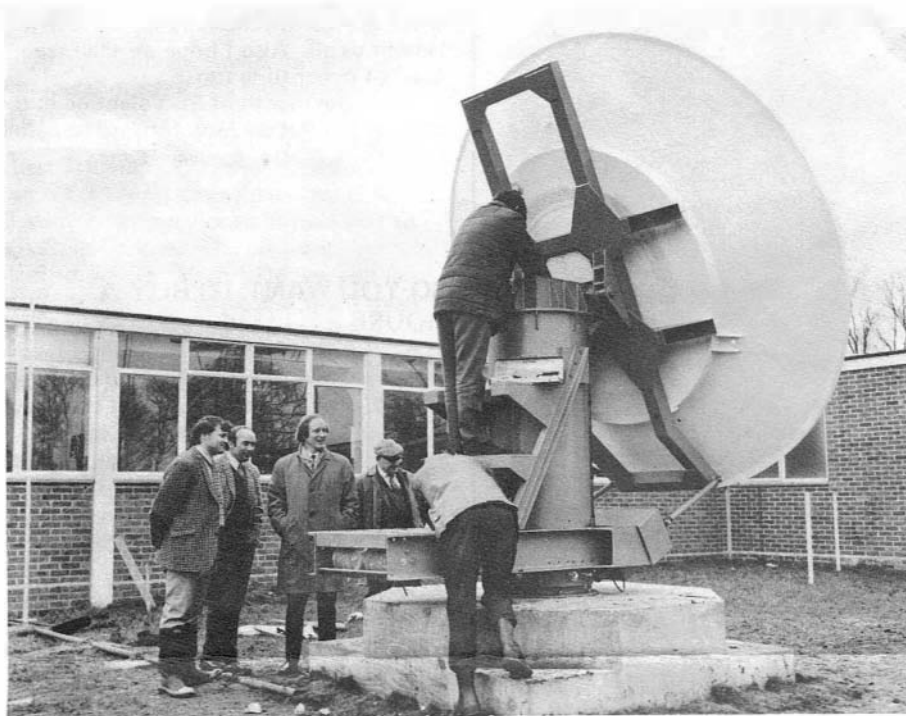




FEB 1973

NEW SATELLITE TRACKING AERIAL

FOR
THE RADIO AND
SPACE RESEARCH
STATION



From left to right, Dr. Allnutt, Mr. Greenan, John Welsh and 'Mac' with Les Martin and Dave Cattermole doing the work.

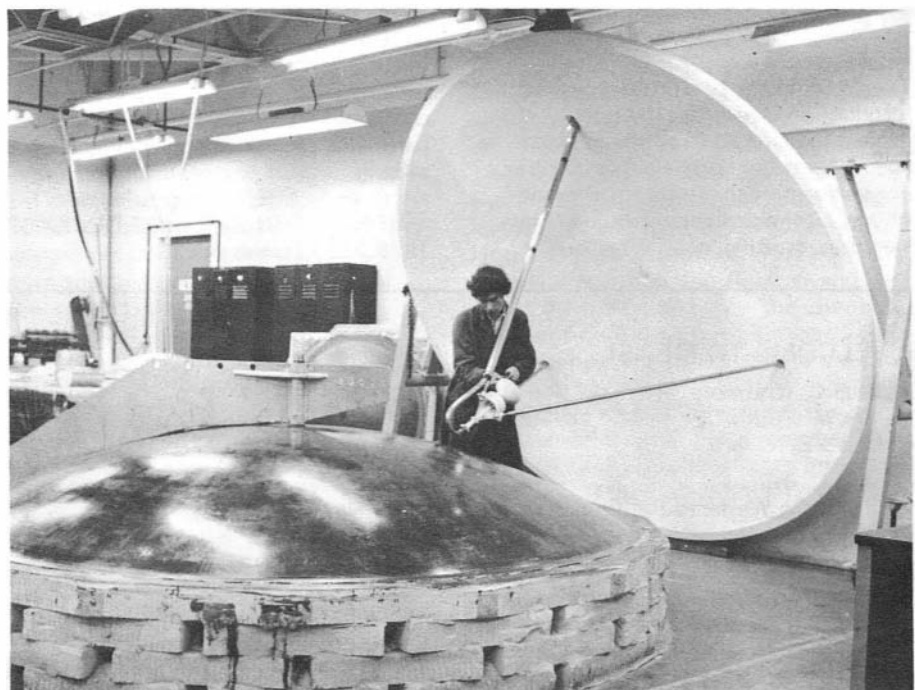
The picture above shows a 10½ foot diameter satellite tracking aerial being installed at the R & S Research Station, Slough. The aerial is intended for the reception of centimeter and millimeter waves carrying scientific information from the Sirio II satellite due to be launched in 1974.

