

What the flights sound like at six homes near Palm Beach International

Public version, 2 October 2026. To protect the privacy of the residents who host the monitors, distances between aircraft and each monitor are given in bands (under 0.5 km, 0.5–1 km, over 1 km), and path-shift distances and crossing heights are rounded. Every other figure is unchanged from the record of 30 September 2026.

A combined record of outdoor sound at six homes in Palm Beach and West Palm Beach, each measured every second and associated, where possible, with individual aircraft tracks. Daily figures cover 15 February – 24 September 2026; each home's own window is given in Table 1.

6 MONITORS · 1-SECOND SAMPLING 15 FEB – 24 SEP 2026 PREPARED 30 SEP 2026

On 20 October 2025, the FAA introduced a full-time flight restriction and interim procedures at Palm Beach International, and the arrival and departure paths moved north; revised instrument procedures took effect on 22 January 2026. The FAA now proposes a permanent Special Flight Rules Area to replace the temporary security restriction behind those changes.

This record describes what those flights sound like at six homes, each with a sound monitor outside the house recording the sound level every second. Two of the homes are in Palm Beach, in the Estate Section and on Everglades Island, where the airliners on final approach now pass close to overhead, below a thousand feet.⁵ Four are in West Palm Beach neighbourhoods east of the airport (Poinciana Park, Prospect Park, Flamingo Park and Historic El Cid), where departures make up 86% to 96% of the matched aircraft events whose displayed route begins or ends at Palm Beach.¹ Each home is identified here only by its neighbourhood. Each loud event was matched, where possible, to an aircraft track, using the aircraft's own transponder broadcasts. The same rules are applied at every home, so the homes can be compared. The legal and technical detail is in the numbered notes at the end.

TABLE 1 • THE SIX HOMES AND THEIR DATA WINDOWS

HOME	LOCATION	DAILY FIGURES	NIGHTS COUNTED	FLIGHT PATHS AT THE HOME
Estate Section	Palm Beach	15 Feb – 4 Sep	200	Arrival path almost overhead; departure path nearby
Everglades Island	Palm Beach	23 Apr – 24 Sep	144	Arrival path close to overhead; departure path nearby
Poinciana Park	West Palm Beach	3 Apr – 24 Sep	163	Departures (95%)
Prospect Park	West Palm Beach	3 Apr – 24 Sep	175	Departures (86%)
Flamingo Park	West Palm Beach	3 Apr – 24 Sep	158	Departures (96%)
Historic El Cid	West Palm Beach	3 Apr – 1 Sep	152	Departures (87%)

All dates 2026. Nights are named for the evening they begin and run to 7 a.m. the next morning. Some days are left out at four of the homes (note [2](#)). Percentages are the departure share of matched aircraft events with a displayed route beginning or ending at Palm Beach (note [1](#)); departures also outnumber arrivals at the two Palm Beach homes (note [5](#)). Each home also has its own record, prepared from the same data (note [14](#)).

THE YARDSTICK

One number, averaged over a year, and what it leaves out

The FAA's primary measure of aircraft noise is a single number: the day-night average sound level (DNL), averaged across an entire year.³ It counts an increase as significant when it raises DNL by 1.5 decibels or more in an area that is, or as a result becomes, exposed to 65 decibels DNL or more. When the FAA modelled the January 2026 procedures, it found increases of 5 decibels or more in parts of Palm Beach, in areas exposed to 45 to 60 decibels, and concluded that no location met its significance criterion.⁴

A yearly average is a reasonable way to compare one airport with another. It cannot say how many aircraft passed over a bedroom, how loud any one of them was, or what time it happened, and those are the things the people in these homes live with. The rest of this record measures them.

MAXIMUM SOUND LEVEL PER FLIGHT • BEFORE AND AFTER THE CHANGE • THE TWO PALM BEACH HOMES

At the two Palm Beach homes, a typical arrival is modelled to be 10 to 13 decibels louder than on the old path

The archived pre-change tracks put the arrival path well south of both Palm Beach homes; the arrivals now pass over or close to overhead. No sound was recorded at either home before the change, so each measured flight was compared with the same aircraft modelled on

the old path. Under that model the typical arrival is now 12.6 decibels louder at the Estate Section home and 10.4 decibels louder at the Everglades Island home. On the approximate rule that every 10 decibels doubles how loud a sound seems, that is about 2.4 times and about twice as loud. The model puts almost no arrival at 75 decibels or more on the old path; today about two in three measure that loud at the Estate Section home and more than half at the Everglades Island home. Departures always crossed near both homes; what changed is the distance, and how often a departure is genuinely loud.⁵

TABLE 2 · BEFORE-AND-AFTER PER FLIGHT, PALM BEACH HOMES · "BEFORE" IS MODELLED, "NOW" IS MEASURED · LEVELS ARE MAXIMUM LEVELS (LMAX)

HOME · FLIGHTS	PATH NOW CLOSER	TYPICAL CHANGE	MEDIAN BEFORE → NOW	SHARE ≥ 75 DB BEFORE → NOW
Estate Section · arrivals 370 measured, March–August 2026 · crossing height about 1,000 ft before, about 800 ft now	about 1.5 km (0.9 mi)	+12.6 dB	63.1 → 77.0 dB	0.3% → 65.1%
Estate Section · departures 2,873 measured, March–August 2026	about 1.1 km (0.7 mi)	+4.3 dB	68.6 → 72.8 dB	5.5% → 34.1%
Everglades Island · arrivals 277 measured, April–August 2026 · crossing height about 900 ft before, about 700 ft now	about 1.1 km (0.7 mi)	+10.4 dB	64.6 → 76.2 dB	0.4% → 57.8%
Everglades Island · departures 1,437 measured, April–August 2026	about 0.8 km (0.5 mi)	+3.6 dB	70.8 → 74.7 dB	12.5% → 47.9%

"Typical change" is the median of each flight's own change, so it need not equal the difference between the two medians. Across four model versions the changes range +11.8 to +12.6 dB and +4.3 to +5.7 dB at the Estate Section home, and +9.5 to +10.4 dB and +3.5 to +4.9 dB at the Everglades Island home (note [5](#)). The four West Palm Beach homes are not modelled.

