



T-6 FLYING STANDARDS

OPR: 14 OG/OGV (Maj Smith)
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Pilots should adhere to the BLAZE standards when planning, briefing and executing T-6 missions to the maximum extent practical. Exceptions may be briefed and executed when necessary for extenuating mission requirements. Requests for changes or revisions should be submitted to Sq/DOV for consideration in the next update. The BLAZE standards are not optimized for a single MDS. The intent of the Blaze Standards is to optimize student training continuity, standardize training procedures while allowing flexibility and to provide the best foundation for successful follow-on training of future combat military aviators.

BLAZE standards will:

- Decrease briefing time for administrative tasks and normal events in a standard profile
- Increase time available for instruction
- Minimize conflicts in technique and promote training continuity for students
- Maximize the standardization of T-6 operations

Standards complement or restate, but do not replace procedures outlined in other governing publications. Topics not addressed by these standards must be understood, briefed and executed IAW applicable governing publications. Standards do not replace good judgment or adherence to applicable directives.

Change Process: To ensure a continuum of training and compliance with regulations, squadrons will submit changes to the standards to 14 OG/OGV. Final approval authority is the Operations Group Commander.

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Chapter 1

MISSION PREPARATION

1.1 Responsibilities.

1.1.1. The Aircraft Commander (AC) is ultimately responsible for the safe and effective conduct of the flight. All pilots (for this document, the terms pilot and crewmember include instructors and students) will ensure that they comply with pre-mission requirements outlined in the Pre-Mission Guide in the 14th FTW T-6 Inflight Guide. TIMS Go/No-Go status will be checked prior to brief time. Pilots will clear any No-Go items prior to step. Pilots will ensure thorough mission planning is accomplished for all flights. As a minimum, this should include reviewing NOTAMS, weather, airfield status, RAIM status and TOLD prior to brief time.

1.1.2. For instrument sorties, students are responsible for signing out and de-conflicting an instrument profile at the ops desk prior to the brief. For low level sorties, students (AC when flying CT) will sign out a low level entry time and ensure the route is de-conflicted prior to the brief. Students will be prepared for any sortie for which they are opted and will have data cards available for alternate missions.

1.2. Flight Briefings.

1.2.1. Briefing times shall be no later than the times found in Table 1.1. Instructors are encouraged to set earlier brief times to allow increased time for instruction when necessary (e.g. C400X, F400X).

Table 1.1. Briefing Times.

MISSION EVENT	H+MM Prior to Takeoff
All Local Sorties	1+10
Cross-Country/Out and Back Sorties (1 st flight)	1+45
Three- and Four-Ship Formation	1+30
Simulators with CSI support	1+00
Simulators without CSI support	0+15 (prior to Start time)

1.2.2. Mission Briefings.

1.2.2.1. All pilots should be in place and ready to brief at brief time. Students will be ready to brief 10 minutes prior to scheduled brief time.

1.2.2.2. Students are expected to plan/brief Mission and Training Objectives, Profile/Overview, Weather, NOTAMS, TOLD, Status, ORM and CRM for all sorties except the C40XX block.

1.2.2.3. All pilots will hold questions or comments until the end of the briefing unless specifically addressed by the IP/FL. The sterile briefing concept also applies to debriefs. Flight members will not eat during the brief/debrief without permission from their IP/FL. Drinks are acceptable.

1.2.2.4. Solo students will show to brief with the following: completed mission data card, ORM sheet, required publications, category grade summary and solo chit.

1.2.2.5. Instructors should brief the sorties found in Table 1.2. IPs may elect to brief any sortie they deem necessary for training (re-demo) or time constraints.

Table 1.2. IP Sortie Briefings.

MISSION TYPE	SORTIES
Contact	C40XX Block
Instrument	I4001, I4002
Navigation	N4001, L41XX Block
Formation	F40XX, F4101

1.2.3. Step Time

1.2.3.1. Step time is NLT 30 minutes prior to takeoff for RWY 31 or 35 minutes prior to takeoff for RWY 13. Step time is defined as the time the instructor briefs the Sup on the planned mission profile. All crew members, including students, will step to the Ops desk to verify Go/No-Go Status and receive the Ops Sup brief.

1.2.3.2. Pre-solo crews should step earlier to allow increased time for ground ops and ground instruction to maximize adherence to scheduled takeoff times.

1.3. Emergency Procedure of the Day.

1.3.1. IPs will check the TIMS Emergency Procedures tab when administering table-top EPs to ensure that students are exposed to EPs IAW syllabus requirements and respective Squadron Gradebook instructions.

Chapter 2

GROUND OPERATIONS

2.1. AFTO Form 781 (Review/Storage).

2.1.1. The AC is responsible for ensuring proper pre-flight and acceptance of the aircraft. Students will plan to review and stow the aircraft forms and perform the exterior inspection with the supervision of the IP.

2.1.2. For CT sorties, both pilots will review the forms.

2.2. Gear Pin/Personal Equipment Stowage.

2.2.1. The pilot conducting the Exterior Inspection will ensure the gear pins are stowed in the pouch in the baggage compartment and the fuel card is present.

2.2.2. Neither pilot will stow items under the ejection seat or on a circuit breaker panel. The FCP pilot will not stow any items on the left side and will ensure the Firewall Shutoff Handle and all controls are clear.

2.3. Exterior Inspection and Instrument Cockpit Check.

2.3.1. Prior to initiating the Before Exterior Inspection, the first pilot on the wing will ensure that both cockpits have both the Ejection Seat Safety Pin and CFS Pin installed and that the ISS Mode Selector Switch is in SOLO.

2.3.2. For student performed exterior inspections, any discrepancies will be briefed to the IP before getting back on the wing.

2.3.3. For CT crews, the RCP IP should accomplish the Exterior Inspection Checklist.

2.3.4. Before applying power to the aircraft, ensure the prop area is clear and announce “prop clear” to any personnel in the vicinity.

2.3.5. Both crewmembers must ensure that ejection seats are clear of obstructions (i.e. oxygen hoses, comm. cords, lap belts and leg straps) prior to adjusting the seat height.

2.3.6. The FCP pilot is responsible for the Interior Inspection.

2.3.7. Exercise caution when actuating switches and moving flight controls—especially while personnel are moving around the aircraft. During the AOA system test, hold the control stick off the front stop to avoid damage to the flight controls.

2.3.8. To prevent damage to the flight controls, ensure the controls do not firmly impact the stops during the flight control check. Aircraft control does not need to be transferred for this check.

2.3.9. Monitor ATIS and obtain clearance on the backup UHF radio prior to engine start. This may be accomplished while the RCP pilot completes the exterior inspection. Pilots may delay obtaining ATIS and clearance until after engine start if environmental conditions warrant. If clearance is not available prior to taxi, coordinate with ground to obtain clearance during taxi.

2.3.10. Ensure the backup UHF radio is tuned to the ground control frequency and turned off prior to engine start.

2.3.11. Instrument Cockpit/Avionics Setup. Use the Instrument Cockpit/Avionics Setup found in Attachment 1 for local missions to the maximum extent practical.

2.4. Engine Start.

2.4.1. Unless circumstances dictate otherwise, the pilot occupying the FCP will start the engine. Both pilots are responsible for monitoring the engine start.

2.4.2. The AC will determine if external power is required for engine start. After a start using external power, the pilot accomplishing the checklist will state “hands clear” IAW Attachment 2, and both pilots will raise their hands until receiving a thumb up signal from the crew chief. Pilots will avoid contact with any flight controls (primary or secondary) until the crew chief is clear.