The dish-shaped reflector has a parabolic profile accurate to 0.004 inch over its entire surface and produces a radio beam only a few minutes of arc in width. This beam is steered to the correct position in the sky to an accuracy of 0.02 degrees by an electric servo system under the control of a sidereal clock.

A 14 KW heating system is built into the front surface of the dish to keep it clear from deposits of ice and snow and the system is designed for un-interrupted operation for a period of 10 years.

The whole system was designed and developed by the Research Laboratory and the dish was constructed by the SPD Lightweight Structures Department.

*J. Welsh
R.R.L.*



The dish in course of completion in the Lightweight Structures Department with Paul Bladen working on it. The mould is in the foreground.

CONCORDE 02 LANDS AUTOMATICALLY



The Automatic Flight Control System manufactured jointly by Marconi-Elliott Avionic Systems Rochester and SFENA (Societe Francaise D'Equipments pour la Navigation Aeriennne) has enabled the newest Concorde 02 preproduction aircraft to complete a successful automatic landing at the first attempt.

The first landing took place at Toulouse on January 13th and by the 27th of that month Concorde 02 had made two automatic landings in its first seven flights. This information has only just been released by Aerospatiale the French Aircraft manufacturer.

The AFCS in the two prototype and pre-production Concorde has now controlled the aircraft in all the planned manoeuvres, speeds and heights of airline service performing thirty three different functions automatically controlling climb, acceleration, cruising, navigation, height

change, deceleration, landing, stabilisation and throttle control.

The first acceleration by Concorde 001 to Mach 2 was controlled by the autopilot and Concorde 001 and 02 have now accumulated a total of 45 automatic landings.

After the latest flights in Concorde 02, pilots have commented very favourably on the clarity of the control and indicator panel which was the first to be designed for mounting in the glareshield.

Reliable electronic automatic flight control will make an important contribution to successful Concorde operations in accuracy and regularity and therefore to economy, safety and comfort. This is particularly significant at a time when the sales options of prospective purchasers are to some extent in the balance.

(REPORT IN EARSHOT DECEMBER 1970 REFERS)

WE WELCOME TO MEASL

305 Mr B.C. Whitmore
Mrs. M. Turko
Miss J.E. Millard
307 Mr J.L. Bellairs
Mr S.A.N. Whitehead
Mr M.F. Doyle
309 Mrs I. Deller
Mr N.D. Whitlock
Mr C.V. Rowntree
Mr R.G.J. Coleman
Mr T.P. Stock
Mr O.W. Clarke

Mr R.H.W. Graves
Mr M.A. Pratley
Mr J.N. Bryan
Mrs N. Morris
358 Mr A.R. Fowler
Mr W.J. Pickard
Mr R. Burrow
Miss A.E. Vaughan
Mr N. Totton
918 Mr J. Evans
Mr K.G. Denning
Mr S.P. Burgess

EDITORIAL

EARSHOT'S third anniversary comes up this year in April — anyone with special ideas or articles for this anniversary issue please let me have them as soon as possible.

We are bound to see some changes in 1973. The Common Market, VAT, Metrication, and the start of important new work in the Company requiring additional staff will all impose change of one sort or another. We can hope that these changes will directly or indirectly benefit us all. Also I hope we shall see Earshot benefitting too.

So in the month of St. Valentine in the Year of the Rat we look forward hopefully.

J.L. Burden — Editor

SO YOU WANT TO BUY A HOUSE !

Or perhaps you are only kicking the idea around, or you think you might consider it if you could afford it, or you might some day or something. Anyway why not take some expert free advice — it's available for you.

There are three ways of solving your mortgage problem:—

A scheme run entirely by the Group

A scheme where the go-between is a Company employee

A scheme where an outside broker is used.

The Personnel Manager will provide you with all the details you need of the first two methods. The third and last scheme is operated by Newman and West Ltd. of 14b St Albans Road, Watford, Herts — a firm of brokers well known to us and who have been giving us good service over a number of years. Mr. John Newman attends regularly and is only too happy to see you and offer any help and advice you may need. He occupies an office in the Personnel Dept. when visiting and appointments can be made through that Department!

