## Numpad Control for FSX v1.1

## Introduction

Numpad Control (NpC) is a program (set of LUA scripts) for setting Com, Nav, ADF, Transponder, OBS, and Autopilot values in FSX using the number pad of the keyboard. NpC is a revision and expansion of the Numpad Radio program by “dazz” that includes three principle additional features –

* The ability to see each number as it is entered on the radio display itself – you no longer have to wait until the full number is entered for the display to change
* The ability to set the autopilot altitude, vertical speed and heading
* The ability to set the auto-throttle airspeed in knots or MACH number
* The ability to set the OBS1 and OBS2 heading

Another feature of NpC is that the ‘Title Bar’ - the green or red bar that appears at the top of the FSX screen displays only the active device - COM1, COM2, NAV1, NAV2, ADF, etc. The frequencies and other entered values are *not* displayed on the title bar as they were in the original version. NpC shows the numeric values change ***as you enter them, in the display of the device whose settings are being changed (except OBS and autopilot values which “appear” after the last digit is entered).***

**IT IS IMPORTANT TO NOTE** that for aircraft whose radio stacks do not show a standby frequency (such as the stock FSX King Air and DC-3) you will **not** see the frequency as it is entered – AND, in order to see that frequency you MUST hit the ‘Swap’ frequency key. In general, transponder codes and ADF frequencies will be seen as they are entered. Altitude entries will be seen on the autopilot display or on the PFD display but not until the entire (5-digit) entry has been made.

It should be noted that a great deal of credit goes to “dazz” (Dario Iriberri ) <http://forum.avsim.net/topic/336131-tuning-the-fsx-radios-with-the-numpad-of-your-keyboard/>. The scripts build on his original work as does this ‘user manual’.

## Description

NpC is a program for entering Com, Nav and ADF radio frequencies, the Transponder code, VOR OBS settings, and Autopilot altitude, vertical speed, and heading values in FSX using the keyboard numberpad. A registered copy of FSUIPC4 is needed for it to work, and it's programmed for the default FSX radios, transponder, and autopilot. It may not work with aircraft with additional logic programmed into the radios.

NpC functions consists of:

* 1 key to toggle NpC ON/OFF
* 7 keys to select the device to be edited (the ‘active device’) - COM1 & 2, NAV 1 & 2, ADF1 & 2, SQK (transponder), AP (AutoPilot Altitude, Vertical Speed and Heading, sequentially), IAS (auto-throttle Indicated Airspeed), and OBS1 & 2 settings**. NOTE:** There are options available for how the Nav radios, OBS1&2, and Autopilot values are accessed. See **NpC Configuration Options**,below**.**
* 10 numpad keys for the 0 - 9 digits and the decimal '.' dot
* 1 key to reset (restart) entering data, such as frequencies or OBS values, from the beginning.
* 1 key to back up one or more digits (backs up one digit (or decimal point) with each keypress) while entering values.
* 1 key to swap frequencies in the currently selected device where applies (COM or NAV, depending on active device).
* 2 keys to select positive or negative vertical speed for the autopilot, respectively

## Installation

Browse to your FSX installation directory and open the *Modules* folder, the default path is:

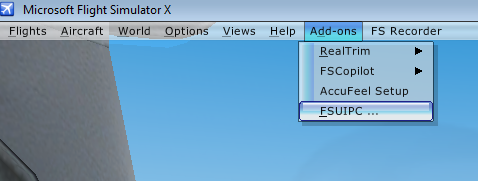
C:\Program Files (x86)\Microsoft Games\Microsoft Flight Simulator X\Modules. A commonly used alternative location is C:\FSX\Modules if FSX was installed in the root directory.

Copy & unzip the contents of the *NpC.zip* file there.

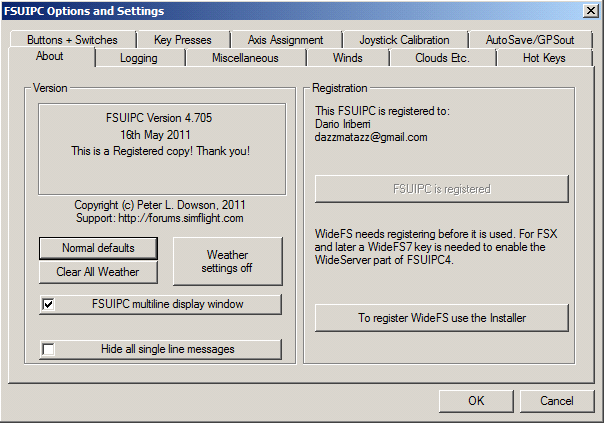
You should now have 12 LUA script files (and this manual) in your *Modules* folder alongside all the FSUIPC4 stuff. These files allow for NpC configuration as explained in the NpC Configuration Options section below.

