

REFERENCE CARD

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System Commands

[C] Cycle through **time compression** rates
(but not slow motion)

[Shift][C] Turn **slow-motion** on
(Press **[C]** to return to normal time)

[Ctrl][P] **Pause** game

[Esc] **Pause** game/display *In-Flight menu bar*

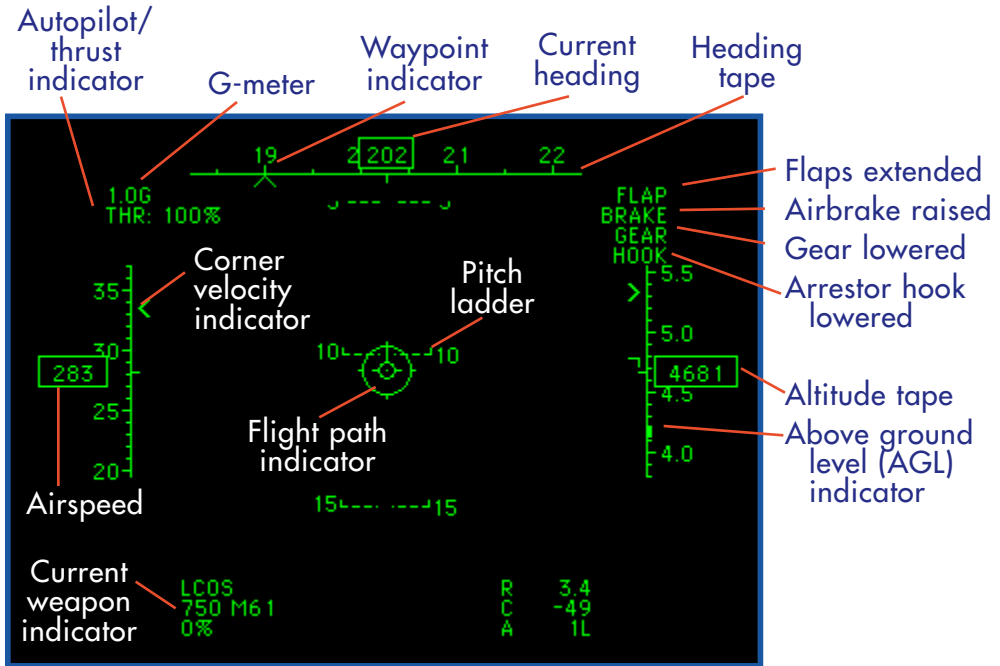
Highlight menu,
then option **Select option** from menu bar

[Ctrl][Q] **End** mission

[Ctrl][C] **Exit** to DOS

Head-Up Display

[More details](#)



Ref Card TOC

Cockpit Instrument Commands

[A] **Autopilot** (toggle)

[Shift][E] (press twice) **Eject**

[Backspace] **Show cockpit** (toggle)

[Shift] + [I], [J] Dim/brighten **HUD**

[N] Change HUD mode: weapon, nav./landing (toggle)

[Shift][D] Display last six **messages**

[D] Display aircraft **damage report**

Instrument Window Commands

Shift 1	<u>Flight Envelope</u> Window (toggle)
Shift 2	<u>Front View or IR/Laser Target</u> Window (toggle)
Shift 3	<u>Other View</u> Window (toggle)
V	Put current view into Other View Window
Shift 4	<u>Target or Radar/Visual Target</u> Window (toggle)
Shift + ' ;	<u>Bomb Window</u> zoom in/out
Shift 5	<u>RWR</u> Window (toggle)
Shift 6	<u>NAV</u> Window (toggle)
W	Select next waypoint
Shift W	Select previous waypoint
Shift 7	<u>System Status</u> Window (toggle)
Shift 8	<u>Weapon Status</u> Window (toggle)
Shift 9, 9	<u>Radar</u> Window (toggle)
<, >	Increase, decrease radar range
Y	Radar history (toggle)
Shift 0	<u>Radar Cross Section</u> Window

Aircraft Control Commands

[More details](#)

Move joystick control

Pitch/yaw of aircraft



Pitch aircraft up/down



Roll left/right

Numpad 

Left rudder

Numpad 

Right rudder



Flaps (toggle)



Brakes (toggle)



Landing gear (toggle)



Thrust

[More details](#)

Thrust can be controlled with a throttle device.
(Full-forward position is 100% with afterburner.)

