X-ATC-Chatter 1.7.2

User's Guide

4/26/2023
Stick and Rudder Studios

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Change Log

Version	Changes
1.7.2	• Changed URL for the clip update server
1.7.1	• Improved support for window positioning with multi-monitor configurations • Fixed a bug where loading airports was not following directory links in scenery_packs.ini • Fixed warnings about new X-Plane 12 weather datarefs • Added vector and decent hints to the Pilot Transmission window • Added auto select option for auto selecting Regions and Countries • Added support for detecting when clip updates have been posted • Switched clip updates to use HTTP protocol instead of FTP • Added traffic alerts • Added option route deviation • Added ability to request a diversion • Added ability for user to verbalize pilot transmission instead of using text to speech engine • Add support for Amazon Polly voices on OSX and Linux • Added option to issue vectors and the termination fix on a star • Added greetings and salutations • Added SIDS, STARS, and Approaches • Added support for vectors when in contact with the tower • Added supporting vector to final
1.7.0	• Added an option to monitor the radio audio panel • Added a sample Lua script for controlling radio power / pause on custom aircraft. • Removed 121.5 (guard) from center frequency list • Added a "Check for Updates" menu item • X-ATC-Chatter.XPL for OSX is now signed and notarized with a certified Apple Developer ID. This should eliminate the need to manually approve the running of the plugin. • Added support for User Defined clip collections • Added support for geo tagged clips that can be selected by country and ICAO code • Added an option that if any monitored radio is tuned to an atis facility the chatter will pause • Significant speed improvement on startup if you disable refresh facility database on startup • Added support for Simple ATC • New UI • Added an integration to 124th ATC • Added 400 demo clips to the player distribution • Fixed X-Life bug

Table 1

Release Notes

1.7.2

- Changed URL for the clip update server

We have decided to change the server that hosts the clip updates. 1.7.2 uses the new server for all clip updates.

1.7.1

- Improved support for window positioning with multi-monitor configurations
- Fixed a bug where loading airports was not following directory links in scenery_packs.ini
- Fixed warnings about new X-Plane 12 weather datarefs
- Added vector and decent hints to the Pilot Transmission window
- Added auto select option for auto selecting Regions and Countries
- Added support for detecting when clip updates have been posted
- Switched clip updates to use HTTP protocol instead of FTP
- Added traffic alerts
- Added option route deviation
- Added ability to request a diversion
- Added ability for user to verbalize pilot transmission instead of using text to speech engine
- Add support for Amazon Polly voices on OSX and Linux
- Added option to issue vectors and the termination fix on a star
- Added greetings and salutations
- Added SIDS, STARS, and Approaches
- Added support for vectors when in contact with the tower

The primary purposes of X-ATC-Chatter 1.7.1 are:

- Support X-Plane 12 in addition to X-Plane 11
- Add significant enhancements to Simple ATC
  - SIDS, STARS, Approaches
  - Integration to Amazon Polly
  - Vectors to final
  - Airport diversions
- Include all the latest clips into the new archive

Refer to the appropriate sections of this guide for more information on the specific Simple ATC enhancements.

Installation

The demo archive comes with 400+ U.S. demo clips. The purchased version has over 45,000 clips. To upgrade to this new version follow these steps.

1. Make a backup copy of the X-ATC-Chatter folder that is currently in your X-Plane plugins folder
2. Unzip the 1.7.1 X-ATC-Chatter archive to a temporary folder. Make sure there is enough free space as the full clip set is roughly 3.2 GB.
3. Copy the resulting X-ATC-Chatter folder over to the X-Plane 11(12)\Resources\plugins folder allowing the copy utility to replace (merge) any existing files. This can take a while particularly for the full clip set. Make sure you do not change the name of the folder; it needs to be named X-ATC-Chatter.

Common Mistakes

- Renaming the X-ATC-Chatter folder to some other name like X-ATC-Chatter_1.7. The folder must be named X-ATC-Chatter
- Placing the X-ATC-Chatter folder from the archive into the exiting X-ATC-Chatter folder thereby creating a nested installation

Introduction

X-ATC-Chatter is a set of air traffic control audio chatter files that either a stand-alone X-Plane player or Pilot2ATC can play back. The clips have been edited so that each one contains a single exchange between a pilot and an ATC facility. When necessary the audio has been edited to remove any glaring location specific phrases so that the clips can be played back for a general region of the world regardless of the departure / destination airports and which ARTCC centers are used. As an example the exchange "Boston Tower, United 6626, clear of active" would be changed to "Tower, United 6626, clear of active". No attempt was made to change references to SIDS, STARS, runways, taxiways, and specific waypoints.

The clips are organized by world region and then by controller type. The directory structure below the region folders matches what Pilot2ATC needs to playback controller specific audio.

Licensing

The audio clips in X-ATC-Chatter are copyrighted material. They were derived from LiveATC.net archives and are being distributed under a licensing agreement between Stick and Rudder Studios, LLC. and LiveATC.net.

- You have the right to use these files for personal, non-commercial use in a flight simulator on a single PC.
- You may not redistribute them or the included stand-alone player in any way including
    - Posting them on the internet
    - Embedding them in another product
    - Transmitting or sharing the files with a third party in any way
- You may not make any derivative audio files from the included clips
- You may make a backup copy of the files for archival purposes

Installation

The distribution of X-ATC-Chatter is one fairly large zip file. X-ATC-Chatter.zip contains the stand-alone X-Plane player plugin, documentation, and the clips for all the Regions.

After downloading the zip file simply use your favorite zip utility to extract the archive to temporary folder.

Install the Stand-Alone X-Plane Player

If you plan to use the stand-alone player copy the X-ATC-Chatter folder from the temporary folder above to your X-Plane 11/12 plugins folder. Example:

X-Plane 11\Resources\plugins\X-ATC-Chatter

Note: Do not change the name of the folder; it must be named X-ATC-Chatter

Running on OSX

If you are running on OSX you need to be at 10.15 or higher.

