



FFS TRADOC: Basic Flight Training

Contents

1	Basic Flight Training	2
1.1	Basic Flight Training preparation for Bf 109 F-4	2
1.2	Cockpit familiarization	3
1.3	Aircraft information and optimal operating configuration	3
1.4	Take-off procedure	3
1.4.1	Take-off configuration	3
1.4.2	Take-off	3
1.5	Flying as a Wingman	3
1.5.1	Formation Flight	3
1.5.2	How to act as a good Wingman	4
1.6	Level flight	4
1.6.1	Power on & power off stalls & recovery	4
1.6.2	Spin induction & recovery	4
1.6.3	Emergency engine operating procedures	4
1.7	Landing procedure	4
1.7.1	Landing configuration & procedures	4
1.7.2	Landing	4
1.8	BFT passing requirements	4
2	Communication standards	4
2.1	General communication protocol	4
2.2	Critical Information	5
2.3	Cycling attack terminology	5
3	Formations, structure, and manoeuvres	5

1 Basic Flight Training

1.1 Basic Flight Training preparation for Bf 109 F-4

[Video: Bf 109 F-4 Familiarisation](#)

All applicants, trainees, and other such interested pilots watch the above linked video - and take notes - in order to prepare yourself for Basic Flight Training.

FFS does Basic Flight Training in the Bf 109 because it's the most simple aircraft to fly due to its automation. As such, some things you must do before the formal training class are bind & memorize these additional non-standard keybindings for the Bf 109:

Adjustable stabilizer axis bind two keys or an axis to this ONE keybinding

Switch propellers pitch control mode: manual/auto This turns off automatic prop pitch control in the 109 - essential for emergency engine procedures

Propellers pitch increase Allows you to increase prop pitch after disabling automatic control.

Propellers pitch decrease Allows you to decrease prop pitch after disabling automatic control.

Tail wheel lock/unlock Please change this to something not on the "G" key to avoid ground accidents. I use "/", for example.

Engage engines start procedure / Stop engine Please change this to a modifier key plus "Home" to avoid accidentally stopping your engine during normal flight operations. I use "RWin + Home", for example. That's the standard DCS:World key binding for engine starts, so it's easy to remember.

These are not optional steps, these are to ensure that training goes smoothly and we aren't spending our time instructing on key bindings or dealing with accidents that slow down training. Failure to do this will result in being told to leave training and come back during the next class.

Good luck with training! I look forward to you all passing and being welcomed into FFS!

1.2 Cockpit familiarization

1.3 Aircraft information and optimal operating configuration

1.4 Take-off procedure

1.4.1 Take-off configuration

Before Take-off in the Bf-109 make sure you have your canopy closed and your tail wheel locked. You will need to straighten out your tail wheel for it to actually lock in place. Set your flaps to 20° by extending them until you see two black lines on the flaps on your left wing. Trim your aircraft nose down to +1 on the adjustable stabilizer so that your tail wheel will lift off the ground at the appropriate speed.

1.4.2 Take-off

The Bf-109 has a clockwise rotating propeller when viewed from the cockpit. Due to torque, gyroscopic precession and various aerodynamic effects the plane will have a tendency veer left during take-off. To compensate for this you will need to apply right rudder pressure throughout take-off. If you are taking off as part of a flight of aircraft make sure to count 6 seconds before following the aircraft in front of you. When you are ready to go, check that the runway is clear and then slowly throttle up to full power. By throttling up slowly you reduce the amount of torque on your aircraft and thus, the amount of compensation needed to stay straight during take-off. You can rotate at 180km/h. As soon as you have established a steady climb rate, retract your gear and flaps and reduce your throttle to 1.1ata or whatever your section leader calls it out to be.

1.5 Flying as a Wingman

1.5.1 Formation Flight

The most common formations will have you flying at a 45° angle off your leaders left or right wing.

1.5.2 How to act as a good Wingman

1.6 Level flight

1.6.1 Power on & power off stalls & recovery

1.6.2 Spin induction & recovery

1.6.3 Emergency engine operating procedures

Adjust engine RPM via propeller pitch

1.7 Landing procedure

1.7.1 Landing configuration & procedures

1.7.2 Landing

1.8 BFT passing requirements

Successfully complete 3 T/O + 3 Landings

2 Communication standards

2.1 General communication protocol

Every flight will be assigned a call sign. For ease of use these will always be mono- or bisyllabic. So a flight of 109s may be assigned the call sign *sparrow*. This will then be used to address the entire flight. Individual aircraft in the flight can be referenced by their position within the flight as follows: "*FlightCallsign* – #*Section* – #*Plane*".

So the leader of *sparrow* would be *sparrow-1-1* as he is the first aircraft of the first section in *sparrow*. The wingman of the second section leader would be *sparrow-2-2* as he is the second aircraft in section two of *sparrow*.

When you wish to communicate with a specific aircraft or flight you begin your message with the intended recipient of the message, then who is speaking and then your message. So if you are the wingman of the flight lead of *sparrow* and you wish to inform you leader that you have spotted a plane to your right you might say something like: "*Sparrow-1-1* this is *sparrow-1-2* contact at 3 o' clock high."

In practice when we are flying with few people we may not always be strict with this protocol. But you must be familiar with it as it will be essential for communication in larger flights and

with unfamiliar pilots. If at any point anyone requests strict comms, please keep to these rules.

2.2 Critical Information

If at any time you have critical information, like an enemy diving in on you, that you need to communicate but someone else is saying something non-essential you immediately say "Break!" and then continue with your message. If at any point you hear someone say "Break!" you must instantly stop speaking and listen to their message.

2.3 Cycling attack terminology

"*YourCallSign*' is in position" Aircraft is in the circuit, ready to cover and/or spot targets

"In" Aircraft is rolling on target

"Out" Aircraft is climbing out of attack run back into circuit

"Pass" Current aircraft in position cannot spot a target and is passing attack authorization to the other aircraft. This should cycle every 10 seconds or so.

3 Formations, structure, and manoeuvres