|  |  |
| --- | --- |
| Basic Script Set | Optional Script Set |
| * *NpCKeyData.lua* * *NpCsetADF.lua* * *NpCsetCOM.lua* * *NpCsetNAV.lua* * *NpCsetSQK.lua* * NpCsetAP.lua * NpCsetIAS.lua * NpCsetOBS.lua | * NpCsetNAV&OBS.lua (combines NAV and OBS toggle: NAV1-OBS1-NAV2-OBS2) * NpCsetALT.lua (Allows a separate key to select Altitude input) * NpCsetVS.lua (Allows a separate key to select Vert Speed input) * NpCsetHDG.lua (Allows a separate key to select Heading input) |

Fire up FSX. Select Add-ons -> FSUIPC in the menu bar to open the FSUIPC GUI:



Make sure the option "*Hide all single line messages*" is **unticked** in the "*About*" tab. We will now assign the keystrokes in FSUIPC. Click on the "*Key Presses*" tab



Verify this is UNchecked

## Configuration

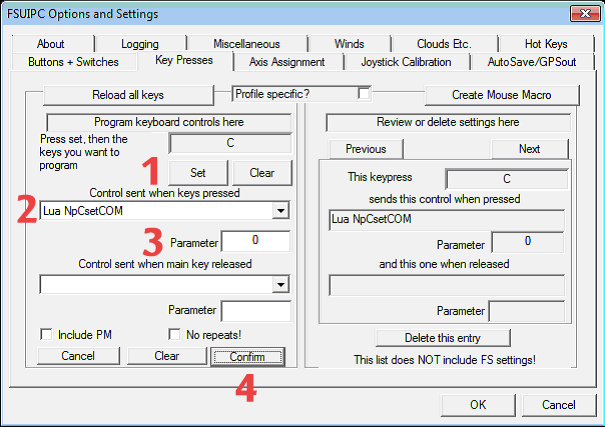
# Setting the Active Device Selection Keys

NOTE: This section covers the *Basic Script Set* device configuration. The *Optional Script Set* configuration is done in the same way – and can be done in lieu of or in addition to configuring the Basic scripts. See the section ‘NpC Configuration Options’ for additional information. Note that you can leave unused scripts in the Modules folder – they will not affect operation if there are no key assignments made that activate the scripts and their functions.

This example shows the configuration for the COMs key … See the screen views below the following steps -

1. Click the *“Set”*button and press the key you want to use to select the COM radios The " C “ key is used for this example, but you can pick whichever key you want, such as the “Page Up” key, as long as that key is not assigned to another FSX function or another LUA script.
2. Use the "*Control sent when key pressed*" dropdown and select "*Lua NpCsetCOM*" from the list. That will assign the functionality to the keystroke (in this case, activation of the COM lua script). Hint – If you click the drop-down and quickly type ‘lua’ this will bring up the first of the Lua files, then just scroll to the one desired.
3. Enter 0 in the Parameter box (more on this value below).
4. Press “*Confirm”* and make sure that the configuration is mirrored to the fields on the right side of the FSUIPC panel.

Once you press "*Confirm*" and you can see the Key Press selection and the action control in the fields are correct, FSUIPC is ready to assign a new keystroke by pressing "*Set*" again, there's no need to close the GUI and restart the process.



Verify the configuration is mirrored here after pressing ‘Confirm’

Repeat the above process to assign the NAV selection key, the ADF selection key, the Transponder selection key the Autopilot selection key and the Omni bearing selection key using each of the following in **Step 2** for each key, respectively:

NAV: "*Lua NpCsetNAV*"

ADF: "*Lua NpCsetADF*"

SQK: "*Lua NpCsetSQK*"

AP: “*Lua NpCsetAP*”

IAS: *“Lua NpCsetIAS”*

OBS: “*LuaNpCsetOBS"*

Each key assigned through this process identifies a particular LUA script to be “activated”. Once activated, the device associated with the function that key activates is ready to receive the data for that script to operate on. A particular key can only be used to activate one script (device). As you will see below, the NpCKeyData.lua script is "activated” by many keys – those keys, operating through the NpCKeyData script provide the data that the selected device script receives.

