message control equipment: message automatic heading-line generators; telegraph interface units; systems engineering for all types of communications systems.

Current R&D is concentrating on the development of ATC systems and simulators as well as the investigation of equipment best suited to particular air traffic or communications requirements.

**International Aviation Computer Services**, Aeradio House, Hayes Road, Southall, Middx. 01-574 2411. An International Aeradio subsidiary. Comprehensive consultancy and development services covering all aspects and sizes of computer operation. These can range from the evaluation of a single item of terminal equipment to the implementation of a complete reservations system on behalf of an airline. Provision of maintenance and operating personnel, and facilities to assist in or undertake the full day-to-day operation of computer installations. Design and development of specialised systems such as CUBAS (Commercial User Passenger Acceptance System), which is a computer-based system supporting passenger check-in and aircraft load-control operations at airports around the world.

IACS is backed in this field through its association with the BOAC and BEA computer groups, from whom it can obtain specialist advice and assistance for particular projects, as well as being able to draw on experience gained by International Aeradio in the operation of airports, communications and air traffic control services throughout the world.

**Kollsman Instrument Ltd**, The Airport, Southamptom, Hants. Eastleigh 2721. Engine life recorder L81380-00-000 is currently in production and development of a second-generation recorder is well advanced. Manufacture of these items for marine and helicopter applications is proceeding. In addition, the company is currently developing solid-state air data computers, of both digital and analogue types. An optical pyrometer amplifier and a fuel heater control system have been developed for Rolls-Royce for Concorde application.

**Marconi Communication Systems Ltd**, Marconi House, Chelmsford, Essex. Chelmsford 53221. The following three companies make up the group:—

Marconi Radio Communications Division, Marconi House, Chelmsford, Essex. Chelmsford 53221. Complete static and transportable HF point-to-point radio communications systems, including the Marconi Self-Tuning system. Complete transportable microwave and tropospheric scatter systems. Mobile radio communications systems. Complete shipborne radio communications systems.

Marconi Space Communications Division, Movable House, Great Baddow, Chelmsford, Essex. Chelmsford 53255. Civil and military satellite communications Earth stations. Military fixed and transportable stations both landbased and shipborne; radio-astronomy equipment; weather stations; satellite telemetry command and control stations; communications and other electronic packages for satellites.

Marconi Line Communications Division, Writtle, Essex. Writtle 451. PCM telephony systems, data transmission systems, automatic correction telegraphy equipment. Message switching systems based on MARS (Marconi automatic relay system) for transfer of flight information, bookings etc, from airport to airport.

**Marconi-Elliott Avionic Systems Ltd, Airport Works, Rochester, Kent. Medway 44400. The following four companies make up the group:—**

Marconi Aeronautical Division, Basildon, Essex. Basildon 2282. Civil and military airborne electronic equipment. Automatic communication finders; Doppler navigation sensors; navigation computers and displays; VOR/ILS and DME navigation aids. HF and VHF communications equipment; HF/ VHF tactical communications equipment; Selcal selective calling system and aerial tuning units. Digital computer and moving-map display for flight navigation/control, fuel management, etc. Analogue computers.

Elliott Flight Automation Division, Airport Works, Rochester, Kent. Medway 44400. Marconi Automation Division: HS.801 Nimrod tactical system, application of computing in inertial navigation, flight control and flight management.

Airborne Displays Division: Head-up and head-down displays, including A-7D, A-7E. ILAAS, Viggan, Buccaneer, Belfast; trials installations in DC-9, Comet and Sea Vixen: 80 Series for civil airliners.

Aircraft Engine Instruments Division: flowmeters, fuel contents gauging and engine instruments in most current British aircraft; new applications include Concorde, Phantom, Harrier, Boeing 747.

Automotive Test Equipment Division: computer-controlled automatic test installations, including those for HS.801 and A-7 head-up display.

Aviation Service & Repair Division: worldwide after-sales support, contract maintenance and repair, and engineer training for Elliott and other manufacturers.

Flight Automation Research Laboratory: advanced research on flight control and guidance techniques.

Flight Instruments Division: air data computers and flight instruments in HS.801, Jaguar, C-5A, A-7E, Concorde and others.

Gyro Division: Quantity production of subminiature precision gyros for Harrier, Sea Dart, Martel and others.


Military Aircraft Controls Division: automatic stabilisers and autopilots for combat aircraft, helicopters and drones, including Harrier, WG.13; Lightning, Buccaneer, Phantom, Jindivik, Hunter, MK.1; export management analogue comp; for C-5A.

Transport Aircraft Controls Division: autopilots and automatic landing systems for Concorde, VC10, BAC One-Eleven; undercarriage alignment control for C-5A.


Mobile Radar Division: mobile transportable and portable radar and allied systems, including Tobias seismic intruder alarm and EZ.298 battlefield surveillance radar.

Neutron Division: Neutron devices, X-ray tubes, lasers and associated equipment.

Research and Advanced Projects Department: system feasibility and design studies, and basic technique and component investigations, both for Elliott Automation and for external organisations and Government departments.

Radar Service & Repair Division: after-sales support of radar and communications equipment.

Manufacturing Division: quantity production.