

F-16 RAMP/TAKEOFF/DEPARTURE CHECKLIST
= A SCRAMBLE ONE CHECKLIST BY VANDAL =

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RAMP		
#	ACTION	NOTES
<i>Initial Start and Warm Up</i>		
	Equip NVG if too Dark	Press [N] to equip night vision goggles.
	Test and Set Throttle	Verify the virtual throttle (the 3D model in the cockpit) is moving in sync with the physical throttle (real world HOTAS controller). <u>Option 1 Idle-Cutoff Disabled</u>

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		<p>(default configuration)</p> <p>Press [Alt] + [I] to activate the Cutoff Release Paddle¹ on the throttle. This releases the throttle from cut-off position and moves it automatically to the idle position. Then move the throttle fully forward and then fully back. Press [Alt] + [I] to set the throttle back to the cutoff position.</p> <p><u>Option 2 Idle-Cutoff Enabled²</u></p> <p>Move the throttle fully forward and then fully back.</p>
	Open Fuel Tanks	Set FUEL : Engine Feed knob to Norm {LCA}.
	Turn on Power	Set ELEC : Main to Pwr {LCA}.
	Spotlight On (Optional)	Press [Shift] + [S] if additional interior lighting is needed during startup. Press [N] to unequip night vision goggles.
	Set Interior Lighting	LIGHTING : Primary : Inst Panel; Data Entry Display; and LIGHTING : Flood: Consoles as desired {RCF}.
	Activate Air Conditioning	Set AIR COND : Air Source knob to Norm {RCF}

- 1 The Cutoff Release Paddle is next to the pilot's left pinky when gripping the throttle. The paddle is black and resembles a curved horn. The paddle is clickable if you prefer using the mouse rather than the keyboard combo. If you have a HOTAS, you may want to consider mapping [Alt] + [I] to it.
- 2 This option is best if you have a throttle with a physical detent for the idle cutoff position. However, you can still do this option without a physical detent but it can be quite easy to accidentally cutoff/flameout the jet engine. This step only works if the "idle cutoff" option is enabled. To enable idle cutoff, exit the sim and run the external Configuration "F4Patch" Program listed in the Falcon BMS launch and ensure that HARDWARE: Idle Cutoff is checked. Restart sim and go to SETUP: Controllers and set the Idle detent. Restart the sim.

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		but obscured by arm rest} use alternate method of [Alt] + [Shift] + [.] if preferred.
	Set Exterior Lighting to Indicate Not Moving	EXT LIGHTING : Master to Norm ; Ant-Coll to Off ; Position to Steady ; Wing/Tail/Fuselage to Brt .
	Set Parking Brake	Set GEAR : Parking Brake to On (up position) {LAC}.
	Close Canopy	Click the obscured canopy switch ³ or alternatively [Ctrl] + [C] if preferred. Closing the canopy may cause a power drain during start and result in a start failure (so close before starting engine or after 70% RPM.)
	Start Jet Engine	Set JET FUEL to Start 2 (right click) {LCF}. It takes 10 to 15 seconds before the jet engine starts turning over.
	Spool Up Engine	<p>Monitor the RPM gauge and the FTIT gauge during throttle up {RAC}. Keep throttle all the way back until 20% to 25% RPM is indicated. Select either the Idle Cutoff Enabled or Disabled procedure below as appropriate to your setup.</p> <p><u>Option 1 Idle-Cutoff Disabled</u> (default configuration)</p> <p>Do not move the throttle whatsoever. Instead, press</p>

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- 3 The switch to open/close canopy is clickable but it is difficult to find. It is obscured by the canopy latch assembly (the spider). The spider assembly is a piece of metal, painted yellow, located forward of the throttle, and attached to a gray colored hinge plate. There is a toggle switch below the hinge plate and between two half moon plates that protect the switch from accidental activation. You should be able to see it if you have are able to lean forward. Otherwise, you can just click between the half moon plates and it should activate the canopy.