2.5. Clearance and Taxi Procedures.

2.5.1. Aircraft will obtain clearance IAW paragraph 2.3.9.

2.5.2. Use the AFI 11-205 “pitchout” signal or flash the landing/taxi lights after obtaining clearance to taxi to alert the crew chief when ready to taxi. Unless required for limited visibility, landing/taxi lights will remain off until performing the Lineup Checklist and turned off after completion of the After Landing Checklist during the hours from official sunrise to official sunset.

2.5.3. The FCP will not perform the brake check until the wings are clear of the sun shelters. The RCP can check theirs when time and conditions permit. This may be accomplished without transferring control of the aircraft.

2.5.4. Accomplish the RNEWS check outside of the T-6 parking ramp and prior to takeoff.

2.5.5. Taxi at speeds IAW AFTO 1T-6A-1. While operating in the congested area of the T-6 parking area, pilots should not taxi faster than a brisk walk.

2.6. End of Runway Procedures.

2.6.1. Entering the EOR, change to the appropriate frequency for takeoff (RSU or Tower).

2.6.2. Normally, pilots will take the EOR space closest to the runway. Do not taxi behind an aircraft already established in an EOR run-up spot.

2.6.3. Set the parking brake, clear around the aircraft and verbally ensure both crewmembers are guarding the brakes before accomplishing the Overspeed Governor Check. Do not perform the check if an aircraft is directly in front of or behind yours.

2.6.4. The PF will verbalize the calculated minimum torque expected at 60 knots and receive acknowledgement from the PNF on all dual sorties.

2.6.5. When taxiing to the hold short line, stagger to provide room for other aircraft and ensure adequate separation from a preceding aircraft (no closer than 1/2 ship length). Aircraft should transition from the hammerhead to the hold short line starting with the aircraft closest to the runway and working outward.

2.7. Spare Aircraft Procedures.

2.7.1. When stepping to a spare, the IP (or AC for CT crews) will check the AFTO Forms 781 and accomplish the exterior inspection.

2.7.2. Aircrew will call their new tail number into Texan Ops. The SUP will inform the aircrew of any dual/solo-only restrictions associated with the new tail number.

2.8. Chock Extension Procedures.

2.8.1. IPs will strive to complete sorties so as to return to chocks NLT 1+30 after takeoff. As soon as the AC determines it is unlikely that aircraft will be shut down in the chocks by 1+45 from scheduled take off time, he or she should request a chock extension with Texan Ops.

2.8.2. To ensure proper coordination takes place, chock extensions can only be approved through Texan Ops. IPs will not request chock extensions from crew chiefs or other flight line personnel without coordinating with Texan Ops. Chock extensions are never automatic, even for aircraft not scheduled to turn to later sorties.

2.8.3. Chock extension times are referenced from a 1+45 chock time. For example, a 15 minute extension means the aircraft must be in chocks NLT 2+00 from original scheduled takeoff time.

Chapter 3

TAKEOFF, DEPARTURE AND ENROUTE

3.1. Engine Run Up. Pilots will not run the engine up until cleared for takeoff.

3.2. Rolling Takeoffs. Pilots should perform rolling takeoffs to the max extent practical.

3.3. Vision Restricting Device. The IP will be in control of the aircraft anytime the student is donning/doffing the VRD. The VRD is an instrument training aid only. The IP may direct the student at any time to stow the VRD for safety of flight considerations.

3.3.1. During instrument sorties with a VRD in use, the IP will be responsible for visually clearing. Students will remove the VRD after relinquishing aircraft control if an IP continues an approach past the Decision Altitude on a precision approach or continuing below the MDA on a non-precision approach.

3.3.2. Students will not wear a VRD while occupying the FCP.

3.4. Climb Out. During VFR pattern operations, aircrews should not switch to departure frequency until passing pattern altitude on climb out. Climb out at 180 KIAS to aid in clearing.

3.5. Enroute. T-6s will cruise at 200 KIAS while leveled off during local missions.

Chapter 4

AREA, RECOVERY AND LANDING

4.1. FENCE-In. When established in the MOA, accomplish a FENCE check. Verbalize emergency airfield options as part of the FENCE check.

4.2. G-Awareness Exercise. The G-Ex will be flown IAW AFMAN 11-248. Both pilots will verbalize G's and physical condition after the maneuver.

4.3. Specific Area Work and Parameters. Brief all planned maneuvers required to complete mission and training objectives.

4.4. Engine and G Envelope. Identify any maneuvers or portion of the flight with potential for exceeding limits and discuss mitigation techniques.

4.5. Area Orientation. CBM T-6 MOA airspace is primarily defined by the GPS database. However, in accordance with the syllabus, student contact sorties should emphasize the utilization of visual ground references to the maximum extent practical for area orientation.

4.6. FENCE-Out. Unless briefed or directed otherwise, the FENCE-out will include obtaining ATIS, completing the FENCE check items and completing the Descent Checklist prior to leaving the confines of the MOA. ATIS is normally obtained via voice capability on the VOR.

4.7. Instrument/Navigation Sortie Landings. While flying instrument sorties with the SP in the RCP, the IP will either take the aircraft for a touch-and-go or low approach or remain silent to indicate that the student will execute the missed approach at the appropriate time. On navigation or instrument sorties with the SP in the FCP, the IP will inform the student whether to take over visually or remain silent to indicate that the student will execute the missed approach.

4.8. After Landing Checklist. Pilots will not accomplish checklist items until clear of the runway at a safe taxi speed. Clear of the runway is considered past any hold short line.

4.8.1. Upon exiting the runway, if stopping prior to calling ground, taxi forward enough to allow another aircraft to safely clear the runway.

4.8.2. Prior to returning to chocks, return RMU, EADI and EHSI to standard setup described in Attachment 1.

Chapter 5

IMC AND NIGHT PROCEDURES

5.1. IMC Procedures.

5.1.1. Unusual Attitudes. Upon recognition, the affected pilot should verbalize an unusual attitude and, if needed, transfer aircraft control to recover.

5.1.2. Spatial Disorientation. If a crewmember becomes spatially disoriented, they should verbalize it to the other crewmember. Attempt to bring the aircraft to a straight and level attitude. Consider requesting an altitude and/or heading change in an effort to find VMC. If required, transfer aircraft control. Depending on the severity of the spatial disorientation, declare an emergency and advise ATC of the problem. As a last resort, do not delay the decision to eject.

5.1.3. Icing Restrictions. If icing is forecast or reported for the planned route of flight, comply with TO 1T-6A-1 restrictions and adjust the mission profile and alternate fuel requirements as necessary.

5.2. Night Procedures.

5.2.1. Aircraft Lighting. All external lighting will be turned on when the aircraft is in motion at night. The following exceptions apply:

5.2.1.1. Taxi. Use position lights only when in the chocks and EOR. Leave the landing, taxi and anti-collision lights off until after making the first turn out of parking.

5.2.1.2. EOR. Once stopped in the EOR, aircrew will turn their taxi, landing and anti-collision lights off. Once cleared for takeoff, turn landing, taxi and anti-collision lights on when completing the Lineup Check.

