



EFA NEWS

No 29

December 1971

MRCA News

BY the time this issue of EFA News appears we may at last know where we stand in the MRCA programme. A fair proportion of our industry's work-loading inevitably depends on this Anglo-German-Italian Multi-Role Combat Aircraft. Indeed, the operational capability of the three countries' air forces until well into the 1980s depends on it too.

It is hardly surprising that the total, all-in cost of the 900 or so MRCA's planned is estimated at more than £1,000 million — greater than the cost of the Concorde programme as it now stands.

Following the recognised pattern, about one third of the cost of MRCA is accounted for by avionics. Without such systems as radar, automatic navigation, weapon aiming computing, communications and the special displays and controls with which the pilot can make use of the systems, the aircraft would have no worthwhile combat capability.

For more than a year EFA and its competitors have been planning and responding to MRCA's joint manufacturing company Panavia's specifications for a wide range of avionic equipment. For the last few months, Panavia and its inter-governmental management organisation NAMMA have been moving slowly towards the key decisions on who gets which contract.

The decision process aroused public concern in September, when it became known that the nose radar, biggest single cost item after the airframe and engine, had been ordered from the US company Texas Instruments, thus virtually terminating Britain's ability to develop airborne attack radars, including that of our own Elliott Automation Radar Systems at Borehamwood.

Finally, Mr Ian Gilmour, Minister of State for Defence Procurement, answering a question from our own MP Mrs Peggy Fenner on November 19, announced that British

companies would be "main contractors" for six out of ten systems. He did not specify how much of each system would be shared with other companies in Germany and Italy, as virtually all ten systems must be, or any details of timing or other factors.

He did say officially for the first time that "Elliotts" would be main contractor for the autopilot and TV tabulator. The latter unusual term defines the use in MRCA of a television screen to display all kinds of information, from pictures to writing, for the MRCA crew — in simplest terms an instrument panel on a television screen. FARL has been developing this type of device for some time.

Besides EFA, Ferranti will make the inertial navigator and combined radar-map display, Decca the Doppler radar and Smiths the head-up display. Half a dozen other important systems will go to Germany and Italy, with British companies sharing in two of them.

It will be some time before the true picture of MRCA work-load becomes clear. More detailed information will certainly be made public soon, but firm contracts will take some time to emerge.

Well Over 65

SOcial secretary Jim Collins reports that one of his most successful Social Club sections is the Over 65s Club. Since 65 was established as the official retiring age, club membership has steadily increased to 70, not including wives or husbands, and shows no signs of levelling off.

Treasurer and Secretary of the club are respectively Jock Frazer (formerly Fisher) and his wife Gladys. Believe it or not, Jock is 82 years old and his wife is 78.

The Over 65s are having their annual Christmas party on December 16. They normally meet each month in the Elliott club house. The club provides transport to these meetings and for visits to shows or theatres in winter and expeditions in summer. Over 65 certainly seems to make little difference to these folks.



JAPAN is fast developing an aerospace industry and tried to advertise the fact early in November through the International Aerospace Show at Nagoya. Fred Haskett, EFA Marketing Executive, organised and ran the EFA exhibition stand and welcomed Mr Frederick Corfield, Britain's Minister for

Aerospace. With them in this picture as they discuss the Harrier autostabiliser box are, on the right, Sir Richard Smeeton, Director of the Society of British Aerospace Companies and on the left, an official of the Japanese Ministry of Trade and Industry. Picture by Hawker Siddeley Aviation.

www.rochesteravionicarchives.co.uk

£100 Went a Long Way



EILEEN Fulwood of FCD can prove it! She was one of the £100 holiday winners in the draw last Christmas and, as reported in our May issue, used it for the purpose of visiting her brother, who emigrated to Canada 18 years ago.

Her itinerary was extensive indeed. She told EFA News that "3,000 miles plus by air and a further 2,500 odd road miles seeing Canada is a long way.

"I was able to spend a week at a lakeside cottage in Northern Ontario, complete with its own power boat, kayak and sailing boat; two days in Ottawa, passing through the famous Algonquin Provincial Park en route (where I spotted a large black bear waiting to cross the road) and, leaving Ottawa to return to Toronto, visited the Upper Canada village.

