

Black Square



**REAL TAXIWAYS
EUROPE**

For Microsoft Flight Simulator

Just Flight™

Black Square

“Virtual Aircraft. Real Engineering.”

Real Taxiways 2024 User Guide

Please note that Microsoft Flight Simulator 2024 must be correctly installed on your PC prior to the installation and use of this taxiway sign data and appearance addon.

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Introduction

Microsoft Flight Simulator has ushered in a new era of airport scenery. Airports now resemble their real-world counterparts enough to be easily recognisable, but inaccurate taxiway names, unrealistic signs and objects placed in the middle of taxiways immediately destroy immersion. Black Square's Real Taxiways has been designed by real-world aviation professionals to fix these problems, resulting in unique airport signage that is functionally identical to its real-world counterparts.

If you've ever struggled while navigating the taxiways of an airport in MSFS because online ATC instructions or taxiway diagrams didn't match the signs around your aircraft, this is the product for you. With Real Taxiways you will be able to navigate airports using real-world taxiway diagrams and online ATC while you learn the nuances of airport surface navigation.

In previous versions of Flight Simulator, only expensive payware scenery could provide you with the quality of airport signage achievable with Real Taxiways. Crowd-sourced alternatives, like scenery gateway systems and freeware downloads lack consistency and coverage, even when professionally moderated, which frequently disappoints real-world pilots. Real Taxiways is a cost effective solution whereby you can have thousands of consistently enhanced airports with features which have never been seen before for the cost of a single payware airport.

Real Taxiways is extremely frame rate friendly - you won't experience any performance loss!

You can exclude any airport (or airports) from your Real Taxiways installation if you wish, avoiding conflicts with freeware, payware and World Update airports.

Feature Overview

The features of Real Taxiways fall into two major categories; corrections, and enhancements.

What's New In MSFS 2024?

- Custom taxiway sign model and textures, including improved nighttime emissives.
- LOD optimization makes signs readable much farther away with no popping.
- No longer requires separate texture installations. "Just works".
- 5,383 signs updated at 61 airports for MSFS 2024.
- Numerous small fixes to airport signs.
- Now available on Marketplace and XBOX.

Custom Sign Models and Textures

New fully custom taxiway sign models provide greater detail than the default models, with more realistic textures. The models are LOD optimized, and readable from much further away with no noticeable "popping" from great distances. The new sign textures include custom nighttime emissive lighting, making them more readable at night, with unlit segments being truly dark. These models and signs no longer require any separate installations, and "just work" with the one-time installation.

Other Features

- 1,100 airports updated with 50,000+ taxiway signs!
- Real-world taxiway names
- Near real-world taxiway sign placement
- Multiple variations of all sign types
- Double-sided taxiway signs
- Sign sizes are appropriate to the airport
- Hundreds of airport sign 'personalities' for an authentic experience
- No signs obstructing taxiways or runways
- Signs easily readable from cockpit without zooming
- Destination signs match real-world charts
- Closed taxiways updated and signs added
- Sign text padding corrected and more readable

Corrections

Users familiar with the default airports in Microsoft Flight Simulator will have no doubt encountered frustrations, such as oversized taxiway signs placed on the centerline of taxiways, or hundreds of taxiway lights scattered in the grass, or in parking areas of airports. Real Taxiways has eliminated the possibility of many such immersion breaking occurrences, some which even payware airports struggle with. For a complete list of these corrections, see the “Detailed Features” section of this user guide.

Enhancements

In addition to correcting many unwanted aspects of the default airports in Microsoft Flight Simulator, Real Taxiways has added more than a dozen features that have either been lost over the years since their original appearances in the flight simulator series, or have never been seen in a flight simulator before. These include the addition of dynamically generated ground vehicle signs, runway safety awareness signs, runway distance remaining signs, and custom destination signs. As many variations of these signs, in content, size, and orientation, are generated at airports with different airport “personalities” to create realistic diversity. These, and many more, are enumerated in the “Detailed Features” section of this user guide.

For Pilots & Aspiring Pilots

Real Taxiways was born out of the desire for accurate taxiway naming and sign placement lacking in many flight simulators, past and present. As visual fidelity in flight simulators has increased, enthusiasts and pilots have been able to use simulators to practice airport operations, including ground navigation via real world charts. However, missing taxiway sign types, poorly placed signs, and downright misleading ones, stymie this effort. Real Taxiways aims to provide the best airport operations training environment for real world pilots looking to maintain proficiency, and aspiring pilots learning the challenges of ground operations for the first time by simulating accurate placement of taxiway signs of all types and sizes that would reasonably be found at airports around the world. Users should find that airports covered by Real Taxiways regions are now navigable via real world airport diagrams, the signs on the ground, most external moving-map programs, and ATC instructions.

