



DCP-CCP PANELS

Manual



TABLE OF CONTENT

(click on titles to be redirected)

1. GENERAL DESCRIPTION

1.1. [Presentation](#)

1.2. [Diagram](#)

2. FEATURES

2.1. [Cpt F/O switches](#)

2.2. [Removable panels](#)

3. SYSTEM OVERVIEW

3.1. [Arduino](#)

3.2. [Mobiflight](#)

3.3. [Hardware config file](#)

3.4. [Software config file](#)

3.5. [System diagram](#)

4. BACKLIGHTING

5. INSTALLATION



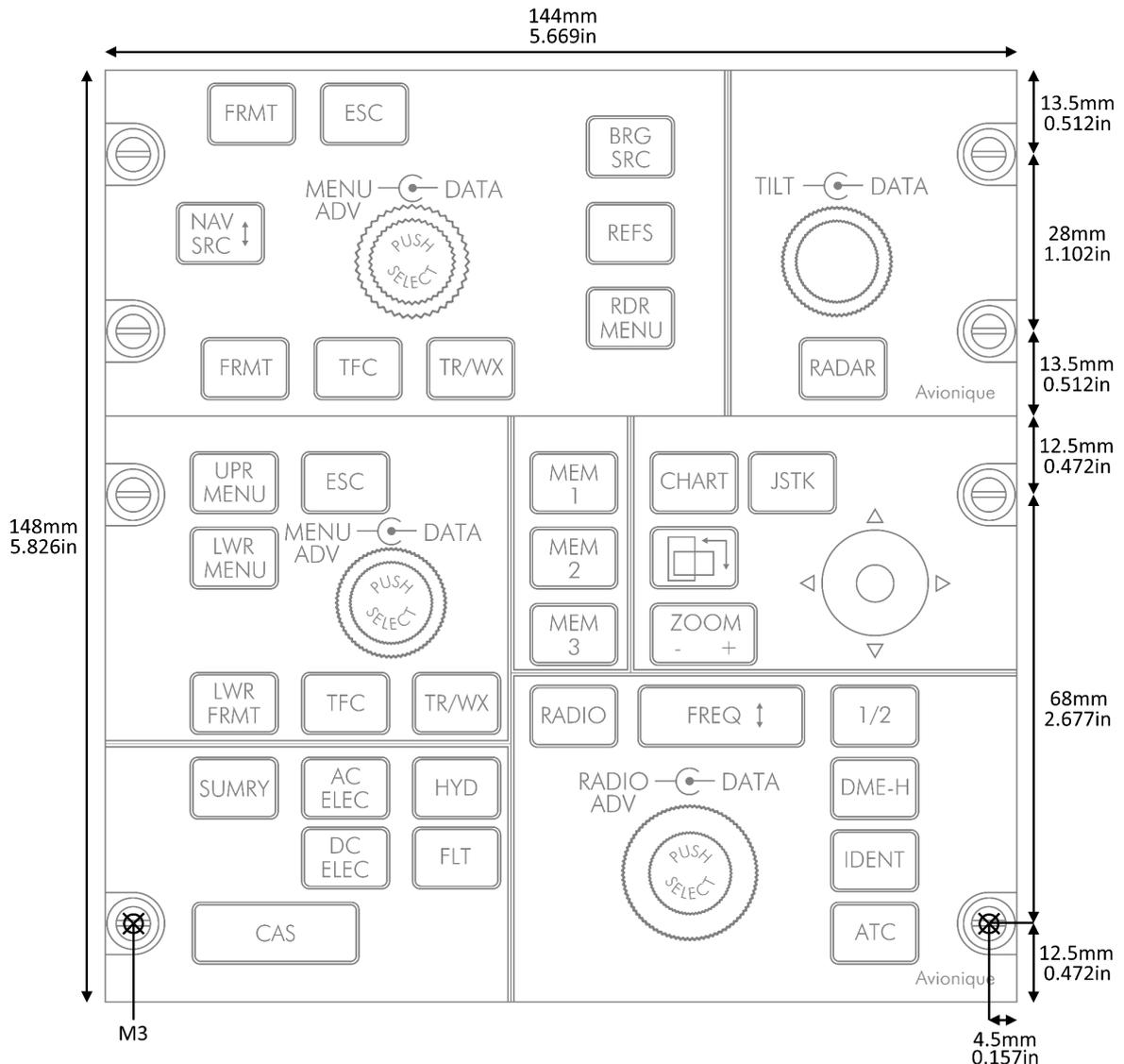
1. GENERAL DESCRIPTION

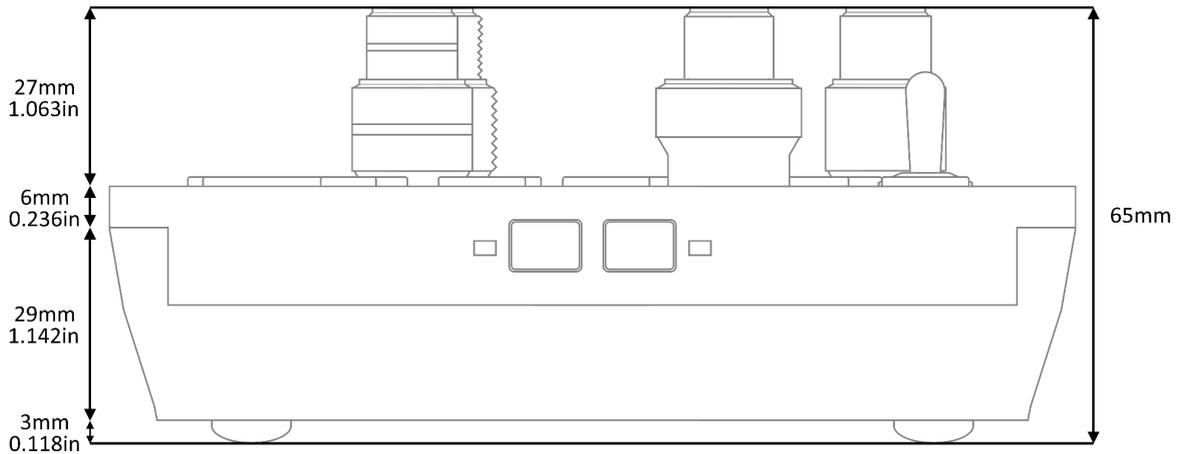
1.1. Presentation

The DCP and CCP panels are a 100% replica of those found in the Bombardier Challenger 605/650. The units recreate the same look, feel and functionalities. They are located on the center pedestal and each pilots have their own set of DCP and CCP.

