



Sim Shack User Guide

Revision Date: 10-27-2025

Copyright © 2025 Denekim Software
Contact: highpapiair@gmail.com

Special Thanks to OurAirports

About myself, I am a retired Data Center Manager for the US Postal Service. I have been writing software for over 40 years. I have always enjoyed coding software to simplify things for those individuals I worked with. This project started back in July 2025 when I was dabbling with VB.Net. I had not used it for many years. So, I downloaded Visual Studio 2022 and found to my enjoyment that I could write applications for free if I was not in an Enterprise environment. So, the learning curve begins again 😊.

I originally started building a database of Aircraft types. I wanted to keep a database of aircraft specifications. It's sometimes hard to seek out data as so much of it is not uniform. So, as the project began and I was doing some research, I stumbled upon OurAirports website, not realizing at first that I had found the holy grail of data for the world of Airports. I thought, who gives this kind of data away for free! But there it was, so the project took a huge turn. My goal was to put this data into the hands of Flight Simmers in the easiest way possible. I think I have done that with this application. Sim Shack is very robust in presenting OurAirports data, and it allows you to keep the data updated daily if you choose to do so with a few clicks of your mouse.

As I kept moving along, I kept finding things to add. I thought how cool it would be to incorporate Metar data. So, I found an API that allowed me to pull that data for any airport that provided it. And then just recently, I came across another API that lets me pull D-ATIS Information. Granted, it's not all large airports around the world, but it's nice to have the large ones in the US for now.

The other criterion for Sim Shack is that it would be FREE. As an avid simmer myself, I have benefited from many free applications that better my time in the sim. I have also paid for a lot of great products. I just like the idea of giving back to better the community is some way.

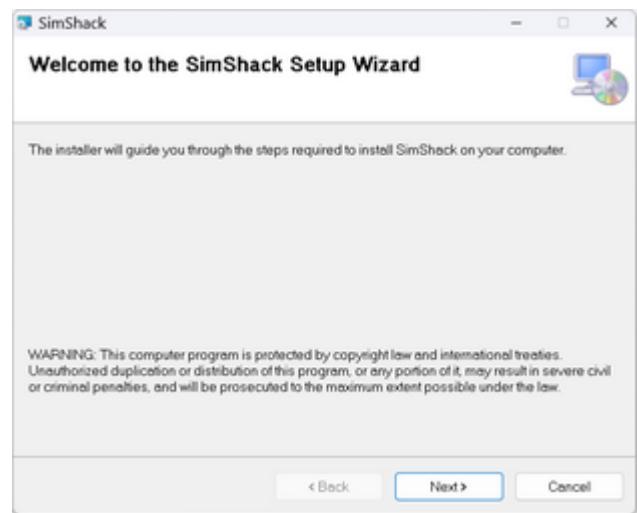
Before getting started I want to give a huge shout out to David Megginson, Founder of OurAirports. His dedication along with those working with him I can't thank enough for what they have provided.

Let's get started

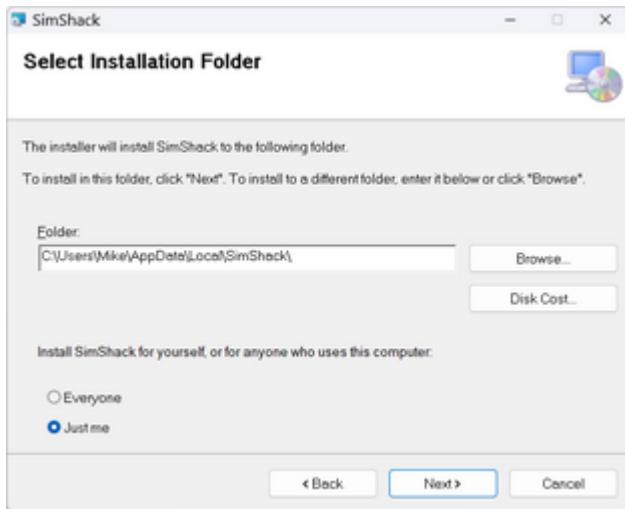
Sim Shack Installation

This is your standard installation package, nothing new here for many. This one is provided by Visual Studio, so nothing has been customized.

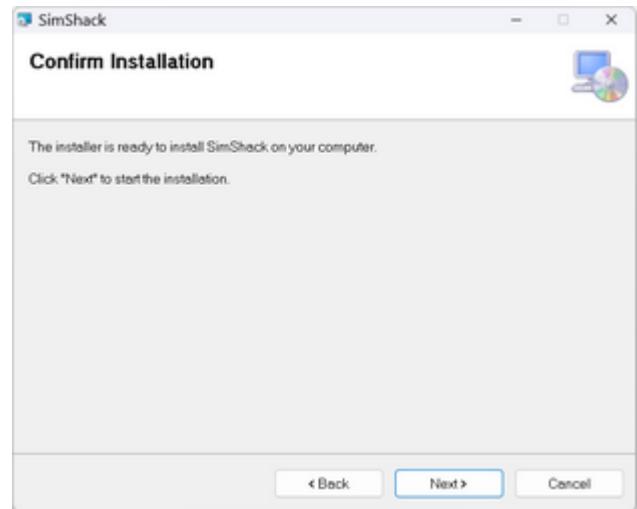
It is recommended you choose the defaults for the installation as with Windows restrictions, installing into the Program Files directory can play havoc with user security rights when trying to work with custom databases, or write log files. A custom install application would solve these limitations, but I could not justify purchasing one.



