas industry. We are responsible for control and monitoring electronics for the BP Magnus field, including 'fail-safe' control pods and quick-release inductive couplers for electrical power and signal connections.

Naval Systems

- 5 Some of the systems we supply are towed array sonar processing and display systems for ships and submarines.

Powerplant Testing

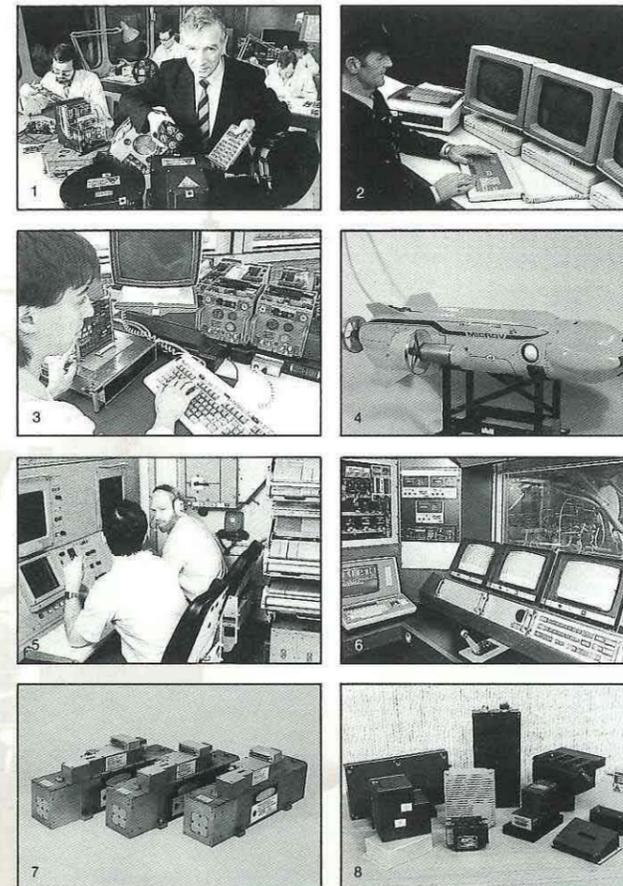
- 6 We supply electronic controls and automatic test equipment for a wide variety of gas turbine engines.

Laser Systems

- 7 Our CO₂ laser rangefinder system has been selected for the United States Army Abrams main battle tank.

Power Conversion

- 8 We design and supply a wide range of power conversion units suitable for the demanding safety and environmental requirements of aerospace.



Index - Trading divisions and their 'key' codes

Division	Code	Location	Tel No.	Telex No.
GEC AVIONICS LIMITED (head office)		Airport Works, Rochester, Kent, ME1 2XX	(0634) 44400	826279
Airborne Display Division	01	Airport Works, Rochester , Kent, ME1 2XX	(0634) 44400	96304
Applied Physics Division	02	Elstree Way, Borehamwood , Hertfordshire, WD6 1RX	(01) 953 2030	22777
Automatic Test Equipment Division	03	Airport Works, Rochester , Kent, ME1 2XX	(0634) 44400	96246
Aviation Service and Repair Division	04	Airport Works, Rochester , Kent, ME1 2XX	(0634) 44400	96211
Central Quality Department	05	Airport Works, Rochester , Kent, ME1 2XX	(0634) 44400	96333
Combat Aircraft Controls Division	06	Airport Works, Rochester , Kent, ME1 2XX	(0634) 44400	965450
Flight Automation Research Laboratory	07	Airport Works, Rochester , Kent, ME1 2XX	(0634) 44433	965884
Flight Controls Division	08	Airport Works, Rochester , Kent, ME1 2XX	(0634) 44400	965450
Guidance Systems Division	09	Airport Works, Rochester , Kent, ME1 2XX	(0634) 44400	96333
Instrument Systems Division	10	Airport Works, Rochester , Kent, ME1 2XX	(0634) 44400	96333
Maritime Aircraft Systems Division	11	Airport Works, Rochester , Kent, ME1 2XX	(0634) 44400	96333
Mobile Radar Division	12	Elstree Way, Borehamwood , Hertfordshire, WD6 1RX	(01) 953 2030	22777
Offshore Projects Group (Sub of 10)	13	2 High Street, Nailsea , Bristol, BS19 1BS	(0272) 856511	444791
Power Conversion System Division	14	2 High Street, Nailsea , Bristol, BS19 1BS	(0272) 856511	444791
Powerplant Systems Division	15	Airport Works, Rochester , Kent, ME1 2XX	(0634) 44433	965884
Recording Systems Division	16	2 High Street, Nailsea , Bristol, BS19 1BS	(0272) 856511	444791
Sonar Systems Division	17	26-28 Hydeway, Welwyn Garden City , Hertfordshire, AL7 3BD	(0707) 328511	269404

