

MARCONI AVIONICS NEWS

House Journal of Marconi Avionics Limited

MOTTO FOR THE MONTH

★ ★ "So many men, so many opinions, his own a law to each." ★ ★

A Prayer for Easter

"O God, who through the mighty resurrection of Thy Son Jesus Christ hast delivered us from the power of darkness and brought us into the Kingdom of Thy Love: Grant that as He was raised from the dead by the glory of the Father, so we also may walk in newness of life and seek those things that are above, where with Thee, O Father, and the Holy Spirit, He liveth and reigneth for ever and ever.

Adapted from Gelasian Sacramentary.

10,000 GYROSCOPE MARKS BRITISH PRODUCTION ACHIEVEMENT

Productivity the key to sales and jobs growth in Marconi Avionics.

The 10,000th example of one of the world's most widely-used precision rate gyroscopes, the GR-H4, was handed over to the United Kingdom's Ministry of Defence. Produced by Marconi Avionics Limited the gyro, hardly bigger than a man's thumb, has proved a key element for the stabilization and guidance systems of many kinds of land, sea and air vehicles and missiles.

The handing-over took place at a ceremony at Airport Works, Rochester, before a large gathering which included press from different parts of the world and other interested people. Since UK



Part of the assembled gathering. (A)

production of the GR-H4 began, some 15 years ago, under licence from the Northrop Corporation of the United States, the Division has systematically developed the design for increasingly demanding applications. These developments have also enabled the real cost of the gyro to be reduced nearly three-fold during the same period.

As a result, the GR-H4 has proved competitive in such applications as the radar guidance system of the SKY FLASH missile, key armament of the RAF's new TORNADO fighter, the stabilization of HARRIER and SEA HARRIER aircraft, the guidance systems of UK MARTEL and SEA DART missiles, the flight test system of the CONCORDE SST prototypes and stabilization of HOVER-MARINE air cushion craft.

The handing-over of the 10,000th GR-H4 gyro occurs during a period of steady expansion in Gyro Division's production and applications teams. The advances made in detail design, to enhance the gyro's performance and to reduce its cost, coupled

with such developments as 'strapdown' systems, have led to an expansion of sales and a five-fold growth in the size of the Division, over the 15 year period.

The 10,000th gyro was handed over to a senior member of the Ministry of Defence (Procurement Executive) by Charlie Evans (who has worked on gyros during most of his 25 years with the Company), for use in the SKY FLASH programme. Participating in the ceremony are members of another GEC-Marconi Electronics Company, Marconi Space and Defence Systems Limited, MASDS has responsibility for the guidance system for SKY FLASH and for many other types of missile.



Charlie Evans presenting the 10,000th Gyro to MOD representative, Mr. Jeff Collins. (A)



Mr. Jeff Collins, MOD, handing over the 10,000th GR-H4 to Mr. Jim Paton, MASDS. (A)

COMPANY CLASH

"It was a famous victory" wrote the poet, as he eulogized over the battle of Blenheim.

These sentiments can be applied to the team which represented Marconi - Avionics in this annual event sponsored by BBC - Radio Medway and the Junior Chamber jointly.

The first round saw Marconi victorious over Kent Messenger by 55-38. In the quarter-final Marconi Avionics beat Whitbread by 56-37.

Semi-finals and final were held at Corpus Christie Hall, Maidstone, on Thursday 28 February Results as follows: Marconi Avionics 42 - Reed International 24. Blue Circle triumphed over Kent Police in the other semi-final by 1 point.

Marconi Avionics, were victors in the final over Blue Circle, the scores being 36-32. Both teams were equal at the start of the 'buzzer' round.

Broadcasts of the whole contest, in half hourly programmes, begin on Tuesday 18 March at 2.00 pm and are repeated on the following Thursday at 6.00 pm, each week until 24 and 26 June.



The team in session, Rod Cole is on the extreme right.



Rod Cole receiving the trophy.



DO YOU ששחא?

SEALS, SEA-LIONS AND WALRUSES. (PINNIPEDS)

Largest

The largest of the 32 known species of pinnipeds is the southern elephant seal, of the sub-antarctic islands. Adult bulls average 16½ ft in length (snout to tip of tail), 12 ft in girth and weigh 6,000 lb. The largest specimen on record was a bull killed in Possession Bay, South Georgia, on 28 February, 1913, which measured 22½ ft long and weighed 12,000 lb.

Fastest swimming and deepest diving

The highest speed measured for a pinniped is 25 mph for a Californian sea-lion. It was reported in March 1966 that a dive of 1970 ft had been recorded by a depth gauge attached to a Weddell seal, which remained under water for 43 minutes 20 seconds, in McMurdo Sound, Antarctica. The seal withstood a pressure of 875 lb per square inch. Some of this species have been measured to swim under ice for 19 miles, utilizing the layer of air sometimes trapped on the underside of the ice.

NOTICE

Will the employee who corresponds with:
Mr. M. Gelliot,
F9 Grosvenor Place,
Grosvenor Street,
Manchester M1 7HR

Please note the Post Office are returning his mail marked 'gone away'.



CASTAWAY
Len Pavitt

This month we selected a well known member of CMS, in the person of Len (Leonard) Pavitt the Aquo-Blast Operator.

An ex-soldier, formerly in the Queens Own Royal West Kent, he was a TA and as such called to active service in August 1939, serving in France (BEF), Dunkirk and the Western Desert.

A lover of singing, he was a member of the Gillingham Parish Church Choir, Dockyard Choral Society and Gillingham Operatic Society. As a true man of Kent, he is a keen follower of Kent County Cricket Club.

His choice of music and books for a desert island would be:

Music

1. Marching Round The World by R.E. Band (Chatham) — to keep me in step.
2. Elgar Cello Concerto — to remind me of England in springtime.
3. Symphony No 8 in E by Dvorak — symphonic music at its best.
4. Vivaldi-Gloria — Choral Society memories.
5. Home Sweet Home sung by Deanna Durbin — nostalgic! Heard at dusk in the Western Desert and not knowing whence it came.
6. St. Matthew Passion by Bach — to be uplifted by the final chorus.

