**HT-28 FORMATION FLIGHT GUIDANCE**

June 2023

The purpose of this document is to provide amplifying information on the conduct of the formation syllabus. It is in no way a replacement for the FTI. Rather, it is meant to clarify certain procedures.

**Bridge Forms Stage Summary**

* FRM3001 – Sim event with CI. Conduct all the maneuvers from the wing position using a prerecorded Lead
* FRM4001 – First formation flight. Walkthrough conducted before this event. All maneuvers demo-do
* FRM4002 – Likely paired up with FRM4003 and scheduled as an out and in to Florala
* FRM4003 – Formation Low Level Flight. More than likely, purple route. Florala out and in profile
* CAPSTONE – FRM4101/4102, formation out and in
	+ Working through contingencies, airspace, landing at different airfields
	+ Will be scheduled for a study day prior to the event
	+ Talk with instructors to confirm location and LZs
	+ Follow the instructions on the JMPS computers (don’t save over the master copies) located at \\c27audtwhtgp01\Student Folder
	+ Brief will be off the powerpoint shell also found in the folder. You may use another students brief as a starting point
	+ Folder name “FORMATION CAPSTONE”
	+ Expectations will be to update the brief, put in route pics (using snipping tool into ppt), print out Route charts on jmps, and print out Coversheet/route cards/LZ diagram

**Brief expectations:**

* Brief space:
	+ Check yourself over to make sure you are presenting in a professional manner. Ex. Zippers closed, clean flight suit, clean boots, etc.
	+ Ensure the briefing space is cleaned up and presentable. Do not leave old papers, white boards, staplers and pointers laying around on the tables and floor.
	+ Set up space appropriately with charts (to include, JOGAIR, Eastern Formation Area, and LZ diagram). You own the space, so it should be clean and set up properly for how you want to brief. If you brief with another section, each section will need their own briefing space
	+ Make sure the podium is set up in a logical place
	+ Low Level routes will be used for FRM4003A (Purple Route)
	+ Self-built route on JOGAIR/JMPS for FRM4101/4102
		- Mission based. Contact IP for location/destination
* Briefing documents (Smartpack):
	+ Per FTI (6-19) Smartpack shall include, at a minimum, a Coversheet/Smart Card, Route Card, a bingo route card, and a Terminal Area Diagram. Optional items that can be attached are: grade sheet, and weight & balance. Stan Recommendation is to leave off grade sheet and weight & balance, as they will be ripped off anyway.
	+ Kneeboard Cards:
		- Section Lead- Ensure this is indicated on the front page
		- Highlight the name of the person to whom the smart pack belongs
		- Lead and Wing position (Lead is who will be leading out of homefield for the day’s flight. Lead is different than Section Lead)
		- Ensure updated HIGE/HOGE #’s match weight & balance with HIGH/HOGE #’s on coversheet as well as LZ Diagram
		- Ensure all pages are the same size and the edges are aligned. Use one staple in the upper left-hand corner
		- Include the appropriate landing sequence for the flight on the cover page.
		- Remove all VHF/UHF NAV1 frequencies from the cover page that do not apply to the flight. For example: do not leave Purple Route Common on the F4001
	+ Have one HT-28 Form Debrief Card per student
* The Brief:
	+ Brief the audience and not the board. The items on the wall are briefing aids. Point to them when the audience attention needs to be drawn to them. The pointer comes down after. Continue talking to the audience with eye contact.
	+ All comm switches will be a **positive** or **automatic** switch, **with** or **without** a check-in
		- Ex. “4 miles prior to Point Racetrack, we will conduct a positive switch to Button 12, with a check-in”
	+ When briefing boundaries, brief the area of operations (the entire area in which you will be operating all day) and then brief the Eastern Formation Area
	+ How to properly use FALCON. For example, when taking off out of homefield:
		- Formation: Cruise Formation
		- Airspeed/Altitude: 100KIAS/900’MSL
		- Lighting: Normal Lighting Configuration
		- Comms/Squawk: BTN 4/0100
		- Obstacles/Terrain: Light blue water tower and maintenance pattern
		- Navigation: Backup heading
	+ Ex. At PT. FISH the only things that needs to be briefed are the following because nothing else changed:
		- Ex. “At Point Fish, we will conduct an automatic switch to Button 17, with a check-in”
		- Navigation: Turn left to stay south of the Blackwater River
	+ Contingencies: These items need to be close to verbatim, so that the section can execute these efficiently when needed
		- *IIMC*, SMAs should use the Fan Break Procedure for all of their formation events
		- *LOST COMMS:* “LEAD” and “WING” only to draw scenario. After refer to them as “LOST COMMS A/C” and “GOOD COMMS A/C”

**Maneuver Descriptions:**

* Each section will conduct a “walkthrough” before flying a form event in the aircraft. This will consist of the students and IP’s doing a full run through of the event from start to finish to include radio calls, maneuvers, etc. The SNA’s should show up with a very thorough knowledge of FTI and RWOP procedures. IP’s will provide additional techniques
	+ Focus areas:
		- Radio calls – the appendix of the FTI is a great source
		- Maneuver checkpoints and procedures
* Cruise position – “Step-up, Bearing, BUNO, Ball” is a very useful mantra when establishing your cruise position. This is the order in which you should prioritize correcting your position. Step-up is the most important checkpoint because that will keep wing clear of lead at all times
* Landing Pattern
	+ This will use many of the same skills that you learned during crossovers, cruise turns, and climbs/descents
	+ You do not have to crossover at exactly the 90 position. The crossover will likely occur either early in the turn or later in the turn to final/downwind
	+ It is common for students to get acute on short final. Remember to continue flying in cruise position until 25’ AGL

**Scheme of Maneuver**

Preflight / Turn-up / Taxi

1. In order to save time, IPs may send the students to the aircraft to preflight while they read the book. Ensure that you know where both aircraft are located on the line.
2. Inform lineman that you are a formation if parked in close relation to each other.
3. Preflight and turn-up will be done individually. Lead will check in wing on VHF and UHF. The IP may bring the twist grip full open and conduct take-off checks while the student copies ATIS.
4. Recommend twisting HSI needle to active runway and wind bug to current winds to facilitate lead/wing position on the runway.
5. There is no positive switch to CH. 7. There is NO check-in on ground.
6. Lead will call for taxi, explicitly stating wingman’s side number, souls on board for both aircraft, and both aircraft spot numbers. This enables ground to file a single flight plan for the section with both aircraft on it.
7. The switch to tower is automatic with no check-in.