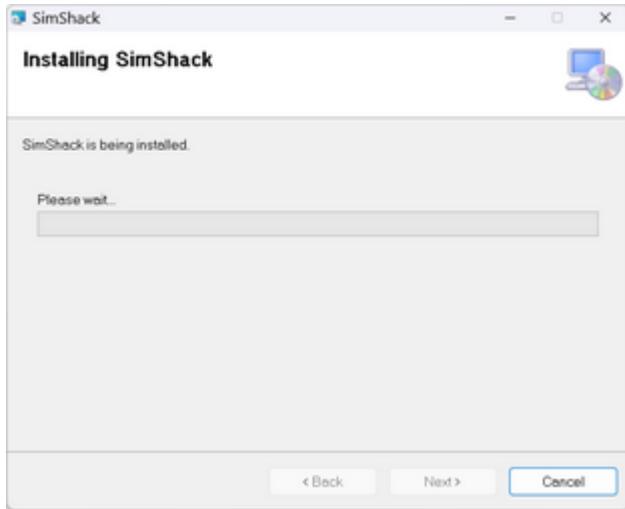
Welcome Screen – Select Next



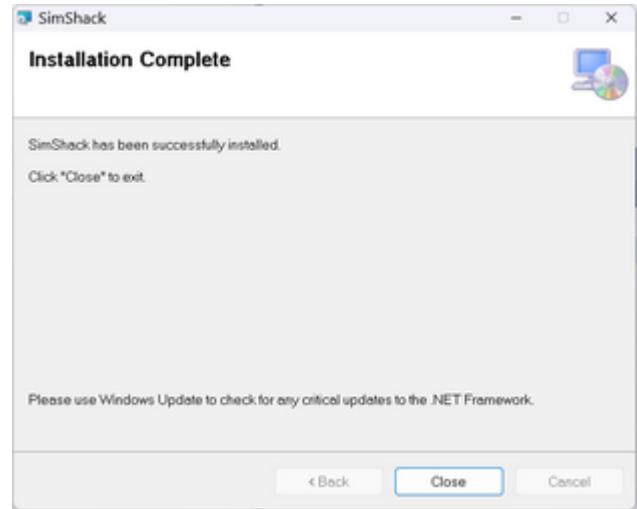
Recommend accepting defaults, select Next



Confirm by selecting Next



Sim Shack is installing



Sim Shack Installation Complete

This is Sim Shack's opening page. From here you have some options as to how you want to view airport data.

1. You can do a Quick Search by ICAO or Airport Name and select the type of airport you want to look for. The ones selected here are the defaults, but you change them in the settings for your own preference. If you select Starts with, it will find anything your search begins with. If you want to look for a phrase in any part of the requested data, then uncheck this.
2. Select a Country from the drop-down list. It has every country in the world listed. Select your country of choice, and it will sort all the data for that country based on every type of airport for that country. If you only want a specific region for that country, you can select that, and it will give you only the information for that Region.
3. Your third option would be to select a Favorites you may have saved. They appear at the bottom of this page.

Sim Shack

File Tools Favorites Help

Airports | Aircraft | Calculate / Convert

Quick Search

ICAO Airport Name Starts with

Find

AP Large AP Med AP Small Heliports
 AP Sea Balloon Closed

Countries

Regions

Airports

Airports - Large

Airports - Medium

Airports - Small

Heliports

Sea Plane | Balloon | Closed

ICAO Size Elevation(ft)
Name
Municipality / City
Region / State
Country Air Service
GPS Coords

Runways Length Width Elev(ft) True Deg. Surface Lighted

Airport / Facility Communications

Description Freq

Metar

Favorites - 20

Enter Quick Search, Country, or Favorites

Airports via Quick Search

These are the results of an ICAO search where the ICAO contains “KT” in the search results. It found 209 entries. The results always open into a new window and as you move your mouse towards the results, the dropdown will automatically drop for you when your mouse gets close. You can then move your mouse over each entry, and the Continent, Region/State and City/Town/Village/District will fill in. This is very handy if you have same name and don’t know where the airport is. Once you find your airport just click on it, the results will appear back on the main screen.

Sim Shack

File Tools Favorites Help

Airports | Aircraft | Calculate / Convert

Quick Search

ICAO Size Elevation(ft)
Name
Municipality / City
Region / State
Country

ICAO Airport Name Starts with KT
 AP Large AP Med AP Small Heliports
 AP Sea Balloon Closed

Quick Search ICAO / Airport Results

Type Codes

(LG) Large Airport
(MD) Medium Airport
(SM) Small Airport
(HE) Heliport
(SE) Seaplane Base
(BL) Balloon Port
(CL) Closed Airport

Airport Location Information

Continent Europe
Region / State South Moravian Region
City / Town / Village / District Brno

SIM SHACK
SIMPLIFY YOUR JOURNEY

Displaying 209 Entries

ICAO	Type	Airport Name	Country
KT31	(SM)	Aero Country Airport	United States
SSKT	(SM)	Aeroclube de Santa Catarina Airport	Brazil
LFKT	(SM)	Aerodrome de Corte	France
KT23	(SM)	Albany Municipal Airport	United States
KT69	(SM)	Alfred C 'Bubba' Thomas Airport	United States
KBKT	(SM)	Allen C Perkins Blackstone Army Air Field	United States
KT39	(SM)	Archer City Municipal Airport	United States
KTZT	(SM)	Belle Plaine Municipal Airport	United States
KTVY	(SM)	Bolinder Field Tooele Valley Airport	United States
KTZR	(SM)	Bolton Field	United States
PFKT	(SM)	Brevig Mission Airport	United States
LKTB	(MD)	Brno-Turany Airport	Czech Republic
YBKT	(SM)	Burketown Airport	Australia
KTVB	(SM)	Cabool Memorial Airport	United States
KT35	(SM)	Cameron Municipal Airpark	United States
SKTQ	(MD)	Captain Ernesto Esguerra Cubides Air Base	Colombia
KTSO	(SM)	Carroll County-Tolson Airport	United States
SWKT	(SM)	Catalao Airport	Brazil
KTVK	(SM)	Centerville Municipal Airport	United States
KT00	(SM)	Chambers County Airport	United States

This is the same search but with “Starts with” selected. You now only have 130 results as all the results start with “KT”. If you were only looking for Large airports, just close the search result window and uncheck AP Med and AP Small then click the Find button. You will only get Large Airport results.

It's very easy to work with, and you will figure it out within a few attempts.

