COMBAT·AIR·PATROL 2

FLIGHT MANUAL

Contents

Purchasing CAP2

CAP2 is a digital download from the 'Steam' store. Once downloaded and installed, the Steam platform will keep your CAP2 install updated.

If you don't yet have a Steam account, create one at https://store.steampowered.com/

You can purchase CAP2 in either of the following ways:

1. From our website
   a. Buy a license key from our website here: https://combatairpatrol2.com/buy-now
   b. Redeem the license in the Steam Store here: https://store.steampowered.com/account/registerkey

2. From the Steam Store
   a. Log into your Steam account
   b. Search 'Combat Air Patrol 2'
   c. Click 'Buy'

Installation

Using the Steam client, download the default branch of CAP2

Steam Release Channels

CAP2 utilises three Steam release channels for game updates. After purchasing CAP2 you start in the default channel for game updates. If you wish to switch to another channel, follow the guide below.

You can select a release channel by:

right clicking on CAP2 in your Steam Library

select 'Properties'

Select the BETAS tab

Select one of the following entries in the beta dropdown

NONE - Opt out of all beta programs (Default Channel)

This is the default stable build of CAP2 which is updated as the Beta build completes development milestones.

beta - Faster release branch (Beta Channel)

This is the most active build of CAP2 which introduces new features on a regular basis.

vrbeta - (VR Beta Channel)

This is a build which receives VR specific updates together with standard Beta updates.

Getting Started

From the Steam client, run CAP2.

If you have a VR headset you will be given the option to run in Steam VR mode or Oculus VR mode. If you have an Oculus Rift, we recommend using the Oculus native mode for better performance.

The first time CAP2 runs it will start in windowed mode.

We recommend you go through each of the following steps to setup CAP2 on your PC.

1. Set your video options
2. Set your video lighting levels
3. Setup your controllers

Once your controllers are setup let's get flying! From the main menu select QuickStart, Free Flight or Training to get into the cockpit and begin to familiarise yourself with the AV8B-2.
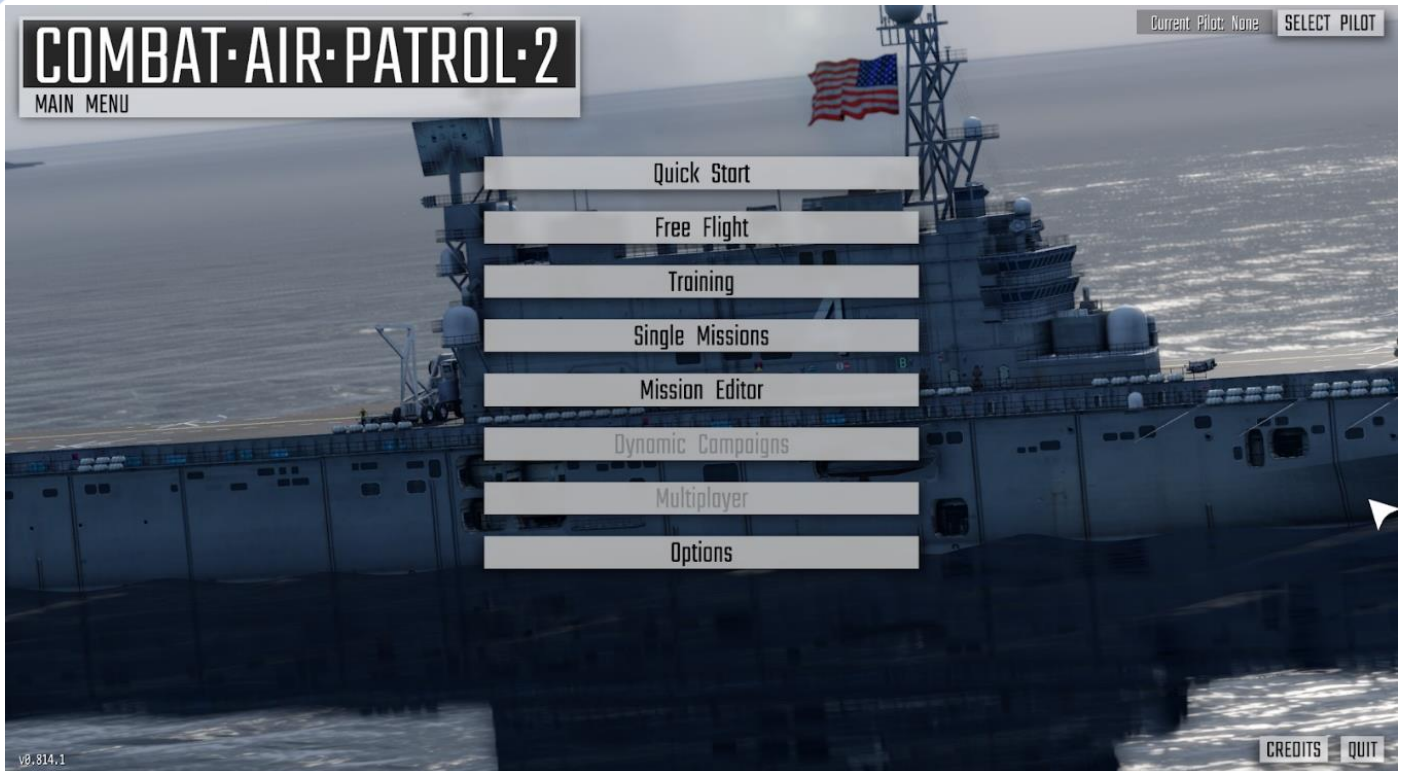
Main Menu

