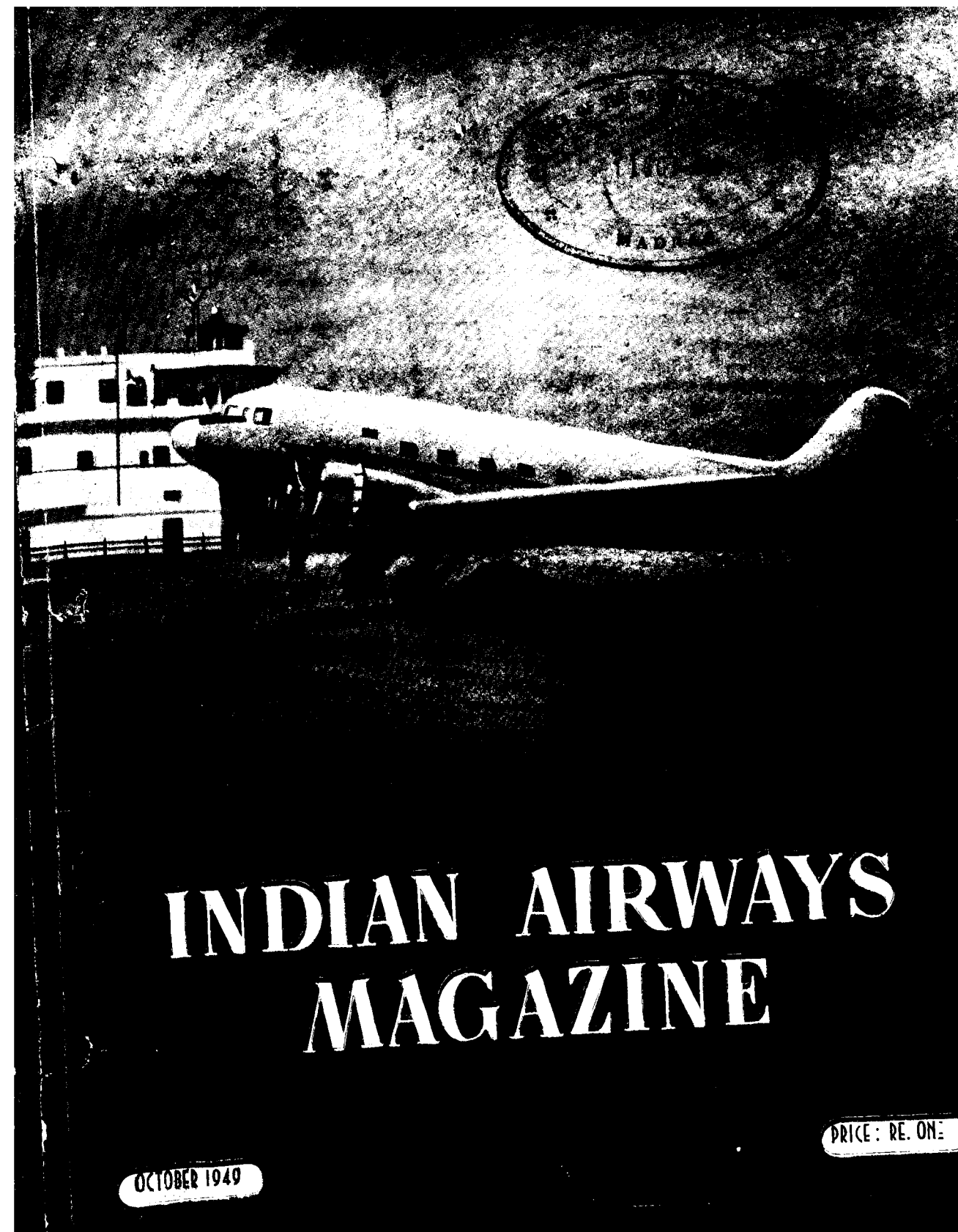




INDIAN AIRWAYS MAGAZINE

OCTOBER 1949

PRICE: RE. ONE



FLY YOUR FREIGHT

BY

KALINGA AIR LINES

SCHEDULED FREIGHT SERVICES

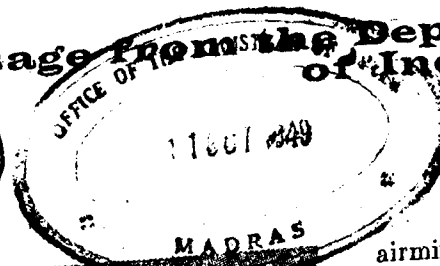
CALCUTTA — AGARTALLA

ALSO CHARTER PLANE AVAILABLE
FOR NATIONAL AND INTERNATIONAL
CHARTERS.

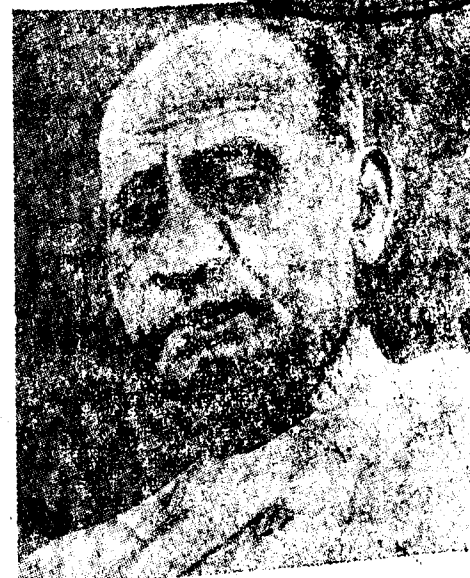
CAPT. JOHN BRINNAND,
General Manager.

MESSAGES

Message from the Deputy Prime Minister
of India



CAMP: BIRLA HOUSE,
BOMBAY,
18th September, 1949.



India has yet to go a long way in airmindedness. The extent of its area provides tremendous scope for civil aviation, but, for civil aviation to be a success it is essential that airmindedness grows by leaps and bounds. In this direction the INDIAN AIRWAYS MAGAZINE can play a notable part. It can seek to inculcate in the mind of an average citizen a spirit of enterprise and a sense of confidence in air travel. It can also bring home to the people the fact that, in the modern world of increasingly mechanical life, the mastery of the air in mind, as well as in deed, is an essential for progress as the exploitation of earthly resources. In this mission I wish the MAGAZINE every success.

Vallabhbhai Patel
Deputy Prime Minister of India

Message from the Governor of Madras



MADRAS GOVERNOR'S CAMP
OOTACAMUND
29th August 1949.

I am very glad to learn that Sri. E. V. Venkatram proposes to start an aviation journal entitled "Indian Airways Magazine" from October onwards from Madras Presidency. I understand that the magazine is intended to deal with the problems of aeronautical interest. Civil Aviation in India is still in its infancy and I hope that the new journal will succeed in its objective with the co-operation and goodwill of all those concerned.

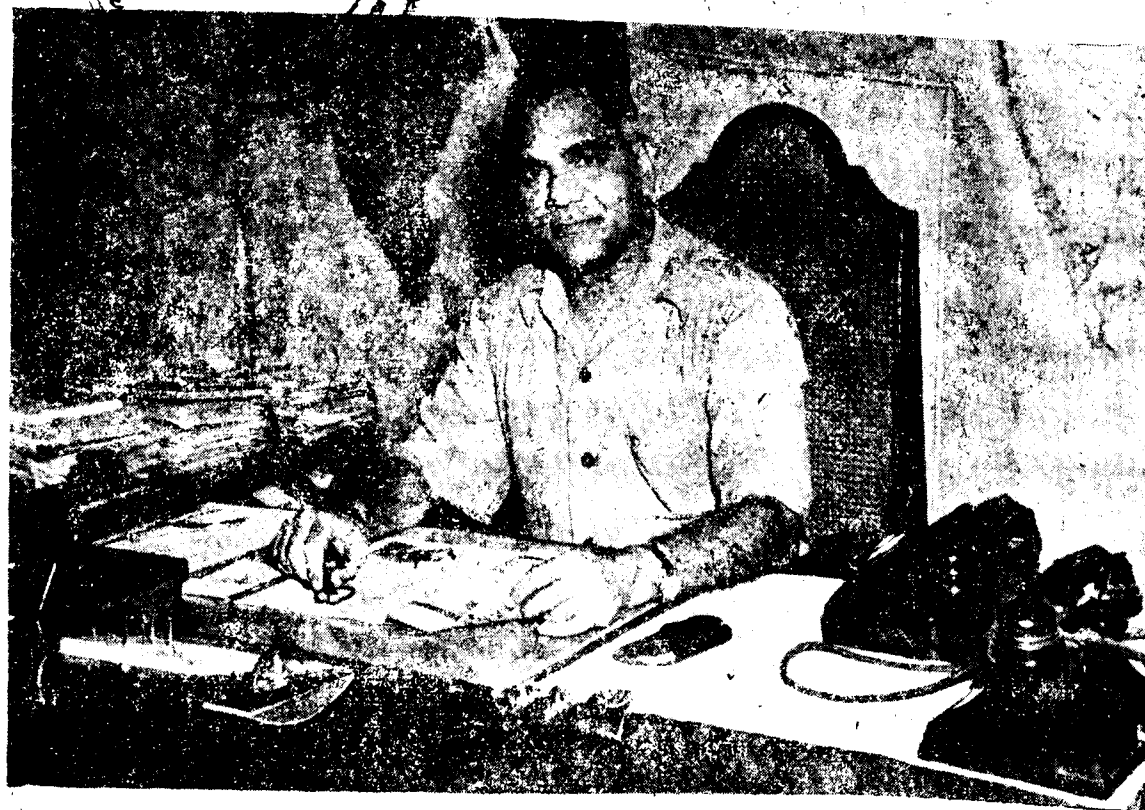
I would like to congratulate Sri. Venkatram on this enterprise and I wish the journal every success.

Krishna Kumarsinhji Bhavsinhji
Governor of Madras.



Message from the Director General of Civil Aviation in India

NEW DELHI,
30th August, 1949.



The occasion of a birth is always a matter for rejoicing even when the family is numerous. The Aviation Wing of the Fourth State is yet thin in numbers and therefore the proposal to start the *Indian Airways Magazine* is still more welcome. I sincerely hope the new birth will fully grow to its stature and serve the cause of Aviation without fear or favour in a spirit of healthy, friendly and understanding criticism intended to secure co-operation and co-ordination which are rarely achieved by gall and wormwood. It is easy to destroy than to build as it is easy to make destructive criticism than constructive. For our nascent Aviation the cool showers of friendly suggestions and criticism are more needed than the 'loo' of destructive criticism. I wish you and your new venture all success.

Director General of Civil Aviation in India

Message from the Military Governor of Hyderabad

MILITARY GOVERNOR,
BOLARUM RESIDENCY,
HYDERABAD—DECCAN,
10th Sept. 1949.



"I thank you for your letter dated the 6th Sept. 1949 and congratulate you on your intention to bring out an Aviation Journal. As you may know, I am extremely interested in civil aviation and in fact, I am a qualified pilot myself. I feel that your Journal will successfully assist those who read it to understand the many problems that are facing civil aviation in our country to-day."

H. E. Military Governor of Hyderabad

Message from the Governor of Bihar

GOVERNOR'S CAMP,
BIHAR,
5th September, 1949.



"A journal like *Indian Airways Magazine* will be a boon to people who are becoming more and more air-minded and inclined to make greater use of aeroplanes hereafter in travelling. The air companies will certainly welcome the publication of a journal which purports to be a sort of liaison between the Government and the various air-line companies. It would also be a good forum for the public to ventilate their grievances about air travelling and make suggestions for its improvement. Civil aviation must improve much more in the near future, and the Magazine may serve in its own way to accelerate that day of improvement."

H. E. Governor of Bihar



Message from the Governor of Assam



GOVERNMENT HOUSE,
SHILLONG,
September 3, 1949.



I am happy to learn that Mr. E. V. Venkatram is projecting an *Indian Airways Magazine*. Civil aviation is one of the wonders of modern science; and it, besides making the passage of passengers and goods easy, has made the whole world a very small place indeed. Rapid developments have taken place and a huge organisation has grown up, as if overnight, to meet the increasing needs of man.

I have every confidence that the new magazine will serve its appointed purpose; and besides giving all the necessary information to persons concerned, it will also help in making the organisation stronger and more efficient for the purpose in view.

H. E. Prakasa

H. E. Governor of Assam

Message from the Governor of East Punjab



BARNES COURT,
SIMLA,
13th September 1949.

I am glad to learn that a monthly aviation journal entitled, "*Indian Airways Magazine*" will be published from next month onwards. Civil aviation is still in its infancy in India and it has to face many problems and difficulties. I hope that this new journal will contribute towards the solution of these problems and difficulties. I wish it every success.

C. M. Singh

H. E. Governor of East Punjab



Message from the Governor of Bombay



GOVERNMENT HOUSE,
P. O. GANESHKHIND, (POONA),
August 26, 1949.



I wish all success to the *Indian Airways Magazine* which owes its inception to the enterprise of its Managing Editor, Mr. E. V. Venkatram. Civil Aviation is in its infancy in India. There is no doubt, however, that as our country is eminently suited for travel by air, aviation will rapidly increase here. I feel confident that any difficulties that may possibly arise between Government and Airlines will be satisfactorily settled. It will, I hope, be one of the objects of the *Indian Airways Magazine* to assist in such co-operation.

H. E. Singh

H. E. Governor of Bombay.

Message from the Governor of C. P. & Berar

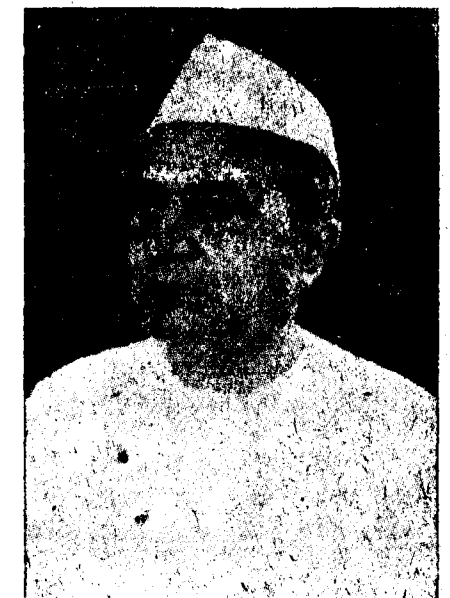


GOVERNMENT HOUSE,
NAGPUR,
9th September 1949.

The *Indian Airways Magazine* will strive to remove obstacles that may be in the way of the growth of civil aviation in India. Civil Aviation in India is just beginning. Government and the various airlines have a hard task in front of them. Anybody who makes an effort to help those who are striving to serve the people of this country will deserve well of all concerned in civil Aviation.

Mangaldas P. P. P.

H. E. Governor of C. P. and Berar.



Message from the Governor of West Bengal



GOVERNMENT HOUSE,

CALCUTTA,

3rd September 1949.



India offers the best field and the greatest opportunity for civil aviation. Distances are great, and air travel is not only comfortable but definitely a great time-saver. Flying conditions, barring one or two months of the monsoon, are almost ideal in India and planes of every kind and every size can be used with a sense of perfect safety and security. Civil Aviation has, during the last five years, already developed enormously but room for further expansion is still very great. Fortunately, sometimes good cometh out of evil, and as the legacy of the war, we have inherited a large number of air-fields and air-strips throughout India. These can be utilised for a net-work of airports and various flying facilities throughout the land. Civil aviation presents a variety of problems in which Government, Air Companies and the public are vitally interested. I am therefore glad to hear that Mr. Venkatram proposes to publish an *Indian Airways Magazine*. I hope this magazine will play a notable part in the development of civil aviation in India. I wish this enterprise all success.

H. E. Governor of West Bengal.

Indian Airways Magazine

VOL. I
NO. 1

OCTOBER - 1949

ISSUED
MONTHLY

BOARD OF HONY. ADVISERS

CAPT. JOHN BRINNAND,
Kalinga Airlines.

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Bharat Airways Ltd.

ROBERT M. BURNETT,
Pan American World Airways.

J. S. THURMAN,
British Overseas Airways Corporation.

About Ourselves

Today we see the dawn of a new era ushering in the history of aviation journalism in this province with the publication of "INDIAN AIRWAYS MAGAZINE." Altogether a new chapter in English journalism unfolds today, this being the first aviation journal to be published from this province. The advent of "INDIAN AIRWAYS MAGAZINE" is significant of potentialities for development of aviation industry in India in general and South India in particular. On the whole the sponsors of this venture have undertaken a very onerous responsibility to discharge with all sincerity and to portray to the outside world what India offers today for the development of this industry which has been neglected for many years. As His Excellency Dr. Kailash Nath Katju rightly pointed out we have inherited a large number of airfields and air-strips throughout India as a legacy of the war. Curiously enough some of the airports are fastly deteriorating owing to lack of adequate maintenance. Of course these airfields do offer immense opportunity for the development of civil aviation in view of their commercial and strategic importance in the industrial expansion of India.

The main objective in embarking upon this enterprise is to make the people more air-minded by providing them with useful information on aeronautical interest from time to time as also how civil aviation is functioning efficiently in other foreign countries. Secondly, the operating companies are fraught with grave consequences owing to mounting up costs in operations, prevailing high-wage level and also the dearth of Indian technical personnel. These are the main contributory factors for the slow progress in civil aviation. Besides this, airlines are confronted with other manifold problems which deserve the immediate attention of the Government, as well as proper understanding and appreciation of the difficulties of the companies. No rapprochement can be arrived at in the absence of a liaison which would keep both the parties informed of the difficulties of the one and the other. This long-felt want of the airlines is thus fulfilled by the "INDIAN AIRWAYS MAGAZINE" as it pledges to act as a liaison between the Government and the Airline Companies for safeguarding their interests and thereby promoting commercial aviation as the nation's thriving industry.

In conclusion, we take this opportunity of heartily thanking all the Chiefs of the airline companies for their so close co-operation in publication of this issue and also to their prompt response to our invitations to be on the Board of Advisers.

— JAI HIND —

Aviation News

Special Air Rates Envisaged:

It is proposed to introduce special rates in respect of specific items of cargo moving from one sector to another in India. The airlines will study the various aspects of the market situation and then evolve an agreed formula to determine the commodities coming under "special" categories, and the rates to be applied. This new scheme worked out by the airlines has been submitted to the Air Transport Association at Delhi for final adoption. This was disclosed by a spokesman of an Indian airline sometime back in Bombay, and said, that this system was already being followed by International airlines which appeared to be leaning towards the cargo rates structure adopted by the steamship companies.

Fall in Passenger Traffic:

Enquiries show that there has been an appreciable fall in air travelling by the public in recent days. Aircraft companies are deeply concerned over this development. The question is somewhat complex as the freight traffic is as bright as ever. The air companies are studying the causes of the fall in passenger traffic.

In regard to the suggestion of the Director of Civil Aviation for the use by air lines of smaller machines with a limited number of seats to economise the cost of operation, aviation experts hold the view that the change-over from 21-seater Dakotas, 27-seater Vikings to 10-seater So-95 is not a feasible proposition. Firstly it would involve a huge expenditure to buy So-95's. Secondly there are a number of technical difficulties too. These experts prefer to wait and watch developments for some more months and see whether the fall in passenger traffic is only temporary due to any extraneous reasons or whether the fall is due to economic reasons. Pending a scrutiny of the question, they are of opinion that the status quo might be maintained.

Suggestions for using Smaller Planes:

Mr. T. P. Bhalla, Director General of Civil Aviation, in one of his visits to Bombay, flew from Delhi in a So-95 French aircraft to take part in the conference for the development of Santa Cruz airport. He suggested that Indian Airlines should operate smaller type of aircraft on their internal routes. In view of the overhead expenditure which Indian airlines had to incur and the poor passenger traffic on certain routes, it was advisable to switch over to smaller aircrafts, which were not only faster but also economic.

Reduction in Air Fares not Possible:

Sir Gurunath Bewoor, Director-in-charge of Air-India International and Air-India expressed the view in the course of his talks with pressmen at Madras that it would not be possible to reduce air passage fares any further at the moment, considering the high operational costs. The Companies consider that this is not the opportune time for reduction of fares. In reply to a question as to the difficulties of air companies operating in India Mr. Bewoor explained the reason that there is not enough traffic as well as enough people ready to travel by air. He pointed out that if the companies were to prosper, people must be prepared to pay economic fares. He did not believe Government extending any subsidies to the companies and he emphasized the fact that air operating costs were very high and considering the speed and comfort in air travel people should be prepared to pay fares sufficient to cover the cost incurred by the companies. The fares were worked out basing the calculation on several factors, like the freight that could be carried, the mileage, the number of passengers etc. "You cannot expect an aeroplane to be cent per cent fully every day." Speaking generally of the future of the air companies Mr. Bewoor opined that these concerns will succeed if the proper charges were paid, the workers did better work and Government prevented

ineconomic competition by restricting the number of operating companies. Although the Government of India had now understood the real situation facing the air operating companies Mr. Bewoor said that the Government of India were trying to help them in various ways, namely, by the reduction of the cost of aviation petrol and entrusting the carriage of mails to companies; but this had not helped them appreciably.

India—U. K. Air Service:

The activities of the Air-India International will be expanded and the frequency of the Bombay-London air service will be increased to three times a week and possibly more during peak periods. Two additional constellations with the necessary spares have been ordered and are due for delivery towards the end of this year. This was disclosed by Mr. J. R. D. Tata, Chairman of the Air-India International speaking at the Annual General Meeting of the organisation.

A new service would be operated from India to East Africa with an initial frequency of one return flight per week.

Servicing of Planes:

The repair and servicing of all de Havilland products, owned by operators in India, are now being carried out by the Hindustan Aircraft Factory under an agency agreement concluded in April last between the factory and the de Havilland Aircraft Company Limited England.

The scope of the contract extends to the products of the present company and its allied concerns in England and the de Havilland Aircraft of Canada.

The agreement, among other things, provides for the holding by the factory of stocks of spares manufactured by the de Havilland Company and their sale. Provision has also been made for six members of the Factory staff to undergo training at the de Havilland works. The company will make available to the factory all the necessary drawings, technical and maintenance data and other literature, and offer guidance

in the maintenance and repair of de Havilland products. The de Havilland representative stationed in India will pay regular visits to the Factory to tender advice and assistance.

Initially the agent rights apply only to this country. But provision has been made for enlarging the territory to include the neighbouring countries.

Civil Aviation in India.

Mr. J. R. D. Tata, Chairman of the Air India Ltd., speaking at the annual general meeting of the shareholders of the company sounded a note of warning against "any policy of enforcing a general reduction of fares and freight rates in the civil aviation industry before it has had a chance to recover from its past and present difficulties to reduce its cost of operations and to make provisions for the purchase of new aircraft which, by virtue of their greater efficiency and economy in operation, will themselves help to make it possible as well as advantageous to reduce fares." Drawing attention to the "unsatisfactory policies followed by the Government of India which permitted, and in fact encouraged the creation of a grossly excessive number of air transport companies resulting in a scramble for routes, equipment, trained personnel, etc. in highly uneconomical operations for the industry as a whole," he said, "I am glad to say that the present administration in charge of civil aviation seems fully awake to the realities and dangers of the situation and to the needs of the industry both of which were so wantonly disregarded in the past."

Referring to the "all-up-air mail" scheme, he said the benefits which might have accrued from this scheme have, however, been seriously curtailed by a simultaneous and heavy reduction in the rate of payment for mails carried. "The industry welcomes these concessions and reliefs, and is grateful to Government for them as it can now plan for the future with greater confidence than in the past."

Bombay Conference for Development of Santa Cruz Airport.

Of late the development of Santa Cruz Airport has been assuming a very high importance among the Civil Aviation authorities in India. It may be recalled here that sometime in August, a conference of thirty Officials of Civil Aviation Directorate, Central Public Works, Customs, Postal, Airport, health departments, aviation experts and refuelling companies duly participating was held in Bombay. The programme of the Government of India for its development includes the construction of terminal buildings, regional offices, selection and the expansion of primary and secondary runways, provision of lighting facilities on runways and obstruction lights and selection of a site for building residential quarters for the civil aviation personnel. The blue-print of the terminal buildings which will have five floors fitted with the latest equipment is expected to cost nearly Rs. 50 lakhs. The work of this building is expected to begin by the end of this year. Landing facilities such as inner and outer beacons are expected to be taken up immediately and completed within a couple of months. A radio range station is nearing completion at Juhu and a wireless telegraph system is under construction at Chembur. The Bombay Conference arrived at an important decision to provide the airport with the ground control equipment technically known as the G. C. A. at an early date. Installation of this device will make the Santa Cruz aerodrome one of the most up-to-date and modern airports in the world. The Director of Civil Aviation accepted this recommendation which would facilitate landing and lead the incoming plane directly to the runways even in the worst weather conditions affecting visibility. Special and technical staff, required for working this would have to be imported from abroad. Mr. Bhalla assured the conference that the Government would do the needful and get down experts from abroad and simultaneously get suitable Indian personnel trained to take charge of this at a later date.

One of the highlights of the Bombay Conference is to cut down the heights of the

neighbouring hills in line with the runway and reduce its height by 100 feet. Further the aerodrome would be provided with high intensity lighting system and install powerful obstruction lights on each of the four hills around including the Trombay Hills which are about five miles off. The other hills are Chindivili, Powai, Kurla. This new lighting system is expected to be very helpful to the pilot.

It was decided to extend the east-west runway by another 3,000 feet at its west end burying the pipe line from Tansa. The most important point of the conference is the early removal of the 65-year old Bandra Slaughter House and the tanneries at Dharavi, a hamlet of Bandra, about two miles from the aerodrome was considered by the conference. It was stated that the proximity of the slaughter house was a source of hazard for aircraft, as vultures hovered over the area all day long. The Civil Aviation Directorate had asked the Municipality to remove the slaughter house to a safe area 10 miles from the periphery of the airport. The conference also considered a proposal for reserving 12 rooms for passengers in transit and recommended the setting up of a Committee to work out plans for accommodating and providing amenities for passengers.

A custom warehouse will shortly be installed at the Santa Cruz airport itself to facilitate quick clearance of incoming and outgoing air freight. This decision was reached at the second day of the civil aviation conference. At present such air freights have to be taken to the Bombay Customs House in the city for checking clearance and delivery. When the new unit comes into force cargoes will be examined at the airport itself thus avoiding considerable delay.

The concluding session of the Civil Aviation Conference was attended by representatives of Air India International, Air India, British Overseas Airways Corporation, Trans World Airline besides other Government departmental authorities, connected with this scheme.

New Australian Basic Trainer:

Orders have been given for the construction by the Commonwealth Aircraft Corporation of two prototype of a New Australian-designed basic trainer—a single-engined cabin monoplane. A wind tunnel model is being tested in the Department of supply's aeronautical research laboratory.

Designed for the Royal Australian Air Force, the trainer is a low-wing all metal machine of semi-monocoque construction. It has side-by-side front seating for instructor and pupil, with a rear seat for another passenger and a baggage compartment that can also be used by an additional passenger. The P and W Wasp Junior 9-cylinder radial engine will develop 445 h.p. on take-off.

The simple construction is designed to achieve lowest possible maintenance costs and reduce maintenance problems to a minimum. A few details of the design are:

Wings:—centre section with split-type flaps, incorporated to allow the upper skin to protect the flap over the walk-way and cockpit; outer wing sections, bolt-angle connected to the centre section, will have full trailing edge type flaps.

Landing gear:—Fixed type, long-stroke, oleo-pneumatic struts and hydraulic single disc, foot-operated brakes (provision made in centre section for subsequent installation of retractable landing gear if desired).

Electrical system:—While a generator and two 40 ampere-hour 12-volt batteries give a power for instrument and fleb operation, a 24 DC system, boosted by a 400 cycle, 115 volt three-phase converter, will power gyro instruments and gyrosyn compass.

Fuel Tanks:—One light-weight bag type taken in wing centre section with positive pressure feed provided by submerged electrical boost pump; fixed belly tank may be fitted under centre section and provided with independent boost pump to transfer fuel to main tank through an automatic cock.

Oil System:—With ten-gallon tank and flexibly mounted oil cooler this is carried entirely on the removable power cell.

Controls:—Normal one-piece stick and swinging rudder pedals.

Communications:—One light-weight VHF radio set (situated behind third seat) to provide air-to-ground, aircraft-to-aircraft and crew inter-communications.

Charter Flights from Hongkong:

Cathay Pacific Airways, in which Australian National Airways have a substantial interest, is reported to have been informed by the Australian Department of Civil Aviation that applications for further charter flights between Hongkong and Australia will not be approved.

Grounds for refusal are that Qantas Empire Airways is now operating a regular service on this route. Declared Government policy is to eliminate non-scheduled operations. Cathay Pacific Airways has been operating one charter flight a month between Hongkong and Australia for the last two years.

Maiden flight of Turbine Airliner:

The world's biggest airscrew turbine airliner 'Hermes V' made its maiden flight last month. It flew for 30 minutes at about 2,000 feet, and the flight was described as "completely successful."

Powered by four Bristol Theseus airscrew turbine engines, each developing 2,500 h. p. the Hermes V is pressurised for sub-stratosphere flying and has a minimum cruising speed of 353 miles per hour. Its maximum range is 3,050 miles. During its flight the Hermes V did 345 miles per hour without being at full throttle.

U. K. 's Two New Secret Jet-Fighters:

Britain has two new secret jet-fighters able to fly faster than the speed of sound, the Society of British Aircraft Constructors disclosed last month.

(Continued on page 16)



THE WORLD'S FIRST AIRLINE

Over 500,000 passengers fly every year on the 62,000 miles ROYAL ROUTE.

Over 1,000,000 kgs. of air mail are carried every year by the "FLYING DUTCHMAN".

Over 5,000,000 kgs. of freight are flown every year by the WORLD'S OLDEST AIRLINE.

TO ACHIEVE ITS 30th ANNIVERSARY

DON'T JUST FLY...
...FLY K. L. M.

General Agents for Pakistan: Messrs. VOLKART BROS., McLeod Road, Karachi.

RR19

A Small Story of A Great Airline

By A. H.

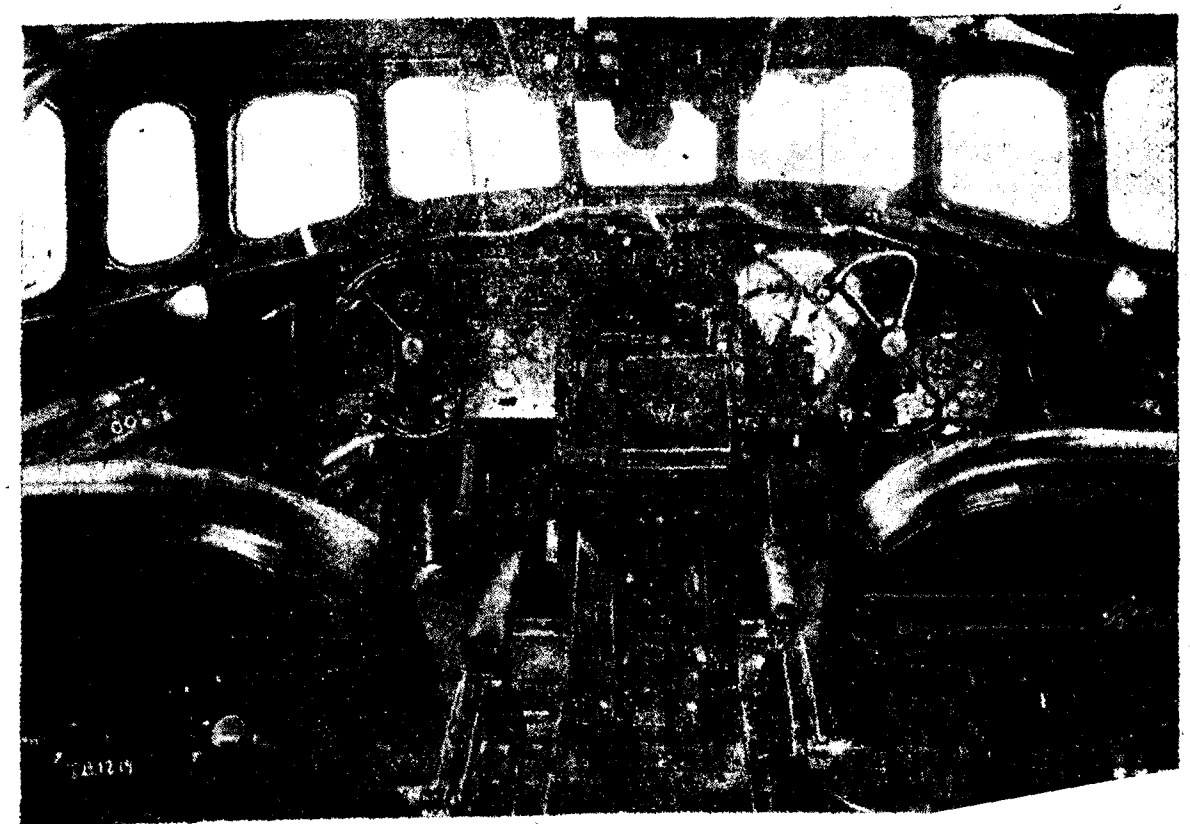
In the following paragraphs the writer outlines a comprehensive picture of commercial aviation in Holland from its very inception. It may be recalled here that the "great airline" according to the author, completes its thirtieth anniversary on October 7, 1949. How far this airline has made rapid progress in the process of evolution is evident from its present-day contribution towards humanity. (Editor).

Traditions & Progress:

The chroniclers of the 19th century have recorded the general sensation created in the scientific spheres of that period by the appearance of the first steam engines. A certain outstanding medico at that time went as far as asserting that the passengers' hearts would not resist the speed of the infernal machine, and that the town people would die asphyxiated by the obnoxious fumes which it would spread. The reckless adventurers who were prepared to chance

their lives on this means of transport were strongly criticised for their thoughtless futility and in fact their perversion.

Not so many years ago, an edifying poster could still be seen displayed in a Paris library describing the conduct of the libertine type of the 19th century in a series of highly comical cartoons in which a miserable specimen of a man could be seen drunk at a night club, beating his wife at home, stealing out of his son's money box... and travelling by train. This last action



Interior view of the Cock pit in K. L. M.

proves to be fatal as well deserved derailment sends him straight to the land of Cerberus, where he is left to meditate over the enormity of his faults.

The history of all innovations shows the same difficult beginning. The respect for traditions and the courage of mankind are disposed in us in such a way that the latter can only overcome the first after a lengthy and often stubborn resistance.

That is why we can truly be astonished at the rapidity with which commercial aviation has triumphed over numerous setbacks to conquer the rightful place it deserves in our modern world.

The Flying Dutchman:

In the East it is from Holland that commercial aviation found its first and most determined pioneers. It was The Dutch Company K.L.M. which started a series of test flights carrying freight, mail, papers and even flowers as far back as 1925 and is now able to boast of being the first airline in the world not only to start regular flights in Europe, but to establish a regular service right across 3 continents on a 10,000 mile route from Amsterdam to Batavia. The crews of this company carried on the old tradition of the Dutch mercantile navy of ceaseless and untiring experiment despite continued rebuffs. Three years ago with already two firsts to their record (one in Europe and one in the East), they added yet others, such as carrying out the first passenger trans-Atlantic service to the West Indies and being the first nation to establish a large air network in their colonies...the East Indies on the one hand and the West Indies on the other.

It is thus that the K.L.M. having started its first service from Amsterdam to London in 1920 continually increased its services and reliability until in 1947 it was able to claim having the third largest air-net in the world immediately after those of the U.S.A. and Great Britain. Their figures for 1947 include half a million passengers, more

than four and half million lbs. of freight and mail flown to the four corners of the world.

Pioneering & Organisation:

Today when commercial aviation is in its 30th year and is in the limelight, we forget too often the memory of the astounding feats accomplished by a handful of determined men in steering aviation through its difficult and hesitant childhood to its present day maturity and yet each great line possesses in its annals many astounding stories disclosing great courage and brimming with tenacity and perseverance. What a fine subject would be the "history of communications" for the lyric poet! It would start with the Romans who literally threw their famous roads, bridges and aqueducts across Gaul, Germania and the Near East. Then come the Normans and Vikings who incidentally discovered America before Columbus followed by Vasco da Gama, Magellan, Cook and others who lived in the time of sails and stage-coaches and so on, to the "builders of the railway" of Kipling...and then the conquest of the air.

Operations "Safety":

However, today these growing pains have been left behind. The sky is mastered by man and we can only conclude by reminding the many passengers of airlines of the forgotten army which is looking after their safety, punctuality and comfort.

We are thinking of the 75% of the airlines personnel and those of State Departments who all contribute to the smooth running and thorough organisation of an air-service. It starts with the many hard-working teams of mechanics and engineers who are continually checking aircraft not only between flights, but at the intermediary stops of any lengthy line; the catering department who have to see to the passengers' requirements in food, literature, warmth and even health; the departments which centralise all bookings so as to avoid mishaps and disappointments and, when in the air, the many others who contribute to the complete safety of the flight, as not only the crew can be said to control the aircraft since

(Continued on page 16)

Vagaries of Landing Charges

CIVIL aviation in India has not made any rapid progress in recent years? Why? Is it due to lack of initiative on the part of the Indian capitalists to invest on this new industry? Are not there potentialities for making commercial aviation a profitable proposition in India. The answer is not far off to seek. Our country is most eminently suited for air-transport in all seasons barring the monsoon period of four months commencing from middle of June to September. Despite other natural facilities, commercial aviation in this country has not been successful. The main reason is due to lack of understanding and appreciation of the difficult problems of very high magnitude by the Government in the centre which our operating companies are confronted with. Further, the mounting up of operational costs in airline companies are due to various factors such as dearth of trained Indian technical personnel, high cost of labour, non-availability of spares etc. Only recently the Government of India did rise to the occasion by allowing certain concessions such as rebate on aviation petrol, increase in carriage of load, running overhaul of engines etc. Such a step of the government is really commendable and those concessions are some sort of relief to the airlines. But still many more to be done by the Government for bringing down the operational cost to the barest minimum. First of all government should review their policy in respect of landing charges collected from the operating companies. All the more a revision in the charges is absolutely essential considering the following glaring instances where there is no justification at all for such a levy. Let us take a "Dakota" for an example. Usually the landing charges vary according to the type of aircraft. The rate fixed by the Government for the Dakotas is rupees twentyfive only for each landing made at the airports controlled by the civil



THE Birla LINE

EXTERNAL SERVICES

Route I

Frequency: Every Wednesday

07 00 Dep. CALCUTTA	Arr. 18 30
12 00 Arr. BANGKOK	Dep. 13 30

Route II

Frequency: Daily

07 45 Dep. CALCUTTA	Arr. 11 25
09 20 Arr. CHITTAGONG	Dep. 09 50

INTERNAL SERVICES

Route I

Frequency: Daily

06 30 Dep. CALCUTTA	Arr. 13 00
08 45 " PATNA	Dep. 11 00
09 55 " BENARES	" 09 50
11 15 " LUCKNOW	" 08 30
13 00 Arr. DELHI	" 06 30

Route II

Frequency: Twice a week
Tuesday & Friday

05 45 Dep. CALCUTTA	Arr. 18 50
09 15 " ALLAHABAD	Dep. 15 40
10 10 " KANPUR	" 14 35
11 50 Arr. DELHI	" 12 45

Route III

Frequency: Daily

06 00 Dep. CALCUTTA	Arr. 17 20
07 20 Arr. AGARTALA	Dep. 16 00

Duplicate Service

Route III

FREQUENCY: DAILY

9 00 Dep. CALCUTTA	Arr. 18 20
10 20 Arr. AGARTALA	Dep. 17 00

FOR TIME, FARE & DETAILS FOR
NON-SCHEDULED FLIGHTS
PLEASE CONTACT

BHARAT AIRWAYS

4, Chittaranjan Avenue, Calcutta

TELEPHONE: City 5743 & 5744
TELEGRAMS: "AIRBHARAT"

aviation department. The revenue thus accrued from this levy is intended for the proper upkeep and maintenance of runways as also to provide with adequate facilities such as fire-fighting, ambulance corps, night-landing facilities etc. Of course these facilities are provided at important airports only. Whereas airports like Gauhati, or Jorhat in Assam for an instance do not possess any of the aforesaid facilities offered at the Dum Dum port in spite of the fact that the former ones are of high commercial and industrial importance. India's eighty five per cent of total production of tea is only from Assam. What we fail to understand is why should the Government collect the

same landing charges although not even a single facility is offered as apply to other international airports like Delhi, or Dum Dum? Is there any justification in the Government's unified collection? We would request the Director General of Civil Aviation in India not to shelve this issue. If due justice is accorded to the airlines, we don't find any reason why cannot the airlines bring down their operational costs to some extent if not completely. It would be very much appreciated if the Government could fix up a rate in accordance with the facilities available at the different airports. We would await Government's esteemed action in this regard.