EVENT FREQUENCY · BUSIEST MEASURED HOUR

The busiest hours: 24 or 25 aircraft, one about every two and a half minutes

At every home, the busiest hour in its record brought 24 or 25 separate aircraft, all identified from their transponders and none flagged by the acoustic-shape screen. At three homes it was the same hour, a morning departure wave between 10 and 11 a.m. on Tuesday 19 May 2026: 25 aircraft at the Poinciana Park and Historic El Cid homes and 24 at the Everglades Island home. The Prospect Park and Flamingo Park homes recorded 23 in that hour. That day was windy, with 23 hours of wind above 11 mph.⁶

TABLE 3 · BUSIEST HOUR AT EACH HOME · IDENTIFIED, UNFLAGGED AIRCRAFT

HOME	AIRCRAFT	WHEN (ET)	AVG. INTERVAL	DIRECTION	WIND HOURS THAT DAY
Estate Section	25	Fri 27 Feb, 10–11 a.m.	2:25	All departing	10
Everglades Island	24	Tue 19 May, 10–11 a.m.	2:24	21 of 21 with a route departing	23
Poinciana Park	25	Tue 19 May, 10–11 a.m.	2:18	All 25 departing	23
Prospect Park	24	Mon 3 Aug, 2–3 p.m.	2:35	14 of 16 with a route arriving	3
Flamingo Park	24	Wed 8 Apr, 1–2 p.m.	2:31	All 24 departing	24
Historic El Cid	25	Tue 19 May, 10–11 a.m.	2:18	24 of 24 with a route departing	23

"Avg. interval" is the mean time from the start of one aircraft event to the start of the next, in minutes and seconds. Wind hours are hours above 11 mph; wind may affect event boundaries and aircraft attribution, and these counts follow the stated screen (note [6](#)).

A yearly average cannot express those hours. Each is one of 8,760 in a year; the annual DNL folds its sound energy into one value and does not report its flight count, timing or event levels.

TIME ABOVE 65 DB · MINUTES PER DAY

Forty minutes to an hour a day above 65 decibels at five homes in the busy season

"Time above 65" totals the seconds in a day when sound attributed to aircraft at a home was at or above 65 decibels, about the level of normal conversation. Where wind shortens detected events, the pipeline can substitute a reference-event estimate; the figures below use those corrected daily totals where the pipeline computed one, and the stored uncorrected totals otherwise. In the busy season a typical day at five of the homes brought between 40 and 59 minutes above that level; the sixth home, on Everglades Island, began recording only on 22 April. By August, the quiet season, a typical day brought between 18 and 28 minutes.⁷

TABLE 4 · TIME ABOVE 65 DB, AIRCRAFT-ATTRIBUTED, MINUTES PER DAY

HOME	BUSY-SEASON PERIOD	TYPICAL DAY	WORST DAY	TYPICAL AUGUST DAY
Estate Section	15 Feb – 30 Apr (75 days)	41.5	56.7 · Tue 17 Feb	23.0
Everglades Island	23–30 Apr (8 days); May (30 days)	34.0; 32.3	48.0 · Sun 3 May	28.2
Poinciana Park	3–30 Apr (27 days)	58.8	81.5 · Mon 6 Apr	26.6
Prospect Park	3–30 Apr (28 days)	48.4	63.8 · Mon 6 Apr	28.2
Flamingo Park	3–30 Apr (27 days)	40.4	57.9 · Fri 3 Apr	18.4
Historic El Cid	3–30 Apr (28 days)	43.8	60.6 · Mon 6 Apr	26.4

"Typical" is the median day. For four of the worst days (Estate Section, Everglades Island, Prospect Park and Historic El Cid) no wind-corrected value is stored, so the worst-day figure is the uncorrected aircraft-attributed total (note [7](#)).

NIGHT OPERATIONS · 992 NIGHTS MEASURED AT SIX HOMES

The nights

The FAA's own night runs from 10 p.m. to 7 a.m.; those are the hours it penalises by 10 decibels when it calculates DNL. In the busy season a typical night brought 12 to 13 aircraft at 65 decibels or louder at five of the homes, and 9 or 10 at the Everglades Island home from late April to the end of May. In the summer a typical night brought 7 to 10. At every home, every busy-season night measured had at least one; in the summer, at least 95% of nights did.⁸

