Having made this judgment, Boeing will press ahead with research work on the emerging technologies, but it will not launch an all-new aircraft until it has proved there are no unforeseen problems.

The company clearly believes that the advantages of the new design will be so compelling that sales will follow as a matter of course. The rear-engined MD-80 looks likely to involve several major international airlines, and—eventually, if sales of the 757 and 767 are slow—remains the clear across-the-board market leader. Its support for the UDF cannot therefore be taken lightly. McDonnell Douglas is, of course, also a supporter of the new concept, and has the advantage that the rear-engined MD-80 lends itself more readily than any existing Boeing design to a conversion to propfan/UDF power. Nevertheless, Boeing called in potential equipment suppliers last May for a briefing and asked them to become risk-sharing partners. It hopes to be able to offer the airlines payload, performance, and price guarantees in 1987 (the year the A320 flies) for an aircraft scheduled for 1992 delivery. Design and production is likely to involve several major international partners.

727-200. Although the last 727 was rolled off the production line in August 1984, the type is included in the Survey because of its continuing importance. Around 1,650 remain in airline service, but there is now very little possibility that the type will be re-engined with new technology powerplants as once proposed. The first 727 was rolled out in November 1961 and entered service in October 1963. The stretched -200 was introduced in 1967, and the Advanced -200 in 1971. A stretched 727-300 powered by the refanned JT8D-217 was considered but not built.

Initial 727s grossed 153,000lb, while the final model grossed 210,000lb. Along with the 707, it established Boeing as the leading supplier of jet airliners.


737-200. The production rate of the 737-200 has slowed somewhat as the -300 has reached its stride. Nevertheless, sales have not lessened because there is a large order base of over 1,000 aircraft. A recent feature of the market, however, has been a decisive shift in favour of the -300 despite its nominal price being some $5 million less than the $18 million -200.

Boeing is no longer actively promoting the idea of a 737-200L (or Lite), perhaps because McDonnell Douglas has launched the MD-87 and is the first to build a new small-capacity jet. Boeing has recently chosen the Fokker 100 as its new small-capacity jet.

Improvements are continually being applied to the -200, and new examples have graphite/ epoxy elevators, rudder, spoilers, and ailerons as standard.

The initial model 737-100 flew for the first time in April 1967, but was quickly followed by the slightly stretched 737-200 in August the same year.

Programme status: 737-100/200: Orders, 1,117 including operating leases arranged through banks. Delivered, 1,086. Production rate, 2 per month.

737-300. The latest version of Boeing’s best-selling twinjet has clocked up over 100 sales since January 1, including large orders for TAA (12), Ansett (12), Lufthansa (10), KLM (10), Piedmont (19) and GPA (12). Significantly, Ansett and Lufthansa also placed orders for the Airbus A320 on the basis that the two types are not directly comparable, either in terms of size or in terms of the timescales of their availability. Boeing has recently been offering deep discounts for large orders.

After a relatively slow build up of sales, the -300 now has the highest production rate of any Boeing aircraft, and the company expects to deliver 46 examples in the second half of 1985.

Boeing gave the 737-300 the go-ahead in March 1981 and the new model made its first flight in February 1984. Deliveries began in November 1984. Stretched by 104in (2.6m) compared to the 737-200 and powered by the CFM56-5, the -300 also makes use of technology developed for the 757 and 767 programmes. It is not simply a stretched 737-200.

It is now on offer with maximum weights between 124,500lb (56,473kg) and 138,500lb (62,823kg), and the 22,000lb thrust CFM56-3B2 is available in place of the 20,000lb CFM56-3B1 (an option exercised by PIA and TAA). Optional auxiliary fuel tanks are also available. Recent improvements include optional electronic flight instruments (EADI and EHSI), a three module wide-aisle stand to provide more space for avionics, and the higher maximum take off weights mentioned above. All 737s nevertheless have the same type ratings.

There is still a possibility that the 737 will be stretched further. Now that the CFM56-powered -300 is firmly established, and the company has decided to wait until 1992 before making available an all-new propfan/UDF-powered aircraft, it may decide to build one more version of the 737. Perhaps the most likely is a stretch of around 100in (2.54m) to add around 18 seats. The powerplant could be either the CFM56-9 or the V.2500. Much depends on present discussions with airlines like Delta and United, which are looking to buy new 150-seater aircraft.


747. To all intents and purposes, Boeing has now given the go-ahead to the uprated 747-400 (the designation 747-300 Advanced has now been dropped). The new model is scheduled to fly in the fourth quarter of 1987 and be available for airline deliveries in the fourth quarter of 1988.

The most significant external difference from the -300 will be extensions of about 6ft (1.8m) to each wingtip combined with vertical winglets of similar dimensions. The new aircraft will, however, incorporate a significant series of modifications and improvements and it will be an important addition to the 747