ASSOCIATED OPERATIONS

GEC Avionics Inc.	20	2975 Northwoods Parkway, P O Box 81999, Atlanta , Ga 30366 USA	(404) 448 1947	708447
GEC Avionics Projects Limited	21	Airport Works, Rochester , Kent, ME1 2XX (Registered Office)	(0634) 44400	96333
GEC Avionics Research Laboratory	22	West Hanningfield Road, Great Baddow , Chelmsford, CM2 8HN	(0245) 73331	995016
Lear Astronics Corp	23	3400 Airport Ave, PO Box 442, Santa Monica , Ca 90406-0442 USA	(213) 452 6000	910 343 6952
Developmental Sciences Corp	24	1930 South Vineyard Ave., PO Box 50000, Ontario , Ca. 91761 USA	(714) 947 7600	910 584 4699

GEC SENSORS LIMITED

GEC Sensors	30	Christopher Martin Road, Basildon , Essex.	(0268) 22822	99225
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Facsimile No.	Personal Contact
(0634) 816036	Sales Manager D.J. Sowler, Extn 3734
(01) 207 0331	Business Development Manager C.M. Lennon, Extn. 6474
(0634) 816263	Sales Manager G.U. Rands, Extn. 3677
(0634) 816301	Marketing Manager W.H. Bland, Extn 3337
(0634) 816301	Divisional Manager K.W. Boardman, Extn 3542
(0634) 827362	Sales Manager A.J. Fisher, Extn 3722
(0634) 813652	Divisional Manager R.P.G. Collinson, Extn. 39
(0634) 827362	Marketing Manager T.G. Hamill, Extn 3453
(0634) 827332	Marketing Executive P.I. Rowell, Extn. 3020
(0634) 401748	Marketing Manager Extn 3482
(0634) 827332	Marketing Executive P. Duckworth, Extn. 3411
(01) 207 5417	Divisional Manager J.A.P. O'Keefe 01-906 6248
(0272) 851467	Chief Engineer R. Phillips, Extn. 210
(0272) 851467	Marketing Executive P.J. Cooper, Extn 202
(0634) 813652	Marketing Manager J.A. Hill, Extn 63
(0272) 851467	Marketing Manager I.J. Carter, Extn. 272
(0707) 327822	Sales Manager D. Brazier, Extn. 11

(404) 449 6128	(Please see details at right)
(0634) 827332	GAv Commercial Director C.C.F Naylor, Extn 3560
(0245) 75244	Manager D.W. Byatt, Extn 3001
(213) 398 5630	Marketing: D.Edlelson (213) 452 6861
(714) 947 1823	Vice President Dr. G. Seeman

(0268) 27322	Marketing Manager M.B. Howe, Extn 3003
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GEC Avionics Limited-(Outside UK) Establishments and Area Managers' Addresses

To reach any of our Divisions from outside the UK, it may be convenient to contact an Associate Company or your nearest Area Manager:

Associated Operations: USA (please see also entries 23 and 24 opposite)

ATLANTA

W. Broyles, President
GEC Avionics Inc., 2975 Northwoods Parkway,
P.O. Box 81999
Atlanta, Ga 30366
Tel. 404 448 1947 **Telex** 708447
Fax. 404 449 6128

DAYTON

T. Taylor
GEC Avionics Inc., Suite 1375 Kettering Tower,
Dayton, Ohio 45423
Tel. 513 224 1110 **Telex** 28 8350
Panafax 513 224 8241 **Rapicom** 513 224 0624

