

Dynamic campaign generator for IL-2 Sturmovik: 1946

(DGen modification)



User manual

(DGen_MOD 2.0.5.0 or higher)

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Introduction.

The modified dynamic campaign generator (DGen_MOD) is a further development of the generator, developed by Vadim "Starshoy" Kolosov for 1C:Maddox Games. The new generator is based on the original code and algorithms of DGen version 4.0.4.1. DGen_MOD is fully compatible with IL-2 Sturmovik version 4.11 m or above. The generator can be used both with the original version of the game and the MOD version (the mod does not matter).



"WARNING

As of DGen_mod version 2.0.5.0, the files containing aircrafts definitions, available loadouts and maps related files are only fully compatible with: DGenPack (version 1.0) itself based on the Team Daidalos patch (4.13.1). The maintenance of separate configuration files (for HSFx, DBW, etc...) has been discontinued. Files for these modpacks are no longer provided with the generator."

The main difference is that all the parameters and settings of DGen_MOD are now stored in external files, which can be easily edited. This allows to fine-tune the new generator to match any version of the game.

DGen_MOD can be used simultaneously with DGen – all its files are stored in separate folders and therefore not mixed with the original files.



IMPORTANT! For better use of the new generator (DGen_MOD) it is highly recommended to make backup copies every 5-10 missions. Follow the steps below:

Step 1 – make a folder to store backup copies.

Step 2 – copy the **Users** folder, with all its content, from the main folder of the game (**C:\IL-2 Sturmovik 1946\Users** for example) to the new folder.

Step 3 – copy your current campaign's folder, with all its content, from the **Missions** folder (**C:\IL-2 Sturmovik 1946\Missions\Campaign\UN\dgen_1_coralsea16** for example) to the new folder.

In case of malfunction of the generator just copy the backup files back to the game's folders.



Because the new generator is a console program (with no visible windows), some antivirus software may consider it as a potential threat and prevent it from launching. If your campaigns does not start or the dynamic generator does not seem to work – check your antivirus settings and enable launching of the **DGen.exe**



ATTENTION! Since version 2.0.3.0 DGen_mod is not compatible with the old dynamic campaigns for seaplanes. Missions in these campaigns are created with errors. Look for new compatible campaign.

Installation.

With version 2.0.5.0 DGen_MOD install or upgrade by simply unpacking the contents of the archive into the game folder.



IMPORTANT! If you want to keep the old version of the generator, do not forget to rename the file DGen.exe or copy it to another location before unpacking the archive.

Zip contents:

- **DGen\MOD** – this folder contains all the data necessary to create missions (coordinates of cities, airfields, bridges; lists of available aircraft, objects, etc.)
- **DGen.exe** – the main executable file, used by the game.
- **DGen_mod.ini** – settings of the new generator.
- **DGen_ReadMe_Ru.txt, DGen_ReadMe_En.txt** – brief information about the program.

The new date format.

Since its version 1.0.1.0, the new generator supports the full date format, which overrides previous campaign date period limitations. The old date format is still supported for backward compatibility with the existing dynamic campaigns.

The old **YMMDD** format (i.e. 10622 – 22 June 1941, 50509 – 9 May 1945) can still be used provided a new campaign falls into the 1 January 1941 - 31 December 1945 period. All old format dates are automatically converted into the new format.

The new **YYYYMMDD** format (i.e. 19360718 - 18 July 1936, 19400709 – 9 July 1940, 19500625 – 25 June 1950) must be used for campaigns beyond the 1 January 1941 - 31 December 1945 period.

It is recommended to use the new date format in all new campaigns, no matter what are their date periods.

Parameters of the DGen_mod.ini file.

LogLevel – controls the level of verbosity of the DGen_mod.log and DGen_mod_proc.log files.

Available settings:

LogLevel=2 – the default value suitable for normal use.

LogLevel=1 – log some additional information.

LogLevel=0 – log complete debug information. Apart from the DGen_mod.log file, all the debug information is stored in the DGen_mod_proc.log file. This setting is useful for program and dynamic missions debugging.

LogListOutput – logs information, loaded from the generator and campaign files (lists of cities, airfields, units, aircraft, objects etc.). This setting is useful for dynamic missions debugging.

Available settings:

LogListOutput=0 – logging is off. The default value suitable for normal use.

LogListOutput=1 – logging is on.

PromotionRate – sets promotion rate for the player. Available values: 0.0 – 100.0. A value of “0” means no promotion.


MissionDistance – sets the range of the player’s aircraft. The generator will look for targets within this radius to generate missions. In carrier based campaigns, if the parameter is set to *Medium* or *Short*, files **[episode_name]Blue0.mis** and **[episode_name]Red0.mis** will be used additionally.

Available settings:


MissionDistance=Full – full range from the **AllPlaneDB.dat** file.

MissionDistance=Medium – the range is limited to 75%.

MissionDistance=Short – the range is limited to 50%.



In **[episode_name]Blue0.mis** and **[episode_name]Red0.mis** files (used for aircraft carrier campaigns only) aircraft carriers are located closer than historical distance on the map. This allows reducing time to target. If these files are omitted, the *MissionDistance* only sets the range of the flight.



IMPORTANT! Range reduction can lead to monotonous missions during a campaign, as well as to errors in searching targets during some custom campaigns.

SlowFire – sets ship's rate of fire. Available values: 0.5 – 100. A value of "0.5" means fastest ROF, and a value of 100 means slowest ROF.

MaxFLAK – controls maximum number of anti-aircraft guns en route (not including target area). Available values: 0 – 100. A value of "0" means no anti-aircraft guns en route.

MaxBomberSkill – controls skills of bomber crews, both gunners and bombardiers. Available values: 0 – 3. 3 sets random skill level.

CampaignLength – allows reducing the number of sorties by reducing the number of lines in the *[Schedule]* section of *[episode_name].DB* files. The number of sorties in a day is not affected.

Available values:

CampaignLength=VeryLong – the default value. Every line (i.e. day) is read.

CampaignLength=Long – every second line is read.

CampaignLength=Medium – every third line is read.

CampaignLength=Short – every fifth line is read.

CampaignLength=VeryShort – every ninth line is read.

CampaignAI – controls the balance of skill between friendly and enemy AI flights.

Available values:

CampaignAI=Hard – enemy AI are more skilful.

CampaignAI=Normal – the default value. Level of skills is set historically correct

CampaignAI=Easy – friendly AI are more skilful.

CampaignMissions – controls using of mission type files *ops[episode_name].dat*.

Available values:

CampaignMissions=Hard – files with more enemy aircraft are used.

CampaignMissions=Normal – the default value. Files with historically correct balance are used.

CampaignMissions=Easy – files with more friendly aircraft are used.

CampaignDifficulty – controls both **CampaignAI** and **CampaignMissions** parameters.

Available values:

CampaignDifficulty=Hard

CampaignDifficulty=Normal

CampaignDifficulty=Easy

OperationVictory, OperationDefeat – set score limits, which define mission's success. The text of the final briefing is determined by these parameters.

WarVictory, WarDefeat – set score limits to define campaign success. These parameters also determine the final briefing text and the last mission type.

NoActiveFrontline – it reduces the number of ground objects in missions and prevents loading them from *[episode_name]Front.mis* files.

NoBadWeather – no bad weather (thunderstorms, rains, snows).

NoAirfieldHighlight – removes anti-aircraft guns from airfields, not used in current mission, so these airfields are not highlighted on the map.

UseParkedPlanes – the player's plane initial airfield for each episode is defined by parked static airplanes. This allows setting historically correct airfields, from which actual combat sorties were flown.

UseParachutes – valid for the Pacific theater only. Japanese pilots use parachutes from the very beginning of war. If omitted, they use parachutes since 1 July 1942.

AirIntensity – sets the number of airplanes in a group.

Available values:

AirIntensity=High – the number of airplanes increases (2 -> 6, 3 -> 6, 4 -> 8, 6 -> 8).

AirIntensity=Medium – the default value. The number of airplanes is defined in the **ops[name].dat** file.

AirIntensity=Low – the number of airplanes decreases (4 -> 2, 6 -> 4, 8 -> 6, 9 -> 6, 12 -> 6).


GroundIntensity – sets ground moving objects intensity for a mission.

Available values:

GroundIntensity=High – an unlimited number of objects will be created in target area and around active airfields, as well as enroute to target.

GroundIntensity=Medium – the default value. Up to 5 objects will be created in target area and around active airfields, as well as enroute to target.

GroundIntensity=Low – Up to 5 objects will be created in target area and around active airfields only.



If on large maps there is a stuttering during the mission it is recommended to set *GroundIntensity=Medium* or *GroundIntensity=Low*.

Use410Lights – activates landing lights control on demand, implemented by DT in version 4.10, if omitted, the landing lights are always on.

Language – sets the language of briefings, no matter what language is set in the game.

Options:

Language=Russian – briefings in Russian (available in 2.0.1.0 version).

Language=English – briefings in English (available in 2.0.1.0 version).

Language=German – briefings in German (available in 2.0.1.0 version).


Language=French – briefings in French (currently unavailable).

Language=Czech – briefings in Czech (currently unavailable).

Language=Polish – briefings in Polish (currently unavailable).

Language=Hungarian – briefings in Hungarian (currently unavailable).

Language=Japanese – briefings in Japanese (currently unavailable).



To activate an available language there must be a MessageXx.dat translation file present in the generator. Unfortunately there are no such files for the new version. If you can translate briefings to one of the missing languages, please send a letter to dgen.service@mail.ru.

NoLocalPlanes – turns off using local files **[episode_name]Planes.dat**, all weapon loadings are taken from **AllWeapons.dat**. Not recommended for custom campaigns..

noWounded – turns off ending of campaign after the player was wounded, the campaign will continue as if it was an ordinary sortie, but a wound record is logged.

NightBeginW, NightEndW – set begin and end of night time during the winter season.

NightBeginS, NightEndS – set begin and end of night time during the summer season.

FriendlyAAASkill – sets the skill of friendly anti-aircraft.

Available values:

FriendlyAAASkill=0 – the skill value is taken from the template files of the campaign.

FriendlyAAASkill=1 – all guns set to cadet skill.

FriendlyAAASkill=2 – all guns set to beginner skill.

FriendlyAAASkill=3 – all guns set to veteran skill.

FriendlyAAASkill=4 – all guns set to expert skill.

FriendlyShipSkill – sets the skill of friendly ships.

Available values:

FriendlyShipSkill=0 – the skill value is taken from the template files of the campaign.

FriendlyShipSkill=1 – all ships set to cadet skill.

FriendlyShipSkill=2 – all ships set to beginner skill.

FriendlyShipSkill=3 – all ships set to veteran skill.

FriendlyShipSkill=4 – all ships set to expert skill.

EnemyAAASkill – sets the skill of enemy anti-aircraft.

Available values:

EnemyAAASkill=0 – the skill value is taken from the template files of the campaign.

EnemyAAASkill=1 – all guns set to cadet skill.

EnemyAAASkill=2 – all guns set to beginner skill.

EnemyAAASkill=3 – all guns set to veteran skill.

EnemyAAASkill=4 – all guns set to expert skill.

EnemyShipSkill – параметр устанавливает мастерство кораблей противника.

Available values:

EnemyShipSkill=0 – the skill value is taken from the template files of the campaign.

EnemyShipSkill=1 – all ships set to cadet skill.

EnemyShipSkill=2 – all ships set to beginner skill.

EnemyShipSkill=3 – all ships set to veteran skill.

EnemyShipSkill=4 – all ships set to expert skill.



OldStat – includes the old format of static object lines in *.mis files (compatibility with the game version 4.09m).

The default settings:

LogLevel=2

LogListOutput=0

PromotionRate=1.0

SlowFire=5.0

MaxFLAK=10

MaxBomberSkill=3

CampaignLength=VeryLong

MissionDistance=Full

CampaignDifficulty=Normal

CampaignAI=Normal
 CampaignMissions=Normal
 OperationVictory=100
 OperationDefeat=-100
 WarVictory=1000
 WarDefeat=-1000
 NoActiveFrontline – not set
 NoBadWeather – not set
 NoAirfieldHighlight – not set
 UseParkedPlanes – not set
 UseParachutes – not set
 AirIntensity=Medium
 GroundIntensity=Medium
 Use410Lights – not set
 Language – matches the language of the game
 NoLocalPlanes – not set
 noWounded – not set
 NightBeginW=17
 NightEndW=7
 NightBeginS=18
 NightEndS=6
 FriendlyAAASkill=0
 FriendlyShipSkill=0
 EnemyAAASkill=0
 EnemyShipSkill=0
 OldStat – not set

The purpose of the program's files.

All the necessary files are located in the **DGen\MOD** folder.



IMPORTANT! The Name values must match the game's internal names of aircraft, ships etc., otherwise unpredictable results are possible!

AllClasses.dat – this file is a list of airplanes, available to the player. Do not add AI airplanes to the list, this could cause errors when loading missions.

The format:

```

A_20C;false;GROUND;1;0;0
├── Name
├── isFighter
├── Class
├── isHydro
├── isNaval
└── Defensive_arms
  
```

Name – the internal name of an airplane (could be obtained from a file, created in the FMB or from the air.ini file for modded versions).

isFighter – this airplane is a fighter. This value is used by the scoring algorithms, which are different for fighters and other airplanes.

Available values:

true - fighter

false – all other types

Class - the type of aircraft. This value is used for selecting the type of missions.

Available values:

GROUND – a bomber or an attack airplane. Missions available: Attack of all ground targets (vehicle and armored columns, trains, ships, artillery, stores, airfields, bridges etc.), reconnaissance.

BOMBER - a bomber airplane. Missions available: Attack of stationary ground targets (artillery, stores, airfields, bridges etc.), reconnaissance.

TORPEDO - a torpedo bomber airplane. Missions available: Attack of ships, reconnaissance.

TANK – an attack airplan. Missions available: Attack of armored columns and tanks.

JABO – a fighter-bomber airplane. Missions available: Reconnaissance, scramble, attack of all ground targets (vehicle and armored columns, trains, ships, artillery, stores, airfields, bridges etc.).

LIGHT – a fighter airplane. Missions available: Intercept, escort, reconnaissance, scramble, attack of some ground targets (vehicle and armored columns, trains, artillery, stores, airfields).

FIGHTER - a fighter airplane. Missions available: Intercept, escort, scramble.

ALL – an all-purpose airplane. Missions available: Intercept, escort, reconnaissance, scramble, attack of all ground targets (vehicle and armored columns, trains, ships, artillery, stores, airfields, bridges etc.).

ROCKET – a rocket interceptor airplane. Missions available: Intercept.

GROUND_N, *TORPEDO_N*, *JABO_N*, *LIGHT_N*, *FIGHTER_N*, *ALL_N* – – naval (carrier-based) versions of the above mentioned classes.

RECON – reconnaissance airplane. Missions available: All types of reconnaissance.

PATROL – patrol airplane. Missions available: Attack of ground targets of all types (vehicle and armored columns, trains, ships, artillery, stores, airfields, bridges, etc.), reconnaissance, special missions of sea patrol, search for submarines and free hunting.



The class of aircraft can be overridden by the **classes[campaign_name].dat** file of a specific campaign.

Defensive_arms – the defensive arms are present. This value is used by the *MaxBomberSkill* parameter.

Available values:

1 – there are gunners

0 – no gunners

isNaval – a naval (carrier-based) airplane.

Available values:

1 – yes

0 – no

isHydro – a hydroplane.

Available values:

1 – yes

0 – no

AllPlaneDB.dat – this file is a list of airplanes with data necessary to create routes for missions.

The format:

B_17G;Allies;1;USA;England;None;0;HBomber;None;Staff;Reconplane;3220;290;7500;0;0;0

The diagram illustrates the structure of the file format. The fields are: Name, MultiNation, Faction, Nation(s), Flyable, Type, fmRange, fmCruiseSpeed, fmFuelMass, DT1Fuel, DT2Fuel, and DT3Fuel. The fields are grouped into three main categories: Name, MultiNation, and Faction; Nation(s), Flyable, and Type; and fmRange, fmCruiseSpeed, fmFuelMass, DT1Fuel, DT2Fuel, and DT3Fuel.

Name – the internal name of an airplane (can be obtained from a file, created in the FMB, or from the air.ini for modded versions).

Faction – the main faction for which this aircraft will be available.

Available values:

Allies – red army

Axis – blue army

MultiNation – the airplane was used by different airforces.

Available values:

1 – yes

0 – no

Nation – a country the airplane belongs to. Up to three different countries could be specified.

Available values:

USSR

France

USA

England

Finland

Hungary

Slovakia

Romania

Poland

Germany

Italy

Japan

Australia

NewZealand

Holland

None

Flyable – a flyable or AI only airplane. Used to determine takeoff points – AI airplanes always start in the air.

Available values:

1 – a flyable airplane

0 – AI only airplane

Type – the type of an airplane, used to select an airplane for a mission..

