The CIX VFR Club	Flight Training Notes	Exercise	**34**
For Simulation Purposes only. Not to be used for real World flight	**FLIGHT SIMULATOR INSTRUCTOR MODE**	**Issue 1.3**	**13/02/12**

1   INTRODUCTION

One of the limitations of Flight Simulator is that it isn't very good at teaching you to learn to fly. The inbuilt flying lessons are good as far as they go, but if you make a mistake in a lesson, the subsequent instructions become nonsensical. In lesson 2 - turning, try turning right when Rod Machado asks you to turn left, and you'll see what I mean!

Now you want to learn to fly Flight Simulator properly before you learn lots of bad habits. You are frustrated by the fact that even if you sit beside a more experienced simmer, you don't have dual controls, so it is very difficult for him to pass on his knowledge and experience.
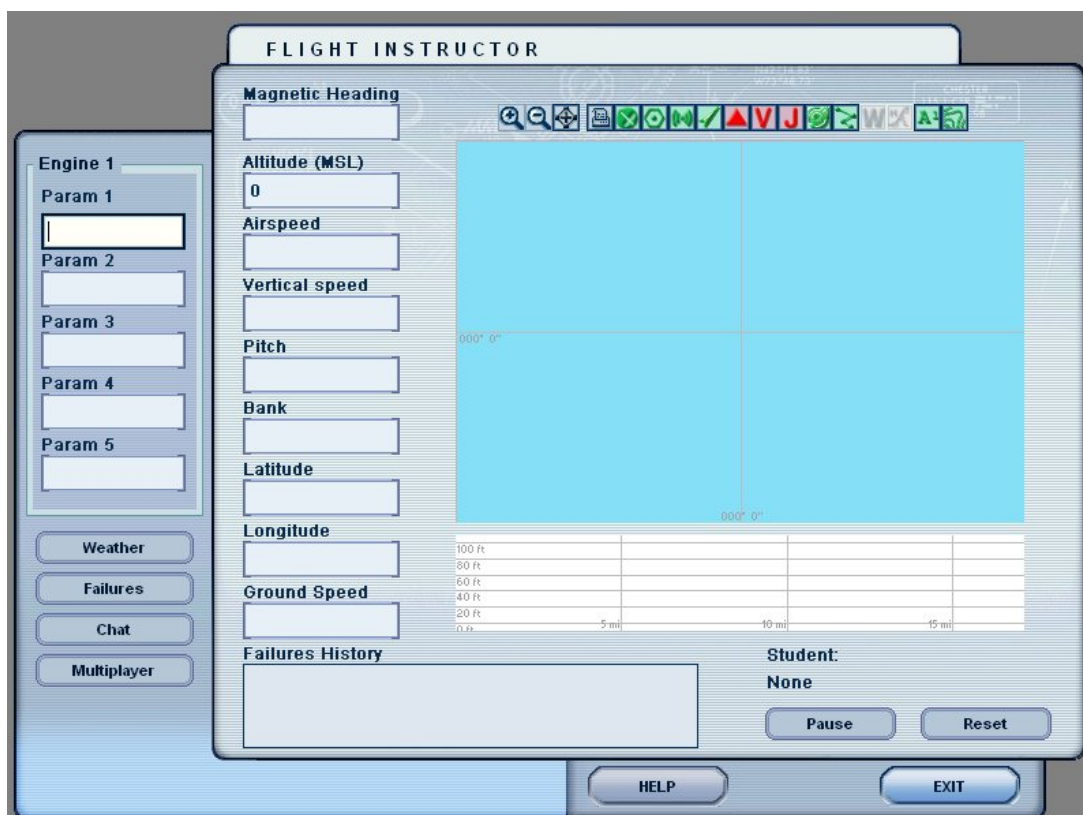
2   THE INSTRUCTOR MODE

The Instructor's Screen in Flight Simulator

Starting Instructor mode, the familiar sign-on screen comes up, but there's a slight difference – in the lower right corner are the words "Instructor Station". That confirms that we have at least loaded the right program, because the first two screens are unfamiliar. The first, "Multiplayer

Instructor Connect" asks for the Instructor's name. Well I'm Peter, so that will do. Click "OK". The next screen "Settings - Multiplayer Host Server" asks for a name for the Session. Anything will do, though it will help your student if you use a name he will recognize when he connects – lets use "Cix VFR Club Training" and click "OK" again.

