



# LUVCARS 5 User Guide

Revised: 08/29/2024

Proprietary | Southwest Virtual Airlines

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## Table of contents

Table of contents .....	2
Changelog .....	3
Purpose .....	4
Introduction .....	5
New features .....	6
System requirements .....	6
Initial install and setup .....	7
LUVCARS Announcements .....	8
PMDG setup .....	9
LUVCARS pre-flight .....	10
Performance calculator .....	16
Co-Pilot .....	21
Diversions .....	22
LUVCARS post-flight .....	22
Chat usage .....	24
Frequently asked questions (FAQ) .....	25



## Changelog

<u>NAME</u>	<u>DATE</u>	<u>CHANGE</u>	<u>VERSION</u>
Braden T	09/01/24	Updates for LUVCARS 5.0.27	1.5
Braden T	03/23/24	Updates for LUVCARS 5.0.26	1.4
Matt G, Braden T	11/12/23	Updates for LUVCARS 5.0.23/24	1.3
Braden T	06/30/23	Updates for LUVCARS 5.0.22	1.2
Matt G, Braden T	05/12/23	Functionality Updates for LUVCARS 5.0.20	1.1
Ryan F, Matt G, Braden T	04/02/23	Initial Release	1.0

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All flight and aeronautical information found here is for simulated use only.  
This is an operational guide for members of Southwest Virtual Airlines



## Purpose

### Purpose

This manual is designed to educate the pilots of Southwest Virtual Airlines on the new features and capabilities of LUVCARS 5 and how to operate the new ACARS client.

### Scope

This manual is approved by the Executive Team at Southwest Virtual Airlines specifically for the release of LUVCARS 5 install, set-up, and use.

### Mission

Southwest Virtual Airlines is dedicated to the highest quality of flight simulation with a sense of realism, warmth, friendliness, and company spirit.



## Introduction

When we started looking at updating our ACARS software nearly three years ago, we knew we wanted to do something that would push the limits of what virtual airlines offered. Built upon our proprietary and very successful LUVCARS 4 software, we wanted to take the ease of LUVCARS 4 and add features into the client that other virtual airlines did not offer. The result was LUVCARS 5. I'm confident our pilots will find this new software to be another one of the many reasons that Southwest Virtual Airlines is one of the best virtual airlines out there.

We hope you enjoy the NEW LUVCARS 5! You are now free to move about the country!

*Ryan Flynn*



## New features

LUVCARS 5 introduces many new features that will enhance the flight simulation experience and bring it to the next level. \*Updates in latest version

Some new features of LUVCARS 5 (L5) are:

- Non-Normal Landing Configurations
- Tankering Fuel
- Taxiway Markings and Gate Numbers
- Interactive Co-Pilot
- Updated Performance Calculations
- Checklist/Flows integration
- Legs not flown option
- Custom Announcements
- Advanced Audio settings
- Load Dispatch Fuel Option
- SDK Auto Check for PMDG Aircraft
- Cancel Uplink Button
- Bug fixes for WX/Perf Data\*
- New Checklist steps for Interactive Co-Pilot\*
- Brake Cooling Calculations\*

## System requirements

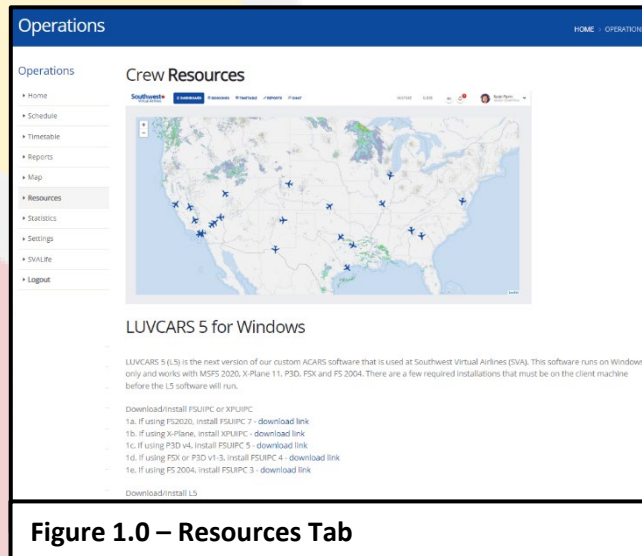
For LUVCARS 5 to operate correctly, pilots must ensure that they meet these parameters.

- Valid and updated version of Windows 7+ with .Net 8.0
  - NOTE: LUVCARS 5 is **NOT** compatible with macOS!
- Valid copy of any flight simulator (MSFS, FSX, P3D, XP)
- FSUIPC/XPUIPC, depending on the simulator being utilized.



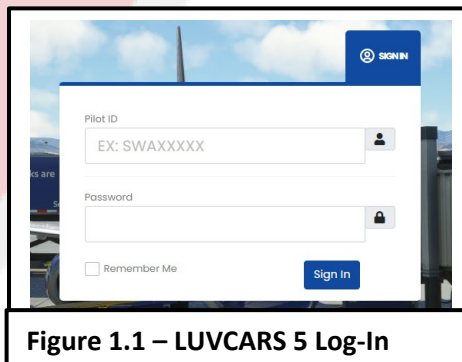
## Initial install and setup

Proceed to the Operations page on swavirtual.com and select the [Resources tab](#) on the left side. Here will be the download link to LUVCARS 5 (L5). Once downloaded, run Installer.exe and follow the prompts as required.



**Figure 1.0 – Resources Tab**

Once L5 has been installed, login to the application with the pilot's same SWA ID and Password used to access swavirtual.com



**Figure 1.1 – LUVCARS 5 Log-In**

If the client has an update, pilots will be prompted on the login page of the L5. Clicking on “Yes” will update the client automatically. Clicking on “No” will proceed into the client on the out-of-date version normally.

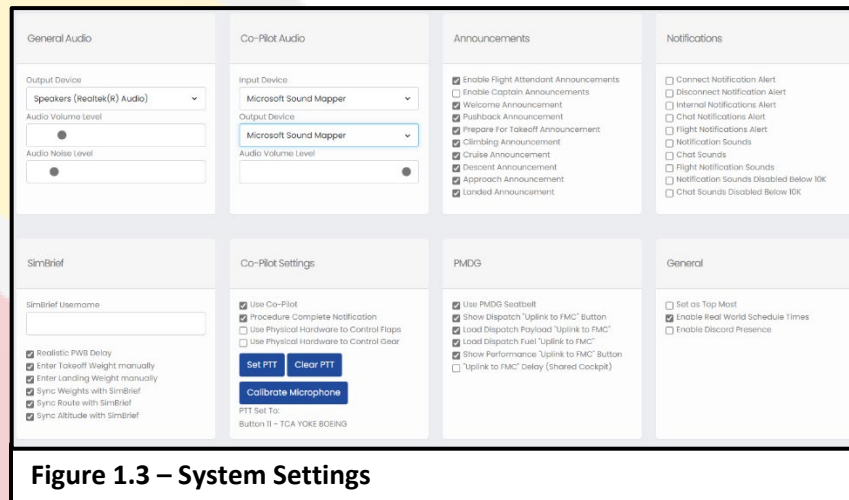


**Figure 1.2 – LUVCARS Update**



Click on the drop down next to the name and select Settings.

Review the announcements desired, the alert notifications, and input the SimBrief username of the pilot.



**Figure 1.3 – System Settings**

SimBrief username can be found at [simbrief.com](https://simbrief.com) by selecting account settings.

