# IL-2 Sturmovik DEMO v1.0

## www.il2sturmovik.com

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Before you start the demo, please remember that this demonstration is based on beta version of the full game and final release tunings and fixes are not included.

#### General features of the demo version:

#### 1. Three flyable types of planes

IL-2M2 - Russian ground attack

Bf-109G-2 - German fighter

P-39N-1 Airacobra – American-made Soviet fighter (most popular of all WWII lend lease planes in USSR)

#### 2. Al planes

German aircraft - Ju-87D-3 (dive bomber), Ju-88A-4(medium/dive bomber), FW-189A-2(recon)

Russian aircraft - I-16 Type 24(fighter), Li-2(transport/bomber), Yak-1B(fighter)

German ground units: Panzer IVF, Wirbelwind, Hetzer, StuG III, BMW bike, Opel Blitz 3,6-3700A, Opel Blitz 6700 medical, Opel Blitz fuel supplier, Opel Blitz radio car, 88mm AA Flak cannon 18, 20mm "Oerlikon" AA cannon

Russian ground units: T-60, T-34, GAZ-67, ZIS-5 truck, ZIS-6 fuel supplier, "Katyusha" rocket launcher, 85 mm AA cannon.

#### Single Play:

- Smolensk area map for single play (200x300km).
- Quick Mission Builder

## Multiplay:

- · LAN/Online Dogfight for 4 players with ability to create own server.
- · Special multiplayer map.

NOTICE: Bellow, after the short manual, you can find the list of final release features

#### Recommended system requirements for DEMO v1.0

- Pentium III, 600 MHz or better.
- 256 MB RAM recommended
- Windows 98/ME/2000 compatible sound card with DirectX 8 drivers

- 32 MB 3D video card \*, Windows 98 and 2000 compatible with **OpenGI and DirectX 8 drivers** (if you run the game in DirectX render mode).
- · Recommended 3D cards:
  - NVidia GeForce 256
  - NVidia GeForce 2MX
  - NVidia GeForce 2
  - NVidia GeForce 2 Ultra
  - NVidia Quadro
  - NVidia Quadro 2 Pr0
  - 3DFX Voodoo 5
  - ATI Radeon

We are sure the above 3D cards will have drivers available to support OpenGl and DirectX 8.

#### Notice:

As more new 3D cards receive drivers compatible with OpenGI and DirectX 8 we will expand this recommended list.

#### INSTALLATION.

- 1. Insert the IL-2 DEMO CD in your CD-ROM drive. You need to run the file **setup.exe** manually (using Windows Explorer) from a CD.
  - 2. Left-click the "Install" button on the Autorun menu that appears
- 3. Follow installation program instructions to complete setup. In case of any problems, installation will stop and notify you of the nature of the issues.

You can also remove (uninstall) the game from your hard drive either from the Autorun menu, or by clicking the Start button, and then selecting Programs / Ubi Soft / IL-2 Sturmovik / Uninstall.

## SETUP YOUR HARDWARE SETTINGS.

After the installation is complete, the Setup program starts automatically. It will allow you to select correct settings for video driver and video card, sound and input devices. For that you need to know at least basic hardware types of the devices installed on you PC.

#### 1.Driver - Driver and video modes setup.

These settings are similar to the internal II-2 *Video Modes* dialog. See the corresponding section of in-game menus below for description.

#### 2. Video - Video driver adjustment.

Allows the user to adjust the game for correct work with the appropriate driver.

OpenGL/DirectX settings are set separately.

It is recommended that the latest video card drivers be installed.

If any problems occur, please check your driver settings in Windows. The settings can be found in Control Panel/Display Properties/Advanced...menu

If the game locks up, or the screen refreshes very slowly make sure the other 3D applications or games (OpenGL/DirectX) start up and work properly. We recommend that you do not overclock your video card or processor, or use non-standard setting for them. In such case uninterrupted game functionality is not guaranteed!

Settings - Drop-down menu for video card selection and setup

Special options of the **Settings** menu allow detailed adjustment of video driver.

