GRUMMAN F9F
OPERATIONS MANUAL

Grumman F9F-5 "Panther" Fighter and Photo Reconnaissance versions.

AEROPLANE HEAVEN

Congratulations on becoming an owner of a piece of Heaven*.

Installation
There are two ways to install your software.

1.   Double-click on the self installing archive(s) and follow the prompts. The installers are thoroughly pre-tested and built specifically for Aeroplane Heaven installations. Just double click on the installers and they will place everything where it should go.

2.   If you'd prefer to install the software manually, then unzip the 'Manual ZIPS' to a folder of your choice and distribute the folder contents yourself.

IF YOU ARE UNSURE OR NEW TO INSTALLING EXPANSIONS FOR YOUR SIMULATORS, WE STRONGLY RECOMMEND THAT YOU USE THE AUTO-INSTALLERS

GAUGES

For maximum reliability, we have designed the instrument panels to use Microsoft standard gauges and a selection of other third party, free-ware gauges. Your programme should already have many of these gauges installed. In addition, we have included a set of gauges for both aircraft types and these should be unzipped to your simulator GAUGES folder.

EFFECTS

There are special effects for both CFS2 and FS2002. Please make sure you unzip the additional EFFECTS.ZIP to the EFFECTS folder of your simulator, otherwise you will not see the special effects.

CONTROLS
You will need to configure the key commands in you simulator to activate the various features of this aeroplane. PLease read the relevant section carefully before attempting to fly.

* aeroplaneheaven.com

In the photo-reconnaissance version, no less than 14 cameras were carried in three compartments beneath the extending nose cone and lift up cover. Strip film, reconnaissance high resolution and motion picture cameras were carried in these bays.

Panthers served with many US NAVY and MARINES units and equipped the famous Blue Angels aerobatics team. So evocative of this early jet era, the Grumman F9F-5 Panther will provide an exciting challenge for any pilot!

The Models
The version modelled in this Aeroplane Heaven release is based on the F9F-5 with both fighter and unarmed, photo-reconnaissance versions covered. Included in the pack are three different paint schemes for the fighter and a colourful stars and stripes scheme for the PR bird. It is hoped that more schemes will be added as time allows. These schemes are accurate replicas of actual Marines and Navy units
operational at the time of the Korean conflict and show off the curves and lines of this attractive aeroplane to the full.

The first Grumman F9F was a design for four engines. Due to complexities with early jet engine development, the design was soon dropped in favour of a single engine version. On November 21, 1947, the very first of a long line of F9Fs took to the air.

Designed for aluminium materials and ease of maintenance, the F9F series enjoyed a long, successful career with both the US NAVY and Marine Corps. The F9F-5,
the subject of your model, was built in the greatest numbers and is best remembered for its roles played in the Korean War, flying from both carrier and land-based fields. With a wingspan (including the permanent wing-tanks) of some 37 feet, the F9F was a nimble and fast performer for its day. Powered by Pratt & Witney J48 P6 or P8 jet engines of 7,000 + lbs of thrust, these little Grumman fighters delighted the 'jet jockies' of the period with their performance. Armed with fixed 20mm cannons in the nose and a variety of weaponry carried under the wings, the "Panther" could deliver a hefty knock-out blow and was formidable in ground attack roles.

The first F9F-5s entered combat in Korea in October of 1952, serving aboard the USS Oriskany (CVA-34) with the reserve squadrons VF-781 and VF-783. They were also flown by VF-51, VF-52, VF-53, VF-111, VF-153, and VF-154 during the latter stages of the Korean War. They provided the backbone of the Navy's carrier-based jet-powered ground attack capability during the last year of the Korean War.

Grumman F9F-5 Operations Manual

The purpose of this manual is to assist you in extracting the maximum satisfaction from owning and flying the F9F-5 .

This aeroplane is a delight to fly. If you set your simulator controls for maximum realism, you will enjoy the self-same experience that the real pilots had.

All simulator controls work as per normal including autostart for the engines. You can, of course, go right ahead and use your own settings and controller assignments.

However, should you wish to start the aeroplane manually, we've included a short checklist which may be of assistance.