Available values:

Fighter – fighter, codes for ops* files: F, Ff

AFighter – escort fighter, code for ops* files: aF
CFighter – carrier-based fighter, codes for ops* files *: nF, nFf
FBomber – fighter-bomber, codes for ops* files: fB, aB, Bx, Br
Bomber - bomber, codes for ops* files: B, aB, Bx, Br
DBomber – dive bomber, codes for ops* files: dB, aB, Bx, Br
TBomber - torpedo bomber, codes for ops* files: tB
CBomber – carrier-based bomber, codes for ops* files: nB, naB, nBx, nBr
CDBomber – carrier-based dive bomber, codes for ops* files *: ndB, naB, nBx, nBr
CTBomber – carrier-based torpedo bomber, code for ops* files: ntB
HBomber – heavy bomber, codes for ops* files: hB, Bz, By
Kamikaze – kamikaze airplane, code for ops* files: K
Attack – attack airplane, code for ops* files: A
Transport – transport airplane, code for ops* files: T
Paradrop – paradrop airplane, code for ops* files: P
Reconplane - reconnaissance airplane, code for ops* files: R
Staff – supply airplane, being added by the randomizing procedure
HyRecon – reconnaissance hydroplane, code for ops* files: Hr, Hx
HyFighter – fighter hydroplane, code for ops* files: Hf
HyFighterB – fighter-bomber hydroplane, code for ops* files: HfB, Hx
HyPatrol – patrol hydroplane, code for ops* files: Hp, Hx
HyTransport – transport hydroplane, code for ops* files: Ht
Patrol – patrol airplane, code for ops* files: Pt

fmRange – the flight range, according to the FM.


fmCruiseSpeed – the cruise speed, according to the FM.

fmFuelMass – the fuel weight in kilos, according to the FM.

DT1Fuel – drop tank type 1 capacity (litres).

DT2Fuel – drop tank type 2 capacity (litres).

DT3Fuel – drop tank type 3 capacity (litres).



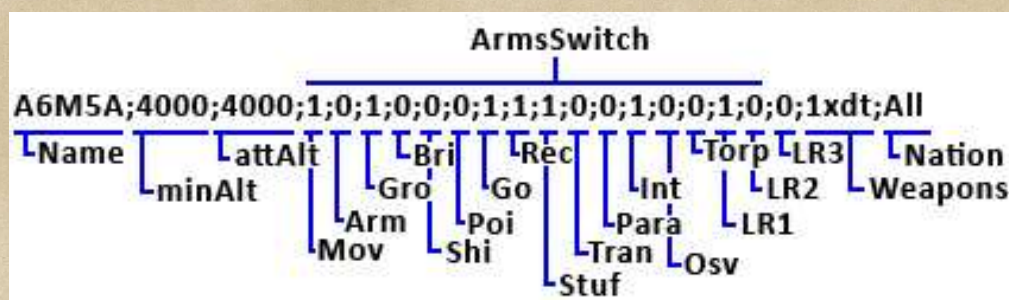
The type of droptanks determines the total fuel capacity, available for a mission. If droptanks are present, the generator computes the combat range based on the increased range of flight. The droptank type depends on total capacity:

1 x 200 litres – type 1
 2 x 100 litres – type 1
 1 x 300 litres – type 2
 2 x 300 litres – type 3

Selection of payload, including droptanks, depends on LR1, LR2 and LR3 values in the **AllWeapons.dat** file

AllWeapons.dat – This file contains the weapons definitions for each aircraft. The usage of each payload is also parametrically defined in this file.

The format:



Name – the internal name of an aircraft (can be obtained from a file, created in the FMB, or from the air.ini for modded versions).

minAlt – flight altitude at all points of a route, except points of ground attack, takeoff and landing. Optimal flight altitude with this payload..

attAlt – flight altitude at the point of attack. Optimal altitude to attack using this payload.

ArmsSwitch – these 0/1 switches define the type of targets the payload can be used against.

Available values:

1 - payload is used against the target type.

0 - payload is not used for this specific target.

Types of targets (switches in the following order):

Mov – moving targets (trains, convoys)

Arm – armored targets (tanks, tank columns)

Gro – stationary targets (HQ, ports, stores, troops, airfields)

Bri – bridges

Shi – ships

Poi – cities and key points

Go – flying on a route (escort, moving, patrol)

Rec – reconnaissance mission

Stuf – supply mission

Tran – transport mission

Para – paratroops dropping mission

Int – intercept

Osv – night missions

Torp – torpedo attack

LR1 – use drop tanks type 1

LR2 – use drop tanks type 2

LR3 – use drop tanks type 3

Weapons – payload internal name. (Can be obtained from a file created in FMB, or from weapons.properties for modded versions).

new

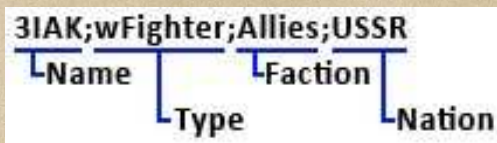
Nation – the country the payload belongs to.

Available values:

USSR
France
USA
England
Finland
Hungary
Slovakia
Romania
Poland
Germany
Italy
Japan
Australi
NewZealand
Holland
All

AllWing.dat – this file is a list of units (squadrons), available for dynamic campaigns.

The format:



3IAK;wFighter;Allies;USSR

└─Name┐ └─Faction┐

└─Type┐ └─Nation┐

Name – the internal name of a unit (can be obtained from a file, created in the FMB).

Type – the unit type.

Available values:

wFighter – a fighter unit
wBomber – a bomber unit
wAttack – a ground attack unit
wDBomber – a dive bomber unit
wTransport – a transport unit
wCarrier – a unit operating from an aircraft-carrier (irrespective of type)
wAll – an all-purpose unit (irrespective of type)

Faction – a faction the unit belongs to.

Available values:

Allies – red army
Axis – blue army

Nation – a country the unit belongs to.

Available values:

USSR
France
USA

England
 Finland
 Hungary
 Slovakia
 Romania
 Poland
 Germany
 Italy
 Japan
 Australia
 NewZealand
 Holland

[map_name]Towns.dat – this file is a list of key points (towns) for a map.

The format:

98696;89724;2;Stalingrad
 └─X-Coord└─Y-Coord└─TownSize└─TownName

X-Coord – X coordinate of a town.

Y-Coord – Y coordinate of a town.

TownSize – the size of a town, used in Russian briefings to determine type of the town.

Available values:

-1 – a location on the map, outside of a settlement (used for the front line)

0 – a small settlement or village

1 – a town

2 – a big city or capital

TownName – the name of a town or map location.

[map_name]AF.dat– the file is a list of airfields for each map.

The format:

A simple string specifies a regular airfield:

10129.17;141881.69;11724.17;141881.69;Kletskaya
 └─X-Takeoff└─Y-Takeoff└─X-Landing└─Y-Landing└─AFName

X-Takeoff – X coordinate of the takeoff point.

Y-Takeoff – Y coordinate of the takeoff point.

X-Landing – X coordinate of the touchdown point.

Y-Landing – Y coordinate of the touchdown point.

AFName – the name of an airfield.

Extended line 1 - defines the hydro-aerodrome (takeoff and landing of hydroplanes on water):

```
10129.17;141881.69;11724.17;141881.69;Kletskaya;H
└─X-Takeoff┐└─X-Landing┐└─AFName┐└─Hydrodrom
            └─Y-Takeoff┘└─Y-Landing┘
```

Hydrodrom – these coordinates are used only for seaplanes.

Expanded line 2 - defines the airfield installed on the template (objects 1-5 Test runway in the full editor):

```
10129.17;141881.69;11724.17;141881.69;Kletskaya > 1_StaticAF
└─X-Takeoff┐└─X-Landing┐└─AFName┐└─TText
            └─Y-Takeoff┘└─Y-Landing┘
```

TText – a line from the campaign template with the description of the object. When forming a mission, the object from the template will be identified as an airfield.

Examples of lines:

227154.40;227056.32;227981.18;227753.26;Wissant

492891.43;279149.20;494543.12;279158.80;Rekata_seaplane_base;H

106082.58;113670.38;107002.35;113424.77;B11_Longues > 1_StaticAF ships.Ship\$RwyTranspWide 1 106498.44

113560.65 555.00 0.0 0 2 1.0

[map_name]BR.dat – this file is a list of bridges for each map.

The format:

```
Bridge535;168340;92900
└─BridgeName┐└─Y-Coord
              └─X-Coord
```

BridgeName – the name of a bridge.

X-Coord – X coordinate of the bridge.

Y-Coord – Y coordinate of the bridge.

Amphibious.dat – this is a list of amphibious vehicles.

CapitalShip.dat – this is a list of battle ships.

Carriers.dat – this is a list of aircraft carriers.

esCarriers.dat – this is a list of escort carriers.

Submarines.dat – this is a list of submarines.

Tank.dat – this is a list of tanks.

TownMsgEn.dat – a file for internal use, do not edit this file!

UKcarriers.dat – this is a list of UK aircraft carriers.

UScarriers.dat – this is a list of US aircraft carriers

MessageRu.dat, MessageEn.dat, MessageDe.dat – these files contains text templates used by the generator, do not edit these files!

The purpose of files in the DGen folder.

Any DGen campaign consists of the following files:

campaigns[campaigns_name].dat – the top level file, containing a description of the campaign and a list of episodes for the campaign. It is displayed when starting a dynamic campaign.

squadrons[campaigns_name].dat – a list of squadrons available to the player (displayed when starting a campaign).

planes[campaigns_name].dat – a list of airplanes, available to the player, the data from this file is displayed when starting a dynamic campaign.

classes[campaigns_name].dat – this file overrides the values, specified in the **AllClasses.dat** file.

settings[campaigns_name].dat – this file is used by the DGen_MOD only. The file contains campaign settings. In original versions of DGen all settings were hardcoded into the program.

The file allows authors to adapt global generator settings for individual campaigns.

The file has a fixed structure, sections must follow in order!

Non-mandatory sections can be skipped, but the general order should be preserved. There should be no blank lines in the file, parameter values are separated by a space.

File structure:

Pacific

UseParkedPlanes

UseSearchlight

[EnemyNation]

[AF_OFF]

[Distance]

[AirStart]

[DropTanksON]

[MapSeason]

[MapNight]

[MapWeather]

[MapWind]

[RndScrambleOFF]

[Airfield]

[RndTransferOFF]

[Transfer]

[ChangeSquad]

Pacific – a campaign in the Pacific theater. In the generator version 2.0.1.2 or above it is not used. **Optional.**

Available values:

Pacific=True - campaign in the Pacific theater

Pacific=False - campaign in other theatres

UseParkedPlanes – defines that user's airfield is determined by static airplanes. **Required.** Reassigns the global setting UseParkedPlanes from the generator settings file (DGen_mod.ini).

Available Values:

UseParkedPlanes=True - static planes are used, global setting is ignored

UseParkedPlanes=False - the global setting is used

UseSearchlight – automatic addition of landing lights. **Required.**

Available Values:

UseSearchlight=True - landing lights, searchlights and serenads are automatically added around the player's airfield.

UseSearchlight=False - landing lights, searchlights and serenads are not automatically added. The appearance of the airfield equipment objects is controlled by the template file of the ground targets of the campaign.

[EnemyNation] – Contains the list of the nation of the main enemy for the episodes. The EnemyNation parameter specifies with which identification marks enemy planes using common squadrons (r01, ja01, g01, etc.) will appear. The enemy aircraft, which are linked to a specific unit, receive identification marks for the nation of the squadron. For details, see the information on [episode_name] .DB files. **Required.**

The format:

Episode_name Encounter_Nation

Example:

[EnemyNation]

PG_Balaton1 USA

PG_Balaton3 USA

PG_Balaton2 USSR

PG_Balaton4 USSR

For available EnemyNation values, see the "The purpose of the program's files" section for the Nation value.

[AF_OFF] – Contains a list of airfields for episodes that are disabled for a certain period and are not used when creating missions. These sections allows you to flexibly configure the list of airfields for each episode without changing the global lists from * AF.dat files. The main option for disabling the airfield is disabling for the entire period of the episode. It is also possible to turn off the airfield from the beginning of the episode and turn on during the episode. Disabling the airfield midway through an episode is not recommended. This can lead to generator errors. **Optional.**

The format:

Episode_name Airfield_name Date_First_Off Date_Completion_off

Example:

[AF_OFF]

PG_Balaton1 Kazsok 19440524 19440828

PG_Balaton1 Donja_Dubrava 19440524 19440828

PG_Balaton3 Kazsok 19440901194 41107

PG_Balaton3 Donja_Dubrava 19440901 19441107

[Distance] – Contains parameters that override the global values defining clusters. Clusters are ground targets such as: airfield,; airfield, railway station, port, warehouse, headquarters, battery, troops). For more details, see

the description of the template files with ground targets [episode_name] Red.mis and [episode_name] Blue. Mis). **Optional.**

Parameters:

AFRange - size of the radius of an airfield cluster (for ground attack purposes).

ClustersRange - distance between adjacent clusters

ClustersRadius - radius defining the cluster

ClustersCount - the number of objects that defines the cluster

Example:

[Distance]

AFRange=2000

ClustersRange=1000

ClustersRadius=1000

ClustersCount=6

[AirStart] - Contains parameters that determine the type of start for factions by episode. The value of False determines that the aircraft begins the mission using takeoff from the airfield, True - the aircraft begins the mission in flight at the first waypoint (air start). For more details, see the description of the template files with ground targets [episode_name] Red.mis and [episode_name] Blue. Mis). **Optional.**

The format:

Episode_name Allies_Start Axis_Start

Example:

[AirStart]

SolomonsAug1942 Allies=False Axis=True

SolomonsOct1942 Allies=False Axis=True

[DropTanksON] - Prioritises the use of drop tanks for certain aircrafts. Targets will be selected further away, according to the extra range provided by the drop tanks. **Optional.**

The format:

Episode_name Aircraft

Example:

[DropTanksON]

SolomonsAug1942e A6M2_21

SolomonsAug1942 A6M2_21

SolomonsOct1942 A6M3

[MapSeason] - Specifies the time of year for the episode. The value of the time of year is used to include summer or winter aircraft skins defined in the file [episode_name] .DB and for the formation of weather conditions. By default, the summer period is always set. **Optional.**

The format:

EpisodeName Period

Example:

[MapSeason]

WinterWar1 Winter

WinterWar2 Winter

WinterWar3 Summer

Available values:

Summer – Summer

Winter – Winter

[MapNight] - Defines the type of missions in the episode - night or daytime and the time of the beginning and end of the night. By default, the mission type is Random, the night in the summer from 18:00 to 6:00, the night in the winter from 17:00 to 7:00. These settings change the global settings NightBeginW, NightEndW, NightBeginS, NightEndS of DGen_mod.ini file. **Optional.**

The format:

Episode_name Night_Missions Start_Nights End_Nights

Example:

[MapNight]

WinterWar1 False 16 9

WinterWar2 True 17 9

WinterWar3 Random 16 9

Available values:

False – only day flights

True – only night flights

Random – random selection

Start_Nights End_Nights - To define the beginning and end of the night you have to use the 24-hour (or military) format.

[MapWeather] - Determines the probability of weather types in episodes. For each type of weather, the % probability of its appearance in the mission is indicated. The sum of the values shall be equal to 100. **Optional.**

The format:

Episode_name Clear Mostly_Cloudy Haze Mist Fog Rain Thunderstorm

Example:

[MapWeather]

SolomonsAug1942e 100 0 0 0 0 0 0

- in all the missions of the episode it will be clear.

SolomonsAug1942 30 40 15 8 5 2 0

- the missions of the episode will have different weather.

SolomonsOct1942 0 0 0 0 0 50 50

- all episodes will have either thunderstorms or rain.

The default values are as follows: 30 40 16 5 3 3 3

[MapWind] – Is not used.



Due to the fact that even moderate wind turns the plane on the runway in DGen_mod 2.0.5.0 there is only a slight breeze. Section [MapWind] is not used.

[RndScrambleOFF] - Prevents random scrambling missions from being generated for certain episodes (independently from the ops[name].dat file). **Optional.**

The format:

Episode_name

Example:

[RndScrambleOFF]

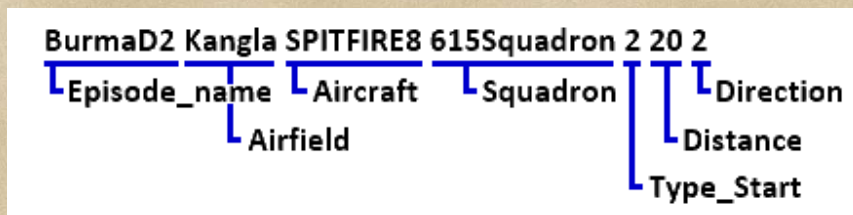
Kwajalein1942

Rabaul1942

Wake1942

[Airfield] - A new mechanism for determining the player's airfield. When this section is present, the generator will check for matches between the player's chosen aircraft model/squadron and this section. If there is a match the player will be located at the indicated airfield. If no matches are found or the section is missing, the old algorithms for selecting airfields - ParkedPlanes and searching for the nearest ones - are used. **Optional.**

The format:



Example:

[Airfield]

*BurmaD2 Malon SPITFIRE5C2 ** 2 20 2*

BurmaD2 Kangla SPITFIRE8 615Squadron 2 20 2

*BurmaD3 Tulihal ** ** 2 20 2*

The first line assigns Malon airfield if the player's aircraft is a Spitfire mk.Vc.

