

**Quick
Find and Replace
For
Flight Simulator 2020**

Foreword

Many people are currently modifying the ASOBO Studios files in order to change the characteristics of default aircraft, or simply correct mistakes made, such as ATC referring to the TBM 930 as Daher instead of TBM.

The modifications are only good until the next update, since Asobo overwrites the files during updates.

My Idea

It occurred to me that we could replicate the changes after each update in a single process, this would save a lot of hassle. Copying and replacing the files is not a good idea, since other variables may have been changed, so the program I have developed only changes the text that is relevant to the issue at hand.

About me

I am a pensioner who taught programming for a while at a British College. That was in the 1980's. The languages were Microsoft C, Sheffield Pascal, Cobol, Fortran, Basic. After that my work moved away from programming and teaching, so C# had to be learned from Scratch. My technique is not terribly structured and error trapping sparse. By all means let me know if there are untrapped errors, but I am anxious to release this into the wild whilst it is at maximum usefulness. I know the User Interface is very basic, but hey, it was going to be command line only to start off with.

I expect the frequency of updates from Asobo will eventually reduce, and the errors people are correcting will become built in fixes, so this program may have a limited usefulness.

In the meantime, I will be working on logging and trapping everything that goes on, so hopefully I can trap issues that occur. Email:mgconnor55@gmail.com with any issues.

The Method

Top of the list of requirements for the code was safety. I.e. Not damaging the Asobo code so that Flight Sim would not run. So an early priority was to create a backup. The backup is made on the first occasion the code is run on a particular file. Future changes are not backed up to ensure the original file is kept safe.

Another issue is that the install location of the files varies according to whether it is rented via GamePass, Steam, or purchased via Microsoft Store. Therefore, the initial setup must locate the Packages folder, after which this path is held in the application Configuration file.

I wanted to be sure that all the files generated were kept in one place, so I chose to create a subdirectory/Folder in the Documents folder of the users machine.

This folder is called QFR and will contain:

- Backup files of any files changed
- Xml files containing the instructions for changes.
- It may also contain a record to show when the last update was performed so that backups can be removed automatically.

Operation

The main form page contains top menus as follows:

Configure

- Folder within Documents
- Packages Location

Create

- Replacement Instruction List (RIL)

Edit

- Existing RIL

Execute

- Replacement Instruction List

Housekeeping

- List Backups
- Delete
 - Single Backup
 - All Backups
 - Replacement Instruction List
- Restore
 - Backup

List

- RIL Contents

Configure .. Folder within Documents

This menu will be grayed out once the folder has been created. Just clicking it will read the folder name from the app.config file which should be in the same folder as the Executable Quick_Find_Replace.exe.


Configure .. Packages Location

It is important that you know where this is in advance, but since you have downloaded this program, I think it safe to assume you already know this.

Use the Folder Browser that is launched by this option to locate the Packages folder on the drive where you installed Flight Sim.

Create .. Replacement Instruction List

This option will open a form which must be filled in depending on whether you are replacing existing text, or Inserting new lines of text:

List Name:	<p>This is used as the unique file name for your instruction set. When saved, the list name will have .xml appended. I.e. Example One will become Example One.xml</p> <p>If you put .xml on yourself, it won't be added again.</p>
GUID:	<p>This value will be added automatically when you choose the file to be modified. It is used exclusively to prefix backup files. I.e.</p>  <p>6c095265-8da8-4624-8348-877bec7410fd.en-US.locPak</p> <p>This provides the means to restore the file to correct location should the change break the system</p>
Purpose of Change:	<p>This is just a record of why you wish to change the Asobo config file. You might enter something like "Correct Maximum Altitude Variable for TBM 930"</p>
Find and Replace OR Insert New Line ...	<p>Ticking Insert New line will change the form so that below, Replacement Text will change to Insert Line 1, and two more fields will appear below so that you can enter three new lines <u>after</u> the Text to be found.</p>
File to be modified:	<p>This is filled in using the File Dialog button. The dialogue starting point is the Packages folder you entered during the Configuration process. Search down the tree, to find the file you want to change and having clicked on it, click OK</p>
Text to be found:	<p>This much be exact, so I suggest you copy and paste the text into the box. BUT take great care if copying from a Web Page. Browsers can mess with the standard quote symbols. I suggest copying without the quotes and then type them in, or just paste the whole thing and edit them before adding the instruction to the list.</p>
Replacement Text:	<p>Again, you have to be exact. Paste the original in here, then modify it before hitting the "Add to List" button.</p>
Make Backup:	<p>This checkbox is there just so you can confirm what is happening. When you select a file to change, a backup will be made, because Make Backup is checked. It will then be unchecked automatically. If, for example, you need to make several changes to the same file, you will only need to edit the:</p> <p><i>Purpose of Change,</i> <i>Text to be Found</i> <i>Replacement Text</i></p> <p>Entries, then click "Add to List"</p> <p>If however, you need to change a parameter in a different file, then when you select File Dialog, the check box will be reset to checked until you have selected the next file. This will trigger a new backup of the new file.</p>
Write:Button	<p>The List you have created will only be saved when you click the Write Button.</p>

Edit .. Replacement Instruction List

If you wish to change anything in the list you have created, then you can use this option. It will offer you a File Browser Dialog, focused on the QFR directory where the lists are stored, and only show the xml files.

Select the one you want to edit and it will be loaded into a data grid on the form. You can change anything on this grid, so be careful. You can safely change the ReasonForChange, FindText or Replace Text columns, but on no account change the GUID or filename. When you have made your changes, click the button at the bottom where is says **Write Back File** with a button labeled with the file name of the list. Close the List when you are done.

Execute .. Replacement Instruction List.

This option launches the file browser in the same manner as in the previous instruction so you can select the instruction set you wish to run. Once run, all the replacement text requests you made should be ready to go.

Execute .. All RIL's

I've not written this bit yet, but if I do, it will scan the QFR folder for XML files and run each of them.

Housekeeping - List Backups

Generates a list showing the Original Location of the files that have been backed up, and the reason for change. If you have deleted them following an ASOBO update, the list will be blank.

Housekeeping - Delete - Single Backup

This option uses exactly the same form as List Backups, only it changes the Title Label to List and Delete Backup, and adds a **Delete Backup** button. Just select the one you wish to remove and hit the button.

Housekeeping - Delete - Replacement Instruction List

This will list all the RIL's saved in the QFR folder. Just highlight the one you wish to delete, and click the **Delete** Button. If you decide not to delete anything, click the **Close Delete RIL** Button.

Housekeeping - Delete AllBackups

Since you might regret this, there is a warning dialog that reaffirms that you are about to delete all the backups, and reminds you that this is really there for use after an Asobo update.

You will see a message at the bottom of the screen saying "Deleting all Backups".

Housekeeping - Restore Backup

Again, this uses the List Backups form, just changing the title to List and Restore Backup. A new button **Restore Backup** will appear. Just select the backup you want restored and hit the button, or click the **Close Form** Button.

Please note that Restoring the backup also deletes the backup.

List .. RIL Contents

This will list all the instructions in the file you select from the file Dialog. Note that regardless of whether the instruction is a Find and Replace or a Find and Insert, Replace Text will be the column header. (Hope to program this out) If the ModeReplace column is not ticked, then the instruction is for an insert. Replace Text Column will contain the first of up to three lines of text that can be added.

If the ModeReplace column shows a tick or check mark, then the Find Text will be replaced with the Replace Text only.

Repair XML

This code came about because I edited my instructions (RIL) and somehow ended up with an exception every time I tried to load them. The error related to Whitespace and \n characters where an Element should have been. I tried a routine to remove all illegal characters, but this failed, so I hand edited the file so there was no white space between ">" and "<" symbols. This worked, so I added a routine to remove any spaces accordingly. I have not hit the problem since, so I have no test file, but hopefully it works.