***Notice that the five selection keys use the parameter 0***. That means that for the radios and ADF the selected key will toggle between COM1 and COM2, NAV1 and NAV2, ADF1 and ADF2 (if you have two).

So if, for example, you only have one Com radio or ADF or if you only want the script to activate one particular Com radio or ADF, then assigning the *Lua NpCsetCOM* control to a key with the parameter set to 1 will make the key work as a COM1 only selection (no toggle behavior). In short:

* *Lua NpCsetCOM* + parameter 0 = toggles selection COM1 - COM2
* *Lua NpCsetCOM* + parameter 1 = COM1 only selection
* *Lua NpCsetCOM* + parameter 2 = COM2 only selection
* *Lua NpCsetNAV* + parameter 0 = toggles selection NAV1 - NAV2
* *Lua NpCsetNAV* + parameter 1 = NAV1 only selection
* *Lua NpCsetNAV* + parameter 2 = NAV2 only selection
* *Lua NpCsetADF* + parameter 0 = toggles selection ADF1 - ADF2
* *Lua NpCsetADF* + parameter 1 = ADF1 only selection
* *Lua NpCsetADF* + parameter 2 = ADF2 only selection
* *Lua NpCsetIAS + parameter0=toggles selection Knots - MACH*
* *Lua NpCsetIAS+ parameter1= Knots only selection*
* *Lua NpCsetIAS + parameter2= MACH only selection*
* *Lua NpCsetOBS + parameter 0 = toggle selection OBS1 – OBS2*
* *Lua NpCsetOBS* + parameter 1 = OBS1 only selection
* *Lua NpCset* OBS + parameter 2 = OBS 2 only selection

There's only one transponder and one autopilot, so no toggle with these devices. For the *Lua NpCsetSQK* control simply set the parameter to 1 (default value) and the key will move NpC’s focus to the transponder so you can type in a new squawk code, and similarly, we use a default parameter value of 1 for the autopilot script NpCsetAP.

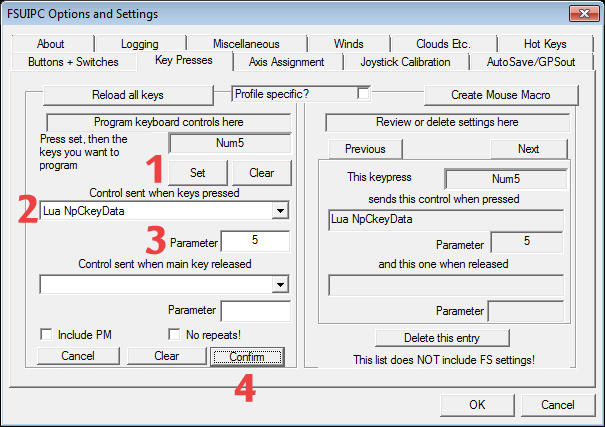
# Setting the Digits and Decimal Point

Now to assign the **numpad** keystrokes, including the 0, 1, 2,... 9 digits and the decimal point that are needed to type in the radio frequencies or squawk codes:

All those will use the control "*Lua NpCKeyData*" in step 2, but we need to assign the right parameter to each digit in step 3:

|  |  |
| --- | --- |
| digit 0 🡪 parameter = 0  digit 1 🡪 parameter = 1  digit 2 🡪 parameter = 2  digit 3 🡪 parameter = 3  digit 4 🡪 parameter = 4  digit 5 🡪 parameter = 5 | digit 6 🡪 parameter = 6  digit 7 🡪 parameter = 7  digit 8 🡪 parameter = 8  digit 9 🡪 parameter = 9  decimal point 🡪 parameter = 10 |

Here's an example for the fifth digit, with the parameter set to 5 – the number pad ‘5’ key is pushed after clicking the ‘Set’ button in step 1, Lua NPCkeyData used in step 2 as the ‘Control sent when key pressed’ and the parameter ‘5’ is entered in step 3. Click ‘Confirm’ and verify the configuration was entered properly.