The second line sets Kangla airfield, if the player is using a Spitfire mk.VIII and has chosen 615 Squadron.

The third line imposes Tulihal airfield for all other combinations of the player's aircraft and squadron.

** - any value.

Type_Start— determines the order of take-off of groups from the airfield.

Available Values:

0 - usual

1 - pair

2 - in line

Distance - the distance between the aircraft when starting in line and a pair in meters.

Direction – determines the direction of take-off.

Available Values:

0 - by default (red from the first point to the second, blue from the second to the first)

1 - from the first point of coordinates to the second

2 - from the second point of coordinates to the first

[RndTransferOFF] - Disables the generation of relocation missions in episodes according to the old algorithm.

Optional.

The format:

Episode_name

Example:

[RndTransferOFF]

BurmaD2

The old algorithm for generating the relocation mission works as follows: every time the front line is moved, the nearest airfield is searched for, if the distance between the current airfield of the player and the airfield closest to the front line is more than 100km – a relocation mission is created from the current airport to the new (closest to the front line).

[Transfer] - A new mechanism for generating relocation missions. If the section is present, the generator will check all the lines for matches with the player's squadron, current airfield and date. If a match is found a relocation mission to the specified airfield will be created. If no match is found or the section does not work, the old relocation algorithms work. Optional.

The format:

Episode_name Date Squadron Airfield_ current Airfield_new

Example:

[Transfer]

*BurmaD2 19440324 ** Kangla Aberdeen*

BurmaD2 19440324 615Squadron Malon Tuliha

On the first line: If the current date is March 24 1944 and the player is based at Kangla he will be relocated to Aberdeen airfield.

On the second line: On March 24 1944, if the player is based at Malon with 615 Squadron he will be relocated to the Tuliha airdrome.

If on a given day the player is set to fly more than once, his first mission will be the relocation and subsequent missions will be carried out from the new base.

[ChangeSquad] - The mechanism allows you to transfer the player to a new squadron. When the transfer is made, the name of the squadron is changed and a new set of colleagues is produced, all the player's services are saved. The algorithm works at the beginning of each episode. **Optional.**

Format:

Episode_name Squadron_Early Squadron_new

Example:

[ChangeSquad]

Moscow_1941_07_14HB 1TBAP 3TBAP

[episode_name].DB – this file contains all the necessary data for episode missions: front line moving, available units and airplanes etc..

[episode_name]Red.mis – this file contains a template with ground targets for red faction missions.

[episode_name]Blue.mis – this file contains a template with ground targets for blue faction missions.

[episode_name]Front.mis – this file contains a template with active objects which will appear to create ground battles near the frontline.

[episode_name]Scenery.mis – this file contains a template with active airfield objects, which will appear in missions to create live effect.

[episode_name]Topo.mis – this file contains a template with reference points, required for creating missions on sea maps.

[episode_name] Fixed.mis – this file contains a template of ground targets and objects being added to each mission. Use such files to add to a mission transport units with their routes crossing the frontline, navigation objects, landing systems, runway lighting etc.

ops[name].dat – The dat file contains a list of mission types and the composition of the main groups of aircraft available in an episode. This is the second most important file after *[episode_name].DB* which determines the contents of the generated missions within the episode. The *ops[name]. dat* file can be of two types - simple and using macros. DGen_MOD of any version supports both types.

Structure of a simple file:

```
// Tainan fighter and bomber ops from Buna airfield august-september 1942
[Operations]
oBluePatrolAF 19420822:19420822:A RED 1R 2F BLUE 2Y 1R
oBlueBombPort 19420822:19420822 RED 4F 4F BLUE 6dB 6Y
oBlueAttackPort 19420822:19420822:N RED 4nF 4nF BLUE 6N 6nF
```

The first line starts with the // character and is a comment that the generator does not process.

The second line is a compulsory word.

Third line: Group compositions for an airfield patrol mission of a land based (or seaplane) campaign.

Fourth line: Group compositions for a port bombing operation of a land-based (or seaplane) campaign.

Fifth line: Group compositions for port attack operation of a naval (carrier-based) aviator campaign.

Structure of the file using macros:

```
// Iwo and alike = later war US carriers vs islands
[Macros]
UsNavyMin 10622:50814:N RED 2N BLUE 3F
UsNavyMin 10622:50814:N RED 4N BLUE 3F
UsNavyMed 10622:50814:N RED 6N BLUE 6F
JpArmyMin 10622:50609:A RED 4nF BLUE 3Y
JpArmyMed 10622:50814:A RED 6nF 6nF BLUE 6Y 6F
[Operations]
oUsReconAF      {UsNavyMin}
oUsPatrolAmph   {UsNavyMed}
oJpReconCarrier {JpArmyMin}
oJpFreeHunt     {JpArmyMed}
```

The [Macros] section lists all possible variations of the groupings, sorted by macro names such as "UsNavyMin". Names are arbitrary and need to be repeated below, delimited by {**}, in the [Operations] section. This section contains the available mission types with group definitions (computed through the macros).

If more than one grouping is associated to a macro, then for a corresponding type of mission the group composition will be selected randomly.

In the example above, "oUsReconAF" can be generated with 2 different combinations of planes.

The format:

```
oBluePatrolShips 19420830:19420830:A RED 6B 4F 6B 4F 1R 1R BLUE 3Y 3F 1R 1Hr 1Hr
└─ Mission      └─ Date_begin └─ Date_end └─ Red └─ Red_group └─ Blue └─ Blue_group
└─ MissType
```

Mission – the type of mission, determines the purpose, routes and action of groups of aircraft in the mission. For a detailed description, see Appendix 1.

Date_begin – the date of the beginning of the period in which this type of missions will be performed (for "special" missions it must coincide with the first date of the episode).

Date_end – the end date of the period in which this type of mission will be performed (for "special" missions it must coincide with the last date of the episode).

MissType – is the type of mission.

Available Values:

Empty - default value, mission for land-based or seaplanes pilots.

A - mission for land-based or seaplanes pilots.

N - mission for carrier-based pilot (Navy, FAA, IJN, etc.. operating from aircraft carriers).

RED and BLUE (in older versions "VVS" and "LW" or "USN" and "IJN") is a required word, following which the group of aircrafts are defined for each side.

Red_group and Blue_group – the definition of groups of aircraft for each side respectively.

DGen_MOD from version 2.0.2.0 supports 8 groups for each side. Each group is characterized by the number of aircraft (the first figure) and the type of aircraft (the subsequent code). Code 0F determines the absence of enemy aircraft in the mission, this code cannot be used in missions such as "interception" (Patrol and Defend)

New types:

[Operations]

oRedAttackBattery 19410715:19410715:A RED 6Y BLUE 4F > SouthSmolensk

oRedAttackDepot 19410713:19410713:A RED 3Y BLUE 4F > Demidov > tm:7.15 > cl:0

The format:

```
oRedAttackBattery 19410715:19410715:A RED 6Y BLUE 3F > SouthSmolensk > tm:7.15 > cl:0
└─ Key_point └─ Time └─ Weather
```

Key_point – is a city (key point) from the [Towns] section of the files [episode_name].DB. The link to the city instructs the generator to search for targets primarily in the area of the specified city (point). The option works for static purposes: a warehouse, a port, a city, an airfield (hydromedrome), a railway station, an artillery battery, etc.

Time – time of departure. Avoid using if multiple missions for the same day are listed in the [episode_name].DB file (under the [Schedule] section).

Alternatively create a unique line in ops[name].dat, one for each departure time. In this case the generator will process the missions in ascending departure time order.

Examples:

Two departures a day, time are precisely specified:

oRedAttackConvoy 19450112:19450112:N RED 8N 8ntB 6ntB 4nB BLUE 1Hr 1Hp > tm:6.84 > cl:3

oRedAttackPort 19450112:19450112:N RED 8N 8nB 6ndB 4nB BLUE 0F > Saigon > tm:13.5 > cl:4

Or time will be chosen randomly:

oRedAttackConvoy 19450112:19450112:N RED 8N 8ntB 6ntB 4nB BLUE 1Hr 1Hp

oRedAttackPort 19450112:19450112:N RED 8N 8nB 6ndB 4nB BLUE 0F > Saigon

Weather - type of weather at the time of departure.

Available Values:

0 - Clear

1 - Mostly Cloudy

2 - Haze

3 - Mist

4 - Fog

5 - Rain

6 – Thunderstorm

The advanced format of the string allows you to more accurately reproduce the conditions for historical missions.

The list of possible codes in the definition of groups:

| | Code | Description | Selectable types from the file AllPlaneDB.dat | Maximum number of aircrafts | Start of the route | End of the route |
|--|------------|---|---|-----------------------------|---|--|
| | Y | Player's group, starting from the airfield or hydro-aerodrome | - | 12 | take-off from the airfield or hydro-aerodrome | landing at the airfield or hydro-aerodrome |
| | U | Player's group, starting in the air | - | 12 | point of the air start | point of the air start |
| | Z | Player's group, missile interceptor (special code for Me-163) | - | 4 | take off from the airfield | landing on the airfield |
| | N | Player's group, starting from an aircraft carrier | - | 12 | take off from an aircraft carrier | landing on an aircraft carrier |
| | F | Group of fighters | Fighter | 12 | take off from the airfield or airborne launch point | landing at the airfield or air launch point |
| | aF | Group of escort fighters (escort heavy bombers) | AFighter | 12 | take off from the airfield or airborne launch point | landing at the airfield or air launch point |
| | nF | Group of carrier based fighters | CFighter | 12 | take off from an aircraft carrier | landing on an aircraft carrier |
| | Hf | Group of seaplane fighters | HyFighter | 12 | take off from the hydro-aerodrome or air-launch point | landing on the hydro-aerodrome or air-launch point |
| | fB | Group of fighter-bombers | FBomber | 12 | take off from the airfield or air-launch point | landing at the airfield or air-launch point |
| | HfB | Group of fighter-bomber seaplanes | HyFighterB | 12 | take-off from the hydro-aerodrome or air-launch point | landing on a hydro airfield or air launch point |
| | Ff | Group of fighters in the Reinforce missions (skirmish). This group starts from a random point, flies to the target and leaves in the direction of its airfield | Fighter | 12 | start in the air from a random point | landing on the airfield |
| | nFf | Group of carrier based fighters in the Reinforce missions (skirmish). This group starts from a random point, flies to the target and leaves in the direction of its airfield. | CFighter | 12 | start in the air from a random point | landing on an aircraft carrier |
| | B | Group of bombers | Bomber | 12 | take off from the airfield or airborne launch point | landing at the airfield or air launch point |
| | dB | Group of dive bombers | DBomber | 12 | take off from the airfield or airborne launch point | landing at the airfield or air launch point |

| | Code | Description | Selectable types from the file AllPlaneDB.dat | Maximum number of aircrafts | Start of the route | End of the route |
|--|------------|---|--|-----------------------------|--|---|
| | tB | Group of torpedo bombers | TBomber | 12 | take off from the airfield or airborne launch point | landing at the airfield or air launch point |
| | aB | Group of bombers of any type (random choice) | Bomber, DBomber, FBomber | 12 | take off from the airfield or airborne launch point | landing at the airfield or air launch point |
| | Bx | Group of bombers in the Scramble missions (interception). This group starts from a random point at a distance of 15 to 20 km from the target, carries out the attack of the target and leaves in the direction of its airfield. By day with a fighter cover (2-6 planes). | Bomber, DBomber, FBomber (on maps Normandy, Ardennes, NWEurope only FBomber, at night only Bomber) | 12 | start in the air from a random point | landing on the airfield |
| | Br | A group of bombers in the Scramble missions (interception). This group starts from a random point at a distance of 40 km from the target, carries out the attack of the target and leaves in the direction of its airfield. By day with a fighter cover (2-6 planes). | Bomber, DBomber, FBomber (on maps Normandy, Ardennes, NWEurope only FBomber, at night only Bomber) | 12 | start in the air from a random point | landing on the airfield |
| | nB | Group of carrier-based bombers | CBomber | 12 | takeoff from an aircraft carrier | landing on an aircraft carrier |
| | ndB | Group of carrier based dive bombers | CDBomber | 12 | takeoff from an aircraft carrier | landing on an aircraft carrier |
| | ntB | Group of carrier based torpedo bombers | CTBomber | 12 | takeoff from an aircraft carrier | landing on an aircraft carrier |
| | naB | Group of carrier based bombers of any type (random choice) | CBomber, CDBomber | 12 | takeoff from an aircraft carrier | landing on an aircraft carrier |
| | nBx | Group of carrier based bombers in Scramble missions (interception). This group starts from a random point at a distance of 15 to 20 km from the target, carries out the attack of the target and leaves in the direction of its aircraft carrier. By day with a fighter cover (2-6 planes). | CBomber | 12 | start in the air from a random point | landing on an aircraft carrier |
| | nBr | Group of carrier based bombers in Scramble missions (interception). This group starts from a random point at a distance of 40 km from the target, carries out the target attack and leaves in the direction of its aircraft carrier. By day with a fighter cover (2-6 planes). | CBomber | 12 | start in the air from a random point | landing on an aircraft carrier |
| | Hx | Group of seaplanes in Scramble missions (interception). This group starts from a random point at a distance of 15 to 20 km from the target, carries out the attack of the target and leaves in the direction of its hydro airfield. | HyRecon, HyFighterB, HyPatrol | 12 | start in the air from a random point | landing on a hydro airfield |
| | hB | Group of heavy bombers | HBomber | 39 | air-start point or in the air above the airfield of the player | goes over the edge of the map |
| | Bz | Group of heavy bombers in the Scramble missions (interception). This group starts from a random point at a distance of 10 to 15 km from the target, carries out the attack of the target and goes over the edge of the map. Fighter cover (2-6 aircraft). | HBomber | 39 | start in the air from a random point | goes over the edge of the map |
| | By | A group of heavy bombers in Scramble missions (interception). This group starts from a random point at a distance of 10 to 15 km from the target, carries out the attack of the target and goes over the edge of the map. Without fighter cover. | HBomber | 39 | start in the air from a random point | goes over the edge of the map |

| | Code | Description | Selectable types from the file AllPlaneDB.dat | Maximum number of aircrafts | Start of the route | End of the route |
|--|-----------|---|---|-----------------------------|---|---|
| | K | Group of kamikaze planes | Kamikaze | 4 | start in the air from a random point | target |
| | A | Group of attack planes | Attack | 12 | take off from the airfield or airborne launch point | landing at the airfield or air launch point |
| | T | Group of transport aircraft | Transport | 12 | take off from the airfield or airborne launch point | landing at the airfield or air launch point |
| | Ht | Group of transport seaplanes | HyTransport | 12 | take off from the hydro-aerodrome or air-launch point | landing at the hydro-aerodrome or air-launching point |
| | P | Group of transport aircraft with paratroopers | Paradrop | 24 | take off from the airfield or airborne launch point | landing at the airfield or air launch point |
| | Hr | Group of reconnaissance seaplanes | HyRecon | 12 | take off from the airfield or airborne launch point | landing at the airfield or air launch point |
| | R | Group of reconnaissance planes | Reconplane | 12 | take off from the airfield or airborne launch point | landing at the airfield or air launch point |
| | Hp | Group of patrol seaplanes | HyPatrol | 12 | take off from the airfield or airborne launch point | landing at the airfield or air launch point |
| | Pt | Group of patrol aircraft | Patrol | 12 | take off from the hydro-aerodrome or air-launch point | landing at the hydro-aerodrome or air-launching point |



In all missions created by the generator, there are the main groups (from the list of lines in the files ops[name].dat and additional (random) groups. All aircraft of the main groups perform tasks tied to a single common goal (for more details see the description of the files of the ground targets templates [episode_name]Red.mis and [episode_name]Blue.mis.). Aircraft from additional groups have their own goals and are used by the generator to create the appearance of activity in the air. In all missions, one side performs offensive actions (attack, bombardment, reconnaissance), the other side is defending (covering, patrolling), while all the aircraft in the list carry out their tasks in relation to a single goal. This is necessary to understand when creating lists.

For example if bombers are added on the defending side, some AI will attack the enemy as indicated in the mission, others will simply circulate around the target area, without doing anything.

The processing sequence of ops[name].dat files by the generator is as follows:

1. Depending on the mission date, missions types are selected from the ops[name].dat file.
2. The selected missions are checked against the availability of targets and the player's aircraft type.
3. A check is carried out for the presence of a "special mission". If present a "special mission" is created. If none is found the generator proceeds to the next step.
4. An ordinary mission is created, randomly selected from those left after step 2.

If during the formation of a routine mission the generator could not pick up any missions from the ops[name].dat file (the search chain was not performed: the period - the mission type - the type of the player's airplane - the appropriate target) - the generator's operation will be terminated with «Can't select target type».

[episode_name]Planes.dat – this file contains a list of airplanes with payload type and its use for each episode of a campaign. This file is being processed during the specified episode only. Settings in this file override those of the **AllPlaneDB.dat** and **AllWeapons.dat** files. A space or a tab is used as a field separator.

Using this file allows to limit payload options available for the airplane in each episode, change the altitude limit for each payload type, change the type of a target and the airplane role.

