

## AIR TRANSPORT...

## BUA's "COMMANDOS"

THE forecast loss by British United Airways for 1967 was £532,000 and for 1968 it is £1.1 million—"and at the rate we are going now the 1969 loss would be £1.4 million." This was said by Mr Alan Bristow, BUA's new managing director, when speaking to staff members soon after his appointment. As already reported (last week's issue, page 1058) he has been organising a key management team ("Bristow's commandos") and it will be among their responsibilities to cut these losses down. The team consists of five new directors, including one still to be named. Announced just as we go to press, names and responsibilities are: Mr E. F. Bates (previously general sales manager), sales; Mr John E. Bes (general manager, finance), comptroller; Mr William A. Richardson (chief engineer), engineering; and Mr John Sidebotham (assistant to the managing director), administration. The operations director has still to be appointed. In addition, two general managers, Mr Peter Lewis, personnel, and Mr Alastair T. Pugh, planning, are responsible to the managing director.

Mr Bristow said to the staff that he proposed to set out a clear and definite plan of the scheduled routes and type of work on which BUA aircraft would be employed. "I want BUA at the top of the first independent league," he said. Supplemental traffic would be generated; the sales effort would be increased. "We will expand our charter business and progressively withdraw from trooping." He described trooping rates as "totally uneconomic."

Whilst strict economies will be made in non-essential, non-productive areas, expenditure will be increased in areas which

can show a genuine increase in productivity and efficiency. "Every economic measure will have a clear purpose." Improvements would be made to facilities in the accounts department; operations staff would get better working conditions. His aim was to create proper facilities in which people could work efficiently.

As already recorded, costs are being cut by moving all BUA staff from Portland House in Victoria, London, to the Gatwick area just as soon as facilities can be provided. Of this Mr Bristow said that he believed "that we must masterplan facilities at Gatwick and stop this everlasting piecemeal Topsy-like growth. Steps will be taken in a matter of weeks to turn the top floor of the administration block into a management nerve centre. This floor will house all the directors and a conference room." He also outlined two incentive schemes, one for boosting passenger and cargo sales, and the other for ideas awards.

## BOEING 737 UP TO DATE

WITH certification of the Boeing 737 now in the bag one can assess the full implication of the specification changes following certain shortcomings and some credits revealed during flight development. Although the 737 has turned out to be heavier and more draggy than predicted, an excess of lift and the availability of the flat-rated JT8D-9 allowed a sufficient increase in operating weights to permit the basic mission guarantees still to be met.

Britannia Airways, the only British operator to have ordered the 737, calculates that, even with the extra cost of devaluation on the 70 per cent or so of the purchase price outstanding for the fleet, the type still promises a seat-mile cost advantage over comparable types that could carry at least 117 passengers on the London-Palma route. Britannia's disappointment is over the two-month delay in deliveries (which Boeing attributes to production problems). The company's first 737-200 is to arrive

in July, and the second in August. Arrangements are in hand to lease jet equipment for the early part of the tour season. Britannia has chosen to delay the delivery of its final two 737-200s until the spring of 1969, and to have them at the higher all-up weights that will, by then, be available. Incidentally, Britannia is applying for certification of its initial pair of 737-200s at a take-off gross weight of 103,200lb by trading against a reduced zero-fuel weight.

During the 737 development trials, at the lower cruise speeds drag was some 5 per cent worse than estimated, and somewhat worse at higher Mach cruise speeds. The net result is that cruise speeds are some 30kt below the original estimate, with a corresponding effect on the specific range. A drag-reduction investigation is in hand, and there is hope of gains by subtle alteration of profile in such critical areas as the back end of the fuselage and the powerplant support pylons.

Exceptional care went into the design of the triple-slotted Fowler flaps, and with the optimisation of settings following flight trials the stalling speeds were very much lower than predicted. On take-off performance this was equivalent to as much as 7,000lb, with the aircraft at around 100,000lb. At least 2,000lb is a typical gain over the whole spectrum of conditions. Landing-distance gains are of a similar order.