NEXT MONTH — MISS PHOTOGENIC

At the Photo Club one night last week, At Sally 'B' we had a peep,
Long Blonde hair and lashes black,
Up swept front and straight white back,
Hips in proportion to her waist,
Dimpled knees just to our taste,
Five thousand watts of hot white light,
Made Sally 'B' all up tight,
All the lads with cameras ready,
Cried "easy Sal and hold it steady!"
' Relax' we said "there's nought to dread,
We only photograph your head!"

ANON

VISITS TO CHINA

On 13th November last the first Trident aircraft for C.A.A.C. (Chinese Civil Aviation Corporation) was formally handed over to the Peoples' Republic of China at a ceremony at the Hawker Siddeley factory, Hatfield. The aircraft is the first of 20 ordered by C.A.A.C. and left Hatfield a few days later for delivery to China. As has already been announced the Airadio Division of Marconi-Elliott Avionics is supplying a complete navigation and communications systems package for these aircraft.

In order to coincide with the arrival of the first Trident in China an Airadio Division field support engineer left U.K. in November to carry out a liaison visit to C.A.A.C. in Canton. The engineer concerned, Mr. H. (Harry) Daines, was in Canton for about a month and spent most of this time familiarising Chinese radio engineers with the various Marconi systems and lecturing on overhaul and maintenance facilities and techniques. A party of seven senior Chinese engineers had already spent 10 weeks, at the Marconi College, Chelmsford, on an intensive course on the avionics equipment being supplied. During his visit to China, Harry Daines was able to do a little sight-seeing, but, as he says, Chinese engineers are most enthusiastic to learn new techniques and his visit was very much a working one.

The Airadio Division will be exhibiting some of its range of products at the British Industrial Technology Exhibition in Peking next month. The exhibition, which has been sponsored by the Department of Trade



and Industry opens on Monday 26th March and finishes on Saturday 7th April. Over 200,000 engineers, technicians, officials and end-users are expected to attend of which a large proportion will be concerned in aviation matters. The

Division will be exhibiting as part of the GEC-Marconi Electronics complex on the main GEC stand.

*B. Blake
Publicity Basilidon*

Metrication PROGRESS OVERSEAS (CONTINUED)

ZAMBIA

A Metric System Act was passed in 1970 which empowered the Minister of Trade and Industry to publish compulsory orders concerning trade in metric and dates for its commencement. A Metrication Board was appointed with the task of co-ordinating plans and preparing programmes to complete metrication by 1973.

Metrication is progressing both in the public and in the private sector. In the Public sector, weights and measures, Customs, Railways, and Land Survey Regulations are already metric and metrication in agriculture was focussed on the 1971/72 planting season.

Metrication is well advanced in construction. Mining output is expressed in metric. Road standards are fully metric and all construction work on roads is in metric. All petrol pumps have been converted and sales of petrol are by the litre.

As far as retail and wholesale trade is concerned metrication is taking place area

by area as orders affecting particular regions are issued. These orders give details by which weighing and measuring equipment must be calibrated in metric for use by hardware merchants, drapers, butchers, grocers, greengrocers and market stallholders.

The metric system is now taught in all schools and colleges and in the University of Zambia. Publicity too is aimed at everyone and in addition to films, posters and leaflets for the public, there are explanatory programmes on radio and television and articles in the newspapers. It is expected that the metric system will be used throughout Zambia by the end of 1973.

UNITED STATES OF AMERICA

A report "A Metric America — A Decision Whose Time has Come" produced by the National Bureau of Standards was published in August 1971 and was the result of a detailed study of the implications of the world change to metric for the American economy. The report's main theme was the question for the USA was not whether to change but how to make the change efficiently and economically. It recommended that the change should be made to the International System of Units through a

co-ordinated national programme over a period of 10 years at the end of which the nation would be predominantly metric. President Nixon in his State of the Union Message — January 1972 — said that the USA could enhance its competitive position by implementing the metric system of measurement.

The US Senate passed the Metric System Bill without opposition or debate last August and the Bill has gone to the House of Representatives. It is now generally accepted that America will adopt the metric system — the essential questions remaining to be answered are how and how fast can or should the change be made.

So there is great activity on the metrication front in a large number of overseas countries and this has important implications for British manufacturers and exporters.

Whilst it is not practicable to draw any general conclusions from such a diverse scene of action it does seem likely that in 1973 we shall see some very important changes being made by governments and industries overseas.

J.L. Burden

DRAMA

The Elliott Players drama section began 1973 by proving that being a year older they were now a little more mature.

