

The CIX VFR Club	2-4-CIX AIR DISPLAYS	
For Simulation Purposes only. Not to be used for real World flight	FSX CONNECTION INSTRUCTIONS for PILOTS and SPECTATORS	Issue 1.2 25/01/14

1 INTRODUCTION

From January 2014, 2-4-CIX changed the way it operated its displays. Hitherto, all displays were conducted on VATSIM, and everyone taking part or watching the show would do so by connecting to VATSIM. A problem became apparent over time, that the display pilots were getting so slick in their routines, that the data transmission lag to the relatively slow VATSIM servers had become a limiting factor. Pilots wanted to create more complex displays, but the lag made timing and positioning impossible. The decision was therefore made to conduct all displays in the future using FSX's Multiplayer Mode only.

One person will act as host for the Multiplayer session. They will be familiar with setting up FSX as a Multiplayer Host. Everyone else joins the session which the host has created.

2 PREPARATION

2.1 Essentials

The first essential requirement is that all participants should have followed the instructions on the 2-4-Cix web pages for pilots and spectators, whichever is relevant, and have downloaded ALL the aircraft from the 2-4-Cix Aircraft Downloads web page. Failure to do this will mean that you will not see the correct aircraft performing, which leads to disappointment for all.

Secondly, you must connect to the Club TeamSpeak 3 Voice over Internet application to enable pilots to receive essential instructions before and during the display, and for spectators to receive information about the program.

Thirdly, ALL players (both Pilots and Spectators) MUST limit their frame rates to 20 per second in FSX. - Anyone who doesn't will use an excessive data flow through the multiplayer host to the detriment of all other connections including the host. The result is a dramatic reduction in frame rates of all the other connections!

2.2 Display Team Pilots

You will connect to the Multiplayer session with your normal display team callsign, e.g. CAT6.

2.3 Solo Performers and Flypasts

If you wish to make a solo performance; perform a simple flypast, or have put together an ad-hoc team for the event, such as a group of military aircraft flying in formation, you must contact the 2-4-CIX Deputy Team Leader (Technical) in advance of the show and obtain an official callsign. You will connect to the Multiplayer session with this callsign, e.g. CIX-LANC.

If the aircraft you wish to fly is not an FSX default, or is not included in the list of "Solo Performers" on the 2-4-CIX Aircraft Downloads web page, the 2-4-CIX Deputy Team Leader (Technical) will also give you instructions to change a setting in your chosen aircraft "aircraft.cfg" to enable all other

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participants in the display, to see your correct aircraft. The 2-4-CIX Deputy Team Leader (Technical) may be contacted via the email link on the web site from the [Management/2-4-Cix Team Leaders](#) menu option.

2.4 Spectators

You should connect to the Multiplayer session with your first and last names connected by an underscore, e.g. Phil_Smith.

3 MULTIPLAYER CONNECTION

3.1 Everyone Taking Part Except the Host

All participants start FSX and select **Multiplayer** from the main menu. This opens the **MULTIPLAYER – Sign In** screen.



Figure 1. MULTIPLAYER - Sign In Screen

It is prudent to check the Network Settings screen before proceeding, even if you only have one computer. Click on the **Network Settings** button on the **MULTIPLAYER – Sign In** screen.

By far the most frustrating element of multiplayer flight simming is the inability to connect to the session. Hours can be wasted dabbling in “comms” issues; an area of computing in which few of us are expert. So it is worth diverting from our main task for a moment.

You need to check the port settings on the Network Settings page and make sure that any firewall you are operating, hardware or software, will “forward” those ports, i.e. allow data from the others in the session to access your computer through the opened ports. To do this, you create a set of rules for the router to follow. The FSX default ports are 6112 to 6122 inclusive and there is no reason to change these unless you have another application which uses any of these ports.