Verify the configuration is mirrored here after pressing ‘Confirm’

Following the same process as demonstrated above, configure NpC keys for the **Frequency Swap, Backspace, On/Off**, **Reset,** and **Vertical Speed Plus and Minus** entering the appropriate parameter for each of the functions at Step 3 as shown in the table below. Remember not to use the same key for more than one assignment:

|  |  |
| --- | --- |
| NpCkeyData Function | **FSUIPC4 Parameter** |
| Number pad digits 0-9 | 0-9 respectively |
| Number pad Decimal Point | 10 |
| Exchange Com or Nav Standby frequency (frequency ‘Swap’) | 11 |
| Backspace (one digit or decimal point place) | 12 |
| NpC ON/OFF | 13 |
| Reset to first digit position | 14 |
| Vertical Speed Up | 15 |
| Vertical Speed Down | 16 |

## NpC Configuration Options

## There are “optional” LUA scripts included in NpC.zip that provide the user with some configuration flexibility. With flexibility, of course, comes the increased possibility of screwing things up so take extra care not to assign the same key to more than one function or use a key that is configured in the FSX Buttons/Keys controls assignment panel for some other FSX function.

###### **Autopilot Option**

The standard script NpCsetAP.lua allows the user to assign a single key (or key combination) to access the three autopilot functions - altitude (ALT), vertical speed (VS), and heading (HDG). The assigned key operates as a 3-way toggle; each push of the key cycles to the next autopilot function in the order ALT, VS, HDG, and then back to ALT.

As an **option**, the user may use one or more of the three “individual” autopilot scripts

## NpCsetALT.lua, NpCsetVS.lua, and NpCsetHDG.lua in place of NpCsetAP.lua to set the autopilot ALTitude, Vertical Speed, or HeaDinG, respectively. The “cost” of using these three separate scripts is that each one requires the assignment of a unique access key (and the ability to remember which key does what!). The advantage (perhaps small) is you would never have to “cycle through” the autopilot functions to get to the one you want.

## One could even use all four autopilot scripts at the same time (although why you would want to do this escapes us) PROVIDED each script is activated (selected) by a unique key. Using both the standard and optional individual scripts you would have 4 keys to remember (a challenge I don’t relish at our age – hence the use of the stick-on labels in the second example key assignment set presented below) and 4 keys you need to verify do not conflict with other functions assigned in FSX.

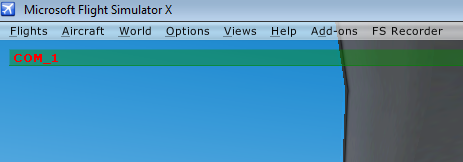
## Nav Radio and OBS Option

The script NpCsetNav&OBS.lua allows the user to assign a single key (or key combination) to select either Nav1or Nav2 (to enter frequencies), or OBS1 or OBS2 (to select a VOR radial or turn the HSI cursor to a specific VOR radial or the actual runway magnetic heading for a localizer approach). The assigned key operates as a 4-way toggle; each push of the key cycles to the next one of the 4 devices in the order of NAV1, OBS1, NAV2, OBS2, and then back to NAV1. The thought here (if we can glorify it as such) was that if the user has just set a new frequency into say, NAV1, she may next want to set OBS1, so that becomes available as the next step in the toggle function.

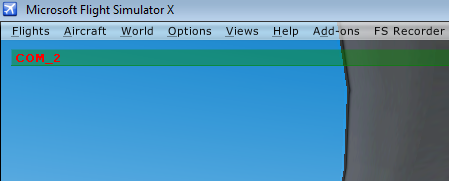
Here again there is the option to use both the standard scripts (NpCset Nav.lua and NpCsetOBS.lua) and the optional NpCsetNav&OBS.lua script. Using the separate scripts from the basic set selecting the Nav radios and the OBSs requires the use of two separate and unique keys. Each key acts as a 2-way toggle (NAV1/NAV2 and OBS1/OBS2, respectively - assuming you have two Nav radios and two OBSs, of course). Similar to the above autopilot option, you could use all three Nav and OBS scripts at the same time **PROVIDED** you assigned three **unique** access keys. Here too we won’t hazard a reason why it would be advantageous to do this, especially given the difficulty of finding convenient and available keys in FSX. However, to each his own and it will work if you choose to use both the basic scripts and the optional scripts together!

## So How Does It Work?

Once back to FSX, press the COM selection key to toggle between COM1 and COM2:



Press again you will see COM2 as the active device …



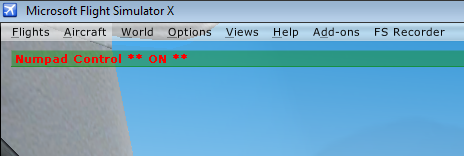
Again, in this version you will *not* see the active or standby frequencies in the notification ribbon. Numbers are displayed in the device frequency window as you enter them after selecting a radio or transponder.

