

the **Combined Strength** of Ultra





Ultra Electronics is a group of specialist businesses designing, manufacturing and supporting electronic and electromechanical systems, sub-systems and products for international defence and aerospace markets.

The Group, which employs 2,400 people in the UK and North America, focuses on high integrity sensing, control, communication and display systems with an emphasis on integrated Information Technology solutions.

The Group concentrates on obtaining a technological edge in niche markets, with many of its products and technologies being market leaders in their field.

Ultra has an increasing role of supporting prime contractors by undertaking specialist system and sub-system integration using the combined expertise of the Group businesses.



HIPSS IN THE HUB, POWER GENERATION FOR PROPELLER DE-ICING



ULTRAQUIET CABIN

AIRCRAFT CABIN

NOISE REDUCTION

SYSTEM



THE QUEEN'S AWARD FOR ENTERPRISE 2000 FOR THE MAGICARD PRINTER AT OCEAN SYSTEMS

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Financial Highlights

"The Group once

levels of sales and

generation."

again produced record

profits in 2001, coupled

with outstanding cash



97 98 99 00 **01**

*Pre-amortisation of goodwill

hts

	2001 £m	2000 £m	Growth
	239.5	226.9	+6%
*	27.1	25.6	+6%
	30.1p	29.0p	+4%
unds	42.5	33.0	
in*	13.2%	13.4%	
umber)	2,376	2,303	

Profit before tax*

Earnings per share*





Ultra Electronics at a glance

Ultra Electronics specialises in the design, manufacture and support of electronic and electromechanical systems, sub-systems and products for aircraft, ships, submarines. armoured vehicles and airports The businesses are classified into two divisions: Air and

- Land Systems
- Information and Sea Systems

Air and Land Systems

Designs and manufactures a range of advanced technology products primarily for civil and military aircraft

CONTROLS DIVISION

Landing gear computers, electronic flight controls, propeller electronic controls supervisory engine controls, electrical generators for propeller de-icing and propeller balancing systems.

DATEL DEFENCE LTD

High integrity systems including safety critical software, Internet-based shared working environments and secure communication networks.

ELECTRICS DIVISION Specialised control handles, high integrity

switches and indicators, lighting system conduit cable harnesses, terminal blocks. Data management systems for armoured vehicles.

FLIGHTLINE SYSTEMS Sonobuoy telemetry receivers for maritime patrol aircraft and helicopters. Mechanical gyroscopes.

HERMES ELECTRONICS INC Passive sonobuoys and bathythermal buoys. Towed array sonars. High power sonar transducers.

Information and Sea Systems

Provides IT solutions for military and civil use. Designs and manufactures a range of advanced technology products primarily for ships, submarines and other naval applications.

ADVANCED PROGRAMMING CONCEPTS INC Battlespace IT solutions. Software based data fusion and display systems for applications in military command, control, communications, computers, intelligence, surveillance and reconnaissance (C⁴ISR) systems.

COMMAND AND CONTROL SYSTEMS Battlespace IT solutions. Geographical information management systems. Datalink communication systems. Multifunction console systems with integrated application software and flat panel displays for command and control. Weapon interface electronics

EMS DEVELOPMENT CORPORATION INC Specialised power supplies and demagnetising systems for the electromagnetic silencing of naval vessels. Magnetic measurement ranges.

MEASUREMENT SYSTEMS INC Displacement and force joysticks, hand grip controls, trackballs, encoders and simulation equipment

NOISE AND VIBRATION SYSTEMS Aircraft cabin quieting systems using active noise and vibration control technology

SONAR AND COMMUNICATION SYSTEMS Active and passive sonobuoys. Receivers and acoustic processors for maritime patrol aircraft and helicopters. Torpedo defence systems and countermeasures. Datalink communication systems

UNDERSEA SENSOR SYSTEMS INC Active and passive sonobuoys, advanced autonomous sensor systems, hydrophones.

WEAPON SYSTEMS

High pressure pure air generators (HiPPAG) for cooling thermal imagers and infra red sensors, and for pneumatic ejection of aircraft munitions. Sidewinder missile overhaul and repair.

FERRANTI AIR SYSTEMS LTD

Airport IT system integration. IT services and solutions for airlines and airports: central database (UltraDB); flight information (UltraFIDS); management information (UltraMIS); passenger bag matching (UltraTrak); resource management (UltraResource); data acquisition and control (UltraControl)

OCEAN SYSTEMS

Naval sonar systems. Multi-beam sidescan sonars and sonar performance measurement Contract manufacturing. The Magicard range of identity card printers. PMES

High power solid state power conversion and control equipment, naval data distribution systems, sonar and acoustic systems

SIGNATURE MANAGEMENT SYSTEMS Multi-influence measurement ranges for measuring complex signatures of naval vessels. Magnetic sensors, instruments and ship demagnetising systems.



Chairman's Statement

I am delighted that Ultra has achieved another set of record figures, with growth in both sales and profits, reflecting the continuing success of the Group's strategy of developing niche technologies and of making targeted acquisitions.

its customers.

Sales were 6% higher at £240m (2000: £227m) and the Group operating margin was again above 13%. Profit before tax and amortisation of goodwill grew by 6% to £27.1m (2000: £25.6m). After a small increase in the effective tax rate, EPS increased to 30.1p in 2001 from 29.0p last year.

they arise.

