



No.7

ELLIOTT-AUTOMATION IN AVIATION

May 1968

EFA at the C-5A Roll-out



QUEEN'S AWARD FOR EFA

ONCE again, an Elliott-Automation Company has won the Queen's Award to Industry. This time it has come deservedly to EFA, for achievement in export. This is positive and public recognition of the tremendous efforts by so many people at Rochester, not only in obtaining the orders, but in producing the goods. Lord Nelson of Stafford, Chairman and Chief Executive of the English Electric Company, immediately sent "warmest congratulations and sincere appreciation" to Sir Leon Bagrit, who has passed them on, with his endorsement, to EFA.

The people doing the work know better than anyone the scale of effort involved, but recognition in this form ensures that those efforts are known far outside the immediate confines of the Rochester factory, throughout the country.

Incidentally, Elliott, English Electric and Marconi have together received a total of 18 Queen's Awards in three years, including six specifically to Elliott Companies.

The Biggest and the Mostest in Georgia

It was a grand ceremony. On the hard-standing outside the World's largest cantilever hangar, when the mighty C-5A had been towed out into the Georgia sunlight, Mr. Pateman was heard to remark to Mr. Herzfeld, Elliott-Automation's Deputy Managing Director, that the aircraft was a fitting vehicle for the roll-out of EFA's air data system.

President Johnson flew down to the Lockheed factory to emphasise the importance of the C-5A as a factor in American global strategy and in local prosperity. Mrs. Johnson officially named the C-5A Galaxy.

Lockheed themselves were taking a very brief breather at an important land-mark in the vast and complex development programme. They held the roll-out ceremony on a Saturday so that some 30,000 Lockheed employees could come and see the aircraft and take their families round the factory.

"An Awful Lot of Hay"

President Johnson, looking into the huge freight hold, remarked with a farmer's practical approach, that the C-5A "would hold an awful lot of hay". An RAF pilot on exchange posting thought that they might hold the roll-out ceremony inside the aircraft.

"Gee Whiz" Figures

Lockheed publicity men obliged with a fine crop of "Gee Whiz" figures. The C-5A's freight floor, they noted, was longer than the Wright brothers' first flight. It would accommodate an eight-lane bowling alley, or 100 Volkswagen cars, or six Greyhound buses. One of the publicists must be a Volkswagen owner, because the story went on to note that each engine nacelle would garage a Volkswagen, and that the fuel in the C-5A would drive a Volkswagen for a century. The C-5A's tail is as tall (65 ft.) as a six-storey building and its rudder is as large as an F-104G's wing. There are more than 100 miles of wiring and 1,500,000 fasteners.

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Mr Pateman, EFA Joint Managing Director, approved of the C-5A as a means of rolling out the EFA air data computer



JAGUAR TAKES A BOW

The Anglo-French Jaguar made front-page news on April 17 when the first prototype was towed out of its hangar at Breguet's factory at Villacoublay, outside Paris. The prototype is being shipped to Istres, near Marseilles, for a first flight perhaps next month. Already, 400 have been ordered and future sales may reach 1,000. EFA is supplying the digital inertial nav/attack system and air data computer.

These pictures were specially taken by EFA News Editor, who joined about 100 other press men in a photographic free-for-all.



Enter the Assistant Editor

NOW installed at an editorial desk in the MACD (Tower 2, Floor 3) area is Maureen Brignall, appointed assistant editor of EFA News with full freedom to seek out, co-ordinate and write news reports. Her appointment ensures closer contact with people and events at Rochester, a continuous effort to secure regular—and possibly more frequent—publication.

Mrs Brignall has been with EFA for over five years and has most recently been working on the programming of the 503 computer in MACD. She is already widely known in EFA, particularly for her meteoric rise to stardom as Cinderella in the last pantomime. Contact her on internal 466.

Jack Rann, who has administered and contributed to EFA News since it began will now be free to concentrate once again on sales. Mark Lambert, of Public Relations at Head Office, continues as editor.

