

## RNAV VISUAL – Taller PANSOPS

<u>Leaflet 15ATSBL03 - IFALPA</u>	<u>Comentarios</u>
<p><b>1) Lack of global harmonization in how these approaches are designed, approved, implemented, trained, and flown.</b></p>	<p>Se debería utilizarse el procedimiento RNP APCH ya estandarizado por la OACI, con mínimos VMC y DH 1500ft. Para los casos en que no exista posibilidad de garantizar el franqueamiento de obstáculos hasta 1500´ AGL, habría que verificar la posibilidad de establecer una altitud de referencia para el FMS (RF Legs)</p>
<p><b>2) IFALPA recommends that pilots should request a different type of approach from ATC if offered an RNAV Visual</b></p>	<p>Normalmente la alternativa a un procedimiento RNAV Visual sería un circling approach, que es comprobadamente más riesgoso que el RNAV Visual.</p>
<p><b>3) These are very specific procedures which require the operator to obtain Civil Aviation Authority approval before its pilots can fly an RNAV Visual. And, pilots must be trained before flying one of these approaches. Because these RNAV Visual approaches are quite demanding, pilots should apply a high level of preparation and vigilance when flying them.</b></p>	<p>RNAV Visual debería ser un RNP APCH ya estandarizado por la OACI. De esa manera, no serían requeridos aprobaciones y entrenamientos adicionales. A discutir – RF Legs</p>
<p><b>4) <u>Fight Path</u> - The general concept is based on maintaining a lateral flight path flown</b></p>	<p>El procedimiento RNAV Visual estaría en la database y utilizaría el mismo criterio de la RNP APCH, incluyendo</p>

<p>via RNAV waypoints, followed by a visual final approach segment. The published flight path must be maintained throughout the entire approach to touchdown. Additionally, the waypoints on the approach are typically “fly by” waypoints that require the turn to be started prior to the waypoint to intercept the subsequent track. If the crew delays the turn until over the waypoint (“fly over” waypoint), the aircraft will fly outside of the published track. If you find yourself unsure about waypoint symbology, an appropriate review of your chart provider’s symbology legend may be helpful.</p>	<p>las simbologías de los waypoints y demás informaciones de la carta.</p>
<p><b>5) Altitude Control</b> - A typical RNAV Visual approach depicts “at or above” altitudes at various waypoints along the flight path. This may require the pilot to calculate the desired descent rates between waypoints (increases pilot workload). Also, the pilot must report to ATC that the airport or preceding traffic is in sight in order to be given clearance for the RNAV Visual.</p>	<p>El procedimiento RNAV Visual estaría en la database y todos los cálculos deben ser hechos automáticamente por el FMS. Además, el requerimiento para que el piloto indique el aeropuerto y/o el tráfico precedente dependería del requerimiento específico del ATC. Podría o no ser aplicable. Para los casos en que no exista posibilidad de garantizar el franqueamiento de obstáculos hasta 1500´ AGL, habría que verificar la posibilidad de establecer una altitud de referencia para el FMS (RF Legs)</p>
<p><b>6) Traffic Separation</b> - On all RNAV Visuals reviewed it remained unclear as to who holds responsibility for traffic separation throughout the approach. Therefore, if flying</p>	<p>La separación con obstáculo en la fase visual sería responsabilidad del piloto. La separación entre aeronaves deberá estar bien establecida en la regulación si sería responsabilidad del piloto o del</p>

<p>these approaches, the responsibility for traffic separation needs to be clarified with ATC.</p>	<p>controlador.</p>
<p><b>7) Workload Management</b> - Pilot workload increases substantially because the crew must maintain the “at or above” altitudes, observe any speed restrictions, maintain sight of the preceding aircraft or airport, maintain the published lateral flight path, and fly a stabilized approach. Consequently, this type of approach can be significantly more demanding than the relatively routine “radar vectors” to final.</p>	<p>El procedimiento RNAV Visual estaría en la database y todos los cálculos deben ser hechos automáticamente por el FMS. Además, el requerimiento para que el piloto indique el aeropuerto y/o el tráfico precedente dependería del requerimiento específico del ATC. Podría o no ser aplicable. La cuestión que ameritaría discusión sería la necesidad de mantenerse visual con obstáculos y al mismo tiempo ejecutando el procedimiento de aproximación IFR.</p> <p>Para los casos en que no exista posibilidad de garantizar el franqueamiento de obstáculos hasta 1500´ AGL, habría que verificar la posibilidad de establecer una altitud de referencia para el FMS (RF Legs)</p>
<p><b>8) Glide Path</b> - Per the FAA, all RNAV Visual approaches in the US must have a visual (VASI, PAPI) or electronic (ILS) vertical guidance system. All of the RNAV Visual approaches reviewed from other regions of the world have PAPI’s available for vertical guidance; however, it is not certain if this is a design requirement or coincidence. If the RNAV Visual approach that you are intending to fly has no vertical guidance whatsoever, plan accordingly.</p>	<p>La eventual falta de coincidencia entre PAPI/VASIS y VPA es lo mismo que el procedimiento IFR/VMC.</p>