At the year-end the Group order book was up by 15% to £315m (2000: £275m), with Ultra selected for further significant defence programmes in early 2002. With many of the contracts won representing the early stages of large, high value programmes, the Group is well positioned for the coming years.

The US is becoming an increasingly important market for Ultra, now forming 30% of the Group's sales, and this is expected to continue to grow in the light of recently announced growth in US defence expenditure. Ultra is already securing more business in the battlespace IT arena as a result of the increased global terrorist threat. The medium-term outlook is for good growth in defence markets and for some recovery in the civil market. The Group's businesses are well positioned to benefit from any upturn in the aerospace market. The major new programmes won in early 2002, the exciting military and civil prospects and the strong order book combine to give the Board confidence in the prospects for growth in 2002 and beyond. Finally, a thank you to all Ultra employees for their consistent hard work and dedication throughout the year.





Ultra is now a world-class aerospace and defence company and this was reflected in the type, size and geographical spread of contracts secured by the Group this year. These excellent results, during a difficult time for the electronics and aerospace industries, are testimony to the Group's ability to deliver market-leading solutions to

A feature of the year was the very strong cash performance of the Group: headline operating cash flow was £39.3m, compared to £19.8m in 2000 and net debt fell to £40.6m (2000: £55.9m). This leaves the Group well positioned, with a strengthened balance sheet, to take advantage of future acquisition opportunities as

On the basis of this year's performance, the Board is recommending a 7% increase in the final dividend, making a total of 10.4p for the year (2000: 9.7p).

The Group's civil aerospace business was affected by the impact of terrorism in North America through the widely reported downturn in demand for aircraft and, in particular, by the impact on the profitable spares and repairs market. However, Ultra has had some notable contract successes in the defence market that have

counterbalanced this effect. I am particularly delighted that success on a number of these contracts has been achieved by the strong combination of Ultra businesses working together to meet the customers' requirements.

2001 was also a year of consolidation for Ultra as the Group digested its acquisitions of the two previous years. These acquisitions are trading profitably and have contributed to the improvement in cash flow.

Chief Executive's Operations Review



Julian Blogh, Chief Executive

The Group once again produced record levels of sales and profits in 2001, coupled with outstanding cash generation. Most importantly, the Group was successful in securing key contracts on both new and existing programmes and was selected by the MoD for potentially its largest ever contract.

Key contract wins

The Group's strategic focus on programmes that support fast reaction and mobile intelligent systems, as outlined last year, continued to yield benefits during 2001.

Building on successful contracts secured last year on MRAV, the battlefield taxi, and MINDER, the land-mine detection system, Ultra was this year selected to play a significant role on the Vickers Engineer Tank System, the US Small Diameter Bomb demonstration programme and for the production of additional equipment for Eurofighter.

In the naval sector this year, the Group was selected to lead the Royal Navy's Surface Ship Torpedo Defence programme with a £1 million start-up contract. Ultra was also successful in winning contracts for the UK Type 45 Daring class destroyer, with DCNi in France for an export ship programme, with EADS in Germany for the Finnish Squadron 2000 and for further work on the UK Astute and US Virginia classes of submarine.

Our Anti-Submarine Warfare (ASW) products continued to win orders, with contracts received from twelve countries worldwide. Since the year-end, the Group has also been selected to supply the bow-mounted Medium Frequency Sonar for the Type 45 destroyer.

Elsewhere within the Group, Ultra's Weapon Systems business was identified by Lockheed Martin as the supplier of High Pressure Pure Air Generators (HiPPAGs) for the exciting F35 Joint Strike Fighter programme. In civil aerospace, the Group's FASL division won its largest ever airport IT contract in October at Kansas City, USA.

Resulting from these successes, the Group's order book stood at £315m, an increase of 15% at the year-end compared to the same point last year (2000: £275m).

Results

Sales were 5.6% higher at £239.5m (2000: £226.9m) and 3.2% of this growth was organic. Increased demand for battlespace IT products, continuing strong growth in HiPPAG sales and successes in the naval sector were the main reasons for this increase. However, these increases were somewhat offset by the effects of recent terrorist activities. Between 11 September 2001 and the year-end, there was little change in the Group's deliveries of original equipment to the civil market, but there was a large reduction in the spares, repairs and retrofit activity. As this weakness is expected to continue into 2002, together with a reduced requirement for original equipment, some restructuring of the affected businesses took place in the latter part of 2001.

The operating margin before the amortisation of goodwill was 13.2%, in line with the level recorded in 2000. There was a 4.5% increase in operating profit before amortisation of goodwill. Profit before tax and amortisation rose by 5.6% to £27.1m (2000: £25.6m). With Ultra now paying corporation tax in Canada, the effective tax rate before amortisation increased by 1.1% to 27.1%. As a result earnings per share were 3.8% higher at 30.1p (2000: 29.0p).

The operating cash flow was very strong at £35.2m (2000: £16.5m) after capital expenditure and financial investments, and net debt dropped by £15.3m during the year to finish at £40.6m. There were no significant acquisitions in 2001.



Prospects

Defence expenditure in the USA is budgeted to rise by 12% in 2002 with a further similar increase planned for 2003. With 25% of Ultra's sales in the US defence sector, the Group stands to benefit from this expansion. Defence expenditure is also planned to grow in our other major markets in the coming years, with particular emphasis on electronics in command and control and highly mobile platforms, including naval vessels, light armoured vehicles and aircraft. Ultra has focused on these areas and is well placed to see this major part of its business continue to grow at its historic rate.

