

TOP GUN PROGRAM

The 36 TFS Top Gun Program is designed to encourage a healthy competitive attitude, while teaching aircrews to recognize and take valid shots. The squadron standard on Valid Shot Criteria/Kill Removal will be used to judge all shots as valid or non-valid.

A. Rules of Conduct

- (1) All air-to-air shots taken will be either valid or non-valid, and either a counter or non-counter IAW this standard. A chargeable sortie is one in which you have the opportunity to take a shot which counts towards top gun analysis. (i.e., there is at least one unrestricted target which you may engage.)
- (2) Only shots taken against an unrestricted target count for top gun. Shots taken against a duck target do not count for top gun. If, however, the first shot is used to begin an engagement from a canned setup and subsequent to that the defender is cleared to maneuver unrestricted, any shots taken after the maneuvering begins do count so long as the attacker re-enters weapons parameters. Similarly, radar shots are non-counters if the radar lock up occurs before the target is free to maneuver unrestricted. Flight leads and IP's will generally determine during the debrief if a target was unrestricted or not, and consequently, whether or not each shot is a counter for top gun analysis.
- (3) The Air-to-air Shot Evaluation Summary will be used to annotate the results of all air-to-air shots (trigger squeezes).
- (4) Flight leads will be responsible for insuring that the Air-to-air Shot Evaluation Summary is completely and accurately filled out.
- (5) Flight leads will be responsible for insuring that all gun camera film from their flight is reviewed in a timely manner. The goal is real time film review with all crewmembers during or just after the flight debrief. When extenuating circumstances preclude this, the film must be reviewed as soon as possible thereafter (7 calendar days maximum).
- (6) Any shot which violates as established ROE will be non-valid.
- (7) Any radar shot which cannot be completely evaluated because of an over-run set less than 10 seconds, will be non-valid.
- (8) All Cope Thunder sorties are non-chargeable unless you engage an unrestricted target. (Irregardless of whether you take a shot or not.)
- (9) A sortie which air aborts before any engagement begins will be non-chargeable.
- (10) Each dart sortie will count as one attempt for dart success rate. Points will be awarded for an airborne or gun camera verified hit. The sortie is non-chargeable unless at least one pattern was butterfly or combat dart. For top gun purposes only, the aircraft actually achieving the hit will receive the points. If it is impossible to determine which aircraft actually achieved the aircored hit, both aircraft will receive credit and points.
- (11) Even though flight leaders are responsible for insuring that his flights' film is reviewed and the Air-to-air Shot Evaluation Summary is completed, it will be the individual concerned who will get no top gun points and a chargeable sortie if all actions are not completed within 7 calendar days of the flight.

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- (12) The top AC will be determined IAW this standard. The top WSO will be the WSO who flew the most sorties with the top AC during that quarter.
 - (13) Any exceptions to the rules contained herein will be at the discretion of the squadron weapons officer. Arbitrations will be handled by 36D04.

B. Point System

Each valid shot will be awarded the following points for top gun.

Radar	3 points
Heat	6 points
Gun	4-12 points
Dart hit	8 points

For valid gun shots, one point will be awarded for each consecutive frame (minimum 4, maximum 12) in which the pipper is touching the aircraft fuselage/stabalator.

C. Computation

The following process will be used to compute the quarterly top gun. The Air-to-air Shot Evaluation Summary will be used to record and compile top gun results.

- (1) For each of the four categories of shots (radar, heat, gun, dart hit), total all points accumulated during the quarter for valid shots.
- (2) Determine the success rate in each category by dividing the number of valid shots by the number of attempted shots (counters). For dart, the number of hits divided by the number of chargeable dart sorties.
- (3) For each category, multiply the total points accumulated by the success rate. This is the number of quality points for each category.
- (4) Total all the quality points from the four categories, and divide that result by the total number of chargeable sorties you flew during the quarter. That result is your top gun number.
- (5) At the end of each quarter, and pending review and approval by the ops officer, the top AC will be the person with the highest top gun number.

D. Summary

It is virtually impossible to have a top gun program which directly incorporates all facets of AC and WSO flying operations. Any top gun program must be simple to operate and manage. For this reason we have elected to not directly count the following actions in the top gun analysis.

- a. Air-to-ground results
- b. Cine track exercises
- c. Roll slide attacks
- d. Direct credit for radar lock ons
- e. Defensive maneuvering or lack thereof
- f. Crew coordination techniques

The benefits derived from correctly performing the above functions will be more shots taken with an overall higher success rate. Remember, this is your top gun program, so make it work for you. Good luck and happy hunting.

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Operations Officer

VALID SHOT CRITERIA/KILL REMOVAL

The following criteria will become effective 2 Oct 78 for the last quarter of CY 78. They will henceforth be used for all air-to-air training in the squadron. All shots will be either valid or non-valid, depending upon whether or not the shot meets the following criteria. Shots must be verified by gun camera film to be considered valid. All criteria assume 24 frames per second. 36D04 will have the final word on arbitrations.

