

The ANA Group’s measures to reduce aircraft noise have resulted in our entire fleet conforming to Chapter 4, the strictest ICAO noise standard.



■ Aircraft Noise

In its Annex 16, the ICAO (International Civil Aviation Organization) specifies the noise standard for subsonic jet aircraft. The initial Chapter 2 standard was followed by the Chapter 3 standard, with the latest Chapter 4 stan-

dard—effective for new aircraft after January 1, 2006—being the strictest to date. Our Chapter 3-compliant aircraft were retired in March 2006, bringing our entire fleet up to the stricter Chapter 4 standard.

■ Improved Flight Procedures

ANA has been examining various flight procedures—such as maintaining a high altitude until approaching

the airport, then descending continuously—to decrease the noise reaching the ground.

ANA’s Main Noise Abatement Procedures

	Procedure	Description
Takeoff	Steepest climb procedure	Continue a steeper takeoff climb to a higher altitude than usual (to 3,000 ft.), so as to keep noise contained to as small an area possible, while controlling noise by attaining high altitude in residential areas.
Landing	Delayed flap-down approach procedure	Delay flap-down and landing-gear-down operations to reduce air resistance to the airframe, so as to decrease engine thrust requirement, thereby reducing noise.
	Low flap angle landing procedure	Set smaller flap angle for use during final approach to reduce air resistance to the airframe, so as to decrease engine thrust requirement, thereby reducing noise.
Landing and takeoff	Preferential runway procedure	If one side of runway does not have a residential area, then perform takeoff and landing in the preferred direction, wind direction and lower velocity permitting.
	Preferential flight path procedure	In the airport vicinity (at lower altitude), select flight paths that pass over rivers or that circumvent residential areas as much as possible.
	V-NAV approach continuous descent procedure	During descent, maintain higher altitude until the vicinity of airport, then continuously descend so as to control the change in the engine thrust, thereby abating noise. This procedure can save fuel as well.
	FMS/LLZ flight procedure	Use FMS/LLZ-RNAV in the airport vicinity and fly while avoiding residential areas and shortening flight path. In the case of late-night landing at Haneda Airport, avoid passing through Kisarazu (land area) and approach via shortcut over the ocean.

■ Reducing Ground Noise

ANA’s engine testing facilities are equipped to reduce noise: the one at Osaka International Airport has sound-proof walls, while Narita International Airport has a noise-reduction hangar. In addition, by making procedures more efficient, we have shortened the duration of test runs that must be carried out following maintenance, further reducing ground noise.



Noise reduction hangar at Narita Airport