The next screen is the instructor's main screen. Down the left hand side of a large blue square are boxes with familiar labels, and further left are some more boxes under a general label "Engine 1".

Waiting for the student

When the student connects, all these boxes start to contain data and the large blue square displays the familiar map view that you can open in normal FS mode. The instructor can then watch the numbers as the student flies and can give the student advice on how to improve their flying. The instructor can also introduce engine and instrument failures to add challenges, when the student reaches a certain standard.

The only thing the instructor cannot do is fly the aircraft. So if it all goes pear shaped, there is nothing he can do about it. Therein is the system's ultimate flaw as a training aid. But we make the best of it.

3   TEAMSPEAK

Within the FS system there is a chat function for passing instructions and information between instructor and student. However this means the student has to stop flying to type messages, which is not only inconvenient, it is unrealistic.

The Club therefore uses Teamspeak, a "Voice over Internet" application, in conjunction with Instructor mode to pass information. A proper instructor student relationship then naturally develops which helps the learning process enormously.

TeamSpeak has excellent voice quality and functionality. We have had very few, if any, problems in using it.

3.1   Installation

Installation is straightforward. Double click the downloaded **TeamSpeak_Client_v2.0.32.60.exe** file and follow the on-screen instructions. Accept the default installation directory   The installation will place a Teamspeak icon on your desktop during installation, which is very useful.

3.2   Set Up a PTT Button

First stage is to set up a PTT button. This has to be a different one to that which you use with AVC. A key which does not auto-repeat is necessary. The most commonly used is the RIGHT-CONTROL Key. On some systems, particularly laptop computers, the LEFT-CONTROL key and the RIGHT-CONTROL key are not separately identified, so it is preferable not to use the LEFT-CONTROL key for AVC unless you are sure that there is no conflict.

Click on the "Settings" main menu bar option, followed by Sound Input/Output from the dropdown menu. Click the Push to Talk radio button (we don't want to use voice activation), then press the Set Button and then press the RIGHT CONTROL Key. Set the Output volume slider to the midpoint "Normal" position. Finally press Close on this menu.

3.3   Options Set Up

Click on the "Settings" main menu bar option, followed by "Options" from the dropdown menu. Set up the following parameters.

3.3.1   Sound Devices Tab

Select the Wave radio button as the "Sound Driver" and move the "Direct Sound Buffer Size" slider fully right to "Better Sound Quality". This has no effect using Wave sound, but if later we select "Direct Sound" to produce better sound quality, then setting this slider to the right is necessary.

3.3.2 Sound Notifications Tab

Select the Sound Notifications slider to about 30%, otherwise the anonymous lady announcer within Teamspeak will deafen you when a member joins or leaves.

3.3.3 Bandwidth Tab

This can be skipped.

3.3.4 Other Tab

Tick the "Show Item in Traybar" tickbox, and select the Process Priority High radio button. This makes sure you can use TeamSpeak while running Flight Simulator. Ignore other settings.

3.4 Key Settings

It is useful to set up an AWAY key and a MUTE TeamSpeak key to enable you to show other users that you have left your PC for a few minutes with (the away key) and to silence TeamSpeak if other members are talking and ATC is calling you.

3.4.1 Away Key

Click on the "Settings" main menu bar option, followed by "Key Settings" from the dropdown menu. In the Key Bindings window, click "Add", then select TOGGLE from the "Action" pick list box. From the pick list box to the right select AWAY. Click the "Set" button above the "Action" Box and press the RIGHT ALT GR key (to the right of the spacebar on the keyboard). Click OK.
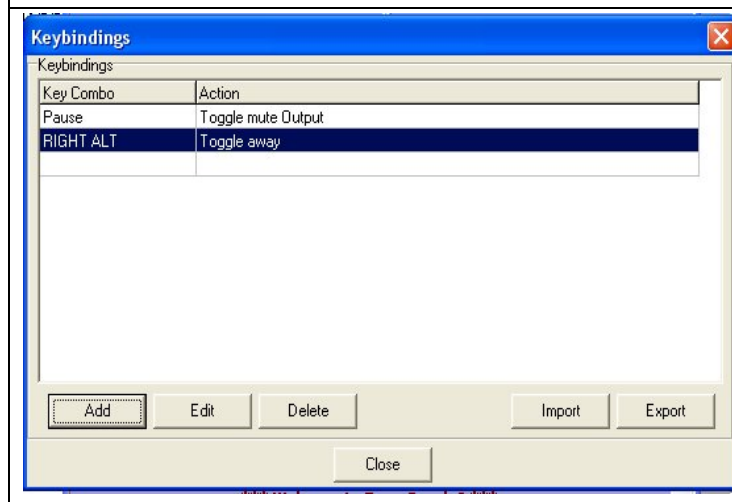
3.4.2 Mute Key

