Redbird Insight – User Guide

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Welcome

Welcome to the Redbird Insight Digital Video Recorder (DVR). Whether you're a student pilot or instructor, Insight will provide essential information to enhance the flight instruction process. Insight integrates with the Redbird line of flight simulators to render the outside view the of the aircraft, inside view of the cockpit and cockpit instrumentation onto an external viewing station. Key aspects of the flight can be immediately reviewed on the Insight screen after a flight is completed within the Redbird simulator.

Key Product Features:

- Automatic Live Flight Recording

- Automatic Flight Playback

- Live Video Cockpit Camcorder

- DVR-Style Pause and Playback Controls

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System Requirements

Insight is delivered on a computer that is custom-built for this application.   While the computer can potentially be used for other purposes (like the Redbird Administrator Station), it is highly recommended that the Insight computer remain dedicated to the Insight application only, and not multi-purposed.

Ensure the Redbird FMX is connected to the Insight computer. This is accomplished via an RJ-45 Cat-5 Network Cable that is plugged directly into the Redbird into the network port underneath the simulator.

The Insight software is designed to be launched and run independently of the simulator itself, so there is no requirement to start Insight before the simulator, or vice-versa. Once the Insight software is running, it will automatically detect the presence of the Redbird simulator, and automatically reconfigure itself to display an aircraft that corresponds to the aircraft being flown inside the Redbird.

A typical sequence of startup events would be as follows:

1. Start the Redbird FMX

2. Power on the Insight CPU (It should be left on at all times, there is no need to shut down the Insight CPU after a training session is complete)

3. Launch the Insight application by double clicking on the Insight Application Icon located on the Windows Desktop. Insight will automatically load the flight simulation visuals along with the proper default aircraft.

4. Start a flight within the Redbird FMX just as you normally would. Flight recording occurs automatically and Insight will automatically playback the flight after the aircraft has become airborne for at least 10 seconds, and returned to the ground for at least 10 seconds. In addition, the playback can be controlled manually by moving the Insight DVR "slider" or "shuttle" left and right to find the desired portion of the recording to play back.

Insight requires a high performance video card for proper display of the flight.   The monitor cable should be connected to the video port at the back of the Insight computer labeled "MONITOR".
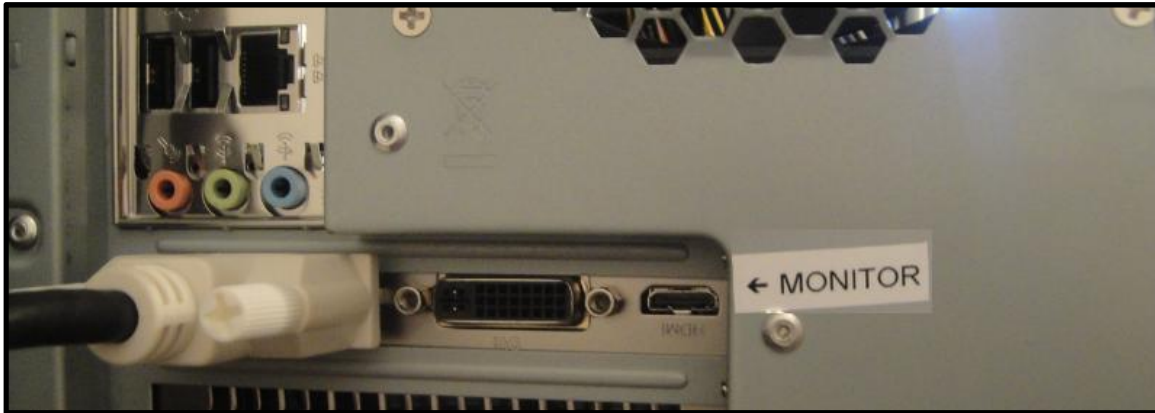
🛑 *The Insight computer has an internal DVI port. The motherboard DVI port is not a high performance video card and should not be used to connect the Insight display monitor to the computer. Only use the port that is marked as "MONITOR".*

A DVI to HDMI cable converter is provided for a connection to a high definition television monitor.