If you are flying in FS2002, of course weapons are denied you but the model is equipped with a complete set of dummy rockets and drop tanks for full effect. The reflective surfaces of the airframe respond best in cloudy or late-day/sunset conditions and the sight of the F9F-5 at speed over a stormy grey sea is breathtaking.
In FS2002, the Panther is fitted with a full lighting set for night work and the 3D Virtual Cockpit is also lit. Specially designed exhaust 'flame' adds to the excitement at night or day if you leave the lights on.

F9F-5 Specification
Engine: Pratt & Whitney J48-P-4/P-6A turbojet
            rated at 6250 lb.s.t.

Performance: Maximum speed 604 mph at sea level,
            579 mph at 5000 feet, 543 mph at 35,000 feet.
            Cruising speed 481 mph. Stalling speed 132 mph .
            Initial climb rate 5090 feet per minute.

Service ceiling: 42,800 feet.

Range: 1300 miles.

Dimensions:
Wingspan: 38 feet 0 inches
Length: 38 feet 10 1/2 inches
Height: 12 feet 4 inches
Wing area: 250 square feet.
Weights: 10,147 pounds empty, 17,766 pounds gross, 18,721 pounds maximum
            takeoff.
Internal fuel capacity: 1003 US gallons.
Armament: Four 20-mm cannon in the nose.
            Eight underwing hardpoints which could accommodate a total under
            wing load of up to 3465 pounds of bombs and rockets.

1.

2.

3.

THE DIFFERENT PAINT SCHEMES

You'll be able to fly the Grumman F9F-5 in a number of different guises. In fact, four in all with more to come!

These schemes are:

1) US Marines VMF 224
2) US Marines VMF 311
3) US NAVY fighter
4) US MARINES Photo-recon VMCJ 3

AEROPLANE HEAVEN

4.

PANEL CONFIGURATIONS

The fighter and photoreconnaissance instrument panels are very different.

The PR version is dominated by the SLR camera viewfinder in its centre top.

FS2002 flyers can call up this special "Viewfinder" and use it to take "pictures' as they pass over targets and landmarks beneath the aeroplane.

Both versions have engine controls, radio and navigation instruments windows that can be called up.

N.B. The engine controls are currently based on the generic prop-fighter controls and as such are labelled for prop operations.

A major upgrade (to follow) will contain a new panel for this feature

CONFIGURING YOUR SIMULATOR
FS2002
In the commands control panel,

Event	Keyboard
Close cowl flaps (in increments)	CTRL + SHIF
Decrease autobrake control	
Decrease Concorde nose/visor angle	
Decrease helo governor beep	
Extend Concorde nose & visor fully	Caps Lock
Generator/Alternator switch on/off	
Increase autobrake control	

Set the "extend CONCORDE VISOR fully" to "CAPS LOCK" key

Event	Keyboard
Propeller de-ice on/off	
Release all drop tanks	
Release drop tank 1	
Release drop tank 2	
Retract Concorde nose & visor fully	8
Select exit	SHIFT + E
Set parking brake	CTRL + .

Set the "retract CONCORDE VISOR fully" to "8" key

Exit Flight Simulator	CTRL + C
Exit Flight Simulator immediately	CTRL + Brea
Extend Concorde nose & visor fully	Caps Lock
Extend flaps/Concorde nose & visor (in incr	F7
Extend flaps/Concorde nose & visor fully	F8
Extend/Retract spoilers/airbrakes	/

Set the "SPOILERS" to "/" key

Also, make sure the "LOOK DOWN" view feature is set to "shift+(number pad)5" (this is important as it operates the "camera" feature of the Photo-recon version

Retract Concorde nose & visor fully	8
Select exit	SHIFT + E
Set parking brake	CTRL + .
Smoke system on/off	I
Structural de-ice on/off	
Tail hook up/down	
Wing fold/unfold	Tab

Set the "WINGFOLD" to "TAB" key

Event	Keyboard
Sync flight director pitch	
Tail hook up/down	SHIFT + H
Toggle Chase View	CTRL + Q
Toggle Metric/English tooltips	
Total brake failure on/off	
Track mode on/off	CTRL + SHIF

Set the "TAILHOOK" to "shift+h" keys

CFS2

In the key commands control panel,

Set "Extend Concorde nose and visor fully" to "Caps Lock " key.

Set "Retract concorde nose & visor fully" to " ' " key.

