

**TIGERMERCS**

Dogfight Server

User Manual - English Edition

1 vs 1 BFM | AI Training | Team Deathmatch | GUNS ONLY

Purpose of this manual

This manual describes the server from the pilot's point of view: slot selection, READY check-in, F10 menu, merge, FIGHT'S ON, BFM evaluation, AI Training and Team Deathmatch. Technical details of the server installation are intentionally outside the scope of this document.

VERSION 1.0

Updated: 03.10.2026 | Server build: v9.0

Inspired by [TM] Viper - developed by [TM] Sarge with AI support, with mission and DTC support by [TM] Mapi.

1. What makes the TigerMercs Dogfight Server different?

The server was created for structured, largely automated BFM fights in DCS. The pilot should be able to focus on the fight - the script takes care of the organizational framework.

A1-4	Protected Jet 1-vs-1 arenas A1 to A4 are dedicated Jet arenas with clearly separated READY, WARN and Combat zones. Active engagements are protected from outside interference.
A5-6	Warbird 1-vs-1 plus AI Training A5 and A6 are dedicated Warbird arenas with a longer fight window. Separate BLUE trainer slots enable Solo AI Training against modern fighter opponents.
AUTO	Automatic fight control READY check-in, release, merge recognition, FIGHT'S ON, fight timer, KIO, boundary monitoring and result display are handled automatically.
F10	HABFM setups via F10 menu Defined starting geometries can be selected for reproducible training. Setup values are guidance, not scoring conditions.
BFM	BFM scoring with tactical focus If a fight reaches the time limit, the system evaluates the tactical advantage created during the engagement instead of returning an empty draw.
A7	Team Deathmatch A7 provides automated Team Deathmatch from 2v2 up to 8v8 with team lives, eliminations, respawns, roster lock and tactical control calls.
Core rule All fights on the server are GUNS ONLY. No firing before FIGHT'S ON.	

1.1 The basic flow

A1-A6 follow the same operating principle:

SLOT	WP1 READY	F10 OPTIONAL	WP2	COMBAT	MERGE	FIGHT'S ON	RESULT
------	--------------	-----------------	-----	--------	-------	------------	--------

2. Quick Start - your first 1-vs-1 fight

The following steps are enough to start a normal Human-vs-Human fight without any additional knowledge.

1

Choose BLUE or RED

Select one of the two coalitions. A 1-vs-1 fight requires one BLUE and one RED pilot in the same arena.

2

Select aircraft and arena

Choose a free slot in A1-A6. Your opponent uses the opposite-side slot of the same arena.

3

Fly through the READY area - WP1

First fly through your side's READY area. The script records your READY check-in on the first valid entry.

4

Optional: choose a HABFM setup via F10

If desired, select one of the available HABFM setups. Without a selection, Easy / Free Fight remains the default.

5

Wait for BOTH PILOTS READY

Once both pilots have checked in, BOTH PILOTS READY appears. Both pilots may then proceed toward the Combat Zone.

6

Proceed via WP2 to the Combat Zone

WP2 is the Combat / Merge reference. When both pilots are inside Combat, the script reports COMBAT ZONE READY.

7

Establish the selected setup

Establish the chosen HABFM geometry. In Easy / Free Fight, the merge is unrestricted.

Remain SUBSONIC until FIGHT'S ON.

8

FIGHT'S ON

When the technical start conditions are met, the fight starts automatically. Weapons may be used only from this point onward.

Fight duration and rounds

A1-A4: 180 seconds. A5-A6: 300 seconds. A Kill, Boundary DQ or another terminal outcome ends the session immediately. Only a KIO in a PvP fight can lead to a second round.

3. How the script guides you through the fight

The most important messages are intentionally short. This table explains what they mean and what you should do.

