User Guide

IL-2 Sturmovik: 1946
v.4.11

In memoriam
Sergey Kubyshkin

Main Features

- 6DoF support with over 100 fixed cockpits
- AI improvements
- Improved radiator & overheat modeling
- Difficulty option changes
- Bomb fuzes
- Stationary plane spawning
- Reworked bomb damage
- Control surface & pilot's head positions transferred over network
- Mouse wheel zoom
- Bombing commands
- Additional waypoint parameters

New Flyable Planes

- PE-8
- TB-7 M40
- IL-4
- Fw 190 A-4 1.42 ATA
- Mosquito XVIII "Tse-Tse"

New AI Planes

- TBD-1
- Hs 123
- IK-3
- Cant Z 506B
- Ki-45 Kai Hei
- Ki-45 Kai Tei

New ground units

- Autoblindo AB 41
- Carro Armato L6-40
- Carro Armato 13-40
- Semovente 47-32
- Semovente 75-18-40
- Crusader III
- Several new groups and companies based on existing tanks & vehicles

Other small Changes & Improvements

- Smart axis
- Improved parasite drag for external weapons & fuel tanks
- Alternative default skins (country/date/regiment specific)
- Additional icon options
- New FMB features (show spawn points & recent files)
- Track recording indicator
- Added two new camouflage nets

- Added new screen shot options
- Added new AM radio stations "Radio Tokyo" & "Radio Paris"
- Changed bomb/torpedo logic so that they do damage online even if "owner" dies before detonation
- Added bomb & rocket random seed propagation over network
- Improved bomb ballistics code
- Added ability to jettison bombs with unlimited ammo
- Added new head shake effects to pilots & gunners
- Added DGEN mission date workaround
- Fixed wrong alpha layers in H-75 damage texture
- Fixed cockpit positions of IL-10, Ki-43, Ki-61, MC.202, Me-163 & P-47D-10 (position of cockpit related to external 3D model)
- Corrected MC.200 Serie I canopy
- Removed SBD oil cooler damage from wing hit
- Prevented dead AI pilot from talking on radio
- Fixed indestructible I-16 parts
- Fixed Hurricane Mk IIb & c radiator damage
- Added working blind landing instrument to Mosquito cockpit
- Fixed wrong skins of bailed out pilots/gunners
- Prevented ejection seat usage on ground since that would only kill the pilot using it
- Changes to darkness of night
- Rudder and Elevator have different speed thresholds now
- Full throttle altitude is pressure altitude now
- Improvements with automatic charger change
- Changes to Hurricane FM
- Changes to F6F FM
- Changes to F4U FM
- Changes to Fw 190 & Ta 152 FM
- Changes to Ki-27 FM
- Changes to DB-3 and IL-4 FM
- Changes to Pe-8 FM
- Changes to flap workings on Hurricane
- Changes to flap workings on F6F
- Changes to flap workings on F4F and FM-2
- Minor changes to Spitfire FM (WEP workings)
- Change to P-47 bomb loadouts
- Addition of 2x500lb bombs to Hurricane IIb bomb loadouts
- Addition of bomb loadouts to Hurricane IIc
- Addition of 8x60lb rockets to Mosquito VI
- Addition of no outer cannon loadout to Fw 190A-4 & A-5
- Addition of 250 kg bomb and droptank loadouts to Fw 190A-8 & A-9
- Fixed many translation
- Fixed faulty regiments
- Fixed wrong fuselage codes for No 601 Sqn RAF and No 478 Sqn RNZAF
- Added missing Italian bomber regiments and No. 1 Sqn RAAF regiment
- Fixed missing test runway shadows
- Changed FoV of few Russian bomb sights so that the indicators are visible at the bottom & top of the screen
- Prevented airfield lights on request going to wrong airport in case there is airfield with no lights near player
- And many more small tweaks…

6DoF support

Pilot head position can now be changed by using TrackIR, Mouse, Joystick, Keyboard, DeviceLink.

Setting up keyboard for 6DoF use
To set up your keyboard for 6DoF use, assign the keys in Controls -> HEAD MOVEMENT section.
There is one special order to help those using the keyboard: Return to Center which when pressed returns the head to default position for that cockpit. Rotation is also set to looking directly forward.

Setting up mouse for 6DoF use
To set up the mouse assign the key to Activate Mouse Move Mode order in Controls -> HEAD MOVEMENT section. When pressed this key will activate head motion with the mouse and when released mouse motion will change head orientation. Raise with mouse is achieved with the mouse wheel and Activate Mouse Move Mode button pressed.

Setting up joystick for 6DoF use
You can assign joystick slider to head movement in Controls -> HOTAS section. Three controls are: Head Forward/Backward, Head Left/Right and Head Up/Down.