Sim Shack

File Tools Favorites Help

Airports | Aircraft | Calculate / Convert

Quick Search

ICAO Airport Name Starts with KT

AP Large AP Med AP Small Heliports
 AP Sea Balloon Closed

ICAO _____ Size _____ Elevation(ft) _____
Name _____
Municipality / City _____
Region / State _____

Quick Search ICAO / Airport Results

Type Codes (LG) Large Airport (MD) Medium Airport (SM) Small Airport (HE) Heliport (SE) Seaplane Base (BL) Balloon Port (CL) Closed Airport

Airport Location Information

Continent North America
Region / State Texas
City / Town / Village / District Temple

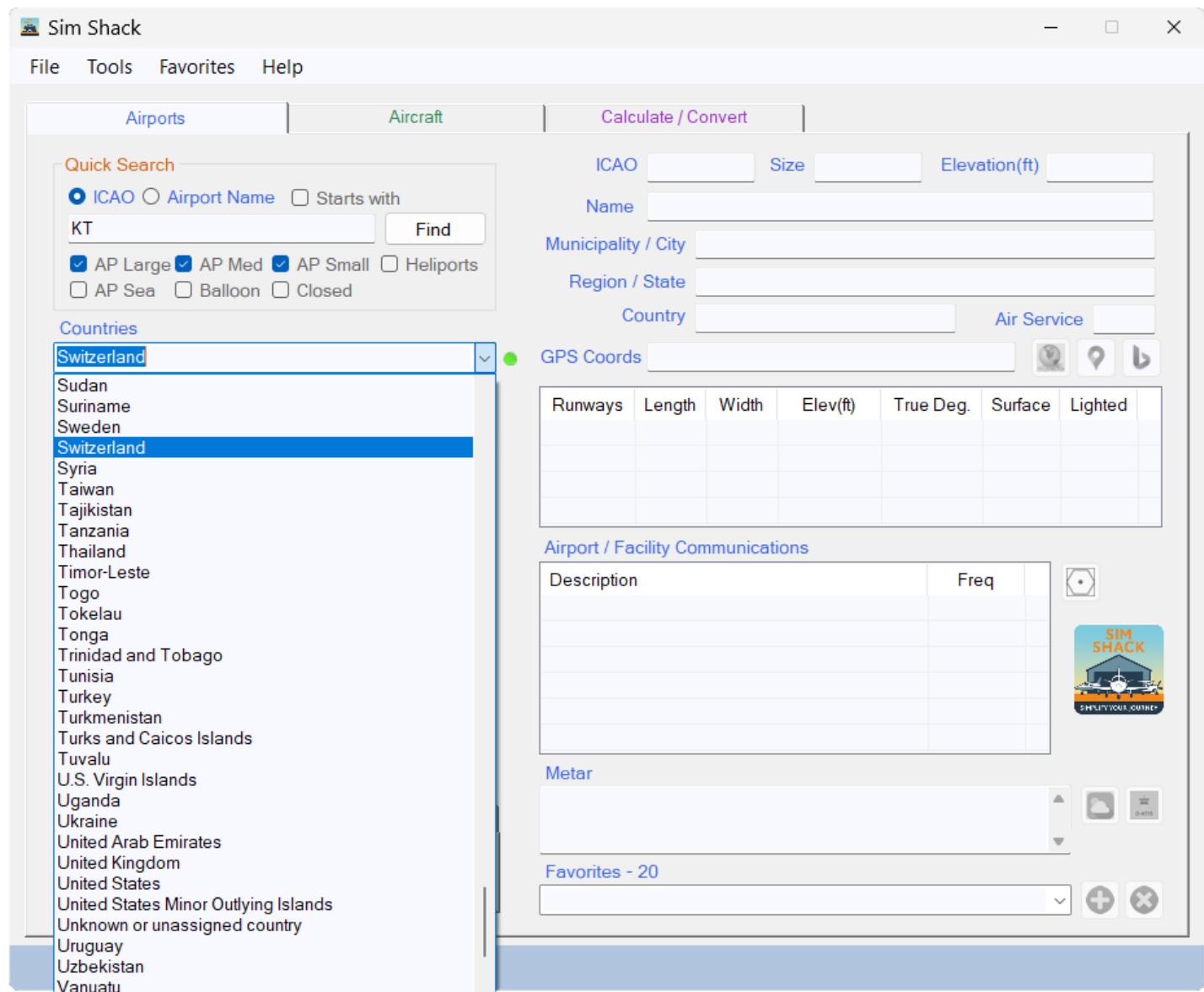

SIM SHACK
Simplify Your Journey

Displaying 130 Entries

ICAO	Type	Airport Name	Country
KTPL	(MD)	Draughon Miller Central Texas Regional Airport	United States
KT90	(SM)	Chambers County Winnie Stowell Airport	United States
KT05	(SM)	Charles R Johnson Airport	United States
KTVC	(MD)	Cherry Capital Airport	United States
KT88	(SM)	Colorado City Airport	United States
KTTF	(SM)	Custer Airport	United States
KTNT	(SM)	Dade Collier Training and Transition Airport	United States
KT51	(SM)	Dan Jones International Airport	United States
KT55	(SM)	Dimmitt Municipal Airport	United States
KTOB	(SM)	Dodge Center Airport	United States
KTPL	(MD)	Draughon Miller Central Texas Regional Airport	United States
KT19	(SM)	Duval Freer Airport	United States
KTDO	(SM)	Ed Carlson Memorial Field South Lewis County Airport	United States
KTOL	(MD)	Eugene F. Kranz Toledo Express Airport	United States
KT47	(SM)	Finney Field	United States
KT93	(SM)	Follett Lipscomb County Airport	United States
KTGC	(SM)	Gibson County Airport	United States
KT82	(SM)	Gillespie County Airport	United States

Airports via Countries

Another option to find an airport is you can select the country drop down and select any country in the world. In this case I chose Switzerland. Once you select it, it will sort all the countries' airports in order based on Size, Heliports, Sea Bases, Balloon Ports or Closed. If you want to narrow it down by Region, select the Region dropdown and select a region and it will filter your results by Region for that County. You will see this in the next image after I have selected Switzerland.



Here I have selected one of the large airports in Switzerland as my country, and LSZH – Zurich Airport. The results show you all the information about that airport.

