Longbow 2 Demo

Longbow 2

Welcome to the Longbow 2 demo. Longbow 2 is the ground-breaking sequel to Jane's AH-64D Longbow, 1996's unanimous Flight Sim of the Year, putting you in the cockpit of the worlds most deadly attack helicopter. Sporting the painstakingly accurate avionics and flight modeling of the original AH-64D Longbow, Longbow 2 adds the ability to fly the OH-58D Kiowa Warrior recon helicopter and the UH-60 Black Hawk utility helicopter (you can even man the Black Hawk's door gunner position), as well as ground breaking visual technology including native support for 3DFX-Voodoo based accelerators, a dynamic campaign generator, and comprehensive cooperative and head to head multiplayer support via tcp/ip, lan or modem. This instant action demo will give you a taste of Longbow 2's award-winning combat with a host of user-definable options that let you tailor the experience to your personal gameplay preference. See for yourself why Longbow 2 has been awarded "Flight Sim of the Year" honors from every major source in the industry. If you like what you find in the demo, you'll be in for a real treat when you get your hands on the full version, which includes fully interactive tutorial missions, customizable single mission scenarios, unlimited instant action and two dynamic campaign environments. Good Hunting!

Requirements

Minimum System Requirements
Windows 95
Pentium 133mhz or faster (with or without 3DFX accelerators)
16 MB ram
170 MB of free, uncompressed hard drive space plus 30 MB free hard drive space for Windows swap file. (Minimum installation size)
4X CD-ROM drive
DirectX 5 compatible 2 MB PCI bus video card
MS compatible mouse
Microsoft DirectX compatible sound card

Recommended System Requirements
Pentium 200mhz or faster
32 MB ram
370 MB hard drive space
Windows95 compatible joystick, rudder, and throttle
3DFX Voodoo chipset based accelerator card

Installation
1. Copy the Longbow 2 demo file to its own directory (ie: C:\Lb2demo)
2. Double click on lb2demo.exe. The Longbow 2 demo is contained in a self-extracting zip file and will install all necessary files.

Execution

You must have DirectX version 5.0 installed to run the Longbow 2 demo.
1. In the folder in which the demo was installed, double-click on the file "demo.exe"

Direct3D Configuration

The Beta Longbow 2 Direct3D graphics engine makes use of an optional configuration file, d3d.cfg. This configuration file must be placed in the same directory as the main directory containing lb2.exe. This file contains several user-configurable options, some of which are required for certain cards Comments regarding the use of specific options is listed in the configuration text file.

The Beta Direct3D patch contains several files with the ".cfg" extension. Each of these files corresponds to decent d3d.cfg settings for a given card. The following table lists the chipset and the config file name for that chipset. The config file will need to be copied to the d3d.cfg filename.

Chipset:	Config file name:
Riva 128	riva128.cfg
Rendition V2x00	rndv2x00.cfg
Permedia 2	perm2.cfg
ATI 3D Rage Pro	ragepro.cfg

Note that you are not required to use a config file, nor are you required to include a given option in a config file. The config file is a text file containing simple <variable>=<value> statements. Lines beginning with the pound sign, "#", will be considered comments. The config file used by the Direct3D engine must be named "d3d.cfg". You may copy the config file for your chipset to d3d.cfg with the following instruction:

copy <config file name> d3d.cfg

III. CARD-SPECIFIC INFORMATION (including information on cards not supported)

The following lists additional information regarding operation on specific chipsets:

Riva 128:
The Riva 128 chipset does not support Gouraud-shaded transparency. It emulates this feature through a method that does not look appealing in some circumstances. Within the Virtual Cockpit, the emulated transparency makes the rotor blades look less than realistic. Furthermore, the STB Velocity 128 apparently does not support the early DirectDraw interfaces correctly. The on-base portion of the game does not draw

fullscreen correctly, rendering it nearly unplayable. Hopefully STB corrects their drivers to fix this.

Permedia 2:
Permedia 2 does not support a feature used by Longbow 2 to create the Pilot Night Vision System (PNVS). If the PNVS is used at night, the terrain will look brighter, but will not be green-shaded.