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MACD made sure that Reg Wofford, General Electric's field service representative, went back to GE's New York factory properly dressed, as befitted a gentleman accepted and indoctrinated by EFA at Rochester. So John Kaighin presented Reg with a suitably labelled, true British bowler hat to go with the tightly rolled umbrella he already had. Reg has been helping MACD for 10 months in production of the GE autopilot for British Phantoms. He went temporarily to help introduce the autopilot to the first RAF service teams getting to know the Phantom in the USA

ALL SET FOR GOOD CRICKET SEASON

THE start of the cricket season should find the Elliott (Rochester) Cricket Club in peak condition. The indoor nets have been used for practice since January, and the grass nets since the beginning of March. According to secretary Jeff Johnson (ASCD), the quality of the cricket has improved considerably since last season and the strength of the team has increased "from medium to strong".

In order to keep the best possible wicket for each game, the club does not intend to play more than one home match per weekend.

An all-day match against the A. J. Harrison Select XI has been arranged for June 16 on the Elliott sports ground. The club also hopes to organise a match in aid of the Colin Page Testimonial Fund between a strengthened Elliott side and an all-star team. Other matches already fixed are against Elliotts Lewisham, at home on August 3 and away on August 31; and against Riverside CC (CAV Ltd) away on August 4 and at home on August 17.

County Connections

The Elliott club maintains close relations with the Kent County Club, and sent a message of congratulations to Kent and England wicket keeper Alan Knott after he gained his permanent place on the England team by his performances in the West Indies. Knott has been an honorary member of the Elliott Rochester Club for the past four years.

Last season's achievements were recognised by the award of the best howler award to Jim Southworth (FID), top batsman award to skipper Alf Pullen (ADD) and runner-up in the single-wicket competition for the

Bolton Trophy to Pete Taylor (CMS). The Bolton Trophy itself went to club secretary Jeff Johnson. The A. J. Harrison Trophy went to Allon Teers (TACD), who skipped the Select XI last year.

Mr G. A. Taylor, who retired last December as divisional manager of Farris, has joined Doug Bolton as honorary vice-president and life member of the club. His presentation was a miniature bat bearing the autographs of the West Indies tour team.



Jeff Johnson (ASCD), Elliott Rochester Cricket Club secretary, receives the single wicket trophy from Mrs. Douglas Bolton as Alan Dixon, Vice Captain of Kent County Cricket Club, looks on

'So I'm off on a trip'

MANY people envy those who are apparently fortunate enough to travel abroad on company business. Brian Wolfe, manager of ADD, summarises many people's experience when he reports that a business trip abroad can be interesting and successful, but it is certainly never a joy ride. It often starts with a phone call to be, say, in Dallas, Texas, the day after tomorrow. Immediately, plans have to be made, messages compiled and data prepared to be carried with me. I'm sure that my secretary, Joyce Barrell, must take pep pills every time my departure is imminent. She has to ensure that no mail is left outstanding before I go, even though I suppose I leave at least twenty letters for typing and distribution.

Anyone who has been unfortunate enough to be near my office on the day of my departure will realise the rush that we are all in.

This panic not only happens at work. My long suffering wife has probably been up late the night before, making sure I have a clean set of clothes for the trip.

Dinner off

My children treat a trip to the USA as if Daddy is just "going to London", with the difference that he stays away longer, and has been known to bring back presents. But on one occasion, my five-year-old announced about some American shirts I had brought, "Clothes aren't presents".

Often a trip clashes with some domestic engagement planned months before and I have to explain to my wife that the US Navy and Air Force are not interested in our dinner date.

So much for the preparations and pre-trip panics. I always find travel to a foreign country stimulating.

There is always something new to see or experience, even if I have been there many times before. It starts with the rush to the airport—I'm usually late—seeing all the people leaving on flights all over the World. Check in. Should I buy some duty-free booze? It's a helluva weight to carry: maybe I will. Oh, I forgot to tell my wife something! Where's a phone box? Change? She's not in! I'll phone Joyce and see if anything has cropped up. Plane is due for departure: rush for the departure lounge.

An Aisle Seat

Finally I get on the plane, having carefully selected an aisle seat at the front—an aisle seat because it's easier to "pay a visit" without clambering all over the two other passengers, and at the front to get away from the galley and noise.

The flight itself is usually relaxing. I find time to catch up on reading and

writing reports, and have time to prepare for the inevitable series of meetings on my arrival.