Sim Shack

File Tools Favorites Help

Airports | Aircraft | Calculate / Convert

Quick Search

- ICAO Airport Name Starts with KT
- AP Large AP Med AP Small Heliports AP Sea Balloon Closed

Countries

Switzerland

Regions - 26

Airports - 68

Airports - Large - 2

LSZH - Zurich Airport

Airports - Medium - 11

Airports - Small - 55

Heliports - 52

Sea Plane - 0 | Baloon - 0 | Closed - 12

ICAO LSZH Size Large Elevation(ft) 1417

Name Zurich Airport

Municipality / City Zurich

Region / State Zurich

Country Switzerland Air Service YES

GPS Coords Lat 47° 27' 29" N, Lon: 8° 32' 53" E 

Runways	Length	Width	Elev(ft)	True Deg.	Surface	Lighted
10 / 28	8202	197	1391 / 1416	96° / 276°	CON	YES
14 / 32	10827	197	1402 / 1402	137° / 317°	CON	YES
16 / 34	12139	197	1390 / 1388	155° / 335°	CON	YES

Airport / Facility Communications

Description	Freq
APP	118.000
ATIS	125.725
CLNC DEL	121.800
DEP	125.950
GND	121.900
APRON	121.750

Metar

LSZH 262220Z 24008KT 9999 FEW022 SCT060 06/03 Q1014
TEMPO RA

Favorites - 20



Airports via Favorites

This airport KLAX was selected via Favorites dropdown. You can put any airport here that you may like to have quick results for in the future. Could be an airport that you fly to or from on a regular basis.

Sim Shack

File Tools Favorites Help

Airports | Aircraft | Calculate / Convert

Quick Search
ICAO KLAX Size Large Elevation(ft) 125
Name Los Angeles International Airport
Municipality / City Los Angeles
Region / State California
Country United States Air Service YES

AP Large AP Med AP Small Heliports
AP Sea Balloon Closed

Countries Japan

Regions - 47

Airports - 280

Airports - Large - 12

Airports - Medium - 95

Airports - Small - 173

Heliports - 3036

Sea Plane - 6 Baloon - 3 Closed - 419

Runways Length Width Elev(ft) True Deg. Surface Lighted
06L / 24R 8925 150 112 / 117 83° / 263° CON YES
06R / 24L 10285 150 108 / 111 83° / 263° CON YES
07L / 25R 12091 150 119 / 94 83° / 263° CON YES
07R / 25L 11096 200 118 / 95 83° / 263° CON YES

GPS Coords Lat 33° 56' 33" N, Lon: 118° 24' 28.79" W

GPS Icons:

Airport / Facility Communications

Description	Freq
SOCAL APP	124.300
SOCAL APP	36.070
ATIS	133.800
CLNC DEL	121.400
SOCAL DEP	124.300
GND	121.650



Metar
KLAX 252353Z 25011KT 9SM OVC011 17/14 A3000 RMK AO2
SLP156 T01720139 10200 20167 55007\$

MVFR

Favorites - 20

KLAX - Los Angeles International Airport	
HECA Cairo International Airport	
KDLH Duluth International Airport	
LOWI Innsbruck Airport	
SABE Jorge Newbery Airpark	
TXKF L.F. Wade International Airport	
KLAL Lakeland Linder International Airport	
KLAX Los Angeles International Airport	
KMHT Manchester-Boston Regional Airport	
VYMD Mandalay International Airport	
KMSP Minneapolis Saint Paul International Airport	
KSJC Norman Y. Mineta San Jose International Airport	
KMCO Orlando International Airport	
ENGM Oslo Airport, Gardermoen	
KPWM Portland International Jetport	
HESH Sham El Sheikh International Airport	
KTPA Tampa International Airport	
LOWW Vienna International Airport	
KORH Worcester Regional Airport	
VYYY Yangon International Airport	
LSZH Zurich Airport	

Airports Tab

The screenshot displays the Sim Shack software interface, specifically the Flight Planning module. The top menu bar includes File, Tools, Favorites, and Help. The main window is divided into several sections:

- Airports:** A "Quick Search" panel with radio buttons for ICAO (selected), Airport Name, and Starts with, and checkboxes for AP Large, AP Med, AP Small, Heliports, AP Sea, Balloon, and Closed. Below it are dropdown menus for Countries (Japan), Regions (Regions - 47), Airports (Airports - 280), Airports - Large (Airports - Large - 12), Airports - Medium (Airports - Medium - 95), Airports - Small (Airports - Small - 173), Heliports (Heliports - 3036), Sea Plane (Sea Plane - 6), Balloon (Balloon - 3), and Closed (Closed - 419).
- Aircraft:** A section for calculating aircraft performance.
- Calculate / Convert:** A section for calculating various flight parameters.
- Right Panel (Selected Airport Information):** Details for RJOO - Osaka International Airport, including Name (Osaka International Airport), Municipality / City (Osaka), Region / State (Osaka Prefecture), Country (Japan), Air Service (YES), GPS Coords (Lat 34° 47' 7.8" N, Lon: 135° 26' 16.81" E), and Runway data (Runways: 14L / 32R, Length: 5997, Width: 150, Elev(ft): 50 / 34, True Deg.: 135° / 315°, Surface: ASP, Lighted: YES) and 14R / 32L (Length: 9840, Width: 200, Elev(ft): 46 / 31, True Deg.: 135° / 315°, Surface: CON, Lighted: YES).
- Airport / Facility Communications:** A table listing frequencies for various communication systems: KANSAI APP (120.450), ATIS (128.600), CLNC DEL (118.800), KANSAI DEP (119.500), GCA (127.500), and GND (121.700). It also includes Metar information for RJOO and a section for Favorites (20).
- Bottom Right Buttons:** Icons for SIM SHACK (SIM SHACK SIMPLY YOUR JOURNEY), VFR (VFR), D-ATIS (D-ATIS), and a green plus sign for View simplified Metar Information.