**Safe** - operating mode with minimum requirements to the driver (the lowest quality and speed)

**Default** - operating mode with medium requirements to the driver

<u>Custom</u> - detailed adjustment (at your own risk)

**Texture quality** - Texture resolution (see below).

Texture mipmap filter - Quality of texture filtration

**Texture Compression**- Saves memory considerably (the highest quality with <u>S3TC</u>)

**Detailed land textures**-Use textures of super fine resolution for landscape (big

volume of video memory and texture compression required)

\*Use Alpha / Use Index - Use additional texture formats

**Polygon Stipple** -Emulate shadow transparency with absent **Stencil Buffer**.

**Dither** -Controls dither mode for 16 bit modes

\*Use Clamped Sprite - Cutting down the number of polygons on sprite objects and effects.

\*DrawLandByTriangles - Drawing landscape with simple triangles

**UseVertexArrays**-Reproducing geometry via vertex array

Disable API Extensions-Forbids use of video driver extensions

MultiTexture - Multitexture

**Combine** - Improved texture combining

Secondary Color-Used for fog and lighting

<u>Texture Anisotropic Extensions</u> - allow anisotropic texture filtering

Texture Compress ARB Extension - allow S3TC compression

## 1. Video Modes - Choosing video modes

**Driver** - Choosing between DirectX8/OpenGL drivers

Choose the driver that suits best your video card in render speed and quality

Resolution - Choosing screen resolution and color depth.

Low resolution, e.g. 800x600x16 is recommended for earlier video cards,

1024x768x32 and higher should only be used on newer cards.

This setting has the greatest effect on quality and frame rate.

<u>Windowed/Full Screen</u> - Switches main game between running in windowed or full screen mode. Only full-screen mode is currently recommended.

Attempt Stencil Buffer - Utilize stencil buffer.

Stencil Buffer allows switching over to translucent shadows, etc.

Works mostly in 32 Bit modes. It usually introduces dramatic drop of frame rate on a number of old video cards.

Recommended for GF3

Apply - Apply new settings and return to the previous menu

**Back** - Return to the previous menu

## 2. Video Settings - Graphic Settings.

This dialogue window allows you to set up quality and efficiency. The result of applying the settings depends on video settings in IL2 Setup (that is the maximum quality is achieved at maximum video settings and when your video card supports a maximum number of options).

**Simple** - Move to simplified settings

**Very Low/Low/Medium/High/Excellent Settings** – Allows choosing between overall lowest to maximum possible quality.

Apply - Apply new settings
Back - Return to previous menu
- Move to detailed settings

**Texture Quality** - Texture resolution. Influences the volume of memory taken up by textures and the

game on the whole. You can also use texture compression to reduce it.

Visibility Distance - Visibility distance for objects.

Objects Lighting - Quality of object lighting.
Objects Detail - Detail of object geometry.

Landscape Lighting - Landscape lighting and shadows from objects.Landscape Detail - Landscape detail (forest/trees/terrain/geometry).

- Cloud Visualization distance (their complete shutoff can be blocked in network

play).

## **Sound Setup**

When installation is completed, a separate IL2Setup configuration program will start up. You can also use the program for more detailed adjustment of equipment settings (at your own risk).

The easiest way to adjust sound is to choose from existing configurations.

Please choose your sound card from the list. In case it is not in the list, follow instructions below:

- If the card supports 3D sound hardware acceleration or you are not sure about it choose **Minimal or Maximal settings**.
- If your card does not support 3D sound hardware acceleration or you experience sound-related problems please choose **No hardware acceleration** in accordance with the OS you are using.

If you want to adjust all the settings yourself choose **<u>Custom settings</u>**.

All dialogue options repeat those in the sound menu within the game (see below) with the exception of:

<u>Disable hardware voice manager</u> - choose the option if you have an accelerated sound card and the sound occasionally fades away and disappears.

<u>Disable streams</u> - choose the option if there are gaps in the sound. However, you will not be able to use network telephone and listen to music.

<u>Disable statics</u> - choose the option if sound effects are out of synch with the picture.

**Audio input** - devices used for input of signal from network telephone mike. DirectX required. "None" switches the telephone off.

**Enable full duplex** option should be checked.

## Main In-Game Settings

Adjusted in the **Sound Setup->Audio** menu. This menu allows main sound settings adjustment.

## "Sound engine" switch

If you have a sound card based on the Aureal Vortex chips use **Aureal3D**.

In all other cases use **DirectX**.

To switch off the sound use **Disable sound**.

Attention! If you have switched on the A3D mode and your card uses a different chip from Aureal the game will most probably hang up.

