

**Permanent Noise Monitor Addresses**

Community	Number of Monitors	Site	Address
Arlington Heights	1	1	805 W. Victoria Lane
Melrose Park	1	2	1700 Bloomingdale Avenue
Bensenville	2	3 31	96 N. Mason Street 333 N. Franzen Street
Schiller Park	2	4 28	9879 Ivanhoe Avenue 4934 ½ Harold Avenue
Chicago	6	5 11 39 40 42 46	6314 W. Rosedale Avenue 7416 W. Roscoe Street 4145 W. Wilson Avenue 2736 W. Ardmore Avenue 7361 W. Farwell Avenue 5801 N. Central Park Avenue
Elk Grove Village	4	12 13 14 34	343 E. Elk Grove Boulevard 1600 Nicholas Avenue 351 Briarwood Lane 1240 Somersset Lane
Rolling Meadows	1	10	3506 ½ Owl Drive
Des Plaines	2	7 8	1410 ½ Dennis Place 2605 Maple Street
Franklin Park	2	15 16	10145 Minneapolis Avenue 10601 Seymour Avenue
Harwood Heights	1	17	7240 Argyle Street
Itasca	1	44	350 E. Irving Park Road
Stone Park	1	19	3850 Division Street
Mount Prospect	3	20 21 37	1803 Lavergne Drive 799 School Street 1835 Wood Lane
Niles	1	45	7990 W. Keeney Street
Norridge	2	18 22	7515 W. Cullom Avenue 5005 Plainfield Avenue
Northlake	2	23 35	31 W. King Arthur Court 459 Geneva Avenue
Park Ridge	4	24 25 26 33	1100 Parkside Drive 1427 Granville Avenue 1421 Garden Street 720A S. Prospect Avenue
Rosemont	1	27	6010 Ruby Street
Wood Dale	3	29 30 32	427 Grove Avenue 399 Oak Meadows Drive 744 Edgewood Avenue
<b>TOTAL</b>	<b>40</b>		

**Note:** There are gaps in the noise monitor site numbering due to some noise monitoring sites being sited but never installed, and some noise monitoring sites having been decommissioned. A detailed site history is outlined in the fact sheet titled *History of the Permanent Noise Monitors at Chicago O'Hare International Airport*.

