***T-44A Briefing Guides***



EVENT: **I3205**

DISCUSS ITEMS: High altitude approach/penetration, lost communications (FIH/LOA) (IFR – VMC vs. IMC), windshear, partial panel approach/ESIS procedures, needle only approach procedures, and SSE approach procedures.

**High altitude approach/penetration** –

FTI Info -

The high altitude approach (or penetration) allows the aircraft to maintain an efficient fuel consumption/true airspeed profile and/or to delay descent into low altitude weather (such as an icing layer). High altitude approaches are most common at military fields and are used primarily by fighter type aircraft. ATC will generally assign an alternate procedure for transport category aircraft. High altitude approaches are generally flown the same as low altitude approaches, with a few exceptions. Refer to the AIGT Study Guide chapter 8 for a more detailed discussion of the different types of high altitude procedures. As with any approach, before reaching the IAF, recheck the weather, review the IAP, obtain clearance for the approach, and complete the Approach Checklist.

Reviewing the IAP. The entire approach must be flown as depicted to comply with all course and altitude restrictions. Usually radial approaches or radial and arc combination approaches are associated with TACAN or VORTAC facilities and teardrop approaches are associated with VOR or NDB facilities. Reviewing the IAP should include calculating descent rates and/or gradients required in order to comply with altitude restrictions. The approach normally requires a higher rate of descent and correspondingly higher indicated airspeed than a low altitude IAP. Carefully observe NATOPS speed limitations and appropriate airspace speed restrictions. (Maximum speed in class C or D within 4 NM from primary airport, less than 2500' AGL is 200 KIAS, and maximum speed in class B is 250 KIAS.) Utilize flaps to provide a steeper approach angle. If required, props may be placed full forward for as long as necessary. The gear and/or full flaps may be extended in unusual circumstances but should generally be avoided.

Descent. High altitude penetration descent may be initiated when abeam or past the IAF with a parallel or intercept heading to the course. The controller should assign you the depicted IAF altitude. If you are not assigned the IAF altitude and cannot make the descent gradient by starting the penetration from your last assigned altitude, request a lower altitude. Remember, you must be able to comply with subsequent mandatory and maximum altitudes.

11-217 Info –

**12.2**. **Non-DME Teardrop Approaches**. Teardrop approaches are usually associated with VOR or NDB facilities (Figure 12.1).

12.2.1. Station Passage. When station passage occurs at the IAF, turn immediately in the shorter direction toward the outbound course and attempt to intercept it. Begin descent when you are established on a parallel or intercept heading to the approach course and outbound from the IAF. If you arrive at the IAF at an altitude below that published, maintain altitude and proceed outbound 15 seconds for each 1,000 foot the aircraft is below the published altitude before starting descent. If you arrive at the IAF at an altitude above that published, a descent to the published IAF altitude should be accomplished prior to starting the approach. If descent is required at the IAF, obtain clearance to descend in a holding pattern. Set the altimeter in accordance with FLIP.

12.2.1.1 NOTE: Use a descent gradient of 800-1,000 ft/NM (8-10°) to ensure you remain within protected airspace.

**12.3. Radial Approaches.** These approaches are associated with TACAN or VORTAC facilities (Figure 12.2). One or more radials form the entire approach track.

12.3.1. Crossing the IAF**. When over the IAF, turn immediately in the shorter direction toward the approach course**. Intercept the published approach course using appropriate course intercept procedures. If your heading is within 90° of the approach course, you are not required to overfly the IAF; you may use normal lead points to intercept the course.

12.3.2. Descent. **Start the descent when the aircraft is abeam or past the IAF on a parallel or intercept heading to the approach course**. (For DME approaches, crossing the arc is considered abeam the IAF.) **Intercept the course and comply with the altitudes depicted on the approach chart**. (Aircraft configuration and airspeed requirements prior to the FAF are the same as for non-DME teardrop.)

**12.4**. **Radial and Arc Combination Approaches** (Figure 12.3). These require the use of arc intercept procedures. Flight procedures are the same as for a radial approach. However, if established in a holding pattern and the IAF is located on an arc or on a radial at a distance less than that required for a normal lead point, you may turn early to intercept the arc. **Start the descent when you are established on an intercept to the arc and abeam or past the IAF in relation to the initial approach track**. (Aircraft configuration and airspeed requirements prior to the FAF are the same as for non-DME teardrop.) An arc or radial altitude restriction only applies while established on that segment of the approach to which the altitude restriction applies. Once a lead point is reached, and a turn to the next segment is initiated, the pilot may descend to the next applicable altitude restriction. This may be especially important to facilitate a reasonable rate of descent to final approach fix altitude.

**Lost communications (FIH/LOA) (IFR – VMC vs. IMC) –**

FIH Lost Comm – Route **A**ssigned. Last assigned by ATC.

**V**ectored. To the fix, route, or airway specified in the vector clearance.

**E**xpected. ATC has advised may be expected in a further clearance.

**F**iled. By the route filed in the flight plan.

Altitude **A**ssigned. The altitude or flight level last assigned.

**M**inimum. MSA for IFR flight.

**E**xpected. Altitude ATC advised may be expected in further clearance.

VFR- Land as soon as practicable.

IFR – if assigned a fix, leave the fix as close to EFC time as possible or land as close to estimated time of arrival as possible. If not assigned a fix, proceed to a fix where an approach begins and proceed either at EFC time or ETA as possible.

LOA Lost Comm – If unable to proceed VFR attempt to contact NGP Tower and:

1. Climb to last heading or route assigned, maintain 1,600’
2. Comm can’t be established, w/in 3 mins., climb to 2,600’.
3. After 2,600’ go to fix serving NGP and execute approach.

In GCA Pattern:

No comm. After 1 minute, go to fix for NGP and execute approach.

On GCA Final:

Contact Tower, if unable intercept an instrument approach for the runway in use and execute an approach. If unable, climb 1,600’ and go to fix for NGP approach.

**Windshear –** Comply with NATOPS procedure and get the aircraft under control. Make a radio call when able. Recognize it by seeing a substantial, uncommanded increase in descent rate on your VSI and altimeter.

**Partial panel approach/ESIS procedures –**

Remain VMC and land if this is an option.

Secure the big 5 (windshield wipers, windshield heat, AC, heater, vent blower) and brief wet compass characteristics.

Advise controller and request a no-gyro approach.

Turn at standard rate turns until advised not to. Initiate turns immediately and stop them immediately as instructed.

**Needle only approach procedures –** Choices are VOR or TACAN.

VOR – Fly using RMI needles. Just like flying an NDB approach.

TACAN – Use the needle on the HSI for approach. Same as NDB.

For inbound course intercepts, put heading bug on the inbound course. The head will fall to the heading bug on an intercept heading.

For outbound put heading bug on outbound course. Tail will rise to bug.

**SSE approach procedures –**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Precision** | **Non-Precision** | **Radar Approach PAR** | **Radar Approach ASR** |
| **SSE Configuration** | 1/2 dot below glideslope at glideslope intercept altitude | In safe position to land | 10 sec gear warning | (1) 10 sec gear warning  (2) Safe position to land |

For circling, configure when you are on a normal glidepath to the landing runway. This is not always the 180. If you are lower than your normal pattern altitude, delay your descent and configuration until you intercept your normal glide path.

On the ASR you have the option to configure with a 10 second gear warning if you are going to use recommended altitudes and descend on a stable glide path. If you get will below those altitudes, you most clean up the gear until in a safe position to land.