Message	Meaning	Your action
READY CHECK-IN COMPLETE	Your aircraft has been detected in the READY area.	You may leave READY again. Remain outside Combat until the opponent is ready.
BOTH PILOTS READY	Both sides are checked in.	Both pilots may proceed to Combat. The setup can still be changed until the first Combat entry.
COMBAT ZONE READY	Both pilots are inside Combat.	Establish the merge / HABFM geometry. Remain SUBSONIC until FIGHT'S ON. Weapons are not yet live.
MERGE NOT ARMED	Both pilots are in Combat, but at least one READY check-in is missing.	The indicated side must return through READY and then re-enter Combat. The reminder remains until both are READY.
FIGHT'S ON!	The fight is active and the timer is running.	GUNS are now live. BFM scoring and boundary monitoring are active.
RETURN TO COMBAT ZONE	You have left the permitted Combat boundary.	Return immediately. Remaining outside for 15 seconds can result in a DQ.
KNOCK IT OFF!	The time limit has been reached or the round has ended.	Cease fire and wait for the result. After Round 1 KIO, return to READY for Round 2.
RESPAWN FOR NEW ATTEMPT	The session has ended terminally.	Respawn and check in through READY again for a new session.

3.1 Boundary system

The Combat boundary is monitored automatically. If a pilot leaves the permitted area during FIGHT'S ON, a 15-second DQ timer starts. Return inside before it expires to continue the fight.

- If only one pilot is outside, the 15-second DQ timer runs.
- If both pilots are outside simultaneously, the attempt can be cancelled without score and the same round returns to READY.
- Visible boundary markers are for orientation; the script zones remain authoritative.

3.2 Round 2 after KIO

Only a KIO after the time limit can trigger a second PvP round. The selected setup remains active, but both pilots must check in through READY again. Kill, DQ, crash / harddeck, forfeit or another terminal outcome ends the session immediately.

4. F10 menu and HABFM setups

The F10 menu allows you to select the starting geometry. All setup values are guidance: they support reproducible training, but they are not direct scoring conditions.

Setup	Range	Geometry	Altitude	Speed	Notes
Easy / Free Fight	Free	Natural merge	Free	Free	Default mode without a prescribed starting geometry.
HABFM - Abeam	approx. 1.0 NM	Abeam / 3-9 line	approx. 19,600 ft	approx. 350 KIAS	Repeatable abeam starting position.
HABFM - Head-on	approx. 4.0 NM	Head-on / nose-to-nose	approx. 15,000 ft	approx. 350 KIAS	Frontal starting geometry; TigerMercs baseline.
HABFM - Blue Low / Red High	approx. 1.0 NM	BLUE low / RED high	BLUE ~17,000 / RED ~22,100 ft	both ~350 KIAS	Vertical reference about 5,000 ft.
HABFM - Blue High / Red Low	approx. 1.0 NM	BLUE high / RED low	BLUE ~22,100 / RED ~17,000 ft	both ~350 KIAS	Vertical reference about 5,000 ft.

Important

The setup is locked on the first Combat entry. FIGHT'S ON uses the same automatic technical merge gate for all setups. Remain SUBSONIC until FIGHT'S ON. The subsonic reminder is guidance only - there is no speed gate or automatic speed penalty.

4.1 What does the script score - and what does it not score?

- The HABFM setup values themselves are not point conditions.
- The script evaluates the actual BFM geometry only during the active fight.
- A setup exists to let several training attempts start from a similar initial position.

5. AI Training in A5 and A6

A5 and A6 are dedicated Warbird 1-vs-1 arenas and also provide a separate Solo AI Training mode through special BLUE trainer slots. The AI mode uses modern fighters and is independent of the normal Warbird PvP slots.

1

Choose a BLUE Trainer slot

In A5 or A6, select a Dogfight-Trainer F-16C or F/A-18C on BLUE. Normal PvP / Warbird slots do not receive the AI menu.

2

Check in at READY

Fly through the BLUE READY area. The AI Training selection becomes available in the F10 menu after READY check-in.

3

Choose opponent and skill

Via F10, select either an F/A-18C Hornet or F-16C Viper as RED AI and then choose the desired difficulty.

4

The AI is spawned

The RED AI is created dynamically for the selected arena. After RED AI READY, the flow continues toward the merge just like a normal fight.

5

FIGHT'S ON and evaluation

The fight starts at the common merge gate. Remain SUBSONIC until FIGHT'S ON. A5/A6 run for a maximum of 300 seconds. After Kill, COMBAT LOSS or KIO, the result is evaluated and the AI is removed.