Major defence opportunities in the UK include:

- the main Surface Ship Torpedo Defence contract
- the Active Search Sonobuoy System
- control electronics for the UK's submarine fleet.

High potential programmes in the USA include HiPPAG contracts for:

- the US Small Diameter Bomb programme
- the F35 Joint Strike Fighter programme.

Although a smaller part of the Group at 16% of sales, Ultra's civil aerospace business will suffer a decline in sales and profits in 2002, following the September terrorist activity. In contrast, opportunities in the civil field include the systems integration project for Heathrow's Terminal 5. Ultra's new Magicard printers are showing excellent acceptance by the market and the Group is seeing good demand for its electrical power equipment in the light and mainline rail markets.

The outlook for the Group's defence business is strong, particularly in the US where the defence budget is growing rapidly. Recent excellent programme wins in the UK will also contribute to Ultra's growth and more than compensate for the civil aerospace weakness. These factors, coupled with an increased order book, make the Board confident about prospects for growth in 2002 and beyond. Ultra is supplying the bow sonar and other equipment for Type 45 Daring class destroyers.

"...the Group was successful in securing key contracts on both new and existing programmes and was selected by the MoD for potentially its largest ever contract"

Air and Land Systems

Information and Sea Systems



Air and Land Systems

Air and Land Systems comprises ten businesses in the UK and in North America which supply electronic systems, sub-systems, products and components for civil aerospace and defence applications.

The division continued to grow in 2001, with sales 4.3% higher at £165.1m (2000: £158.3m). Operating profit before goodwill amortisation increased by 8.8% to £24.1m (2000: £22.1m). Key contributors to this performance included the Group's world-leading Anti-Submarine Warfare (ASW) products and HiPPAG, as well as a full year's contribution from Datel Defence Ltd, acquired in April 2000.

Throughout 2001, Ultra was highly successful at working with customers to win business on new platforms and for additional equipment on existing programmes. In the year, contracts for the supply of additional components took the total value of Ultra equipment on each Eurofighter over £200,000.

In November 2001, Ultra was selected for the Surface Ship Torpedo Defence (SSTD) system for the Royal Navy. In order to safeguard the 2004 in-service date while the MoD reassesses its operating commitments, an initial contract was received in 2001 with most of the balance to a total of £54m expected in 2002, subject to the programme being re-endorsed.

In line with the Group's strategy to focus on mobile and intelligent systems, Ultra has been selected to supply the indirect vision system and databus highway for the Engineer Tank System being developed by Vickers Defence Systems for the UK MoD. This system helps ensure that the crew maintains full visual awareness at all times.

Ultra is an acknowledged market leader in a number of different market niches within airborne ASW. Most notably, Ultra is the world leader in the supply of sonobuoys, the sensors for the systems that detect and track submarines acoustically. Ultra has maintained market share in its main markets and has increased its penetration of export markets. In 2001, the Group won orders for sonobuoys from Australia, Canada, France, Italy, Germany, Greece, South Korea, Norway, Poland, Spain, UK and the USA.



Information and Sea Systems

Information and Sea Systems consists of seven businesses in the UK and the USA supplying information management and power systems, sub-systems and products for commercial, defence and airport applications worldwide.

Divisional turnover was £74.4m (2000: £68.6m), an increase of 8.5% of which organic growth was 5.6%. There was a 7.1% reduction in operating profit before goodwill amortisation to £7.6m (2000: £8.3m) which was mainly due to relatively low profit margins on long-term naval programmes, reflecting the Group's prudent accounting policy in the early stages of such contracts. Further analysis is given in the Financial Review section of this report. Order intake remained strong and the closing order book was 13% higher at £77m, supporting expectations of sustained growth in this division in the coming year.

In line with Ultra's strategy, a feature of the success of Information and Sea Systems in 2001 was the international nature of much of the business won.

Ultra secured a contract in the year to supply DCNi, the French naval organisation, with a fully integrated ship's navigation data distribution system for a frigate being built for a Far Eastern navy. Ultra was also successful in the year in winning contracts with Lurssen in Germany to supply the data distribution system for six Turkish Navy minehunter vessels. Other international successes in 2001 included a contract for degaussing equipment for the South Korean Yang Yang minesweeper vessels and continued delivery of command system equipment for the KDX class of destroyer in South Korea through BAE Systems.

This successful strategy is also reflected in Ultra's selection in 2001 by Ericsson to supply consoles, initially for a domestic Swedish requirement and secondly for an ultimate sale to France. EADS in Germany selected Ultra to supply key elements of the combat management system for the Finnish Squadron 2000.

Ultra Electronics does business in the following countries:

 Australia 	• Italy
 Austria 	• Japan
• Bahrain	 Norway
 Belgium 	• Oman
• Brazil	 Poland
• Canada	 Portugal
• Chile	• Qatar
• China	• Russia
 Croatia 	• Saudi Ara
• Czech	• Singapor
Republic	• South Ko
• Eire	• Spain
• Finland	• Sri Lanka
 France 	 Sweden
 Germany 	• Switzerla
 Greece 	• Thailand
 Holland 	• Tunisia
 Hong Kong 	• UK
 Hungary 	• USA



Ultra is the systems integrator for Heathrow's new Terminal 5.

"Order intake remained strong and the closing order book was 13% higher at £77m"

Julian Blogh Chief Executive

Battlespace IT...