If pilots do not have an account with SimBrief, pilots can sign up or an account by visiting [www.simbrief.com](https://www.simbrief.com)

Here pilots can fill out all their flight information, build a dispatch release, and much more!  
**It is highly recommended that pilots use a SimBrief account for the best user experience.**  
 For more information on building and reviewing releases with SimBrief check out this [tutorial!](#)

**\*\* For use of the Interactive Co-Pilot Feature Check out the Interactive Co-Pilot Guide [here!](#) \*\***

## LUVCARS Announcements

PMDG Users Only (FS2020 Only)		Non-PMDG Users	
Switch/Button	Action/Announcement	Switch/Button	Action/Announcement
Wheel Well Light	Triggers "Welcome Aboard" Announcement	Wing Light (off, on, off)	Triggers all 3 announcements within same conditions to the left
Attend Button (Taxi-Out)	Triggers "Cleared for Departure" Announcement		
Attend Button (Descent <12k AGL & <70 miles from airport)	Triggers "Final Descent into XXX" Announcement		

For Custom Announcements reference the [Interactive Co-Pilot Guide](#) for more information!





## PMDG setup

LUVCARS 5 provides a range of automated features designed to transfer data seamlessly into the Flight Management Computer (FMC) of the PMDG aircraft in MSFS 2020. L5 will automatically verify whether the SDK has been tailored for PMDG Users. If the following steps have not been completed, L5 will notify you that configuration is incomplete. Although this feature is optional, pilots who wish to use it must diligently adhere to the steps provided below:

1. Locate your PMDG work folder for applicable aircraft:
  - a. Standalone MSFS
    - i. \AppData\Local\Packages\Microsoft.FlightSimulator\_8wekyb3d8bbwe\LocalState\packages\pmdg-aircraft-737\work
    - ii. \AppData\Local\Packages\Microsoft.FlightSimulator\_8wekyb3d8bbwe\LocalState\packages\pmdg-aircraft-738\work
  - b. Steam Edition
    - i. \AppData\Roaming\Microsoft Flight Simulator\Packages\pmdg-aircraft-737\work
    - ii. \AppData\Roaming\Microsoft Flight Simulator\Packages\pmdg-aircraft-738\work
2. Open the 73(7/8)\_Options.ini folder in notepad
  - a. Scroll to the bottom of the document and find the [SDK] section.
  - b. Edit or, if not present, add entire [SDK] section: (Figure 1.4)

```
[SDK]
EnableDataBroadcast=1
EnableCDUBroadcast.0=1
EnableCDUBroadcast.1=1
```

3. Close the notepad and click Save on the document.

```
[SDK]
EnableDataBroadcast=1
EnableCDUBroadcast.0=1
EnableCDUBroadcast.1=1
```

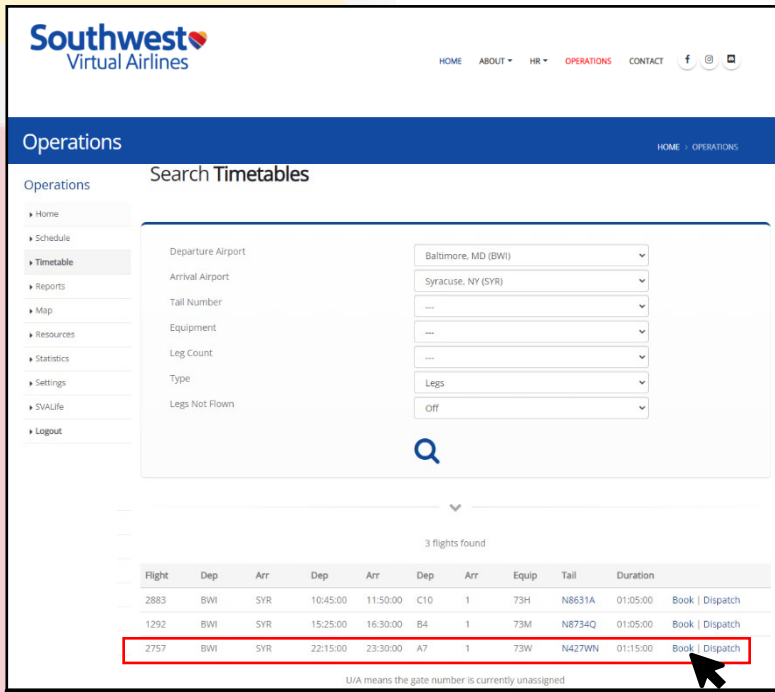
Figure 1.4 – PMDG Options.ini



## LUVCARS pre-flight

### Booking a Flight:

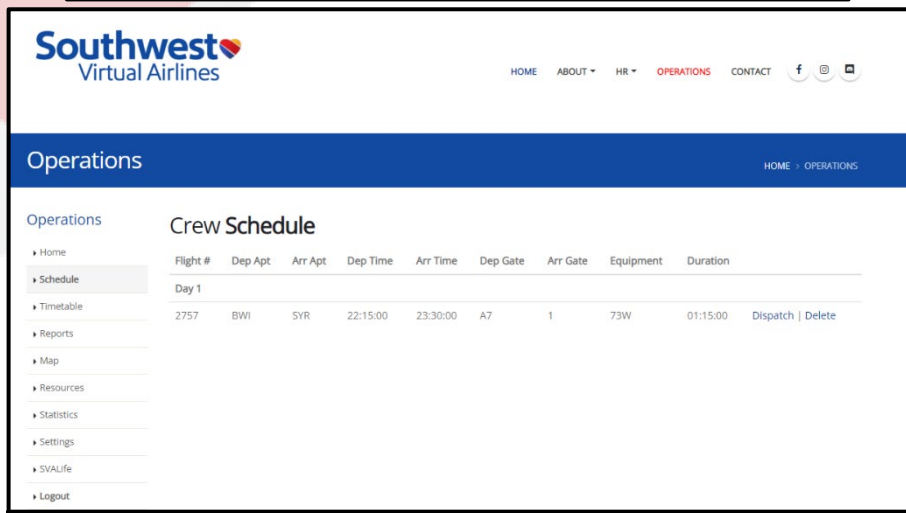
Pilots can book a set of flights on either the swavirtual.com website, see figure 2.1/2.2, or via LUVCARS 5, see figure 2.3/2.4. All flights that are booked on the website/L5 timetable will automatically populate in the bookings tab on L5. To book a series of flights in L5 simply right click on the desired leg and select 'Book'.



Flight	Dep	Arr	Dep	Arr	Dep	Arr	Equip	Tail	Duration	
2883	BWI	SYR	10:45:00	11:50:00	C10	1	73H	N8631A	01:05:00	Book   Dispatch
1292	BWI	SYR	15:25:00	16:30:00	B4	1	73M	N8734Q	01:05:00	Book   Dispatch
2757	BWI	SYR	22:15:00	23:30:00	A7	1	73W	N427WN	01:15:00	Book   Dispatch