(Continued from page 11)

The planes are the Hawker P 1052 and the Vickers Supermarine 510 and, during recent months, they have been undergoing development flying tests sponsored by the Ministry of Supply. The planes are still on the official secret list and the Ministry of Supply refuses to comment on their speed. Hitherto the only British plane which has officially been credited with breaking through the 700 m. p. h. (speed of sound) target is the de Havilland 108, an experimental machine which is not meant to be a standard fighter.

Indo-Phillipines Air Pact :

The Phillipines have been granted temporary authorisation to operate a service across India once a week and traffic rights east of Calcutta once a fortnight. The authorisation, granted for three months, has been extended pending the signing of the bilateral air treaty. Under this authorisation a service of Phillipines Airlines has been in operation for the past eight months from Manila to Amsterdam via Calcutta, Karachi, Teheran, Cairo, Rome, Madrid and London.

(Continued from page 14)

continued messages are received from ground stations giving the aircraft a check on its whereabouts, the weather ahead of it and all kinds of necessary information as well as the Captain being able to ask from the air for all kinds of arrangements concerning the amount of fuel, freight requiring special attention, meals to be prepared which all save precious time and contribute to smooth running.

Incidentally in this respect, K.L.M., ROYAL DUTCH AIRLINES have added

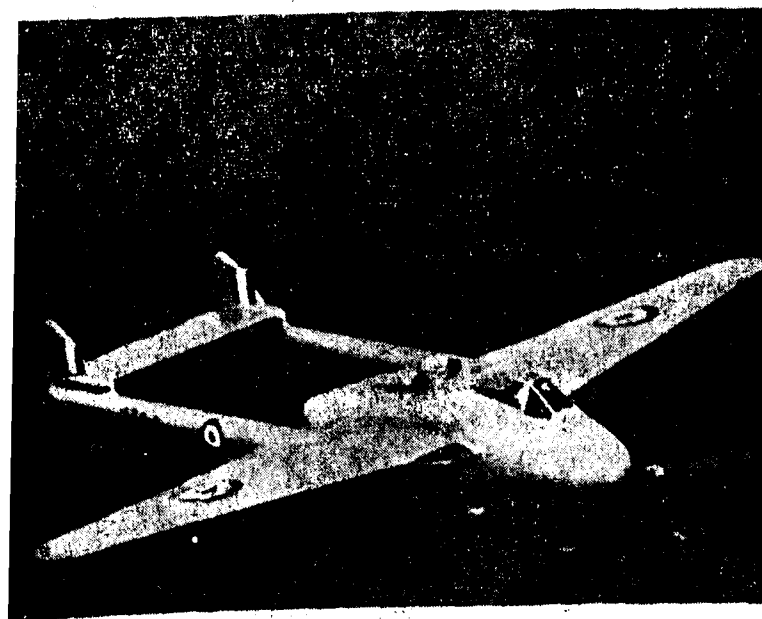
yet another 'FIRST' to the previous lists mentioned when in early 1947 a new position was created of "Flight Operations Officers" whose job it is to contact all aircraft in its area and to keep in continued touch with them so that nothing can be overlooked and no effort spared to make the organisation even more efficient, and today this highly trained officer can be found stationed at all important points along the main routes of the company giving both crews and passengers a complete feeling of confidence and safety.

First Australian-Built Jet Fighter Takes to Air

By Justin Arthur



After the first test flight of the VAMPIRE, Pilot Walker talks to (right) Mr. M. M. Wagborn, de Havilland Production Manager, and Mr. Rollo Kingsford-Smith, Publicity and Sales Manager for de Havilland, Australia.



The VAMPIRE in flight on its first tryout by Mr. Brian Walker, Chief Test Pilot for the de Havilland Company.

On June 29, 1949, a cold, clear day in midwinter, the first Australian-built jet-propelled fighter aircraft screamed through the air over Sydney, New South Wales on its initial flight. It took off from Bankstown airfield, 18 miles from Sydney, the Australian main plant of the de Havilland Aircraft Company Proprietary Limited.

This de Havilland VAMPIRE fighter has one feature which distinguishes it from other Vampires. It is fitted with a Rolls Royce NENE turbo-jet, built in Melbourne, Victoria, under licence, instead of the GOBLIN jet units usually installed for Vampires in Britain and other countries which have bought these aircrafts.

The Nene was built by the Commonwealth Aircraft Corporation at Fishermen's Bend, on the Yarra River, Melbourne. It has a test-bed thrust of some 5000 lb., which is greater than that of the Goblin. Its installation presented some great technical difficulties, chief of which was to take advantage of ram effect at high speed. Air intake ducts on the Vampire were designed for another type of jet unit. Ducting for the Nene had to be re-designed, and auxiliary intakes mounted on top of the main fuselage aft of the cockpit. This adaptation followed closely the example of the parent de Havilland Company in Britain when they experimentally fitted a Nene into a Vampire fuselage.

(Continued on page 19 Bottom)

Farewell to the Flying Boats in India

11 Years of Successful Operation

Calcutta's Marine Air Base, on the River Hooghly, was officially declared closed on 31-8-49 when a B. O. A. C. flying boat operating the last scheduled passenger flight through India took off from Bally Beach and wended its way homeward to the United Kingdom. The aircraft was one of the

actually the first London-Calcutta service was operated partly by Handley Page 42's (Heracles and Hannibals) and partly by Armstrong Whitworth Atalanta landplanes.

The Bally Marine Air Base came into regular use in 1938 when Imperial Airways, the predecessors of B. O. A. C., replaced their fleet by "C" class flying boats in order to



B.O.A.C.'s Flying Boat leaving Bally airport for ever

Plymouth fleet which, since 1947, have been running a bi-weekly service between England and the Far East, with shuttle connections to Singapore and the Philippines.

In the minds of many, through long association, flying boats and the U. K.—India route seem almost complementary, but

implement the Empire Air Mail Scheme under which all first class mail to India and other Commonwealth countries was to be carried by air without surcharge. Technically, their design was remarkably advanced, but apart from this, they set standards of passenger comfort hitherto unknown. These aircraft were the first to offer a feature which became

standard on all Corporation flying boats and that is a promenade in which the passenger has freedom to move about, stretch his legs and smoke. Little wonder these aircraft established a tradition of comfort and popular travel on which B. O. A. C. continues to build.

When Italy declared war on June 10, 1940 and cut off the England-Calcutta route, the "C" class boats east and south of Italy were unable to get back to their base at Southampton. To counter this separation of the fleet, a war base was opened at Durban, South Africa, and the aircraft isolated abroad continued to operate between Durban and Australia via Calcutta. This service was unofficially known as the "Horseshoe" route.

In 1942 the routes east of Calcutta were cut by the entry of Japan into the war. Calcutta then became the eastern terminus of the "Horseshoe" service.

The "C" class boats, incidentally, gave an astonishing service because it was only at the end of 1946 that they were withdrawn, and it is estimated that they flew over 34,779,343 miles on Imperial Airways and B. O. A. C. routes.

Their successors were the Hythes, a conversion of the military Sunderland, larger, faster and with greater range. They were delivered to the Corporation as unequipped "shells" with park bench type seating. The aircraft were first given an austerity interior but ultimately a new interior was designed giving a very high standard of comfort with day and night accommodation. These boats operated the longest route in the world, that

from England to Sydney, Australia, 12,401 miles. Six months ago the Hythes were sold after they had completed 10,606,343 miles during the three years of their service.

The Hythes opened the U. K.—India—China route in 1946 but the plymouths extended it to Tokyo a year later. The Plymouths are direct descendants of the "C" class boats, designed specially for civil use and built by the same constructors, Messrs. Short Brothers of Rochester. With their withdrawal ends a chapter in Indian aviation which began in 1938 with the famous "C" class or Empire flying boats.

The withdrawal of the best-loved family of British aircraft—the Shorts flying boats—does not imply that B. O. A. C. is antagonistic towards flying boats, but the cost of their operation, including the special ground equipment and facilities required, has been subject to ruthless review in the interests of economy. It is anticipated that a considerable sum of money will be saved by the use of the Argonaut airliners which are second to none on the world's air routes today and which began operations through Calcutta last month.

B. O. A. C. is still interested in flying boats and is looking forward so greatly to the actual flying trials of the giant Princess class 150-seater S. R. flying boats. Moreover, Sir Miles Thomas, the Chairman of B. O. A. C., has also called for a report from his technical experts on the operational and economic possibilities of using six-jet flying boats, with seats for sixty passengers, that will fly 400 miles per hour in the stratosphere in the same way as the great new landplanes which are being produced in England for B. O. A. C.

(Continued from page 17)

Test flights of the Australian-built Vampire are being made by Mr. (former Group-Captain) Brian ("Black Jack") Walker, de Havilland's Chief Test Pilot in Australia. It is the first of a batch ordered by the Royal Australian Air Force, which

has adopted the Vampire as its front-line fighter.

Armament is four 20 m. m. Hispano cannon, mounted in the lower half of the nose. Speed at rated altitude with the Nene has been estimated at 350 m. p. h.

New Aircraft for B. O. A. C.

On the 23rd August the British Overseas Airways Corporation introduced their newly acquired fleet of Canadian-built 40-passenger "Argonaut" airliners on the England-India-Far East route, replacing the 22-seater flying boats which were running two services per week over this route.

The grater speed of the Argonauts compared with the Plymouths will save half a day in the flight from Calcutta to Hong-kong, and reduce the flying time from London to Hong kong from six to four days. Departure eastbound from Calcutta will be on Sundays and Thursdays at mid-day, and thus convenient for passengers. compared with the early morning start by flying boat.

The argonaut is powered by four Rolls Royce engines and has a cruising speed of 270 miles per hour. The pressurized passenger accommodation is divided into two cabins, and a small lounge which provides

for the passengers a change from sitting in the same chair throughout the flight.

The withdrawal of flying boats, from the eastern routes in no way implies that B. O. A. C. is antagonistic towards flying boats, but the cost of their operation, including the special ground equipment and facilities, required has been subject to ruthless review in the interests of economy; it is anticipated that substantial money saving will result from the use of Argonauts.

Sir Miles Thomas, D. F. C., the Chairman of B. O. A. C., has, in fact, called for a report from his technical experts on the operational and economic possibilities of flying boats driven by six-jet engines with accommodation for 60 passengers, to fly at 400 miles an hour above the bad weather. B. O. A. C. will also receive in due course the three Princess class 100-seater flying boats now being built by Saunders Roe Ltd., in England, which are to cruise at over 300 miles per hour.

The Argonaut Airliner

Built at Montreal by Canadair Ltd., 22 Canadair Fours are supplied to British Overseas Airways Corporation and they are used on Commonwealth routes to the East and the Far East.

General Layout

To be known in B. O. A. C. as the Argonaut Class, the Canadairs, which are pressurized, are each equipped to carry 40 passengers, an operating crew of four and three stewards.

Entrance is on the port-side amidships leading into a 24-seat forward cabin and 16-seat aft cabin. At the entrance is a well-

equipped pantry, while at the rear of the aft cabin is a comfortable semi-circular lounge with accommodation for six people round a table.

Immediately opposite the entrance is a spacious wardrobe for coats and hats, and a toilet. Forward of the front cabin on the portside is the gentlemen's dressing room in dove-grey with two hot and cold wash basins, and fittings for electric razors, etc; on the starboard-side is the ladies' powder room in pale blue fitted with a dressing table, hot and cold wash basins and a separate toilet.

The cargo hold is immediately forward of the men's dressing room on the port-side.

Crew

The standard crew consists of two pilots, a navigating officer, radio officer and three stewards.

Furnishing & Amenities

By positioning the pantry and entrance door amidships the fuselage has been divided into two pleasantly-sized cabins instead of the usual long "tramcar" arrangement.

The fully-upholstered Vickers-type passenger seats are stationed 40 inches apart and are fully-adjustable to a semi-reclining position. Headroom is ample and the large individual windows (18 ins. x 16 ins.) provide a good view. A folding table is available for each seat. The front pair of seats in each cabin face aft to make convenient "family foursomes." The passenger chairs are covered with dark blue Bedford cord while the coiling has a light grey lining and the flooring is covered with mottled-blue carpeting; wooden tables and fittings are in light natural oak.

Pantry

The pantry is comprehensively equipped and contains an electric oven and ice boxes enabling full meals to be served in flight.

Sound-proofing and Airconditioning

The passenger cabins are sound-proofed throughout and the entire aircraft is fully air-conditioned, the air supply being controllable to warm or cool as required.

Technical Details and Performance of the Argonaut

The Argonaut is a low-wing monoplane with a tricycle undercarriage and an all-up weight of 36 tons. The four Rolls Royce Merlin 626-1 engines each develop 1760 B. H. P. for take off. The aircraft is all-metal light-alloy construction and much of its equipment has been manufactured in Britain.

Dimensions

Span	117 ft. 6 ins.
Over all height at rest	27 ft. 6 "
Over all length at rest	93 ft. 8 "
Wheel Base	37 ft. 5 "
Gross Wing Area	2457 sq. ft.
Aspect ratio	9.48

Tankage

Full Fuel tankage	3226 Imp. gallons.
Full Oil Tankage	88 " "
Full coolant tankage	47 " "

Take-off

The minimum paved runway length required to satisfy the latest safety requirements specified by International Civil Airworthiness regulations is 5,200 feet; the Argonaut will take-off, however in a considerably shorter distance with all engines operating.

Rate of Climb

Fully loaded at 80,200 lbs. the rate of climb is approximately 900 feet/min. At sea level using maximum continuous permissible power.

Range & Speeds

Normal cruising speed is 230/40 m. p. h. at 10,000 feet and 298 m. p. h. at 20,000 using 850/900 b. h.p./engine at an average weight of 80,200 lbs. Range with maximum fuel and 25 passengers is 3,600 st. miles. With a complement of 40 passengers and crew and full cargo load (3,800 lbs.) the aircraft has a range of 2,400 st. miles.

Ceiling

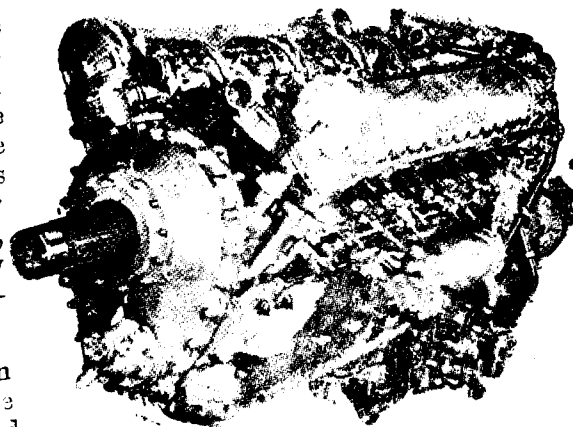
The service ceiling is 26,400 feet at a weight of 80,200 lbs. The normal operating altitude is 10-15,000 feet.

Landing

Normal landing run at maximum landing weight of 70,000 lbs. is 3,000 ft.

The Rolls-Royce Merlin Engine

The Rolls-Royce Merlin 626 is twelve cylinder liquid-cooled engine with a two speed, two-stage supercharger incorporating an intercooler and after-heater. It is designed for high altitude operation to enable aircraft, if need be, to fly above the weather, and is the only British aero-engine to be used on the arduous North Atlantic route. On this route more than 2,500 crossings have been made by airliners powered by the Merlin and, since 1945, Merlin powered civil aircraft have completed fifty million miles on scheduled airline services throughout the world.



Merlin engines have established themselves in post-war civil aviation and are used by airline operators in North and South America, Europe and Australia. These are the engines which will power B.O.A.C. aircraft of the Argonaut class. Take-off power, 1,760 b.p.h. at a charge temperature of 68°C.

Touching on Tyres.....



The 22 Argonaut airliner purchased by B.O.A.C. is equipped by Dunlop with main and nose wheel tyres. The fitting of aircraft with suitable tyres is a complex problem; the routes on which the aircraft will operate, the texture and construction of aerodrome runway surfaces—considerations of safety, weight and speed must be noted before the final selections made.

The tyres supplied for the Argonauts' main wheels are reinforced with piles of nylon cord and are inflated to a pressure of 90 p.s.i. The nose wheel tyres are of electrically conducting rubber (made by introducing a special carbon black into the rubber used for the tread and side walls) which enables the aircraft's static electricity to be discharged within a fraction of a second of the tyre touching the ground. The inflation pressure is 75 p.s.i.

Main and nose wheels are just under four feet in diameter. The Company's factory at Fort Dunlop has developed testing equipment that stimulates the most adverse conditions under which tyres can be operated, including a refrigerator capable of generating temperatures as low as -95° centigrade to allow the investigation of effects on tyres at high altitudes.

(See other Photographs on Cover Pages)

INTERNATIONAL AIRLINES

FARES AND FREIGHT SCHEDULE. Air India International Fare & Freight Schedule

From	To	Single	Return	Excess Baggage per kilo.	
		Rs.	Rs.	Rs.	As.
Bombay	Basra	627	1128	6	5
Bombay	Cairo	1040	1872	10	7
Bombay	Geneva	1587	2856	15	14
Bombay	London	1720	3096	17	3
Basra	Cairo	454	816	4	9
Basra	Geneva	1091	1964	10	15
Basra	London	1200	2160	12	0
Basra	Geneva	770	1386	7	12
Cairo	London	894	1608	8	15
Cairo	London	200	360	2	0
Geneva	London				

Air France

Fare & Freight Schedule

From Karachi To	Single	Return	Baggage		Freight	
	Rs.	Rs.	Rs.	As.	Rs.	As.
Cairo	907	1632	9	2	5	9
Calcutta	360	648	3	10	3	12
Glasgow	1787	3214	17	14	10	8
London	1600	2880	16	0	7	12
Marseilles	1467	2640	14	11	7	4
Montreal	2758	4965	27	10		
New York	2758	4965	27	10	15	5
Paris	1573	2832	15	12	7	9
Rome	1307	2352	13	1	6	10
Saigon	933	1680	9	5	8	0
From Calcutta To	Single	Return	Baggage		Freight	
	Rs.	Rs.	Rs.	As.	Rs.	As.
Cairo	1267	2280	12	11	7	4
Glasgow	1987	3573	19	14	12	3
London	1880	3384	18	13	8	10
Marseilles	1760	3168	17	10	8	4
Karachi	360	648	3	10	3	12
Montreal	3039	5471	30	7		
New York	3039	5471	30	7	29	8
Paris	1867	3360	18	11	8	10
Rome	1627	2928	16	4	7	15
Saigon	613	1104	6	3	5	2

British Overseas Airways Corporation

From	W S F	Single Fare	Return Fare	Excess Baggage Rate per kg.	Freight Rate per kg.
CALCUTTA		Rupees	Rupees	Rs. As.	Rs. As.
To Alexandria ...	2	1294	2328	13 0	7 5
Auckland ...	6	2400	4320	24 0	14 1
Augusta ...	2	1600	2880	16 0	7 11
Bahrain ...	2	760	1368	7 10	6 2
Bangkok ...	2	400	720	4 0	2 13
Basra ...	9	854	1536	8 9	6 6
Batavia ...	2	867	1560	8 11	6 4
Cairo ...	9	1267	2280	12 11	7 4
Darwin ...	6	1467	2640	14 11	8 9
Hong Kong ...	2	800	1440	8 0	5 8
Karachi ...	11	360	648	3 10	3 12
London ...	11	1880	3384	18 13	8 10
Montreal ..	5	3034	5461	30 6	15 11
New York ...	5	3037	5467	30 6	16 2
Rangoon ...	2	254	456	2 9	1 12
Rome ...	5	1627	2931	16 5	8 0
Shanghai ...	2	1080	1944	10 13	6 13
Singapore ...	6	720	1296	7 4	5 0
Sydney ...	6	2067	3720	20 11	10 15
Tokyo ...	1	1480	2664	14 13	8 8
Washington ...	5	3078 ¶	5547 ¶	Δ	—

BOMBAY

To	W S F	Single Fare	Return Fare	Excess Baggage Rate per kg.	Freight Rate per kg.
Basra ...	1	627	1128	6 5	5 0
Cairo ...	1	1040	1872	10 7	6 2
Colombo ...	1	267	480	2 11	2 10
London ...	1	1720	3096	17 4	7 15
Montreal ...	1	2875	5175	28 12	15 0
New York ...	1	2878	5181	28 13	15 7
Rome ...	1	1440	2592	14 7	6 13
Singapore ...	1	934	1680	9 6	6 9
Washington ...	1	2919 ¶	5262 ¶	29 3	—

DELHI

To	W S F	Single Fare	Return Fare	Excess Baggage Rate per kg.	Freight Rate per kg.
Basra ...	4	680	1224	6 13	5 5
Cairo ...	4	1094	1968	11 0	6 8
Karachi ...	4	187	336	1 15	1 15
London ...	4	1747	3144	17 8	7 15
Montreal ...	4	2902	5223	29 1	15 0
New York ...	4	2905	5228	29 1	15 7
Rome ...	4	1465	2646	14 11	7 2
Washington ...	4	2945	5309	Δ	—

China National Aviation Corporation

Fares and Freight Schedule

From	To	Single Rs.	Return Rs. A.	Freight per Kilo Rs. A.
Calcutta	Rangoon	253	455 7	1 12
Calcutta	Kunming	643	1157 7	5 10
Calcutta	Hongkong	800	1440 0	5 8
Calcutta	Taipeh	1050	1890 0	7 12
Calcutta	Tokyo	1480	2664 0	8 7
Calcutta	Honolulu	2696	4852 13	18 10
Calcutta	San Francisco	3143	5657 7	23 13

Note:— Excess baggage charges are 1% of above one-way fares.

K. L. M. Royal Dutch Air Lines

Fare and Freight Schedule

Calcutta To	Single Rs.	Return Rs.	Excess Baggage Rs. As. Ps.	Freight per lb Rs. As. Ps.
Amsterdam	1867	3360	18 10 8	3 14 7
Bangkok	400	720	4 0 0	1 4 2
Basra	853	1536	8 8 10	2 14 10
Batavia	867	1560	8 10 8	2 13 3
Cairo	1267	2280	12 10 8	3 11 0
Damascus	1173	2112	11 11 6	3 4 6
Karachi	360	648	3 9 9	1 11 1
Rome	1627	2928	16 15 1	3 9 0
Singapore	720	1296	7 3 6	2 3 11

Pan American Airways

Fare Schedule

Calcutta To	Rs.	London	Rs.
Brussels	1,869	New York	1,882
Damascus	1,174	San Francisco	3,040
Hongkong	801	Tokyo	3,143
Honolulu	2,696		1,482
Karachi	361		

Trans World Airline**Passenger Fares and Freight Chart**

From	To	Rate per lb.			
		One way		Round Trip	
		Under 100 lbs.	Over 100 lbs.	Under 100 lbs.	Over 100 lbs.
		Rs. A.	Rs. A.	Rs. A.	Rs. A.
Bombay	Athens	1254 0	2257 0	3 1	2 5
Bombay	Basra	628 8	1131 8	2 4	1 12
Bombay	Cairo	1042 0	1872 0	2 12	2 1
Bombay	Dhahran	536 0	965 0	1 15	1 8
Bombay	Gander	2607 0	4692 8	5 15	4 7
Bombay	Geneva (Zurich)	1588 0	2858 8	3 8	2 10
Bombay	New York	2878 0	5180 8	7 0	5 4
Bombay	Paris	1684 0	3031 0	3 8	2 10
Bombay	Rome	1442 8	2596 8	3 1	2 5
Bombay	Shannon	1856 0	3340 8	4 4	3 3

INDIAN AIRLINES**FARES AND FREIGHT SCHEDULE****Air Ceylon****Fares and Freight Schedule**

From	To	Single		Return		Freight per lb.			Excess Baggage per lb.		
		Rs.	As.	Rs.	As.	Rs.	As.	Ps.	Rs.	As.	Ps.
		Rs.	As.	Rs.	As.	Rs.	As.	Ps.	Rs.	As.	Ps.
Colombo	Jaffna	35	66	8	0	0	4	0	0	4	0
	Trichy	70	133	0	0	0	8	0	0	8	0
	Madras	85	162	0	0	0	7	3	0	7	3
	Bombay	230	437	0	0	0	14	6	0	14	6
Jaffna	Karachi	365	694	0	1	8	0	0	1	8	0
	Trichy	35	66	8	0	0	4	0	0	4	0
	Madras	50	95	0	0	5	8	0	0	5	8
	Bombay	195	371	0	0	10	5	0	0	10	5
Trichy	Karachi	330	627	0	1	4	0	0	1	4	0
	Karachi	270	513	0	1	0	0	0	1	0	0
Bombay	Karachi	150	285	0	0	8	0	0	0	8	0

Air India Limited**Fares List**

From	To	One-way		Round trip		Excess Baggage	
		Fare		Fare		per Kilo	
		Rs.	Rs.	Rs.	Rs.	Rs.	A.
Ahmedabad	Delhi	115	219	1 0			
Ahmedabad	Jaipur	80	152	0 11			
Ahmedabad	Madras	213	405	1 15			
Bangalore	Cochin	60	114	0 8			
Bangalore	Coimbatore	35	67	0 5			
Bangalore	Trivandrum	80	152	0 11			
Baroda	Ahmedabad	15	29	0 4			
Bombay	Ahmedabad	60	114	0 11			
Bombay	Baroda	45	86	0 9			

From	To	One-way		Round trip		Excess Baggage	
		Fare		Fare		Per Kilo	
		Rs.	Rs.	Rs.	Rs.	Rs.	A.
Bombay	Calcutta	250	475	1 14			
Bombay	Colombo	230	437	2 2			
Bombay	Delhi	175	333	1 8			
Bombay	Hyderabad	82	156	0 11			
Bombay	Jaipur	140	266	1 6			
Bombay	Madras	153	291	1 4			
Bombay	Nagpur	105	199	0 13			
Cochin	Trivandrum	30	57	0 4			
Coimbatore	Cochin	25	48	0 3			
Coimbatore	Trivandrum	50	95	0 7			
Hyderabad	Colombo	156	296	1 9			
Hyderabad	Madras	71	135	0 9			
Jaipur	Delhi	35	67	0 5			
Karachi	Ahmedabad	90	171	0 13			
Karachi	Bombay	150	285	1 8			
Karachi	Colombo	365	694	3 8			
Karachi	Madras	303	576	2 12			
Madras	Bangalore	40	76	0 6			
Madras	Cochin	75	143	0 13			
Madras	Coimbatore	60	114	0 10			
Madras	Colombo	85	162	1 0			
Madras	Trivandrum	100	190	1 1			
Nagpur	Calcutta	145	276	1 4			

Airways (India) Limited**Fare and Freight Schedule**

From	To	Single		Return		Excess Bag. and	
		Fare		Fare		Freight charge per lb.	
		Rs.	Rs.	Rs.	Rs.	Rs.	A.
Calcutta	Bhubaneswar	59½	113	0 4			
Calcutta	Vishakhapatnam	120	228	0 8			
Calcutta	Madras	220	418	1 0			
Calcutta	Bangalore	260	494	1 3			
Calcutta	Dacca	50	95	0 4			
Calcutta	Bagdogra	74	140½	0 6			
Calcutta	Gauhati	77	147	0 6			
Calcutta	Mohanbari	127	241½	0 10			
Calcutta	Vishakhapatnam	60½	115	0 4			
Bhubaneswar	Madras	160½	305	0 12			
Bhubaneswar	Bangalore	204½	388	0 15			
Bhubaneswar	Madras	100	195	0 8			
Vishakhapatnam	Bangalore	140	266	0 11			
Vishakhapatnam	Bangalore	40	76	0 3			
Madras	Mohanbari	50	95	0 4			

Bharat Airways Limited**Fare and Freight Schedule**

From	To	Single	Return	Freight excess bag. per lb.
		Rs.	Rs.	Rs. A.
Calcutta	Agartalla	50	95	0 4
Calcutta	Patna	75	142	0 6
Calcutta	Benares	101	192	0 8
Calcutta	Lucknow	139	264	0 11
Calcutta	Kanpur	141	268	0 11
Calcutta	Allahabad	116	220	0 9
Calcutta	Delhi	190	361	1 0
Calcutta	Chittagong	54½	99	0 4½
Calcutta	Chittagong	27½	49½	0 4½
Calcutta	Chittagong	5½	11	0 4½
Patna	Benares	35	67	0 4
Patna	Lucknow	73	139	0 6
Patna	Allahabad	55	104	0 5
Patna	Kanpur	80	152	0 7
Patna	Delhi	138	263	0 11
Benares	Lucknow	38	72	0 4
Benares	Delhi	102	194	0 8
Lucknow	Delhi	65	123	0 6
Allahabad	Kanpur	30	57	0 4
Allahabad	Delhi	87	165	0 8
Kanpur	Delhi	62	118	0 6
				Excess bag. Freight per Kilo 3.8-0
Calcutta	Bangkok	350	630	

Indian National Airways Limited**Fare and Freight Schedule**

From	To	Single			Return			Freight and Excess Bag.
		Adult	Child	Infant	Adult	Child	Infant	per lb.
		Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs. A.
Delhi	Calcutta	203	102	21	386	194	39	1 0
Delhi	Karachi	170	85	17	323	162	33	0 13
Delhi	Lahore	66	33	7	126	63	13	0 5
Delhi	Jodhpur	75	38	8	143	72	15	0 6
Delhi	Amritsar	65	33	7	124	62	13	0 5
Delhi	Jammu	95½	48	10	181½	91	19	0 7½
Delhi	Srinagar	120	60	12	228	114	24	0 9
Jodhpur	Karachi	95	48	10	181	91	19	0 8
Calcutta	Jodhpur	278	139	28	529	265	53	1 6
Calcutta	Karachi	350	175	35	630	315	63	1 11
Calcutta	Rangoon	235	118	24	447	224	46	1 2
Amritsar	Jammu	30½	15	3	60½	30	6	0 2½
Amritsar	Srinagar	58	29	6	116	58	12	0 3½
Jammu	Srinagar	27½	14	3	55½	28	6	0 2½

Orient Airways Limited**Fare and Freight Schedule**

From	To	Single	Return	Freight per lb.	Excess baggage per lb.
		Rs.	Rs.	Rs. A.	Rs. A.
Calcutta	Karachi	360	684	2 3	2 3
Calcutta	Rangoon	200	380	0 15	0 15
Calcutta	Akyab	100	190	0 8	0 8
Calcutta	Dacca	50	95	0 4	0 4
Calcutta	Chittagong	54	99	0 4½	0 4½
Chittagong	Dacca	32	61	0 4	0 4
Dacca	Karachi	350	665	2 0	2 0
Chittagong	Rangoon	140	266	0 11	0 11
Chittagong	Akyab	40	76	0 4	0 4
Dacca	Delhi	200	380	1 2	1 2

WSF: (Weekly Service Frequency)

¶ Supplemented tour within U. S. A. are charged by certain Carriers when service operated by DC-6 or Constellation aircraft.

△ Sector rates of the carrier concerned apply.

Air India Limited**BOMBAY—KARACHI—BOMBAY****(Daily)**

Flight No. 1	Flight No. 2	Dep.	Arr.	Flight No. 2	Flight No. 1
07.00	09.45	Bombay	17.00	17.25	
08.50	...	Ahmedabad	...	15.25	
09.20	...	Karachi	...	15.00	
11.55	13.00		14.00	12.45	

BOMBAY—DELHI—BOMBAY**(Daily)**

Flight No. 1	Flight No. 2	Dep.	Arr.	Flight No. 2	Flight No. 1
09.00	11.50	Bombay	13.05	17.45	
...	13.40	Ahmedabad	11.10	...	
...	14.05	Jaipur	10.45	...	
...	16.10	Delhi	08.25	...	
...	16.25		08.10	...	
12.45	17.25		07.00	13.45	

BOMBAY—CALCUTTA—BOMBAY**(Daily)**

Flight No. 1	Flight No. 2	Dep.	Arr.	Flight No. 2	Flight No. 1
07.30	08.30	Bombay	14.40	12.45	
...	11.10	Nagpur	11.45	...	
...	11.55	Calcutta	11.00	...	
12.45	15.45		07.00	07.00	

BOMBAY—BARODA—AHMEDABAD
(Daily)

1600	Dep.	Bombay	Arr.	09.35
17.30	Arr.	Baroda	Dep.	07.55
17.40	Dep.		Arr.	07.45
18.10	Arr.	Ahmedabad	Dep.	07.15

BOMBAY—COLOMBO—BOMBAY
(Daily)

08.30	Dep.	Bombay	Arr.	16.30
10.45	Arr.	Hyderabad	Dep.	13.40
11.15	Dep.		Arr.	13.10
13.25	Arr.	Madras	Dep.	11.00
14.10	Dep.		Arr.	10.15
16.55	Arr.	Colombo	Dep.	07.30

BOMBAY—MADRAS—BOMBAY
(Daily)

12.25	Dep.	Bombay	Arr.	11.25
16.15	Arr.	Madras	Dep.	07.15

MADRAS—TRIVANDRUM—MADRAS
(Daily)

I. S. T.		(Daily)	I. S. T.	
07.45	Dep.	Madras	Arr.	17.20
08.55	Arr.	Bangalore	{ Dep.	16.10
09.25	Dep.		{ Arr.	15.50
10.25	Arr.	Coimbatore	{ Dep.	14.50
10.30	Dep.		{ Arr.	14.45
11.10	Arr.	Cochin	{ Dep.	14.05
11.15	Dep.		{ Arr.	14.00
12.05	Arr.	Trivandrum	Dep.	13.10

Airways (India) Ltd.

CALCUTTA—BANGALORE—CALCUTTA
(Daily)

Aircraft: Dakota		(Daily)	
07.00	Dep.	Calcutta	Arr.
08.30	Arr.		15.10
08.45	Dep.	Bhubaneswar	Dep.
10.30	Arr.		13.40
10.55	Dep.	Vishakhapatnam	Arr.
13.35	Arr.		13.25
14.00	Dep.	Madras	Dep.
15.10	Arr.	Bangalore	Arr.
			08.30
			08.10
			Dep.
			07.00

CALCUTTA-DACCA-CALCUTTA
(Daily)

Aircraft: Dakota				
07.30	Dep.	Calcutta	Arr.	10.00
08.30	Arr.	Dacca	Dep.	09.00

CALCUTTA—BAGHDOGRA—CALCUTTA
(Daily)

Aircraft: Dakota			
08.00	Dep.	Calcutta	Arr. 16.30
09.50	Arr.	Baghdogra	Dep. 14.40

CALCUTTA-DIBRUGARH-CALCUTTA
(Daily)

(Daily)					
Flight No. 1	Flight No. 2				
17.30	08.30	Dep.	Calcutta	Arr.	Flight No. 2 13.40
09.40	10.40	Arr. }	Gauhati	{ Dep.	11.40
0.10	...	Dep. }		{ Arr.	14.00
1.50	...		Mohanbari	Dep.	...
					12.20

Air Ceylon

FROM:— CEYLON

U. K., Pakistan, India, Malaya, Egypt, Italy.

TIME: L. S. T

Flight No.	28	26	30	38	42	44	48	50	LC*	SC*
Frequency	Fri.	Sun. Mon. Tue. Thur.	Daily	Sat.	Mon.	Sun. Thur.	Sun. Mon. Tue. Thur.	Sat.	Sat.	Tue.
London	Dep.								0001	
Rome	Arr.								0530	
	Dep.								0730	
Cairo	Arr.								1530	
	Dep.								1700	
Karachi	Arr.								Sun	
	Dep.			0645					0730	
									0930	
Bombay	Arr.			1030					1230	
	Dep.			1100					1400	
Madras	Arr.									
	Dep.		1330	↓						
Trichinopoly	Arr.			1520						
	Dep.	0900	1605	↓	1605		1300	1615		
Jaffna	Arr.	↓		1500			1355	1710		
	Dep.			1545		0700	0800			
Singapore	Dep.	↓		↓	↓	↓				0900
Colombo	Arr.	1055	1800	1710	1800	0825	0925		1930	1600

TO: CEYLON

U. K., Pakistan, India, Malaya, Egypt, Italy.

Flight No.		25 Mon. Tue. Thur. Sat.	29 Daily	37 Fri.	41 Sun. Wed. Thur.	47 Fri.	49 Sun. Mon. Tue. Thur.	CL*	CS*
Colombo	Dep.	1030	0800	0645	1635			0930	1930
Singapore	Arr.								Tue. 0630
Jaffna	Arr. Dep.		0925 1010		1800				
Trichinopoly	Arr. Dep.	1225		0840 0910		0700 0755	1430 1525		
Madras	Arr.		1140						
Bombay	Arr. Dep.			1330 1415				1500 1630	
Karachi	Arr. Dep.			1800				1930 2130	
Cairo	Arr. Dep.							Thur 0515	
Rome	Arr. Dep.							0645 1245	
London	Arr.							1415 1945	

* SKYMASTER SERVICE

Air Services of India Limited

BOMBAY-INDORE-GWALIOR-DELHI

Mon. Wed. Fri. I. S. T.				Tue. Thur. Sat. I. S. T.
06.45	Dep.		Bombay	Arr. 12.45
08.45	Arr. }			
09.10	Dep. }		Indore	Dep. 10.45
11.00	Arr. }			Arr. 10.20
11.30	Dep. }		Gwalior	Dep. 08.30
12.45	Arr.		Delhi	Arr. 08.00
				Dep. 06.45

BOMBAY-JAMNAGAR-BHUJ-KARACHI

Sun. Mon. Wed. Fri. I. S. T.	Tue. Thur. Sat. I. S. T.		Sun. Mon. Wed. Fri. I. S. T.
08.00	08.00 Arr.	Bombay	17.35
10.00	10.00 Dep. }		15.35
10.20	10.20 Arr. }	Jamnagar	15.15
10.50	10.00 Arr.		14.45
11.05	Dep.	Bhuj	14.30
12.30	Arr.	Karachi	13.15

BOMBAY-BHAVANAGAR-RAJKOT

Daily	Sun. Mon. Tue. Thur. Sat.		Sun. Mon. Tue. Thur. Sat.
8.30	07.00 Dep.	Bombay	Arr. 10.00
9.45	08.15 Arr.	Bhavanagar	Dep. 08.45
0.00	Dep.		Arr. 15.
0.50	Arr.	Rajkot	Dep. 15.

