



User Manual

Convair CV-240 VBF reloaded

for Microsoft Flight Simulator FS2004 (ACOF)

Convair CV-240 CA-18 VBF & Convair CV-240 CB-16 VBF
Convair military VBF (incl. T-29x VBF & C-131A)



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1. The Project

Greg Pepper's and Tom Gibson's Convair CV-240 has long been a favorite classic with the friends of flight simulation. After that model came out, VBF released several repaints for it, which were well received. However, a model of the military variants of the Convair, the T-29, has always been missing. As a spotter in Europe in the 1960s it was possible to observe much of the T-29 fleet. The aircraft had important roles within the USAF as liaison and reconnaissance aircraft during the Cold War. The FAA used the ET-29C as flight inspectors at both the US air bases in Europe and those civilian airports that were served by the US majors. This made them very conspicuous in Germany especially, since PanAm (together with the British and French flag carriers) was responsible for civilian traffic to and from West Berlin.

Querying Tom Gibson on whether he would consider adding a T-29 himself soon revealed that he himself was not interested in military aircraft. If, however, VBF were to design such a model, he would gladly provide the model files for the CV-240 as a basis, provided the resulting model remain freeware. A condition that could be complied with easily.

So, in November 2009 the first trials were conducted as to fitting all the antennas, astrodomes, and the radom onto and under the fuselage with any degree of similitude to the prototype. On the basis of the available 3D model, which was too short compared to its height and width, this was impossible. So the decision was made to fit the length of the fuselage to its thickness, with attendant adjustments to the fin. Now the Convair had the correct proportions, at least when viewed from the side, and all the equipment details could be added in their respective places. A photo overlaid onto the fuselage as a texture proved the new proportions immediately.

In addition, a few minor inconsistencies in the texture mapping were got rid of, as were a few minor bleed-throughs. The adjustments made it necessary, however, to create completely new fuselage and tail fin textures, making the new ones incompatible with the old.

In the real world, the military versions of the CV-240 were re-configured and re-equipped fairly often, and for many different roles. So a major challenge consisted in creating a reasonable range of different layouts in the model. In the end, the T-29A, T-29B, T-29C, T-29D, as well as FAA's ET-29C and a couple of VT-29s were made. Each model shows the typical equipment for the type regarding antennas, astrodomes, the radom, and radar noses. As a byproduct, the very first C-131A ever published for flight simulator could be added, too. This type even has the prototypical large cargo door in the rear fuselage.

Viewing the new T-29, the wish was born to let the civilian CV-240 benefit from the modifications. So our stop-gap T-29 project escalated into a major CV-240 project, now dubbed

„Convair CV-240 VBF reloaded“.

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The civilian Convair CV-240, too, has always been rich in different variants and was delivered in four markedly different configurations fresh from the factory alone:

Type A: Integral stairs in the right forward position, service door left aft;

Type B: Integral ventral air stairs;

Type C: Cabin entrance left aft, service door left forward;

Type D: Cabin entrance left aft, service door right forward.

Of these four variants, types A and B were modeled fully. On types C and D, only the main entrances are available; the service doors are only painted on. Here, too, there was a host of aftermarket conversions to be covered.

A grand total of 25 different 3D model files have been created, covering not only every single Convair 240 that ever rolled off the production line, but also most 240s and T-29 ever flown. To our humble knowledge, this is unprecedented in freeware flight simulator development, at least on this scale.

2. Credits

Base model and textures originally by Greg Pepper und Tom Gibson

Model file upgrades by Georg Hauzenberger

Texture enhancements by Hans Hermann, CEO VBF, painted at PastPerfect PixelStudio, Germany

Flightdynamic by FSAviator originally for the Calclassic.com Convair

Beta Testing by Tim Creed and Nikko Yaginuma

User Manual by Hans Hermann, Georg Hauzenberger and Helmut Gerresheim

Many thanks to all who have supported this project, especially to Tom Gibson. Without his willingness to supply us with his basic model of the CV-240 this project could never have been realised. From him we got full permission for use of files or parts of files created for Greg Pepper's and Tom Gibson's original Convair and needed for the Convair CV-240 VBF reloaded.