Books

1. M.C.C. by Colin Cowdrey — to remind me of the great days of Kent Cricket.
2. Touring Guide to Britain (AA) — for antichair travel.
3. The Best of Benjamin — selected by John Guest which I never tire of reading.

NOTICE

For the Easter holiday break —
Works and offices will close at the normal shift finishing
times on Thursday, 3 April, 1980, and re-open on Tuesday
8 April.

Another winner

Successes still continue to be enjoyed by employees of Marconi Avionics in various facets of life.

T. Paine, of the Cost and Budget Dept. ADD, won a cheque in the Gillingham Football Club Lottery in February. The prize £1000.

Mr. Paine is a Gillingham F.C. supporter of a unique kind, hardly missing a match either at home or away. He helps during the close season by doing odd jobs around the stadium, even to the extent of giving up some of his holidays to do it. A supporter for 17 years, he is a member of the travel club attached to the 'Gills'.

A former footballer with ambitions of becoming a professional, his career was cut short when he had an accident during a match.

Holiday time is here again!

Want to give the family a treat and save money?

Then why not buy a family railcard. Either a two adult railcard for £16 or a one adult railcard for £8. Up to four children then qualify to travel at the cost of 50p each. Yes, only 50p for the children, up to 14 years old.

This means for the cost of an ordinary second class return ticket for yourself, you can take the kids with you for an additional 50p each only. Shopping sprees, visits to the countryside or the coast all become possible for very little expense.

Interested? Get a brochure and application form from Lorna McPake, Travel Manager (int. 894).

MARRIAGES

Tina Lorrax Gould of Ditton, to Frederick Charles Downes at St. Peter's Church, Ditton, on Saturday 15 March at 3.00 pm. Both are full-time workers with residential mentally and physically handicapped children.

Tina's father is an Elliott employee of long standing. She is also a writer of verse, much of which has been published. We hope to give samples of her work in future issues.

BIRTHS

Our congratulations and best wishes to:

Bernie and Janet Stevens, on the birth of their daughter, on 18 February, at 6 lb 15 oz.

Named Tanya, Bernie laments that the infant sleeps all day, and cries all night! Bernie is in FCD Tool Drawing Office.

Alan and Glynis Goodo, on the birth of a son, Simon Paul, on 3 March 1980, at 6 lb 6 oz.
Alan is foreman of CAC Test Department.

Jill and Ray Nunney, a daughter on Tuesday, 24 February, at 7 lb. Jill was formerly in Gyro Purchasing.

OBITUARY

We regret to record the death of John Percival Regan, which occurred on 14 February 1980.
John was a Night Shift Operator in CMS and had been with the Company for 2½ years.

We regret to record the death of Albert (Bert) William Bushall on 20 February 1980.

Bert was a well known figure in the Company having started in MACD as a Prototype Wireman in 1958. In 1960 promoted Chargehand, 1961 Supervisory Chargehand, 1962 Assistant Foreman and December 1962 Foreman. In 1965 he became a Methods Engineer, 1969 he moved to ADD as Production Shop Supervisor and in 1978 as Methods Engineer ADD.

To the relatives of both, we extend our sympathy. Floral tributes were sent and representatives of their colleagues attended the funeral services.

The same yesterday, and today?

A PRAYER (by a Seventeenth Century Nun)

LORD, Thou knowest better than I know myself, that I am growing older and will some day be old.
KEEP me from getting talkative and particularly from the fatal habit of thinking I must say something on every subject on every occasion.
RELEASE me from craving to try and straighten out everybody's affairs.
MAKE me thoughtful, but not moody; helpful, but not bossy. With my vast store of wisdom it seems a pity not to use it all, but Thou knowest Lord that I want a few friends at the end.
KEEP my mind free from the recital of endless details; give me wings to get to the point.
SEAL my lips from my many aches and pains. They are increasing, and my love of rehearsing them is becoming sweeter as the years go by.
I ASK for grace enough to listen to the tales of others' pains. Help me to endure them with patience, me the glorious lesson that occasionally it is possible that I may be mistaken.
KEEP me reasonably sweet, I do not want to be a saint. Some of them are hard to live with; but a sour old woman is one of the crowning works of the devil.
HELP me to extract all possible fun out of life. There are so many funny things around us, and I do not want to miss any of them. Amen.

FOR DEEPER THOUGHT

Money and fame and health alone
Are not enough for a man to own;
For healthy men are heard to sigh
And men of wealth go frowning by,
And one with fame may play his part
With a troubled mind and a heavy heart,
If these three treasures no joy possess,
How shall a man find happiness?

I fancy the joy which men strive to win
Is born of something which lies within,
A strain of courage no care can break,
A love for beauty no thief can take,
For they are the happiest souls of earth
Who gather the treasures of gentle worth,
The pride of neighbours, the faith of friends,
And a mind at peace when the sun descends.

Suggestion Scheme

Among the latest award winners under this scheme is:
Mr. Tibury of ADD Model Shop for a suggestion 'to overcome trouble of cables coming apart on F16 EURSD cables — test set'.

QUOTATION

"When God breathed the breath of life into man's nostrils He consigned him the impossible for his vocation and the history of civilization which is one vast miracle, declares man's fitness for that high calling."

Prof. L.P. Jicks



MARCONI'S DOUBLY-ATTRACTIVE SOLUTION FOR NEW EUROPEAN AIRBUS



Linda Hickman (left) is understandably pleased that Marconi Avionics has been selected to supply electronic controls for the new European A310 Airbus. At 29 she is a Project Engineer in the Company's Flight Controls Division and is responsible for designing an important part of the A310's new advanced-technology system.

Identical twin Paula (right) is also pleased. She is a Project Engineer as well, responsible for computer software in the Company's Automatic Test Equipment Division. Her work is important for the maintenance of the sort of equipment her sister designs and affects all kinds of aircraft, including airliners.

The two girls are pictured with a model of the new airliner, the first flight of which is due in 1982. They are each holding one of the two kinds of microprocessor 'chip', which lie at the heart of the electronic controls for the airliner's wing flaps and leading edge slats.

These powerful flying surfaces, which are essential for take-off and landing, are being controlled for the first time by 'intelligent' electronics. The microprocessors are programmed to ensure safe operation, even in the unlikely event of a wrong operation by the flight crew. Marconi Avionics is supplying the new system to the German company Liebherr Aero-Technik which is responsible for the overall flap and slat control system.