1292 means the gate number is currently unassigned

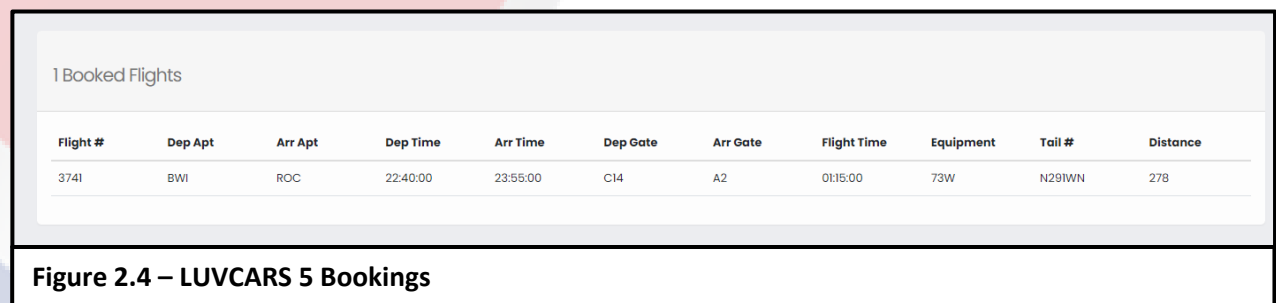
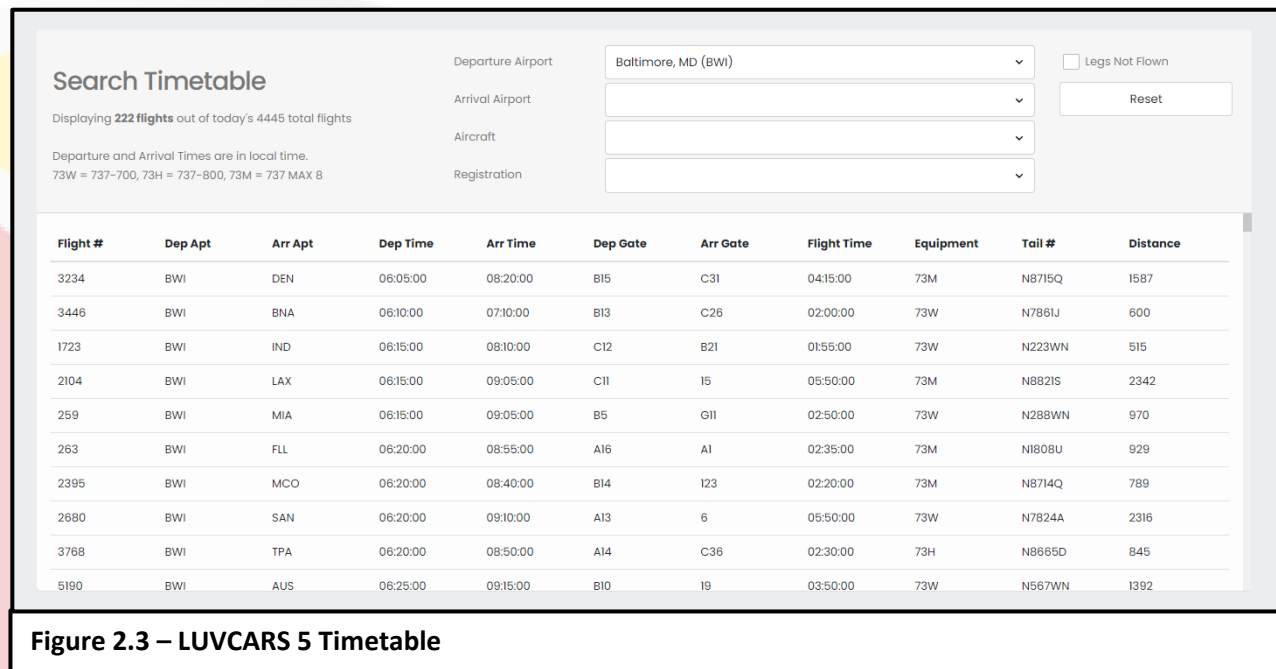
Figure 2.1 – Booking a flight on swavirtual.com



Flight #	Dep Apt	Arr Apt	Dep Time	Arr Time	Dep Gate	Arr Gate	Equipment	Duration	
Day 1									
2757	BWI	SYR	22:15:00	23:30:00	A7	1	73W	01:15:00	Dispatch   Delete

Figure 2.2 – Crew Schedule





### Loading into the simulator:

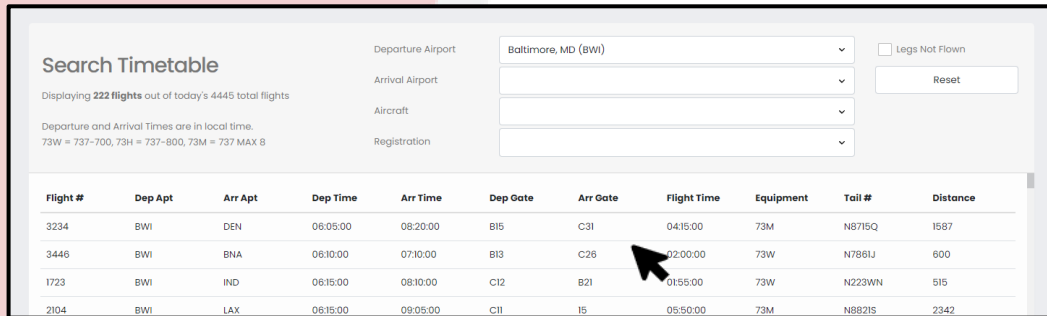
Pilots must load into the departure airport in the simulator prior to selecting the flight in L5. Be sure to have the engines off and parking brake set prior to initiating the flight in LUVCARS.

### Starting a flight:

To initiate the flight simply double-click the leg desired. There are 2 scenarios listed below for selecting flights within LUVCARS 5.

- **Real World Schedule Times Enabled:** Pilots will only be able to load into the flight in the simulator 1 hour prior to the 'Out' time. Pilots will also not be able to select flights that have already departed. This feature enables realism of flying the real-world flight scheduled times.
- **Real World Schedule Times Disabled:** Pilots can fly the flight at any time and L5 will set your departure time (Out Time) to be 30 minutes after you select the flight.

If pilots do not have Real World Schedule Times disabled and they attempt to fly a flight that is > 1 hour away from departure, or has already departed, a prompt will display notifying the user that the selected flight is unavailable.



**Search Timetable**

Departure Airport: Baltimore, MD (BWI) ☐ Legs Not Flown

Arrival Airport:

Aircraft:

Registration:

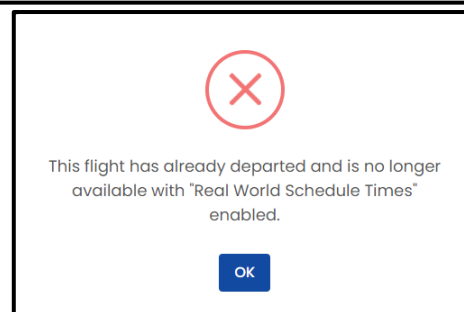
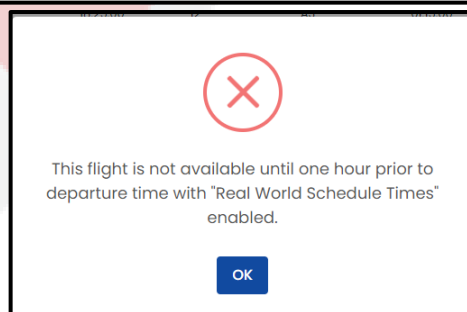
Reset

Displaying 222 flights out of today's 4445 total flights

Departure and Arrival Times are in local time.  
73W = 737-700, 73H = 737-800, 73M = 737 MAX 8

Flight #	Dep Apt	Arr Apt	Dep Time	Arr Time	Dep Gate	Arr Gate	Flight Time	Equipment	Tail #	Distance
3234	BWI	DEN	06:05:00	08:20:00	B15	C31	04:15:00	73M	N8715Q	1687
3446	BWI	BNA	06:10:00	07:10:00	B13	C26	02:00:00	73W	N7861J	600
1723	BWI	IND	06:15:00	08:10:00	C12	B21	01:55:00	73W	N223WN	515
2104	BWI	LAX	06:15:00	09:05:00	C11	I5	05:50:00	73M	N8821S	2342

**Figure 2.5 – L5 Selecting a Flight**



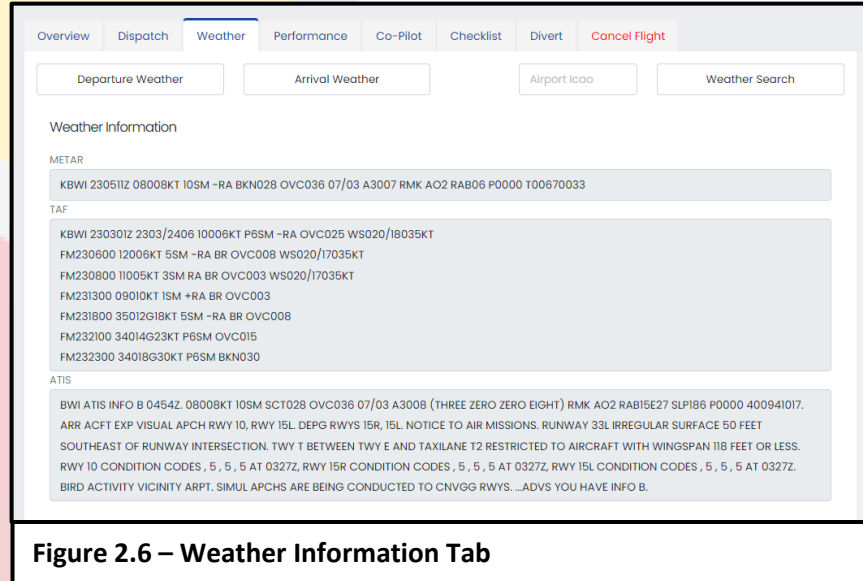
The flight does not start recording until the parking brake is released and aircraft movement is detected.