Tribute to Greg Pepper

This project is also a tribute to Greg Pepper, who passed away in November 2008. Many of the planes on the CalClassic Propliner page and at AVSIM.com were created by his talented hands. Over the years he has created a huge variety of aircraft, including the CV-240, CV-340, CV-440, CV-580, DC-6, DC-6A, DC-6B, DC-7, DC-7B, DC-7C, B-377, C-97, KC-97E, KC-97G, HU-16, and Beech 18. His name yields more than 23 *pages* of files at AVSIM.

<http://calclassic.proboards.com/index.cgi?action=display&board=general&thread=494&page=1>

3. Installation Instructions

3.1 Basic Information

The Model of the Convair CV-240 VBF has only been designed and tested for Microsoft Flight Simulator FS2004 (ACOF). It has not been tested if it is possible to use this model in other versions of the Flight Simulator. The textures for the Convair CV-240 VBF and for the CV-240 of Greg Pepper und Tom Gibson are not compatible.

As in Greg Pepper's and Tom Gibson's model we have produced two different production lines due to the different flight dynamics and engine configurations. They are represented by the following base packs:

1. **Convair CV-240 VBF CA-18** (cv240VBFca18_basepack_010.zip) **and**
2. **Convair CV-240 VBF CB-16** (cv240VBFcb16_basepack_010.zip)

Additionally we are introducing a third production line:

3. **Convair CV-240 VBF military** (cv240VBFmilitary_basepack_010.zip)

This third line is identical to the Convair CV-240 CA-18 in terms of flight dynamics, but this line is destined for the installation of all military versions of the T-29, the C-131A, as well as the calibration aircraft of the AFCS (Air Force Communications Service) and the FAA (Federal Aviation Agency / Administration) as government organizations.

Each base pack comes with its own installation program that installs the files, including one model and livery, into separate folders. Each base pack can be installed independently from the other base packs.

We recommend to install all three base packs to facilitate an easy and uncomplicated installation of additional liveries. Liveries will always include their own 3D model.

To make sure that the installers for additional liveries work correctly, do not change the folder names specified by VBF.

All three base packs of the Convair CV-240 reloaded use the original Panel and Sound files from Calclassic's Convair CV-240. The panel's beautiful bitmap was created by Alan Jennings and Greg Pepper, Francois Ouellette, Greg Pepper, and Alan Jennings have done many of the gauge bitmaps.

The sounds are a remix of sounds from Reinhard Herrmann, with startup and shutdown sounds recorded by Tom Gibson mixed by him for the Calclassic's FSX/FS2004/FS2002 ConvairLiners and DC-6's.

3.2 Installation of the Base Packs 1, 2 und 3

Step 1:

It is strongly recommended that before proceeding, you ensure that no other Windows program are running. Also be sure the Base Packs aren't already installed on your system. Otherwise you may overwrite parts of your installation. For your own safety make a backup first if you are not sure.

Step 2

Unzip the zip-file included in the base pack to a temporary folder.

Step 3

Use the Windows Explorer and find the extracted file in your temporary folder. Double click on the base pack's setup.exe

- cv240VBFca18_basepack_setup.exe or
- cv240VBFcb16_basepack_setup.exe or
- cv240VBFmilitary_basepack_setup.exe

and run the install-program.

The base packs will be installed in in your FS9 aircraft directory into the folders:

Type	Folder Name
CV-240 VBF CA-18:	cv240VBFca18
CV-240 VBF CB-16:	cv240VBFcb16
CV-240 VBF military:	cv240VBFmilitary

Step 4

Repeat steps 1,2 and 3 for the remaining base packs to achieve a complete installation. This is all that is necessary to complete the installation of the base packs.