You can safely mix the the above controllers; i.e. use mouse for lean forward/backward & lean left/right and some slider on your joystick for Head Up/Down. The same goes for mixing with keyboard controls.

TIR should work automatically, if you have it, and it shouldn't be mixed with other controllers.

Setting the conf.ini
In section [HookView Config], the following parameters can be added: LeanF, LeanS and Raise. Possible range is from 0.01 to 1.0 with higher number giving faster motion. These settings affect all types of controllers (including TIR).

Additional notes
Daidalos Team has fixed over one hundred cockpits in 4.11. The most glaring holes have been fixed, some smaller ones are still there. We believe those are harmless and should not give unfair situational advantage or spoil your visual enjoyment. Nevertheless, we would like to ask the IL-2 community to provide us with feedback regarding the 6DoF and report any 6DoF related bugs in cockpits that you consider important. We will fix them in 4.12.

Only TIR is full 6DoF. All other controllers can't be used to control the Roll of the camera and are therefore just 5DoF. We feel that camera Roll is just an eye candy and it's introduction for all controllers would only cause unnecessary complications without increasing your situational awareness.

If you find that you are unable to move the head, you are most likely in gunsight view ([SHIFT][F1]). This is intended behavior.

AI improvements

AI routines in 4.11 have been modified extensively in order to introduce several limitations that human pilot would experience. Below is a list of things player can expect to see in 4.11:

Various new AI maneuvers have been added. Number of maneuvers is increased by 25%.

AI planes will no longer detect enemy planes automatically inside certain radius. Position and size of enemy plane is the main factor here. Bigger plane will obviously produce a bigger and more visible "dot" and it will be more visible to AI.

AI skill will generally determine how well AI can spot targets. Also every gunner on board will contribute to enemy spotting by covering their own sectors.

Generally pilots will keep looking more forwards than backwards. Occasionally fighters execute fishtail maneuver to get better view behind. Planes will be less visible against dark background like land, but more visible against brighter background like sky and clouds.

Clouds & land mass blocks AI's ability to see other planes behind them. For example it is possible to evade attacking AI plane by hiding in clouds. AI planes will also try to hide in clouds in certain conditions.

AI's own plane will block their line of sight. This is calculated from the plane's collision model. For example basically all planes cannot see directly below them, unless the plane has ventral/bottom gunner that can cover the underside. For example plane like Blenheim has blind spot rear & behind since it has no tail/bottom gunner. Plane like B-17 with bottom/rear gunners cannot be surprised from rear & behind like Blenheim (during daylight).

Occasionally fighters will execute roll maneuvers to get a look directly below them.

When fighter is pulling positive G's to get a lead shot and target goes invisible under nose, AI will not see the target. Instead of aiming at the actual target, AI is shooting at estimated target which position is extrapolated based on the last real observations. Much like human brain would do.

AI pilot's ground collision detection is improved and now they will detect ground obstacles in front of them better. Previously AI always crashed into certain kind of hill/mountain which has too steep slope.

Environment factors such as darkness affects how well planes can be seen. AI is blind against attack from sun and planes show up better as silhouette against moon. Planes are spotted more easier if they emit smoke, fire, condensation trail or have lights on or are illuminated by searchlight.

Also ships & ground AAA and aircraft gunners have the same clouds/ground/environment restrictions as AI pilots.

AI gunners check before shooting that there is no friendly planes in front/behind their enemy target.

AI gunners don't keep shooting while the gun is turning towards target and the target is nowhere near when the bullets would go. So gunners will no longer waste ammo for stupid shots.

Gunners will be less accurate shooting targets that move fast. In other words target that forces the gunners to turn guns fast is less likely to get hit.

Gunners that experience too much positive or negative G's cannot fire at all.

AI plane's engine will overheat forcing AI to reduce throttle and open radiators.

AI planes respect diving limits of their planes.

Changes have been made in AI deflection shooting. AI calculate deflection better but it is still

not perfect. AI's ability to chose correct deflection and to hold steady aim vary with the skill. AI Aces shooting ability is now at human aces level and if they get into your close six you will be in trouble.

AI flights doesn't go into attack as soon as they spot the enemy anymore. Depending on the situation AI might try to avoid fight or try to improve their position before commencing the attack.

AI skills are now divided internally into sub-skills and thus provide finer distribution of skill. Aces are still better than Veterans and Averages are better than Rookies but not all AI pilots with the same skill are the same. Some fly better, some shoot better. Some are braver and some see better. This makes their behavior less predictable.

In addition to the maneuvers, AI fighter defense is completely reworked, no more constant rolls. AI will perform diverse maneuvers and provide bigger challenge to the player.