The data on this page were supplied by Boeing and is presented in the format of our annual Commercial Aircraft Survey (*Flight* for November 23, 1967).

Type	737-100		737-200		737-200C	
	Basic	Intermediate	Basic	Intermediate	Basic	Intermediate
Powerplant and sea level thrust ...	Two Pratt & Whitney JT8D-7 (14,000lb thrust) or JT8D-9 (14,500lb thrust)					
Overall dimensions						
Span (ft) ...	93		93		93	
Length (ft) ...	94		100		100	
Height (ft) ...	37		37		37	
Wing area (sq ft) ...	980		980		980	
Mean $\frac{1}{4}$ -chord sweep (deg) ...	25		25		25	
Wheel track (ft) ...	17.2		17.2		17.2	
Wheelbase (ft) ...	34.3		37.3		37.3	
Weights (lb)						
Ramp gross ...	100,800	111,000	100,800	111,000	100,800	111,000
Take-off gross ...	100,000	110,000	100,000	110,000	100,000	110,000
Max landing ...	98,000	99,000	98,000	99,000	98,000	99,000
Max zero fuel ...	85,000	90,000	85,000	92,000	88,000	95,000
Operating weight empty*/appropriate interior layout ...	56,749/ 101-seat	57,926/ 101-seat	58,189/ 113-seat	59,255/ 113-seat	60,496/ all-cargo	62,693/ all-cargo
Fuel capacity (Imp gal)						
Standard tanks ...	2,375	3,508	2,375	2,955	2,375	2,375
Optional total tankage ...	3,508	3,956	3,508	3,956	3,508	3,956
Accommodation						
Cabin length (ft) ...	62.3		68.7		68.7	
Front hold length (ft) ...	11.5		14.5		14.5	
Front hold volume (cu ft) ...	280		370		370	
Rear hold length (ft) ...	18.1		21.3		21.3	
Rear hold volume (cu ft) ...	370		505		505	
Max seating capacity (34in pitch) ...	101		117		117	
Cabin pressurisation (lb/sq in) ...	7.5 above 18,500ft 14.7 below 18,500ft		7.5 above 18,500ft 14.7 below 18,500ft		7.5 above 18,500ft 14.7 below 18,500ft	
Performance						
FAR take-off field length (ft)† ...	6,150 $\psi$	7,400	6,150 $\psi$	7,400	6,150 $\psi$	7,400
FAR landing field length (ft)‡ ...	4,950	4,700	4,950	4,700	4,950	4,700
Approach speed (kt)‡ ...	134	131	134	131	134	131
Cruising speed (kt)/altitude (ft)§						
High-speed ...	475/22,000		475/22,000		475/22,000	
Long-range ...	406/30,000		406/30,000		406/30,000	
Max permitted operating altitude (ft) ...	35,000	35,000	35,000	35,000	35,000	35,000
Engine-out service ceiling (ft)§ ...	17,000		17,000		17,000	
Max std tanks fuel range (n.m.)/payload (lb)¶ ...	1,540/ 20,000	2,260/ 20,000	1,570/ 20,000	1,850/ 20,000	1,480/ 20,000	1,440/ 20,000
Max opt tanks fuel range (n.m.)/payload (lb)¶ ...	1,950/ 20,000	2,630/ 20,000	1,790/ 20,000	2,510/ 20,000	1,580/ 20,000	2,170/ 20,000

\* Including typical electronic and other equipment. Excluding crew, usable fuel, payload and consumables such as drinking water and galley provisions. † ISA, sea level, take-off gross weight. ‡ ISA, sea level, max landing weight. § ISA, 95,000lb. ¶ ISA, still air, no fuel reserves, long range cruise technique.  $\psi$  JT8D-7. || JT8D-9.