Newer versions of OSX use the Gate Keeper application to ensure that only safe and known applications are run on your MAC. Since X-ATC-Chatter is not installed from the Apple Store you need to make sure that your privacy settings in OSX allow you to also run apps that are properly signed by a known Apple Developer. See the following image.
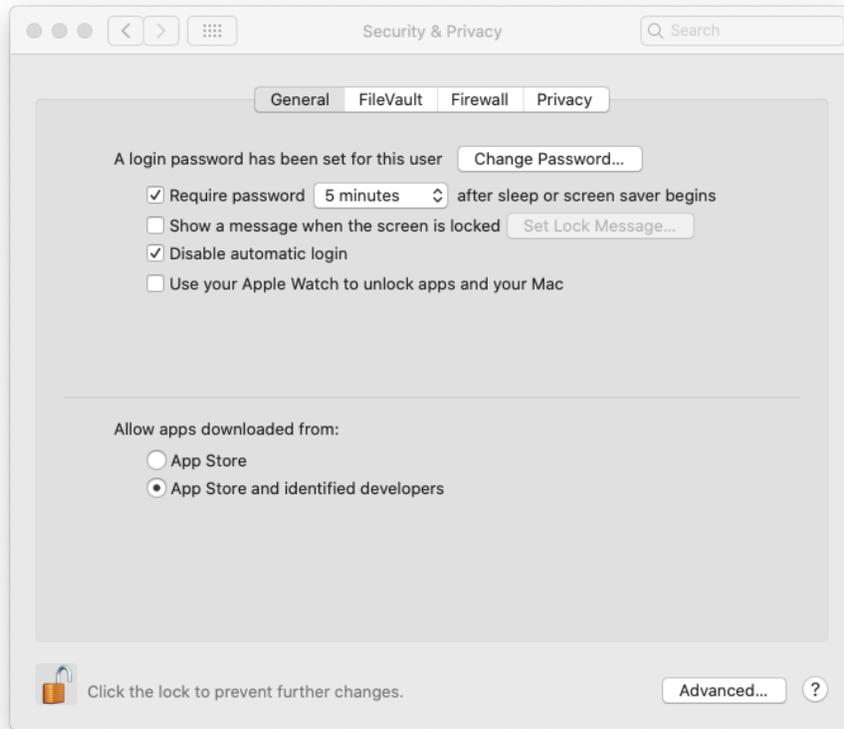
Install for Pilot2ATC

If you plan to use the chatter files with Pilot2ATC there is no need to copy the X-ATC-Chatter folder to your X-Plane plugins folder. Rather, you will just copy the X-ATC-Chatter\Regions folder to the Pilot2ATC \Sounds\ATC_Chatter folder. The final structure should look like this:

Pilot2ATC_2020_x64\Sounds\ATC_Chatter\Regions
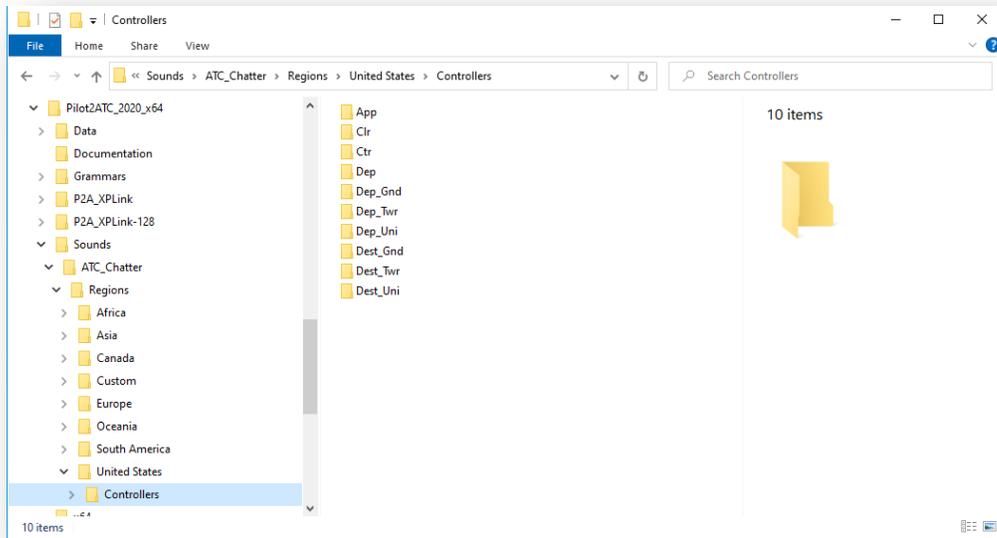
Figure 1

Configuring Pilot2ATC

You will want to configure Pilot2ATC to play chatter files based on a controller file structure. See the following figure:

Figure 2

Set the Sound Source radio button to "Controller Folders" and make sure the Root Folder is empty, cleared. Set the desired "Pause Between File Playback" time. Note, the pause time will not be fixed at that value; rather, it is a random number up to the max value specified here. Finally, check the "Play Chatter" check box.

You also need to make sure that your radio volume is turned up. To open the radio panel click anywhere in the STBY radio indicator in the lower left corner of the Pilot2ATC window.

That should then open the radio panel:

Make sure you turn up the volume.

If you run into any issues Pilot2ATC has a very good support forum where the developer will be able to help you:

https://www.avsim.com/forums/forum/713-pilot2atc-users-forum/

Platform Support

The stand-alone player will work on X-Plane 11 and 12, all versions and all platforms.

If you are running on OSX you need to be at 10.15 or higher.

Using the Stand-Alone Player

Requirements

The stand-alone player will operate on X-Plane 11 and 12 64 bit.

General Operation (Control Panel)

The stand-alone player for X-Plane 11 will play back chatter files from the various clip collections and controllers based on manual input from the X-ATC-Chatter control panel which can be accessed via the X-Plane plugins menu. See figure below.

The collection drop-down box will allow you to select the clip collection you want to work with.
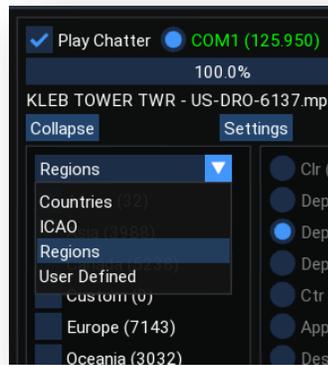
The control panel shows the total number of clips in each collection and when a collection entry is selected the numbers next to the controllers show the total clips for that controller in in the currently selected collection. You can select more than one collection entry at a time which will increase the total clip count for chatter. This may makes the most sense for combining similar regions like the U.S. and Canada where ATC chatter and phraseology are similar although you can select any combination of regions.

To start chatter playback select a region and a controller that has at least one clip in it and click on the Play Chatter checkbox. Chatter should start playing with a pause between each clip that is controlled by the min and max delay parameters on the settings dialog audio tab.

Play Chatter

This is the master play control. It must be checked in order for ATC chatter to be heard regardless of any other settings.

Use COM1 / COM2

These options determine which COM radio to monitor for detecting the tuned facility which determines which controller type will be selected for chatter playback when Automatic Controllers is enabled. Your aircraft must maintain the following two datarefs for Automatic Controllers to work properly:

sim/cockpit2/radios/actuators/com1_frequency_hz
sim/cockpit2/radios/actuators/com2_frequency_hz

Auto Select

X-ATC-Chatter can automatically select the Region or Country based on ICAO code and country information for the nearest ICAO airport.