FORT WORTH

E. Harwood
GEC Avionics Inc., Suite 128
6410 Southwest Blvd,
Ft. Worth, TX 76109
Tel. 817 763 0281

LOS ANGELES

F. White
GEC Avionics Inc., 4551 Glencoe Avenue, Suite 160
Marina Del Rey,
California 90292
Tel. 213 305 8376 **Telex** 66 4947
Fax. 213 305 8503

SEATTLE

P. Clarke
GEC Avionics Inc., Suite 350 Lakeridge 1
14827 N.E. 40th Street,
Redmond, Washington 98052
Tel. 206 883 2525 **Telex** 152147

Australia (covering Australasia)

Air Commodore L H Williamson, RAAF, Retd.,
2 Giffnock Avenue, North Ryde, New South Wales 2113.
Tel. 887 6222 (Office)
997 6837 (Home) **Telex** AA20511

Brazil (covering South America)

Frank Cassidy
Caixa Postal 51110, Rio de Janeiro, CEP 22072.
Tel. 2471956 **Telex** 2122406

Cyprus (covering the Middle East)

Brian Ashley
Flat 9, Kyma Court, 2, Nicosia Road, Limassol.
Tel. Limassol (051) 21277 **Telex** 5025 CHRIMAR

Singapore (covering South East Asia)

Graham Dare
GEC of Singapore Pvt. Ltd., PO Box 4046, Magnet House,
11 KM Bukit Timah Road, Singapore 2158.
Tel. 4663011 (Office)
2551589 (Home) **Telex** RS21508

GEC Avionics Limited

GEC Avionics coordinates some 20 autonomous divisions and associates, all having the strength and support of the whole organisation behind them. Each division deals with every aspect of the design, production, marketing and support for its particular equipment. The divisional concept ensures flexibility and an ability to react quickly to customers' requirements.

Each division and other trading organisation of our company is listed here alphabetically, and has a unique code number by which it can be identified in the Products/Services Guide section (Part 3). The code numbers relate to this publication only and have no other significance. Unless otherwise stated each Division is based at Rochester.

01 Airborne Display Division

Airborne Display Division develops and produces all types of display systems for military aircraft and is the world's leading supplier of Head Up Display (HUD) systems.

Activities

HUD systems are developed for both new aircraft and retrofit applications and normally consist of a Pilot's Display Unit and an Electronic Unit (computer) which carries out interface, symbol generation and weapon aiming (air/air and air/ground). For specific projects, the electronic unit can also carry out full navigation computations. The latest systems are dual-mode, where the display can be either normal flight/weapon aiming symbology or a raster (television type) display of a forward looking sensor (such as Forward Looking Infra Red), with the normal symbology superimposed. Many types of Head Down Displays are also produced, the latest using a touch interactive system to ease the pilot/system interface. To complement the night vision HUDs, two types of night vision goggles are produced: 'Cats Eyes' specifically for fixed wing, and 'Night Owl' for both fixed wing and helicopter applications.

Products

Head Up Displays for Fighter/Transport Aircraft
Head Down Displays for Fighter/Transport Aircraft
Multisurface Display Processors, Weapon Aiming Computers
Helmet Mounted Displays
Night Vision Goggles
Eye Protection Devices

We suggest that the first contact with a Division should be made to the Divisional Manager or Personal Contact at the appropriate address.

Head Office: Aiport Works, Rochester, Kent, ME1 2XX, England. Telephone: Medway (0634) 44400. Telex: 96333 GECROC G.

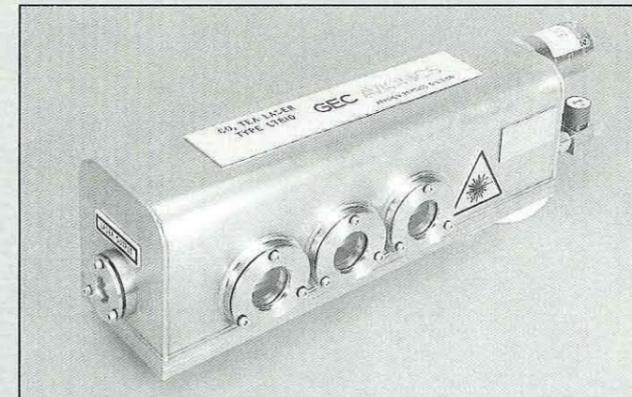


02 Applied Physics Division (Borehamwood)

The Applied Physics Division develops and manufactures a range of military and civilian products which include high reliability neutron generators, ionisation chambers, electron beam sources, gas lasers and laser systems. These diverse products are linked by common manufacturing skills and employ high voltage, gas discharges.