The Marconi Avionics A310 team naturally regards the identical twins as an attractive asset but there are also two 'non-identical twins', which are important to the success of their project. These are the microprocessor chips which the sisters are holding. The electronics 'fail safe' because the control calculations are done twice over, by independent microprocessors and then compared for agreement. The two 'chips' are of different designs - to ensure that no common programming errors can detract from the inherent safety of the control system.

The components are 8-bit microprocessors. Linda is holding a Motorola 6800 and Paula an Intel 8085. Either component is capable of carrying out the complete control or monitoring task alone.

The girls, who live in Rainham, near Gillingham, joined Marconi Avionics after leaving Brighton Polytechnic in 1974 where each received, at the same time, a Bachelor of Science degree in Electronic Engineering. They share an interest in horses (Paula has her own) and in playing squash.

Apprentice News

The following Apprentices have completed their training, and have been 'posted' to the Divisions to practice their 'arts':

1979 December
Childs, ISD Logistics; Erwin, GYRO Calibration Test; Hollingworth, ADD QA; Hyland, ADD Eng; Negus, ISD Insp; Whitehead, FCD Test.

1980 January
Belcher, CGD Test; Bevan, ADD Estimating; Collins, ATE B/Fitter.

February
Corbishley, ISD QA; Perrin, FCD Test; Taylor, MASD Test.

March
Ashworth, WES DO; Biggar, FCD Test; Daly, FCD Test; Franks, PSD Estimating; Hope, FCD Model Shop; Luck, MASD QA; Norris, ATE Insp.

We apologise for the lack of initials, but these were not to hand at the time of going to press.

Around the Divisions

New 'Intelligent' electronics, for slat and flap controls.

A joint technical proposal by Marconi Avionics Limited and Liebherr Aero-Technik GmbH has been selected by Airbus Industrie, for the control of leading edge slats and trailing edge flaps, for the new European A310 Airbus airliner. The Marconi Avionics Flight Controls Division, Rochester, will supply digital electronic systems to Liebherr Aero-Technik of Lindenburg, West Germany, the company responsible for the airliner's slat and flap control systems.

Two electronic units per aircraft will control the operation of electrohydraulic motors, by means of which the extension of the flying controls is adjusted. For the first time in any airliner, this is to be done by means of 'intelligent' electronics, a new technique in which microprocessors are programmed to ensure safe operation, even in the unlikely event of an inadvertent selection by the flight crew.

Marconi Avionics was selected to supply the advanced electronics for the A310 against strong international competition. The Flight Controls Division worked with Liebherr Aero-Technik, to produce a joint proposal for the overall system, in which the German company's expertise in secondary flight controls was combined with Marconi Avionics long experience in high-integrity automatic flight control systems. The winning combination brings the two companies together for the first time.

In the duplex control system, two independent electronic units are to operate motors, which work together to control the flap and slat surfaces. Each electronic unit incorporates self-monitoring, so that no failure in the overall system can cause asymmetric, or otherwise incorrect control. Should the command be given to withdraw the slats below the safe airspeed, or to extend the flaps above the corresponding limiting airspeed, the digital electronics automatically inhibit the operation and warn the flight crew. In addition, flaps will automatically be retracted, if the limiting airspeed is exceeded whilst flaps are deployed.

The new microprocessor system for the A310 will incorporate a unique 'fail safe' feature, which the Company has pioneered for digital avionics. In this, the microprocessor used for controlling the slats and flaps is of a different type from that which monitors their correct operation. This arrangement prevents the possibility of a fault in the software (programming of the control laws) common to the control and its safety monitor, from passing undetected.



Model of the Airbus

COMMERCIAL ACTIVITY

Fighter plane of the future in Science Museum 'Chips' Exhibition

Marconi Avionics provided a unique display of microprocessors in aviation.

'Challenge of the Chip' Exhibition
Science Museum
from 26 February 1980
10 am to 6 pm daily
2.30 pm to 6 pm Sundays

An outstanding feature of the 'Challenge of the Chip' exhibition, at London's Science Museum, is a large realistic model of an advanced fighter plane of the future, demonstrating the role of the microprocessor 'chip' in aviation. The exhibit has been contributed by Marconi Avionics Limited.

The unique audio visual presentation makes use of the same techniques as those used in the Company's head-up displays. The head-up display, an export-winning British innovation, is an instrument, not unlike a sophisticated gunsight, which presents to a pilot in his forward view, an image of symbols representing the readings of his instruments. Using the same optical principles and involving a 10ft long half-silvered mirror, mounted beneath the model plane,

a vivid account is presented to the onlooker of the vital tasks performed by microprocessors in modern civil and military aircraft. Visitors to the exhibition will see how avionics engineers have already taken up the 'challenge of the chip', in systems currently being produced and exported. Modern aircraft of all kinds have come to rely on such systems, for communications, navigation and flight control, and for the increasing number of 'mission systems' which nowadays help aircraft to carry out more useful tasks. One outcome of this trend is that the avionics on board an aircraft can represent as much as a third of its value, equal to or greater than that of its engines.

The exhibit clearly demonstrates the kinds of task which avionic systems carry out and also explains how these tasks are performed and where the equipment is located in an aircraft. Systems for civil airlines, maritime patrol aircraft and combat planes are vividly explained.

Among the systems incorporating microprocessors, for which Marconi Avionics has already won orders, are navigation computer systems, doppler navigators, helicopter low airspeed sensing systems, flap and slat controls for airliners, all of which are for export, and lightweight acoustics processing and display systems for Royal Navy helicopters.

FUND TOPS £1000

Employees at the Airport Works site of Marconi Avionics Limited have now raised their contributions to well over a thousand pounds, in aid of Medway Hospitals and the projected Medway Hospice. The money raised by raffles, donations, charity walks and social functions has been contributed by every section of the Company's 5,000 plus team.

At a ceremony in the main canteen, Airport Works, on Friday 1 February, Miss Medway, Francine Bailey, drew the winning tickets in a raffle which has brought the total collected to well above the £1,000 mark. After the draw prizes were presented by Marconi

Avionics ladies, Receptionists Pat Pilbrow, Sue Wylie, Katie Luscombe and Bridget Bowes, Confidential Secretary Joyce Oliver and the organizer of the raffle, Val Harris of the Company's Transport Department. First prize was a giant Easter Egg!