Regions

On the settings page there is a Region Map that allows you to enter a list of letters associated with a region.
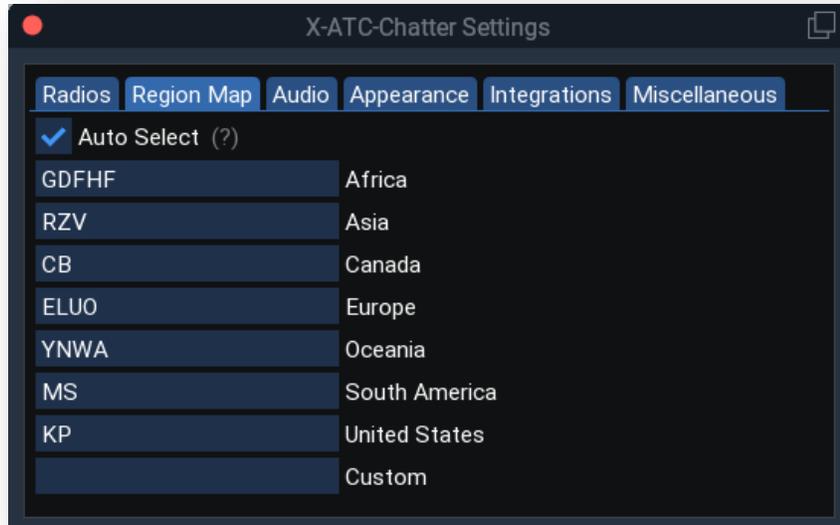
When an aircraft is loaded and approximately every minute of flight, X-ATC-Chatter will find the nearest airport with an ICAO four character designator. If the first letter of the designator is found in the string of characters associated with a region then that region will be selected. If no match is found, X-ATC-Chatter will not adjust the region selection.

Note: many smaller airports are not given a true ICAO designation, like 2B3 in Newport, NH. That code is a local / state code and does not follow the ICAO naming convention. X-ATC-Chatter will only evaluate nearby airports with true ICAO code designation.

The custom region is evaluated first and then the remaining regions in alphabetic order. As soon as a match is found that region will be selected and the match process stops.

The default Region Map does not contain all possible first letters of all ICAO codes. You will likely need to add some depending on what areas you fly in. You can refer to the ICAO code country map to help complete the mapping:

https://en.wikipedia.org/wiki/ICAO_airport_code#/media/File:ICAO-countries.png

Countries

If you are filtering by countries and you enable Auto Select, X-ATC-Chatter will look at the country information at the nearest ICAO airport. If that country information matches a country for which there are clips, then the country will be selected. If no match is found the current country selection will not be adjusted.

Auto selecting countries is very dependent on two things. First, the country name the scenery designer used at the nearest ICAO airport must match the country name associated with the clip collection's MP3 tag data. The second thing is how well populated the clip collection is for a particular country. Although X-ATC-Chatter has tens of thousands of clips they tend to be concentrated in a relatively small number of countries. As an example, The United States, Canada, Australia, Netherlands, Japan, and Ireland have good coverage where many other countries have very few or no clips.

Our hope is that with the addition of country selection it might spur more interest in user's becoming volunteers to collect and curate clips in more countries. Read more about becoming a volunteer here:

https://www.stickandrudderstudios.com/x-atc-chatter-project/

Custom Region

The stand-alone player supports a Custom region where you can place any of your personal chatter clips. In order to use this simply place mp3 or wav files in the various controller folders under X-ATC-Chatter\Regions\Custom\Controllers.

One use case for the Custom folder is to allow you to collect facility specific chatter for a particular flight. You can go to LiveATC.net and download ground, tower, approach, and departure clips for a specific flight between airports where LiveATC.net has coverage. Since it may be difficult to capture an accurate sequence of en-route center chatter you could populate the Custom\Controllers\ctr folder with a copy of the center clips from another region while having airport and approach and departure specific clips in the other Custom controller folders.

User Defined Collections

In addition to the Custom Region you can also create User Defined clip collections. User Defined collections are stored under the X-ATC-Chatter\UserDefined folder. The name of each sub-folder will result in a unique collection entry name when the User Defined collection type is selected in the drop-down.

The folder structure below these uniquely named folders is the same as what you see under the Custom Regions folder. The UserDefined folder is pre-poplated with a Template folder that contains a small number of clips across multiple controllers. You can use this template to create additional uniquely named collections.

Limitations of Geo Tags

The country and ICAO collections are derived from the MP3 tag data that is associated with most LiveATC.net archives. Generally the first word of the Artist tag contains the ICAO code of the facility where the clip was collected. Center clips do not follow a very consistent naming convention and for many CTAF clips these can be collected from a CTAF frequency that a number of airports in a general area might be using. Obviously these will not be tagged with a unique ICAO code.

Curating the clips from volunteers involves a number of steps to improve the overall quality of the collection set. One of these steps is to verify the MP3 tag data and to build a final classification file that is stored in ClipTags.csv in the Regions folder using special tools and software. That CSV file is shipped with the collection and X-ATC-Chatter reads this file at startup and will create the Country and ICAO collections based on this data.

Any user created collections in either the Custom Region folder or under the UserDefined folder will not show up in the ICAO and Country collections as they are not part of the ClipsTags.csv database.

Settings
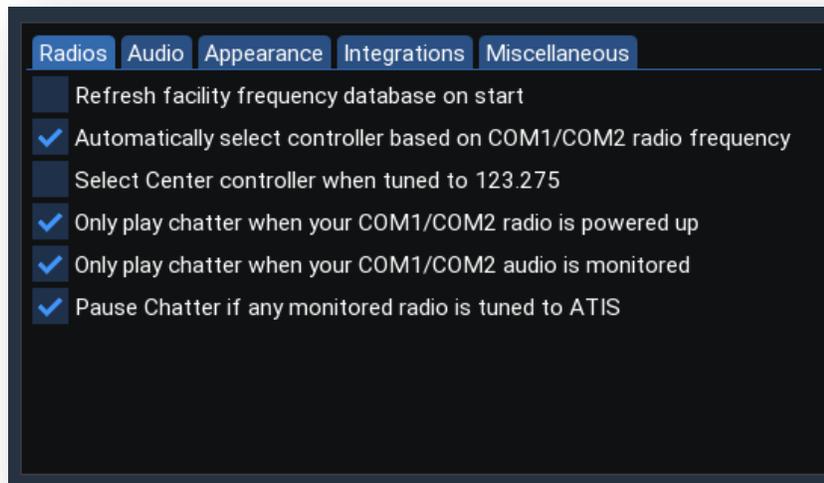
Radios Tab

Refresh Cache on Start

X-ATC-Chatter maintains a list of frequencies and locations of all the ATC facilities defined in your scenery in the file airports.dat. It also maintains a list of ARTCC center transmitters stored in the file freq.csv.