5.2.2. After Landing Procedures. Report down on Texan Ops when the RSU is closed and tower controls the pattern.

Chapter 6

CREW COORDINATION

6.1. Transfer of Aircraft Control (With and Without Intercom). Transfer aircraft control IAW AFMAN 11-248. The AC will ensure positive aircraft control is maintained at all times; however, the extent to which PNF assuming control noticeably shakes the stick may vary depending on phase of flight (formation wing work). Aircraft control does not need to be transferred for the brake check during the Taxi Checklist or to check flight controls during the Cockpit (All Flights) Checklist.

6.2. Clearing. Clearing is the responsibility of both pilots. Any traffic that may pose a conflict will be verbalized to the other pilot.

6.3. Inflight Checks. The PF will initiate all checklists and ensure completion of those checks should a transfer of aircraft control take place.

6.4. Radio Procedures. The PF is responsible for using radio communication. IPs may assume control of the radios without taking control of the aircraft.

6.5. Avionics Procedures. IAW UPT syllabi, a single-seat mentality applies to T-6 training. This means the PF has control of the aircraft and all of its systems, including the GPS/RMU/TAS/EFIS. In circumstances when the PNF (instructor) needs to make changes to frequencies/navigation setup/displays, the PNF will take control of the specific item by stating, **“I have the (VHF/UHF/GPS/HSI/NAVAIDS).”** After completing the desired action, the PNF will return control of the item back to the PF by reversing the procedure.

6.6. PCL movement/Hand position. To prevent inadvertent engine shutdown, pilots will:

6.6.1. Use caution not to drape their hands or wrists over the PCL.

6.6.2. Ensure flight suit sleeves are tightly fastened in order to prevent them from inadvertently catching on the PCL.

6.6.3. Exercise caution when bringing the PCL to the idle position and avoid excessive force against the idle stop.

Chapter 7

EMERGENCY PROCEDURES

7.1. Aircrew Responsibilities. In the case of an emergency, the PF should continue to fly. Apply applicable boldface; however, do not perform any irreversible actions without coordination with the AC. Use appropriate CRM to safely recover the aircraft. Normally, the PNF will consult the checklist and IFG and back up the PF to the maximum extent or as directed. The AC will determine the final course of action for recovery and may delegate full-stop landing responsibilities to the other pilot if necessary.

7.2. Emergency Ground Egress. Execute the emergency ground egress procedure IAW TO 1T-6A-1. If the canopy cannot be opened or the situation requires right side egress, the AC will command “Egress right, egress right” and direct CFS handle actuation. In the event that the CFS fails, consider ejection.

7.2.1. Exit the aircraft at a 45° angle aft (unless the situation dictates otherwise) and use caution for responding emergency vehicles. Meet at a safe distance (approximately 300 feet) from the aircraft on the egress side.

7.3. Takeoff/Touch and Go Emergencies. Takeoff emergencies will be briefed in detail. As a minimum, brief reasons for abort, sufficient runway remaining determination and sufficient energy conditions required to make HIGH/LOW key. This briefing shall be tailored for environmental conditions and mission profile. Update the briefing for current conditions or changes during the RNEWS check while taxiing.

7.3.1. Pilots should not attempt to land opposite direction at Columbus AFB.

7.4. Physiological Incident. If a crewmember experiences hypoxia or other adverse physiological symptoms, they should inform the other crewmember. “Gang-Load” the OBOGS, declare an emergency, descend below 10,000’ MSL cockpit altitude and pull the Green Ring, if required. If able, contact the SOF to coordinate for the flight surgeon to meet the crew at the aircraft.

7.4.1. Comply with IFG procedures and return via a straight-in approach. Consideration should be given to landing at a location with appropriate medical response capabilities (e.g. recovering to CBM or NMM) for rapid decompression. Plan to leave life support equipment connected until met by the flight surgeon.

7.5. Bird Strike. If in a safe position to land, the first priority should be to land the aircraft. Announce the intention to land to the other crewmember. If not in a safe position to land, ensure the aircraft is level or climbing away from the ground. If there is any personal injury, determine who is best able to fly. Scan for aircraft damage and complete a thorough check of engine instruments. A controllability check should be accomplished if damage to the aircraft is suspected. Utilize a chase ship if needed. If a prop strike or engine damage is suspected, recover via a PEL.

7.6. Electrical Fire. Brief actions to be taken based on current/forecast weather conditions.

7.7. Engine Malfunction/Failure. With an engine malfunction or failure, turn, climb, clean, check IAW TO 1T-6A-1 toward the nearest suitable airfield. If weather or field conditions at the intended recovery field are unknown, utilize outside agencies.

7.8. Ejection (With and Without Intercom/Controlled and Uncontrolled).

7.8.1. Controlled with Intercom. After completing checklists, the AC will command “BAILOUT, BAILOUT, BAILOUT” over the intercom. Ejection should be initiated after the third “Bailout” command. If time and conditions permit, attempt to point the aircraft to an uninhabited area. Do not delay the decision to eject below 2,000’ AGL. The term “bailout” will not be used at any other time during the flight. Use the term “ejection” instead.

7.8.2. Controlled without Intercom. The AC will hold the emergency pages in the IFG up to signal the need to accomplish the controlled ejection checklist. Once ready to eject, use the “bailout” command (three face curtains) IAW AFI 11-205. If previously attempting to communicate by dropping masks and yelling, it is imperative that both pilots have visors down with masks secured before initiating ejection to avoid serious injury.

7.8.3. Uncontrolled (with and without intercom). If uncontrolled at or below 6,000’ AGL, command an immediate ejection using the intercom if available. If intercom is inoperative, utilize the face curtain signal.

7.9. Visual Signals with Intercom Failure.

7.9.1. Check interphone settings and connections (consider switching to the alternate communications cord). If all settings/connections check good, attempt communication over the non-primary radio. In the absence of smoke/fumes masks may be lowered to communicate when below 10,000 feet cockpit altitude.

7.9.2. Crewmember Attention. PF will “stir the stick” to signal the PNF to look in his/her direction (FCP can utilize mirrors, if needed, to view RCP).

7.9.3. Emergency Landing Gear Extension (when RCP is PF). When the RCP pilot lowers the landing gear handle to the down position, the FCP will check airspeed below 150 KIAS and pull the emergency gear handle IAW checklist procedures.

7.9.4. Aux Battery (when RCP is PF). The RCP pilot will repeatedly touch his or her mask with two extended fingers to signal the FCP pilot to actuate the Aux Battery switch.

7.10. Lost Communications Procedures. Brief a lost communications plan for all non-local sorties. In the local area, pilots are expected to use good judgment and comply with the radio failure procedures in the IFG.

7.11. Lost Procedures. Brief a lost plan for all non-local sorties. In the local area, pilots are expected to climb to a safe altitude, conserve fuel, and inform ATC that they are lost.

7.12. Emergency Divert Airfields.

7.12.1. Brief emergency divert airfields suitable for the route of flight/MOA to be used in the event of an engine malfunction/failure. Consider environmental factors such as weather, winds and runway conditions.

7.12.2. In other situations requiring an emergency divert, reference the IFG/FLIP to determine the best option for recovery. Consider weather conditions and fuel remaining and notify the SOF of divert intentions as conditions permit.

7.13. Emergencies While Flying Low-Level. Immediately initiate a climb away from the ground to gain altitude and energy. Climb at 140 KIAS to maximize energy gain.

7.14. Solo Student Considerations.

7.14.1. Engine Malfunctions. Solo students are not *expected* to recover an aircraft with no/insufficient thrust. Once it is determined that a successful recovery is unlikely, do not delay ejection decision below 2000' AGL. Solo students *may* elect to continue a forced landing if they are able to comply with ORM-3-2-1.

