Review of

**Boeing MCP737 EL-series**

Produced by CPFlight



Hardware – the new generation of ways to expand the virtual experience. Flight simulation has been around for now many years, but lately I have noticed that many flightsim enthusiasts are taking the virtual experience to a more sophisticated level and have started the creation of their own home cockpits.

Looking back the past 5 - 10 years the most common hardware to be found was joysticks and basic throttles. Today this has completely changed and there are now several hardware manufactures that produces and delivers high quality modules, MiPs and controls that are more and more true to real life hardware.

This is a new and very exciting era within flight simulation and I have had the pleasure of testing a very interesting piece of hardware, the Boeing MCP737EL-series from CPFlight. This unit is a light replica of the real MCP found in the Boeing B737NG series and supports several flightsim platforms as FS9 and FSX together with various Boeing B737 add-ons.

Intro

I purchased this unit directly at CPFlight, Italy and the purchase and delivery went smooth and without any issues. A short delivery time using the transport company UPS, and with the possibility to Track & Trace the unit throughout the complete transport. Super!
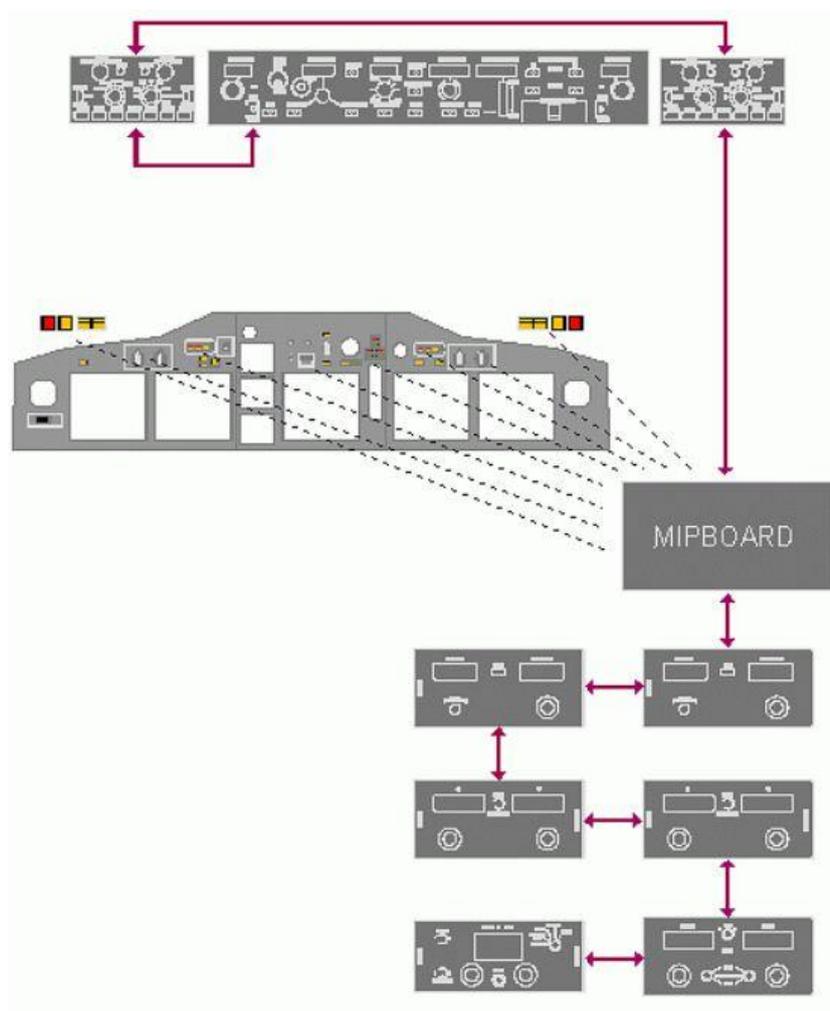
The MCP was packed in a hard cardboard box that had some internal support special made for the MCP. Furthermore the MCP was placed in an airtight plastic bag and the cardboard box was then filled up with small pieces of polystyrene to complete the protection during transport.