TABLE 5 · AIRCRAFT AT 65 DB OR LOUDER, 10 P.M.–7 A.M., BY SEASON · LEVEL = PEAK ONE-SECOND AVERAGE

HOME · SEASON	NIGHTS MEASURED	WITH AT LEAST ONE	TYPICAL NIGHT	AVERAGE	90TH PERCENTILE	WORST NIGHT
Estate Section Winter (15 Feb–30 Apr)	75	75 (100%)	12	12.3	17	36
Estate Section · Summer (1 May–4 Sep)	125	124 (99%)	9	9.4	14	25
Everglades Island Spring (23 Apr–31 May)	38	38 (100%)	9.5	9.0	12	17
Everglades Island · Summer (1 Jun–24 Sep)	106	106 (100%)	9	9.5	14	25
Poinciana Park April (3–30 Apr)	26	26 (100%)	13	13.3	17	22
Poinciana Park · Summer (1 May–24 Sep)	137	136 (99%)	9	9.1	14	21
Prospect Park April (3–30 Apr)	28	28 (100%)	12.5	12.8	17	20
Prospect Park · Summer (1 May–24 Sep)	147	147 (100%)	10	10.1	16	26
Flamingo Park April (3–30 Apr)	26	26 (100%)	12.5	12.1	15	18
Flamingo Park · Summer (1 May–24 Sep)	132	126 (95%)	7	6.6	11	19

HOME · SEASON	NIGHTS MEASURED	WITH AT LEAST ONE	TYPICAL NIGHT	AVERAGE	90TH PERCENTILE	WORST NIGHT
Historic El Cid April (3–30 Apr)	28	28 (100%)	12	11.8	16	20
Historic El Cid · Summer (1 May–1 Sep)	124	124 (100%)	10	10.0	15	24

The worst nights

The worst night at the Estate Section home was Thursday 12 March: between 10 p.m. and midnight, 20 arrivals came in over the roof, an average of one every six minutes; seven more followed between midnight and 3 a.m., and nine departures between 6 and 7 a.m. Thirty-six aircraft in nine hours, every one identified by its transponder. At three homes, Prospect Park and Historic El Cid in West Palm Beach and Everglades Island in Palm Beach, the worst night was the same one, Sunday 19 July: 26 aircraft at the Prospect Park home, 25 at the Everglades Island home and 24 at the Historic El Cid home, most of them between 10 p.m. and midnight, then a business jet at 12:23 a.m. and the departures from 5:41 a.m.⁹

Narrow the hours and the flights are still there

Most of the FAA night's traffic comes in the late evening and the 6 a.m. departure wave. But at five of the six homes, at least one aircraft at 65 decibels or louder was recorded between midnight and 6 a.m. on three nights in four or more; at the Flamingo Park home, on 61% of nights. Between midnight and 5 a.m., the middle of the night, it happened on between 27% and 47% of nights.⁸

TABLE 6 · NIGHTS WITH AT LEAST ONE AIRCRAFT AT 65 DB OR LOUDER IN THE SMALL HOURS; AIRCRAFT AT 70 DB OR LOUDER BETWEEN 1 AND 5 A.M.

HOME	NIGHTS MEASURED	MIDNIGHT – 6 A.M.	MIDNIGHT – 5 A.M.	IDENTIFIED AIRCRAFT ≥ 70 DB, 1–5 A.M.
Estate Section	200	157 (79%)	80 (40%)	47
Everglades Island	144	108 (75%)	60 (42%)	39
Poinciana Park	163	124 (76%)	77 (47%)	30
Prospect Park	175	134 (77%)	73 (42%)	44
Flamingo Park	158	97 (61%)	43 (27%)	11
Historic El Cid	152	117 (77%)	57 (38%)	37

One flight, six homes

The deep-night flights are not a local effect of one address. United Airlines UA 1395, a departure from Palm Beach to Newark, was recorded at about 1:52 a.m. on Friday 21 August at 70 decibels or louder at all six homes: 82.7 decibels at the Prospect Park home, 82.2 at the Everglades Island home, 79.4 at the Historic El Cid home, 79.0 at the Estate Section home, 77.0 at the Poinciana Park home and 72.7 at the Flamingo Park home, each a peak one-second

average measured outdoors. For context, the World Health Organization's 1999 guidance gives 60 decibels outside bedrooms for a single night-time event, as a maximum level measured differently and assuming a partly open window. This record does not measure indoor levels or awakenings.¹⁰

PEAK EVENTS · ACOUSTIC-SHAPE SCREENED

The loudest aircraft-associated events

These are recorded sound levels associated by software with flight tracks. An automated acoustic-shape screen kept events whose rise and fall met its aircraft-like criteria and held back events flagged as impulsive, such as a slammed gate or a thunderclap. Passing the screen is consistent with a flyover; it does not show that all the sound in the event came from that aircraft.¹¹ At each home, the airliners among its ten loudest events sit in a narrow band, from about 82 to 84.5 decibels at the Flamingo Park home to about 86 to 89 decibels at the Poinciana Park home, each roughly three to five times as loud as a 65-decibel reference under the stated rule of thumb. At the Prospect Park home, whose maxima were recorded with Fast time weighting, the scheduled airliners sit at about 86 decibels, below the MD-83 at the top of Table 7.

