# ACMI GAUGE FOR FSX

Taking FSX to the next level and beyond.



**User's Manual** 

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### **Background**

ACMI is a system used on the Nellis Ranges during Red Flag and other air exercises. ACMI stands for Air Combat Maneuvering Instrumentation. The ACMI system involves state of the art sensors on the aircraft that allow the ground controllers of the air war to 'see' a 3-D picture of the simulated air combat, including air-air engagements, air-ground strikes etc. in real time. The data can be recorded and played back in the pilot debriefing for training purposes. The data transmitted from the aircraft is picked up by a network of repeaters on the ground and transmitted back to Nellis AFB via microwave links and fiber optic broadband data cables.

The original ACMI system has since been replaced by a system called RFMDS (Red Flag Measurement and Debriefing System), which allows an increased range by using newer, more powerful hardware. Recently RFMDS in turn has been replaced by NACTS (Nellis Air Combat Training System), which increases the precision and the amount of available data. For the purpose of this article we will continue to refer to the system as ACMI, since that still is the most commonly used name for the system.

### Introduction of the VUSAF ACMI system:

Until April 2012 we simulated dogfights by performing air combat maneuvers with our jet until we managed to put our opponent in a predefined position within HUD frame and under 0.4nm) If certain conditions were met such as acceleration (G's) and heading of the other plane (3-9 line) we called this a good kill and had to validate it by submitting a screenshot. The idea came up to have an automated system that could validate a good kill instantly without the need of waiting for confirmation i.e. stopping the action , uploading the screenshot and arguing if the kill is valid or not. At the same time the missile guidance technology was made available to us and we took the opportunity to introduce Surface to Air Missile defense system as well as Anti-Aircraft Artillery.

During our Red Flag event that took place in April 2012 we introduced the ACMI version 1. Gun Dogfight became realistic. SAM's were quite deadly and the entertainment level was raised to new height. A second event was held in August for Red Flag Alaska and the Team system was introduced with two groups in the war theater with their own air defense system.

Based on the feedback from RFA2012, we felt that an improvement was needed to more accurately simulate air combat. We decided to implement the use of Air to Air missiles between players. This led us to developing a proprietary protocol that logs and transmit combat event between the players without the need to be an standard FSX multiplayer session. Having this protocol also helped us to get rid of manually entering codes to disable a SAM after another pilot destroyed it. More importantly it allowed us to automatically send damage to the plane we hit with gun or missile. With the new system when you get a hit from another player you will have damage ranging from electrical failure to complete plane destruction.

This ACMI version contains the first ever military ACAR system that logs position and combat events on our website for post action analysis and evaluation.

Finally the best feature of this system is that it is available for <u>FREE</u> to any active VUSAF member.

#### Test Pilot Team:

We would like to thanks the following test pilots for their availability and patience during the development of the ACMI Gauge

- vCol Bryan Bedwell (F-16)
- vMaj John Hootman (F-15E)
- vMaj Maciej Urbaski (C130 H60)
- vCol Hajo Lippke (C-130, CV-22, B-52)

### Licensing:

This software is the property of the vUSAF. We grant you the right to use this software, as long as you are a member in good standing in accordance with the rules set by vUSAF.

# **Installation Instructions:**

- Download ACMI Gauge Installer.
- Run the installer and it will place the necessary files to their correct locations.  $\Box$  Add the necessary line of code to the panel.cfg for your plane.

# **Installation Diagrams:**

Location of your aircrafts .air, aircraft, and panel configuration files.

Main FSX directory:

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F-22 Edited Panel Configuration File. Make sure that your panel look similar to the one show below and don't contain the word "alias="

panel - Notepad			x
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gauge05=Bendix_King_Radio!Bendix-Kin gauge06=Bendix_King_Radio!Bendix-Kin windowsize_ratio=1.000 window_pos=0.756,0.358 window_size=0.243,0.641	ng Radio Xpndr, ng Radio AP,	0,217,156,49 0,262,156,48	*
//*********	******	******	
[Vcockpit01] Background_color=0,0,0 size_mm=512,512 visible=1 pixel_size=256,256 texture=\$HUD			
<pre>gauge00=F22-AVIONICS!HUD-F22, gauge01=F22-AVIONICS!ICP_Keypad, gauge02=F22-AVIONICS!ICP, gauge03=F22_sound!dsd_xml_sound3, \F22sound:ini gauge04=F22-SYS!SYS-ELECTRICS, gauge05=F22-SYS!SYS-APU,</pre>	6,6,500,500 0,0,1,1 0,0,1,1 1,1,1,1, 0,0,1,1 0,0,1,1	.\SimObjects\Airplanes\IRIS F-22 Raptor\sound	
<pre>gauge06=F22-SYS!SYS-AUDIO, gauge07=F22-SYS!SYS-EFFECTS, gauge08=F22-SYS!SYS-SAS, gauge09=F22-SYS!SYS-LIGHTING, gauge10=F22-SYS!SYS-STARTERS, gauge11=F22-SYS!SYS-FXTTS</pre>	$\begin{array}{c}0,0,1,1\\0,0,1,1\\0,0,1,1\\0,0,1,1\\0,0,1,1\\0,0,1,1\end{array}$		
<pre>gauge12=F22-SYS!SYS-FUEL, gauge13=F22-SYS!SYS-INIT, gauge14=F22-SYS!SYS-RF, gauge15=F22-SYS!SYS-VMS, gauge16=F22-SYS!SYS-ORDNANCE, gauge17=F22-SYS!SYS-FLCS-TEST.</pre>	$\begin{array}{c} 0,0,1,1\\ 0,0,1\\ 0,0,1\\ 0,0,1\\ 0,0\\ 0,0$		н
<pre>gauge18=F22-SYS!SYS-MUSIC, gauge19=F22-AVIONICS!MFD,</pre>	0,0,1,1,1	),0,1,1 ),0,1,1	
<pre>gauge20=acm1!multiplay, 1,1,[,1, gauge21=fly_by_wire!fbw, 1,1,1,1</pre>		Added line of code for Fighters	
//*********	*******	*******	
[vcockpit02] Background_color=0,0,0 size_mm=512,512 visible=1 pixel_size=512,512 texture=\$glass			
gauge00=F22-AVIONIC5!5MFD-HSD,	0,0,256,256		*

\*\*The line gauge21=**acmi!multiplay, 1,1,1,1** was added to the panel config then saved. You need to change the number 21, where the gauge21 is located, to the next number available in your panel.cfg.\*\*

Virtavia C-17:

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reew Volume (c;)     Local Disk (H:)     Local Disk (I:)     New Volume (J:)	Aircraft  C17A C17A C17A_Check C17A_Ref Readme	4/29/2012 7:51 PM 6/23/2011 2:43 PM 6/6/2011 8:42 PM 6/6/2011 9:43 PM 6/23/2011 11:32 PM	CFG File Installer Package Chrome HTML Do Chrome HTML Do Text Document	31 KB 8 KB 10 KB 1 KB 3 KB	Aircraft Config. .Air File	