By default X-ATC-Chatter will refresh airports.dat on each X-Plane start by scanning all your scenery apt.dat files. The time required to do this will depend on your CPU, disk drive, speed, and amount of custom scenery installed and can take half a minute or longer. The actual time required will be written to the X-Plane log.txt file.

X-ATC-Chatter: Refreshed airports.dat in 29 seconds

You can use this option to disable refreshing airports.dat on each X-Plane start if you find that the load time is too long. X-ATC-Chatter will monitor changes to your scenery_packs.ini file and if it detects any modifications it will automatically rebuild the airports.dat file. There are a few limitations to this detection technique:

1. If you install a new version of exiting scenery but the folder name does not change then X-ATC-Chatter will not be able to automatically detect that change.
2. If you install new custom scenery X-ATC-Chatter will not detect the changes to your scenery_packs.ini file until the 2nd X-Plane restart. This is due to the fact that X-Plane does not update the scenery ini file until well after plugins have been loaded.
3. Updates to the X-Plane scenery will typically not be detected.

In the above cases you may need to enable the refresh option to get X-ATC-Chatter to update the airports.dat file.

We recommend leaving this option enabled if the impact on your load time is minimal.

Automatic Controllers Checkbox

When this option is enabled X-ATC-Chatter will monitor the com frequency dialed into the COM1 / COM2 radio. The frequency is checked against a database of ATC facilities that are within 100 NM of your current aircraft position. The closest matching frequency will determine the type of controller that will be selected. The matching ATC facility will be displayed in the lower left corner of the control panel.

Ground, Tower, and CTAF/Unicom facilities that are within 10 NM of the origin airport will select the departure airport Ground, Tower, or Unicom controllers. If your plane is more than 10 NM from the origin airport X-ATC-Chatter will select the destination Ground, Tower, and Unicom controllers.

If it finds a match against an ATIS/AWOS station X-ATC-Chatter will temporarily pause chatter playback so you can listen to the X-Plane generated ATIS information.

Enable Center Override When Tuned to 123.275

When this option is set along with the Automatic Controllers, X-ATC-Chatter will force the selection of ATC Center chatter. This is useful when flying outside the U.S. where X-ATC-Chatter may not have accurate Center Facility information.

As of X-ATC-Chatter 1.6 we have added better data for the Canadian airspace and we have added generic center transmitters for the rest of the world. Hopefully with these additions the need to use Center Override will be reduced.

Note: 123.275 conflicts with the Tower at EGNF. If you are flying to or from EGNF you may want to temporarily disable Override so that tower chatter will be selected when the EGNF tower is within range.

When using X-Plane ATC to automatically tune COM1 it will often select a center frequency that is not found by X-ATC-Chatter.

To get around this X-ATC-Chatter will first look to see if you have the "Center Override" option set. If it is set it will then look to see if the COM2 audio panel selector is ON and check if COM2 is tuned to 123.275. If all those conditions are met Center Override chatter will be played regardless of what you have COM1 tuned to.

You will need to tune COM2 to any frequency other than 123.275 or deselect COM2 on the radio audio panel in the cockpit when you want to have chatter selected by what you have COM1 tuned to.

Radio Power Checkbox

The radio power checkbox controls chatter playback based on when power to one of the two com radios is on. With this option set chatter will play under these conditions:

- The Play Chatter checkbox must be selected
- There must be voltage on the plane's power bus
- The avionics switch must be on
- One or both COM1 / COM2 radio power switches must be turned on

Radio Monitor

The Audio is Monitored option when enabled will cause X-ATC-Chatter to monitor the state of the datarefs:

sim/cockpit2/radios/actuators/audio_selection_com1
sim/cockpit2/radios/actuators/audio_selection_com2

If the audio selector for the active radio is disabled X-ATC-Chatter pause the chatter.

Custom Aircraft Radio Functions

Some custom aircraft will not sue the default X-Plane power and audio panel datarefs. If need be, you can use a Lua script to pause chatter based on the capabilities of custom aircraft. In the LuaScripts folder is a sample Lua script that shows how that can be done:

X-CHATTER_AUDIO.lua

Pause Chatter if Any Monitored Radio is tuned to ATIS

In a typical GA cockpit if you have both radios enabled on the audio control panel you will be able to hear signals on both radios simultaneously. It is not uncommon to have ATC tuned on COM1 and then tune an ATIS on COM2. It can be very challenging to hear the ATIS recording while at the same time hearing ATC communications. This is just one of the challenges with a single pilot in a small GA aircraft. X-ATC-Chatter will pause chatter of you tune your main COM radio to ATIS but it will not pause chatter if you tune the alternate radio to ATIS and enable it on the audio panel.

This option will cause X-ATC-Chatter to pause chatter if either radio enabled on the audio control panel is tuned to a nearby ATIS facility.

Integrations Tab

Use X-Plane ATC

X-Plane 11.3 beta 5 or higher has an improved ATC voice system which X-ATC-Chatter is integrated with. When this option is enabled X-ATC-Chatter will automatically select the controller type based on which facility the X-Plane ATC has you tuned to. X-ATC-Chatter will pause chatter playback if you, an ATC controller, or an AI aircraft's pilot is transmitting on the selected radio.

External Integrations

X-ATC-Chatter offers an interface via an exposed dataref that allows 3rd party ATC or Traffic Plugins to control chatter playback. X-Life version 2.1 beta 7 is the first 3rd party plugin to take advantage of this integration.

We are currently working with a number of other authors to get these integrations completed and we will announce them as they are made available.

That said, you will need to check this option to allow X-Life and any 3rd party plugin to control X-ATC-Chatter.

Audio Tab

Interior Sound Only

When enabled X-ATC-Chatter will pause chatter playback if you change your X-Plane view to an external camera. When disabled, chatter will play regardless of the view type selected.

Volume Sliders

The control panel has two volume control sliders. The one on the left controls the volume of the chatter playback and the right volume slider will control the X-Plane engine sound volume. Some planes have very loud engines even when in the cockpit and it can make it difficult to hear the chatter. Use these volume controls to adjust chatter environment to your liking. Please note that not all planes will respond to adjustments on the engine volume slider. Some of these aircraft have their own sound environments and they usually offer a way for you to adjust that volume.

Audio Device

This dropdown lists all the available audio playback devices on Windows and Linux. You can choose the device you want chatter to play on. X-Plane Audio will play audio using the X-Plane OpenAL context and audio device. This is normally the default audio device in your OS.