Now you should be able to see and fly the new Convair CV-240 VBF reloaded in FS2004 in the versions included in the base packs. In the FS2004 aircraft menu you will find the Convair CV-240 VBF reloaded at:

Manufacturer = Convair

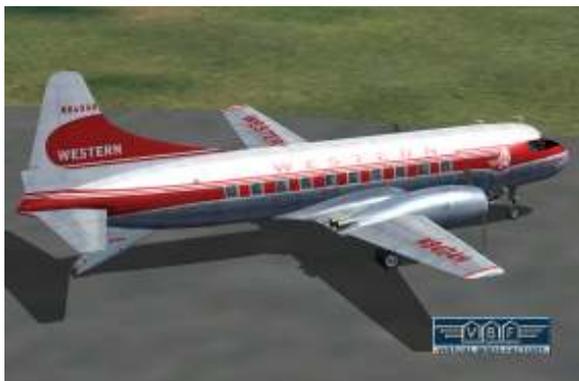
Type = CV-240 VBF CA-18 and/or
Type = CV-240 VBF CB-16 and/or
Type = CV-240 VBF military

With each base pack, one 3D model and one paint scheme will be installed. The CA-18 base pack comes with a CV-240 Type A in the House Colors of the Consolidated Vultee Aircraft Corporation of the year of 1947 on **NX90849**.



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The base pack for the Convair CV-240 CB-16 includes the 1950's livery of Western Airlines.



N8404H was delivered to Western Air Lines on June 16, 1948. After serving for several airlines it was withdrawn from use in 1988 and broken up

For the military Base Pack we have chosen a CT-29A of the USAF with dayglo markings. This CT-29A with tail-number **0-91917** was delivered to USAF in 1950. In the Cold War it was operated by the USAF 7405th Support Sqdn in Europe as a spy aircraft.



The first C-131A (CV-240-53) model file will come as the first add-on package for the Convair CV-240 VBF military. It will show **0-25970** as operated by USAF MATS in 1965 and pictured by Ralf Manteuffel at Berlin-Tempelhof.

3.3 Installation of Panel und Sound

For all Convair CV-240 VBF reloaded variants you have to install the original Calclassic's Convair "**FS2004/FS2002/FSX American Air Lines CV-240 CA-18 Base Pack**" on your system only once (unless you already have done this before). This base pack installs panel and sound also used by the Convair CV-240 VBF reloaded. You can get it directly from the Calclassic's Convair website

<http://www.calclassic.com/convair.htm>

Just follow the install instructions you will get after you have extracted the base pack into a temporary folder of your choice.

VIRTUAL BIRDS FACTORY

After this installation is completed successfully, the Convair CV-240 VBF reloaded will have a wonderful panel and nice sounds, as well.

3.4 Installation of Add-On liveries

Further additional liveries will always be supplied with an installation program. You can find an overview of the model files in Appendix A. In order to install an add-on livery from VBF, please follow these steps:

Step 1

Each add-on livery assumes that a certain base pack has been installed. We will inform you about the Base Pack that is necessary for the installation of a certain livery. Please make sure that the necessary base pack (folders "CV240VBFca18" and/or "cv240VBFcb16" and/or "CV240VBFmilitary" is installed. Otherwise the installation of a livery cannot be successfully completed.

If not present, please first download and install the Base Pack as described in Chapter 3.2.

Step 2

Unzip the zip-file included in the add-on package to a temporary folder

Step 3

Use the Windows Explorer and find the extracted file in your temporary folder. Double click on the add-on's setup.exe named like "*cv240VBFca18_aal_N94200_01_setup.exe*" (example for the American Airlines Convair CV-240 with registration N94200) and run the install-program. The install-program will automatically place the chosen livery and associated model into the folder "cv240VBFca18" or "cv240VBFcb16" or „cv240VBFmilitary“. For the next step please take note in which of the three folders the livery will be installed. For the allocation to the folders please also refer to the list that Tom Gibson has produced in 2009 (see Appendix B).

