FLYING

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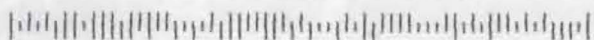Ready to fly in the
clouds?

Van Nuys Newhall 9 Departure

One of the country's busiest airports benefits from a standard departure procedure.

BY ROB MARK AND JASON BLAIR

The key aspect of any standard instrument departure is the word "standard." SIDs were created to reduce the required radio traffic between air traffic controllers and pilots, as aircraft transition from the terminal to the en route airspace in busy environments such as the one surrounding Van Nuys, California. This past year, KVNY locally handled more than 212,000 takeoffs and landings, making it one of the busiest general aviation airports in the United States. Adding to the local complexity is KVNY's proximity to Hollywood Burbank Airport (KBUR) to the east and its location beneath the busy Los Angeles Class B airspace. ●

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A **Terrain and Climb Requirements**
The takeoff obstacle notes found on the right side of the SID plate provide required climb gradients per nautical mile. These ensure the aircraft is able to safely clear local terrain. Some pilots confuse this requirement with climb rates in feet-per-minute depicted on the vertical speed indicator. Climb gradients are not displayed in the cockpit and must be calculated using an aircraft's performance charts prior to departure, considering atmospheric and altitude requirements. For example, an aircraft climbing at 120 knots must interpolate a climb gradient per nautical mile by considering the 100-knot groundspeed that translates into 617 feet per nautical mile and a 150-knot speed, a 925-foot rate per nautical mile. That works out to an approximate climb rate of 740 feet per minute being required up to 7,000 feet.

B **It All Depends on the Departure Runway**
A quick look at the lower right side of this chart offers details about what the pilot can expect, depending on which runways are in use at KVNY. When runways 16 Left and Right are active, departures should expect an initial climb followed by a left turn to 163 degrees and a climb to cross the VNV 2.0 DME at or below 1,700 feet. Next, there's a climbing left turn to a heading of 113 degrees. When north departures off runways 34 Left and Right are in use, pilots can expect a climbing left turn to a heading of 253 degrees. The notes on the bottom right tell pilots to "expect radar vectors to IPIHO, then via transition to assigned route." This means that no matter the runway in use, a pilot should expect to cross IPIHO before continuing the departure procedure.

C **SIDs Offer Predictability**
Once the aircraft crosses IPIHO, the route

KVNY/VN
VAN NUYS

FILLM
112.5

CHANGES: LHS

is easy to identify and needs no input from ATC. After IP-IHO, the pilot flies to TWINE, then to LANGE, SLAPP and BO-GET, next to the Palmdale VOR [PMD], then to ETHER, and finally on to DAG. Along this route, minimum altitudes are published much as they would be for an minimum en route altitude on a low en route chart. These altitudes increase in relation to the terrain. Pilots unable to maintain any of these altitudes along the way should notify ATC prior to departure by declining the SID and negotiating another option.

D Lost Comms
Additionally, in the middle right column of the chart there's a "Lost Comms" box that explains the action a pilot is expected to take if they lose radio communication with ATC during the departure. If departing Runway 16 Left, for example, the aircraft should fly the initial 113-degree heading. If the pilot was unable to make radio contact with SoCal Approach by the time they crossed the 5-mile point from the VNY VOR, they should turn left to 313 degrees and intercept the LAX 342-degree radial, and then continue on the published procedure. Also keep in mind that FAR 91.185 reminds pilots who experience radio failure in VFR conditions to proceed to the destination visually.

KVNY/VNY
VAN NUYS

JEPPESEN VAN NUYS, CALIF
9 AUG 19 (10-3D) Eff 15 Aug SID

SOCAL Departure (R) 124.6	Apt Elev 802

Trans alt: 18000.
1. RADAR required.
2. For all runways: Do not intercept any departure radial until advised by ATC.
3. Approximate distance from take-off area runways 16L/R to D2.2 VNY is 1.2 NM.

NEWHALL 9 DEPARTURE (NUAL9.IPIHO)

Map labels:
- EDWARDS AFB / Edwards CA / KEDW
- DAGGETT 113.2 DAG
- LAKE HUGHES 114.35 LHS
- PALMDALE 114.5 PMD
- LANCASTER CA / Gen Fox / KWJF
- PALMDALE CA / Palmdale Usaf Plant 42 / KPMD
- ETHER
- DAGGETT (NUAL9.DAG) 12000 6200T
- NOT TO SCALE
- VICTORVILLE CA / Southern California Logistics / KVCV
- VICTORVILLE 109.05 VCV
- PALMDALE (NUAL9.PMD) 7000
- BOGET 7000
- SLAPP 7000
- LANGE 7000 5800T
- TWINE
- FILLMORE 112.5 F
- VAN NUYS 113.1 VNY
- BURBANK CA / Bob Hope / KBUR
- IPIHO
- 1700
- 9387

LOST COMMS
If not in contact with Departure Control within D5.0 from VNY VOR: Rwys 16L/R; Turn LEFT heading 313° to intercept the LAX R342 and continue the published procedure.

TAKEOFF OBSTACLE NOTES
See TAKEOFF OBSTACLE NOTES page (10-3OB1).

This SID requires takeoff minimums (for standard minimums, refer to airport chart): Rwys 16L/R, 34L/R: Standard (or lower than standard, if authorized) with a minimum climb of 370 per NM to 7000.

Gnd speed-KT	75	100	150	200	250	300
370 per NM	463	617	925	1233	1542	1850

RWY	INITIAL CLIMB	TOP ALTITUDE
16L/R	Climb on heading 163°, cross FIM R102 or D2.2 VNY at or below 1700, then climbing LEFT turn heading 113° to assigned altitude.	Assigned by ATC
34L/R	Climbing LEFT turn heading 253° to assigned altitude.	

ROUTING
EXPECT RADAR vectors to IPIHO, then via transition or assigned route. MAINTAIN ATC assigned altitude, EXPECT filed altitude/flight level 10 minutes after departure.

CHANGES: LHS VO...