**Once the aircraft has started moving, do NOT reload fuel or aircraft weight.**



## Weather:

Here, pilots can get the weather for the expected departure and arrival airports. Pilots can also look up the weather for additional ICAO codes if needed.



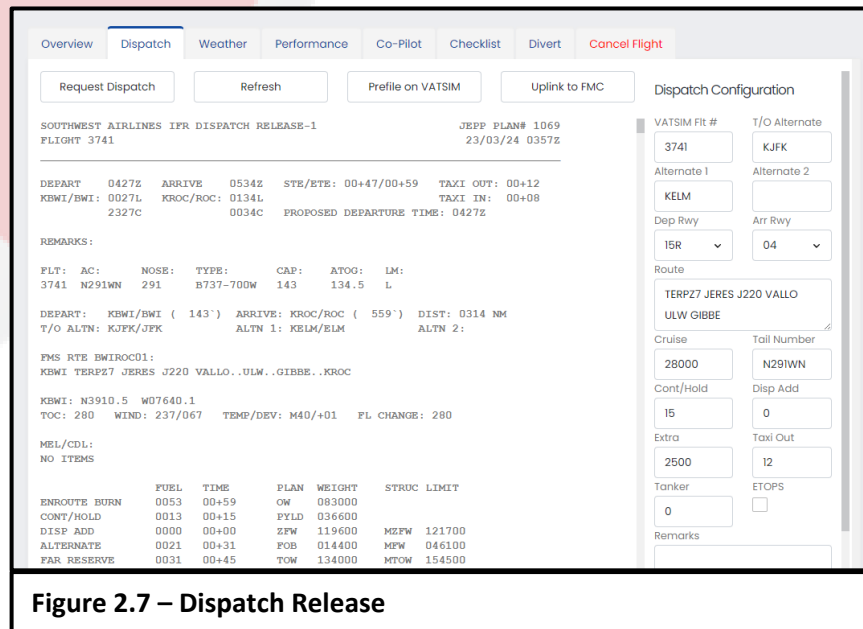
The screenshot shows the 'Weather' tab selected in the top navigation bar. Below the navigation bar are buttons for 'Departure Weather', 'Arrival Weather', 'Airport Icao', and 'Weather Search'. The main content area is titled 'Weather Information' and contains three sections: METAR, TAF, and ATIS. The METAR section shows a single entry for KBWI. The TAF section shows a list of TAF entries for various airports. The ATIS section shows a single entry for BWI.

Figure 2.6 – Weather Information Tab

## Dispatch:

Pilots who generate their dispatch release via SimBrief or with L5 should see a copy of the release under this tab as depicted in figure 2.7. Continue to read below to learn how to create a dispatch in both LUVCARS 5 and SimBrief.

Check out our [YouTube channel](#) for videos on [how to read a SWA OFF](#).



The screenshot shows the 'Dispatch' tab selected in the top navigation bar. Below the navigation bar are buttons for 'Request Dispatch', 'Refresh', 'Profile on VATSIM', and 'Uplink to FMC'. The main content area is titled 'Dispatch Configuration' and contains a form for creating a dispatch release. The form includes fields for 'VATSIM Flt #', 'T/O Alternate', 'Alternate 1', 'Alternate 2', 'Dep Rwy', 'Arr Rwy', 'Route', 'Cruise', 'Tail Number', 'Cont/Hold', 'Disp Add', 'Extra', 'Taxi Out', 'Tanker', 'ETOPS', and 'Remarks'. The form also includes a table for 'ENROUTE BURN' and 'FUEL' data.

Figure 2.7 – Dispatch Release



## Building a Dispatch Release (via SimBrief):

Log into [SimBrief](#) and input all the data for the flight intended to be flown into the appropriate cells on SimBrief's website and click on 'Generate Flight'.

With the desired leg to be flown selected and started, navigate to the 'Dispatch' tab under the 'Flight' tab on L5. Once on the 'Dispatch' tab, click on the 'Refresh' button. Clicking 'Refresh' will import the externally generated flight plan into L5 for easier access and use your externally planned data for performance calculations on the 'Performance' tab.

Check out our [YouTube channel](#) for videos on [how to read a SWA OFF](#).

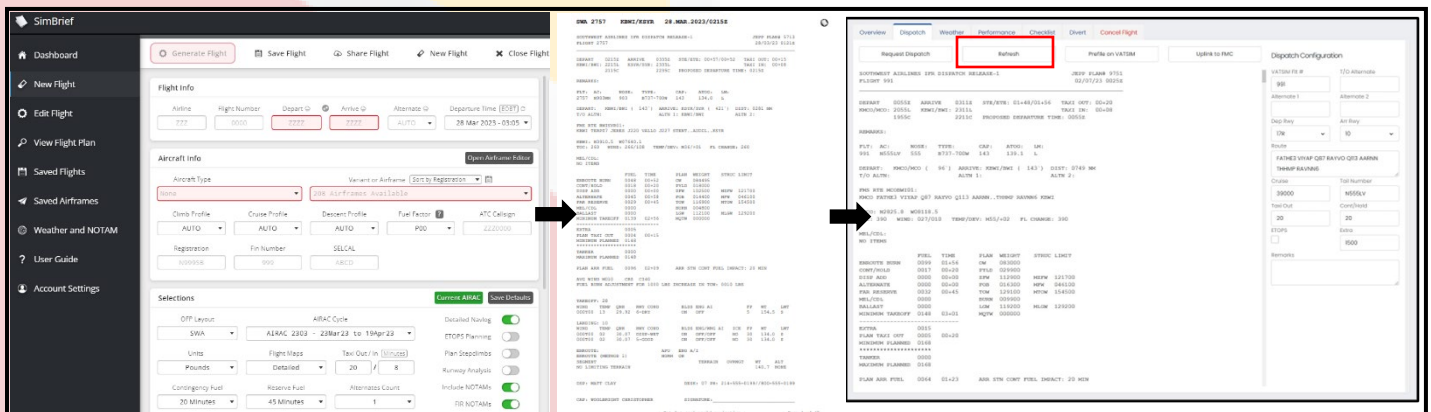


Figure 2.8 – SimBrief Release to L5

## Dispatch Tab 'Uplink to FMC' (MSFS):

Clicking on the 'Uplink to FMC' button on the 'Dispatch' tab will allow for L5 to begin automatically typing Fuel, ZFW, and RTE data into PMDG's FMC Fuel and Payload pages.



Figure 2.9 – 'Uplink to FMC' Fuel Loading





### Building a Dispatch Release (via L5):

Pilots can generate a release through the L5 User Interface. Below is the information that needs to be completed to request the dispatch. The L5 Dispatch page uses SimBrief and SVA specific profiles to give the pilot a release.

1. VATSIM Fit # - Defaults to the Real-World Flight Number. User can change this value in case someone else is using the callsign on VATSIM already.