BOMBAY-POONA-BANGALORE

Mon. Sat. Sun. I.S.T.			Tue. Sat. Sun. I.S.T.
08.30	Dep.	Bombay	Arr. 17.10
09.10	Arr.		Dep. 16.30
09.25	Dep.	Poona	Arr. 16.15
12.25	Arr.	Bangalore	Dep. 13.15

BOMBAY-KESHOD-PORBANDAR-RAJKOT-JAMNAGAR-BHUJ

Mon. Wed. Fri.			Mon. Wed. Fri.
07.30	Dep.	Bombay	Arr. 18.00
09.05	Arr.		Dep. 16.25
09.25	Dep.	Keshod	Arr. 16.00
09.55	Arr.		Dep. 15.35
10.15	Dep.	Porbandar	Arr. 15.15
11.00	Arr.		Dep. 14.30
11.20	Dep.	Rajkot	Arr. 14.10
11.45	Arr.		Dep. 13.45
12.00	Dep.	Jamnagar	Arr. 13.20
12.30	Arr.	Bhuj	Dep. 12.50

Bharat Airways

CALCUTTA-DELHI-CALCUTTA

Aircraft: Dakota			Frequency: Daily.
06.30	Dep.	CALCUTTA	Arr. 13.00
08.30	Arr.	PATNA	Dep. 11.00
08.45	Dep.		Arr. 10.45
09.40	Arr.	BENARES	Dep. 09.50
09.55	Dep.		Arr. 09.35
11.00	Arr.	LUCKNOW	Dep. 08.30
11.15	Dep.		Arr. 08.15
13.00	Arr.	DELHI	Dep. 06.30

CALCUTTA-DELHI-CALCUTTA

Aircraft: Dakota			Frequency: Twice A week (Day return) Tuesdays and Fridays.
05.45	Dep.	CALCUTTA	Arr. 18.50
08.55	Arr.	ALLAHABAD	Dep. 15.40
09.15	Dep.		Arr. 15.20
10.00	Arr.	KANPUR	Dep. 14.35
10.10	Dep.		Arr. 14.25
11.50	Arr.	DELHI	Dep. 12.45

CALCUTTA-CHITTAGONG-CALCUTTA

Aircraft: Dakota			Frequency: Daily.
07.45	Dep.	CALCUTTA	Arr. 11.25
09.20	Arr.	CHITTAGONG	Dep. 09.50

CALCUTTA-AGARTALLA-CALCUTTA						
No. 1. Aircraft : Dakota			Frequency : Daily.			
No. 2. Duplicate Service Aircraft : Skymaster.			Daily.			
2	1		2	1		
09.00	06.00	Dep.	Calcutta	Arr.	17.20	18.20
10.20	07.20	Arr.	Agartalla	Dep.	16.00	17.00
CALCUTTA-BANGKOK-CALCUTTA						
Aircraft : Skymaster			Frequency : once a week. Wednesday			
		I. S. T.	L. T.	G. M. T.		
Calcutta	Dep.	07.00	07.00	01.30		
Bangkok	Arr.	12.00	13.30	06.30		
Bangkok	Dep.	13.30	15.00	08.00		
Calcutta	Arr.	18.30	18.30	13.00		

Deccan Airways Limited

DELHI-MADRAS-DELHI				
Aircraft : Dakota.		Frequency : Daily.		
I. S. T.		I. S. T.		
07.00	Dep.	DELHI	Arr.	16.25
09.30	Arr.	BHOPAL	Dep.	13.55
10.15	Dep.		Arr.	13.10
11.30	Arr.	NAGPUR	Dep.	11.55
12.00	Dep.		Arr.	11.25
13.30	Arr.	HYDERABAD	Dep.	09.45
14.30	Dep.		Arr.	09.10
16.40	Arr.	MADRAS	Dep.	07.00
HYDERABAD-BANGALORE-HYDERABAD				
Aircraft : Dakota.		Frequency : Daily.		
15.30	Dep.	HYDERABAD	Arr.	09.00
17.30	Arr.	BANGALORE	Dep.	07.00
HYDERABAD-BOMBAY-HYDERABAD				
Aircraft : Dakota		Frequency : Daily.		
09.30	Dep.	HYDERABAD	Arr.	15.00
12.00	Arr.	BOMBAY	Dep.	12.30
HYDERABAD-VIZAG-HYDERABAD				
Aircraft : Dakota		Frequency : Daily.		
15.20	Dep.	HYDERABAD	Arr.	09.05
16.25	Arr.	BEZWADA	Dep.	08.00
16.45	Dep.		Arr.	07.40
17.55	Arr.	VIZAG	Dep.	06.30

Indian National Airways

CALCUTTA-KARACHI-CALCUTTA				
Aircraft : Dakota/Viking		Frequency : Daily.		
I. S. T.		I. S. T.		
07.30	Dep.	Calcutta	Arr.	17.15
12.00	Arr.	Delhi	Dep.	13.00
13.00	Dep.		Arr.	12.30
15.00	Arr.	Jodhpur	Dep.	10.30
15.30	Dep.		Arr.	10.00
18.00	Arr.	Karachi	Dep.	07.30

(Viking Aircraft will operate Cal/Del/Cal. Dakota Aircraft will operate Del/Kar/Del.)

CALCUTTA-RANGOON-CALCUTTA				
Aircraft : Dakota		Frequency : Daily.		
05.30	Dep.	Calcutta	Arr.	14.00
09.30	Arr.	Rangoon	Dep.	10.00
(10.30)		Burma Time		11.00)
DELHI-LAHORE-DELHI				
Aircraft : Dakota		Frequency : Daily.		
07.30	Dep.	Delhi (Wellington)	Arr.	11.45
09.15	Arr.	Lahore	Dep.	10.00
DELHI-SRINAGAR-DELHI				
Aircraft : Dakota		Frequency : Daily.		
06.30	Dep.	Delhi	Arr.	18.45
08.15	Arr.	Amritsar	Dep.	17.00
08.45	Dep.		Arr.	16.35
09.35	Arr.	Jammu	Dep.	15.45
10.00	Dep.		Arr.	15.20
10.50	Arr.	Srinagar	Dep.	14.30
SRINAGAR-JAMMU-SRINAGAR				
Aircraft : Dakota		Frequency : Mon. Wed. Fri. & Sun.		
11.30	Dep.	Srinagar	Arr.	13.35
12.20	Arr.	Jammu	Dep.	12.45
DELHI-SRINAGAR-DELHI (Freight Service)				
Aircraft : Dakota		Frequency : Saturday.		
06.00	Dep.	Delhi	Arr.	20.30
07.45	Arr.	Amritsar	Dep.	18.45
08.15	Dep.		Arr.	18.15
09.30	Arr.	Srinagar	Dep.	17.00

Kalinga Air Lines

CALCUTTA-AGARTALLA			
(Freight and Mails only)			
Aircraft : Dakota		Frequency : Daily	
0700	Dep.	Calcutta	Arr. 1820
0820	Arr.	Agartalla	Dep. 1700
Freight Schedule			
Calcutta/Agartalla		Rs. -/4/- per lb.	

Orient Airways**CALCUTTA-DACCA-CALCUTTA**

Flight No. 1.	Flight No. 2.
I. S. T.	I. S. T.
08.00	15.00
09.00	16.00

Dep.	Calcutta	Arr.
Arr.	Dacca	Dep.

CALCUTTA-CHITTAGONG-RANGOON

07.00
08.30
08.50
11.40

Dep.
Arr.
Dep.
Arr.

Calcutta

Chittagong

Rangoon

Frequency : Daily	Flight No. 2.	Flight No. 1
I. S. T.	I. S. T.	I. S. T.
17.30	10.30	
16.30	09.30	

Frequency Tues. Thur. Sat.

Arr.	18.00
Dep.	16.30
Arr.	16.05
Dep.	13.15

CALCUTTA-CHITTAGONG-DACCA-CHITTAGONG-CALCUTTA

07.00
08.30
09.30
10.30

Dep.
Arr.
Dep.
Arr.

Calcutta

Chittagong

Dacca

Frequency : Sundays

Arr.	18.00
Dep.	16.30
Arr.	12.30
Dep.	11.30

KARACHI-DELHI-DACCA

04.00
07.00
07.30
11.30

Dep.
Arr.
Dep.
Arr.

Karachi

Delhi

Dacca

Frequency : Tuesday & Sunday

Arr.	19.45
Dep.	17.00
Arr.	14.30
Dep.	12.30

CALCUTTA-CHITTAGONG-AKYAB-CHITTAGONG-DACCA-CHITTAGONG-CALCUTTA

Dep.	Calcutta	I.S.T.
Arr.	Chittagong	07.00
Dep.	Chittagong	08.30
Arr.	Akyab	09.15
Dep.	Akyab	10.15
Arr.	Chittagong	11.00
Dep.	Chittagong	12.00
Arr.	Dacca	13.00
Dep.	Dacca	14.00
Arr.	Chittagong	14.45
Dep.	Chittagong	15.45
Arr.	Chittagong	16.30
Dep.	Calcutta	18.00

CALCUTTA-CHITTAGONG-DACCA-CHITTAGONG-AKYAB-CHITTAGONG-CALCUTTA

Dep.	Calcutta	07.00
Arr.	Chittagong	08.30
Dep.	Chittagong	09.15
Arr.	Dacca	10.15
Dep.	Dacca	11.00
Arr.	Chittagong	12.00
Dep.	Chittagong	13.00
Arr.	Akyab	14.00
Dep.	Akyab	14.45
Arr.	Chittagong	15.45
Dep.	Chittagong	16.30
Arr.	Calcutta	18.00

Frequency : Wednesdays**Air France****Paris—Calcutta—Saigon**

Aircraft : Skymaster

AF/034	L. S. T.		A/F035A	A/F035B
			L. S. T.	L. S. T.
MON. WED. & FRI.	1445	Dep.	Arr. 0700	0710
	↓		Dep. ↑	0430
	1850	Arr.	Arr. ↑	0330
	2020	Dep.	Dep. 0245	↑
	0340	Arr.	Arr. 0145 & Sun.	Tue.
TUE. THUR. & SAT.	0500	Dep.	Dep. 1915	1915
	1105	Arr.	Arr. 1745	1745
	1205	Dep.	Dep. 1320	1320
	2110	Arr.	Arr. 1220	Wed. 1220
WED. FRI. & SUN.	0630	Dep.	Dep. 0730 & Sat.	0730 Mon.
	1315	Arr.	Arr. 2020	2020
THUR. SAT. & MON.	0415	Dep.	Dep. 1310	1310
	1410	Arr.	Arr. 1140	Tue. 1140
			Dep. 0445 & Fri.	0645 Sun.

EXTRA FACILITY. As from the 30th July, the services leaving Saigon for Paris every SUNDAY will operate via MARSEILLES instead of Rome. Until then all service will continue operating via Rome.

These schedules are dependent on operational conditions and may be altered without notice.

Air India International**BOMBAY—LONDON—BOMBAY**

Aircraft : Constellation :

Frequency : Twice Weekly

West Bound :

			L.T.	G.M.T.		L.T.	G.M.T.
Bombay	Dep.	Tue.	14.00	08.30	Fri.	14.00	08.30
Basra	Arr.	"	19.30	16.30	Fri.	19.30	16.30
Basra	Dep.	"	21.00	18.00	"	21.00	18.00
Cairo	Arr.	Wed.	00.30	22.30	Sat.	00.30	22.30
Cairo	Dep.	"	01.45	23.45	"	01.45	23.45
Geneva	Arr.	"	08.45	07.45	"	08.45	07.45
Geneva	Dep.	"	09.45	08.45	"	09.45	08.45
London	Arr.	"	12.15	11.15	"	12.15	11.15

East Bound :

London	Dep.	Thur.	11.15	10.15	Sun.	11.15	10.15
Geneva	Arr.	"	13.45	12.45	"	13.45	12.45
Geneva	Dep.	"	14.45	13.45	"	14.45	13.45
Cairo	Arr.	"	23.30	21.30	"	23.30	21.30
Cairo	Dep.	Fri.	01.00	23.00	Mon.	01.00	23.00
Bombay	Arr.	"	16.00	10.30	Mon.	16.00	10.30

BRITAIN—N. AFRICA—PAKISTAN—INDIA—CEYLON—MALAYA

Solent		York		Lancastrian		York		Solent	
BO 766	BO 752	BO 750	BO 754/756	BO 755/757	BO 751	BO 753	BO 767		
Days	L.T.	Days	L.T.	Days	L.T.	Days	L.T.	Days	L.T.
2	19.00	3	15.45	1	07.30	dep. Airways Terminal	arr. 20.00	1	07.15
	—		17.00		08.45	dep. London Airport	arr. 18.45		06.00
	23.00		—		—	dep. Southampton	arr. —		—
	—		22.20		—	arr. Rome	dep. —		15.15
	—		23.50		—	dep. Rome	arr. —		—
	—		—		15.00	arr. Malta	dep. 12.15		—
	—		—		16.00	dep. Malta	arr. 11.15		—
	—		—		—	arr. Augusta	dep. —		—
	06.15		—		—	dep. Augusta	arr. —		08.00
	08.00		—		—	arr. Tripoli (Castel Benito)	dep. —		20.45
	—		—		—	dep. Tripoli (Castel Benito)	arr. —		—
	—		—		22.00	arr. Cairo	dep. 07.00		—
	—		07.20		00.01	dep. Cairo	arr. 13.45		17.00
	—		09.30		2	arr. Alexandria	dep. —		14.15
	14.00		—		—	dep. Alexandria	arr. —		—
	05.30		—		—	arr. Basra	dep. 09.30		16.15
	—		15.30		—	dep. Basra	arr. 08.30		14.45
	—		16.30		—	arr. Kuwait	dep. —		09.15
	12.45		—		—	dep. Kuwait	arr. —		08.15
	13.45		—		—	arr. Bahrain	dep. —		07.30
	16.15		—		—	dep. Bahrain	arr. —		06.30
	17.15		—		—	arr. Bahrain	dep. —		05.30
	—		—		—	dep. Bahrain	arr. —		04.30
	—		—		—	arr. Karachi	dep. 04.30		00.01
	—		—		—	dep. Karachi	arr. 15.50		—
	—		—		—	arr. Delhi	dep. —		—
	—		—		—	dep. Delhi	arr. —		—
	—		—		—	arr. Calcutta	dep. —		—
	—		—		—	arr. Bombay	dep. 12.45		—
	—		—		—	dep. Bombay	arr. 11.45		—
	—		—		—	arr. Colombo	dep. 06.30		—
	—		—		—	arr. Colombo	arr. 15.35		—
	—		—		—	dep. Singapore	dep. 08.30		—

On service BO 767. Base is a technical call only. No commercial traffic may be accepted.

BRITAIN—EGYPT—PAKISTAN—INDIA—CHINA—JAPAN

Plymouth BO 902		Plymouth BO 900		Plymouth BO 901		Plymouth BO 903	
Days	L. T.	Days	L. T.		L. T.	Days	L. T.
4	07.00	6	07.00	dep. Airways Terminal	arr. 19.30		19.30
	11.00		11.00	dep. Southampton	arr. 15.30		15.30
N	19.00	N	19.00	arr. Augusta	dep. 07.15	6	07.15
5	09.00	7	09.00	dep. Augusta	arr. 15.00	N	15.00
N	15.15	N	15.15	arr. Alexandria	dep. 09.45	5	09.45
6	07.00	1	07.00	dep. Alexandria	arr. 18.30	N	18.30
	17.00		17.00	arr. Bahrain	dep. 11.30		11.30
	18.00		18.00	dep. Bahrain	arr. 10.30		10.30
7	01.45	2	01.45	arr. Karachi	dep. 05.30	4	05.30
	08.00		08.00	dep. Karachi	arr. 19.30	N	19.30
N	16.00	N	16.00	arr. Calcutta	dep. 11.15		11.15
1	08.00	3	06.00	dep. Calcutta	arr. 10.00		10.00
	11.00		11.00	arr. Rangoon	dep. 06.30	3	06.30
	12.00		12.00	dep. Rangoon	arr. 15.00	N	15.00
N	15.00	N	15.00	arr. Bangkok	dep. 13.00		13.00
2	08.00	4	08.00	dep. Bangkok	arr. 12.00		12.00
N	16.45	N	16.45	arr. Hong Kong	dep. 07.00	2	07.00
3	10.00	5	10.00	dep. Hong Kong	arr. 16.00	N	16.00
	15.00	N	15.00	arr. Shanghai	dep. 11.00	1	11.00
		6	08.00	dep. Shanghai	arr. 16.00	N	
			16.30	arr. Tokyo (Yokohama)	dep. 08.30	7	

BRITAIN—PERSIAN GULF—PAKISTAN INDIA—MALAYA—N.E.I.—AUSTRALIA

CONSTELLATION

EM 502

BO 704

Days

L. T.

Days

L. T.

dep.

Airways Terminal

arr.

18.20

^

18.20

^

7 4

06.30

3 Alt. 1

5

06.30

dep.

London Airport

arr.

17.05

17.05

12.00

12.00

arr.

Rome

dep.

12.30

12.30

13.35

13.35

dep.

Rome

arr.

11.00

11.00

20.05

20.05

arr.

Cairo

dep.

06.00

7 4

06.00

5 2

1 5

08.00

4 Alt. 2

6

08.00

dep.

Cairo

arr.

16.30

16.30

—

—

arr.

Basra

dep.

13.00

13.00

—

—

arr.

Basra

dep.

11.30

11.30

20.30

20.30

arr.

Karachi

dep.

08.00

6 2

08.00

4 1

2 6

00.01

5 Alt. 3

7

00.01

dep.

Karachi

arr.

19.35

19.35

05.30

05.30

arr.

Calcutta

dep.

13.45

13.45

07.00

07.00

dep.

Calcutta

arr.

12.15

12.15

16.15

16.15

arr.

Singapore

dep.

07.00

5 1

07.00

3 7

N

10.55

6 Alt. 4

1

08.30

dep.

Singapore

arr.

16.50

14.30

—

—

arr.

Batavia

dep.

15.50

—

—

arr.

Batavia

dep.

13.25

—

21.25

21.25

arr.

Darwin

dep.

08.00

4 7

05.15

2 6

4 1

00.30

7 Alt. 5

2

00.30

dep.

Darwin

arr.

05.15

3 6

21.30

1 5

V

09.00

V

09.00

arr.

Sydney

dep.

21.30

CONSTELLATION

BO 705

EM 501

L. T.

Days

L. T.

Days

China National Aviation Corporation

Aircraft: Skymaster. **HONGKONG-CALCUTTA-HONGKONG.**
(Arriving & Leaving Calcutta Every Monday.) Frequency: 1 weekly.

L. S. T.				L. S. T.			
Sun.	09.30	Dep.	Hongkong	Arr.	17.25		
	11.45	Arr.	Kunming	Dep.	12.10		
	12.45	Dep.		Arr.	11.10		
	15.55	Arr.	Rangoon	Dep.	08.00	Tues.	
Mon.	08.00	Dep.		Arr.	17.00		
	10.45	Arr.	Calcutta	Dep.	12.15	Mon.	

HONGKONG-TAIPEH-TOKYO

Fri.	08.00	Dep.	Hongkong	Arr.	17.30		
	10.30	Arr.	Taipeh	Dep.	14.30		
	11.30	Dep.		Arr.	13.30		
	19.30	Arr.	Tokyo	Dep.	07.30	Sat.	

HONGKONG-HONOLULU-SAN FRANCISCO

Wed.	08.00	Dep.	Hongkong	Arr.	11.00		
	09.00	Arr.	Canton	...	...		
	09.30	Dep.		...	...		
	21.00	Arr.	Guam	Dep.	01.00	Sun.	
	22.30	Dep.		Arr.	24.00		
Thu.	07.30	Arr.	Wake	Dep.	17.30		
	08.30	Dep.		Arr.	16.30	Sat.	

.....International.....Date.....Line.....

Wed.	23.00	Arr.	Honolulu	Dep.	08.00		
Thur.	02.00	Dep.		Arr.	06.00	Fri.	
	16.00	Arr.	San Francisco	Dep.	20.00	Thur.	

K. L. M. Royal Dutch Air Lines

Time: L. S. T. **AMSTERDAM-CALCUTTA-BATAVIA**

Daily				Daily			
16.00	dep.	London	arr.	18.20			
17.15	arr.	Amsterdam	dep.	17.00			
21.00	dep.	Amsterdam	arr.	15.45	16.15	16.15	
Thur. Sun.	arr.	Rome	dep.	↑	12.45	12.45	
↓							
00.15	dep.	Rome	arr.	↑	11.15	11.15	
06.45	arr.	Cairo	dep.	07.30	06.15	↑	
09.00	dep.	Cairo	arr.	05.00	03.45	05.30	
↓				↑	↑	03.50	
14.15	arr.	Damascus	dep.	01.30	00.15	01.30	
↓					Mon.	Thur.	
15.45	arr.	Basra	dep.	00.05	22.50	23.50	

23.55	23.40	23.55	arr.	Karachi	dep.	Wed. Sat.	20.45	19.30	20.30
Wed.	Sat.	Fri. Mon.							
03.00	03.00	03.00	dep.	Karachi	arr.	17.45	17.30	17.30	
08.50	08.50	08.50	arr.	Calcutta	dep.	11.45	11.30	11.30	
10.15	10.15	10.15	dep.	Calcutta	arr.	10.15	10.00	10.00	
16.05	16.05	16.05	arr.	Bangkok	dep.	07.15	07.00	07.00	
Thur.	Sun.	Sat. Tue.				Tue. Fri.	Sun.	Wed.	
07.30	07.30	08.30	dep.	Bangkok	arr.	14.15	15.15	15.15	
12.00	12.00	↓	arr.	Singapore	dep.	↑	11.45	11.45	
13.30	13.30	↓	dep.	Singapore	arr.	↑	10.20	10.20	
16.40	16.40	15.45	arr.	Batavia	dep.	09.00	08.15	08.15	
						Mon. Thur.	Sat.	Tue.	

Pan American Airways

ROUND THE WORLD SERVICES

Westbound

Aircraft: Skymaster & Constellation.

		Flight No. 1			Flight No. 2			Flight No. 3		
		Mon.			Tue.			Fri.		
Seattle	Dep.	P. S. T.	...	...	...	...	...	22.00	...	...
San Francisco	Dep.	"	11.00	15.15	...	...	...	...	...	...
			Tue.	Wed.	...	...	...	...	...	...
Honolulu	Arr.	H. S. T.	17.45	01.15	...	...	...	10.45	...	...
Honolulu	Dep.	"	20.00	03.45	...	...	...	20.00	...	...
Midway Island	Arr.		...	09.15	...	...	...	...	...	...
Midway Island	Dep.		...	10.15	...	...	...	...	...	...
			Wed.	Thu.	...	...	...	Mon.	...	...
Wake Island.	Arr.		05.15	15.15	...	...	...	05.15	...	...
Wake Island.	Dep.		06.45	16.45	...	...	...	06.45	...	...
Guam Island.	Arr.		...	23.30	...	...	...	...	...	...
Guam Island.	Dep.		...	23.55	...	...	...	...	...	...
Tokyo	Arr.		14.30	...	...	...	...	14.30	...	...
			Thu.	...	...	...	...	Tue.	...	...
Tokyo	Dep.		01.00	...	...	...	...	01.00	...	...
Okinawa	Arr.		06.30	...	...	...	...	06.30	...	...
Okinawa	Dep.		07.30	...	...	...	...	07.30	...	...
				Fri.	...	...	...	...	...	...
Manila	Arr.		...	06.30	...	...	...	...	...	...
Manila	Dep.		...	08.30	...	...	...	...	...	...
Hongkong	Arr.		11.45	12.45	...	...	...	11.45	...	...
Hongkong	Dep.		13.30	14.30	...	...	...	13.30	...	...
Bangkok	Arr.		18.30	19.30	...	...	...	18.30	...	...
Bangkok	Dep.		20.00	21.00	...	...	...	20.00	...	...
			Fri.	Sat.	...	...	...	Wed.	...	...
Calcutta	Arr.		00.15	01.15	...	...	...	00.15	...	...
			Fri.	Sat.	...	...	...	Wed.	...	...
Calcutta	Dep.		21.00	21.00	...	...	...	21.00	...	...
			Sat.	Sun.	...	...	...	Thu.	...	...
Delhi	Arr.		00.35	00.35	...	...	...	00.35	...	...
Delhi	Dep.		01.20	01.20	...	...	...	01.20	...	...
Karachi	Arr.		04.20	04.20	...	...	...	04.20	...	...

		Flight No. 1.	Flight No. 2.	Flight No. 3.
		Tues.	Wed.	Thu.
Karachi	Dep.	05.35	05.35	05.35
Damascus	Arr.	10.15	10.15	10.15
Damascus	Dep.	11.30	11.30	11.30
Brussels	Arr.	19.35	19.35	19.35
Brussels	Dep.	20.50	20.50	20.50
London	Arr.	21.15	21.15	21.15
London	Dep.	22.15	22.15	22.15
		Sun.	Mon.	Fri.
Gander	Arr.	06.00	06.00	06.00
Gander	Dep.	07.15	07.15	07.15
New York	Arr.	E. S. T. 10.50	10.50	10.50

Eastbound

		Tue.	Wed.	Sun.
New York	Dep.	19.00	19.00	19.00
		Wed.	Thur.	Mon.
Gander	Arr.	01.05	01.05	01.05
Gander	Dep.	01.50	01.50	01.50
London	Arr.	13.50	13.50	13.50
London	Dep.	15.00	15.00	15.00
Brussels	Arr.	17.25	17.25	17.25
Brussels	Dep.	18.40	18.40	18.40
		Thur.	Fri.	Tue.
Damascus	Arr.	04.05	04.05	04.05
Damascus	Dep.	04.50	04.50	04.50
Karachi	Arr.	16.00	16.00	16.00
Karachi	Dep.	17.15	17.15	17.15
Delhi	Arr.	20.25	20.25	20.25
Delhi	Dep.	21.10	21.10	21.10
		Fri.	Sat.	Wed.
Calcutta	Arr.	00.40	00.40	00.40
		Fri.	Sun.	Thur.
Calcutta	Dep.	22.00	22.00	22.00
		Sat.	Mon.	Fri.
Bangkok	Arr.	05.00	05.00	05.00
Bangkok	Dep.	06.30	06.30	06.30
Hongkong	Arr.	13.15	13.15	13.15
Hongkong	Dep.	15.30	15.30	16.30
Manila	Arr.	19.30	19.30	...
Manila	Dep.	22.00	22.00	...
Okinawa	Arr.	...	...	22.30
Okinawa	Dep.	...	...	23.55
		...	...	Sat.
Tokyo	Arr.	...	...	05.00
Tokyo	Dep.	...	...	23.55
		Sun.	Tues.	...
Guam Island	Arr.	08.00	08.00	...
Guam Island	Dep.	09.55	09.55	...

Aircraft: Skymastr & Constellation

		Flight No. 1	Flight No. 2	Flight No. 3.
				Sun.
Wake Island	Arr.	20.15	20.15	13.30
Wake Island	Dep.	21.45	21.45	15.00
Honolulu	Arr.	HST 14.05	14.05	05.00
Honolulu	Dep.	17.00	17.00	18.00
		Mon.	Wed.	Mon.
San Francisco	Arr.	PST 07.00	07.00	...
Seattle	Arr.	...	...	10.15

Trans World Airlines

Aircraft Constellation

Westbound

Flight Number		907	903	905
		Mon.	Wed.	Sun.
Bombay	Lv.	23:00	23:00	00:30
		Tue.	Thur.	
Dhahran	Ar.	04:50	04:50	06:20
	Lv.	05:35	05:35	07:10
Basra	Ar.	06:15	06:15	...
	Lv.	07:00	07:00	...
Cairo	Ar.	10:25	10:25	10:20
	Lv.	11:25	11:25	11:25
Athens	Ar.	...	...	14:35
	Lv.	...	...	15:20
Rome	Ar.	16:20	16:20	17:30
	Lv.	17:05	17:05	18:15
Geneva	Ar.	19:25	...	...
	Lv.	20:10	...	20:45
Zurich	Ar.	...	...	21:30
	Lv.	...	...	...
Paris	Ar.	21:30	20:10	23:00
	Lv.	22:30	21:10	Mon.
		Wed.	23:55	00:05
		01:15	Fri.	...
Shannon	Ar.	02:15	00:55	02:50
	Lv.	08:35	07:15	03:50
Gander	Ar.	09:35	08:15	10:10
	Lv.	12:10	10:50	11:10
New York	Ar.	...	...	13:45

Eastbound

Flight Number		902	904	906
		Sun.	Wed.	Fri.
New York	Lv.	18:00	21:00	18:55

Time L. S. T.

		Mon.	Thur.	Sat.
Gander	Ar.	01:05	*04:05	*02:00
	Lv.	02:05	05:05	03:00
Shannon*	Ar.	*13:10	16:10	*14:05
	Lv.	14:10	17:10	15:05
Paris	Ar.	16:40	19:40	17:35
	Lv.	17:40	20:40	18:35
Zurich	Ar.	19:05	22:05	...
	Lv.	19:50	22:50	...
Geneva	Ar.	...	...	19:50
	Lv.	...	...	20:35
Rome	Ar.	22:15	Fri.	23:00
	Lv.	23:05	01:15	23:45
		Tue.	02:00	
Athens	Ar.	03:00	...	...
	Lv.	03:40	...	...
			Sun.	
Cairo	Ar.	06:35	08:30	06:15
	Lv.	07:35	09:30	07:15
Basra	Ar.	...	14:40	12:25
	Lv.	...	15:25	13:10
Dhahran	Ar.	14:20	18:00	15:45
	Lv.	15:05	18:45	16:30
			Sat.	Mon.
Bombay	Ar.	23:05	02:45	00:30

*Flag stop will be made to take on or discharge passengers and cargo.

We extend Our Diwali Greetings to our

Patrons, Advertisers and Subscribers,

for their so close Co-operation in

publication of this Magazine and hope

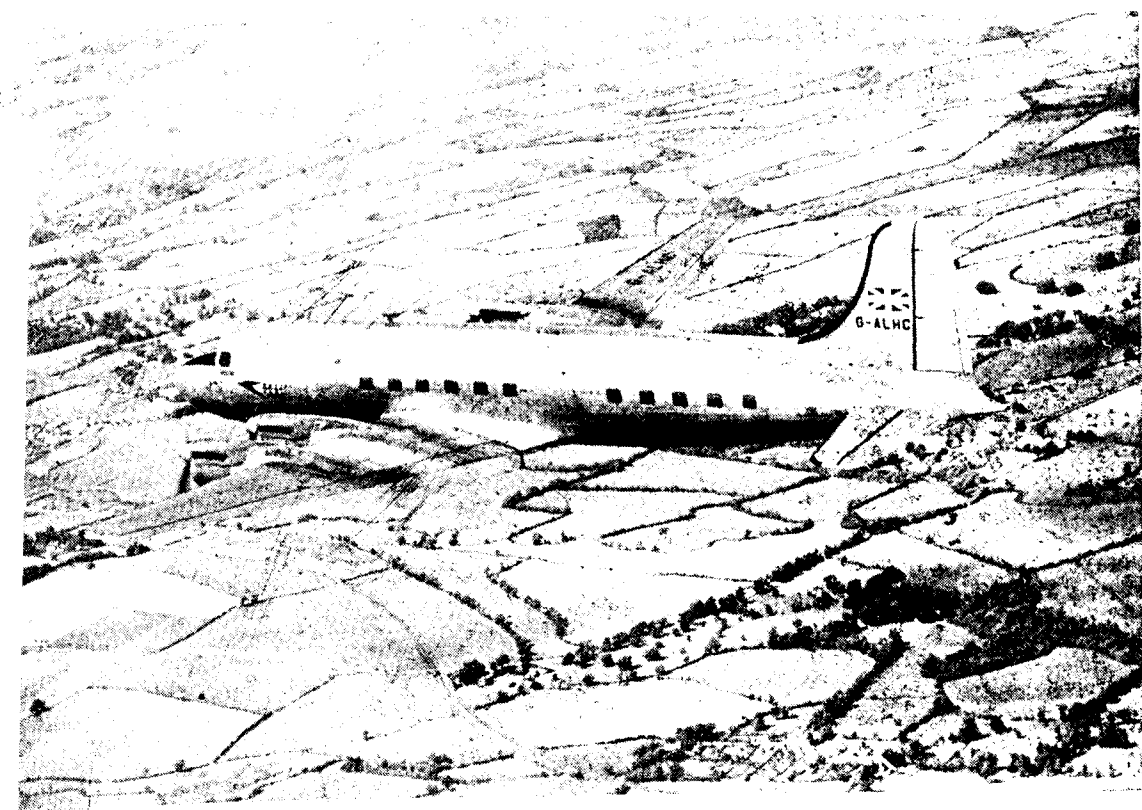
to receive the same in our common cause.

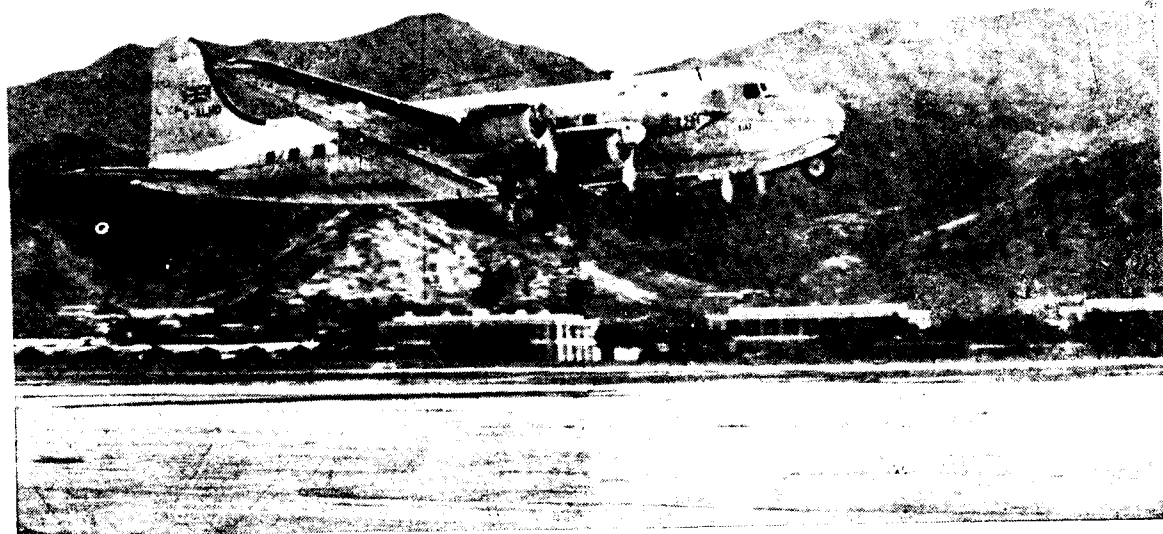
General Manager.



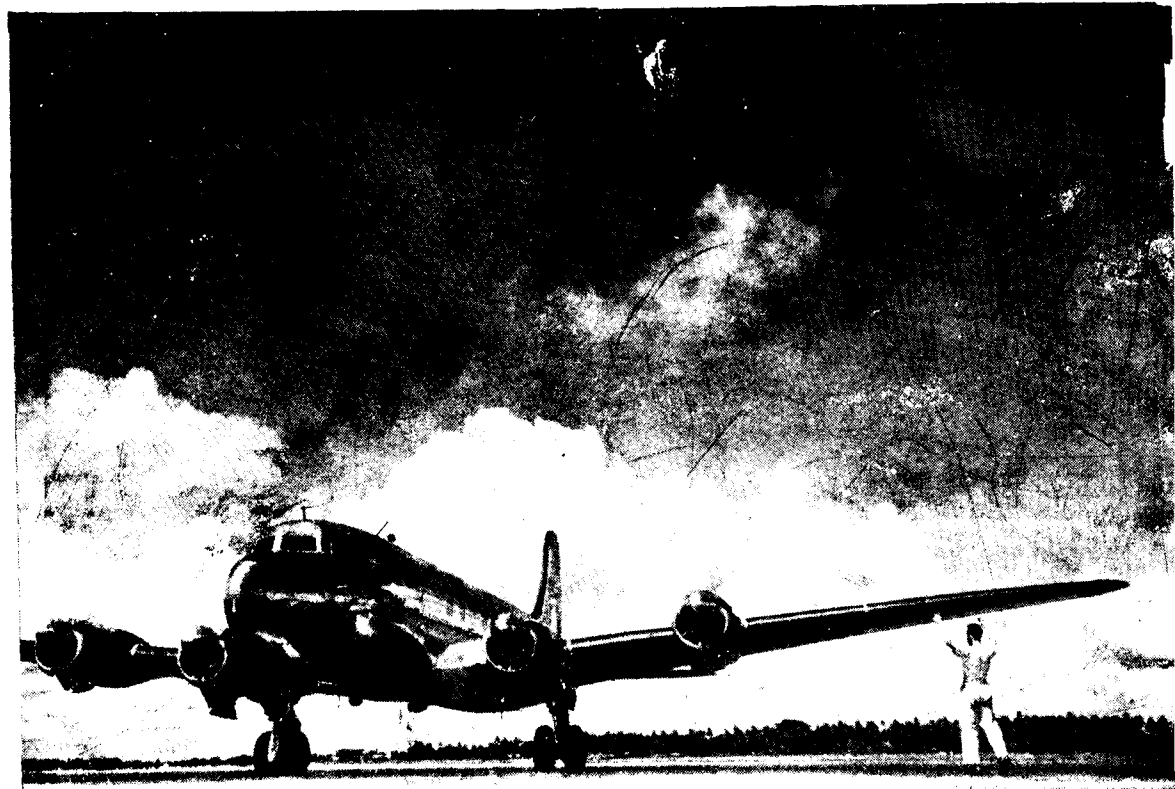
Interior View of the Argonaut

B. O. A. C.'s 22 new Argonaut airliners flow across India inaugurating the first landplane service between the United Kingdom and the Far East. The service will be twice-weekly in each direction and will leave Calcutta eastbound on Thursdays and Sundays and westbound on Wednesdays and Saturdays. The Argonaut, which carries forty passengers and cruises at 300 miles per hour, is fitted with every modern refinement fully pressurized and airconditioned cabin, hot and cold water, pantry with electric oven and ice-box, and even fittings for electric razors are provided in the men's dressing rooms.





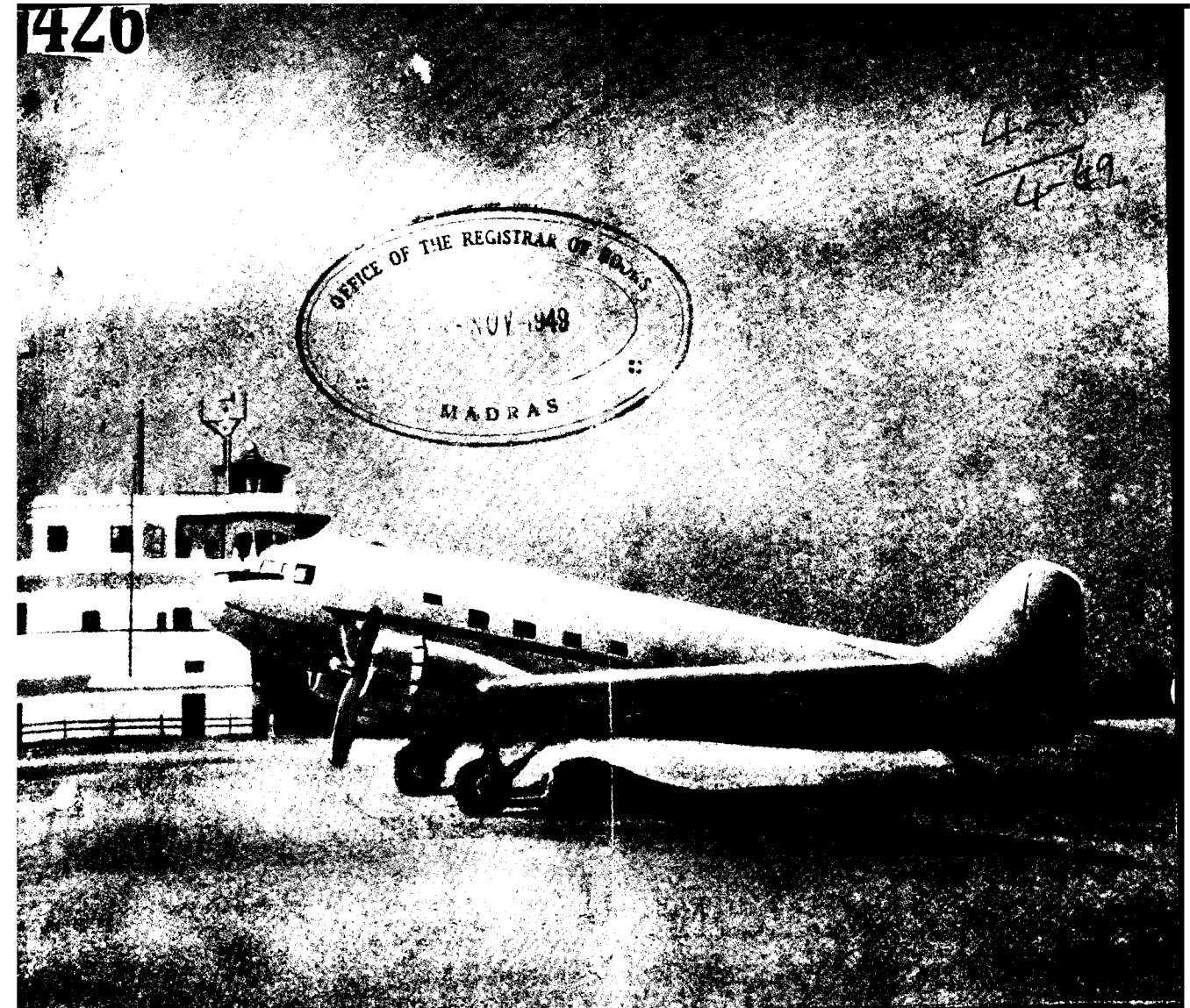
Just after the take-off of Argonaut at Hong Kong Airport



R. M. A. "Aeternus," the first of the Argonaut Airlines to pass through Calcutta, leaving the tarmac at Dum Dum Airport for its onward flight to Hong Kong.

