**FSUIPC4 Status of IPC Offsets for FSX**

**(excerpt for common panel functions)**

Applicable to FSUIPC4 version 4.924

| Offset | Size | Use | FSX Read | FSX Write |
| --- | --- | --- | --- | --- |
| 0280 | 1 | Lights: this operates the NAV, TAXI, PANEL and WING lights. For separate switches see offset 0D0C | **Ok-Intl**  **(via 0D0C)** | **Ok-Intl**  **(via 0D0C)** |
| 0281 | 1 | Beacon and Strobe lights. For separate switches see offset 0D0C | **Ok-Intl**  **(via 0D0C)** | **Ok-Intl**  **(via 0D0C)** |
| 028C | 1 | Landing lights. (See also offset 0D0C). | **Ok-Intl**  **(via 0D0C)** | **Ok-Intl**  **(via 0D0C)** |
| 029B | 1 | Alternate static air source (0=off, 1=on) | **Ok-SimC** | **Ok-SimE** |
| 029C | 1 | Pitot Heat switch (0=off, 1=on) | **Ok-SimC** | **Ok-SimE** |
| 02B4 | 4 | GS: Ground Speed, as 65536\*metres/sec. Not updated in Slew mode! | **Ok-SimC** | **No** |
| 02B8 | 4 | TAS: True Air Speed, as knots \* 128 | **Ok-SimC** | **?-SimC** |
| 02BC | 4 | IAS: Indicated Air Speed, as knots \* 128 | **Ok-SimC** | **?-SimC** |
| 02C4 | 4 | Barber pole airspeed, as knots \* 128 | **Ok-SimC** | **No** |
| 02C8 | 4 | Vertical speed, signed, as 256 \* metres/sec.  For the more usual ft/min you need to apply the conversion \*60\*3.28084/256 | **Ok-SimC** | **?-SimC** |
| 02CC | 8 | Whiskey Compass, degrees in ‘double’ floating point format (FLOAT64) | **Ok-SimC** | **?-SimC** |
| 0300 | 2 | VOR1 DME distance, 16-bit integer, nm \* 10 | **Ok-SimC** | **No** |
| 0302 | 2 | VOR1 DME speed, 16-bit integer, kts \* 10 | **Ok-SimC** | **No** |
| 0304 | 2 | VOR1 DME time to station, 16-bit integer, secs \* 10 | **Ok-Intl** | **No** |
| 0306 | 2 | VOR2 DME distance, 16-bit integer, nm \* 10 | **Ok-SimC** | **No** |
| 0308 | 2 | VOR2 DME speed, 16-bit integer, kts \* 10 | **Ok-SimC** | **No** |
| 030A | 2 | VOR2 DME time to station, 16-bit integer, secs \* 10 | **Ok-Intl** | **No** |
| 0330 | 2 | Altimeter pressure setting (“Kollsman” window).  As millibars (hectoPascals) \* 16 | **Ok-SimC** | **Ok-SimE** |
| 034C | 2 | ADF1 Frequency: main 3 digits, in Binary Coded Decimal.  See also offset 0356.  A frequency of 1234.5 will have 0x0234 here and 0x0105 in offset 0356. (See also offset 0389) | **Ok-SimC** | **Ok-SimE** |
| 034E | 2 | COM1 frequency, 4 digits in BCD format.  A frequency of 123.45 is represented by 0x2345. The leading 1 is assumed. | **Ok-SimC** | **Ok-SimE** |
| 0350 | 2 | NAV1 frequency, 4 digits in BCD format.  A frequency of 113.45 is represented by 0x1345. The leading 1 is assumed. | **Ok-SimC** | **Ok-SimE** |
| 0352 | 2 | NAV2 frequency, 4 digits in BCD format.  A frequency of 113.45 is represented by 0x1345. The leading 1 is assumed. | **Ok-SimC** | **Ok-SimE** |
| 0354 | 2 | Transponder setting, 4 digits in BCD format: 0x1200 means 1200 on the dials. | **Ok-SimC** | **Ok-SimE** |
| 0356 | 2 | Extended ADF1 frequency.  The high byte contains the 1000’s digit and the low byte the fraction, so, for a frequency of 1234.5 this offset will contain 0x0105. | **Ok-SimC** | **Ok-SimE** |