1 TACISYS provides geographically 2 Indirect vision system enhances situational awareness





(0 00 H 60000

ADSI displays a real-time view of the tactical battlespac

> Air to ground secure tactical datalink equipr



6 Advanced contro handles for noured vehicle

In future conflicts the side that manages real-time information flows most effectively is likely to have a decisive edge. Ultra is constantly innovating to create new battlespace IT products that help deliver that advantage.

Ultra has a world-class capability to fuse together data from many different military sensors and datalinks in order to display a real-time view of the tactical battlespace. This product, the Air Defense Systems Integrator (ADSI), is at the centre of a new tactical airspace defence system being produced for the US Army. As part of this multi-year programme, 13 ADSI systems were delivered in 2001. Ultra was also selected during the year to design a new command and control processor for the US Navy that will ultimately be used

on most US Navy warships.

ADSI is used by US joint and Allied forces worldwide and has played a significant role in all recent conflicts such as Bosnia, Kosovo and Operations Northern and Southern Watch, enforcing the no-fly zones over Iraq. Most recently, ADSI played a major role in Operation Enduring Freedom in Afghanistan.

Modern fighting forces must be provided with up to date information about the terrain and the latest intelligence information. Ultra is expert at providing geographically referenced battlespace information to the front line. Sophisticated software systems developed by Ultra that aid the provisioning and database management of such information were accepted into service

by the British Army in 2001.

Ultra's innovative Olympus collaborative planning system facilitates sharing electronically real-time geographic and tactical information. This allows the speed of the military operation to be increased - another decisive advantage. In 2001, the Olympus system was taken to Oman as a key component in the successful execution of **Operation Saif Sareea 2, the largest** overseas deployment of UK forces since the Gulf War. Olympus proved to be a highly successful demonstration of innovative battlefield digitisation.

As digital information is shared between allied forces, the methods of data transmission must be secure. Ultra has specific expertise in the design and

implementation of high-integrity digital datalinks and in cryptography. In 2001, Ultra won two significant contracts in the UK together worth over £12 million for advanced cryptographic equipment. Ultra's strategy is to focus on mobile and intelligent systems. Modern armoured vehicles are increasingly fitted with advanced digital management systems. In December 2001, Ultra was selected to develop an indirect vision system for the UK Army's Engineer Tank System. This system ensures that the crew maintains full visual awareness at all times by using commercially available databus technology to pass digital data, including video images, around the vehicle. This

technology will also be applicable to future armoured vehicles.



information for





the **Combined** Strength of Ultra

"In future conflicts, the side that manages real-time information flows most effectively is likely to have a decisive edge"

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Anti-Submarine Warfare...

The number of small, highly capable diesel-electric submarines operating in the world today is proliferating. Detecting them, especially when they deploy in cluttered, noisy, shallow waters, is becoming increasingly difficult. Over the years, Ultra has assembled a world-leading sonobuoy capability to detect submarines. Sonobuoys are the highly sensitive acoustic sensors that are dropped from maritime patrol aircraft and helicopters.

Ultra's capability has been developed both internally, through innovation, and also by strategic acquisitions. Ultra's businesses in the UK, the USA and Canada design and produce a complete range of sonobuoys, encompassing active and passive buoys that can be combined to form the latest multi-static systems,

suitable for detecting even the quietest target. With such a range, Ultra earns contracts from around the world and, in 2001, secured sonobuoy orders from twelve different countries.

The signal from the sonobuoy, carrying the acoustic information about the target, is transmitted back to the aircraft overhead. Ultra supplies the highly sensitive acoustic receivers that pick the signal out from the background. In 2001, Ultra's acoustic receivers were selected by the USA, Canada and Poland and are being developed for the prestigious Franco-Italian NH90 Anti-Submarine Warfare (ASW) helicopter programme in Europe.

In the UK, the Royal Navy's new MRA4 Nimrod aircraft is being fitted with Ultra's

ASW equipment. Here, highly advanced acoustic processors supplement the sonobuoy receivers. These are capable, in the hands of an experienced operator, of identifying the specific submarine being tracked. Ultra's ASW suite is also being retrofitted to the existing UK Mk2 Nimrod fleet – the first updated Mk2 entered operational service in 2001 and rapidly proved its enhanced capability.

Information on the targets being tracked must be passed between platforms in a secure fashion. Ultra also supplies leading-edge tactical datalink and cryptography equipment to support this capability.

Ultra's strategy is to retain its dominant position as the world's leading supplier of expendable ASW detection

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systems for both deep and shallow water. Sonobuoys are normally air-launched, either from helicopters or from fixed-wing aircraft. In 2001, Ultra entered a new and associated area of long-life deployable detection systems that are ship-launched. The first US DoD development contract for these networked sensors was won in the year.



1 Passive sonobuoys detect submarines



2 Advanced display techniques help highlight the target





Active sonobuoys detect even the quietest target

3 Highly sensitive

6 Tactical datalink and cryptography equipment



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10 Ultra Electronics Holdings plc

Acoustic process

help identify the specific submarine

the **Combined** Strength of Ultra

"Over the years, Ultra has assembled a world-leading sonobuoy capability to detect submarines"

Civil aerospace...



 Ultra reduces aircraft cabin noi and vibration





 Advanced propelle de-icing system



UltraTrak baggag

nhances securit



6 Airbus landing

gear control



integrity cockpit

Oltra's public

display solutions

Integrated airport

Modern airports function most efficiently and safely when supported by advanced, integrated Information Technology systems encompassing critical operating information for the airport. Ultra provides integrated solutions for international airports worldwide.