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1426



INDIAN AIRWAYS MAGAZINE

NOVEMBER 1949

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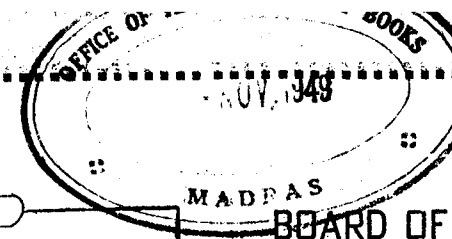
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FOR NATIONAL AND
INTERNATIONAL CHARTERS.

CAPT. JOHN BRINNAND,
General Manager.



THE Birla LINE

EXTERNAL SERVICES

Route I ★

Frequency: Every Wednesday

07 00 Dep. CALCUTTA Arr. 18 30
12 00 Arr. BANGKOK Dep. 13 30

Route II ★

Frequency: Daily

07 45 Dep. CALCUTTA Arr. 11 25
09 20 Arr. CHITTAGONG Dep. 09 50

INTERNAL SERVICES

Route I ★

Frequency: Daily

06 30 Dep. CALCUTTA Arr. 13 00
08 45 " PATNA Dep. 11 00
09 55 " BENARES " 09 50
11 15 " LUCKNOW " 08 30
13 00 Arr. DELHI " 06 30

Route II ★

Frequency: Twice a week
Tuesday & Friday

05 45 Dep. CALCUTTA Arr. 18 50
09 15 " ALLAHABAD Dep. 15 40
10 10 " KANPUR " 14 35
11 50 Arr. DELHI " 12 45

Route III ★

Frequency: Daily

06 00 Dep. CALCUTTA Arr. 17 20
07 20 Arr. AGARTALA Dep. 16 00

Duplicate Service

Route III ★

FREQUENCY: DAILY

9 00 Dep. CALCUTTA Arr. 18 20
10 20 Arr. AGARTALA Dep. 17 00

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(Madras Presy.)

Indian Airways Magazine

VOL. I
NO. 2

NOVEMBER - 1949

ISSUED
MONTHLY

Night Air Mail Scheme

The Night Air Mail service which has attracted a lot of criticism and appreciation has an interesting history. It was introduced a year ago, as consolation to the people against the burden of enhanced postal rates. How far this has succeeded and satisfied the people is a question outside the scope of our discussion to-day. What we are concerned with is about the effect on development of civil aviation.

As a step for the progress of civil aviation in the country, the operation of Night Air Mail Service is really a great experiment. Though it had to be suspended during the unfavourable monsoon season, the successful operation of the same for over a period of six months without any mishap is a tribute to the skill and efficiency of the pilots and technical organization. But apart from this there are certain important issues involved. Arguments advanced against the Night Air Mail Service are, lack of safety, high operation costs, dearth of pilots and technical personnel and the adverse effects on the Airways companies operating scheduled day-time services.

Recently the resumption of the Night Air Mail Service has caused tremendous criticisms especially from the scheduled Airways Companies, which have been carrying the Air Mail during the period of suspension. Particular opposition has been shown towards the Government's decision to entrust the responsibility of operating the Night Air Mail Service to a non-scheduled Company, which had had no experience in operating any day or night service. Further, the Government have also allowed carriage of passengers by the Night Air Mail Service at reduced rates. Naturally, apart from genuine apprehension about safe travel, the repercussion on day air travel is also serious. A forthright statement came out on the subject from the eminent industrialist, Mr. J. R. D. Tata. There was also a reply from the Hon'ble. Mr. Rafi Ahmed Kidwai. But no convincing argument to support his decision to entrust the operation of Night Air Mail Service to a Non-scheduled Company has been given from the Government side. It has been said, that the rates offered by the Government were not acceptable to the Airways Companies. In our opinion, practical considerations of safe flying and ability to manage the service satisfactorily should have received greater weight.

The development of civil aviation in the country has been beset with serious handicap. Several Companies were floated and it is common knowledge that very few have been able to meet the tremendous costs involved in the maintenance of aircraft and running a service. Several Companies have gone

Indian Airways Magazine, November 1949

46

into liquidation. In short, the Airways Companies have not found it a lucrative project to continue in the field. A couple of years back Airways Companies were being floated like mushrooms and good public money was sunk. Many people are yet to know how these Companies would thrive in the years to come and whether their investments would yield a return commensurate with risk that has been taken. The situation must be fully known to the Government. In the circumstances, the Government's encouragement to a fresher in the field must be disheartening to atleast the Companies that are struggling to keep their head above.

The public in this country have become sceptic about Government's experiments. Undoubtedly with good intentions, the Government made reforms in the Railways. They have now realised to their cost that the changes in the different classes have not worked out satisfactorily. So they are restoring status quo. This, it is said, involves the Government to a loss of 14 crores of rupees. With this experience, it will only be reasonable to expect that the Government should weigh the pros and cons of their decision and take with them the industry that will be affected by their decision. Unfortunately, in the operation of the Night Air Mail Service, the Government have taken a decision against the advice and interest of the existing Airways Companies. We cannot say how the new experiment would end. We do not want to be pessimistic. Yet, we would rather like to watch and see how far the Government expectations are fulfilled.

The Airways Companies and the Government are anxious to develop civil aviation in the country, and it is but proper that they should co-operate with each other in their effort. We would also like to point out that the Airways Companies have to set their house in order to fully utilize the Government's support and develop themselves. Many Airways Companies are operating at a very heavy cost primarily, because their over-head expenses are very high. They are paying far too much for their pilots and technical personnel. True, there is scarcity of technical personnel. But the different Airways Companies can come to an understanding and have a workable basis of sharing the available technical personnel instead of bidding and over-bidding each other. It has been common practice for pilots and technical personnel to leave one Company to take up employment in another on a higher pay and leave again for another company on a still higher pay. This neither helps the industry nor the technical personnel. We would strongly urge that the Airways Companies should try to reduce their operating costs and be able to offer their services to the public at less charges. Unless the Air Services are made attractive to the public by lower charges and steady and better service and comfort, it is not possible to hope for a bright future for the Civil Aviation in this country.

OFFICE OF THE REGISTRAR OF AIRCRAFT

NOV 1949

Aviation News

More Trainer Aircraft for Madras Flying Club

The Government of India have allotted to the Madras Flying Club three trainer aircraft, one Tiger Moth and two Chipmunks. The addition of these aircraft would considerably augment the training facilities that the Madras Flying Club could provide.

Aero Club for Tiruchi

The prospects of starting an Aero Club in Tiruchirapalli were discussed with Flt./Lt. P. T. F. Nath, Secretary of the Aero Club of India, during his recent visit to Tiruchi. Mr. Nath expressed that the Government of India were interested in encouraging Aero Club in the country by providing all possible facilities. Mr. Nath also said that Pandit Jawaharlal Nehru, Prime Minister of India, who was the President of the Aero Club of India was keenly interested in the matter. It is understood that a gentleman connected with one of the airways concerned has taken up the work of forming an Aero Club at Tiruchirapalli.

National Air Races to be held in Calcutta

It is understood that National Air Races and an Air Rally will be held in Calcutta (Barrackpore) in early February 1950. This is organised under the joint auspices of the Aero Club of India and the Bengal Flying Club. A three-day programme covering air racing, landing, acrobatic and navigation competition has been fixed provisionally. It is expected that this will draw a large number of participants from various flying clubs in India and abroad.

Safety in Air Travel

A report of the International Air Transport Association reveals that a substantial improvement in safety in air travel was achieved in 1948 as compared to 1947. The report, compiled by the Association from figures submitted to it by its 60 airlines members said that fatality rate in scheduled air transport all over the globe had during 1948 decreased from one for every 21, 184, 108 passenger miles to one for every 30, 487, 279 passenger miles. In 1948, there were 20 fatal accidents as against 32 in 1947. The total number of fatalities in 1948 was 325 as against 488 in 1947.

43 of the airlines members had no fatal accidents at all, while the numerical totals of fatal accidents and individual fatalities were both greatly reduced. This improvement in the safety quotient of scheduled air transport was accompanied by an increase in the actual amount of traffic carried.

New Canadian Jet Transport Plane

The first jet powered transport plane built in North America climbed at 6000 ft. per minute at its first public showing in Toronto. Designed and built by Canadian subsidiary of a British Company the jet is powered by four Rolls-Royce Derwent jet engines. The aircraft is designed to carry 50 passengers and has a cruising speed of 430 miles per hour.

World's Largest Aircraft Complete Maiden Flight

The 130-ton giant aircraft Brabazon 1 the largest civil land plane in the world made a 27 minutes maiden flight in Filten (near Bristol) recently. This 8-motor 130-

ton aircraft took off over a distance of 500 yards at a speed of 85 m. p. h. from a specially constructed runway, and the altitude reached was between 3500 and 4000 ft.

The Brabazon project has involved the British tax payer in an outlay of 12 million pounds. This covers the construction of an outside hanger with 65 feet high doors and the runway, the making of 17,000 drawings, research work, the development of precision tools, and the building of two of these "Winged Monsters." The two machines represent fifty per cent of the total outlay. Brabazon Mark I, which flew is an experimental plane. Mark II now on the stocks, is intended to be used on the London-New York route of the British Overseas Airways Corporation Service. It is likely to carry 100 passengers but may take twice as many on shorter flights.

Gibraltar-London Air Speed Record

A Royal Air Force Flight Command plane, a de Havilland Hornet, has set up a new Gibraltar-London speed record of 435.823 m. p. h.

Three Engined Jet Bomber

A three jet ground support Bomber, identified as the Martin X B-51 was announced in Washington by the National Military Establishment. Ground and taxiing tests will be made shortly. The expected flight performance details are secret. An outstanding feature of the bomber is the arrangement of its engines, two of which are mounted on pylons below the cockpit with a third in the tail. Wings of the X B-51 are swept back at an angle of 35° and have a span of about 55 ft.

Development Programme of Aviation Department

Mr. M. S. Mathur, Chief Engineer of the Civil Aviation Department, Govern-

ment of India, during his recent visit to Madras said that though the development programme of the Aviation Department would be very much restricted in view of the present economic stringency, there would however be concentration of work at international airports like Bombay, Calcutta and Delhi. He added that the Government would carry on as at present with minor additions and alterations to the existing structures.

As regards development of Madras Airport, Mr. Mathur said, that additional buildings which were now under construction at a cost of Rs. 5 lacs would be completed by March 1950. In addition, residential quarters for the airport staff and hangers at an estimated cost of Rs. 19 lacs would be built at the Meenampakkam aerodrome in the course of next two years. He, however indicated that there would not be any further expansion at Madras Airport for sometime to come.

Concessional Air Fares for Students

It is learned that the K. L. M. Royal Dutch Airline will grant a considerable reduction in return fares to students between the ages of 12 and 21, when travelling between their home and the place of study. This reduction amounts to 35 per cent of the total normal single fares for journeys between North America and the West Indies on the one hand and Europe Africa and the Near East on the other. A reduction of 50 per cent is granted in the case of journeys in and between Europe, Africa and the Near East and the Far East. In order to be eligible for such a reduction the student must produce a letter from the School authorities. It is not possible to stop over at one of the intermediate airport enroute.

New type of Aircraft Brake

A new type of brake has been specially developed by a British Rubber Company to meet the demand of heavier

airliners and of aircraft with high landing speeds such as jet fighters.

The advantages claimed for the new type are its very small displacements and consequent rapid response, rapid cooling and greater surface for the absorption of the tremendous heat generated during the braking of fast moving aircraft. It is lighter than the older type in relation to performance and it gives greater braking power in a mechanism which still fits into the limited space of the wheel. The operation of the brake can be either hydraulic and pneumatic and the control mechanism is duplicated.

The brake has already been fitted to the de Havilland "Comet", the Airspeed "Ambassador," the Supermarine 510 fighter and the Hawker naval fighter. It is also to be used on the 130-ton Bristol "Brabazon."

World's First Turbine Airliner approved for Service

The Vickers "Viscount," the first airscrew turbine airliner in the world, has been granted a Certificate of Airworthiness.

Besides being the first aircraft of its type to receive the Certificate, the Viscount becomes the first British Civil Airliner driven by any type of engine to receive the Certificate of Airworthiness to the Air Registration Board's revised requirements which automatically ensure compliance with the new standards laid down by the International Civil Aviation Organisation.

A joint order for 40 "Viscounts" has been placed by British Overseas Airways and British European Airways. Vickers Armstrong have had a number of inquiries for the airliner from overseas countries, including the U. S. A., Canada and Australia, and propose to produce immediately more than 100. The sterling price of each Viscount will be £. 167,000.

Radar Device for Training Pilots

A new radar device which can reproduce the effects of air attacks of any size is now being tested in Britain. It will be used in training Royal Air Force Fighter pilots. It is planned to install 13 of these new machines at fighter control units throughout Britain.

Simplified Testing of Aircraft Wireless

A new simplified apparatus for the testing of aircraft wireless equipment has been designed and produced by a British Firm. Although it comprises a comprehensive range of test equipment, the set is housed entirely in one steel cabinet measuring 4x3x1—1/3 feet.

The gear includes a single generator, a beat frequency oscillator, an output power meter, artificial aërials and a special direction finder test sets. At the base of the tester is a row of standard back plates which correspond to the back plate of the wireless equipment racking in an aircraft. This enables units to be removed from an aircraft and plugged into the tester in such a manner that easy access to any part of the unit is assured. Testing can then be done in conditions similar to those obtaining in actual flying.

This new equipment solves the old problem of aircraft wireless depots—the large amount of test equipments needed to provide complete overhaul and replacement service.

"Python" off the Secret List

One of the most powerful airscrew turbine aero-engines, the Armstrong Siddeley "Python," has been released from the secret list. It develops over 4000 h. p. and drives contra-rotating airscrews.

The engine is constructed on the reverse flow principle. The reverse thrust can be used as a landing brake and a

wind-mill brake is also incorporated to limit the speed of the aircraft in a dive. The "Python" has an axial flow, compresses the intake of air into 11 combustion chambers disposed radially around the compressor casing. The compressor and the two-stage turbine are coupled together on a common shaft.

The engine is just over seven feet long, has a maximum diameter of approximately four-and-a-half feet and has an installed weight of 4,100 lbs. including the airscrews.

Concession Fares for Family

Airways India have introduced concessional fares for family travel on their Calcutta-Madras-Bangalore route. A reduction of 25 per cent for wife and 50 per cent for children under 18 years will be charged from Calcutta to Madras and Calcutta to Bangalore.

Aerodrome for Mangalore

In a recent tour of South India, Mr. M. S. Mathur, Chief Engineer, of the Civil Aviation Directorate, said that the construction of an aerodrome at Mangalore would be taken up immediately. He added that preliminary survey was being made to choose a suitable site for the purpose. Priority for the construction of an aerodrome in Mangalore has been given in view of the necessity of having an intermediate aerodrome between Bombay and Cochin.

Suggestion for an Aerodrome for Guntakkal

The Collector of Bellary suggested the opening of an Aerodrome at Guntakkal, and this has been supported by other Collectors of Rayalaseema. It has been pointed out that Guntakkal being a big Railway Junction with connections to all

the district headquarters in Rayalaseema, would be the most suitable place for an Aerodrome to serve the area and would help the economic development. An Aerodrome at Guntakkal would be virtually on a direct line between Bangalore and Hyderabad, both of which are touched by air routes. The proposal is to be placed before Rayalaseema Development Board.

Air Travel Concessions for Students

BOAC and Qantas Empire Airways have introduced a special 50 per cent fare reduction for students making return air journeys between India and the United Kingdom, the Middle East, the Far East and Australia.

The concession applies to school children and students of Collegés and Secondary Schools up to the age of 21. Hitherto the age limit for such a concession was 18 years. Students can also travel on BOAC's North Atlantic Services specially reduced rates. The concession over the London—U.S.A. and Canada route amounts to 35 per cent. Student tickets are issued on the production of a certificate from the school principal and are valid for one year from the date of the outward journey.

T. W. A. "Round-Trip" Excursion

Air travellers from India over Trans-World Airline Routes through Europe and on to London may fly on a special winter round-trip excursion rate from November 1, TWA Officials announced last month. The special TWA round-trip rate, equivalent to one and one-third times the regular one-way fare, applies to trips originating in Bombay, Calcutta, Bangalore, Delhi, Madras and Colombo to Rome, Paris, Geneva, Zurich and London. The rate applies to tickets purchased between November 1, and March 31 next and is valid for four months, but applies to troops originating in India only.

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(TOP)

Stewardess Barker presented BOAC's compliments to Bauccha, a playful young tiger who also travelled to London by air from India. Photograph shows Stewardess Barker making friends with Bauccha.

(BOTTOM)

Baby elephant is being loaded in a BOAC aircraft at Dum Dum on its journey to United Kingdom.

Photo By:

"STATESMAN"

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Even Elephants Fly

We are inclined to take many things for granted nowadays. To say that everyone flies is, of course, an exaggeration, but we are quite certain that at least representatives of all the various creeds, colours and conditions of mankind now fly at some time or other. Also we know that some of the most out-of-the-way and unusual places are now ports-of-call for aircraft, and that practically every little spot of habitation is somewhere within reach of an airfield. The story of this air age, however, is not just that everyone flies to everywhere, but also that, to all intents and purposes, everything flies as well. Amongst the items of cargo carried nowadays is anything from an oyster to an elephant.

Actually this is not surprising when one really looks into the shipping of goods by air. Perhaps one may be momentarily nonplussed to find an elephant travelling by air—even if it was only a baby one. There is a limit to what an aircraft can carry is the first thought that enters the mind. Oysters? Yes. Everything is in favour of shipping oysters by air—speed is essential—but elephants? No.

Aeroplanes do have a limit. Certain things cannot be transported by air. The procedure for the transportation of heavy machinery is, of course, to dismantle the equipment for easy handling and in order to make several loads of it. On the other hand, a fully grown bull elephant, complete with trunk and in his notoriously badly tailored trousers, cannot be dismembered for easier stowage upon an aircraft.

Even so, the pachyderm clan are not barred from the joys of flight as long as they travel light enough (i. e. young enough). Not so long ago arrangements were made with B. O. A. C. to fly a baby elephant from Calcutta to England.

At the Kallang Airport Hotel, Singapore, oysters are obtainable as a hors d'oeuvre before dinner. This may not seem surprising, except that they are Australian oysters, and fresh ones at that. The answer is that oysters are flown to Singapore from Sydney by Q. E. A. (Qantas Empire Airways) to the tune of 3,466 dozen oysters per month. Someone has worked it out that Q. E. A. ships oysters at the rate of two a minute. It would seem that even oysters are becoming airminded—a fact that would surely have rocked both the walrus and the carpenter had they foreseen it.

Many strange cargoes have been carried on the B. O. A. C. routes in recent months, when livestock has taken pride of place among the unusual freight. Indeed, almost an entire miniature zoo has been sent by the Speed Bird Lancastrian Cargo Service from India to Britain and its consignment note read somewhat like a page from the passenger list of Noah's Ark. Here it is:—

Four tiger cubs, five civet cats, four Himalayan bear cubs, three fishing cats, 300 monkeys, four leopard cubs, one mongoose, three mountain squirrels and four pheasants.

Other animals lately carried included silver foxes from Canada to Scotland, dogs from Britain to Nairobi, pigeons to Johannesburg, live chicks to Castel Benito and toads in transit from South America to Dar-es-Salaam for research purposes.

Medical supplies are often flown, and from public health laboratories in London to Adelaide, South Australia, there recently went a consignment of fluid bacteriophage, specially packed in dry ice.

Horticulturists are making increased use of air transport and many valuable



Photo's by B. O. A. C.



orchid plants have been flown from Britain to North America, the Near and Far East, Africa and Australasia, while Bermuda lilies have been despatched by Speedbird to the United States and Canada.

Air transport is the natural answer to many transport problems, and this fact is becoming more widely recognised, as shown by the vast range of items which are shipped by air. There is, in fact, very little that has not, at some time, formed a part of the cargo on board an airliner. When elephants fly and monkeys are actually a regular item of air cargo—well, one can say it certainly is an air world!

(TOP)

Dumbo the baby elephant which BOAC flew from India to the U. K. a few months ago, recently celebrated her first birthday anniversary at the London Zoo. BOAC Stewardess Vida Barker visited the thriving infant to offer congratulations and a birthday treat of sliced potatoes, Dumbo's favourite dish.

Photograph shows Stewardess Barker presenting Dumbo with her birthday treat.

(BOTTOM)

Four Tiger Cubs and two Panthers being shipped from Calcutta to London by a BOAC Lancastrian All-cargo Service.

New Landing Devices

Two devices to help aircraft land in bad weather conditions have been approved as standards for world-wide use by the Council of International Civil Aviation Organisation, which at a meeting in Montreal has approved international standards on aeronautical tele-communications.

The two devices are the Instrument Landing System (ILS), which permits a pilot to land in low visibility by following the indications of two pointers on his instrument board, and Ground Controlled Approach (GCA) which allows a ground radio operator to talk to the aircraft down while watching a radar screen which shows its exact position. ILS is specified for all regular international airports where an instrument landing system is required, with GCA as supplementary equipment wherever air traffic control will be materially assisted or wherever it is likely to be needed by aircraft now equipped with ILS. The only equipment required in the aircraft itself for GCA use are a radio receiver and transmitter.

Other provisions of the aeronautical tele-communication standards include the selection of the very-high-frequency omni-range as a short-distance radio aid to navigation for use where traffic conditions justify an aid of that character. The omni-range gives a continuous direct reading of the aircraft's bearing from a fixed ground station. Standardised distance measuring indicator is to be added when available. Both the aircraft's distance and bearing from the ground station will then continuously be available to the pilot, thereby providing him with precise tracks along which he may fly, and

keeping him advised at all times of what track he is on and how far he is from the fixed ground station.

The standards do not include any long-range navigational aids, as no completely satisfactory aid is yet sufficiently mature for international adoption as a standard, but the ICAO Council recommends that research and developments continue on this problem, and that in the meantime the present types of long-distance aids be continued in operation.

The aeronautical tele-communication standards are the tenth set which ICAO has adopted. Others include such subjects as Rules of the Air, Personnel Licensing, Dimensional Standardisation, Maps and Charts, etc. Standards are designed to foster air safety in two ways: by producing world-wide uniformity of Air Navigation Services and procedures, so that wherever an aircraft may fly it will find familiar facilities, methods of operation and regulations, and by ensuring that each nation's aviation practices are maintained at a high standard of quality.

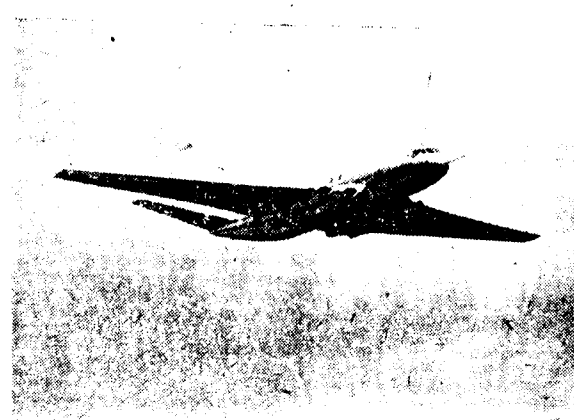
The aeronautical tele-communication standards will be effective on March 1950, unless they are previously disapproved by a majority of the member nations of ICAO. Authority for the establishment of the standards comes from the Convention of International Civil Aviation, concluded at Chicago in 1944; ICAO Council adoption of a set of standards gives it status as an Annex to this convention. Any State which finds itself unable to comply with any of the standards in an approved Annex must notify ICAO, so that other member nations may be warned of the divergency.



First flight of the de Havilland Comet at Hatfield, England. The aircraft taxiing to its shed, followed by a few hundred members of the de Havilland technical departments and experimental shops who had finished their day's work in time to witness the first flight.



John Cunningham and his flight crew being greeted after alighting by those who designed and built the aircraft.



First flight of the de Havilland Comet at Hatfield England. The aircraft at the end of its 31 minutes flight, when John Cunningham flew it across the field at 100 ft. in salute to its builders.

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Successful Test Flight of World's First Jet Airliner THE de HAVILLAND "COMET"

The de Havilland "Comet," first jet-propelled public-transport aircraft in the world, emerged from its assembly shed on Monday, July 25, and after two days occupied in engine runs, including 1½ hours spent in taxiing and hops, made its first full flight, lasting 31 minutes, at Hatfield on Wednesday, July 27, at 6.17 p. m. The de Havilland chief test pilot, Mr. John Cunningham, with a crew of four, flew the aircraft. He climbed to 10,000 ft., tried out the general handling qualities of the aircraft over a range of low and medium speeds, and flew along the runway at 100 ft. in salute to employees of the de Havilland technical and experimental departments who were on duty. In accordance with the de Havilland custom, and in the interests of safety, the public did not witness the flight. But more than a hundred members of the press had observed taxiing tests earlier in the day.

Landing at 6.48 p. m., the crew, along with the technical heads of the Companies, were given a great ovation by those who had been working on the aircraft for the best part of two years and who could see at once that the "Comet" which they had created was a basically sound aeroplane.

In the conference which followed, Mr. Cunningham reported that the aircraft handles very nicely in the air and on the ground, that the controls and stability are good and that in every way these first tests hold high promise for the future of the project.

In the message to the teams of technicians of which he is the head, and to all the employees of the enterprise, Sir

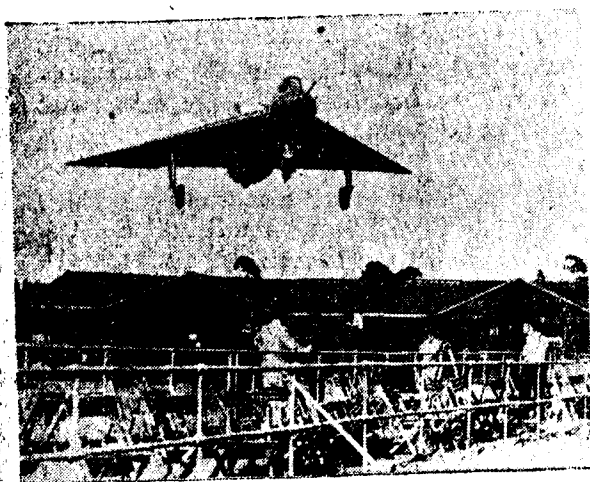
Geoffrey de Havilland, whilst reminding them that there is much still to be done, added "but we now know that the 'Comet' is basically sound and its opportunities for future success are almost unlimited."

The "Comet," powered by four de Havilland Ghost jet turbines, each of 500 lb. static thrust, has commenced its development trials within three years of the stage when the main decisions were reached concerning its design. A considerable period will be occupied by the builders' trials, and by operational proving—for this aircraft represents a major technical advance—but quantity production is meanwhile going ahead and the type will be in commission on Corporation trunk services in 1952/53. Besides two aircraft for the British Government 14 are being built for British Overseas Airways Corporation and British South American Airways. The British Corporations have by placing orders "off the drawing board" demonstrated their belief in jet propulsion and their confidence in the de Havilland Company's ability to produce a transport aircraft outstanding in performance and efficiency of operation.

The purpose of this project, which was conceived by the de Havilland Aircraft and Engine Companies towards the end of the war, is to take a step forward in commercial efficiency, comfort and convenience by utilising the special qualities of jet propulsion. On main-line stages a briefer and smoother flight is envisaged for a competitive cost. The "Comet" will carry up to 36 passengers and its cruising speed will be something approaching 500 m. p. h.



A general view of the Royal Aircraft Establishment's Airfield at Farnborough, showing aircraft ready in place for the display



The Avro Delta 107, single jet research plane the latest aircraft to be taken off the secrets list. It has a wing span of 33 ft. and a length of 30 ft. 6 in. and revolutionary in design.



Among the many famous personalities who visited the display were (centre): Field Marshal Sir William Slim C. I. G. S. with on his right Lord Tedder and on his left: Mr. A. V. Alexander.

Will the Jet Liner Prove Profitable

By E. Colston Shepherd

Secretary-General of the Air League of the British Empire

British air operators seem likely to take with readiness to jet propulsion for passenger aircraft. Both British Overseas Airways and British South American Airways are looking forward to the delivery of their de Havilland "Comet" jet liners in time to be put on their routes in 1952. The successful start of the "Comet's" trials, a little ahead of schedule, has raised hopes that deliveries will be made in time although the critical tests, including those on routes, have yet to come.

Viewed in a detached way, this keenness on commercial jets might be considered rash. No other operators are committed to them. No U. S. designer has yet been encouraged by an air line to build a jet-liner. American operators are still trusting the big piston-engine and airscrew, doubtful evidently of the range and economics of the jet liner. There has been some tendency in the past few months for U. S. designers to think again about the turbo-prop for passenger carrying. That has arisen from information about British experience with the Vickers "Viscount," which has been shown by its designer to be no more expensive to run than a comparable piston-engine liner.

High Expectations

On the basis of economic operation and on the test of time between overhauls and general maintenance costs, the jet must stand or fall in commercial air transport. The willingness of British operators to accept jet liners is evidence of high expectations, for British Corporations have been under severe criticism over their losses and dare not, in the present circumstances, turn to new aircraft which would

be likely to increase them. Not only are BOAC and BSAAC pleased at the prospect of their "Comets," but British European Airways Corporation is also said to be considering jet liners instead of turbo-prop liners for some of its services.

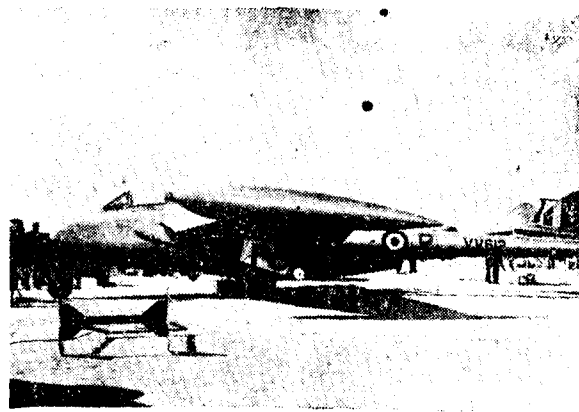
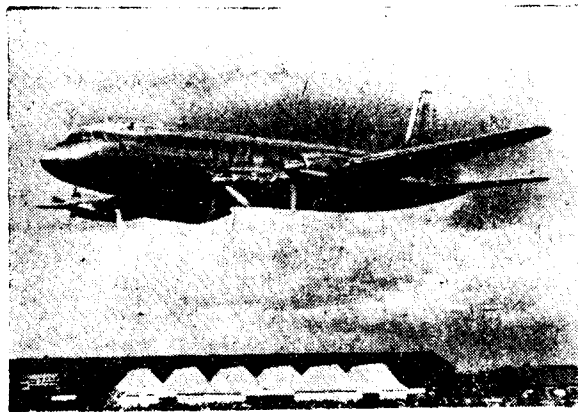
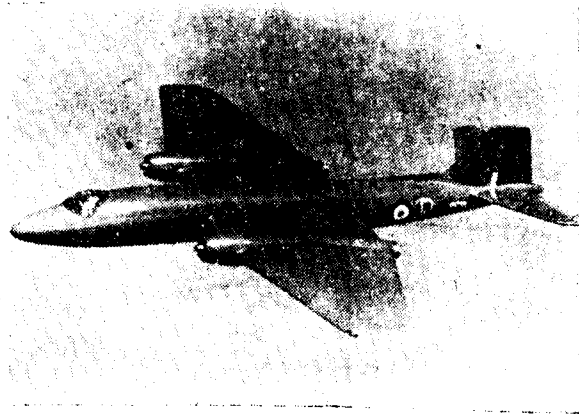
In the last financial year British European Airways losses were £ 2,500,000 (Rs. 3. 34 crores). Since that year ended its staff has been reduced by 1,300 and if the current year works out as well as it has begun, the loss will be down to £ 1,500,000 (Rs. 2 crores). This Corporation is bent on making a profit. It would not be thinking of jet liners if their economic prospects were not good.

Whether BOAC is thinking of the "Comet" or of the jet-driven "Viscount," there is no reliable information yet. The two are roughly equal in passenger capacity. The "Comet" has seats for 36 and the improved "Viscount" for 40. On the other hand, the "Comet" will have an operational range (with all the usual allowances for headwinds and diversions) of something over 1,500 miles, whereas the jet-driven "Viscount's" operational range may be around 900 miles.

Estimated Performance

At first sight the "Viscount" might be expected to suit BEAC better since few of its non-stop stages exceed 800 miles and the "Viscount" should give a better ratio of payload to engine power and, therefore, to fuel consumption at the cost of a lower cruising speed.

The estimated performance of the "Comet" has been kept secret but we



The great array of civil and military aircraft and aero-engines seen at the British Aircraft Industry's tenth flying display and static exhibition held at Farnborough Aerodrome, England.

Economy of Maintenance

By the old standards of relating one pound of fuel consumed to every h. p. per hour, the gas-turbine appears quite unattractive. The consumption rate on that calculation is about 25 per cent worse than that of a piston-engine. Speed helps to put that right. A piston-engine liner does not promise much above 400 m. p. h. If a jet liner can give higher speeds, the cost in gallons per mile may be little, if anything, more than that of a piston-engine liner of poorer performance. The higher speed may also mean more journeys per day and, therefore, more revenue. The mechanical simplicity of the gas-turbine may further mean some measure of economy in maintenance.

There are some shrewd heads among the planners of BEA. If they are, in fact, thinking of jets for their relatively short routes, operators in other countries will be unable to ignore the claim of the jet. So far British commercial air transport has that field to itself and without doubt the recent appearance of the de Havilland "Comet" is an event. The "Comet" and the jet-driven "Viscount" will be watched with great interest. None of us can yet assert that the jet liner will be a good investment, but we are on the edge of finding out.

know that it has swept-back wings and we are entitled to conclude that these are not seriously needed to cope with shock waves at speeds below 550 m. p. h. The cruising speed of the "Comet," therefore, should not be below 450 m. p. h. Its four gas-turbines might not all be needed for cruising, and there will be no safe grounds for a comparison between the economic characteristics of these two aircraft until they have done a good deal of test flying.

The requisite data will begin to pile up during the next year and all the three Corporations will be able to gauge the possibilities. They are no doubt tempted by the chance to offer something exceptionally attractive to passengers as a means or competing with other operators. A high cruising speed has always sold well provided it was associated with good operation.

British Air Lines recently have been winning good opinions among passengers of all nationalities. That advantage would be consolidated if the fastest aircraft on the world's routes could be offered in addition. That is what these jet liners are likely to be; yet the Corporations cannot afford to turn to jets simply as a means of filling their aircraft. They have to be sure that they can be run economically.

Norwegian Air Service thro' India

Temporary authorisation has been granted by the Government of India for the operation of a Scheduled Weekly Air Service through India by the Norwegian Air Line, "Breathens." The service will start from October 29. The Company has been operating a non-scheduled Air Service through India for some time. The route will be Norway—Amsterdam—Geneva—Rome, Athens—Cairo—Basrah or Abadam or Sharjah—Karachi—Bombay—Calcutta—Bangkok—Saigon—Hongong and beyond.

The Norwegian Air Line cannot carry passengers from any Indian port to Geneva, Cairo, Karachi or Bangkok or from any of these places to India. These places are touched by Indian Air Lines. An Air Line designated by the Government of India will have similar reciprocal rights to Norway. The authorisation is the result of exchange of correspondence between the two Governments and discussions between the Government of India and the Norwegian Ambassador.

INTERNATIONAL AIRLINES

FARES AND FREIGHT SCHEDULE.

Air India International

Fare & Freight Schedule

From	To	Single	Return	Excess Baggage per kilo.
		Rs.	Rs.	Rs. As.
Bombay	Basra	627	1128	6 5
Bombay	Cairo	1040	1872	10 7
Bombay	Geneva	1587	2856	15 14
Bombay	London	1720	3096	17 3
Basra	Cairo	454	816	4 9
Basra	Geneva	1091	1964	10 15
Basra	London	1200	2160	12 0
Cairo	Geneva	770	1386	7 12
Cairo	London	894	1608	8 15
Geneva	London	200	360	2 0

Air France

Fare & Freight Schedule

From Karachi To	Single	Return	Baggage	Freight
	Rs.	Rs.	Rs. As.	Rs. As.
Cairo	907	1632	9 2	5 9
Calcutta	360	648	3 10	3 12
Glasgow	1787	3214	17 14	10 8
London	1600	2880	16 0	7 12
Marseilles	1467	2640	14 11	7 4
Montreal	2758	4965	27 10	15 5
New York	2758	4965	27 10	15 5
Paris	1573	2832	15 12	7 9
Rome	1307	2352	13 1	6 10
Saigon	933	1680	9 5	8 0

From Calcutta To	Rs.	Rs.	Rs. As.	Rs. As.
Cairo	1267	2280	12 11	7 4
Glasgow	1987	3573	19 14	12 3
London	1880	3384	18 13	8 10
Marseilles	7960	3168	17 10	8 4
Karachi	1130	648	3 10	3 12
Montreal	039	5471	30 7	—
New York	3039	5471	30 7	29 8
Paris	3867	3360	18 11	8 10
Rome	1627	2928	16 4	7 15
Saigon	613	1104	6 3	5 2

British Overseas Airways Corporation

From	W S F	Single Fare	Return Fare	Excess Baggage Rate per kg.	Freight Rate per kg.
		Rupees	Rupees	Rs. As.	Rs. As.
CALCUTTA					
To Alexandria	... 2	1294	2328	13 0	7 5
Auckland	... 6	2400	4320	24 0	14 1
Augusta	... 2	1600	2880	16 0	7 11
Bahrain	... 2	760	1368	7 10	6 2
Bangkok	... 2	400	720	4 0	2 13
Basra	... 9	854	1536	8 9	6 6
Batavia	... 2	867	1560	8 11	6 4
Cairo	... 9	1267	2280	12 11	7 4
Darwin	... 6	1467	2640	14 11	8 9
Hong Kong	... 2	800	1440	8 0	5 1
Karachi	... 11	360	648	3 10	3 12
London	... 11	1880	3384	18 13	8 10
Montreal	... 5	3034	5461	30 6	15 11
New York	... 5	3037	5467	30 6	16 2
Rangoon	... 2	254	456	2 9	1 12
Rome	... 5	1627	2931	16 5	8 0
Shanghai	... 2	1080	1944	10 13	6 13
Singapore	... 6	720	1296	7 4	5 0
Sydney	... 6	2067	3720	20 11	10 15
Tokyo	... 1	1480	2664	14 13	8 8
Washington	... 5	3078 ¶	5547 ¶	△	—

		Rupees	Rupees	Rs.	As.	Rs.	As.
BOMBAY							
To Basra	... 1	627	1128	6 5	5 0	5 0	0
Cairo	... 1	1040	1872	10 7	6 2	6 2	2
Colombo	... 1	267	480	2 11	2 10	2 10	10
London	... 1	1720	3096	17 4	7 15	7 15	15
Montreal	... 1	2875	5175	28 12	15 0	15 0	0
New York	... 1	2878	5181	28 13	15 7	15 7	7
Rome	... 1	1440	2592	14 7	6 13	6 13	13
Singapore	... 1	934	1680	9 6	6 9	6 9	9
Washington	... 1	2919 ¶	5262 ¶	29 3	—	—	—

DELHI

				Rs.	As.	Rs.	As.
To Basra	... 4	680	1224	6 13	5 5	5 5	5
Cairo	... 4	1094	1968	11 0	6 8	6 8	8
Karachi	... 4	187	336	1 15	1 15	1 15	15
London	... 4	1747	3144	17 8	7 15	7 15	15
Montreal	... 4	2902	5223	29 1	15 0	15 0	0
New York	... 4	2905	5228	29 1	15 7	15 7	7
Rome	... 4	1465	2646	14 11	7 2	7 2	2
Washington	... 4	2945	5309	△	—	—	—

WSF: (Weekly Service Frequency)

† Supplemented tour within U.S.A. are changed by certain Carriers when service operated by DC-6 or Constellation aircraft.