5.1 Available difficulty levels

Skill level	Simplified description
Cadet	Beginner-friendly opponent.
Average	Medium AI level.
Good	Advanced opponent.
High	High AI level.
Excellent	Highest available AI level.

AI Training - special notes

AI Training is always UNRANKED and is handled separately from normal PvP results. An active AI fight can no longer be cancelled through F10 after FIGHT'S ON. The merge must occur within 90 seconds, otherwise the AI is removed and no result is generated.

6. Arena 7 - Team Deathmatch

A7 is separate from the 1-vs-1 system and is designed for automated team fights. F-16C and F/A-18C client slots are available on both sides.

6.1 Select match size

Via F10 -> Match Setup, choose in READY: AUTO, 2v2, 3v3, 4v4, 6v6 or 8v8. AUTO accepts teams from 2 to 8 pilots and allows a maximum difference of one pilot between both sides.

Match / team size	Team lives	Elimination target
AUTO / 2-4 pilots / Team	4	4
AUTO / 5-6 pilots / Team	6	6
AUTO / 7-8 pilots / Team	8	8
2v2 / 3v3 / 4v4	4	4
6v6	6	6
8v8	8	8

6.2 Start and Roster Lock

- Spawning in your own READY area automatically registers you for the current match.
- All registered pilots must then enter the Combat Zone.
- Only then is the roster locked and a 5-second countdown started.
- After the lock, non-roster pilots cannot take free A7 slots during the active match.

6.3 Lives, eliminations and respawn

A team wins when the elimination target is reached or the opposing life pool is exhausted. Roster pilots may respawn while team lives remain. After respawn, boundary monitoring is re-armed only after the pilot reaches the inner WARN / Core area.

6.4 Arena 7 - Control

During a running match, Arena 7 - Control provides each active living roster pilot with the nearest valid hostile approximately every 30 seconds, including BRA, range in NM and ANGELS.

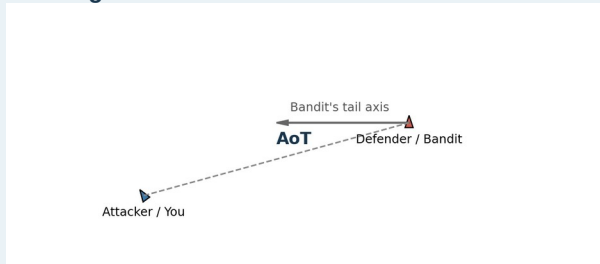
6.5 Radio in A7

Radio	BLUE	RED	Use
Radio 1 / UHF	267.5 MHz	267.5 MHz	Shared match frequency
Radio 2 / VHF	127.1 MHz	127.2 MHz	Team-internal radio

7. Understanding BFM scoring - AoT, AoN and Control Zone

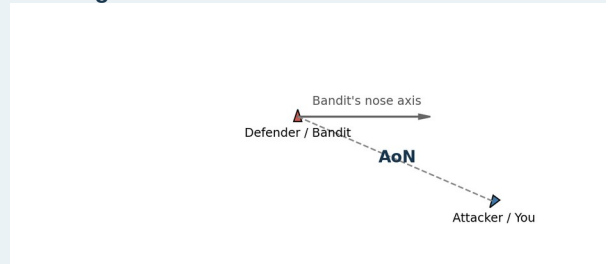
The scoring system is designed to show more than the final kill. In time-limit fights, it also records who created the stronger tactical position. AoT, AoN, distance and positional quality are key geometric inputs.

AoT = Angle-off-Tail



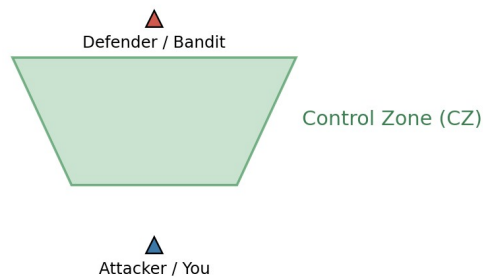
AoT describes how well the attacker is aligned behind the opponent. A smaller AoT generally means a cleaner offensive weapons position.