AI will make mistake too. They will stall and spin occasionally, panic and "freeze" and sometimes they will even bail out before you fire a single bullet at them.

Note
If AI planes in player's own flight have not noticed the enemy planes, player has possibility to "point out" the enemy presence to the friendly AI planes by padlocking enemy plane so that it is visible at roughly center of the screen (15 deg. cone). This works even if the padlock is not enabled. Also the commands attack all/bombers/fighters has the same function built in as the padlock key. So issuing "attack fighters" command to your wingman would fail if your wingman has not seen the enemy and you give the command while you don't see the enemy. Giving the command when you see the enemy at the center of your screen (in cockpit) gives your wingman the direction of the enemy and wingman can attack it. This prevents abusing the attack commands like a radar.

The AI development is a continuous process we plan to refine further for 4.12. We would like to ask you to report any odd AI behavior we may have not noticed during our beta testing. It was not possible for us to test all AI situations / routines.

Checks concerning clouds are not working on dedicated server. DS doesn't know anything about clouds and was never designed to have AI planes, but we will try to change this later.

Improved radiator & overheat modeling

4.11 introduces a more detailed and more accurate radiator model. It is different from the previous model in many ways, the main differences being:

• radiator settings now have an impact on both water/cylinder and oil temperature

• outside temperature now has an impact on oil temperatures

• engine rpm has a bigger impact

• impact of WEP is dependent on extra power generated

• mixture setting has an impact

• the density of the air has an impact

• aircraft speed has a bigger impact

• there is no longer a fixed period after which damage occurs in case of overheat

• introducing a random chance for damage depending on how strongly the engine overheats

- type of damage is depending on if it is water/cylinder or oil overheating

You will generally find that the planes overheat a lot more, in particular if you are not on a cold map in fast level flight. As a guideline, on hotter maps you can expect fighters to be able to sustain about 70% power at 70% pitch without overheating radiators closed, for bombers it is somewhat more. The values in many cases are reasonably close to real life maximum continuous settings (please don't go by cockpit gauges, they aren't always accurate).

If you start a low speed full power dogfight with a closed radiator, you can expect the engine to overheat rapidly and to get damaged quickly. War emergency power settings should therefore only be used in an emergency, otherwise your plane might get destroyed without your enemy even firing a shot.

To keep engine temperatures low, remember:

- use low rpm (reduce pitch), in particular oil temperature are sensitive towards rpm

- use low throttle settings (and avoid WEP)

- open the radiator

- fly faster (don't climb at too low speeds)

- use an as rich mixture as possible

Difficulty option changes

Old difficulty menu has now several sub pages that group similar difficulty settings under one page. "Weapons & Stores" page has three new options and "Views" sub page has five new difficulty options.

Bomb Fuzes option
When Bomb Fuzes is enabled, the arming dialog shows selection box for the fuze type. When the option is disabled, the arming dialog shows same components as before except the layout is slightly different than before.

Fragile Torpedoes option
When this options is enabled, the torpedoes can be broken easily when dropped. Old constraints from 4.10 apply. Basically this is just enable/disable switch for the feature introduced in 4.10.

Realistic Rocket Spread option
When this options is enabled, the rockets will have the more realistic spread from 4.10. When disabled, old very small spread from 4.09 is used.

No Players Own View option
When this options is enabled, the player cannot view his own plane in external view. However this has one exception. When player is on ground, he still can access the external view for easier taxing. As soon as the player gets airborne, he is forced back to cockpit view.

No Enemy Views option
When this option is enabled, player cannot view any enemy external views. This also includes any stationary cameras which have different army color than player's own army.

No Friendly Views option
Basically same thing as above, but for friendly external views.

No Carrier Views
Normally the external views have always included aircraft carriers too. In some cases these views might reveal too much information for the player. When this option is enabled, the

carrier views are not available.

No Aircraft Views option
When this option is enabled, all aircraft views (excluding player's own) are disabled. By using this it is possible to have static cameras only views and static cameras can then have specific army colors.

Bomb fuzes

Bomb fuze feature is made in such a way that if the new "Bomb Fuzes" difficulty option is turned off, bombs behave like in 4.09 (zero arming time). When diff. option is on, the arming UI has extra fuze type selection box and available detonation delay values are limited to the values available for the selected fuze.

Several historic fuzes are modelled and bombs now store a list of different fuzes that they can use. Complexity is hidden from the user by grouping the fuzes to few different groups so user doesn't need to learn several dozen of fuze names. Availability of fuzes even change by mission date. User only needs to select type of the fuze needed for the bombing task he is going to perform.