△ Sector rates of the carrier concerned apply.

China National Aviation Corporation

Fare and Freight Schedule

INDIAN OR BURMA
RUPEES

	Fare Rs.	Freight per kg. Rs. As.	Fare. Rs.	Freight per kg. Rs. As.
Karachi—				
Calcutta	360	3 12	250	2 10
Rangoon	613	5 7	426	3 12
Kunming	1004	7 0	697	4 14
Hongkong	1120	7 13	778	5 7
Calcutta—				
Rangoon	253	1 12		
Kunming	643	5 10		
Hongkong	800	5 8		

PAKISTAN
RUPEES

K. L. M. Royal Dutch Air Lines

Fare and Freight Schedule

	Single Rs.	Return Rs.	Excess Baggage Rs. As. Ps.	Freight per lb. Rs. As. Ps.
Calcutta To				
Amsterdam	1,867	3,360	18 10 8	3 14 7
Bangkok	400	720	4 0 0	1 4 2
Basra	853	1,536	8 8 1	2 14 10
Batavia	867	1,560	8 10 8	2 13 3
Cairo	1,267	2,280	12 10 8	3 11 0
Damascus	1,173	2,112	11 11 6	3 4 6
Karachi	360	248	3 9 9	1 11 1
Rome	1,627	2,928	16 15 1	3 9 0
Singapore	720	1,296	7 3 6	2 3 11

Pan American Airways

Fare Schedule

Calcutta To	Rs.		Rs.
Brussels	1,869	London	1,882
Damascus	1,174	New York	3,040
Hongkong	801	San Francisco	3,143
Honolulu	2,696	Tokyo	1,482
Karachi	361		

Trans World Airline

Passenger Fares and Freight Chart

From	To	Rate per lb.			
		One way	Round Trip	Under 100 lbs.	Over 100 lbs.
		Rs. A.	Rs. A.	Rs. A.	Rs. A.
Bombay	Athens	1254 0	2257 0	3 1	2 5
Bombay	Basra	628 8	1131 8	2 4	1 12
Bombay	Cairo	1042 0	1872 0	2 12	2 1
Bombay	Dhahran	536 0	965 0	1 15	1 8
Bombay	Gander	2607 0	4692 8	5 15	4 7
Bombay	Geneva (Zurich)	1588 0	2858 8	3 8	2 10
Bombay	New York	2878 0	5180 8	7 0	5 4
Bombay	Paris	1684 0	3031 0	3 8	2 10
Bombay	Rome	1442 8	2596 8	3 1	2 5
Bombay	Shannon	1856 0	3340 8	4 4	3 3

INDIAN AIRLINES

FARES AND FREIGHT SCHEDULE

Air Ceylon

Fare and Freight Schedule

From	To	Single	Return		Foreight per lb.			Excess Baggage per lb.		
		Rs.	Rs.	As.	Rs.	As.	Ps.	Rs.	As.	Ps.
Colombo	Jaffna	35	66	8	0	4	0	0	4	0
	Trichy	70	133	0	0	8	0	0	8	0
	Madras	85	162	0	0	7	3	0	7	3
	Bombay	230	437	0	0	14	6	0	14	6
	Karachi	365	694	0	1	8	0	1	8	0
Jaffna	Trichy	35	66	8	0	4	0	0	4	0
	Madras	50	95	0	0	5	8	0	5	8
	Bombay	195	371	0	0	10	5	0	10	5
	Karachi	330	627	0	1	4	0	1	4	0
Trichy	Karachi	270	513	0	1	0	0	1	0	0
Bombay	Karachi	150	285	0	0	8	0	0	8	0

Air India Limited

Fares List

From	To	One-way Fare	Round trip Fare	Excess Baggage per Kilo
		Rs.	Rs.	Rs. A.
Bangalore	Cochin	60	114	0 8
Bangalore	Coimbatore	35	67	0 5
Bangalore	Trivandrum	80	152	0 11

From	To	One-way Fare	Round trip Fare	Excess Baggage Per Kilo
		Rs.	Rs.	Rs. A.
Bombay	Calcutta	250	475	1 14
Bombay	Colombo	230	437	2 2
Bombay	Delhi	175	333	1 8
Bombay	Hyderabad	82	156	0 11
Bombay	Jaipur	140	266	1 6
Bombay	Madras	153	291	1 4
Bombay	Nagpur	105	199	0 13
Cochin	Trivandrum	30	57	0 4
Coimbatore	Cochin	25	48	0 3
Coimbatore	Trivandrum	50	95	0 7
Hyderabad	Colombo	156	296	1 9
Hyderabad	Madras	71	135	0 9
Jaipur	Delhi	35	67	0 5
Karachi	Bombay	150	285	1 8
Karachi	Colombo	365	694	3 8
Karachi	Madras	303	576	2 12
Madras	Bangalore	40	76	0 6
Madras	Cochin	75	143	0 13
Madras	Coimbatore	60	114	0 10
Madras	Colombo	85	162	1 0
Madras	Trivandrum	100	190	1 1
Nagpur	Calcutta	145	276	1 4

Airways (India) Limited**Fare and Freight Schedule**

From	To	Single	Return	Excess Bag. and Freight charge per lb.
		Rs.	Rs.	Rs. A.
Calcutta	Bhubaneswar	59½	113	0 4
Calcutta	Vishakhapatnam	120	228	0 8
Calcutta	Madras	220	418	1 0
Calcutta	Bangalore	260	494	1 3
Calcutta	Dacca	50	95	0 4
Calcutta	Bagdogra	74	140½	0 6
Calcutta	Gauhati	77	147	0 6
Calcutta	Mohanbari	127	241½	0 10
Bhubneswar	Vishakhapatnam	60½	115	0 4
Bhubneswar	Madras	160½	305	0 12
Bhubneswar	Bangalore	204½	388	0 15
Vishakhapatnam	Madras	100	195	0 8
Vishakhapatnam	Bangalore	140	266	0 11
Madras	Bangalore	40	76	0 3
Gauhati	Mohanbari	50	95	0 4

Bharat Airways Limited**Fare and Freight Schedule**

From	To	Single	Return	Freight excess bag. per lb.
		Rs.	Rs.	Rs. A.
Calcutta	Agartalla	50	95	0 4
Calcutta	Patna	75	142	0 6
Calcutta	Benares	101	192	0 8
Calcutta	Lucknow	139	264	0 11
Calcutta	Kanpur	141	268	0 11
Calcutta	Allahabad	116	220	0 9
Calcutta	Delhi	190	361	1 0
Calcutta	Chittagong	54½	99	0 4½
Calcutta	Chittagong	27½	49½	0 4½
Calcutta	Chittagong	5½	11	0 4½
Patna	Benares	35	67	0 4
Patna	Lucknow	73	139	0 6
Patna	Allahabad	55	104	0 5
Patna	Kanpur	80	152	0 7
Patna	Delhi	138	263	0 11
Benares	Lucknow	38	72	0 4
Benares	Delhi	102	194	0 8
Lucknow	Delhi	65	123	0 6
Allahabad	Kanpur	30	57	0 4
Allahabad	Delhi	87	165	0 8
Kanpur	Delhi	62	118	0 6
Calcutta	Bangkok	350	630	Excess bag. Freight per Kilo 3-8-0

Deccan Airways**Fare and Freight Schedule**

From	To	Single	Round Trip	Excess Baggage or Freight per lb.
		Rs.	Rs.	Rs. As.
Madras	Hyderabad	80	152	0 5
"	Nagpur	140	266	0 10
"	Delhi	265	504	1 3
"	Bombay	150	285	0 10
Hyderabad	Nagpur	60	114	0 5
"	Delhi	195	371	0 13
"	Bombay	95	181	0 6
"	Bangalore	80	152	0 6
Nagpur	Delhi	135	257	0 9
Bangalore	Bombay	135	257	0 11
"	Delhi	265	504	1 3
"	Nagpur	140	266	0 11

Indian National Airways Limited**Fare and Freight Schedule**

From	To	Single			Return			Freight and Excess Bag. per lb.
		Adult	Child	Infant	Adult	Child	Infant	
		Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs. A.
Delhi	Calcutta	203	102	21	386	194	39	1 0
Delhi	Karachi	170	85	17	323	162	33	0 13
Delhi	Lahore	66	33	7	126	63	13	0 5
Delhi	Jodhpur	75	38	8	143	72	15	0 6
Delhi	Amritsar	65	33	7	124	62	13	0 5
Delhi	Jammu	95 $\frac{1}{2}$	48	10	181 $\frac{1}{2}$	91	19	0 7 $\frac{1}{2}$
Delhi	Srinagar	120	60	12	228	114	24	0 9
Jodhpur	Karachi	95	48	10	181	91	19	0 8
Calcutta	Jodhpur	278	139	28	529	265	53	1 6
Calcutta	Karachi	350	175	35	630	315	63	1 11
Calcutta	Rangoon	235	118	24	447	224	46	1 2
Amritsar	Jammu	30 $\frac{1}{2}$	15	3	60 $\frac{1}{2}$	30	6	0 2 $\frac{1}{2}$
Amritsar	Srinagar	65	29	6	124	58	12	0 5
Jammu	Srinagar	35	14	3	70	28	6	0 2 $\frac{1}{2}$

Orient Airways Limited**Fare and Freight Schedule**

From	To	Single	Return	Freight per lb.	Excess baggage per lb.
		Rs.	Rs.	Rs. A.	Rs. A.
Calcutta	Karachi	360	684	2 3	2 3
Calcutta	Rangoon	200	380	0 15	0 15
Calcutta	Akyab	100	190	0 8	0 8
Calcutta	Dacca	50	95	0 4	0 4
Calcutta	Chittagong	54	99	0 4 $\frac{1}{2}$	0 4 $\frac{1}{2}$
Chittagong	Dacca	32	61	0 4	0 4
Dacca	Karachi	350	665	2 0	2 0
Chittagong	Rangoon	140	266	0 11	0 11
Chittagong	Akyab	40	76	0 4	0 4
Dacca	Delhi	200	380	1 2	1 2

Air India Limited

Time: 1st

BOMBAY—KARACHI—BOMBAY

(Daily)

Flight No. 1	Flight No. 2	Dep.		Arr.	Flight No. 2	Flight No. 1
07.00	09.45	Dep.	Bombay	Arr.	17.00	17.25
08.50	...	Arr. }	Ahmedabad	{ Dep.	...	15.25
09.20	...	Dep. }		{ Arr.	...	15.00
11.55	13.00	Arr.	Karachi	Dep.	14.00	12.45

BOMBAY—DELHI—BOMBAY

(Daily)

Flight No. 1	Flight No. 2			Flight No. 2	Flight No. 1
09.00	11.50	Dep.	Bombay	Arr.	13.05
...	13.40	Arr. }		{ Dep.	11.10
...	14.05	Dep. }	Ahmedabad	{ Arr.	10.45
...	16.10	Arr. }		{ Dep.	08.25
...	16.25	Dep. }	Jaipur	{ Arr.	08.10
12.45	17.25	Arr.	Delhi	Dep.	07.00
					13.45

BOMBAY—CALCUTTA—BOMBAY

(Daily)

Flight No.1				Flight No.1
07.30		Dep.	Bombay	
12.45		Arr.	Calcutta	
				12.45
				07.00

BOMBAY—COLOMBO—BOMBAY

(Daily)

		Dep.		Arr.	
08.30		Dep.	Bombay	Arr.	16.30
10.45		Arr. }		{ Dep.	13.40
11.15		Dep. }	Hyderabad	{ Arr.	13.10
13.25		Arr. }		{ Dep.	11.00
14.10		Dep. }	Madras	{ Arr.	10.15
16.55		Arr.	Colombo	Dep.	07.30

BOMBAY—MADRAS—BOMBAY

(Daily)

Dep.		Arr.	
12.25		Dep.	Bombay
16.15		Arr.	Madras
4			
			11.25
			07.15

Air Services of India Limited**BOMBAY-INDORE-GWALIOR-DELHI**

Mon. Wed. Fri. I. S. T.				Tue. Thur. Sat. I. S. T.
06.45	Dep.	Bombay	Arr.	12.45
08.45	Arr. }	Indore	{ Dep.	10.45
09.10	Dep. }		{ Arr.	10.20
11.00	Arr. }	Gwalior	{ Dep.	08.80
11.30	Dep. }		{ Arr.	08.80
12.45	Arr.	Delhi	Dep.	06.45

BOMBAY-JAMNAGAR-BHUJ-KARACHI

Sun. Mon. Wed. Fri. I. S. T.	Tue. Thur. Sat. I. S. T.		Tue. Thur. Sat. I. S. T.	Sun. Mon. Wed. Fri. I. S. T.
08.00	08.00 Arr.	Bombay	Arr. 14.00	17.35
10.00	10.00 Dep. }	Jamnagar	Dep. 12.00	15.35
10.20	10.20 Arr. }		Arr. 11.40	15.15
10.50	10.00 Arr. }	Bhuj	Dep. 11.10	14.45
11.05	Dep. }		Arr.	14.30
12.30	Arr.	Karachi	Dep.	13.15

BOMBAY-BHAVANAGAR-RAJKOT

Daily	Sun. Mon. Tue. Thur. Sat.		Sun. Mon. Tue. Thur. Sat.
08.30	07.00 Dep.	Bombay	Arr. 10.00 17.30
09.45	08.15 Arr.	Bhavanagar	Dep. 08.45 16.15
10.00	Dep.		Arr. 15.45
10.50	Arr.	Rajkot	Dep. 15.00

BOMBAY-POONA-BANGALORE

Tue. Sat. Sun. I. S. T.			Tue. Sat. Sun. I. S. T.
08.30	Dep.	Bombay	Arr. 17.10
09.10	Arr.		Dep. 16.30
09.25	Dep.	Poona	Arr. 16.15
12.25	Arr.	Bangalore	Dep. 13.15

BOMBAY-KESHOD-PORBANDAR-RAJKOT-JAMNAGAR-BHUJ

Mon. Wed. Fri.			Mon. Wed. Fri.
07.30	Dep.	Bombay	Arr. 18.00
09.05	Arr.	Keshod	Dep. 16.25
09.25	Dep.		Arr. 16.00
09.55	Arr.	Porbandar	Dep. 15.35
10.15	Dep.		Arr. 15.15
11.00	Arr.	Rajkot	Dep. 14.30
11.20	Dep.		Arr. 14.10
11.45	Arr.	Jamnagar	Dep. 13.45
12.00	Dep.		Arr. 13.20
12.30	Arr.	Bhuj	Dep. 12.50

Bharat Airways**CALCUTTA-DELHI-CALCUTTA**

Aircraft: Dakota

Frequency: Daily.

06.30	Dep.	CALCUTTA	Arr.	13.00
08.30	Arr.	PATNA	Dep.	11.00
08.45	Dep.		Arr.	10.45
09.40	Arr.	BENARES	Dep.	09.50
09.55	Dep.		Arr.	09.35
11.00	Arr.	LUCKNOW	Dep.	08.30
11.15	Dep.		Arr.	08.15
13.00	Arr.	DELHI	Dep.	06.30

CALCUTTA-DELHI-CALCUTTA

Aircraft: Dakota

Frequency: Twice A week (Day return)
Tuesdays and Fridays.

05.45	Dep.	CALCUTTA	Arr.	18.50
08.55	Arr.	ALLAHABAD	Dep.	15.40
09.15	Dep.		Arr.	15.20
	Arr.	KANPUR	Dep.	14.35
10.00	Dep.		Arr.	14.25
11.50	Arr.	DELHI	Dep.	12.45

CALCUTTA-CHITTAGONG-CALCUTTA

Aircraft: Dakota

Frequency: Daily.

07.45	Dep.	CALCUTTA	Arr.	11.25
09.20	Arr.	CHITTAGONG	Dep.	09.50

CALCUTTA-AGARTALLA-CALCUTTA

No. 1. Aircraft: Dakota

Frequency: Daily.

No. 2. Duplicate Service Aircraft: Skymaster.

Daily.

2	1				2	1
09.00	06.00	Dep.	Calcutta	Arr.	17.20	18.20
10.20	07.20	Arr.	Agartalla	Dep.	16.00	17.00

CALCUTTA-BANGKOK-CALCUTTA

Aircraft: Skymaster

Frequency: once a week. Wednesday

		I. S. T.	L. T.	G. M. T.
Calcutta	Dep.	07.00	07.00	01.30
Bangkok	Arr.	12.00	13.30	06.30
Bangkok	Dep.	13.30	15.00	08.00
Calcutta	Arr.	18.30	18.30	13.00

Deccan Airways Limited**DELHI-MADRAS-DELHI**

Aircraft: Dakota.

Frequency: Daily.

I. S. T.	Dep.	DELHI	Arr.	I. S. T.
07.00	Dep.	DELHI	Arr.	15.15
11.30	Arr.	NAGPUR	Dep.	11.55
12.00	Dep.		Arr.	11.25
13.30	Arr.	HYDERABAD	Dep.	09.45
14.30	Dep.		Arr.	09.10
16.40	Arr.	MADRAS	Dep.	07.00

HYDERABAD-BANGALORE-HYDERABAD

Aircraft: Dakota.

Frequency: Daily.

I. S. T.	Dep.	HYDERABAD	Arr.	I. S. T.
13.10	Dep.	HYDERABAD	Arr.	09.00
15.10	Arr.	BANGALORE	Dep.	07.00

HYDERABAD-BOMBAY-HYDERABAD

Aircraft: Dakota

Frequency: Daily.

I. S. T.	Dep.	HYDERABAD	Arr.	I. S. T.
09.40	Dep.	HYDERABAD	Arr.	12.30
12.10	Arr.	BOMBAY	Dep.	10.00

HYDERABAD-VIZAG-HYDERABAD

Aircraft: Dakota

Frequency: Daily.

I. S. T.	Dep.	HYDERABAD	Arr.	I. S. T.
15.20	Dep.	HYDERABAD	Arr.	09.05
16.25	Arr.	BEZWADA	Dep.	08.00
16.45	Dep.		Arr.	07.40
17.55	Arr.	VIZAG	Dep.	06.30

Indian National Airways**CALCUTTA-DELHI**

Aircraft: Viking

Frequency: Daily.

I. S. T.	Dep.	Calcutta	Arr.	I. S. T.
13.00 (Snack Lunch)	Dep.	Calcutta	Arr.	18.45
17.30	Arr.	Delhi	Dep.	14.30 (Tea)

DELHI-JODHPUR-KARACHI

Wed. Fri. & Sun.

I. S. T.	Dep.	Delhi	Arr.	I. S. T.
0815	Dep.	Delhi	Arr.	1900
1015	Arr.	Jodhpur	Dep.	1700
1045	Dep.	Jodhpur	Arr.	1630 (Tea)
1315	Arr.	Karachi	Dep.	1400

DELHI-AMRITSAR-SRINAGAR

Aircraft: Dakota

Sun. Mon. Wed. Fri.

06.30	Dep.	Delhi	Arr.	1800
08.15	Arr.	Amritsar	Dep.	1615
08.45	Dep.		Arr.	1545
10.00	Arr.	Srinagar	Dep.	1430

SRINAGAR-JAMMU-SRINAGAR

Aircraft: Dakota

Frequency: Mon. Wed. Fri. & Sun.

I. S. T.	Dep.	Srinagar	Arr.	I. S. T.
11.30	Dep.	Srinagar	Arr.	13.35
12.20	Arr.	Jammu	Dep.	12.45

Kalinga Air Lines**CALCUTTA-AGARTALLA-CALCUTTA**

(Freight and Mails only)

Aircraft: Dakota.

Frequency: Ten Times.

Flight No. 1 (Daily)	Flight No. 2 (Sun. Wed. & Fri.)	Flight No. 1 (Daily)	Flight No. 2 (Sun. Wed. & Fri.)
0800	0815	1820	1835
0920	0935	1700	1715

Freight Schedule

Calcutta—Agartalla Rs. 0—4—0 per lb.

Orient Airways**CALCUTTA-DACCA-CALCUTTA**

Aircraft: Dakota

Frequency: Twice Daily

Flight No. 1 I. S. T.	Flight No. 2 I. S. T.	Flight No. 2 I. S. T.	Flight No. 1 I. S. T.
08.00	15.00	17.30	10.30
09.00	16.00	16.30	09.30

CALCUTTA-CHITTAGONG-RANGOON

Aircraft: Dakota

Frequency: Tues. Thur. Sat.

I. S. T.	Dep.	Calcutta	Arr.	I. S. T.
07.00	Dep.	Calcutta	Arr.	18.00
08.30	Arr.	Chittagong	Dep.	16.30
08.50	Dep.		Arr.	16.05
11.40	Arr.	Rangoon	Dep.	13.15

CALCUTTA-CHITTAGONG-DACCA-CHITTAGONG-CALCUTTA

Aircraft: Dakota

Frequency: Sundays

I. S. T.	Dep.	Calcutta	Arr.	I. S. T.
07.00	Dep.	Calcutta	Arr.	18.00
08.30	Arr.	Chittagong	Dep.	16.30
09.30	Dep.		Arr.	12.30
10.30	Arr.	Dacca	Dep.	11.30

KARACHI-DELHI-DACCA

Aircraft: Convair

Frequency: Tues. & Fri.

04.00	Dep.	Karachi	Arr.	20.00
07.00	Arr. }	Delhi	{ Dep.	17.00
07.30	Dep. }		{ Arr.	06.30
11.30	Arr.	Dacca	Dep.	12.30

CALCUTTA-CHITTAGONG-AKYAB-CHITTAGONG-DACCA
CHITTAGONG-CALCUTTA

Frequency: Monday, Wed. & Fri.

		I. S. T.
Dep.	Calcutta	07.00
Arr.	Chittagong	08.30
Dep.	Chittagong	09.15
Arr.	Akyab	10.15
Dep.	Akyab	11.00
Arr.	Chittagong	12.00
Dep.	Chittagong	13.00
Arr.	Dacca	14.00
Dep.	Dacca	14.45
Arr.	Chittagong	15.45
Dep.	Chittagong	16.30
Arr.	Calcutta	18.00

Air France

PARIS-SAIGON-CALCUTTA

Aircraft: Skymaster. Time: Local.

		AF 032	AF 034 A	AF 034 B	AF 034 B
		Thur.	Mon.	Wed.	Sat.
Paris	Dep.	17.30	17.30	17.30	17.30
Tunis	Arr.	22.10	22.10	22.10	22.10
Tunis	Dep.	23.10	23.10	23.10	23.10
		Fri.	Tues.	Thur.	Sun.
Cairo	Arr.	06.40	06.40	06.40	06.40
Cairo	Dep.	08.10	08.10	08.10	08.10
Basra	Arr.	14.20	14.20	14.20	14.20
Basra	Dep.	15.20	15.20	15.20	15.20
		Sat.	Wed.	Fri.	Mon.
Karachi	Arr.	00.10	00.10	00.10	00.10
Karachi	Dep.	16.30	14.30	14.30	14.30
Calcutta	Arr.	23.40	21.40	21.40	21.40
		Sun.			
Calcutta	Dep.	00.40	22.40	22.40	22.40
Hanoi	Arr.	10.15	...	...	...
Hanoi	Dep.	11.15	Thur.	Sat.	Tues.
Saigon	Arr.	15.00	08.35	08.35	03.35

SAIGON-CALCUTTA-PARIS

Aircraft: Skymaster. Time: Local

		AF 033	AF 035 A	AF 035 B	AF 035 B
		Fri.	Mon.	Wed.	Sun.
Saigon	Dep.	17.30	06.45	06.45	06.45
Hanoi	Arr.	11.15			
		Sat.			
Hanoi	Dep.	10.30			
Calcutta	Arr.	14.30	11.35	11.35	11.35
Calcutta	Dep.	15.30	13.00	13.00	13.00
Karachi	Arr.	22.50	20.20	20.20	20.20
		Sun.	Tue.	Thu.	Mon.
Karachi	Dep.	07.30	05.30	05.30	05.30
Basra	Arr.		10.20	10.20	10.20
Basra	Dep.		11.20	11.20	11.20
Cairo	Arr.	15.45	15.45	15.45	15.45
Cairo	Dep.	16.45	16.45	16.45	16.45
Tunis	Arr.	23.15	23.15		23.15
		Mon.	Wed.		Tue.
Tunis	Dep.	00.15	00.15	Fri.	00.15
Marseilles	Arr.			01.30	
Marseilles	Dep.			02.30	
Paris	Arr.	05.15	05.15	05.05	05.15

Air India International

BOMBAY-LONDON

Aircraft: Constellation.
West boundFrequency: Thrice Weekly.
Flight 104 and 105 Express
Service.

		101	103	G.M.T.	101	103	L.S.T.	105	G.M.T.	105	L.S.T.
		Thur.	Fri.		Tue.	Fri.		Sun.	10.00	Sun.	15.30
Bombay	Dep.			10.00			15.30				
Basra	Arr.	"	"	17.50	"	"	20.50				
Basra	Dep.	"	"	19.00	"	"	22.00				
Cairo	Arr.	"	"	23.30	Wed.	Sat.	01.30	"	23.05	Mon.	01.05
Cairo	Dep.	Wed.	Sat.	01.00	"	"	03.00	Mon.	00.30	"	02.30
Geneva	Arr.	"	"	10.30	"	"	11.30				
Geneva	Dep.	"	"	11.30	"	"	12.30				
London	Arr.	"	"	14.00	"	"	15.00	"	11.20	"	12.20

East Bound

LONDON-BOMBAY

		102	106	G.M.T.	102	106	L.S.T.	104	G.M.T.	104	L.S.T.
		Thur.	Tue.		Thur.	Tue.		Sun.	10.15	Sun.	11.15
London	Dep.			10.15			11.15				
Geneva	Arr.	"	"	12.30	"	"	13.30				
Geneva	Dep.	"	"	13.30	"	"	14.30				
Cairo	Arr.	"	"	21.45	"	"	23.45	"	19.50	"	21.50
Cairo	Dep.	"	"	23.15	Fri.	Wed.	01.15	"	21.20	"	23.20
Basra	Arr.	Fri.	Wed.	03.45	"	"	06.45				
Basra	Dep.	"	"	05.00	"	"	08.00				
Bombay	Arr.	"	"	12.10	"	"	17.40	Mon.	07.35	Mon.	13.05

British Overseas Airways Corporation

BRITAIN-N. AFRICA-PAKISTAN-INDIA-CEYLON-MALAYA

Solent	York	York	Lancastrian	York	York	Solent
BO 766	BO 752	BO 750	BO 754/756	BO 755/757	BO 751	BO 767
Days	Days	Days	Days	Days	Days	Days
L.T.	L.T.	L.T.	L.T.	L.T.	L.T.	L.T.
2	3	15,45	7,45	17,00	1	1
19.00	15.45	17.00	08.45	dep. London	arr. 20.00	19.15
23.00	22.20	22.20	—	dep. Southampton	arr.	15.15
—	23.50	23.50	—	arr. Rome	dep.	—
—	—	—	15.00	dep. Rome	arr.	—
—	—	—	16.00	arr. Malta	dep. 12.15	—
—	—	—	—	dep. Malta	arr. 11.15	—
06.15	—	—	—	arr. Augusta	dep.	08.00
08.00	—	—	—	dep. Augusta	arr.	20.45
—	—	—	—	arr. Tripoli (Castel Benito)	dep.	—
—	—	—	—	dep. Tripoli (Castel Benito)	arr.	—
—	07.20	07.20	22.00	arr. Cairo	dep. 07.00	—
—	09.30	09.30	00.01	dep. Cairo	arr. 13.45	—
14.00	—	—	—	arr. Alexandria	dep.	16.15
05.30	—	—	—	dep. Alexandria	arr.	14.45
—	15.30	15.30	—	arr. Basra	dep. 09.30	09.15
—	16.30	16.30	—	dep. Basra	arr. 08.30	08.15
12.45	—	—	—	arr. Kuwait	dep.	07.30
13.45	—	—	—	dep. Kuwait	arr.	06.30
16.15	—	—	—	arr. Bahrain	dep.	05.30
17.15	—	—	—	dep. Bahrain	arr.	04.30
5	01.55	01.55	13.30	arr. Karachi	dep. 04.30	00.01
00.15	05.30	05.30	06.00	dep. Karachi	arr. 15.50	6
—	09.00	09.00	—	arr. Delhi	dep.	N
—	—	10.00	—	dep. Delhi	arr.	5
—	—	14.15	—	arr. Calcutta	dep.	3, 7, 1
—	—	—	09.20	arr. Bombay	dep. 12.45	—
—	—	—	10.20	dep. Bombay	arr. 11.45	—
—	—	—	15.20	dep. Colombo	dep. 06.30	—
—	—	—	06.00	arr. Colombo	arr. 15.35	—
—	—	—	16.20	dep. Singapore	dep. 08.30	—

On service BO 767. Basra is a technical call only. No commercial traffic may be accepted.

British Overseas Airways Corporation

BRITAIN—EGYPT—PAKISTAN—INDIA—CHINA—JAPAN

Plymouth BO 902		Plymouth BO 900				Plymouth BO 901		Plymouth BO 903	
Days	L.T.	Days	L.T.			L.T.	Days	L.T.	Days
4	07.00	6	07.00	dep.	Airways Terminal	arr.	19.30	19.30	
	11.00		11.00	dep.	Southampton	arr.	15.30	15.30	
N	19.00	N	19.00	arr.	Augusta	dep.	07.15	07.15	2
5	09.00	7	09.00	dep.	Augusta	arr.	15.00	15.00	N
N	15.15	N	15.15	arr.	Alexandria	dep.	09.45	09.45	1
6	07.00	1	07.00	dep.	Alexandria	arr.	18.30	18.30	N
	17.00		17.00	arr.	Bahrain	dep.	11.30	11.30	
	18.00		18.00	dep.	Bahrain	arr.	10.30	10.30	
7	01.45	2	01.45	arr.	Karachi	dep.	05.30	05.30	7
	08.00		08.00	dep.	Karachi	arr.	19.30	19.30	N
N	16.00	N	16.00	arr.	Calcutta	dep.	11.15	11.15	
1	06.00	3	06.00	dep.	Calcutta	arr.	10.00	10.00	
	11.00		11.00	arr.	Rangoon	dep.	06.30	06.30	6
	12.00		12.00	dep.	Rangoon	arr.	15.00	15.00	N
N	15.00	N	15.00	arr.	Bangkok	dep.	13.00	13.00	
2	08.00	4	08.00	dep.	Bangkok	arr.	12.00	12.00	
N	16.45	N	16.45	arr.	Hong Kong	dep.	07.00	07.00	5
3	10.00	5	10.00	dep.	Hong Kong	arr.	16.00	16.00	N
	15.00	N	15.00	arr.	Shanghai	dep.	11.00	11.00	4
		6	08.00	dep.	Shanghai	arr.	16.00		
			16.30	arr.	Tokyo (Yokohama)	dep.	08.30		

BRITAIN—PERSIAN GULF—PAKISTAN—INDIA—MALAYA—N. E. I.—AUSTRALIA

CONSTELLATION

CONSTELLATION

EM 502		BO 704		BO 705		EM 501		
Days	L.T.	Days	L.T.	L.T.	Days	L.T.	Days	
7 4	06.30	3 Alt. 1	5 06.30	dep. Airways Terminal	arr. 18.20	↑	18.20	↑
	08.00		08.00	dep. London Airport	arr. 17.05		17.05	
	12.00		12.00	arr. Rome	dep. 12.30		12.30	
	13.35		13.35	dep. Rome	arr. 11.00		11.00	
N	20.05	N	20.05	arr. Cairo	dep. 06.00	7 4	06.00	5 2
1 5	08.00	4 Alt. 2	6 08.00	dep. Cyno	arr. 16.30	N	16.30	N
	—		—	arr. Basra	dep. 13.00		13.00	
	—		—	dep. Basra	arr. 11.30		11.30	
	20.30		20.30	arr. Karachi	dep. 08.00	6 2	08.00	4 1
2 6	00.01	5 Alt. 3	7 00.01	dep. Karachi	arr. 19.35	N	19.35	N
	05.30		05.30	arr. Calcutta	dep. 13.45		13.45	
	07.00		07.00	dep. Calcutta	arr. 12.15		12.15	
N	16.15	N	16.15	arr. Singapore	dep. 07.00	5 1	07.00	3 7
3 7	10.55	6 Alt. 4	1 08.30	dep. Singapore	arr. 16.50	N	14.30	N
	—		11.30	arr. Batavia	dep. 15.50		—	
	—		13.00	dep. Batavia	arr. 13.25		—	
	21.25		21.25	arr. Darwin	dep. 08.00		08.00	
4 1	00.30	7 Alt. 5	2 00.30	dep. Darwin	arr. 05.15	4 7	05.15	2 6
↓	09.00		↓	09.00	arr. Sydney	3 5	21.30	1 5

China National Aviation Corporation

HONGKONG—RANGOON—CALCUTTA—KARACHI

Aircraft: Skymaster.

Time: Local Standard Time.

Hongkong	Dep.	Sat.	08.00
Kunming	Arr.		10.45
Kunming	Dep.		11.45
Rangoon	Arr.	Sun.	14.55
Rangoon	Dep.		06.30
Calcutta	Arr.		09.00
Calcutta	Dep.		10.00
Karachi	Arr.		17.45

KARACHI—CALCUTTA—RANGOON—HONGKONG

Aircraft: Skymaster.

Time: Local Standard Time.

Karachi	Dep.	Mon.	04.00
Calcutta	Arr.		11.45
Calcutta	Dep.		12.45
Rangoon	Arr.		17.15
Rangoon	Dep.	Tue.	06.30
Kunming	Arr.		10.40
Kunming	Dep.		11.40
Hongkong	Arr.		16.25

K. L. M. Royal Dutch Airlines

AMSTERDAM—CALCUTTA—BATAVIA

Aircraft: Constellation

Amsterdam	Dep.	Thur.	20.00	Mon.	20.00	Wed.	20.00	Sun. & Sat.	20.00
Rome	Arr.		23.40		23.40				
Rome	Dep.	Fri.	01.15	Tue.	01.15	Thu.			
Cairo	Arr.		↓	↓	05.15	↓	Mon. & Sun.	05.15	
Cairo	Dep.		↓	↓	08.00	↓		08.00	
Damascus	Arr.		08.15		08.15	↓			
Damascus	Dep.		11.00		11.00	↓			
Baghdad	Arr.		↓	↓	12.30	↓			
Baghdad	Dep.		↓	↓	13.45	↓			
Basra	Arr.		15.00		15.00	↓			
Basra	Dep.		16.30		16.30	↓			
Karachi	Arr.	Sat.	00.20	Wed.	00.20	↓			
Karachi	Dep.		↓	↓	22.45	↓			
Calcutta	Arr.		03.30		01.30	Fri.			
Calcutta	Dep.		09.00		07.00	↓	Tue. & Mon.	01.30	
Bangkok	Arr.		10.30		08.30	↓		07.00	
Bangkok	Dep.		16.20		14.20	↓		08.30	
Bangkok	Dep.	Sun.	06.30	Thur	06.30	↓	Wed. & Tue.	14.20	
Singapore	Arr.		↓		11.00	↓		06.30	
Singapore	Dep.		↓		12.30	↓		↓	
Batavia	Arr.		13.50		15.40	↓		↓	

BATAVIA—CALCUTTA—AMSTERDAM

Batavia	Dep.	Mon.	08.00	Thur.	06.30	Tue.	06.30	Fri. & Sat.	08.00
Singapore	Arr.		↓		08.45		08.45	↓	
Singapore	Dep.		↓		10.00		10.00	↓	
Bangkok	Arr.		13.15		13.20		13.20	↓	13.15
Bangkok	Dep.		15.15		15.15		15.15	↓	15.15
Calcutta	Arr.		18.15		18.15		18.15	↓	18.15
Calcutta	Dep.		20.00		20.00		20.00	↓	20.00
Karachi	Arr.	Tue.	02.00	Fri.	02.00	Wed.	02.00	Sat. & Sun.	02.00
Karachi	Dep.		05.00		05.00		05.00	↓	05.00
Basra	Arr.		08.30		08.30		↓	↓	08.30
Basra	Dep.		10.00		10.00		10.00	↓	10.00
Baghdad	Arr.		↓		↓		11.30	↓	
Baghdad	Dep.		12.30		12.30		↓	↓	
Damascus	Arr.		Wed.	Sat.		Thu.		↓	
Damascus	Dep.		03.30		01.45		14.30	↓	Sun. & Mon.
Cairo	Arr.		↓		↓		02.30	↓	13.45
Cairo	Dep.		↓		07.45		07.45	↓	04.00
Rome	Arr.		↓		09.00		09.00	↓	
Rome	Dep.		↓		12.55		12.55	↓	
Amsterdam	Arr.		12.30					↓	12.30

Pan American World Airways

Westbound (from San Francisco)

		Flight Number.		
		5	7	3
		Tue.	Fri.	Mon.
San Francisco	Dep.	16.30		23.30
Seattle	Dep.		22.00	
Portland	Arr.		23.10	
Portland	Dep.		23.55	
Honolulu	Arr.	Wed.	Sat.	Tue.
Honolulu	Dep.	02.30	11.45	06.30
Midway Island	Arr.	05.00	22.00	11.30
Midway Island	Dep.	10.30		16.15
(International dateline)	Dep.	11.15		17.45
Wake Island	Arr.	Thu.	Mon.	
Wake Island	Dep.	16.30	07.30	
Guam	Arr.	18.00	08.30	
Guam	Dep.	Fri.		
Manila	Arr.	01.00		
Manila	Dep.	06.45		
Tokyo	Arr.	08.30		
Tokyo	Dep.		16.30	Thu.
Okinawa	Arr.		Tue.	00.30
Okinawa	Dep.		01.00	
Hong Kong	Arr.		06.30	02.00
Hong Kong	Dep.		07.30	07.30
Bangkok	Arr.	12.30	12.00	08.30
Bangkok	Dep.	14.30	14.30	13.00
Bangkok	Arr.	19.30	19.30	14.30
Bangkok	Dep.	21.00	21.00	19.30
Calcutta	Arr.	Sat.	Wed.	Fri.
		01.15	01.15	01.15

Westbound (from Calcutta)

		Flight Number			
		1	7	5	3
		Mon.	Wed.	Sat.	
Calcutta	Dep.	23.45	22.00	22.00	
		Tue.	Thu.	Sun.	
Delhi	Arr.	03.25	01.40	01.40	
Delhi	Dep.	04.40	02.40	02.40	
					Sat.
Karachi	Arr.	07.40	05.40	05.40	04.35
Karachi	Dep.	09.05	06.50	06.50	05.35
Basara	Arr.				08.30
Basara	Dep.				09.50
Damascus	Arr.	15.30	12.15	12.15	12.15
Damascus	Dep.	17.30	13.15	13.15	13.15
Istanbul	Arr.	19.35			
Istanbul	Dep.	22.00			
		Wed.			
Brussels	Arr.	04.25	22.10	22.10	22.10
Brussels	Dep.	05.10	22.55	22.55	22.55
London	Arr.	05.35	23.20	23.20	23.20
			Fri.	Mon.	Sun.
London	Dep.	08.30	01.00	01.00	01.00
Shannon	Arr.		03.05	03.05	
Shannon	Dep.		04.05	04.05	
Gander	Arr.	16.55	10.25	10.25	09.25
Gander	Dep.	17.55	11.25	11.25	10.55
Boston	Arr.		14.40	14.40	
Boston	Dep.		15.25	15.25	
La Guardia, New York	Arr.	21.45	16.40	16.40	14.15

Eastbound

		Aircraft: Skymaster & Constellation		
		Tue.	Wed.	Sun.
New York	Dep.	19.00	19.00	19.00
		Wed.	Thur.	Mon.
Gander	Arr.	01.05	01.05	01.05
Gander	Dep.	01.50	01.50	01.05
London	Arr.	13.50	13.50	13.50
London	Dep.	15.00	15.00	15.00
Brussels	Arr.	17.25	17.25	17.25
Brussels	Dep.	18.40	18.40	18.40
		Thur.	Fri.	Tue.
Damascus	Arr.	04.05	04.05	04.05
Damascus	Dep.	04.50	04.50	04.50
Karachi	Arr.	16.00	16.00	16.00
Karachi	Dep.	17.15	17.15	17.15
Delhi	Arr.	20.25	20.25	20.25
Delhi	Dep.	21.10	21.10	21.10
		Fri.	Sat.	Wed.
Calcutta	Arr.	00.40	00.40	00.40
		Fri.	Sun.	Thur.
Calcutta	Dep.	22.00	22.00	22.00

		Sat.	Mon.	Fri.
Bangkok	Arr.	05.00	05.00	05.00
Bangkok	Dep.	06.30	06.30	06.30
Hongkong	Arr.	13.15	13.15	13.15
Hongkong	Dep.	15.30	15.30	16.30
Manila	Arr.	19.30	19.30	...
Manila	Dep.	22.00	22.00	...
Okinawa	Arr.	...	...	22.30
Okinawa	Dep.	...	...	23.55
				Sat.
Tokyo	Arr.	...	...	05.00
Tokyo	Dep.	...	...	23.55
		Sun.	Tues.	
Guam Island	Arr.	08.00	08.00	...
Guam Island	Dep.	09.55	09.55	...
				Sun.
Wake Island	Arr.	20.15	20.15	13.30
Wake Island	Dep.	21.45	21.45	15.00
Honolulu	Arr.	HST 14.05	14.05	05.00
Honolulu	Dep.	17.00	17.00	18.00
		Mon.	Wed.	Mon.
San Francisco	Arr.	PST 07.00	07.00	...
Seattle	Arr.	...	...	10.15

Trans World Airlines

Aircraft: Constellation

Westbound

		Time L. S. T.		
		907	903	905
Flight Number				
Bombay	Lv.	Mon. 23:00	Wed. 23:00	Sun. 00:30
Dhahran	Ar.	Tue. 04:50	Thur. 04:50	06:20
	Lv.	05:35	05:35	07:10
Basra	Ar.	06:15	06:15	...
	Lv.	07:00	07:00	...
Cairo	Ar.	10:25	10:25	10:20
	Lv.	11:25	11:25	11:25
Athens	Ar.	...	...	14:35
	Lv.	...	...	15:20
Rome	Ar.	16:20	16:20	17:30
	Lv.	17:05	17:05	18:15
Geneva	Ar.	19:25	...	...
	Lv.	20:10	...	...
Zurich	Ar.	...	...	20:45
	Lv.	...	...	21:30

Paris	Ar.	21:30	20:10	23:00
	Lv.	22:30	21:10	Mon.
		Wed.	23:55	00:05
Shannon	Ar.	01:15	Fri.	...
	Lv.	02:15	00:55	02:50
Gander	Ar.	08:35	07:15	03:50
	Lv.	09:35	08:15	10:10
New York	Ar.	12:10	10:50	11:10
				13:45

Eastbound

Flight Number		902	904	906
		Sun.	Wed.	Fri.
New York	Lv.	18:00	21:00	18:55
		Mon.	Thur.	Sat.
Gander	Ar.	01:05	*04:05	*02:00
	Lv.	02:05	05:05	03:00
Shannon*	Ar.	*13:10	16:10	*14:05
	Lv.	14:10	17:10	15:05
Paris	Ar.	16:40	19:40	17:35
	Lv.	17:40	20:40	18:35
Zurich	Ar.	19:05	22:05	...
	Lv.	19:50	22:50	...
Geneva	Ar.	...	...	19:50
	Lv.	...	...	20:35
Rome	Ar.	22:15	Fri.	23:00
	Lv.	23:05	01:15	23:45
		Tue.	02:00	...
Athens	Ar.	03:00	...	...
	Lv.	03:40	...	...
				Sun.
Cairo	Ar.	06:35	08:30	06:15
	Lv.	07:35	09:30	07:15
Basra	Ar.	...	14:40	12:25
	Lv.	...	15:25	13:10
Dhahran	Ar.	14:20	18:00	15:45
	Lv.	15:05	18:45	16:30
			Sat.	Mon.
Bombay	Ar.	23:05	02:45	00:30

*Flag stop will be made to take on or discharge passengers and cargo.