| 0764 | 4 | Autopilot available | **Ok-SimC** | **N/A** |
| 0778 | 4 | Flaps available | **Ok-SimC** | **N/A** |
| 077C | 4 | Stall horn available | **Ok-SimC** | **N/A** |
| 0780 | 4 | Engine mixture available | **Ok-SimC** | **N/A** |
| 0784 | 4 | Carb heat available | **Ok-SimC** | **N/A** |
| 078C | 4 | Spoiler available | **Ok-SimC** | **N/A** |
| 0790 | 4 | Aircraft is tail dragger | **Ok-SimC** | **N/A** |
| 0794 | 4 | Strobes available | **Ok-SimC** | **N/A** |
| 079C | 4 | Toe brakes available | **Ok-SimC** | **N/A** |
| 07A0 | 4 | NAV1 available | **Ok-SimC** | **N/A** |
| 07A4 | 4 | NAV2 available | **Ok-SimC** | **N/A** |
| 07BC | 4 | Autopilot Master switch | **Ok-SimC** | **Ok-SimE** |
| 07C0 | 4 | Autopilot wing leveller | **Ok-SimC** | **Ok-SimE** |
| 07C4 | 4 | Autopilot NAV1 lock | **Ok-SimC** | **Ok-SimE** |
| 07C8 | 4 | Autopilot heading lock | **Ok-SimC** | **Ok-SimE** |
| 07CC | 2 | Autopilot heading value, as degrees\*65536/360 | **Ok-SimC** | **Ok-SimE** |
| 07D0 | 4 | Autopilot altitude lock | **Ok-SimC** | **Ok-SimE** |
| 07D4 | 4 | Autopilot altitude value, as metres\*65536 | **Ok-SimC** | **Ok-SimE** |
| 07D8 | 4 | Autopilot attitude hold | **Ok-SimC** | **?-SimE** |
| 07DC | 4 | Autopilot airspeed hold | **Ok-SimC** | **Ok-SimE** |
| 07E2 | 2 | Autopilot airspeed value, in knots | **Ok-SimC** | **Ok-SimE** |
| 07E4 | 4 | Autopilot mach hold | **Ok-SimC** | **Ok-SimE** |
| 07E8 | 4 | Autopilot mach value, as Mach\*65536 | **Ok-SimC** | **Ok-SimE** |
| 07EC | 4 | Autopilot vertical speed hold | **Ok-SimC** | **?-simE** |
| 07F2 | 2 | Autopilot vertical speed value, as ft/min | **Ok-SimC** | **Ok-SimE** |
| 07F4 | 4 | Autopilot RPM (N1) hold | **Ok-SimC** | **Ok-SimE** |
| 07FA | 2 | Autopilot RPM (N1) hold value, 16384 = 100% N1.  Writing rounds to the nearest whole % | **Ok-SimC** | **Ok-SimE** *(but see note)* |
| 07FC | 4 | Autopilot GlideSlope hold N.B. setting this also sets 0800, approach hold. To clear both you need to write 0 to them in the same FSUIPC process call, as if they are separated by an FS frame, an interlock stops them clearing. | **Ok-SimC** | **Ok-SimE plus Intl operations** |
| 0800 | 4 | Autopilot Approach hold. See the note above, for offset 07FC. | **Ok-SimC** | **Ok-SimE plus Intl operations** |
| 0804 | 4 | Autopilot Back course hold. The note for offset 07FC may also apply here. | **Ok-SimC** | **Ok-SimE** |
| 0808 | 4 | Yaw damper | **Ok-SimC** | **Ok-SimE** |
| 080C | 4 | Autothrottle TOGA (take off power) | **Ok-SimC** | **Ok-SimE** |
| 0810 | 4 | Autothrottle Arm | **Ok-SimC** | **Ok-SimE** |
| 0892 | 2 | Engine 1 Starter switch position (Magnetos),  Jet/turbojet: 0=Off, 1=Start, 2=Gen/Alt  Prop: 0=Off, 1=right, 2=Left, 3=Both, 4=Start  Don’t forget to switch fuel on to start (mixture to max). | **Ok SimC/Intl** | **Ok-SimE/Intl** |
| 092A | 2 | Engine 2 Starter switch position (Magnetos) |  |  |
| 09C2 | 2 | Engine 3 Starter switch position (Magnetos) |  |  |
| 0A5A | 2 | Engine 4 Starter switch position (Magnetos) |  |  |
| 0AEC | 2 | Number of Engines | **Ok-SimC** | **N/A** |