2. T/O Alternate (TALT) - Defaults to BLANK. Enter a TALT only if weather conditions do not permit the flight to return to origination. Note a Takeoff Alternate may never exceed the following parameters: More than one hour flying time from the origination airport at normal cruising speed with one engine inoperative. To ensure this regulation is not violated, at Southwest Virtual Airlines, a Takeoff Alternate may not exceed 320NM from departure airport.

3. Alternate 1 - Defaults to BLANK. Enter a Destination Alternate either when weather conditions require an alternate or when weather conditions do not require an alternate, but it might be a good idea to do so.

4. Alternate 2 - Defaults to BLANK. Enter a 2nd Destination Alternate either when weather conditions require a 2nd alternate or when weather conditions do not require a 2nd alternate, but it might be a good idea to do so.

7. Cont/Hold- The Cont/Hold (Contingency/Hold) field is TIME BASED. The Cont/Hold field manipulates the CONT/HOLD fuel found on page one of the Dispatch Release. The minimum value for CONT/HOLD at Southwest Virtual Airlines is 15 minutes. The Maximum value is 60 minutes. Normally, 20 minutes is plenty of contingency fuel, but every situation is different.

9. Extra - The Extra field is U.S. POUNDS BASED. The Extra field manipulates the EXTRA fuel found on page one of the Dispatch Release. The minimum value for EXTRA is 200lbs and there is no set maximum value.

11. Tanker – Fuel added to Dispatch release to enable aircraft to carry more fuel to minimize fuel to be added to the aircraft at the arrival airport prior to the next flight.

#### Dispatch Configuration

VATSIM Fit #	T/O Alternate
69	
Alternate 1	Alternate 2
Dep Rwy	Arr Rwy
26R	31R
Route	
NIITZ3 SSKEE GUP KA30U TURKI JFRYE5	
Cruise	Tail Number
37000	N8843S
Cont/Hold	Disp Add
15	0
Extra	Taxi Out
200	12
Tanker	ETOPS
0	<input type="checkbox"/>
Remarks	

5. Route AND Cruise - Choose the preferred flight plan route and cruise altitude, inputting the desired value into the altitude box. If changes to the cruise altitude are needed, update the box accordingly. Verify real-world flight details on flightaware.com for best practices.

6. Tail Number – Defaults to the scheduled tail number for the real-world flight. Pilots can change this to match the simulator tail

8. Disp Add - An amount of fuel added (typically by the dispatcher) for expected weather/winds enroute or at the arrival airport, expected ground delays/traffic, De-icing operations, etc. Default = 0 lbs

10. Taxi Out - The Taxi Out field is TIME BASED. The Taxi out filed manipulates the TAXI OUT fuel found on page one of the Dispatch Release. The minimum value for taxi out fuel at Southwest Virtual Airlines is 10 minutes. The maximum value is 20 minutes.

12. ETOPS - Select the ETOPS checkbox for flights to/from the mainland USA to/from the Hawaiian Islands. DO NOT select ETOPS for interisland flights that initiate and terminate within the Hawaiian Islands.

13. REMARKS - The Remarks field will manipulate the REMARKS section found on page one of the Dispatch Release.



## Performance calculator

The Performance Calculator is a new feature to L5 that allows pilots to get their V-Speeds, Runway Stopping Margins, Auto-Brake Settings, Reduced Thrust-TO data, and flap settings.

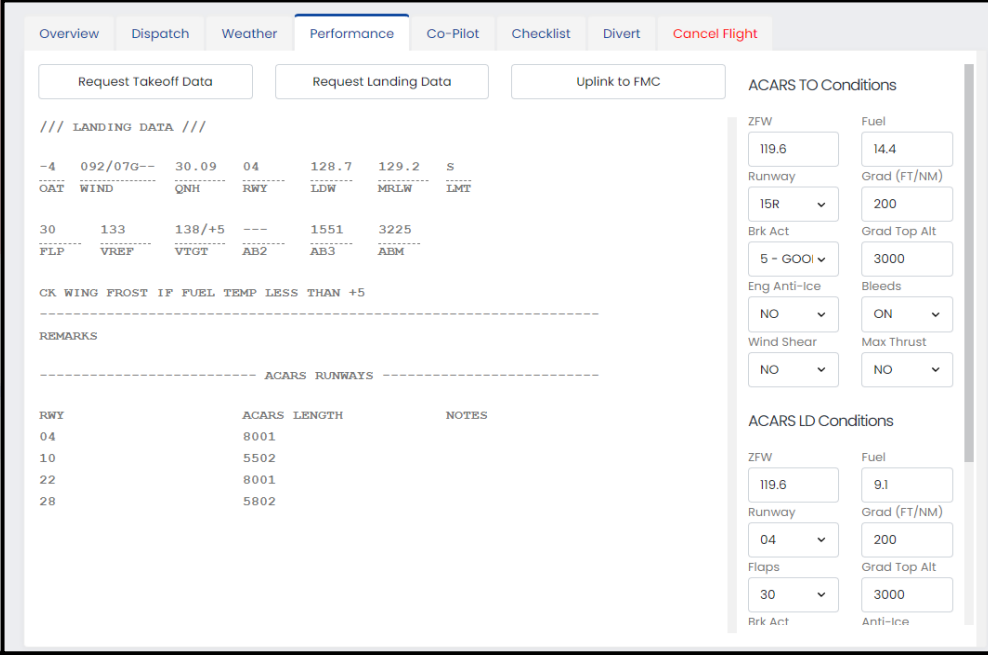
Ensure the data on the right side of the performance Calculator is accurate for the departure and arrival airport.

Pilots should assume the Runway Condition Code (RCC) is 6 unless NOTAMS/ATIS dictate otherwise for the specified airports. Pilots should default to a Bleeds ON (YES) takeoff with Max Thrust set to NO, unless the departure airport requires Max Thrust. Max thrust may be selected anytime deemed necessary for the safety of the flight by the Pilot in command.

If the RCC is less than 5 or the runway is contaminated, Max Thrust is required and should be set to YES. Engine Anti-Ice should only be selected to YES if there is visible moisture and an OAT of 10°C or less. If windshear is possible at time of departure based off either current report or forecast, consider selecting YES.

Takeoff data will output the Engine Failure Procedure (EFP) and departure notes for each runway/intersection departure for that airport. EFPs are available on [SVALife](#).

For landing performance validate the Runway, RCC, select the appropriate flap setting (15, 30, 40), and if the aircraft has operational reverse thrust (R/T) ensure it is set to OP.



The screenshot shows the Performance Tab interface with the following sections:

- Navigation:** Overview, Dispatch, Weather, **Performance**, Co-Pilot, Checklist, Divert, Cancel Flight.
- Buttons:** Request Takeoff Data, Request Landing Data, Uplink to FMC.
- ACARS TO Conditions:**
  - ZFW: 119.6
  - Fuel: 14.4
  - Runway: 15R
  - Grad (FT/NM): 200
  - Brk Act: 5 - GOOI
  - Grad Top Alt: 3000
  - Eng Anti-Ice: NO
  - Bleeds: ON
  - Wind Shear: NO
  - Max Thrust: NO
- ACARS LD Conditions:**
  - ZFW: 119.6
  - Fuel: 9.1
  - Runway: 04
  - Grad (FT/NM): 200
  - Flaps: 30
  - Grad Top Alt: 3000
  - Brk Act: Anti-Ice
- LANDING DATA:**

OAT	WIND	QNH	RWY	LDW	MRLW	LMT
-4	092/07G--	30.09	04	128.7	129.2	S
- FLP VREF VTOT AB2 AB3 ABM:**

30	133	138/+5	---	1551	3225
----	-----	--------	-----	------	------
- REMARKS:** CK WING FROST IF FUEL TEMP LESS THAN +5
- ACARS RUNWAYS:**

RWY	ACARS LENGTH	NOTES
04	8001	
10	5502	
22	8001	
28	5802	

Figure 3.0 – Performance Tab





**Performance Tab 'Uplink to FMC' (MSFS):**

Clicking on the 'Uplink to FMC' button on the 'Performance' tab will allow for L5 to begin automatically typing INIT REF data into PMDG's FMC INIT REF pages.