Limitations

Real Taxiways is a patching system for the default airports of Microsoft Flight Simulator and therefore must work within the current limitations of the simulator's facility data and rendering engine. While Real Taxiways does its best to eliminate unwanted results, such as noted in the Corrections section above, it is always possible that unwanted results will still be present due to unforeseen conflicts with other custom scenery, terrain data or, in the rare case, a mistake on the part of the Real Taxiways patching process. Please keep this in mind while enjoying the airports covered by Real Taxiways.

Additionally, you are encouraged to report errors in Real Taxiways' core features that you believe can be readily fixed, such as poorly placed signs or incorrect sign content, on the Real Taxiways section of the Just Flight Forum.

Real Taxiways' largest single limitation is the elimination of rogue taxiway lighting at airports that also have green taxiway centreline lighting. Due to limitations in the Microsoft Flight Simulator SDK, it is not possible to BOTH eliminate rogue taxiway lighting entirely and to allow for the presence of green centreline lighting at larger airports. The developers of Real Taxiways have taken a 'some improvement is better than none' approach to this problem by removing the majority of rogue taxiway lighting on active taxiways on all airport surface areas that do not have green taxiway centreline lighting by default in Microsoft Flight Simulator.

Lastly, Real Taxiways does not currently remove windsocks, airport beacons or autogen buildings on taxiway surfaces, though this feature is in development and may be included in future versions of Real Taxiways.

For more information on this product's capabilities and the most up-to-date list of included features, see the store page at www.JustFlight.com.

Installation, Updates & Support

Installation

You can install this Real Taxiways software as often as you like on the same computer system:

1. Click on the 'Account' tab on the Just Flight website.
2. Log in to your account.
3. Select the 'Your Orders' button.
4. A list of your purchases will appear and you can then download the software you require.

Using the Automated Installer

Upon downloading and double-clicking the installer provided by Just Flight for Real Taxiways, the installer should be able to detect the correct directories for your Microsoft Flight Simulator installation and proceed with the install process. Clicking 'Next' and following the installer's instructions should result in a complete installation of Real Taxiways to your Community content directory.

Installing Packages Manually

If you are reinstalling Real Taxiways, wish to exclude airports, or otherwise wish to perform the installation manually, the process should be as easy as moving or renaming files within your Microsoft Flight Simulator Community content directory. For information on locating your Community content directory, see below.

Community Content Directory

This should be named "Community", though you may have set this location manually when installing MSFS". This is the directory where you may have installed other 3rd party addons for the simulator. The exact path varies based on the installation type, such as whether you purchased the simulator from the Windows Store, or from a 3rd party vendor, such as Steam.

For the Windows Store install:

`C:\Users\[YourUserName]\AppData\Local\Packages\Microsoft.FlightSimulator_8wekyb3d8bwe\LocalCache\Packages\`

For the Steam install:

`C:\Users\[YourUserName]\AppData\Local\Packages\Microsoft.FlightDashboard_8wekyb3d8bbwe\LocalCache\Packages\`

Important: Windows 10 by default hides the “AppData” folder, so you will have to go to “View” in the menu of File Explorer, and select “Hidden items” so as to see it.

For the Custom install:

If you used a custom location for your Flight Simulator installation, then proceed there.

For example, you may have set:

[E:\Steam\steamapps\common\MicrosoftFlightSimulator\Community](#)

Uninstalling

To uninstall this product from your system, use one of the Windows App management features:

Control Panel -> Programs and Features

or

Settings -> Apps -> Apps & features

Select the product you want to uninstall, choose the ‘Uninstall’ option and follow the on-screen instructions.

Uninstalling or deleting this product in any other way may cause problems when using this product in the future or with your Windows set-up.

Updates and Technical Support

For technical support (in English) please visit the Support pages on the Just Flight website. As a Just Flight customer, you can get free technical support for any Just Flight or Just Trains product.

If an update becomes available for this software, we will post details on the Support page and we will also send a notification email about the update to all buyers who are currently subscribed to Just Flight emails.

