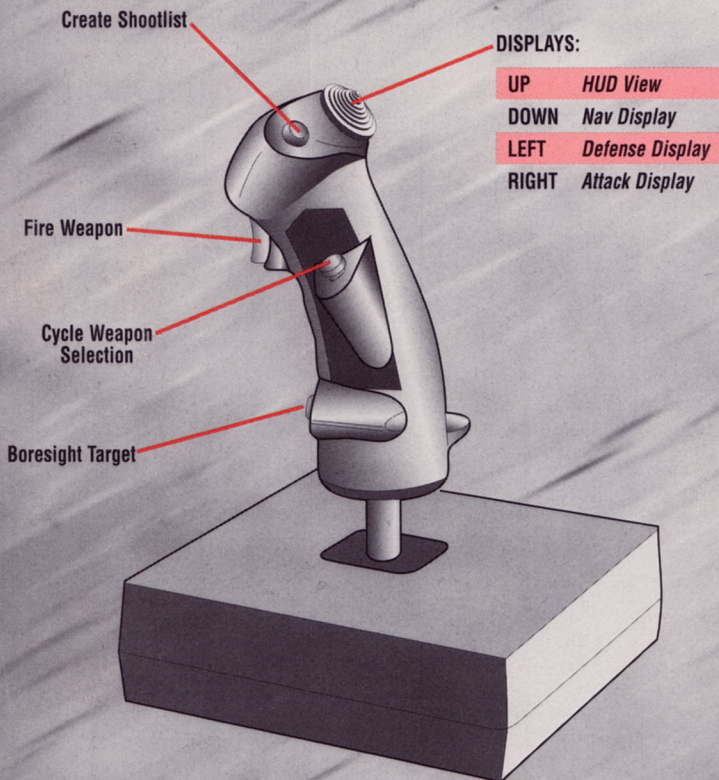


FRF LIGHTNING II™

REFERENCE CARD



Standard 4-Button
Non-Programmable Joystick

F22 Keyboard Commands

| | | | | | | | | | | | | | |
|---|-------------------------------|------------------------------------|-----------------------------|------------------------------|-------------------------------------|-------------------------------|---------------------------|--------------------------|------------------------|------------------------|------------------------------|-------------------------|------------------|
| Exit <i>Esc</i> | Camera Modes | | | | Time Compression | | | | | | | | |
| | Virtual Cockpit <i>F1</i> | HUD <i>F2</i> | External View <i>F3</i> | Flyby View <i>F4</i> | Padlock View <i>F5</i> | Wingman External <i>F6</i> | Missile View <i>F7</i> | Target View <i>F8</i> | Normal <i>F9</i> | 2X <i>F10</i> | 4X <i>F11</i> | 6X <i>F12</i> | |
| Weapon Select | | | | Engine Power | | | | | | | | | |
| | AMRAAM <i>1</i> | Sidewinder <i>2</i> | Cannon <i>3</i> | JDAM <i>4</i> | 0% (Eng. Off) <i>5</i> | 60% (Idle) <i>6</i> | 70% <i>7</i> | 80% <i>8</i> | 90% <i>9</i> | 100% <i>0</i> | Afterburner <i>=</i> | | |
| Cycle Targets Forward Back <i>Tab</i> | <i>Q</i> | Cycle Weapon Selection <i>W</i> | <i>E</i> | Radar On/Off <i>R</i> | <i>T</i> | <i>Y</i> | <i>U</i> | <i>I</i> | <i>O</i> | Pause Game <i>P</i> | Prev. Target <i>[</i> | Next Target <i>]</i> | Create Shootlist |
| <i>Caps Lock</i> | Auto Pilot On/Off <i>A</i> | Zoom In: Slow Fast <i>S</i> | <i>D</i> | Flaps On/Off <i>F</i> | Gear On/Off <i>G</i> | Home <i>H</i> | Eject <i>J</i> | Keybd Help <i>K</i> | Auto Level <i>L</i> | <i>;</i> | Boresight Target <i>'</i> | <i>Enter</i> | |
| <i>Shift</i> | <i>Z</i> | Zoom Out: Slow Fast <i>X</i> | Countermeasures <i>C</i> | Video Resolution <i>V</i> | Air/Ground Brake On/Off <i>B</i> | Cycle Waypoints <i>N</i> | Mission Goals <i>M</i> | HUD Dim <i>,</i> | HUD Bright <i>.</i> | <i>/</i> | <i>Shift</i> | | |
| <i>Ctrl</i> | <i>Alt</i> | Fire Selected Weapon | | | | | | | | <i>Alt</i> | <i>Ctrl</i> | | |