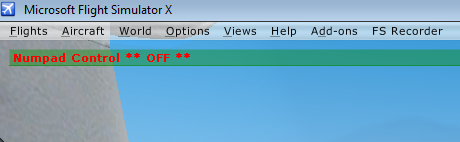
There's no need to use the decimal point, NpC will add it automatically, but you can enter it if you choose to. You **must** however enter all required digits (see the “Required Entries for Each Device section below) to ensure that the input is entered properly.

For Com and Nav devices, once the required digits are entered you can swap the entered value (the frequency entered will be in the standby spot for Coms and Navs) by pressing the ‘Swap’ key to make this the active frequency.

The **Reset** key can be used to restart typing a frequency, transponder code, altitude, vertical speed, autopilot heading or OBS heading from the beginning if a mistake is made. The **Backspace** key can be used to move back one or more digits or decimal point places (one for each keypress) to replace an entry from a specific point, leaving the previous entries in that string unchanged.

Pressing the ON/OFF key will alternately switch NpC on and off. A message will be displayed informing the current state of NpC. All key presses will be ignored while NpC is off, except for the ON/OFF key of course.





## Required Entries for Each Device

In order to ensure a proper entry you should follow the recommendations below. You may get an entry (or maybe not) but to ensure you do, enter as specified:

RADIOS/TRANSPONDER:

* COMs – 5 digits, with optional decimal point, For aircraft with 6 digit frequency displays (3 decimal digits) FSX ***will fill in the sixth digit automatically ( a 0 or 5)*** when the fifth digit is entered. Do **NOT** enter the sixth digit manually or an *Invalid entry* error message will result.
* NAVs – 5 digits with optional decimal point. For aircraft with 6 digit frequency displays (3 decimal digits) FSX ***will fill in the sixth digit automatically ( a zero)*** when the fifth digit is entered. Do **NOT** enter the sixth digit manually or an *Invalid entry* error message will result.
* ADF 5 digits– use a leading zero for frequencies below 999.9 KHz.
* Transponder – 4 digits required. A zero is considered part of the code so if the code begins with zero it must be entered.

AUTOPILOT:

* Altitude set – 5 digits (use a leading zero for altitudes below 10,000 feet) – note that the last two digits MUST be zeros ‘00’ – the smallest increment for altitude entry is 100 feet. Also note that altitude (and vertical speed) entries do not appear in the display until all required values are entered.
* Vertical speed set – The entry *must* be preceded by the “plus/up” or “minus/down” key (the one programmed using the "*Lua NpCKeyData*" control, and parameter = 15 (for plus/up)**,** and parameter = 16 (for minus/down). THEN – four more digits are required – leading zero for vertical speed less than 1000 FPM. Last 2 digits must be zeros ‘00’ – the smallest increment for vertical speed entry is + or - 100 feet.
* Heading – 3 digits – leading zero(s) for headings less than 100 degrees.

AIRSPEED

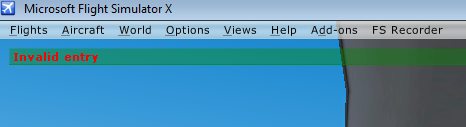
* Airspeed in Knots – always 3 digits (leading 0 if necessary), max entry is 990 (FSX property)
* Airspeed in MACH – always 3 digits with a decimal point (leading 0 if necessary), max entry is 1.64 Mach.
* No Auto-throttle? Nothing happens

OMNI BEARING SELECTOR:

* OBS heading – 3 digits – leading zero(s) for headings less than 100 degrees.
* Note that OBS1 may point to an HSI, PFD or other instrument cursor – this is the device that will change
* No NAV2/OBS2? Nothing happens

**IMPORTANT:** If you find that the device is not responding to your number pad input as it should, enter the digits a bit more slowly. This may be an issue for certain users’ systems or aircraft so be aware that entering digits too quickly could be a problem.

