

Flight Crew A320

MAIN OPS MANUAL

Introduction:

This program adds a flight and cabin crew to Airbus aircraft in Microsoft Flight Simulator, Lockheed Martin Prepar 3D and FSX (Steam and Boxed MS versions) using a “**Button Control**” interface method.

This program attempts to follow stock, real-world Airbus A320 procedures from the Airbus FCOM as much as possible.

This program also features a brand-new User Interface system designed to keep the learning curve to an absolute minimum so you can spend more time flying and less time reading. It also features some new functionality, such as auto-respond checklist options.

Compared to other FS2Crew’s, this is more of a “light” product aimed at users who want a realistic Airbus ambiance featuring authentic Airbus Checklists, PA announcements, Cabin announcements and FA dialogues, but who do not want to read a 100-page technical manual or have the simulated copilot do most of the “the work”.

As this program uses “Button Control”, there are no complex commands to memorize. Users need only press a button to proceed along a linear path.

This program is also different from other FS2Crew’s in that it uses a stand-alone EXE rather than a gauge file that is added to the host aircraft’s panel.cfg file. Accordingly, you must manually start FS2Crew each time you want to use it. It will not load automatically when you start the sim.

In addition (and at least at the time of writing) compared to other FS2Crew’s this product will appeal to users who want to perform most of the “work” (i.e., button pressing) themselves, that is at least until Microsoft updates their SDK so FS2Crew can control all the buttons in the Airbus directly.

Features:

- ✓ Authentic A320 Checklist.
- ✓ First Officer Interaction.
- ✓ Procedures follow stock Airbus procedures (where possible).
- ✓ Voice Sets: US, UK, and EU (German).
- ✓ FA Cabin PA’s (users can also swap in their own custom Cabin PAs now)
- ✓ Purser Communications.
- ✓ New User Interface system for maximum ease of use and the lowest possible learning curve.
- ✓ New audio system.
- ✓ New functions (i.e., Auto Checklist Respond).
- ✓ Turn-Arounds.
- ✓ And more!

Supported Aircraft Limitations:

Default Airbus (Microsoft Flight Simulator):

FS2Crew can currently control the gear, flaps, spoiler handle and a couple of the exterior lights. All other buttons and switches (for example, the APU start buttons) are not accessible to FS2Crew due to current SDK limits. Accordingly, most of the flows that would typically be performed by the Pilot Monitoring must be performed by you, the simulated Captain and Pilot Flying.

However, as Microsoft updates their SDK to allow for greater control of Airbus over time, we will update the product accordingly so your copilot can perform his or her flows on their own.

In the meantime, we suggest running many of the checklists as **READ-AND-DO**.

FSLabs Airbus and Aerosoft Airbus (Prepar 3D and FSX):

In these aircraft, FS2Crew only serves as an audio checklist app. These aircraft will **not** be updated with additional FS2Crew interaction since other FS2Crew's currently perform that job.

When using these aircraft, you should **uncheck** **DOOR CONTROL**, **ERROR CHECKING** and **FLAP CONTROL** on the Settings Panel.

Door Control

Error Checking

Flap-Gear Ctrl

For **FSLabs Airbus users**, you should **also** check **GENERIC ALTIMETER** because the altimeter setting is unreadable in the FSLabs:

Generic Altim

If you want an FO / Pilot Monitoring who actively performs all his real-world flows in FSX/P3D, you should use one of the traditional FS2Crew products that was exclusively programmed for the FSLabs or Aerosoft Airbus. They are available, for FSX and P3D only, at: <https://www.fs2crew.com>.

Developer Sidebar: The reason we made Flight Crew A320 available for P3D and FSX is because there are many users who only want audio checklists in the FSLabs and Aerosoft Airbus, especially if they are running a home cockpit setup. Like with the default Airbus, we suggest running checklists as **READ-AND-DO**.