Regular News

To get all the latest news about Just Flight products, special offers and projects in development, subscribe to our regular emails.

We can assure you that none of your details will ever be sold or passed on to any third party and you can, of course, unsubscribe from this service at any time.

You can also keep up to date with Just Flight via Facebook and Twitter.

Excluding Airports

Microsoft Flight Simulator employs a hierarchical scenery system that allows some scenery to overwrite, or be transparent to, other geographically related sceneries.

With In-Game Marketplace or XBOX Installations

With in-game marketplace or XBOX installations of Real Taxiways, the only option available to control which airports are enhanced or ignored by Real Taxiways is the Package Reorder Tool, which is described below.

With Direct or 3rd Party Store Installations (you ran an installer)

On PC/Desktop installations of Real Taxiways bought from an online store, you also have the option of excluding specific airports, **in addition to using the Package Reorder Tool.**

The easiest way to exclude an airport from your Real Taxiways installation is to remove or rename that airport's specific BGL file from the appropriate 'bksq-' package for your installation, such as 'bksq-us-bcde', in your Community folder. Within the package you will find the BGL files in the 'scenery\global\scenery' subdirectories.

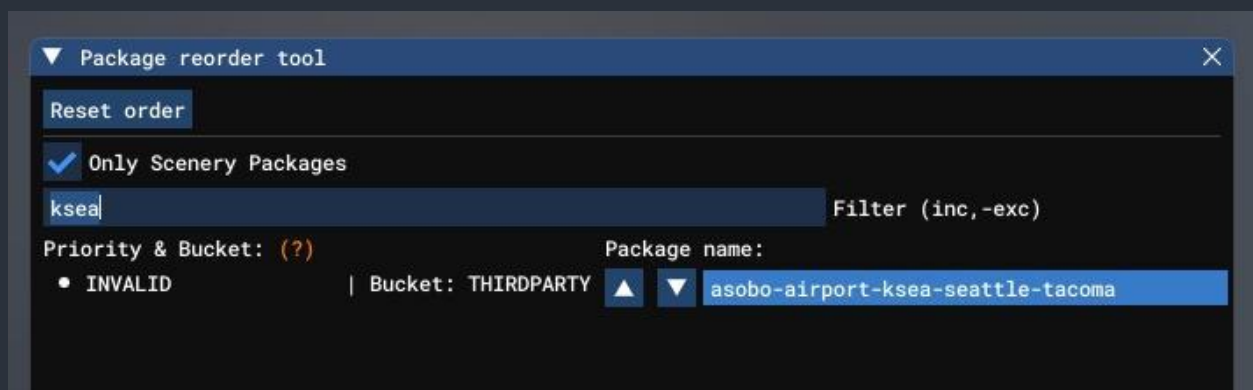
To avoid misplacing or losing specific airport files, it is recommended that you simply rename the airport file you wish to be excluded by adding the extension, '.bak' to the BGL. Doing so will prevent Flight Simulator from loading the file and making modifications to the airport. If you do lose the original airport's BGL file, a new one can be obtained by reinstalling Real Taxiways from your Just Flight account.

The Package Reorder Tool

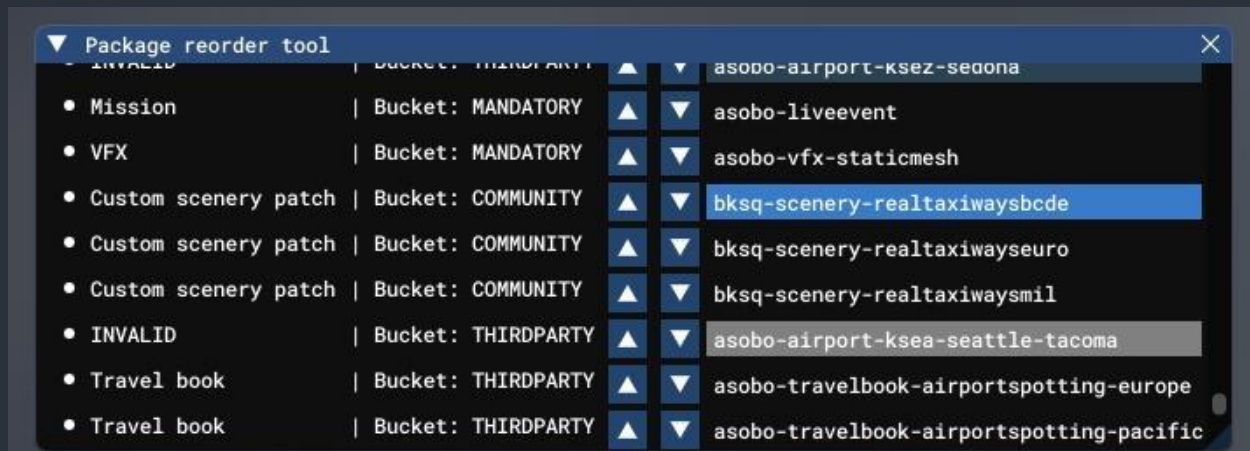
The Package Reorder Tool is an experimental feature now available in MSFS 2024. This tool can be used to customize the priority of custom scenery packages. The Package Reorder Tool can be enabled by clicking the gear icon in the upper-right hand corner of the main menu screen in MSFS 2024. From the general settings tab, click the advanced options subsection. Under the experimental heading, enable the Package Reorder Tool.



