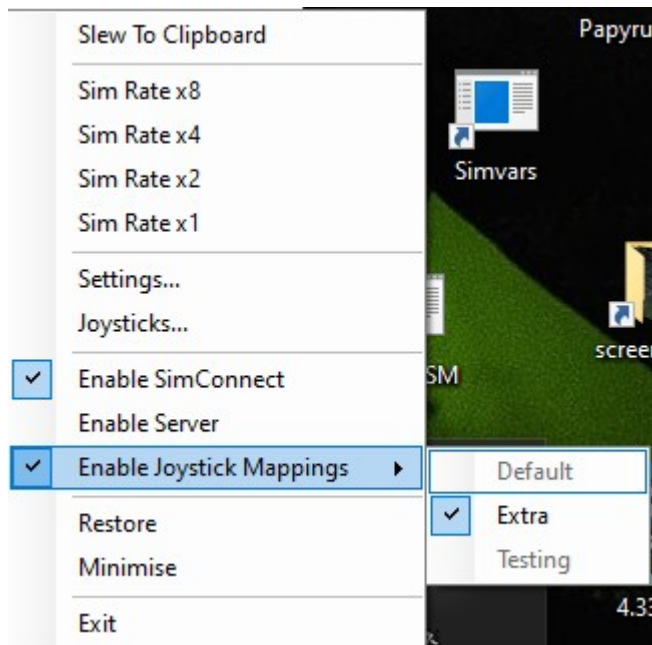


## FS\_Tool v0.5.0

This is the bare essentials doco for the joystick mapping functionality built into this version of FS\_Tool, with specific reference to the Honeycomb Bravo throttle configuration included with the release.

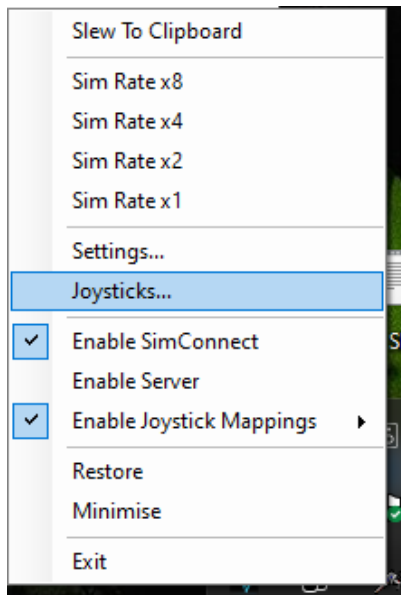
The app has a Windows task bar tray icon and is controlled by a right-click context menu from this icon.

Note that joystick mapping can only occur when the app is running and the “Enable SimConnect” and “Enable Joystick Mappings” menu options are ticked.



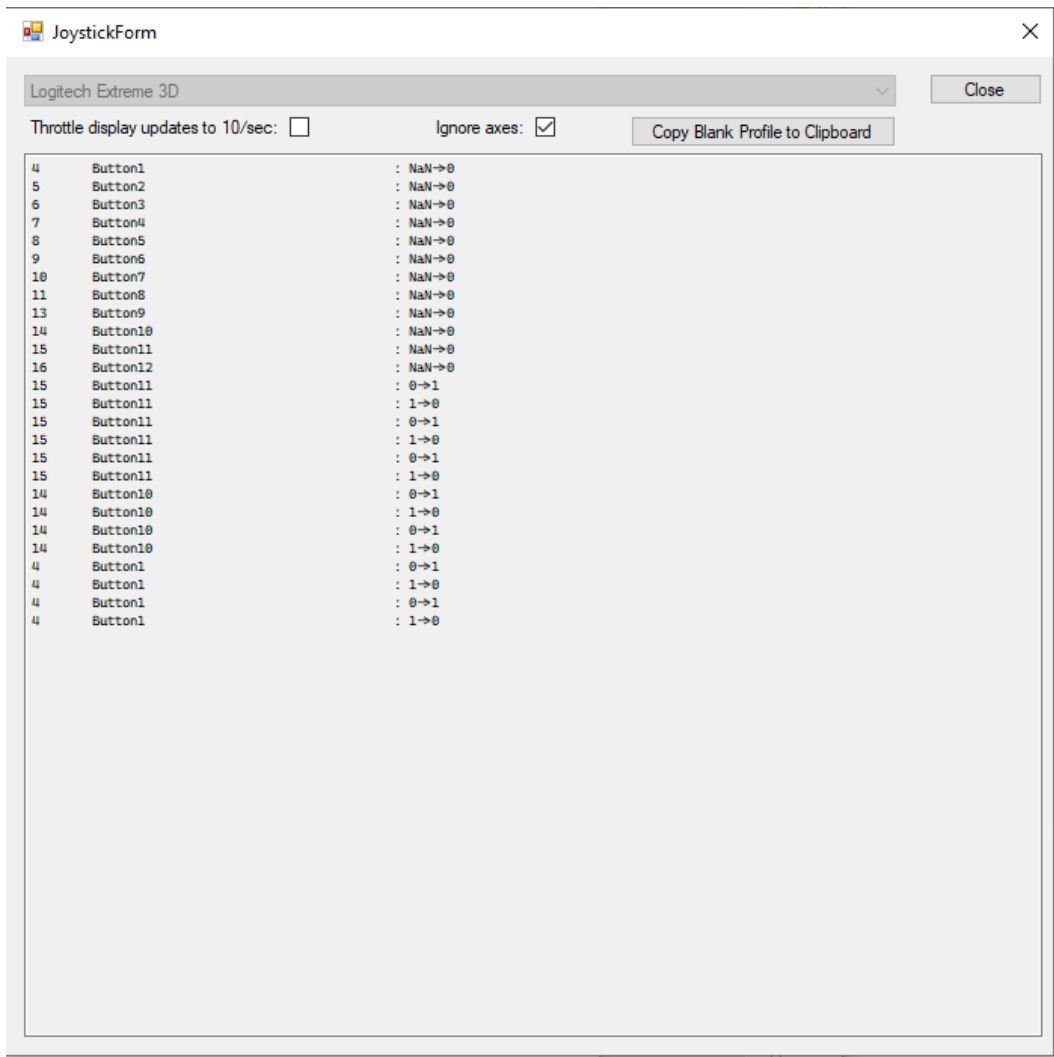
To enable a joystick profile select its name in the “Enable Joystick Mappings” sub-menu. To enable a different profile you first must select the current profile to un-tick it, and then select the new profile you wish to activate.