Invalid entries are those where the frequency, code or heading does not exist (e.g., a heading of 440 degrees or a Nav frequency ending with a second decimal value of 6 – like 112.56). If you make an invalid entry you will see:



#### Valid NpC Entries

|  |  |
| --- | --- |
| **Device** | **Valid NpC Data Entries** |
| Com | 118.00 to 136.97 MHz in 0.025MHz steps, 2nd (last entered) decimal digit is 0, 2, 5, or 7. For displays with a 6th digit (3 decimal digits), this will be entered automatically. |
| Nav | 108.00 to 117.95 MHz in 0.05MHz steps, last decimal digit must be either 0 or 5. For displays with a 6th digit (3 decimal digits), this will be entered automatically. |
| ADF | 0190.0 to 1799.5 KHz |
| Transponder | 0000 to 7777 but SQK codes only use digits from 0 to 7 (no 8s or 9s) |
| Airspeed | 000 to 990 knots; 0.00 to 1.64 MACH |
| OBS | 000 to 360 (note the use of leading zeros when required) |
| Autopilot |  |
| Altitude | 00100 to 99900 feet in 100 foot increments – **the last 2 digits must be 00** |
| Vertical Speed | up (+) or down (-) key, then, 0100 to 9900 in 100 ft/min increments – **last 2 digits must 00** |
| Heading | 000 to 360 (note the use of leading zeros when required) |

**DUMMY DIGITS**: If you are making an entry where the initial digits would result in an invalid entry you will see a temporary ‘dummy’ digit appear to avoid an invalid entry that FSX will not accept – for example:

Com1 is currently set at 128.50. You want to enter a new frequency, 133.25 – but entering the first two digits 1 and 3 would (at that point, since you have not entered the third digit) give an invalid frequency (138.50) – so a dummy digit (in this case a zero) will *automatically appear* in the third digit spot (at this point you will see 130.50) until you enter the final three digits – which progressively replace the zero, 5 and second zero in the remaining string to give 133.25.

**Standby / Swap** key moves the frequency entereed into a Nav or Com radio from the standby position (where the entered frequency appears) to the active position.

The **Backspace** key moves you back one space (or decimal point) from your current position each time you press it – so if you enter 121.5 but at that point wanted 120.50 you would need to press this three times – to move you back to the second “1” in the string, then type ‘0.50’ to get the correct entry.

The **Reset** key moves you back to the beginning of the entry. So, in the example used for the Backspace key, above, if you hit the reset key after entering 121.5 you would start from the beginning to get the correct entry, entering all five digits (and optionally, the decimal point), 120.50.

ASSIGNING KEYS

This is very much a personal preference thing but there are two important rules to keep in mind:

1. **A given key can only be assigned once for a device selection (COM, NAV, XPDR, ADF, etc), an action (Frequency swap, NumPad control On/Off) or an entry (numeric value, decimal point, backspace, reset and vertical speed + and - ). In other words, a given key can only be associated with a single LUA script (although some scripts may have several associated keys).**
2. **You MUST verify that there are no conflicting assignments in the FSX Buttons/Keys configuration (in Options | Settings | Controls accessed from the menu bar at the top of the FSX screen)**

Below are a couple of key assignment sets used by the script testers – you can use one of these or some modification on these themes, or make your own key assignments – whatever suits you best. The idea behind the first set below is, to the extent possible, make key assignments whose “name” relates to the associated function, for example, C for Com radios, N for Nav radios, etc. The idea behind the second set is to pick keys whose physical location on the keyboard and number pad allows for convenient groupings or layout patterns.

Note the term key can refer to a single key, or what is really a key combination, such as Shift + F1.

|  |  |
| --- | --- |
| **Device Selection Keys** | **Input and Action Keys** |
| * C - Com * N - Nav&OBS (if using a single key for Nav and OBS selection) * ADF - Shift + F * T - Transponder * Shift + F1 - Autopilot * Shift + F2 - Airspeed * Shift +B - OBS (if using separate Nav and OBS selection keys) | * X - Swap or eXchange Standby/ Active Nav or Com frequencies * Numpad \* (asterisk on the number pad) - NpC on/off * Backspace key – Backspace function in the entry script * Numpad / (forward slash on the number pad) - Reset function to restart the entry from the beginning * Numpad number and decimal point keys (the logical keys to be used for number and decimal entry) * Num+ (+ sign on numpad) –Vertical Speed up * Num- (- sign on numpad) – Vertical Speed down |