The main menu contains the following options:

- Quick Start
- Free Flight
- Training
- Single Missions
- Mission Editor
- Dynamic Campaigns
- Multiplayer
- Options

Each sub menu is detailed below

Current Pilot: None

QUICK START
MISSION SELECT

STOVL TAKEOFF **STOVL LANDING** **INFLIGHT REFUELING** **DOGFIGHT**

BACK

Menu: QuickStart

Fly some easy to get into missions.

STOVL Take-off

You start on the deck of LHA-4 USS Nassau near MCAS Kaneohe Bay, Hawaii. Wait for your wingman to take off then you're next. Set flaps to VTOL, nozzles to 30deg, close the canopy. Throttle up to 30%, check engine is nominal, release the brakes and throttle up to 100%. Once you have a positive climb select gear up and flaps to auto

Vertical Landing

You start lined up on approach to LHA-4 USS Nassau near MCAS Kaneohe Bay, Hawaii. Transition to vertical flight by first setting nozzles to 60°. Use your airbrake to reduce speed. As your speed drops you transition from wing borne to jet borne flight. Set nozzles to 90°. If you want to fly with vertical flight aids, enable them now (default mapping Key V).

Vertical Flight Aids

- Off

You are fully in control of engine, nozzles and attitude. This is extremely difficult!

- Medium

You are in control of nozzles and attitude. Throttle position is now a demand for vertical speed from +5m$_s$ to -5m$_s$.

- High

You are in control of nozzle angle. Pitch and Roll inputs are now a demand for forward and lateral speed. Centring the stick will bring the aircraft to a stop. Throttle position is a demand for vertical speed from +5m$_s$ to -5m$_s$.

InFlight Refuelling

In this mission you attempt an inflight refuel with a KC767 over MCAS Yuma.

DogFight

In this mission you defend the fleet from an ERF low level surprise attack.

Menu: Free Flight

There are four Free Flight regions which each contain several areas:

Persian Gulf

Khasab
Start in flight heading towards the friendly airbase Khasab in Northern Oman

Northern Oman
Start in flight high above Northern Oman

Straits
Start at 20,000ft over the Straits of Hormuz

Bandar Abbas
Start at 20,000ft over the Iranian military port Bandar Abbas

Abu Musa
Start at the heavily fortified island Abu Musa

Arizona

Yuma Apron
You start on the apron at MCAS Yuma

Yuma Take-off
You start on the runway at MCAS Yuma

Yuma Approach
You start lined up for approach to MCAS Yuma

BMGR West
You start over the western edge of 'Barry M. Goldwater Range'

BMGR East
You start over the western edge of 'Barry M. Goldwater Range'

Chocolate Mountain Range
You start over 'Chocolate Mountain Range' in Arizona, USA

Hawaii

Kaneohe Bay Apron
You start on the apron at MCAS Kaneohe Bay

Kaneohe Bay Runway
You start on the runway at MCAS Kaneohe Bay

Kaneohe Bay Approach
You start lined up for approach to MCAS Kaneohe Bay

Honolulu
You start above the city of Honolulu, Hawaii

UK

Mach Loop

The 'Mach Loop', named after the Machynlleth Valley it traverses, is the foremost low-level flight training area in the UK. You enter the loop from one of the three following locations:

East

You start at low level heading west over the village of Bala

North

You start at low level heading south east over the town of Caernarfon

West

You start at medium level over the Irish Sea to the west of the Machynlleth valley

Lake District

Fly a low-level route through the rugged terrain of the UK's Lake District.

HMS Queen Elizabeth

This is the first of the Royal Navy new class of super carrier. Designed to operate VSTOL aircraft from her ski jump equipped deck.

Deck

Start from the deck and experience a ski jump take-off.

Fly-By

Overfly the Queen Elizabeth

Menu: Training

Pick from a selection of flight training missions then progress to weapon training missions.

Flight Training

Take-off

> Practice carrier take-offs.

Landing

> Practice carrier vertical landings

Basic Manoeuvring

> Fly with your flight leader, practice flight navigation

Wingman

Weapons Training

Air to Air

Guns

> Attack F4 drones in flight near MCAS Kaneohe Bay

AIM-9

> Using AIM-9 Sidewinder missiles engage manoeuvring F4 drones near MCAS Kaneohe Bay

AIM-120

> Using AIM-120 AMRAAM missiles engage manoeuvring F4 drones at long range near MCAS Kaneohe Bay

Air to Ground

Guns

> Practice ground strafing attacks using your GAU-12 Equalizer at the Hawaiian target range.