A cheque for £1,200 was handed over by Val Harris to Mr. Graham Hill, Secretary of Medway Health District Community Health Council, who has been responsible for the successful fund-raising campaign on behalf of Medway Hospitals. Funds are being used to keep hospital wards open and to develop further the health facilities in the Medway Towns.



Mr. Graham Hill, Medway Health District, receiving from Mr. G. Thomas, General Manager, an earlier cheque for the 'Save Medway Hospital's Fund'.



Francine Bailey, Joyce Oliver (Easter egg winner), Val Harris and Mr. Graham Hill.

www.rochesteravionicarchives.co.uk



Year of 19 Carol

We return to this event, which was the highlight of the many Christmas events in 1979. As we have reported, many people gave up much valuable time and spent their energies in creating the whole event. Many hours were spent in rehearsals and learnings and our photographs 1, 2 and 3, show these in operation, in various locations. 1 and 2 in the Cathedral and 3 in the canteen.

1.



2.



All Kent was thrilled this week by the glorious exploit of the Royal Navy in wiping out a German convoy in a 30-minute midnight battle 30 miles west of Skagerrak.

Special pride was taken in the splendid part played by H.M.S. Kent, the Chatham commissioned cruiser, the flagship of Rear-Admiral Roderick McGregor, C.B., D.S.O., commanding the naval force.

The captain of H.M.S. Kent is Captain G.A.B. Hawkins, M.V.O., D.S.C., and to him and the officers and men under his command the County of Kent extends its heartiest congratulations.

STORY OF THE ENGAGEMENT

A thrilling story of the engagement was broadcast by Lieut. Howard French, R.N.V.R., after the 9.00 pm news on Tuesday. Lieut. French said:

"I was on the bridge of H.M.S. Kent, the flag ship of Rear-Admiral Roderick McGregor, when a naval force under his command penetrated to within a few miles of the coast of southern Norway, and just south of Egersund Fjord engaged and destroyed an enemy convoy consisting of about 11 ships, including three or four escorts. That was on Sunday night, 12 November 1944.

If you can imagine the Hipper and the Prinz Eugen steaming from Yarmouth to Harwich within 5 miles of our coast, and wiping out one of our east coast convoys, you'll have a fair idea what we did to the Hun that night.

"We crossed the North Sea in broad daylight, dodging the

U-boats which might possibly report us, and reached the Norwegian coast not very long after dark. The idea was to get across the German convoy route where it runs through open sea.

"From northern Norway down to Stavanger, there are safe channels behind innumerable protecting islands, but from Stavanger to the Baltic, roughly a distance of 100 miles, the convoys have to come out into the open.

"OUR LUCK HELD"

"This was our first surface action so close to the coast of Southern Norway since 1940, and, well, our luck held. The weather which had held all day continued to help us at night.

"It was the perfect night for a surprise attack - very dark, but with good visibility and a calm sea.

"We could see the rugged coastline quite clearly; through binoculars I could even pick out the Norwegian villages scattered in the foothills.

"For nearly two hours - until just after 11.00 pm we went on like that - on the alert and keyed up.

"I felt as if I were eavesdropping, that I was somewhere I oughtn't to be - some of us even began speaking in whispers until some wag shattered the illusion by shouting 'speak up, they can't hear you'.

"At this time we were steaming in line ahead, the Kent as a flagship of Admiral McGregor leading, then the Balona, followed by the destroyers Mings, Bambezie, Fairland and the Canadian Algonquin.

35 years on.. A m

BRA H.M.S.

CONVOY SIGHTED

"When we sighted the convoy we'd just passed the Egersund Fjord going southwards; we were only about 30 miles from the entrance to the Skagerrak.

"The convoy was about four miles away, plodding steadily towards us without a care in the world. As Admiral McGregor said we caught the Hun in his nightshirt.

"In moments it seemed the range had shortened to two miles, and suddenly the sky was brightened by the light of dozens of star shells, and our first broadsides went crashing across the sea.

the Child 1979 Service

The boys' choir contained many children of employees and they were rewarded by a trip in the Company's aircraft. No doubt they were 'high singers' and their obvious delight in being treated to this spectacular thank you shows in their faces as they are photographed beside the aeroplane.

Photos are by Ken Jordan of AS & RD.



3.



Memory lingers on. SAVO! KENT

"I was standing on the bridge of the Kent, when the fire gongs rang. We closed our eyes to save being blinded by flash. I opened mine just in time to see bits on the leading escort vessels. One I saw reared out of the water with its screw thrashing the air, then it slithered bows first below the sea.

"By this time the Balona and the destroyers were at work, a second vessel was glowing like a coke oven, coloured tracers - ours and the enemy's - began zigzagging in all directions; some of it, with a nasty orange flame, was bursting over us. Red

and green distress signals from the enemy added to the colour and their confusion.

LIKE UNTIDY FUNERAL PYRE

"A third ship, pretty obviously an ammunition carrier, exploded: she went up with a brilliant red flash which sent white-hot teardrops streaming into the air like a Catherine wheel. All round us were blazing and sinking ships: It was like a huge untidy funeral pyre.

"All this time Captain Hawkins, of the Kent, suave and unshakable, was picking our targets for his gunnery officer, Lieut. Brook.

"Guns hit that one," he'd say. "That one, Sir?" "Yes, please". "The gunnery officer gave his technical orders down the voice pipe and they sealed the doom of another ship.

"Once the captain said 'Here, hit that one, guns; he's firing at one of our destroyers.' I saw the ship in question go up in a flash of red and green flame.

"No one can describe everything that happened, it was too quick.

PADRE'S SHOUT

"I heard the Padre shouting into the ship's microphone. There goes another, and I was just in time to catch its end out of the corner of my eye; it went down under a mushroom of black smoke and a pall of hissing steam.

"To give him his due, the enemy fought back gallantly. I watched an escort vessel approach, firing hard; then she caught

one aft and turned away to disappear in the dark.

"A shore battery opened fire, but no one took any notice. "Afterwards Captain Hawkins told me he'd seen us straddled by this battery, but we were too busy with the convoy to worry about a shore battery.