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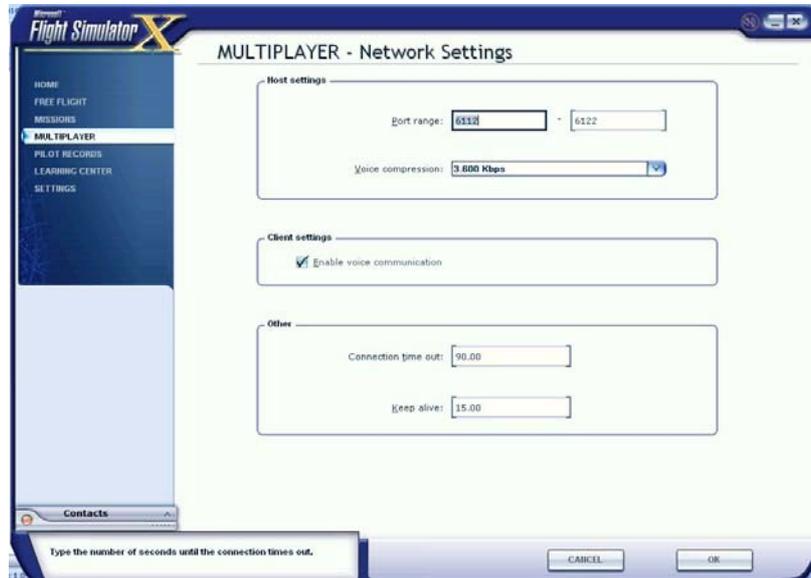


Figure 2. Network Settings Screen

Service	Port Range	LAN Computer	Action	WAN Users	Log
FSX	6112-6122	192.168.0.2	Allow Always	Any	Always

A typical router port forwarding rule for FSX is shown above. Note that the ports have to be forwarded somewhere. That somewhere is the computer running Flight Simulator, and the router needs that computer's internal IP address (shown above as "LAN server"). These are almost always of the form 192.168.0.X on home networks, where X is unique to each computer on the network.

You may have other computers on a network, so it is important to get it right otherwise the router will try and send the other session data to a computer on your network which is not running Flight Simulator. If you open a Command Prompt window from the Windows Accessories menu, and type in **ipconfig** and **<Return>** the resultant text output will show the internal IP address of the computer from which you are typing. They normally start 192.168....

Moving back to Flight Simulator, click on **OK** in the Networks Settings screen. From the **MULTIPLAYER – Sign In** screen select **Local Network (LAN)**, and enter your allocated team call-sign, solo performer callsign or your name, as appropriate. Click on **Sign In**. This takes you to the **MULTIPLAYER Lobby** screen.

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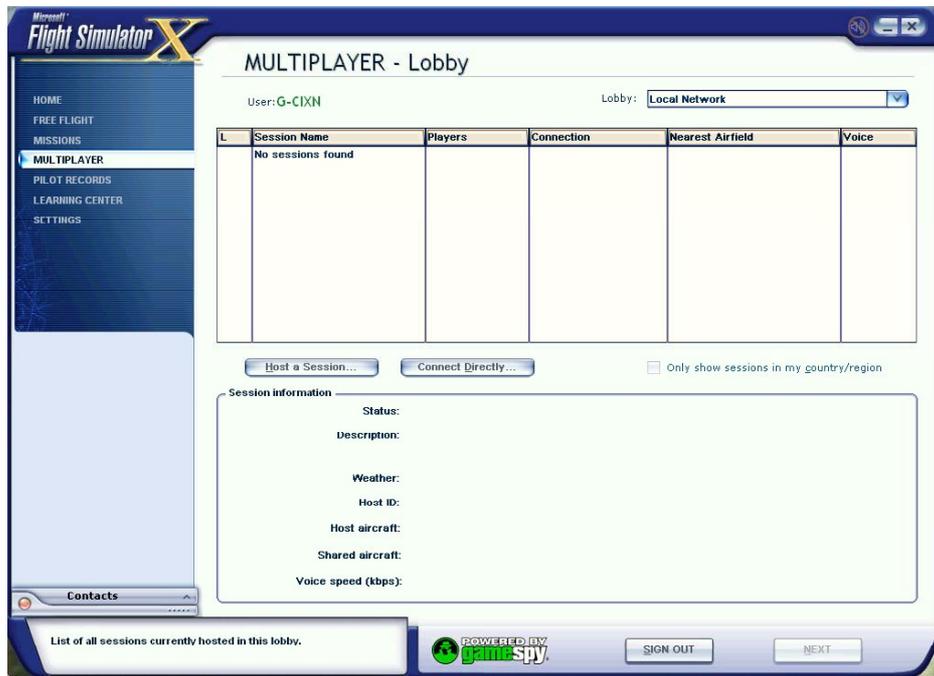