Instant

Required longer arming time/distance, but allows instant detonation (no long delays) or very very short delay of 0.1-0.5 seconds. Typical fuze for med/high-alt level bombing.

Low level

These fuzes are armed very quickly but the safety comes from delay. Usually doesn't allow delays below 4 seconds or so. Like the name says, these fuzes are suitable for low level attacks, but don't allow instant detonation for pilot's safety.

Delay

Generic fuzes that allow longer delays and have medium arming times. Something between types 1 & 2.

Long delay

Fuzes that allow very long delays like 90 seconds etc.

When player selects a loadout which has bomb, the fuze type selection box is populated with the fuze types that are available for the selected bombs. Not all bombs have all different types available. When the fuze selection is made, the fuze detonation delay selection box is populated with the available values that the fuze supports. The actual fuze selection is made automatically when the mission starts or user spawns in dogfight mission.

German electric fuzes are exception to this. These fuzes do not provide delay selection at all. Fuze has three different modes that can be changed during flight. This requires a new mapping at the controls menu. Available modes are "instant", "short delay" and "long delay". Detonation delay & arming time depend of the actual fuze type that is selected automatically. Electric fuze circuits work so that if the fuze fails to arm on instant or short delay mode, it automatically reverts to long delay mode which needs lower arming time.

Generic fuze changes

In all previous IL-2 version, the selected detonation delay time was not propagated over the network. So other players that were not the "owners" of the bomb would always see visual effect of bomb exploding instantly when it hit ground. Actual invisible explosion (with killing effect) could happen even ten seconds after. In 4.11 the delay and everything else related to the bomb is propagated over network, so clients should see the effects in sync with the actual explosion.

4.11 introduces some changes to the bomb's penetrating effect which is related to the detonation delay. Bomb with instant detonation (zero delay) doesn't penetrate into ground or into target that it might hit and therefore its explosion is little different than if it would dig into ground/house/ship. Bomb digging into ground before exploding has slightly reduced "daisy cutter" effect, so its power against ground units is slightly reduced. In general you want to attack ground troops with zero delay or drop the bomb in so shallow angle that it doesn't dig into ground. Against houses and ships the penetration is desired effect. Bomb explosion makes more damage to confined space when it explodes inside it. Small bomb dropped on roof of a house might do only superficial damage to the roof if it explodes immediately and house it not destroyed. If the same bomb would penetrate the roof and explode inside the house, destruction is much more probable.

Stationary plane spawning

This features enables the usage of stationary planes as human player spawn points in all mission types. AI planes are supported only in single player mission, but the positioning of AI planes is critical since they do not know how to taxi to runway. They will just simply take off to the direction they spawn. Feature always requires additional editing of old missions, so it is not automatically enabled to old missions.

Setting up for dogfight missions
In dogfight mission, the feature is enabled under each home base object. Home base properties have two new check boxes and stationary plane properties has one new check box related to this feature. To enable this feature for selected home, check the box "Use stationary planes as spawn points". Check or uncheck the optional parameter "Return used stationary plane to original position" to change how the plane reacts when player lands it back to base and clicks "Refly". If stationary plane spawning is enabled for a home base from which a player spawns and there is a matching stationary plane type placed inside the home base radius, player will spawn from the stationary planes' position. In other words the stationary plane is transformed into players own plane. Logic is that the closest matching plane (viewed from home base center) is selected, unless there is a stationary plane available which player used previously.

New checkbox "Allow DF Spawn" under stationary plane properties can be used to disable spawn usage of any particular plane. For example if plane is part of scenery, in repairs or just in such place that would lead to explosion when spawning, like "inside" forest. Another new checkbox "Restore if Wrecked" under properties restores the original stationary plane even if player would wreck the spawned plane in DF mission.

When player lands a plane to home base and clicks "Refly", the player's own plane transforms back to stationary plane. So player is kind of leaving a stationary plane behind him. This happens only if player spawned from stationary plane and he landed the plane inside the home base radius in relatively good condition so that it can be used again. Burning heap of metal will not spawn a new stationary plane unless the "Restore if Wrecked" was checked for the stationary plane. Extra option "Return used stationary plane to original position "under home base parameters determines how the returned stationary plane is "parked". It can be returned

to it's original location (for easy reuse) or it can be left exactly where player parked it. However this has two exceptions:

Return used stationary plane to original position enabled: If the plane is landed to another own home base, it is left there to the location where it is parked. Since it was not from the new base originally so it cannot be returned very far away to its original home base.

Return used stationary plane to original position disabled: If you park the plane very close to the place where you originally took it (within 10 meters), plane will be returned to it's original position with original orientation. This is handy if you taxi back to the shelter/hangar where you took it from and have no room to turn it around.