Step 4

Find the "Microsoft Games\Flight Simulator 9\Aircraft\cv240VBFca18" folder or the "Microsoft Games\Flight Simulator 9\Aircraft\cv240VBFcb16" or the "Microsoft Games\Flight Simulator 9\Aircraft\cv240VBFmilitary" folder (as jotted down in step 3) on your system. There you will find a file named "*(livery name)_add_to_aircraft_cfg.txt*". *Livery name* is the short title for the livery you have just installed; make sure you pick the right one!

Step 5

Using a text editor such as Notepad, open the file "*(livery name)_add_to_aircraft_cfg.txt*" and copy the [fltsim.xx] section shown there. Afterwards open the aircraft.cfg contained in the same folder and paste the [fltsim.xx] section below the last [fltsim.yy] entry already there. Make sure the new [fltsim] entry is in proper numerical order by replacing the "xx" with the next number in sequence. Save and close the aircraft.cfg.

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Step 6

You should now be able to see and fly the new livery in FS2004. If this is not the case, please double check whether you really completed the step above and try to remember whether you changed any folder names after the previous installation of the aircraft. It should read "cv240VBFca18" or "cv240VBFcb16" or „cv240VBFmilitary“. Please also make sure you selected your correct FS2004 root folder (the one where FS9.EXE is located).

If you have any problems at this stage contact virtual.birds@gmx.de.

NOTAM: You will find our Base Packs and further add-on packages marked in different colors depending from the aircraft production line they are belonging to. So you can better assign the add-on packages to the specific Base Pack.

Convair CV-240 VBF CA-18
Convair CV-240 VBF CB-16
Convair CV-240 VBF military

Green Line

Yellow Line

Blue Line

4. Handling the Aircraft

Handling the aircraft is very easy, especially when you are familiar with Greg Pepper's und Tom Gibson's Convair. It's the same for the Convair CV-240 VBF reloaded.

- Prop reverse (throttle to idle, click reverse handle, allow plane to slow down, throttle to idle to go back to forward thrust)
- Depending on the model the main cabin door can be the integral staircase in front fuselage at starboard side, the ventral staircase in the lower rear fuselage or the cabin door in the portside rear fuselage. They all will open/extend when you press Shift-E. Press Shift-E again to close the main door for flight.
- If the model has got an additional moving service or cargo door in the left rear fuselage (and this door is not the main cabin door), you can open it by pressing Shift-E followed by 2. Pressing Shift-E > 2 again will close the service door.
- The working cowl flaps are opened by Ctrl-Shift-V, and closed by Ctrl-Shift-C (both in increments).
- The plane comes complete with reflective and night textures. Turn on lights with L key, then turn the landing lights off and on with Ctrl-L. With the landing lights, the ice lights in the nacelles are switched on and off, too.
- The landing lights light the ground properly, and must be extended before use (press the L key, and then press Shift-W). There is a separate taxi light on the nose strut (turns off with the rest of the lights using the L key, or use the switch on the panel).

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- FS2004 style navigation, landing, and beacon lights (press the L key).
- The prop blades actually rotate when you change the pitch or feather them; to feather the prop select engine by E > 1 or E > 2, then press and hold Ctrl-F2. Press M > - > - > - and Ctrl-Shift-F1 to shut down the ignition and mixture. Then press E2 or E1 so you can operate the other engine.
- Contrails whenever you want them (press the I key)

5. Copyright & Terms of Use

DO NOT SELL, CD-BUNDLE OR REDISTRIBUTE THIS FILE SEEKING MONETARY PROFITS, THIS FILE IS FREWARE.

These files, distributed in no matter what shape or form, are for private use only and therefore must not be sold either as single items or as parts of an FS-collection. All elements put together are Freeware!

Repaints are allowed without further permission, but we prefer that they only be uploaded to totally free websites. However, if you repaint the plane you must credit all of the original authors in your text file.

Please note that parts of this Base Pack are also under copyright by Tom Gibson, Greg Pepper, Alan Jennings, FSAviator and Steve Mathis from Calclassic.com.