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		<p>[Alt]+[I] or click the “Cutoff Release” paddle on the throttle.</p> <p><u>Option 2 Idle-Cutoff Enabled</u> <i>Enabled in the configuration editor.</i></p> <p>Gently move throttle from aft limit towards but not past the idle detent while ensuring engine temperature remains below 700° (at 800° will damage the engine). If the engine is getting too hot then ease back the throttle.</p>
	Verify Proper Engine Start	<p>At about 45% RPM you should hear the JFS shutdown and the jet engine proper fire up. At this time the JET FUEL switch automatically flips from Start 2 to Start 1 {LCF} and the SEC warning light shuts off {RAC}.</p> <p>At 70% RPM the jet engine temperature should start cooling back down to the 450° - 500° range.</p>
	Spotlight Off (Optional)	Press [Shift] + [S] to turn off the cabin spotlight to allow eyes to acclimate to night flying.
	Activate Avionics	Set AVIONICS POWER {RCA}. All Switches to On (up position) and EGI knob set to Align Norm.
	Activate Sensors	Set SENS PWR : Rdr Alt to Stby . Set all remaining switches to On (up position).
<i>Mission Data Load</i>		
<p>On the LEFT MFD wait for BIT test to start then select the following buttons labels using the appropriate Option Select Buttons [OSBs]. OSBs are numbered clockwise starting from the upper row left.</p>		

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Create a DTE DAB on the LMFD.	Double-click on any unlabeled LMFD DAB (OSB 12-14). Double-clicking the unlabeled DAB will bring up the create/change menu for it. Now select “DTE” (OSB 8) to set and label a DTE DAB.
Load Mission Data	Click Load (OSB 3) (LMFD will cycle through data categories indicating the data being loaded).
Power Up the RWR	Depress Power button {LAC just left of the main CMDS panel and underneath the canopy latch}. The RWR will be tested later.
<i>Communications</i>	
Set IFF to Standby and C&I to UFC	Set IFF : Master: Stby and IFF: C&I: Ufc {LCA}.
Power Up Radios	Set UHF : Both {LCF}.
Set Audio Volumes	Set AUDIO : Comm 1; Comm 2; MSL; Threat all to max (or desired) volume {LCF}.
Set Comm 1 and Comm 2 to Squelch Audio Modes	Set AUDIO : Comm 1; Comm 2 to Sq1 {LCF}.
Switch COM1 to UHF Channel 2.	Press ICP : Com1 > (2) > Ent to switch to UHF CHANNEL 2 (Uniform 2). This is the ground operations preset for the takeoff airfield.
Uniform Radio Check	If flight lead, press [T] 5 times until the “ATC COMMANDS Common Page” comes up and then press [3] to “Request Takeoff Runway”.

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		Consider dialing your HSI CRS to match the active takeoff runway.
	Get Basic Flying info from ATIS (optional).	Press ICP : Com2 > *ATIS FREQUENCY* > Entr . Note: You can get the ATIS frequency for your airbase from your airfield charts, Falcas's Weapons Delivery Planner, and UHF presets 1-4 as well.
	Switch COM2 to the VHF Channel Assigned to the Flight.	Switch to the appropriate VHF CHANNEL (Victor) preset for your flight by pressing keyboard [F2] then (1) > (5) 1st flight; (1) > (8) fourth flight; (1) > (6) 2nd flight; (1) > (9) fifth flight (1) > (7) 3rd flight; then Ent .
	Victor Radio Check	If human wingmen: Complete a mic check by holding Comm Switch Down [End] while talking. Address the preset channel, state your mission callsign, then "Mike Check". (i.e. "Victor One Five - Falcon One Two - Mike Check"). If AI wingman: Conduct a delayed a mic check with AI wingman at STPT 2 by giving the weapons hold command (press [R] > [5]).
Countermeasure Systems		
	Arm Electronic	Set ECM : Opr {LCF just aft of Audio 1 and