#### "Enable hardware" switch.

If your sound card has hardware acceleration, turn the switch on. This enhances sound quality considerably and reduces CPU load. If there is no acceleration, the position of the switch is irrelevant. Should any sound-related problems turn up the switch must be turned off.

#### "Playback channels" switch.

If your sound card has no hardware acceleration or the latter is turned off by **Enable Hardware** switch, the parameter has a great effect on the CPU load. Use the **Default** or **16** values. We recommend that you use value **8** for Windows2000 and NT.

## "Speakers type" and "Reverse stereo" switches.

Indicate the type of audio reproducing device you are using: headphones, desktop speakers or system 5.1 (surround).

If stereo channels appear reversed, use the **Reverse Stereo** switch.

#### **Advanced Menu**

This menu is used for adjustment of additional settings. **Audio quality** and **3D render performance** settings determine the ratio of sound quality to the rate of CPU load, other settings affect the sound.

<u>Audio quality</u> and <u>3D Rendering performance</u> switches affect sound quality and for the most part the CPU load. Optimal value of <u>Audio quality</u> is <u>22kHz</u>.

The value of <u>3D Rendering performance</u> is only important in case your sound card has no hardware acceleration or the latter is turned off by <u>Enable Hardware</u> switch. In this case, we witness fast CPU operation when the switch is in Minimum position; CPU operation is correspondingly slow if the switch is at <u>Maximum</u>. It is recommended that you use the <u>Default</u> or <u>Minimum</u> values.

<u>Distance attenuation</u> regulator sets the rate at which sound volume decreases, if the distance to its source is increased.

**Environmental acoustics** switch allows utilization of EAX or A3D virtual acoustics interfaces, if they are supported by your sound card.

**Volumetric sounds** switch turns on 3D sound sources by Sensaura technology (it should be mentioned that in the current version of Sensaura drivers - 2101 this technology does not work too well).

**Realistic occlusions** switch determines whether the obstacles (for example the hull of the aircraft) will reduce sound volume. If it is switched on and you are inside the aircraft it becomes more difficult to distinguish the sounds from the outside. If your card supports EAX or A3D you should turn the **Environmental acoustics** switch on. You can use the other two switches at your discretion.

#### Adjusting sound volume.

Sound volume is adjusted with the help of corresponding controls in the **SoundSetup->General** menu:

<u>Master volume</u> - general level of volume for all sources.

Objects volume - relative volume of effects.

**Music volume** - relative music volume.

**Voice volume** - relative volume of voice messages and network telephone.

## Music playback.

Music in the game is turned on by <u>Play music</u> switch in the <u>Sound Setup->General</u> menu. Music volume can be adjusted with <u>Music Volume</u> control in the <u>General</u> menu.

Whether the music is to be switched on or off in a given gameplay episode is defined in **Sound Setup- Music** menu.

Play take-off tracks
Play in-flight tracks
Play crash tracks
- play music in flight
- play music when damaged

You can add music files at your own discretion from Samples/Music/ directory. The music should be in Windows WAVE-file, MPEG 1.3 format. The files for playback are chosen at random.

#### **Network Communication.**

Network voice communication is turned on by the <u>Voice Communications</u> switch in <u>Network</u> menu and starts working when you enter the next LAN or Internet game. The volume is adjusted with the help of <u>Voice</u> volume switch in the <u>SoundSetup->General</u> menu.

The channel for communication is chosen in chat window. Only the players using the same channel can hear each other. If you enter "." (dot) in text box window, a list of channels will appear at the bottom of the screen. You can use it to select the working channel by pressing UP and DOWN arrows or by entering its number. The list consists of channel number and name. The number of players switched onto the channel is indicated in brackets. Current working channel is highlighted in different color, and has a "\*" symbol.

If you are experiencing problems of any kind related to network voice communication, please make sure the following settings are chosen in the separate il2setup.exe program, **Sound Setup** section: **"Advanced"** group

<u>Disable streams</u> - unchecked. <u>Disable static</u> - unchecked.

## "Radio chatter" group

<u>Audio input</u> - "DirectX" <u>Enable full duplex</u> - checked.

If the game does not run well with active voice comms, it can be switched off by choosing **Audio input -> None** in il2setup.

#### Adjusting sound in Windows.

DirectX sound settings in Windows can be found in <u>Control Panel->Sounds and Multimedia->Audio</u> dialogue. Sounds and Multimedia may simply be called Sounds in some version of Windows

To adjust sound hardware acceleration choose <u>Sound Playback->Advanced</u> (see below).