Set "Toggle wing fold" to " shift+w " keys.

Set "Extend/retract spoilers/airbrakes" to " D " key.
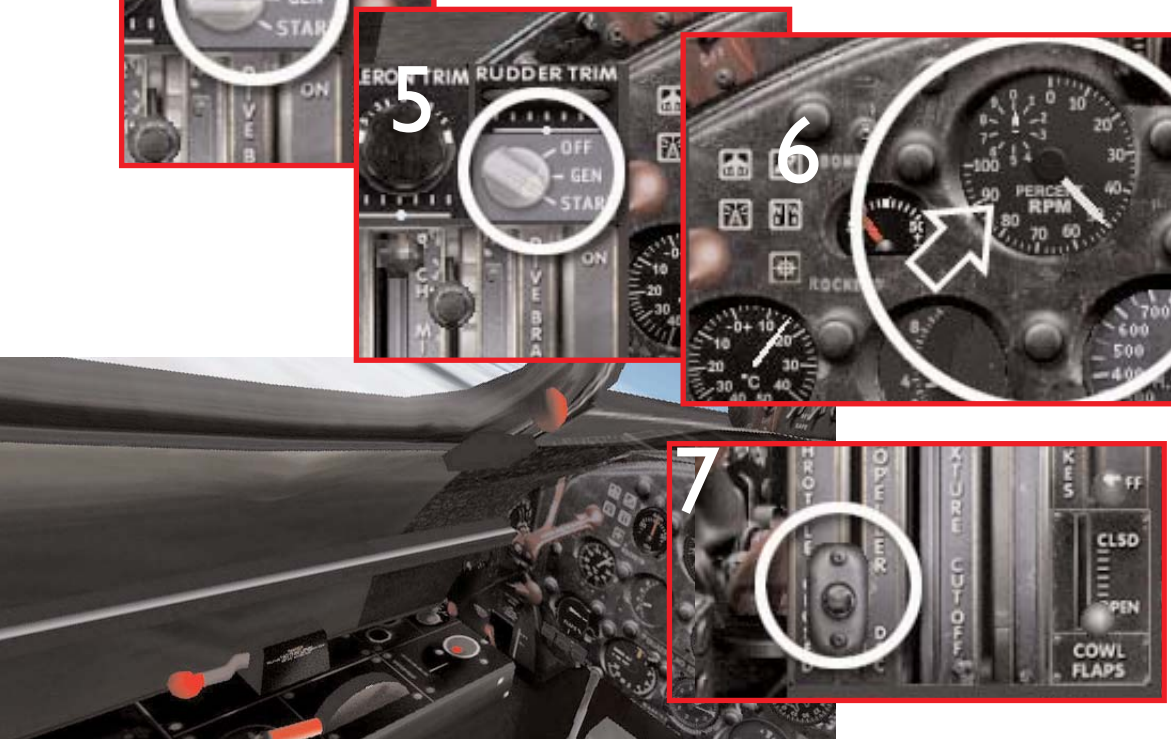
Throttle panel

3

2

4

5

6

7

THE F9F-5 VIRTUAL COCKPIT "THE DEN"

Flying the Grumman F9F-5

START UP

To start up simply use the simulator shortcut keystrokes or if you prefer a manual start follow this checklist:

1) Parkbrakes on.
2) Master battery switch on.
3) Mixture lever to full (top the quadrant).
4) Turn the generator control to "GEN".
5) The press and hold the gen switch on START.
6) Wait for the engine to wind up and the sound to change, watching needles as the power comes on line.

RELEASE the START switch.

7) Allow all instruments to settle. Ensure throttle is closed
8) Allow warm up.

Wing folding sequence

THUMBS UP!

Everything hanging out!

Nearly there!

Whilst warming the engine take a visual check around the aeroplane. Check all flying controls visually.

Also check out the visual features:

MAJOR CONTROLS	FS2002	CFS2
CANOPY	shift+E	shift +C
NOSECONE	CapsLock	CapsLock
CAMERA BAY	shift+E +2	(opens with nosecone)
SPOILERS	/ key	D key
TAILHOOK		SHIFT+ H

TAKEOFF

With park brakes on, open the throttle fully.

Once full power is achieved, release the parkbrake.

