

Result of the 1956 Cierva Memorial Prize Essay Competition

The Association is pleased to announce the result of the 1956 Cierva Memorial Prize Essay Competition

The Prize-Winning Essay was entitled

“ Investigations of Ground Resonance in Helicopters with
an Analogue Computer ”

by

H Fuchs, B Sc , Ph D

This Paper will be published in the Journal at the earliest opportunity

The Examining Panel recommended that, in view of its very high standard, the following Essay should be published in the Journal as a “ Proxime Accessit ” award

“ Independence of Helicopter Rotor Derivatives under non-uniformity of Induced Velocity Distribution at Low Forward Speed ”

by

W W Bryce, B A , B Sc , D C Ae

The Association would like to take this opportunity of thanking the Donor for his continuous contributions to the Fund, which makes this Essay Competition possible

The Cierva Memorial Prize Essay Competition — 1957

IN commemoration of the work of SENOR JUAN DE LA CIERVA in the early pioneering of rotary wing flight the Helicopter Association of Great Britain offers annually a prize for an original essay of a technical nature on any subject connected with that field of aeronautics

THE COMPETITION IS OPEN TO ENTRANTS OF ANY AGE OR NATIONALITY and is not restricted to members of the Association (Council Members of the Association are, however, debarred from entry)

A PRIZE OF £50

will be awarded to the competitor submitting the best paper on any subject connected with rotating wing aircraft Papers of a purely historical or journalistic content will not be eligible, but the subject may be construed to include studies in any related field such as operation, administration, navigation, maintenance, economics and safety, as well as the fields of aeronautical science and engineering design and manufacture

Closing Date 31ST DECEMBER, 1957

For Rules and Entry Form, please apply to

THE HONORARY SECRETARY
THE HELICOPTER ASSOCIATION OF GREAT BRITAIN
4 THE SANCTUARY
WESTMINSTER, LONDON, S W 1

INVITATION TO STUDENTS

A special invitation is extended to all Students and Apprentices under the age of 26 who are engaged in branches of the aviation industry, or who are training therefor, to join The Helicopter Association of Great Britain

The Association is the only professional body in this country catering exclusively for those concerned with the development of rotating wing aircraft. Regular meetings are held at which papers by the foremost authorities on various aspects of the subject are presented.

These papers together with full discussion and proceedings are recorded in the Association's **Journal** which is published six times a year and sent to all Student Members **at no extra cost** (Price to non-members is 10/6 per copy). If you are interested in the scientific, technical or operational development of rotary wing aircraft, **you cannot afford to be without this publication** which has achieved world wide status as an authoritative book of reference.

Technical books and papers on all rotary wing subjects published in this country and overseas can be borrowed from the Association's Library.

In addition the Association organises other useful activities and a number of social functions. **Membership can help you to extend your knowledge and is also a means of meeting those who are working in this field of aeronautics.**

On reaching the age limit **STUDENT MEMBERS** are eligible for upgrading without transfer fee.

STUDENT MEMBERSHIP

Age Limit 26

Annual Subscription £1 1s 0d

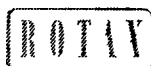
No Entrance Fee

JOIN NOW '

The membership year commences on 1st April

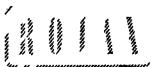
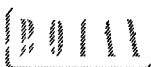
Forms of Application for Membership can be obtained from
The Hon Secretary

Something to depend on...



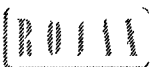
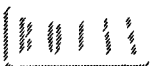
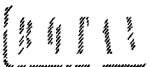
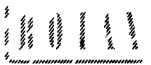
You can depend on it—

most British aircraft do depend on
Rotax Electrical & Starting Systems



You can depend on it—

the reason is the magnitude and scope
of Rotax research, design development
and manufacturing facilities, and their
unrivalled servicing and technical
information