7.14.2. For non-engine related emergencies, solo students will recover to CAFB unless directed otherwise by SOF, SUP or RSU.

Chapter 8

FORMATION

8.1. General.

8.1.1. Administration. The aircraft that leads out will be the designated flight lead (FL). FL conducts the formation brief and de-brief, uses the number 1 call sign and performs responsibilities as described in AETCMAN 11-248 paragraphs 9.3.1 and 9.3.2. If the formation splits, call signs will revert to those listed on the flight authorization.

8.1.2. Interplane Frequency (Aux). Refer to the interplane frequency as “Aux.” Students will ensure an Aux frequency is signed out and deconflicted prior to formation briefs. Aux is a VHF discrete frequency for local sorties. Formation sorties flown outside of the local area should brief a UHF Aux for use when ATC requires the use of VHF.

8.1.3. Formation Boards. Students are responsible for preparing a formation briefing board IAW the Texanworld Standard Formation Board maintained by each squadron’s DOV. Students will choose the appropriate EP of the day (EPOD) and an instructional topic of the day (ITOD) based on their scheduled mission. Topics are found in Table 8.1. Students may select topics other than those listed in Table 8.1 to avoid duplication.

8.1.4. FL will determine how the EPOD and ITOD are covered during the briefing. Students will normally brief these topics. This does not replace tabletop EP training by individual IPs conducted at the completion of missions.

8.1.5. The purpose of the EPOD is to hone student briefing abilities, ensure continuous review of emergency procedures and to familiarize students with formation considerations during emergencies. Students should brief the cause, indications and initial actions for each flight member for the EPOD.

8.1.6. ITOD. The wingman student’s mission number will determine the ITOD to be covered during the brief. The purpose of the ITOD is for the student to demonstrate proficiency in formation procedures and standards. The EPOD and ITOD portions of the brief should take approximately one minute each.

8.1.7. Debriefing. Discuss items related to the overall mission and training objectives and events that are pertinent to all flight members. Any training rule violations or knock it off situations should be addressed. Individual instruction will be deferred to single-ship debriefs. Unless specifically requested by FL, formation members will withhold all comments or questions.

Table 8.1.

SORTIE	EPOD	ITOD
F4001	Abort (Flight vs. Single)	11-205 visual signals
F4002	Engine Failure on T/O	Wingman position parameters (fingertip, route)
F4003	NORDO	Rejoins / Overshoots
F4004	Engine Fire	Wingmen Considerations
F4005	Fuel Pressure Light	Lost wingman procedures
F4006	Electrical fire	HEFOE signals
F4007	Inadvertent Departure from Controlled Flight	Interval takeoff procedures
F4008	Physiological Incident	Extended trail entry / position
F4101	Ejection	Knock it off (when and how)
F4201	Oil System Malfunction/CHIP Light	Blind w/ and w/o radios
F4202	Bird strike (low altitude, high altitude)	Form landing and T/O restrictions
F4203	Hydraulic system failure	Wx for interval and wing T/O
F4204	Midair	Breakouts / Mid-air collision avoidance (when and how)
F4205	Divert	Formation approach procedures
F4206	Electrical Failure with Weather	BD Check

8.2. Ground Operations.

8.2.1. Notify the crew chief upon arrival at the aircraft of position in the flight and the location of the other formation aircraft.

8.2.2. Check-in/Engine Start. Prior to lowering the canopy after cockpit checks, pilots will retrieve ATIS using the backup UHF and auto-switch to clearance delivery. Once ready for engine start, wingmen will pass a “thumbs up” to FL. If motoring is required, accomplish motoring procedures prior to passing the “thumbs up.” If a tail swap is necessary, report the new tail to Texan Ops prior to check-in on Aux.

8.2.2.1. If FL is not in sight, utilize crew chiefs to relay the “thumbs up” signal or check in as directed by FL.

8.2.2.2. Following the “thumbs up,” FL will check the formation in on clearance delivery. After acknowledgement of the IFR clearance by lead, wingmen will acknowledge reception (e.g. “2,” “3,” “4”) and ensure the backup UHF radio is tuned to ground control frequency and turned off.

8.2.2.3. EXCEPTION: At the discretion of FL, aircraft may start engines as soon as ready (i.e. Wind Chill Caution or ITS Danger). In these circumstances, flight members will get ATIS after engine start. When ready for check-in, wingmen will pass a “thumbs up.”

FL will check flight members in on Aux first, followed by UHF Clearance Delivery. After wingmen acknowledge clearance (on Aux), the flight will auto-push to UHF Ground for check-in and taxi clearance.

8.2.3. Taxi. After engine start, flight members will monitor Ground and Aux. When ready to taxi, wingmen will pass a “thumbs up” to FL. FL will check flight members in on Aux first. If FL had established a check-in time and additional time is required, wingmen will inform FL during the Aux check-in (e.g. “Creek 2 needs XX minutes”). When all flight members are ready, FL will check the flight in on Ground and call for taxi clearance.

8.2.3.1. For staggered operations on taxiway A, wingmen will mirror lead.

8.2.4. End of Runway Procedures. Upon Lead initiating the turn into the hammerhead, formation members will “auto-push” to the appropriate takeoff frequency (Sunfish or Tower). Wingmen will align aircraft with FL. When complete with the Before Takeoff checklist and ready for takeoff, wingmen will pass a “thumbs up” to FL. FL will then ensure the formation is on the appropriate frequency and move into the number one position.

8.3. Takeoff.

8.3.1. Wing Takeoff. Wingmen may request a single “push it up/give me one” call if unable to maintain position. FL will not reduce torque below 85%. Visually confirm the “clean” configuration of both aircraft and report any discrepancies on Aux prior to 150 KIAS.

8.3.2. Interval Takeoff. A 6-second interval takeoff may be executed if conditions do not permit a wing takeoff or if required for training. FL will maintain 160 KIAS until the formation is rejoined. Once rejoined, normal climb/cruise speeds will be maintained.

8.3.3. Instrument Trail Departure. FL will inform Clearance Delivery of the intention to perform an instrument trail departure (e.g. “Reno 1, 20-second trail departure”). The last aircraft will squawk 0400 unless directed otherwise. FL will also inform Tower (“Reno 1, non-standard—20-second trail departure”) when requesting clearance for takeoff.

8.3.3.1. All aircraft will fly 160 KIAS, climb with MAX power and use 30° of bank until cleared to rejoin by FL. FL will maintain 160 until completion of the rejoin. FL will add “non-standard formation” to radio calls to ATC agencies until the formation is rejoined. FL will announce passing even thousand altitudes and state DME from a pre-briefed NAVAID for turns until the formation is reformed.

8.3.3.2. Wingmen will maintain 1,000’ vertical separation until visual with lead. Wingmen will report visual over Aux once they are able to execute a visual rejoin. Wingmen will not initiate a rejoin until directed by FL. Once the rejoin is complete, FL will inform ATC that the formation is maintaining standard spacing.

8.4. Enroute/Area Procedures.

8.4.1. All pattern turns are echelon.

8.4.2. FL will direct a FENCE-in check once established in the assigned area.

8.4.3. Rejoins. All rejoins/reforms are to close formation (fingertip) unless briefed or directed otherwise. Rejoins on departure or enroute (prior to FENCE-in) will be accomplished at 180 KIAS while climbing and 200 KIAS when straight and level.