When purchasing the MCP unit it includes the MCP, a USB connection cable and a set of small clips/jumpers that are used when the firmware has to be updated.

## Installation & Programing

The MCP is a plug and play unit that connects to the computer by USB either directly or through a USB-hub preferable with an independent power supply. If the MCP is used as a stand-alone unit it can be powered directly by the USB connection, but if the MCP is used together with the various radios and the EFIS, an additional power supply is needed. This can be purchased directly at CPFlight.

A setup could look like the below where you have the MCP as primary unit and to this one you connect a string of other units as the EFIS and the various radios. The image below also includes the MIP-board which is a PCB that controls all the annunciators etc. for the complete setup. If you don't need the annunciators but just the MCP, EFIS and radios, they are just connected directly as a string without the MIP-board. This connection is done by a DIN 5-pole connection.

Even though the MCP is a plug and play unit it cannot function without the proper drivers installed. Standard drivers can be downloaded from CPFlight website that will cover Boeing B737 variants as e.g. the default FS9/FSX and the PMDG737NGX for FSX etc.

Other variants of the B737 as e.g. the PMDG for FS9 will require payware drivers that can be purchased and downloaded from FlightSimLabs website.

One note though is that to be able to use the MCP together with the PMDG 737NGX the simmer will have to manually add two lines into the 737NGX_Options.ini file but this is very well described in the downloadable manuals etc. that you can find on CPFlight website.

Here below is a matrix of which B737 variant that the MCP currently supports and to what detail the MCP support the specific add-on.

| MCP737EL | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | F/D | A/T ARM | N1 | SPEED | C/O | LVL CNG | HDG SEL | BANK | VNAV | LNAV | VOR LOC | APP | V/S | CMD A/B | CWS A/B | DISENGAGE BAR | ALT/SPEED INT |
| FS9 (default B737) | √ | √ | √ | √ | √ | √ | √ | | | √ (1) | √ | √ | √ | √ | | √(2) | |
| FSX(default B737) | √ | √ | √ | √ | √ | √ | √ | √ | | √ (1) | √ | √ | √ | √ | | √(2) | |
| PMDG for FS9 (Flightsymlab driver) | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ |
| LevelD 767 | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | |
| Project Magenta | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ |
| PMDG737NGX | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ |
| Flightdecksoftware | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | |
| Sim-Avionics | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | |
| X-Plane | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | | √ | |
| PROSIM737 | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | |
| iFly737 (FS9 & FSX) | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | |
| aeroSystem737 | √ | √ | √ | √ | √ | √ | √ | | √ | √ | √ | √ | √ | √ | | √ | |
| FsXPand FMS | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | |
| OPUS FSX | √ | √ | √ | √ | √ | √ | √ | | √ | √ | √ | √ | √ | √ | √ | √ | √ |

The way that the MCP communicates with your flightsim platform (e.g. FSX) is through the firmware. CPFlight has chosen the idea that the MCP has its own memory hereby enabling the possibility to upgrade the firmware. The newest edition can be downloaded at CPFlight website and by using the set of jumpers included with the MCP and following the manual, the simmer can easily upgrade the firmware by him or herself.

After I had installed the drivers to my configuration (FSX, Default B737 and PMDG 737NGX) I plugged in the MCP and started up FSX. I setup a flight from EKBI and when FSX had finished loading the flight I went to the topbar menu Add-Ons and selected the CPFlight entry. Now the computer asked me which communication port the MCP were plugged into and I selected the corresponding port and clicked apply. Now my screen went back to the FSX flight and the MCP light up and was now ready to use.

Basically it is really easy to set up, but I would most certainly recommend reading the instructions in the included manual prior to the installation. The manual is well written and provides quite a few good tricks that answer the most FAQs for sure. No programming of the MCP is needed – just download and install the drivers and you are ready for take-off.