In fact, you can depend on



**Complete Electrical and Starting
Systems for Aircraft.**

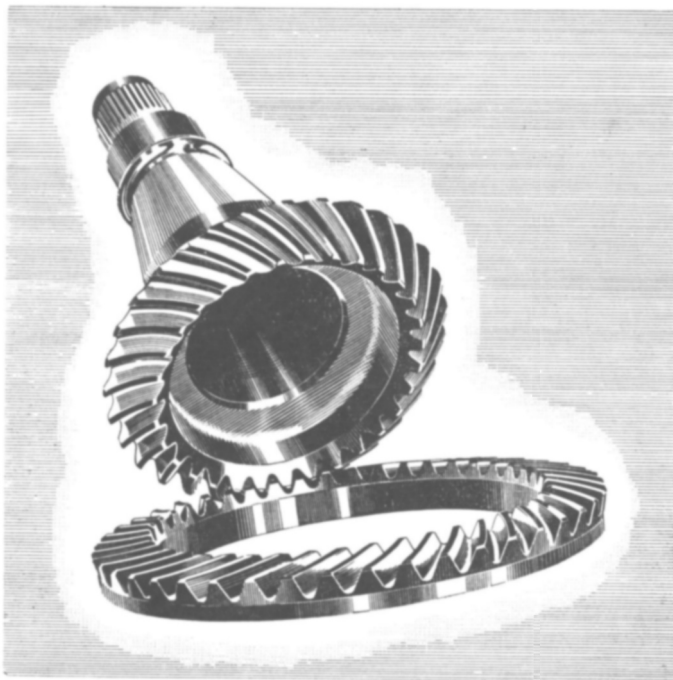
ROTAX LTD , Willesden Junction London NW10
LUCAS ROTAX (AUSTRALIA) PTY LTD Melbourne and Sydney Australia
LUCAS-ROTAX LTD Toronto, and Montreal Canada



Instruments and control systems

SPERRY

SPERRY GYROSCOPE COMPANY LONDON NEW YORK MONTREAL



ENV spiral bevel gears used in Westland main rotor drives

ENV

for Gears

Specialists in precision gears for piston-engines and gas turbines, helicopter drives, accessory drives and flying controls
Spur and helical gears and spiral bevel, zerol and hypoid gears are supplied with profile ground teeth when required

ENV ENGINEERING CO LTD



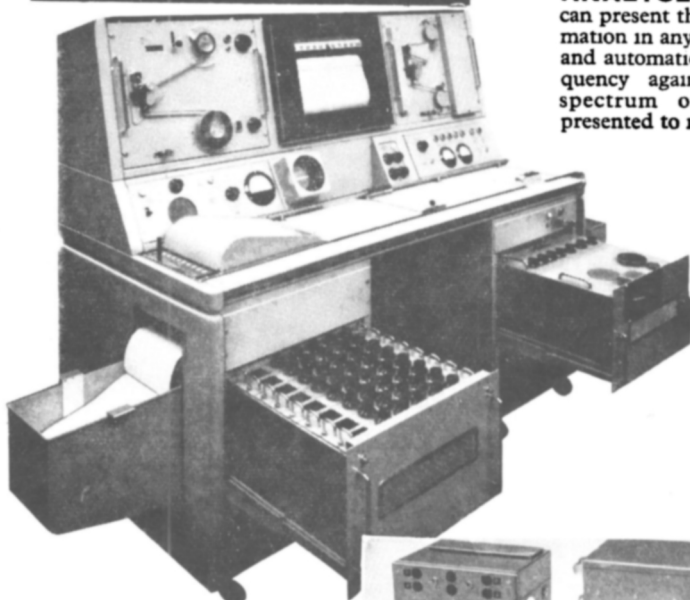
HYTHE ROAD WILLESDEN NW 1

DATA RECORDING AND ANALYSIS

An entirely new approach by
MERVYN INSTRUMENTS

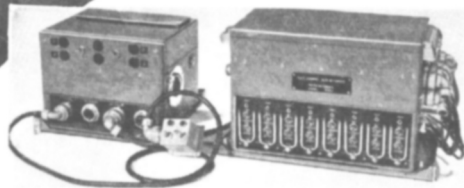
● THE PLAYBACK UNIT AND ANALYSER

can present the stored information in any way required, and automatically plots frequency against amplitude spectrum of waveforms presented to it



● THE RECORDER

using magnetic tape is small enough to be carried under one arm but records on seven channels simultaneously



THE MERVYN SYSTEM IS—

- | | |
|-------------------|--|
| FLEXIBLE | Many combinations of units possible |
| ACCURATE | Uses an error cancellation system |
| FAST | Complete analysis of waveform in a fraction of the time needed by conventional equipment |
| AUTOMATIC | Releases skilled personnel for more important work |
| ECONOMICAL | One Playback Unit and Analyser can deal with the outputs of many Recorders |