| | | |
|------------|-------------|-------|
| Print Scrn | Scroll Lock | Pause |
|------------|-------------|-------|

| | | |
|------------------|--------------------------|----------------------|
| Insert Delete | Look Down Home End | Page Up Page Down |
|------------------|--------------------------|----------------------|

Flight Inputs
(Ctrl) Camera Angles

| | | |
|-----------------------|------------------------|------------------------|
| | Pitch Down (Camera) | |
| Roll Left (Camera) | Pitch Up (Camera) | Roll Right (Camera) |

Wingman Commands

Ctrl-C Wingman Cover Role
Ctrl-E Wingman Engage
Ctrl-F Wingman Form on Wing
Ctrl-M Wingman Attack My Target
Ctrl-P Wingman Patrol Home Base

| | | | |
|--------------------------|--------------------------|--------------------------------|------------------|
| Num Lock | / | * | - |
| HUD Repeater <i>7</i> | Nav Overlays <i>8</i> | Artificial Horizon <i>9</i> | |
| Defense <i>4</i> | Nav <i>5</i> | Attack <i>6</i> | + |
| <i>1</i> | Stores <i>2</i> | <i>3</i> | Create Shootlist |
| <i>0</i> | | <i>Del</i> | <i>Enter</i> |

Display Controls

Waypoint Steering Cue
 Waypoint Selected
 Waypoint Comments
 Distance to Waypoint
 Horizon Indicators
 Airspeed (in knots)
 Throttle Setting
 G Meter
 Fuel Remaining
 Airframe Integrity
 Flight Indicators

Compass Heading
 Current Heading
 Flight Path Indicator
 Allowable Steering Error Circle
 Shoot List (inactive)
 Weapon Selected

Target Designation Box

Pitch Ladder (w/Pitch Angle)
 Altitude (in feet)
 Target Type/ID
 Closure Rate
 Range to Target
 Enemy Airframe Integrity

Target Lock
 Shoot Cue



K E Y C H A R T

General Game Controls

| | | |
|--------|-------------------------|---|
| Esc | <i>exit game</i> | : exits player from game |
| P | <i>Pause</i> | : halts/resumes simulation |
| Ctrl V | <i>Video Resolution</i> | : allows selection of screen resolution |
| K | <i>Keyboard Help</i> | : superimposes key summary on screen |
| M | <i>Mission Goals</i> | : presents mission goal summary |
| End | <i>End Mission</i> | : ends mission |

Camera Modes

| | | |
|------------|-------------------------------------|--|
| F1 | <i>Virtual Cockpit Mode</i> | : places player in Virtual Cockpit mode |
| F2 | <i>HUD View</i> | : forward view of HUD and symbology |
| F3 | <i>Player External View</i> | : movable external camera view of player's F-22 |
| F4 | <i>Player Fly-By View</i> | : fixed external camera view of player fly-by |
| F5 | <i>Padlock View</i> | : keeps locked target centered in player view |
| F6 | <i>Wingman External View</i> | : external camera view of wingman's F-22 |
| F7 | <i>Missile FlyBy/ External View</i> | : fixed view of missile fly-by/ external camera view |
| F8 | <i>Target View</i> | : movable external view of player target |
| Home | <i>Look Down</i> | : Virtual Cockpit mode glance down at avionics |
| Up arrow | <i>Cam pitch up</i> | : pitches camera angle upward |
| Dwn arrow | <i>Cam pitch down</i> | : pitches camera angle downward |
| Left arrow | <i>Cam left</i> | : pitches camera angle left |

| | | |
|-------------|------------------------|---------------------------------------|
| Right arrow | <i>Cam right</i> | : pitches camera angle right |
| S | <i>Zoom In - Slow</i> | : magnifies view for close inspection |
| X | <i>Zoom Out - Slow</i> | : expand field of view |
| Ctrl S | <i>Zoom In - Fast</i> | : rapid view magnification |
| Ctrl X | <i>Zoom Out - Fast</i> | : rapid view expansion |