TABLE 7 · LOUDEST EVENT AT EACH HOME, AND THE BAND OF ITS LOUDEST AIRLINERS · AFTER EACH HOME'S DATE EXCLUSIONS AND A 1 KM CLOSEST-APPROACH RESTRICTION (NOTE 11) · LEVEL = RECORDED A-WEIGHTED MAXIMUM (LMAX) · DISTANCE = TRACK-DERIVED CLOSEST APPROACH

HOME · LOUDEST EVENT	DATE & TIME (ET)	PEAK	CLOSEST	AIRLINERS AMONG THE HOME'S TEN LOUDEST
Estate Section Callsign NEW605 · Embraer Legacy 600/650 · Palm Beach to Westhampton Beach	Fri 26 Jun · 9:13 AM	90.0 dB	0.5–1 km	about 85–86 dB at 0.5–1 km (four of the six before 31 March; see note below)
Everglades Island Callsign RCH3285 · site lookup: US Air Force (AMC); type not in the record	Sat 25 Apr · 6:04 PM	86.2 dB	0.5–1 km	about 83–85 dB at under 1 km
Poinciana Park Southwest Airlines WN 1041 † · Boeing 737 MAX 8 · Baltimore to Palm Beach	Fri 17 Jul · 10:18 AM	89.3 dB	0.5–1 km	about 86–89 dB at under 1 km
Prospect Park Callsign WAL261 · McDonnell Douglas MD-83 · Palm Beach to Miami · Fast weighting	Sun 14 Jun · 5:29 PM	91.3 dB	0.5–1 km	scheduled airliners about 86 dB at under 1 km (Fast weighting) †; the MD-83 is not included
Flamingo Park Callsign HER18 · operator, type and route not in the record	Wed 29 Jul · 10:20 PM	88.9 dB	0.5–1 km	about 82–84.5 dB at under 1 km †
Historic El Cid Registration N156RE · Dassault Falcon 50 · Sarasota to Palm Beach	Fri 17 Jul · 11:39 AM	85.8 dB	under 0.5 km	about 84–85 dB at under 1 km

"Closest" is the straight-line distance from the monitor to the aircraft at its nearest point, including height. † More than one flight was near the home during this event; the software associated it with one of them on the basis of distance, so the level may include sound from another aircraft. The airliner bands also include multi-flight events: Frontier F9 2500 on 30 April at the Prospect Park home (85.9 dB, 0.5–1 km) and Delta DL 1106 on 23 June at the Flamingo Park home (82.2 dB, 0.5–1 km); the same caveat applies. The Prospect Park home recorded maximum levels with Fast rather than Slow time weighting from about 29 April to 24 September 2026; in this programme's data, Fast-weighted maxima tend to read about 1.5 to 2 decibels higher, an approximate observed difference, not a conversion for individual events. The Estate Section home's maxima before 31 March 2026 are consistent with Fast weighting too, and four of the six airliners in its band date from then. These values are shown as recorded and are not directly comparable with the other homes' (note [11](#)). Callsigns and registrations: note [12](#).

The same aircraft reached the top ten at several homes. The MD-83 flying as WAL261 on the afternoon of Sunday 14 June was the loudest event at the Prospect Park home, 91.3 decibels (Fast weighting), and among the ten loudest at the Everglades Island (84.6), Historic El Cid (85.2) and Poinciana Park (86.4 †) homes.¹¹

LIMITS

What these numbers do and do not say

- **Six homes, six microphones.** These are measurements at six single points outdoors. They do not describe whole neighbourhoods, and they count aircraft, not awakenings.
- **A meter hears everything.** Deciding which sounds were aircraft is done by software that matches the sound to transponder tracks. Present-day sound levels are measured; aircraft attribution, event boundaries, counts, durations and closest-approach distances are derived from sound records and flight tracks, and time-above figures also include the stated wind correction. Events flagged as impulsive are excluded from the peak and night figures, and days where such events were unusually common are left out of the time-above-65 figures (note [7](#)).
- **The "before" levels are modelled.** No sound was recorded at either Palm Beach home before 20 October 2025. The before-and-after comparison takes each measured flight today and re-computes its level on the old path (note [5](#)).
- **Some days are left out.** Days of documented instrument faults or reduced sensitivity, and days meeting a declared local-noise or measurement-anomaly screen, are left out at four of the homes, as are three Flamingo Park days carried over from an earlier exclusion; the separately cited model keeps its original sample, which includes one Everglades Island fault day (notes [2](#) and [5](#)). The retained evidence does not establish normal instrument response on every remaining day.
- **Maximum levels were not all recorded the same way.** The Estate Section home's maximum levels before 31 March 2026 and the Prospect Park home's from about 29 April to 24 September 2026 are consistent with, or were recorded with, Fast rather than Slow time weighting, and tend to read higher. Night counts and daily figures use one-second averages, which do not depend on that setting.
- **The windows differ.** The Estate Section record ends on 4 September 2026, before the first instrument hang recorded in the operational log there; the Historic El Cid record ends on 1 September 2026, and its instrument was removed the next day; the other four end on 24 September 2026 (note [2](#)).