MERVYN INSTRUMENTS ST JOHN'S WOKING SURREY

Telephone WOKing 2091

The
Westland “Whirlwind”



is fitted with

TYRES, WHEELS, BRAKES
and BRAKE OPERATING EQUIPMENT

by **DUNLOP**



SUPPORT

Five hundred fully equipped Royal Marine Commandos air-lifted from aircraft carriers to battle areas—a distance of 100 miles per round trip—in the short space of 91 minutes

The maintenance of shuttle services from aircraft carriers to battle areas with water, food and medical supplies after delivery of the assault force

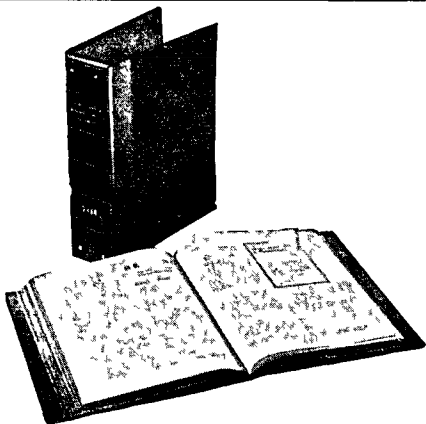
Evacuation of casualties from battle areas to hospital beds on aircraft carriers within 20 minutes of initial landing

These achievements accomplished by helicopters during recent military operations in the Middle East must inevitably weigh heavily in the assessment of the helicopter's role in task force operations. Equally, they determine the necessity for the inclusion of the helicopter in the air component assigned to such operations

WESTLAND

The Hallmark of British Helicopters

WESTLAND AIRCRAFT LTD YEovil, SOMERSET, ENGLAND



PROTECT

YOUR JOURNALS

The Binders illustrated, in which the Association Journals can be readily clipped for preservation and easy reference, are available from the Association's Offices

4 The Sanctuary, Westminster, S W 1

Each Binder will hold 8 Journals covering two volumes The price is 13/9 (Post free), and this includes the Title in gold lettering on the spine

The Council of The Helicopter Association of Great Britain wish to record their appreciation of Advertisers' support

ALVIS LIMITED



HOLYHEAD ROAD COVENTRY
Telephone Coventry 5501

Pioneers of Rotating Wing Aircraft



ELECTRO-HYDRAULICS LIMITED



Undercarriages
Hydraulic
Electro Hydraulic and
Pneumatic Equipment

LIVERPOOL ROAD
WARRINGTON
Telephone Warrington 2244

THE FAIREY AVIATION CO. LTD



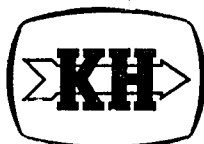
Hordern-Richmond Ltd

MANUFACTURERS OF

Helicopter Rotor Blades

HYDULIGNUM WORKS HADDENHAM BUCKS
TELEPHONE AYLESBURY 1100 1102

KELVIN & HUGHES (AVIATION) LTD



NEW NORTH ROAD BARKINGSIDE ESSEX
TEL HAINAULT 2601
WINCHESTER ROAD BASINGSTOKE HANTS
TEL BASINGSTOKE 690



AIRCRAFT EQUIPMENT

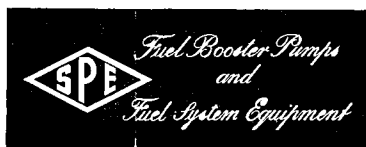
Palmer
HYDRAULIC & PNEUMATIC
AIRCRAFT EQUIPMENT

SI280

**COMPLETE
ELECTRICAL SYSTEMS**
for AIRCRAFT by

ROTAX

**SELF-PRIMING PUMP AND
ENGINEERING CO LTD**



SLOUGH BUCKS Tel SLOUGH 23277

**STANDARD TELEPHONES & CABLES
LIMITED**

**Standard
Radio**

NEW SOUTHGATE LONDON N11
Telephone Enterprise 1234

THE
FAIREY 'ROTODYNE'
will be powered by two
ELAND propeller turbines
by
NAPIER

Redifon
FLIGHT
SIMULATOR
DIVISION

CRAWLEY SUSSEX ENGLAND



EASTLEIGH Southampton Phone Eastleigh 2731
● Head Office OSBORNE EAST COWES ISLE OF WIGHT Phone COWES 2211