"This is an original North West village, complete with a 'Miss Kitty' type saloon and hotel, sawmill, bakery, spinning mill, shoemaker and so on. It even has its own mail coach and four horses. It was moved, one mile to its existing site to make way for the new St Lawrence Seaway.

"Naturally no visit to Canada is complete without seeing Niagara Falls. That day was rounded off with dinner in the revolving restaurant at the top of the Skylon Tower, where the falls were viewed with colour illumination.

"With energy and opportunity still remaining, but alas no small change from the £100, I next went on a boat cruise of the Thousand Islands in the St Lawrence River, where the wealthy of Canada and USA have week-end and holiday cottages — some cottages, as you can imagine! I saw Helena Rubenstein's island and Caruso's and set foot

in the USA by taking coffee on an island in American waters.

"Back in Toronto, for the remainder of the holiday, visits were made to the Canada Exhibition, with exhibits from many parts of the world, and also to the very wonderful Science Museum, a magnificent building this, containing exhibits and demonstrations of many Canadian industries scientific achievements, and mineral wonders of this great country. Shopping in the new shopping halls and plazas has to be experienced to be believed. By comparison with shopping in the High Street, it had a dreamlike quality.

"Altogether a wonderful family reunion and holiday, and I still can hardly believe my good fortune in winning the prize that provided the impetus to embark on the journey I had always hoped to make one day".

Retiring-Len Russon

FOR a man who spent 32 years in the RAF, a mere ten years with EFA may seem like a temporary posting. Len Russon joined the RAF in 1926 when, it is said, Pontius was converting to twin-engined aircraft. His career included a tour as Staff Officer in the Air Ministry and the Ministry of Supply. For a year he was adviser on supply matters to the Royal Ceylon Air Force.

As Administration Officer for the Nimrod project his service experience was invaluable and Doug Harris, IND's Chief Engineer, echoed the thoughts of many when he said at Len's retirement presentation that he would be greatly missed. Paying tribute to Len's hard and dedicated work for the division, Doug presented him with an electric drill and various attachments and wished him success in his next posting.



Globe Trotters

AS&RD representatives travel all over the World looking after EFA equipment. This picture was taken at Keflavik, Iceland, during the trans-Atlantic delivery of the BAC One-Eleven Series 475 to Faucett, the Peruvian airline. Boarding the aircraft are (right) John Bass (AS&RD) and Mr B.G. Thomas, BAC's General Manager, Product Support.

John Bass travelled to Peru with the aircraft and continued in South America for some six weeks. He visited five operators who together fly Elliott avionic systems in some fourteen One-Elevens.

Technical representatives and service engineers from AS&RD really get around. At present, resident representatives are based in Miami, Saudi Arabia, Malta and South Africa. Visits will be made shortly to Fiji and Malawi as new operators receive their first jet aircraft. Representatives and service engineers are also based at Kinloss in Scotland; Warton, Woodford and Ringway in the Manchester area; London's Heathrow and Gatwick, and the Concorde test base and RAF transport station at Brize Norton, Glos.

www.rochesteravionicarchives.co.uk

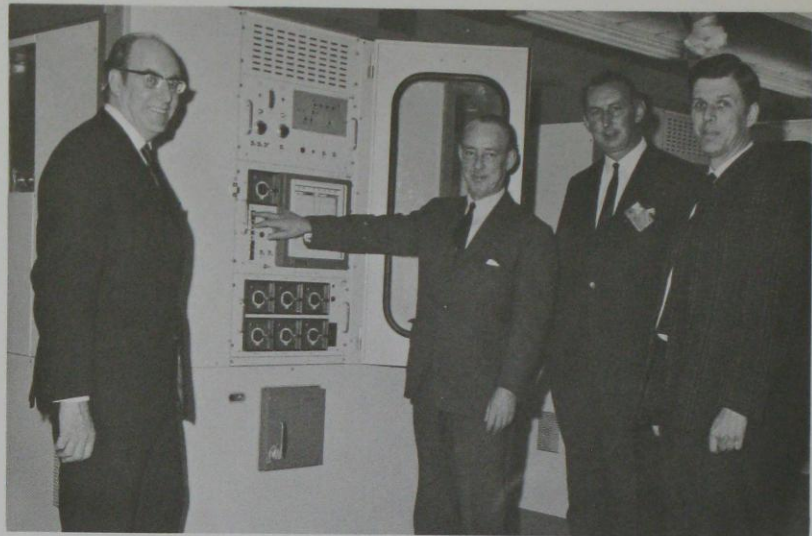


.... and Dick Madigan

AFTER 14 years with the company, Dick Madigan retired on December 6. Dick joined the Accounts Staff as a cost clerk for Swift and Swallow, and when that division moved from the Medway area, he was promoted to section leader of the Salary Analysis Section, a position he has held for the last nine years. Prior to all this, he served for 29 years in the Royal Navy.