SQUADRON REFORMED

"After 20 minutes the fighting was getting very scrappy, and the Admiral re-formed his squadron. As we drew away from the blazing ships we saw by their glow several ships still afloat.

"The admiral ordered the destroyers to finish them off. In a few minutes we had a grandstand view of the most thrilling battle I've ever seen.

"Against the glow of fires and star-shell, we could see the enemy standing our like black models, and in and out of this gruesome, pattern our destroyers charged, their guns blazing right and left.

"Mings and Verulum had already torpedoed a couple of ships and now they were in their element, polishing off the others without restraint.

"The battle drifted inshore and came under the fire of the enemy batteries. So Admiral McGregor ordered the destroyers to rejoin us. What was left of the enemy by this time was not worth risking a destroyer for.

"The whole job, destroying nine out of eleven ships, and possibly the other two as well, had taken half-an-hour.

"We steamed back the way we'd come, leaving behind a shambles."

RETIREMENTS

A varied and full life, described as one 'full of danger and excitement' is the experience of **Charlie West**, who returned from IN Division recently.

Charlie came to Elliotts in 1959, after starting back in civilian employment with Le Grand, Gell and Sutcliffe. In 1971 he joined IN Division, with whom he remained until retirement.

An ex-service man, he joined the Royal Navy at 15½ years old, during the depression years. When in South Africa, during his early service days, he became a member of the Fable Mountain Climbing Club. 1935 saw him in Palestine, during the troubles of that area as a member of the crew on an armoured train and trucks. 1936, during the Spanish Civil War, the Royal Navy helped in picking up refugees fleeing the German, Italian, French (Madagascar) and Japanese Forces. In World War II, 1939, he saw action against Germany. He joined the fleet Air Arm, as an aerial photographer and at one period was the sole photographer on an Australian destroyer. His assignments covered Tobruk, Crete and the Far East. In all he served on six ships during this time, and he proudly recalls that the American Naval Forces entered the Yangtze River navigating from his aerial photographs.

In 1946 Charlie was demobbed from the Navy and he went into the film industry, until it gave way to television, when he joined Le Grand.

His colleagues and friends presented him with a bowl to mark the occasion and he hopes to be able to 'Roll'em up' more often, as he has more time.



Charlie West with Mr. Harris, Production Manager IND, at the presentation.

Starting work in 1929 as a 'dolly boy', with Short Bros, Albert Edward (Jerry) Godden has now joined the growing ranks of retired persons.

From the 'dolly boy' to Rivetter, until 1943 when he joined the RAF seeing service in Iceland, as a clerk. From Iceland Jerry moved to Alton and then to Hampshire in 1945. He was demobbed in 1946.

He began his industrial life again, in Medway Towns by joining CAV later BP at the Isle of Grain and then back to Short Bros Machine Shop at the flying School.

In 1962 he came to Elliotts to work on Naval Weapons. He then moved to FID on Stock Records, through ISO and in 1971 to IND as a Progress Chaser where he remained until he called it a day!

He married in 1939 and has a son and daughter, grandchildren and a great-grandchild.

For relaxation, and to fill the fleeting minute, Jerry performs duties in the garden and for the past 12 years has been an ardent beer making man (he has not as yet, splattered the walls and ceiling!). As becomes a man of Kent, he too enjoys County Cricket matches.

His nickname of 'Jerry' was bestowed on him by his father for a prank at the age of two! Modesty prevents us giving details!



Jerry Godden having received a pair of binoculars from Mr. D. Harris. (B)

Arthur Southall a former Wing Commander of the RAF, has a distinguished career behind him. He joined the Company some 20 years ago, as the first Divisional Administration Officer.

One of his duties was the ordering of aircraft for use by company, executives and arranging flights. As a former pilot, and very much still a flyer at heart, he saw the potential of the great need for aircraft in pursuit of the Company's growing business activities. Through his convictions and persuasiveness he led the Company to have its own aircraft and he himself, on its acquisition, became the Chief Pilot. Ill health brought his active flying to a halt and he joined MASD as a Contracts Officer.

Mr. W.H. Alexander, Asst. Managing Director, in presenting him with a retirement gift spoke of his enthusiasm and high standards which he observed for himself and inspired in others.

For 27 years a member of the RAF, he distinguished himself and was awarded the DSO, DFC and AFC of these awards, he remains silent, his demeanour of reticence being understood by all who know him and which endeared him to all colleagues, being a true gentleman.



Arthur Southall (centre) with management colleagues, left to right: M. Moulton, G. Thomas P. Rayner, A.J. Harrison and G. Cook. (B)

PSD was the scene of a retirement presentation when **Ron Gilbert** decided to call a halt to his working days. Ron had completed his 25 years' service with the Company in 1979, and had served several Divisions.

He was a keen member of the Sports and Social Club and was particularly associated with the Indoor Games Section, representing his Divisions at darts.

Of a quiet disposition, he declined to mark his retirement in any special way but his colleagues and friends contributed to a gift to mark the occasion. He is a well known gardener and to help him in his hobby he received a Propagator and sprinkler for use in the greenhouse.

A devotee of ballroom dancing, for which he has received many trophies, and a useful table tennis player - by which means he keeps himself fit!

Bert Kenneth, Production Manager PSD, made the presentation.



Bert Kenneth presenting Ron Gilbert with a gift to mark his retirement. (A)

After 21 years' service with the Company **Bill Loane** has finally retired. During his time with the Company he worked in Fisher, Sheet Metal, ACD and FCD. In the latter case he was a Goods Inwards Inspector. He had been engaged in engineering work for a total of 61 years and now wishes to take things a little easier by concentrating on darts and gardening.

On leaving he was presented with a portable radio to remind him of his friends and colleagues, and also some miniature bottles (we were assured they would be used for medicinal purposes only). When making the presentation Mr. J.F. Smith, Production Manager CAC, wished him well and expressed on behalf of all friends the wish for a long and happy retirement.



Bill Loane on his retirement. (A)

25 YEARS' SERVICE

In service life it is generally assumed that to be court-martialled spells punishment and/or degradation, but to one man the opposite is the case, for **Jim Collins**, the well known Social Club Secretary disclosed that during his army career he was promoted Sergeant after being court-martialled for losing his Stan gun.