**THE SPERRY GYROSCOPE CO
LTD**



WESTLAND
S 55 & S 51 HELICOPTERS

WESTLAND AIRCRAFT LTD YEovil ENGLAND



**FLYING
COURSES FOR**

**AIRCRAFT
ENGINEERING
COURSES FOR**

**AIR NAVIGATION
COURSES FOR**

**RADIO/RADAR
COURSES FOR**

*Private Pilot's Licence
*Commercial Pilot's Licence
Instrument Rating
Flying Instructor's
Certificate
*Maintenance Engineer's
Licences
Specialist Courses

*Flight Navigator's Licence
Airline Transport Pilot's Licence
Senior Commercial Pilot's Licence
Commercial Pilot's Licence

M T C A Aircraft Radio Officer's Licence
M O T Radar Maintenance Certificate

For
fixed-wing
aircraft and
helicopters

* These courses are APPROVED by the Ministry of Transport and Civil Aviation. Where a course is so approved a concession is given which reduces the normal requirement for the licence.

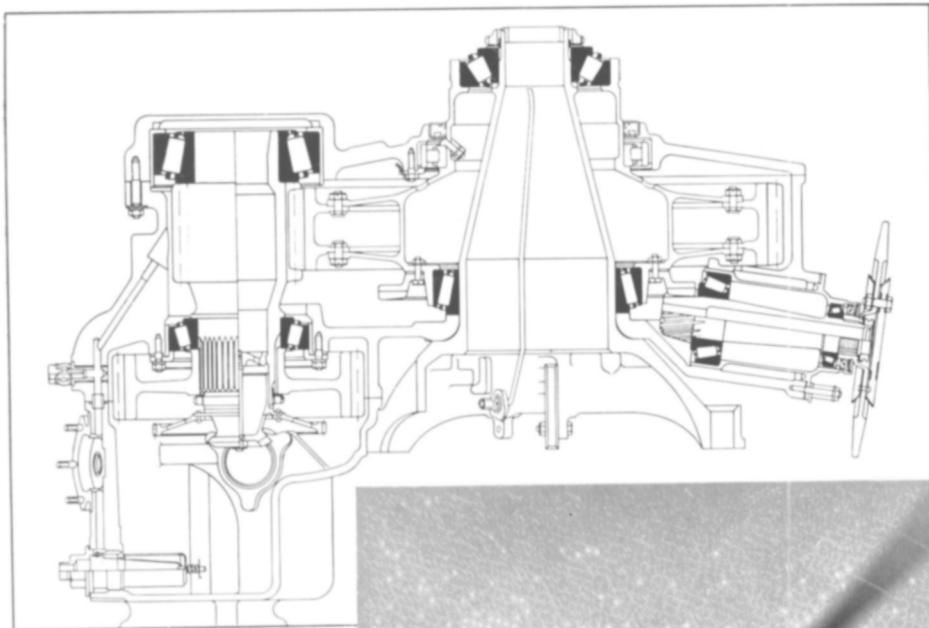
ALL THE ABOVE COURSES ARE BASED ON THE RECOMMENDATIONS OF THE
INTERNATIONAL CIVIL AVIATION ORGANISATION

Apply for details to

**THE COMMANDANT
AIR SERVICE TRAINING LTD
HAMBLE, SOUTHAMPTON, ENGLAND**

Telephone Hamble 3001

On the BRISTOL 'SYCAMORE' helicopter



TIMKEN tapered-roller bearings with their nickel alloy case-hardening steel and toughened shock-resistant core, are the ideal bearings for carrying the heavy loads imposed by helicopter gearing and main rotors

They are extensively used on various makes and designs of helicopter

All Bristol Sycamores—and well over 100 have so far been built—have Timken bearings in their gear boxes



The sectional drawing shows the arrangement of the Timken bearings on the gearing to the main and tail rotors and on the sleeve carrying the main rotor. The upper Timken bearing carries the entire weight of the helicopter in addition to journal loads

REGISTERED TRADE MARK TIMKEN

TIMKEN

tapered-roller bearings

MADE IN ENGLAND BY BRITISH TIMKEN LTD

Duston, Northampton (Head Office), Daventry and Birmingham

Telephone Northampton 4921 8 & 3452 3 Telex No 31 620 Telegrams Britimken Northampton Telex