- **A known disagreement with the airport's own monitors.** Compared day by day with the paired airport station, the six homes' median signed difference in total DNL ranges from -1.9 to +0.1 decibels, but their aircraft DNL runs +1.1 to +3.9 decibels above the airport's aircraft figure. These statistics describe the paired records; they do not establish interchangeability or validate either aircraft-attribution method. Different aircraft-attribution rules are one possible explanation. Siting, instrument response, weather treatment and day selection may also contribute. This comparison does not resolve those explanations, and the retained sources do not document the airport's full attribution rules.¹³

TABLE 8 · COMPARISON WITH THE AIRPORT'S MONITORS · MEDIAN SIGNED DAILY DIFFERENCE, COMMUNITY MONITOR MINUS AIRPORT STATION

HOME	AIRPORT STATION	PAIRED DAYS	TOTAL DNL	AIRCRAFT DNL
Estate Section	NMS05	154	-1.89 dB	+3.60 dB
Everglades Island	NMS01	147	+0.11 dB	+2.74 dB
Poinciana Park	NMS04	167	+0.04 dB	+3.87 dB
Prospect Park	NMS01	174	+0.09 dB	+2.98 dB
Flamingo Park	NMS04	160	-1.63 dB	+1.08 dB
Historic El Cid	NMS01	151	-0.12 dB	+2.22 dB

METHOD

How this was measured

- **The monitors.** At each home, a Convergence Instruments NSRTW_mk4 sound-level meter at a fixed outdoor position, recording A-weighted sound every second. This is an independent community monitoring programme; it does not claim to be a Part 150-certified programme, and no field calibration is asserted. Each instrument's certificate and settings are in note [2](#).
- **The flights.** Sound events are matched to specific aircraft using transponder (ADS-B) positions from FlightAware, Flightradar24 and a local receiving antenna in Palm Beach. The matching uses each aircraft's three-dimensional closest approach and the time sound takes to travel. The three sources overlap and fill one another's gaps; they are not independent confirmation.
- **Which events count as aircraft.** An event counts only when it has been matched to a flight whose track was measured against that home's position. Most are matched directly. Some are matched to a track that was first identified from a neighbouring monitor's recording; those count only if the sound's timing fits the track at that home, the trajectory fits the event's own one-second levels (goodness-of-fit score of at least 0.5) and the event passes the acoustic-shape screen. Aircraft-shaped sound that could not be matched to any flight — including sound that several monitors recorded at about the same time — is not counted in any aircraft figure in this record; total-DNL figures, such as the comparison with the airport's monitors, include all recorded sound. A matched event is associated with a flight by software; the association is not a unique identification of the aircraft.
- **What counts as an event.** A sustained rise above the location's own running background level, ending when the level falls back. Two levels are reported: the maximum level (Lmax) for the

loudest events and the before-and-after comparison, and the peak one-second average for night counts. For a flyover the two are close: with Slow time weighting the maximum is usually within about 1 decibel of the peak one-second average, and with Fast time weighting it typically reads about 1.5 decibels higher.

- **Counting nights and flights.** A night is named for the evening it begins, in Eastern time, and is counted only if the monitor recorded at least 90% of it, measured in actual elapsed seconds so the nights of the daylight-saving changes are handled correctly. Events from the same aircraft within 15 minutes count once.

The same rules are used at every home. The night figures describe the date windows and screening rules stated here.

Notes

1. Traffic, West Palm Beach homes: matched aircraft events with a displayed route beginning or ending at Palm Beach, excluding the days in note 2. Poinciana Park: 18,406, of which 17,420 departures and 986 arrivals (94.6% departures), 3 April – 24 September. Prospect Park: 20,455, of which 17,570 departures and 2,885 arrivals (85.9%), 3 April – 24 September. Flamingo Park: 15,874, of which 15,315 departures and 559 arrivals (96.5%), 3 April – 24 September. Historic El Cid: 17,759, of which 15,376 departures and 2,383 arrivals (86.6%), 3 April – 1 September. These are event counts, not a count of unique flights. Source: /api/noise-events for each monitor, retrieved 30 September 2026 and retained. VERIFIED
2. Data windows, day exclusions and instruments. Coverage is the recorded sample count divided by the actual elapsed seconds in each Eastern-time window, counting each hourly record once; every counted night has at least 90% of the night recorded, and nights touching a left-out day are not counted. Some retained hourly buckets at the five homes whose records begin in April contain more readings than the seconds in an hour; the retained aggregates do not establish the timestamps or cause of those extra readings, and they are kept as recorded. Aggregate coverage checks do not rule out every duplicated second. For every home, a day is excluded as a possible local-noise or measurement anomaly when that monitor has a complete daily record and its total DNL is at least 5.0 dB above the median total DNL of at least three other monitors with complete records that day; this declared screening rule does not establish the source of the excess sound or prove that retained days are free of contamination. **Estate Section** (15 February – 4 September; 202 days, each at least 99.7% recorded; 200 nights): 18 June (+7.2 dB) meets the screen and is left out of the recalculated figures; 18 June and 15 August, flagged by the site's health checks, are left out of the time-above figures. The operational log records instrument hangs on 5 and 7–9 September, a last report on 9 September and a finding of a fault on 10 September; the record ends before the first hang. The manufacturer describes the instrument as IEC 61672-1 Class 1 and supplied a calibration certificate. **Everglades Island** (23 April – 24 September; 155 days; 144 nights): 1–4 June and 6 June are left out, when the microphone's windscreen was missing and loose hardware struck it, producing loud impulses no neighbouring monitor recorded (found and repaired on 8 June); 28 June (+5.6 dB) and 8 July (+6.4 dB) meet the screen. Of the remaining 148 days, 147 are complete; one day flagged by the site's health checks is left out of the time-above figures. Calibration certificate 26 November 2025, IEC 61672 Class 1; A-weighting and Slow time weighting. **Poinciana Park** (3 April – 24 September; 175 days; 163 nights): 30 April, 1–2 May and 13 May are left out, when this monitor and the Flamingo Park monitor recorded suppressed peaks and a raised background floor at the same time, a reduced-sensitivity episode investigated in May 2026 that cannot be corrected; 4 July (+9.4 dB), 21 September (+18.0 dB) and 24 September (+10.7 dB) meet the screen. Of the remaining 168 days, 167 are complete. Calibration certificate 22 February 2026, IEC 61672 Class 1; A-weighting and Slow time weighting. **Prospect Park** (3 April – 24 September; 175 days; 175 nights): no day meets the screen and no instrument-fault days are documented; 174 days are complete; 30–31 May, 18 July and 15 August, flagged by the site's health checks, are left out of the time-above figures. Calibration certificate 22 February 2026, IEC 61672 Class 1; maximum levels recorded with Fast time weighting from about 29 April to 24 September 2026 and with Slow time weighting otherwise. **Flamingo Park** (3 April – 24 September; 175 days; 158 nights): 30 April, 1–2 May and 13 May (the reduced-sensitivity episode above); 7–9 August, left out as a data fault in an earlier version of the processing, which held 30, 0 and 0 aircraft events on full days of recording (the reprocessed events hold 113, 117 and 127, against 117, 113 and 132 at the Poinciana Park monitor; the days are kept out so the day-exclusion rules stay as first declared); and 4 May (+5.3 dB), which meets the screen. The monitor recorded nothing from 18 to 21 July. 160 days are complete; 4 July and 7 September, flagged by the site's health checks, are left out of the time-above figures. Calibration certificate 22 February 2026, IEC 61672 Class 1; A-weighting and Slow time weighting; unlike the other