MK-82,83,84 Bombs

> Practice delivery of MK-82,83,84 free fall slick bombs. Roll in at 12,000ft, get the CCIP on the target and release at 8000ft. Release chaff then climb above 10,000ft to escape simulated AAA and IR Missile threats.

AGM-84

Use the AGM-84 Harpoon anti-ship missile to engage target ships off the coast of Hawaii.

AGM-88

Employ the AGM-88 HARM anti-radiation missile against dummy radar emitters on the Hawaiian target range.

AGM-65

Practice using the AGM-65 Maverick against targets within the Hawaiian target range.

LAU Rockets

Practice low level attacks with the LAU 5003 rocket pod with 19x CRV7 rockets per pod.

Menu: Single Missions

There are 4 types of single mission:

- CAP2 Missions

  These are 10 missions included with CAP2

- User Missions

  Missions created by you using the mission editor

- Steam Workshop

  Missions created by other players downloaded from the Steam Workshop

- Challenges

 Score or time-based missions with an associated Steam leader board

Select the type of mission then choose a specific mission. Click 'Start Mission' to view mission details then pre-flight options.

Main Menu: Mission Editor

The CAP2 mission editor enables you to create missions in each of the four regions included with CAP2. Missions created within the mission editor can later be selected from Main Menu: Missions: UserMissions

Mission Editor Display Overview
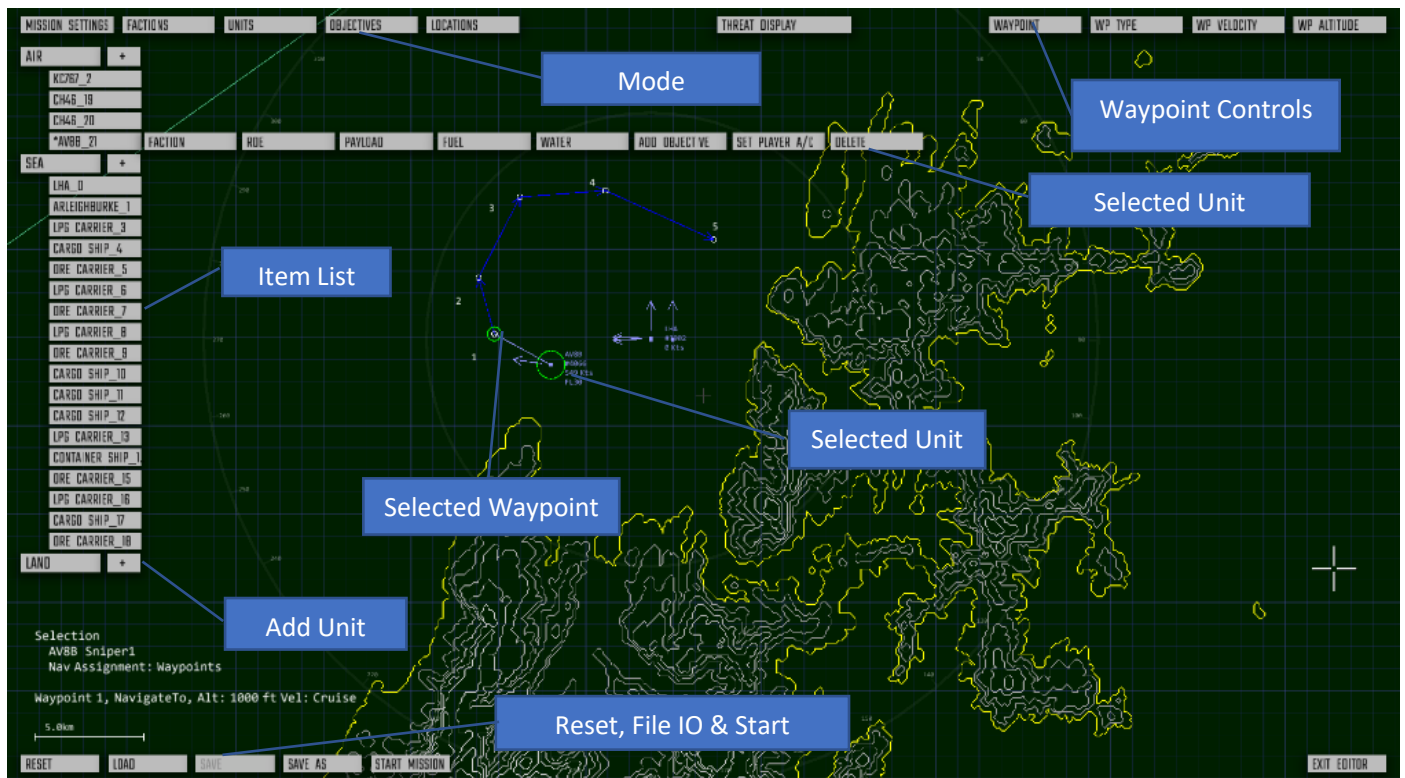
map navigation

Click and drag on an empty area of the map to adjust map position

Use the mouse wheel to zoom in/out

Item Selection and Manipulation

Selectable items include Units, waypoint nodes and locations.

selecting an item is done with the left mouse button. Zoom in or out with mouse wheel to easily pick an item from a group.