Joe Turner forsaking the plaudits of the star for the headaches of the producer offered us "A Day in the Death of Joe Egg" by Peter Nichols. The play, performed in the Sports Pavilion, Rowley Lane on 5th and 6th January, has a story which calls upon the audience to think and the cast to act; tasks not always required in the "laugh a minute" comedies usually presented by amateur groups.

The story is of a marriage in which the immature husband has to joke his way out of situations created by his inability to cope with the 'problem' of the marriage — Josephine, his 10 year old spastic daughter.

A difficult story — extremely well produced and competently handled by the cast — headed by Joyce Ash as the mother and Malcolm Todd as the frustrated husband. These two performers were on stage almost non-stop throughout the two acts of the play and are to be congratulated not only for their fine acting but also for their achievement in remembering every line of the reams of dialogue that the parts

called for.

Joyce and Malcolm were the cream on a well made cake, but the cake could have been quite distasteful had not the remainder of the cast — comprising Pam Goodwin, Peter Oddy, Lena Kennet and Jenny Elliston (a young lady of indeterminate age) who played the ten year old Josephine — all handled their parts with the delicacy absolutely necessary in a play written and produced to give a number of laughs and a few little tears.

No doubt there will be some Elliott Players fans who will cry out for a return to the relaxing evening of high comedy and I'm sure they will be accommodated. Personally, however, I shall be disappointed if the players do not attempt more ambitious plays of which they have shown they are capable in the production of "A Day in the Death of Joe Egg".

Congratulations also to the backstage and front of house staff for a very good set, first class lighting and effective sounds — I believe the tea was pretty good too!

All together an evening for which the Elliott Players can be justly proud.

"Playfan"

OTHER COMPANY NEWS

MARCONI COMMUNICATION SYSTEMS LTD.

At Great Baddow Research Laboratories the core of a system is in operation, which, when fully implemented, will transmit 300,000 telephone conversations or 200 colour television signals simultaneously through a two inch waveguide "pipe".

The new circular waveguide "pipe" is capable of supporting signals throughout the frequency band from about 32 to 110GHz and offers the basis of a practical solution to the problem of high capacity communications for the future.

As part of the reconstruction of the State of Bangladesh, a new communication link between the capital Dacca and Chittagong the country's main seaport is being installed by Marconi Communication Systems.

"MATELO" (Maritime Air Radio Telegraph Organization) a new £1 million ground to air, high frequency communication network has been delivered to Royal Air Force Strike Command. The system includes a number of transmitters and receivers located at sites in the British Isles and all the equipment is controlled remotely from central control stations.

British Rail has placed an order for further PCM systems. They were the first organisation other than the Post Office to take advantage of PCM to increase the capacity of their telephone system.

"BE PREPARED"



Ted Coote of Vacuum Physics Neutron Division seen in Borehamwood village on a shopping spree.

MYSTERY CHAIR BREAKER STRIKES AGAIN!

Who was it sat upon a chair in 309 Admin. Office so hard as to cause it to collapse? Did he weigh too much for this tubular steel framework? Or did he have someone on his knee? If so who?

CONGRATULATIONS TO —

John and Ann Bolton on the birth of a son, Richard Anthony, at 11.15 a.m. on 1st February. Richard weighed in at 8 lbs 3½ ozs.

and to Valerie and Neville Pole on the birth of a daughter at 7 lbs 3 ozs on 16th January, 1973. Neville works in 309.



Best wishes from colleagues and friends in Neutron Division to Mr. Jack Edwards who completed 26 years service with the company this February.

and to Norma and John Coulter a son Stephen on 8th February, 1973 weighing in at 7 lbs +. Norma was a member of 307 Division.

MIXED-UP ADDRESS:—

We have received a letter from abroad which was addressed as follows:—

GEC-MARCONI ELECTRONIC LTD.,
CHELMSFORD
LEICESTER
GATESHEAD
WATFORD
U.K.

and it arrived safely!

ANON.

ELLIOTT ANGLERS

The Competition for the Doug Bladon Shield duly took place on Sunday 4th February as announced in last month's issue.

Accordingly at around 7.00 a.m. eighteen hardy and practised anglers could just be seen along the riverbank through the morning fog! So the competition was on and braving the cold they all got on with the serious business of fishing for the coveted Shield.

Unfortunately the fish did not share the Angling Section's enthusiasm — perhaps it was too early on a Sunday or too cold or something, anyway with valiant efforts by all, the trophy was finally won by Reg Harmer — and the catch that won it — one small roach!

Better luck next time chaps but nevertheless congratulations to Reg Harmer.

A.R. Tilley