Philippine Air Lines Inc.

The Sunshine Route Schedule

MANILA—AMSTERDAM

	Leave	Arrive
Sat. Manila	09:30	Calcutta 16:00
" Calcutta	17:30	Karachi 23:30
Sun. Karachi	01:00	Lydda 05:30
" Lydda	07:00	Rome 12:00
" Rome	14:30	Madrid 17:15
" Madrid	18:45	London 21:45
" London	22:45	Amsterdam 01:00 Mon.

AMSTERDAM—MANILA

Wed. Amsterdam	11:00	London 11:00
" London	12:30	Madrid 17:30
" Madrid	8:00	Rome 21:45
" Rome	22:45	Lydda 05:15 Thu.
Thu. Lydda	06:45	Karachi 17:45
" Karachi	19:15	Calcutta 01:15 Fri.
Fri. Calcutta	02:45	Manila 13:30 "

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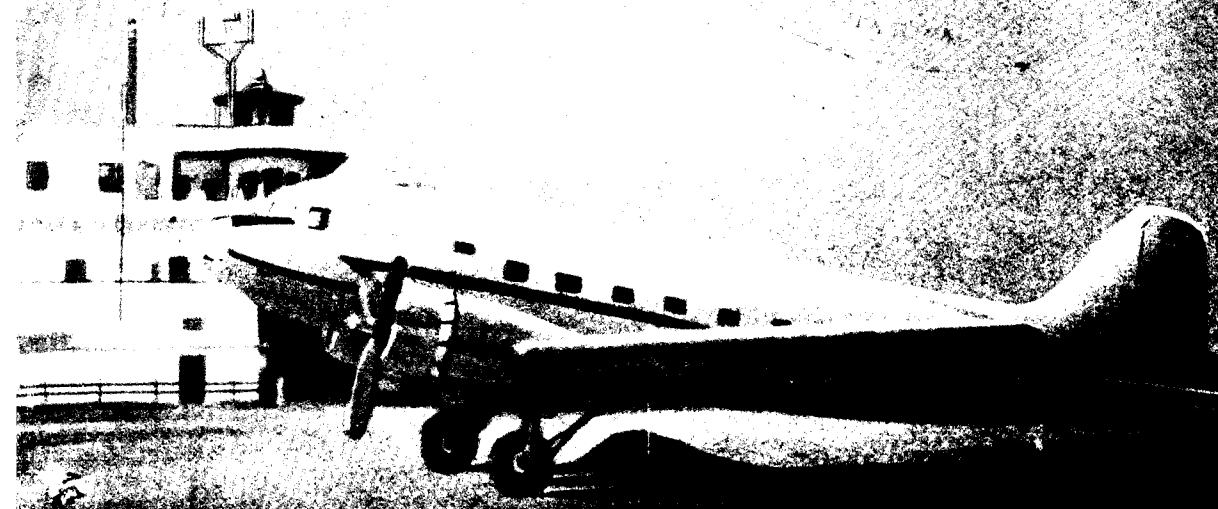
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INDIAN AIRWAYS MAGAZINE

DECEMBER 1949

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NO. 3

DECEMBER - 1949

ISSUED
MONTHLY

Crisis in Industry

It is an accepted fact that India offers a finer base for the development of commercial aviation although the latter is in its infant stage. But we should accept that people are becoming more and more Air-minded from day to day with the existing facilities offered to the Air-travellers. Still to make it more attractive on a par with other countries needs closer co-operation and correct understanding of the difficulties of the companies who are unable to afford more amenities to the Air-travellers in view of the manifold problems confronting them. Unless they are immediately attended to, one finds that the prospects for commercial aviation in this country are bleak.

Prior to evolving a suitable policy by the Government which would alleviate the fears and suspicions of the operators, we would venture to make some suggestions herein and hope they will receive the favourable consideration of the Government if at all the authorities in the centre really mean that aviation industry should be saved from extinction.

The cardinal point put forth by the operators for the slow progress of civil aviation is the mounting up of operational costs day in and day out which is a matter of supreme importance and deserves to be investigated from various aspects. We did really appreciate the Government's announcement allowing a rebate of nine annas per gallon on aviation petrol consumed by Air-companies which was received with great enthusiasm by the Industry. But then what happened next? There came the announcement of devaluation and as a result of which again the cost of petrol went up five annas per gallon. In the ultimate analysis one can arrive at a conclusion that the rebate announced earlier does little or no benefit to the Air-companies. This is not the crux of the problem which we want to solve. Still there are certain vagaries in the policy pursued by the Government, one aspect of which we pointed out to the Government in our previous issues in respect of landing charges which should vary from port to port considering the availability of facilities there. Similarly Government should immediately consider the problem of acute shortage of spares facing the airline operators without which the government may be aware of, no airline can first of all operate. Why this shortage? First of all the Government of India recently announced their import policy; according to that no licence will be granted for the import of aircraft spares. Secondly the cost of existing stocks of spares have gone on unprecedented scale following the announcement of devaluation of sterling. It may be mentioned here that the type of aircraft which are operated by the Indian Companies are mostly DC-3 (Dakotas) which are manufactured in the United States of America and also for the spare

Indian Airways Magazine, December 1949

87

accessories the airlines have to depend upon the foreign manufacturers. Under the circumstances, if the free flow of spares into this country is restricted, the existing airlines have no other alternative than to ground most of their aircrafts for indefinite period till the Government review their import policy. Then, thirdly another point is also equally important for the increase in the prices of aircraft spares. That is, the stocks held by the Disposals Department of the Government are being sold in public auction with the result the material passes through several intermediaries till finally it reaches the bona-fide consumers and in this process the prices shoot up without any justification from the original price. If the Government could sell these stocks direct to the airlines at a reasonable price, it would be definitely some sort of relief to the companies.

The last but not the least is the recent announcement of the Government to condemn the DC-3 aircraft in India from 1951-52 which has created panic among the airlines for most of the airlines as we pointed out earlier, are in possession of Dakotas which are ideal type of aircraft most eminently suited to the Indian conditions with safety and security. If the Government proceeds ahead in implementing this decision, we are afraid that most of the airlines have to liquidate their business which would mean permanent closure of the industry on account of short-sighted policy of the Government. We would await Government's intentions in this regard.

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(Inserted by the Management for the promotion of Civil Aviation in India)

Aviation News

Helicopter's Role

Night delivery of Mail by Helicopter has begun in Britain. Thirty-two bags of letters and parcels were flown from the Midlands to the North, covering the distance of 100 miles in 45 minutes. This compares with the usual three-hour train journey and allows much later clearance of post-boxes for delivery the next morning.

Cheap Air Travel in Britain

Air travel at rates cheaper than the fare rates on British Railways are being offered by a private Charter Company in Britain said a news agency's message. There will be two classes of fares. Tudors will carry 72 passengers at 2 d. a passenger mile or will carry 42 at 3 d. a passenger mile. The third class passenger rate on British Railways is 2.45 d. per mile.

Air India's New Constellation

Flying the latest type of million-dollar Constellation in London Capt. Kenneth Bhore, General Manager of Air India International said India has a plentiful supply of young men whose greatest ambition was to be civil air pilots. Machine-minded boys soon become air-minded and make apt-pupils, India's flying clubs, about nine in number are the training ground for pilots. Mr. Bhore said "We have about 110 pilots on our domestic and international air routes and of these all save two Englishmen are Indians."

The fourth and latest addition to Air India International's fleet, Maratha Princess, was a long way off the London-Bombay course. A party of Indian and British journalists were being taken on a

600-mile two-hour sight-seeing trip as far north as industrial Lancashire and Yorkshire.

Captain Bhore who took delivery of the Maratha Princess at the Lockheed factory in California and brought her all the way across the United States, then across the Atlantic praised the new type of Constellation for the extra strength in her body which enables her to carry 5,000 pounds more. He said that when he piloted her to India on Sunday on the new "Express" service—London to Bombay in 24½ hours—he would be able to take a full pay-load, instead of having to trim the passenger list as on previous occasions on this extra fast schedule, which permits but one stop at Cairo.

Captain Bhore praised, too, the "high-activity" propellers which enable the airliner to make a quick take-off which is one of its most remarkable features. Capt. Bhore took the Maratha Princess over Oxford, Coventry, Birmingham, Stockport, Manchester, Blackburn, Barnsley, Sheffield, Nottingham, Leicester, and Northampton, giving the Indian journalists a wonderful lightning impression of the great industrial cities in the Midlands, Lancashire and Yorkshire. As it was a sight-seeing trip he kept to 2,000 feet or thereabouts and therefore could not fly at the top speed—320 to 350 miles an hour—possible at higher altitudes.

Air India International's new type of Constellation, the Maratha Princess, arrived in Bombay from London on 1st of November in Bombay piloted by Mr. K.G. Bhore, General Manager of Air India. The plane which cost million dollars, is the first of its kind to be operated on the Bombay—London route and it provides extra comforts to passengers, can carry a

load of 107,000 lbs. and is fitted with maximum safety devices.

Sir Gurunath Bewoor, Managing Director of Air India International, who travelled by the plane, said that the Bombay—London service would touch down at Rome en route once a week from middle of December so that Catholic Pilgrims would avail themselves of the facilities. He had been to attend the International Air Transport Association meeting at the Hague and before returning to India visited the offices of Air India International in London, Geneva and Cairo.

New Routes

Bharat Airways Ltd., Calcutta have been operating a new route Calcutta—Agartala—Gauhati—Tezpur from the 7th of last month. Similarly Messrs. Airways India Ltd. have been operating a new route Calcutta—Baghdogra—Tezpur—Jorhat since last month.

Central Air Rally

The Aero-Club of India and the Irwin Flying Club Trust Fund have organised a central air rally and an air exhibition at Calcutta early next year. The R. I. A. F. flying clubs and airline companies are expected to take part in this All-India event. Invitations, it is learnt, have been extended to the National Aero Clubs of Europe the Middle East and South East Asia to send some of their prominent private fliers. The All India Model Aircraft Rally organised by the All-India Aero-Modellers Association Calcutta is scheduled to be held on 18th of this month.

Bombay—Nairobi Air Service

Seventeen Indian aviation experts who were on a 3000-mile survey of the Bombay—Nairobi air route via Aden took off in a special Air India International Constellation from Santa Cruz airport

during last month. The survey team was headed by Mr. T. P. Bhalla, Director General of Civil Aviation, Government of India besides experts from Air India International, the Meteorological and Communications Departments of Civil Aviation. The object of the survey was to study the weather conditions and navigational facilities on the route.

About K. L. M.

Altogether K. L. M. has carried 2,900,000 passengers, 53,500 tons freight and 13,300 tons mail in the past thirty years, covering a total of almost 136,000,000 miles in 890,000 flying hours. These figures include the traffic of the Batavia Inter-island Division which K.L.M. has operated since August 1917.

The number of people employed by K. L. M. in Batavia is 3,800 including numerous Indonesians. The flying personnel comprise 90 pilots and 22 stewardesses (some of them Indonesians), in addition to 9 stewards and one flying "djongos" (an Indonesian steward).

The fleet of aircraft maintained by K. L. M. to operate the "Water Division" of the inter-insular network at Batavia consists of 3 Catalina amphibians, 12 Dakotas with special Cargo-space, and 11 Dakotas for passenger traffic.

K. L. M. Winter Excursion Fare

The K. L. M. Winter excursion fare from/to Calcutta to/from London, Paris, Brussels, Amsterdam, Geneva and Rome is now £188 or Rs. 2,507/- and the journey may originate at either end. This ticket will be valid for four months and may be used between the 1st of November 1949 and the 1st of April 1950. K. L. M.'s special excursion fares from Calcutta to Montreal and Calcutta to New York, which have been operative since 1st October 1949 are Rs. 5,518/- and Rs. 5,607/- against the old rates of Rs. 6,223/- and Rs. 6,342/- respectively.

Live Cargo by K. L. M.

A live cargo weighing about 4,050 kg. passed through Calcutta by a specially converted K. L. M. Skymaster on its way from Singapore to New York. These animals were shipped for a bird and animal company in New York.

About 300 monkeys, 4 baby elephants, 7 leopards, a full-grown tiger and a King cobra formed the wild cargo. News of the Flying Zoo brought a crowd of curious spectators to Dum Dum, and some of them were allowed aboard. It proved a really exciting experience especially to the children who tried their best to converse with the monkeys!

Miss G. Cuprys, who was in charge of these animals, said that her "wards" behaved well during the flight. After a good lunch, the animals resumed their aerial journey.

Trans World Airlines

The number of seats on Trans-World Airline's fleet of Constellations will be increased by 80 per cent in programme to standardise aircraft now in service and new equipment on order it was announced last month. The first step in the programme will be to standardise the arrangement and capacity of cabin interiors on the aircraft which will result in additional seating space on TWA's 35 Constellations now in service. Twenty new Constellations, now on order, will add more than 900 additional seats. This will make TWA's 55 Constellations the world's largest standardise commercial fleet of four-engine aircraft.

New Housing Scheme

The Hindusthan Aircraft Factory have launched a new housing scheme for its employees, with the grant of rupees three lakhs made by the Board of Management. A few units have already been completed. The houses will be allotted to those in the

lower income group. With the expansion of the factory, the demand for houses has been on the increase. There is a Government ration shop, subsidised by the factory and a primary school which is run by the Mysore Government.

Danish-Pakistan Air Agreement

Sometimes in the month of November Denmark and Pakistan signed an air agreement which gives each country traffic rights over the other's territory.

The first Dakota overhauled and reconditioned locally by Pakistan Aviation Ltd., was handed over to the Royal Pakistani Air Force during last month. It is understood that there are twelve Dakotas in the final stage of completion and they will be handed over to the RPAF.

Further the experts who had flight tested the aircraft and examined it on the ground opined that it was a first-rate piece of workmanship and it is hoped by Air Commodore Amlort that similar aircrafts would be turned out by Pakistan Aviation Ltd. for the RPAF.

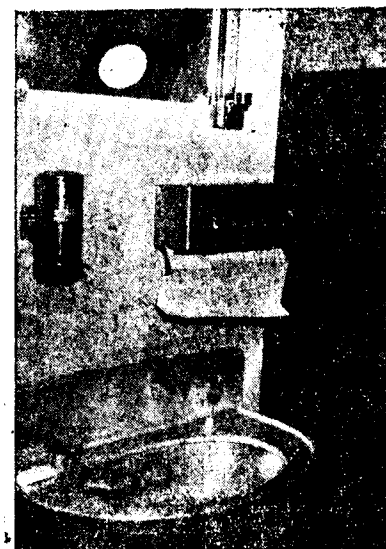
It may be recalled here that Pakistan Aviation Ltd. was started in October last year to undertake major overhauling of all aircraft of the RPAF and civil airlines in Pakistan. The setting up of a most highly equipped machine shop is now nearing completion with machinery obtained from deliveries of German reparations equipment. An air-conditioned instrument workshop, propeller overhaul shop, and electrical shops and other ancillary overhaul shop are in process of being set up.

Night Air Service

Mr. R. K. Sidhwa, member of the Constituent Assembly said in a statement last month that the night air service was a "blessing" from the passenger's point of view, in spite of the slight inconvenience that the passenger's sleep was disturbed. Mr. Sidhwa said that when he travelled by

the night service last time he was surprised to find that "passengers have taken to this service very favourably. "I am convinced that this night passenger service has come to stay permanently and will

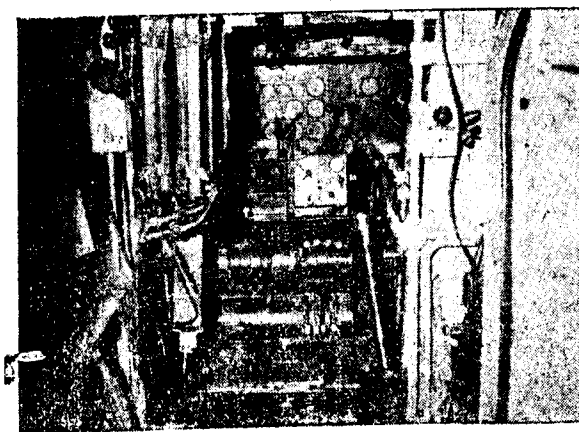
become very popular in a short time." He added that night air service existed in almost all European countries and in India too, some one or the other had to make a start at some time or other."



Toilet Room in the DC-4 Aircraft



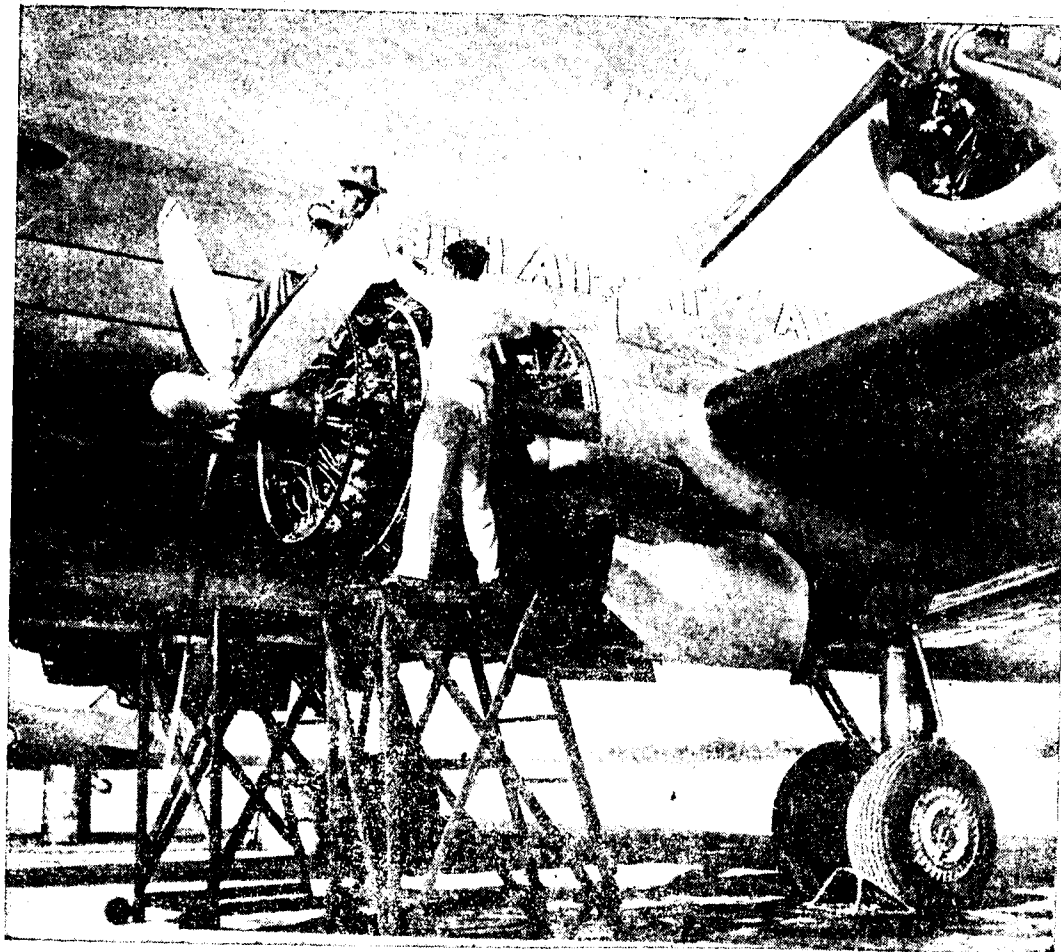
General View of the Seating Accommodation in Bharat's Skymaster



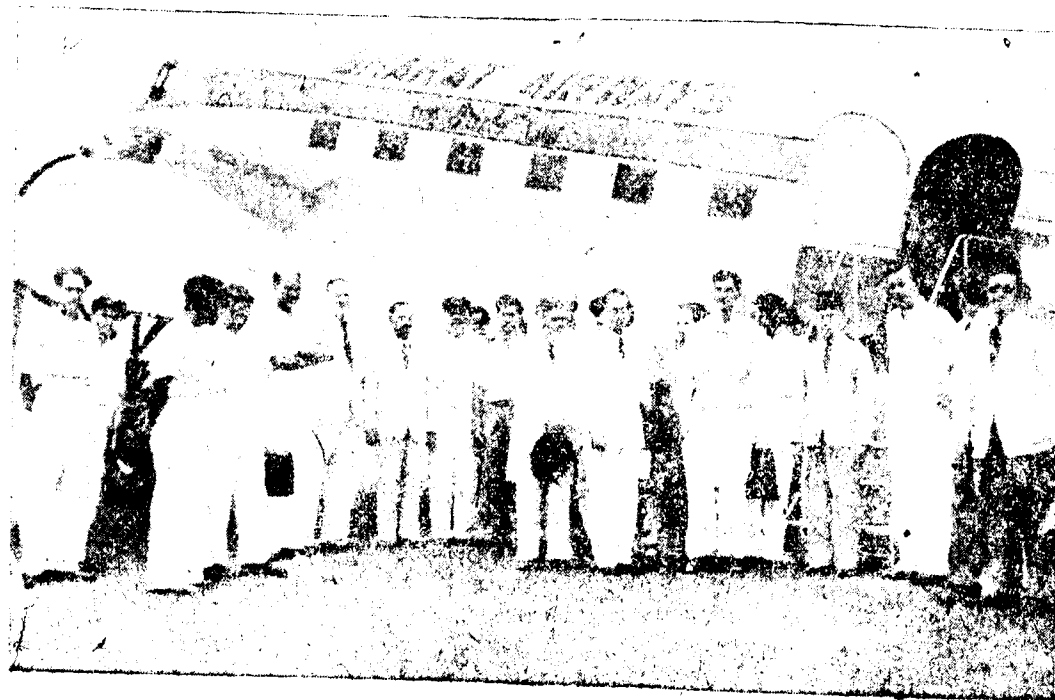
Interior View of the Cockpit in Bharat's DC-4



Dalai Lama's Brother a Prominent Personality of Tibet arriving Calcutta by Bharat's Dak.



Vigilant Engineering Staff of Bharat at Work after a Day's Flight



Prior to Dr. Hatta's Departure to Delhi by Bharat's Dak. at Dum Dum Airport

Birth of Bharat Airways

By Our Special Correspondent

It was June 1946 when a new babe was born to Messrs. Birla Brothers which is today known as Bharat Airways. The advent of Bharat brings in new hopes of optimism for the aviation industry as a whole. This costly enterprise of Birlas is significant of their sagacity and business intelligence who have not left any field unexplored and unexploited. Thus the inception of Bharat Airways is fulfilment of one of their dreams.

Though Bharat came into existence as late as 1946, actual commercial operations began from January 1947 firstly on the basis of non-scheduled lines. Barely within six months Bharat commenced its scheduled services the first route being Calcutta/Gaya/Lucknow and Delhi to which a couple of months later another route Patna and Benares was added along with Calcutta/Allahabad/Kanpur and Delhi and Delhi/Amritsar/Delhi shuttle service. The then Director General of Civil Aviation appreciated the efficient and prompt operations of the first route and in no time the routes were reconstituted thus granting more frequencies.

Calcutta/Patna/Benares/Lucknow/Delhi
Frequency 3 times a week Dakota.

Calcutta/Gaya/Allahabad/Kanpur/Delhi
Frequency 4 times a week Dakota.

Delhi/Amritsar/Delhi
Frequency Daily Dakota.



Bharat's New General Manager
Sri Haridatta Rai Sugla

Following the Kashmir operations the Government of India stopped all operations in the month of November 1947 till 20th November when the services were again resumed. During that period of nearly six months of Kashmir operations and the Relief and Rehabilitation work in Punjab, Bharat's fleet of about five aircraft were permanently engaged in the discharge of task of paramount national importance. This

venture of Bharat manifests their proneness for national service in the larger interests of the country.

Now let us look into their figures of commercial operations which reveal the fact that Bharat will flourish as a commercial concern and take this opportunity of thanking their staff for the close co-operation extended to us in obtaining the following statistics.

	1947—1948			1948—1949		
	Passenger Freight etc. Mails			Passenger Freight etc. Mails		
	Nos.	lbs.	lbs.	Nos.	lbs.	lbs.
	23,719	3,77,975	61,351	33,038	11,80,034	2,24,744
		4372			6680	
	Stature miles			Stature miles		
	Dakotas 9, Ansons 2, Wayfairer 1, Sentinels 2.			Dakotas 11, Wayfairer 1, Skymasters 3, Anson 1, Sentinel 1, Bonanza 1.		
		15			37	
		14			15	
		305			480	
	Pilots			Pilots		
	Radio Officers			Radio Officers		
	Staff			Staff		

Bharat has not only earned its reputation in India alone but it has spread its wings also in foreign countries. At present there are only two Indian Airlines who have been operating International routes viz., Air India International and Bharat Airways. Among all the other lines Bharat to have this unique privilege of Calcutta-Bangkok-Hongkong-Tokyo route testifies that how far Bharat has created confidence in the Civil aviation authorities about their successful operation. It is really a tribute to Bharat Airways that it had had no accidents or crashes in the course of operations which is an important psychological factor that is usually reckoned with by the general public. Even this foreign route Bharat had been operating very successfully till recently but unfortunately owing to unsettled conditions in Hongkong, it had to suspend its services beyond Bangkok.

Every year Bharat is carrying celebrated personalities of international repute. For an instance the famous Indonesian leader Dr. Hatta who came to India on a political mission left Calcutta by Bharat's Dakota only to Delhi. Some of the interesting pictures have been reproduced elsewhere in this issue by the kind courtesy of the Publicity Officer, Bharat Airways Ltd.

Today Bharat is in its infant stage. Infants are often beset with illness if there is any slight change in the natural conditions. Similarly if at all Bharat has any such, it is but natural. Till Bharat attains adolescence stage, Government should extend all encouragement and patronage for its full growth.

Bharat is a much-talked out airline in the country for efficiency and alertness with which the smart decently dressed Traffic Assistants look after the passengers. To be so courteous and polite, we should attribute to the inspiration and guidance given by the Deputy General Manager to his Traffic Boys who is none other than the present General Manager Haradatta Rai Sugla. It is essential to present to our readers the glimpses of Sugla's life in brief.

New Chief

Medium-built, chubby faced, forty-seven year old Sri Haradatta Rai Sugla the New General Manager of Bharat Airways, hails from Bhiwani in East Punjab. Soon after his graduation in law with distinction from the Punjab University, Sugla joined the Hissar District Bar for his career at the age of twenty-five. As a Lawyer he did earn a good name for him and profession at large. Destined to be a *Pucca* Lawyer in his life, the year 1943 brought a turn in his career. That was the time he joined the famous Birla Brothers Ltd. and served their associated companies in various capacities.

Somehow or other Sugla took real interest in aviation and began to study that industry in various aspects. But then his efforts did not go in vain. His self-acquired vast knowledge on problems of complicated nature in the aviation industry and the power of understanding on men and matters made him in no time as the Vice-President of the Air Transport Association of India which is an All-India organisation sponsored by the scheduled airline operators. It is no wonder that he became the Deputy General Manager of Bharat Airways, and as such the Traffic Department was under his control and administration. Statistics reveal the number of passengers, mails flown and the quantity of traffic carried during Sugla's tenure of office as the Deputy General Manager of Bharat.

In Private Life

Now peeping into his private life one finds that Sugla's name is associated with every charitable institution and social organisation throughout the country. All the more, one important aspect of Sugla's life should not be lost sight of. That is whenever any visitor approaches Sugla for any favour, at last he comes out with satisfaction that Sugla is his good old friend. His pleasing manners and perfect gentlemanliness to the core and his unassuming and unostentatious outlook bring his continued success in his life. So, his assumption of General Manager's office on the retirement

(Continued on page 100)

The Evolution of Civil Flying Boats

The hull of the pioneer civil flying-boat, the Supermarine "Sea Eagle," has been presented to B. O. A. C. by Mr. Victor Scott-Paine, brother of the designer of the aircraft—Mr. Hubert Scott-Paine.

It was received on behalf of the Corporation by Mr. John Brancker, General Manager of B. O. A. C's Eastern Division, whose father the late Sir Sefton Brancker, whose father the late Sir Sefton Brancker, flew in the "Sea Eagle" in 1923. Also present at the ceremony was Mr. A. C. Blay, who flew in the "Sea Eagle" as

engineer and is now a Section Inspector on flying-boats at B. O. A. C's base at Hythe.

The following tabulated data, which contrasts the veteran "Sea Eagle," the modern Short Solent "and the future Saunders-Roe "Princess," provides an interesting indication of the evolution of the flying boat over a period of fewer than three decades. The 140-ton "Princess" flying boats, are under construction at Cowes.

	Supermarine 'Sea Eagle'	Short 'Solent'	Saunders-Roe 'Princess'
Construction	Wood and fabric	All metal	All metal
Power Plant	One-360 h. p. Rolls Royce (Eagle IX)	Four-1690 h. p. Bristol Hercules 763.	Ten-3500 h. p. Bristol 'Proteus' III Prop-jet engines
Crew	1 or 2 Pilot & (occasional) Engineer	8-2 pilots : Radio, Navigating & Engineer Officers, 2 Stewards and a Stewardess.	8 or more
Passengers	7	39	Up to 105
Weight Empty	3,950 lb.	48,956 lb.	—
Weight All-up	6,050 lb.	78,000 lb.	315,000 lb.
Span	46 ft.	112 ft. 10 in.	219 ft 6 in.
Length	43 ft.	89 ft. 8 in.	148 ft.
Max. Cruising Speed	84 m. p. h.	253 m. p. h.	380 m. p. h.
Routes & Operator	Imperial Airways Southampton-Channel Isles 130 miles in 1 hr. 40 min.	B. O. A. C. Southampton Southern & Central Africa.	B. O. A. C. long range routes as yet unspecified.

World's First Air Charter Exchange

By Frank Gordon

The "Baltic" Exchange, in the City of London, has meant something very real and useful to the whole mercantile world for many generations. It is on its floor that much of the world's chartering of cargo shipping is done. To-day, however, it is something more than this: it is also an Air Freight Exchange for tramping aircraft as well as tramp ships.

History is repeating itself. British enterprise is again giving the lead in meeting a modern need, just as it did more than two centuries ago when those with cargoes to ship abroad developed a common meeting place where they could get in touch with those with shipping space to offer. Then shippers and shipowners met in some of the many of London's coffee houses scattered over the City, or business area, and close to the River Thames and docks. Now the air brokers and charter concerns or their representatives meet in one corner of the modern domed and marble pillared Baltic Exchange.

Air charter broking was initiated on the "Baltic" by members of the market who saw, as early as 1938, that air transport of goods would expand swiftly and that charterers and aircraft owners would need an efficient method of getting in touch with each other. What better, then, than the tramp shipping method which had worked so well for many generations?

World War II delayed the development of these ideas and it was not until 1947 that business was recommenced. The formation of a special committee in March 1948 was the signal that the world's first air charter exchange had been started. Later similar organisations were set up in Paris, Antwerp and Amsterdam.

Over 70 Members

To-day the Airbrokers' Association, as this section of the Baltic Exchange is known, has more than 70 members,

representing the leading firms of chartering brokers and air operators, including the Government-owned British Overseas Airways Corporation. The way in which the idea is justifying itself is shown by the claim of a firm of brokers that one-half of enquiries received to-day lead to business as against only one in 20 a year ago.

The air transport business is like shipping in many ways. It is divided, for instance, into two recognised sections—Liner Trade and Tramping. The former runs to set time and route schedules; in other words runs "on a line." The latter moves from one task to another and, in many instances, to and from varying parts of the world. It is with the tramps—of sea and air—that the Baltic Exchange serves its greatest use.

Obviously it is more costly to send a tramp on a journey without a full load or without a cargo to its return port than to have it fully loaded both ways. Again, particularly in these days, it is an expensive business to have a ship or aircraft standing idle waiting for cargoes. It would be a tedious task, and often a chancy one, for shippers and owners to try to get in touch on their own. By letting members of the Baltic know what space is available, and what is wanted and the destination of the goods, the job is comparatively easy and speedy.

Reducing Freight Rates

Problems of return loads and empty cargo space have been among the biggest difficulties of air charter operators. Until the Airbrokers' Association began filling the gap, most freight rates had to take full account of flying back empty or operators had to take big financial risks. Already it can be shown many times over that the "Baltic" system can achieve considerable savings and make more rates attractive to shippers.

From the shipper's point of view economies can go much further for many

(Continued on next page)

New "Cloud Analyser" Developed in U. S.

A new device that indicates the thickness, height, and density of clouds is being used in the United States. Carried by a weather balloon rising to the upper atmosphere at the rate of 1,200 feet a minute, the device, known as a "cloud analyser," sends weather data 120 times a minute to a receiving and automatic recording equipment on the ground.

The General Electric Company, developer of the cloud analyser, is currently doing research in experimental meteorology, a comparatively new field of science. It concerns such activities as artificially produced snow and rain under certain conditions; preventing or curbing thunderstorms, hailstorms, lightning, torrential rains, tornados, and hurricanes; clearing ice from aircraft, and dispersing ground fog at airports.

The cloud analyser is expected to help determine whether a cloud is worth "seeding" to make snow or rain, or whether it can be "overseeded" to prevent storms from which severe damage might result, the Company says. Other

instruments carried in the balloon with the analyser provide data on temperature, air pressure, and relative humidity.

A basic part of the cloud analyser is a piece of string saturated with a salt solution. As electricity is sent through the string, a resistance reading is given indicating moisture content of a cloud. If the balloon passes through a dense cloud, the string picks up more moisture and becomes a better conductor of electricity. A low-resistance reading indicates water or rain. An increase in resistance indicates a decrease in the moisture content of the air.

A special antenna developed by the General Electric Company automatically "tracks" the balloon and "translates" information from it into height and direction readings on paper tape recorders. Data from which wind velocity and direction can be determined also is recorded by the ground equipment.

A balloon, carrying about eight pounds of delicate instruments, climbs to about 75,000 feet and bursts. The instruments return to earth by parachute.

(Continued from previous page)

types of shipments. He can save on packing—cardboard cartons can often take the place of expensive containers—and on insurance premiums, while with the faster transport of his goods his capital is tied up for a shorter time.

The advantages are best illustrated a few examples. It was reported that a plane was flying empty from Britain to carry out a charter service from Aden to London. A Baltic broker immediately advised a firm of radio manufacturers that this was a chance of an economic freight rate for any destination on the route to Aden. As a result the plane was filled up with radio sets and within 17 days of leaving the factory in the United Kingdom, they had reached their destination, been distributed and sold.