Click on the "Settings" main menu bar option, followed by "Key Settings" from the dropdown menu. In the Key Bindings window, click "Add", then select TOGGLE from the "Action" pick list box. From the pick list box to the right select MUTE. Click the "Set" button above the "Action" Box and press the PAUSE/BREAK key (to the upper right of the keyboard next to "Scroll Lock"). Click OK. The Keybindings window should now look like the lower of the screenshots below.
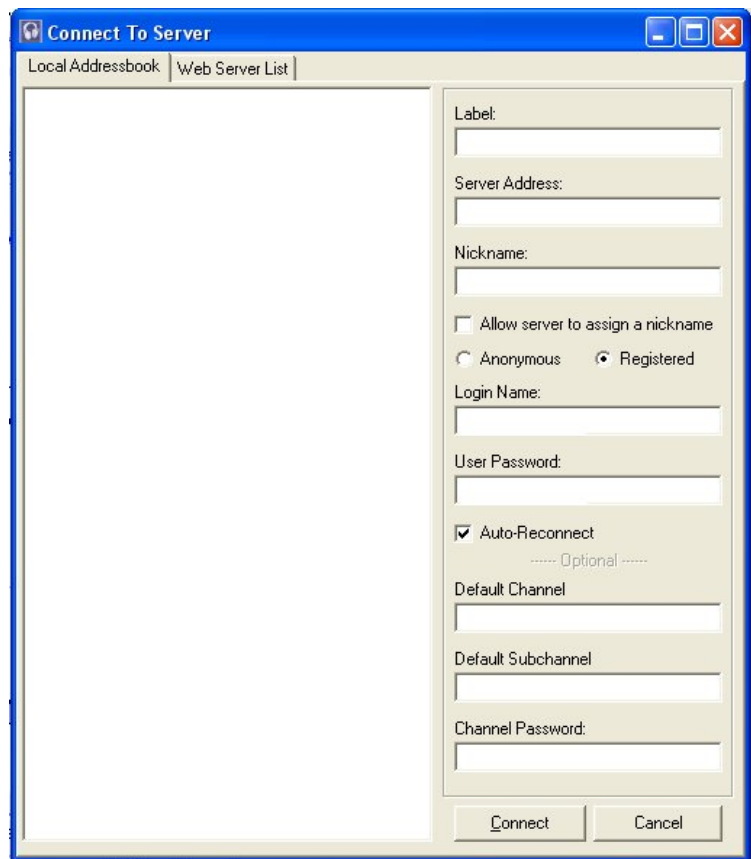
Setting Key Bindings

3.5   Connections

Once you have been given your personal Cix VFR Club registration details, , click on the "Connections" main menu bar option, followed by "Connect" from the dropdown menu. The following screen appears.

Right-click anywhere in the large white box and select ADD SERVER from the menu. Type "Cix VFR Club" (without the quotes of course). Press the keyboard "Enter" key.

Creating a Connection

Complete the following details.