If you have several sound devices installed (for example, a chip on the motherboard and a separate card), choose the one you prefer in the <u>Preferred devices</u> list and select the <u>Use only preferred devices</u> option.

In addition to this dialogue box, your sound card may have additional adjustment options.

Choose the sound device you are using in **Speakers** dialogue.

Choose <u>Hardware acceleration->Full</u> position of the switch in Performance dialogue. If this creates problems with the sound, check <u>Basic acceleration</u> or as a last resort <u>Emulation only</u>.

#### Troubleshooting.

#### No sound.

Make sure the sound is not switched off in the <u>SoundSetup->Audio</u> menu. Make sure the volume is not muted in the <u>SoundSetup->General</u> menu.

#### No music.

Make sure the volume is not muted in **SoundSetup->General** menu and music is checked in the menu. Make sure with the help of il2setup program that **DisableStreams** option at **Sound** page is not switched on (to see all components on the page you should chose **Settings->Custom**).

#### No network voice comms

You can hear messages of other players under Windows NT4.0, but you cannot talk yourself in most cases. This does not hold for Windows2000.

Make sure the telephone is switched on (see above) Go through all options in **No music** paragraph.

#### **Basic controls**

In order to easily start playing for the first time, you will need to understand the basic controls.

#### **Basic Flight Controls:**

Joystick or Arrow Keys - Move Control Surfaces (Control Pitch and Roll)

Rudder Pedals or Z/X - Rudder (Controls Yaw)

Joystick Throttle or +/- - Change Engine Throttle

1 through 9 and 0 - Change Engine Throttle to a Pre-Set Value

**W** - Engine boost mode (WEP)

Joystick Buttons - Fire Weapons
Space - Drop Bombs
Alt-Space - Fire Rockets

#### **Additional Controls:**

G - Toggles Landing Gear
F/V - Raises/Lower Landing Flaps
I - Starts/Stops the Engine

B - Wheel Brakes
A - Toggles Autopilot
Ctrl-E - Ejects Pilot

#### **View Controls:**

Function keys - Change to Different Views

Mouse or Numpad Keys - Pan Around in Cockpit

#### **Advanced controls**

Select "Controls" menu of the game and change them there.

#### **FINAL VERSION WILL INCLUDE:**

- 1. Fly **31** types of Russian, German and American planes. See them in different camouflage and paint schemes for different times of the year (at least summer and winter)
- 2. Fly pilot or rear gunner (IL-2 variants only)
- 3. Choose between realistic and simple flight models with many adjustments to various realism settings. Encounter **40** other types of aircraft in large air battles. (with camouflage paint schemes changing from summer to winter)
- 4. Engage in air-to-air and air-to-ground battles
- 5. Destroy any ground object, such as buildings, bridges, airfields, etc.

- 6. Play quick missions using full mission parameter settings
- 7. Play different types of single missions
- 8. Play campaign missions and track your career (with ranks and awards)
- 9. Fight intelligent Al opponents
- 10. Play two different multiplayer modes: dogfighting or cooperative missions across a LAN or the Internet with dedicated servers for online play
- 11. Multiplay: with up to 32 players in dogfight and 16 players in cooperative missions. Use custom paint schemes, squadron nose art, markings, and national markings for each single plane. Custom skins from other players are seamlessly downloaded in the background upon connection to server
- 12. Record a track of any of your flights, and edit these tracks. Then play and enjoy or send this track file to others. (Internet sim community can use this to confirm their online wins/kills.)
- 13. Use Network and Internet voice communications for multiplayer sessions
- 14. Build new missions and scenarios with an easy to use mission builder. Use missions for single or multiplayer sessions
- 15. Play new scenarios designed by other players, automatically download upon connection to server
- 16. Use new plane sets and new scenarios from free and/or commercial add-ons, designed by original developers after release of the sim
- 17. See exceptionally high quality aircraft and ground unit graphics
- 18. See massive air and ground battles between German and Russian airplanes and tanks
- 19. See realistic dynamic damage modeling
- 20. See realistic 3D world environment, including terrain, sky, unique clouds and weather conditions
- 21. See realistic smoke, explosions, fire and other special effects
- 22. Hear immersive radio chatter
- 23. Use and wide variety of 3D sound cards or drivers (Aureal 3D 3.0 or EAX 1.0, EAX 2.0)