We wish Dick a long and happy retirement.

L E Hubbard (EFA Accounts)



IND Switched On

JUST to prove it, we photographed Mr K.O. Grant, OBE, Assistant Director Aircraft Equipment Production Branch of MoD (PE), switching on the first of 12 environmental test chambers now being commissioned for the Jaguar project.

There to lend support were, on the left, Mr J.J. Sullivan (AFP/8), and on the right, Dave Harries, IND Production Manager, and John Wyatt who is responsible for this part of the Jaguar project.

The chambers will test Jaguar NAVWAS units under representative and worse environments of temperature, vibration and humidity. Tests will continue night and day to ensure that when NAVWAS enters RAF service there will be no problem due to environmental conditions.

This test facility is part of IND's build up towards full production for the Jaguar.

Don't Fire - Shoot

TALK to an archer about firing an arrow at the bullseye, and he may go berserk. An archer does not fire an arrow, he shoots it at the gold, not the bullseye.

The fascinating sport or pastime of archery, centuries old, is the source of a number of popular phrases such as "playing fast and loose" and "having two strings to your bow". If you wish to become a toxophilite you will learn all about such things, but as an archer you will be content with "shooting in the bow" as often as you like.

Elliott (Rochester) Archery Club has grown in nearly six years from a humble beginning to one of the largest and most

important clubs in Kent. As well as providing four of the twelve archers chosen to shoot for the County last year, the Club's own team won three handsome shields, which are on display at the Elliott clubhouse.

The 1971 membership, has dropped slightly to 27 seniors and 18 juniors. All the juniors and most of the seniors were taught by the Club's qualified instructors, and these instructors are ready and willing to teach you how to shoot in the bow and find a new and pleasant way to spend your leisure.

Details from Reg Bloodworth (FCD) on internal 730, or at home Medway 32961.

Elliott Social Club Sailing Section

SEVERAL keen yachtsmen in EFA have suggested it would be a good idea to have a sailing section of the Social Club. The objective would be to encourage both cruising and racing, to promote EFA sailing events and to arrange meetings for discussion and instruction.

Athletics - next month

Elliott Athletic Club will be competing in the following events during the coming month:

December 18

Cross country for seniors, youths and boys between Kent Police, Tonbridge AC, Invicta AC, Met. Police, Medway AC and Nonnington College at Aylesford.

January 1

Kent Cross Country Championships for seniors, juniors, youths and boys at Aylesford.

Further details from Len Murphy, ADD, on Internal 361.

Whether you are interested in cruising, dinghy racing or just messing about in boats— or even just thinking about it — and would support the formation of a sailing section, please contact Don Emmett (EFA) on internal 459, or Jim Collins, Social Secretary, on internal 217.

www.rochesteravionicarchives.co.uk

Dickie Richards MBE

HIS many colleagues and multitude of friends will have been greatly saddened by the sudden death on October 28 of Dickie Richards, Assistant Chief Engineer of Airborne Display Division. Dickie joined us in 1964 on the acquisition of Rank Cintel's aviation division, where he had worked on the development of head-up displays since shortly after the start of the original development programme.

As an engineer Dickie had a truly original mind aided by a well developed judgement and horse sense, which consistently enabled him to choose the right engineering approach and compromises on many projects on which he worked.

As a colleague and companion his sturdy individuality and absolute integrity won him the respect and friendship of all who came in contact with him.

His interests and intellect spanned many fields. Few will know that before



joining Elliotts he was a keen pilot and private owner of a light aircraft, a rather more practical approach to aviation than his tongue-in-cheek concept of a carbon fibre evacuated sphere or balloon which, being theoretically lighter than air, would be a permanent anti-gravity sky hook. And I am sure that he wouldn't mind me writing that he was a "good man" on a party with a vocal repertoire that got us evicted from at least one Dallas night club.