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😯 Dropbox	Autopilot_Panel	4/2/2010 6:52 PM	BMP File	470 KB	
🔢 Recent Places	C17_BND.DLL	8/11/2011 7:18 PM	Application extens	184 KB	
	Center_Panel_wide	4/4/2010 8:03 PM	BMP File	474 KB	
Libraries	Center_Panel_wide_night	4/4/2010 8:00 PM	BMP File	474 KB	
Documents	Main_Panel_wide	4/4/2010 8:45 PM	BMP File	1,682 KB	
J Music	Main_Panel_wide_night	4/4/2010 8:59 PM	BMP File	1,682 KB	
E Pictures	Soverhead_Panel	1/4/2008 9:30 PM	BMP File	273 KB	
🛃 Videos	panel.BackupXGaugeWizard	6/9/2011 12:14 AM	CFG File	14 KB	
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panel - Notepad	
File Edit Format View Help	
ident=10006 sizeable=1	-
<pre>gauge00=Virtavia_C-17!ESCP, 3, 1, 258, 300 gauge01=Virtavia_C-17!X_FSP, 268, 1, 280, 300 gauge02=Virtavia_C-17!X_PWS, 555, 2, 139, 114 gauge03=Virtavia_C-17!AICP, 556, 120, 139, 182 gauge04=virtavia_C-17!X_LCP, 2, 309, 693, 89</pre>	
//*************************************	
<pre>[window07] Background_color=0,0,0 size_mm=684,567 window_size_ratio=1.000 position=3 visible=0 ident=225 sizeable=1</pre>	
gauge00=fs9gps!gps_500, 0,0,684,567	
//*****************************	-
//*************************************	
<pre>[Vcockpit01] ; MFDs file=\$vpanel.bmp Background_color=0,0,0 size_mm=1024,1024 visible=0 pixel_size=1024,1024 texture=\$vpanel</pre>	
gauge00=virtavia_C-17!MFDX1_vC,       93, 56, 403, 422         gauge01=virtavia_C-17!MFDX2_vC,       544, 56, 403, 422         gauge02=virtavia_C-17!MFDX3_vC,       93, 520, 403, 422         gauge03=virtavia_C-17!MFDX4_vC,       544, 520, 403, 422         gauge04=virtavia_C-17!MFDX4_vC,       544, 520, 403, 422         gauge04=virtavia_C-17!AP N1_7,       0, 0         gauge05=Virtavia_C-17!REFUEL,       0, 0         gauge06=C17_BND!BND,       1,1,1,1         gauge06=C17_BND!AV, 1, 1, 1,1       Added line of code for Careo/Tapker/Trap	report
	spor *

\*\*The line gauge07=acmi!multiplay, 1,1,1,1 was added to the panel config then saved. You need to change the number 07, where the gauge07 is located, to the next number available in your panel.cfg.\*\*

Diagrams of setup procedures:

Current realism settings: Custom	Display flying tips Crashes and damage
Flight model	
G <u>e</u> neral:	Detect crashes and damage
P-factor:	Aircraft <u>s</u> tress causes damage
Torque:	Allow collisions with other aircraft
<u>Gyro:</u>	- Engines
Crash t <u>o</u> lerance:	Enable automixture
easy realistic	Unlimited fuel
- Instruments and lights	Engine stress damages engine
Pilot controls aircraft lights	Special Effects
Enable gyro drift	G-effects
🔘 Display true airspeed	Flight controls
Display indicated airspeed	Autogudder
	HELP CANCEL OK

controller type: Logitech	Extreme 3D Pro USB	Flight	t mode	
ssignment list:				
	Keyboard	Joystick	Repeat	-
xadios (cycle backwards) Radios (cycle) Refresh scenery	ACMI BOI	MBS		
Release Droppable Objects	Shift + D	Button 05	0	
Repair and refuel				
Request Fuel Truck	Shift + F			
Reset flight	Ctrl + ;			Т
Rotor brake (apply)	Shift + B			1000
Rotor governor(on/off)	Shift + ,			
Rudder (yaw left)	Num 0		_	Ţ
New Assignment	Delete Key Assignm	ent		
				_
Change <u>A</u> ssignment	Delete Joystick Assign	nment	Reset Defaults	_

Controller type: Logitech Extre Event gategory: All events Assignment list:	eme 3D Pro USB	Flight	nt mode Normal Slew
Event	Keyboard	Joystick	Repeat
Brakes (apply/release) Brakes (set parking) Brakes anti-skid (on/off) COM 1 radio (transmit) COM 2 radio (transmit) COM radio (select) COM radios (receive all) Cabin alert - No Smoking (on/off)	Ctrl + . Shift + A		
Cabin alert - Seatbelts (on/off) ACM	IGUN	Button 01	0 0
Capture Screenshot           New Assignment           Change Assignment	Delete Key Assignme Delete Joystick Assign	ment	Reset Defaults

Controller type: Logitech Ext Event category: All events Assignment list:	reme 3D Pro USB	Fligt	<b>t mode</b> Normal Slew	
Event	Keyboard	Joystick	Repeat	
COM radio (select) COM radios (receive all) Cabin alert - No Smoking (on/off) Cabin alert - Seatbetts (on/off) Capture Screenshot Carb heat/eng anti-ice (on/off)	Shift + A	CMI INVEN Button 01	TORY	•
Chase distance (decrease) Chase distance (increase) Chat Window (make active)	Ctrl + - Ctrl + = Enter			
Ne <u>w</u> Assignment Change <u>A</u> ssignment	D <u>e</u> lete Key Assignme Delete <u>J</u> oystick Assign	ment	Reset <u>D</u> efaults	_

Controller <u>type:</u> Event <u>category:</u> All events Assignment list:	xtreme 3D Pro USB	Fligh	<b>t mode</b> Normal Slew	
Event	Keyboard	Joystick	Repeat	
Propeller (increase RPM quickly) Propeller (low RPM) Propeller de-ice (on/off) Propeller sync (on/off)	Ctrl + F1			
Desta de la dela dela dela dela dela dela de	Shift + P ACN	<b>IJETTISSO</b>	N (airborn	e)
Pusnback (start/stop)	ACI		And and a second se	
Pusnback (start/stop) Race Results Window (display/hide) Radios (cycle backwards) Radios (cycle) Refresh scenery Release Droppable Objects	Shift + D	Button 05	0	

Controller <u>type</u> : Logitech Extreme vent <u>c</u> ategory: All events	ne 3D Pro USB		nt mode <u>N</u> ormal <u>S</u> lew	
ssignment <u>l</u> ist: E <b>vent</b>	Keyboard	Joystick	Repeat	
Concorde nose & visor (retract) Concorde nose/visor (decrease angle) Concorde nose/visor (increase angle) Concorde reheat/afterburner (on/off) Coordinates/frame rate (cycle)	Shift + F4 Shift + Z			I
Cowl flaps (close incrementally) Cowl flaps (open incrementally) Cycle through other players DME (select)	Ctrl + Shift + O	MI CHAFF/	FLARE	
Ne <u>w</u> Assignment	Delete Key Assignment Delete Joystick Assignme	nt C	Reset <u>D</u> efaults	