Figure 3. MULTIPLAYER Lobby

All participants select the **Connect Directly** button in the centre left of the screen. This opens the **MULTIPLAYER - Connect Directly to Host** screen.

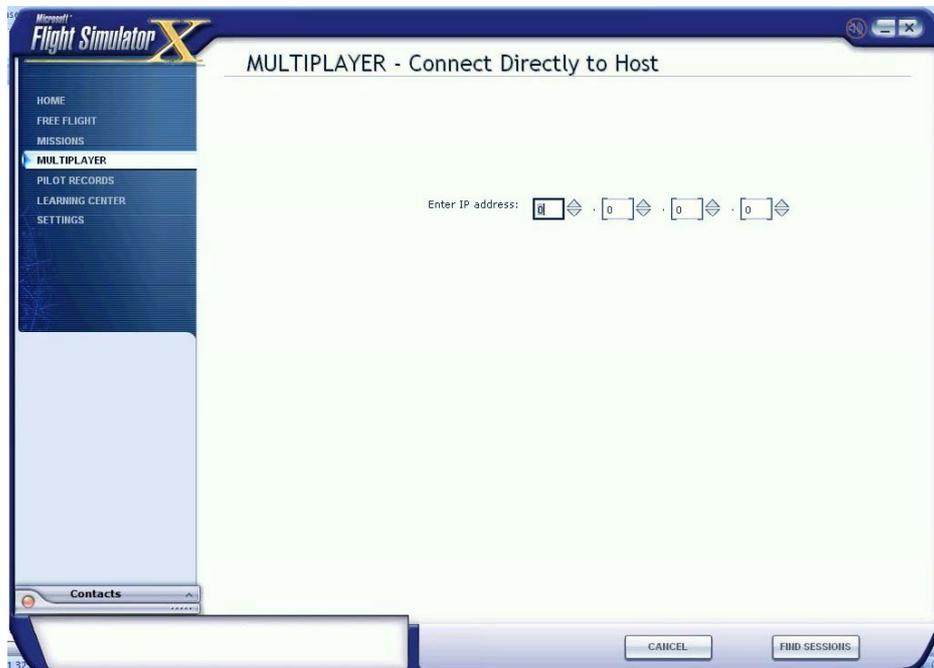


Figure 4. Connect Directly to Host Screen

Enter the host's IP address, which will be given out via Teamspeak once the session has been created. This is partly for security, and partly because the hosts's internet IP address is "volatile" and can change from day to day. Now Click on the **Find Sessions** button. A small pop-up window appears "Trying to connect..." and after about 30 seconds, another "Loading players' aircraft

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list". After a further few seconds the **Multplayer - Session Conditions** screen appears.

If the connection is likely to fail, the small pop-up "Trying to connect..." window appears for about 45 seconds or longer, followed by a message "Cannot create connection to Host". Display pilots should not have this error as they will have had practice sessions beforehand, but spectators may. If this happens to you, it is likely that you will not be able to solve the problem quickly and will miss the show. It may be valuable therefore to try some multiplayer sessions with a friend or Club member in advance of the show.