Important Links:

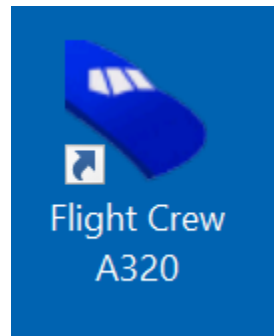
[FS2Crew Website](#)

[FS2Crew Support Forum](#)

LET'S GO FLYING!

STEP 1 – INSTALLATION AND REGISTRATION:

1. Unlike previous FS2Crew's, FS2Crew does not need to be installed in the FS main folder. This version of FS2Crew can be installed **anywhere**, although by default it will select your Program Files folder.
2. After installing, you will notice a new icon on your desktop that looks like this. One icon will specify the MSFS version the other will specify the FSX/P3D version.



STEP 2 – CREATING KEYBOARD ASSIGNMENTS

When interfacing with FS2Crew, you can either press buttons directly on the panel or you can use Hotkey assignments to control select functions.

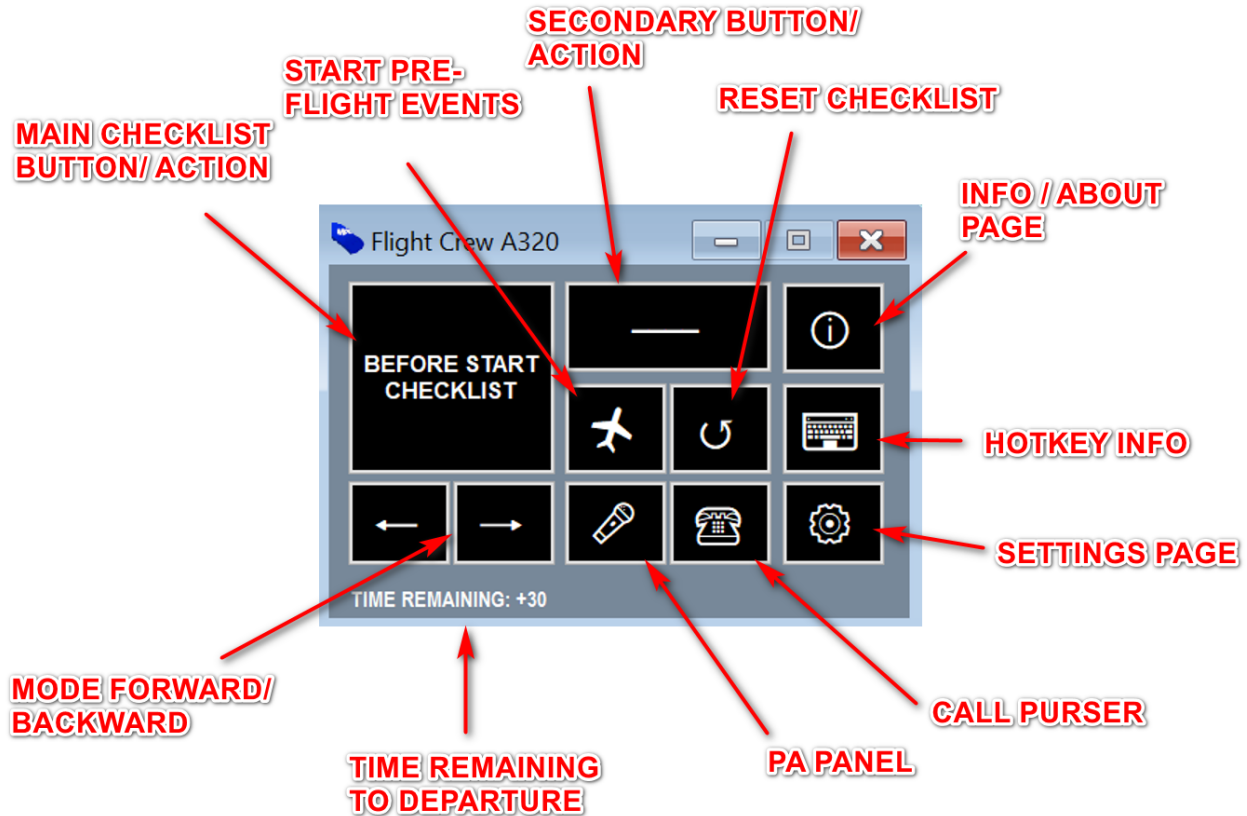
The current hotkeys are listed on the SETTINGS PANEL.