Controller type: Saitek X52 F Event category: All events	light Controller	Flight	<b>t mode</b> <u>N</u> ormal <u>S</u> lew	
Assignment list: Event	Keyboard	Joystick	Repeat	
G1000 MFD Page (increase) G1000 MFD Softkey 1 (activate) G1000 MFD Softkey 10 (activate) G1000 MFD Softkey 11 (activate) G1000 MFD Softkey 12 (activate) G1000 MFD Softkey 2 (activate)				
G1000 MFD Softkey 3 (activate) G1000 MFD Softkey 4 (activate) G1000 MFD Softkey 5 (activate)	Shift + 9	AIM-9 ON/0	DFF	3
Ne <u>w</u> Assignment	D <u>e</u> lete Key Assignm Delete <u>J</u> oystick Assign	ent ment	Reset <u>D</u> efaults	

## Booking and plane configuration on version 2.0.1.4460 and above.

Home User Login	
ACMI Login Username : ACMI User. Password :	
Login with First and Last name and PIN number	

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Home ACMI Gauge :	Book Tail # Aircraft Configuration	Repair My Tail #	Inventory CP Log Out	
User Control Panel	1		Team Speak	
Pilot: Tail Booked: ACMI User 0 Click on Book Tail N	Plane Booked: Parked location: Last Kno 0 0 No Loadout Jumber	wn Fuel; Last Known Payload;	WUSAF Team Speak Server           TS 3 Info           III Lobby           III Lobby           IIII Lobby           IIII Lobby           IIIII Lobby           IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII	v2 s & Invite Only) ; wite Only) ∰ ™ ite Only) ™
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Home	ACMI Gauge	Book Tail # 🕴	Aircraft Configuration	Repair My Tail # 🕴	Inventory CP	Log Out	
		Pilofs	Assign Aircraft 1	fail Numbers			
			AcMi User	M ///DMA / 0			
Selec	t Your Tail Nun	nber	Submit		—— Hit Su	ıbmit Button	
VIRTUAL US AIR FORCE no one else co	= =*=						



This page displays your tail number booked, type of aircraft, and where it's parked at. It also gives you information on how much fuel was left in the plane and payload. This will come into use when repair your plane later in the guide.

You will see that your planes lead-out is empty and will need to be configured. The last thing displayed is your planes damage condition. This will be explained later on in the guide.



### Configuration Manager for a Fighter:

Home ACMI Gauge	Book Tail # : /	Aircraft Configuration	Repair My Tail # 🗄	Inventory CP	Log Out
		Plane Confir	Turation		
		i lulie Colling			
	Cor	npatible With Version	1 4460 & Above ON	LY ***	
	Pilot's Vatsim ID: 3545658				
	Pilot's Name:	er			
	Nom 03	a. A			
	Pilot's Aircraft A10				
	Flare Loaded Qty: 👔 🔻			ole: 200	
	Bullet Loaded			ible:	-
	Qty: Payload Mk82.50	Dibs T	SAM Units Availabl	e.	-
	Payload Quantity: In -			able:	_
				0	
	Station ID ( D = 0 • Disabled )			8 8	
	AIM9 Quantity: 0 🔻				
		Subm	it.		
	Weight P	<u>'er Unit</u>	<u>Units Per Item</u>		

This screen is one of the most important and used screens you will use. There is quite a bit of information on this page, so I will break it down into sections.

On the left side, you will see your information, type of plane, and the load out section. This is where you select the munitions you want to load on your plane. This must be done before claiming your plane in FSX. We will get into the loading of your airframe, in the next section.

One the right side, you will see the different types of inventory located at the base your plane is at and how much of each one is there. This is important when loading out your plane. In the picture above, you will see that there are only 200 bomb units available. This means you would only be able to load bombs at this airport. Currently flares and bullets are not be tracked in the inventory system so they can be loaded as needed.

At the bottom, you will see the weight per unit breakdown, as well as the unit amount per item. **Example for the configuration of a fighter aircraft:** 

This does not apply to aircraft such as the Milviz F-15 and Chris Dub's F-16 with their own weapons loading system.

Plane Configuration							
*** Compatible With Version 4460 & Above ONLY ***							
Pilot's Vatsim ID: 3545658							
Pilot's Name: ACMI User							
Pilot's Aircraft Type: A10							
Flare Loaded Qty 👔 🔻		200					
Bullet Loaded 0 ▼ Qtv:		0					
Payload Mk82 500lbs V		0					
Payload Quantity:		0					
Station ID(D = 0 v Disabled)		11					
AIM9 Quantity: 0 🔹							
	Submit						

The user selects the type of bomb the want to load on their aircraft from the drop-down menu.

	Plane Configuration						
	*** Compatible With Version 4460 & Above ONLY ***						
Pilot's Vatsim	D: 3545658						
Pilot's Name:	ACMI User						
Pilot's Aircraft Type:	A10	l					
Flare Loaded (	Qty: 0 🔻		200				
Bullet Loaded Qty:	0 🔻		0				
Payload	Mk82 500lbs 🔻		0				
Payload Quan	ity: 0 V		0				
Station ID ( 0 : Disabled ) AIM9 Quantity	1 1 1 3 4 5 6 6 7 7 8 9 Subr	Pallet Units Available:	11				

Depending on the available inventory and how many the plane can hold, you select the amount from the drop-down menu.

Plane Configuration						
***	*** Compatible With Version 4460 & Above ONLY ***					
Pilot's Vatsim ID: 3	545658					
Pilot's Name:	User					
4 Pilot's Aircraft 6 Type: 7						
8 Flare Loaded Qty: 9 10			200			
Bullet Loaded 12 Otv			0			
Payload 15	500lbs <b>v</b>		0			
17 Payload Quantity: 18 19			0			
Station ID ( 0 = 0	<ul> <li>▼</li> </ul>		11			
Disabled) AIM9 Quantity:	7		×			
	Subm	nit.				

This text box is very important to properly load your munitions. You must pick the station you want the weight of your munitions added to. If you leave the station at 0, it disables the user payload system and the weight would have to be added manually (not recommended). If you're not sure which station to use, it will be explained further in another section below.

	Plane Configuration						
	*** Compatible With Version 4460 & Above ONLY ***						
	3545658						
	ACMI User						
Pilot's Aircraft Type:	A10						
Flare Loaded Qty	0 🔻	Bomb Units Available:	200				
Bullet Loaded Qty:	0	Missile Units Available.	0				
	Mk82 500lbs 🔻	SAM Units Available:	0				
	0 🔻	Trooper Units Available:	0				
	0 🔻	Pallet Units Available:	11				
	0 -						
	Sub	omit					

Here you can see there are no AIM-9's available to load because the missile units available are at zero.

	Plane Confi	guration		
	*** Compatible With Version	n 4460 & Above ONLY **	*	
Pilot's Vatsim ID	3545658			
Pilot's Name:	ACMI User			
Pilot's Aircraft Type:	A10			
Flare Loaded Qt	/ 0 🔻		200	
Bullet Loaded Qty:	0 🔻	Missile Units Available:	10	
Payload	Mk82 500lbs 🔻	SAM Units Available.	0	
Payload Quantit	0 •		0	
Station ID ( 0 = Disabled ) AIM9 Quantity:	0 V 0 V 1 2 3 Subm 4 5	Pallet Units Available: it	11	

In this example you can see that there are 10 missile units available at this location now so the maximum number of AIM-9's the plane can hold is listed in the drop-down menu. This will change depending on the amount of bombs you have loaded as well. Once you are happy with your load-out you can hit submit.