8.4.3.1. Rejoins in the MOA will be at 180 KIAS. Rejoins on recovery (after the FENCE-out call) will be flown at 200 KIAS.

8.4.3.2. Rejoin speeds in paragraph 8.4.3.1 may be modified by lead as required. Deviations from standard rejoin speeds will be pre-briefed or directed over Aux.

8.4.4. G-Awareness Exercise.

8.4.4.1. The first pitchout will be a G-Ex of approximately 180 degrees of turn. Priorities during the G-Ex are flightpath de-confliction, positional awareness and proper anti-G straining.

8.4.4.2. Following the G-Ex, lead will initiate an Ops Check IAW Attachment 3.

8.4.5. Extended Trail Exercise.

8.4.5.1. Use Max torque for Extended Trail Exercise levels 2 and 3.

8.4.5.2. Either aircraft may call "Terminate" to end the exercise. Following a "Terminate," lead should transition to an approximately 30° bank turn, direct a reform as required and initiate an Ops check. Plan all reforms from ET at 180 KIAS and 30° of bank.

8.5. Recovery.

8.5.1. FENCE-Out. At the completion of area maneuvering, lead will direct a FENCE-out check.

8.5.2. Flight Split Up. After flight split up, aircraft will retain call signs signed out on the flight authorization regardless of position during the split up. Wingmen will not respond to ATC or execute controller instructions until the aircraft leading the formation clears them off on Aux (e.g. "Stomp 2, cleared off"). The aircraft in the lead will relay the wingman's squawk and/or ATC clearance over Aux. Wingmen will acknowledge before being cleared off.

8.5.2.1. The lead aircraft should perform an "Alpha check" prior to the split-up. Referencing the primary recovery NAVAID, lead will verbalize the current bearing and range. If the bearing/range is within +/- 5° and 1 NM, wingmen will respond with "2 same," otherwise, they will reply with bearing and range. Consider recovering as a formation if the discrepancy cannot be remedied.

8.5.2.2. Flight Split-Up in the Pattern. Formations are limited to one formation low approach or one break from initial when entering the pattern unless coordinated with the RSU (this restriction does not preclude multiple VFR patterns once split). Formations are expected to split up at the following places:

8.5.2.2.1. Break. Lead will give Wing a “cleared-off” salute. Wing will delay the break a minimum of 5 seconds.

8.5.2.2.2. Closed. Lead will request closed for the formation. This is the preferred pattern entry following a formation low approach. Do not use a crossunder to reposition the wingman if they are the inside of the turn. Instead, obtain clearance, clear in the direction of the turn and clear off the wingman. The aircraft on the inside will then pull closed, followed 5 seconds later by the other aircraft.

8.5.2.2.3. Crosswind. Following a low approach (when closed is not requested/available) or after carrying straight through initial, lead will clear the wingman off prior to turning crosswind. The aircraft on the pattern side of the formation will turn crosswind. The other aircraft will delay the crosswind turn a minimum of 5 seconds.

8.5.3. Formation Breakout. In the event of a formation breakout, lead will be directive. Plan to send the wingman to route or fighting wing to facilitate clearing. Lead should delay doing this until after initiating the climb to pattern breakout altitude. Direct a reform to fingertip if a formation approach is desired or clear the wingman off prior to re-entering the pattern at VFR entry.

8.5.4. Wing Approach and Landing.

8.5.4.1. Wingmen landing on the cold side of the runway should make a “1, cleared cold” call over Aux when speed permits a safe transition and the minimum 150’ nose-tail separation is assured. Wingmen landing on the hot side are expected to transition to the cold side when 150’ nose-tail clearance is achieved and can be maintained.

8.5.5. After Landing Checks/Taxi Back.

8.5.5.1. If both aircraft in a formation land sequentially, the first aircraft will allow sufficient spacing and wait for the other aircraft to taxi clear. Once all formation aircraft are clear of the landing runway, they will accomplish a check-in and obtain clearance (as required) to taxi to chocks as a formation.

8.5.5.2. Formations should stagger on taxiways E and G (until turning southeast towards the parking area) after landing on 13R and on L after landing on 31L.

8.5.5.3. When exiting RWY 13C/31C at taxiway Hotel, lead will direct Number 2 to “push” Sunfish, report the flight “down on the center” and return to UHF Ground. Number 2 will report back on Aux when the report is complete.

8.5.5.4. When exiting 31C at the departure end and Sunfish is in control of the inside runway, formations will “auto-push” to Sunfish once clear of the runway, and lead will report the flight “down on the center” to Sunfish.

8.6. IMC Procedures.

8.6.1. Wingmen may request that lead turn anti-collision lights off if deemed a hindrance.

8.7. Communication Procedures.

8.7.1. Intra-flight Communication. Formations will use the communication table in Attachment 3 to the maximum extent practical. Refer to interplane frequency as “Aux.”

8.7.1.1. Full call signs are not required when using Aux. Wingmen will always mimic lead (e.g. “2, go close trail,” “2,” “2’s in” or “Bomber 2, go close trail,” “2,” “Bomber 2’s in.”). Use the term “set” to refer to airspeeds and “reference” to refer to headings when announced verbally. Neither requires acknowledgment from the wingman.

8.7.2. Radio Procedures. Refer to the primary ATC frequency as “Prime.” Use full call signs when communicating with any outside agency (e.g. “Stein 41,” or “Bomber 1”). Use “Push” to change radio frequencies when not using visual signals. If lead does not suffix the channel change with frequency type, assume the frequency is Prime. FL will brief a radio plan for off-station formation sorties.

8.7.3. The following channel changes will occur automatically when operating in the local area:

8.7.3.1. Clearance Delivery to Ground (after flight members acknowledge receipt of clearance).

8.7.3.2. Ground to Sunfish/Tower upon lead initiating the turn into the hammerhead.

8.7.3.3. Columbus Approach to Area Monitor upon being directed to FENCE-in.

8.7.3.4. Area monitor to Columbus Approach upon being directed to FENCE-out.

8.7.3.5. Sunfish/Tower to Ground upon exiting the runway.

8.8. Formation Management

8.8.1. Squawk/TAS. The lead aircraft will actively squawk and utilize TAS. Wingmen will squawk standby and leave TAS in standby.

8.8.2. In-Flight Checks. FL is responsible for managing the fuel for the flight. Lead will initiate checks (e.g. Ops checks, FENCE checks, etc.). Wingmen will acknowledge any in-flight changes to JOKER/BINGO.

8.8.2.1. If in close formation at the time the check is directed, wingmen will move to route position to complete the check unless weather is a factor. Once checks are complete, wingmen will reform to close formation.

8.8.2.2. An Ops check will automatically be accomplished during the FENCE-in.

8.8.2.3. OBOGS checks are always internal to the aircraft and need not be verbalized to the formation.

8.8.2.4. Pilots will announce reaching JOKER/BINGO on Aux. If initiated by lead, wingmen will respond with fuel as described below. If initiated by wingmen, lead will acknowledge. Reference JOKER if at or above JOKER. Reference BINGO if below JOKER (e.g. “Rusty 1, JOKER” “Rusty 2, BINGO plus 100”).

8.8.3. Route Position and Spacing. Utilize route position for extended cruise periods and to enhance clearing for the formation. Maintain spacing IAW with AFMAN 11-248 at a logical position for the situation.

8.8.4. Position Change. The primary concern during a position change is to maintain proper formation position and flightpath deconfliction while maintaining visual.