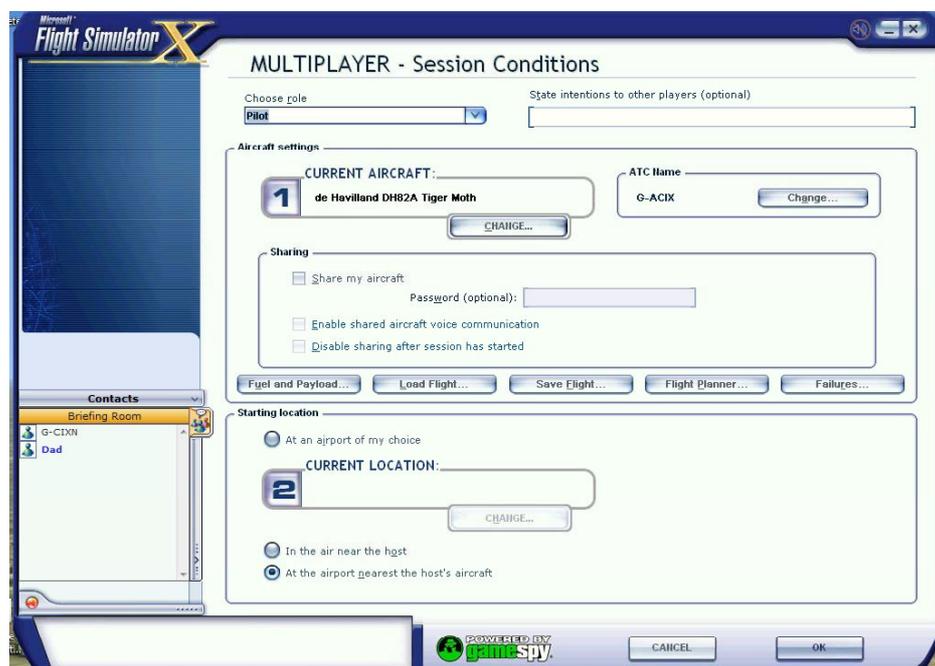


Figure 5. Session Conditions Screen

On the **Session Conditions** screen, the "Current Aircraft" always starts as the one used for your "default flight", so select the one you will be using for the display. Click on the Current Aircraft "Change" button and select the required aircraft in the normal way.

If you are watching the display as a spectator you are strongly advised to select the Spectator and Chair which you should have downloaded from the 2-4-CIX Aircraft Downloads web page. It will give you the best view of the display.

Still on the **Session Conditions** screen, set the "Current Location".

Select "At an airport of my choice". An airport is now shown, which initially is normally the airport closest to the host, and it would place you on the active runway, so **before clicking OK** at the bottom right of the screen, you **must** then click on the **Change** button and select the stand or parking position of your choice, or as allocated by the Team Leader. (You may need to start from another airfield. E.g. for a display at Gloucester some teams will muster at Fairford.)

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If you use the more obvious location “at the airport closest to the host’s aircraft” setting you will always be placed on the active runway, which would be unfortunate if a display has started, to put it mildly!

Now click on **OK**. This takes you to the Briefing Room.



Figure 6. The Briefing Room screen

There are no changes to make on this screen. You will notice a list of names in the small Briefing Room window at bottom left. These are the callsigns of the currently connected participants. Seeing these is reassuring that you have connected to the correct Multiplayer session.

Finally, click on **Join Session**. This takes you to the familiar scenery and terrain loading progress bar on a black screen and eventually places you in the cockpit. (If you have chosen to “spawn” where someone else is already parked you may be “kicked” into the air – if this happens land as quickly as possible, or disconnect and try again at a different stand.) – To avoid kicking others into the air, taxi or slew away from the stand as soon as possible once in the session.

4 FSX BINARY TOGGLES

Some FSX functions are binary toggles - either on or off. These features can behave in an unintended manner in Multiplayer sessions. If you have one of these features ON when you join the session, when it should be OFF, and so you then turn it OFF, other players will see it as having been turned ON. Therefore: -

Pilots – to ensure consistency of the following functions, before joining the session, you must ensure that: -

- Your smoke systems are all OFF,
- Your lights are all OFF,

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- Cockpit canopies, doors etc. are all CLOSED.

When all pilots and spectators are fully loaded into the session, the Team Leader will advise you when it is safe to switch these on or test their functioning. (Latecomers will have to bear with possible inconsistencies.)

Spectators – to ensure consistency of the various effects you are advised to be in your seat ready for the show five to ten minutes before the advertised start time. If you are later than this some of the show aircraft might end up looking as if they are displaying smoke etc. when in fact they are not, and vice-versa!