				_				
Home	ACMI Gauge	Book Tail #	Aircraft Configuration	Repair I	My Tail # 🕴	Inventory CP	Log Out	
			Plane Co	nfiguration				
		all all all a	Fine CO	iniguration		a a a shahah		
		*** (	Compatible With Versi	on 4460 &	Above ON	LY ***		
		ilot's Vatsim ID: 354	5658					
		ilot's Name:	Al Liser					
		ilot's Aircraft A10						
		are Loaded Qty. 60 🔹	1			ole: 178		
	Bi	ullet Loaded 500 tv:	▼ 			ble: 10		
		ayload Mk82	2 500lbs 🔻			e: 0		
		ayload Quantity: 🔒 🔻				able: 0		
		tation ID ( 0 = 1				le: 9		
	D	isabled) IM9 Quantity: 6 🕇				2		
			Su	bmit				
		<u>Weigl</u> Bomb (1	n <u>t Per Unit</u> unit = 500 lbs) MK-82 = 1	<u>Units I</u> bomb unit	<u>er item</u> GBU-32 = 4			
				4 bomb unit				

VIRTU/ AIR FC no one el	AL US DRCE -se com -se		-						
Home ACMI	Gauge : Bo	ook Tail # 🗄	Aircraft Conf	iguration	Repair My	Tail # 🗄	Inventory CP	Log Out	
User Control Par	nel						Team Spe	ak	
<u>Pilot: Tai</u> ACMI User	<u>il Booked:</u> Plar 810991 Loadout	ne Booked: A10 t: A	<u>Parked location:</u> KDMA I x CDMk82 500 lbs 5	<u>Last Known Ft</u> 33990 00 xBullets 60 xFl	iel: Last Kno ares 6 x AIM9 ST.	own Payload: 170 A(1)	■ VUSAF TS 3 Info 一顧 Lobby 一顧 Office ー顧 Port 一顧 Chi 一顧 RFAF	Feam Speak Serv rs Lounge SAF Conf. Rm. (S inders Boardroom ef of Staff Office ( lange Control gressor Tactical 1	er v2 ups & Invite Only) ( (Invite Only) 굶 10 Invite Only) 10
		Aircraft C	ondition 100 % Safe				- 및 Bug - 및 AA - 및 AFO - 및 AFO - 및 Opera - 및 Din - 및 Din - 및 Din	e Tactical 1 R Channel EC Operations A6A Office 002 LtGen Sean " tions Department ector Air & Space & Programs ector Plans & Prog	'Dad'' Petersn Ops Office grams Office
						Map Satellit	te - 데임 Logist - 데임 Dim - 데임 CM - 데임 AETC - 데임 AETC - 데임 AETC - 데임 AE - 데임 AE - 데임 AC		flission Support on
							- 11 38 - 11 9th - 11 12 - 12 12 - 12 27 - 12 AMC - 12 A	m righter Squadro Bomber Squadro I Bomber Squadr x1216 vCapt Tom h Bomber Squadr Derations C/CC Office sidential Airlift Sru Airlift Squadron h Airlift Squadron d Airlift Squadron d Airlift Squadron	on n on i Bonnes on n

In the example in the page above, after hitting the submit button it brings you to this page where you can review your load-out. There are 4 MK-82's loaded, 500 bullets, 60 flares, and 6 AIM-9's loaded on station one. Your plane is now loaded ready to fly.

### Configuring aircraft with a built in weapons management system (Milviz F-15, Dub F16, etc.):

	Plane Confi	iguration						
*** Compatible With Version 4460 & Above ONLY ***								
Pilot's Vatsim ID:	3545658							
Pilot's Name:	ACMI User							
Pilot's Aircraft Type:	F15							
Flare Loaded Qty	0 🔻		1202					
Bullet Loaded Qty:	0 🔻		121					
Payload	Mk82 500lbs •	SAM Units Available	100					
Payload Quantity	0 🔻		482					
Station ID ( 0 = Disabled )	0 🔻		94					
AIM9 Quantity:	0 •							
	Subn	nit						

When configuring these aircraft, the steps are a bit different. If you are going to load 8 bombs onto your aircraft, you must select 8 from the dropdown menu. You can use either MK-82's or MK-84's. At this time an AGM-65, AGM-88, AGM-130, etc. are considered bombs and must be accounted for that way. With these types of aircraft, you will leave the station number at zero due to the weapons management system adding the weight for you. You will also need to add the amount of AIM-9's you intend on loading, as well as flares and bullets. Once you are happy with your load-out you can hit submit.

Hama	ACMI Course	Beek Teil #	Aircraft Configuration	Densis My Tell #	Inventen CD	Les Out	
Home	ACMI Gauge :	BOOK THE # :	Aircraft Configuration :	Repair My Tall #	Inventory CP	Log Out	
			Plane Confi	guration			
		*** (	Compatible Mith Warrier	AACO & Above ON	1 17 ***		
			compatible with version	1 4460 & ADOVE UN	LI		
		ot's Vatsim ID: 3545	5658				
		ot's Name: ACN	11 User				
		- N - A					
		pe: F15					
		ire Loaded Qty: 60 🔻	1		ble: 1188		
		llet Loaded 500	▼		able: 121		
	Pa	/. yload Mk82	2 500lbs 🔻		le: 100		
		vload Quantity: 16		Trooper Units Avai	lable:		
					482		
		ation ID(D = 0 • abled)			92		
		//9 Quantity:4 ▼					
			1.000				
			Subm				
		Weigl	<u>ht Per Unit</u>	Units Per Item			
			CBU 27 - 4 h				



In the example in the page above, after hitting the submit button it brings you to this page where you can review your load-out. There are 6 MK-82's loaded (remember this included any of the air to ground missiles listed above., 500 bullets, 60 flares, and 4 AIM-9's loaded on station 0. Your plane is now loaded ready to fly.



Configuration Manager for a Bomber: (Notice the AIM-9 selection is not available)

	Plane Configuration								
)	*** Compatible With Version 4460 & Above ONLY ***								
Pilot's Vatsim ID:	3545658								
Pilot's Name:	ACMI User								
Pilot's Aircraft Type:	B52								
Flare Loaded Qty:	0 •		490						
Bullet Loaded Qty:	0 •		694						
Payload	Mk82 500lbs 🔻		30						
Payload Quantity:	0 🔻		24						
Station ID ( 0 = Disabled )	0 🔻		242						
	Sut	omit							

The bombers are loaded the same way as the fighters. You select the type of payload and quantity of payload from the drop-down menus. Remember to keep in mind the bomb units available and how many you're loading at that location. Make sure you have the correct station id selected to load the payload weight. You can load your flares from the drop-down menu. Even though the bullet qty. dropdown appears, it will not let you load or fire bullets from a bomber.

Vin Air no ol	RTUAL US R FORCE De else come close	= <b>★</b> =					
Home	ACMI Gauge 🕴 Boo	ok Tail #   Aircraft Co	onfiguration	Repair My Tail #	Inventory CP	Log Out	
			Plane Configu				
		*** Compatible	With Version	4460 & Above O	NLY ***		
		sim ID: 3545658					
		ACMI User					
		B52					
		ded Qty: 60 🔻	E	Bomb Units Available:	480		
	Bullet Loa Qty:	ded ov			698		
		Mk82 500lbs •			30		
		Quantity: 50 🔻			24		
		<b>(0=</b> 3 ▼		Pallet Units Available:	235		
			Submit				
		<u>Weight Per Unit</u> Bomb (1 unit = 500 lbs)	MK-82 = 1 bon	Units Per Item mb unit GBU-32 =			
		SAM (1 unit = 3000 lbs)	GBU-10 = 4 bor	mb units AGM-65 =	3 missile units		



In this example, after hitting the submit button it brings you to this page where you can review your load-out. There are 50 MK-82's and 60 flares loaded on station 3. Your plane is now loaded ready to fly.