6 am UK Time

The time difference when travelling to the USA is probably the most tiring. You arrive at anything from 12 midnight to 3 am UK time, but it is only late afternoon over there and you usually have to hold discussions in preparation for the next day's meetings. Often these sessions go on until 6 am UK time. Yet local time may be only 12 midnight. I get to bed, only to wake up at 5 am US time and have to wait two hours for breakfast. It usually takes about 24 hours to adjust, but a full day's work has to be done during that time.

I rarely get time to do any shopping or sight-seeing unless the trip extends over a weekend. While the pressure of work is on, I tend to forget I'm away from home, but a weekend "out in the blue", particularly in a large city, can be very lonely. During trips lasting two or three weeks, I speak to my family by telephone, but this tends to accentuate my isolation.

Director's Baggage

There are always travelling complications and changes of plan. When a certain Managing Director was trying to travel from Dallas to London via New York and Montreal, with a ticket validated for Chicago-London, a certain Mr. Roscoe of American Airlines was severely tested. Our Director's baggage was loaded and unloaded twice and he ended up travelling to London via Chicago and Montreal, and narrowly prevented his baggage travelling via New York. In addition, the occasional airline delays and diversions can be extremely tiresome. Everyone has some bitter memory of an exasperating delay; and on the Atlantic, lost time always aggravates the natural effects of the time change.

Red Eye Special

When returning to the UK, I have to decide whether to gain time in the office by flying overnight and getting perhaps three hours' sleep—the "red-eye special" flight—or fly during the day and not get back to the office for 24 hours. The office usually wins. Acclimatisation usually takes about 36 hours, during which I am "firing on three cylinders". The problem is that the pressure of work is always greatest during the acclimatisation stage. But the results in terms of production orders during the last few years have fully justified the discomforts of repeated foreign travel.

Comment from someone who has just completed his 100th trip: "He won't have so many problems when he has a little more experience."



With the RAF's 50th anniversary on April 1, much on their mind, the RAF Central Servicing Development Establishment detachment produced this alarming picture of our tower blocks. The RAF unit crest on the notice board belongs to "RAF Rochester". The crest is two queens of clubs and two of spades, and the motto "Chassez la Chienne"

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CLIMBING CLUB FORMED

New members can be trained

CLIMBING has now joined the many activities supported by the Elliott Social Club. The new Climbing Club was officially formed on March 13.

Already there are 25 members, some of whom have had several years' rock climbing experience and can train the novice members in the special skills of mountaineering. A grant from the Social Club has helped in the purchase of the basic equipment and the club now possesses four full-weight climbing ropes and numerous slings and karabiners.

Regular all-day practice excursions go at weekends either to Harrison's Rock near Tunbridge Wells or to Stone Farm near East Grinstead.

Harrison's Rock is a sandstone outcrop, owned by the Central Council for Physical Recreation, and gives novices excellent practice in the basic techniques of rock climbing. According to the chairman Frank McLoughlin (ATED), regular climbing is essential to gain competence.

Climbing Upside Down

During practice, the climbers usually divide into groups of two or three and attempt different routes. They can assess the difficulty of each climb by the technical standard of the moves involved. Each route is recorded in a guide book and its difficulty classified. These training climbs usually go between 30 ft and 60 ft and there is no serious danger, but club members guarantee "One big laugh from beginning to end".

On a recent visit to Harrison's Rock, Roger Cooper (ATED) attempted a very difficult climb upside down, walking on his hands, but this is not generally recommended.

Frank McLoughlin has had five years Alpine climbing experience. He has already climbed Mount Aneto in the Pyrennees, five peaks in the Alps, the Wildespeitz, highest peak in the Tyrol, and numerous mountains in Norway. He hopes



Roger Slater (ATED) descending Harrison's Rock, Tunbridge Wells

that the Climbing Club will progress to Alpine climbing. Roger Slater (ATED), pictured above on Harrison's Rock, and Frank McLoughlin planned a climb up the notorious Cheddar Gorge over the Easter weekend to see if it lived up to its reputation.