Setting up for single player and coop missions
In single & coop mission, the feature is enabled by assigning a stationary plane as spawn point individually to each aircraft. Individual plane tabs has a new pair of buttons (set & clear) related to this feature.

If AI aircraft spawns in coop mission and it's "AI only" parameter is disabled, spawn point is ignored since the mission builder cannot know if the plane will be occupied by human or AI.

Note
In single & coop it is possible to assign spawn point to stationary plane which type does not correspond to the actual plane that is spawning. But generally it is good to place a matching stationary plane in FMB in order to see how it fits and then assign it to matching player's plane. Spawning a Pe-8 from small shelter that is meant for single engine planes will lead to disaster.

Please note that there are old game limits to this feature. Some planes cannot start the engine if placed too far away from an actual air field. These are the same planes that cannot start engine in mid-air.

Reworked bomb damage

Bomb damage has been remodelled according to blast pressure strength and splinter density. Furthermore buildings have been made more resistant to damage. There have also been some smaller tunings. You will notice the following:
   • reduced differences between bombs of similar size and type
   • significant reduction in damage effect with increasing distance
   • less damage against buildings
   • more near miss damage against ships
   • more effective torpedoes
   • bombs under water are more effective against ships.
   •
Please also note that the huge damage radius of a few bombs is no longer there.

Control surface & pilot's head positions transferred over network

There are few more parameters sent over network and saved into tracks – position of control surfaces (ailerons, elevator, rudder) and direction of player's view. Additionally flaps now show in four position when looking on a plane piloted by someone else on network (closed, combat, T/O and landing) instead of two (closed and fully open). Please note that head turning is limited to pilot's cockpits, gunners' heads are fixed due to 3D model limitations.

Mouse wheel zoom

It is possible to zoom in/out with the mouse wheel on all maps (Briefing, Debriefing, FMB and inflight map). The new view is centered on current mouse cursor position if possible (exceptions are near the map edge). If you use mouse wheel as one of your HOTAS commands the zoom in/out feature is disabled on the inflight map

Bombing commands

4.11 introduces four new commands related to bombing.

Under "Ground Targets" -> "Drop Commands" , there are two new commands:

Drop Bombs On My Command
This command will instruct the selected wingmen to keep their bombs and drop them when player drops his bombs.

Drop Bombs At Will
This command will instruct the selected wingmen to drop bombs when they want. This is the default mode that the wingmen will have at the start of the mission.

Under "Tactical", there are two new commands:

Keep Ordnance
This command will instruct wingmen to keep the bombs even they encounter enemy resistance and would normally drop the bombs.

Drop Ordnance At Will
This command will allow the wingmen to drop their bombs when encountering enemy resistance. This is the default mode that the wingmen will have at the start of the mission.

Additional waypoint parameters

There is one additional tab for squadrons where you can set additional waypoint parameters.

Take-off
For take-off you can set plane alignment to normal (as it was), pair and line. The latter two work as off runway take-off; i.e. they take-off in the direction of the next waypoint. You can also set the distance between planes on the ground. You can also delay the takeoff.
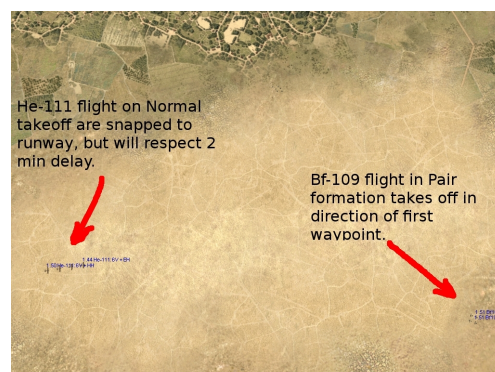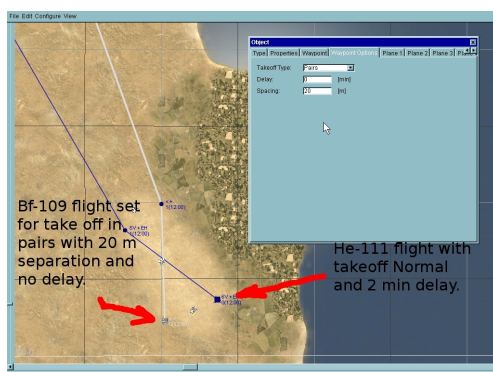

If you set Normal takeoff, plane position will be snapped to runway as usual if the waypoint is less than 1250 m away from the runway. Flight will, however, respect any delay that was set.

You can also specify all of those parameters for carrier take-off, but all except the time delay will be ignored.