When an item is selected a green circle will be displayed around it. After selection the item can be clicked and dragged to reposition it. To change its heading click and drag its heading arrow which is now 'live'

Units

Left Click on a unit or one of a unit's waypoints to select it. You can also click on a unit from the unit list to select and centre the view.

Left Click on a unit and drag to reposition it. A unit may be positioned on a carrier if the carrier has available attach points. Zoom in to position a unit onto a specific attach point.

Left Click and drag on a selected unit heading symbol to adjust heading.

Shift Drag a unit to adjust its initial velocity.

Control Drag an aerial unit to adjust its initial altitude.

Waypoints

Left Click on a waypoint node to select it and its associated unit.

Left Click & drag to move the waypoint node.

Control Drag a waypoint node to adjust its altitude

Press Delete key to delete a waypoint node

Locations

Left Click on a location centre to select it.

Left Click & drag to move the location.

Shift Drag to adjust the location radius.

Control Drag to adjust the location altitude

Main Options are located top left of the screen. They include mission settings, faction settings and three mode selectors; Units, Objectives and Locations

| MISSION SETTINGS | FACTIONS | UNITS | OBJECTIVES | LOCATIONS |

Mission Settings

The following mission text can be entered by clicking the relevant button

Mission Title

Mission Location

Mission Description

Mission Notes

Mission Completion Criteria

Mission Region

Select the region for your mission. Changing the region resets the mission state.

Extra regions will be made available as downloadable content. After purchasing a region, it will become selectable here.

Environment Options

Select the atmosphere state (clear, hazy etc)

Select Cloud levels, wind speed and turbulence

Start Time

Select the default mission start time

Faction Settings

There are 3 factions. They are:

Blue - Friendly combative forces

Red - Adversary combative forces

Green - Civilian non combative vehicles, ships and aircraft

Each unit added to the mission will belong to a faction. This can be changed via the unit settings.

Factions can be renamed within the Factions menu.

Each faction has an R.O.E. (Rule Of Engagement) which controls how units within that faction will react to opposing faction units.

Item Lists

Clicking the buttons labelled Units, Objectives or Locations will show a list of their items to the left of the screen. Also clicking an on-screen unit or location will display their items list and select the relevant item.
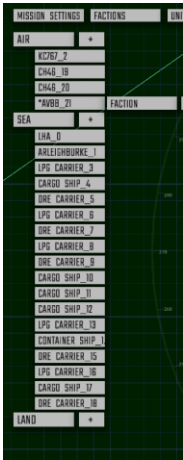
Units Item List

This list shows all units added to the current mission. Units are grouped into 3 types; Air, Land and Sea.

Adding a unit

To add a class of unit, click the + button next to each unit class then click on a specific unit type. It will be added to the centre of the display. The display centre has a cross hair symbol to aid unit placement.

Selecting a unit

In addition to directly clicking on a unit in the map you can select a unit by clicking on its entry in the unit list.

Unit Options

After selection, Unit specific options are displayed. These include:

Faction

Change the unit faction

ROE

Override the unit's faction ROE. Rules of Engagement control how forces react to adversaries and whether battle is initiated. ROE is set at faction level and can be overridden on a unit by unit basis.

Objective

Add an objective to this unit such as protect this unit, attack this unit. To edit the objective, select Objectives from the top left buttons

Delete

To delete this unit, click this button then confirm

Selecting an AV8B adds the following options

Pilot

Choose a pilot from the pool for this aircraft

Payload

Choose a pre-defined payload for this aircraft

Fuel

Pick a fuel level for this aircraft

Water

Pick a water level

Set Player AC

Selecting this identifies which plane the player will fly. The unit name will start with an asterisk (*) to show the player aircraft
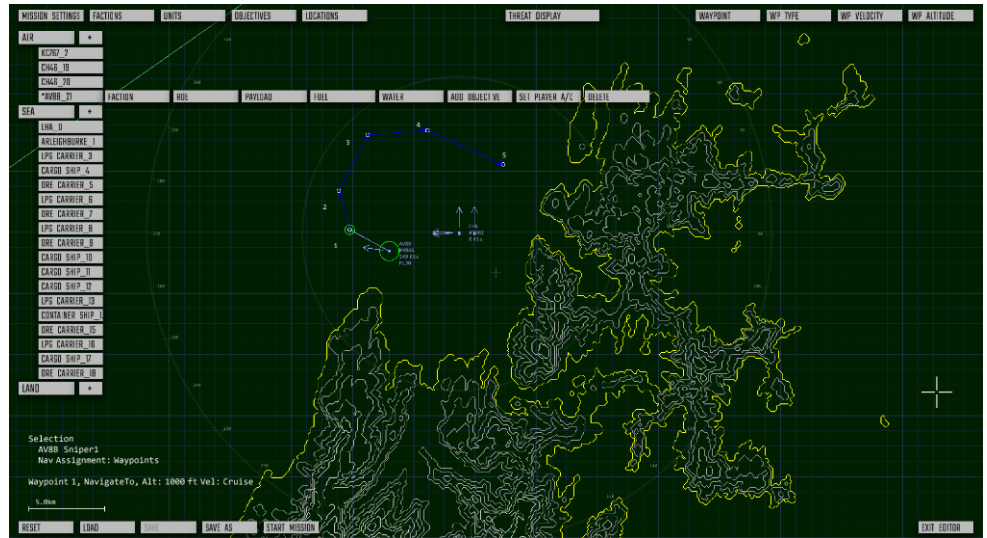