Server Address	Provided by the Club by email
Nickname	Your first and last name.
Allow Server Nickname	Leave blank
Anonymous or Registered	Select the "Registered" radio button
Login Name	Provided by the Club by email
User Password	Provided by the Club by email
Auto-Reconnect	Tick this tick box
Default Channel	Leave blank
Default sub-Channel	Leave blank
Channel Password	Leave blank

Click the CONNECT button at the bottom of the window, and you should be connected with the following windowe displayed if there is no-one else on line.
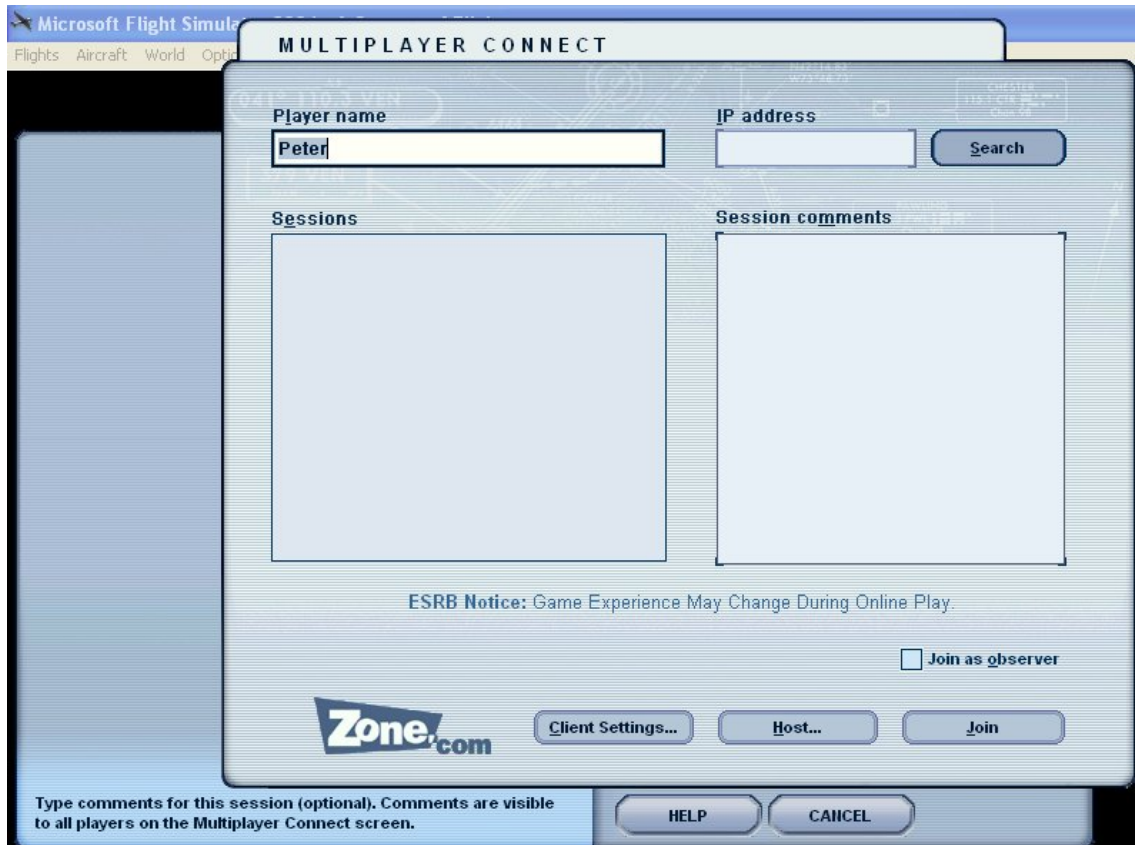
There are other options, including the facility to send a private text message to just one of the members connected, the setting up of different "rooms" for confidential conversations etc. For the Club's purposes, however, that is about all there is to it. When you come to disconnect, simply click on the "Connections" main menu bar option, followed by "Disconnect" from the dropdown menu.

4   CONNECTING IN FS AS A STUDENT PILOT

Start FS2004 and set up a multiplayer session as described below. When FS is loaded, untick the "Full Screen" option in the "Views" menu for the moment. Once everything is set up and running, you can go back to full screen if you wish.

First connect to the network or the Internet and start FS. Select "Multiplayer" either from the initial Startup menu, or from the "Flights" option on the Main menu once a flight is loaded.

The Student Connects to the Instructor

First enter your the Player name – your own name, or possibly the aircraft registration. Then enter the Instructor's IP address in the form "123.45.67.89". Then click the Search button, whereupon your Instructor session name "Cix VFR Club Training" should appear in the "Sessions" window of your Multiplayer screen. Click the session name once to highlight it and then click "Join". A message will scroll across your screen saying that "Peter (the instructor) has joined the session" – meaning that the two PCs have successfully connected.

Now go and do some flying!