File format:

| | | | | | | | | |
|---------|--------|---------|-------|-------------|--------|--------|------------|---------|
| Allies | USA | LBomber | A_20C | 360 | 5000 | 5000 | 2x5002x500 | 1 |
| Faction | Nation | Type | Name | CruiseSpeed | minAlt | attAlt | Weapons | Flyable |

Available values:

Allies – red army

Axis – blue army

Nation – a country, the airplane belongs to.

Available values:

USSR

France

USA

England

Finland

Hungary

Slovakia

Romania

Poland

Germany

Italy

Japan

Australia

NewZealand

Holland

Type – the type of an airplane. The data from the **[episode_name]Planes.dat** files is used either to select an airplane for a mission or to select payload for that airplane. In the former case an airplane is selected with its default payload, in the latter its payload is replaced depending on a mission. The latter is also typical for all fighters and airplanes of the player.

Explanation of the values of aircraft types (variants):

| Type | Purpose | Usage | Applies to | Code in ops*.dat files |
|--------------------|---------------------------------------|---|-------------|------------------------|
| LBomber | The main type of bomber: Level Bomber | Used when selecting an aircraft for the mission | AI | B, aB, Bx, Br |
| TBomber | Torpedo Bomber | Used to select payload for torpedo attack | AI | tB |
| CTBomber | Torpedo Bomber, carrier based | Used to select payload for Pearl Harbour attack | AI | ntB |
| CDBomber | Dive Bomber, carrier based | Used to select payload for Pearl Harbour attack | AI | ndB, naB, nBx, nBr |
| HBomber | Heavy Bomber | Used when selecting an aircraft for the mission | AI | hB, Bz, By |
| DBomber | Dive Bomber | Used when selecting an aircraft for the mission | AI | dB, aB, Bx, Br |
| Attack | Attack | Used when selecting an aircraft for the mission | AI | A |
| Fighter | Fighter | Used when selecting an aircraft for the mission | AI | F, Ff, random |
| FighterLR | Long range fighter | Used to select payload for long range missions (more than 70km) | Player + AI | Y, U, Z, H, N, F, Ff |
| Interceptor | Interceptor | Used to select payload for intercept missions | Player + AI | Y, F, aF, nF, random |
| FBomber | Fighter Bomber (Heavy load) | Used to select an airplane and payload for bombing missions | AI | U, fB, aB, Bx, Br |
| Kamikaze | Kamikaze | Used when selecting an aircraft for the mission | AI | K |
| Staff | Staff | Used to select an airplane for a mission – random airplanes within base airfield's area | AI | - |
| Reconplane | Reconnaissance | Used when selecting an aircraft for the mission | AI | R, random |
| HyRecon | Hydroplane - reconnaissance | Used when selecting an aircraft for the mission | AI | Hr |
| aShip | Any player's aircraft | Used to select payload to attack ships | Player | Y, U, N |
| aTank | Any player's aircraft | Used to select payload to attack tanks | Player | Y, U, N |
| aHeavy | Any player's aircraft | Used to select payload to destroy bridges | Player | Y, U, N |
| aSoft | Any player's aircraft | Used to select payload to attack vehicles, trains, stores, staffs, guns, airfields etc. (except ships, tanks and bridges) | Player | Y, U, N |
| Paradrop | Transport with paratroopers | Used when selecting an aircraft for the mission | AI | P |
| Transport | Transport | Used when selecting an aircraft for the mission | AI | T, random |
| Transfer | Transfer to another airfield | Used to select payload | AI | Y, U, P, N, random |
| CFighter | Fighter, carrier based | Used when selecting an aircraft for the mission | AI | nF, nFf |
| AFighter | Attack fighter | Used when selecting an aircraft for the mission | AI | aF |
| CBomber | Bomber, carrier based | Used when selecting an aircraft for the mission | AI | nB, naB, nBx, nBr |


Name – the internal name of an airplane (could be obtained from a file, created in the FMB or from the air.ini file, created for a MOD).

CruiseSpeed – the cruise speed en route, except for points of takeoff and landing.

minAlt – the altitude en route, except for points of takeoff, landing and attacking ground targets. This is the optimum altitude for a given payload.

attAlt – the altitude at points of attacking ground targets. This is the optimum altitude to start attack for a given payload.

Weapons – payload combinations.



IMPORTANT! If a mistyped or wrong payload is specified then this may cause strange behavior when starting a mission – airplane explosions at runways, appearing airplanes with bent propellers, texture artifacts etc.

Flyable – it's a player-controlled or AI airplane. Determines takeoff points – AI planes always start in the air.

Available values:

1 – an airplane can be controlled by the player

0 – an airplane controlled by AI only.

[episode_name]Msg[Nn].dat – these files are used by the DGen_mod only. These are episode briefings in different languages.

The purpose of files in the Missions folder.

The campaign files are created in the \Missions\Campaign\[Nn] folder of the game (C:\IL-2 Sturmovik 1946\Missions\Campaign\Ru, for example). [Nn] is a shortcut for a nation, for which the campaign is created. The name of a campaign folder is compiled by the game and consists of the following parts:



CampIdtent – this is a dynamic campaign.

CampCod – the code of a campaign, taken from the name of a **campaigns[campaigns_name].dat** file (campaignsRu1.dat – «I» in this case).

MapName – the name of a map on which the campaign begins or the name of an episode.

UserCod – user ID (generated by the game).

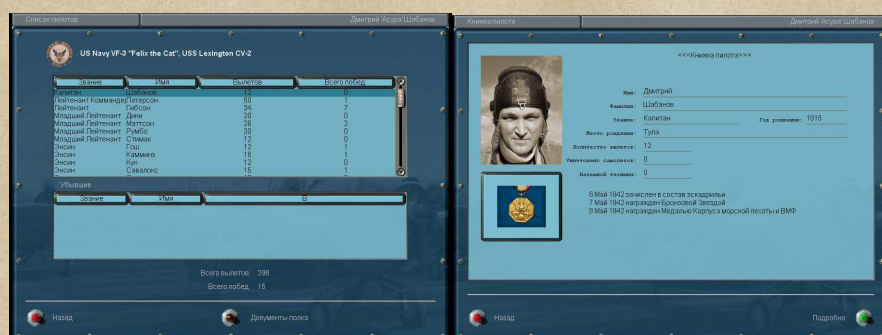
IMPORTANT! The files in a campaign folder are generated automatically, no manual modification allowed.

[date].mis – mission files, created by the generator.

[date]. properties – mission's description files, created by the generator.

Squadron.dat – this file contains information on the player's squadron/unit. This info is displayed in the campaign interface.

Archive.dat – this file contains information on pilots from the player's squadron/unit, which are injured, killed, moved to other units. This info is displayed in the campaign interface.



conf.dat – this file is generated by the game when it starts a new campaign; it contains general information on the campaign and a list of episodes.

campaign.ini – the main file, which determines the sequence of missions.

Damage.dat – a list of destroyed objects.

DeadAces.dat – a list of downed enemy aces in the campaign.

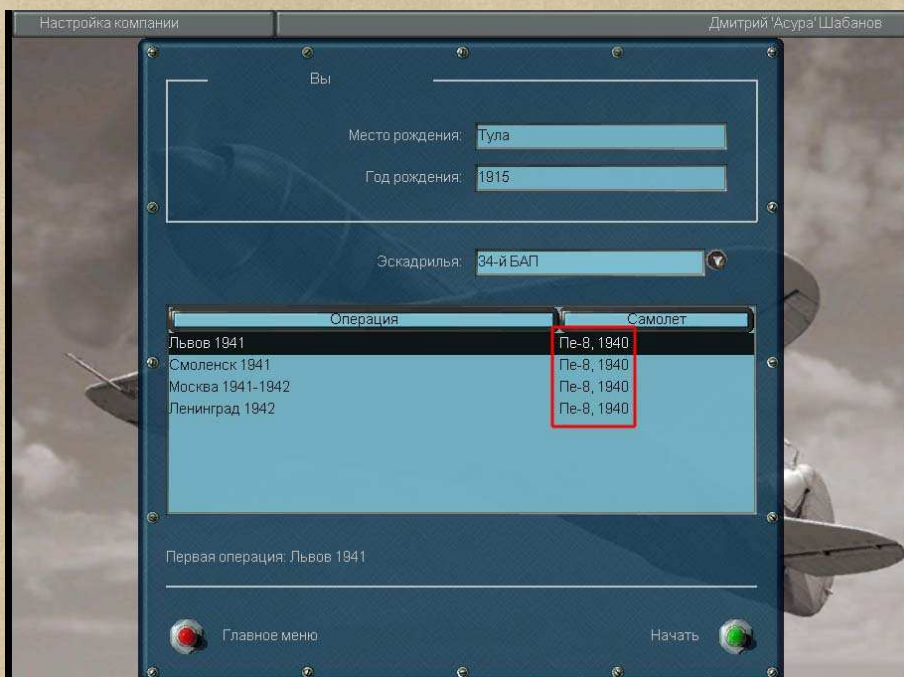
Add a new airplane to a campaign.

Any airplane from versions 4.11 and 4.12.2 can be used, just add this airplane to the **planes[campaigns_name].dat** file.

In the example below a Pe-8 has been added, using the internal name format: (PE_8).



And the result:



Add a new map to the generator.

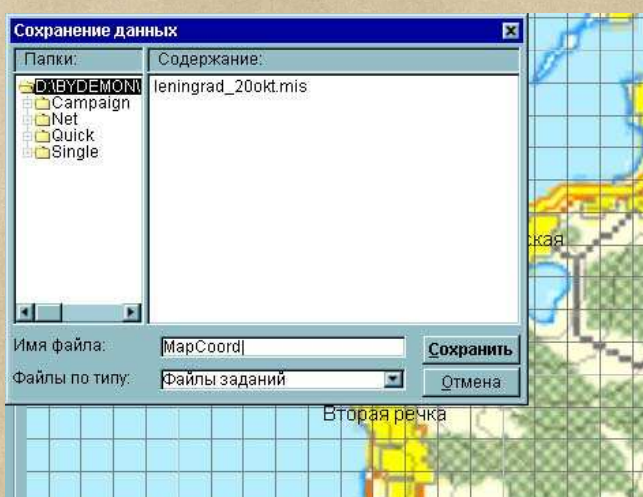
To add a new map, just create and fill in two files **[map_name]Towns.dat** and **[map_name]AF.dat**. Additionally, you may create a **[map_name]BR.dat** file, which will allow the generator to create bridge attack/defense missions.

The most complicated task is to acquire coordinates of points, placed in towns and on airfields. You can use the following following manual process shown below. Alternatively you can ask the map creator for help. Coordinates can be derived from map files (actors.static in particular) by an experienced map maker.

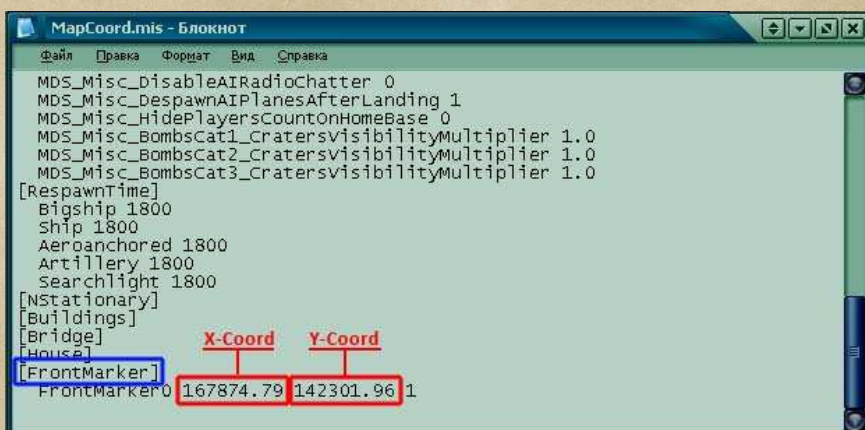
Step 1 – in the FMB put a front line marker (of any color) at the required point.



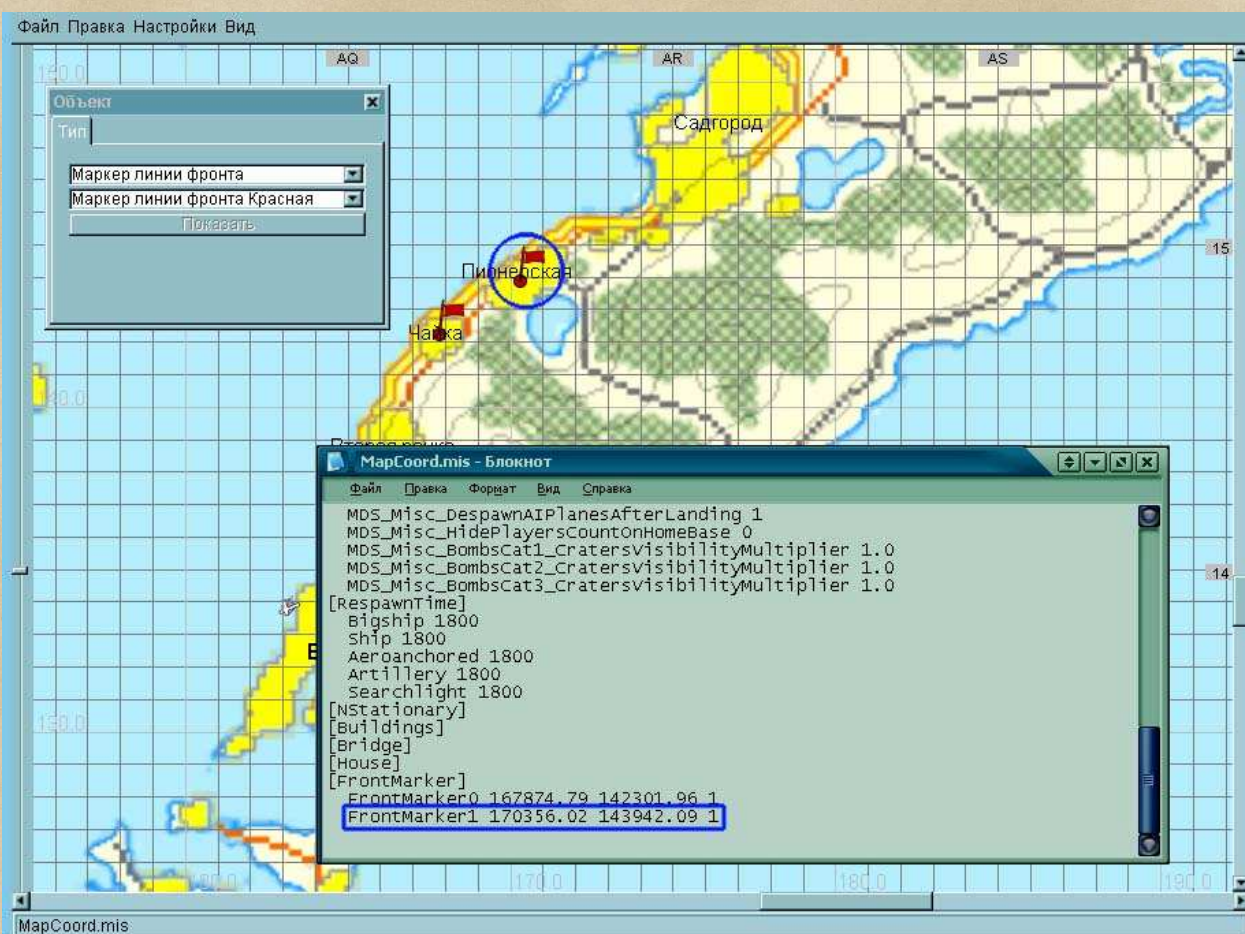
Step 2 – save the mission.