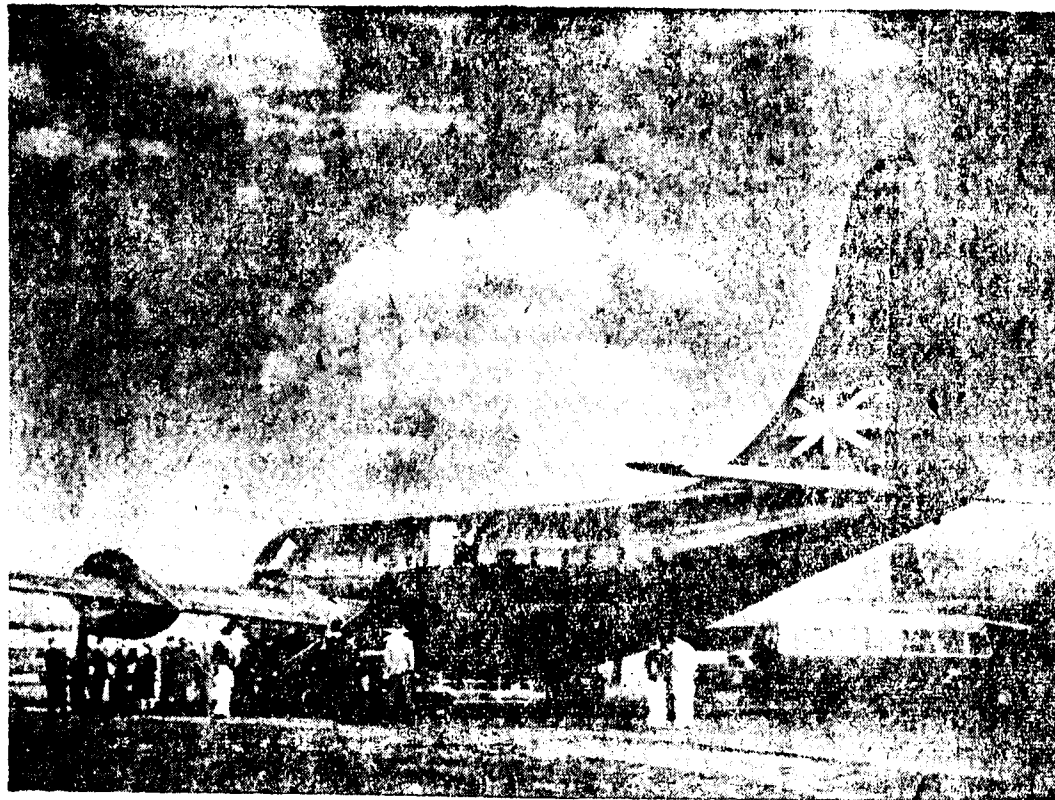
A tramping flight was fixed to operate into East Africa and with partial loads each way. Within half-an-hour of the

fixture being announced on the Baltic Exchange the remaining space was taken each way. On the outward journey this included almost three-quarters-of-a-ton of rayon and on the home trip the aircraft carried a donkey from Khartoum to the London Zoo and half-a-ton of pine-apples from Nairobi to London.

Regular Flow

Baltic air brokers have now built up a regular flow of charter business in fruit, horses and cattle, ship and factory spare parts, urgent engineering supplies, movements of ships' crews—this is a great saving to shipowners—export of drugs and medical supplies and other goods.

Finally, they have just taken another new step in world air tramp operation by introducing a standard charter party document which makes it clear to charterers and operators alike just what their obligations are.



B.O.A.C. recently took delivery of "Cathay," the first of their fleet of ten Boeing Strato Cruiser Aircraft. The flight from New York to London was made non-stop in 16½ hours, at an average height of 28,000 feet and a speed of 350-360 m. p. h.

The Strato Cruiser Speed-birds will be used on the Corporation's services between London and New York. They are "double-decker" aircraft with accommodation for 55 to 60 passengers in two large cabins on their upper decks. There are spacious lounges on the lower decks. Power is supplied by four Pratt and Whitney Wasp Major engines each of 3,500 horsepower. An air conditioning system controls pressurisation, temperature and humidity. Cabin "altitude" may be maintained at sea level pressure when the aircraft is at 15,000 feet; and the equivalent of 5,500 feet when the aircraft is flying at 25,000 feet.

"Cathay" is now at the B.O.A.C. base at Filton, Bristol where it is being used for air and ground crew training.

Photograph shows interested personnel inspecting "Cathay" on its arrival at London Airport.



The Sea Eagle hull, dwarfed by a modern solent flying boat being handed over to Mr. Vicar Scott-Paine (centre) to Mr. John Branker (right). With them, on left is B.O.A.C. Section Inspector A. C. Blay who flew in the Sea Eagle as a engineer.

Fire-Fighting by Helicopter

By John Loughlin

Foresters borne by helicopter to fire outbreaks in otherwise inaccessible regions of the dense Australian Eucalyptus Forests will be key men in the Victorian Forests Commission's "catch them before they get away" attack on the fire hazard.

Recent trials by the Royal Australian Air Force in setting down fire fighters and equipment at the seat of outbreaks from a helicopter proved the effectiveness of the procedure under Australian conditions.

Fire fighters cannot be parachuted into the Australian native forests. They would be trapped in the thick forest roof and injured by jagged branches. Fires travel with such terrifying speed through these forests in mid-summer that the risk of isolated fire-fighters being caught by the flames would be high.

Helicopter-borne fire fighting units, however, fit into the Victorian Commission's pattern of operations designed to detect incipient fires and get right on to them before they flash through the oily forests and sweep across great tracts of country as they have in the past.

Helicopter trials not only tested the possibilities of the machine under local conditions, but also served to map-spot cleared patches for future landings, and to give foresters experience in landing from the machine.

Each trip, the Sikorsky helicopter carried the pilot and three passengers, a pump unit, ten hose lengths, radio, food and water, axes and rake. From the Forests District Headquarters at Taggerty, in the Glispsland ranges, they flew over the closed-in olive grey roof of 900 square miles of forest spotting for clearings. When they found them they went down for landing drill.

The foresters and their equipment were let down in harness by a winch while the machine hovered at around 50 ft. and were hauled up again in the same way.

But where possible the machine landed, or went down near to ground level and allowed the men to step down to earth. This relieved the pilot of the extremely arduous job of keeping the machine hovering for the length of time taken to lower men by winch at a speed of a foot a second.

The difficulty of keeping the machine steady for very long is one reason they don't like hovering over the forest roof and lowering men through the trees. The foresters would be swung around so much that they would be thrown against the trees and injured.

Although the Sikorsky has room for only three passengers and the pilot inside, they carried five passengers. The other two rode sitting on the broad undercarriage struts. They were held secure by straps, but this was no perch for the fainthearted.

Even an experienced pilot confessed uneasiness during one of these rides "Sitting there at 1,000 feet, it's like flying home with nothing all around you," he said.

EMERGENCY EDUCATION

According to information from the Sikorsky organisation in the U. S. A. this is the first time passengers have been lifted by helicopter in this unorthodox way. Foresters soon overcame their hesitation to ride in the machine, but there was no rush of volunteers to ride on the struts. It is an idea that will only be used in emergencies—when, for example, men have to be evacuated quickly from danger points.

One problem is to relate the load carried to what is called the density altitude which the pilot expects to encounter, and to the size of the forest clearing he may have to land on. All this is affected by the day's temperature, because density altitude varies with the temperature. As the temperature rises, the performance of the helicopter decreases.

So if the Forests Commission gets a radio warning that smoke has been spotted somewhere in the bush and wants to send a unit of two men with axes, pumps and other equipment, the pilot will have to look at the weight of the load and the day's temperature, and then scan the map to find out the area of the nearest clearing to the outbreak.

This is because at a given density altitude the helicopter, with a given weight, cannot rise vertically. If the clearing is a small one, the load has to be limited to allow a vertical take-off. To get away with a larger load the pilot needs more room because he has to make a vertical take-off to say 5 ft., and fly forward at an increasing speed on a rising path until he has cleared the trees. That brings in another factor—the height of the trees around the clearing.

Preferring to land rather than hover if he can, the pilot often finds it hard to decide from the air whether an apparently level clearing is really a safe landing place. If it proves to be sloping and he lands across the slope, he is likely to have trouble getting off again. If he knows how the slope runs, he can land downslope and brake to a standstill. That is alright for a take-off. This means

that map-spotted clearings have to be surveyed and the angles of the slopes shown.

Another serious problem arises in loading the helicopter. They cannot just take on a full load, fly off to a landing place, unload, and fly back empty.

Loading is determined by the machine's point of balance, which is just beneath the rotor. If passengers are put forward, the point of balance moves forward, and it moves back as weight is put off. But the margin is a small one in the helicopter.

So if they go in with the machine trimmed to carry a couple of passengers and fire fighting equipment, they have to put in logs as ballast for the return trip.

The helicopter trials will continue as summer nears, to provide more performance data for different conditions, but this weapon will definitely be available in the danger period to help in combating the potentially disastrous small forest fires.

In its aggressive attack on the fire hazard, the Victorian Forests Commission with the aid of the RAAF, can now command constant air patrols by conventional aircraft bombers to attack pin-pointed outbreaks with water bombs, helicopter fighting squads and highly efficient ground "flying squads," all backed up by a general body of foresters trained in fire protection.

Its whole system is tied up in a State-wide radio network. This links the remotest fire watching towers, the 52 District Headquarters, and the fighting units, with the elaborate operations room in Melbourne where a 24-hour listening watch is kept.

(Continued from page 94)

of Mr. H. A. W. Retting, should be welcomed by all and sundry.

We take this opportunity of congratulating Sugla on his appointment and wish

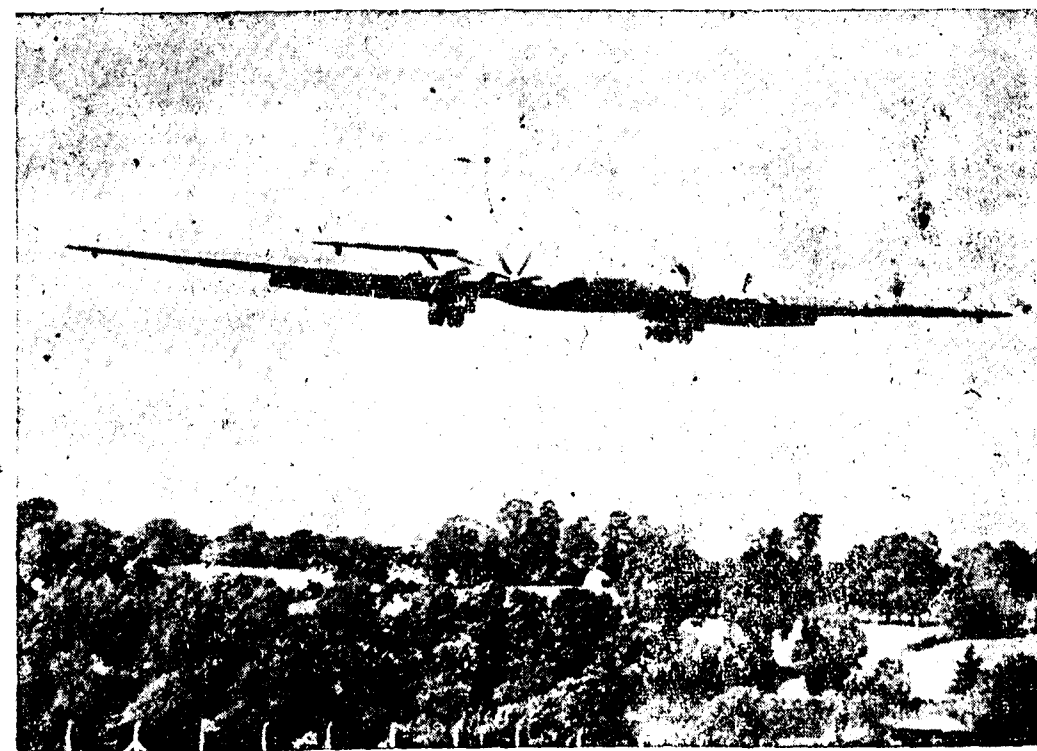
him all success, and believe under his stewardship Bharat will spread its wings to the hitherto unknown lands and thereby infuse a new life altogether in the promotion of civil aviation in this country.

Power for the Brabazon

Four Twin Centaurus Units Develop 20,000 H. P.

A twin Bristol Centaurus power unit of the type specially developed for the Brabazon I, has successfully completed the first Air Registration Board type test ever

was undertaken is a reproduction of a 21 ft. wide section of the Brabazon's wing, which simulated the flexibility and resilience of the actual aircraft installation.



The 130-ton "Brabazon"—Largest Air Liner in the World—photographed in the Air on its First Test Flight.

accomplished by an aero engine installation of this type. This means that the Brabazon's eight Centaurus engines, arranged in four pairs and developing a total of over 20,000 h. p., have been officially approved for use in a civil aircraft several weeks before the prototype's taxiing trials are due to begin.

The 5,000 h. p. twin Centaurus is now the most powerful engine unit and the first "buried" engine installation ever type tested. The rig on which the test

The test was the normal Air Registration Board 150 hours' test, comprising 80 hours' running at maximum continuous power (climb), 10 hours at take-off power, 20 hours at maximum weak mixture power and 40 hours at various cruising powers.

When stripped at the end of the test, all components, including the gears and bearings, were found in perfect condition. Examination of the specially developed mounting confirmed that the problem of

vibration one of the principal difficulties with earlier power units of twin or coupled type, has been overcome.

Development of this Centaurus installation has involved as much research and experiment as a completely new type engine. The type test was the climax of over 1,200 hours of development running since February, 1946, when the unit ran for the first time. Two rigs have been used, the first consisting only of two engines, gearbox and propeller, bolted to a steel supporting structure, and the second consisting of the wing section facsimile on which the test was run.

Each of the Brabazon's four power units consists of two Centaurus 20 engines, driving Rotol co-axial propellers through a common bevel reduction gear box. The two engines are separately housed in fire-proof cells in the leading edge of the wing. Their centre lines coverage at an included angle at 64° and the engines are supported on a box section structure which is an integral portion of the wing. The dual reduction gear box is carried at the forward extremity of this structure and flexibly jointed primary drive shafts convey the power from the engine to the reduction gear.

Access to the engine for servicing or engine changing is obtained through openings in the upper and lower wing skins. These openings are closed by doors hinged at the forward edges just aft of the extreme leading edge of the wing.

The propellers are carried on concentric forward extending shafts and lie some distance ahead of the wing leading edge. These shafts and the dual reduction gear are encased in a housing now known as the propeller stalk which, together with the propeller spinners, form small nacelles of aerodynamic form. Each engine, with its mounting, exhaust system and cowling, forms a complete unit which is readily removable from its fireproof cell, quickly detachable mounting points being provided. The twin exhaust manifolds discharge the exhaust gases rearwards below the lower wing surface.

Accessories for aircraft service are grouped round and driven by a separate gear box secured within the wing well aft of the front spar. This assembly is driven by means of long flexibly jointed shafts running at high speed from a power take-off shaft at the rear of the dual reduction gear. This drive incorporates a device which ensures continuity of drive should one or other of the engine be closed down.

The Centaurus 20 engine differs from the forms used in normal installations chiefly in that it is an ungeared engine and that the method of support is entirely different. Since the reduction gear is dispensed with, it is possible to arrange a flange direct on the forward end of the crankshaft for the main drive, a special front cover being provided to enclose the sleeve drive mechanism. With the exception of the engine mounting, the remainder of the engine conforms closely to the Centaurus 57 specifications.

To obviate any adverse effect of primary drive shaft misalignment, both engines with their dual reduction gearbox are carried by a central box structure which forms a cantilever projecting forward from the wing spar; the upper and lower surfaces are portions of the wing skin. Each engine is attached to the box structure by means of tubular engine mountings. These take the form of twin tripods picking up the engine crankcase at their feet and with their apexes secured at points near the top and bottom respectively of the box number by quickly detachable fittings.

These tripods take all vertical loads and torque reaction. In order to stabilize the assembly and to deal with fore and aft accelerations, two further tubes are provided connecting top and bottom of the engine assembly to a common point towards the front of the box structure. Quickly detachable fittings are provided at the engine end of these tubes. This design of engine mounting ring and results in a considerable saving of weight.

Dual Reduction Gear:— One of the outstanding features of this installation is

the design of the reduction gearbox. Two complete and independent reduction gears are incorporated in the magnesium alloy casing with means of driving the aircraft accessories and a simple system of lubrication and cooling, both of which function whether either or both the engines are running. The reduction ration is 0.41 in each case.

To ensure maximum efficiency of power transmission, the minimum number of gears are used in each train between engine and propeller. The right hand power input shaft carries at its forward extremity a straight tooth bevel pinion, the teeth of which mesh with the ground teeth of an internal bevel gear. This gear is serrated to the large diameter tubular shaft carried on ball and roller bearings in the magnesium casing which drives the rear of the Rotol co-axial propellers.

This shaft is made up of three sections flange-bolted together. Within this shaft, and running in a series of roller bearings, is the inner propeller shaft carrying at its forward extremity the forward propeller and at its rear extremity the main driving bevel wheel. In mesh with the teeth of this wheel are the teeth of the left hand input bevel pinion. The shaft carrying this pinion, in common with that carrying the right hand input pinion, is also supported on ball and roller bearing.

This configuration results in the concentric shafts, and therefore the co-axial propellers, being rotated in opposite direction by the two Centaurus engines, although their crankshafts both rotate in the same direction. Despite the high efficiency of these gear trains considerable heat is generated at the actual tooth, contact point and to maintain a satisfactory temperature level, oil jets are directed on the tooth flanks close to the point of contact. The oil draining away is cooled and re-circulated.

Two subsidiary gear trains are incorporated in this gear box, one of which picks up the drive from the outer propeller shaft and conveys it through idler gears and shaft to a free-wheel unit, and thus to

the aircraft accessory drive output shaft. The second train picks up a drive from the inner propeller shaft and conveys it via additional idlers to the free-wheel unit and thus to the same aircraft accessory drive output shaft. This output shaft carries a small gear which drives the main oil pressure and scavenge pumps.

If either engine is closed down, the section of the free-wheel unit associated with the drive from that engine begins to slip or 'free-wheel'. The other engine meanwhile carries on with the drive. Although their speeds are nominally synchronized, there will inevitably be minor speed fluctuations between the two drives to the free-wheel unit with both engines running. To avoid any possibility of shock loading resulting from this, the drive ratios have been carefully selected so that under synchronized conditions the entire accessory load is in fact carried by the right hand engine. Meanwhile, that portion of the free wheel unit associated with the left-hand engine "free-wheels" at a very low speed difference.

The ancillaries serving the co-axial propellers are located on the rear cover of the dual reduction gear unit. These consist of the propeller controller units and the synchronizing alternators. Drives for these units are tapped off the gear trains which drive the free-wheel units. Lubrication of the working parts is effected by a supply of cool oil pumped to vital points by a gear type pressure pump. This pump also supplies the oil necessary for hydraulic propeller operation; a Purolator type filter in the circuit excludes any small particles of matter from the delicate constant speed control mechanism.

Single Engine Operation:— During Single Engine operation the non-operative propeller is feathered to reduce drag. If the front propeller only is feathered, the aero-dynamic forces acting on the blades do not produce any propeller turning moment. In the case of a feathered rear propeller, however, the blade angle for minimum drag is such that a reverse propeller rotating moment is produced.

Since reverse rotation of an engine is undesirable, means are provided inside the dual reduction gear to prevent this occurring. A large diameter ratchet wheel is carried on the forward face of the internal bevel gear, three pawl units equally spaced round this wheel, but attached to the front cover of the gearbox casing, are brought into action automatically by the propeller feathering oil supply. The pawls slip over the ratchet wheel teeth while the latter is rotating in a forward direction with the rear propeller. As the feathering process is completed, the propeller slows down and comes to a standstill before the reverse torque builds up. At this point the teeth of the ratchet wheel are brought into abutment with the pawls, thus preventing reverse direction rotation. In normal operation an arrangement of springs in the pawl units completely retracts each pawl. As a means of precluding excessive torques in the reverse direction in the event of such an untoward happening as a backfire, the ratchet wheel mounting incorporates a high torque slipping clutch.

The power from each engine is transmitted through a tubular drive shaft to the dual reduction gear. At the rear end, the drive shaft is bolted to the engine crankshaft flange through the medium of a flexible coupling of the Layrub type. This consists of a light alloy ring carrying a number of specially constructed rubber units or trunnions. The flexibility of the trunnion units is sufficient to accommodate any slight deviation from true alignment which might be encountered.

At the forward end, the shaft is united to the input flange of the dual reduction gear by a universal joint of the Hooke's type. This is equipped with nonmetallic preloaded bearings of a type which do not require routine lubrication. The design is such that for engine removal the drive is disconnected at the Layrub joint and swung to one side round one axis of the Hooke's coupling.

Means are provided for measuring the engine torque by electrically determining the degree of torsion in the primary drive shaft tube. For this purpose, two toothed inductor rings encircle the Hooke's joint. One of these is carried directly by the forward end of the drive shaft tube and the other is supported on a spidershaped member, deriving its location from the engine end of the drive shaft. Associated with the inductor rings is a double "Generator" in which electric impulses are induced. Phase differences between the impulses of the two portions of the generator provide an indication of true engine torque and this may be read off indicators disposed at the engineer's station in the aircraft.

Lubricating Oil System:— Three entirely independent oil systems are provided. These supply respectively, the left-hand and right-hand engines and the dual reduction gear and each consists of an oil cooler and a service oil tank. Air to the oil coolers is ducted from the forward portion of each engine cell. The ducts run straight to the twin oil coolers which discharge their air through variable area shutters into the main wing space. The reduction gear cooler is jointly fed by small ducts from both the main cooler ducts. This also discharges into the wing space. Air outlets from the wing space are provided through the rear spar and upper wing skin, near the trailing edge.

Since the oil consumption of the gear box and propeller system is of a minute order, the capacity of the tank feeding these units is correspondingly small. The oil specified incorporates a special additive to suit high duty gearing. The engine oil tanks are also kept to the smallest practicable size, thus ensuring satisfactory behaviour under cold climate conditions. Oil consumption is made good by maintaining a constant level in these service tanks, make-up oil being supplied from a common pressurized storage tank within the wing—(*Shell Aviation News*).

What the Press and the People Say

"It is with very great pleasure and no small profit that I have gone through the copy of the inaugural number of the "Indian Airways Magazine" which you have been kind enough to send me. I must congratulate you on being a pioneer in the field of aviation journalism in India and upon achieving such a high standard of excellence even with the very first issue of the Magazine. I hope that each succeeding number would find itself better than the last, and succeed in considerable measure in fulfilling the objectives with which you have embarked upon this enterprise. The "Indian Airways Magazine" has my very best wishes"—K. CHENGALARAYA REDDY, CHIEF MINISTER, MYSORE.

* * * * *

"I thank you for sending me the inaugural number of "Indian Airways Magazine." The get-up is very attractive and its contents also very interesting. I hope your magazine will help the growth of Air-mindedness in the country. I once more congratulate you on the spirit of enterprise you have shown in starting the "Indian Airways Magazine."—M.S. ANEY, GOVERNOR OF BIHAR.

* * * * *

"INDIA is rapidly becoming Air-minded and the scope for expansion of Civil Aviation is practically unlimited. A publication serving the interests of the Companies operating Airlines and the public using them, could help materially in the development of Flying in this country, and I wish the Indian Airways Magazine every success"—H. P. MODY, H. E. GOVERNOR OF U. P.

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"Today it has become an indispensable necessity to have a journal for every industry. Railways have many journals. But the long-felt need for a journal to aviation industry has been fulfilled by Sri E. V. Venkatram with the publication of "Indian Airways Magazine" and we congratulate him besides welcoming his journal.

Although the civil aviation in our country is in its infancy, it is gradually developing in its own sphere. Several air-companies are being floated. There should be some sort of a liaison between the industry and the general public on one hand and the industry and the Government on the other with a view to explain the difficulties of each other and thereby moulding the public opinion for the functioning of this industry which would insist the Government to assume newer responsibilities in the development plans. Hence to set things aright, a magazine is absolutely essential. Further, this magazine contains timings and fares of various airlines operating in this country which is essential for the general public as well as the business men at large"—

SWADESHIMITRAN, MADRAS.

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"Bearing the messages of goodwill from Sardar Patel and provincial Governors the "Indian Airways Magazine." the first aviation journal to be published in our province is a significant publication. Launched with the aim of making people more air-minded by providing useful information on aeronautics the first issue contains aviation news, fares and freight schedules of various aviation companies and other useful information"—FREE INDIA, MADRAS.



The world's newest international air terminal, the Seattle-Tacoma International Airport at Bow Lake, midway between the two major cities in the western part of the State of Washington, on the Pacific coast of the United States, was formally dedicated on July 9, 1949. Included in the day's programme were addresses by United States, State and City officials and a huge air show staged by aircraft of the United States armed services and the State of Washington Air National Guard. More than 100,000 people attended the exercises, many of them inspecting the various types of aircraft parked on the field. As part of the ceremonies, a new double-deck Boeing strato-cruiser, built in Seattle, was christened with water flown from China, Korea, the Philippines, Japan, and Alaska, areas on the aircraft's scheduled overseas routes. The \$11,000,000 terminal airport, which is being operated by the Port of Seattle, embraces an area of 920 acres of land. The main runway at the terminal is 6,100 feet long. Although this runway can handle most of the normal traffic at the field, the Port of Seattle contemplates extending the runway to 7,500 feet. The area at the north end of the field has been cleared and graded so that additional runways can be added.

INTERNATIONAL AIRLINES

FARES AND FREIGHT SCHEDULE **Air India International**

Fare & Freight Schedule

From	To	Single	Return	Excess Baggage per kilo.	
		Rs.	Rs.	Rs.	As.
Bombay	Basra	627	1128	6	5
Bombay	Cairo	1040	1872	10	7
Bombay	Geneva	1587	2856	15	14
Bombay	London	1720	3096	17	3
Basra	Cairo	454	816	4	9
Basra	Geneva	1091	1964	10	15
Basra	London	1200	2160	12	0
Cairo	Geneva	770	1386	7	12
Cairo	London	894	1608	8	15
Geneva	London	200	360	2	0

Air France

Fare & Freight Schedule

From Karachi To	Single	Return	Baggage		Freight	
	Rs.	Rs.	Rs.	As.	Rs.	As.
Cairo	907	1632	9	2	5	9
Calcutta	360	648	3	10	3	12
Glasgow	1787	3214	17	14	10	8
London	1600	2880	16	0	7	12
Marseilles	1467	2640	14	11	7	4
Montreal	2758	4965	27	10		
New York	2758	4965	27	10	15	5
Paris	1573	2832	15	12	7	9
Rome	1307	2352	13	1	6	10
Saigon	933	1680	9	5	8	0

From Calcutta To	Rs.	Rs.	Rs.	As.	Rs.	As.
Cairo	1267	2280	12	11	7	4
Glasgow	1987	3573	19	14	12	3
London	1880	3384	18	13	8	10
Marseilles	7960	3168	17	10	8	4
Karachi	1130	648	3	10	3	12
Montreal	3039	5471	30	7		
New York	3039	5471	30	7	29	8
Paris	3867	3360	18	11	8	10
Rome	1627	2928	16	4	7	15
Saigon	613	1104	6	3	5	2

British Overseas Airways Corporation

	Single	Return	Excess Baggage per kg.	
	Rs.	Rs.	Rs.	As.
CALCUTTA				
Bangkok	... 400	720	4	0
Basra	... 854	1538	8	9
Cairo	... 1267	2281	12	11
Darwin	... 1467	2641	14	11
Hong Kong	... 800	1440	8	0
Karachi	... 360	648	3	10
London	... 1880	3384	18	13
Montreal	... 3457	6223	34	10
New York	... 3524	6344	35	4
Rome	... 1627	2929	16	5
Singapore	... 720	1296	7	4
Sydney	... 2067	3721	20	11
Washington	... 3588	6459	35	15
DELHI				
Cairo	... 1094	1970	11	0
Karachi	... 187	337	1	14
London	... 1747	3145	17	8
Montreal	... 3324	5984	33	4
New York	... 3391	6104	33	15
Rome	... 1467	2641	14	11
Washington	... 3455	6219	34	9
BOMBAY				
Cairo	... 1040	1872	10	7
London	... 1720	3096	17	4
Montreal	... 3301	5942	33	1
New York	... 3367	6061	33	11
Rome	... 1440	2592	14	7
Singapore	... 934	1682	9	6
Washington	... 3431	6176	34	5

China National Aviation Corporation**Fare and Freight Schedule**

INDIAN OR BURMA RUPEES			PAKISTAN RUPEES		
Fare Rs.	Freight per kg. Rs. As.		Fare. Rs.	Freight per kg. Rs. As.	
Karachi—					
Calcutta	360	3 12	250	2 10	
Rangoon	613	5 7	426	3 12	
Kunming	1004	7 0	697	4 14	
Hongkong	1120	7 13	778	5 7	
Calcutta—					
Rangoon	253	1 12			
Kunming	643	5 10			
Hongkong	800	5 8			

K. L. M. Royal Dutch Air Lines**Fare and Freight Schedule**

	Single	Return	Excess Baggage			Freight per lb.		
	Rs.	Rs.	Rs.	As.	Ps.	Rs.	As.	Ps.
Calcutta To								
Amsterdam	1,867	3,360	18	10	8	3	14	7
Bangkok	400	720	4	0	0	1	4	2
Basra	853	1,536	8	8	10	2	14	10
Batavia	867	1,560	8	10	8	2	13	3
Cairo	1,267	2,280	12	10	8	3	11	0
Damascus	1,173	2,112	11	11	6	3	4	6
Karachi	360	648	3	9	9	1	11	1
Rome	1,627	2,928	16	15	1	3	9	0
Singapore	720	1,296	7	3	6	2	3	11

Pan American Airways**Fare Schedule**

Calcutta To	Rs.		Rs.
Brussels	1,869	London	1,882
Damascus	1,174	New York	3,040
Hongkong	801	San Francisco	3,143
Honolulu	2,696	Tokyo	1,482
Karachi	361		

Scandinavian Airlines**Fares and Freight**

	Bombay to			Calcutta to			Delhi to		
	Single	Return	Frt.	Single	Return	Frt.	Single	Return	Frt.
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Karachi	... 160	288	2/4	360	648	6/3	187	337	1/5
Damascus	... 947	1705	6/-	1174	2114	7/4	1000	1800	6/6
Rome	... 1440	2592	6/13	1627	2929	8/-	1467	2641	7/2
Zurich	... 1587	2857	7/11	1774	3194	8/5	1640	2952	7/10
Copenhagen	... 1816	3269	9/7	1936	3485	9/15	1790	3222	9/2
Stockholm	... 1906	3431	10/1	2026	3647	10/10	1880	3384	9/13
London	... 1720	3096	7/15	1880	3384	8/10	1747	3145	7/15

Trans World Airline

	Single	Return		Single	Return
	Rs.	Rs.		Rs.	Rs.
BOMBAY					
Athens	1257/8	2263	Paris	1681	3026
Basra	629	1131/8	Rome	1443	2597/8
Cairo	1043	1877/8	Shannon	1857/8	3343
Dhahran	533/8	960	CALCUTTA		
Geneva/Zurich	1590/8	2863	London	1881	3386
London	1724	3103	Geneva	1776/8	3197/8
San Francisco	4106	7445/8	Paris	1867	3360
New York	3367	6060	New York	3524	6343

INDIAN AIRLINES

FARES AND FREIGHT SCHEDULE

Air Ceylon

Fare and Freight Schedule

From	To	Single	Return	Freight per lb.	Excess Baggage per lb.
		Rs.	Rs. As.	Rs. As. Ps.	Rs. As. Ps.
Colombo	Jaffna	35	66 8	0 4 0	0 4 0
	Trichy	70	133 0	0 8 0	0 8 0
	Madras	85	162 0	0 7 3	0 7 3
	Bombay	230	437 0	0 14 6	0 14 6
	Karachi	365	694 0	1 8 0	1 8 0
Jaffna	Trichy	35	66 8	0 4 0	0 4 0
	Madras	50	95 0	0 5 8	0 5 8
	Bombay	195	371 0	0 10 5	0 10 5
	Karachi	330	627 0	1 4 0	1 4 0
Trichy	Karachi	270	513 0	1 0 0	1 0 0
Bombay	Karachi	150	285 0	0 8 0	0 8 0

Air India Limited

Fares List

From	To	One-way Fare	Round trip Fare	Excess Baggage per Kilo
		Rs.	Rs.	Rs. A.
Bangalore	Cochin	60	114	0 8
Bangalore	Coimbatore	35	67	0 5
Bangalore	Trivandrum	80	152	0 11
Bombay	Calcutta	220	418	1 14
Bombay	Colombo	230	437	2 2
Bombay	Delhi	175	333	1 8
Bombay	Hyderabad	82	156	0 11
Bombay	Jaipur	140	266	1 6
Bombay	Madras	153	291	1 4
Bombay	Nagpur	105	199	0 13
Cochin	Trivandrum	30	57	0 4
Coimbatore	Cochin	25	48	0 3
Coimbatore	Trivandrum	50	95	0 7
Hyderabad	Colombo	156	296	1 9
Hyderabad	Madras	71	135	0 9
Jaipur	Delhi	35	67	0 5
Karachi	Bombay	150	285	1 8
Karachi	Colombo	365	694	3 8
Karachi	Madras	303	576	2 12
Madras	Bangalore	40	76	0 6
Madras	Cochin	75	143	0 13
Madras	Coimbatore	60	114	0 10
Madras	Colombo	85	162	1 0
Madras	Trivandrum	100	190	1 1
Nagpur	Calcutta	145	276	1 4

Airways (India) Limited

Fare and Freight Schedule

From	To	Single	Return	Excess Bag. and Freight charge per lb.
		Rs.	Rs.	Rs. A.
Calcutta	Bhubaneswar	59½	113	0 4
Calcutta	Vishakhapatnam	120	228	0 8
Calcutta	Madras	220	418	1 0
Calcutta	Bangalore	260	494	1 3
Calcutta	Dacca	50	95	0 4
Calcutta	Bagdogra	74	140½	0 6
Calcutta	Gauhati	77	147	0 6
Calcutta	Mohanbari	127	241½	0 10
Bhubneswar	Vishakhapatnam	60½	115	0 4
Bhubneswar	Madras	160½	305	0 12
Bhubneswar	Bangalore	204½	388	0 15
Vishakhapatnam	Madras	100	195	0 8
Vishakhapatnam	Bangalore	140	266	0 11
Madras	Bangalore	40	76	0 3
Gauhati	Mohanbari	50	95	0 4

Bharat Airways Limited

Fare and Freight Schedule

From	To	Single	Return	Freight Excess bag. per lb.
		Rs.	Rs.	Rs. A.
Calcutta	Agartala	50	95	0 4
Calcutta	Patna	75	142	0 6
Calcutta	Benares	101	192	0 8
Calcutta	Lucknow	139	264	0 11
Calcutta	Kanpur	141	268	0 11
Calcutta	Allahabad	116	220	0 9
Calcutta	Delhi	190	361	1 0
Calcutta	Chittagong	54½	99	0 4½
Calcutta	Chittagong	27½	49½	0 4½
Calcutta	Chittagong	5½	11	0 4½
Calcutta	Gauhati	75	142	0 6
Calcutta	Tezpur	108	205	0 8
Agartala	Gauhati	38	72	0 3
Agartala	Tezpur	50	95	0 4
Gauhati	Tezpur	20	38	0 2
Patna	Benares	35	67	0 4
Patna	Lucknow	73	139	0 6
Patna	Allahabad	55	104	0 5
Patna	Kanpur	80	152	0 7
Patna	Delhi	138	263	0 11
Benares	Lucknow	38	72	0 4
Benares	Delhi	102	194	0 8

From	To	Single	Return	Freight Excess bag. per lb.
		Rs.	Rs.	Rs. A.
Lucknow	Delhi	65	123	0 6
Allahabad	Kanpur	30	57	0 4
Allahabad	Delhi	87	165	0 8
Kanpur	Delhi	62	118	0 6
				Excess bag. Freight per Kilo
Calcutta	Bangkok	350	630	3-8-0

Deccan Airways**Fare and Freight Schedule**

From	To	Single	Round Trip	Excess Baggage or Freight per lb.
		Rs.	Rs.	Rs. As.
Madras	Hyderabad	65	124	0 5
"	Nagpur	110	209	0 10
"	Delhi	217	412	1 3
"	Bombay	150	285	0 10
Hyderabad	Nagpur	50	95	0 5
"	Delhi	160	304	0 13
"	Bombay	75	143	0 6
"	Bangalore	65	124	0 6
Nagpur	Delhi	110	209	0 9
Bangalore	Bombay	135	257	0 11
"	Delhi	217	412	1 3
"	Nagpur	110	209	0 11

Indian National Airways Limited**Fare and Freight Schedule**

From	To	Single			Return			Freight and
		Adult	Child	Infant	Adult	Child	Infant	Excess Bag.
		Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	per lb.
Delhi	Calcutta	203	102	21	386	194	39	Rs. A. 1 0
Delhi	Karachi	170	85	17	323	162	33	0 13
Delhi	Lahore	66	33	7	126	63	13	0 5
Delhi	Jodhpur	75	38	8	143	72	15	0 6
Delhi	Amritsar	65	33	7	124	62	13	0 5
Delhi	Jammu	95 $\frac{1}{2}$	48	10	181 $\frac{1}{2}$	91	19	0 7 $\frac{1}{2}$
Delhi	Srinagar	120	60	12	228	114	24	0 9
Jodhpur	Karachi	95	48	10	181	91	19	0 8
Calcutta	Jodhpur	278	139	28	529	265	53	1 6
Calcutta	Karachi	350	175	35	630	315	63	1 11
Calcutta	Rangoon	235	118	24	447	224	46	1 2
Amritsar	Jammu	30 $\frac{1}{2}$	15	3	60 $\frac{1}{2}$	30	6	0 2 $\frac{1}{2}$
Amritsar	Srinagar	65	29	6	124	58	12	0 5
Jammu	Srinagar	35	14	3	70	28	6	0 2 $\frac{1}{2}$

Orient Airways Limited**Fare and Freight Schedule**

From	To	Single	Return	Freight per lb.	Excess Baggage per lb.
		Rs.	Rs.	Rs. A.	Rs. A.
Calcutta	Karachi	360	684	2 3	2 3
Calcutta	Rangoon	200	380	0 15	0 15
Calcutta	Akyab	100	190	0 8	0 8
Calcutta	Dacca	50	95	0 4	0 4
Calcutta	Chittagong	54	99	0 4 1/2	0 4 1/2
Chittagong	Dacca	32	61	0 4	0 4
Dacca	Karachi	350	665	2 0	2 0
Chittagong	Rangoon	140	266	0 11	0 11
Chittagong	Akyab	40	76	0 4	0 4
Dacca	Delhi	200	380	1 2	1 2

Air India Limited

TIME: I. S. T.