This feature will only list the X-Plane Audio device on OSX due to a bug in Apple's implementation of OpenAL. Hopefully Apple will correct this problem in a future update to OSX.

Min and Max delay

These numeric inputs allow you specify the min and max delays between chatter clips. If you use SimpleATC the current delay count down will get reset to the max delay value after any transmissions. The reason for this is that a response to that transmission is likely and we want to prevent chatter from slipping in.

Appearance

These check boxes allow you to adjust the appearance of the three main X-ATC-Chatter windows.

It is possible that if you change your monitor layout previously positioned windows might not be visible because they are outside the bounds of the previous virtual desktop. In this case use the "Reset Window Positions" button to center all the windows on the current display.

There is also a plugin menu items that will also reset the window positions should you lose track of the settings window.

Miscellaneous

The Debug Output option will log more information to the X-Plane log.txt file. This may be helpful when debugging problems with X-ATC-Chatter.

Notes

- Not all planes will model radio power switches so your radios may be on as soon as the plane has some form of power and the avionics switch is on.

Show Nearby Facilities

There is a menu item and a command that can be used to open a window that will show up to 40 nearby ATC facilities that are within a 100 NM range of your aircraft.

The window will show you the facility frequency displayed in a radio button that when clicked will set your COM1 or COM2 active frequency to the frequency shown. A checked radio button also indicates which facility you are tuned to and has been selected for chatter. If you select a station further away from you but there is one on the same frequency that is closer, the closer one will be selected.

The window also displays the icao code of the facility, its distance from your aircraft at the time the window was opened or refreshed and the facility name.

There are a set of filter checkboxes toward the top of the display that will allow you to filter the list by facility type.

Note: Due to some inaccuracies in scenery files some CTAF facilities are classified as towers. If you are trying to find a CTAF frequency it might be a good idea to also check the tower filter.

Commands

X-ATC-Chatter defines a number of plugin commands that you can map to keyboard keys or joystick buttons using X-Plane's command mapping feature. The following X-ATC-Chatter commands are available:

- SRS/X-ATC-Chatter/Toggle_Control_Panel
- SRS/X-ATC-Chatter/Toggle_Playback
- SRS/X-ATC-Chatter/Stop_Playback
- SRS/X-ATC-Chatter/Start_Playback
- SRS/X-ATC-Chatter/Select_App_Chatter
- SRS/X-ATC-Chatter/Select_Clr_Chatter
- SRS/X-ATC-Chatter/Select_Ctr_Chatter
- SRS/X-ATC-Chatter/Select_Dep_Chatter
- SRS/X-ATC-Chatter/Select_Dep_Gnd_Chatter
- SRS/X-ATC-Chatter/Select_Dep_Twr_Chatter
- SRS/X-ATC-Chatter/Select_Dep_Unicon_Chatter
- SRS/X-ATC-Chatter/Select_Dest_Gnd_Chatter
- SRS/X-ATC-Chatter/Select_Dest_Twr_Chatter
- SRS/X-ATC-Chatter/Select_Dest_Unicon_Chatter
- SRS/X-ATC-Chatter/Toggle_Nearby_Facilities
- SRS/X-ATC-Chatter/Select_Next_Logical_Controller
- SRS/X-ATC-Chatter/Select_Previous_Logical_Controller
- SRS/X-ATC-Chatter/Transmit
- SRS/X-ATC-Chatter/Toggle_ATC_Panel
- SRS/X-ATC-Chatter/Toggle_Pilot_Transmission_Window_Collapse
- SRS/X-ATC-Chatter/Request_Flight_Level_Change
- SRS/X-ATC-Chatter/Request_Cancel_Flight_Following
- SRS/X-ATC-Chatter/Report_Missed_Approach
- SRS/X-ATC-Chatter/Cancel_Transmission

Notes:

The select next and previous logical controller commands only work when you do not have "Automatic Controllers" enabled.

VR

If you are using a VR headset the control panel and nearby facility windows will show up in the VR environment when it is active. Note: it is the act of opening these windows when VR is active that causes

them to be positioned in the VR world. Make sure you start VR with both the control panel and the nearby facility windows closed.

These are the only two windows at the moment that will show in VR so you will need to do things like changing your audio devices from the desktop.

Simple ATC

Overview

Simple ATC provides for a more immersive ATC communications experience by using the text to speech capabilities of the operating system to synthesize communication between your aircraft and ATC. This capability is built into X-Plane but the voices tend to be very robotic and it does not handle the various flight plans such as VFR and VFR with flight following.

Simple ATC is not intended to be a full blown ATC add-on. For that we would recommend either Pilot2ATC, 124th ATC, or flying on virtual networks like Pilot Edge, POSCON, and Vatsim.

Simple ATC is designed to work best with the Microsoft SAPI voices. It will work using the one X-Plane voice on OSX but it is not as immersive as having multiple SAPI voices on Windows.

SAPI Voices

Windows OS

Where to get extra voices

Microsoft Voices

Windows 10 does come with a few voices installed but you can add more. Here is a YouTube tutorial showing you how to add more:

https://www.youtube.com/watch?v=ANiReiDHBjA

Simple ATC uses SAPI voices. For some reason Microsoft does not expose all their voices as SAPI voices. There is a way to modify the registry so that the newer WindowsRT voices will show up as SAPI voices. The following YouTube tutorial shows you how to do this modification. **WARNING**: modifying the Windows registry improperly can render your system inoperable. Only do this if you are comfortable and have a good backup of your system.

https://www.youtube.com/watch?v=VIv5jc3Kf5I

[Step by Step](#)

There is also a free tool from [Neuber Software](#) that may help simplify all of the above steps. I have tried and it on my system and it seemed to work well but use it at your own risk:

Third Party SPAI Voices

You can also purchase high quality SAPI voices from 3rd party vendors. They are usually high quality voices but they can be a bit expensive. Here are examples of where you can purchase Ivona or Cereproc voices:

https://nextup.com/ivona/index.html

https://www.cereproc.com/en/buy-voices

Amazon also has an Amazon Polly Windows Plugin that will install the Polly Text to Speech voices as SAPI voices. This is a subscription service based on the number of characters that are converted but there is a free tier available with limits. The Polly voices are very impressive and it may be worth it to give them a try as an alternative purchase option. There were one or two voices that seemed to generate errors but you can simply unselect them for use on the Simple ATC Voices tab if they don't generate speech with the Try button.

Provisioning Amazon Polly is a multi-step process so read the instructions carefully. Also, make sure you are comfortable with how the free tier works and what you will be paying should you exceed the free tier limits.

https://docs.aws.amazon.com/polly/latest/dg/sapi-plugin.html

OSX and Linux

By default SimpleATC only uses the built-in text to speech voice that is part of X-Plane on OSX. On Linux there is no default voice.

