How Do I Tell if My Aircraft is Considered "Noisy"?

This guide is for aircraft owners and operators who want to know if their aircraft would be subject to two noise-based restrictions on operations at the East Hampton Airport which the Town Board is considering for adoption prior to the 2015 season.

Two of the four local laws that the Town Board is considering would restrict operations of "noisy aircraft," defined to be "**any airplane or rotorcraft for which there is a published Effective Perceived Noise in Decibels (EPNdB) approach (AP) level of 91.0 or greater**."[1]

This guide provides advice on how to determine whether a specific aircraft falls under the "noisy aircraft" definition, based on four sources. ***Users should consult the sources in this order.***

1. Noise level data posted on the Town of East Hampton website
2. "Airplane Flight Manual" or "Rotorcraft Flight Manual"
3. Federal Aviation Administration (FAA) published noise level data
4. European Aviation Safety Agency ("EASA") published noise level data

1. Noise Level Data on the Town of East Hampton Website

The Town is developing a list of aircraft models and associated EPNdB levels, derived from information from the FAA and EASA sources described below. In many cases, a range of EPNdB levels (maximum and minimum values) will be provided, reflecting the ranges in the FAA and EASA publications. Where a range for a specific aircraft type and model crosses the 91.0 EPNdB "noisy aircraft" definition cutoff, owners and operators may want to refer to the aircraft flight manual (if available) to compare the detailed configuration information in those documents to the configuration of the aircraft in question. The list will be posted on the Town's website[2] and will be updated on an as-needed basis. *Until the official list is posted (after enactment of the local laws), owners or operators may use the following sources to determine whether their aircraft is likely to be considered a "noisy aircraft."*

2. "Airplane Flight Manual" or "Rotorcraft Flight Manual" Noise Level Data

The Town recommends that owners and operators check their "Airplane Flight Manual" or "Rotorcraft Flight Manual." FAA Advisory Circular (AC) 36-4C ("Noise Standards: Aircraft Type and Airworthiness Certification") requires that those manuals present the certificated noise levels; therefore those manuals are the most definitive source of information for a specific aircraft.[3]

Owners and operators should use the following two data sources only if they cannot determine noise levels from the list on the Town website or from their airplane or rotorcraft flight manuals.

3. FAA-Published Noise Level Data

FAA AC 36-1H, "Noise Levels for U.S. Certificated and Foreign Aircraft" is available on the FAA's website.[4] Appendix 1 presents the EPNdB levels for US-certificated turbojet-powered airplanes. Appendix 6 presents EPNdB levels for propeller-driven transport category airplanes. Appendix 10 presents EPNdB levels for helicopter models for which FAA conducts noise certification in terms of EPNdB. All three lists are in alphabetical order by manufacturer and model. The relevant noise level data are listed under the column with the subheading "AP" (approach), under the major heading "NOISE LEVEL (EPNdB)." Please note that the lists include noise levels for a range of configurations in many cases, including variation in such factors as engine model, maximum takeoff weights, landing weights, and takeoff and approach flap settings. *Therefore, please be careful to identify the appropriate configuration.*

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4. EASA-Published Noise Level Data

EASA maintains a website that contains detailed noise level data.[5] The home page offers four spreadsheet downloads. Three of the spreadsheets provide EPNdB data for "heavy propeller driven aeroplanes," "jet aeroplanes," and "rotorcraft." The fourth spreadsheet, for "light propeller driven aeroplanes" is not relevant because it does not present EPNdB.

For helicopters (in the "rotorcraft" download) be sure to look at the column labelled "CHAPTER 8 NOISE LEVELS (EPNdB), APPROACH, LEVEL," on the far right of the spreadsheet. The columns labelled "CHAPTER 11 NOISE LEVELS (dBA SEL)" do not apply. On the heavy propeller and jet spreadsheets, look at the column on the far right labelled "NOISE LEVELS (EPNdB), APPROACH, LEVEL."

Similar to the FAA data source, the spreadsheets include noise levels for varied aircraft configurations, so be careful to identify the appropriate configuration.

The EASA spreadsheets generally are more comprehensive and up-to-date than the FAA Advisory Circular. Past history indicates that the EASA updates the spreadsheets at least once a year.

NOTES AND SOURCES

[1] Proposed Town Code § 75-38 A. (4) states: "Noisy Aircraft" shall mean any airplane or rotorcraft type classified as a Noisy Aircraft type pursuant to this Section.

(a) The Airport Director is directed to maintain on the Town website a current list of aircraft based upon the noise characteristics published by the Federal Aviation Administration, or (if data is not available from that agency), the European Aviation Safety Agency. Noisy Aircraft shall be defined as any airplane or rotorcraft for which there is a published Effective Perceived Noise in Decibels (EPNdB) approach (AP) level of 91.0 or greater

(b) In lieu of being subject to the definition of "Noisy Aircraft" pursuant to subsection (a) on the basis of the Town's list of types of Noisy Aircraft, the owner of an Individual Aircraft may elect to have the noise classification of such Individual Aircraft determined by the sound levels on the basis of the EPNdB level that is published in the airplane or rotorcraft flight manual for such Individual Aircraft pursuant to 14 C.F.R. 36.1581(a). To obtain a noise classification of an Individual Aircraft, the owner of such aircraft shall provide the Airport Director with a true copy of the relevant pages from such manual showing the noise level data. In the event of a conflict between the Town's list of classifications of Noisy Aircraft types and classification based on the data set forth in the Individual Aircraft airplane or rotorcraft flight manual, the data in the Individual Aircraft airplane or rotorcraft flight manual shall prevail. Once the owner of an Individual Aircraft has provided the Airport Director with such data from the Individual Aircraft airplane or rotorcraft flight manual, and the Airport Director has determined the authenticity thereof, the Airport Director shall keep such data on file so that the owner need not resubmit the data for each Use of the Airport, and compliance by such Individual Aircraft with this Section shall be determined based on such data.

[2] See http://www.town.east-hampton.ny.us/HtmlPages/AirportInterimNoiseAnalysis.html

[3] AC 36-4C, SUBPART O – "Operating Limitations and Information," Section 36.1501(a), states (in part) "Noise levels achieved during type certification must be included in the approved airplane (rotorcraft) flight manual." Organization of flight manuals varies by manufacturer. The information may be presented in sections titled "noise certification," "noise levels," "noise characteristics," or similar. In some cases, the manufacturer may provide a separate "noise information manual" supplement.

[4] See: http://www.faa.gov/documentLibrary/media/Advisory_Circular/AC%2036-1H.pdf

[5] See https://www.easa.europa.eu/document-library/noise-type-certificates-approved-noise-levels