#### **GAMEPLAY**

This is a list of the flyable aircraft for players. There are 23 flyable planes for both of Single and Multiplayer:

Model	Production Year	Equipment Changes
IL-2 Single seat	1941 early	2x20mm machine cannons
IL-2 Single seat	1941	2x20mm machine cannons
IL-2 Single seat	1941	2x23mm machine cannons
IL-2	1942	Field modification: Rear Gunner
IL-2M Type-2	1942	Series production: Rear Gunner
IL-2 Type 3	1943	15-degree swept-back wing portions, 1720 hp AM-38F engine
IL-2 Type 3M	1943	2x37mm anti-tank cannons
IL-2T	1943	torpedo bomber for Soviet Naval Aviation
IL-2I		armored anti-bomber fighter (based on the single seat variant)
LaGG-3	1941	initial series production with M-105 engine
LaGG-3-IT	1942	Powered by 37 mm nose mounted cannon
LaGG-3	1944	last and best series with M-105PF or M-105PF2 engine
MiG-3	1940-41	high altitude fighter and interceptor
MiG-3ud	1940-41	high altitude fighter and interceptor
MiG-3U	1942-45	powered buy new engine, new type 20mm cannons.
La-5FN	1943-45	
Yak-1b	1942-45	
Yak-7	1941-43	
Yak-9T	1943	
Yak-9K	1944	
Yak-9U	1944-45	
Yak-3	1944-45	
P-39N-1	1942	US lend-lease

P-39Q-1	1943	US lend-lease
P-39Q-10	1944-45	US lend-lease. Most popular lend lease plane on Russian
		front
Bf-109F-2	1941	
Bf-109G-2	1942	
Bf-109G-6	1943	
Bf-109G-6 Late	1944	Changes in aerodynamics and design
Bf-109G-6AS	1944-45	Powered by WEP system MW-50
FW-190A-4	1942-44	•

#### **Single Play Features:**

A) New missions can be easily created with the **Quick Mission Builder**:

- Select any flyable aircraft including stock planes or future add-ons
- Select the number of friendly aircraft in air and the AI skill for each plane
- Select the loadout of each friendly aircraft
- Select number of enemy planes in air and the AI skill for each plane
- Select loadout of selected enemy aircraft
- Set the time of Day
- Select weather conditions
- Select the tactical situation: None, Advantage, Disadvantage
- Select any included map, stock or future add-on
- Select target.
- Select level of defense: None, AA-artillery (Including fire from the ships)
- All settings may be saved to a file, to play later, or to send to other IL-2 players and they will be able to repeat (replay) such situation.
- Fly as wing leader or squadron member
- Extensive commands in flight to control the AI aircraft of your flight or squad (if it is present)
- Immersive radio chatter, generated automatically with each new mission.

**Important NOTE:** Quick Mission Builder is build to enhance offline single player gaming. Its most important feature is ease of use. It is designed for fast random generation of new single missions. Missions created by a player using the **Quick Mission Builder** may be saved to a file to be sent to other users or uploaded to the Internet so anyone will be able to fly the identical mission.

The Quick Mission Builder is not the same as Mission Builder (see below). The Quick Mission Builder is a subset of the Mission Builder. The Quick Mission Builder will only build single player missions and training flights. It can provide excellent preparation for online play.

B) You can fly for Russia or Germany in single missions or campaigns.

- Russia: You may fly either ground attack or fighters aircraft such as IL-2 (9 types), LaGG-3 (3 types), P-39 (3 types), MiG-3 (3 types), Yak-1, Yak-7, Yak-9T, Yak-9K, Yak-9U, Yak-3, La-5FN. See the mission examples section below.
- Germany: You may fly the Bf-109F-2, Bf-109G-2, Bf-109G-6, Bf-109G-6 late, Bf-109G-6AS, and FW-190A-4 and use them as fighters or fighters-bombers. See below for examples of mission types.