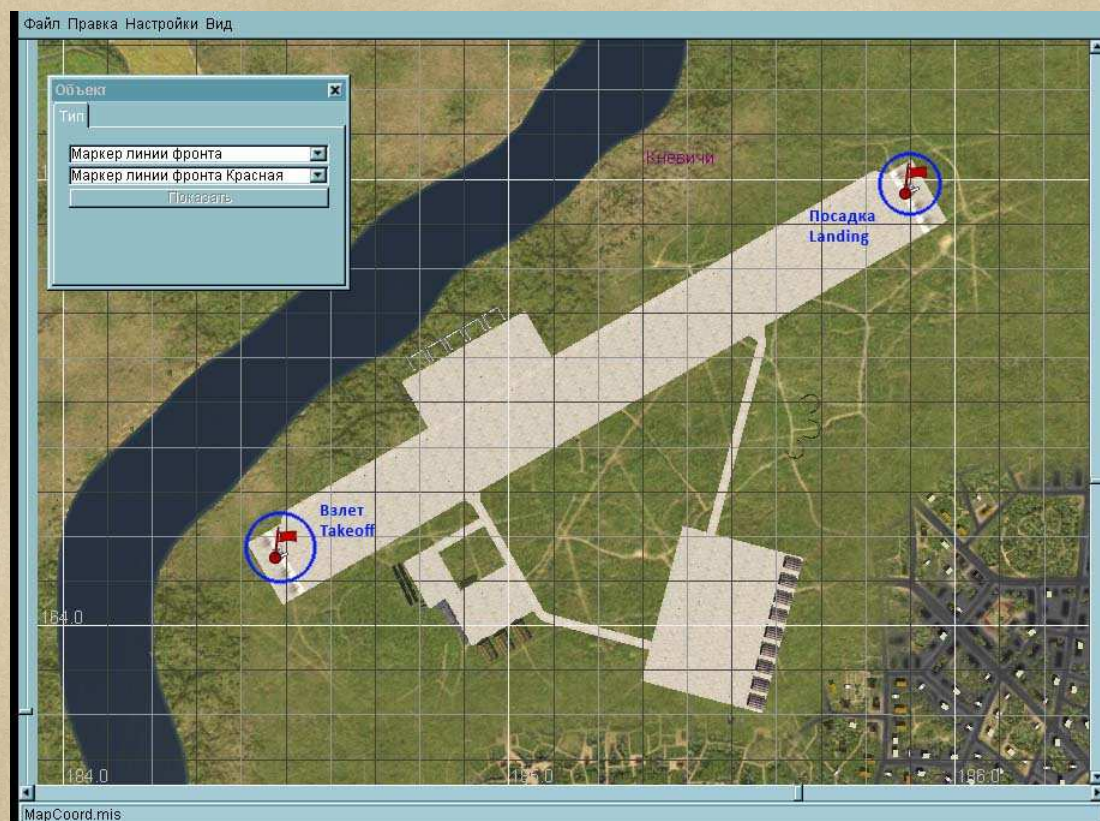
Step 3 – open the saved **[name].mis** file and locate the **[FrontMarker]** section. Copy the coordinates and paste them into the new **[new_map_name]Towns.dat** file. Enter the name and the size of a town, as well as the name of a bridge or airfield.



Step 4 – repeat steps 1, 2 and 3 for other points.



For an airfield you will need to mark two points – where airplanes takeoff and land.



A bridge is marked by a single point.



To obtain comprehensive data for creating campaigns, it's better to get the coordinates of all the towns, airfields and bridges present on a map.

If you have created the data files for a map, which is not currently present in DGen_MOD, you can send them to dgen.service@mail.ru and they will be added to the next version of the generator. The files, going to be added to the official release, should contain as much detailed data as possible.

The DGen_MOD team.

Asura – programming.

Motorhead – dynamic campaigns, testing.

LSA – translation to English for User manual 2.1, programming advices.

Other contributors:

vonOben – Updated the English translation for User manual 2.4.

Appendix 1. Type of mission.

[illegible]

| New feature | Type (N-normal S-special) | Old Mission code | <u>New Mission code *</u> (Recommended for DGen_MOD, see page 53) | Mission | Objective | Description | Type of player airplane | Player's flight position in the list | Selecting weapons to attack ground targets | Selecting weapons to attack air targets |
|-------------|---------------------------------|------------------|---|---|--|--|--|---|--|--|
| | N | oJpAttackCars | <u>oBlueAttackCars</u> | Attack enemy vehicle columns | Random enemy vehicle columns | These lines determine the composition of groups when the player attacks the enemy's vehicle columns. If the second group on the list are fighters, it performs cover for the player's group. The enemy groups defend their vehicle columns and intercept groups of players. | GROUND, JABO, LIGHT, ALL, PATROL | 1 | Yes | No |
| | | oUsAttackCars | <u>oRedAttackCars</u> | | | | | | | |
| | N | oDeAttackCluster | <u>oBlueAttackCluster</u> | Attack enemy target area | Random enemy target area | The generator randomly selects the type of the target from the substitution list and forms the corresponding mission. | GROUND, BOMBER, JABO, LIGHT, ALL, PATROL | 1 | Yes | No |
| | | oRuAttackCluster | <u>oRedAttackCluster</u> | | | | | | | |
| | N | oJpAttackConvoy | <u>oBlueAttackConvoy</u> | Attack enemy sea convoys | Random enemy sea convoy | These lines determine the composition of groups when the player attacks the enemy's sea convoy. If the second group on the list are fighters, it performs cover for the player's group. The enemy groups defend their convoy and intercept the player's groups. | GROUND, TORPEDO, JABO, BOMBER, ALL, PATROL | 1 | Yes | No |
| | | oUsAttackConvoy | <u>oRedAttackConvoy</u> | | | | | | | |
| | N | oJpAttackDepot | <u>oBlueAttackDepot</u> | Attack enemy warehouses | Random enemy warehouse | These lines determine the composition of groups when the player attacks enemy warehouses. If the second group on the list are fighters, it performs cover for the player's group. The enemy groups protect their warehouses and intercept the player's groups. | GROUND, BOMBER, JABO, LIGHT, ALL, PATROL | 1 | Yes | No |
| | | oUsAttackDepot | <u>oRedAttackDepot</u> | | | | | | | |
| | N | oJpAttackHQ | <u>oBlueAttackHQ</u> | Attack enemy field headquarters | Random enemy field headquarters | These lines determine the composition of groups when the player attacks the enemy's field headquarter. If the second group on the list are fighters, it performs cover for the player's group. The enemy groups defend their headquarters and intercept the player's groups. | GROUND, BOMBER, JABO, LIGHT, ALL, PATROL | 1 | Yes | No |
| | | oUsAttackHQ | <u>oRedAttackHQ</u> | | | | | | | |
| | N | oJpAttackPort | <u>oBlueAttackPort</u> | Attack enemy seaport | Random enemy port | These lines determine the composition of groups when the player attacks the enemy seaport. If the second group on the list are fighters, it performs cover for the player's group. The enemy groups protect their port and intercept the player's groups. | GROUND, BOMBER, JABO, LIGHT, ALL, TORPEDO, PATROL | 1 | Yes | No |
| | | oUsAttackPort | <u>oRedAttackPort</u> | | | | | | | |
| | N | oJpAttackShips | <u>oBlueAttackShips</u> | Attack enemy ships | Random enemy ship | These lines determine the composition of groups when the player attacks enemy ships. If the second group on the list are fighters, it performs cover for the player's group. The enemy groups defend their ships and intercept the player's groups. | GROUND, TORPEDO, JABO, BOMBER, ALL, PATROL | 1 | Yes | No |
| | | oDeAttackShips | | | | | | | | |
| | | oUsAttackShips | <u>oRedAttackShips</u> | | | | | | | |
| | | oRuAttackShips | | | | | | | | |
| | N | oDeAttackSoft | <u>oBlueAttackSoft</u> | Attack enemy weakly armored targets | Random enemy weakly armored target | The generator randomly selects the type of a weakly armored target from the substitution list and forms the appropriate mission. | GROUND, JABO, LIGHT, ALL, PATROL | 1 | Yes | No |
| | | oRuAttackSoft | <u>oRedAttackSoft</u> | | | | | | | |

| New feature | Type (N-normal S-special) | Old Mission code | New Mission code * (Recommended for DGen_MOD, see page 53) | Mission | Objective | Description | Type of player airplane | Player's flight position in the list | Selecting weapons to attack ground targets | Selecting weapons to attack air targets |
|-------------|---------------------------------|------------------|--|----------------------------------|--|---|---|---|--|--|
| | N | oJpAttackStation | oBlueAttackStation | Attack enemy railway station | Random enemy railway station | These lines determine the composition of groups when the player attacks an enemy railway station. If the second group on the list are fighters, it performs cover for the player's group. The enemy groups defend their station and intercept the player's groups. | GROUND, BOMBER, JABO, LIGHT, ALL, PATROL | 1 | Yes | No |
| | | oUsAttackStation | oRedAttackStation | | | | | | | |
| | N | oJpAttackSub | oBlueAttackSub | Attack enemy submarine | Random sea point | These lines determine the composition of groups when an enemy player attacks an enemy submarine. If the second group on the list are fighters, it performs cover for the player's group. The enemy groups defend their submarine and intercept the player's groups. | GROUND, TORPEDO, JABO, BOMBER, ALL, PATROL | 1 | Yes | No |
| | | oUsAttackSub | oRedAttackSub | | | | | | | |
| | N | | oBlueAttackTown | Attack enemy city (key point) | Random enemy city | These lines determine the composition of groups when the player attacks enemy cities. If the second group on the list are fighters, it performs cover for the player's group. The enemy groups defend their cities and intercept the player's groups. | GROUND, BOMBER, PATROL | 1 | Yes | No |
| | | | oRedAttackTown | | | | | | | |
| | N | oJpAttackTrain | oBlueAttackTrain | Attack enemy trains | Random enemy train | These lines determine the composition of groups when the player attacks enemy trains. If the second group on the list are fighters, it performs cover for the player's group. The enemy groups protect their trains and intercept the player's groups. | GROUND, JABO, LIGHT, ALL, PATROL | 1 | Yes | No |
| | | oUsAttackTrain | oRedAttackTrain | | | | | | | |
| | N | oJpAttackTroops | oBlueAttackTroops | Attack enemy troops | Random accumulation of enemy troops | These lines determine the composition of the groups when the player attacks enemy forces. If the second group on the list are fighters, it performs cover for the player's group. The enemy groups carry out the defense of their troops and intercept the player's groups. | GROUND, BOMBER, JABO, LIGHT, ALL, PATROL | 1 | Yes | No |
| | | oUsAttackTroops | oRedAttackTroops | | | | | | | |
| | N | oJpBombAF | oBlueBombAF | Bomb enemy airfield | Random enemy airfield | These lines determine the composition of groups when the enemy airfield is bombed. The player's group covers the first attacking group. The enemy groups defend their airfield and intercept the player's groups. | FIGHTER, LIGHT, ALL | 2 | No | No |
| | | oDeBombAF | | | | | | | | |
| | | oUsBombAF | oRedBombAF | | | | | | | |
| | | oRuBombAF | | | | | | | | |
| | N | oJpBombAmph | oBlueBombAmph | Bomb enemy amphibious | Random enemy amphibious | These lines determine the composition of the groups when the enemy's amphibious assault is bombarded. The player's group covers the first attacking group. The enemy groups defend their landing and intercept the player's groups. | FIGHTER, LIGHT, ALL | 2 | No | No |
| | | oUsBombAmph | oRedBombAmph | | | | | | | |
| | N | oJpBombArmor | oBlueBombArmor | Bomb enemy tanks | Random enemy tanks | These lines determine the composition of groups when bombing enemy tanks. The player's group covers the first attacking group. The enemy groups defend their tanks and intercept the player's group. | FIGHTER, LIGHT, ALL | 2 | No | No |
| | | oDeBombArmor | | | | | | | | |
| | | oUsBombArmor | oRedBombArmor | | | | | | | |
| | | oRuBombArmor | | | | | | | | |

| New feature | Type (N-normal S-special) | Old Mission code | <u>New Mission code *</u> (Recommended for DGen_MOD, see page 53) | Mission | Objective | Description | Type of player airplane | Player's flight position in the list | Selecting weapons to attack ground targets | Selecting weapons to attack air targets |
|-------------|---------------------------------|------------------|---|----------------------------------|---|--|-------------------------------|---|--|--|
| | N | oJpBombBattery | <u>oBlueBombBattery</u> | Bomb enemy artillery battery | Random enemy artillery battery | These lines determine the composition of groups when the enemy's artillery battery is bombarded. The player's group covers the first attacking group. The enemy groups protect their artillery batteries and intercept the player's groups. | FIGHTER, LIGHT, ALL | 2 | No | No |
| | | oUsBombBattery | <u>oRedBombBattery</u> | | | | | | | |
| | N | oJpBombBridge | <u>oBlueBombBridge</u> | Bomb enemy bridge | Random enemy bridge | These lines determine the composition of groups when the enemy bridge is bombed. The player's group covers the first attacking group. The enemy groups defend their bridge and intercept the player's groups. | FIGHTER, LIGHT, ALL | 2 | No | No |
| | | oDeBombBridge | | | | | | | | |
| | | oUsBombBridge | <u>oRedBombBridge</u> | | | | | | | |
| | | oRuBombBridge | | | | | | | | |
| | N | oJpBombCarrier | <u>oBlueBombCarrier</u> | Bomb enemy aircraft carrier | Random aircraft carrier | These lines determine the composition of groups when the enemy aircraft carrier is bombarded. The player's group covers the first attacking group. The enemy groups defend their aircraft carrier and intercept the player's groups. | FIGHTER, LIGHT, ALL | 2 | No | No |
| | | oUsBombCarrier | <u>oRedBombCarrier</u> | | | | | | | |
| | N | oJpBombCars | <u>oBlueBombCars</u> | Bomb enemy vehicle columns | Random enemy vehicle columns | These lines determine the composition of groups when bombing enemy vehicle columns. The player's group covers the first attacking group. The enemy groups defend their convoys and intercept groups of players. | FIGHTER, LIGHT, ALL | 2 | No | No |
| | | oUsBombCars | <u>oRedBombCars</u> | | | | | | | |
| | N | oDeBombCluster | <u>oBlueBombCluster</u> | Bomb enemy target area | Random enemy target area | The generator randomly selects the type of the target from the substitution list and forms the corresponding mission. | FIGHTER, LIGHT, ALL | 2 | No | No |
| | | oRuBombCluster | <u>oRedBombCluster</u> | | | | | | | |
| | N | oJpBombConvoy | <u>oBlueBombConvoy</u> | Bomb enemy sea convoys | Random enemy sea convoy | These lines determine the composition of groups when the enemy's sea convoy is bombarded. The player's group covers the first attacking group. The enemy groups defend their convoy and intercept the player's groups. | FIGHTER, LIGHT, ALL | 2 | No | No |
| | | oUsBombConvoy | <u>oRedBombConvoy</u> | | | | | | | |
| | N | oJpBombDepot | <u>oBlueBombDepot</u> | Bomb enemy warehouses | Random enemy warehouse | These lines determine the composition of groups when bombarding the enemy's warehouses. The player's group covers the first attacking group. The enemy groups protect their warehouses and intercept the player's groups. | FIGHTER, LIGHT, ALL | 2 | No | No |
| | | oUsBombDepot | <u>oRedBombDepot</u> | | | | | | | |
| | N | oJpBombHQ | <u>oBlueBombHQ</u> | Bomb enemy field headquarters | Random enemy field headquarters | These lines determine the composition of the groups when the enemy's field headquarters is bombarded. The player's group covers the first attacking group. The enemy groups defend their headquarters and intercept the player's groups. | FIGHTER, LIGHT, ALL | 2 | No | No |
| | | oUsBombHQ | <u>oRedBombHQ</u> | | | | | | | |

| New feature | Type (N-normal S-special) | Old Mission code | New Mission code * (Recommended for DGen_MOD, see page 53) | Mission | Objective | Description | Type of player airplane | Player's flight position in the list | Selecting weapons to attack ground targets | Selecting weapons to attack air targets |
|-------------|---------------------------------|------------------|--|---|--|---|-------------------------------|---|--|--|
| | N | oJpBombPort | oBlueBombPort | Bomb enemy seaport | Random enemy port | These lines determine the composition of the groups when the enemy sea port is bombed. The player's group covers the first attacking group. The enemy groups protect their port and intercept the player's groups. | FIGHTER, LIGHT, ALL | 2 | No | No |
| | | oUsBombPort | oRedBombPort | | | | | | | |
| | N | oJpBombShips | oBlueBombShips | Bomb enemy ships | Random enemy ship | These lines determine the composition of groups when bombing enemy ships. The player's group covers the first attacking group. The enemy groups defend their ship and intercept the player's groups. | FIGHTER, LIGHT, ALL | 2 | No | No |
| | | oDeBombShips | | | | | | | | |
| | | oUsBombShips | oRedBombShips | | | | | | | |
| | | oRuBombShips | | | | | | | | |
| | N | oDeBombSoft | oBlueBombSoft | Bomb enemy weakly armored targets | Random enemy weakly armored target | The generator randomly selects the type of a weakly armored target from the substitution list (substitution) and forms the appropriate mission. | FIGHTER, LIGHT, ALL | 2 | No | No |
| | | oRuBombSoft | oRedBombSoft | | | | | | | |
| | N | oJpBombStation | oBlueBombStation | Bomb enemy railway station | Random enemy railway station | These lines determine the composition of groups when bombing an enemy railway station. The player's group covers the first attacking group. The enemy groups defend their station and intercept the player's groups. | FIGHTER, LIGHT, ALL | 2 | No | No |
| | | oUsBombStation | oRedBombStation | | | | | | | |
| | N | oJpBombSub | oBlueBombSub | Bomb enemy submarine | Random sea point | These lines determine the composition of groups when the enemy's submarine is bombed. The player's group covers the first attacking group. The enemy groups defend their submarine and intercept the player's groups. | FIGHTER, LIGHT, ALL | 2 | No | No |
| | | oUsBombSub | oRedBombSub | | | | | | | |
| | N | oJpBombTown | oBlueBombTown | Bomb enemy city (key point) | Random enemy city | These lines determine the composition of groups when bombing enemy cities. The player's group covers the first attacking group. The enemy groups defend their cities and intercept the player's groups. | FIGHTER, LIGHT, ALL | 2 | No | No |
| | | oDeBombTown | | | | | | | | |
| | | oUsBombTown | oRedBombTown | | | | | | | |
| | | oRuBombTown | | | | | | | | |
| | N | oJpBombTrain | oBlueBombTrain | Bomb enemy trains | Random enemy train | These lines determine the composition of groups when bombing enemy trains. The player's group covers the first attacking group. The enemy groups protect their trains and intercept the player's groups. | FIGHTER, LIGHT, ALL | 2 | No | No |
| | | oUsBombTrain | oRedBombTrain | | | | | | | |
| | N | oJpBombTroops | oBlueBombTroops | Bomb enemy troops | Random accumulation of enemy troops | These lines determine the composition of the groups when bombing enemy troops. The player's group covers the first attacking group. The enemy groups carry out the defense of their troops and intercept the player's groups. | FIGHTER, LIGHT, ALL | 2 | No | No |
| | | oUsBombTroops | oRedBombTroops | | | | | | | |