Within the dialog that opens, higher priority packages are positioned at the bottom of the list. By default, Real Taxiways will place itself in a high priority position, as it is designed to augment all default airports, bespoke airports, and World Update airports. If you wish for a 3rd party airport that you have installed in your community folder or purchased on the in-game marketplace to override Real Taxiways, first locate this package by typing the airport identifier or another keyword into the search box at the top of the window.



Then, use the arrow buttons to position the 3rd party airport BELOW the Real Taxiways packages. You may have to click the arrow button multiple times for the package to appear in a different position in the list due to hidden packages. If you make a mistake, or otherwise want to reset the package order, use the Reset Order button at the top of the window.



It may be necessary to restart the simulator to see the effect of your changes, depending on what world data is currently loaded from your last flight.

Frequently Asked Questions (FAQ)

How accurate is the placement and content of each sign?

There is no international database of taxiway sign content and placement; therefore, Real Taxiways generates signs and places them based on ICAO and FAA guidelines, after a streamlined manual process is used to assign taxiway names and special properties based on charts and satellite imagery. While the results may not be perfect, the added signs are functionally identical to their real world counterparts.

How well will using Real Taxiways prepare me for my actual flying?

Real Taxiways was created specifically to provide a realistic training environment for pilots and aspiring pilots. There is so much left to be desired by the default airports in Microsoft Flight Simulator, much of which has a substantial impact on the quality of real world training possible, such as the omission of safety critical signage, incorrect taxiway names, and downright misleading sign placement or content. With Real Taxiways, you will be able to navigate airports using real world charts, receive instruction from simulated, and online ATC, and navigate on airport ground surfaces in a functionally identical manner to how you would in the real world, and develop essential situational awareness at your local airfields.

Will Real Taxiways interfere with Microsoft Flight Simulator's World Updates?

Real Taxiways does not intend to cover "bespoke" airports provided in World Updates; however, the scope of these updates may expand over time. If you are aware of an airport which has received special treatment in a World Update, and you no longer wish to use the Real Taxiways version of that airport, you may always exclude that airport. For instruction on how to do this, see the "Excluding Airports" and "The Package Reorder Tool" sections, above.

Will Real Taxiways interfere with 3rd party freeware/payware airports?

If you download or purchase a 3rd party airport, and you no longer wish to use the Real Taxiways version of that airport, you may always exclude that airport. For instruction on how to do this, see the "Excluding Airports" and "The Package Reorder Tool" sections, above.

Can Real Taxiways be used to enhance 3rd party airports?

By default Real Taxiways will attempt to enhance all airports, including installed 3rd party ones. While Real Taxiways does not officially support any specific 3rd party airports, it might be possible to combine Real Taxiways with these airports, especially freeware ones that typically use the default MSFS taxiway sign system. If this results in undesirable outcomes, you may always exclude that airport from Real Taxiways. For instruction on how to do this, see the "Excluding Airports" and "The Package Reorder Tool" sections, above.

Will Real Taxiways signs models/textures interfere with other addons?

There are several other addons that attempt to improve the appearance only of taxiways signs. Real Taxiways is not compatible with these addons, because it requires its own custom taxiway sign textures to create all the enhanced features listed in this manual.

Do external programs, like moving maps, also benefit from Real Taxiways?