Jim has now completed his 25 years' service, having joined the Company after service in Germany and Palestine, working in the Accounts Department.

In 1956 he joined the Personnel Department and combined a Personnel function with the duties of Sports and Social Club Secretary. He also had responsibilities for the canteen and its services and in 1962/63 he opted for the segregation of the Social Club activities and took up this side of duty, a post he has continued to fill. It is not generally known that he is the writer and producer of the annual Fantomimes, both the children's party version and the adult ones. He is also one of the regular performers.

A native of Hoo, he resides in the village and is married with three sons. His hobbies, or out of work pursuits cover gardening and golf!

We learn that as a Corporal and a Platoon leader in Palestine, in the early 40s an alert was given and every man went to his post, fully equipped for duty, but not Jim. He had hung his Stan gun on a tent pole and when the alert sounded the gun was missing, but Jim being Jim, he got out

of that one and as a result he was promoted to Sergeant. Did someone say "let a rogue to catch a rogue"?



Jim Collins surrounded by the canteen staff on his 25 years' presentation day. (B)

'65' CLUB

The February meeting was the adjourned Annual General Meeting, when the various reports and accounts were presented and accepted.

Rainham Majorettes gave a display, showing some of the items which gained them many trophies at a Southern Counties Championship contest at Southampton.

March meeting was entertained by Strood Handball Ringers, who delighted the audience with their delightful rendering of many well known musical favourites.

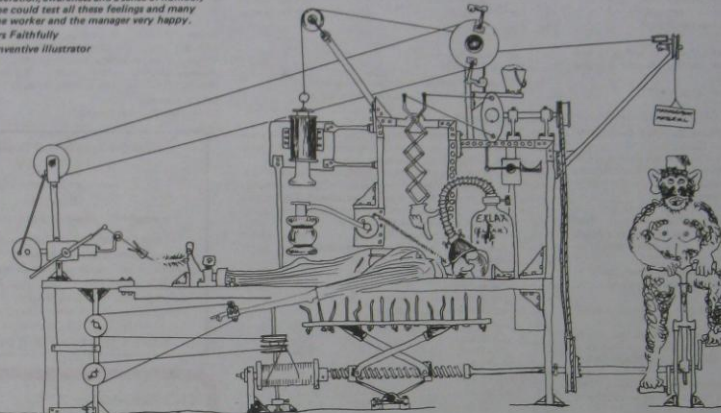
The club members expressed their thanks and appreciation to Mrs. Fisher, for her work and great help to the club since its formation. As she will retire from the Company at the end of March and is moving from the district this was her last meeting.

ATE

MANAGEMENT ATS

Dear Sir,
 After working in ATE Division for more than a year now, I have come to the conclusion that a management automatic test system would be a good investment. Every six months the managers should be rounded up, put in pens and individually tested for things like - affection, consideration, awareness and a sense of humour. This machine could test all these feelings and many more leaving the worker and the manager very happy.

Yours Faithfully
 An inventive illustrator



DOWN MEMORY LANE



For the great outdoors

SOUPS

For summer days, chilled soups are ideal for a first course. Chill them thoroughly in the refrigerator before pouring into vacuum flasks. For colder days, such as early spring, late autumn or winter, hot soups will beat off the chill, or restore vigour after a brisk walk.

WATERCRESS SOUP

A light, smooth-textured soup that can be served hot or cold. Allow the soup to cool before chilling for about two hours.

Ingredients: 1 onion
 2 potatoes
 2 pints chicken stock
 1 dessertspoon chopped parsley, chives, dill or basil
 2 bunches of cleaned watercress
 ¼ pint soured or double cream
 salt and pepper

Method: Chop the onion and potatoes and add to the chicken stock. Season to taste with salt and pepper and add the chopped herbs. Simmer for 10 minutes, then add the watercress. Cook for a further 15 minutes then liquidize the soup or rub it through a sieve. Adjust the seasoning, re-heat the soup and stir in, away from the heat, the double or soured cream.

EGG AND BACON PIE

An easy to make pie that can be left in its dish and cut into portions at the picnic.

Ingredients ½ lb flour
 2 oz lard
 2 oz butter or margarine
 ½ lb lean bacon rashers
 4-6 eggs
 salt and pepper

Method Make up a short crust pastry from the flour, lard and butter or margarine. Divide into two and use one half to line a 7 inch pie plate. Remove rind and gristle from the bacon rashers and lay these over the pastry base. Carefully break the eggs over the bacon, sprinkle with salt and pepper and cover the pie with the remaining pastry. Make a slit in the centre, brush with beaten egg and bake at 440° F (gas mark 6) for about 40 minutes.

It is well known that Easter is a 'movable feast', and can occur anytime between the end of March and the end of April. This brings with it possible variations of weather.

Our scout troop, of which I was then Group Scoutmaster, decided to hold a camp, under canvas, from Maundy Thursday evening until Easter Tuesday night. We selected a site about 17 miles from headquarters.

All went well, the camp was set up early on Thursday and being early April the evening was 'balmy' as the boys strolled around the village to get their bearings; and at supper around the camp fire, it began to get chilly. Friday morning dawned, with a very heavy hoar frost. The stream flowing below the camp was icy cold as we performed our ablutions, while the fire was difficult to get going as the gathered wood had been left out all night.

The day passed well, the icy air keeping us on our toes and lights out came as the wind got up. All slept soundly and on waking on Saturday we got a surprise - no not a giant Easter egg - but snow about 4 inches deep, which had fallen quietly through the night. Tents were burdened and conditions were very bad. The boys who went to the village to collect milk and other supplies had a difficult journey.

The freezing conditions remained and more snow threatened but the programme, after adjustment, was pro-

ceeded with. More snow fell during the night and on Sunday, the villages sent a message that we should abandon our life under canvas and take shelter in the local school-room, which eventually we did.

From this experience, the next year saw Easter come, as this year, in early April - Easter Monday in fact was 6 April - and it was decided not to risk a camp. But the weather was so different! It was a bright, dry and warm Eastertide, with all the ardent gardeners getting down to digging and early planting.