Engine Power Settings

| | | |
|---|--------------------------|---|
| 5 | <i>0% Engine Off</i> | : engine off, throttle to 0% |
| 6 | <i>60% Idle</i> | : engine idle, throttle to 60% |
| 7 | <i>70% power</i> | : throttle to 70% |
| 8 | <i>80% power</i> | : throttle to 80% |
| 9 | <i>90% power</i> | : throttle to 90% |
| 0 | <i>100% Full Mil Pwr</i> | : Full Military Power, throttle to 100% |
| - | <i>Afterburner</i> | : Afterburner On/Off toggle |

General Flight Controls

| | | |
|-------------|-----------------------------|------------------------------------|
| Up arrow | <i>pitch down</i> | : pitch aircraft nose down |
| Dwn arrow | <i>pitch up</i> | : pitch aircraft nose up |
| Left arrow | <i>roll left</i> | : roll aircraft to left |
| Right arrow | <i>roll right</i> | : roll aircraft to right |
| F | <i>Flaps On/ Off Toggle</i> | : Flaps On/Off toggle |
| G | <i>Gear (landing)</i> | : Gear Up/ Down toggle |
| Page Dwn | <i>Right Rudder</i> | : Yaws aircraft nose to right |
| Delete | <i>Left Rudder</i> | : Yaws aircraft nose to left |
| B | <i>Brake</i> | : Brake On/ Off toggle |
| Ctrl J | <i>Eject</i> | : Ejects pilot from aircraft |
| , | <i>HUD Dim</i> | : decreases HUD symbology contrast |
| . | <i>HUD Bright</i> | : increases HUD symbology contrast |

Navigation Controls

| | | |
|---|------------------|--|
| A | Autopilot Toggle | : autopilot On/ Off toggle |
| N | Cycle Waypoints | : cycles through pre-set navigation waypoints |
| L | Auto-Level | : aircraft automatically assumes level flight |
| H | Home | : takes F-22 to initial landing approach, engages Auto-Pilot |

Radar/Weapon Controls

| | | |
|---|------------------------|--|
| 1 | AMRAAM | : selects AMRAAM radar-guided missile |
| 2 | Sidewinder | : selects Sidewinder heat-seeking missile |
| 3 | Cannon | : selects M61A2 20mm cannon |
| 4 | JDAM | : selects JDAM Mk. 83 bomb |
| R | Radar | : Radar On/ Off toggle |
| W | Cycle Weapon Selection | : cycles through available weapon selections |
| C | Counter-measures | : releases chaff/flare ECM combination |

Target Selection

| | | |
|----------|------------------------|---|
| Enter | Create Shootlist | : creates prioritized list of four nearest targets |
| Tab | Cycle Targets | : cycles through all weapon eligible objects within 40 nm |
| Ctrl Tab | Reversed Target Cycle | : reversed cycle through all weapon eligible objects within 40 nm |
| [| Select Previous Target | : cycles through Shoot List targets |
|] | Select Next Target | : reverse cycle of Shoot List targets |
| ' | Boresight Mode | : targets nearest object within ASE (center of HUD) circle |

Avionics (numberpad keys)

| | |
|---|---------------------------|
| 2 | Stores Management Display |
| 4 | Defense Display |
| 5 | Nav Display |
| 6 | Attack Display |
| 7 | Hud Repeater |
| 8 | Nav Overlay |
| 9 | Artificial Horizon |

Time Compression

| | | |
|-----|---------|--------------|
| F9 | Normal | |
| F10 | 2x Time | : compressed |
| F11 | 4x Time | : compressed |
| F12 | 6x Time | : compressed |

Wingman Keys

| | | |
|--------|--------------------------|--|
| Ctrl C | Wingman Cover Role | : wingman attacks nearest enemy attacking you |
| Ctrl E | Wingman Engage | : orders wingman to engage enemy targets at will |
| Ctrl F | Wingman Form on Wing | : orders wingman to fly with you |
| Ctrl M | Wingman Attack My Target | : orders wingman to attack target you have locked |
| Ctrl P | Wingman Patrol Home Base | : orders wingman to Return-to-Base (RTB) and perform Combat Air Patrol (CAP) |