That said SimpleATC does support an interface to the Amazon Polly voice service.

Amazon Polly

Amazon Polly is a high quality cloud based text to speech engine. It offers numerous high quality voices. The service is not free but it seems to be reasonably priced and does come with a free tier for a limited time.

https://aws.amazon.com/polly/pricing/?nc=sn&loc=4

On the Windows OS Amazon Polly is supported using the Amazon Polly SAPI-5 plugin which is discussed above. On OSX and Linux, SimpleATC supports an interface to Amazon Polly using the AWS CLI (Amazon Web Service Command Line Interface).

Setting up Amazon Polly on your OSX or Linux system is a multi-step process:

1. Create an Amazon Account and an IAM user
2. Install the AWS CLI tool on your system
3. Do a one-time configuration of the AWS CLI by providing it with your credentials you obtained from step 1 above and letting it know which AWS region you will be using
4. Run some quick test using the AWS CLI from a OSX/Linux command shell

Setup your AWS Account and Create an IAM User

https://docs.aws.amazon.com/polly/latest/dg/setting-up.html

Make sure you save you your Access key and Secret Access key in a safe place. You will need them when configuring the AWS CLI.

Install the AWS CLI Tool for your OS

https://docs.aws.amazon.com/cli/latest/userguide/getting-started-install.html

Configure the AWS CLI

This is a one-time procedure to tell the AWS CLI what your Polly credentials are and to let it know what region to use and what output format is desired. When asked specify a json output format as that is what SimpleATC is expecting to enumerate the Polly voices. Pick a region that is nearest your location to ensure the best performance when generating speech.

https://docs.aws.amazon.com/general/latest/gr/pol.html

https://docs.aws.amazon.com/cli/latest/userguide/getting-started-quickstart.html

Verify that the AWS CLI can properly interact with the Polly service

Open a command shell and experiment with the AWS command as outlined in the following link to make sure that you can get a list of voices and generate a speech mp3 file.

https://docs.aws.amazon.com/polly/latest/dg/get-started-cli-exercise.html

If the above steps are successful SimpleATC should display and populate a Voices tab on the SimpleATC ui window and then use the voices for pilot and ATC transmissions.

Languages

Amazon Polly will offer voices with different languages. In some cases you can pick a non-English voice that will speak English ATC phraseology with that voice's language accent. Not all voices support this concept well so it is a good idea to use the Try button to see how the voice sounds.

Configuring voices

Once you open the Simple ATC Panel from the X-ATC-Chatter plugin menu you can use the Voices Tab to pick which voice you want to use for the Pilot transmissions and which voice(s) you want to use for the controllers. There is also a Voice Filter text filed that can be used to filter the voices for specific languages or voice types such as Neural / Standard for Amazon Polly voices.
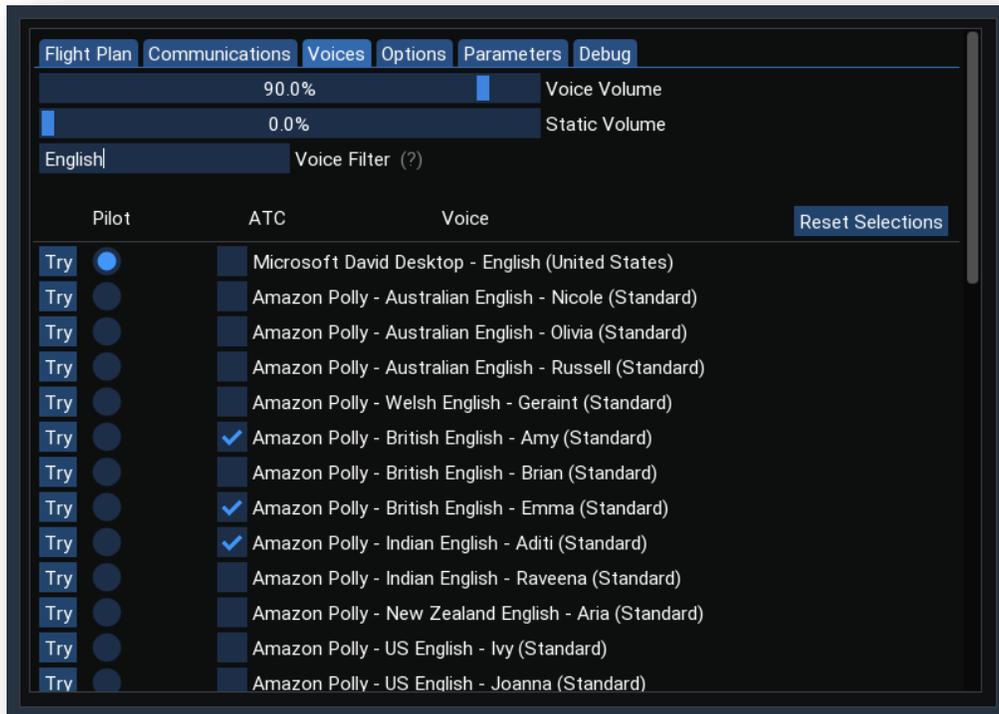
Flight Plan

The flight plan tab is where you configure Simple ATC for the type of flight you are performing.

Origin and Destination

You specify the origin and destination airports using the 4 letter ICAO code for airport. As you enter these codes Simple ATC will fill in the name field. You can edit this name field so that transmissions will have a good sounding name when the airport is referenced.

Taxi Destination

After landing at a controlled airport and are clear of the runway you will be instructed to contact ground where you will be able to request taxi to an airport destination. By default the text will be to "The Gate". You can change this to any option text such as:

- The Ramp
- Parking
- Golf 5
- G 5
- Etc.

Use Standard Overhead Join

This option is available for uncontrolled destination airports and enables the U.K. Overhead Join method of entering the traffic pattern. This pattern entry procedure is commonly practiced in the U.K., South Africa, and New Zealand as well as some other British Commonwealth countries. The checkbox will default to enable for uncontrolled destination airports in those countries. You can optionally enable it for any country.

When selected the 45 downwind entry will no longer be available.

Radar Services

Radar services denote those airports that have departure and approach controllers. In the U.S. these are the class Charlie and Bravo airports. The X-Plane scenery database does not explicitly identify these airports so Simple ATC will fill in the checkbox if it sees that an airport has a tower and a clearance frequency as well as an assigned approach and/or departure frequency. When you fly VFR into a class C or B airport you must make contact with the approach controller before entering the airspace. This checkbox tells Simple ATC when it needs to do that.