ATI 3D Rage Pro:
The drivers for this chipset are in a state of flux that may or may not be compatible with the Beta release of Longbow 2 Direct3D. Currently, certain operations are failing, leading to the drop-out of certain special effects. Beta 3D Rage Pro drivers I have been working with render the game unplayable. Hopefully the drivers settle out in such a way that the 3D Rage Pro will work just fine; however, no promises can be made at this time regarding the results you will achieve.

PowerVR PCX2:
Although there are some benefits to the architecture supported by this card, the PowerVR architecture places restrictions on texture usage that are incompatible with the Longbow 2 render pipeline. You may be able to get it to run partially; however, no promises are made over the results you will achieve.

IV. RECOMMENDED SETTINGS

The following is a list of option settings recommended to improve your gaming experience while running under Direct3D. These options are located by selecting the options menu, choosing "Graphics", then choosing "Custom Detail..."

A. Horizon Distance: Select third notch from left. This will significantly improve frame rate.

B. Deselect Sky Texture. With the horizon distance set near, fogging gives the appearance of a perpetual cloudy day. Deselecting sky texture provides a blended blue sky. This doesn't provide any performance gains.

For the best performance, select "Low" on the main graphics options page. This automatically adjusts option settings in order to achieve optimal frame rate.

V. KNOWN BUGS

The following is a list of bugs you may experience. The development team is aware of these bugs, so there is no need to report them if you experience one of them during gameplay.

A. FLIR terrain/object color incorrect:

In some situations on some cards, the terrain color will show up incorrectly in the FLIR camera mode for the TADS. The problem may only show up when switching between white-hot and black-hot mode.

B. Tutorial palette colors incorrect:

On some cards during tutorial exercises, the colors shown in the cockpit may not be correct (noticeably for the IHADSS symbology). The problem becomes worse if you return from the options menu or select cancel from the quit or exit dialog. The colors will revert to normal if you fire your cannon (note: the tutorial doesn't always let you fire the cannon when the instructor is talking).

C. In-flight mouse cursor colors incorrect:

In some instances, the mouse cursor for the in-flight systems may be set to incorrect colors.

Realism Configuration
In this demo version of Longbow 2, you will be placed ready to fly in an instant action mission where a group of US tanks are being attacked by Russian tanks and helicopters. Flight controls will be set to simple mode (a summary of keyboard commands follows below). If you wish to fly using the advanced controls, you may do so by pressing ALT-O in flight which will take you to the options menu. Select "Controls" and a submenu will appear with "Control Level" at the top. Choose "Expert" to enable the full keymap. From this submenu, you may also enable your joystick, throttle, and other input devices.

Keyboard Commands
The Longbow 2 demo defaults to simple controls. Instructions for changing realism settings can be found above in the "Configuration" section.

Simple Keymap

| Key	Function
Left Arrow	**Cyclic Left-rolls chopper to the left**
Right Arrow	**Cyclic Right-rolls chopper to the right**
Up Arrow	**Cyclic Down-pitches chopper down**
Down Arrow	**Cyclic Up-pitches chopper up**
[	**Tail rotor left**
]	**Tail rotor right**
+	**Increase Collective (increases altitude)**
-	**Decrease Collective (decreases altitude)**
Backspace	**Cycle Weapons**
Space Bar	**Fire Selected Weapon**
Enter Key	**Fire Cannon**

F1	**Front Cockpit View**
F4	**Enable Virtual Cockpit (*Alt and Joystick or Alt and Arrow key pan view*)**
T	**Select Next Target**
H	**Auto-Hover (works only at speeds <= 10 knots)**
Control-Z	**Cycle Time of Day (Dawn, Day, Dusk, Night)**
A	**Enable Autopilot**
ALT-X	**Exit demo**

Expert Keymap

A complete keymap can be found in the documents Keymap1.doc and Keymap2.doc, included in the zip file.

Cockpit Instrumentation

Pictured below is your heads-up display, known as the IHADSS (Integrated Helmet and Display Sighting System). A description of each item follows.