This depends on the exact implementation of the scenery database in whichever software you are trying to use. Some such programs generate their scenery database with the inclusion of 3rd party scenery in your community folder, while others do not. Only ones that take scenery in the community folder into account will see correct taxiway naming and lighting. Applications intended for use with real world aircraft should align well with Real Taxiways airports.

Troubleshooting

I don't see any changes to airports after installing Real Taxiways.

Make sure that you completed the installation process as outlined in this User Guide. To double-check this, look in your Community content folder and see if you have the correct 'bksq-' package for your installation, such as 'bksq-us-bcde'. If you do, and its 'scenery/global/scenery' folder is populated with BGL files, then the problem lies within the simulator, possibly due to a recent update. If this is the case, contact Just Flight Technical Support. Advanced users might be able to further diagnose the problem by using Developer Mode to inspect the virtual file system and confirm whether the BGL files are being loaded from the Community folder.

Everything installed correctly but some airports don't seem to be enhanced.

It is unlikely that only some airports have been enhanced by Real Taxiways, but not all the airports which should be covered. Double-check the list of included airports on the following pages to ensure that you are at one of the airports covered. Since it is possible to exclude some airports, as explained in the Excluding airports section, make sure that you retain back-ups of any files you remove from the Real Taxiways package in your Community folder, and simply replace them if you want to restore Real Taxiways functionality at those airports.

I still see incorrect taxiway signs, signs facing the wrong way or signs placed in the middle of taxiways, runways or aprons, and I am definitely at one of the covered airports.

Time to report an issue! Please contact Just Flight Technical Support to report the bug and it will be fixed in a subsequent update to your Real Taxiways edition. Remember, Real Taxiways aims to provide a functionally identical airport environment to the real world but may not match it exactly. Please only report errors that you believe have an impact on immersion or the functionality of an airport's surface navigation aids.

Included Airports

BGAA	BGBW	BGGH	BGJN	BGSF	BIAR	BIBD
BIBL	BIEG	BIGJ	BIHK	BIHN	BIHU	BIKF
BIKR	BIPA	BIRF	BIRK	BISF	BISI	BIST
BITE	BITN	BIVM	BIVO	BKPR	EBAW	EBBR
EBCI	EBCV	EBGB	EBKT	EBLG	EBNM	EBOS
EBSG	EBSP	EBTN	EBZR	EBZW	EDAC	EDAH
EDAX	EDBC	EDBH	EDDB	EDDC	EDDE	EDDF
EDDG	EDDH	EDDK	EDDL	EDDM	EDDN	EDDP
EDDR	EDDS	EDDV	EDDW	EDFE	EDFH	EDFM
EDFQ	EDFZ	EDGS	EDHI	EDHK	EDHL	EDJA
EDKA	EDLN	EDLP	EDLS	EDLV	EDLW	EDMA
EDNY	EDQA	EDQD	EDQG	EDQM	EDRB	EDRH
EDRT	EDRZ	EDSB	EDTF	EDTL	EDVE	EDVK
EDWE	EDWG	EDWO	EDWR	EDXB	EDXH	EDXW
EEEI	EEKA	EEKE	EEPU	EETN	EETU	EFAA
EFAL	EFET	EFEU	EFHF	EFHK	EFHN	EFHP
EFHV	EFIK	EFIM	EFIV	EFJM	EFJO	EFJY
EFKA	EFKE	EFKI	EFKJ	EFKK	EFKM	EFKO
EFKS	EFKT	EFKU	EFKY	EFLA	EFLP	EFMA
EFME	EFMI	EFOP	EFOU	EFPI	EFPO	EFRA
EFRH	EFRO	EFRU	EFRY	EFSA	EFSI	EFSO
EFTP	EFTS	EFTU	EFUT	EFVA	EFVR	EGAA
EGAB	EGAC	EGAD	EGAE	EGBB	EGBD	EGBE
EGBF	EGBG	EGBJ	EGBM	EGBN	EGBO	EGBP
EGBS	EGBT	EGBW	EGCB	EGCC	EGCF	EGCJ
EGCK	EGCL	EGCM	EGCN	EGCS	EGCV	EGCW
EGDM	EGDX	EGDY	EGEC	EGED	EGEF	EGEH
EGEL	EGEN	EGEO	EGEP	EGER	EGES	EGET
EGEW	EGFA	EGFE	EGFF	EGFH	EGFP	EGGD
EGGP	EGGW	EGHC	EGHD	EGHE	EGHG	EGHH
EGHI	EGHJ	EGHN	EGHQ	EGHU	EGJA	EGJB
EGJJ	EGKA	EGKB	EGKK	EGKR	EGLC	EGLD
EGLF	EGLK	EGLL	EGLM	EGMC	EGMD	EGMH
EGNC	EGND	EGNE	EGNH	EGNJ	EGNL	EGNM