A. All Aspect Missiles

- (1) Max Range: Target range must be less than 12,000' 10 seconds after trigger squeeze.
- (2) Min Range: Four seconds after trigger squeeze, target range must be greater than 3000'.
- (3) Time of Flight: One second plus one additional second (10 seconds max) for every 1000' of instantaneous slant range. (For slant ranges between 9000' and 12,000', TOF will be 10 seconds for overrun considerations.)
- (4) Target Illumination: Except for boresight shots, a valid radar lock must be maintained for the missile TOF.
- (5) Boresight Shots: The target must remain illuminated (within the 50 mil reticle) from trigger squeeze until simulated impact. The position of the aspect switch must be verbally recorded on tape prior to trigger squeeze. Film review will be used to verify the correct aspect switch position.
- (6) Target Verification: The target must appear in the gun camera field of view sometime during the 10 second overrun.
- (7) Clutter Background: For targets below 5000' AGL, a lookup (blue sky background) must be attained at trigger squeeze.

B. Heat Missiles

- (1) Max Range: Target above 10,000' MSL, 7500'
Target below 10,000' MSL, 5000'
- (2) Max Angles: 30 degrees inside the turn (topside), and 45 degrees bellyside.
- (3) Min Range: Above 10,000'- 2000' bellyside to 10 degrees topside.
Add 100' for each additional degree inside the turn
(up to 4000' at 30 degrees).
Below 10,000'- 1000' bellyside to zero angle off.
Add 100' for each degree inside the turn
(up to 4000' at 30 degrees).

Note: In both cases, the min range inside the turn is the same for angles between 10 and 30 degrees.

- (4) Tone/Tracking: The target heat source must remain within the reticle "eyebrows" for 12 consecutive frames, one of which must include the trigger squeeze. If a tape recorder and a captive AIM-9 are carried, there must be a tone recorded unless a malfunction exists. (Malfunction report required.) The heat tone must cease at trigger squeeze. Uncaged shots are valid only if verified by a tape recorder.
- (5) Clutter Background: For targets below 5000' AGL, a lookup (blue sky background) must be attained at trigger squeeze.
- (6) Line of Sight: Line of sight to the target must be maintained for 3 seconds after trigger squeeze unless the target is moved out of the camera field of view.

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- C. Guns
- (1) Max Range: 2000' locked, 1500' no lock. For target aspect angles between 60 and 120 degrees, add 500'.
 - (2) Min Range: IAW applicable ROE.
 - (3) Time of Flight: One half second time of flight (12 frames) must be counted before assessing frames on the fuselage.
 - (4) Tracking: 12 consecutive or 24 total frames on the fuselage during a single trigger squeeze.
 - (5) Snapshots: Minimum of 4 consecutive frames on the fuselage.
- Notes: The stabalator is considered part of the fuselage. All gunshots must use an actively computing gunsight.
- D. Max Weapons Load
- (1) F-4: 3 AIM-7E-2, 4 AIM-9J, 6 seconds of gun
F-5/A-4: 4 Atoll, 4 seconds of gun
F-14/F-15: 2 Apex, 4 Aphids, 9 seconds of gun
 - (2) Aircraft will be fully reloaded at each KIO.
- E. Kill Criteria
- To receive credit for an air-to-air kill, one of the following conditions must be met:
- (1) The attacker(s) achieve two valid shots on the same target during any one engagement. The two shots can be any kind, in any combination, but must be taken at least five seconds apart.
 - (2) The attacker achieves one valid belly heat shot.
 - (3) The attacker achieves one valid tracking gun shot.
- F. Kill Removal
- Defenders will be removed from the fight and scored killed, pending verification by gun film, under the following conditions:
- (1) A clear kill call must be made on the prebriefed fight frequency.
 - (2) Positive identification of the claim must also be made to include as a minimum: type aircraft, direction of turn, heading passing, and altitude. (Tail number if you see it.)

These criteria are all designed to help you train towards heart of the envelope weapons delivery. Strive for these parameters now, and your success rate in combat will surely improve.

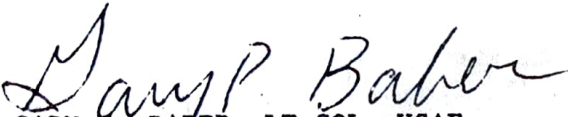
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D. Remarks

1. Be sure to use the remarks portion of the shot evaluation summary to include all applicable information not specifically requested anywhere else on the form. Explain any oddities which occurred, such as sorties (chargeable or not) where there were no trigger squeezes.
2. Also include, IAW the instructions, the type of dart pattern, any malfunctions, and the specific reason why any shot is non-valid.
3. The password is to leave nothing to guesswork. Explain anything which is not obvious. This becomes particularly important when more than one sortie is included on the same sheet.

Remember, we need your effort and cooperation to make this program a success.


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