Equipment secretary Glynn Church (ASCD), the most experienced member of the club, attempted some very difficult climbs at Llanberis Pass, Snowdonia over Easter. During six consecutive years' climbing Glynn has acquired great skill and technique. He is planning an expedition to the Dolomites this summer with a group of friends.

Secretary Sandy Slater (ESWAL) made gritstone climbs at Stanage in Derbyshire over the Easter weekend. Shaun Martin (ATED) another member also has a few years' experience behind him and two very promising novices within the group are Dennis McKeen and Brian Smith (ATED).

A camping expedition to Llanberis Pass is planned for the Whitsun weekend.

The climbing club is looking for new members. Any potential climbing enthusiasts should contact secretary Sandy Slater. No previous experience is necessary. Training will be given by the skilled club members.

LUCK OF THE ELLIOTT RIFLES



Specialy photographed for EFA News by Dave Meredith, are, left, Christine Luck (AS&RD) and Vivienne Beaver (MACD), the Rifle Club's lady marksmen

ELLIOTT Rifle Club's A and B teams won both divisions 1 and 2 of the Maidstone and District shoulder-to-shoulder smallbore League during the winter. In the 20 matches shot by each team, the all-male A team won 18 and lost two; the B team won 18, drew one and lost one.

Of the two girls in the B team, Christine Luck (AS&RD) has been chosen to shoot for Kent Ladies. She first handled a rifle in March 1966 and was trained by George Burbridge of MACD.

Opposing Males

Christine was so overcome by the occasion when she took aim for the very first time that she was unable to pull the trigger. But with constant practice and expert teaching, she developed into a useful Club member eventually graduating into the C team and then into the B.

Both Christine and Vivienne Beaver (MACD), the other girl in the B team, are always worth several points to the B team by their natural ability to distract the attention of the opposing males.

The senior of the two girls, Christine, has been with EFA for 64 years. With typical MACD precision and eye for detail, Reg Bloodworth reports that Christine is 23 years old, 5 ft 3½ in tall, weighs 8 st 11 lb and that her vital statistics 34, 24 and 36 add up to a useful score of 94. (Useful for what, Reg?).



When Bill Partridge of MACD retired after 13 years as production planner, John Goodhand, MACD production manager, presented him with a set of pipes and accessories. Bill intends to continue his planning activities, improving his rock and ornamental garden



William Tanton, who retired at 65 after seven years in the Elliott accounts department, holds the transistor radio which was his farewell present. Beside him is his wife Elsie. Mr Tanton will now be able to devote all his time to his garden, not far from the Flying School side of the airfield. He worked for more than 35 years with NAAFI in Britain and abroad before joining Elliotts and established here the reputation of never having been late or sick

Return of the Badges

A CHANCE in a million saved a badge which someone dropped in a local Woolworth store a while ago. A stranger must have picked it up and popped it into a letter box, because in due course it tumbled out of a mail bag onto a GPO sorting office table.

The GPO inspector watching the sorting picked the badge up, recognised the Elliott markings and handed it to his wife. She, by extraordinary coincidence, was temporarily working as secretary to Cdr Fenn-Clark, head of EFA documents security and master of the badge system. So the badge was very quickly returned to a surprised owner.

Another lost badge was posted back from the "blue". Both these badge owners were lucky, but let's not try our luck too often.

Firteen for Free

Ernie Free, training officer, reports that the appeal for second-hand technical books published in the last issue of EFA News produced 13 books — nine of them from one donor, the rest from two others.

Ernie is grateful for this response, but wonders unkindly whether it reflects the restricted readership of EFA News, or lack of response from readers. The foundations of the apprentices' technical library have been laid, but any further books will be much appreciated.

Law Reports

Brewster sessions wrong on 'beer only' ruling

At last, and on the unimpeachable authority of the Financial Times, the ladies at Ken Brewster's parties can now demand their gin and sherry. No longer will he be heard saying "Sup thee pint, Luv".