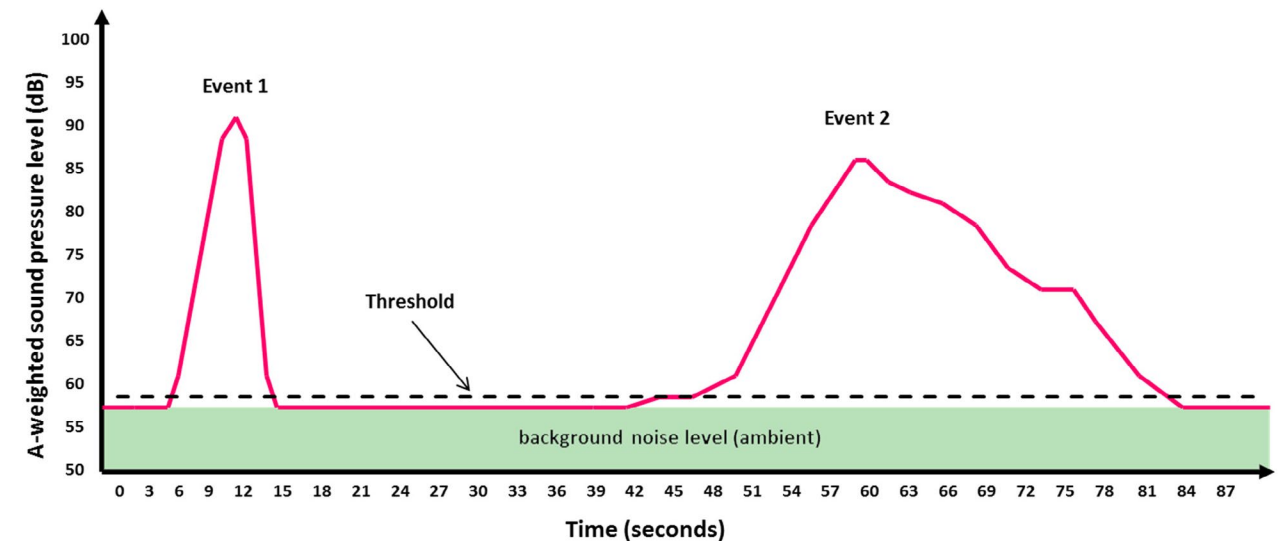
**INTRODUCTION TO NOISE MONITORS  
AT CHICAGO O'HARE INTERNATIONAL AIRPORT**

**Introduction**

A noise monitor is an electronic instrument that measures sound pressure levels. Each noise monitor used by the Chicago Department of Aviation (CDA) is a Class 1 noise monitor approved to International Electrotechnical Commission (IEC) 61672 *Electroacoustics* standards and can record multiple octave bands and threshold exceedance levels. Class 1 noise monitors have a wider frequency range and a tighter tolerance than a lower cost, Class 2 noise monitor. The CDA routinely checks the calibration and performs annual preventative maintenance for every noise monitor in the Airport Noise Management System (ANMS). Noise monitors are sited in consultation with community representatives and based primarily on the criteria outlined in the fact sheet titled *Criteria for the Permanent Noise Monitors at Chicago O'Hare International Airport*.

**How They Work**

The CDA's noise monitors record noise events based on threshold exceedance. Each noise event starts at the time the noise level exceeds a decibel threshold, typically slightly above the background or ambient noise level, and ends at the time the noise level returns to the threshold.



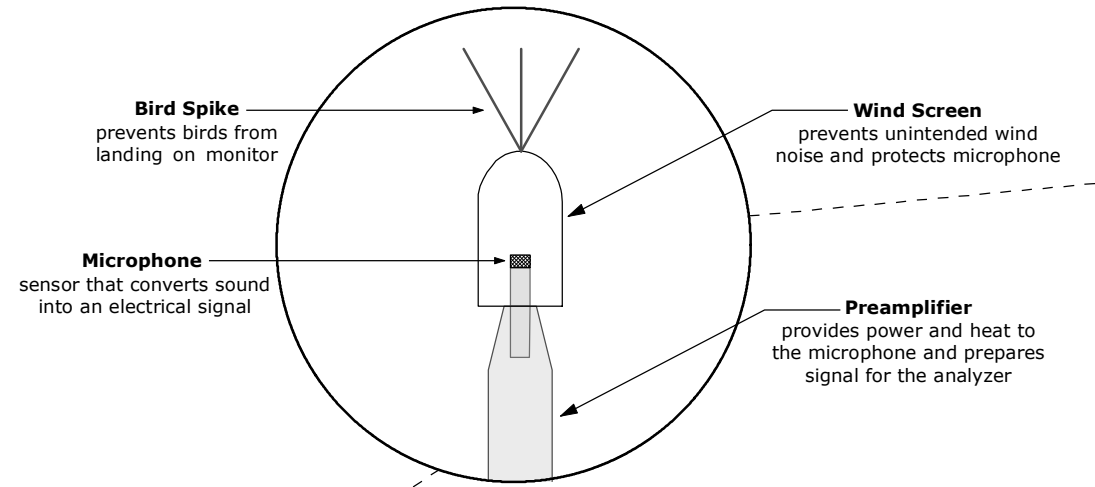
For each noise event recorded, a start date/time, end date/time, Leq (Equivalent Sound Level), and Lmax (Maximum Sound Level) is recorded. While noise can be measured in multiple scales, noise levels recorded by the CDA are recorded in the A-weighting scale, as A-weighting most closely relates to the range of the human ear. On average, the noise monitors around O'Hare capture and record noise events at a radius of greater than three miles.

**Correlating Noise Events to Aircraft Operations**

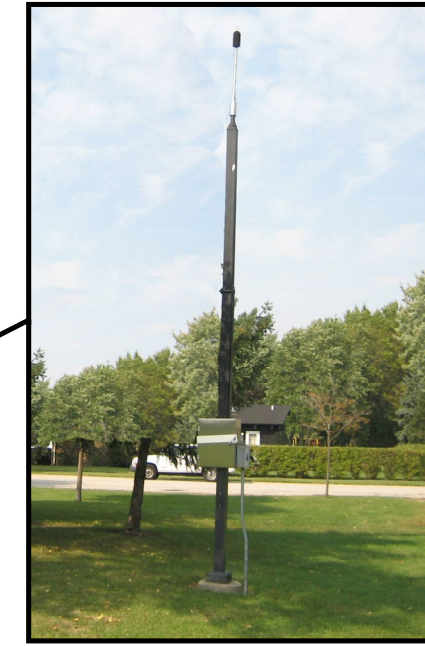
Once the noise events are collected and downloaded to the CDA's ANMS, they are correlated to actual aircraft operations. The process that correlates noise events to aircraft operations uses defined parameters to match every eligible noise event to specific aircraft operations. Noise events that fall outside these parameters are classified as community noise.