The Insight CPU contains two internal network cards. The network port labeled "Redbird" used to connect Redbird FMX to the Insight CPU.   The network port labeled "Support" provides remote support capability and Internet access for the Insight operating system (preferred, but not required)

Prior to requesting remote support, a network connected Ethernet cable should be attached to the network port located at the back of the Insight CPU labeled "SUPPORT"

The Ethernet port on the back of the Insight computer that is labeled "REDBIRD" is assigned a special type of static IP number, thus it can't be utilized to access the Internet. It sole purpose of the Redbird network port is to provide an interface between the Redbird FMX and Insight. See the Section "Redbird Ethernet Port"
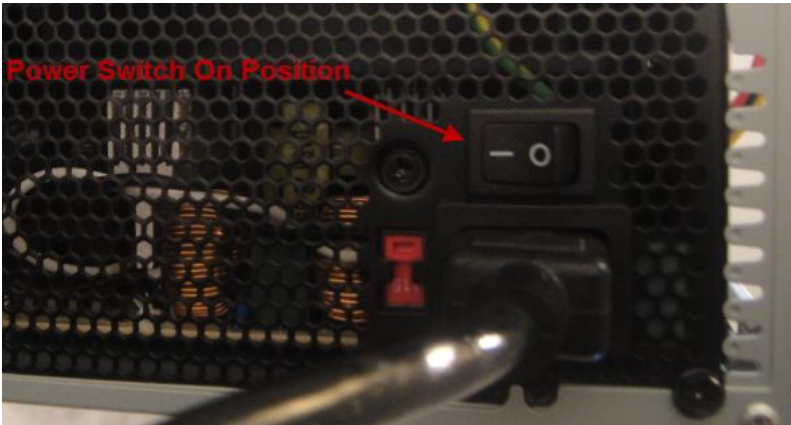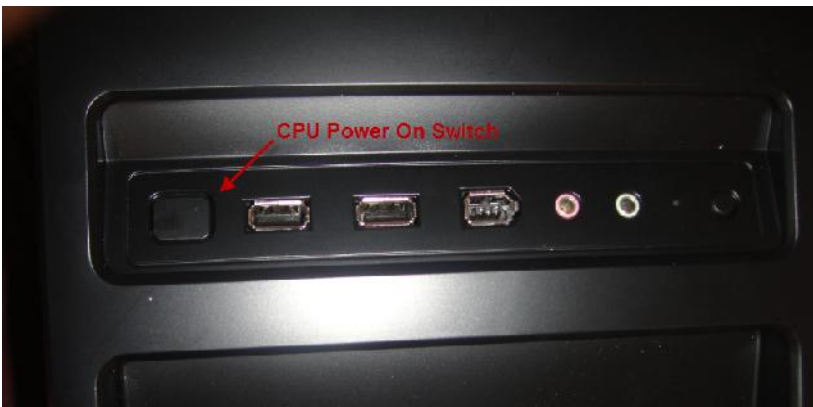
Insight System Start up

Power Up

Power up the Insight CPU by:

1. Ensure the power switch is set to the "On" position.

2. Press the CPU power on switch.

Application Start

The Insight DVR software is launched by double left clicking on the Redbird Insight Icon that's located on the Windows Desktop. After launching the Insight DVR, it will automatically start Windows Microsoft Flight Simulator.

Once loaded, Insight will communicate with the Redbird FMX to determine the current avionics panel connected within the simulator and load the appropriate aircraft within Microsoft Flight Simulator

Application Shut Down

The Insight DVR should be shut down by left clicking on the Insight icon in the task bar at the bottom of the Windows desktop and selecting close. This action will close both Insight and Microsoft Flight Simulator. Once Insight has been shut down, proceed with shutting down Microsoft Windows.

Insight DVR Recorder

Insight's DVR control panel is the same as those that you are likely use to operating whereas the play button is used to playback recorded video, the pause button is used to freeze playback and advancement controls allows for playback repositioning. Playback positioning also can be controlled by the video slider by dragging the control.

Insight is based on a persistent recording state, it's always "recording" all flight related activities in the Redbird FMX. Play of a Redbird FMX flight is automatically replayed after landing. As with a standard DVR, it is able to actively record a flight session, while playing back a previous one.

To open the Insight DVR application, double click on the Insight icon on the desktop.

 Upon Insight loading, you will see that it waits for a flight to start on the Redbird Simulator, unless a flight is already in progress. It will show the status [WAITING] in the title bar.

 Once a flights starts on the Redbird Simulator, you will see the status [LIVE] and the time display will increment with the duration of the flight.

At any time during this flight you can use the slider control to move back in time while the flight that is in progress on the Redbird Simulator is still recorded. You will see the status [PLAYING] in the title bar.


While in the [PLAYING] state, you can press either the Fast Forward button or the Go Live button to return to

the live view of the current flight on the Redbird Simulator. You can also press Pause to pause playback of the current flight.