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Elliott Red and White netball teams, left to right, standing Janet Smith, Kathleen Fiest, Betty Wheeler, Sadie Springate, Linda Eason, Eileen Baker, Yvonne Long, Anne Rowe: Kneeling, Beryl Hoey, Cheryl Gilbert, Joan Thompson, Pauline Kennedy, Pamela Jones and Pauline Harker

Ladies' Netball Successes



Janet Smith, honorary member, in action

More Players Wanted

THE Elliott "Red" and "White" netball teams did well in the Medway Netball League last season and have been training hard since January to do even better this season. Both teams came fourth in their individual divisions and the "Whites" were also finalists in the important Bowen Award knockout competition. The Bowen Award was donated by Elliotts in memory of a former member of the Elliott team.

The netball club is still looking for new members, even though it has already formed a third, "Blue", team this year. All three teams are doing well so far this season and all were undefeated at the time of going to press.

The picture above shows the "Reds" and "Whites" in their Elliott uniforms, a striking red tunic with a white blaze.

Any girls interested in joining should contact secretary Beryl Hoey (Fuze) on Internal 235.



Alderman S. Corry, JP, Mayor of Rochester, presented the apprentices prizes on March 14: recipients included, above left, G. Bull (Divisional managers' prize for best student), above right, Dave Upton (Chief engineers' prize for best technician), below left, Graham Baker (one of two best third year apprentices) and below right, John Willis (best of two fifth year apprentices and foremen's prize for best craft apprentice)



EFA RIDER AT CRYSTAL PALACE

CHRIS Singleton, who recently joined the company as a technical author, enjoys what he calls "the somewhat dubious pastime of motorcycle racing". Followers of the sport may remember having seen him performing (off and on) a home-built 650cc Triton at Lydden. He has also been well placed at Brands Hatch and Crystal Palace.

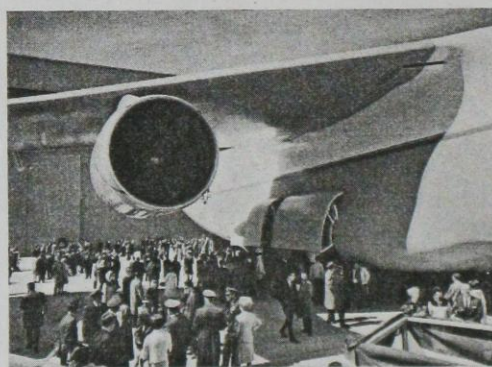
Practising at Crystal Palace on Easter Saturday, Chris overcame earlier engine troubles, but skidded off the track at the end of the straight on his first lap and needed five stitches in his chin. The bike was straightened out for Monday and he gained a safe seventh place.

This season his number one bike is a 350cc Italian Aermacchi of somewhat dubious origin, on which he finished sixth at Brands Hatch on

March 24. This was encouraging for Chris as the bike was started for the first time only five minutes before the start of the race and Chris rode it without having practised or qualified. He fought his way up to third place during the first lap and then had the frustrating experience of watching riders pass him along the straight. Apparently the timing of his engine was wrong and he was just "running in".



Chris Singleton (TACD) at speed on the Brands Hatch circuit



Above, the people give scale to the huge air frame and engines of the 360-ton C-5A heavy logistics transport. Below, one of the four six-wheel bogies of the C-5A's undercarriage, steered by courtesy of TACD



EFA at the C-5A Roll Out Continued from page 1

Each of General Electric's 41,000 lb. thrust TF-39 turbofan engines swallows 42 tons of air per minute. It could suck the air out of the giant Houston Astrodome in five minutes, or evacuate a four-bedroom house in under a second.

Land On Wet Grass

The five-leg, 28-wheel undercarriage, for which TACD is preparing the cross-wind steering computer, allows the C-5A to operate from wet grass surfaces with the consistency of a cricket field with a payload of 100,000 lb. The legs can be adjusted to tilt the freight floor to match loading and unloading facilities, tyre pressures can be changed in flight to allow landing on grass after take-off from concrete, and legs can be individually raised to allow wheels to be changed without jacking the aircraft up.

FID is, of course, providing the duplicated air data computers for the C-5A and MACD are producing the Energy Management Analogue Computer, which will allow the USAF crews to get the best range or endurance from the 49,000 US gallon maximum fuel load. That much fuel would, incidentally, fill a five-room house.

58 C-5A's have so far been ordered, but the US Air Force has said it will confirm its option for 57 more, and there is a second option for another 85. This work will keep EFA busy for some years to come.

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