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	Countermeasure Systems	Audio 2 radio stack}.
	Activate Countermeasure Defense Subsystems [CMDS]	Set CMDS : RWR; JMR; MWS; 01; 02; CH; FL all to On (up position) {LAC}.
	Set CMDS Mode	Set CMDS : MODE : Stby {LAC}.
	RWR Test and Activate Diamond Float Mode	<p>a. Depress Sys Test button and wait a few seconds for the test to complete.</p> <p>b. Depress Launch button and wait a few seconds for the test to complete. An audible beep sequence indicates the system is working.</p> <p>c. Depress Handoff button (short press). A visible diamond between two vertical bars appears on the button itself indicating the system is in diamond float mode.</p>
<i>Ready for Taxi</i>		
	Activate HMCS	Click the HMCS : Symbology knob {LAC}. Adjust to the desired brightness on the same knob.
	Arm ejection seat.	Click on Ejection Controls Locked handle located left of the pilot's left knee and to the right of the {LAC}. It is marked with yellow and black label.
	Clear BIT Tests Return to FCR	Click Test (OSB 12-14) then Clr (OSB 3). Clearing "Test" should clear "Avionics Fault" from the caution panel {LAC}. After clearing test, select FCR (OSB 12-14) to return to FCR.
	Verify NO Warnings	Check Master Caution {LE} and warning lights {RAC} ensuring that all warnings are cleared.

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Set HUD Display Preferences	<p>Rotate the Sym and Brt wheels on the left side of the ICP and-or use the following commands.</p> <p>Increase brightness [Shift] + [Ctrl] + [Num +] Decrease brightness [Shift] + [Ctrl] + [Num -] HUD Scales Cyc [H] HUD DED Cyc [Shift] + [H] HUD Velocity Cyc [Ctrl] + [H] HUD Color Cyc [Alt] + [H]</p>
If loaded with Laser Guided Munitions set Laser Code	<p>Select ICP : Rtn > List > (0) > (5) make sure laser code matches the briefing loadout and then switch mode from Training “Trng” to Combat “Cmbt” by clicking DCS Down [↓] then clicking the M-Sel-0 key and Entr. DCS Down [↓] again and change the Laser St Time to (1) > (6) seconds Ent > Rtn.</p>
Activate and Verify Nosewheel Steering	<p>Activate Nosewheel steering [Shift] + [\]. AR/NWS should appear on the right indexer.</p>
Verify DED flashing RDY	<p>Select ICP : Rtn > List > 6 to bring up DED INS page. Wait for “Rdy” to flash before continuing. When “Rdy” is flashing press ICP : Rtn Note: If you don’t return to the DED home page groundspeed will be located in the lower right hand of this DED page. Max taxi speed is 25 on the straight and 10 during a turn. Use toe brakes [K] to slow down as needed.</p>
Turn on Oxygen	<p>OXYGEN REGULATOR : On {RCA}.</p>
Set Avionics to NAV	<p>Set AVIONICS POWER : EGI knob to Nav {RCA}.</p>

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Remove EPU Pin	Signal your crew chief to remove the EPU pin. [T] [1].
Systems Tests (Optional)	FLCS, SEC, DBU, TRIM, AA REFUEL, EPU, OBOGS, and MPO checks done at the pilot's option.
Set Exterior Lights to Strobe and Flash	Set EXT LIGHTING : Anti-Coll to C and Position to Flash or per standing orders. (Strobe and flash indicates aircraft is moving or waiting for clearance to move.)
Remove chocks.	Signal crew to remove chocks. [T] > [2].
Request Taxi	(If not already on UHF CHANNEL 2 (Uniform 2) then: Select ICP : Rtn > Com1 > (2) > Entr.) Once on Uniform 2, type [T] > [3] "Request Taxi for Departure."
Release Parking Brake	After cleared to taxi then [Alt] + [P].
<i>Holding Short</i>	
Set Brake	Stop short of assigned runway and set parking brake [Alt] + [P] and-or hold toe brakes [K].
Verify Nav and FCR is in CRM RWS Radar Mode	"NAV" should appear in lower left hand corner of the {HUD}. Select LMFD : FCR direct access button, then as needed: (OSB 1) to switch from STBY mode; (OSB 20) to switch to CRM mode and (OSB 2) to switch to the RWS sub-mode.
Switch Radar Altimeter from STBY to ON	Set SENSR PWR : Alt Rdr.