Take-off / Operating Area / Maneuvers

1. When cleared for takeoff, Lead aircraft makes distinct taxi movement to intended spot corner. Wing taxis to the aft adjacent corner.
2. Only the Section Lead will squawk in ALT mode.
3. Searchlight is used as visual signal in hover.
4. After take-off, proceed normal course rules to the Eastern Formation Area. At Point Fish, conduct an automatic switch to button 17, with a check-in.
	1. There is no additional requirement to check in to the operating area; the form check-in will suffice.
5. While in the working area, Wing will initiate all maneuvers using the internal call-sign. Lead will roger the calls, again stating the internal call-sign and name of the maneuver.
6. Lead is responsible for keeping the formation in the operating area and clear from all traffic and obstacles.

Pattern Work

a. After completing all the maneuvers, Wing will call for the pattern by stating, “Section

 Landings.”

b. Lead will turn towards Point Race track and accelerate to 100 KIAS. Lead will not descend to 700’ MSL until south or east of the Blackwater River and clear of the Orange Route.

i. The Orange Route is directly below the form operating area and is flown at 500’ AGL which equates to approximately 700’ MSL.

c. Prior to Point Race Track, Lead will conduct a positive switch to button 12 (Harold), with a check-in.

d. At Point Race Track, Lead will call inbound using ONLY the external call-sign. When Lead makes the section’s “splitting” call, then Lead will explicitly state both Lead and Wing’s individual side numbers.

e. During high speed approaches, the aircraft will not aim for a specific spot, and Lead will make the appropriate traffic call

f. Landing Sequence for individual events (subject to IP discretion):

FRM4001: 2 x Normal, 2 x High Speed (IP/IP, IP/SNA)

FRM4002/3: 2 x Normal, 2 x High Speed (IP/SNA, SNA/SNA)

Note: When normal and high speed approaches are initially introduced, both IPs will be on the controls for the first iteration. For the second, the IP will fly in the lead aircraft. For the third, both students will be at the controls

Return to Base / Landing

a. Wing will initiate the OLF departure by making the call “RTB”. Lead will make the OLF departing call followed by a positive switch to base, with a check-in.

b. After calling inbound to base, Lead will conduct a positive switch to tower via ATIS. Do not check-in on tower.

c. Lead will request the break when calling inbound at Point Juniper. Expect to do the

break on all events

e. The section is considered dissolved when ground states that the flight plan has been closed out. No explicit call is required.

FRM4002 / FRM4003 Florala Out and In

1. Expect these events to be scheduled as an out and in to Florala. One student will brief from takeoff to Florala. The second student will brief from Florala back to KNDZ and contingencies.
2. The section will depart South Whiting and conduct maneuvers in the Formation Area as per a normal FRM4001. At the completion of the maneuvers, Wing will call “Proceed to Route.” Lead will navigate to the Purple Route CP 1, descending to 200’ AGL, and switching to button 16.
3. At the completion of the Purple Route forward, the section will proceed to Florala (0J4) to hot refuel. Do not expect to “magic” yourself from Purple CP 10 to Florala. You need to plan a route with visual checkpoints, frequency changes (CH. 20, CH. 18, Florala CTAF), squawks changes, altitude changes, etc (think about all the FALCON information that is going to change along the route).
4. When briefing operations at Florala, be very specific. Where are you going to land? How will you taxi from the runway to the fuel pits? Where are you parking? How are you going to taxi from the ramp to the runway for departure?
5. After refueling, the section will depart Florala for the Purple Route reverse. Just as with the route to Florala, brief all of the FALCON changes and have a plan to navigate back to CP10 of the Purple Route (without using the GTN). Upon completion of the Purple Route Reverse, the section will climb to 1,000’ MSL, switch to button 17, and proceed directly to Point Juniper for South Whiting course rules.

FRM4101/4102 CAPSTONE

* 1. Intent: Plan an out and in profile as a section. Room for creativity!
	2. Route Selection - Can go to any location except for Florala
		1. Ex: KMOB, KBFM, KJKA, KDHN, KTLH, KGPT, KHSA, KPQL
		2. Don’t go further than KHSA to the west and KTLH to the east
		3. Once you decide your location, contact your IP or the Stage Lead to confirm location is ok
		4. Standard routes have already been made. Feel free to use them, adjust them or come up with your own. Routes saved in FRM Capstone Folder on the JMPS sharedrive **(DO NOT SAVE OVER THEM. MOVE SAVE A COPY IN YOUR OWN FOLDER)**
	3. CP Selection - Don’t over think the Checkpoint selection. Pick something you can see on the JOGAIR/Sectional. Use all the knowledge you’ve acquired from previous syllabus events
	4. Along the route, plan on executing landings at an airfield. Preferably a Class E airfield. Use a min of 1 intermediate LZ but feel free to throw in more if timing works
	5. Smart Packs – It is a useful technique to include relevant FALCON information in the Remarks column