Request Vectors

If a destination airport has radar services you can optionally request vectors to final after you check-in with approach control. You can select this option even after you filed your flight plan up to the point you are cleared for landing. Vectors can also optionally be issued automatically when you get to within two nautical miles of the last fix on a STAR. Read the section below on using vectors on an approach.

ATIS

When making initial contacts to ATC at airports that have an ATIS frequency you must let the controller know which ATIS information you have. X-Plane does not expose an interface to know which ATIS is in effect so you must listen to the ATIS and then select the letter that matches what you heard. Pretty much just like the real world, no cheating, listen to the ATIS.

Taxi and Take-Off Options

If your origin is a controlled airport you can request Pushback and / or Engine start clearances. You can also have the tower instruct you to lineup and wait prior to giving you take-off clearance. Take off clearance will be given 45 seconds after you acknowledge the lineup and wait instruction and your aircraft heading is aligned to the runway heading +/- 20 degrees.

Commercial Flight

Commercial flights are always fully referenced by the airline name and flight number. Non-Commercial flights will be initially referenced by the aircraft type and tail number on the first call to a facility and then just by the tail number on subsequent calls to the same controller. The first letter of the tail number denotes the registration country and is usually omitted in all ATC transmissions. As an example, N685DW will be referred to as 685DW.

Altitude

This denotes the cruise altitude for your flight. It is used by Simple ATC to report climbing to during your departure. Once you reach your cruise altitude Simple ATC will no longer report climbing.

Transition Altitudes

Transition altitude refers to the altitude at which point a pilot will set there altimeter to standard pressure, 29.92. This can vary from country to country. In the U.S. it is typically 18,000 feet. Once you reach the transition altitude you should set your altimeter to standard pressure. Simple ATC will also stop reporting local altimeter settings when you check-in with a new controller.

You can specify different transition altitudes for you origin and your destination. Simple ATC will use the mid-point of the flight to switch the destination transition altitude.

When descending Simple ATC will have the controller report a local altimeter setting just before you get to the transition altitude.

Type

Your flight type can be IFR, VFR, or VFR with Flight Following. Commercial flights will always be limited to IFR. IFR flights will have an initial climb clearance which defaults to 2,000 feet above the origin airport. You can increase this if you wish. Simple ATC will give you clearance to climb to your plan altitude after you reach your initial clearance altitude.

Issue Traffic Alerts

If your flight plan type is IFR or VFR with flight following Simple ATC can optionally issue traffic advisories when it detects that your flight path will intersect with traffic within 2 NM and 2,000 feet. Use this checkbox to turn this feature on and off.

Note: Traffic Advisories are only available during the enroute phase of the flight as they can interfere with the heavier work load during departure, approach, and landing.

File the Plan

Once you have all the fields filled out properly use the File Flight Plan button to file your plan. Simple ATC will verify that the various fields are properly filled out. Once the plan is filed you cannot change the ICAO codes of your airports nor can you change the plan type or radar service designations.

The following filed flight plan data is saved on a per aircraft bases and will be retrieved when you load the aircraft again.

- Origin and Destination Altitudes
- Commercial or Private Flight
- Airline / Type
- Flight / Tail Number
- Plan Altitude
- Taxi Destination
- Push Back and Engine Start
- Lineup and Wait
- Plan Type

Communications

The communication tab will show you hints as to what frequency you should be tuned to and what squak code you should be using. It will also show the current transmission and any transmission history.
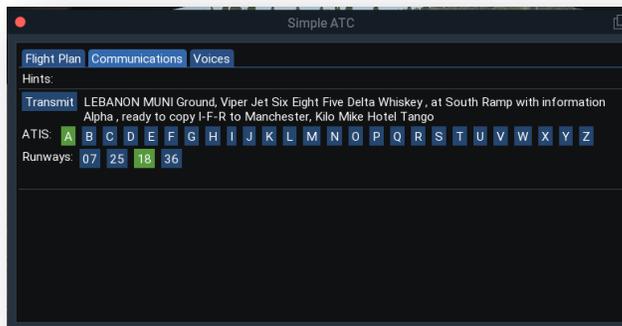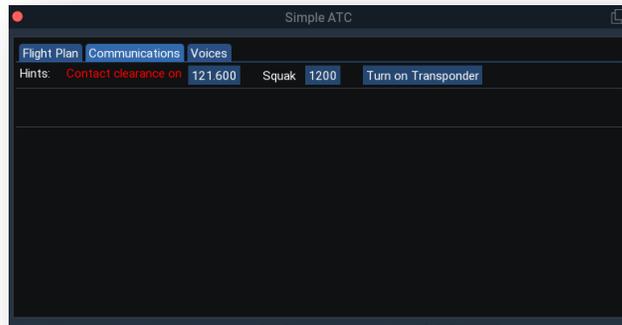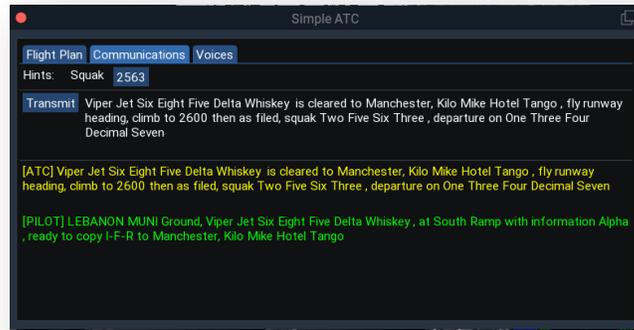
When the pilot has a pending transmission there will be a transmit button that you can click to activate the transmission. ATC transmissions occur automatically. Transmission can occur only if no other chatter is playing.

Most yokes have a push to talk button. You can map that button to the X-ATC-Chatter command:

SRS/X-ATC-Chatter/Transmit

This will allow you to activate pilot transmissions without the need to click on the Simple ATC transmit button. This command is also used for the Say Again feature discussed below.

Requesting Altitude Changes

Default methods

When flying IFR you will be given clearance to the initial clearance altitude specified in the flight plan. Once you have reached that altitude and are in contact with departure will be given climb clearance to your plan altitude.

Once you are in the en route phase of your IFR flight you have the opportunity to request a new altitude. This can be accomplished three ways:

1. On the Simple ATC Communications tab there will be a *Request Altitude Change* button
2. You can map a key or joystick button to the command:
   a. *SRS/X-ATC-Chatter/Request_Flight_Level_Change*
3. You can change the autopilot altitude hold value and then within five seconds of the change press and release the PTT switch.

The value of the altitude in the request will initially be populated from the Autopilot altitude hold dataref: *sim/cockpit/autopilot/altitude*. As long as you do not have the Copilot setup to automatically transmit the request you will have the opportunity to change the value before transmitting the request.