Annotations with callouts point to specific features:

- Quick Search Window (points to the search panel on the left)
- GPS Coord viewing when selected. Open in Skyvector, Google or Bing. Results vary from each at times. (points to the GPS Coordinates field)
- Navaids Icon. Select this to view navaids for the selected airport. (points to the Navaids icon in the bottom right)
- View simplified Metar Information (points to the D-ATIS button)
- View D-ATIS Information (points to the D-ATIS button)
- Green LED's when selected bring up Wiki information about the item next to it. (points to the green circular icons in the top right)

Aircraft Tab

Here you select a Manufacturer to get started and it will sort all their models based on Jet, Turboprop or Piston. This is a work in progress. If you see a green verified checkbox in the lower right corner, I have confirmed the data based on multiple sources. Please take it with a grain of salt. I am sure there will be items that are not correct. I would like to at some point create a reporting system where a user could suggest changes and I could implement them with an updated import for download. My original intent with Sim Shack was to provide aircraft data. I would like to make this data as accurate as possible.

The screenshot shows the Sim Shack application window with the 'Aircraft' tab selected. The interface is divided into several sections:

- Manufacturer:** Cessna (selected)
- Model (Jet) - 21:** Cessna Citation Longitude
- Model (Turboprop) - 4:** (empty dropdown)
- Model (Piston) - 29:** (empty dropdown)
- Specification:**
 - Wingspan (ft): 68 ft 11 in
 - Length (ft): 73 ft 2 in
 - Tail Height (ft): 19 ft 5 in
 - Avionics: Garmin G5000
 - Engines: 2
 - Gear Type: Retractable tricycle
 - HP Per Eng: 7,700
 - Engine Model: Honeywell HTF7700L
- Weights / Capacities:**
 - Crew: 2
 - Passengers: 9
 - Weight Class: Mid
 - MTOW (lb): 39,500
 - MALW (lb): 33,600
 - Empty Weight (lb): 24,343
 - Max Payload (lb): 6,000
 - Payload Full Fuel (lb): 1,600
 - Fuel Capacity (gal): 1,124
 - Fuel Capacity (lbs): 7,520
- Flight Limits / Performance:**
 - Service Ceiling: 45,000
 - Range (nm): 3,500
 - Normal Cruise (kt): 417
 - Max Cruise (kt): 483
 - Rate of Climb (fpm): 3,976
 - Approach Speed (kt): 108
 - Takeoff Distance (Ground Roll) (ft): 3,360
 - Landing Distance (Ground Roll) (ft): 2,530
 - Takeoff Distance (Over 50-ft Obstacle) (ft): 4,910
 - Landing Distance (Over 50-ft Obstacle) (ft): 2,960
- Verified:** A green checked box in the bottom right corner.

Calculate / Convert Tab

Here you can find options to plan your TOD or BOD along with other Calculators and Conversions. Each cell is live active. No matter what cell you go into, it will calculate as you type for the other cells within their group.

Avgas is based on 6.01 pounds per gallon, and Jet Fuel is based on 6.68 pounds per gallon.

For results that still show 0.00 because they are so low, you can hover over the cell with your mouse, and it will give the decimal amounts if you so desire.

The screenshot shows the Sim Shack software window with the 'Calculate / Convert' tab selected. The interface is divided into several sections:

- Airports**, **Aircraft**, and **Calculate / Convert** tabs at the top.
- TOD (Top of Descent) Planner** section:
 - Cruise Altitude (ft): *
 - Target Altitude (ft): *
 - Ground Speed (kts): *
 - Descent Angle (°): *
 - Top of Descent (nm)
 - Time to BOD (min)
 - Rate of Descent ft/min
 - Distance to BOD (nm)
- Reciprocal Heading Calculator** section:
 - Heading
 - Reciprocal Heading
- Speed Conversion** section:
 - Knots (/hr)
 - Miles (/hr)
 - Mach
 - Kilometers (/hr)
- BOD (Bottom of Descent) Active Tracker** section:
 - Current Altitude (ft): *
 - Target Altitude (ft): *
 - Ground Speed (kts): *
 - Descent Angle (°): *
 - Rate of Descent ft/min
 - Time to BOD (min)
 - Distance to BOD (nm)
- Temperature Conversion** section:
 - Fahrenheit
 - Celsius
- Weight & Mass Conversion** section:
 - Pounds (lb)
 - Kilo (kg)
 - Ounces (oz)
 - Grams (g)
 - Ton (US)
 - Tonnes (t)
- Fuel Conversions** section:

	US Gallons	Liters	Pounds (lb)	Kilograms
Avgas 100LL	<input type="text" value="1"/>	<input type="text" value="3.79"/>	<input type="text" value="6.01"/>	<input type="text" value="2.73"/>
Jet A / Jet A1	<input type="text" value="1"/>	<input type="text" value="3.79"/>	<input type="text" value="6.68"/>	<input type="text" value="3.03"/>
- Volume Conversion** section:

	US Gallons	US Quarts	US Pints	US Ounces	Imp Gallons	Imp Quarts	Imp Pints	Imp Ounces	Liters	Milliliters
	<input type="text" value="1"/>	<input type="text" value="4.00"/>	<input type="text" value="8.00"/>	<input type="text" value="128.00"/>	<input type="text" value="0.83"/>	<input type="text" value="3.33"/>	<input type="text" value="6.66"/>	<input type="text" value="133.23"/>	<input type="text" value="3.79"/>	<input type="text" value="3,785.41"/>

* Field Required (Note: Target Altitude must be lower than Cruise or Current Altitude in order to calculate)

Settings - Downloads / Imports

From Tools Menu – OurAirports – Downloads / Imports

From this screen you can directly download OurAirports files from the GitHub site. It's best to visit the site and see if they have been updated and only get those you need. Here is the link to the page so you can look at when the file was last updated.