#### Single Missions:

- Russian or German side
- Select any flyable aircraft
- Select loadout
- Fly as wing leader or squadron member
- Extensive commands in flight to control the Al aircraft of your wing (if any are present)
- Realistic radio chatter generated in response to your commands

## Campaigns (careers)

- Russian or German side
- Bomber pilot career (Russian side only)
- Fighter pilot career (both sides)
- Select the initial rank in Soviet Air Force or Luftwaffe
- Extensive commands in flight to control the AI aircraft of your wing (if it is present)
- Realistic radio chatter generated in response to your commands
- Awards if your flights are successful. «The Hero of Soviet Union» or "Knight Cross with Diamonds" are available
- Campaign Scenarios based on historical settings

## Campaigns which will follow a continuous coherent story line.

- 1) 1941 Smolensk
- 2) 1941 Moscow
- 3) 1942 Stalingrad
- 4) 1943 Kursk
- 5) 1943 Kuban
- 6) 1944 Crimea
- 7) 1945 Berlin

Note: A common list of mission types may be found in the 'Mission Types' section.

## **Multiplayer**

Multiplayer includes two main modes that can be played on a LAN or across the Internet with dedicated servers (you can host your own server in additional to the main, hosted by us or the publisher).

- 1. Dogfight will allow up to 32 players, depending on connections and server's preference
- 2. Cooperative missions will allow up to 16 players depending on connections and server preference

#### Dogfight

Connect to the server at any time of day or night and go head to head against any of other player online. The server may be set up several different ways:

- A) For the hardcore simmers (adjustable on the server)
- B) For the player who wants rapid fire action, arcade style (adjustable on the server with many various) For Dogfight mode is present two types of servers:
  - 1) dedicated (hosted by publisher and perhaps, other providers)
  - 2) hosted by user on home PC connected to Internet.

#### Cooperative Missions (Teamplay).

- 1) This mode is developed for those who like to play in teams in historical scenarios or scenarios created in the mission builder.
- 2) Before a team play game, players will need to set the date and time for internet play, for LAN it isn't necessary, when they all will begin the cooperative mission with selected scenario.
- 3) There are possible two types of server settings:
  - a) for hardcore simmers (adjustable on the server)
  - b) for novice or for those who like arcade style games (adjustable on the server)
- 4) Possible various of cooperative missions modes:
  - 5) team vs. other team.
  - 6) team vs. Al
  - 7) team + AI vs. other team + AI. (with various amount of AI friends/enemy for both teams)
- 6) Player host own cooperative server on the home PC, connected to Internet.

#### **MULTIPLAY/ONLINE PAINT SCHEMES:**

Each flyable plane can be unique. Virtual squadrons may have their original paint schemes with individual numbering. It will be easy to identify friends or foes.

Players are able to select:

- 1. National markings. Players for countries not present in our list of images can paint new national markings and upload for others to use.
- 2. Numbers on the fuselage from 00 to 99 plus it is possible to select the color of number.
- 3. Squadron markings from a list including some historical images and a list of images sent us many virtual squadrons. A player can paint any new emblem (with the correct size and palette). It will be seamlessly downloaded by all other players in an MP game
- 4. Camouflage from a list that includes some well-known paint schemes for each flyable plane, including aircraft of famous aces. In addition, player can paint their own schemes and place any new markings, numbering, etc on the new painted skin.
- 5. During the automatic skin downloading process, or if a player chooses to disable it, they will see other player's aircraft with the standard markings (with our standard list, player selected national markings, player selected numbering, player selected or default squadron markings, and with the standard default camouflage)

**For all modes of the multiplay:** All players receive the settings of the server to which they are currently connected during the first seconds of connection to such server. The players can not change them (cheat). All of players will use the same settings for gameplay.

A SEARCH for SERVERS utility is included with the release. Each player will be able to search for all IL-2 servers. In this search program it displays:

- all servers (if options are set for this)
- type of the server (dogfight or cooperative)
- number of players online
- player's callsign (nickname)
- their current Kills/Deaths
- connection quality (ping/lag)
- type of the map (scenario)
- connect to this server without permission of other players or host (unattended server mode)

#### **IMPORTANT NOTICE FOR MULTIPLAY COOPERATIVE MODE:**

- 1. All single or campaign missions are not available to every player online. The number of players online is limited. The is no limit to the number of Al planes in single play (except as limited by the speed of processor)
- 2. For two seat aircraft, it is possible to fly two players in one plane, pilot + rear gunner. The rear gunner seat uses a "quake mode" to shoot using the mouse. You may always fly alone and to switch your position from Pilot to rear gunner (AI will take control of the position you are not controlling). Switch at any time during your flight from one position to another and back. This feature is currently included for IL-2 two seats models only. If there are additional TWO SEAT aircraft in the form of future add-ons, this feature will be also present for them. The multi crew Ju-88, Pe-2 or Tu-2 are being considered also for expansion. The feature of multi crewmembers online in one plane is modeled, so if there will be such planes with add-ons, that feature will work.