DCP stands for **Display Control Panel**, it's the primary pilot interface that sets the information presented on the PFD (such as nav and bearing sources, display range, radar, traffic etc.) while the **CCP Cursor Control Panel**, allows the pilot to select the information presented on the MFD (such as maps setting, systems, checklists, charts etc.).

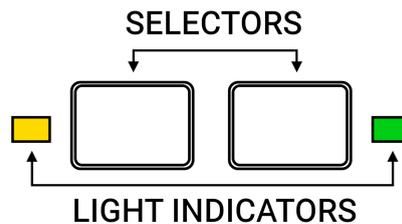
1.2. Diagram





2. FEATURES

2.1. Cpt F/O switches



Use the two buttons on the front face of the panel to select whether to control the DCP and CCP on the left or right side of the cockpit. An indicator light will show the active side, with yellow indicating the left/captain side and green indicating the right/first officer side.

2.2. Removable panels

The panels are detachable from the base and can be installed anywhere. To plan for space and dimensioning of the referenced holes, refer to the diagram above. In this case, you can unscrew the *micro USB* to *USB-C* adapter from inside the casing and use it for the connection. Alternatively, after disconnecting the *micro USB* cable from the PCB, you can directly connect a *micro USB* cable (not provided) from the computer.

3. SYSTEM OVERVIEW

The DCP and CCP panels are delivered with the firmware and their hardware config file uploaded. The software config file is configured and available on the website.

3.1. Arduino

The system is based on an Arduino board to which all buttons, encoder, leds are connected. It serves as the link between the hardware inputs/outputs and the computer.

3.2. Mobiflight

To translate the actions coming from this board, we use the industry-leading software MobiFlight, which is reliable and allows extensive customization. In order to operate, MobiFlight needs to have its firmware installed on the Arduino board of the panel, along with a configuration file (.mfmc), referred to as the **Hardware config file**.

For more information on MobiFlight, please refer to the [official website](#).

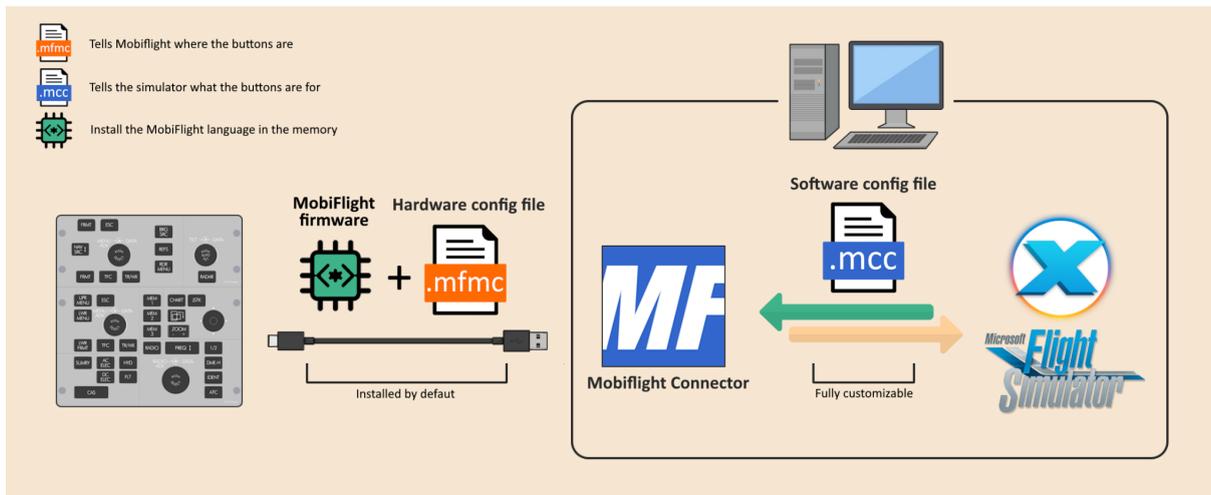
3.3. Hardware config file

The Hardware config file (.mfmc) provides MobiFlight information about the components present in the panel and connected to the Arduino board. It is installed alongside the firmware on the Arduino board and can be updated through **MobiFlight Modules** in the software menu. It can have multiple modules connected and used by MobiFlight simultaneously. This config file is not used to configure commands for the simulator, unlike the software config file.

3.4. Software config file

The software config file (.mcc) assigns commands to the components identified by the hardware config file. It is constantly open in the main window of the MobiFlight software and is activated using the **Run/autorun** button. Only one software config file can be active at a time. Therefore, in the case of multiple connected hardware modules, all commands from the modules are added to the active software config file.

3.5. System diagram



4. BACKLIGHTING

The backlight is powered by 12V through the IN jack located at the back of the unit. The second OUT jack is used to supply 12V to the backlight of another panel, reducing the number of cables and power supplies needed.

5. INSTALLATION

For detailed and updated installation instructions, please visit the website in the **INSTALLATION** section or click [here](#) to be redirected.