The number keys [1] – [8] also control **thrust**:

- [1] **0%** thrust
- [2] **25%** thrust
- [3] **50%** thrust
- [4] **75%** thrust
- [5] **100%** thrust
- [6] **100%** thrust and afterburners (if available)
- [7] **-5%** thrust
- [8] **+5%** thrust



Short TakeOff/Vertical Landing

[More details](#)

- [Z] Vector thrust **back** 10°
- [Shift][Z] Vector thrust **fully back**
- [X] Vector thrust **down** -10°
- [Shift][X] Vector thrust **fully down** to 90°
(press again for -100°)
(X-32 goes to -90°, then -120°)

Thrust Vectoring

[More details](#)

- [Ctrl] + [↑], [↓] **Pitch** with vectored thrust
(F-22, X-31, X-32)
- [Ctrl] + [↑], [↓], [←], [→] **Pitch and yaw** with vectored thrust
(X-31)
- [0] (zero) **Auto-center** vectored thrust
(F-22, X-31, X-32)



View Commands

[More details](#)

F1	Forward view
F2	Back view
F3	Look-up view (full view canopies only)
F4	Track target view (with target selected)
F5	Player → Incoming missile view
F6	Player → Wingman view
F7	Player → Target view (with target selected)
F8	Target → Player view (with target selected)
F9	Fly-by view
F10	External view
F12 or Ctrl F7	Missile → Target view
Right [Shift] + ←, →, ↑, ↓	Pan view ([Shift] not necessary with joystick)

[+], [-] **Zoom** view in/out

[Alt] + a View Command **View relative to current target**













[Ctrl] + a View Command **View relative to last missile launched**

Targeting Commands

Normal Targeting

[More details](#)

Note: *Visible target commands only work in Front View ().*




-  Visually target **contact nearest center of screen**
-  Visually target **next contact**
- Left-click Visually target object **in view**
- ,   Target **next/previous contact** (must have radar or FLIR active, Radar Visual Window open)
-  **Deselect** current target
-   Display heading of **closest enemy aircraft**
-   Display heading of **closest enemy ground target**
-   Display heading of **closest friendly aircraft**

IR/Laser Advanced Targeting

[More details](#)


Left-click on target in view Select **radar/HARM/visual** target

Right-click on target in view Select **IR/laser** target

,   Select next/previous **radar/HARM/visual** target.
Must have radar or FLIR active, Radar Visual Window open

 Select next **visible** target

 Select next **IR/laser target** on HUD

 Select **radar/visual** target closest to center of view

 Select **IR/laser** target closest to center of view

 **Deselect** current **radar/HARM/visual** target



Sensors

[More details](#)

- ☐ R Switch to **active radar** (turns off IR or HARM)
- ☐ , ☐ . Increase/decrease **radar range**
- ☐ Y **Radar history** (toggle)
- ☐ I Switch to **IR Sensor** (turns off radar or HARM)
- ☐ M Switch to **HARM seeker** (turns off IR or radar)
- ☐ U Send **IFF Squawk** to target
- ☐ J **Jamming** (toggle)



Weapons Commands

[More details](#)

[], []

Select next, previous **weapon**

Spacebar

Fire selected weapon

Tab

Fire internal gun

O

Weapons bay doors (toggle)

(F-22, F-117, B-2, X-32)

Shift J

Jettison **external fuel tanks**

Shift K

Jettison **air-to-ground ordnance**

Insert

Release **chaff cartridge**

Delete

Release **flare**

Wingmen Commands

[More details](#)

[Alt] 1 **Fly straight** for 10 seconds

[Alt] 2 **Break left** 180°

[Alt] 3 **Break right** 180°

[Alt] 4 **Break low** 70°

[Alt] 5 **Break high** 70°

[Alt] 6 **Approach** current target **from left**

[Alt] 7 **Approach** current target **from right**

[Alt] 8 **Approach** current target **low**

[Alt] 9 **Approach** current target **high**

[Alt] E **Engage** targeted object

[Alt] R **Engage** targeted object, **remain in formation**

[Alt] W **Engage all** objects of same class

[Alt] P **Protect me**

[Alt] D **Disengage**

[Alt] B **Bug out** (go home)