Unit Editing

After a unit is selected you can:

Alter a unit's heading by clicking and dragging its direction arrow.

Change a unit's position by selecting it and dragging with the left mouse button held.

Change an air unit altitude by pressing CTRL + left mouse and moving the mouse vertically

Unit Waypoints

Selecting an onscreen waypoint will also select the unit that has the waypoint assigned to it.

Drag the waypoint with the mouse to reposition it.

Alter the waypoint altitude by CTRL dragging it vertically.

Alter the waypoint velocity by SHFT dragging it vertically.

Change a waypoint type by selecting the waypoint type UI dropdown at the top right of the screen.

Locations Items List

Click the button labelled 'Locations' or select an onscreen location to display the locations list.

Locations are points within the current region with an altitude and radius. A location can have an objective attached to it such as fly to this location, attack this location or defend this location.

To add a location:

Position the cross hair where you want to create the location

Click 'LOCATION' on top left menu

Click '+' to add a new location

To edit a location

Click a location in the map

Edit the location name by clicking on its entry in list

Move the location by dragging it around the map

Adjust the location altitude CTRL + dragging the location up and down the display

Adjust the location radius by SHFT + dragging the location up and down the display

Objectives Items List

Click the button labelled 'Objectives' to display the Objectives list.

Each mission objective is required to be completed by the player.

There are the following mission objective classes:

1. Avionics/Flight controls
    a. These are suitable for training missions where the player must complete actions such as 'close canopy' or release brakes.
2. Flight Path
    a. The player must follow his waypoint or fly to predefined locations
3. Attack units
4. Attack locations
    a. The player must damage or destroy specific units or impact weapons within predefined locations
5. Protect units
6. Protect locations
    a. The player must protect specific units or prevent impacts within specific locations

The mission will be complete once all objectives are complete.

The mission will be failed if an objective such as 'protect unit' or 'protect location' is not complete.

Objective sequences

Objective sequences ensure objectives are evaluated in a specific order.

Objectives in sequence 0 are constantly evaluated.

New objectives are created in sequence 0.

Multiple objectives can share a sequence index.

At mission start, in addition to sequence 0, objectives in sequence 1 are also evaluated. Once all objectives in sequence 1 are complete, evaluation will start for sequence 2 and so on.

If you do not require objective sequencing, set all objectives to sequence 0.

Unit Types

Air

AV8B

CH46

SH60

F4

F4 Drone

KC767

Mig21

Sea

LHA – Tarawa Class

QE Class Carrier

Oliver Hazard Perry Frigate

Arleigh Burke Destroyer

Type 45 Destroyer

DDG-1000 Zumwalt

Gunboat

Patrol Boat #1, #2

Submarine

Mini Submarine

Tanker

Cargo Ship

Container Ship

LPG Carrier

Ore Carrier

Land

ZSU-23 Mobile AAA gun

SA-2 SAM

Hawk SAM

FlatFace Mobile Radar

SpoonRest Mobile Radar

SilkWorm Anti Shipping Missile Launcher

Main Menu: Campaign

Currently Disabled

This screen allows you to start or continue a campaign. You can have multiple active campaigns.

Main Menu: Multiplayer

Currently Disabled

Main Menu: Options

The Options Menu contains the following sub menu's

- Controls
- Game
- Graphics
- Audio
- VR
- Realism

This menu can also be displayed in game by pressing [ESC]

Options: Controls

There are 8 sub menus' leading to groups of controls sorted by the following categories

1. Flight
2. Engine
3. Weapons
4. Avionics #1
5. Avionics #2
6. Radio
7. View
8. Misc

Within each sub menu is a separate class of controls

For a detailed description of each control, go to the section 'Control Reference'

The final sub menu is 'SET DEFAULTS'. Select this menu to set default controls for Keyboard, GamePad or FlightStick

For a list of controls assigned for each control method, see Default Control Mappings'

Mapping a Control

You can map any game control to a key press, joystick/throttle/pedals (button, axis, slider or pov hat), xbox controller (button, axis) or mouse button.

The procedure to map a control is:

1. Select the menu page for control you wish to map. ie for Pitch Up/Down select Controls->Flight.
2. Select the control from the list. ie for Pitch Up/Down select Pitch.
3. Select the control again to begin mapping it.