EGNO	EGNR	EGNS	EGNT	EGNU	EGNV	EGNW
EGNX	EGOV	EGOY	EGPA	EGPB	EGPC	EGPD
EGPE	EGPF	EGPG	EGPH	EGPI	EGPJ	EGPK
EGPL	EGPM	EGPN	EGPO	EGPT	EGPW	EGQK
EGQS	EGSC	EGSF	EGSG	EGSH	EGSL	EGSM
EGSN	EGSS	EGSU	EGSV	EGSX	EGTB	EGTC
EGTD	EGTE	EGTF	EGTK	EGTN	EGTR	EGTU
EGUL	EGUN	EGUY	EGVA	EGVN	EGXC	EGXH
EGXT	EGXY	EGYC	EGYD	EGYM	EHAM	EHBD
EHBK	EHGG	EHLE	EHRD	EHSE	EHTX	EIAB
EICA	EICK	EICM	EIDL	EIDW	EIKN	EIKY
EIME	EINN	EISG	EIWF	EIWT	EKAH	EKBI
EKCH	EKEB	EKHG	EKKA	EKLS	EKMB	EKOD
EKPB	EKRD	EKRK	EKRN	EKSB	EKSN	EKSP
EKSV	EKTS	EKVD	EKVG	EKVH	EKVJ	EKYT
ELLX	ENAL	ENAN	ENAT	ENBL	ENBN	ENBO
ENBR	ENBS	ENBV	ENCN	ENDU	ENEV	ENFG
ENFL	ENGM	ENHD	ENHF	ENHK	ENHV	ENKB
ENKJ	ENLI	ENLK	ENMH	ENML	ENMS	ENNA
ENNK	ENNM	ENNO	ENOL	ENOV	ENRA	ENRK
ENRM	ENRS	ENRY	ENSB	ENSD	ENSH	ENSK
ENSN	ENSO	ENSR	ENST	ENTC	ENTO	ENVA
ENVD	ENZV	EPBC	EPBS	EPBY	EPDA	EPDE
EPDR	EPGD	EPKA	EPKK	EPKN	EPKS	EPKT
EPKW	EPKZ	EPLB	EPLE	EPLK	EPLL	EPLU
EPLY	EPMB	EPMI	EPML	EPMM	EPMO	EPOD
EPOK	EPPI	EPPO	EPPR	EPPT	EPPW	EPRA
EPRZ	EPSC	EPSN	EPSY	EPTM	EPWA	EPWR
EPZG	EPZN	ESDF	ESGE	ESGG	ESGJ	ESGK
ESGL	ESGP	ESGR	ESGT	ESKK	ESKM	ESKN
ESKV	ESMA	ESMG	ESMO	ESMQ	ESMS	ESMT
ESMV	ESMX	ESND	ESNG	ESNN	ESNO	ESNQ
ESNR	ESNS	ESNU	ESNV	ESNX	ESNZ	ESOE
ESOH	ESOK	ESOW	ESPA	ESSA	ESSB	ESSD
ESSF	ESSK	ESSL	ESSN	ESSP	ESST	ESSU