Naturally, nobody can guarantee that these data will function properly and that no problems will occur along with installation and usage on all computer systems in the future. We ourselves have no problems at all running this aircraft on our systems.

Always happy landings!
Virtual Birds Factory, August 2010
Hans U. Hermann
e-mail: virtual.birds@gmx.de

VIRTUAL BIRDS FACTORY

Appendix A: Convair CV-240 VBF Model Files Variants

Type	Folder Name (model.nn)	File Name. (nn.mdl)	Remarks
Convair CV-240 civil variants			
Door Configuration A			
	cv240_side	cv-240_s	integral side stair
	cv240_sidebut	cv-240_sb	integral side stair, button nose radar
	cv240_sidelong	cv-240_sl	integral side stair, long nose radar
	cv240_sidetwin	cv-240_st	integral side stair, twin ADF pods
Door Configuration B			
	cv240_vent	cv-240_v	ventral staircase,
	cv240_ventbut	cv-240_vb	ventral staircase, button nose radar
	cv240_ventlong	cv-240_vl	ventral staircase, long nose radar
	cv240_venttwin	cv-240_vt	ventral staircase, twin ADF pods
Door Configuration C & D			
	cv240_nostair	cv-240_n	no stairs
	cv240_nostairbut	cv-240_b	no stairs, button nose radar
	cv240_nostairlong	cv-240_b	no stairs, long nose radar
	cv240_nostairtwin	cv-240_nt	no stairs, twin ADF pods
Convair CV-240 military variants (CV-240-53)			
C-131A	c131a	c-131a	integral side stair
C-131A	c131a_but	c-131a_b	integral side stair button nose radar
<i>HC-131A</i>	<i>For USCG variants use the c131a_b.mdl</i>		
Convair CV-240 military variants (CV-240-17/27/52)			
T-29A	t29a	t-29a	
T-29B	t29b	t-29b	
VT-29B	vt29b	vt-29b	
VT-29B	vt29b_long	vt-29b_l	long nose radar
T-29C	t29c	t-29c	
ET-29C	et29c	et-29c	
ET-29C	et29c_but	et-29c_b	button nose radar
T-29D	t29d	t-29d	
T-29D	t29d_pods	t-29d_p	electronics trainer
VT-29E	vt29e	vt-29e	
VT-29E	vt29e_long	vt-29e_l	long nose
<i>ET-29D</i>	<i>For ET-29D variants use the t-29d.mdl file</i>		

Notam: mdl-files with door configuration C & D only will show a moving door in the port side rear fuselage

VIRTUAL BIRDS FACTORY

Appendix B: Convair Livery Guide (Extract)

(Tom Gibson, Calclassic.com)

Guide to adding new liveries to the CV-240 VBF Base Packs

(Last update 08/2010 by Tom Gibson for VBF)

These are the known liveries available on the web and into which Base Pack they should be placed. Many of these are guesses, since that type of information is not typically available (door configurations in parentheses).

List of Door Configurations

Version A: integral stairway starboard side front fuselage, service door portside rear

Version B: ventral staircase lower rear fuselage

Version C: cabin door portside rear fuselage, service door front portside

Version D: cabindoor portside rear fuselage, service door starboard side front

CV-240 CA-18 Base Pack

Aerolineas Argentinas	(A)
Alaska	(A, B)
American	(A)
Central	(A)
Continental	(A)
Kenair	(A)
KLM	(C)
Linee Aeree Italiane	(C)
Mid-Continent	(C)
Mohawk	(A)
Ozark	(A, C)
Pakistan International	(B)
Swiss Air	(D)
Texas International	(A)
Trans Australia	(B)
Transocean	(C, D)
Trans Texas	(A)

CV-240 CB16 Base Pack

Air Tahoma	(A)
Northeast	(A)
Pan American	(C)
Rhoades	(A)
Western	(B)

CV-240 VBF military Base Pack

US Air Force	(T-29x/C-131A)
US Coast Guard	(C-131A)