You can change them if desired.

If you do NOT want a hotkey to be active, select the BLANK space at the top of the hotkey drop down list.

The Flight Simulator window must be in focus for the Hotkeys to work! The Keyboard Icon on the Main Panel must not be crossed out!

STEP 3 – UNDERSTANDING THE MAIN PANEL



Notes:

1. The PRE-FLIGHT EVENTS button is only visible when the engines are off.
2. TIME REMAINING is only visible when the Pre-Flight Events are running.
3. When the Pre-Flight Events are running, click the + button to fast forward the time down. The + symbol will take the place of the airplane symbol when the Pre-Flight events are running.
4. You can start from any desired Mode by advancing the mode using the arrow buttons.
5. If the Main Panel minimizes by itself when you change focus to the aircraft, press the hotkey you created to re-open it, or press the FS2Crew icon on the bottom of your screen. If you have a 2nd monitor, the easiest solution though is to just keep the Main Panel on your 2nd screen.
6. If the FS2Crew Panel is in focus the icon below will be displayed on the Main Panel. It means that the Hotkeys are **not** available. The MSFS window must be in focus for the hotkeys to work. You can put the MSFS window in focus by clicking your mouse inside of it.



STEP 4 - UNDERSTANDING THE SETTINGS PANEL

Notes:

1. Most items are self-explanatory; however, you can enable “**Show Tooltips**” in the sim and mouse over each selection to learn more about each item.
2. If you select your headset for your Audio Device, only crew sounds will go through your headset. FA Cabin PA’s will still go through your main speakers.

Audio Options

Output Audio Device:
default device

Crew Volume

Cabin PA Volume

AUDIO TEST

Crew Accent

US
 UK
 EU
 EU-2 (HS Filter)
 US-2 (Female)

Takeoff Flap

Config 1 + F
 Config 2
 Config 3

Altimeter Units

In HG
 HPA

Checklist Options

Auto Respond
 Secure Procedure
 Error Checking

Misc

Door Control
 Jetway Control
 Loadsheet
 10K Flow >18K
 Show Tooltips
 Flap-Gear Ctrl
 Generic Altim
 Force Panel Front
 Start Seq 1->2
 Transparency

Takeoff Speeds

V1: 130
VR: 140
V2: 150

VFE Limit by Model

A320

Hot Keys

Main Action
C
Secondary Action
D
Open Main Panel
N

STEP 5 – AFTER THE PLANE HAS LOADED – RUNNING THE (OPTIONAL) PRE-FLIGHT EVENTS

1. Let us assume the plane is at the gate and the engines are shut down. If desired, you may run the Pre-Flight events by pressing the airplane icon on the Main Panel, but that is strictly optional. **If you cannot see the airplane icon, you need to shut your engines down first!**

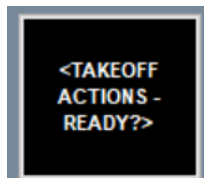


2. If you run the Pre-Flight events, FS2Crew will open and close the cabin door and connect the jetway (assuming you did not disable that functionality on the Settings page). During the Pre-Flight event phase, you will also experience dialogues with the ground crew and FAs. Note that your response is automatic. You do not need to press a button to respond.
3. If you run the Pre-Flight events, you may fast forward the time down by pressing the + symbol on the FS2Crew Main Panel. We do not expect you to sit for 30 minutes! The + symbol will take the place of the airplane icon when the Pre-Flight events are running.



STEP 6 – WHAT IF YOU WANT TO START IN THE TAKEOFF POSITION?

1. If you load FS2Crew and the engines are running, FS2Crew will automatically advance you to Takeoff Mode, but you can still manually change the mode as desired using the arrow buttons.