Longbow IHADSS
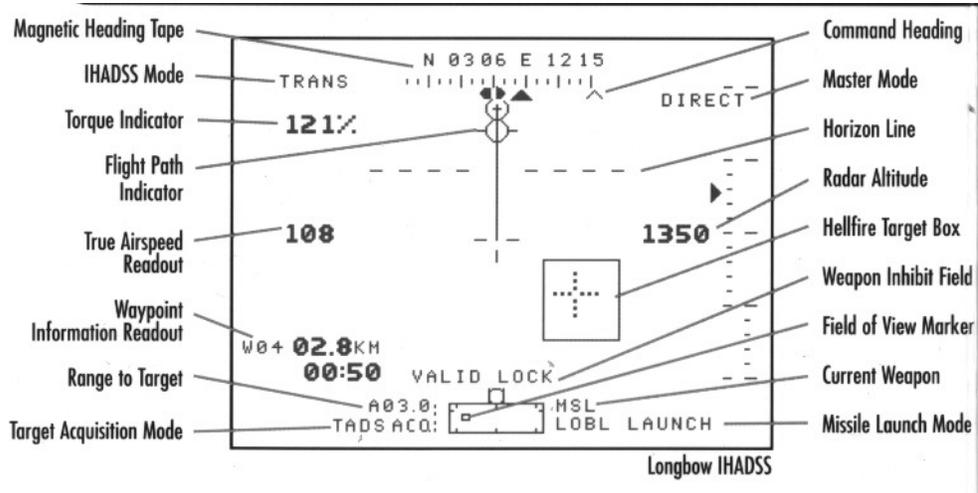
Magnetic Heading tape: This shows which direction on the compass you are facing.

IHADSS Mode: This displays which IHADSS mode you are currently in, either Transition, Cruise, Bob-up, or Hover

Torque indicator: Displays the amount of torque (collective) being applied. As you increase collective, this number will increase.

Flight Path Vector: This indicator shows you where the aircraft is heading.

True Airspeed Readout: The speed in knots at which you are currently traveling.

Waypoint Information: Displays which waypoint (W01, W02, etc) you are traveling towards, and the distance in kilometers to the waypoint.

Range To Target: Distance to your currently selected target, displayed in kilometers.
Target Acquisition Mode: Displays which sensor you are currently using to target, either TADS or FCR.
Command Heading: Shows you the direction to your next waypoint.
Master Mode: This shows which Master Mode you are currently in, either Direct, Indirect, Air to Air, or Navigation.
Horizon Line: The horizon line gives you an indication of ground level ahead of you.
Radar Altitude: Radar computed distance above ground.
Hellfire Target Box: This box gives you an indication of where your target is located, as well as whether or not you have a valid lock on it. A solid box indicates a good lock. If the lines are dashed, you need to turn towards your target more, or achieve line of sight.
**Weapon Inhibit Field:** Displays information about whether or not you have a good lock on your current target.
Current Weapon: Shows you your currently armed weapon. MSL=Hellfire missile, RKT=Folding Fin rockets, ATA=Stinger air to air missiles.
Missile Launch Mode: Displays the currently selected missile launch mode, either Lock On Before Launch, or Lock On After Launch.

Multi-Function Displays
Each cockpit in the Longbow contains two multi-function displays (MFD's). By default, the active MFD's will be the Engine page in the left MFD, and the Tactical Situation Display (TSD) in the right MFD. If you are flying in the simple keymap, you will be unable to cycle these MFD's. When flying in Expert mode, you can cycle these displays by pressing "," or "."

Engine Page
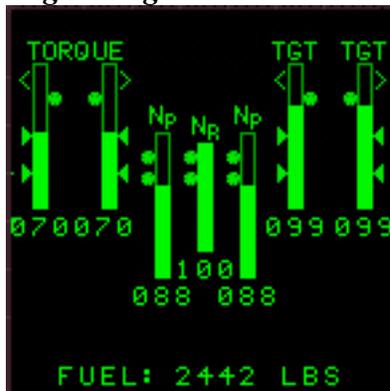
The Engine page displays information relating to the aircrafts two engines, including the amount of torque being applied, turbine gas temperature, rotor rpm, and available fuel.

TSD Page
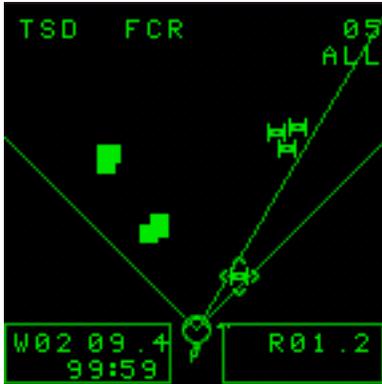
The TSD, or Tactical Situation Display is your most vital link to your surroundings on the battlefield. The TSD displays icons representing vehicles and buildings, your waypoint route including which waypoint you're traveling towards, distance to the waypoint, and time to arrival, as well as which sighting system being used, either FCR or TADS, and basic targeting information. Your currently selected target will have a diamond drawn around it. Each type of threat will have a unique symbol. Tanks are shown as an "H" symbol, air defense vehicles such as SAM's and triple-A are shown as a triangle, wheeled vehicles are a circle, helicopters are shown as a bow-tie shape, and buildings or unknowns are shown as a square.