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Home	ACMI Gauge	Book Tail #	Aircraft Configurati	on i Repair I	My Tail # :	Inventory CP	Log Out	
			Plar	ne Configuration				
		*** C	ompatible With V	ersion 4460 &	Above ON	LY ***		
		ot's Vatsim ID: 3545	658					
		of's Name: ACM	l User					
		ot's Aircraft c17						
		re Loaded Qty: 👔 🔻	Ĩ			482		
		ssengers 0				220		
		yload Palle	1000lbs 🔻			0		
		yload Quantity: 👔 🔻	Ĩ			0		
		ttion ID(0 = 0 ▼ abled)	ļ			564		
				Submit				
			<mark>it Per Unit</mark> unit = 500 lbs) MK-8	<u>Units I</u> 32 = 1 bomb unit	<u>Per Item</u> GBU-32 = 4			

ViR AiR no or	TUAL U FORCE ELSE C		=				
Home	ACMI Gauge	Book Tail # 🕴	Aircraft Configuration	Repair My Tail #	Inventory CP	Log Out	
			Plane Confi	guration			
		*** C	compatible With Version	n 4460 & Above ON	NLY ***		
		it's Vatsim ID: 3545	658				
		it's Name: ACM	I User				
		ot's Aircraft C17					
		re Loaded Qty: 0 🔻	l		482		
		sengers 0	T		220		
		/load	000lbs •		0		
		/load Quantity:			0		
		tion ID (0 = 7 abled) 9			564		
		10 11 12 13 14 15 16 <u>1</u> 7 18 Bon 19	Subm <u> Per Unit</u> ↓ if = 500 lbs) MK-82 = 1 b	<mark>it</mark> <u>Units Per Item</u> omb unit GBU-32 = -			
		Missile (1	unit = 200 lbs) MK-84 = 4 b				
		SAM (1 u	nit = 3000 lbs) GBU-10 = 4 b	omb units AGM-65 = 3	3 missile units		

When loading the cargo plane there are some noticeable differences than in the other types of airframes. You will notice the passenger's drop-down menu. This is where you will select the amount of standard passengers you are carrying. At this time, this does not add weight to your aircraft.

ViR Air no oi	RTUAL L R FORCE		=						
Home	ACMI Gauge	Book Tail #	Aircraft Conf	iguration	Repair I	My Tail # 🕴	Inventory CP	Log Out	
				Plane Config	guration				
		***	* Compatible W	ith Versio	1 4460 &	Above ON	LY ***		
		lot's Vatsim ID:	545658						
		lot's Name:	ACMI User						
		lot's Aircraft /pe:	217						
		are Loaded Qty: 0	T				482		
		assengers 0	Ť				220	x	
		ayload P	allet 1000lbs 🔹 🔻				0		
		ayload Quantity:	allet 3000lbs allet 5000lbs				0		
		ation ID ( 0 = Pa sabled ) Pa Pa Pa Pa Pa Pa Pa Pa Pa Pa Pa Pa Pa P	allet 9000lbs allet 9000lbs allet Bombs 1000lbs allet Bombs 3000lbs allet Missiles 600lbs allet Missiles 1200lbs allet Missiles 1800lbs allet Missiles 3000lbs	Subm	Pallet Unit		564		
		Pi Pi Pi	allet ADF 3000lbs allet ADF 6000lbs aratrooper		Units F	Per Item			
		Bomb	(1 unit = 500 lbs)						
		SAM (	1 unit = 3000 lbs)	GBU-10 = 4 b	omb units	AGM-65 = 3	missile units		

The loading of the payload is done the same way as the other aircraft; you just have much more to choose from. You have Pallets, Pallet Bomb's with varying weights, Pallet Missile's with varying weights, Pallet ADF's with varying weights, and paratroopers. You will load your plane according to your mission assignment. The varying weights are there so if you have 90,000lbs of pallets to load, you would select Pallet 9000lbs. and quantity of 10. This goes for the rest of the pallet types as well.

- Pallets are used when hauling misc. equipment, supplies, etc.
- Pallet Bombs are used when hauling bomb units.
- Pallet Missiles are used when hauling missile units.
- Pallet ADF's are used when hauling air defense units such as SAM's and AAA.
- Paratrooper's selection is self-explanatory.

Make sure you select the proper Station Id or your payload won't load correctly. The Station ID selection process will be explained in the next section.
VIRTUAL US AIR FORCE	= = <b>★</b> =			
Homo ACMI Caugo	Rock Tail #Aircraft Conf	investion i Donair My	Tail #Inventory CD	Log Out
Home ACMI Gauge	Book fail # Aircraft Com	Iguration : Repair My	Tall # 1 Inventory CP	Log Out
		Plane Configuration		
	*** Compatible V	Vith Version 4460 & A	bove ONLY ***	
	3545658			
	s Name: ACMI User			
	s Aircraft c17			
	Loaded Qty 60 🔻		Available: 482	
	engers 0 🔻		Available: 220	
	Dad Pallet 9000lbs 🔻	SAM Units A	vailable: 0	
	oad Quantity. 10 🔻		s Available: 0	
	on ID ( 0 = 4 •		Available: 564	
		Submit		
	<u>Weight Per Unit</u> Bomb (1 unit = 500 lbs)	<u>Units Per</u> MK-82 = 1 bomb unit	<u>- Item</u> GBU-32 = 4 bomb units	
	Missile (1 unit = 200 lbs)	MK-84 = 4 bomb unit	GBU-38 = 1 bomb units	



In this example, after hitting the submit button, it brings you to this page where you can review your load-out. There are 10 9000lbs. Pallets and 60 flares loaded on station 4. Your plane is now loaded ready to fly.



You don't need to do anything in FSX. once you choose the station number that you want ACMI to take control you just set it on the webpage

Remember as a pilot it's vour responsibility to choose the correct station that won't affect vou center of aravity

Some aircraft may not have a payload station and one will need to be added. If you are not familiar with doing this contact the AFOTEC Dept. for assistance.

Finally if you are using the Milviz F-15 or the vUSAF F-16 just leave the station ID to zero

Flinht Simulaton	Acceleratio	TH			<u>0 = x</u>
	FREE FLIGHT				
номе	CURRENT AIRCRAF	Т:		CURRENT LOCATIO	<u>DN:</u>
MISSIONS	FUEL AND	PAYLOA	)		
MULTIPLAYER					C <u>H</u> ANGE
PILOT RECORDS	Boeing C-17A				
SETTINGS	🗹 Display fuel quantity as w	eight		Ϋ́ΞΎ	EASON:
	Empty weight:	282500	Pounds		CHAIIGE
	Payload:	90557	Pounds		
	Fuel:	152000.00	Pounds		
	Gross weight:	525057	Pounds		Foilurae
	Max. gross weight:	586000	Pounds	글	
	Max. allowable fuel: 🧹	212943.00	Pounds		
	90,000 lbs. Paylor	ad			
	<b>Plus Crew Weigh</b>	t.			and the second se
	Change <u>F</u> uel	Change <u>P</u> aylo	ad		1
			Goo	d Center of Gravity	,
					and the second second
					/
				CANCEL	
	- Hard and a state of the state	-	State State		
Contacts ^		-			
					ELX.HOW!
					Ler non.