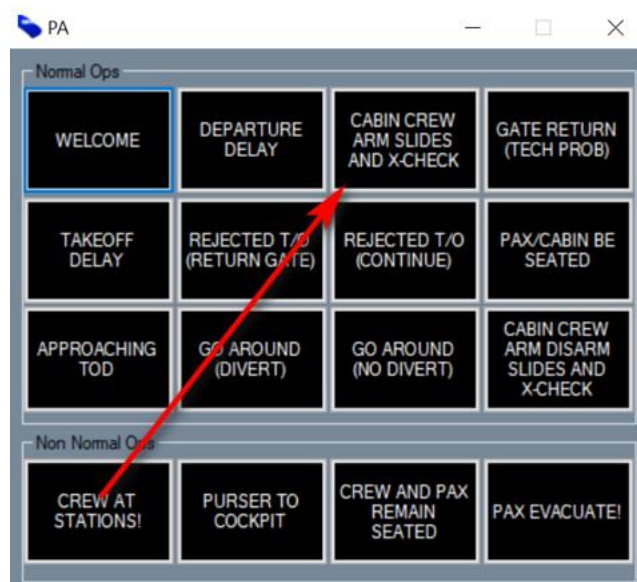
STEP 7 – A FLIGHT FROM A TO B SUMMARIZED IN A FEW EASY STEPS!

1. Load the Airbus.
2. If desired, run the Pre-Fight events (ensure the engines are shut down first) by pressing the airplane icon.



3. Establish electrical power (start the APU if desired). Next, setup the overhead panel, MCDU and console panels as desired and prepare the flight deck for departure.

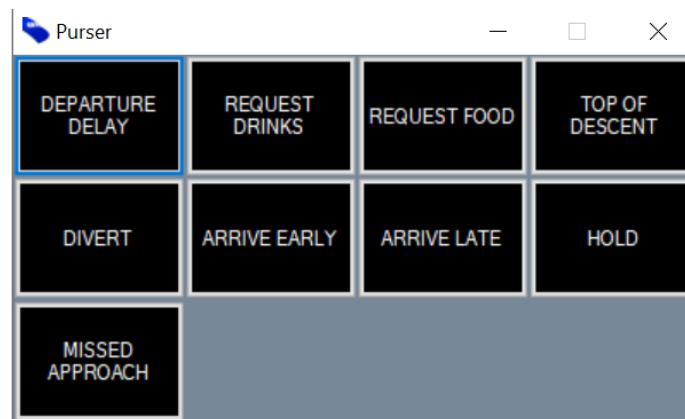
4. When desired, run the **BEFORE START CHECKLIST (TO THE LINE)** by pressing the button directly on the main panel or by using the hotkey. Note that unless you have **AUTO RESPOND** selected on the Settings Panel, you need to press the main button each time to respond and advance.
5. Please refer to the included A320 paper checklist if desired.
6. When desired open the PA panel and announce: **CABIN CREW ARM SLIDES AND CROSSCHECK.** To open the PA panel, press the microphone icon on the FS2Crew Main Panel.



7. Prior to pushback, run the **BEFORE START CHECKLIST (BELOW THE LINE)**.
8. When ready for engine start, announce **STARTING ENGINE 2**. Then start engine two.
9. After Engine 2 has stabilized, announce **STARTING ENGINE 1** and manually start engine one. Note that in an Airbus, the Captain (that is you in this simulation!), starts the engines, not the FO.
10. After both engines have stabilized and the pushback is complete, run the **AFTER START CHECKLIST**. Your copilot will set the takeoff flap and arm the spoiler immediately after you call for this checklist then he will read the first item in the checklist. You need to set the Takeoff Stabilizer trim.
11. After the After Start checklist is complete, perform the Flight Control check. Note in the real-world the Flight Control check would typically, but not necessarily, be done during taxi, but for the sake of user convenience we will have you do it prior to taxi. Press the Main button to announce: **FLIGHT CONTROL CHECK**, then move the side stick in the following order:

