

FLYING

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SAFETY



Helmet Fires

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Sometimes “helmet fires” get the best of us and result in a mishap. Single-seat fighter pilots face some of the most challenging environments. We have to organize our own resources plus work as a team to accomplish the mission while preparing for immediate contingencies such as weather, threats, IFEs, and alternate missions.

Putting out the fires involves staying ahead of the jet through preparation and anticipation—preparing for the “worst case” and anticipating the next event in the chain. How to maintain this state of situational awareness (SA) varies from pilot to pilot. Here are some proven concepts.

Preparation

- **Mission planning.** Plan together as a team with one central focus led by the flight lead and the mission will flow smoothly even if faced with contingencies (weather, fallout, jet and airspace problems).

- **Know the capabilities of your flight.** Are you flying with a new wingman? What are the currencies for everyone in your flight? The flight commander should be the key person to find the answer to any questions regarding personal problems.

- **Briefing.** The “on time” brief should be the melding of mission planning information, tailored to the least experienced pilot, and not an introduction to the plan. A poor briefing usually equates to a flight filled with multiple “helmet fires.”

- **Preflight.** Slip your times to accommodate last-minute changes. Disruptions to pacing and habit patterns increase task saturation.

- **Ground operations.** Review your game plan for a takeoff emergency where critical actions must be accomplished quickly with little time for analysis. Thinking through your game plans, reviewing your shot/kill criteria, and memorizing the attack parameters can increase your chances of killing the bandit/target.

- **Proficiency.** When was the last time you accomplished an emergency procedures simulator or cracked open the Dash One? Did you really accomplish a SEPT last month? You are responsible for your proficiency and knowledge.

- **Personal life.** Are you fit to pull high Gs? You should have a personal fitness program including proper nutrition. Are you getting enough crew rest to maintain a high degree of alertness and beat fatigue? If not, make some lifestyle changes.

Anticipation

- **Wingman anticipation.** Anticipate and lead turn the next event. Use any idle time to accomplish checks (ops, fence, descent) or avionics setup (radar, navigation, IFF) prior to the flight lead’s call. This includes anticipating formation changes plus being ready to back the flight lead during an emergency—reading the checklist or calling out critical altitudes. Misprioritization of tasks, such as spending too much time in the “tube” and not monitoring the flight lead, may cause a flight path conflict and degrade the tactic.

- **Flight lead/IP anticipation.** Know your flight’s position and fuel state. Put yourself in their cockpits and anticipate what they are doing before directing a task. For example, don’t give an ops check during the last stage of a rejoin, during a turn at low altitude, or as the attack/engagement is executed. Have a game plan ready for IFEs, blind wingmen, rejoins, obtaining ATC clearances, weather, and backup missions.

- **Communications.** Check-ins usually indicate the SA of the flight—the initial check-in sets the tone for the entire mission. Anticipating radio changes and using clear, concise 3-1 comm will assist in missing critical information. A formation should work as a team in accordance with the briefing. Don’t hesitate to call out a dangerous situation or conflict—traffic, terrain, towers, noncompliance with training rules or AFIs. Knowing the correct radio to use is crucial to mission success and safety. Think before transmitting, and avoid “zipper” comm.

- **Cross-checks.** At low altitude, check near rocks and far rocks prior to accomplishing any other task. Using the autopilot, the HUD, and HOTAS (Hands On Stick And Throttle) can reduce “helmet fires” associated with flying in poor weather or at night. Passing critical flight information to a wingman may reduce spatial disorientation.

Cockpit Resource Management (CRM) is one of those “buzz words” many fighter pilots “blow off.” It is what we do every day—staying ahead of the jet by being prepared and anticipating. I, too, have been guilty of disregarding the CRM revolution, but take a look at CRM in a different way and see if it can apply to your cockpit. CRM issues are not new! Every time we strap on a jet we practice some form of CRM learned from experiences—sorties, simulators, the briefing room, and previous mishaps. It takes only one breakdown in SA to teach a lesson. Some examples of learned CRM are forgetting to set up for an approach prior to entering the weather or soaking up a missile due to not arming the flares. Some lessons are not forgiving and result in mishaps. *Prepare and anticipate.* This is CRM in the single-seat world. ✈