KITBASH 2.0 For X-Plane 11

Version 2.0b01

GNU General Public License

INSTRUCTION MANUAL

Disclaimer: This software is distributed as-is and comes with no warranty. You could break stuff. Make backups. Use at your own risk. I don't own anything, and I do not have a job so there are no wages to garnish and nothing to take if you win any frivolous law suit.

Introduction:

I like making mods to X-Plane 11 aircraft, and if you have done the same, you have probably discovered how challenging it can be to add manipulators to an existing cockpit object file. Previously, I wrote Kitbash.lua so that I could append an object to a cockpit object file, but the object being appended had to be created for a specific aircraft and everything modeled precisely where it belonged in the cockpit. That was fine, but I wanted a more sophisticated solution that would let me quickly append a single add-on to multiple aircraft.

KITBASH 2.0 was developed so that you could develop an add-on object (and subsequent manipulator object) independently of a specific aircraft and then place the add-on object in Plane Maker. You can then move and/or rotate the add-on object however you like. Once you are happy with the object placement, KITBASH will open the aircraft ACF file, find your placed object, determine the rotation and offsets, then open the related manipulator object and perform the necessary 3D rotational transformation to each vertex and append the vertex, index, and animation information to the aircraft cockpit OBJ.

Work Flow:

KITBASH 2.0 isn't necessarily geared for the novice developer. It'll go easier if you have played with this stuff before and bashed your keyboard over your head a few times to figure out the basics.

The recommended work flow for KITBASH 2.0 is to create two different OBJ8 files as follows:

POSITIONED OBJECT: An OBJ8 object with all the animated switches, lights, knobs, etc that has it's own texture, LIT, and normal texture files.

MANIPULATOR OBJECT: An OBJ8 object that contains the ANIM_MANIP click areas (The areas that glow green when you turn on "click regions") and their subsequent dataref commands for the POSITIONED OBJECT. This manipulator object gets appended to the aircraft's cockpit OBJ file so ends up mapped to

the panel.png file. Best practice is to UV map everything to 0,0 and worst case you'll need to create a single transparent pixel in the lower left corner of the aircraft panel texture.

Once the two objects are created and copied to your aircraft objects folder, you open Plane Maker and attach the POSITIONED OBJECT from within the STANDARD->MISC OBJECTS menu. (See Plane Maker manual for how to do this). You can then use the longitudinal, lateral, and vertical fields to position your object as you desire and the yaw, pitch, and roll fields to rotate the object to face the direction you want.

[**PRO TIP:** Plane Maker does not allow you to be very precise, so once you get it close in Plane Maker, save the file and load the aircraft in X-Plane 11. Then open the aircraft.acf file in a text editor, search to find the POSITIONED OBJECT, and then tweak the X, Y, and Z offset numbers to get it placed precisely and "Reload Aircraft and Art" in X-plane to verify it's exactly where you want it.]

After you get the POSITIONED OBJECT positioned you can run KITBASH from the command line (obviously navigate to the folder where the KITBASH 2 executable is installed).

Windows Users run "kitbash"

Mac Users run "./kitbash"

Linux Users run "kitbash"

You'll get the list of command switches needed which are…

`-a` **"aircraft.acf"** the full path and file name of the aircraft acf file. (Window's users: it's easy to get the full path by creating a shortcut to the file, then right click the shortcut and select Properties…)

`-p positioned_object.obj` the filename only (no path!) of the POSITIONED OBJECT exactly as it's entered in Plane Maker.

`-m` **"manipulator_object.obj"** the full path and file name of the MANIPULATOR OBJECT you wish to append.

`-c` **"cockpit.obj"** the full path and file name of the aircraft's original cockpit OBJ file.

So then you would put it all together on the command line as…

`kitbash -a` "aircraft.acf" `-p positioned_object.obj -m` "manipulator_object.obj" `-c` "cockpit.obj"

KITBASH 2.0 will ensure it can open the acf, manipulator.obj, and cockpit.obj files and display them for review. If everything looks correct you can press "Y" to continue.

After KITBASH 2.0 completes you should be able to reload the aircraft and find that the switches, knobs, etc. are fully functional.

One File Work Flow:

You can work with a single OBJ file instead of the two-file work flow above. You would add the add-on OBJ in Plane Maker as described above, but then also use that file as your POSITIONED OBJECT and MANIPULATOR OBJECT above. Once KITBASH finishes, go back into Plane Maker and remove the object using the STANDARD->MISC OBJECTS menu.

Known Limitations:

Currently, KITBASH 2.0 cannot handle manipulators that are animated, though show/hide animations will work just fine. It will only work with static click regions.

Support:

You can e-mail questions, comments or concerns to jemmasimulations@gmail.com, but for faster feedback join the Jemma Studios discord! https://discord.gg/xpEnWXA

Donate-ware:

If you realize how awesome this little utility is, feel free to let me know by sending me lunch money to https://paypal.me/JemmaStudios.

Change Log:

2.0b01 2020-09-25:
- Initial release.