Systems Page (SYS)
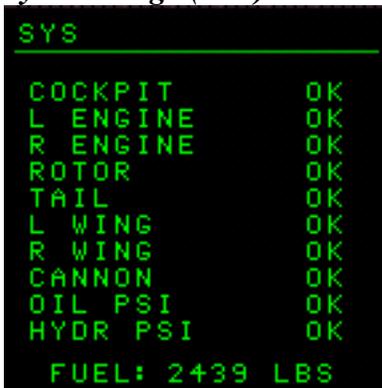
The Systems page shows the operating condition of the major systems aboard the Longbow. When undamaged, the status will be shown as "OK", when damaged "MARG" will be shown, meaning marginal damage, and when destroyed "FAIL" will be shown.

Com Page
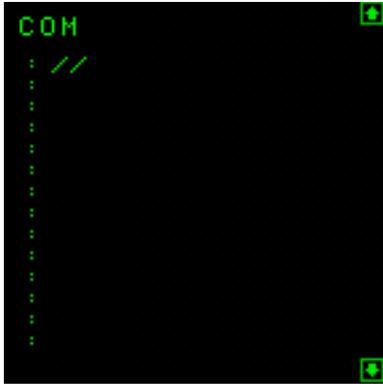
The Com page is used to display callsign designations for other units on the battlefield. This page is not used for the demo.

TADS Page

The TADS page relays information from your optical sensors to an MFD. To cycle between the available cameras, you may click on the selected camera display (either DVO, FLIR, or DTV). To pan the camera, move your mouse to the edge of the display and left click using your mouse. You can zoom the cameras in or out using the Plus and Minus keys on the numeric keypad.

Flight Page

The Flight page repeats information from your IHADSS to an MFD page. Included are a compass, pitch ladder, torque indicator, waypoint information, radar altimeter, and a slip ball.

ASE Page

The ASE (Aircraft Survivability Equipment) page displays information about any detected threats (SAM's and AAA) on the battlefield. When a threat is detected, a symbol will be drawn representing the type of threat (EX: a '23' represents a ZSU-23 anti-aircraft gun, a '9' represents an SA-9 SAM). A circle will also be drawn around the threat symbol representing the area of engagement for that threat. Fly into the circle, and you are within that threats firing range. You can toggle the range of the ASE by pressing the DELETE key.

Radar Page

The Radar page displays raw returns for the Longbow Fire Control Radar, or FCR. In the Simple keymap, you will only be able to target using the "T" key. Under the Expert keymap, you have a great deal more of control over the system. To toggle the radar on or off, use the Keypad Enter key. You may narrow the scan range by pressing the Keypad Up or Down arrow keys. After narrowing the scan range, you may pan the are left or right using the Keypad Left and Right arrow keys. The radar range can be zoomed in or out by using the Keypad Plus or Minus keys.

Weapon Page
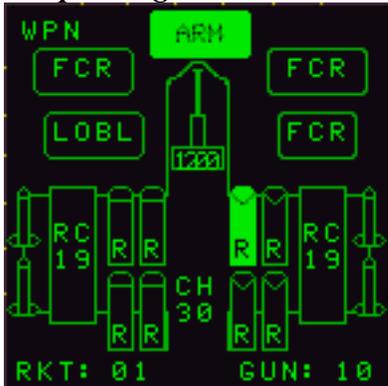
The Weapon page shows you the number of and type of weapons you currently have loaded. Four Stinger missiles are shown (2 on each wingtip) along with 2 pods of 19 rockets, labeled "RC", and 4 Hellfire missiles on each wingtip. Also shown is the rocket ripple rate, amount of chaff remaining, and the burst rate for the chain gun.

Check the Jane's Combat Simulations website for more information on Longbow 2:
             http://www.janes.ea.com