As described earlier, the version below was used on a keyboard where the Insert, Delete, Home, End, Page Up and Page Down keys were clustered in a group of six. The keys were then labelled to identify the device they activate since you can see that the logical “C” for Coms, “N” for Navs, etc, is not used. Please note that if the Num Lock key is not in the Number mode certain number pad keys will perform these functions so be careful to ensure you have Num Lock on before you make a numeric entry

|  |  |
| --- | --- |
| Device Selection Keys | **Input and Action Keys** |
| * Page Up - Com * Page Down - Nav (OBS is separate in this setup but could be used) * ADF - End * Home - Transponder * Delete - Autopilot * Insert - OBS (using separate Nav and OBS selection keys in this case) | * Numpad ‘Enter’ key (the enter key associated with the number pad) - Swap Standby/ Active Nav or Com frequencies * Numpad \* (asterisk on the number pad) - Vertical speed direction negative (down) * Numpad / (forward slash on the number pad) - Vertical speed direction positive (up) * Backspace key – Backspace function in the entry script * Numpad ‘-‘ (minus key on the number pad) Reset function to restart the entry from the beginning * Backspace key – Backspace function in the entry script * The ‘ ~ ` ‘ key (just left of the ‘1’ key in the horizontal number keys across the top of the keyboard) ) - NumpadControl on/off * Numpad number and decimal point keys (the logical keys to be used for number and decimal entry) |

## Notes

Actions like squawk ident, COM1/2 select (as the active radio for transmitting) NAV and marker beacon ID codes audible on/off, etc.. are not covered here. But if you own a FSUIPC4 license it should be no problem for you assigning keystrokes or buttons to those things directly through existing FSUIPC functions.

‘Dazz’ said in the original version “The code sucks ass, I know. I just started adding stuff and it ended up being a complete mess. I may group things in functions, rename the variables and add comments someday, or maybe not.” WELL – we will have to disagree with that! It was a wonderful tool as-built and one that pointed the way (in the right direction!) to improvements.

We are not experienced programmers, so use NpC and abuse it at will (or improve it!), but don't blame anyone if something goes wrong. There's no reason why anything bad should happen and we haven’t had any problems in this regard, but be prudent and make sure you back up your Modules folder prior to installing NpC, and also make sure there are no key conflicts with your FSUIPC and FSX assignments.

**SEE THE NEXT PAGE FOR A SUMMARY OF NpC PARAMETERS** – This is also found in the separate document ‘NpC Data & Param Quick Reference’

Again, thanks to “dazz” (Dario Iriberri) for getting the whole concept started.

Al Klayton - amateur programmer unencumbered by experience or training

Dan Sullivan – Napolean’s corporal (Google if you don’t get it!)

Last Updated: 16/11/2013 07:17:00

Created: 10/6/2013 2:58 PM

NpC Quick Reference

|  |  |
| --- | --- |
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| Nav | 108.00 to 117.95 MHz in 0.05MHz steps, last decimal digit must be either 0 or 5  For displays with a 6th digit (3 decimal digits), this will be entered automatically |
| ADF | 0190.0 to 1799.5 KHz |
| Transponder | 0000 to 7777 but SQK codes only use digits from 0 to 7 (no 8s or 9s) |
| Airspeed | 000 to 990 knots; 0.00 to 1.64 MACH |
| OBS | 000 to 360 |
| Autopilot |  |
| Altitude | 00100 to 99900 feet in 100 foot increments, i.e., last 2 digits must be 00 |
| Vertical Speed | up or down, 0100 to 9900 in 100 ft/min increments, i.e., last 2 digits must 00 |
| Heading | 000 to 360 |

|  |  |
| --- | --- |
| **NpCkeyData Function** | **FSUIPC4 Parameter** |
| Number pad digits 0-9 | 0-9 respectively |
| Numbr pad Decimal Point | 10 |
| Exchange Com or Nav Standby frequency | 11 |
| Backspace (one digit or decimal pt place) | 12 |
| NpC ON/OFF | 13 |
| Reset to first digit position | 14 |
| Vertical Speed UP | 15 |
| Vertical Speed Down | 16 |

|  |  |
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| **Avionics Function** | **Possible FSUIPC4 Parameter Values** |
| NpCsetCOM | 0, 1, 2 |
| NpCsetNAV | 0, 1, 2 |
| NpCsetNAV&OBS | 0, 1, 2 |
| NpCsetADF | 0, 1, 2 |
| NpCset IAS | 0, 1, 2 |
| NpCsetOBS | 0, 1, 2 |
| NpCsetSQK | 1 (not used) |
| NpCsetAP | 1 (not used) |
| NpCsetALT | 1 (not used) |
| NpCsetVS | 1 (not used) |
| NpCsetHDG | 1 (not used) |