

INAV Stage Supplemental

15NOV16

***** WARNING: THIS INFORMATION IS MEANT TO SUPPLEMENT THE FTI WITH ADDITIONAL OR AMPLYFYING INFORMATION. STUDENTS ARE STILL RESPONSIBLE FOR KNOWING FTI, NATOPS, AND OPNAV CONTENT *****

GENERAL NOTES

- IPs are your "voice-activated autopilot." It is your responsibility to direct your instructor as necessary to successfully execute your mission.
- First, after IGS you need to refresh yourself on your gear, checklists, Pre-flights, Hollywood script, etc. You will be held responsible and IPs will UNSAT accordingly. Know the differences for the rear cockpit.
- KNOW and fully understand your EPs. i.e. A simple step of 'intercept ELP' is complex, what does it entail? Understand what efficient power means.
- Jet Log Navigation. Jet log is used for FUEL ANALYSIS only. If you have a navigational mistake on your jet log, it WILL translate to a HUGE error. NAVIGATE OFF YOUR CHARTS, and fuel plan off your jet log.
- Be **VERBAL**. Telling your instructor what you are doing/thinking. Say your 6 T's out loud. If you're quiet, the IP can make all kinds of assumptions.
- With discuss items, be sure to study the SOURCE (OPNAV, FTI, NATOPS, SOP, FIH, etc) of the material thoroughly, not just notes/gouge.

THE GENERAL PRIORITIES: Aviate, Navigate, Communicate

- AVIATE. The most important for any aviator. KEEP THE PLANE FLYING. Think of aviate as:
 - Actual emergency procedures
 - Safety of flight issues
 - **Altitude and airspeed**
 - NAVIGATE. Ensure GPS/VOR reflect what we are cleared for. Keep CDI tracking on victor/jet ways or approaches, point to points, etc.
 - COMMUNICATE. Three parts and should be prioritized in this order.
 - ATC comms
 - Checklists
 - Briefs
- *Constantly recycle back to Aviate (altitude and airspeed) and Navigate in between communication NO EXCUSES FOR BASIC AIR WORK TO BE OFF CTS PARAMETERS*

PHASES OF FLIGHT

- Ground OPS, takeoff, departure
- Enroute
- Terminal

PHASE 1 - GROUND OPS, TAKEOFF, DEPARTURE

GROUND OPS

- Checklist. Intro pg 3-1.

TAKEOFF

- Note on pg 3-5.

DEPARTURE

- Standard Procedures. When levelling off, give a target indicated IAS to fly while calculated actual IAS for TAS.

PHASE 2 - ENROUTE PROCEDURES

TURNPOINT PROCEDURES

- 2 MINUTES PRIOR. If you are late, don't call it a 2 minute prior call, call it the 1 minute prior, 30 seconds prior, etc.
- OPS CHECK. If you are flying VERY long legs, you need to do more OPS checks and not just with the turn point procedures. Remember, CTS is an OPS check at least every 20 minutes, regardless of how the route is designed.
- NEAREST DIVERT. Look at the chart and find the nearest divert. High charts only have airports with 5000ft or greater paved surfaces, so a good idea is to find the nearest divert with the low chart.

POINT TO POINTS

- PTPs must be updated throughout, due to methods not incorporating winds.
- Turn after course intercept, **NOT** DME intercept.
- DON'T forget your priorities. You still need to aviate, navigate, and communicate.

PHASE 3 - THE TERMINAL ENVIRONMENT (ATIS, DRAFTs, BRIEFs (Field & Approaches), Checklists, Instruments set up, Missed approaches)

The Terminal phase starts after getting ATIS, complete associated procedures as early as possible to stay ahead of the aircraft and ready for approaches.

- ATIS / ASOS / WX. As early as possible will help determine if it's worth continuing to the destination and what to expect for approach selection. Keep in mind, ATIS usually updates 5min before the hour.
- FIELD BRIEF. After the field brief, verify which approaches you'll be requesting.
- APPROACH BRIEF. Can be done right after the field brief, earlier the better. If you know what approach you're requesting, brief it. While executing the approach, continue to update/brief the pertinent info of the approach (What changes, step by step, as it comes).

SETUP FOR HOLDING

- It's acceptable to twist in the holding course 2-4 miles ahead of the fix. Use the heading bug as necessary or needle to continue navigating to the fix. For GPS, ensure OBS is selected prior to reaching the fix and deselected prior to the fix when cleared for the approach.

SETUP FOR THE APPROACH

- If you're not currently using the VOR or GPS, make it useful and set it up for the next desired approach.
- As soon you are on radar vectors, start setting up proper frequencies and inbound courses for the approaches.
- Ensure GPS approach is loaded as soon as possible. Double check the OBS function and use it accordingly.

ARCING

- Don't forget the lead turn. Needle above 90 = closer, needle below 90 = further from the NAVAID. Winds will affect you during arcing.
- If VOR arcing to an ILS/LOC final, be cautious of different freqs and swap accordingly after turning from the VOR arc onto the ILS/LOC FAC.

BACKUP APPROACHES

- Backup approaches are neither required nor graded, but can be helpful. In the real world, you'll use a backup if wx is IMC and close to minimums.

- A backup approach can add SA, especially if the approach you are flying does not have DME.
 - ONLY try to load a backup approach if you comfortably have the time to do so! Remember, this is not a graded item. Also, a rushed and incorrectly loaded backup can be more harmful than helpful!
- ***Be sure to discuss what you are doing with your IP***

MISSED APPROACH / CLIMBOUT / WAVEOFF

Differences:

- Missed approach - Runway environment was never in sight. Reporting missed approach informs tower/departure that the WX is now below mins.
- Climbout - Executed after a touch and go or low approach. Climbout instructions are usually assigned from either tower or approach.
- Waveoff/Go Around - This is a safety of flight/landing issue. We had the runway environment in sight and intended to land, but something prevented us from safely doing that.
- You can say missed approach on ICS in the cockpit between crew members, but do not say "missed approach" on the radio to tower/ATC unless the WX was actually bad and never had runway environment in sight.

Execution:

- ***Per NATOPS***, "Smoothly advance PCL to MAX power" for a missed approach. Don't forget to verbalize procedures to the IP, WE'RE ACTING AS AN AUTOPILOT WAITING FOR YOUR COMMANDS. Simply just stating execute missed approach isn't good enough.
- Executing a missed approach/climbout for training: "Execute missed approach, max power, climb, 2 positive rates, gear up, 110 flaps up, fly heading xxx, climb to xxx" then report executing climbout to tower "Tower, KATT 615 executing climbout".
 - Executing a missed approach/climbout when actual Wx prevents runway environment in sight: Same comms over ICS but report to tower "Tower, KATT 615, Runway environment not in sight, executing Missed Approach."