Activities

Neutron generators; test and control systems; specialised vacuum tubes for radiation monitoring; continuous wave (CW) waveguide, CO₂ laser transmitters; pulsed, transversely excited atmospheric pressure (TEA) CO₂ lasers; rangefinders; laser doppler anemometers; laser radar for obstacle and cable warning; a range of optical and digital signal processing subsystems.



03 Automatic Test Equipment Division

Largest centre of ATE expertise in Europe.

Activities

Automatic test equipment for functional testing of digital and analogue equipment for factory, depot and field use, including mobile applications. Systems available include the ORION series of ATE which has a modular configuration capability extending from simple in-circuit testing of components up to combined functional analogue/digital in-circuit systems.

Turnkey ATE projects with technology ranging from LF through RF to MW. Mil-Std-1553B test tools include a test unit for bus controllers and remote terminals and an integration facility, incorporating a mini computer and disc system for system commissioning.

A full range of customer support services is provided.

Products

ORION 2210 - In-circuit
ORION 4420 - Functional Digital
ORION 4440 - Functional Analogue
ORION 4460 - Functional Digital/Analogue (Illustrated)
ORION 6620 - Functional Digital and In-circuit
ORION 6640 - Functional Analogue and In-circuit
ORION 6660 - Functional Digital/Analogue and In-circuit
ORION 9000 - 1553B Test Unit
1553B Integration Facility



Part 2 Directory of Divisions and Departments

04 Aviation Service and Repair Division

Aviation Service and Repair Division offers total integrated support for GEC Avionics products.

Activities

Services embrace equipment repair, overhaul and modification, warranty administration, logistics support engineering, NATO codification, spares recommendations, stocking, supply and AOG service, on-call and on-site field service, comprehensive equipment and maintenance training, test equipment design and supply, test equipment calibration, technical publications, development, operation and transfer to customer of depot level repair facilities including provision and update of ATE software. Special-to-customer support options include cost-per-flying-hour, fixed-cost/fixed-turnaround and direct exchange schemes.



05 Central Quality Department

Central Quality Department offers product assessment, development and testing services covering a wide range of National and International Standards.

Activities

Comprehensive environmental and mechanical test facilities. Electromagnetic compatibility testing including mobile facilities and advisory services on suppression techniques for use on automotive vehicles, customer sites and similar locations. Component testing and diagnosis. Calibration of electrical and mechanical items and environmental facilities.

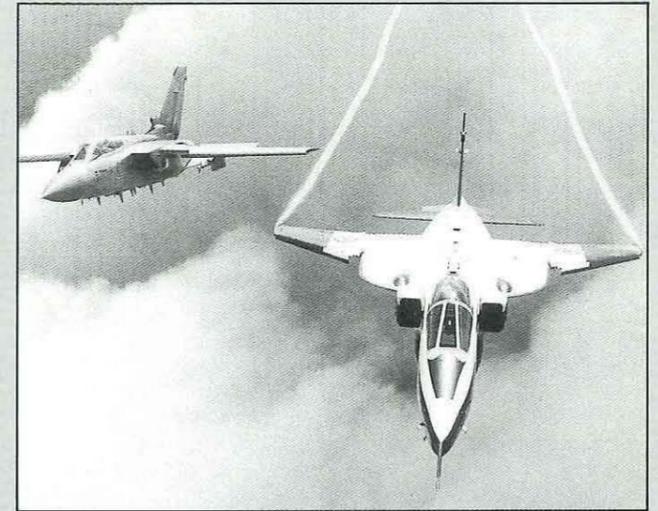


06 Combat Aircraft Controls Division

35 years' experience in flight control . . . 18 of them in digital flight control

Activities/Products

A wide range of automatic flight control systems, subsystems for combat aircraft and guidance and control systems for missiles. Products include integrated AFCS to customers' requirements, autopilots, command and stability augmentation systems, fly by wire systems, fly by light systems, autothrottle controls, terrain following systems for aircraft and missiles, and specialised systems, such as are required for spin and incidence limiting. Also included are AFCS and FCC updates and aircraft modernization programme packages.