4. Press or move the required input. ie for Pitch Up/Down move your flight stick forward. The change in state is detected and the control is mapped. To cancel the mapping state press 'ESC'.

You do not need to save your changes as the configuration is saved whenever an adjustment is made. To revert to the configuration used when your current CAP2 session was started, select 'Revert'.

Axis Sensitivity

You can adjust the sensitivity of an axis input by first selecting it in the control list then clicking on its response curve modifier at the bottom of the screen. The modifier cycles between Linear, Exp1, Exp2, Exp3, Exp4, Exp5. Each step progressively flattens the response around the axis centre.

Axis Null Zone

You can adjust the null zone of an axis input by first selecting it in the control list then clicking on Null Zone + or Null Zone - at the bottom of the screen. The null zone is displayed as a percentage.

Re-Scan Devices

Select 'Re-Scan Devices' if you have connected a new device since starting CAP2.

Options: Game

These menu options allow you to change the following 'In-Game' options:

- Cockpit FOV
  - Adjust the cockpit view width in degrees. Typical values are in the range 80°-90°
- Cockpit Transition
  - Enable or disable a camera animation when switching to cockpit view.
- Cockpit View Levelling
  - Set a rate of 'auto head levelling' when in cockpit view

Options: Graphics

You can adjust the video output from CAP2 to match your monitor/TV display with the following options

Display Adapter Settings

> Select to enter the Display Adapter Settings sub menu

Rendering Settings

> Select to enter the Rendering Settings sub menu

Gamma Boost

> Gamma is the primary brightness adjustment control. Decrease the Gamma value to darken shadow areas, increase it to brighten.

Brightness Boost

> Click to adjust display brightness

Contrast Boost

> Click to adjust display contrast

Saturation

> Click to adjust display saturation

Lens Flare

> Toggle drawing lens flare

Lens Particles

Toggle drawing lens particles

Options: Graphics Rendering Settings

These options adjust how CAP2 draws the environment. An LOD setting adjusts the 'Level Of Detail' of a rendering component. Higher LOD's improve visuals but use more GPU power.

Global LOD – Overall LOD. Change to set all other LODs in one step

Individual LODS

Terrain LOD – Sets terrain detail level

Terrain Distance – Terrain draw distance in km

Buildings LOD – Building detail level

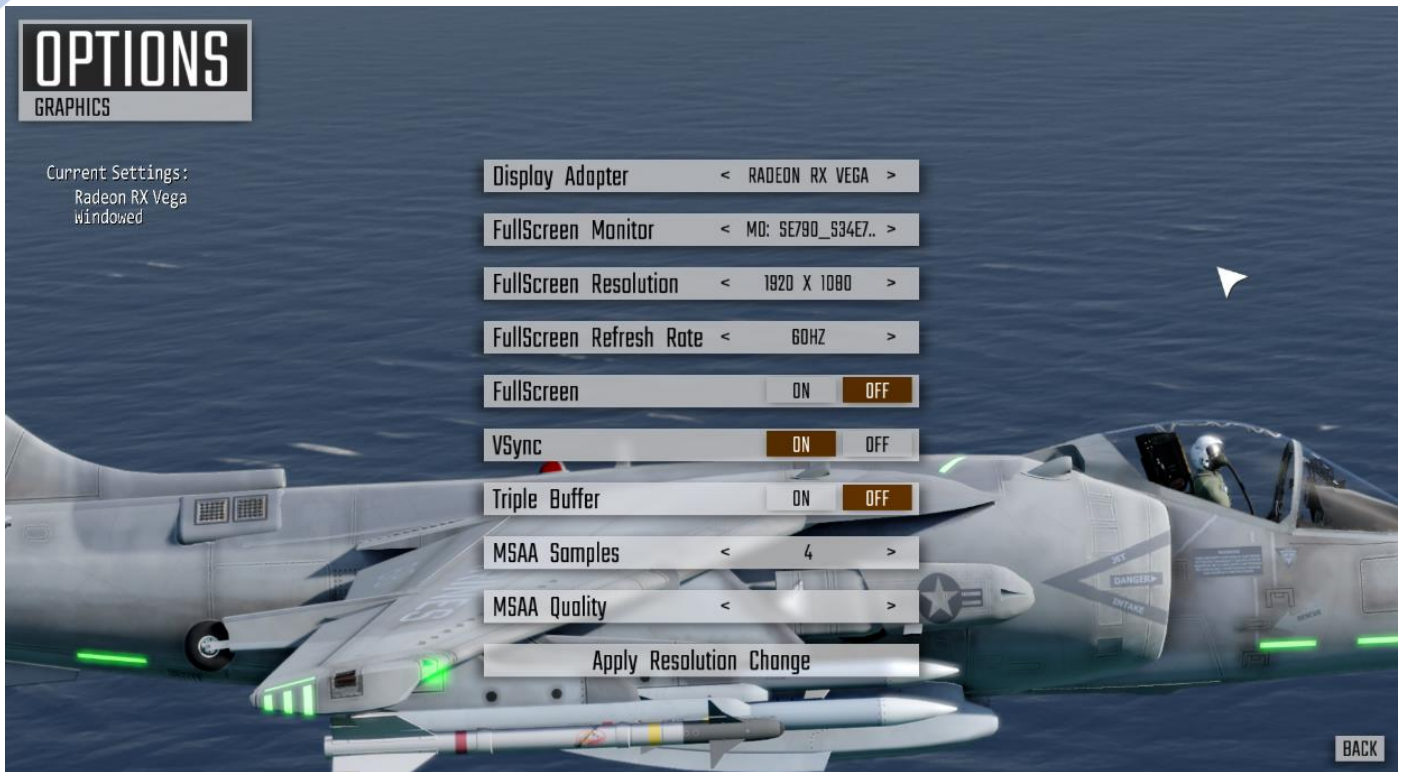Vegetation LOD – Vegetation density level

