

**BY ORDER OF THE  
COMMANDING OFFICER OF THE  
185<sup>th</sup> VIRTUAL FIGHTER SQUADRON**

**185<sup>th</sup> VFS INSTRUCTION  
08 December 2016**



**185<sup>th</sup> VFS AIRFIELD OPERATIONS AND AIRBORNE FLIGHT  
PROTOCOLS  
SOP 10 – Version 1.5**

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**COMPLIANCE WITH THIS PUBLICATION IS MANDATORY  
FOR ALL MEMBERS OF THE 185<sup>th</sup>**

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This manual provides current and aspiring members of the 185<sup>th</sup> VFS with a simple document containing a step by step guide for pilots to use from before taxiing to post take off and also for pre-landing checks to shutting down the aircraft, all for multiplayer use.

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## 2. INTRODUCTION

Multiplayer flying in Falcon BMS 4.3X is arguably the thing about this sim that continues to attract virtual pilots new and old to the sim, even though it is a pretty old program.

It is recognised that with its procedures of relatively high complexity compared with other online 'games', a good level of discipline is required by those involved. This is important in airfield operations and in the basic post take-off and pre-landing checks; probably more than any other part of the flight.

## 3. AIM

This document, along with referred videos and other files, is intended to list the procedures required by the 185<sup>th</sup> VFS for multiplayer flying. It will enable efficient set up of aircraft for operations from the moment you enter your cockpit to the point you park the aircraft and receive authorisation to shut down your aircraft and leave the sim. It will concentrate on lights protocols and good 'comms' as well as important set-up procedures prior to taxi.

This document will **not** take you through the technical process of start-up, shut down and other controls. See your BMS manuals in the Docs folder of your Falcon installation directory for further information on those items.

**The procedures listed in this document are a 185<sup>th</sup> VFS requirement for all pilots and must be adhered to.**

## 4. RAMP TO TAKE -OFF

### *Aircraft Lighting Protocols*

As you enter the sim you call on Team Speak that you are in the jet. From then on you do not use comms until your lead calls you on IVC.

During ramp, wing lights should be set to steady. The tail anti collision light and the landing light should be left off.

Once your INS has aligned and your aircraft has completed it's full start-up procedure, leave the wing lights on steady and turn on the anti-collision and nose wheel steering lights. This notifies lead that you are ready to go.

Note that throughout this process no radio comms will have occurred.

### *Pre-Comms Checks*

Whether you start from ramp or have entered the sim at Taxi you must ensure the following are set prior to taxiing;

- Set your FCR to DMD (OSB 5). Datalink is initiated by the Package Commander only. **NOBODY ELSE.**
- Set IDM on the ICP as directed/briefed by your flight lead. By default you should set up the lead and element leads in the other flights in your package, ie X1 and X3. You can add other package aircraft should you have enough spare slots (a maximum of eight are available, including your flight).
- Set your TACAN A/A as per the 185<sup>th</sup> SOP table listed below (figures below the TACAN are laser codes);

Flight	TACAN A/A	1	2	3	4	VHF
First	11/74	11X	74Y	74X	11Y	1
	Laser Codes	1611	1612	1613	1614	
Second	16/79	16X	79Y	79X	16Y	2
	Laser Codes	1621	1622	1623	1624	
Third	21/84	21X	84Y	84X	21Y	3
	Laser Codes	1631	1632	1633	1634	
Fourth	26/89	26X	89Y	89X	26Y	4
	Laser Codes	1641	1642	1643	1644	
Fifth	31/94	31X	94Y	94X	31Y	5
	Laser Codes	1651	1652	1653	1654	

- Set Joker/Bingo fuel alert as pre-briefed
- Set altimeter for take-off (QNH).
- Activate the caret on your HUD using your ICP (Press 5-CRUISE, 0-M-SEL, ENTR on ICP in that order)

Once you have completed these items, turn on your nose wheel taxi light and the anti collision tail light and await radio calls from your flight lead. Do not make **any** radio calls yourself.

### *Comms Checks*

Comms checks are initiated by your flight lead. The Lead will start with the VHF radio or 'Victor' check, eg "Cowboy, check Victor." Note that he does not use the number just the name of the flight. Each pilot in the flight will respond in crisp, clear and quick order "2", "3", "4".