| New feature | Type (N-normal S-special) | Old Mission code | <u>New Mission code *</u> (Recommended for DGen_MOD, see page 53) | Mission | Objective | Description | Type of player airplane | Player's flight position in the list | Selecting weapons to attack ground targets | Selecting weapons to attack air targets |
|-------------|---------------------------------|------------------|---|---|---|---|-------------------------------|---|--|--|
| | N | oJpDefendAF | <u>oBlueDefendAF</u> | Defense of the player's airfield | Random airfield of the player | These lines determine the composition of groups in the defense of the airfield of the player. The player's group intercepts the attacking enemy group. The enemy groups attack the airfield of the player. | FIGHTER, LIGHT, ALL | 1 | No | Yes |
| | | oDeDefendAF | | | | | | | | |
| | | oUsDefendAF | | | | | | | | |
| | | oRuDefendAF | | | | | | | | |
| | N | oJpDefendAmph | <u>oBlueDefendAmph</u> | Defense of the player's amphibious | Random amphibians of the player | These lines determine the composition of groups in the defense of the amphibious assault of the player. The player's group intercepts the attacking enemy group. The enemy groups attack the player's landing. | FIGHTER, LIGHT, ALL | 1 | No | Yes |
| | | oUsDefendAmph | <u>oRedDefendAmph</u> | | | | | | | |
| | N | oJpDefendArmor | <u>oBlueDefendArmor</u> | Defense of the player's tanks | Random tanks of the player | These lines determine the composition of groups in the defense of the player's tanks. The player's group intercepts the attacking enemy group. The enemy's teams attack the player's tanks. | FIGHTER, LIGHT, ALL | 1 | No | Yes |
| | | oDeDefendArmor | | | | | | | | |
| | | oUsDefendArmor | | | | | | | | |
| | | oRuDefendArmor | | | | | | | | |
| | N | oJpDefendBattery | <u>oBlueDefendBattery</u> | Defense of the player's artillery battery | Random artillery battery of the player | These lines determine the composition of groups in the defense of the artillery battery of the player. The player's group intercepts the attacking enemy group. The enemy groups attack the player's battery. | FIGHTER, LIGHT, ALL | 1 | No | Yes |
| | | oUsDefendBattery | <u>oRedDefendBattery</u> | | | | | | | |
| | N | oJpDefendBridge | <u>oBlueDefendBridge</u> | Defense of the player's bridge | Random bridge of the player | These lines determine the composition of the groups in the defense of the player's bridge. The player's group intercepts the attacking enemy group. The enemy groups attack the player's bridge. | FIGHTER, LIGHT, ALL | 1 | No | Yes |
| | | oDeDefendBridge | | | | | | | | |
| | | oUsDefendBridge | | | | | | | | |
| | | oRuDefendBridge | | | | | | | | |
| | N | oJpDefendCarrier | <u>oBlueDefendCarrier</u> | Defense of the player's aircraft carrier | Random aircraft carrier of the player | These lines determine the composition of groups in the defense of the aircraft carrier of the player. The player's group intercepts the attacking enemy group. The enemy groups attack the aircraft carrier of the player. | FIGHTER, LIGHT, ALL | 1 | No | Yes |
| | | oUsDefendCarrier | <u>oRedDefendCarrier</u> | | | | | | | |
| | N | oJpDefendCars | <u>oBlueDefendCars</u> | Defense of the player's vehicle columns | Random vehicle columns of the player | These lines determine the composition of groups in the defense of the player's vehicle columns. The player's group intercepts the attacking enemy group. Groups of the enemy attack the convoy of the player. | FIGHTER, LIGHT, ALL | 1 | No | Yes |
| | | oUsDefendCars | <u>oRedDefendCars</u> | | | | | | | |
| | N | oDeDefendCluster | <u>oBlueDefendCluster</u> | Defense of the player's target area | Random target area of the player | The generator randomly selects the type of the target from the substitution list and forms the corresponding mission. | FIGHTER, LIGHT, ALL | 1 | No | Yes |
| | | oRuDefendCluster | <u>oRedDefendCluster</u> | | | | | | | |

| New feature | Type (N-normal S-special) | Old Mission code | New Mission code * (Recommended for DGen_MOD, see page 53) | Mission | Objective | Description | Type of player airplane | Player's flight position in the list | Selecting weapons to attack ground targets | Selecting weapons to attack air targets |
|-------------|---------------------------------|------------------|--|--|--|--|-------------------------------|---|--|--|
| | N | oJpDefendConvoy | oBlueDefendConvoy | Defense of the player's sea convoys | Random sea convoy of the player | These lines determine the composition of groups in the defense of the player's sea convoy. The player's group intercepts the attacking enemy group. The enemy groups attack the naval convoy of the player. | FIGHTER, LIGHT, ALL | 1 | No | Yes |
| | | oUsDefendConvoy | oRedDefendConvoy | | | | | | | |
| | N | oJpDefendDepot | oBlueDefendDepot | Defense of the player's warehouses | Random warehouse of the player | These lines determine the composition of the groups in the defense of the player's warehouses. The player's group intercepts the attacking enemy group. The enemy groups attack the player's warehouse. | FIGHTER, LIGHT, ALL | 1 | No | Yes |
| | | oUsDefendDepot | oRedDefendDepot | | | | | | | |
| | N | oJpDefendHQ | oBlueDefendHQ | Defense of the player's field headquarters | Random field headquarter of the player | These lines determine the composition of groups in the defense of the player's field headquarters. The player's group intercepts the attacking enemy group. The enemy groups attack the player's headquarters. | FIGHTER, LIGHT, ALL | 1 | No | Yes |
| | | oUsDefendHQ | oRedDefendHQ | | | | | | | |
| | N | oJpDefendPort | oBlueDefendPort | Defense of the player's seaport | Random seaport of the player | These lines determine the composition of groups in the defense of the seaport of the player. The player's group intercepts the attacking enemy group. The enemy groups attack the seaport of the player. | FIGHTER, LIGHT, ALL | 1 | No | Yes |
| | | oUsDefendPort | oRedDefendPort | | | | | | | |
| | N | oJpDefendShips | oBlueDefendShips | Defense of the player's ships | Random ship of the player | These lines determine the composition of groups in the defense of the player's ships. The player's group intercepts the attacking enemy group. The enemy groups attack the player's ships. | FIGHTER, LIGHT, ALL | 1 | No | Yes |
| | | oDeDefendShips | | | | | | | | |
| | | oUsDefendShips | oRedDefendShips | | | | | | | |
| | | oRuDefendShips | | | | | | | | |
| | N | oDeDefendSoft | oBlueDefendSoft | Defense of the player's weakly armored targets | Random weakly armored target of the player | The generator randomly selects the type of a weakly armored target from the substitution list and forms the appropriate mission. | FIGHTER, LIGHT, ALL | 1 | No | Yes |
| | | oRuDefendSoft | oRedDefendSoft | | | | | | | |
| | N | oJpDefendStation | oBlueDefendStation | Defense of the player's railway station | Random railway station of the player | These lines determine the composition of groups in the defense of the player's train station. The player's group intercepts the attacking enemy group. The enemy groups attack the player's station. | FIGHTER, LIGHT, ALL | 1 | No | Yes |
| | | oUsDefendStation | oRedDefendStation | | | | | | | |
| | N | oJpDefendSub | oBlueDefendSub | Defense of the player's submarine | Random sea point of the player | These lines determine the composition of groups in the defense of the player's submarine. The player's group intercepts the attacking enemy group. The enemy groups attack the player's submarine. | FIGHTER, LIGHT, ALL | 1 | No | Yes |
| | | oUsDefendSub | oRedDefendSub | | | | | | | |

| New feature | Type (N-normal S-special) | Old Mission code | <u>New Mission code *</u> (Recommended for DGen_MOD, see page 53) | Mission | Objective | Description | Type of player airplane | Player's flight position in the list | Selecting weapons to attack ground targets | Selecting weapons to attack air targets |
|-------------|---------------------------------|------------------|---|---|---|--|-------------------------------|---|--|--|
| | N | | <u>oBlueDefendTown</u> | Defense of the player's city (key point) | Random city of the player | These lines determine the composition of the groups in the defense of the player's cities. The player's group intercepts the attacking enemy group. The enemy groups attack the city on the territory of the player. | FIGHTER, LIGHT, ALL | 1 | No | Yes |
| | | | <u>oRedDefendTown</u> | | | | | | | |
| | N | oJpDefendTrain | <u>oBlueDefendTrain</u> | Defense of the player's trains | Random train of the player | These lines determine the composition of groups in the defense of the player's trains. The player's group intercepts the attacking enemy group. The enemy's teams attack the player's train. | FIGHTER, LIGHT, ALL | 1 | No | Yes |
| | | oUsDefendTrain | <u>oRedDefendTrain</u> | | | | | | | |
| | N | oJpDefendTroops | <u>oBlueDefendTroops</u> | Defense of the player's troops | Random accumulation of player's troops | These lines determine the composition of groups in the defense of the accumulation of player's forces. The player's group intercepts the attacking enemy group. Groups of the enemy attack the accumulation of player's forces. | FIGHTER, LIGHT, ALL | 1 | No | Yes |
| | | oUsDefendTroops | <u>oRedDefendTroops</u> | | | | | | | |
| | N | oJpPatrolAF | <u>oBluePatrolAF</u> | Patrolling the player's airfield | Random airfield of the player | These lines determine the composition of groups when patrolling the player's airfield. The player's group intercepts enemy aircraft. The enemy groups are sent to the player's airfield area. | FIGHTER, LIGHT, ALL | 1 | No | Yes |
| | | oDePatrolAF | | | | | | | | |
| | | oUsPatrolAF | <u>oRedPatrolAF</u> | | | | | | | |
| | | oRuPatrolAF | | | | | | | | |
| | N | oJpPatrolAmph | <u>oBluePatrolAmph</u> | Patrolling the player's amphibians | Random amphibians of the player | These lines determine the composition of groups when patrolling the amphibious assault. The player's group intercepts enemy aircraft. The enemy groups are sent to the area of the player's landing. | FIGHTER, LIGHT, ALL | 1 | No | Yes |
| | | oUsPatrolAmph | <u>oRedPatrolAmph</u> | | | | | | | |
| | N | oJpPatrolArmor | <u>oBluePatrolArmor</u> | Patrolling the player's tanks | Random tanks of the player | These lines determine the composition of groups when patrolling the player's tanks. The player's group intercepts enemy aircraft. The enemy groups are sent to the area of the player's tanks. | FIGHTER, LIGHT, ALL | 1 | No | Yes |
| | | oDePatrolArmor | | | | | | | | |
| | | oUsPatrolArmor | <u>oRedPatrolArmor</u> | | | | | | | |
| | | oRuPatrolArmor | | | | | | | | |
| | N | oJpPatrolBattery | <u>oBluePatrolBattery</u> | Patrolling the player's artillery battery | Random artillery battery of the player | These lines determine the composition of groups when patrolling the player's artillery battery. The player's group intercepts enemy aircraft. The enemy groups are sent to the area of the player's battery. | FIGHTER, LIGHT, ALL | 1 | No | Yes |
| | | oUsPatrolBattery | <u>oRedPatrolBattery</u> | | | | | | | |
| | N | oJpPatrolBridge | <u>oBluePatrolBridge</u> | Patrolling the player's bridge | Random bridge of the player | These lines determine the composition of groups when patrolling the player's bridge. The player's group intercepts enemy aircraft. The enemy groups are sent to the area of the player's battery. | FIGHTER, LIGHT, ALL | 1 | No | Yes |
| | | oDePatrolBridge | | | | | | | | |
| | | oUsPatrolBridge | <u>oRedPatrolBridge</u> | | | | | | | |
| | | oRuPatrolBridge | | | | | | | | |

| New feature | Type (N-normal S-special) | Old Mission code | <u>New Mission code *</u> (Recommended for DGen_MOD, see page 53) | Mission | Objective | Description | Type of player airplane | Player's flight position in the list | Selecting weapons to attack ground targets | Selecting weapons to attack air targets |
|-------------|---------------------------------|------------------|---|--|--|---|-------------------------------|---|--|--|
| | N | oJpPatrolCarrier | <u>oBluePatrolCarrier</u> | Patrolling the player's aircraft carrier | Random aircraft carrier of the player | These lines determine the composition of groups when patrolling the aircraft carrier of the player. The player's group intercepts enemy aircraft. The enemy groups are sent to the area of the aircraft carrier's location. | FIGHTER, LIGHT, ALL | 1 | No | Yes |
| | | oUsPatrolCarrier | <u>oRedPatrolCarrier</u> | | | | | | | |
| | N | oJpPatrolCars | <u>oBluePatrolCars</u> | Patrolling the player's vehicle columns | Random vehicle columns of the player | These lines determine the composition of groups when patrolling the player's vehicle columns. The player's group intercepts enemy aircraft. The enemy groups are sent to the area of movement of the player's motorcade. | FIGHTER, LIGHT, ALL | 1 | No | Yes |
| | | oUsPatrolCars | <u>oRedPatrolCars</u> | | | | | | | |
| | N | oDePatrolCluster | <u>oBluePatrolCluster</u> | Patrol the player's target area | Random target area of the player | The generator randomly selects the type of the target from the substitution list and forms the corresponding mission. | FIGHTER, LIGHT, ALL | 1 | No | Yes |
| | | oRuPatrolCluster | <u>oRedPatrolCluster</u> | | | | | | | |
| | N | oJpPatrolConvoy | <u>oBluePatrolConvoy</u> | Patrolling the player's sea convoys | Random sea convoy of the player | These lines determine the composition of groups when patrolling a player's sea convoy. The player's group intercepts enemy aircraft. The enemy groups are sent to the player's convoy moving area. | FIGHTER, LIGHT, ALL | 1 | No | Yes |
| | | oUsPatrolConvoy | <u>oRedPatrolConvoy</u> | | | | | | | |
| | N | oJpPatrolDepot | <u>oBluePatrolDepot</u> | Patrolling the player's warehouses | Random warehouse of the player | These lines determine the composition of groups when patrolling the player's warehouses. The player's group intercepts enemy aircraft. The enemy groups are sent to the player's player area. | FIGHTER, LIGHT, ALL | 1 | No | Yes |
| | | oUsPatrolDepot | <u>oRedPatrolDepot</u> | | | | | | | |
| | N | oJpPatrolHQ | <u>oBluePatrolHQ</u> | Patrolling the player's field headquarters | Random field headquarters of the player | These lines determine the composition of groups when patrolling the player's field headquarters. The player's group intercepts enemy aircraft. The enemy groups are sent to the player's headquarters area. | FIGHTER, LIGHT, ALL | 1 | No | Yes |
| | | oUsPatrolHQ | <u>oRedPatrolHQ</u> | | | | | | | |
| | N | oJpPatrolPort | <u>oBluePatrolPort</u> | Patrolling the player's seaport | Random seaport of the player | These lines determine the composition of groups when patrolling the seaport of the player. The player's group intercepts enemy aircraft. The enemy groups are sent to the port area of the player. | FIGHTER, LIGHT, ALL | 1 | No | Yes |
| | | oUsPatrolPort | <u>oRedPatrolPort</u> | | | | | | | |
| | N | oJpPatrolShips | <u>oBluePatrolShips</u> | Patrolling the player's ships | Random ship of the player | These lines determine the composition of groups when patrolling the player's ships. The player's group intercepts enemy aircraft. The enemy groups are sent to the area where the player ships. | FIGHTER, LIGHT, ALL | 1 | No | Yes |
| | | oDePatrolShips | | | | | | | | |
| | | oUsPatrolShips | <u>oRedPatrolShips</u> | | | | | | | |
| | | oRuPatrolShips | | | | | | | | |