You will notice a slowish start then a sudden acceleration down the strip as the power begins to kick in. Watch your speed!

The Panther will 'unstick' at around 130 knots clean. With half flaps you can lower that to around 110knots or with full flaps a little lower.

After lift-off, raise the gear and retract any flaps.

DO NOT be tempted to raise the nose to high or she WILL stall.
Just a nice, smooth gentle climb is what we want. Speed will pick up quite quickly and you will be able to bear away and climb as your speed reaches 200 knots.

Climb out with the throttle backed a little and the aeroplane in a gentle climb angle.

Switch to outside views and turn on the lights to view the exhaust and smoke effects! (FS2002 only)

At all times watch your speed. She can be overpowered quite easily and the OVERSPEED warning will sound. If this happens, back off the throttle and apply speedbraking. The nose will lift quite sharply so catch her before a stall.

APPROACH and LAND

If you are attempting a carrier landing, make a standard pattern pass quite close to the ship(1.) and then round out by reducing throttle in a climbing turn to bring the deck into view centred in your screen(2.). Reduce speed to 130 knots and feed in half flaps. As speed drops away lower the gear and the tailhook. Watch your speed, it should now be around 100knots. Drop full flaps and in a slight nose up attitude, approach the carrier in a nice, smooth gliding descent(3.). Watch for the LO but ignore his speed warnings. (he doesn't know you're a jet!) Try to get to the deck threshold at around 90 knots and cut power as you are over the wires(4.). The idea here is to try and 'fly' your ship onto the deck and grab the wire with your hook. Keep her nose up and be prepared for quite a violent landing! DO NOT USE THE SPEED BRAKES TO SLOW DOWN. If you've done it right, you'll be pulled up by the wire. In any case, apply full braking on touch down for good measure(5.). If you miss, immediately hit full power and she should bear away under full flaps. Raise to half flaps and try again at a much slower approach. It's not easy but you will get it in the end and the feeling is immensely satisfying! Enjoy the moment to the full by shutting down (mixture to shutoff/idle or control/shift/F1) opening the nose for servicing and open the canopy(6.). The pilot will signal the crew with a thumbs up.
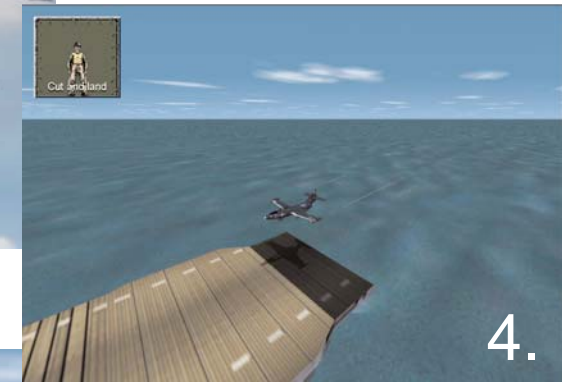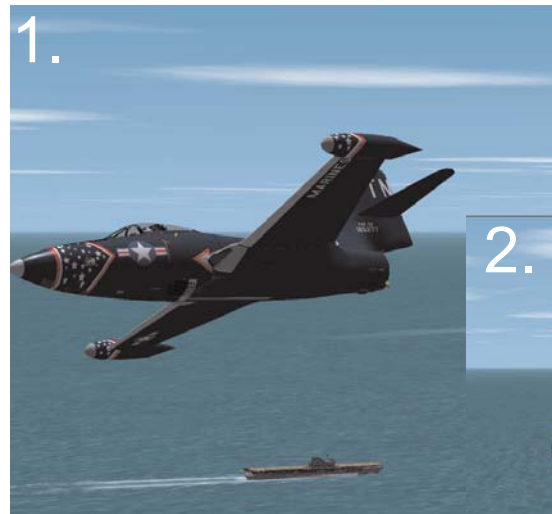
Landing at a field is slightly less hectic but at around 100knots and full flaps you should try and 'grease' her in for a perfect nose high, no-hop landing. Let the speed and the nose drop before braking to much. Raise flaps for a clean taxi arrival and avoid a blasting from the CO for dirty flying!
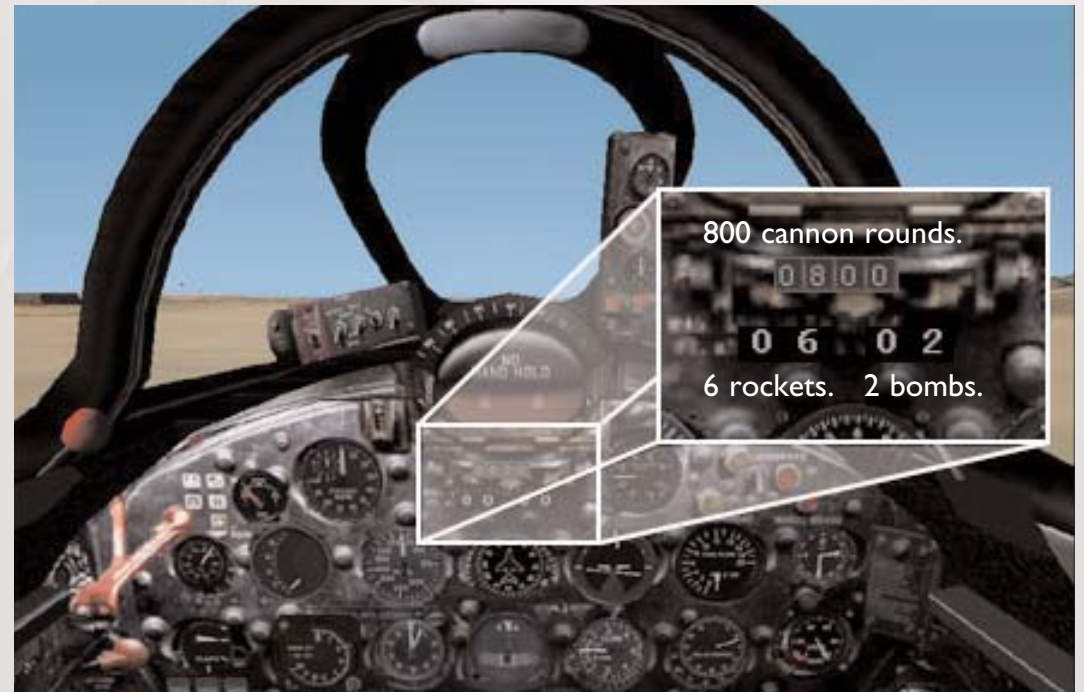