The opening in 2001 of the new Incheon International Airport in South Korea was excellently served by the wide range of IT systems provided by Ultra. This reinforced Ultra's reputation as a reliable professional IT partner for airport construction and refurbishment projects. Ultra is trusted to provide systems on which the airport operation depends, such as the creation and maintenance of accurate databases of operation-critical information and for delivering accurate,

timely information to all airport users, both passengers and staff. In 2001, Ultra was selected as the systems integrator for the new Terminal 5 project at London's Heathrow Airport. Ultra will be responsible for a budget approaching £30m for this project.

During the year, Ultra's strength and capability was also reflected in the decision by Kansas City International Airport to select Ultra to deliver a turnkey IT infrastructure solution to support the airport development programme.

Ultra's integrated IT solutions for airports can play a key role in enhancing security. For example, its UltraTrak baggage reconciliation system helps to ensure that unaccompanied baggage, which could pose a security risk, is not

inadvertently loaded onto an aircraft. In addition, Ultra's new Rio and Tango identification card printers could be used to enhance security by ensuring that access to sensitive areas is better controlled. They incorporate advanced, patented anti-counterfeiting features.

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In civil aerospace, Ultra provides control systems for new Airbus aircraft. Every time the landing gear extends or retracts, Ultra's high reliability electronic systems are in control. Ultra's equipment is fitted to over 2,000 Airbus aircraft worldwide. The Airbus range is being expanded with the addition of the long-range A340-500/600 models. An enhanced Ultra landing gear control was developed for the new aircraft's first flight in April 2001.

Airbus is studying more highly integrated avionic systems for new aircraft designs such as the A380. Ultra is working as a member of a pan-European team of specialist companies in order to maximise the benefits achieved through such integrated avionic systems.

For smaller turboprop aircraft and for advanced business jets, Ultra supplies a system that dramatically reduces the levels of noise and vibration experienced by passengers and crew. The system has been so successful at enhancing the passenger appeal of their aircraft that Raytheon decided in 2001 to extend the number of different aircraft types on which this noise and vibration cancellation equipment would be offered.



the **Combined** Strength of Ultra

"Ultra provides integrated solutions for international airports worldwide'

Ultra Electronics Holdings plc 13

Naval equipment...

Ultra specialises in designing, manufacturing and supporting advanced naval control equipment for ships and submarines worldwide. During 2001, Ultra strengthened its position in this important area.

In 2001, Rolls-Royce selected Ultra to supply modern control and monitoring equipment with the highest levels of integrity. This followed an extensive supplier selection process involving more than 100 UK electronics companies. Design expertise and a proven track record of successful project management were key attributes that aided Ultra's selection, together with a commitment to a successful partnership. Ultra and Rolls-Royce will work together to provide advanced, safety critical electronics to be retrofitted to Royal Navy submarines.

The equipment will control and monitor the electrical and propulsion power generation systems.

Ships and submarines are vulnerable to sea mines that employ fuses able to detect the inherent magnetism of a ship's hull. Reducing this magnetic signature makes vessels more difficult to detect and lowers their susceptibility to mines. In 2001, Ultra won a contract to supply degaussing equipment that will reduce the magnetic signature of the new Type 45 Daring class of destroyer. This follows an earlier contract to supply the equivalent equipment for the Astute class submarines. In addition, Ultra's specialist skills in signature measurement and control have earned export contracts around the world, with current contracts from France, South Korea and Singapore.

Modern naval vessels make increasing use of electrical rather than hydraulic or steam power systems to give design flexibility, high reliability and enhanced tolerance to battle damage. Ultra's high power solid state electrical power conversion and control technology has been chosen for a broad range of applications on the UK Astute class of submarines and is also being supplied for the US Virginia class. On Astute, Ultra's static power converters replace mechanical rotary converters, thereby providing greatly improved efficiencies and reliability.

Ultra has now received contracts in the region of £50m to supply equipment for Astute. One such contract is to develop consoles and software as part of the combat management system.

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Modern submarines no longer have traditional optical periscopes that constrain the design of the boat by dictating where the operations room must be located. Instead, Astute will be fitted with an electro-optical periscope. In 2001, Ultra was chosen to supply the operator console that controls this equipment and provides the periscope picture. Ultra's high-integrity control equipment is also being developed for Astute's weapons launch system and for controlling the deployment of torpedo countermeasures. Ultra therefore makes a significant contribution to the operational

capabilities of modern naval vessels.



 Advanced Ultra command and control equipmen



2 High power

solid state

power control equipment





olling magneti





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3 Advanced naval power contro



Advanced safety critical controls for submarines

the **Combined** Strength of Ultra

"In 2001, Rolls-Royce selected Ultra to supply modern control and monitoring equipment with the highest levels of integrity"

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Military aircraft equipment...





system accuracy





4 Advanced cockpit displays for Pilatus PC 21

Ultra's high-integrit cockpit indicators

Ultra derives a long-term benefit from its unique position on equipment programmes and platforms. Typical project lifecycles can exceed fifty years. For example, the Eurofighter concept was defined in the early 1980s, it will enter front line operations in 2004 and will stay in service until at least 2030. Ships, submarines and armoured vehicles all have similar lifecycles.