<p><b>Potential for Confusion RNAV Visual Chart Naming:</b> Pilots should be keenly aware that RNAV Visual approaches do not follow the ICAO standard for approach designation (ILS Z, VOR A, RNAV GPS Y, ILS 23L, etc.). Most of the RNAV Visual approaches in the US are named using a “RNAV Visual Rwy XX” convention that appears like this: “RNAV Visual Rwy 19R”. Bordeaux (BOD) uses this as well, however, Tel Aviv (TLV) tends to use the five letter identifier of the waypoint at which the pilot must be in visual sight of the surrounding terrain, followed by the remaining nomenclature: “Visual Rwy XX”, e.g. “KEREN Visual Rwy 26”. Because other types of approaches (non-visual) may appear very similar both in name, as well as appearance, pilots must be certain that the correct approach has been selected.</p>	<p>Procedimientos RNAV Visual debería utilizar la nomenclatura regular de los procedimientos RNP APCH, con mínimos VMC.</p>
<p><b>9) FMS Database and the RNAV Visual:</b> The name of the RNAV Visual approach in the FMS database may also be confusing for similar reasons, and due to the limited number of characters allowed by FMS software, the</p>	<p>Idem anterior.</p>

<p>approach name will usually be in an abbreviated form from what appears on the actual chart. Jeppesen's FMS approach identifier appears as such: "R18L -V". If the V has already been used for a different approach, S will be utilized, e.g. "R18L-S". But other database providers may use a different naming convention. This, too, challenges the crew to identify the correct approach to be entered in the FMS when preparing the arrival, be it for an Instrument approach or a Visual RNAV. Additionally, the tracks should always be checked against the NAV display for accuracy, including speed and altitude constraints.</p>	
<p><b>10) <u>Approach Minimums</u></b> The only published minimums are the ceiling and visibility that are required to fly the approach. There is no DA or DH. Obstacle clearance is to be maintained visually by the flight crew.</p>	<p>DA/DH deben ser publicadas y correspondientes a 1500` DH. Para los casos en que no exista posibilidad de garantizar el franqueamiento de obstáculos hasta 1500` AGL, habría que verificar la posibilidad de establecer una altitud de referencia para el FMS (RF Legs)</p>
<p><b>11) <u>Missed Approach</u></b> In the U.S., RNAV visual approaches will not have published missed approach procedures. You must prepare your action plan if you decide to discontinue the approach for whatever reason. The RNAV visual charts at Bordeaux and Tel Aviv do have published missed approach</p>	<p>Publicar Missed Approaches iguales a los procedimientos RNP APCH. Hay que evaluar los casos en que no es posible garantizar el franqueamientos de obstáculos en un missed approach</p>

<p>procedures.</p>	
<p><b>12) Other Points</b> - To further complicate matters, although these approaches are not circling approaches, some do require several turns while flying visually to final. Without ICAO Standards, what remains uncertain is whether or not these turns should be considered circling manoeuvres with the associated maximum speed and bank angle restrictions in order to preserve obstacle clearance. Or, is obstacle clearance assured by precisely flying the published track? On some RNAV Visuals such as ATL Rwy 26R, 210 knots is required until BAMBU which necessitates that the pilot make two turns from POORS at a speed that exceeds the maximum circling speeds for Category C and D (PANS-OPS), as well as Category C,D and E (TERPS).</p> <p>Some approach charts indicate whether the approach was designed to ICAO PANS OPS provisions or TERPS standards. But this is inconsistently notated. It may be useful to note that there are differences between the two. These two charts show the Circling differences.</p>	<p>En el caso de que se utilice el RF como parte de un procedimiento RNAV Visual, la aeronave y piloto deben estar aprobados para la aplicación del RF, así como hay que garantizarse que el piloto sea capaz de mantener la referencia visual con los obstáculos al efectuar el RF.</p>

Note: TERPS is the FAA standard for approach design and provides a smaller circling radius than ICAO PANSOPS primarily due to slower circling speeds. Example: A Cat C aircraft has a PANS-OPS max speed and bank of 180kts/20degrees which results in a circling area radius of 4.2 NM. That same aircraft under TERPS is restricted to 145kts/20degrees which results in a 2.68NM radius - nearly a 1.5 NM difference.

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