- Full back
 - Full forward
 - Neutral
 - Full Left
 - Full Right
 - Neutral
12. After the elevators and ailerons have been checked, the Captain will automatically announce **RUDDER**. You should then move the rudder:
- Full Left
 - Full Right
 - Neutral
13. Your copilot will then perform his/her Flight Control check. The FS2Crew Main Button will indicate “**STANDBY**” while the FO performs his Flight Control Check.
14. Prior to starting the taxi, perform the **Taxi Flow**:
- Radar On
 - Predictive Windshear Auto
 - Terrain on ND as required
 - Autobrake Max (**Performed by the First Officer**)
15. Announce **CLEAR LEFT SIDE** and start the taxi.
16. You are responsible for exterior lights, so set the Nosewheel light to Taxi.
17. Announce **BRAKE CHECK** then tap the brakes.
18. Run the **BEFORE TAKEOFF CHECKLIST** to the line.
19. When cleared on to the runway, perform the **Line Up Flow**:
- Runway Turn Off Lights On and Nose Light to Takeoff
 - TCAS to TARA
20. Run the **BEFORE TAKEOFF CHECKLIST** below the line. Your copilot will make a PA immediately after you call for the checklist below the line intended for the cabin crew: CABIN CREW SEATS FOR TAKEOFF.
21. When Takeoff Clearance has been received, ask your copilot if he or she is **READY**. You will then automatically announce **TAKEOFF**.
22. Select Landing Lights On.
23. Set the thrust lever to FLEX or TOGA, then press the Main Button to announce the FMA.
24. As you roll-down the runway, your copilot will announce **THRUST SET, 100 KNOTS, V1** and **ROTATE**.
25. When your copilot calls **ROTATE**, pitch the nose up to 15 degrees.
26. When the copilot calls **POSITIVE CLIMB**, command **GEAR UP**.
27. When desired, turn on the autopilot or command your copilot to turn on the autopilot for you.

28. Press the Main Button to clean up the flaps on schedule. When the flaps are up, your copilot will disarm the spoiler and set the nose wheel and runway turnoff light to off.
29. Run the **AFTER TAKEOFF CLIMB CHECKLIST** to the line.
30. Passing the Transition Altitude, set your altimeter to STD on the Airbus's EFIS panel, then press the **Secondary Button** to announce **SET STANDARD**. Your copilot will then perform an altimeter cross-check.
31. Run the **AFTER TAKEOFF CLIMB CHECKLIST** below the line.
32. Passing 10,000, the FO will turn off the Landing Lights.
33. If you would like the Purser to bring you a meal, phone the Purser by pressing the phone icon.



34. In cruise, prior to setting up the aircraft for the descent and arrival, pass control to your copilot.
35. Set up the aircraft for arrival (check the arrival weather, setup the MCDU, and select AUTOBRAKE LOW.)
36. After you have finished setting up for arrival, retake control and start your descent when ready.
37. At 20,000 feet, your copilot will make a PA: **CABIN CREW PREPARE FOR ARRIVAL**.
38. Passing the Transition Level, set your altimeters to local pressure then press the **Secondary Button** to announce the altimeter change. Your copilot will perform an altimeter cross-check.
39. Run the Approach Checklist.
40. Passing 10,000, the FO will turn the Landing Lights On.
41. Extend the flaps on schedule by pressing the Main Button as desired.
42. Your copilot will arm the spoiler and set the nose light to taxi and turn on the runway turnoff light after you call **GEAR DOWN**.
43. Once the flaps in the full position, your copilot will make a PA: CABIN CREW SEATS FOR LANDING.
44. Run the **LANDING CHECKLIST**. Note that **GO AROUND FLAPS** is now available as a **Secondary Button** option in case you need to go around. Note that in the checklist FS2Crew cannot read the position of the autobrake switch, so we assume you're using low (the most typical setting).