Reflections LOD – Water reflection detail level

Shadows LOD – Shadows detail level

Object LOD – Object detail level adjusted by distance

SSAO Settings – Select to adjust 'Screen Space Ambient Occlusion' settings

Depth Of Field – Toggle 'depth of field' distance blur effects

Options: Graphics Display Adapter Settings

These options let you configure how CAP2 uses your graphics processing unit (GPU)

Display Adapter – If you have more than one GPU you can select which one CAP2 will run on

Full screen mode options

Full-Screen Monitor – If you have multiple monitors select which monitor CAP2 will run on

Full-Screen Resolution – Choose a resolution for the full-screen display

Full-Screen Refresh Rate – choose a screen refresh rate. Default is 60hz

Full-Screen Mode – toggle full-screen mode on/off. Also done via Alt-Enter

V-Sync – Toggle V-Sync on/off. Prevents 'screen tearing' when on

Triple Buffer – Enable to potentially improve performance when V-Sync is enabled

MSAA Samples – Increase value to smooth edges of rendered objects. Higher values use more GPU power

Apply Resolution Change – Click this after changing screen resolution or rate when in full screen mode

Options: Audio

In this menu adjust the following volume levels

- Master Volume
- FX Volume
- Radio Volume
- Music Volume

Options: VR

This menu allows access to the following VR settings:

Cinema Mode Aspect Ratio
Changes the size and shape of the cinema mode used for non-pilot view. Choose whichever you prefer.

Mirror VR Output to Desktop
Select Yes to draw the current view to the computer desktop. This is useful to show the current view while you are not wearing the headset or for spectators to see your view. This incurs a slight performance hit so if you don't require it, disable it.

Reset Head Position
Use this option to reset the headset position. In you feel in pilot mode you are too high/low, forward/backward, left/right or rotated left/right then select this option. Sit comfortably, looking straight ahead and select. For convenience this option can be mapped to an input through the menu Settings->Controls->View.

Pixel Scaling Factor
Adjust this figure from 100% to 150% to increase the quality of the image within the headset. Increasing this figure will increase the workload on your GPU so you may experience jitter with higher settings. The updated scaling factor is applied after restarting CAP2.

VR Gamma
Adjust the gamma (brightness) setting used for VR rendering. 1.0 has darker shadow areas.

VR Saturation
Adjust the saturation (Colour Intensity) used for VR rendering.

IPD (Interpupillary Distance) is read from the headset settings (adjusted with Vive rotary knob or Rift CV1 slider).

VR Compatibility

The current implementation uses the OpenVR API to support HTC Vive and Oculus Rift headsets and a native Oculus API implementation for direct Rift support. For Rift users we recommend using the Oculus VR Mode for better performance.

Starting VR

When running CAP2 you will see three launch options:

Play Combat Air Patrol 2

Plays CAP2 in standard 2D mode

Launch Combat Air Patrol 2 in Oculus VR Mode

Plays CAP2 in VR using Oculus API (Rift & DK2 only)

Launch Combat Air Patrol 2 in Steam VR Mode

Plays CAP2 in VR using OpenVR API (HTC Vive, Rift & DK2)

Through your headset you should see a 'cinema mode' view of the start-up screens and game UI. This is how everything apart from pilot view will be displayed. If you start a mission and switch to pilot view you will see a full VR view.

The VR Beta channel will receive VR specific updates first.

Creating a Pilot

Creating a pilot allows you to save statistics between sessions of CAP2.

To create a pilot:

1. Select MainScreen->Pilot
2. Click on an empty slot
    a. if there are no free slots, select then delete an unneeded pilot
3. Enter your pilot name
4. Click 'Create'

Default Controls - Keyboard

At the simplest level you can fly using keyboard cursor keys for pitch and roll. Rudder is controlled by comma and period. Shift and cursor keys adjust trim.