For myself, it was a special day, it being my 21st birthday. Early in the morning the postman had delivered the mail with many cards for the event, and my girl-friend had come to spend the holiday and join in what celebrations might be had. So we betook ourselves for a country walk - and what a walk it was. Across fields, by footpaths, bridle paths, roadways and beside brooks and streams we wandered in the fresh air and amid the countryside we loved.

Through other surrounding villages, eventually realizing we had done a 'circular tour', we arrived back home, having been on our stroll for some four hours, covering about 12 miles.

A day to remember, for its sheer joy and simplicity and healthy activity.

PAPER

Paper is nearly as old as civilization itself and its name comes from the Latin word Papyrus. As we know it today, paper had its origins in China about 1900 years ago, when 'pulped' fibre was mixed with water, drained through a sieve, dried and matted to form paper.

The art of papermaking gradually spread from China and reached Europe around the mid 12th century AD the first recorded papermill in Britain was in 1490 AD at Stevenage, in Hertfordshire.

It took the Industrial Revolution, in the latter part of the 18th century to upgrade the papermaking industry into a position of importance. This growth and status coincided with that of Industry, Commerce, Education and literacy generally.

Nowadays everyone realizes that 'paper work' is the means by which everything moves, and on which the whole industrial fabric depends.

www.rochesteravionicarchives.co.uk

Sports and social club round up

ATHLETICS

Urgently wanted for this season's events, participants in all field events:

levelin, shot, hammer, discus, high jump, pole vault.

All age groups:

Colt 11 to 13 years on 1 September each year
 Boy 13 to 15 years on 1 September each year
 Youth 15 to 17 years on 1 September each year
 Junior 17 to 19 years on 1 September each year
 Senior 19 and over.

Anyone who would like to try his 'hand', or wishes to take up any sport should contact Len Murphy, Corsair Building (Int. 893 or ext. 398)

JOIN A SUCCESSFUL OUTFIT

SUCCESS IN KENT COUNTY CROSS COUNTRY

The County cross-country championships, held at Canterbury, were one of the best in the history of Elliotts AC.

Both 'A' and 'B' teams smashed all opposition and the junior team had a decisive victory. In the youth race, Elliott athletes filled the first five places, and the two teams and the first reserve were in the top 13, from a field of more than 60.

Neil Mayum, in his first year in the age group was first home in 15 minutes. Ian Head closely followed in 15.03, Christopher Sellars in 15.06, and Kevin Minter in 15.12. Kerry Hayes was 7th in 15.21 and made up the team to win with a total of 15 points.

Dave Coney, in 5th position with Andrew Saker 12th and Gareth Wellington 13th the 'B' team finished runners-up to 'A' team with 32 points.

The juniors, also were triumphant, becoming County Champions:

Alan Guilder, last year's Youth Champion, in his first year in this age group, finished runner-up to a Dartford rival, in a time of 25.09. Dave Brechin finished 5th, and Dave Minter in 6th place scored a victory.

The senior team, had to be content with 10th place, Peter Mullervey, was the first man home, Arthur Champ was 36th and veteran Mo Jury finished 59th in a field of 130.

Following their success, many Elliott youngsters were selected to represent the County at Allestree Park, Derby.

Following on the successes of past seasons, Elliott AC now has the honour of hosting several matches.

Besides competitors, many other helpers are required to stage, supervise and record the events.

Can you help?

Are you interested in seeing the athletes giving their all?

Do you like to make yourself useful?

Have you some free time you can give to encouraging others?

Then contact Len Murphy (Int 893) there is a job waiting for you to fill.

Don't be afraid of inexperience—you can be quickly shown the ropes.

FIXTURES

1980 summer fixtures list (provisional)

Date	Fixture	Venue
April 4	Hornchurch Relays	Hornchurch
7	Borough of Hunslow AC	Hunslow
	Feltham 'S'	
9	Southern Open meeting (inc. Southern Senior 1000m w)	Crystal Palace
12	Belgrave H/Southern 12-Stage Road Relay	Wimbledon
19	Holly Hill Race	
20	Kent Relay Championships (Track—Men and Women)	Crystal Palace
26	Barnet AC Road Races	Oak Hill Park
27	Young Athletes League	Rochester
May 3	Southern League Division 2	Rochester
	Division 6	Folkestone
	Kent League	
4	CRE Cup Preliminary Round	Rochester
10	Elliott Sports Day	Featherby Road
14	Southern Open Meeting	Aldershot
17/18	Kent Championships	Crystal Palace
21	LBH 5 miles Road Race	Battersea
24/25	Kent Colts and Boys Championships	Erith
25	Young Athletes League	Croydon
31	Southern League Division 2	Rechill
	Division 6	Aldershot
	Kent League	Rochester

POINTS WE HERE!

The athletics section newsletter number 2 informs its readers "The GPO have announced record profits for 1979", and goes on to suggest "... their chairman has written a letter of thanks to Mr. Len Murphy for making this possible."

Is this why we can never get hold of him?

TOWARDS GREATER SAFETY AND EFFICIENCY

Better motor cycling courses — 1980

These courses are open to persons who are holders of a full driving licence for motor cycles. They are held at the Driving School, Police Headquarters, Sutton Road, Maidstone.

Each course consists of three evening lectures commencing at 7pm and lasting approximately two hours. The first two lectures are devoted to 'The study of the theory of riding' and the third 'To consider the law as it affects the motor cyclist'. On the

Saturday morning of the third week motor cyclists will attend for practical riding.

A fee of £3 per person is charged to defray administrative expenses. Fees should NOT be sent with initial application.

Dates of the courses are as follows:—

1/80 Wed, 2 April	3/80 Wed, 3 September
9 April	10 September
16 April	17 September
Sat, 19 April	Sat, 20 September
2/80 Wed, 4 June	
11 June	
18 June	
Sat, 21 June	

Any employee interested, should contact: Colin Bennett, Corsair Building (Int. 626)

Better driving courses — 1980

These courses are open to persons who are holders of a full driving licence. They are held at the Driving School, Police Headquarters, Sutton Road, Maidstone.

Each course consists of four evening lectures commencing at 7.00pm and lasting approximately two hours. On the Saturday morning of the fourth week a two hour period is given to a practical demonstration in a school car and practical instruction in your car, with you driving, on the skid pan.