The app will remember the last profile in use and will reload this profile when restarted.



The “Joysticks...” menu option will open a joystick diagnostic window which will allow you to examine the HID events reported by the system for the selected joystick. You cannot close the window or select a different joystick until you close the currently selected Joystick by clicking the “Close” button.

The HID event names reported in this window are what is required in the XML configuration file which details the mappings for each joystick. You can set up your own custom mappings by editing this file using any text editor. The file is called JoystickMappings.xml and must be in the same folder as the application executable file.



There are two profiles provided for the Bravo, Default and Extra.

Default is a simple configuration that simply maps all the Toggle Switches, the rotary 5-way switch and the Gear Lever to SimConnect events. This will stop the 10deg and 1000ft bug but won't provide any additional functionality. To use this profile you need to remove all the in-game mappings for the toggle switches, the rotary 5-way switch, the Gear Lever and the INC/DEC knob. Failure to do this will not fix the bug and may provide unpredictable behaviour.

The following toggle switch mappings are made.

Switch 1	Not mapped
Switch 2	Not mapped
Switch 3	Landing Lights
Switch 4	Taxi Lights
Switch 5	Nav Lights
Switch 6	Strobes
Switch 7	Pitot Heat

Extra is a complex configuration that does all the above as well as a lot more besides.

This configuration utilises the two left hand toggle switches as a combined mode selector providing four different modes of operation.

**N.B. The Extra profile requires that the MobiFlight WASM module is installed to the Community folder and running correctly and none of this extra functionality will be available without it.** Instructions for getting and running this module can be found at this link <https://pastebin.com/fMdB7at2>.

Mode one is both switches off (down). This mode provides the same AP mapping as the default configuration.

Mode two is left switch on (up) and right switch off (down). This mode changes the function of the rotary switch and push buttons to adjust the PFD NAV and COM radio controls.

Mode three is left switch off (down) and right switch on (up). This mode lets the rotary switch and push buttons adjust the G1000 PFD controls.

Mode four is left switch on (up) and right switch on (up). This mode lets the rotary switch and push buttons adjust the G1000 MFD controls.

The details for each of these modes are in the following two tables.

The first table shows which in sim rotary knobs are affected by the Bravo INC/DEC knob.

Toggle Switch Positions	5 Way Rotary Switch Position				
	IAS	CRS	HDG	VS	ALT
Sw 1 Dn + Sw 2 Dn	IAS	CRS	HDG	VS	ALT
Sw 1 Up + Sw 2 Dn	PFD NAV	PFD COM			
Sw 1 Dn + Sw 2 Up	PFD FMS	PFD RNG	PFD CRS/BARO		
Sw 1 Up + Sw 2 Up	MFD FMS	MFD RNG	MFD CRS/BARO		

The second table shows which in sim buttons are clicked when one of the Bravo buttons is pressed.

Push Buttons	Toggle Switch Positions			
	Sw 1 Dn + Sw 2 Dn	Sw 1 Up + Sw 2 Dn	Sw 1 Dn + Sw 2 Up	Sw 1 Up + Sw 2 Up
HDG	HDG		PFD FMS Click	MFD FMS Click
NAV	NAV		PFD CLR	MFD CLR
APR	May		PFD FPL	MFD FPL
REV	REV	PFD COM SWITCH	PFD PROC	MFD PROC
ALT	ALT	PFD COM SELECT	PFD ]←	MFD ]←
VS	VS	PFD NAV SWITCH	PFD MENU	MFD MENU
IAS	IAS	PFD NAV SELECT	PFD ENT	MFD ENT

The following toggle switch mappings are made.

Switch 1	Mode Select
Switch 2	Mode Select
Switch 3	Landing Lights
Switch 4	Taxi Lights
Switch 5	Nav Lights
Switch 6	Strobes
Switch 7	Pitot Heat

There is an acceleration function built in to the SimConnect code that is utilised by both profiles.

When adjusting the ALT, HDG and CRS the number of pulses sent to the sim varies depending on how fast the INC/DEC knob is turned. If the knob is turned slowly then the normal 1 pulse is sent to the sim for each click of the knob. If the knob is turned fast enough then 10 pulses are sent to the sim for each click of the knob.

This allows a course value to be quickly dialed in before final fine tuning to the desired value.