

Hardman Tool & Engineering's Model 8037 Uni-Space first-class double luxury chair

PASSENGER SEATS . . .

in production for BEA, incorporates adjustable rear tables to facilitate accommodation to changes in pitch between the two classes. Quantity production will be starting shortly on similar units for the Corporation's Trident 2Es. Flight Equipment convertibles have also been ordered by Ansett/ANA and TAA for their Boeing 727s and DC-9s.

The company's output—from two factories—includes several other types of seat besides convertibles. Notable among these are first-class doubles for BOAC, EAA and Ghana Airways VC10s. BEA has received Trident tourist seats, and first-class equipment for Comets and Viscounts. Viscounts operating in Germany have recently been fitted out for four-abreast seating to provide competitive first-class comfort at tourist pitch. Tridents for Pakistan, Kuwait and Iraq have also been furnished by Flight Equipment.

A new design, first displayed at Farnborough last year, is the "Flitemaster"—the triple tourist seat for the Trident 2E, but equally suitable for high-density seating in any airliner. This is a lightweight unit fitted with hydraulic-recline backs in either soft or shell-type trim. Although designed for 30in to 32in pitch, the "Flitemaster" is considered to provide adequate comfort at 28in if desired.

An even lighter high-density double seat, in production for the Britten-Norman Islander, has been designed for comfort without refinements at pitches down to 28in. The Islander's four 20lb seats can be quickly removed and folded for stowage on the rear luggage platform, thus leaving the cabin space free for freight, but with the seats still to hand for the return flight.

Flight Line Corp, 8330 San Fernando Road, Sun Valley, California 91352, USA Flight Line produce two basic types of airline seat. The Model 2620, although designed

primarily for the Boeing 700 series will, after minor modifications, fit other comparable aircraft. Tourist triple and first-class double versions are available with the same styling, and a fully equipped triple weighs 83lb. Single-beam construction is used for the base frame. Individual reclining backs also break forward and legs folds inwards for convenience of stowage.

The Model 4000 is a non-reclining convertible seat with a single-piece back, designed for short-haul jets. Ashtrays are incorporated in the backs, and conversion from triple layout to double, and vice versa, is achieved simply by re-arranging intermediate armrests.

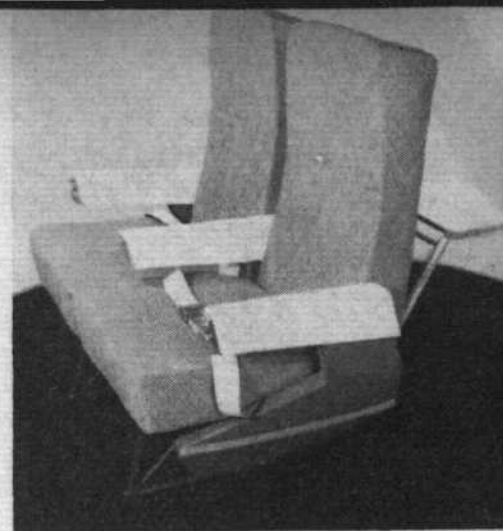
Hardman Tool & Engineering Co, 1845 South Bundy Drive, Los Angeles, California 90025, USA Following war-time manufacture of crew seats, the immediate post-war business of supplying passenger seats for converted military transports led to the company's first airline contract in 1948, when Hardman received an order for new seats from KLM. Steadily increasing airline custom, Boeing and Douglas contracts for 707 and DC-8 standard equipment, and executive and military sales, have since raised Hardman's output to the top level among the world's seat makers.

Seat designs display the attention given to component interchangeability between models and to versatility in service. Current examples are the "Uni-Space Cargo Convertible"—a fold-flat model designed for quick-change conversion; the brightly styled deluxe 8037 first-class "Uni-Space" which is illustrated on this page; and the "Commuter"—a bench-type convertible designed for short-haul routes.

Claimed as the last word in versatility and comfort at 32in pitch, the new "Uni-Space 9500" (due to be unveiled at Paris next month) is a "Unitised, all-in-one chair" designed to accommodate all fare-classes in a single basic model, on short- or long-haul routes in either airbuses or jumbo jets. One of the 9500's many novel features is a detachable centre headrest (on the triple version), which is designed to serve alternatively as a plastic-topped dividing table when fitted on an unoccupied middle seat cushion.

The company's most recently announced order is for five-abreast seating and lounge furniture approximating to first-class standards of spaciousness, for Piedmont Airlines' six 85-seater Boeing 737s.

Radford (Sales) Ltd, Harold, 122-124 King Street, Hammersmith, London W6 (telephone, Riverside 8831) Harold Radford (Sales) has recently been formed to develop Microcell aircraft, marine and hovercraft



SST seating: a special version of Rumbold's Slimline seat as produced for the tourist-class cabin in the Concorde mock-up at Filton

seat patents—in particular, the "Travellite," a single-beam-construction, ultra-lightweight, economy-class seat, built in reclining double or triple versions.

The company supplies replacement parts for all Microcell seats, and specialises in refurbishing seats of any make. Production facilities include vacuum forming, machining and light engineering. Advanced designs and methods of construction are under development.

Rumbold & Co Ltd, L. A., Albion Works, Old Common Lane, Willesden Junction, London NW10 (telephone, Elgar 4802) Rumbold can justifiably claim to be one of the world's longest-established and most experienced manufacturers of airline seating, and also one of the largest outside the United States.

Their first airline order was in 1932, for tubular-framed chairs for the H.P.42s of Imperial Airways. Today, 35 years later, the company's activities cover a wide range of seats and furnishings for civil and military aircraft, helicopters and hovercraft, with an order book worth £½ million and more than 80 per cent of output destined for export.

Comfort and a smart, attractive appearance have always been features of Rumbold passenger seats and, more especially, their luxury chairs for business and corporate aircraft. Mr Alan Jacobs, the chief designer, worked for many years with Mr Charles Butler, with whom the company co-operates closely on a number of interior furnishing projects. Notable among these projects at the moment is the Concorde mock-up at

Two approaches to the convertibility problem: Left, latest version of Flight Equipment & Engineering's BEA convertible seat designed for 34in to 38in pitch, illustrating the method of conversion from triple to double arrangement by use of a split centre-back. Right, Flight Line's solution (the Model 2620 for Boeing 700-series aircraft) has a fixed single-piece back; the two inner armrests are lifted and the centre backrest lowered to form a single wide armrest between two seats