8.8.5. Wake Turbulence. If encountering wake turbulence while maneuvering at increased G, pilots should assume the G's were asymmetric.

8.8.6. Breakout. When a breakout is initiated by lead, lead will direct the wingman when to roll out. When a breakout is initiated by the wingman, a “roll out” call is not required.

8.8.7. Terminate/Knock-It-Off (KIO). After each flight member has acknowledged the “Terminate/KIO” call, the aircraft initiated the call should state the reason. Terminate and KIO calls will not be combined with other communications, such as Ops checks.

8.8.8. Lost Sight/Blind.

8.8.8.1. If lead loses position awareness of a wingman, he or she should query with a “posit” call (e.g. “Mohawk 2, Posit”). If visual, the wingman should respond with their position relative to lead.

8.8.8.2. If a wingman is blind, he or she will announce “Blind” with current altitude. If lead is visual, he or she will give position relative to wing and be directive.

8.8.8.3. If both aircraft are blind, lead will establish a minimum of 1000' altitude separation before directing a rendezvous. If a rejoin is not accomplished prior to BINGO, lead will coordinate with ATC for flight split-up.

8.8.9. Visual Signals. Use visual signals IAW AFI 11-205 to the maximum extent practical. Exception: FL will signal the push to route with an open hand motion toward the wingman. A salute from lead indicates wingmen are cleared off. Only the PF gives visual signals. The PF in the other aircraft acknowledges visual signals with a nod. Changes to Aux may be given using a downward pointing motion.

8.9. Formation Emergencies.

8.9.1. Takeoff. FL is responsible for briefing considerations for abort scenarios as they apply to the formation. Discuss contingencies prior to brake release, after brake release and after rotation including expected actions and comm. The aircraft with the malfunction is responsible for flightpath deconfliction and handling the emergency.

8.9.2. In-Flight Malfunctions. The malfunctioning aircraft should take initial actions to handle the emergency, call KIO (if necessary) and inform other formation members as soon as conditions permit. As a minimum, the malfunctioning aircraft should be offered the lead three times:

8.9.2.1. Immediately upon recognition of the malfunction

8.9.2.2. On recovery and able to navigate VFR to the field

8.9.2.3. On final with the field in sight and clearance to land

8.9.3. Element Integrity. Maintain element integrity to the maximum extent practical. The good aircraft will act as a chase ship as appropriate for the malfunction. If both aircraft are experiencing a malfunction, each should obtain a separate chase ship.

8.9.4. Mid-Air Collision. The aircraft leading the formation is responsible for coordinating separate chase ships (if available) and required areas.

8.9.5. Radio Failure.

8.9.5.1. Simple NORDO. Attempt to communicate from both cockpits on UHF, VHF and the backup UHF radio. The good aircraft will lead the formation back for a straight-in and offer the lead on final with clearance to land. If clearance to land is subsequently cancelled, the good aircraft will move abeam and rock their wings to initiate a go around. If lead is refused, accomplish a formation landing.

8.9.5.2. Blind and NORDO. FL will transition to the nearest odd altitude, and the wingman will transition to the nearest even altitude without passing through the last known altitude of the other aircraft. Both aircraft should utilize TAS if possible.

8.9.5.2.1. The NORDO aircraft will squawk 7600 and enter a 30° bank right orbit over the center radial/DME of the current MOA at 180 KIAS. If unable to navigate, the NORDO aircraft may orbit over their present position.

8.9.5.2.2. The non-NORDO aircraft will utilize NAVAIDS, TAS and ATC as required to regain visual contact with the NORDO aircraft. Once visual, move no closer than route until the NORDO aircraft signals a rejoin with a wing rock.

8.9.5.2.3. Do not overfly BINGO in an attempt to rejoin. If unable to rejoin, the NORDO aircraft will recover single ship IAW the IFG. If another malfunction exists, avoid the other aircraft's last known position, squawk 7700 and recover single ship if required.

8.9.6. HEFOE. If unable to communicate using radios, utilize HEFOE signals to communicate a malfunction with your aircraft. The other aircraft should acknowledge the signal by repeating it and offer the lead as described in paragraph 8.9.2.

8.9.7. Physiological. Comply with the IFG. The EP aircraft should lead the recovery. The unaffected aircraft should monitor the emergency aircraft. Remain VMC if able.

8.9.8. Bird Strike. Striking a bird is preferable to a mid-air collision. Consider a formation landing if forward visibility is restricted.

8.9.9. Ejection. If able, the wingman will provide on-scene search and rescue IAW the IFG. Adjust JOKER/BINGO fuels required. Do not under fly parachutes or overfly BINGO in an effort to coordinate rescue efforts.

8.9.10. Divert. Maintain element integrity to the maximum extent practical. FL is responsible for ensuring the safe recovery of the formation. FL should plan based on the aircraft with the lowest fuel state. If NORDO, hold up an approach plate book followed by signaling three numbers corresponding to the page number of the planned approach to indicate the divert airfield.

8.9.11. Formation Solo Student Considerations.

8.9.11.1. IP Aircraft with an Emergency and Good Radios. If time and conditions permit, the IP will coordinate with ATC for a separate clearance for the solo student to recover single-ship. Depending on the EP, the IP should consider clearing the solo off to recover first. A solo student will not be used as a chase ship but may provide mutual support from a position no closer than route.

8.9.11.2. Simple NORDO. The good aircraft will lead the formation back to initial and notify SOF/ATC/Sunfish of the situation. The NORDO aircraft should expect light-gun signals from the RSU.

8.9.11.3. IP Aircraft NORDO with an EP. Pass applicable HEFOE signals. If the IP intends to RTB single-ship, he/she will squawk 7700 and clear the solo student off with a salute. The solo student should recover normally and notify SOF/ATC/Sunfish of the other aircraft's problem if able.

8.10. Three and Four Ship Procedures.

8.10.1. Three and four ship formation operations are standardized IAW the two-ship procedures in Chapter 8 except as outlined in the following paragraphs or briefed otherwise.

8.10.2. Takeoff.

8.10.2.1. Instrument trail departures. Line up with 500' between elements and use 20-second spacing (minimum). State intentions to the RSU clearly (e.g. "Number one is CALL SIGN, flight of four, 2 (or 4) by 20, interval").

8.10.2.2. Upon being lined up on the runway, 3 will announce "3's ready" on Aux. Lead will state, "CALL SIGN, run it up." This call does not require acknowledgement. When the second element is complete with the run-up check, 3 will state, "CALL SIGN 3's ready."

8.10.3. Route Position and Spacing. Extended cruise in three- and four-ship should be in route formation as much as practical.

8.10.4. Visual Signals. Visual signals (e.g. pitchout, echelon turn, BD check) should be mirrored down the line (1→2→3→4 in echelon, 1→3→4 in close/route formation). No acknowledgement is required.

8.10.5. Echelon Radio Procedures. To send the formation to echelon, lead will direct, "Psycho, echelon left." If FL uses "go" or "take," acknowledgment is required from wingmen.

8.10.6. Element Rejoins. Once cleared to rejoin by the lead element, the aircraft in the #2 position of the rejoining element will automatically go to fighting wing.

8.10.7. BD Checks. When lead directs a BD check, all other aircraft will maintain position while number 2 checks the entire formation and returns to the original position. Number 4 (#3 if 3-ship) is automatically cleared to check number 2 and return to position. No response is required unless an issue is discovered.