**INIT REF Data Entered:**

- ZFW
- Reserve Fuel
  - If no Alternate Airport entered, 4.4 will be used as minimum reserve fuel.
- Cost Index
  - 40 for -700/-800
  - 30 for 38M
- CRZ ALT
- CRZ WIND & T/C OAT
- SEL TEMP
  - As necessary, empty for max thrust takeoff.
- T/O FLAPS
- CG
- V-SPEEDS

**NOTE:** Due to a marginal difference in aircraft performance data between L5 and PMDG, T/O Trim and V-Speeds may slightly differ. Users are recommended to utilize L5 calculations based on L5's integrated SimBrief profiles.



Figure 3.1 – 'Uplink to FMC' INIT REF Loading

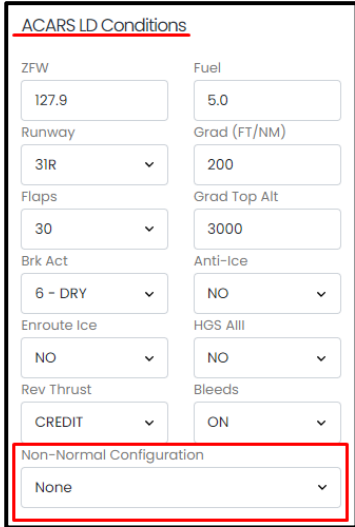


### Non-Normal Landing Configurations:

Non-normal configurations have been added to the ACARS Landing Conditions calculator found within the performance tab of L5. When a non-normal condition is met in-flight, the specified condition is to be selected within the non-normal configuration dropdown menu. Once the condition is selected, and all other landing condition fields are filled out, press 'Request Landing Data' under the performance tab and L5 will generate the performance data for the set conditions to include the non-normal landing computations. A notation of the selected condition will be included in the Landing Data Notes.

### Non-Normal Configuration Options:

- Antiskid INOP, Flaps 15
- Antiskid INOP, Flaps 30
- Antiskid INOP, Flaps 40
- One Engine INOP, Flaps 15
- One Engine INOP, Flaps 30
- Leading Edge Flaps 15
- Trailing Edge (TE) Flap Asymmetry, Flaps 30
- TE Flap Asymmetry, Flaps 15 to 25
- TE Flap Asymmetry, Flaps 1 to 15
- TE Flap Disagree, Flaps 30 to 40
- TE Flap Disagree, Flaps 15 to 30
- TE Flap Disagree, Flaps 1 to 15
- TE Flaps UP
- All Flaps UP
- Loss of System A, Flaps 15
- Loss of System A, Flaps 30
- Loss of System A, Flaps 40
- Loss of System B, Flaps 15
- Loss of System A+B, Flaps 15
- Manual Reversion Flaps 15
- Stab Trim INOP, Flaps 15
- Jammed or Restricted Flight Controls, Flaps 15
- Airspeed Unreliable, Flaps 15
- Airspeed Unreliable, Flaps 30
- Airspeed Unreliable, Flaps 40



ACARS LD Conditions	
ZFW 127.9	Fuel 5.0
Runway 31R	Grad (FT/NM) 200
Flaps 30	Grad Top Alt 3000
Brk Act 6 - DRY	Anti-Ice NO
Enroute Ice NO	HGS All NO
Rev Thrust CREDIT	Bleeds ON
Non-Normal Configuration None	

**Figure 3.2 – Non-Normal Landing Configuration**



**Brake Cooling Schedule:**

Brake temperature buildup can occur when operating a series of short flights in hot weather or after performing a high-energy stop during takeoff or landing. LUVCARS 5 will output the expected brake cooling times based on the braking actions provided in the landing PWB. Typically brake cooling can be accomplished at the gate with minimal interference to ground operations. Figure 3.3 outlines what the cooling schedule looks like with a breakdown of what each output is referencing. The next page shows the RTO button and the associated output when pilots accomplish a rejected takeoff (RTO).

1. BRAKE SETTING – Options are MAN, ABM, AB3, and AB2. These are based on the distances remaining from the landing PWB data.

2. VREF – Associated Reference Speed for the aircraft at touchdown based on the landing PWB data.

3. WT – Aircraft's landing weight as referenced by the PWB data.

MAN 131 KTS WT 123.3  
NO SPECIAL PROCEDURES REQUIRED  
PARKED COOL TIME 32 MIN  
BRK ENERGY 22.8M FT-LB

4. SPECIAL PROCEDURES – Associated procedures for hot brakes and brake cooling will be outlined here. No procedures are required when the BRK ENERGY is below 48.5M FT-LB.

5. PARKED COOL TIME – The amount of time the aircraft must be stationary on the ground for the brakes to cool to safe taxi/takeoff temperatures.

6. BRK ENERGY – The total amount of energy applied to each brake during the landing/RTO. Measured in Millions of Foot-Pounds (xx.xM FT-LB)

**LEGEND:**

MAN – MAX MANUAL BRAKING

ABM – AUTO BRAKE MAX

AB3 – AUTO BRAKE 3

AB2 – AUTO BRAKE 2

*\*AB1 IS NOT AUTHORIZED AT SOUTHWEST AIRLINES*

/// LANDING DATA ///

22	084/06G--	29.88	27	123.3	129.2	S
OAT	WIND	QNH	RWY	LDW	MRLW	LMT

30	131	136/+5	---	847	2644
FLP	VREF	VTGT	AB2	AB3	ABM

CK WING FROST IF FUEL TEMP LESS THAN +5

\*\* BRAKE COOLING SCHEDULE \*\*

MAN 131 KTS WT 123.3  
NO SPECIAL PROCEDURES REQUIRED  
PARKED COOL TIME 32 MIN  
BRK ENERGY 22.8M FT-LB

ABM 131 KTS WT 123.3  
NO SPECIAL PROCEDURES REQUIRED  
PARKED COOL TIME 19 MIN  
BRK ENERGY 19.6M FT-LB

AB3 131 KTS WT 123.3  
NO SPECIAL PROCEDURES REQUIRED  
PARKED COOL TIME 0 MIN  
BRK ENERGY 14.6M FT-LB

AB2 - U/A

REMARKS

ACARS RUNWAYS		
RWY	ACARS LENGTH	NOTES
09	7280	
27	7591	

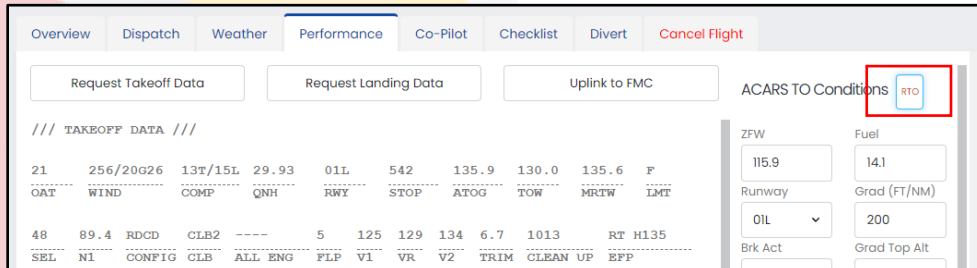
**Figure 3.3 – Brake Cooling Schedule**



## Brake Cooling Schedule Continued...

### Rejected Takeoffs:

When an aircraft executes a Rejected Takeoff (RTO) press the RTO button (Figure 3.4) on LUVCARS 5. Once pressed, a pop up will display asking for the airspeed in Knots Indicated (KIAS) at which the RTO was initiated (Figure 3.5). After the speed is entered it will output the cooling schedule required (Figure 3.6) While the brakes are cooling, determine if you need to refuel (i.e. Below Min takeoff on Dispatch page) or return to the gate for maintenance. Once the cooling is complete if you are continuing the flight, re-run the Takeoff PWB data and continue to the destination as scheduled.