| 0BAC | 2 | Inner Marker: activated when TRUE | **Ok-SimC** | **No** |
| 0BAE | 2 | Middle Marker: activated when TRUE | **Ok-SimC** | **No** |
| 0BB0 | 2 | Outer Marker: activated when TRUE | **Ok-SimC** | **No** |
| 0BC0 | 2 | Elevator trim control input: –16383 to +16383 | **Ok-SimC** | **Ok-SimC** |
| 0BC2 | 2 | Elevator trim indicator (follows input) | **Ok-SimC** | **No** |
| 0BC4 | 2 | Left brake application read-out (0 off, 16383 full: parking brake=16383). You can also apply a fixed brake pressure here, or else use the byte at 0C01 to apply brakes emulating the keypress.  *Note that the values READ here run from 0 to 16384, but will not match exactly the values written. They seem to follow an exponential curve, being much lower at the low end (e.g. only 33% of what is written), gradually catching up to meet at the top.* | **Ok-SimC** | **Ok-SimC** |
| 0BC6 | 2 | Right brake application read-out (0 off, 16383 full: parking brake=16383). You can apply a fixed brake pressure here, or else use the byte at 0C00 to apply brakes emulating the keypress.  *Note that the values READ here run from 0 to 16384, but will not match exactly the values written. They seem to follow an exponential curve, being much lower at the low end (e.g. only 33% of what is written), gradually catching up to meet at the top.* | **Ok-SimC** | **Ok-SimC** |
| 0BC8 | 2 | Parking brake: 0=off, 32767=on | **Ok-SimC** | **Ok-SimE** |
| 0BCA | 2 | Braking indicator: brake applied if non-zero (1=Left, 2=Right, 3=both | **Ok-SimC** | **N/A** |
| 0BCC | 4 | Spoilers arm (0=off, 1=arm for auto deployment) | **Ok-SimC** | **Ok-SimE** |
| 0BD0 | 4 | Spoilers control, 0 off, 4800 arm, then 5620 (7%) to 16383 (100% fully deployed). The 4800 value is set by arming. Values from 0 to somewhere close to, but below, 4800 do nothing. The percentage extension is the proportion of the distance in the range 4800 to 16383, even though values 4800 to 5619 cannot be used—7% seems to be the minimum. | **Ok-SimC** | **Ok-SimC** |
| 0BD4 | 4 | Spoiler Left position indicator (0-16383) | **Ok-SimC** | **No** |
| 0BD8 | 4 | Spoiler Right position indicator (0-16383) | **Ok-SimC** | **No** |
| 0BDC | 4 | Flaps control, 0=up, 16383=full. The “notches” for different aircraft are spaced equally across this range: calculate the increment by 16383/(number of positions-1), ignoring fractions. See also offset 3BFA below. N.B. Do not expect to read this and see 100% accurate values. | **Ok-SimC** | **Ok-SimE** |
| 0BE0 | 4 | Flaps position indicator (left). This gives the proportional amount, with 16383=full deflection. It doesn’t correspond to the equally spaced notches used for the control lever. If you know the maximum deflection angle you can derive the current angle by ((max \* position indicator) / 16383). This only gives the (inboard?) trailing edge flaps. Please see offsets 30E0–30FF for greater details where needed. | **Ok-SimC\*** *(see note)* | **No** |