8.10.8. Blind and NORDO.

8.10.8.1. Lead will transition to the nearest VMC odd altitude. Number 2 transitions to the nearest VMC odd altitude plus 500.' Number 3 transitions to the nearest VMC even altitude and number 4 transitions to the nearest VMC even altitude plus 500.'

8.10.8.2. Once established at the blind altitude, the NORDO aircraft should squawk 7600 until join-up and orbit at 180 knots as described in paragraph 8.9.5.2.1.

Attachment 1

LOCAL INSTRUMENT COCKPIT/AVIONICS SETUP

TYPE	ITEM	SETUP
RMU	UHF	Memory, Direct Entry
	VHF	Memory, Direct Entry CH 12 (CBM SOF) for local missions
	VOR	Memory, Direct Entry
GPS	SUPER NAV 5	Track Up Range: As Desired OBS: As required
	Baro/Altimeter Setting	Set to current altimeter setting during GPS initialization. Update as required for navigation and GPS approaches.
	MODE	CDI Mode: +/- 1.00 NM
HSI	HSI Mode or Map Mode with Composite selected on EADI	Nav Source: VOR or GPS (as required) ETE displayed White Needle: VOR Magenta Needle: GPS
TAS	ON/STBY	ABOVE: Departure BELOW: Recovery Range: As Desired

Attachment 2

CHECKLIST TERMINOLOGY

“(BOTH)” Items. The front cockpit pilot (or pilot flying) will initiate challenge and response items and ensure the other crewmember responds for every item highlighted and marked as (BOTH). Pre-solo students will verbalize each checklist item. Replies are only required for (BOTH) items.

BEFORE EXTERIOR INSPECTION	
Before Exterior Inspection (Note 3)	<p>The first pilot on the wing verifies both ejection seat/CFS pins are installed and the ISS is in solo and states, “ISS Solo, 2 safe seats.”</p> <p>Before checking proper PCL movement, each pilot confirms, “PCL Clear” Once the check is complete, pilots state, “PCL Checks.”</p> <p>“[ISS SOLO]” – RCP only. “Two pins in” – Ejection seat, and CFS pin installed. “OFF” – PCL stops check and is in cutoff. “Down” – Gear handle down. “Caged and locked” – Standby ADI caged and locked. “NORMAL” – Starter norm. “NORMAL” – Ignition norm. “Blower & OBOGS OFF” – Evap Blower off, OBOGS off “Seat, CFS, and Breakers good” – Ejection seat handle in good condition, eyebolt plungers seated, left and right top latches fully engaged with guide rail locking lugs, emergency O₂ is within limits, CFS donor plungers flush with housing, pin box is closed and latched and all circuit breakers are in.</p> <p style="text-align: center;"><u>Aux battery on:</u> “Fire 1, Aux Batt checks” – Standby instruments, backup UHF (FCP only) and fire 1 check; CWS & AEDD clear. RCP replies with same.</p> <p style="text-align: center;"><u>Battery on:</u> “Seat & Pubs good,” – Seat height adjusted; pubs/helmet bags properly stowed. “FDR light’s out” – MAINT and FAIL light is extinguished (Note 3) RCP responds, “Seat & Pubs good”</p>
COCKPIT (ALL FLIGHTS) (Note 1)	
Strap-In	<p>When fully strapped in the FCP will initiate this step by using the following terminology while verifying correct connections: “Legs, lap, seat kit, shoulders, helmet, harness, hoses, all strapped in, mask checks.” The RCP IPs may respond with the same verbiage or “All strapped in, mask checks.”</p>
Flight Controls	<p>Each pilot will query “Feet and knees clear?” and verify controls are clear before checking the flight controls are free and correct.</p>

COCKPIT (ALL FLIGHTS) (Cont) (note 1)	
Lamp Check	FCP pilot states, <i>“My lamps check”</i> once lamp test is complete and all lights are verified operational. RCP pilot responds with the same.
Fire Detection System	FCP will push the fire detection test switch forward and challenge by saying <i>“Fire 1”</i> and the RCP will respond with <i>“Fire 1”</i> for the proper light operation. Accomplish the Fire 2 test in the same manner.
Trim Disconnect/Trim	FCP verifies and states <i>“Trim disconnect NORM.”</i> RCP responds with same. FCP checks trim operation all three axes, leaves the rudder trim out of the green and states <i>“My trim checks, two in the green.”</i> RCP responds same.
Generator Switch	FCP states <i>“Gen switch OFF.”</i> RCP responds with same.
Canopy	FCP states <i>“Visor down, rail clear.”</i> RCP responds with same. After the canopy is confirmed closed and locked and the unlock lever checks, both pilots confirm, <i>“Canopy is closed and latched, light’s out.”</i>
Before Engine Start/Motor	Ensure all BOTH items of “Cockpit (All Flight)” checklist are complete, then clear fore, aft, left and right and state, <i>“Prop clear, crew chief, fire bottle, no oxygen or refueling within 50 feet, good temps, good volts, Start Ready illuminated/extinguished, ready to start/motor?”</i> The RCP will respond with <i>“Ready to start/motor.”</i>
External Power	If used for engine start, FCP states, <i>“Hands clear,”</i> and the RCP responds with the same. Both pilots will keep hands visible to the crew chief until receiving the thumb up signal indicating that the external power is safely disconnected.
BEFORE TAXI	
OBOGS	FCP challenges with <i>“On, normal, normal, good blinker.”</i> RCP responds with the same.
STBY ADI	FCP challenges with <i>“Uncaged and adjusted.”</i> RCP responds with <i>“Uncaged and adjusted.”</i>
Anti-G Test	FCP will challenge with <i>“My G-suit checks”</i> and the RCP will respond with <i>“My G-suit checks.”</i>
Speed Brake	FCP challenges with <i>“Speed brake out, light’s on”</i> and RCP responds with <i>“Light’s on.”</i> Leave speed brake extended for flaps check.
Flaps	After flaps are lowered to landing, FCP challenges with <i>“Flaps landing, light’s out”</i> and RCP responds with <i>“Flaps landing, light’s out.”</i> After setting flaps to TO, FCP challenges with <i>“Flaps TO, lights out, speed brake won’t extend.”</i> RCP will respond with <i>“Flaps TO, lights out, speed brake won’t extend.”</i>

BEFORE TAXI (Cont)	
Flight Instruments	“Flight instruments check” from both pilots after checking flight instruments IAW TO 1T-6A-1 and 11-217 V1.
Altimeters	“XX.XX set twice, showing XXX (altitude in main altimeter) over YYY (altitude in stby altimeter).” RCP responds with same.
CWS Panel	“Panel Checks.” Both pilots verify warning and caution panel is clear.
TAXI	
Taxi Brake Check	“My brakes check.” PF checks brakes once clear of sun shelters and directs the PNF to check brakes by stating “Check yours.” The PNF checks brake operation and states, “My brakes check.”
Heading/Turn & Slip Indicators	Once clear of congested area, PF performs check and states, “Needles left/right, balls right/left, and decreasing/increasing on two.” Only one turn is required. No response is required from the PNF.
BEFORE TAKEOFF	
End of Runway	Once verified with the checklist, the PF states “Minimum power at 60 knots is XX%,” and the RCP pilot confirms, “XX%, checks.” Once ejection seat pins are removed, FCP states “Pin’s removed and stowed.” RCP responds “Pin’s removed and stowed.” After both pins are removed and stowed, FCP queries “Confirm ISS (desired position).” RCP responds with “ISS (desired position).”
LINEUP	
Caution and Warning Panel	Both pilots confirm no aircraft are on final and the warning and caution panel has no abnormal indications and state, “Final’s clear, panel checks.”
TAKEOFF	
Minimum Torque at 60 KIAS	During takeoff roll, the PF checks the calculated minimum value for torque at 60 KIAS and states “60 knots, torque checks.” This call out is advisory only and no response is required by the PNF unless a discrepancy is observed. Aircraft performing formation wing takeoffs should check torque is within the acceptable range and use the same verbiage.