07 Flight Automation Research Laboratory

Flight Automation Research Laboratory establishes new ideas and technology applicable to flight automation.

Activities

Research and applied engineering to assist GEC Avionics product divisions, R & D for Government and Industrial customers and collaborative programmes with other groups.

Products

Since its formation in 1961, the Laboratory has built up a leading role in an extensive range of areas which includes:

- Advanced Digital Processing
- Avionic Systems Engineering Studies
- CAE
- Control Systems
- Data Transmission
- Displays
- Environmental Design
- Head Coupled Viewing Systems
- IKBS Applications
- Man/Machine Interface
- Modular Packaging
- Navigation
- Nuclear Hardening Design
- Optical Design
- Power Supply Design
- Processor Architectures
- Sensor Systems
- Software Engineering
- Unmanned Aircraft
- VLSI Design



08 Flight Controls Division

Flight Controls Division provides systems for a wide range of aircraft types from unmanned aircraft to the largest commercial passenger aircraft.

Activities/Products

Automatic flight control systems and subsystems for civil and military transport aircraft, helicopters and unmanned aircraft including drones, targets and surveillance aircraft. The Division is prime contractor for the British Army's Phoenix S & TA RPV system. Products also include integrated AFCS for customers worldwide, autopilots, automatic landing and autothrottle; secondary flying control systems for slats and flaps; complete unmanned aircraft systems including ground handling and support; actuators, both hydraulic and electric.



09 Guidance Systems Division

Guidance Systems Division is a leading supplier of gyros and gyro based systems for land, sea and air applications. It is also leading the development of Digital Colour Map Generators, as part of a fully fledged Total Terrain Avionics System.

Activities/Products

Development and production of aircraft, missile, ship and land vehicle navigation, attitude and heading reference, and inertial systems, including gimbaled, ring laser and strapdown; related systems including digital computers, digital colour map units and terrain referenced systems. Total systems integration capabilities.

Sub-miniature precision rate and rate integrating gyroscopes and accelerometers including associated electronics. Multi-axis gyro and accelerometer units for ac or dc inputs and outputs. Strapdown attitude sensing units for underwater weapons and guided weapon applications.



10 Instrument Systems Division

Instrument systems with worldwide applications.

Activities

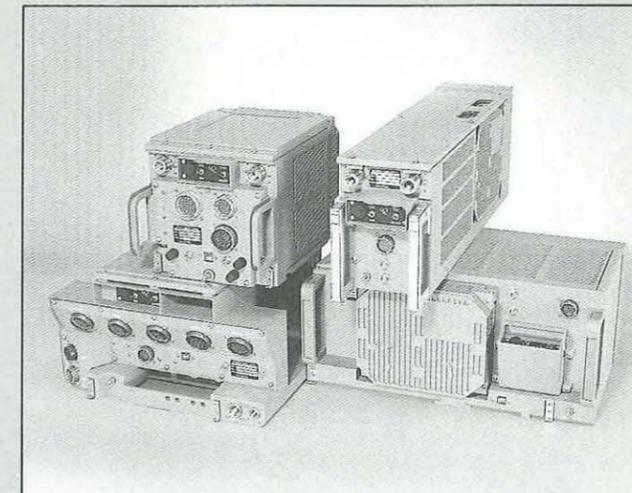
Advanced central air data computer and air data sensors for military and civil aircraft. Omni-directional air data systems for helicopters. Stores management systems for combat aircraft. Performance management systems for helicopters. Microprocessor based ejection seat sequencers.

Principal Products

Standard Central Air Data Computer (SCADC): contracted to the USN/USAF to produce a range of Standard Air Data Computers that will retrofit 35 aircraft variants.

Stores Management Systems: in use on the Tornado IDS with over 200 systems delivered to date. Modularised Stores Management Systems for a wide range of new aircraft types.