Keeping a fast jet in service for so long requires a constant programme of equipment upgrades. Ultra is a key member of the team constantly integrating new and improved weapons and displays into the Tornado fleet. The Group's specialist system and software expertise is critically involved in planning future update programmes. Ultra's

expertise is now also being applied to new programmes including the Nimrod MRA4 and Eurofighter. In 2001, Ultra's role on these two major programmes included completing integration work on Eurofighter's new radar system and hosting the MRA4 utility system's software development team.

3 Ultra supports

Tornado upgrades

Ultra's High Pressure Pure Air Generator (HiPPAG) has succeeded in displacing traditional compressed air bottles on US Navy and Marine Corps aircraft by having significantly lower lifecycle costs. HiPPAG is used both to cool the seekers on missiles and to provide the energy required to eject weapons from launcher rails. In this second application, the use of HiPPAG enhances the accuracy of the aircraft weapons system by

providing improved control over the release of the weapon. This significant operational advantage is in addition to HiPPAG's overall cost benefit. As a result, in 2001, following the selection of Lockheed Martin to supply the F35 Joint Strike Fighter, Ultra was nominated as a member of the winning team to supply HiPPAG as a vital element of the advanced weapons ejection system. In addition, as part of its competitive team, Boeing included HiPPAG in its solution for the US DoD Small Diameter Bomb programme under which existing aircraft fleets can be adapted to carry a larger number of

The pace of aircraft development is increasing. Ultra has a proven ability to shorten the development cycles for

smaller, smart munitions.

advanced cockpit displays by the use of modern computer aided engineering and simulation tools, coupled with thorough domain knowledge. These techniques facilitated a successful first flight in 2001 of the demonstration cockpit system for the new PC21 trainer aircraft from Pilatus. Ultra's ability quickly to develop variants of the cockpit displays that emulate different types of fast jet attack aircraft will be a key feature of the PC21.

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the **Combined** Strength of Ultra

"Ultra is a key member of the team constantly integrating new and improved weapons and displays...

Torpedo defence...

Since the early 1990's, the UK and US navies have together studied how to improve the protection given to their warships from torpedo attack. Ultra was a major player in the joint US/UK Surface Ship Torpedo Defence (SSTD) feasibility and demonstration programme. In the late 1990's, the UK decided to proceed alone to equip its major naval ships with a new torpedo protection system. In December 2001, Ultra was selected, against international competition, for the development and supply of the SSTD system.

The system detects and locates incoming torpedoes and provides the means to decoy or jam the homing mechanism of the torpedo. The system also provides the captain with tactical advice on ship manoeuvres.

Ultra's winning SSTD solution demonstrates how the combined Group has developed to offer a world-beating capability. Ultra's Sonar & Communication Systems business leads the team and draws on its years of experience in underwater acoustic detection, acoustic countermeasure devices, advanced systems engineering and successful project management of multi-company projects.

Ultra's PMES business, acquired in 1998, is expert at sensing the hostile transmissions that may indicate a torpedo is about to be launched. PMES also specialises in the detection of a torpedo's active homing system.

Within the Ultra team, Hermes Electronics, Canada, acquired in 1995,

will supply the array of sensors that is towed behind the ship to detect acoustically the incoming torpedo once it is in the water.

The Group's Ocean Systems division brings great experience of providing the electronics that process the signals from the acoustic detection system. This capability at Ocean Systems is also recognised by its winning, in early 2002, the competition to supply the Type 45 Daring class destroyer with a self-defence bow sonar system.

In April 2000, Datel Defence joined the Ultra Group. This acquisition strengthened Ultra's systems and software capability and Datel's expertise is a key element of the winning SSTD team.

The UK's SSTD solution is designed

0 0



 Ultra's system and software integration



2 Intercept sonar picks up the torpedo homing system



3 Acoustic receiver for the NH 90 helicopte







Tactical displays for



defeat or decoy the torpedo





to be easily integrated with other ship's systems. This enhances Ultra's SSTD system's suitability for export sales. of these Ultra businesses has produced



launch equipment

• The ship's

the **Combined** Strength of Ultra

Working together, the combination a formidable capability to develop and produce the SSTD system.

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"Ultra was selected, against international competition, for the development and supply of the SSTD system"

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Financial Review

Sales by Geographical Destination



Sales by Market Segment





David Jeffcoat, Finance Director and Company Secretary

Trading results

Group turnover increased by 5.6% in the year to a record £239.5m. Underlying organic growth was 3.2% and there was an additional contribution from the DF Group, acquired in April 2000. There were no significant acquisitions in 2001. Operating profit before goodwill amortisation was 4.5% higher at £31.7m, representing an operating margin of 13.2% (2000: 13.4%).

Air and Land Systems continued to perform strongly during the year. Sales increased by 4.3% to £165.1m and operating profit before goodwill amortisation was 8.8% higher at £24.1m, equivalent to an operating margin of 14.6% (2000: 14.0%). Divisional growth was boosted by the achievement of sustained levels of production of two new sonobuoys at Ultra's North American facilities, together with rapid growth in the sales of HiPPAG. Conversely, the Group's civil aerospace businesses experienced a fall-off in sales and profits in the second half of the year, reflecting the first signs of order cutbacks due to the industry downturn since 11 September.

Sales in Information and Sea Systems grew by 8.5% to £74.4m during 2001 and underlying sales growth was 5.6% after eliminating the additional contribution from Ferranti Air Systems. This return to positive organic growth is in line with Ultra's previous predictions and reflects increasing activity on a range of naval contracts. The Group maintains a prudent profit recognition policy at the early stages of such contracts and this has reduced overall profitability. Ferranti Air Systems experienced lower demand for its airport systems during the year, reflecting the current uncertainty in the civil aviation sector. As a result of these factors the divisional operating margin was lower at 10.3% (2000: 12.0%). Operating profit before goodwill amortisation was £7.6m (2000: £8.2m).