ESSV	ESTA	ESUE	ESUP	ESUT	ETAD	ETAR
ETEK	ETHA	ETHB	ETHC	ETHE	ETHF	ETHL
ETHN	ETHR	ETHS	ETIC	ETMN	ETND	ETNG
ETNH	ETNJ	ETNL	ETNN	ETNT	ETNW	ETOR
ETOU	ETSA	ETSB	ETSE	ETSF	ETSH	ETSI
ETSL	ETSN	EVAD	EVDA	EVEA	EVGA	EVJA
EVKA	EVLA	EVRA	EVRS	EVVA	EYBI	EYJB
EYKA	EYKD	EYKL	EYKR	EYKS	EYMM	EYMO
EYPA	EYPI	EYPP	EYPR	EYRU	EYSA	EYSB
EYSI	EYTL	EYTR	EYVI	EYVK	GCFV	GCGM
GCHI	GCLA	GCLP	GCRR	GCTS	GCXO	GEML
LAGJ	LAKU	LAKV	LATI	LBBG	LBBO	LBDB
LBGO	LBHT	LBKA	LBLS	LBDP	LBPR	LBSF
LBSZ	LBWB	LBWN	LDDU	LDLO	LDOS	LDPL
LDPV	LDRG	LDRI	LDSB	LDSP	LDVA	LDZA
LEAL	LEAM	LEAS	LEBA	LEBB	LEBG	LEBL
LECH	LECO	LECU	LEDA	LEGE	LEGR	LEIB
LEJR	LELL	LELN	LEMD	LEMG	LEMH	LEMI
LEPA	LEPP	LERS	LERT	LESA	LESB	LESL
LESO	LEST	LESU	LETL	LEVC	LEVT	LEVX
LEXJ	LEZL	LFAE	LFAG	LFAI	LFAK	LFAL
LFAO	LFAQ	LFAT	LFAV	LFAX	LFAY	LFBA
LFBD	LFBE	LFBF	LFBH	LFBI	LFBJ	LFBK
LFBL	LFBN	LFBO	LFBP	LFBR	LFBS	LFBT
LFBU	LFBX	LFBY	LFBZ	LFCA	LFCC	LFCD
LFCE	LFCF	LFCG	LFCH	LFCI	LFCK	LFCL
LFCM	LFCN	LFCQ	LFCR	LFCU	LFCW	LFCY
LFCZ	LFDA	LFDB	LFDE	LFDF	LFDH	LFDI
LFDJ	LFDK	LFDM	LFDN	LFDP	LFDW	LFDX
LFEA	LFEB	LFEC	LFED	LFEF	LFEG	LFEH
LFEL	LFEN	LFEQ	LFER	LFES	LFEW	LFEY
LFFI	LFFK	LFFN	LFGA	LFGB	LFGF	LFGH
LFGI	LFGJ	LFGK	LFGM	LFGQ	LFGW	LFHN
LFHO	LFHP	LFHQ	LFHS	LFHT	LFHU	LFHV
LFHX	LFHY	LFHZ	LFIF	LFIG	LFIK	LFIR

LFIV	LFJA	LFJB	LFJL	LFJR	LFKA	LFKB
LFKC	LFKF	LFKG	LFKJ	LFKO	LFKT	LFLA
LFLB	LFLC	LFLD	LFLE	LFLG	LFLH	LFLI
LFLJ	LFLK	LFLI	LFLM	LFLN	LFLO	LFLP
LFLS	LFLT	LFLU	LFLV	LFLW	LFLX	LFLY
LFMA	LFMC	LFMD	LFMG	LFMH	LFMK	LFML
LFMN	LFMP	LFMQ	LFMR	LFMS	LFMT	LFMU
LFMV	LFMW	LFMY	LFMZ	LFNA	LFNB	LFNC
LFNE	LFNG	LFNL	LFOB	LFOD	LFOF	LFOG
LFOH	LFOK	LFOL	LFOO	LFOP	LFOQ	LFOU
LFOV	LFOX	LFOZ	LFPA	LFPB	LFPG	LFPK
LFPL	LFPM	LFPN	LFPO	LFPQ	LFPT	LFPZ
LFQA	LFQB	LFQC	LFQE	LFQF	LFQG	LFQJ
LFQM	LFQN	LFQP	LFQQ	LFQT	LFQU	LFQV
LFQW	LFRB	LFRC	LFRD	LFRE	LFRF	LFRG
LFRI	LFRK	LFRM	LFRN	LFRO	LFRQ	LFRS
LFRT	LFRU	LFRV	LFRW	LFSB	LFSG	LFSH
LFSL	LFSM	LFSN	LFSP	LFST	LFSY	LFTZ
LFXB	LFXQ	LFYD	LFYK	LFYT	LGAD	LGAG
LGAL	LGAV	LGAX	LGBL	LGEL	LGHI	LGIK
LGIO	LGIR	LGKA	LGKC	LGKF	LGKJ	LGKL
LGKM	LGKO	LGKP	LGKR	LGKV	LGKY	LGKZ
LGLE	LGLM	LGLR	LGMG	LGMK	LGML	LGMT
LGNX	LGPA	LGPL	LGPZ	LGRD	LGRP	LGRX
LGSA	LGSK	LGSM	LGSO	LGSR	LGSY	LGTG
LGTL	LGTP	LGTS	LGTT	LGZA	LHBC	LHBP
LHDC	LHFM	LHJK	LHKA	LHKE	LHKK	LHNY
LHPA	LHPP	LHPR	LHSA	LHSM	LHSN	LHSS
LHTL	LHUD	LIAF	LIAP	LIBA	LIBC	LIBD
LIBF	LIBG	LIBN	LIBP	LIBR	LIBV	LICA
LICB	LICC	LICD	LICG	LICJ	LICP	LICR
LICT	LICZ	LIDA	LIDE	LIDG	LIDP	LIDR
LIDT	LIDU	LIEA	LIED	LIEE	LIEO	LIER
LIET	LILE	LILG	LILH	LILN	LILR	LIMA
LIMB	LIMC	LIME	LIMF	LIMG	LIMJ	LIML