Helicopter Air Data Systems: A 3-axis Air Data System for helicopters. More than 600 systems delivered for the US Army AH-1S Cobra.



11 Maritime Aircraft Systems Division

Activities/Products

Maritime Aircraft Systems Division is the world's leading supplier of modern airborne acoustic processors for anti-submarine (ASW) aircraft and helicopters. MASD also offers TATTIX Tactical Processing Systems and total avionics systems integration to exploit the increasing quantity of data from modern sensors and navigation systems.

In support of these systems, MASD's Basic Systems Trainer and Airborne Crew Trainer provide total ground based and airborne aircrew training. These systems will easily modify to simulate the data control and display of any prime acoustic or tactical system.

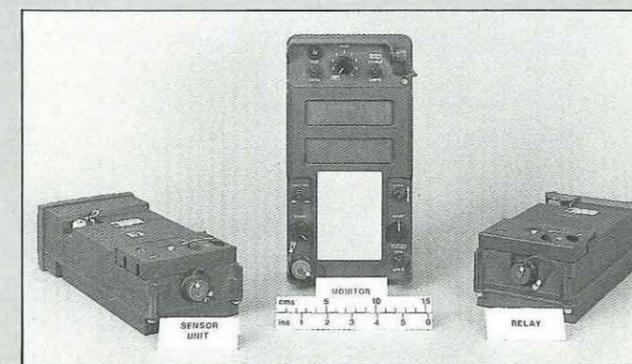


12 Mobile Radar Division (Borehamwood)

The Division specialises in the development and manufacture of high integrity security and surveillance products for military and civil applications, worldwide.

Products

FASTAR battlefield surveillance radar; HERMES remote ground sensor system; precision angulation and mounting systems for surveillance instrument; AIDA 2000 perimeter intrusion detection system; SMS 2000 security alarms monitoring system; access control; integrated turnkey civil security projects; fill-level monitoring radar for vertical storage bunkers, coal mine bunkers and silos; low level intruder aircraft detection system.



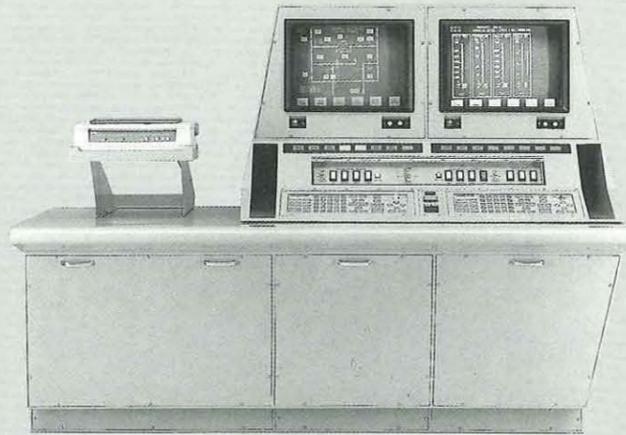
Part 2 Directory of Divisions and Departments

13 Offshore Projects Group (Nalsea)

The Offshore Projects Group, part of Instrument Systems Division, supplies remote control and monitoring systems for underwater applications, which include offshore oil and gas projects and naval mine countermeasures.

Activities/Products

Conceptual and feasibility engineering studies for the oil industry majors, front-end engineering design work for field development plans, umbilical based and umbilical free wellhead control and monitoring systems, including long range acoustic telemetry links. ROV control and monitoring systems, fibre optic based with multi-channel video capability. Underwater stereo viewing systems. Inductively coupled umbilical connection systems, oil storage tank sonar monitoring systems, pipeline integrity surveillance.



14 Power Conversion Systems Division (Nalsea)

Power Conversion Systems Division is a leading supplier of custom designed high reliability military power conversion units.

Activities

The Division undertakes the design, development and manufacture of Power Conversion Units for use in applications where high reliability performance in hostile environmental conditions is required.