With regard to exchange rates,

Ultra's main exposure is to the US Dollar with lesser exposure to the Canadian Dollar. The average Sterling exchange rate against the US Dollar weakened by 3% during the year, leading to a greater contribution from the American subsidiaries whose results are translated into Sterling. The impact upon Group sales and profits was an increase of less than 1% in both cases.

The proportion of sales in overseas markets increased to 53% in the year (2000: 50%), reflecting Ultra's continuing success in reducing its dependence upon the UK. Sales in North America, Ultra's largest overseas market, remained at 35% of total Group turnover during the year. The most significant change occurred in sales to Continental Europe, which rose to 13%. Sales of sonobuoys to this part of the world were strong and the Group had marked success in winning new naval business with European governments and prime contractors. UK sales were slightly lower in 2001 as the domestic sonobuoy demand returned to normal levels following a peak in the previous year.

HiPPAG and higher activity levels on Nimrod and Ultra's long-term naval contracts made the biggest contribution to sales growth last year. With relatively flat sales in the civil aviation sector, the proportion of military sales increased in 2001 to 77% (2000: 75%).

Group-funded revenue investment in research and development was £10.0m. When combined with customer-funded activities, the total investment in new products was £50.1m. This was equivalent to 21% of turnover, in line with previous levels of investment. The biggest development programmes during the year were the Nimrod, Tornado and Astute programmes and Ultra's Air Defense Systems Integrator product.

Interest and profit before taxation

A reduction in net debt and the lower

prevailing interest rates combined to limit the net interest charge to £4.6m (2000: £4.7m). This was despite the fact that the loan to purchase the DF Group was in place for a full year, three months more than in 2000. The interest charge was covered 6.9 times by profits before goodwill amortisation. Headline profit before taxation and amortisation was £27.1m, 5.6% more than in 2000 (£25.6m). Amortisation of goodwill increased to £3.6m reflecting the full year's impact of the amortisation associated with the DF Group acquisition. The value of the DF Group goodwill was confirmed at £43.1m during the year.



Sales of HiPPAG grew rapidly in 2001

Taxation

The Group's effective tax rate on profit before goodwill amortisation was 27.1%, up 1.1% compared to the previous year. Ultra was a full taxpayer in Canada for the first time, having used up prior years' tax losses. The Group continues to benefit from tax losses in the USA although these will unwind over the next two to three years. There was an unrecognised deferred tax asset of £1.4m at the end of the year.

Earnings per share and dividends

Earnings per share before goodwill amortisation increased by 3.8% to 30.1p, reflecting the higher tax rate. The proposed final dividend is 7p, bringing the total dividend for the year to 10.4p. This represents an annual increase of 7.2% and reflects the Board's confidence in

Ultra's future prospects. The dividend is covered 2.9 times by earnings per share before amortisation.

Cash flow and borrowings

The Group recorded excellent operating cash flow, after capital expenditure and financial investments, of £35.2m in the year (2000: £16.5m). The ratio of operating cash to operating profit before amortisation was 111%. Capital expenditure was £3.4m, with no single major investment project. Operating working capital levels dropped by £3.2m despite the increase in turnover. As a result of this strong cash performance, free cash flow before dividends was more than £21m and net debt was £15.3m lower, finishing the year at £40.6m.

Financial risk management

Ultra's financial instruments, other than derivatives, comprise borrowings, some cash resources and sources of funding such as trade debtors and trade creditors. These are used to raise finance for the Group's operations. Ultra uses forward currency contracts, an interest rate collar and an interest rate swap to manage the currency and interest rate risks associated with its underlying business activities and their financing.

Group policy prohibits speculative transactions and no trading activity in financial instruments is undertaken. Treasury policies are determined by the Finance Director based on forecast business requirements and are reviewed regularly.

Interest rate risk

The Group finances its operations through a mixture of retained profits and bank borrowings. Ultra has £15m of Sterling facilities and a US \$32m facility with the Royal Bank of Scotland. The Sterling facility is used to provide working capital. The US Dollar facility was utilised for acquisitions and also provides a balance sheet hedge for foreign subsidiaries'

assets. A further £5m overdraft facility is available, also for working capital funding. These facilities are drawn down as and when required.

The Group took out a £45m term loan, repayable over five years, from the Royal Bank of Scotland during 2000 to finance the acquisition of the DF Group. The interest rate on this loan has been fixed at 7.8% using an interest rate swap. A collar is used to manage Ultra's exposure to US interest rate fluctuations.

At 31 December 2001, 20% of the Group's borrowings were at floating rates after taking account of the interest rate collar.

Foreign currency risk

The Group has overseas subsidiaries whose assets and liabilities are denominated mainly in US Dollars. These investments are financed by means of the US Dollar borrowings to protect the Balance Sheet from movements in the Dollar/Sterling exchange rate. Virtually all of Ultra's civil aerospace sales are denominated in US Dollars. As a result the principal currency translation exposure is to the US Dollar and the Group's policy is to hedge the net exposure using forward foreign exchange contracts. Exposure to the Canadian Dollar is hedged in the same way. Any remaining currency exposures are hedged as they arise.