BOMBAY—KARACHI—BOMBAY

(Daily)

Flight No. 1	Flight No. 2	Dep.	Arr.	Flight No. 2	Flight No. 1
07.00	09.45	Dep. Bombay	Arr.	17.00	17.25
08.50	...	Arr. } Ahmedabad	Dep. }	...	15.25
09.20	...	Dep. }	Arr. }	...	15.00
11.55	13.00	Arr. Karachi	Dep.	14.00	12.45

BOMBAY—DELHI—BOMBAY

(Daily)

Flight No. 1	Flight No. 2	Dep.	Arr.	Flight No. 2	Flight No. 1
09.00	11.50	Dep. Bombay	Arr.	13.05	17.45
...	13.40	Arr. }	Dep. }	11.10	...
...	14.05	Dep. }	Arr. }	10.45	...
...	16.10	Arr. }	Dep. }	08.25	...
...	16.25	Dep. }	Arr. }	08.10	...
12.45	17.25	Arr. Delhi	Dep.	07.00	13.45

BOMBAY—CALCUTTA—BOMBAY

(Daily)

Flight No. 1	Dep.	Arr.	Flight No. 1
07.30	Dep. Bombay	Arr.	12.40
12.45	Arr. Calcutta	Dep.	07.05

[illegible]

TO:— CEYLON

U. K., Pakistan, India, Malaya, Egypt, Italy.

Flight No.	25	29	37	41	47	49	CL*	CS*
	Mon.	Daily	Fri.	Sun.	Fri.	Sun.	Wed.	Mon.
	Tue.			Wed.		Mon.		
	Thur.			Thur.		Tue.		
	Sat.					Thur.		
Colombo	Dep. 1030	0800	0645	1635			0930	1930
Singapore	Arr.	↓	↓	↓			↓	Tue. 0630
Jaffna	Dep. 1225	0925	0840	1800	0700	1430		
Trichinopoly	Arr.	↓	↓		0755	1525		
Madras	Dep. 1140	1140	0910					
Bombay	Arr.		1330				1500	
	Dep.		1415				1630	
Karachi	Arr.		1800				1930	
	Dep.						2130	
Cairo	Arr.						Thur. 0515	
	Dep.						0645	
Rome	Arr.						1245	
	Dep.						1415	
London	Arr.						1945	

* SKYMASTER SERVICE

Air Services of India Limited

BOMBAY-INDORE-GWALIOR				Tue. Thur. Sat.	
Mon. Wed. Fri.	I. S. T.	Dep.	Bombay	Arr.	I. S. T.
	06.45	Dep.			13.45
	08.20	Arr.	Indore	Dep.	12.10
	08.40	Dep.		Arr.	11.50
	10.00	Arr.	Gwalior	Dep.	10.30

BOMBAY-JAMNAGAR-BHUJ-KARACHI				Sun. Wed. Fri.	
Sun.	Wed. Fri.	I. S. T.	Arr.	Bombay	Arr.
		08.00	Dep.		17.35
		10.00	Arr.	Jamnagar	15.35
		10.20	Dep.		15.15
		10.50	Arr.	Bhuji	14.45
		11.05	Dep.		14.30
		12.30	Arr.	Karachi	13.15

BOMBAY-BHAVANAGAR-RAJKOT				Daily	
Daily	Dep.	Bombay	Arr.	Daily	
	08.30				17.80
	09.45	Arr.	Bhavanagar	Dep.	16.15
	10.00	Dep.		Arr.	15.45
	10.50	Arr.	Rajkot	Dep.	15.00

BOMBAY-POONA-BANGALORE

Tue. Sat.	Sun.	I. S. T.	Dep.	Bombay	Arr.	Tue. Sat.
		07.00	Arr.			Sun.
		07.30	Dep.	Poona	Dep.	I. S. T.
		07.45	Dep.		Arr.	13.45
		10.00	Arr.	Bangalore	Dep.	13.15
						13.00
						10.30

BOMBAY-KESHOD-PORBANDAR-RAJKOT-JAMNAGAR-BHUJ

Mon. Wed.	Fri. & Sat.	Dep.	Bombay	Arr.	Mon. Wed.
		08.00			Fri. & Sat.
		09.30	Arr.	Keshod	16.15
		05.50	Dep.		14.45
		10.20	Arr.	Porbandar	14.30
		10.30	Dep.		14.00
					13.45
		11.00	Arr.	Jamnagar	13.45
		11.30	Dep.		12.45
		12.00	Arr.	Bhuji	12.15

Bharat Airways

CALCUTTA-DELHI-CALCUTTA

Aircraft: Dakota

Frequency: Daily.

Dep.	CALCUTTA	Arr.	13.00
06.30			
08.30	PATNA	Dep.	11.00
08.45		Arr.	10.45
09.40	BENARES	Dep.	09.50
09.55		Arr.	09.35
11.00	LUCKNOW	Dep.	08.30
11.15		Arr.	08.15
13.00	DELHI	Dep.	06.30

CALCUTTA-DELHI-CALCUTTA

Aircraft: Dakota

Frequency: Twice A week (Day return)
Tuesdays and Fridays.

Dep.	CALCUTTA	Arr.	18.50
05.45			
08.55	ALLAHABAD	Dep.	15.40
09.15		Arr.	15.20
10.00	KANPUR	Dep.	14.35
10.10		Arr.	14.25
11.50	DELHI	Dep.	12.45

CALCUTTA-CHITTAGONG-CALCUTTA

Aircraft: Dakota

Frequency: Daily.

Dep.	CALCUTTA	Arr.	11.25
07.45			
09.20	CHITTAGONG	Dep.	09.50
5			

CALCUTTA-AGARTALA-GAUHATI-TEZPUR

Daily	Mon. Tue. Thur. Sat. Sun.			Mon. Tue. Thur. Sat. Sun.	Daily
06.00	06.00	Dep.	Calcutta	Arr.	17.20
07.20	07.20	Arr.		Dep.	16.00
07.40	07.40	Dep.	Agartala	Arr.	15.40
09.10	09.10	Arr.		Dep.	14.10
08.30	09.30	Dep.	Gauhati	Arr.	13.50
	10.05	Arr.	Tezpur	Dep.	13.15

CALCUTTA-BANGKOK-CALCUTTA

Aircraft : Skymaster		Frequency : once a week. Wednesday		
		I. S. T.	L. T.	G. M. T.
Calcutta	Dep.	07.00	07.00	01.30
Bangkok	Arr.	12.00	13.30	06.30
Bangkok	Dep.	13.30	15.00	08.00
Calcutta	Arr.	18.30	18.30	13.00

Deccan Airways Limited**DELHI-MADRAS-DELHI**

Aircraft : Dakota.		Frequency : Daily.		
I. S. T.				I. S. T.
07.00	Dep.	DELHI	Arr.	15.15
10.20	Arr.	NAGPUR	Dep.	11.55
10.40	Dep.		Arr.	11.25
12.20	Arr.	HYDERABAD	Dep.	09.45
13.00	Dep.		Arr.	09.10
14.00	Arr.	MADRAS	Dep.	07.00

HYDERABAD-BANGALORE-HYDERABAD

Aircraft : Dakota.		Frequency : Daily.		
13.10	Dep.	HYDERABAD	Arr.	09.00
15.10	Arr.	BANGALORE	Dep.	07.00

HYDERABAD-BOMBAY-HYDERABAD

Aircraft : Dakota		Frequency : Daily.		
09.40	Dep.	HYDERABAD	Arr.	12.30
12.10	Arr.	BOMBAY	Dep.	10.00

Indian National Airways**CALCUTTA-DELHI**

Aircraft : Viking		Frequency : Daily.		
I. S. T.				I. S. T.
13.00 (Snack Lunch)	Dep.	Calcutta	Arr.	18.45
17.30	Arr.	Delhi	Dep.	14.30 (Tea)

DELHI-JODHPUR-KARACHI

Wed. Fri. & Sun.					
0815	Dep.	Delhi	Arr.	1900	
1015	Arr.	Jodhpur	Dep.	1700	
1045	Dep.	Jodhpur	Arr.	1630 (Tea)	
1315	Arr.	Karachi	Dep.	1400	

DELHI-SRINAGAR

Sun. Mon. Wed. Fri.		Tue. Thur. Sat.		Tue. Thur. Sat.		Sun. Mon. Wed. Fri.
07.30	07.30	Dep.	Delhi	Arr.	19.20	18.30
09.15	09.15	Arr.	Amritsar	Dep.	17.35	16.45
09.45	09.45	Dep.		Arr.	17.05	16.15
	10.35	Arr.	Jammu	Dep.	16.15	
	11.00	Dep.		Arr.	15.50	
11.00	11.50	Arr.	Srinagar	Dep.	15.00	15.00

SRINAGAR-JAMMU-SRINAGAR

Aircraft : Dakota		Frequency : Mon. Wed. Fri. & Sun.		
11.40	Dep.	Srinagar	Arr.	14.00
12.30	Arr.	Jammu	Dep.	13.10

Indian Overseas Airlines**BOMBAY-NAGPUR-CALCUTTA**

Aircraft : Dakota		Frequency : Daily.		
I. S. T.				I. S. T.
08.30	Dep.	Bombay	Arr.	14.25
11.10	Arr.	Nagpur	Dep.	11.30
11.40	Dep.		Arr.	11.00
15.30	Arr.	Calcutta	Dep.	07.00

		Passenger fares.		Freight & Excess baggage. per lb.	
		Single	Return		
Bombay to	Nagpur	80	152	0	6
Bombay	Calcutta	195	370/8	0	14
Nagpur	Calcutta	115	218/8	0	9

Kalinga Air Lines**CALCUTTA-AGARTALA-CALCUTTA**

(Freight and Mails only)

Aircraft : Dakota.

Frequency : Ten Times.

Flight No. 1 (Daily)		Flight No. 2 (Sun. Wed. & Fri.)		Flight No. 1 (Daily)		Flight No. 2 (Sun. Wed. & Fri.)
0800	Dep.	0815	Calcutta	1820	Arr.	1835
0920	Arr.	0935	Agartala	1700	Dep.	1715

Freight Schedule

Calcutta-Agartala Rs. 0-4-0 per lb.

British Overseas Airways Corporation

BRITAIN-ITALY-MALTA-EGYPT-IRAQ-P. GULF-PAKISTAN-INDIA-CEYLON

York BO 778	Argonaut BO 762	Argonaut BO 770/772	Airways Terminal London Airport	dep.	arr.	Days	L. T.	Days	L. T.	Argonaut BO 773/771	Argonaut BO 763	York BO 779
3	4	3	dep.	06.30	08.00	13.15	14.45	1	14.45	18.05	17.45	7
4	5	4	dep.	08.00	13.15	14.45	08.10	1	08.10	16.50	16.20	6
5	6	5	arr.	13.15	14.45	08.10	08.10	1	08.10	—	11.15	—
6	7	6	dep.	14.45	08.10	11.45	08.10	1	08.10	—	10.15	—
7	8	7	arr.	08.10	11.45	10.15	08.10	1	08.10	11.45	—	—
8	9	8	dep.	10.15	03.30	15.25	08.10	1	08.10	10.15	—	—
9	10	9	arr.	03.30	15.25	08.10	08.10	1	08.10	04.00	03.30	—
10	11	10	dep.	08.10	11.45	10.15	08.10	1	08.10	04.30	15.25	—
11	12	11	arr.	10.15	03.30	15.25	08.10	1	08.10	—	—	—
12	13	12	dep.	15.25	08.10	11.45	08.10	1	08.10	—	—	—
13	14	13	arr.	08.10	11.45	10.15	08.10	1	08.10	—	—	—
14	15	14	dep.	10.15	03.30	15.25	08.10	1	08.10	—	—	—
15	16	15	arr.	03.30	15.25	08.10	08.10	1	08.10	—	—	—
16	17	16	dep.	08.10	11.45	10.15	08.10	1	08.10	—	—	—
17	18	17	arr.	10.15	03.30	15.25	08.10	1	08.10	—	—	—
18	19	18	dep.	15.25	08.10	11.45	08.10	1	08.10	—	—	—
19	20	19	arr.	08.10	11.45	10.15	08.10	1	08.10	—	—	—
20	21	20	dep.	10.15	03.30	15.25	08.10	1	08.10	—	—	—
21	22	21	arr.	03.30	15.25	08.10	08.10	1	08.10	—	—	—
22	23	22	dep.	08.10	11.45	10.15	08.10	1	08.10	—	—	—
23	24	23	arr.	10.15	03.30	15.25	08.10	1	08.10	—	—	—
24	25	24	dep.	15.25	08.10	11.45	08.10	1	08.10	—	—	—
25	26	25	arr.	08.10	11.45	10.15	08.10	1	08.10	—	—	—
26	27	26	dep.	10.15	03.30	15.25	08.10	1	08.10	—	—	—
27	28	27	arr.	03.30	15.25	08.10	08.10	1	08.10	—	—	—
28	29	28	dep.	08.10	11.45	10.15	08.10	1	08.10	—	—	—
29	30	29	arr.	10.15	03.30	15.25	08.10	1	08.10	—	—	—
30	31	30	dep.	15.25	08.10	11.45	08.10	1	08.10	—	—	—
31	32	31	arr.	08.10	11.45	10.15	08.10	1	08.10	—	—	—
32	33	32	dep.	10.15	03.30	15.25	08.10	1	08.10	—	—	—
33	34	33	arr.	03.30	15.25	08.10	08.10	1	08.10	—	—	—
34	35	34	dep.	08.10	11.45	10.15	08.10	1	08.10	—	—	—
35	36	35	arr.	10.15	03.30	15.25	08.10	1	08.10	—	—	—
36	37	36	dep.	15.25	08.10	11.45	08.10	1	08.10	—	—	—
37	38	37	arr.	08.10	11.45	10.15	08.10	1	08.10	—	—	—
38	39	38	dep.	10.15	03.30	15.25	08.10	1	08.10	—	—	—
39	40	39	arr.	03.30	15.25	08.10	08.10	1	08.10	—	—	—
40	41	40	dep.	08.10	11.45	10.15	08.10	1	08.10	—	—	—
41	42	41	arr.	10.15	03.30	15.25	08.10	1	08.10	—	—	—
42	43	42	dep.	15.25	08.10	11.45	08.10	1	08.10	—	—	—
43	44	43	arr.	08.10	11.45	10.15	08.10	1	08.10	—	—	—
44	45	44	dep.	10.15	03.30	15.25	08.10	1	08.10	—	—	—
45	46	45	arr.	03.30	15.25	08.10	08.10	1	08.10	—	—	—
46	47	46	dep.	08.10	11.45	10.15	08.10	1	08.10	—	—	—
47	48	47	arr.	10.15	03.30	15.25	08.10	1	08.10	—	—	—
48	49	48	dep.	15.25	08.10	11.45	08.10	1	08.10	—	—	—
49	50	49	arr.	08.10	11.45	10.15	08.10	1	08.10	—	—	—
50	51	50	dep.	10.15	03.30	15.25	08.10	1	08.10	—	—	—
51	52	51	arr.	03.30	15.25	08.10	08.10	1	08.10	—	—	—
52	53	52	dep.	08.10	11.45	10.15	08.10	1	08.10	—	—	—
53	54	53	arr.	10.15	03.30	15.25	08.10	1	08.10	—	—	—
54	55	54	dep.	15.25	08.10	11.45	08.10	1	08.10	—	—	—
55	56	55	arr.	08.10	11.45	10.15	08.10	1	08.10	—	—	—
56	57	56	dep.	10.15	03.30	15.25	08.10	1	08.10	—	—	—
57	58	57	arr.	03.30	15.25	08.10	08.10	1	08.10	—	—	—
58	59	58	dep.	08.10	11.45	10.15	08.10	1	08.10	—	—	—
59	60	59	arr.	10.15	03.30	15.25	08.10	1	08.10	—	—	—
60	61	60	dep.	15.25	08.10	11.45	08.10	1	08.10	—	—	—
61	62	61	arr.	08.10	11.45	10.15	08.10	1	08.10	—	—	—
62	63	62	dep.	10.15	03.30	15.25	08.10	1	08.10	—	—	—
63	64	63	arr.	03.30	15.25	08.10	08.10	1	08.10	—	—	—
64	65	64	dep.	08.10	11.45	10.15	08.10	1	08.10	—	—	—
65	66	65	arr.	10.15	03.30	15.25	08.10	1	08.10	—	—	—
66	67	66	dep.	15.25	08.10	11.45	08.10	1	08.10	—	—	—
67	68	67	arr.	08.10	11.45	10.15	08.10	1	08.10	—	—	—
68	69	68	dep.	10.15	03.30	15.25	08.10	1	08.10	—	—	—
69	70	69	arr.	03.30	15.25	08.10	08.10	1	08.10	—	—	—
70	71	70	dep.	08.10	11.45	10.15	08.10	1	08.10	—	—	—
71	72	71	arr.	10.15	03.30	15.25	08.10	1	08.10	—	—	—
72	73	72	dep.	15.25	08.10	11.45	08.10	1	08.10	—	—	—
73	74	73	arr.	08.10	11.45	10.15	08.10	1	08.10	—	—	—
74	75	74	dep.	10.15	03.30	15.25	08.10	1	08.10	—	—	—
75	76	75	arr.	03.30	15.25	08.10	08.10	1	08.10	—	—	—
76	77	76	dep.	08.10	11.45	10.15	08.10	1	08.10	—	—	—
77	78	77	arr.	10.15	03.30	15.25	08.10	1	08.10	—	—	—
78	79	78	dep.	15.25	08.10	11.45	08.10	1	08.10	—	—	—
79	80	79	arr.	08.10	11.45	10.15	08.10	1	08.10	—	—	—
80	81	80	dep.	10.15	03.30	15.25	08.10	1	08.10	—	—	—
81	82	81	arr.	03.30	15.25	08.10	08.10	1	08.10	—	—	—
82	83	82	dep.	08.10	11.45	10.15	08.10	1	08.10	—	—	—
83	84	83	arr.	10.15	03.30	15.25	08.10	1	08.10	—	—	—
84	85	84	dep.	15.25	08.10	11.45	08.10	1	08.10	—	—	—
85	86	85	arr.	08.10	11.45	10.15	08.10	1	08.10	—	—	—
86	87	86	dep.	10.15	03.30	15.25	08.10	1	08.10	—	—	—
87	88	87	arr.	03.30	15.25	08.10	08.10	1	08.10	—	—	—
88	89	88	dep.	08.10	11.45	10.15	08.10	1	08.10	—	—	—
89	90	89	arr.	10.15	03.30	15.25	08.10	1	08.10	—	—	—
90	91	90	dep.	15.25	08.10	11.45	08.10	1	08.10	—	—	—
91	92	91	arr.	08.10	11.45	10.15	08.10	1	08.10	—	—	—
92	93	92	dep.	10.15	03.30	15.25	08.10	1	08.10	—	—	—
93	94	93	arr.	03.30	15.25	08.10	08.10	1	08.10	—	—	—
94	95	94	dep.	08.10	11.45	10.15	08.10	1	08.10	—	—	—
95	96	95	arr.	10.15	03.30	15.25	08.10	1	08.10	—	—	—
96	97	96	dep.	15.25	08.10	11.45	08.10	1	08.10	—	—	—
97	98	97	arr.	08.10	11.45	10.15	08.10	1	08.10	—	—	—
98	99	98	dep.	10.15	03.30	15.25	08.10	1	08.10	—	—	—
99	100	99	arr.	03.30	15.25	08.10	08.10	1	08.10	—	—	—
100	101	100	dep.	08.10	11.45	10.15	08.10	1	08.10	—	—	—
101	102	101	arr.	10.15	03.30	15.25	08.10	1	08.10	—	—	—
102	103	102	dep.	15.25	08.10	11.45	08.10	1	08.10	—	—	—
103	104	103	arr.	08.10	11.45	10.15	08.10	1	08.10	—	—	—
104	105	104	dep.	10.15	03.30	15.25	08.10	1	08.10	—	—	—
105	106	105	arr.	03.30	15.25	08.10	08.10	1	08.10	—	—	—
106	107	106	dep.	08.10	11.45	10.15	08.10	1	08.10	—	—	—
107	108	107	arr.	10.15	03.30	15.25	08.10	1	08.10	—	—	—
108	109	108	dep.	15.25	08.10	11.45	08.10	1	08.10	—	—	—
109	110	109	arr.	08.10	11.45	10.15	08.10	1	08.10	—	—	—
110	111	110	dep.	10.15	03.30	15.25	08.10	1	08.10	—	—	—
111	112	111	arr.	03.30	15.25	08.10	08.10	1	08.10	—	—	—
112	113	112	dep.	08.10	11.45	10.15	08.10	1	08.10	—	—	—
113	114	113	arr.	10.15	03.30	15.25	08.10	1	08.10	—	—	—
114	115	114	dep.	15.25	08.10	11.45	08.10	1	08.10	—	—	—
115	116	115	arr.	08.10	11.45	10.15	08.10	1	08.10	—	—	—
116	117	116	dep.	10.15	03.30	15.25	08.10	1	08.10	—	—	—
117	118	117	arr.	03.30	15.25	08.10	08.10	1	08.10	—	—	—
118	119	118	dep.	08.10	11.45	10.15	08.10	1				

Indian Airways Magazine, December 1949

BRITAIN-ITALY-EGYPT-IRAQ-PAKISTAN-INDIA
-BURMA-SIAM-CHINA-JAPAN

Argonaut B O 908			Argonaut B O 906			Argonaut B O 907			Argonaut B O 909		
Days	L. T.	Days	L. T.			L. T.	Days	L. T.	Days		
2	16.30	5	16.30	dep. Airways Terminal	arr.	16.35	↑	16.35	↑		
	18.00		18.00	dep. London Airport	arr.	15.20		15.20			
	23.15		23.15	arr. Rome	dep.	11.30		11.30			
3	00.45	6	00.45	dep. Rome	arr.	09.30		09.30			
	07.25		07.25	arr. Cairo	dep.	04.10		04.10			
	09.25		09.25	dep. Cairo	arr.	02.40	7	02.40	4		
	14.35		14.35	arr. Basra	dep.	22.50		22.50			
	16.05		16.05	dep. Basra	arr.	20.50		20.50			
4	00.10	7	00.10	arr. Karachi	dep.	17.00		17.00			
	01.40		01.49	dep. Karachi	arr.	15.30		15.30			
	07.25		07.25	arr. Calcutta	dep.	09.00	6	09.00			
	09.25		09.25	dep. Calcutta	arr.	17.49		17.40			
	13.25		13.25	arr. Rangoon	dep.	15.30		15.30			
5	17.00	1	07.00	dep. Rangoon	arr.	14.00		14.00			
	09.25		09.25	arr. Bangkok	dep.	12.35		12.35			
	10.55		10.55	dep. Bangkok	arr.	11.05		11.05			
↓	17.40		17.49	arr. Hongkong	dep.	08.00	5	08.00	2		
		2	08.00	dep. Hongkong	arr.	14.50					
			—	arr. Shanghai	dep.	—					
			—	dep. Shanghai	arr.	—					
		↓	15.54	arr. Tokyo	dep.	06.00	4				

LONDON—SYDNEY—LONDON

FREQUENCY : 2 WEEKLY

AIRCRAFT: CONSTELLATION

	LT.					
Tue. Fri.	08.15	dep.	London	arr.	14.15	
	13.35	arr.	Rome	dep.	10.05	Sun. Wed.
	15.00	dep.	Rome	arr.	19.00	
	21.30	arr.	Cairo	dep.	13.45	
Wed. Sat.	07.45	dep.	Cairo	arr.	12.15	
	19.45	arr.	Karachi	dep.	04.45	Sat. Tue.
	22.45	dep.	Karachi	arr.	20.15	
Thu. Sun.	04.00	arr.	Calcutta	dep.	14.00	
"	05.30	dep.	Calcutta	arr.	12.30	
	15.00	arr.	Singapore	dep.	07.00	Fri. Mon.
Fri. Mon.	08.00	dep.	Singapore	arr.	14.15	
	18.30	arr.	in	dep.	07.30	Thu. Sun.
	22.00	dep.	n	arr.	05.15	
Sat. Tue.	07.00	arr.	y	dep.	21.30	Wed. Sat.

China National Aviation Corporation

HONGKONG—RANGOON—CALCUTTA—KARACHI

Aircraft: Skymaster.

Time: Local Standard Time.

Hongkong	Dep.	Sat.	08.00
Kunming	Arr.		10.45
Kunming	Dep.		11.45
Rangoon	Arr.		14.55
Rangoon	Dep.	Sun.	06.30
Calcutta	Arr.		09.00
Calcutta	Dep.		10.00
Karachi	Arr.		17.45

KARACHI—CALCUTTA—RANGOON—HONGKONG

Aircraft: Skymaster.

Time: Local Standard Time.

Karachi	Dep.	Mon.	04.00
Calcutta	Arr.		11.45
Calcutta	Dep.		12.45
Rangoon	Arr.		17.15
Rangoon	Dep.	Tue.	06.30
Kunming	Arr.		10.40
Kunming	Dep.		11.40
Hongkong	Arr.		16.25

K. L. M. Royal Dutch Airlines

AMSTERDAM—CALCUTTA—BATAVIA

Aircraft: Constellation

Amsterdam	Dep.	Thur.	20.00	Mon.	20.00	Wed.	20.00	Sat. & Sun.	20.00
Rome	Arr.		23.40		23.40				
Rome	Dep.	Fri.	01.15	Tue.	01.15	Thu.	05.15	Sun. & Mon.	05.15
Cairo	Arr.						08.00		08.00
Cairo	Dep.								
Damascus	Arr.		08.15		08.15		12.30		12.30
Damascus	Dep.		11.00		11.00		13.45		13.45
Baghdad	Arr.								
Baghdad	Dep.								
Basra	Arr.		15.00		15.00		13.00		13.00
Basra	Dep.		16.30		16.30		14.30		14.30
Karachi	Arr.	Sat.	00.20	Wed.	00.20	Fri.	22.45	Mon. & Tue.	22.40
Karachi	Dep.		03.30		03.30		01.30		01.30
Calcutta	Arr.		09.00		09.00		07.00		07.00
Calcutta	Dep.		10.30		10.30		08.30		08.30
Bangkok	Arr.		16.20		16.20		14.20		14.20
Bangkok	Dep.	Sun.	06.30	Thur.	06.30	Sat.	06.30	Tue & Wed.	06.30
Singapore	Arr.				11.00		11.00		11.00
Singapore	Dep.				12.30		12.30		12.30
Batavia	Arr.		13.50		15.40		15.40		13.50

BATAVIA—CALCUTTA—AMSTERDAM

Batavia	Dep.	Mon.	08.00	Thur.	06.30	Tue.	06.30	Fri. & Sat.	08.00
Singapore	Arr.				08.45		08.45		
Singapore	Dep.				10.00		10.00		
Bangkok	Arr.		13.15		13.20		13.20		13.15
Bangkok	Dep.		15.15		15.15		15.15		15.15
Calcutta	Arr.		18.15		18.15		18.15		18.15
Calcutta	Dep.		20.00		20.00		20.00		20.00
Karachi	Arr.	Tue.	02.00	Fri.	02.00	Wed.	02.00	Sat. & Sun.	02.00
Karachi	Dep.		05.00		05.00		05.00		05.00
Basra	Arr.		08.30		08.30		10.00		08.30
Basra	Dep.		10.00		10.00		11.30		10.00
Baghdad	Arr.								
Baghdad	Dep.		12.30		12.30		14.30		13.45
Damascus	Arr.	Wed.	03.30	Sat.	01.45	Thu.	02.30	Sun. & Mon.	04.00
Damascus	Dep.								
Cairo	Arr.						07.45		07.45
Cairo	Dep.						09.00		09.00
Rome	Arr.		12.30		12.55		12.55		12.30
Rome	Dep.								
Amsterdam	Arr.								

Pan American World Airways

West Bound (from San Francisco)

San Francisco	Dep.	5	7	3
Seattle	Dep.	Tue.	Fri.	Mon.
Portland	Arr.	16.30	22.00	23.30
Portland	Dep.		23.10	
Honolulu	Arr.		23.55	
Honolulu	Dep.	Wed.	Sat.	Tue.
Midway Island	Arr.	02.30	11.45	06.30
Midway Island	Dep.	05.00	22.00	11.30
(International dateline)	Arr.	10.30		16.15
Wake Island	Dep.	11.15	Mon.	17.45
Wake Island	Arr.	16.30	07.30	
Guam	Dep.	18.00	08.30	
Guam	Arr.	23.30		
Manila	Dep.	Fri.	01.00	
Manila	Arr.	06.45		
Tokyo	Dep.	08.30		
Tokyo	Arr.		16.30	Thu.
Okinawa	Dep.		01.00	00.30
Okinawa	Arr.		06.20	02.00
Hong Kong	Dep.		07.30	07.30
Hong Kong	Arr.		08.30	08.30
Bangkok	Dep.	12.30	12.00	13.00
Bangkok	Arr.	14.30	14.30	14.30
Bangkok	Dep.	19.30	19.30	19.30
Bangkok	Arr.	21.00	21.00	21.00
Calcutta	Dep.	Sat.	Wed.	Fri.
	Arr.	01.15	01.15	01.15

A: West Bound (from Culcutta)

West Bound (from Calcutta)		Flight Number			
		1	7	5	
		Mon	Wed.	Sat.	
		Tue.	Thu.	Sun.	
Calcutta	Dep.	23.45	22.00	22.00	
Delhi	Arr.	03.25	01.40	01.40	
Delhi	Dep.	04.40	02.40	02.40	
Karachi	Arr.	07.40	05.40	05.40	Sat. 04.35
Karachi	Dep.	09.05	06.50	06.50	05.35
Basra	Arr.				08.30
Basra	Dep.				09.50
Damascus	Arr.	15.30	12.15	12.15	12.15
Damascus	Dep.	17.30	13.15	13.15	13.15
Istanbul	Arr.	19.35			
Istanbul	Dep.	22.00			
		Wed.			
Brussels	Arr.	04.25	22.10	22.10	22.10
Brussels	Dep.	05.10	22.55	22.55	22.55
London	Arr.	05.35	23.20	23.20	23.20
			Fri.	Mon.	Sun.
London	Dep.	08.30	01.00	01.00	01.00
Shannon	Arr.		03.05	03.05	
Shannon	Dep.		04.05	04.05	
Gander	Arr.	16.55	10.25	10.25	09.25
Gander	Dep.	17.55	11.25	11.25	10.55
Boston	Arr.		14.40	14.40	
Boston	Dep.		15.25	15.25	
La Guardia, New York	Arr.	21.45	16.40	16.40	14.15

Philippine Air Lines Inc.

The Sunshine Route Schedule

MANILA-AMSTERDAM

	Leave	Arrive
Sat.	Manila 09.30	Calcutta 18.00
"	Calcutta 17.30	Karachi 23.30
Sun.	Karachi 01.00	Lydda 05.30
"	Lydda 07.00	Rome 12.00
"	Rome 13.30	Madrid 17.15
"	Madrid 18.45	London 21.45
"	London 22.45	Amsterdam 01.00 Mon.

AMSTERDAM-MANILA

Wed..	Amsterdam	11.00	London	11.30	
"	London	12.30	Madrid	17.30	
"	Madrid	18.00	Rome	21.45	
"	Rome	25.45	Lydda	05.15	Thu.
Thu.	Lydda	06.45	Karachi	17.45	
"	Karachi	19.15	Calcutta	01.15	Fri.
Fri.	Calcutta	02.45	Manila	13.30	"

Trans World Airline

East Bound Flights

	No. 907	No. 903	No. 905		No. 902	No. 904	No. 906
	Mon.	Wed.	Sat.		Sun.	Wed.	Fri.
Bombay	dep. 15.00	15.00	15.00	New York	dep. 10.00	10.00	10.00
Dhahran	arr. 20.20	20.20	20.20	Gander	arr. 16.00		
Dhahran	dep. 21.05	21.05	21.05	Gander	dep. 17.00		
Basra	arr. 21.05	21.45	21.45	Shannon	arr. 17.00		Sat. 04.10
Basra	dep. 22.30	22.30	22.30	Shannon	dep. 17.00		05.10
	Tue.	Thur.	Sun.	Paris	arr. 08.50	Thur. 08.50	08.50
Cairo	arr. 00.30	02.15	02.15	Paris	dep. 09.50	09.50	09.50
Cairo	dep. 01.30	03.15	03.15	Zurich	arr. 11.30	11.30	
Athens	arr. 06.45		06.30	Zurich	dep. 12.15	12.15	
Athens	dep. 07.30	08.30	07.15	Rome	arr. 14.50	14.30	14.50
Rome	arr. 10.15	09.15	09.30	Rome	dep. 15.35	15.15	15.35
Geneva	dep. 11.00		10.15	Athens	arr. 19.25	19.25	
Geneva	arr. 11.00			Athens	dep. 20.10	20.10	
Zurich	dep. 12.30		12.40	Cairo	arr. 22.05	23.20	22.05
Zurich	arr. 13.40		13.25	Cairo	dep. 23.05	Fri. 00.20	23.05
Paris	dep. 15.40	12.45	15.05				Sun. 04.00
Shannon	arr. 16.50	13.45	16.05	Basra	arr. 04.00		04.45
Shannon	dep. 16.50	15.45	18.05	Basra	dep. 04.45		07.25
		16.45	19.05	Dhahran	arr. 07.25	07.15	08.10
			Mon.	Dhahran	dep. 08.10	08.00	15.45
			01.40	Bombay	arr. 15.45	15.35	
Gander	arr. 04.25	Fri. 04.20	02.40				
Gander	dep. 04.25		06.40				
NEW YORK							

Himalayan Aviation Limited

PASSENGER	CALCUTTA	NAGPUR	BOMBAY	DELHI	MADRAS
	Rs.	Rs.	Rs.	Rs.	Rs.
Calcutta	—	99	172	126	145
Nagpur	99	—	73	107	96
Bombay	172	73	—	118	112
Delhi	126	107	118	—	191
Madras	145	96	112	191	—

Freight & Ex. Baggage Per Lb.

Calcutta	—	0 10	0 14	1 0	1 0
Nagpur	0 10	—	0 8	0 9	0 10
Bombay	0 14	0 8	—	0 12	0 10
Delhi	1 0	0 9	0 12	—	1 3
Madras	1 0	0 10	0 10	1 3	—

SERVICE	DELHI	NAGPUR	MADRAS
HOURS	SOUTH BOUND	NORTH BOUND	HOURS
23.00	Dep. Delhi	Arr.	06.55
02.30	Arr. Nagpur	Dep.	03.25
03.20	Dep. Nagpur	Arr.	02.45
07.05	Arr. Madras	Dep.	23.00

SERVICE	CALCUTTA	NAGPUR	BOMBAY
HOURS	WEST BOUND	EAST BOUND	HOURS
23.00	Dep. Calcutta	Arr.	07.15
03.00	Arr. Nagpur	Dep.	03.15
03.20	Dep. Nagpur	Arr.	02.15
06.20	Arr. Bombay	Dep.	23.25

Scandinavian Air Lines

Aircraft: DC.6

	LST			LST	
Sunday	08.00	Dep.	Bangkok	Arr.	10.30
	11.05	Arr.	Calcutta	Dep.	04.40
	12.20	Dep.	Calcutta	Arr.	02.55
	18.30	Arr.	Karachi	Dep.	21.40
	19.45	Dep.	Karachi	Arr.	19.55
Monday	01.10	Arr.	Damascus	Dep.	08.30
	02.25	Dep.	Damascus	Arr.	08.55
	08.20	Arr.	Rome	Dep.	00.00
	10.05	Dep.	Rome	Arr.	22.05
	12.25	Arr.	Zurich	Dep.	19.55
	13.15	Dep.	Zurich	Arr.	18.55
	16.00	Arr.	Copenhagen	Dep.	16.10
	16.50	Dep.	Copenhagen	Arr.	15.15
	18.25	Arr.	Stockholm	Dep.	13.30

BATAVIA—CALCUTTA—AMSTERDAM

	Mon.	Thur.	Tue.	Fri. & Sat.
Batavia	Dep. 08.00	06.30	06.30	08.00
Singapore	Arr. ↓	08.45	08.45	↓
Singapore	Dep. 13.15	13.20	13.20	13.15
Bangkok	Arr. 15.15	15.15	15.15	15.15
Bangkok	Dep. 18.15	18.15	18.15	18.15
Calcutta	Arr. 20.00	20.00	20.00	20.00
Calcutta	Dep. Tue. 02.00	Fri. 02.00	Wed. 02.00	Sat. & Sun. 02.00
Karachi	Arr. 05.00	05.00	05.00	05.00
Karachi	Dep. 08.30	08.30	↓	08.30
Basra	Dep. 10.00	10.00	↓	10.00
Basra	Arr. ↓	↓	10.00	↓
Baghdad	Dep. ↓	↓	11.30	↓
Baghdad	Arr. 12.30	12.30	↓	↓
Damascus	Dep. Wed. 03.30	Sat. 01.45	Thu. 14.30	Sun. & Mon. 13.45
Damascus	Arr. ↓	↓	02.30	↓
Cairo	Dep. ↓	07.45	07.45	04.00
Cairo	Arr. ↓	09.00	09.00	↓
Rome	Dep. 12.30	12.55	12.55	12.30
Rome	Arr. ↓	↓	↓	↓
Amsterdam	Dep. ↓	↓	↓	↓

Pan American World Airways

	West Bound (from San Francisco)	Flight Number	
	5	7	3
	Tue. 16.30	Fri.	Mon. 23.30
San Francisco	Dep.		
Seattle	Dep.	22.00	
Portland	Arr.	23.10	
Portland	Dep.	23.55	
	Wed.	Sat.	Tue.
Honolulu	Arr.	11.45	06.30
Honolulu	Dep.	22.00	11.30
Midway Island	Arr.		16.15
Midway Island	Dep.		17.45
(International dateline)	Thu.	Mon.	
Wake Island	Arr.	07.30	
Wake Island	Dep.	08.30	
Guam	Arr.		
	Fri.		
Guam	Dep.		
Manila	Arr.		
Manila	Dep.		
	16.30	Thu.	
Tokyo	Arr.	00.30	
	Tue.		
Tokyo	Dep.	01.00	02.00
Okinawa	Arr.	06.30	07.30
Okinawa	Dep.	07.30	08.30
Hong Kong	Arr.	12.00	13.00
Hong Kong	Dep.	14.30	14.30
Bangkok	Arr.	19.30	19.30
Bangkok	Dep.	21.00	21.00
	Sat.	Wed.	Fri.
Calcutta	Arr. 01.15	01.15	01.15

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Philippine Air Lines Inc.

The Sunshine Route Schedule

MANILA-AMSTERDAM

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AMSTERDAM-MANILA

Thi

Trans World Airline

West Bound Flights

East Bound Flights

NEW YORK

Aest Br

Indian Airways Magazine, December 1949

Himalayan Aviation Limited

PASSENGER	CALCUTTA	NAGPUR	BOMBAY	DELHI	MADRAS
	Rs.	Rs.	Rs.	Rs.	Rs.
Calcutta	99	172	123	145	
Nagpur	73	107	96	112	
Bombay	107	118	191		
Delhi	96	112			
Madras					

Freight & Ex. Baggage Per Lb.

Calcutta	0 10	0 14	1 0	1 0
Nagpur	0 8	0 8	0 9	0 10
Bombay	0 9	0 12	0 12	0 10
Delhi	0 10	0 10	1 3	1 3
Madras				

SERVICE	DELHI	NAGPUR	MADRAS
HOURS	SOUTH BOUND	NORTH BOUND	HOURS
23.00	Dep. Delhi	Arr. Nagpur	06.55
02.30	Arr. Nagpur	Dep. Nagpur	03.25
03.20	Dep. Nagpur	Arr. Madras	02.45
07.05	Arr. Madras	Dep. Madras	23.00

SERVICE	CALCUTTA	NAGPUR	BOMBAY
HOURS	WEST BOUND	EAST BOUND	HOURS
23.00	Dep. Calcutta	Arr. Nagpur	07.15
03.00	Arr. Nagpur	Dep. Nagpur	03.15
08.20	Dep. Nagpur	Arr. Bombay	02.15
06.20	Arr. Bombay	Dep. Bombay	23.25

Scandinavian Air Lines

Aircraft: DC.6

	LST				LST
Sunday	08.00	Dep. Bangkok	Arr. Calcutta	10.30	
	11.05	Arr. Calcutta	Dep. Calcutta	04.40	
	12.20	Dep. Calcutta	Arr. Karachi	02.55	Friday
	18.30	Arr. Karachi	Dep. Karachi	21.40	
	19.45	Dep. Karachi	Arr. Damascus	19.55	
Monday	01.10	Arr. Damascus	Dep. Damascus	08.30	
	02.25	Dep. Damascus	Arr. Rome	06.55	
	08.20	Arr. Rome	Dep. Rome	00.00	Thursday
	10.05	Dep. Rome	Arr. Zurich	22.05	
	12.25	Arr. Zurich	Dep. Zurich	19.55	
	13.15	Dep. Zurich	Arr. Copenhagen	18.55	
	16.00	Arr. Copenhagen	Dep. Copenhagen	16.10	
	16.50	Dep. Copenhagen	Arr. Stockholm	15.15	Wednesday
	18.25	Arr. Stockholm	Dep. Stockholm	13.30	

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Authorised Capital	...	...	...	...	Rs. 8 Crores.
Subscribed Capital	...	...	...	...	Rs. 4 Crores.
Paid-up Capital	...	...	...	...	Rs. 2 Crores.
Reserve Fund	...	...	...	...	Rs. 45 Lacs

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General Manager

B. T. THAKUR

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