Once there are flights that have been recorded, you can press the Select Flight button to choose a previous flight to be played back. When you have selected a flight other than the most recently recorded you will see the status [DEBRIEF]

You will be presented with a list of previously recorded flights. Highlight the desired flight and press Select.
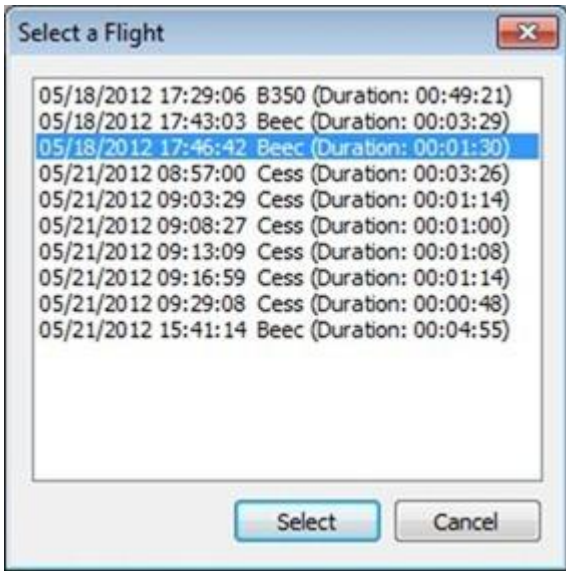
If another flight starts on the Redbird Simulator, you can use the Go Live button to go the live view of the current flight. At any time while viewing the live flight on the simulator, you can use Select Flight to choose another flight for playback from the history. The current flight on the Redbird Simulator will continue to be recorded in the background.

The Auto Replay button can be used to automatically replay the flight currently being viewed once the playback reaches the end of the recording. This is good for displaying the Redbird and Insight systems when the simulator isn't actively being used.

FLIGHTS UNDER 45 SECONDS ARE NOT KEPT. YOU WILL NOT SEE A FLIGHT UNDER 45 SECONDS IN THE "SELECT A FLIGHT" LIST.

Insight has predefined short cuts to change the various display views. The keys displayed below in combination with the Num Lock key being turned on or off determines active feature state.

REDBIRD
INSIGHT™ KEYPAD SHORTCUTS

| KEY	WITH NUM LOCK OFF	WITH NUM LOCK ON
1	Side View	Pan Down/Left
2	3D Cockpit	Pan Down
3	2D Cockpit	Pan Down/Right
4	Fly By	Panel Left
5	Tower View	
6	Tail View	Pan Right
7	CoPilot	Pan Up/Left
8	Large PFD (G1000)	Pan Up
9	Large MFD (G1000)	Pan Up/Right
0	Loop Replay	
/	Start Replay	
*	Return to Live	
+	Zoom In	
-	Zoom Out	

Remote communication is handled by the secondary network card that's installed within the Insight computer. Prior to requesting support, ensure that an Ethernet cable with Internet access is plugged into the Network Card label "SUPPORT".

Remote technical support is handled through the use of TeamViewer which is pre-loaded onto the Insight Computer.

Your assigned Insight TeamViewer number will be required to allow a technician to remotely access the Insight CPU.

To obtain the machine assigned TeamViewer number, simply hover the mouse cursor over the TeamViewer icon in the task bar and provide the displayed number technician.
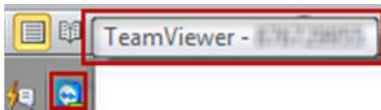
Tip: If the TeamViewer icon isn't present in the task bar look for the "Show Hidden Icons" symbol in the task bar to show all running program icons and repeat the process of hovering over the TeamViewer icon.

Insight System Shut Down

Power Down

Power down the Insight CPU by performing the following steps:

1. Right click on the Insight Application icon and select "Close". This will shut down <u>both the Insight DVR and Microsoft Flight Simulator</u>.

2. Left click on the windows start button.

3. Left click on the Windows Shut Down button.

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Problem	Cause	Solution
Insight CPU to Redbird interface connection not functioning	Redbird network type is set to "Public"	Switch network type to "Home". To Resolve select Start Menu >Control Panel > View By Small Icons > Network & Sharing Center. Look at Network Type and make sure Public is NOT selected. If a change is required, change the network type to HOME. To Change, select 'Choose Homegroup & Sharing Options'. Click on the text, 'What is a Network Location?'. Select 'Home Network'. Click Cancel on the 'Create a Homegroup' dialog.
Insight CPU to Redbird interface connection not functioning	Redbird Network IP not properly set	Set IP address of this adapter to 192.168.10.99. Start > Control Panel > Network and Sharing Center > Change Adapter Settings. Right Click on 'Network Connection - Redbird', click Properties >Internet Protocol Version 4 (TCP/IPv4). Set IP Address to 192.168.10.99 Subnet Mask will default to 255.255.255.0
Insight CPU to Redbird interface connection not functioning	Ethernet cable plugged into Support Card Network instead of the Redbird Network Port	Ensure that the Ethernet from the FMX is connected to the Ethernet port on the Insight CPU that is labeled Redbird.