90,000 lbs. of cargo was loaded through the website configuration page and the correct station was loaded, giving you the proper COG. This aircraft is ready for its mission.

Plane Selection from FSX

After booking a Tail number from the website and configuring vour aircraft. vou will have to claim that airframe inside FSX

## On the Add-on menu click on

Microsoft Flight Simulator X <u>Flights Aircraft World Options Views Help Tools Add-ons</u>

### Click on "Take me to Mv Plane'

Warning: Clicking on this menu will warp your FSX position to the exact location where the plane was last parked. You are now in charge of this Airplane. You must put on the parking break to arm your plane. You will hear an audible warning telling you your plane is now rearmed. It's your responsibility to move the airplane without crashing it to your destination.



### Warnina:

It is your responsibility to park the plane in the correct spot.

You must use approved scenery in order to have the good parking spot. Our scenery match real world positions so you should not have any problems. You should not park your plane on the Taxiway. You should check that your plane is not blocking any traffic. You must not park on top of another aircraft (All static plane you see on the ground represent an airplane parked by another pilot) !!!!!! If the apron is full refuel and fly to another airport!!!!!!



#### Notes:

The dauge has the function to put vou back in to the air when the plane was not released. This might happen if your FSX terminated unexpectedly or if you decided to close FSX while in Flight.

In this situation the plane will still be booked to vour name. vou can't reselect another one vou have to finish vour flight. Clicking on Take me to Mv Plane will put vou in the air at the last airborne known position.

It's your responsibility to check where the plane is (on the ground or airborne) and to configure it (engine running or not with the correct fuel load and payload) before claiming the plane. The ACMI gauge will automatically turn on the FSX auto-pilot to maintain current heading and altitude when continuing a flight. Make sure you adjust or disable the auto-pilot as needed. Your previous known payload and fuel information can be found in the example below.

\*\*\*When continuing a previous flight and reconnecting to Vatsim, make sure you check you indicated airspeed. It is very possible that the wind direction may have changed, and this could cause you to over speed, causing damage. If you notice an over-speed upon reconnection, reduce thrust, adjust the pitch or your airplane nose up, and activate your spoilers. This should slow your aircraft down quickly\*\*\*

Vi <b>r</b> Air no or	TUAL L Force Close		=					
Home	ACMI Gauge	Book Tail # 🗄	Aircraft Con	figuration	Repair My Tail #	Inventory CP	Log Out	
User Con	trol Panel					Team Sp	eak	
<u>Pilot:</u> ACMI User	<u>Tail Booked:</u> 010186 L	<u>Plane Booked:</u> C17 .oadout:	Parked location: KSSC 10 x vusaf_pallet 90	<u>Last Known Fuel</u> 22959 00 lbs 0 xBullets 60 x	<u>: Last Known Paylo</u> 557 Flares 0 x AIM9 STA(4)	朝 VUSA 11 TS 3 li - 間 Lob - 間 Offi - 間 HQ - 間 RF/ - 間 RF/ - 間 E	Team Speak Serv fo by D urst Lounge USAF Conf. Rm. (S ounders Boardroom hief of Staff Office ( Range Control ggressor Tactical 1 lue Tactical 1	rer v2 ▲ iups & Invite Only) <b>j</b> ((Invite Only) ♠ ₪ Invite Only) ₪
		Aircraft	Condition 100 % Safe		Map Se	- 및 Arc - 및 0 opt - 및 0 opt - ] (D opt - ] (D opt	TEC Operations 6-A6A Office 1001 Brick DCoS 1002 LtGen Sean ' 1005 vLtGen Chris rations Department irrector Air & Space is & Programs irrector Plans & Prog stics irrector Plans & Prog stics (National Cargo - Site Operations C ETC/CC Office COPCO Office	'Dad" Petersn 'Bushman'Dub Ops Office grams Office Alssion Support David Walton
							CC/CC Office 35th Fighter Squadr 89th Fighter Squadr 13th Bomber Squadr 21st Fighter Squadr 6th Bomber Squadr 6th Bomber Squadr 7th Fighter Squadro 2 Operations MC/CC Office	on on on on on on

### Repairing a crashed plane

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Home	User Login
	ACMI Login
	Username : ACMI User
	Password :
Login	with First and Last name and PIN number Login
	= <del>*</del>
Ethics Regulat suggest the De the Departmen organization. 1 Virtual United operations and	tions prohibit the Department of the Air Force and its employees from using or permitting the use of position, title, or organization names in any manner that would epartment of the Air Force or United States Government endorsement or preferential treatment of any non-federal entity, event, product, service, or enterprise. Neither at of the Air Force nor any other component of the Department of Defense or Federal Government has approved, endorsed, or authorized this promotion, activity, or The Virtual United States Air Force is in no way affiliated with the Department of Defense, Department of the Air Force, or any other federal or government entity. The States Air Force is a volunteer not for profit group of friends with the common interest in promoting enjoyment and education through the simulation of military d procedure through the use of operating standards within several flight simulation platforms. Organization inquiries may be directed to <b>cos@vusaf.org</b>
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When a crash occurs, the aircraft will be re-spawned back to the airbase where you originally departed and any payload on board will be destroyed. There is a fifteen minute wait time before your tail number will appear in the dropdown menu. This wait is written in the code to prevent instant re-spawning. The 15 minute re-spawn time is disabled when there are no events going on.



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Home	ACMI Gauge	Book Tail # 🕴	Aircraft Configuration	Repair My Tail # 🕴	Inventory CP	Log Out	
			Repair Tail	Numbers			
			Pilot's Name: ACMI User				
			Tail Number(s) to C17 / 01018 repair: Submit	6 / KSSC / Sean Peterson 🔻			
Select	tail number to Submit but	repair and hit ton.					
VIRTUAL US AIR FORCE no one Elose	= =★= ^						

### If you crash your plane with the current ACMI gauge you must do the following:

The pilot must first re-activate crashed plane, then repair the damage to the plane. The pilot must then login in FSX and click take to my plane. Once this is done, you must PARK THE PLANE IN A PARKING SPOT. (If warp is allowed the pilot can warp to a different location) then the pilot must release the plane. If the directions above are not done properly, the pilot won't be able to configure their plane with any payload.

There are two repair features now, one to repair the tail (crashed plane) and one to repair damage to the plane. The repair damage to your plane will be covered in the next section. If you don't keep track of the damage to your plane, you may find yourself with failures to your aircraft in flight. You can repair basic damage to your plane only when it reaches 50%.

There is also a chance of random failures in flight if your plane condition drops below 10%. You must monitor all your aircraft's instruments and watch for failures now.

If you have a CTD or shut down FSX, you will be required to enter in the amount of payload and fuel you had in the plane, before you can continue your flight. This information is given to you in your User Control Panel and in your ACMI log. Make sure you have your engines running and navigation ready before resuming your flight.

