

ORDER

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

8110.35B

5/3/90

SUBJ: AIRCRAFT NOISE CERTIFICATION HISTORICAL DATABASE (RIS: 8110.1)

1. **PURPOSE**. This order requires the reporting of aircraft noise certification information to the Office of Environment and Energy for the purpose of maintaining a historical database on aircraft noise.
2. **DISTRIBUTION**. This order is distributed to the branch level in the Aircraft Certification Service and the Office of Environment and Energy; to the branch level in the Aircraft Certification Directorates; and to the Aircraft Certification Offices.
3. **CANCELLATION**. Order 8110.35A, Aircraft Noise Certification Historical Database, dated March 29, 1985 is canceled.
4. **BACKGROUND**. The Office of Environment and Energy published Advisory Circular 36-1E, "Noise Levels for U.S. Certificated and Foreign Aircraft", which lists airplane noise levels of certificated aircraft in EPNdB and dBA as applicable, and Advisory Circular 36-3E, "Estimated Airplane Noise Levels in A-Weighted Decibels", which lists airplane noise levels in dBA. To continue this effort and periodically update these advisory circulars, noise data are needed for all types of aircraft certificated, for which noise compliance was required. These include aircraft issued original, amended, and supplemental type certificates. Data collection and reporting is an ongoing effort since noise data are required for new aircraft types which are continually entering the market.
5. **EXPLANATION OF CHANGES**. This revision:
 - a. expands the noise certification historical database to include helicopters which are certificated to FAR Part 36, Appendix H,
 - b. revises FAA Form 8110-23 to include commuter category airplanes and to reflect the change in noise certification procedure from FAR Part 36, Appendix F to Appendix G, and
 - c. reduces the information reporting requirements of FAA Form 8110-24.
6. **FORMS**. Three forms are used to document the information required by this order.
 - a. FAA Form 8110-23, Aircraft Noise Certification Data (Propeller-Driven Commuter Category Airplanes and Propeller-Driven Small Airplanes - Except for Agricultural and Fire Fighting Airplanes). A copy of this form, which may be reproduced locally, is contained in appendix 1.
 - b. FAA Form 8110-24, Aircraft Noise Certification Data (Turbojet Powered Airplanes and Propeller-Driven Airplanes Certificated in the Transport Category). A copy of this form, which may be reproduced locally, is contained in appendix 2.
 - c. FAA Form 8110-27, Aircraft Noise Certification Data (Helicopters-Except for Agricultural, Fire Fighting, and External Load Carrying Helicopters). A copy of this form, which may be reproduced locally, is contained in appendix 3.
7. **REPORTING REQUIREMENTS**. (RIS: 8110.1) The Aircraft Certification Offices will submit the noise levels established in the certification process to the Office of Environment and Energy within 30 days after an aircraft is certificated. FAA Form 8110-23, Aircraft Noise Certification Data (Propeller-Driven Commuter Category Airplanes

and Propeller-Driven Small Airplanes - Except for Agricultural and Fire Fighting Airplanes), will be used for commuter category and propeller-driven small airplanes that comply with Appendix G of FAR Part 36. FAA Form 8110-24, Aircraft Noise Certification Data (Turbojet Powered Airplanes and Propeller-Driven Airplanes Certificated in the Transport Category), will be used for those aircraft that comply with Appendix C of FAR Part 36. FAA Form 8110-27, Aircraft Noise Certification Data (Helicopters- Except for Agricultural, Fire Fighting, and External Load Carrying Helicopters), will be used for those aircraft that comply with Appendix H of FAR Part 36.