| 0BE4 | 4 | Flaps position indicator (right). This gives the correct proportional amount, with 16384=full deflection. It doesn’t correspond to the equally spaced notches used for the control lever. This only gives the inboard trailing edge flaps. Please see offsets 30E0–30FF for greater details where needed. | **Ok-SimC\*** *(see note)* | **No** |
| 0BE8 | 4 | Gear control: 0=Up, 16383=Down | **Ok-SimC** | **Ok-SimC** |
| 0BEC | 4 | Gear position (nose): 0=full up, 16383=full down | **Ok-SimC** | **Ok-SimC** |
| 0BF0 | 4 | Gear position (right): 0=full up, 16383=full down | **Ok-SimC** | **Ok-SimC** |
| 0BF4 | 4 | Gear position (left): 0=full up, 16383=full down | **Ok-SimC** | **Ok-Sim** |
| 0BFC | 1 | Flaps handle index (0 full up) | **Ok-SimC** | **Ok-SimC** |
| 0C02 | 2 | Aileron trim value/control: –16383 to +16383 [NEW!] | **Ok-SimC** | **?-SimC** |
| 0C04 | 2 | Rudder trim value/control: –16383 to +16383 [NEW!] | **Ok-SimC** | **?-SimC** |
| 0C20 | 9 | Local time in character format: “hh:mm:ss” (with zero terminator) | **Ok-Intl** | **No** |
| 0C29 | 5 | DME1 distance as character string, either “nn.n” or “nnn.” (when > 99.9 nm). The 5th character may be a zero or a space. Don’t rely on it. | **Ok-Intl** | **N/A** |
| 0C2E | 5 | DME1 speed as character string, “nnn” followed by either space then zero or just zero. | **Ok-Intl** | **N/A** |
| 0C33 | 5 | DME2 distance as character string, either “nn.n” or “nnn.” (when > 99.9 nm). The 5th character may be a zero or a space. Don’t rely on it. | **Ok-Intl** | **N/A** |
| 0C38 | 5 | DME2 speed as character string, “nnn” followed by either space then zero or just zero. | **Ok-Intl** | **N/A** |
| 0C4E | 2 | NAV1 OBS setting (degrees, 0–359) | **Ok-SimC** | **Ok-SimE** |
| 0C5E | 2 | NAV2 OBS setting (degrees, 0–359) | **Ok-SimC** | **Ok-SimE** |
| 0C6C | 2 | ADF1: dial bearing, where adjustable (in degrees, 1–360) | **?-SimC** | **?-SimE** |
| 0D0C | 2 | Lights, a switch for each one (bits from lo to hi):  0 Navigation  1 Beacon  2 Landing  3 Taxi  4 Strobes  5 Instruments  6 Recognition  7 Wing  8 Logo  9 Cabin | **Ok-SimC** | **Ok-SimE**  *(Intl decode)* |
| 0E8C | 2 | Outside Air Temperature (OAT), degrees C \* 256 *(“Ambient Temperature”)* | **Ok-SimC** | **No** |
| 0E90 | 2 | Ambient wind speed (at aircraft) in knots | **Ok-SimC** | **No-SimC** |
| 0E92 | 2 | Ambient wind direction (at aircraft), \*360/65536 to get degrees True. | **Ok-SimC** | **No-SimC** |
| 0EC6 | 2 | Pressure (QNH) as millibars (hectoPascals) \*16. |  |  |
| 11D0 | 2 | Total Air Temperature (TAT), degrees Celsius \* 256 | **Ok-SimC** | **No** |
| 132C | 4 | NAV/GPS switch, in FS2000 & FS2002. 0=NAV, 1=GPS | **Ok-SimC** | **Ok-SimE** |
| 2430 | 4 | Propeller 1 autofeather armed flag | **?-SimC** | **No** |
| 2434 | 4 | Propeller 1 feather switch | **?-SimC** | **?-SimE** |
| 2438 | 4 | Propeller 1 panel auto-feather switch *(There appears to be only one control, not one for each prop, so changing any of these 4 changes all 4)* | **?-SimC** | **?-SimE** |
| 2440 | 4 | Propeller 1 de-ice switch *(There appears to be only one control, not one for each prop, so changing any of these 4 changes all 4)* | **?-SimC** | **?-SimE** |