LIMN	LIMP	LIMS	LIMW	LIMZ	LIPA	LIPB
LIPC	LIPE	LIPF	LIPH	LIPI	LIPK	LIPL
LIPM	LIPN	LIPO	LIPQ	LIPR	LIPS	LIPU
LIPX	LIPY	LIPZ	LIQB	LIQL	LIQS	LIQW
LIRA	LIRE	LIRF	LIRG	LIRI	LIRJ	LIRL
LIRM	LIRN	LIRP	LIRQ	LIRS	LIRU	LIRV
LIRZ	LJBL	LJCE	LJDI	LJLJ	LJMB	LJPZ
LJSG	LJSO	LKKV	LKMT	LKPD	LKPR	LKTB
LMML	LOAB	LOAG	LOAN	LOAU	LOAV	LOGF
LOGG	LOGM	LOGO	LOIH	LOIJ	LOKL	LOLG
LOLK	LOLS	LOLU	LOLW	LOWG	LOWI	LOWK
LOWL	LOWS	LOWW	LOWZ	LOXA	LOXN	LOXT
LOXZ	LP77	LPAR	LPAZ	LPBG	LPBR	LPCH
LPCO	LPCS	LPEV	LPFR	LPGR	LPHR	LPIN
LPLA	LPMA	LPMR	LPMT	LPOT	LPOV	LPPD
LPPI	LPPM	LPPR	LPPS	LPPT	LPSC	LPSJ
LPST	LPTN	LPVL	LPVR	LPVZ	LQBK	LQMO
LQSA	LQTZ	LRAR	LRBC	LRBM	LRBS	LRCK
LRCL	LRCS	LRCT	LRCV	LRIA	LROD	LROP
LRSB	LRSM	LRSV	LRTC	LRTM	LRTR	LSGE
LSGG	LSGK	LSGN	LSGS	LSMI	LSPM	LSTS
LSZA	LSZB	LSZC	LSZF	LSZG	LSZH	LSZL
LSZR	LSZS	LUBL	LUBM	LUCH	LUKK	LUTR
LWOH	LWSK	LXGB	LYBE	LYBO	LYBR	LYBT
LYCA	LYKV	LYNI	LYNK	LYPG	LYPO	LYTV
LYUZ	LYVR	LZIB	LZJS	LZKZ	LZLU	LZMC
LZPP	LZPW	LZSE	LZSL	LZTN	LZTT	LZZI
UMBB	UMMG	UMMS				

Credits

Real Taxiways 2024

Publishing

Manual

Testing

Nicholas Cyganski

Just Flight

Nicholas Cyganski

Just Flight Testing Team

Dedication

This software is dedicated to the Father of Flight Simulation, Bruce Artwick, and the subLOGIC team. Flight simulator enthusiasts, and likely many developers, have little idea of how much remains in Microsoft Flight Simulator (2020) from the original versions of subLOGIC Flight Simulator, released in the early 1980's, more than forty years ago. This heritage is evident nowhere more than in the basis of all flight simulator scenery, the BGL file. BGL stands for BAO Graphical Language, BAO standing for Bruce Artwick Organisation. Through the creation of this addon for Microsoft Flight Simulator, I have had the pleasure of becoming intimately familiar with the ingenious, space-saving, immensely efficient bytecode created by Bruce Artwick for the storage of flight simulator facilities data. This is my small thank-you to Mr. Artwick and his team for creating the hobby that we all love so much, and inspiring generations of software engineers and pilots alike. Thanks to you and your team, I have never felt closer to the pioneers of personal computing, whom I admire so much.

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