Financial reporting

Note 24 to these accounts contains new disclosures on the Group's pension funding position in accordance with FRS17 - Retirement Benefits.

David Jeffcoat Finance Director and Company Secretary

Board of Directors



Peter Macfarlane* FCA FCT, Non-Executive Chairman, age 63, gualified as a Chartered Accountant with Touche Ross and, after three years with Coopers & Lybrand, joined Kimberley Clark, managing their financial affairs in Europe, Africa and the Middle East. He joined Rolls-Royce in 1979 as Group Treasurer and, after a period as Director of Corporate Development, he was appointed Finance Director in 1989. Mr Macfarlane retired from the board of Allied Domecq plc on 10 February 1998 where he had been initially Finance Director and subsequently Chairman of two divisions. He was appointed to the Board of Ultra in January 1995.



Julian Blogh CBE BA MSc PhD CEng MIEE, Chief Executive, age 58, has spent most of his working life in the electronics industry working with Ferranti Radar, Plessey Radar and Dowty Electronic Systems. He was Managing Director of Sonar and Communication Systems from 1987 to 1992, when he was appointed Managing Director of Dowty Avionics. He became Chief Executive of Ultra Electronics when it began trading in October 1993.



Douglas Caster BSC AMIEE,

Managing Director, Information and Sea Systems, age 48, started as a Design Engineer with Racal in 1975, before moving to Schlumberger and then to Dowty as Engineering Director of Sonar and Communication Systems in 1988. In 1992, he became Managing Director of that division and joined the board of Ultra in October 1993. In 1999 he became Managing Director of Command and Control Systems with responsibility for Ocean Systems, PMES, and APC. In April 2000, he was appointed to his current position.



Andrew Hamment BA,

Marketing Director, age 47, started his career with Hawker Siddeley before moving to Schlumberger in 1980, working in procurement and then marketing at Weston Aerospace before transferring to Solartron as Aerospace Business Manager. He joined Dowty in 1988 as Managing Director of the Controls business. He was appointed to his current position in July 2000 and joined the Board at that time.



Sir Frank Holroyd* KBE CB MSc FREng CEng FRAeS FIEE CIMgt, Non-Executive Director, age 66, retired from the RAF in 1991 as Air Marshal after 35 years' service, latterly as Chief of Logistics and Chief Engineer. Formerly Chief Engineer of Strike Command and Director General of Procurement (MoD) for Strategic Electronic Systems, he is Chairman of Composite Technology Ltd, Deputy Chairman of Military Aircraft Spares Ltd and Deputy Chairman of Council at Cranfield University. Sir Frank was appointed to the board of Ultra in March 1995.



David Jeffcoat BA FCMA, Finance Director, age 51, started his career in the motor industry as a Production Engineer. Since gualifying as an accountant he has held senior financial positions in several large corporations including GlaxoWellcome plc, where he was Finance Director of two subsidiaries. Before joining Ultra he was Group Financial Controller of Smiths Industries plc. He has significant international experience, having worked abroad in Canada and South Africa. He was appointed to the Board in July 2000.



Frank Hope BSc PhD CPhys MinstP, Managing Director, Aircraft and Defence Land Systems, age 47, started his career with Tecalemit as a design engineer working on robotics. He spent 13 years with Avimo Limited latterly as Managing Director, having previously held the positions of Technical Director and Operations Director. He joined Ultra in 1994 as Managing Director of the Electrics division and was appointed to the board of Ultra in January 1999. In April 2000, he was appointed to his present position.



Andrew Walker*MA CEng, Senior Non-Executive Director, age 50, was appointed to the board in June 1996. Joining the Dowty Group plc in 1978, he held various positions, becoming an operating board member during 1991/92. Following TI Group's acquisition of Dowty, he became Managing Director of John Crane Polymer Engineering. He was Chief Executive of South Wales Electricity plc (SWALEC) from 1993 to 1996, and was Chief Executive of McKechnie plc from 1997 to 2001. In 2000, he successfully led the MBO of McKechnie plc.

Executives and Advisors

Executive

GROUP MANAGEMENT Dr. Julian Blogh CBE **Chief Executive**

Douglas Caster Managing Director, Information and Sea Systems

Andrew Hamment **Marketing Director**

Dr. Frank Hope Managing Director, Aircraft and Defence Land Systems

David Jeffcoat Finance Director and Company Secretary

Jack Telfer Human Resources Director

DIVISIONAL MANAGEMENT Harry Young, President, Advanced Programming Concepts Inc

Paul Summers, Managing Director, Command and Control Systems

Dr. Colin Ross, Managing Director, **Controls Division**

Keith Morris, Managing Director, Datel Defence Ltd

Dr. Frank Hope, Managing Director, **Electrics** Division

Alan McCartney, Managing Director, Ferranti Air Systems Ltd

Mick Drustrup, President, EMS Development Corporation Inc

Carlos Santiago, President, Flightline Systems

Doug Burd, General Manager, Hermes Electronics Inc

Ken Tasch, President, Measurement Systems Inc

Keith Thomson, Managing Director, Noise and Vibration Systems

Ray Coles, Managing Director, Ocean Systems

Andrew Freer, Managing Director, PMES

lan Mence, Managing Director, Signature Management Systems

Rakesh Sharma, Managing Director, Sonar and Communication Systems

Wayne Trowse, President, UnderSea Sensor Systems

Roland Fritts, President, UnderSea Sensor Systems Inc

Paul Benson, Managing Director, Weapon Systems

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