monitors it samples at 32 kHz rather than 48 kHz, and its certificate's response table is headed 48 kHz, so it does not independently establish response at 32 kHz; this record makes no claim about the effect. **Historic El Cid** (3 April – 1 September; 152 days; 152 nights): no day meets the screen, no instrument-fault days are documented and no day is flagged by the site's health checks; 151 days are complete. The instrument was removed on 2 September; a replacement recording from 11 September at a different position nearby is not included. Calibration certificate 22 February 2026, IEC 61672 Class 1; A-weighting and Slow time weighting. At the five homes whose records begin in April, 29 May is incomplete and is left out of the daily figures. Source: /api/sound-levels/aggregated per day and /api/daily-dnl for all six monitors, retrieved 30 September 2026 and retained with SHA-256 checksums of the saved files; the programme's instrument and settings records. **VERIFIED**

3. Day-night average sound level: the sound energy of a 24-hour period, with a 10-decibel penalty added to the hours between 10 p.m. and 7 a.m., averaged across the year. It is the FAA's primary metric for airport noise and the basis of its 65-decibel land-use threshold. Under FAA Order 1050.1G, an increase is significant when it is 1.5 dB or more in a noise-sensitive area that is, or as a result becomes, exposed to 65 DNL or more.
4. FAA brief in *Palm Beach County v. FAA*, D.C. Cir. Nos. 25-1282 et al., filed 11 August 2026, pp. 37–40: a noise-screening model of the January 2026 procedure changes "did identify reportable noise increases in certain locations, including 5+ decibel increases in areas exposed to 45–60 decibels in Palm Beach," which fall "below the FAA's significance threshold of 1.5+ decibel increase at 65 decibels or higher" (AR 2001, 2042–43). The screening is a model of DNL; the figures in this record are measured single-event levels and time totals, a different measure. **VERIFIED FROM THE BRIEF**
5. Before-and-after per flight, Palm Beach homes. Path shift: the pre-change arrival path is from recorded flight tracks on 11 October 2025, the only day in the archived window with sustained westerly operations, so it is a single-day case study; the present path is from 2026 tracks. Each measured flight (Estate Section: March–August 2026, 24 sample days; Everglades Island: April–August 2026, 17 sample days) is compared with the same aircraft modelled on the pre-change path. Noise-versus-distance curves were fitted to 13,473 monitor-event observations across the six monitors and combined with the FAA's lateral-attenuation model (SAE-AIR-5662, used inside AEDT); each flight's recorded track is moved by the measured path shift and its closest approach recomputed. This is a conditional estimate for the sample days, not a measured before-and-after change. Across four model versions: Estate Section arrivals +11.8 to +12.6 dB, departures +4.3 to +5.7 dB; Everglades Island arrivals +9.5 to +10.4 dB, departures +3.5 to +4.9 dB; these ranges show sensitivity to the choice of model, not confidence intervals. The fits explain part of the flight-to-flight variation (R^2 0.23 departures, 0.34 arrivals), so single modelled values are uncertain and the medians are the meaningful result. 21% of modelled arrivals at the Estate Section home, and about 6% (18 of 277) at the Everglades Island home, fall outside the measured range of the curve used for them. The model keeps the acoustic-shape screen in use when it was built on 25 September 2026, before the screen was revised on 29 September; its inputs and fitted results were not recomputed for this record. Keeping the events that screen excluded gives arrivals +12.0 dB (Estate Section) and +9.9 dB (Everglades Island). Leaving out the Fast-weighted maxima, about a fifth of the model's data, gives arrivals +13.5 dB and departures +4.3 dB at the Estate Section home, and arrivals +11.0 dB and departures +3.4 dB at the Everglades Island home. The Everglades Island sample includes 95 departure observations from the 4 June fault day (note 2); removing them and refitting leaves the rounded departure change at +3.6 dB, with shares at or above 75 dB of 12.1% and 47.5% (1,342 departures); arrival results are unchanged. The fault-day observations have not been physically validated. Rebuilding the model on the events reprocessed on 29–30 September 2026 gives arrivals +13.8 dB (Estate Section) and +11.2 dB (Everglades Island) and departures +4.6 and +3.7 dB; the difference comes mainly from the noise-versus-distance fits, which are sensitive to which flights enter them, and the values above are kept as the more conservative estimate. "2.4 times" and "about twice" apply the approximate rule that each 10 dB doubles perceived loudness, a rule of thumb rather than a measured response. Source: Palm Beach Flight Noise Record, revised 25 September 2026, and its corrections notes of 27 and 30 September 2026; model input rebuilt with the corrected closest-approach calculation and independently reviewed. **MODELLED ESTIMATE**
6. Busiest hour at each home: the largest hourly count of identified aircraft with no event flagged by the acoustic-shape screen, within that home's window. Estate Section, Friday 27 February, 10–11 a.m.: 25 aircraft, mean start-to-start interval 145 s; Saturday 9 May, noon–1 p.m., also had 25 events classed as aircraft, two of them with no callsign or registration (23 identified). Everglades Island, 19 May: 24, the 21 with a displayed route departing and 3 with none; 144 s. Poinciana Park, 19 May: 25, all departures; 138 s; one further event in the hour, matched to a flight track with no callsign or registration, is not counted. Prospect Park, Monday 3 August, 2–3 p.m.: 24; 14 of the 16 with a displayed route arriving, 2 with other routes, 8 with none; 155 s; three hours follow at 23, including 19 May, 10–11 a.m. (the 22 with a displayed route all departing). Flamingo Park, Wednesday 8 April, 1–2 p.m.: 24, all with a displayed route and departing; 151 s; four other hours reach 23, including 19 May, 10–11 a.m. Historic El Cid, 19 May: 25, the 24 with a displayed route departing and 1 with none; 138 s; one further event, matched to a track with no callsign or registration, is not counted. Wind hours