The first three lectures are devoted to 'The study of the theory of driving' the fourth lecture 'To consider road traffic law as it affects the private motorist'.

A fee of £8.00 per person is made for the course to defray administrative expenses.

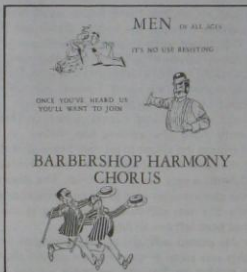
Instruction is provided by the staff of the school.

Dates of the courses are as follows:

3/80 Thur, 1 May	4/80 Thur, 29 May
8 May	5 June
15 May	12 June
22 May	19 June
Sat, 24 May	Sat, 21 June
5/80 Thur, 26 June	6/80 Thur, 31 July
3 July	7 August
10 July	14 August
17 July	21 August
Sat, 19 July	Sat, 23 August
7/80 Thur, 28 August	8/80 Thur, 25 September
4 September	2 October
11 September	9 October
18 September	16 October
Sat, 20 September	Sat, 18 October
9/80 Thur, 23 October	10/80 Thur, 20 November
30 October	27 November
6 November	4 December
13 November	11 December
Sat, 15 November	Sat, 13 December

Any employee interested, should contact: Colin Bennett, Corsair Building (Int. 626)

WHERE'S THE BARBERSHOP?



Although I've been in the Company for 25 years I'm very much a new boy at Rochester. It won't take me long to get into the Social Club activities, golf being my top priority for day-time leisure. However, I find it very disturbing to find that there is no apparent organization to satisfy one of my prime 'after dark' leisure activities, so I've concluded that I must start my own. Now, before too many of you get excited and without denying any of the wild ideas you may have, I'd better explain that I'm talking about barbershop singing.

I was introduced to barbershop about a year ago after bouts of singing in the Fareham Philharmonic and a lifetime of church choir activity and almost immediately found it a very rewarding group activity. That may be due to the fact that our rehearsals were conducted in a hall right next to a pub run by our musical director. Accordingly, they finished very promptly at 10 and the landlord was much less prompt in calling time! On the other hand some of the enjoyment undoubtedly comes from the sound that a dozen or so relatively unmusical chaps can make when they're well rehearsed. Competing against others with this affliction is fun and 'sing-outs' whether for charity or filthy lucre are very rewarding.

Barbershop, whether in quartet or chorus consists of a group of men singing traditional songs in unaccompanied close harmony. Originating in the US, or at least the revival did, it is administered by the SPEB QSA, enough of a mouthful without me telling you what it all stands for. In this country there are some 50 choruses

affiliated to BABS (British Association of Barbershop Singers) but from a search of their records it seems I may be the only one in Kent—rarer than a Dartford Warbler—and that might be a good name for a chorus if it wasn't so far away! (Actually there is one in Bromley, but risking the wrath of the Kentish Men, I take the view that that's 'up Lannon'!)

So what about it, chaps? You don't have to be operatic tenors or basses, but if you think you sound o.k. in your bath, even if you provoke your wife to leave home on your annual bath night, let me know and we'll see if we can make music together. Reading music is not essential, but of course it helps—my last club, the Solent City Barbershop Harmony Club had only about 4 'readers' in it among twenty singers. Give it a try and the Medway Mathers or the Macaroni Noodles may well become World Champions. I'm looking forward to hearing from you! Stan Armstrong Consultant Engineer (Int. 657)

Elliott Sports and Social Club

FETE DAY

Saturday 21 June 1980

3.00 pm

Featherby Road Ground, Gillingham

Special Attraction: Bring and Buy Sale

Proceeds in aid of Medway Hospice

(Items for sale received at canteen from 14.19 June)

Events: Works Band, Fancy Dress, Races (all kinds)

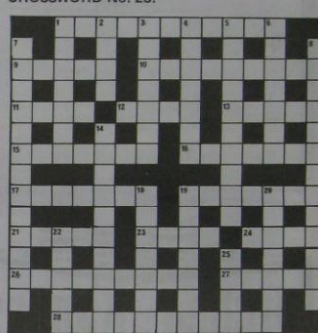
German Shepherd Dog Display Team, Rainham

Rangerettes, North West Kent Corps of Drums

MINI CIRCUS 3.00 pm - 4.00 pm

MAKE A NOTE IN YOUR DIARY NOW

CROSSWORD No. 23.



ACROSS

- Smart buyer, by night type (5,3)
- The morning after feeling (5)
- Creature well protected, if mad (9)
- Part of a ship, oldtime (4)
- Not Harvard, but similar (4)
- The smallest you give (5)
- A crank to crack (3,4)
- High wire swinger (7)
- Sometimes called receivers (7)
- Drinking woman in betting shop (7)
- French river, Calais way? (5)
- Fastened (4)
- Male voice (4)
- Highland range, if old (9)
- A desert or walah maybe (5)
- The speedy ones in front (4,7)

DOWN

- Using all energy, maybe lying down (4,3)
- The up and down thing (4)
- Not conscious of it happening (7)
- Not storm or flood, but (7)
- Around the 50 mark, if living (6,4)
- Freedom from captivity (7)
- Not satisfied, so experiments (4,3,6)
- Keep quiet, it is a secret (4,2)
- An estate goal, very determined (10)
- A boost for the boatman (3,4)
- The Texan hat (7)
- Wind and rain combine (7)
- Bread or wood support (5)
- Without work (4)

For amusement only

SOLUTION TO CROSSWORD No 22

Across

1 Self starter, 9 Idaho, 10 Dog collar, 11 Soul, 12 Oral, 13 Heath, 15 Pelican, 16 Cortage, 17 Humming, 19 Restful, 21 Pasta, 23 Last, 24 Snag, 26 Saint Paul, 27 Amass, 28 Fill the bill.

Down

1 Segull, 2 Laos, 3 Sad iron, 4 Angelic, 5 Tooth brush, 6 Release, 7 Digs up the past, 8 Archaeologist, 14 Accidental, 18 Gallant, 19 Resolve, 20 Fantal, 22 Shift, 25 Maxi.

Photographs taken by Staff Photographers will be acknowledged in the following way: (A) Alan Raas, (B) Brian Buxton (C) Ludo Jones (D) Bill Gony.

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