Normal

For normal waypoints, you can choose some sort of Combat Air Patrol. This will establish circling movement in particular pattern (triangle, square,...). You can adjust orientation of the pattern (direction of first waypoint in the pattern), base size (size of the pattern in km) and altitude difference from waypoint to waypoint (climbing or descending pattern). Triggers telling AI when to exit the pattern and continue with subsequent waypoints are number of cycles and timer. They work as OR logic, so whichever comes first will make the AI exit the cycle. Zero value for either of the two parameters means that this trigger is ignored.
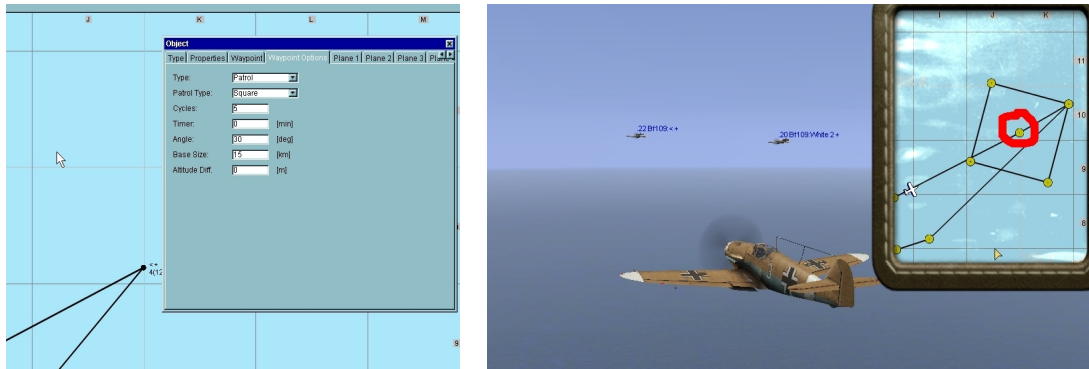
In the images above we have a flight of Bf-109s flying on Patrol with rectangular pattern with base size of 15 km. They will exit the loop after 5 cycles.

Landing

For Landing you can choose one of the 5 landing patterns: Right, Left, Short Right, Short Left and Straight In. Left Pattern is the default pattern present in previous versions of the game. The Straight In landing is rather tricky to get correct and can cause planes to crash into each other. You can set several flights with different pattern to land on the same airfield. AI seems to handle this fairly well, but there are no guarantees that they will not collide. All settings are ignored if the flight is landing on a carrier (i.e. they use default Left pattern).

Ground Attack

There are no special waypoint actions for Ground Attack, so the additional Tab has no options available when GAttack waypoint is selected.

Additional icon options

Three more options were added for mp_dotrange command: ALTICON, ALTCOLOR, ALTSYMBOL.
ALTICON sets the maximum distance when the icon will be shown. ALTCOLOR sets the color of the icon. ALTSYMBOL sets the one character symbol which will be shown as icon. These settings only kick in when old style icons are not shown, i.e. when distance of COLOR, TYPE, NAME, ID and RANGE are smaller than the distance to the aircraft.
Example:
mp_dotrange FRIENDLY DOT 25.0 COLOR 0.1 RANGE 0.1 TYPE 1.0 ID 0.1 NAME 0.1 ALTICON 2.5 ALTSYMBOL + ALTCOLOR 3
This will display a symbol "+" above the aircraft between 1.0 and 2.5 km in color 3 (green).

Smart Axis

Dual throttle has turned out to be little problematic if player has only two throttles and plane has more than two engines. Normally if player has dual throttle, he has power 1 and power 2 mapped and old power (all) axis unmapped. If player wants to fly plane with more engines that two, he needs to go to controls menu and map one of the throttle axis to the old power axis which controls all engines.

When the smart axis feature is enabled and user has only power 1 & 2 mapped and plane has four engines, the power 1 handles both left side engines and power 2 both right side engines. With three engine planes, the center engine gets average value of both levers. Prop pitch works similar way.

To enable this feature, add following in conf.ini under [rts] section.

[rts]
UseSmartAxis=1

Flight model changes

F6F

The F6F-3 no longer has water injection. Both models have flaps working with blow up springs now (self retracting at higher speed). Handling and performances have been changed.

F4F / FM-2

The F4F has flaps with blow up springs similar to the F6F now.

F4U

The Corsair I (F4U-1) no longer has water injection. Handling and performances have been changed.

Hurricane

The Hurricane I is modelled to 6.25lb boost performance, the Hurricane II to 12lb boost performance now. The flap workings have been changed.

Fw 190

For the whole series handling and performance have been changed.

A new model has been made, a fully rated A-4. The derated model is now simulated by using the same engine with a limited throttle.

The A-5 and A-6 no longer have the erhöhte Notleistung. The A-5 1.65ata boost system only works at low altitude now.