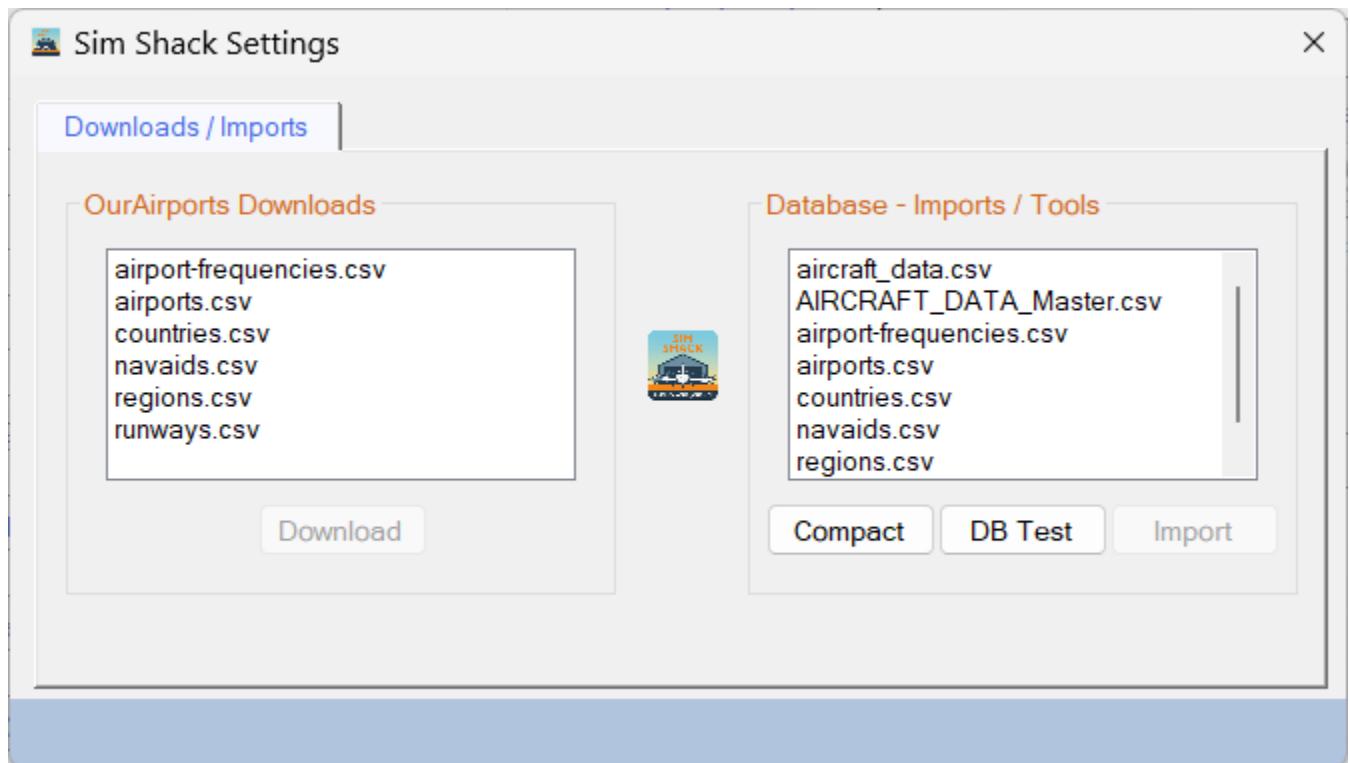
<https://github.com/davidmegginson/ourairports-data?tab=readme-ov-file>

Just select the file(s) in the OurAirports Downloads list then select the Download button.

Once done, select the file on the right side under Database – Imports / Tools then select the Import button. It's that simple. It will update the local database in seconds.

The Compact Button is to compact the database manually if you wish to do so. It's automatically compacted when the application exists.

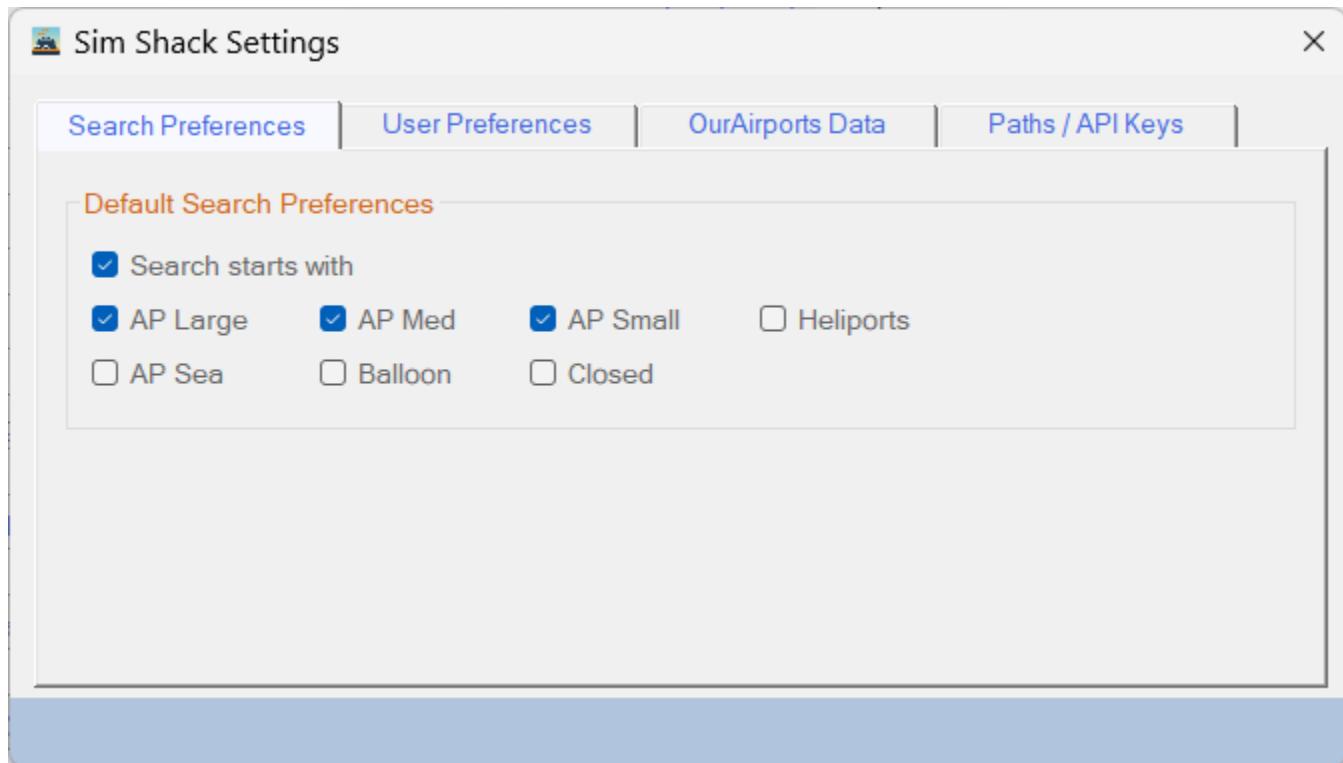
The DB Test button will show Connected when pressed. It's there in the event you are getting some import error. You can test to make sure the database is connecting.



