



HIGH-DENSITY B747 CABINS

'They're squeezing in more seats – again!' Jennifer Cou tts Clay from Jetliner Cabins, the comprehensive e-book app of aircraft cabin design, recalls big changes to B747 cabins in the 1970s

News reports describe high-density cabins as a particularly agonising form of millennial-age torture. However, while cabin densification is directly linked to holding down the price of current, budget-level air fares, it is not a new phenomenon.

In 1970, when Pan American (Pan Am) launched the B747-100 aircraft (about three times the size of its predecessor, the B707), there were 304 economy-class seats on the main deck, configured nine-abreast. This new market segment, named 'thrift class', was the great ambition of Juan Trippe, the airline's visionary chief executive, to develop affordable mass air travel worldwide.

In June 1973, on its New York to San Juan route, Pan Am flew densified B747-100s, with a 10-abreast configuration to accommodate 439 economy-class passengers. Divider partitions were



removed and lightweight drapes were used to separate the cabin zones.

In 1973, Japan Airlines (JAL) launched the B747-100SR (short range) with 550 seats. This variant was developed for the Japanese domestic market, which had increased during the late 1960s by 20% per year, averaging 85% load factors. Designed as a 'walk on, walk off' shuttle-style aircraft, the airframe support-

structures were strengthened to withstand the stresses of pressurisation-cycle changes and the impacts of frequent scheduled landings. The aim was to provide a 20-year economic lifetime of 52,000 domestic flights, with a 35-minute turnaround (instead of the standard long-range B747-100 expectancy of 24,600 flights).

As operated by JAL and ANA, the high-density SRs were credited as an essential element in Japan's economic growth. Starting in 1993, the SRs were replaced by the B747-400D (domestic) variant, flying 568 seats – and certified for 660 seats in all-economy configuration. Marketing machinations will never cease ☒

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