



Getting closer—a more intimate view of the spacious DC-8 pilots' office. (A glimpse from the flight deck appeared on page 822 last week.) Each pilot's panel contains primary flight instruments and two integrated flight instrument systems; throttles and other manual controls have been shaped, where possible, to be representative of the components they operate. Systems instruments and controls are manned by a flight engineer at a panel aft of the second pilot.

CIVIL AVIATION . . .

findings, based on a sample poll of 6,000 passengers flying east to Europe during February, June and September last year, show (as reported by the air correspondent of *The Financial Times*) that the average income of their 50,000-plus passengers who annually cross eastwards is £2,500, but the proportion of those with £1,800 or less (34 per cent) is far higher than those with incomes of over £5,400 (23 per cent).

Housewives form the biggest single group (26 per cent) of T.W.A.'s east-west travellers, followed by the "executive/managerial" and the "teacher/student" class, though most of the latter do their travelling in the peak summer season. Businessmen make up only 11 per cent of summer-season passengers, but they are the most consistent group in year-round monthly volume (700-900). Professional men—doctors, lawyers, etc.—follow with 10 per cent.

Why do these people fly east? According to T.W.A., apart from the businessmen more than half its passengers to Europe have either lived there earlier or have parents who lived there. Each year, nearly two-thirds of the airline's passengers travel for pleasure. The majority of North Atlantic air travellers are American tourists bent on spending their vacation money in Europe. Last year they disbursed \$1,500 m (£535,711,500) abroad, most of it in Europe.

TWO SERIOUS ACCIDENTS

WE regret to record that on Sunday last, June 24, a B.O.A.C. Argonaut crashed and caught fire after taking off from Kano Airport, Nigeria. Of the 45 people on board, 30 died—including the stewardess and one of the stewards—and a number were seriously injured.

Four days before, on June 20, the Venezuelan airline, Linea Aeropostal Venezolana, had suffered an accident resulting in one of the most serious losses of life in the history of commercial aviation. The accident was unusual in that the entire circumstances were observed from the air—by the crew of a Long Island coastguard Grumman amphibian escorting the Venezuelan Super Constellation (which had suffered a "runaway" engine) back to Idlewild. It appears to have been due to jettisoned fuel being ignited by the burning port inboard engine. In previous years, six safety awards have been made to Linea Aeropostal Venezolana.

California Eastern Aviation announce that, in the past ten years, 452,518,130 passenger miles have been logged without injury to a passenger or crew member, and the 1955 accident figures for operations by American domestic airlines show that for the fourth consecutive year the passenger death rate has been below one per 100 million passenger miles.

GILDING THE SKYLARK

ANNOUNCED as a joint undertaking of Hughes Tool Co., Delta Airlines, Convair, and the General Electric Co., is the Convair Golden Arrow medium-range jet airliner. Delivery of thirty aircraft for T.W.A. and ten for Delta has been scheduled to begin in late 1959.

These aircraft, representing contracts in excess of £70m with spares provisioning, will be powered by four General Electric CJ-805 engines—a commercial version of the successful J79 unit. A joint statement says: "The name, Golden Arrow, is derived not only from the airliner's commercially unmatched speed, but also from its planned unique and sensational employment of colour in metal. The Golden Arrows are planned to be the first aircraft to

I.C.A.O. AT CARACAS

THE tenth annual assembly of I.C.A.O. was formally opened in Caracas, Venezuela, on June 19, attended by the Venezuelan President and members of his government. Present were 282 delegates from 67 countries, with observers from six nations, including Russia. The United Kingdom delegation was led by Mr. J. E. Keel, C.B. The primary technical item under discussion will be the problem of establishing suitable organization to handle the rapid growth of jet airliner traffic in the next few years.

It is reported from Caracas that Mr. O. Zapounov, senior inspector of Aeroflot, told the conference that the Tu-104 was being "mass-produced" and that three were in service between Moscow and the Far East. A further Russian announcement stated that the Tu-104 would go into regular service between Moscow and Prague or Stockholm at the end of the year. (Inter-capital flights were discussed by Mr. Nikita Krushchev, Soviet Communist party first secretary, at the Soviet Air Force Day party; he claimed that Andrei Tupolev's new 180 passenger four pure-jet engined airliner, the Tu-114, will be able to make non-stop flights between Moscow and New York or Moscow and Vladivostok, the Soviet Pacific port.)

BREVITIES

SOUTH AFRICAN AIRWAYS hope to start a new direct service between Perth, Western Australia, and Johannesburg, according to Mr. H. C. De Wet, the company's assistant manager. The service would start in September this year on the basis of one flight every two weeks for the first eighteen months, and subsequently once a week, or more in case of need.

Reports that Capital Airlines, who have 60 Viscounts on order, are to buy Comets or Britannias have been denied by Capital officials.

Pakistan International Airlines plans to extend its operations to the Middle East in 1958, using three Viscount 810 aircraft. Two series 840 machines are also on order, together representing business for Vickers-Armstrongs to a value of £1½m.

On June 19 a Lufthansa Super-G Constellation flew non-stop from Hamburg to New York on a normal scheduled service. The flight took 14 hr 4 min and normal fuel reserves were still intact when the aircraft landed.

Tomorrow, June 30, the Society of Licensed Aircraft Engineers hold their thirteenth annual general meeting in the Assembly Hall, Mansion House, 26 Portland Place, London, W.1. Commencing at 2 p.m., the meeting will include the guest address, the presentation of awards and the presidential installation.

The Kelvin Hughes drift and ground-speed meter is to be fitted on all B.O.A.C. Britannias. The first production instrument was delivered to Vickers-Armstrongs, who fitted it to a V.I.P. Viscount ordered by the Pakistan Government. The second went to Central African Airways for their first Viscount and they have since ordered five more drift meters from Kelvin Hughes. Other overseas operators who have specified these instruments are Middle East Airlines and Indian Airlines Corporation (for their Viscounts) and Canadian Pacific Airlines (for the DC-6B and Britannia 300 L.R.).