Settings – Search Preferences

From Tools Menu – Settings / Preferences

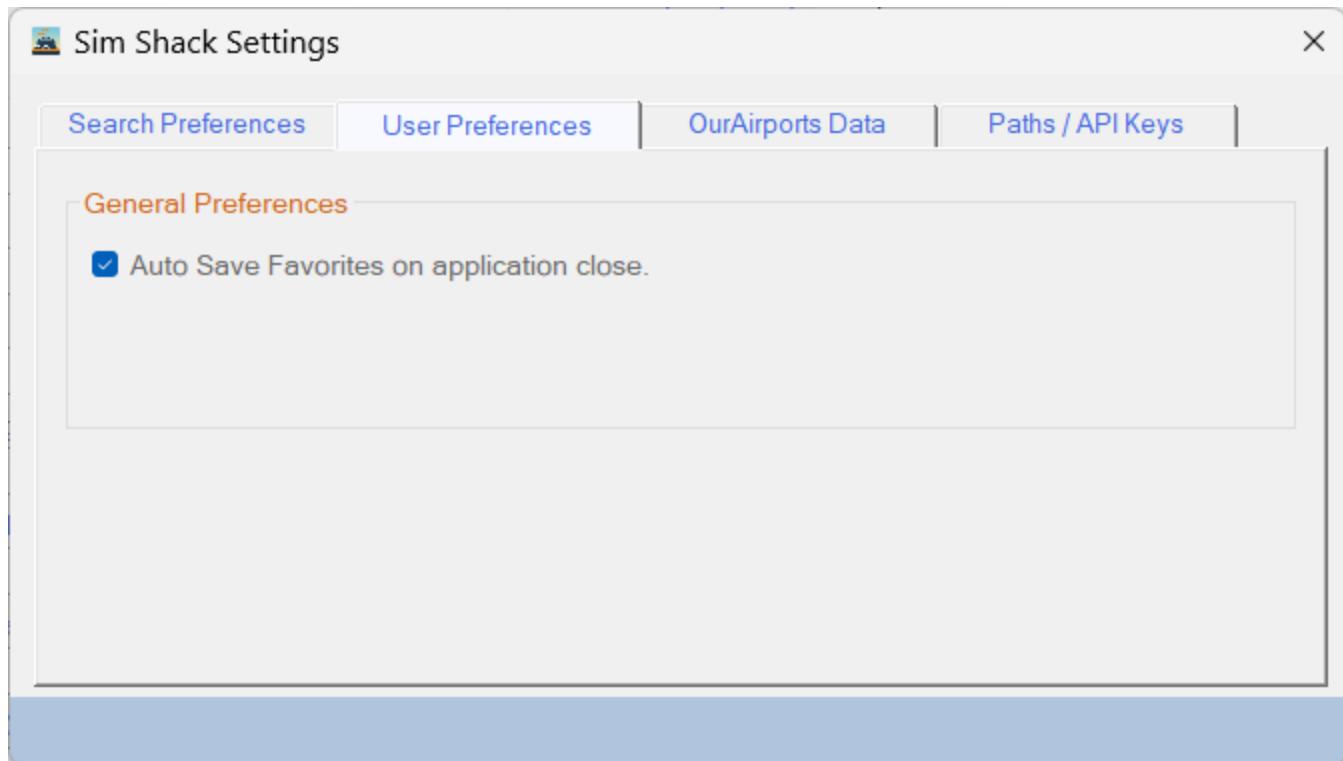
This allows you to set your Default Search Preferences for Quick Search



Settings – User Preferences

From Tools Menu – Settings / Preferences

Here you can Auto Save Favorites. There are always 3 copies of your Favorites, and they get sequenced each time you save them. You can do it automatically when Sim Shack closes, or you can do it manually from the tools Favorites Option on the Menu Bar.