## Mission builder:

This utilizes 2D and 3D tools and is based on the IL-2 engine. There is a Zoom feature that can expand the 2D map from the full 200 km x 300 km (full screen) to view single 3D object with full screen detail.

Users can create their own missions for single or multiplayer cooperative missions. It will be possible to set the area, location of ground forces (troops, tanks, ships, etc) and air forces with all necessary parameters for both sides. Any mission is playable on any PC running IL-2. Generally, in order to play the mission, one will need only the sim itself. Sometimes the new models of objects or maps from our own add-ons (if used) will need to be downloaded.

The Mission Builder will be module of IL-2 engine, incorporated in a simulator.

**Mission Examples for Russian forces:** 

Bomber missions (available to all 8 modifications of IL-2, except fighter variant):

1. Ground attack:

- a) Tank and vehicles busting
- b) Stationary objects (airfields and aircraft strafing, bombing bridges, bombing buildings, engineering, AA-defense objects, etc)
- c) Hunt for the enemy ground objects, engineering, and officer's cars
- 2. Air attack.
- a) Sweep Ju-87s from the skies (all types of Ju-87)
- b) Protect your troops from Hs-129 ground attack planes
- c) Protect your installations from He-111 bombers
- d) Hunt for the staff plane 'Storch'
- e) Hunt for Ju-52 transports and paratrooper transports.

#### 3. Escort missions

During 1941-43, IL-2s, equipped with 2x20(or 23)mm guns, 8 or 16 rockets (or deleted rocket rails) with no bombs loaded were used for escorting of fully loaded IL-2 flights. The speed and maneuverability of the IL-2 when it was not loaded with bombs were slightly with the Bf-109E at low altitudes (up to 1.000 m). Such missions should be frequent but they are an interesting diversion from the normal air to ground tasking.

- 4. Naval attacks
- a) Hunt for naval combat vessels and transports
- b) Hunt for U-boats
- c) Attack naval vessels and installations when they are in port

#### Fighter missions:

- Fighter sweep
  - a) Against German, Romanian and Hungarian fighters (for example, Bf-109E-4, Bf-109E-7/B, Bf-109F-2, Bf-109G-2, Bf-109G-6, Bf-109K-4, FW-190A-4, FW-190A-8, FW-190D-9, Me-262)
- 2) Intercept
  - a) Stukas (Ju-87B-2, Ju-87D-3, Ju-87G-1)
  - b) Hs-129 ground attack planes
  - c) He-111, Ju-88 bombers
  - d) Fi-156 Storch liaison aircraft
  - e) He-111Z Tug linked to Me-321 Glider
  - f) Me-323, Ju-52 transport planes
- 3) Patrol
  - a) Hunt for Ju-52 transports and descent planes, any target
- 4) Close Air Support (rockets and bomb target)
- 5) Reconnaissance
- 6) Escort flight
  - a) Escort of all types of IL-2 bombers
  - b) Escort of transport and descent planes Li-2
- 7) Naval attacks

- a) Hunt for the enemy torpedo boats.
- b) Hunt for U-boat
- c) Defend Russian military and transport ships.

#### Bomber missions:

- 1) Ground attack:
  - a) Tank and vehicles busting
  - b) Stationary objects (airfields and aircraft strafing, bombing bridges, bombing buildings, engineering, AA-defense objects, etc)
  - c) Hunt for the enemy ground objects, engineering, and officer's cars

## **Mission Examples for the Luftwaffe:**

## Fighter missions:

- 1) Intercept
  - a) IL-2s (9 types, many variants of this mission)
  - b) U-2 (Po-2) liaison plane
  - c) R-10 reconnaissance plane
- 2) Fighter sweep
  - a) Russian fighters (for example, I-16, LaGG-3s, MiG-3s, P-39N, P-39Q, La-5FN, La-7, Yak-1, Yak-7, Yak-9, Yak-3)
- 3) Free Hunt
  - a) Any target.
- 4) Patrol
- 5) Close combat support (bomb target)
- 6) Escort flight
  - a) Ju-87 groups
  - b) Hs-129 groups
  - c) He-111 bombers
  - d) Ju-88 bombers
  - e) transport and paratrooper transport Ju-52