IN-FLIGHT CHECKS	
After Takeoff Check (Note 2)	<p>“Climbing” – Verified by looking outside during a contact takeoff and by checking the altimeter and VSI during an instrument takeoff.</p> <p>“Good engine”—Engine instruments are within limits.</p> <p>“Gear clear?”—Preparatory command for student to raise landing gear</p> <p>“Gear flaps up, lights out, (read airspeed).”</p>
Climb Check	Check cockpit altitude and ΔP passing 10K’ MSL. They should read approximately 8,000’ and 0.8 psi. FCP states “OBOGS good.” RCP response same.
Ops Check	“[Actual fuel], OBOGS good.” RCP response same.
Pre-Stalls, Spins, and Aerobatics	Challenge and response: “Loose items stowed.”
Descent Check	After receiving ATIS, both pilots will state, “XX.XX set twice. Heading and attitudes check.”
Before Landing (Note 2)	<p>Prior to lowering the gear, PF will state. “XXX (PF reads actual airspeed), gear clear?”</p> <p>Once gear is down, “Check handle down, three green, flaps [desired position].” PNF verifies configuration (FCP physically verifies gear handle position) and responds, “Handle checks down, three green, flaps [desired position].”</p>
AFTER LANDING/ENGINE SHUTDOWN/BEFORE LEAVING AIRCRAFT	
After Landing	After past the hold short line, the FCP queries, “ISS SOLO?” RCP verifies the ISS is in Solo and responds, “ISS SOLO.” After ejection seat pins are installed, both pilots confirm “Pin’s in.” Once standby ADI is caged and locked, both pilots state “Caged and locked.”
Engine Shutdown	<p>Prior to placing the PCL off, both cockpits will confirm “Blower & OBOGS off.” Before opening the canopy, the pilot opening the canopy will verify “Loose items stowed, rail clear” and receive confirmation from the other pilot.</p> <p>Before turning the batt/gen off, the FCP will check the FDR/Maint light and confirm “FDR light is out.”</p>

AFTER LANDING/ENGINE SHUTDOWN/BEFORE LEAVING AIRCRAFT (Cont)	
Before Leaving Aircraft	<p>Challenge and respond with: “ISS SOLO” – RCP only. “Two pins in” – Ejection seat and CFS pins in. “OFF” – PCL in cutoff. “Down” – Gear handle down. “Caged and locked” – Standby ADI caged and locked. “NORMAL” – Starter norm. “NORMAL” – Ignition norm. “Blower & OBOGS OFF” – Evap Blower off, OBOGS in off position, hoses & comm cord stowed loop forward. “Seat, CFS, Breakers good” – Verify Ejection seat is raised to the full-up position, straps/belts are properly stowed, plungers are seated and all circuit breakers are in.</p>
<p>NOTES:</p> <ol style="list-style-type: none"> 1. If the FCP has partially completed the checklist prior to the RCP arriving on interphone, he/she need not interrupt the checklist to catch the other pilot up but may wait until the end of the Interior Inspection Checklist and perform all of the challenge and response items at the end. 2. On student, pre-solo contact sorties, the IP must acknowledge the gear clear call with “clear” before the SP raises or lowers the gear. On all other sorties this is an advisory call only. 3. FDR FAIL light will be illuminated for approximately 10 seconds after battery power is applied while it conducts a BIT. After the 10 second BIT, any MAINT or FAIL light requires maintenance attention. 	

Attachment 3

EXAMPLE FORMATION COMMUNICATION

Note: [Brackets] indicate items that are “as required” or at lead’s discretion.

EVENT	LEAD CALL	WING CALL
Radio Check-Ins	<i>“Psycho, check [Aux]”</i>	<i>“2”</i>
Radio Channel Changes	<i>“Psycho, push / go XX [Aux]”</i>	<i>“No response / 2”</i>
FENCE-In (Note 2)	<i>“Psycho, FENCE-in”</i>	<i>“2”</i>
	<i>“[Psycho] 1 is 900”</i>	<i>“[Psycho] 2’s same or “[Psycho] 2 is 800”</i>
Climb Check (Note 1)	<i>“Psycho, climb check”</i>	<i>“2”</i>
Ops Check (Notes 2, & 3)	<i>“Psycho, ops check – [Psycho] 1 is 900, [4 G’s]”</i>	<i>“[Psycho] 2’s same” or “[Psycho] 2 is 800, [5 G’s]”</i>
Close Trail	<i>“[Psycho] 2, go close trail”</i>	<i>“2” / “[Psycho] 2’s, in”</i>
Knock-it-off	<i>KIO INITIATED BY LEAD</i>	
	<i>“Psycho, Knock-it-off... Psycho 1, Knock-it-off”</i>	<i>“Psycho 2, Knock-it-off”</i>
	<i>“Alibi”</i>	
	<i>KIO INITIATED BY WING</i>	
		<i>“Psycho, Knock-it-off”</i>
	<i>“Psycho 1, Knock-it-off”</i>	<i>“Psycho 2, KIO, Alibi”</i>
Breakout	<i>BREAKOUT DIRECTED BY LEAD</i>	
	<i>“[Psycho] 2, breakout”</i>	<i>”2”</i>
	<i>“[Psycho] 2, roll out”</i>	<i>”2”</i>
		<i>“[Psycho] 2’s, visual”</i>
	<i>BREAKOUT INITIATED BY WINGMAN</i>	
		<i>“[Psycho] 2’s breaking out”</i>
		<i>“[Psycho] 2’s visual”</i>
Practice Lost Wingman	<i>“[Psycho] 2, go practice lost wingman”</i>	<i>“2”</i>
		<i>“[[Psycho] 1 roll out], [Psycho] 2’s lost wingman”</i>
	<i>“[Psycho] 1 is [Attitude]”</i>	<i>“2”</i>
		<i>“[Psycho] 2’s visual”</i>

Extended Trail Exercise	<i>“[Psycho], go ET level [1,2,3]”</i>	<i>“2”</i>
		<i>“[Psycho] 2’s in”</i>
Blind EX Check Turn	<i>“Psycho, standby blind exercise, reference heading [xxx]”</i>	<i>“2”</i>
	<i>“Psycho, turn away”</i>	
		<i>“[Psycho] 2’s blind, altitude”</i>
	<i>“[Psycho] 1’s, blind, altitude. Psycho 2 [climb/descend/maintain altitude/snap HDG xxx]”</i>	<i>“2”</i>
Check Turn	<i>“Psycho, check XX [degrees][Left/Right]”</i>	<i>“2”</i>
FENCE-Out (note 3)	<i>“Psycho, FENCE-out”</i>	<i>“2”</i>

NOTES:

- OBOGS checks are always internal to the aircraft. No calls on Aux are necessary.
- Only state **“same”** if Wing has the same values as Lead for Fuel (+/- 50 #) and G (+/- 0.5 G); otherwise respond with actual values.
- Formation members will verbalize fuel on all Ops Checks. Include G’s in the MOA or as directed by lead.