# Noise Monitor Diagram

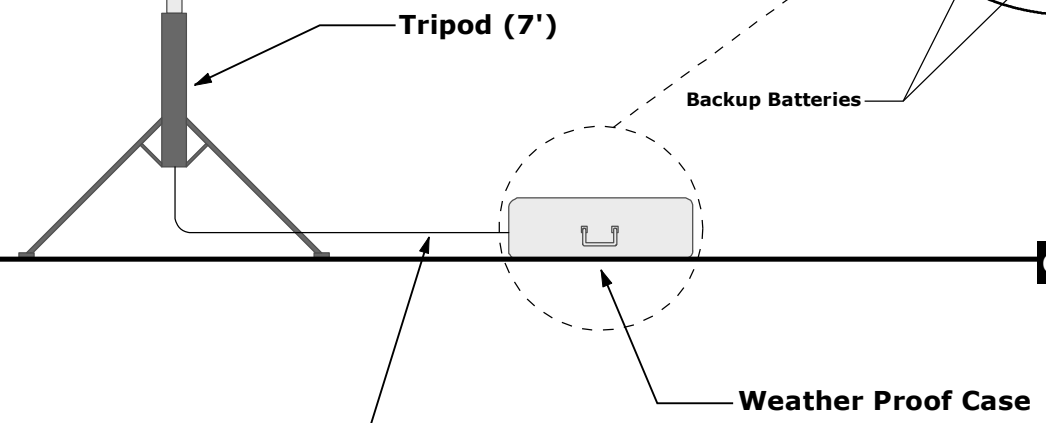
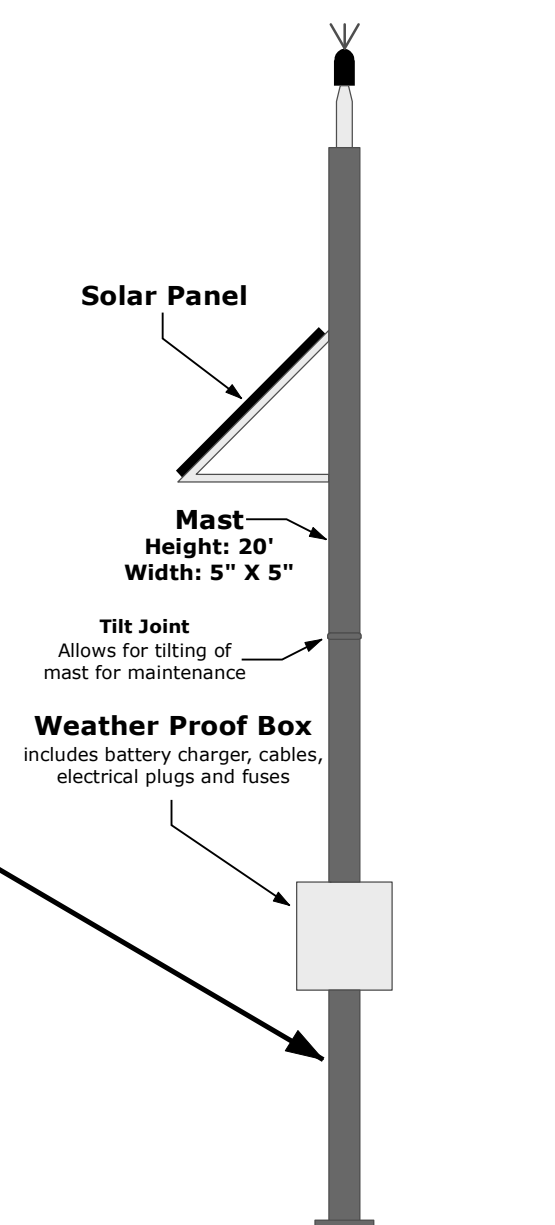
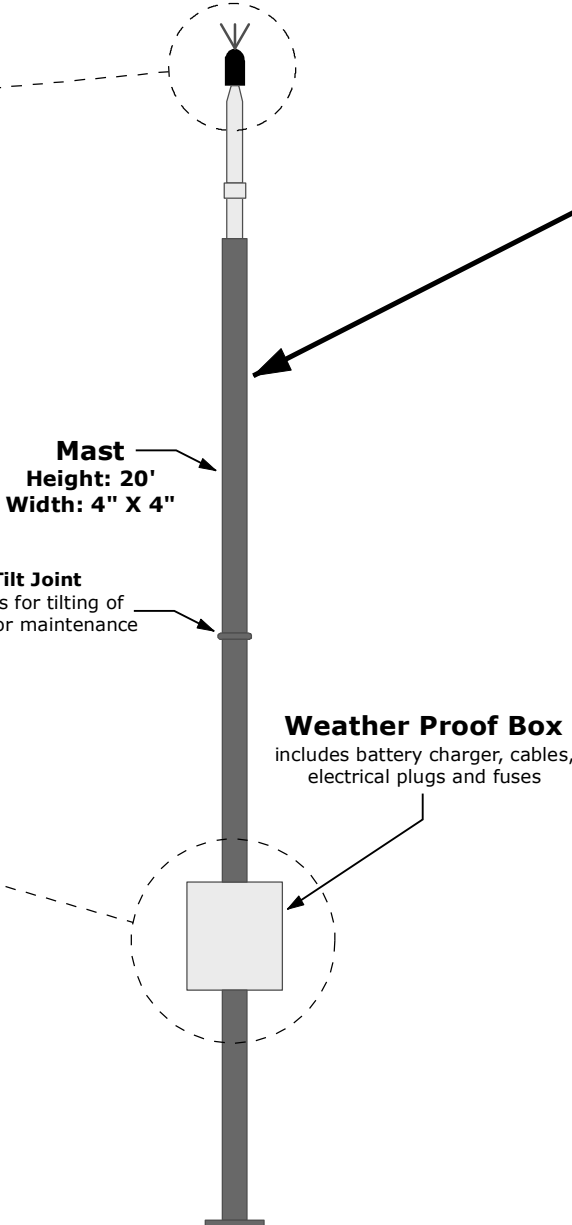
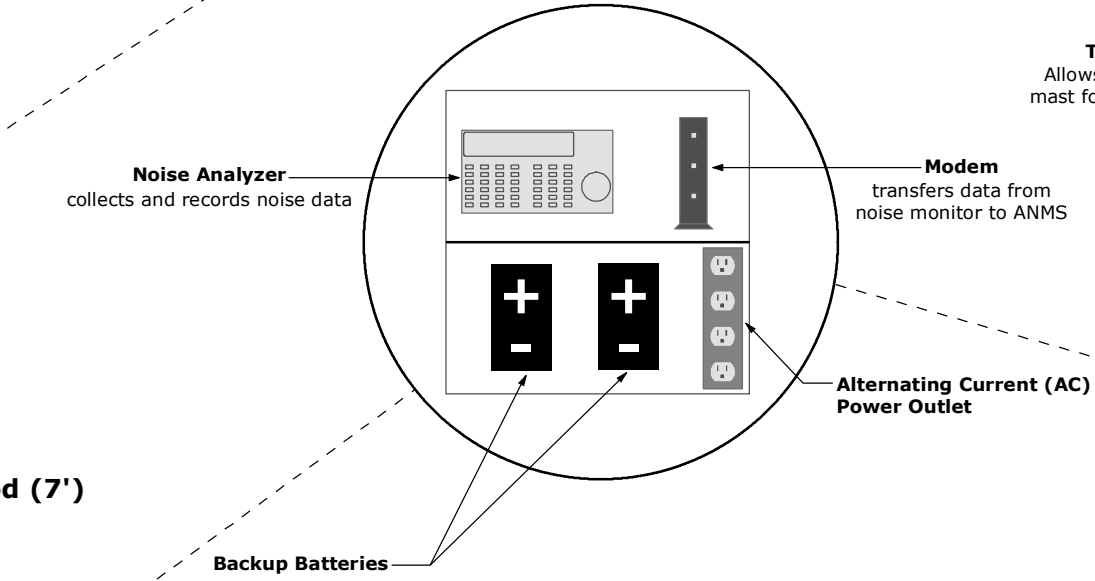
## Portable Monitor



## Permanent Monitor (Electric)



## Permanent Monitor (Solar)



**Microphone Cable**

**Ground Level**

**Concrete Base**  
Depth: 6'  
Diameter: 18"

**Electrical Power Line**

**Concrete Base**  
Depth: 6'  
Diameter: 36"