| New feature | Type (N-normal S-special) | Old Mission code | New Mission code * (Recommended for DGen_MOD, see page 53) | Mission | Objective | Description | Type of player airplane | Player's flight position in the list | Selecting weapons to attack ground targets | Selecting weapons to attack air targets |
|-------------|---------------------------------|------------------|--|---|--|---|-------------------------------|---|--|--|
| | N | oDePatrolSoft | <u>oBluePatrolSoft</u> | Patrolling the player's weakly armored targets | Random weakly armored target of the player | The generator randomly selects the type of a weakly armored target from the substitution list and forms the appropriate mission. | FIGHTER, LIGHT, ALL | 1 | No | Yes |
| | | oRuPatrolSoft | <u>oRedPatrolSoft</u> | | | | | | | |
| | N | oJpPatrolStation | <u>oBluePatrolStation</u> | Patrolling the player's railway station | Random railway station of the player | These lines determine the composition of groups when patrolling the player's railway station. The player's group intercepts enemy aircraft. The enemy groups are sent to the player station area. | FIGHTER, LIGHT, ALL | 1 | No | Yes |
| | | oUsPatrolStation | <u>oRedPatrolStation</u> | | | | | | | |
| | N | oJpPatrolSub | <u>oBluePatrolSub</u> | Patrolling the player's submarine | Random sea point | These lines determine the composition of groups when patrolling the player's submarine. The player's group intercepts enemy aircraft. The enemy groups are sent to the area where the player's submarine is located. | FIGHTER, LIGHT, ALL | 1 | No | Yes |
| | | oUsPatrolSub | <u>oRedPatrolSub</u> | | | | | | | |
| | N | oJpPatrol | <u>oBluePatrol</u> | Patrolling a local area in the player's territory | Random city of the player | These lines determine the composition of the groups when they conquer air superiority on their territory. The player's group intercepts enemy aircraft. The enemy groups are sent to the player's key point area. | FIGHTER, LIGHT, ALL | 1 | No | Yes |
| | | oDePatrol | | | | | | | | |
| | | oUsPatrol | <u>oRedPatrol</u> | | | | | | | |
| | | oRuPatrol | | | | | | | | |
| | N | oJpFreeHunt | <u>oBlueFreeHunt</u> | Patrolling an enemy area | Random enemy city | These lines determine the composition of groups when they gain superiority in the air on the territory of the enemy. The player's group intercepts enemy aircraft. The enemy groups are sent to the area of their key point. | FIGHTER, LIGHT, ALL | 1 | No | Yes |
| | | oDeFreeHunt | | | | | | | | |
| | | oUsFreeHunt | <u>oRedFreeHunt</u> | | | | | | | |
| | | oRuFreeHunt | | | | | | | | |
| | N | oJpPatrolTown | <u>oBluePatrolTown</u> | Patrolling the player's city (key point) | Random city of the player | These lines determine the composition of groups when patrolling a player's city. The player's group intercepts enemy aircraft. The enemy groups are sent to the player's city area. | FIGHTER, LIGHT, ALL | 1 | No | Yes |
| | | oDePatrolTown | | | | | | | | |
| | | oUsPatrolTown | <u>oRedPatrolTown</u> | | | | | | | |
| | | oRuPatrolTown | | | | | | | | |
| | N | oJpPatrolTrain | <u>oBluePatrolTrain</u> | Patrolling the player's trains | Random train of the player | These lines determine the composition of groups when patrolling the player's trains. The player's group intercepts enemy aircraft. The enemy groups are sent to the area of movement of the player's trains. | FIGHTER, LIGHT, ALL | 1 | No | Yes |
| | | oUsPatrolTrain | <u>oRedPatrolTrain</u> | | | | | | | |
| | N | oJpPatrolTroops | <u>oBluePatrolTroops</u> | Patrolling the player's troops | Random accumulation of player's troops | These lines determine the composition of groups when patrolling the accumulation of player forces. The player's group intercepts enemy aircraft. The enemy groups are sent to the player's deployment area. | FIGHTER, LIGHT, ALL | 1 | No | Yes |
| | | oUsPatrolTroops | <u>oRedPatrolTroops</u> | | | | | | | |

| New feature | Type (N-normal S-special) | Old Mission code | New Mission code * (Recommended for DGen_MOD, see page 53) | Mission | Objective | Description | Type of player airplane | Player's flight position in the list | Selecting weapons to attack ground targets | Selecting weapons to attack air targets |
|-------------|---------------------------------|------------------|--|---|--------------------------------|---|--|---|--|--|
| | N | oJpReconAF | <u>oBlueReconAF</u> | Reconnaissance of enemy airfield | Random enemy airfield | These lines determine the composition of groups when reconnaissance of an enemy airfield by the player. If the second group on the list are fighters, it performs cover for the player's group. The enemy groups defend their airfield and intercept the player's groups. | GROUND, BOMBER, JABO, LIGHT, ALL, TORPEDO, RECON, PATROL | 1 | No | No |
| | | oDeReconAF | | | | | | | | |
| | | oUsReconAF | <u>oRedReconAF</u> | | | | | | | |
| | | oRuReconAF | | | | | | | | |
| | N | | <u>oBlueReconAmph</u> | Reconnaissance of enemy sea assault | Random enemy amphibious | These lines determine the composition of groups in the reconnaissance of the enemy's amphibious assault by the player. If the second group on the list are fighters, it performs cover for the player's group. The enemy groups defend their landing and intercept the player's groups. | GROUND, BOMBER, JABO, LIGHT, ALL, TORPEDO, RECON, PATROL | 1 | No | No |
| | | | <u>oRedReconAmph</u> | | | | | | | |
| | N | | <u>oBlueReconArmor</u> | Reconnaissance of enemy tanks | Random enemy tanks | These lines determine the composition of groups in the reconnaissance of enemy tanks by the player. If the second group on the list are fighters, it performs cover for the player's group. The enemy groups defend their tanks and intercept the player's groups. | GROUND, BOMBER, JABO, LIGHT, ALL, TORPEDO, ANTITANK, RECON, PATROL | 1 | No | No |
| | | | <u>oRedReconArmor</u> | | | | | | | |
| | N | oJpReconArty | <u>oBlueReconBattery</u> | Reconnaissance of enemy artillery battery | Random enemy artillery battery | These lines determine the composition of the groups when the enemy's artillery battery is being explored by the player. If the second group on the list are fighters, it performs cover for the player's group. The enemy groups protect their artillery batteries and intercept the player's groups. | GROUND, BOMBER, JABO, LIGHT, ALL, TORPEDO, RECON, PATROL | 1 | No | No |
| | | oUsReconArty | <u>oRedReconBattery</u> | | | | | | | |
| | N | | <u>oBlueReconBridge</u> | Reconnaissance of enemy bridges | Random enemy bridge | These lines determine the composition of groups when the player scouts an enemy bridge. If the second group on the list are fighters, it performs cover for the player's group. The enemy groups defend their bridge and intercept the player's groups. | GROUND, BOMBER, JABO, LIGHT, ALL, TORPEDO, RECON, PATROL | 1 | No | No |
| | | | <u>oRedReconBridge</u> | | | | | | | |
| | N | oJpReconCarrier | <u>oBlueReconCarrier</u> | Reconnaissance of enemy aircraft carrier | Random aircraft carrier | These lines determine the composition of groups in the reconnaissance of the enemy aircraft carrier by the player. If the second group on the list are fighters, it performs cover for the player's group. The enemy groups defend their aircraft carrier and intercept the player's groups. | GROUND, BOMBER, JABO, LIGHT, ALL, TORPEDO, RECON, PATROL | 1 | No | No |
| | | oUsReconCarrier | <u>oRedReconCarrier</u> | | | | | | | |
| | N | | <u>oBlueReconCars</u> | Reconnaissance of enemy vehicle columns | Random enemy vehicle columns | These lines determine the composition of groups when the player is exploring the enemy's vehicle columns. If the second group on the list are fighters, it performs cover for the player's group. The enemy groups defend their convoys and intercept groups of players. | GROUND, BOMBER, JABO, LIGHT, ALL, TORPEDO, RECON, PATROL | 1 | No | No |
| | | | <u>oRedReconCars</u> | | | | | | | |

| New feature | Type (N-normal S-special) | Old Mission code | New Mission code * (Recommended for DGen_MOD, see page 53) | Mission | Objective | Description | Type of player airplane | Player's flight position in the list | Selecting weapons to attack ground targets | Selecting weapons to attack air targets |
|-------------|---------------------------------|------------------|--|--|---------------------------------------|---|--|---|--|--|
| | N | oJpReconConvoy | oBlueReconConvoy | Reconnaissance of enemy sea convoys | Random enemy sea convoy | These lines determine the composition of the groups when the player is exploring the enemy's sea convoy. If the second group on the list are fighters, it performs cover for the player's group. The enemy groups defend their convoy and intercept the player's groups. | GROUND, BOMBER, JABO, LIGHT, ALL, TORPEDO, RECON, PATROL | 1 | No | No |
| | | oUsReconConvoy | oRedReconConvoy | | | | | | | |
| | N | oJpReconDepot | oBlueReconDepot | Reconnaissance of enemy warehouses | Random enemy warehouse | These lines determine the composition of groups when the player scouts the enemy's warehouses. If the second group on the list are fighters, it performs cover for the player's group. The enemy groups protect their warehouses and intercept the player's groups. | GROUND, BOMBER, JABO, LIGHT, ALL, TORPEDO, RECON, PATROL | 1 | No | No |
| | | oUsReconDepot | oRedReconDepot | | | | | | | |
| | N | oJpReconHQ | oBlueReconHQ | Reconnaissance of the enemy's field headquarters | Random enemy field headquarters | These lines determine the composition of the groups when the player scouts the enemy's field headquarters. If the second group on the list are fighters, it performs cover for the player's group. The enemy groups defend their headquarters and intercept the player's groups. | GROUND, BOMBER, JABO, LIGHT, ALL, TORPEDO, RECON, PATROL | 1 | No | No |
| | | oUsReconHQ | oRedReconHQ | | | | | | | |
| | N | | oBlueReconPort | Reconnaissance of the seaport of the enemy | Random enemy port | These lines determine the composition of the groups when the player is exploring the seaport of the enemy. If the second group on the list are fighters, it performs cover for the player's group. The enemy groups protect their port and intercept the player's groups. | GROUND, BOMBER, JABO, LIGHT, ALL, TORPEDO, RECON, PATROL | 1 | No | No |
| | | | oRedReconPort | | | | | | | |
| | N | | oBlueReconShips | Reconnaissance of enemy ships | Random enemy ship | These lines determine the composition of groups in the reconnaissance of enemy ships by the player. If the second group on the list are fighters, it performs cover for the player's group. The enemy groups defend their ship and intercept the player's groups. | GROUND, BOMBER, JABO, LIGHT, ALL, TORPEDO, RECON, PATROL | 1 | No | No |
| | | | oRedReconShips | | | | | | | |
| | N | | oBlueReconStation | Intelligence of enemy railway station | Random enemy railway station | These lines determine the composition of groups in the reconnaissance of the opponent's railway station by the player. If the second group on the list are fighters, it performs cover for the player's group. The enemy groups defend their station and intercept the player's groups. | GROUND, BOMBER, JABO, LIGHT, ALL, TORPEDO, RECON, PATROL | 1 | No | No |
| | | | oRedReconStation | | | | | | | |
| | N | oJpReconSub | oBlueReconSub | Reconnaissance of enemy submarine | Random sea point | These lines determine the composition of the groups when a player scouts an enemy submarine. If the second group on the list are fighters, it performs cover for the player's group. The enemy groups defend their submarine and intercept the player's groups. | GROUND, BOMBER, JABO, LIGHT, ALL, TORPEDO, RECON, PATROL | 1 | No | No |
| | | oUsReconSub | oRedReconSub | | | | | | | |
| | N | oDeRecon | oBlueReconTown | Reconnaissance of enemy cities (key points) | Random enemy city | These lines determine the composition of groups when a player is exploring enemy cities. If the second group on the list are fighters, it performs cover for the player's group. The enemy groups defend their cities and intercept the player's groups. | GROUND, BOMBER, JABO, LIGHT, ALL, TORPEDO, RECON, PATROL | 1 | No | No |
| | | oRuRecon | oRedReconTown | | | | | | | |






[illegible]

| New feature | Type (N-normal S-special) | Old Mission code | <u>New Mission code *</u> (Recommended for DGen_MOD, see page 53) | Mission | Objective | Description | Type of player airplane | Player's flight position in the list | Selecting weapons to attack ground targets | Selecting weapons to attack air targets |
|-------------|---------------------------------|-------------------------|---|--|---|--|---|---|--|--|
| | N | | <u>oBlueTranEscort</u> | Escort of transport aircraft | Random airfield in the player's territory | These lines determine the composition of groups when escorting transport aircraft that supply friendly troops. The player's group carries out a cover for the aircraft. The enemy groups intercept the player's groups. The code for transport aircraft is T. | FIGHTER, LIGHT, ALL | 2 | No | No |
| | | | <u>oRedTranEscort</u> | | | | | | | |
| | N | | <u>oBlueTranEscortC</u> | Escort of transport aircraft | Point in the player's territory, is designated campfire on RED or BLUE template | These lines determine the composition of groups when escorting transport aircraft that supply friendly troops. The player's group carries out a escort for the aircraft, which, when the "point" is reached, throws out the cargo. The enemy groups intercept the player's groups. The code for transport aircraft is T. | FIGHTER, LIGHT, ALL | 2 | No | No |
| | | | <u>oRedTranEscortC</u> | | | | | | | |
| | N | <u>oJpTranIntercept</u> | <u>oBlueTranIntercept</u> | Interception of transport aircraft | Random airfield on enemy territory | These lines determine the composition of groups when intercepting enemy transport aircraft. The player's group intercepts the enemy territory. The enemy groups are sent to the area of one of their airfields. | FIGHTER, LIGHT, ALL | 1 | No | Yes |
| | | <u>oDeTranIntercept</u> | | | | | | | | |
| | | <u>oUsTranIntercept</u> | <u>oRedTranIntercept</u> | | | | | | | |
| | | <u>oRuTranIntercept</u> | | | | | | | | |
| | N | <u>oJpReinforce</u> | <u>oBlueReinforce</u> | Assistance to friendly aircraft | Point with random coordinates | These lines determine the composition of groups in missions to intercept enemy aircraft, similar to Patrol and FreeHunt, but with another briefing. The enemy groups are sent to the area with random coordinates. | FIGHTER, LIGHT, ALL | 1 | No | Yes |
| | | <u>oUsReinforce</u> | <u>oRedReinforce</u> | | | | | | | |
| | N | <u>oJpRescue</u> | <u>oBlueRescue</u> | Search for the missing pilot | Random sea or land point | These lines determine the composition of groups in the missions to search for the missing pilot, the object is the target. The enemy groups are sent to the search area and intercept the player's groups. | GROUND, BOMBER, JABO, LIGHT, ALL, TORPEDO | 1 | No | No |
| | | <u>oDeRescue</u> | | | | | | | | |
| | | <u>oUsRescue</u> | <u>oRedRescue</u> | | | | | | | |
| | | <u>oRuRescue</u> | | | | | | | | |
| | S | <u>oJpScramble</u> | <u>oBlueScramble</u> | Defend the player's airfield (scramble) from an enemy raid | Player's airfield | Groups of enemy aircraft carry out a raid on the airfield of the player. The player starts a mission when all enemy groups are at a distance of less than 40 km. These missions are formed randomly. The ops file should not have date restrictions for these missions. | FIGHTER, LIGHT, ALL, JABO | 1 | No | Yes |
| | | <u>oDeScramble</u> | | | | | | | | |
| | | <u>oJpIntercept</u> | <u>oRedScramble</u> | | | | | | | |
| | | <u>oUsScramble</u> | | | | | | | | |
| | | <u>oRuScramble</u> | | | | | | | | |
| | | <u>oUsIntercept</u> | | | | | | | | |
| | N | | <u>oBlueScrambleO</u> | Defend the player's airfield (scramble) from an enemy raid | Player's airfield | Groups of enemy aircraft carry out a raid on the airfield of the player. The player starts a mission when all enemy groups are at a distance of less than 40 km. These missions are formed according to the data from the ops file with the date taken into account. | FIGHTER, LIGHT, ALL, JABO | 1 | No | Yes |
| | | | <u>oRedScrambleO</u> | | | | | | | |