45. At 2500 (Radar Altimeter Alive) and 1000 RA, the Captain will announce **CHECKED**.
46. At Minimums, announce **CONTINUE** or press the Secondary Button to announce **GO AROUND FLAPS**.
47. Land the airplane.
48. The copilot will announce the position of the spoilers, reversers and if the airplane is decelerating. He or she will also announce 70 KNOTS, at which point you should set your reversers to idle reverse if they are not already there.
49. Exit the runway and disarm the spoilers. That is your copilot's trigger to perform his After Landing flow. Note: If using the **FSLabs Airbus**, you must press the Main Button (either via your hotkey or via the panel) to trigger the FO's after landing flow since the program cannot read the position of the spoiler handle.



During his After Landing flow, your copilot will raise the flaps; however, the remaining actions need to be performed by you:

- Landing Lights Retract
- Strobe Lights Auto
- Other Lights as Required
- Radar Off
- Predictive Windshear Off
- Engine Mode Selector Normal
- Flaps Retract (**Performed by the First Officer**)
- TCAS Standby
- ATC as required
- APU On (**Performed by the First Officer – Default MSFS A320 only**)
- Anti Ice as required

50. Run the **AFTER LANDING CHECKLIST**.
51. As you turn into the gate, press the Main Button to command **TAXI LIGHT OFF**. You do not want to blind the ramp workers!
52. After arriving at parking at the gate, run the first part of the **Parking Flow**:
 - Parking Brake On
 - APU Bleed On (**Performed by the First Officer – Default MSFS A320 only**)
 - Engines Off (Ensure you have a power source first or you will lose power!)

53. Make a PA via the PA Panel: **CABIN CREW DISARM SLIDES AND CROSS CHECK.**

54. Perform the 2nd part of the **Parking Flow**. The trigger for the FO is: beacon off, engines off.

- Seatbelt Signs Off
- Beacon Off
- Anti Ice Off (**Performed by the First Officer**)
- Fuel Pumps Off (**Performed by the First Officer – Default MSFS A320 only**)
- ATC (Transponder as required)

55. Run the Parking Checklist. The jetway will connect and the cabin door will open after you call for the checklist.

56. If, in the Settings Panel you ticked **SECURE PROCEDURE** in the CHECKLIST OPTIONS, perform the shutdown flow after announcing the Secure Procedure.

- Parking Brake On
- ADIRS Off
- Crew Oxygen Supply Off
- Exterior Lights Off
- APU Bleed Off
- APU Master Off
- Emergency Exit Light Off
- Signs Off
- External Power as Required
- Wait 2 minutes, then Battery 1 and 2 Off

57. When ready, run the **SHUTDOWN CHECKLIST**.

REJECTED TAKEOFF PROCEDURE

1. To reject the takeoff, press the Secondary Button to announce **STOP!**



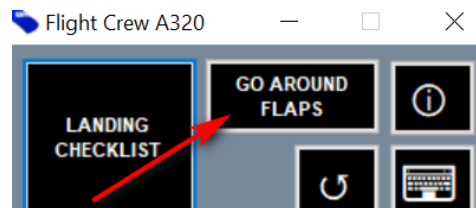
2. **Optional:** After the aircraft comes to a stop, open the PA Panel, and announce **ATTENTION! CREW AT STATIONS!**

SCENARIO CHOICE:

- ✚ If you want to return to the gate: Run the After Landing Checklist and continue normally to the gate.
- ✚ If you want to try another takeoff: Use the mode advance arrow buttons to return to the **AFTER START CHECKLIST** position. You will need manually to set the takeoff flaps again. Run the After Start Checklist and continue normally from that point.

GO AROUND PROCEDURE

1. If you need to go around, press the Secondary Button (or your preselected hotkey) while **GO AROUND FLAPS** is visible in the Secondary Button box to announce: **GO AROUND FLAPS**.



2. Your copilot will raise the flaps up one level and then announce **POSITIVE CLIMB** when a positive rate of climb has been established. Command **GEAR UP** and continue the climb like a normal takeoff.

-MANUAL END-