Principal Products

Custom designed power conversion units:-

DC to DC Low Voltage

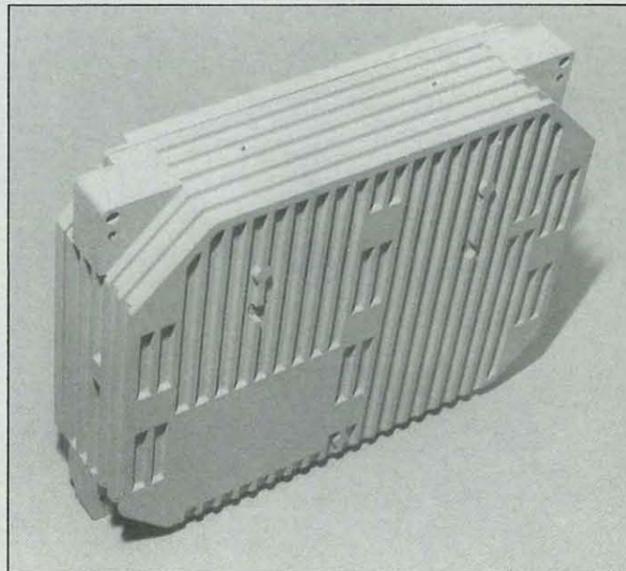
AC to DC Low Voltage

High Voltage Power Supplies

In the power range <math>< 15\text{ watts}</math> to > 2 kilowatts

Applications

High reliability, hostile environment electronic/avionic systems.



15 Powerplant Systems Division

Powerplant Systems Division is responsible for all aspects of aircraft engine control, monitoring and display. The Division's products range from automatic engine test, fuel management systems and engine health monitors to digital engine control, maintenance data panels and reversionary displays.

Activities/Products

Automatic Data Acquisition and Processing Systems (ADAPS) for the Cost Effective Ground Testing of Powerplants.

Full Authority Digital Engine Control (FADEC)

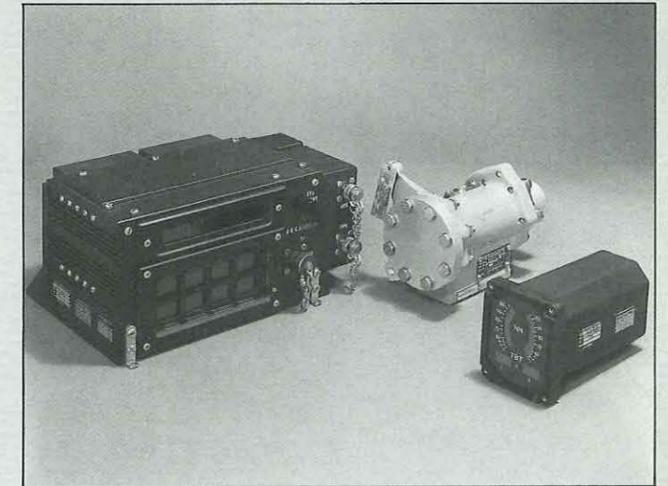
Engine Health Monitor (EHM)

Engine Supervisory Electronics

Utility Management Systems (UMS) - including the Maintenance Data Panel.

Flat Panel LCD Standby Instrumentation

Fuel Management Systems - including Microprocessor Based Fuel Flowmeters.



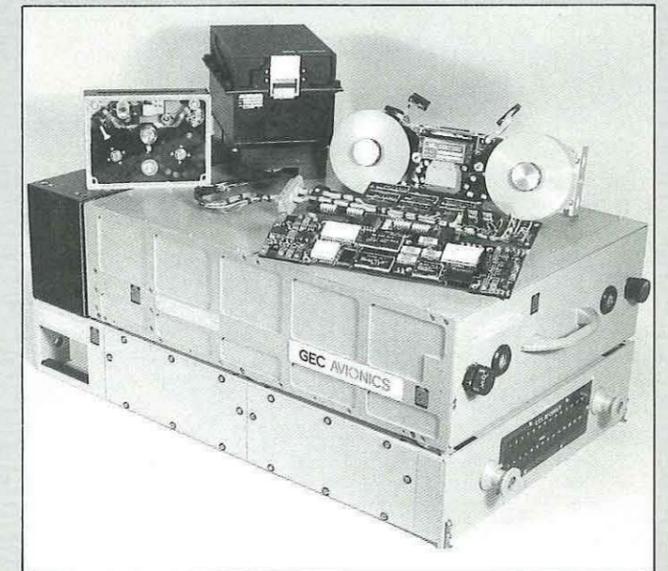
16 Recording Systems Division (Nalsea)

Shown here are some of our magnetic tape recorders which meet the challenge of maintaining high integrity data recording under the severity of the military and similar hostile environments.