J. E. Densmore
Director, Environment and Energy

**AIRCRAFT NOISE CERTIFICATION DATA
(PROPELLER-DRIVEN COMMUTER CATEGORY AIRPLANES AND
PROPELLER-DRIVEN SMALL AIRPLANES - EXCEPT FOR AGRICULTURAL
AND FIRE FIGHTING AIRPLANES)**

RIS: 8110.1

REGION _____ REGIONAL CONTACT/PHONE NO. _____

AIRCRAFT MANUFACTURER _____

MODEL _____ POPULAR NAME _____

FAR PART 36 TEST DATE _____

CERT. THRU FAR PART 36 AMENDMENT NO. _____

CERTIFICATION REPORT NUMBER _____

PROPELLER DATA

MANUFACTURER _____ MODEL _____

DIAMETER _____ NUMBER OF BLADES _____

PITCH: FIXED _____ VARIABLE _____

MAX. OPERATING RPM _____

ENGINE DATA

MANUFACTURER _____ MODEL _____

NUMBER OF ENGINES _____

AIRPLANE NOISE CERTIFICATION DATA

MTOW (LBS.) _____ MLW (LBS.) _____

REFERENCE ALTITUDE (FT.) _____ D₅₀ (FT.) _____

R/C (FT/MIN) _____ V_y _____

CERTIFICATION NOISE LEVEL (dBA) _____

**AIRCRAFT NOISE CERTIFICATION DATA
(TURBOJET POWERED AIRPLANES AND PROPELLER-DRIVEN
AIRPLANES CERTIFICATED IN THE TRANSPORT CATEGORY)**

RIS: 8110.1

REGION _____ REGIONAL CONTACT/PHONE NO. _____

AIRCRAFT MANUFACTURER _____ MODEL _____

FAR PART 36 TEST DATE _____ CERT. REPORT NUMBER _____

CERT. THRU FAR PART 36 AMENDMENT NO. _____

ENGINE DATA

MANUFACTURER _____ MODEL _____

NUMBER OF ENGINES _____

PROPELLER DATA (IF APPLICABLE)

MANUFACTURER _____ MODEL _____

DIAMETER _____ NUMBER OF BLADES _____ MAX. OPERATING RPM _____

AIRPLANE NOISE CERTIFICATION DATA (HIGHEST WEIGHT CONFIGURATION)

MTOW(LBS.) _____ MLW(LBS.) _____ FLAPS: TAKEOFF _____ APPR. _____

EPNdB: TAKEOFF _____ SIDELINE _____ APPROACH _____

CUTBACK USED: YES _____ NO _____

AIRPLANE NOISE CERT. DATA (LOWEST WEIGHT CONFIGURATION) (IF APPLICABLE)

MTOW(LBS.) _____ MLW(LBS.) _____ FLAPS: TAKEOFF _____ APPR. _____

EPNdB: TAKEOFF _____ SIDELINE _____ APPROACH _____

CUTBACK USED: YES _____ NO _____

ADDITIONAL DATA

FAMILY PLAN: YES _____ NO _____ PARENT ENGINE _____

AIRCRAFT NOISE CERTIFICATION DATA
(HELICOPTERS - EXCEPT FOR AGRICULTURAL, FIRE FIGHTING,
AND EXTERNAL LOAD CARRYING HELICOPTERS)

RIS: 8110.1

REGION _____ REGIONAL CONTACT/PHONE NO. _____

AIRCRAFT MANUFACTURER _____ MODEL _____

FAR PART 36 TEST DATE _____

CERT. THRU FAR PART 36 AMENDMENT NO. _____

CERTIFICATION REPORT NUMBER _____

MAIN ROTOR(s) DATA

MANUFACTURER _____ MODEL _____

DIAMETER _____ NUMBER OF BLADES _____

TAIL ROTOR DATA (IF APPLICABLE)

MANUFACTURER _____ MODEL _____

DIAMETER _____ NUMBER OF BLADES _____

ENGINE DATA

MANUFACTURER _____ MODEL _____

NO. OF ENGINES _____

HELICOPTER NOISE CERTIFICATION DATA

MGW (AT BRAKE RELEASE) (LBS.) _____ LW (LBS.) _____

EPNdB: TAKEOFF _____ FLYOVER _____ APPROACH _____

STAGE: 1 _____ 2 _____