AoN = Angle-off-Nose



AoN describes the forward-sector geometry at the opponent. It helps the script identify crossings and possible overshoots.

Control Zone (CZ)



The Control Zone represents close, stable offensive control with favorable geometry. It is weighted more strongly than general Offense.

Remember

Being behind the opponent is good - being close and stable is better. A smaller AoT improves the quality of an offensive position. AoN is particularly useful for identifying crossings and qualified overshoots.

8. How geometry becomes a result

The result display combines Kill / KIO logic with the BFM evidence collected during the fight.

Element	Simplified explanation
Offense	A pilot holds a useful offensive pursuit position behind the opponent.
Control Zone (CZ)	A tighter, higher-quality offensive position inside the defined Control Zone.
Qualified Overshoot	An attacker loses Offense after a qualified closure reversal; defender conversion can upgrade the event.
Hit Sequence	Several closely related raw DCS hit events from one gun burst are grouped into one confirmed hit sequence.

8.1 Kill, COMBAT LOSS or KIO?

- Kill: the winner receives 100 points and the loser 0. The session ends immediately. A real Kill increments the Kill statistic.
- COMBAT LOSS: if an aircraft disappears from the simulation immediately after a confirmed hostile hit and no regular DCS terminal event follows, the fight may be scored 100:0 as COMBAT LOSS. No Kill is awarded.
- KIO / Time Limit: the calculation starts at 50:50. BFM evidence shifts the result toward the stronger side.
- The result also includes a tendency such as EVEN, SLIGHT or CLEAR ADVANTAGE.

8.2 Current weighting - for interested pilots

Component	Current value
Offense difference	0.2 points per second of difference
Control Zone difference	0.4 points per second of difference
Forced Overshoot	1 point; upgraded to 2 with own Offense or 3 with own CZ
Overshoot influence	Maximum 6 points of score shift
Hit Sequences at KIO	1 / 2 / 3 / 4+ -> 10 / 16 / 22 / 28 points of shift
Maximum KIO shift	40 points from the 50:50 starting point

Technical note

The BFM geometry is internally sampled in approximately 0.5-second steps. The intentionally slower server debug logging does not change the scoring resolution.

9. Rules, radio and quick reference

9.1 Most important rules

- GUNS ONLY - no missiles, rockets, bombs or other weapons.
- No firing before FIGHT'S ON.
- A1-A6 / AI Training: remain SUBSONIC until FIGHT'S ON. This is guidance, not a speed penalty.
- Do not enter an active 1-vs-1 arena unless you are part of that fight.
- Respect KIO immediately and cease fire.
- React to Boundary warnings immediately; the DQ timer is 15 seconds.
- AI Training is unranked.

9.2 Arena frequencies

Arena	UHF / Radio 1	Notes
A1	261.5 MHz	BLUE and RED shared
A2	262.5 MHz	BLUE and RED shared
A3	263.5 MHz	BLUE and RED shared
A4	264.5 MHz	BLUE and RED shared
A5	265.5 MHz	Jet trainer slots; Warbird slots additionally use VHF 125.0 MHz
A6	266.5 MHz	Jet trainer slots; Warbird slots additionally use VHF 126.0 MHz
A7	267.5 MHz	Shared match frequency; team VHF is listed in section 6.5

9.3 Navigation A1-A6

- WP1: READY reference for your side.
- WP2: Combat / Merge reference. WP2 is not necessarily the geometric center of the arena.
- Combat and WARN boundaries are additionally supported by visible boundary markers.

9.4 If something does not start

Problem	Check
No BOTH PILOTS READY	Have both pilots actually flown through their own READY areas?
MERGE NOT ARMED	The indicated side must return through READY and then re-enter Combat.
No FIGHT'S ON	Are both pilots in Combat, is READY released, and has the technical merge gate been reached? Approach the merge under control and subsonic.
F10 setup cannot be changed	The setup may already be locked after the first Combat entry.
No AI menu	Use a BLUE Trainer slot in A5/A6 and check in at READY first.
A7 does not start	Does the selected match size fit, and are all registered pilots in Combat?

Links

Current information and results:
dcs-air-race.eu/tigermcercs-dogfight/
discord-df.dcs-air-race.eu