are hours above 11 mph on the day. Source: the hours' events in /api/noise-events, retrieved 30 September 2026.

VERIFIED

7. Time above 65 dB: aircraft-attributed seconds at or above 65 dBA, per day. Where wind shortens detected events, the pipeline can substitute a reference-event estimate for an event's time above 65; these figures use the corrected daily totals where the pipeline computed one (/api/daily-dnl, fields aircraft_ta65_corrected_minutes or aircraft_ta65_minutes, retrieved 30 September 2026 and retained with its hash). Time-above figures cannot be screened second by second, so days on which impulse-flagged events made up 10% or more of the day's aircraft events are left out, as are health-flagged days and the days in note 2; the 10% rule is a declared screening rule, not proof that the remaining days are free of other sound. Days used: Estate Section 200 of 202; Everglades Island 146 of 147 complete days; Poinciana Park all 167; Prospect Park 170 of 174; Flamingo Park 158 of 160; Historic El Cid all 151. Worst days: Estate Section, 17 February, 56.7 min, 17 hours of wind above 11 mph; Everglades Island, 3 May, 48.0 min, two hours of wind; Prospect Park, 6 April, 63.8 min, and Historic El Cid, 6 April, 60.6 min, eight hours of wind each; for these four no wind-corrected value is stored, so the figure is the stored uncorrected total and remains subject to wind-related uncertainty. Poinciana Park, 6 April, 81.5 min (81.4 before the wind correction), eight hours of wind; Flamingo Park, 3 April, 57.9 min both before and after the correction, 24 hours of wind. For scale, the National Institute on Deafness and Other Communication Disorders (NIH) lists normal conversation at 60–70 dBA. VERIFIED
8. Night counts: aircraft events peaking at 65 dBA or more (peak one-second average, outdoors), between 10 p.m. and 7 a.m. Eastern, per night; nights named for the evening they begin; a night is included only if the monitor recorded at least 90% of that window, measured in actual elapsed seconds; nights touching a day left out in note 2 are not counted. Unmatched and impulse-flagged events are excluded. Events linked by registration (otherwise callsign) or by stored flight track within 15 minutes count as one aircraft, the method of the published neighbourhood figures. Percentages in Table 6 are rounded half up. Source: /api/noise-events and /api/sound-levels/aggregated for each monitor, retrieved 30 September 2026. VERIFIED
9. Worst nights. Estate Section, 12–13 March: 36 aircraft at 65 dBA or more between 10 p.m. and 7 a.m., all matched to transponder tracks, none flagged by the acoustic-shape screen (20 between 10 p.m. and midnight; 7 between midnight and 3 a.m.; 9 between 6 and 7 a.m.). Prospect Park, 19–20 July: 26, all matched, 21 identified (6 between 10 and 11 p.m.; 11 between 11 p.m. and midnight; 1 at 12:23 a.m.; 3 between 5:41 and 5:55 a.m.; 5 between 6 and 7 a.m.). Everglades Island, 19–20 July: 25, all matched, 20 identified (6; 11; 1 at 12:23 a.m.; 3 between 5:41 and 5:55 a.m.; 4 between 6 and 7 a.m.). Historic El Cid, 19–20 July: 24, all matched, 22 identified (6; 10; 1 at 12:23 a.m.; 3 between 5 and 6 a.m.; 4 between 6 and 7 a.m.). The worst nights at the other homes: Poinciana Park, 9–10 April, 22 aircraft; Flamingo Park, 10–11 May, 19. None of the events on these nights was flagged by the acoustic-shape screen. VERIFIED
10. 1–5 a.m. flights: aircraft events with an identified aircraft, peak one-second average of 70 dBA or more, not impulse-flagged, on the nights of each home's window, excluding the days in note 2. The UA 1395 levels are each home's recorded peak one-second average for the event matched to that flight. The WHO reference is 60 dBA L_{Amax}, Fast, outdoors, derived from 45 dBA indoors and an assumed 15 dB window reduction (Guidelines for Community Noise, 1999). This record's 70 dBA threshold uses the peak one-second average and is an event-reporting choice, not a direct compliance test or a measured sleep-effect threshold. VERIFIED
11. Loudest events: ranked by recorded maximum level (L_{Amax}) from /api/loudest-flights for each monitor (retrieved 30 September 2026 and retained), which holds back events the automated acoustic-shape screen flags as impulsive (a jump of more than 10 dB from one second to the next within the two seconds before the peak, or a level, averaged over three seconds, that is at least 10 dB below its own peak within two seconds on both sides of it). The screen is a rule on the shape of the sound: passing it does not prove the sound was only aircraft, and being held back does not prove it was not. Events on days with six or more hours of wind above 11 mph are not ranked, as on pbnoise.com, and none is listed from a day left out in note 2. For comparability, the ranking is restricted to events with a recorded matched-aircraft closest approach of 1 km or less, including height; this is a declared selection rule, not proof that an aircraft farther away could not have caused a high recorded level. The saved responses are already subject to the service's active-pipeline, fit-quality and background/peak-contrast filters; the response archive does not include the deployed filter settings. Not ranked under a rule applied at every home — an event whose maximum exceeds its peak one-second average by more than 5 dB, since a flyover's maximum sits within a few decibels of that average: NetJets 11 528 on 4 July at the Prospect Park home (86.3 dB maximum, 79.3 dB peak one-second average, 0.5–1 km). Maxima at the Estate Section home before 31 March 2026 are consistent with Fast rather than Slow time weighting. The loudest event at the Flamingo Park home, HER18 at 88.9 dB on 29 July, is 4.4 dB above the next; the record gives no operator, aircraft type or route, so its level cannot be checked against what that aircraft would be expected to produce. The programme's methods document discusses possible reduced sensitivity on 30 May and 27–31 July at the Flamingo Park monitor; the retained evidence neither establishes nor rules it out. Those dates are retained; excluding them would remove the 88.9 dB HER18 event of 29 July