<u>Look & Feel</u>

The MCP is a real size scale 1/1 of the real Honeywell MCP used in some of the Boeing B737 aircrafts. It is made as one large PCB with all buttons etc. mounted directly on to it and then packed in a metal casing with a front plate made from laser cut metal with engraved legends.

The pushbuttons are soft press buttons with dual LEDs that works perfectly and has a very nice realism to them. The rotators are single encoders with standard caps and the few switches are also standard switches.

The reaction/response time when making changes on the MCP until the change is implemented and shown on the FSX MCP is only ½ - 1 second. This is quite fast and I was very impressed by it since this is actual data that has to be transferred from the MCP and into FSX.

Another really superb feature that this MCP unit has is the backlight. The MCP is fully backlighted and this can be controlled in various ways. One way is to connect an external switch to control the backlight – this switch can be connected on the back of the MCP where there is a socket for this feature.

Another way is the default way where the backlights are connected to the NAV light On/Off switch meaning that if the NAV switch is ON, the MCP is fully backlight etc.

Mounting the MCP can be done in various ways but here CPFlight has already helped out. There is a corner hole in each corner so that mounting can be done into a frame just by applying a screw into each corner.

For the flight simmer that does not have a home cockpit with frames etc., CPFlight has created a desktop metal frame that can support both the MCP and the captains EFIS. This desktop frame can be purchased directly from CPFlight also.

The MCP is fully operational and is pure eye candy. The resemblance with the real world pictures that I could find of this MCP version is stunning and the quality is certainly high. The fact that the resemblance with the real world Honeywell MCP is spot on and that the MCP is made from metal etc. really adds a huge amount of realism to the unit and my experience of the product.

There were only a few things that I noticed was not 100% accurate, as example the HDG selector rotator which should have been a dual rotator to support the bank level selection. This is however not created in that way on the MCP-EL but that <u>does not</u> mean that the feature is not available.

CPFlight has included this feature but this is activated by pressing and holding the HDG SEL button for 2 seconds. Hereafter the HDG display converts to be used as the bank level display and the HDG selector rotator can now be used to change the input of bank level in the specified degree settings. To exit the change simply just press the HDG SEL button once and the display and the rotator is now again functioning as the HDG selector.

The second difference I noticed was the color of the MCP. The CPFlight MCP is blue and perfectly colored but the images that I found of the real MCP had different color shading. This I am positive is just because the images that I found was all of used MCPs which could explain the difference, but this is of course just a minor detail.

The last difference is the vertical speed rotator. In the real MCP this rotator seems to be smaller than the CPFlight's one, but again this is just a very small detail which has no effect on my overall experience of the product.

*Real*



*CPFlights*

In regards of how reliable the MCP is, well that is quite difficult for me to verify since I have not yet had the MCP for that long time. I have tried to find an answer for this in various forums and what I found was that the MCP is very reliable even after several years of daily use.

Functionality

The functionality of the MCP is 99% according to the real life MCP and CPFlight has succeeded in creating a very unique and exceptional MCP that supports all the functions that the real MCP also supports.

There are some limitations in regards to the usage of the MCP with the default B737, but this is simply because the default B737 does not support certain features, as e.g. the LNAV and VNAV together with functions as autoland usage with both CMD A and B and the additional operating functions as CWS A and B. These functions are however supported in add-ons as the PMDG 737 NGX and Project Magenta etc.

By using the MCP with one of these add-ons enables the simmer to gain the best experience of how complex and well made this unit actually is.

Another example of what I experienced was in regards to the FD switches. Previously I had tested other MCPs where these switches was just working as one, meaning that switching on the left FD would switch on the FD bar in both PFDs. This I now saw was not the outcome when using the MCP together with the PMDG 737 NGX – now I could select the FD left / right and only the corresponding FD bar would activate. Also the CRS rotators I now found to be independent instead of one combined unit.