[Alt] S Radio **silence** (toggle)

[Alt] T Set **wing formation**

[Alt] H Set **horizontal spacing**

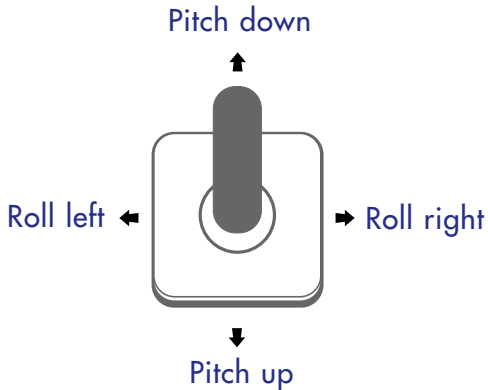
[Alt] V Set **vertical spacing**

[Alt] C Set **formation control**

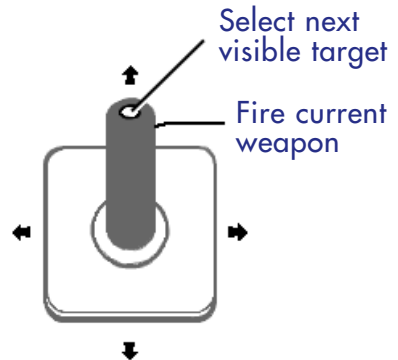
Joystick Commands

Note: See [READ.ME](#) for information on other joystick types.