\*\* Don't forget to hit take me to my plane before starting your flight \*\*

Home	ACMI Gauge	Book Tail # : Aircraft Co	nfiguration	Repair My Tail #	Inventory CP	Log Out		
* 		Book AETC plane						
	1	Book ACC plane						
		Book AMC plane	Assign Aircraft	fail Numbers				
		Book AFSOC plane	ACMI User	8				
		Assign Tail Number(ALL)	A10 / 81099	01 / KDMA / Sean "Da⊨▼				
	/		Submit					
Re-boo	ok Tail Number							

### Repairing a damaged plane



You can repair your damaged airframe when your aircraft condition drops below 50%. Once this occurs you need to book the aircraft you want to repair and select Repair Damaged Plane. If your plane is above 50% the following page will not appear, allowing you to repair your aircraft. You do not have to worry about random failures until your condition drops below 10%.



In the example above, you will see all the damage that occurred to your plane. It also shows the cost in pallets, for the repairs to be done to your aircraft. Think of each pallet needed as parts, tools, etc. needed to repair the aircraft. In this example there aren't enough pallets to repair the aircraft, so pallets will need to be flown in by AMC, AFSOC, or one of our CRAF partners. Once the pallets arrive, the plane can be repaired and flown as normal.

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Home	ACMI Gauge	Book Tail # 🚦	Aircraft Configurati	on i	Repair My Tail #	Inventory CP	Log Out	
			Repair	Damageo	d Aircraft			
			Pilot's Name:	ACMI Use	r			
			Damaged Aircraft:	A10				
			Aircraft Tail #:	810991				
			Aircraft Condition %:	0				
			I	Repair Dan	naged Airframe			
		age to Plane: Electrical, Jamme	Hydraulic, Trim, Spoiler, auto ed Max, Engine 1 Failure, Eng Cost o	o pilot, flap gine 4 Failt of repair 17	os, Fuel Leak 10000 ft +, Engi ure, Elevator and Aileron Trir Pallet(s)	ine 1 Fire, Engine 4 Fire n Up Max		
	= ★= ****							
Ethics Regul suggest the the Departmo organization	lations prohibit the Dep Department of the Air F ent of the Air Force nor . The Virtual United Stat	artment of the Air Ford orce or United States ( any other component tes Air Force is in no v	e and its employees from Government endorsement of the Department of Defer vay affiliated with the Depa	using or p or preference nse or Feo artment of	permitting the use of positi ential treatment of any non- deral Government has appi Defense, Department of th	ion, title, or organizati -federal entity, event, roved, endorsed, or a ne Air Force, or any ot	on names in an product, service uthorized this p her federal or g	/ manner that would e, or enterprise. Neither romotion, activity, or overnment entity. The

In this example it shows you the same information as the one in the previous page except this one has the Repair Damaged Airframe button. This indicates that there are enough pallets to repair your aircraft back to its 100% condition. You can find out the amount of pallets, etc. at each base by using the Inventory CP. The use of this CP will be explained in the next section.



In this example, the plane has been repaired and the condition is back to 100%. Once this is done, you can select take me to my plane in the FSX add-ons menu or log off. (Remember if you are repairing damage after re-activating a crashed airframe, you must park and release the plane.)

### **Inventory Tracking System**

VIRTUAL US = AIR FORCE = no one else comes close	
Home User Login	
	ACMI Login
	sername : ACMI User
	assword :
Login with First and Last name and PIN	number Login
Vietru∧i, Lua ∧ier =0a-ca no ona <u>e, as</u> ponea	

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Copyright © vUSAF 2014 All Rights Reserved. Designed by vUSAF Website Development Team **Inventory Tracking System (User Level Interface)** 







**Inventory Tracking System (Majcom Level Interface)** 









**Inventory Tracking System (Admin Level Interface)** 



Everything you see in this drop-down menu has been explained in the example earlier.



In this example, in the Warehouse Info dropdown, there is Inventory on Hand and Factory Requisition Form. The Inventory on Hand will show you the amount of inventory listed per airbase. If the airbase you're looking for isn't listed, there is no inventory at that airbase. The Factory Requisition Form is used to request inventory be shipped to one of our existing warehouses. These shipments are done automatically by Ship, Truck, or Train. At this time it happens immediately, in the near future it will take a certain amount of days for each one to be shipped.



Here, in the Factory Info dropdown, there are five different buttons. The Factory Production button will display the location of each factory, and if it's producing inventory. The Toggle Production On/Off allows you to turn off an individual factory if there are enough inventories on hand there. The Daily Production button shows you the amounts produced at each factory. The increase/decrease daily production allows you to update the amounts you want produced at each factory. The Inventory on Hand displays the total amount of inventory at each specific factory.



Above, in the Order Info button, there are five buttons to choose from in the dropdown menu. Starting from the top, the first one is where you assign a PRO to CRAF, AMC, or AFSOC. The second button allows you to delete any PRO. The third button gives you a list of unassigned PRO's. The forth button displays a list of unclaimed PRO's that needs to be completed. The last button displays the completed PRO's from AMC and AFSOC.



Above, in the Process Orders dropdown, there are five buttons to choose from. The first one, starting from top to bottom, is where a factory requisition order is processed. The next button is used to assign CRAF missions. The third button is used to process the CRAF PRO, which places the inventory the CRAF partner hauled at its correct location. The forth button is used to claim your PRO and the last button is to mark your PRO complete.

## **Gun Employment**

The pressing the trigger once will release a burst of 15 to 25 simulated bullets, path will be calculated and if you manage to maintain the target within the kill zone then your opponent will receive damage.

While on the ground re-arm your plane, confirm the bullets are loaded by checking your inventory. Be aware that gun works now on a head on course!!!

## **ACMI Gun Kill Center:**



## **ACMI Gun Kill Zone:**



## **BombEmployment**

On the ground rearm your jet and get confirmation of your payload by checking your inventory. Once airborne, provided that you don't hear the Aim9 Growl sound, pressing the release droppable object will drop one bomb. Only High drag bombs are simulated, so it's best to release within 1 to 1.5nm to target on 45 deg. dive. A bomb impacting the ground to close to your plane may have fragment the will damage your jet.

# AIM9 Employment

On the ground rearm your jet and get confirmation of your payload by checking your inventory. Once airborne, toggle the AIM9 key, to turn on the IR seeker. Any hot, fast moving object that passes in the field of view of the seeker head will be detected and high pitch sound will indicate a valid target. Pressing the release droppable object will launch the missile. Launch decision is at pilot discretion

Good Range is from 0.7nm to 4nm. It's possible to fire under the minimum range but you have a high chance to just loose this missile (IOW, no time to turn to the target). It's best to fire when you are behind your opponent, you will have the highest PK, but heads on is also possible.

## **ECM Employment**

Your plane will be loaded with Flare that represent all type of ECM. Make sure to rearm your jet before take-off and get confirmation of your payload by checking your inventory.

ECM against AIM9 simulates flares. Drop them anytime and as needed to force the missile go after them.

ECM against SAM simulates Chaffs they are to be dropped when the SA2 is almost reaching you.

## **ADS INFORMATION**

Currently, we have three types of Air Defense Systems (ADS) in use. They are the SA-2 SAM, the ZSU-23 AAA Battery, and the KS-19 AAA Battery. There will be more added in the near future.