| 2530 | 4 | Propeller 2 autofeather armed flag |  |  |
| 2534 | 4 | Propeller 2 feather switch |  |  |
| 2538 | 4 | Propeller 2 panel auto-feather switch *(There appears to be only one control, not one for each prop, so changing any of these 4 changes all 4)* |  |  |
| 2540 | 4 | Propeller 2 de-ice switch *(There appears to be only one control, not one for each prop, so changing any of these 4 changes all 4)* |  |  |
| 2630 | 4 | Propeller 3 autofeather armed flag |  |  |
| 2634 | 4 | Propeller 3 feather switch |  |  |
| 2638 | 4 | Propeller 3 panel auto-feather switch *(There appears to be only one control, not one for each prop, so changing any of these 4 changes all 4)* |  |  |
| 2640 | 4 | Propeller 3 de-ice switch *(There appears to be only one control, not one for each prop, so changing any of these 4 changes all 4)* |  |  |
| 2730 | 4 | Propeller 4 autofeather armed flag |  |  |
| 2734 | 4 | Propeller 4 feather switch |  |  |
| 2738 | 4 | Propeller 4 panel auto-feather switch *(There appears to be only one control, not one for each prop, so changing any of these 4 changes all 4)* |  |  |
| 2740 | 4 | Propeller 4 de-ice switch *(There appears to be only one control, not one for each prop, so changing any of these 4 changes all 4)* |  |  |
| 281C | 4 | Master battery switch (1=On, 0=Off) | **Ok-SimC** | **Ok-SimC** |
| 2E04 | 4 | Autopilot max bank … *degrees. Works for the default FSX 737. (Writing here uses the AP MAX BANK INC and DEC controls to try to approximate to the angle written.)* | **OK-SimC** | **Partly (SimE)** *(see note)* |
| 2E80 | 4 | Master avionics switch (0=Off, 1=On) | **Ok-SimC** | **Ok-SimE** |
| 2E88 | 4 | Panel auto-feather arm switch (0=Off, 1=On) *(This is for #1 propeller, not all?)* | **?-SimC** *(see note)* | **No** *(see 2438)* |
| 2EE0 | 4 | Flight Director Active, control and indicator. 1=active, 0=inactive. | **Ok-SimC** | **Ok-SimE** |
| 3000 | 6 | VOR1 IDENTITY (string supplied: 6 bytes including zero terminator) | **Ok-SimC** | **N/A** |
| 3006 | 25 | VOR1 name (string supplied: 25 bytes including zero terminator) | **Ok-SimC** | **N/A** |
| 301F | 6 | VOR2 IDENTITY (string supplied: 6 bytes including zero terminator) | **Ok-SimC** | **N/A** |
| 3025 | 25 | VOR2 name (string supplied: 25 bytes needed including zero terminator) | **Ok-SimC** | **N/A** |
| 303E | 6 | ADF1 IDENTITY (string supplied: 6 bytes including zero terminator) | **Ok-SimC** | **N/A** |
| 3044 | 25 | ADF1 name (string supplied: 25 bytes including zero terminator) | **Ok-SimC** | **N/A** |
| 3101 | 1 | Alternator (1 = on, 0 = off), read for state, write to control *(This is for Alternator 1)* | **?-SimC** | **?-SimE** |
| 3102 | 1 | Battery (1 = on, 0 = off), read for state, write to control | **?-SimC** | **?-SimC** |
| 3103 | 1 | Avionics (1 = on, 0 = off), read for state, write to control | **?-SimC** | **?-SimE** |
| 3104 | 1 | Fuel pump (1 = on, 0 = off), read for state, write to control. For separate switches for separate fuel pumps see offset 3125. *(This is for Pump 1)* | **Ok-SimC** | **Ok-SimE** |