His practical achievements are all around us in the Buccaneer, ILAAS, A-7 and other head-up display systems, in all of which he played a major, and sometimes *the* major

part. For this work which contributed greatly to our export successes, he was honoured by the Queen with the award of an MBE in the 1970 Birthday Honours List.

But perhaps more important are the intangible values of admiration, affection and fellowship which he inspired in all who were fortunate enough to work with him.

To his wife, we extend our very deepest sympathy and we share her grief.
P.A.H.

tablespoon cherry brandy and one tin of cherries. Stuffing for duck: one chopped onion, 4 oz bacon, 4 oz mushrooms, 2 oz butter, 8 oz long grain rice, ¾ pt chicken stock, salt and pepper.

Method:

Chop the onion, dice the bacon, wash the mushrooms (do not peel) and slice them, after drying in a cloth. Put onion, bacon and mushrooms into a frying pan with the butter. Fry gently for five minutes. Stir in the rice and cook until rice is transparent. Add the hot stock, a little at a time and simmer until the stock is absorbed. Stir continuously whilst doing this.

Bone the duck, lay stuffing inside and reshape the duck and sew into shape. Rub the outside of the bird with salt, pepper, marjoram and butter. Roast in a preheated oven (400 deg or Reg 5) for 10 minutes, then reduce heat to 375 deg or Reg 4, allowing 15-20 minutes per lb.

Baste every 15 minutes with orange juice mixed with liquid from the cherries.

Twenty minutes before the duck is cooked heat the cherries in the wine. Strain off most of the fat from the duck, add cherries, wine and cherry brandy and baste for the last time.

To serve, place duck on dish, surround with cherries and garnish with watercress and a few stuffed olives. Reduce the wine sauce slightly and serve separately.

Suitable vegetables are croquette potatoes, broccoli and sliced baby courgettes.

Pudding:

This is a cold pudding that keeps the traditional shape, but is not so filling.

Ingredients:

- 1 pkt Brandy jelly (or raspberry)
- 2 oz crystallised ginger
- 1 teaspoon cinnamon and nutmeg
- 4 tablespoons sherry
- 4 oz glace cherries
- 4 oz glace pineapple
- 6 oz mixed dried fruit (soaked overnight in water)
- 4 oz chopped almonds or walnuts

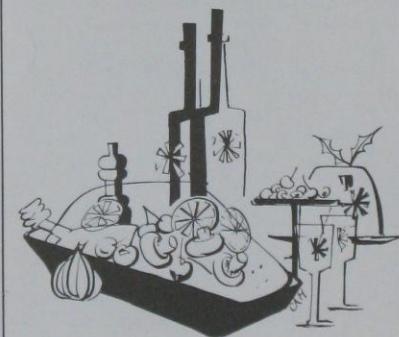
Make up jelly with ¼ pint boiling water, allow to cool. Soak chopped ginger in hot water for five minutes. Drain and stir into jelly with cinnamon and nutmeg. Add remaining ingredients and stir well. Turn into a rinsed pudding basin and refrigerate overnight. Turn out and serve with whipped single cream flavoured with kirsh or grand marnier.



NOW on his way back to Christchurch, New Zealand after a year with EFA, is Paul Knight, shown here working on the FCD's ITEM computer for Concorde. Paul, who is an apprentice with New Zealand National Airlines Corporation, won a scholarship to spend a year in Britain and chose EFA. He worked for four months in AS&RD and completed a computer course before joining FCD.

His fiancee joined him from Christchurch in May. They were married and drove extensively round Europe and Britain. On the way back he hoped to stop off and see Rome, the Taj Mahal and other points East. One problem, he said before leaving, will be to get used to New Zealand beer again.

Christmas à la Jennings



"TRADITIONAL CHRISTMAS FARE will never lose its familiar charm", says Stan Jennings ADD, "but just for once, break away from tradition and try something different. The following menu will make a pleasant change and you will not have the problem of what to do with cold turkey in January".

"Start the meal with smoked salmon, don't forget the brown bread, lemon slices and cayenne pepper. Follow with duck and cherries".

Ingredients:

- One 4 lb duck, salt, pepper, marjoram, butter,
- juice of two oranges, one glass red wine, one

Published by Elliott Flight Automation Ltd Printed by AS&RD PL 1630

www.rochesteravionicarchives.co.uk