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Set STPT 2	On ICP click Rtn > Stpt-4 > (2) > Entr (or [X]).
Set STPT to Auto Advance if Desired	On ICP click Rtn > Stpt-4 > Seq.
Set the STPT Speed Caret	On ICP click Rtn > Crus-5 > M-Sel (0).
Request Takeoff ⁴	Switch to UHF CHANNEL 3 (Uniform 3). Select ICP : Rtn > Com1 > (3) > Entr. Then cycle to the "Tower Page" [T] and [1] report "Ready for Departure."
Shakeout	While waiting for clearance you can run skipped or more tests outlined in BMS documentation.
Release Parking Brake	After cleared to takeoff or to take position and hold then [Alt] + [P].
TAKE OFF	
Review all takeoff steps prior to rollout. Do not read checklist during takeoff.	
Align on Runway	Steer onto runway and use toe brakes [K] to come to a complete stop.
Full Power	While holding toe brakes [K] move throttle to maximum and when RPMs reach 90% release toe brakes.
Turn off NWS	At 70 knots, turn off Nose Wheel Steering [Shift] + [/] or do not use rudder pedals until

⁴ If you are being held up at the holding short position or on the runway after given position and hold clearance, you can report to the tower a second time that you are "ready for departure". This lets the tower know that regardless of what your flight plan says, you want to take off as soon as possible.

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		nose wheel rotates off runway.
	Rotate on a 10° pitch.	At X knots. X is computed based on overall aircraft load. A faster takeoff speed is required as the load increases. Estimate 160 to 180 knts.
	Raise Gear	As soon as positive climb is established.
	Climb Out	Climb at full military power or on afterburner as desired. Adjust pitch to maintain 300 knots until wingman verifies aircraft is gear up.
DEPARTURE		
	Report Airborne	Switch to UHF CHANNEL 4 (Uniform 4). Select ICP : Rtn > Com1 > (4) > Entr. Then cycle to the “Departure Page” [T] and [1] report “Airborne.”
	Switch to Tactical on Uniform 6	When Departure tells you to resume your own navigation switch to UHF CHANNEL 6 (Uniform 6) for AWACS. Select ICP : Rtn > Com1 > (6) > Entr.
	Set SOI as Desired	Cycle HUD, LMFD, and RMFD as the SOI (Sensor of Interest) by pressing DMS Down on HOTAS or [Ctrl] + [End] on keyboard.
CLEANUP		
	Set Autopilot as Desired	Located slightly below and left of the {LMFD}.
	Set IFF as Briefed	IFF : MASTER : Stby , Low , or Norm {LCA}.
	Set CMDS Mode	Set CMDS : MODE : Man {LAC} for manual release of chaff & flares (or alternate method as