from the loudest list. The site's list for the Everglades Island home also carries one event by a manual label, 102.7 dB on 17 June, which no flight record identifies; this record does not rank it or attribute it. The airliner bands in Table 7 are the approximate ranges of level and closest approach given for the airliners among each home's ten highest-ranked events. The 1 km restriction leaves out louder events at two homes: at the Estate Section home, 93.5 dB on 15 June (over 1 km; no callsign or registration in the flight record) and 89.2 dB on 19 June (callsign CYO220; over 1 km); at the Everglades Island home, 90.2 dB at a matched closest approach of over 1 km. Events held back by the acoustic-shape screen are not ranked; the loudest held back in each window read 93.3 dB (Estate Section), 86.1 (Everglades Island), 99.8 (Poinciana Park), 92.8 (Prospect Park), 91.2 (Flamingo Park) and 87.2 (Historic El Cid). Closest-approach distances are the stored values as retrieved on 30 September 2026, computed with the corrected calculation introduced on 25 September 2026. "Three to five times as loud" applies the approximate rule that each 10 dB doubles perceived loudness. **VERIFIED**

12. NEW605, RCH3285, WAL261 and HER18 are callsigns in the retained flight records; the records name no operator for NEW605, WAL261 or HER18, and RCH3285 is shown with the operator the site's airline lookup assigns to its callsign. N156RE is a registration; a registration does not establish the operator, owner or purpose of a flight. This record makes no finding about any operator or flight purpose. Sound levels are measured; closest-approach distances are calculated from matched tracks. **OPERATOR NOT IDENTIFIED**
13. Comparison with the airport's monitors: daily values from the airport's published Symphony data (total LDNT and aircraft LDNA) for the paired station, against each monitor's stored daily values, both retrieved 30 September 2026 and retained; complete days only, excluding the days in note 2. Paired periods: Estate Section 3 April – 4 September; Historic El Cid 3 April – 1 September; the others, each home's full window. Rounded to one decimal, the aircraft differences are +3.6, +2.7, +3.9, +3.0, +1.1 and +2.2 dB in the order of Table 8. Median absolute daily differences in total DNL, computed from the retained paired daily values for five homes: Everglades Island 1.04 dB; Poinciana Park 0.69; Prospect Park 0.99; Flamingo Park 1.74; Historic El Cid 1.13. The retained airport export does not establish the stations' daily completeness. The community aircraft value uses wind_corrected_adnl when available, otherwise night_adjusted_dnl, and counts only sound matched to a flight track (see "Which events count as aircraft"); the airport value is its reported LDNA. **VERIFIED**
14. Relationship to other documents. Each of the six homes also has its own Flight Noise Record, dated 30 September 2026 and computed from the same data retrievals under the same rules; the figures in this combined record are the figures those records report, or are sums, ranges and percentages derived from them. Those records replace versions dated 26 September 2026, which used an earlier acoustic-shape screen and counted, in aircraft DNL, aircraft-shaped sound that could not be matched to a flight; where the earlier versions differ, the figures dated 30 September 2026 apply.