SA-2 = Maximum altitude range 60000 ft. AGL ZSU-23 = Maximum altitude range 6500 ft. AGL KS-19 = Maximum altitude range 20000 ft. AGL

## **Training Information**

If you enter the code 7777 into your transponder, your plane will be set to training mode. This allows you to go out to the range and practice evading SAM's and bombing targets without the risk of being shot down. The ADS's will still shoot at you but there will be no damage done to your plane. In your ACMI log it will tell you what kind of damage you would have incurred if you weren't in practice mode.

If you enter the code 7770 into your transponder, this will enable the quick release of bombs on the B-2, B-1, and B-52. It will also enable the quick release for paratrooper and cargo for air-drops. You will also need to make sure that your repeat slider for release droppable objects is all the way to the right. To disable this function enter 7770 into your transponder.

## **ACMI Radar Installation Instructions.**

This gauge has radar built into it. If you are flying a plane that doesn't have onboard radar, or you don't have pay ware radar installed, you will need to make the following changes to your panel config. file. Open the panel cfg and locate the [window titles] section then add a new line with a new window number

[Window Titles] Window00=HSI Window01=GPS Window02=VUSAF\_RADAR

Then add the following section

[Window02] zorder=0 file=Panel\_POD.bmp size\_mm=300,300 position=5 BACKGROUND\_COLOR=0,0,0 visible=0 sizeable=0 gauge00=acmi!vusaf\_radar ,1, 1 ,512,512

The Window number, shown here as Window02, will vary depending on aircraft. Make sure that the number in the Windows Titles match the line added below.

Here are the keys to control the radar:

G1000\_PFD\_SOFTKEY12: // Radar cursor up G1000\_PFD\_SOFTKEY11: // Radar cursor down G1000\_PFD\_SOFTKEY10: // Radar cursor right G1000\_PFD\_SOFTKEY9: // Radar cursor left G1000\_PFD\_SOFTKEY8: // Radar elevation decrease G1000\_PFD\_SOFTKEY7: // Radar elevation increase G1000\_PFD\_SOFTKEY6: // Radar Aperture decrease G1000\_PFD\_SOFTKEY5: // Radar Aperture increase G1000\_PFD\_SOFTKEY4: //Radar decrease range G1000\_PFD\_SOFTKEY3: //Radar increase range G1000\_PFD\_SOFTKEY2: //Radar TMS up (LOCK) G1000\_PFD\_SOFTKEY1: //Radar TMS down (UNLOCK)

There are 2 new warning sounds indicating what team is locking you on the radar.

## **Radar Warning Receiver (RWR) Installation.**

RWR download link: vUSAF ACMI RWR

Installation instructions included in download. ACMI Damage System Information

The ACMI damage system is broken down into four failure levels:

Initial Failure Level 1

Electrical Failure Hydraulic Failure Trim Disabled Rudder Disabled Flaps Disabled

Medium Failure Level 2

Fuel Leak above 10,000 feet Fuel Leak Engine Fire Engine Fire Engine Fire Engine Fire Aileron Trim set to MAX

Serious Failure Level 3

Engine Failure Engine Failure Engine Failure Engine Failure Elevator Trim up MAX Elevator & Aileron Trim up MAX Elevator Trim set to MAX Down

Severe Failure Level 4

Aileron Disabled Elevator Disabled Complete Fuel Loss Aileron & Elevator Disabled

These failures will begin to occur for the following reasons and will lower your aircraft condition %:

- Shot by a SAM site
- Shot by a AAA site
- Shot by another aircraft

Additional information monitored that will add damage points and lower your aircraft condition %:

- Over-speed of aircraft as determined by FSX. (Checked every 4 seconds)
- Over-speed of aircraft as determined by aircraft's configuration file.
- Flap and Slat speeds
- Overstressing of aircraft (Over-G)
- Landing rate (Over 600 fpm considered hard anything over 1300fpm will cause significant damage)
- Maximum Landing Weight (See MLW information below)
- Landing Gear speed

## Maximum Landing Rate List:

\*\*\*\*All fighters are designed to land with their maximum take-off weight with exception of the second and third generation fighters\*\*\*\*

\*\*\*\*All rotorcraft can land with their max take-off weight\*\*\*\*

C-130 130,000lbs.
C-17 447,000lbs. B-1
310,000lbs.
B-2 310,000lbs. C-40
158,000lbs. VC-25
652,000lbs.

200,000lbs. B350 C-32 15,000lbs. **B-52** 290,000lbs. **BE-40** 15,000lbs. 769,000lbs. KC-10 C-5 408,000lbs. 325,000lbs. GLF5 E-3 75,300lbs. TEX2 5.800lbs. U-2 21,000lbs. **PC-12** 10,000 lbs. 19,200 lbs. KC-135 LJ45 200,000lbs.

\*\*\*\* When flying a mission, you will want to make sure that you have a plan for an alternate airbase, if damage where to occur. You will want to check the pallet totals to make sure you are able to repair your damaged plane without having to wait for pallets to be flown in \*\*\*\*

## **Inventory Tracking System:**

The Inventory Tracking System keeps track of all cargo movements done through the PRO system. This system allows the user to see what's at a certain airbase, request cargo/munitions to be delivered to an airbase, and much more. All this information is very important as it's an essential part of the ACMI gauge. As explained earlier there must be munitions, cargo, troopers, etc., at an airbase, for a pilot to configure their plane.

If a Squadron/Wing Commander needs something delivered to an airbase they must email their Majcom CC their request. The Majcom CC can then put in a request to logistics for assignment and delivery. This is done by choosing the Air Base Requisition Form and filling in the necessary info. If there are Troopers needed, the Trooper Requisition Form is used. Once the PRO has been received, processed, and assigned by the logistics department, the request will be flown. When you are assigned a PRO, the pilot must claim it before flying the mission. Once the mission is completed, the pilot must mark the PRO as completed. If you crash your aircraft, all cargo/munitions on board will be lost, and you will be placed back at your original departure airbase. You will then need to go through the re-activate and repair process.

## **FSInn Airplane Configuration**

Open FSInn Control Panel



Click on Advanced



## Click PLA



Click on Config


## Click on Edit Current Used Aircraft



Enter your correct aircraft ICAO code in the box under User (See list at end for codes). If you enter the proper code the box will turn green, if you don't it will turn red. You may also add Aircraft wake (Heavy, Medium, Light) and Texture Resolution (Last two are optional)



Once the info is filled out, hit apply. List of ICAO codes (should be read as Aircraft Name = ICAO Code)

Fighter

- F-15C/D/E = F15
- F-16 = F16
- F-22A = F22
- F-35 = F35 □ A-10 = A10

## Cargo

- C-5 = C5
- C-17 = C17
- C-130 = C130
- C-27J=C27J
- KC-10 = DC10
- KC-135R = K35R
- VC-32A = B752
- $C-40B/C = B737 \square VC-25 = B742$

Bombers

- B-1B = B1
- B-2A = B2
- B-52H = B52

Rotary

- V-22 = V22
- HH-60 = H60 🛛 UH-1 = UH1

Other

- E-3 = E3TF
- U-2 = U2
- E-4B = B742
- Eurofighter Typhoon = EUFI
- Panavia Tornado = TOR