"greasing 'er in"!

GENTLY DOES IT!

CFS2

CFS2 flyers can load up with a variety of weapons. We have included a weapons pack which is made up of a number of weapons designed by freeware designers. These include rockets, bombs and Napalm tanks. Please ensure that you have installed these weapons before arming your F9F.

800 cannon rounds.

6 rockets.   2 bombs.

Close up detail of the Virtual cockpit for CFS2 showing the weapons counters.

CAMERA OPERATIONS (Photo-reconnaissance model FS2002 ONLY)

If you are flying the Panther in FS2002, you can take advantage of the special 'camera' function fitted to the Photo-recon version. Here's how it works:

In straight and level flight and some miles out from your 'target' switch to Camera mode by using the shift and number pad 5 keys. Hit the numberpad5 key for a quick look, or whilst holding down the 5key use the shift key to 'lock' it in, You should see a special 'close-up' of the viewfinder panel and the terrain below.
You can check your aeroplane's attitude by using the numpad0 key to return you to the main panel instruments.

Precision camera equipment

ADDS A NEW MEANING TO THE SAYING CAN I BORROW THE CAMERA!

Cockpit view of the photo-recon version.

As you fly over the target, just hit the print screen key on your key board or whatever proprietary screenshot programme keys you use, to record the image.

For forward camera work, select the "Camera" panel from the drop down menu options and turn off the main panel and instruments. We have included a vertical speed gauge and heading indicator to assist with flying in this mode.

Just aim your aircraft at the target and use the screen shot key for forward recon work or hit the numpad5 key for overhead shots.

When you finally open the screenshot (s) you'll see a perfect rendition of your 'target' framed in the camera viewfinder.

We hope you will enjoy this Grumman F9F Panther production and derive many hours of rewarding flying.

A complete upgrade pack will follow with more animations, 'breaking damaged parts' for CFS2 and a totally new model to fly in CFS3. This pack will be free to all owners and you will be advised when it is available for download.