After a successful Victor check comes the UHF or "Uniform" check, eg "Cowboy 2, Uniform check." Note that on this occasion he does use the flight number to separate his flight from any other Cowboy flights at the airbase who can hear this call (while on the ground a Uniform call is broadcast across the airbase's tower frequency). As with the Victor check, your responses should be crisp, clear and in quick order with a slight difference, "Cowboy 22", "Cowboy 23", "Cowboy 24".

Uniform checks should be done whenever a change in frequency is called, prior to taxi and on change to tower during the return to base.

### *Taxi and Runway Line-up*

When Lead calls taxi, respond "2", "3", "4". Taxi in sequence; default positions in the taxi should be taxi staggered, ie 1 on left lane, 2 on right lane and so on. No calls of "2 taxiing", etc, are needed.

Lead is the only one to communicate with ATC. Lead will notify ATC that the flight is taking the active, wingmen follow silently as briefed. No need to call entering active or position... it is as briefed.

Typical alignments are rolling (preferred), 2 ship echelon, 3 ship echelon, 4 ship -- 2 by 2 or box, 3-in-the-slot, etc. Waiting for a 4 ship to take the active uses up precious runway, takes more time, and usually serves no tactical advantage. Most USAF procedures forbid formation or close interval takeoffs with ground stores for safety reasons (some allow it with light Maverick loads and 88s).

### *Take Off*

When you are airborne on runway heading, your jet is cleaned, and you reach 300 to 350kts, call "2 airborne-visual" "3, airborne-visual on 1&2", "4 airborne, visual on all".

No other calls are necessary, unless you have an in-flight emergency.

The Lead will then clear the flight into formation. If during bad weather the take-off is a Radar Assisted Trail (RAT) procedure (where you lock up the aircraft in front until skies are clear), call “2 tied on 1” and so on, indicating you have a radar soft lock on the aircraft in front of you in your flight. Your Lead will clear the flight into formation once everyone is VFR above the clouds. At that point the Lead will call the flight into the briefed formation for the next stage of the flight.

Once you are fenced in “...*never, never, ever*...” tie on an aircraft in front.

For instrument departures (night/low visibility and/or low ceilings) the RAT procedure will always be used (reference MCH 11-16 Vol5 sect. 3.1.4).



## 5. AIRBORNE PROTOCOLS

### *AWACs*

Unless cleared by Lead, all AWACS calls and declares are made by Lead. Pay attention. If Lead received a clear picture thirty seconds ago, your target is likely friendly. Keep “buddy-spike” interrogations to a minimum. Briefly and calmly report “1-2, contact 20 right 40 miles” and wait for Lead to say “Declare” or “interrogate (lock it up)”.

Element:

If tactically necessary (in a Box formation, or split element) #3 will make heading, speed and turn calls for #4. Lead should distinguish element commands from flight commands as follows:

Formation in 8nm BOX, nearing STP3:

Lead wants to maintain formation, so the call is: “1&2, reference STP4”

#3&4 maintains current heading until reaching STP3, then #3 calls: “3&4, reference STP4”

If Lead wants to avoid a threat, a call: “Flight reference STP4” causes an in-place turn to the new heading

Other examples: “3&4, set speed mach .7 for separation” “3&4, maintain FL270 and heading 270”

### *Altimeter Settings*

When your flight reaches an altitude of 14,000 feet (FL140) your flight lead shall instruct you to set your altimeter at 2992mmHg. This is the standard barometric pressure and is used by all above this height to ensure altitude blocks are based on the same reading.

On returning to home plate the Lead shall request QNH and QFE settings. You should set your altimeter to this setting when instructed, (see section 6 for more information).

### *Fence Check*

When your Lead calls “Flight, fence in.” respond with “2”, “3”, etc. Call when you are fenced in, eg, “2 fenced in”. As with all information calls, no response is needed.

### *Ops Check*

Anytime during the flight, Lead may call “Ops Check”, the response being “2”, ”3”, ”4”.

Lead will then read the forward needle, aft needle, total fuel, tank status, and faults eg “1 is 28, 32, 10.5 feeding, all green” If 2 has readings within 500lbs of the Leads, the response is “same as one”.

### *Weapons Check*

Lead calls “Say state” or “Weapons Check”; the answer is number of radar missiles, number of semi-active missiles, number of heaters – For example “Say State -- one is 2, 0, 2”; “2 same” “3 is 0, 0, 2”; “4 is Winchester”.