## Bomber missions:

- 1) Ground attack:
  - a) Tank and vehicles busting
  - b) Stationary objects (airfields and aircraft strafing, bombing bridges, bombing buildings, engineering, AA-defense objects, etc)
  - c) Hunt for the enemy ground objects, engineering, and officer's cars

# Naval Missions:

- 1) Hunt for enemy torpedo boats.
- 2) Hunt for enemy armored boats
- 3) Defense of the German, Italian and Romanian military and transport ships
- 4) Close support of Stuka's attacks against Russian Destroyers and transports.

## THE LIST of NON-FLYABLE AI planes

R-10 U-2 (Po-2) Li-2 I-16 I-153 La-7 Pe-2 (with various of modifications 1940-1944. i.e. more then 3 additional different aircraft!) Pe-3 Pe-8 MBR-2 Tu-2S G-11 Bf-109E-4 Bf-109E-7/B Bf-109K-4 FW-190A-5 FW-190A-8 FW-190D-9 He-111H He-111Z Hs-129B-2 Hs-129B-3/Wa Ju-87B-2 Ju-87D-3 Ju-87G-1 Ju-52 Ju-52 with floats (Sea Plane) Ju-88 Fi-156 Storch FW-189, Me-323 Me-321 He-162 Me-262 **IAR-80 IAR-81** Macchi MC.202

**NOTE:** Some of the aircraft on this list above have been created with the possibility to use them for future flyable planes add-ons. They are marked in bold.

## The list of other active Al objects:

#### **Tanks**

USSR BT-7 T-34 T-34-85 KV-1

IS-2

T-40

T-60

T-70M

SU-76M

SU-85

SU-100

ISU-152

ZSU-37

## USA (Lend-lease, Russian side)

M4A2 Sherman

M4A2(76)W Sherman

## UK (Lend-lease, Russian side)

Mk III Valentine II

## Germany

Pz.IIF

Pz.IIIJ

Pz.IIIG

Pz.IIIM

Pz.IIIN

Pz.IVE

Pz.IVF2

Pz.IVJ

Pz.V Panther

Pz.VIE Tiger

Pz.VIB Tiger II

Wirbelwind (2cm Flak)

StuG III

StuG IV

Jagdpanther

Ferdinant (Elefant)

7.5 cm Panzerjager 38(t) Hetzer.

#### **Armored Vehicles**

<u>USSR</u>

BA-64

BA-10

#### Germany

Sd.Kfz.251

Sd.Kfz.4/1 150mm rocket launcher

#### Cars

<u>USSR</u>

GAZ- M1 - civilian car

GAZ -67 jeep

ZIS-5 personnel carrier

ZIS-5 radio car

ZIS-5 mobile flak

ZIS-5 medical

ZIS -6 fuel car

BM-13 Katusha rocket launcher

USA (Lend-lease, Russian side of the war)

Willis MB - jeep Studebecker (truck) Studebecker rocket launcher (With Russian rocket turret)

#### Germany

Opel Blitz fuel car

Opel Blitz radio car

Opel Blitz tent car

Opel Blitz halftruck

Opel Blitz halftruck with AA cannon

Opel Blitz medical

Kübelwagen

Opel Kadett

RSO artillery carrier

BMW bike

NSU-Kettenkrad HK-101 (Sd.Kfz.2)

NOTICE: Almost all vehicles above made with two types of camouflage: winter and summer.

#### Trains:

2 variants of locomotives

Train platforms with: tanks, cars, AA guns

Train cars: Usual transport and cargo train cars, cisterns

## Guns:

USSR

Antitank gun

Field howitzer

AA cannon 1x25 mm

AA cannon 1x85 mm

#### Germany

Antitank gun

Field howitzer

AA cannon 1x20 mm

AA cannon 1x88 mm

#### Ships:

USSR

Destroyer,

Armored Gunboat BBK-1 with rocket turrets,

Armored Gunboat BBK-1 with T-34/76 turrets,

Torpedo boat G-5,

Transport ship

U-boat type Sch

## Germany, Italy, Romania

Submarine Type IIB,

Torpedo boat S-80

Torpedo boat MAS-501,

Transport ship

Fast boats.

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