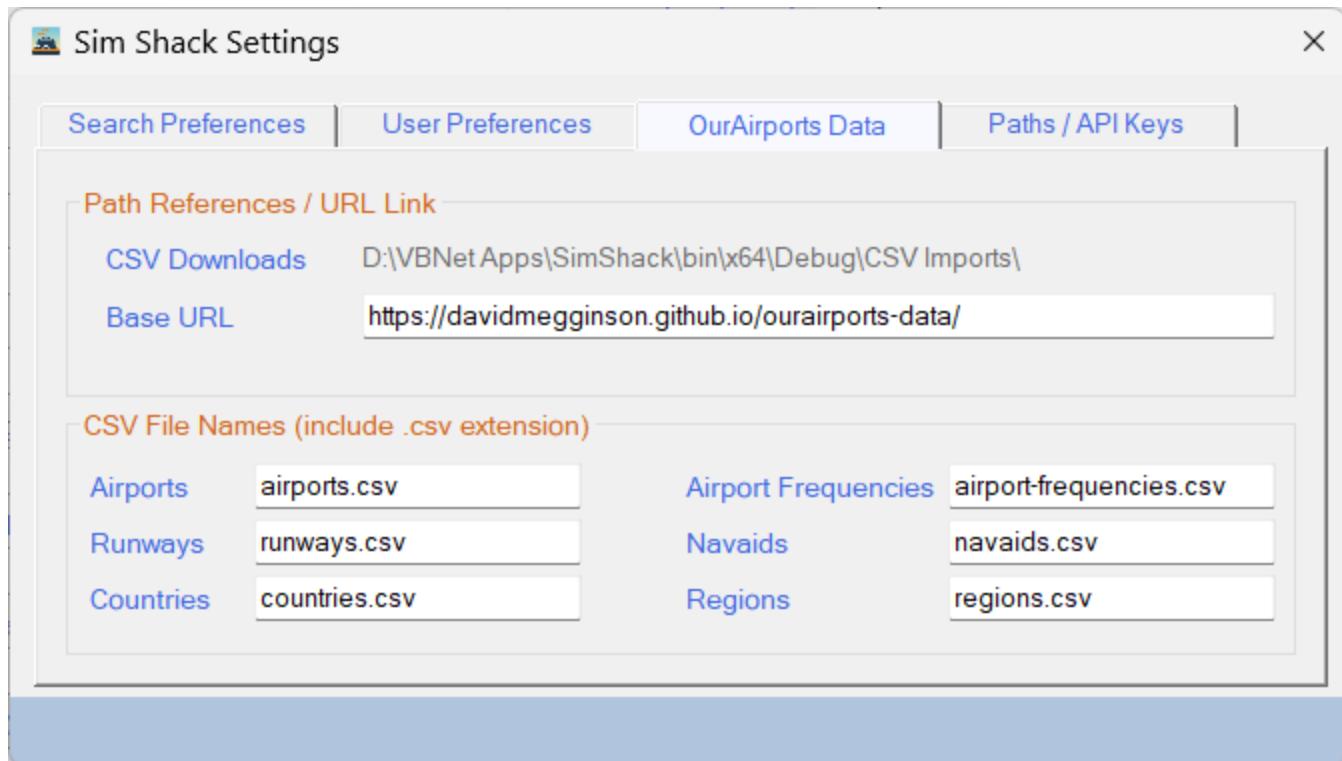


Settings – OurAirports Data

From Tools Menu – Settings / Preferences

This shows you the defined folder on your machine where OurAirports CSV files are downloaded . It also provides a place to enter the Base URL in this case from GitHub where to find the files.

Then of course place to enter in the filenames of the associated files for each category. In the event this changes at some point, you can adjust that here.



Settings – Paths / API Keys

From Tools Menu – Settings / Preferences

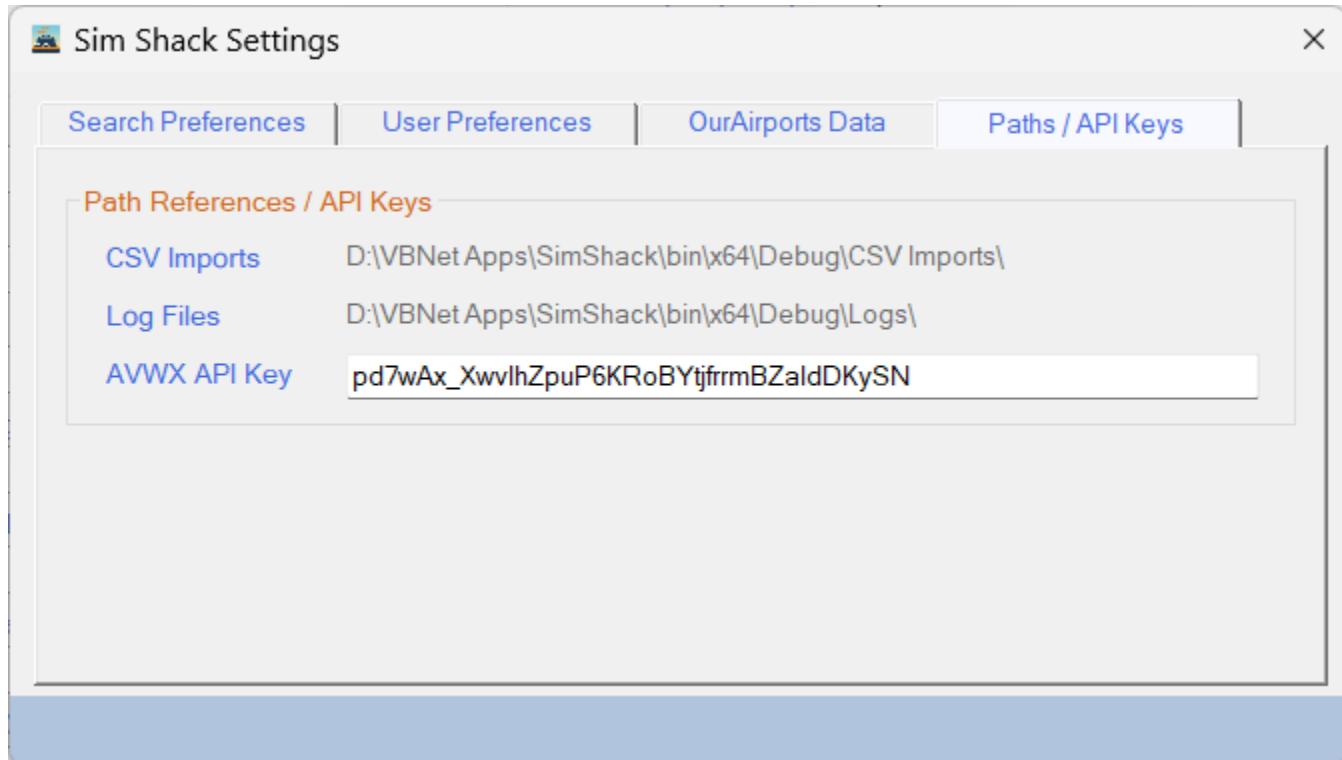
Here you will find the path for CSV Imports and Log Files in the event you wish to reference them.

To get live Metar data you need to obtain a FREE Aviation Weather API Key. It is a hobby account through their site and allows you up to 4,000 API calls per day which is more than adequate for a simmer.

To sign up visit <https://account.avwx.rest/register> and create a new account for yourself.

Once you have logged in, select Access Tokens from the side menu and create a New Token. Once you have your token come back to **Settings / Preferences** from the **Tools** option on the menu bar and enter your API Key into AVWX API Key.

Once done, close this screen, and do a lookup of a large airport to test it. You should be getting Metar data.



End of Sim Shack User Guide

If you have any questions about anything related to Sim Shack, feel free to drop me an email. I would be glad to hear from you. Email: highpapiair@gmail.com