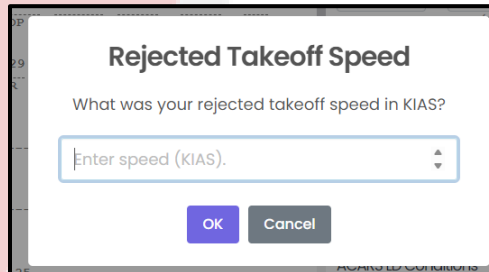


The screenshot shows the LUVCARS 5 Performance tab. The 'ACARS TO Conditions' section has a red box around the 'RTO' button. Below the button, there is a table of performance data.

/// TAKEOFF DATA ///										
21	256/20G26	13T/15L	29.93	01L	542	135.9	130.0	135.6	F	
OAT	WIND	COMP	QNH	RWY	STOP	ATOG	TOW	MRTW	LMT	
48	89.4	RDCD	CLB2	----	5	125	129	134	6.7	1013
SEL	N1	CONFIG	CLB	ALL ENG	FLP	V1	VR	V2	TRIM	CLEAN UP
										EFP

On the right side, there are input fields for ZFW (115.9), Fuel (14.1), Runway (01L), Grad (FT/NM) (200), Brk Act, and Grad Top Alt.

**Figure 3.4 – RTO BUTTON**



The screenshot shows a pop-up window titled 'Rejected Takeoff Speed'. It asks 'What was your rejected takeoff speed in KIAS?' and has a text input field with the placeholder 'Enter speed (KIAS)'. There are 'OK' and 'Cancel' buttons at the bottom.

**Figure 3.5 – RTO POP UP**

```
KSFO BRK COOL
KSFO 01L
RTO 166 KTS WT 130.0
CAUTION-CLEAR RWY. ALERT ARFF. DO NOT SET PARK BRAKE. DO NOT APPROACH GEAR OR
TAXI FOR 1 HOUR.
PARKED COOL TIME 88 MIN
BRK ENERGY 44.1M FT-LB
TAKEOFF PWB DATA MUST BE RECALCULATED FOR THE NEXT TAKEOFF.
```

**Figure 3.6 – RTO BRAKING SCHEDULE OUTPUT**



## Co-Pilot

The Interactive Co-Pilot tab shows you the progress of checklists and procedures. This tab will update based on what has been completed, what is in progress, and what needs to be completed. Reference Figure 4.0 and 4.1 for the Co-Pilot tab and what it looks like with the checklists closed and expanded.

**Black/White** = Not complete yet | **Orange** = In Progress | **Green** = Complete

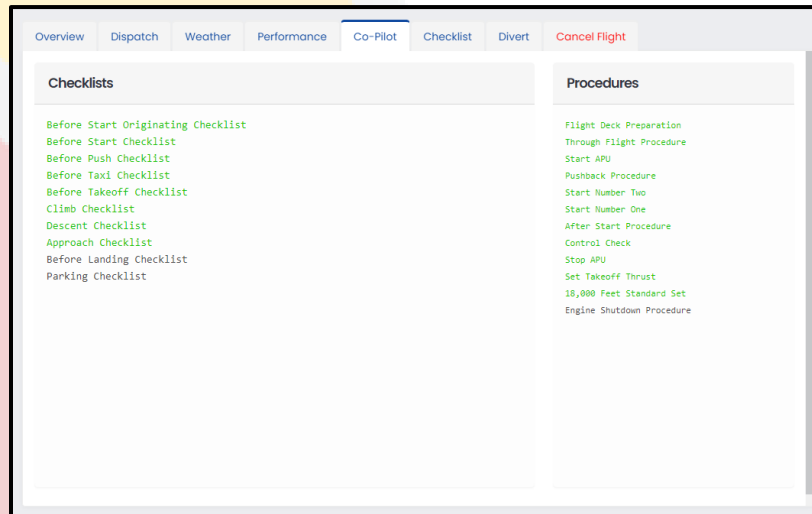


Figure 4.0 – Co-Pilot Tab

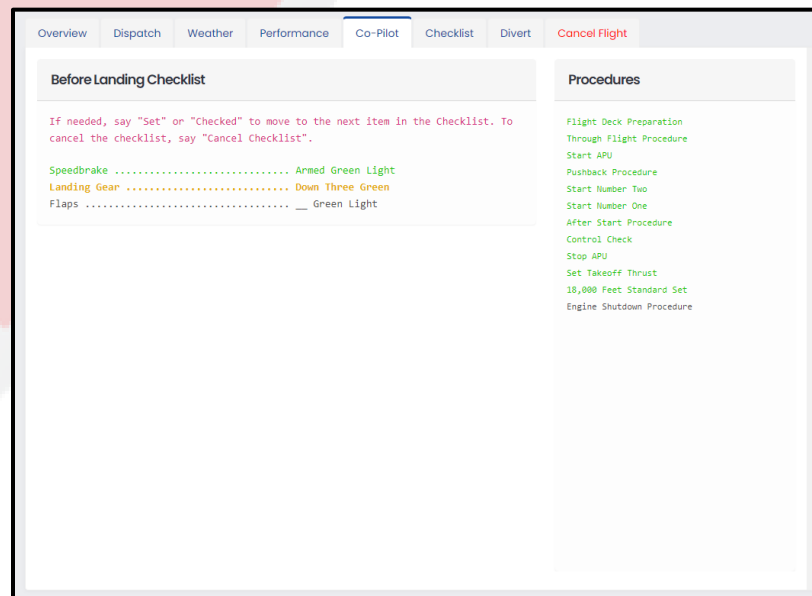


Figure 4.1 – Co-Pilot Tab – Checklist Expanded

Reference the [Interactive Co-Pilot Guide](#) for more information!



## Diversions

Diverting is not a new concept in aviation. Diversions typically occur when one of the following happens:

In-Flight Emergency

Weather en route

Fuel State

Aircraft Malfunction

Weather at arrival airport out of limits

Passenger incident

To maintain MAX realism at Southwest Virtual Airlines, diversions must be due to one of the reasons listed above.

All Diversions will be treated like a manual report and will be reviewed by a CBM prior to being accepted/rejected. Diversions **MUST** include a reason for the diversion **with proof** to justify the need for the aircraft to divert. (i.e., Screenshot of Failure, Link from an addon such as PACX/FsPassengers, FS2Crew, IRL Flight track with diversion, etc.) Pilots will now automatically receive performance data for the selected diversion airport once diversion has been selected.

Diversions will not count as a flight to return the member to active status if the flight was after member was hired/re-hired or returning from LOA. Diversions should be in accordance with the [AUTHORIZED AIRPORTS MEMORANDUM](#) on [SVALife](#).

If a pilot diverts, they must set the parking brake and shutdown normally to complete the initial diversion leg. Pilots will then have the option, once on the ground at the diversion airport, to continue with the scheduled flight, referencing figure 5 below.

If a pilot selects “Yes”, they can expect for a continuation flight to the original destination to be loaded into the booked legs tab for 1 hour after the “IN” time at the diversion airport. Flying the continuation leg is only optional and can be omitted as desired.

If a pilot selects “No”, the continuation leg will be removed from the system altogether.

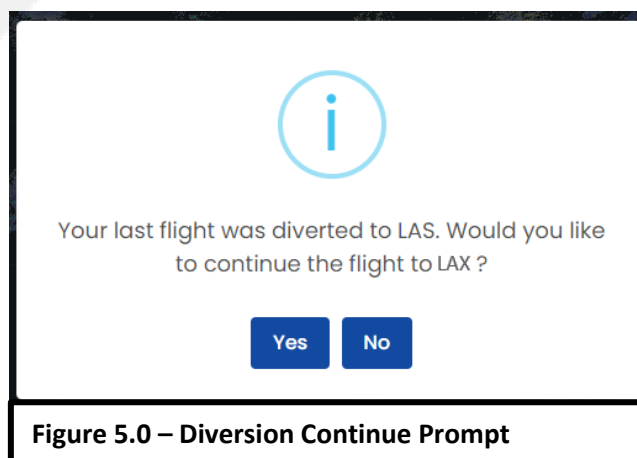


Figure 5.0 – Diversion Continue Prompt



## LUVCARS post-flight

### Ending a Flight:

To end a flight, taxi to a parking location at the airport. The parking location does not need to be the gate that is assigned to that flight in the real world. Pilots may park anywhere at the airport. Once parked, set the parking brake and shutdown both engines. The Flight Review screen will appear, letting the pilot know if the report was held or approved along with a map reviewing the details of the flight flown.