| New feature | Type (N-normal S-special) | Old Mission code | <u>New Mission code *</u> (Recommended for DGen_MOD, see page 53) | Mission | Objective | Description | Type of player airplane | Player's flight position in the list | Selecting weapons to attack ground targets | Selecting weapons to attack air targets |
|-------------|---------------------------------|------------------------|---|---|---|---|---|---|--|--|
| | N | oJpVerify | <u>oBlueVerify</u> | Search for a downed enemy aircraft | Point in the player's territory, is designated campfire on RED or BLUE template | These lines determine the composition of groups in missions to search for a downed enemy aircraft, the object is the target. The enemy groups are sent to the search area and intercept the player's groups. | GROUND, BOMBER, JABO, LIGHT, ALL, TORPEDO | 1 | No | No |
| | | oDeVerify | | | | | | | | |
| | | oUsVerify | <u>oRedVerify</u> | | | | | | | |
| | | oRuVerify | | | | | | | | |
| | N | oUsKamikazeIntercept | <u>oRedKamikazeIntercept</u> | Interception of kamikaze planes | Player's aircraft carrier | Groups of enemy kamikaze planes carry out a raid on the player's aircraft carrier. The player starts a mission where all enemy groups are less than 40 km away. | FIGHTER, LIGHT, ALL, JABO | 1 | No | Yes |
| | S | oDeAttackCon | <u>oDeAttackCon</u> | Attack on an airfield under construction | Airfield under construction | Special missions for the "Second Front" campaign. The "blue" attack and the "reds" defend the airfields under construction in Normandy. The coordinates of the airfields are spelled out in the generator code. | GROUND, BOMBER, JABO, LIGHT, ALL | 1 | Yes | No |
| | | oUsPatrolCon | <u>oUsPatrolCon</u> | | | | FIGHTER, LIGHT, ALL | 1 | No | Yes |
| | S | oDeKomet | <u>oDeKomet</u> | Rocket interceptor | Player's airfield | Special missions for the "Second Front" campaign. Operate only on the map Berlin for an airplane with the type ROCKET. | ROCKET | 1 | No | No |
| | S | oJpAttackPearlHarbor | <u>oJpAttackPearlHarbor</u> | Attack on Pearl Harbor | Port of Pearl Harbor | Special missions for the stock campaign in the Pacific. Operate only on the map of Hawaii. They differ in the choice of goals and the formation of airplane routes. | GROUND, JABO, LIGHT, ALL | 1 | Yes | No |
| | | oJpBombPearlHarbor | <u>oJpBombPearlHarbor</u> | | | | FIGHTER, LIGHT, ALL | 1 | No | No |
| | | oUsScramblePearlHarbor | <u>oUsScramblePearlHarbor</u> | | | | FIGHTER, LIGHT, ALL, JABO | 1 | No | Yes |
| | N | oJpKamikazeEscort | <u>oJpKamikazeEscort</u> | Escort kamikaze aircraft | Enemy aircraft carrier | Groups of kamikaze planes carry out a raid on the enemy aircraft carrier. The player's group carries out a escort for the aircraft. The enemy groups intercept the player's groups. | FIGHTER, LIGHT, ALL | 2 | No | No |
| | S | oRulceRoad | <u>oRulceRoad</u> | Operations in the Ladoga area (Leningrad map winter) | Goals in the Ladoga area | Special missions using the LadogaWinter.mis template. These missions are randomly generated on the Leningrad map provided that the date is less than 01/01/1944 and the range from the airfield of the player to the target of the template is less than 150 km. The ops file should not have date restrictions for these missions. The "blue" attack ground targets, the "reds" defend. | FIGHTER, LIGHT, ALL | 1 | No | Yes |
| | | oDelceRoad | <u>oDelceRoad</u> | | | | GROUND, JABO, LIGHT, ALL | 1 | Yes | No |
| | S | oRuLadoga | <u>oRuLadoga</u> | Operations in the Ladoga area (Leningrad map summer) | Goals in the Ladoga area | Special missions using the template LadogaSummer.mis. These missions are randomly generated on the Leningrad map provided that the date is less than 01/01/1944 and the range from the airfield of the player to the target of the template is less than 150 km. The ops file should not have date restrictions for these missions. The "blue" attack ground targets, the "reds" defend. | FIGHTER, LIGHT, ALL | 1 | No | Yes |
| | | oDeLadoga | <u>oDeLadoga</u> | | | | GROUND, JABO, LIGHT, ALL | 1 | Yes | No |

| New feature | Type (N-normal S-special) | Old Mission code | New Mission code * (Recommended for DGen_MOD, see page 53) | Mission | Objective | Description | Type of player airplane | Player's flight position in the list | Selecting weapons to attack ground targets | Selecting weapons to attack air targets |
|-------------|---------------------------------|------------------|--|---|------------------------------------|---|-------------------------------|---|--|--|
| | S | oUsDDay | <u>oUsDDay</u> | Coverage of the landing in Normandy | Goals around the coast | Special missions for the "Second Front" campaign using DDay * .mis templates. These missions are formed on the Normandy map for the USA nation only in one day 06/06/1944. | - | 1 | Yes | No |
| | S | oUsDDayPara | <u>oUsDDayPara</u> | Coverage of the landing in Normandy | Goals around the coast | Special missions for the "Second Front" campaign. These missions are formed on the Normandy map for the USA nation only in one day 05/06/1944. | - | 2 | No | No |
| | N | | <u>oRedCircusBombDepot</u> | Operation "Circus" ** (Refer to page 54 for historical notes.) | Enemy warehouse | These lines determine the composition of the groups for the operation "Circus" when attacking the enemy's warehouses. The player's group covers the first attacking group or attacks the warehouse. The enemy groups are protecting their facilities. | FIGHTER, LIGHT, ALL | 2 | No | No |
| | | | <u>oRedCircusAttackDepot</u> | | | | BOMBER | 1 | Yes | No |
| | N | | <u>oRedCircusBombHQ</u> | Operation "Circus" | Enemy field headquarters | These lines determine the composition of groups for Operation Circus when attacking the enemy's field headquarters. The player's group covers the first attacking group or attacks the headquarters. The enemy groups are protecting their facilities. | FIGHTER, LIGHT, ALL | 2 | No | No |
| | | | <u>oRedCircusAttackHQ</u> | | | | BOMBER | 1 | Yes | No |
| | N | | <u>oRedCircusBombPort</u> | Operation "Circus" | Enemy port | These lines determine the composition of groups for the operation "Circus" when attacking the enemy port. The player's group covers the first attacking group or attacks the port. The enemy groups are protecting their facilities. | FIGHTER, LIGHT, ALL | 2 | No | No |
| | | | <u>oRedCircusAttackPort</u> | | | | BOMBER | 1 | Yes | No |
| | N | | <u>oRedCircusBombAF</u> | Operation "Circus" | Enemy airfield | These lines determine the composition of the groups for the operation "Circus" when attacking the enemy airfield. The player's group covers the first attacking group or attacks the airfield. The enemy groups are protecting their facilities. | FIGHTER, LIGHT, ALL | 2 | No | No |
| | | | <u>oRedCircusAttackAF</u> | | | | BOMBER | 1 | Yes | No |
| | N | | <u>oRedCircusBombStation</u> | Operation "Circus" | Enemy railway station | These lines determine the composition of groups for Operation Circus when attacking an enemy station. The player's group covers the first attacking group or attacks the station. The enemy groups are protecting their facilities. | FIGHTER, LIGHT, ALL | 2 | No | No |
| | | | <u>oRedCircusAttackStation</u> | | | | BOMBER | 1 | Yes | No |
| | N | | <u>oRedGroundFreeHunt</u> | Free hunting for ground targets | Random weakly armored enemy target | These lines determine the composition of groups when searching for and attacking the enemy's lightly armored targets. If the second group on the list are fighters, it performs cover for the player's group. The enemy groups intercept the player's groups. | GROUND, JABO, LIGHT, ALL | 1 | Yes | No |
| | | | <u>oBlueGroundFreeHunt</u> | | | | GROUND, JABO, LIGHT, ALL | 1 | Yes | No |
| | N | | <u>oRedRhubarb</u> | Operation "Rhubarb" *** (Refer to page 54 for historical notes.) | Random weakly armored enemy target | These lines determine the composition of the groups for Operation Rhubarb when searching for and attacking the enemy's lightly armored targets in conditions of not perfect weather (fog / clouds). If the second group on the list are fighters, it performs cover for the player's group. The enemy groups intercept the player's groups. | GROUND, JABO, LIGHT, ALL | 1 | Yes | No |

| New feature | Type (N-normal S-special) | Old Mission code | New Mission code * (Recommended for DGen_MOD, see page 53) | Mission | Objective | Description | Type of player airplane | Player's flight position in the list | Selecting weapons to attack ground targets | Selecting weapons to attack air targets |
|-------------|---------------------------------|------------------|--|--|---|--|--|---|--|--|
| | N | | <u>oRedPatrolSeaCluster</u> | Marine zone patrolling | Random enemy marine target | These lines determine the composition of groups when the player searches for enemy sea targets. If the second group on the list are fighters, it performs cover for the player's group. The enemy groups intercept the player's groups. | PATROL, BOMBER, GROUND, TORPEDO | 1 | Yes | No |
| | | | <u>oBluePatrolSeaCluster</u> | | | | | | | |
| | N | | <u>oRedSeaFreeHunt</u> | Free hunting for sea targets | Random enemy marine target | These lines determine the composition of groups when the player is searching and attacking the enemy's sea targets. If the second group on the list are fighters, it performs cover for the player's group. The enemy groups intercept the player's groups. | PATROL, BOMBER, GROUND, TORPEDO | 1 | Yes | No |
| | | | <u>oBlueSeaFreeHunt</u> | | | | | | | |
| | N | | <u>oRedAntiSubPatrol</u> | Hunting for submarines | Random enemy submarine | These lines determine the composition of groups when the player is searching for and attacking an enemy submarine. If the second group on the list are fighters, it performs cover for the player's group. The enemy groups intercept the player's groups. | PATROL, BOMBER, GROUND, TORPEDO | 1 | Yes | No |
| | | | <u>oBlueAntiSubPatrol</u> | | | | | | | |
| | N | | <u>oRedSeaRescue</u> | Search and rescue | Random sea point | These lines determine the composition of groups in the missions to search for the missing pilot, the object is the target. The enemy groups are sent to the search area and intercept the player's groups. | PATROL | 1 | No | No |
| | | | <u>oBlueSeaRescue</u> | | | | | | | |
| | N | | <u>oRedBombHyB</u> | Bomb enemy hydro- aerodrome | Random enemy hydro- aerodrome | These lines determine the composition of groups during the bombing of the enemy's hydro-aerodrome. The player's group covers the first attacking group. The enemy groups protect their hydro-aerodrome and intercept the player's groups. | FIGHTER, LIGHT, ALL | 2 | No | No |
| | | | <u>oBlueBombHyB</u> | | | | | | | |
| | N | | <u>oRedAttackHyB</u> | Attack enemy hydro-aerodrome | Random enemy hydro- aerodrome | These lines determine the composition of groups when the player attacks the enemy's hydro-aerodrome. If the second group on the list are fighters, it performs cover for the player's group. The enemy groups protect their hydro-aerodrome and intercept the player's groups. | GROUND, BOMBER, JABO, LIGHT, ALL, PATROL | 1 | Yes | No |
| | | | <u>oBlueAttackHyB</u> | | | | | | | |
| | N | | <u>oBlueDefendHyB</u> | Defense of the player's hydro- aerodrome | Random player's hydro- aerodrome | These lines determine the composition of groups in the defense of the player's hydro-aerodrome. The player's group intercepts the attacking enemy group. The enemy groups attack the player's hydro-aerodrome. | FIGHTER, LIGHT, ALL | 1 | No | Yes |
| | | | <u>oRedDefendHyB</u> | | | | | | | |
| | N | | <u>oBluePatrolHyB</u> | Patrolling the player's hydro- aerodrome | Random player's hydro- aerodrome | These lines determine the composition of groups when patrolling the player's hydro-aerodrome. The player's group intercepts enemy aircraft. The enemy groups are sent to the player's hydro-aerodrome area. | FIGHTER, LIGHT, ALL | 1 | No | Yes |
| | | | <u>oRedPatrolHyB</u> | | | | | | | |

| New feature | Type (N-normal S-special) | Old Mission code | New Mission code * (Recommended for DGen_MOD, see page 53) | Mission | Objective | Description | Type of player airplane | Player's flight position in the list | Selecting weapons to attack ground targets | Selecting weapons to attack air targets |
|--|---------------------------------|------------------|--|--|-------------------------------------|--|--|---|--|--|
|  | N | | <u>oBlueReconHyB</u> <u>oRedReconHyB</u> | Reconnaissance of enemy hydro- aerodrome | Random enemy hydro- aerodrome | These lines determine the composition of the groups when the enemy's hydro-aerodrome is being scouted by the player. If the second group on the list are fighters, it performs cover for the player's group. The enemy groups protect their hydro-aerodrome and intercept the player's groups. | GROUND, BOMBER, JABO, LIGHT, ALL, TORPEDO, RECON, PATROL | 1 | No | No |
|  | N | | <u>oRedAttackNoball</u> | Attack of the starting position of the V-rockets | Random position of rockets | These lines determine the composition of groups when the player attacks the starting position of the enemy's V-rockets. If the second group on the list are fighters, it performs cover for the player's group. The enemy groups protect the starting position and intercept the player's groups. | GROUND, BOMBER, JABO, LIGHT, ALL, PATROL | 1 | Yes | No |
|  | N | | <u>oRedBombNoball</u> | Bomb the starting position of the V- rockets | Random position of rockets | These lines determine the composition of groups when bombarding the starting position of the enemy's V-rockets. The player's group covers the first attacking group. The enemy groups protect the starting position and intercept the player's groups. | FIGHTER, LIGHT, ALL | 2 | No | No |
|  | N | | <u>oRedReconNoball</u> | Reconnaissance of the starting position of the V-rockets | Random position of rockets | These lines determine the composition of the groups when the player reconnaissance the starting position of the enemy's V-rockets. If the second group on the list are fighters, it performs cover for the player's group. The enemy groups protect the starting position and intercept the player's groups. | GROUND, BOMBER, JABO, LIGHT, ALL, TORPEDO, RECON, PATROL | 1 | No | No |
|  | N | | <u>oBluePatrolNoball</u> | Patrolling the starting position of the V-rockets | Random position of rockets | These lines determine the composition of groups when patrolling the starting position of the V-rockets. The player's group intercepts enemy aircraft. The enemy groups are sent to the area of the starting position. | FIGHTER, LIGHT, ALL | 1 | No | Yes |
| | N | | <u>oBlueDefendNoball</u> | Defense of the starting position of the V-rockets | Random position of rockets | These lines determine the composition of the groups in the defense of the starting position of the V-rockets. The player's group intercepts the attacking enemy group. The enemy groups attack the starting line position. | FIGHTER, LIGHT, ALL | 1 | No | Yes |

* - in DGen_MOD it is recommended to use the names of missions from the column "New code Mission".

The generator uses two types of missions: "normal" N-missions, which are formed according to the data of ops [name] files .dat and depend only on the valid period and the [Schedule] section of the episode_name.DB and the "special" S-missions, which are formed by a separate procedure when the parameters match. For "special" missions in the files ops [name].dat must have the appropriate lines, but there should be no restrictions on the time period for the appearance of the these missions. "Special" missions can be formed by random principle (Scramble), by binding to a specific date (DDay, PearlHarbor) or by the appearance of certain conditions (Transfer).

**** - Operation Circus operation:**

After the end of the Battle of Britain, at the end of 1940 there was a relative calm in the fighting over the English Channel. The Luftwaffe stopped massive attacks on Britain and basically confined themselves to night bombing of cities, many units were transferred to other theater. The initiative of offensive action was transferred to the British, and before the Royal Air Force arose the question of the Longest Strategy of the Air War Against Germany. The fighter command decided to transfer the fighting to the territory occupied by the enemy. To this end, in the beginning of 1941, several standard air operations were developed: Circus, Rodeo, Roadstead, Rhubarb, etc., which provide for offensive actions against France. From the beginning of 1941 to the middle of 1943, the main type of operations was the "Circus". All "Circuses" had an end-to-end numbering, "Circus" No. 1 was conducted on January 10, 1941, its purpose was ammunition depots near Fort-de-Guine, south of Calais.

The plan for Operation Circus was simple: a small group of bombers (6-12 Blenheim) was sent to the bombing of the facility in France. The goal was usually an ammunition depot, an airfield, a port or a railway station. The bombers received a very powerful fighter cover: 10-15 squadrons of the Spitfires accompanied them on the entire flight route. It was not necessary to expect serious damage to ground targets, but the Luftwaffe could not ignore such raids, and were forced to engage in battle. The appearance of FW-190 and new modifications of Me-109 led to the fact that the British suffered heavy losses during the "Circuses". Often, the Royal Air Force lost more aircraft than they themselves had to destroy, but until 1943, the Circuses were conducted very intensively.

The group of bombers participating in the "Circus" gradually increased, and in 1943 could have already counted several dozen machines. Thus, the "Circus" has turned into a full-fledged universal operation, because the damage done to the enemy's ground targets by 30-40 Boston or Mitchellam could be quite substantial. Also in the Circuses 4-motor bombers of the Royal Air Force began to participate.

© Motorhead***** - Operation Rhubarb operation:**

Operation "Rhubarb" was one of the first offensive operations (along with the Circus), conducted by the Royal Air Force over France from the beginning of 1941. The aim of the operation was to cause damage to German objects and communications with the help of sudden attacks by small groups of aircraft. Similarly, the "Circus", Operation "Rhubarb" could not cause serious damage to German troops in France, but kept the enemy in suspense.

The plan for the operation "Rhubarb" envisaged the flight of a single fighter or a pair of fighters to free hunting for ground targets in the enemy rear area, with necessary use of low clouds as a cover in the event of the appearance of enemy fighters. Most often the operation was carried out by two fighters, sometimes four, in which case the second pair could act as a cover. The group was headed by an experienced pilot who chose the goals at his own discretion: cars, trucks, trains, locomotives, anti-aircraft guns. The whole-division division could be decapitated with a simple attack of the headquarters car.

The Royal Air Force pilots did not like Operation Rhubarb, since Spitfires and Hurricanes were very vulnerable to anti-aircraft fire. In the first such operation, carried out on January 12, 1941 by pilots of the 242nd Squadron, experienced pilot Willie McKnight, a veteran of the Battle of Britain, died. Despite the high level of losses, Not all of which were repaid by the damage inflicted on the enemy, Operation "Rhubarb" together with the "Circuses" were conducted approximately until 1944.

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