Los Angeles Noise Mitigation

Captain Dan L. Delane
FedEx Express Fleet Check Airman
13 November 2013
FedEx Express

FedEx is committed to reducing NOISE and carbon footprint for both air and ground operations.
How does FedEx Express Mitigate Noise in L.A.?

• All flight operations procedures for ground ops, takeoff, departure, arrival and taxi-in are tailored to minimize noise while reducing emissions.

• Pilots going through initial training, recurrent training and checking events are briefed and evaluated on compliance with noise-reduction initiatives and procedures. Compliance is mandatory.
Modern Aircraft

- Older aircraft, such as the Boeing 727 have been phased out; the complete fleet is now ICAO Stage 3 or the more stringent Stage 4 Noise compliant aircraft, like this brand-new B-777. All our new aircraft are twin-engine, B-757, B-767, B-777.
Newer Aircraft

Twin engine fuel thriftiness, less noise and less carbon footprint for the same payload of some of our older (1992 generation) aircraft. Our brand-new B-777 and B-767 freighters have some of the most advanced and fuel efficient engines on the market today.

- As our older MD-10 freighters (three engine ICAO Stage 3 noise compliant) are phased out, they are replaced with brand-new B-767 freighters. These MD-10’s currently are in use daily here in Los Angeles.
Ground/Taxi Noise-Reduction Initiatives

• Each of our aircraft here in Los Angeles, at every gate, is attached to electrical ground power rather than using the onboard APU (auxiliary power unit) until the power must be removed to push back the aircraft for engine start. No noise.
Ground Power
Start and Taxi-out…

• As the aircraft is pushed out, our procedure is to start only **one** engine on twin-engine aircraft, two on three engine aircraft, always the engine AWAY from the south side. This cuts the noise significantly.

• The remaining engine(s) started **just prior** to taking the runway for departure, usually three minutes.
Runway selection?
Runway selection

- All pilots procedurally are **required** to request the inboard runways, away from residential areas, for takeoff. Runway 25R or 24L, if eastbound, 07L, 06R. This puts the noise footprint farther away so as to be less intrusive. Why do we see aircraft still departing runway 25L?
- Takeoff flaps are procedurally selected **minimum** for less thrust required, less noise, less carbon footprint.
Runway selection?

While the runway lighting is being finished on the 25 R runway, 25 R not available for takeoff.
Departure Routing

- All departures are run strictly by the established RNAV or charted/published departures. No early turns unless directed by ATC. Pilots must adhere carefully to heading assignments or SID when heading west and tuning south.
Climb-out Procedures

• Departing over water, initially westbound, Noise Abatement Departure Procedure (NADP) number 2 is used - clean up gear and flaps at 1000 feet, accelerate away from land rapidly, then climb to meet the restrictions on the RNAV charted departures.

• A new initiative we are using for departures from the east-facing runway, use NADP-1, which is climb first rapidly to 3000 feet for less surface noise, then clean up. Less intrusive during early hours.
Arrival Procedures

• All arrivals are via a charted RNAV procedure or via radar vectors to a precision approach. FedEx is proactive in mandating Constant Descent Angle (CDA) arrivals and final descents—this procedure assures the minimum thrust required will be used at all times and the minimum landing flaps used to reduce the noise footprint to the minimum possible.

• Final landing flap selection and gear down are done as late on the approach as is safe to reduce the noise footprint farther out to the absolute minimum.

• CDA arrivals are the norm in Europe and some of Asia, eventually the United States will mirror and CDA arrivals will be the norm here.
Landing

・ Early morning hours (normally 6 A.M.) the landing runway assigned will be towards the east, 07L or R, 06 L or R, depending on NOTAM closures and atmospherics.

・ Our new initiative to reduce noise is to mandate IDLE REVERSE THRUST on landing, safety permitting. This significantly cuts the DB for adjoining neighborhoods.

・ The APU will not be started after landing (noise) and our mandate is less-than-all-engine-taxi, shutting an engine down immediately after clearing the runway.
Other Noise Cutting Measures?

• FedEx maintains a heavy aircraft maintenance facility on the west end of the airport right between the runways. The Managing Director of Maintenance has implemented a curfew on engine runs, not to be done between 10:30 P.M. and 6:30 A.M.

• Questions?