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		desired).
	Arm Selective Jettison and Review Jettison Procedure	Set GEAR : GND JETT ENABLE to on (up position) {LAC}. NOTE: The procedure to selective jettison is MFD : SMS > S-J > then select/highlight munitions to jettison then pickle.
	Set Weapon Controls as Desired	ICP : A-G > MFD : SMS > Cntl. For example: (1) Auto Power On for Mavericks; (2) Attack Azimuth, End Game Entry Altitude, and Range on Bearing for JSOWs; (3) Nose and Tail Fuse Delays; etc.
	Set Weapon Profiles 1 & 2 as Desired	ICP : A-G > MFD : SMS . Toggle between PROF 1 and PROF 2. For bombs consider rippling Rp multiple bombs off the spacing of the bombs in Ft as well dropping in Single or Pairs .
	Arm Aircraft	Select Master Arm and Laser Arm if using laser guided munitions. Left of {LMFD}.
Consider setting Weapon Controls and Profiles at the ramp immediately after setting the RWR to Floating Diamond Mode. Otherwise they should be set early in the flight as practical long before crossing the fence but certainly no later than reaching the IP steerpoint.		
START FAILURES		
<i>No Start</i>		
	Verify Condition	RPM gauge reads 0%.
	Check Fuel and Power Settings	The most likely causes for a no start failure are: (1) the FUEL : Engined Feed knob {LCA} was

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		not set to Norm ; and-or (2) the ELEC : MAIN switch was not set to Pwr {LCA}.
	Solution	Correct the fuel and power settings and cycle JET FUEL out of and back to Start 2 {LCF}.
<i>Hung Spool Up</i>		
	Verify Condition	RPM gauge {RAC} fails to climb above 25%.
	Check Throttle and Power Settings and Spool Up Procedure	The most likely causes for a hung spool up are: (1) the throttle was never moved from the cutoff position to the idle position; (2) the ELEC : Main switch was set to Batt instead of Pwr ; and-or (3) another system drawing too much power during the spool up.
	Solution	If the JFS start bottle is depleted ask the crew chief to recharge it [T] > [7]. While the chief is recharging the engine, turn everything off that is drawing power lastly switch ELEC : Main to Off . Once the crew chief has recharged the start bottle, attempt a restart per the <i>Initial Start and Warm Up</i> section ensuring that the throttle and power settings are correct as proscribed, and do not open or close the canopy or activate any other systems until after the engine has spooled up.
<i>Hot Start</i>		
	Verify Condition	FTIT gauge {LAC} reads 720° or more.
	Solution	IMMEDIATELY move the throttle to the cutoff position and let engine motor down to 200°,

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		then follow Hung Spool Up solution above.
<i>Low Oil Pressure</i>		
	Verify Condition	Oil pressure gauge right of {RMFD} reads 15psi or less and-or oil pressure light {REY} is on.
	Solution	This is a random chance event. Simply abort start and retry, then follow Hung Spool Up solution above.

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Cockpit Location Acronyms

CHARTED IN THEIR APPROXIMATE POSITIONS TO THE PILOT

	{HUD}	
{LI}↘=Left Index		{RI}↘=Right Index
{LEY}↘=Left Eyebrow {LMFD} Left Multi Function Display	{ICP} {CCH}↘=Center Console High	{DED}=Data Entry Display {REY}↘=Right Eyebrow {RMFD} Right Multi Function Display
{LAC}↘=Left Auxiliary Console	{CCL}↘=Center Console Low	{RAC}↘=Right Auxiliary Console
{LCF}↘=Left Console Fore {LCA}↘=Left Console Aft	PILOT	{RCF}↘=Right Console Fore {RCA}↘=Right Console Aft

Other Acronyms

CUS↘=Combat Unit Symbol (i.e “2” for an “SA-2”)	NPT=Navigation Steerpoint
DAB↘↘=Direct Access Button (Located on any MFD at OSB 12 through 14)	OSB=Option Select Button
DMS=Display Management Switch	PPT=Preplanned Threat Steerpoint
ECUS↘=Expanded Combat Unit Symbol (i.e. “SA-2”)	SOI=Sensor of Interest
ESJ=Electronic Escort Jamming	STPT=Steerpoint (includes NPT, LPT, PPT, and TPT)
LPT=Line Steerpoint	TMS=Target Management Switch
	TPT=Target Steerpoint

Key Marks for All Checklists by Vandal

↘↘	a Vandalized acronym – an existing acronym that has been modified or adapted for use here.
↘	a Vandal-made acronym – use elsewhere is unknown.