### Note:

For MSFS users, if the steps above were followed and the flight did not automatically end, try disengaging and reengaging the parking brake. If a diversion was flown, see the Diversion section above for details on what needs to be filled out before a flight can be submitted.

### Cancelling a Flight:

If pilots need to terminate a flight before it can be completed, select the Cancel Flight Tab in L5. A prompt will be displayed to verify the intention to cancel the current flight.

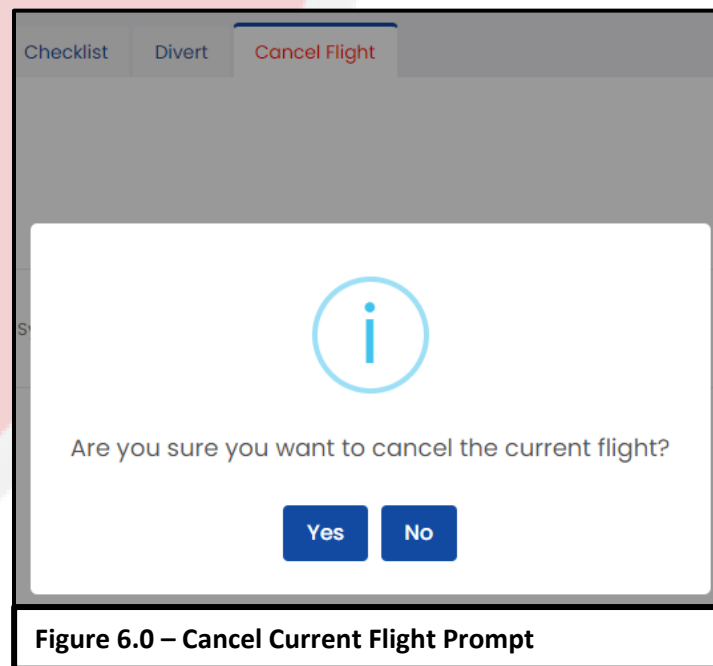


Figure 6.0 – Cancel Current Flight Prompt





## Chat usage

Pilots will have the ability to both communicate in a general chat channel as well as private messages. Included in the chat tab will be an announcements tab and an events tab.

### Announcements:

The announcement tab will import news articles from the website and custom announcements from the staff team.

### Events:

The events tab will import scheduled events from the website.

### Private Messaging:

To begin a private message (PM) with another user, pilots can simply double click on the name of the person they would like to open a PM with. Once a PM has been started, a separate chat box will open on the left side of the client. Pilots can close a PM at any time by pressing the 'x'.



Figure 7.0 – Chat Window

### Chat Expectations:

All pilots will adhere to the [SOP](#)'s Code of Conduct for communications on any Southwest Virtual Airlines entity. Chats should remain on topic with simulation and Southwest Virtual while remaining professional in manner. Chat messages are logged and monitored by Southwest Virtual Staff.

### Disciplinary Actions:

Deviation from the Code of Conduct in any chats may result in disciplinary action. Based on the severity and number of prior occurrences, the member may be temporarily restricted from using the client. If further incidents accumulate, pilots may be permanently removed from Southwest Virtual Airlines.





## Frequently asked questions (FAQ)

To help our staff respond to general inquiries faster, please read the following frequently asked questions to see if they answer any questions before contacting our staff team.

1. **Is L5 supported on macOS?**  
No, we currently do not offer macOS support with L5.
2. **What if I don't remember my password to sign in?**  
Pilots can reset their password [here](#). Please bear in mind that this will also reset the set password for the website.
3. **How do I change my profile picture?**  
Pilots can do so on our website under Operations > [Settings](#).
4. **Do I need to uninstall LUVCARS 4?**  
No, LUVCARS 4 will eventually be phased out once LUVCARS 5 has been verified as stable for the VA users.
5. **Can I log in while on Leave of Absence or if my account was removed for inactivity?**  
No, only pilots on Active status or Termination Warning status may log into the client. If pilots are currently on LOA or inactive, they must request reactivation per our [SOP](#).
6. **Is a SimBrief account required?**  
No, but it is highly recommended. Sign up for FREE and learn more about SimBrief [here](#)!
7. **Is a paid Navigraph subscription required?**  
No, but it is highly recommended. Sign up and learn more about Navigraph [here](#)!
8. **How are aircraft substitutions handled by L5?**  
If the desired route is scheduled in a 737-800 (73H), pilots may substitute this aircraft per our approved substitutions list in the [SOP](#). For example, a pilot wants to fly a 737-700 (73W) on a flight scheduled for a 73H, L5 and the website will reflect this change upon report submission.
9. **Can I use time acceleration on L5?**  
No, time acceleration beyond 1x speed is still prohibited per our [SOP](#). Reports will be held for review and are likely to be rejected.
10. **Can I pause my flight?**  
Yes, pilots may pause their flight if not flying on an air traffic network such as VATSIM.
11. **Can I customize the FA's announcement audio set provided by L5?**  
No, customization support is currently not available for FA announcements. Pilots can make custom announcements utilizing the new feature outlined in the [Interactive Co-Pilot Guide](#).



**12. Do I have to fly the real world scheduled times?**

No, pilots may fly any scheduled leg at the time of their choosing. This is simply available to those looking to follow the real-world scheduled flight times.

**13. Why was my account restricted?**

If a pilot's account is restricted from L5, they may have been issued a disciplinary restriction from using the client. An email will be sent to the email address provided to us when a pilot initially joined including information about the action and steps to rectify the restriction.

**14. If PWB says I cannot takeoff from my desired runway, what should I do?**

Follow a similar flow to the real world. Try checking for a longer runway. If one is not available, try increasing aircraft takeoff performance by setting BLEEDS to OFF and MAX THRUST to YES. If these still yield a poor result, then start removing passengers from the aircraft and lowering fuel quantity.

**15. Why is my autobrake distance showing '----'?**

If the available runway remaining distance is too low, the specified autobrake value will then be inhibited, and the next highest autobrake setting should be utilized. For example, if Autobrake 2 is showing '----', and Autobrake 3 is showing 669, then utilize autobrake 3 or manual braking equivalent.

**16. When is a Destination Alternate NOT required?**

No alternate airport is required if for at least 1 hour before and 1 hour after the estimated time of arrival at the destination airport the appropriate weather reports or forecasts, or any combination of them, indicate:

- (1) The ceiling will be at least 2,000 feet above the airport elevation; and
- (2) Visibility will be at least 3 miles.

Example of weather requiring an alternate:  
BKN019 and 2 3/4SM  
OVC019 and 3SM

Example of weather NOT requiring an alternate:  
OVC020 and 3SM  
BKN020 and P6SM

**17. I'm receiving the "System.IO.FileNotFoundException: The system cannot find the file specified. (0x80070002)" error?**

Download the following [developer add-on](#). Once downloaded re-launch L5 and it should run as advertised!

**18. LUVCARS won't let me select the flight in the timetable or bookings tab?**

LUVCARS 5 now has a feature to enable or disable real world times. Pilots with real world times enabled can only select a flight 1 hour prior to the scheduled pushback or 'Out' time. To disable this feature, go into the user settings in L5 and disable "Real World Times" which will then allow users to fly any legs at any time not in accordance with the real-world schedule.