The default control mappings for Keyboard are as follows

Control	Keyboard Mapping
Pitch	Cursor Up & Down
Roll	Cursor Right & Left
Yaw/Rudder	Comma & period
Throttle	PageUp & PageDown
Nozzle Angle	[&]
Gear Toggle	G
Flaps Mode Cycle	F
Canopy Open/Close	C
Brakes Toggle	B
Speed Brake Toggle	Ctrl-B
Eject	E
Autopilot Mode Cycle	A
Water Injection Mode Cycle	I
Waypoint Increment	N
View Change	V (hold for 1sec to go to pilot view)
View Cockpit	F1
View PadLock	F2

View FlyBy	F3
View Chase #1	F4
View Chase #2	F5
View Orbit	F7
Trigger	Space
Target Select	T
Weapon Select	W
Flares/Chaff Release	BackSpace
Master Mode Cycle	Tab
Objectives Toggle	O
Time Of Day +	P
Time Of Day -	Ctrl-P
Time Accelerate	U
Time Decelerate	Ctrl-U
Clouds Regenerate	Ctrl-C
Panel Lights +	J
Panel Lights -	Ctrl-J
Flood Lights +	K
Flood Lights -	Ctrl-K
HUD Intensity +	H
HUD Intensity -	Ctrl-H

Default Controls - GamePad

The default control mappings for an Xbox GamePad are based on Keyboard Defaults plus the following mappings

Control	GamePad Mapping
Pitch	Left Stick Up/Down
Roll	Left Stick Right/Left
Yaw/Rudder	Trigger Left & Right in combination
Throttle	DPad Up/Down
Nozzle Angle	DPad Left/Right
Cockpit Item Select +	Left Stick Button
View Angle	Right Stick
View Click	Right Stick Button
View Change	Y (hold for 1sec to go to pilot view)
Trigger	A
Target Select	B
Weapon Select	X
HUD Mode	Left Shoulder
Options	Right Shoulder

XBox gamepads use vibration to give feedback on game events such as firing weapons, gear state, AOA buffet etc.

Default Controls - FlightStick

The default control mappings for a DirectInput FlightStick are based on Keyboard Defaults plus the following mappings

Control	GamePad Mapping
Pitch	Stick 0 Axis 1
Roll	Stick 0 Axis 0
Yaw/Rudder	Stick 0 Axis 2
Trigger	Stick 0 Button 0

Controls Reference

Note 1: Some controls are duplicated for digital and analogue inputs e.g. digital throttle up, down and analogue throttle position. The digital inputs are assigned to keys or joystick buttons, the analogue controls to joystick/throttle slider controls. You assign/enable one or the other, not both. Avoid mapping both analogue and digital versions of related controls as the analogue control will override the digital inputs i.e. if you want to use digital throttle up/down ensure analogue throttle is unmapped. This applies to other duplicated controls such as nozzle angle.

Note 2: Some controls have a state cycle input and a group of explicit state inputs. At minimum the cycle function should be mapped with the explicit inputs provided for convenience.

Note 3. Many controls functions are implemented on the AV-8B 3D cockpit view or MFD buttons.

Flight Controls

Control	Default Mapping	Notes
Pitch	Cursor Up/Down	
Roll	Cursor Left/Right	
Yaw	Comma/Period	
Trim Adjust	Shift & Cursor	
Gear Toggle	G	
Cycle Flap Mode	F	
Canopy	C	
Wheel Brakes	B	
Air Brake	A	
Refuel Probe		
Vertical Flight Toggle	V	
Eject	E	Hold for 1 second

Avionics Controls

Caution Acknowledge		

Warning Acknowledge		
Cycle HUD Mode	Tab	
HUD Brightness		Analogue
HUD Brightness Up	T	Digital
HUD Brightness Down	Space	Digital
Target Pod Slew L/R		
Target Pod Slew U/D		
Target Pod Lock Toggle		
Target Pod Zoom In		
Target Pod Zoom Out		

Engine/Nozzle Controls

Throttle		Analogue
Throttle Up	]	Digital
Throttle Down	[	Digital
Nozzle Angle		Analogue
Nozzle Angle + 5°		Digital option
Nozzle Angle - 5°		Digital option
Nozzle to Hover Stop	H	
Nozzle to Hover Brake	J	
Fuel Flow Toggle	F	
Ignition	I	
Water Inject Mode Cycle		

Weapon Controls

Next Weapon	W	
Next Target	T	
Fire Weapon	Space	

Chaff/Flare Dispense	C	
Target Pod Slew L/R		
Target Pod Slew U/D		

View Controls

Pilot	F1	
Tower	F2	
Fly-By	F3	
Exterior	F4	
Exterior2	F5	
Cockpit	F6	
Exterior Fixed	F7	
Weapon	F8	
Camera Left		Digital input for key, POV or button
Camera Right		Digital input for key, POV or button
Camera Up		Digital input for key, POV or button
Camera Down		Digital input for key, POV or button
Camera Left/Right		Analogue version
Camera Up/Down		Analogue version
Camera FOV +	PageDown	
Camera FOV -	PageUp	
Camera Distance +	NumPad +	
Camera Distance -	NumPad -	