The D-9 1944 has been modelled to 1900hp version performance, the D-9 45 remains with the 2150hp MW50 injection performance.

The Ta 152 H-1 now has working GM-1 injection.

Ki-27

The Ki-27 no longer overrevs when flying straight and level. A take off power setting (WEP) has been added.

Mosquito XVIII "Tse-Tse"

Main gun autoloader is sensitive to side forces. Keep ball centered when firing and during whole recoil and reload, gun may jam otherwise.

DS devicelink

Dedicated server has additional readouts now. This is intended as interface for 3rd party applications which want to read position of units in real time. Please see devicelink.txt for more information.

This feature works on dedicated server only during network play and is released as undocumented.

List of new conf.ini parameters

[game]
SkipParatrooperViews=0   (1 = skips all paratroopers from external view)
ScreenshotType=0   (0 = screenshots are saved as TGA, 1 = screenshots are saved as JPG, 2 = screenshots are saved as TGA and JPG)
jpgQuality=1.0 (quality of JPG screenshot. Range 0.0 to 1.0)
RecordingIndicator=0 (1 = shows an indicator if recording of NTRK is active in bottom right part of the screen)

[rts]
UseSmartAxis=0 (value 1 enables smart axis)

[HookView Config]
LeanF=0.4   (Speed of head forward/backward leaning. Range 0.01 to 1 with higher number giving faster motion)
LeanS=0.4 (Speed of head sideways leaning. Range 0.01 to 1 with higher number giving faster motion)
Raise=0.2   (Speed of head up/down motion. Range 0.01 to 1 with higher number giving faster motion)
RubberBand=0.5 (elasticity of the head motion limits)

New Flyable Planes

Pe-8

Cockpit guide:

1. Radio direction finder

2. Artificial horizon

3. Airspeed Indicator

4. Turn and Bank Indicator

5. Variometer

6. Altimeter

7. Clock

8. Blind landing instrument

9. Gyrocompass

10. Artificial horizon

11. Brake pressure indicator

12. Pressure reservoir indicator

13. Compass

14. Landing gear lights

15. Aileron trim

16. Manifold pressure instruments

17. Throttle levers

18. Prop pitch levers

19. Rudder trim

20. Mixture levers

21. Elevator trim

22. Landing gear lever

23. Tachometers (RPM)

24. Water temperature instruments

25. Fuel

26. Oil temperature instruments

27. Fuel pressure instruments

28. Oil pressure instruments

29. Radio direction finder

30. Air temperature

31. Variometer

32. Turn and Bank Indicator

33. Airspeed Indicator

34. Altimeter

35. Clock

36. Right side wing bombs
37. Left side wing bombs
38. Right side bay bombs
39. Left side bay bombs

IL-4

Cockpit guide:

1. Tachometers (RPM)

2. Radio direction finder

3. Artificial horizon

4. Variometer

5. Clock

6. Manifold pressure instruments

7. Magneto switches

8. Turn and Bank Indicator

9. Airspeed Indicator

10. Altimeter

11. Fuel

12. Oil temperature, oil & fuel pressure instruments

13. Gyrocompass

14. Artificial horizon

15. Landing gear lights

16. Cylinder head temperature

17. Compass

19. Throttle levers

20. Prop pitch levers

21. Mixture levers

22. Landing gear lever

23. Flaps lever

24. Supercharger levers

25. Elevator trim
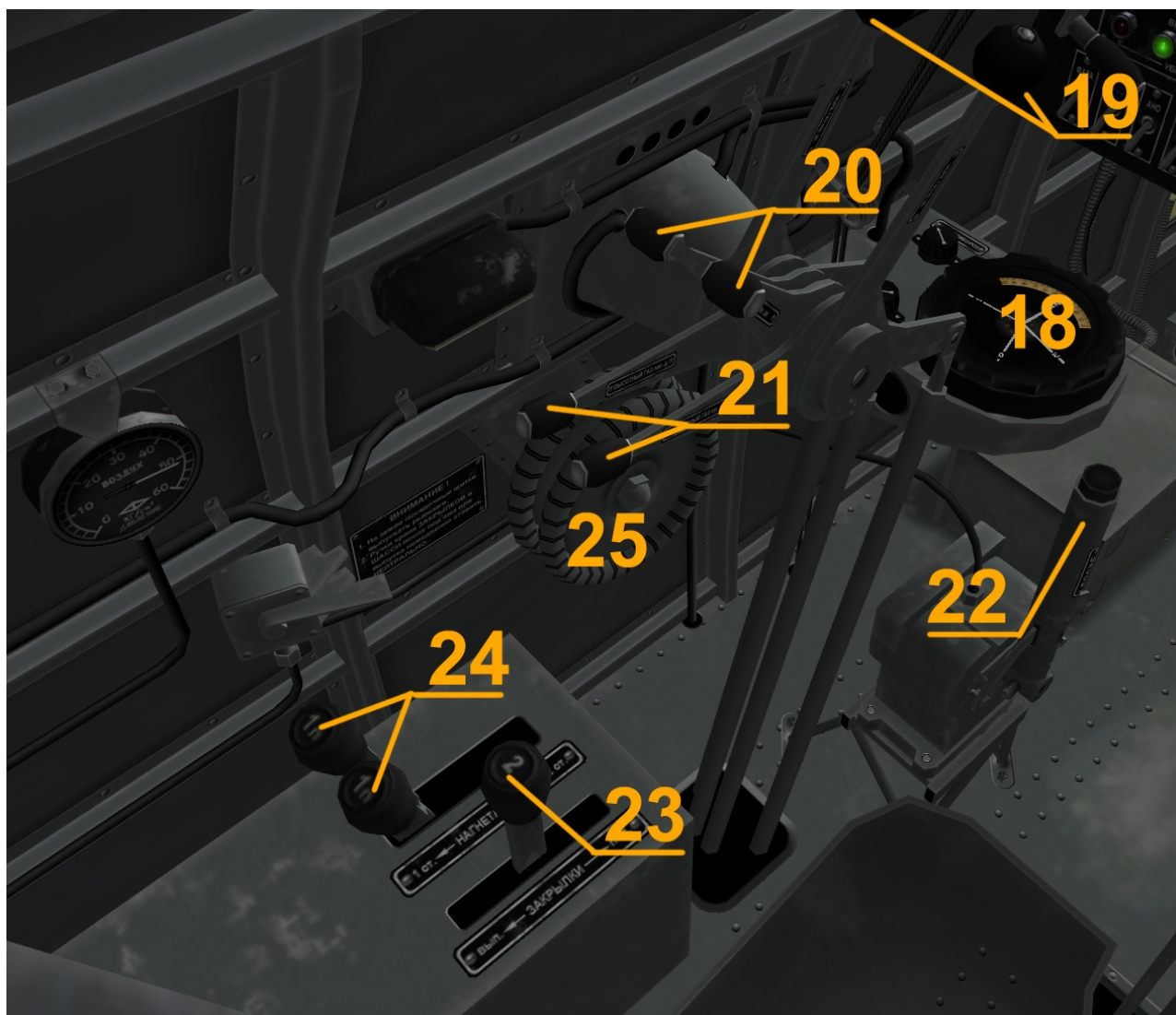
Daidalos Team would like to thank following people:

1stCL Fucida for FW190 info and testing
302_Corsair for Polish localization
Alan Grey for testing
Andric for localization and testing
Antti-Pekka Tuovinen for testing and Winter War campaigns
Beebop for B-17 skin
Birdman for mesh file fixes
Chris Blair for Corsair skin
Cpt_Farrel for all German skins
Emel for all Finnish & Mustang skins
Falkon for DS devicelink testing and ideas
Faustnik for Fw 190 references
Ian Boys for testing
IceFire for missions and testing
Indy for testing
Irina Zhitnik for new ground units
Italo for CantZ.506 skin
Jason for TBD-1
JP_Dore for French localization
Jofe for Ju-88 mission
Lavo for testing
Letka 13, BP and AH squadrons for testing
Mark Shaw for Mosquito skin
Monguse for Mosquito Tse Tse
Palo for testing
Roman Boiko for testing
Sergey "Vert" Kubyshkin for IL-4
Terry Stetler for testing
Toci for testing
Turelio for IK-3
VGR MaP for important bugreport
Wheelsup_cavu for Midway quick missions
Whiton Erikson for testing
Zimbower for IK-3
Zoltan Nagy for Hungarian localization

Thank you to the whole IL-2 community and everyone that were involved with Pe-8/TB-7 project.

Thank you to anyone we may have forgotten!

Daidalos Team:

102nd-HR-cmirko - Mirko Vukadinovic
6S.Maraz - Antonio Maraziti
Aracno
Archie1971
Buster_Dee
Caspar - Ray Grützmacher
char_aznable - Alessandro Tonioni
csThor
FatCat_99 - Josip Sudar
Gitano - Nicola Sartore
Ivank
JtD
Kashiide - Thomas Bastard
LesniHU
M. Boose
Magot - Radim Macan
Martin - Martin Kubani
MicroWave
Psy06 - Dmitriy Linevitch
SaQSoN - Vladimir Kochmarsky
Viikate - Tero Tissari
Yogy