Compatibility

The MCP can interface with flightsim platforms as FS2000, FS2002, FS2004 (FS9) and FSX together with Project Magenta and X-Plane. I have not been able to verify if the MCP can interface with P3D, however this I do believe that is possible but cannot verify it.

In regards to compatibility with various add-ons, then the MCP supports e.g. default B737 for both FSX and FS9 together with PMDG 737 NGX with CPFlight freeware driver. To support other add-ons will require additional drivers depending on which add-on.

E.g. PMDG 737 for FS9 will require the payware driver from FlightSimLabs etc. Please view the MCP737EL matrix located on page 3 to get a full list of add-ons that the MCP currently supports.

The MCP EL is also compatible with below mentioned CPFlight hardware:

| | |
|---|---|
| EFI737PRO | EFIS PRO-series |
| EFI737EL | EFIS EL-series |
| COM | COM radio |
| NAV | NAV radio |
| ADF | ADF radio |
| ATC | ATC radio / Transponder |
| ASP | Audio Selection Panel |
| WXR | Cargo WXR Panel |
| FIRE737 | Fire 737 panel |
| FCDP | Flood & Cabin Door Panel (both versions) |
| MIP737 | MIP737 Expansion Connection PCB |
| MIP737ICS | MIP737 Connection PCB |

EL versus PRO

The main differences between the EL version and the PRO version from CPFlight are:

| | MCP EL-series | MCP PRO-series |
|---|---|---|
| Scale | 1/1 | 1/1 |
| Replica of | Honeywell MCP (old) | Collins MCP (new) |
| Front Panel Lighting | Simple backlighted by LED's placed on the main PCB | Complex with light diffusion and an additional PCB with SMD LED's |
| Pushbuttons | Small rectangular with dual dot green LED's and legends printed on the MCP's front plate | Large square with single dot green LED's and legends printed on the pushbuttons |
| Disengage A/T Arm Switch | Manual switch | Electromagnetic meaning that it will disengage automatically on touchdown during autoland etc. |
| Knobs | Standard knobs for rotaries | Custom made knobs for rotaries with a more real look |
| Bank Selection | Press and hold the HDG SEL button for 2 seconds and the HDG display now functions as bank selection | Uses a dual concentric knob to directly select the bank angle limit |
| Display | Amber | White |
| Price | App. EUR 600.- incl VAT | App. EUR 1,200.- incl VAT |

Conclusion

The conclusion I have from testing this piece of hardware produced by CPFlight is, that the MCP is a very high quality product that features all modes and characteristics that the real world Honeywell MCP features.

The MCP is produced with a high level of precision and with the usage of high quality components to ensure long durability. Professional electronics and driver programming ensures the MCP high interface quality and the realism in regards to look & feel is awesome. Metal casing, laser cut front plate with engraved legends, backlighted and a true to real life scale of 1/1 creates perfection on a very high level.

The MCP is consistent down to even the very smallest details and absolutely gave me an exceptional added feeling of realism – this especially when I combined the experience with the PMDG 737 NGX.

Included are documentation and an easy to read manual that will answer most FAQs. Firmware upgrades can be downloaded directly at CPFlights website together with all necessary CPFlight drivers which are all freeware.

Excellent and professional support through mail and the online support forum made it easy to get help if needed. In short I can describe the MCP the following way:


**Excellent, Awesome, Superb, Great Realism, Professional, a MUST HAVE for sure**


Usage is realistic and the fact that the response time from input on MCP to execution within FSX is so short, really adds to the realism and the overall experience of the MCP.

I rate this MCP EL-series from CPFlight with a full 5/5 star rating together with the Rays Aviation Gold Award and I thank CPFlight for contributing to the flightsim community with such an excellent piece of hardware.

I will most certainly recommend fellow simmers to purchase this MCP – it is worth every cent in my opinion.


**Rays Aviation**





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