These are backed by an integrated design in intelligent data acquisition, replay and analysis, to provide the total recording systems capability satisfying today's ever increasing needs for data storage in advanced systems.

Activities/Products

Design and manufacture of Analogue and High Density Digital magnetic tape recorders, solid state recorders and the associated pre-recording data acquisition and signal processing control, for use in severe military and industrial environments in air, land, sea and subsea applications. The related replay, analysis, support and test equipment to provide a complete data recording and analysis capability. Advanced Integrated Flight Data recorders using real time processing for data compression to reduce storage capacity, facilitating lowest mass and volume, providing high integrity incident and maintenance recorders with crash protection and survivability. Teleprinter terminals for use in hostile environments.



Part 2 Directory of Divisions and Departments

17 Sonar Systems Division (Welwyn Garden City)

Sonar Systems Division supplies advanced sonar processors for the Royal Navy and export Navys' towed array sonars.

Activities

Designs, develops, manufactures and supports advanced digital signal processors and display systems for surface ship and submarine sonars. Fast Time Acoustic Analysis Equipments for Post Mission Analysis, Sonar Stimulation for testing timing and operator evaluation. Hull Vibration Monitoring Equipment. Vibration Analysis/Condition Monitoring for the commercial market.

Products

Digital Sonar Signal Processor
Sonar Training Equipments
Target Following Sonar
Adaptive Digital Filters
Sonar Stimulator
Fast Time Replay Systems for Post Mission Analysis
Hull Vibration Monitoring Equipment
Vibration Analysis for Commercial Condition Monitoring



Associated Operations

20 GEC Avionics Inc. (Atlanta, Ga., USA)

GEC Avionics Inc. is engaged in the design, manufacture and integrated logistic support of the avionic and industrial electronic equipment which the Company supplies to the United States. Established in 1962, GEC Avionics Inc. employs 300 people at its main plant in Atlanta, Georgia, and branch offices in Fort Worth, Los Angeles, Seattle and Dayton. Company-funded research and development includes work in the area of carbon dioxide TEA lasers and laser rangefinders in association with Applied Physics Division at Borehamwood, England.



21 GEC Avionics Projects Limited

This Company coordinates major projects which involve the supply of a range of GEC Avionics products from various GEC Avionics divisions.

22 GEC Avionics Research Laboratory (Great Baddow)

The Avionics Research Laboratory undertakes research and development work of specific interest to the product divisions throughout the GEC Avionics Company.

Activities

The Laboratory is active on advanced radar techniques, holographic optical elements, signal processing, IR systems and control techniques. Its current projects include computer generated holographic optics for display and optical scanning and the application of holography to IR systems. The Laboratory specialises in passive and covert IR and the radar targetting techniques include 3-5mm thermal cueing and synthetic aperture radar. The Research Laboratory supports avionics-related research at universities and the organisation is arranged to ensure maximum utilisation of resources at the GEC Research Centres at Hirst and Great Baddow.

23 Lear Astronics Corp (Santa Monica, Ca., USA)

Lear Astronics Corp is a leading supplier of digital flight control computers and systems for military and commercial aircraft. Small tactical radars for artillery and air defence, such as Muzzle Velocity Radar and Tactical Defence Alert Radar for manual use are available for world markets.



24 Developmental Sciences Corp (Ontario Ca., USA)

Developmental Sciences Corp. offers a range of remotely piloted vehicles and unmanned aircraft avionics, extending to manned aircraft systems integration. Multiple reconnaissance and electronic warfare mission payloads have been demonstrated in the Skyeye RPV. Aviation ground power units provide electrical, hydraulic, and pneumatic services in an air transportable vehicle; advanced composite structures are supplied to prime customers as well as supporting our own requirements.

Acc - Att

Alphabetical index of products with codes indicating their source.
The number codes relate to the Divisions listed on the grey pages and on Pages 8 & 9.

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