| 3118 | 2 | COM2 frequency, 4 digits in BCD format. A frequency of 123.45 is represented by 0x2345. The leading 1 is assumed. | **Ok-SimC** | **Ok-SimE** |
| 311A | 2 | COM1 standby frequency, 4 digits in BCD format. A frequency of 123.45 is represented by 0x2345. The leading 1 is assumed. | **Ok-SimC** | **Ok-SimE** |
| 311C | 2 | COM2 standby frequency, 4 digits in BCD format. A frequency of 123.45 is represented by 0x2345. The leading 1 is assumed. | **Ok-SimC** | **Ok-SimE** |
| 311E | 2 | NAV1 standby frequency, 4 digits in BCD format. A frequency of 113.45 is represented by 0x1345. The leading 1 is assumed. | **Ok-SimC** | **Ok-SimE** |
| 3120 | 2 | NAV2 standby frequency, 4 digits in BCD format. A frequency of 113.45 is represented by 0x1345. The leading 1 is assumed. | **Ok-SimC** | **Ok-SimE** |
| 3122 | 1 | Radio audio switches. Read/write bit settings as follows:  2^7 COM1 transmit  2^6 COM2 transmit  2^5 COM receive both  2^4 NAV1 sound  2^3 NAV2 sound  2^2 Marker sound  2^1 DME sound  2^0 ADF1 sound  For ADF2 sound, on FS2004, see offset 02FB. | **?-SimC** | **?-SimE** |
| 3123 | 1 | Radio Use/Standby swap toggles, Write bits to operate toggles. Don’t bother to read it, there’s no meaning to anything read.  2^3 COM1 swap  2^2 COM2 swap  2^1 NAV1 swap  2^0 NAV2 swap | **N/A** | **Ok-SimE** |
| 3125 | 1 | Separate switches for up to 4 Fuel Pumps (one for each engine). Bits:  2^0 Pump1,  2^1 Pump2,  2^2 Pump3,  2^4 Pump4.  (*see also offset 3104*) | **Ok-SimC** | **Ok-SimE** |
| 3300 | 2 | Additional radio and autopilot status indicators (read only access).  Allocation by bits which are set when true. Bit 0 = least significant (value 1):  0 = reserved  1 = good NAV1  2 = good NAV2  3 = good ADF1  4 = NAV1 has DME  5 = NAV2 has DME  6 = NAV1 is ILS  7 = AP NAV1 radial acquired  8 = AP ILS LOC acquired (incl BC—see 10)  9 = AP ILS GS acquired  10=AP ILS LOC is BC  11=good ADF2  12=NAV2 is ILS  13–15 reserved | **Ok-Intl** | **N/A** |
| 337C | 1 | Propeller de-ice switches, (1 = on, 0 = off), read for state, write to control: one bit for each prop, bits 0—3 = Props 1--4 | **?-SimC** | **?-SimC** |
| 337D | 1 | Structural de-ice switch, (1 = on, 0 = off), read for state, write to control*.* | **Ok-SimC** | **Ok-SimC** |
| 341E | 1 | Hydraulic switches, one bit for each: 2^0=pump1 ... 2^3=pump3 | **Ok-SimC** | **Ok-SimE** |
| 341F | 1 | Fuel cross feed switch | **Ok-SimC** | **Ok-SimE** |
| 3BF8 | 2 | Number of flap positions not including flaps full up. | **Ok-SimC** | **No** |
| 3BFA | 2 | Flaps détente increment. The full range of flap movement is 0– 0x3FFF (16383). Each détente position or “notch” is spaced equally over this range, no matter what flap angle is represented—a table in the AIR file gives those. To obtain the number of détentes, divide this increment value into 16383 and add 1. For example 2047 (0x7FF) would be the increment for 9 positions. | **Ok Intl/SimC** | **No** |

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