If you are out of 120s or your FCR is Tango Uniform– quickly tell lead you are “SKOSH” and also let someone know when you are Winchester

#### *Joker/Bingo Weapons*

If you are down to your last air to air missile this will be considered as “Joker Weapons” and should be reported to your Lead on local VHF comms with your flight. This level will be dependent on the theatre, mission, air threats expected and initial loadout – if Lead briefs a different weapon state, it should be noted in mission notes.

The same does not apply to air to ground ordnance as you would be expected in most cases to deliver all of them in a short period of time.

#### *Blind*

Should you lose contact with your flight or element lead then your call on VHF should inform them of this fact and advise them of your location, eg “2 is blind on 1 at FL240.” The addition of either a Bulleye or reference to the nearest steer point may also be called for, as directed by the lead concerned, eg “2 blind on 1 at FL240, SP4 at 23 miles bearing 070.”

#### *Wingman*

Wingmen should be seen and not heard unless a response to your lead is required or when important information is to be given, eg when you spot a target or if the lead is not flying as required (usually due to the lead having to do other in pit duties). Otherwise, fly in formation as directed and support your lead with no comms at all if possible.

Do not leave your leads wing unless absolutely necessary or ordered to do so.

Further reading is chapter 2.2.3 from the [“Turkish Air Force Tactics, Techniques & Procedures 3-3, Volume 5, Basic Employment Manual F-16C”](#), dated 1<sup>st</sup> August 2002 which explains teamwork and wingmen requirements.





## 6. THE RETURN HOME

### *Introduction*

As you approach home plate, you will be directed by your Lead to make navigational and formational adjustments as well as changes in communication settings, etc. The following sections lists those phases of the approach, the landing and finally taxiing and shut down protocols.

### *Recovery*

Your lead will brief you on the pattern procedure on Victor prior to 30nm of home plate. This will include instructions to fence out (if not done earlier) and to change comms frequency to the destination's tower frequency, by default on UHF 15. Lights to be set to wings flashing, tail anti collision and nose gear landing light to On.

As you start your descent towards home and at 30nm out from home plate the Lead will contact the tower for the latest QNH for when you descend below FL140. All aircraft are to adjust their altimeters to the new QNH value. When you are approaching the ten mile approach the lead will call for the airbases' QFE, ie the setting for the runway altitude of zero feet. All pilots must adjust their altimeters again for QFE in preparation for landing.

For the safety of other aircraft in the area, the Lead makes all calls over Uniform. He alone will contact the tower to announce your arrival and request landing instructions, examples of which are, "Bulldog1 initials for overhead 08", or "Bulldog1, 4 ship entering left downwind 08" or "Bulldog1, 3 ship, straight-in 08".

If no overhead or battle break is planned, the lead will call the flight into trail formation. All aircraft should be in trail and at 3000-3500 ft QFE at between five and ten miles from the runway threshold and lined up for landing.

When low ceilings and/or low visibility (night operations) are expected, Lead will call the flight into "TIED TRAIL" before decent. The TIED approach will use 3nm trail to ensure proper ATC separation and timing. Low visibility approaches will be flown at 300-350kts until pattern entry (10 miles from the airfield in this situation). Patterns (including straight-in or ILS) will be flown at 300kts until final or glideslope intercept.

NOTE: When landing in darkness each pilot must make the in-sim call to the tower for autonomous landing (key press sequence T, 2). The ATC will then put the runway lights on for you. They will turn off again soon after you leave the runway.

Subject to the runway being wide enough (which unless you are landing at an airstrip it will be) the Lead and Element lead will land on the right lane of the runway. Both wingmen shall land on the left lane. This allows an efficient landing process for the flight and avoids on ground collisions.

### *Taxi to Parking*

As you slow down on the runway, close your air brakes and announce that you are turning onto a taxi way, eg “Cowboy 22 exiting runway 20 at taxiway Charlie.” Note that these calls are still made on Uniform frequency.

Once clear of the runway proceed to the parking position with your lead.

Once parked, set your wing lights to steady, turn off your nose wheel landing light and the tail anti-collision light.

Set parking brakes to on and ask the ATC to set wheel chocks in position.

After that sit and wait for the instruction to exit the sim.

**DO NOT BACK OUT OF THE 3D WORLD TO THE DE-BRIEF SCREEN UNTIL ALL AIRCRAFT IN THE PACKAGE ARE DOWN AND THE INSTRUCTION “EXIT TO DEBRIEF” IS GIVEN.**