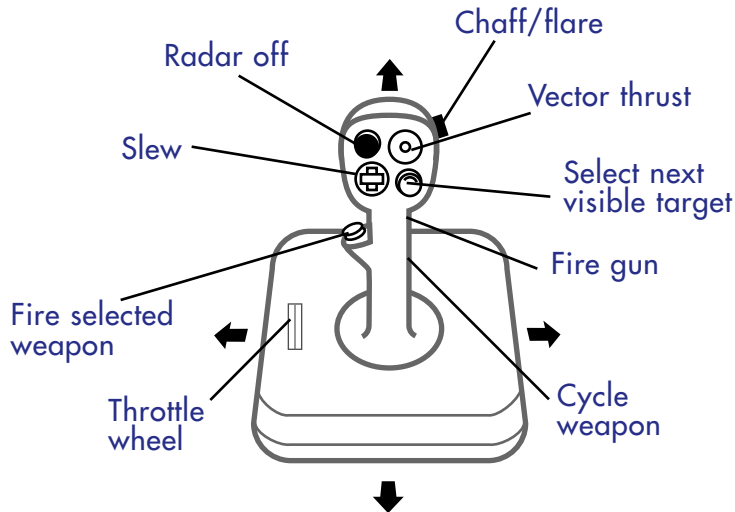
All Joysticks



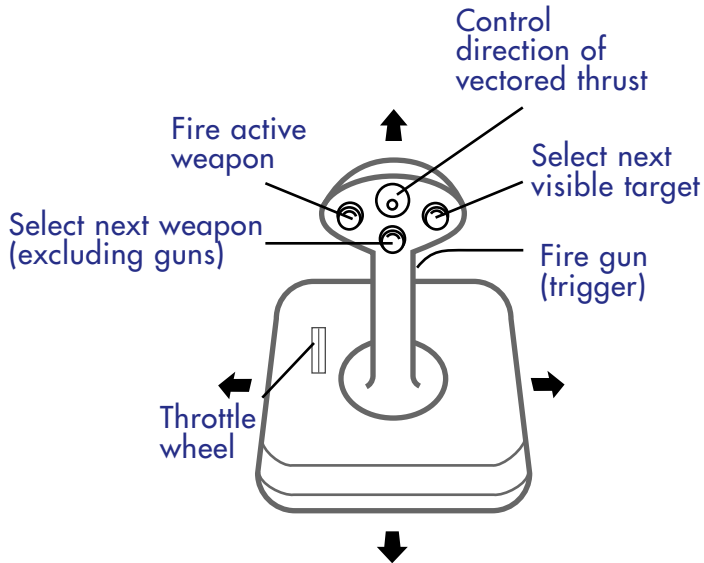
Joystick



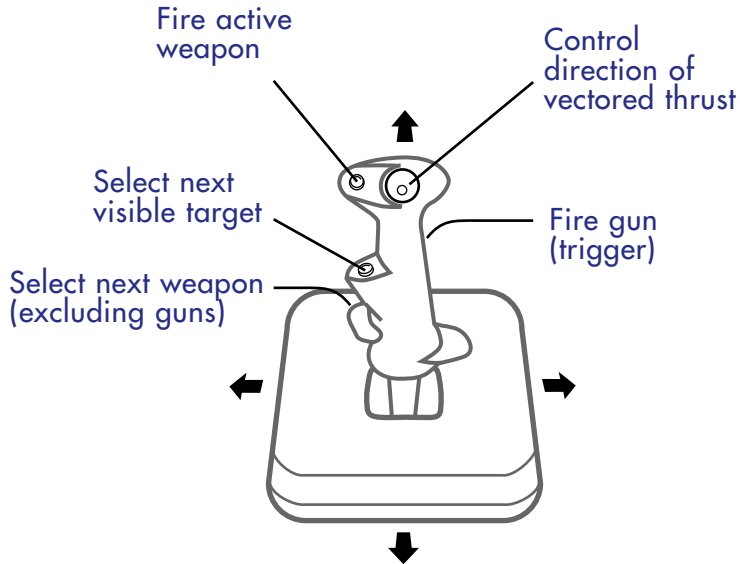
CH F-16 Combat Stick/Jane's Combat Stick



CH Flightstick Pro



Thrustmaster FCS



Pause/
In-flight
menu
ESC

Forward
view
F1

Back
view
F2

Look-up
view
F3

Track
target
view
F4

Player →
incoming
missile view
F5

Player →
wingman
view
F6

Player →
target
view
F7

Target →
player
view
F8

Fly-by
view
F9

External
view
F10

F11

Missile →
target
view
F12

Ref Card TOC

[Alt] +F key: Make view relative to target

[Shift] +**[1]** - **[0]**: Windows

R/V= radar or visual I/L= IR or laser

[Ctrl] +F key: Make view relative to most recent missile

[Alt] +regular keys: Wingman commands

~	1 Flight envelope Straight No thrust	2 Front View, I/L target Break left 25% thrust	3 Other View Break right 50% thrust	4 Target, R/V target Break low 75% thrust	5 RWR Break high Full thrust	6 Navigation Approach left Afterburners	7 System status Approach right -5% thrust	8 Weapon status Approach low +5% thrust	9 Radar Approach high Radar	0 RCS Center thrust	- View zoom out	= View zoom out	\ Central I/L target	← Cockpit
TAB Fire gun	Q End mission	W Prev. weapon Engage class Next waypoint	E (x2) Eject Engage target	R Engage target in formation Active radar	T Prev. contact Formation Next contact	Y Radar history	U IFF squawk	I IR sensor	O Bay door	P Pause Protect me	[Next weapon Dim HUD] Previous weapon Brighten HUD	Select next visual target	
CAPS LOCK	A Autopilot	S Radio silence (toggle)	D Messages Disengage Damage report	F Flaps	G Gear	H Set ↔ spacing	J Jettison ext. fuel Jamming	K Jettison ground ordnance	L Deselect target	; Central R/V target	ENTER			
SHIFT	Z Vector back 10%	X Vector down -10%	C Slo-mo Set formation Time comp. Exit to DOS	V Set ↑ spacing Current view → Other view	B Bugout Brakes	N Change HUD mode	M HARM seeker	< Increase radar range	> Decrease radar range	?/ Next I/L target	SHIFT			
CTRL	ALT	SPACE Fire weapon										CTRL	ALT	

Print
Screen

Scroll
Lock

Pause

Ref Card TOC

Release
chaff

Insert

Home

Page Up

Release
flare

Delete

End

Page Down

Pan up
Pitch up
Vector up
↑

Pan left
Bank left
Vector left
←

Pan down
Pitch down
Vector down
↓

Pan right
Pitch right
Vector right
→

Num Lock

/

*

—

7

8

9

4

5

6

+

Straight
ahead view

Left rudder

1

2

Right rudder

3

Select next
visual target

0

Del

Enter