Using FlyWithLua Scripts

Most aircraft will properly maintain the autopilot dataref: *sim/cockpit/autopilot/altitude*. However not all aircraft have an altitude entry on their autopilot or in some cases may not properly maintain the default dataref. You can always manually request a flight level change by issuing the command mentioned above or by pressing the button on the SimleATC Communications Tab. That said, if you like the ability to trigger a change by modifying the autotpilot altitude in the cockpit and then pressing the PTT within 5 seconds there are ways to customize which dataref SimpleATC will monitor by using FlyWithLua.

In the X-ATC-Chatter folder is a LuaScripts folder. In there is a sample script, **SimpleATC_Altitude_Change.lua**, that demonstrates how this can be done using FlyWithLua.

X-ATC-Chatter defines two integer datarefs:

1. SRS/X-ATC-Chatter/use_simple_atc_altitude_change
2. SRS/X-ATC-Chatter/simple_atc_altitude_change

The first dataref is used to tell X-ATC-Chatter to monitor the default X-Plane autopilot altitude dataref when its value is 0 or when its value is 1 to monitor the simple_atc_altitude_change dataref.

The lua script can then be used to populate the **SRS/X-ATC-Chatter/simple_atc_altitude_change** dataref with any value we want. When it changes and you push the PTT within 5 seconds simple ATC will populate an altitude change request using that dataref's value as the initial requested altitude which can be modified in the UI before transmission.

The sample script actually solves an annoying problem with the Zibo 737. The Zibo 737 can have a 1-2 second delay before it updates the default X-Plane autopilot altitude dataref when in certain altitude hold modes. If you click the PTT too soon after changing the altitude knob SimpleATC does not see the change and will not initiate the request.

The script detects when you are flying the Zibo 737 and tells SimpleATC to monitor its internal altitude dataref. It then copies the value of the Zibo dedicated altitude dial dataref to the internal one on every frame. The Zibo dedicated altitude dataref is always in direct sync with altitude display on the MCP and does not have the delay mentioned above.

The script has default behavior for all other aircraft that simply copies the default autopilot altitude dataref to the SimpleATC internal altitude dataref. This is functionally equivalent to what is done without using FlyWithLua

Approach with Radar Services

SID, STARS, and Approaches

SimpleATC will allow you to choose a SID, STAR and Approach when flying to and from airports with radar services when flying IFR. With the exception of triggering "Vectors at Termination", SimpleATC does not monitor if you are actually flying the procedure. It simply uses your choices to generate more realistic ATC communications.
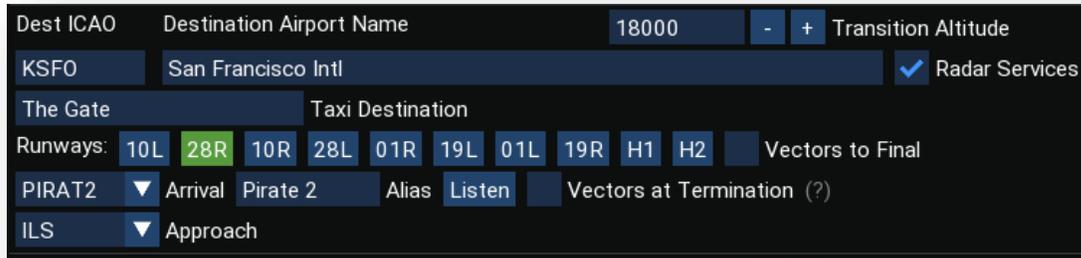
When you choose a SID or STAR your climb clearance will include climb via the SID and descend via the STAR. If you select a STAR you will be notified en route to expect that arrival and will be given clearance to descend via the arrival. The point at which the descend clearance is issued depends on your ground speed and altitude difference between the destination airport elevation and your current altitude. The general rule is 4 NM per 1000' if you are flying a fast moving airliner. The distance is less for slower aircraft. Note that SimpleATC is looking at your Ground Speed and assumes your STAR is taking you in the general direction of the airport. If the early part of the STAR does not take you on a course heading in the general direction of the airport you may get a descend clearance earlier that is necessary. If you aircraft does not have VNAV you will need to judge your descent timing and rate.

The Text to Speech engine will not always pronounce the name of the SID or STAR the way it is referred to in real-life. You can use the Alias field and Listen button to give the SID or STAR a name that will sound like it does in real ATC operations. Alias assignments are remembered between X-Plane starts and are stored in the Aliases.txt file in the X-ATC-Chatter folder.

If you select an approach for a runway the clearance will include the approach type. Also vectors are not available to VOR, NDB, or GPS approach as Simple ATC does not really know where to vector you to. Vectors are available to Visual, ILS, Localizer, and MLS approaches. Vectors are further explained in the next section.

Vectors to Final

The optional Vectors to Final will have ATC issues turn instructions to orient your aircraft so it can intercept a runway's ILS or Glide Slope at a reasonable angle so that your autopilot can capture the localizer without having too steep of a turn and potentially overshooting the course.

SimpleATC uses the following logic and parameters to vector your aircraft.

- The Final Approach Fix (FAF) is calculated to be 9 NM out on the extended centerline of the selected runway. Generally you want to be at an altitude of 2,000' above the airport's elevation when you reach that point. If the approach is supported by an ILS you should still be below the glideslope so your autopilot can capture the GS.
- If your heading is less than or equal to 30 degrees difference compared to the bearing to the FAF, you will get one vector to the FAF. That should be a shallow enough intercept angle for your autopilot to capture the localizer and not over-shoot.
- If the heading / bearing difference is > 30 degrees you will get vectored to an intermediate FIX prior to getting the final vectors to the FAF. The intermediate fix is placed 15 NM from the selected runway threshold and is offset from the centerline. The suggested altitude for this point is 4,000' above the airport elevation. The turn from the intermediate fix to the FAF can be quite large depending on the aircraft heading as compared to the bearing to the FAF. The fact that the intermediate fix is offset from the centerline should allow you to make that turn even if you are going fairly fast. 200 KIAS or less is roughly the speed you want to be at when you reach this intermediate fix.
- You will contact approach control at around 35 NM from the airport. If you plan to use vectors you want to be at approximately 9,000' above the airport elevation with a speed of around 200 KIAS when you reach that point. This is particularly important if your approach course will have you fairly close to any intermediate fix. If you are too fast or too high it might be difficult to get to the suggested intermediate fix altitude.
- You can opt-in for vectors at any time prior to getting landing clearance. When using vectors it is suggested that you set the MAAD (Maximum Approach Angle Difference) to a value of approximately 45 degrees. You can change this value on the Parameters tab.
- If you are flying a STAR SimpleATC has an option to trigger vectors to final when your aircraft is within 2 NM of the final fix in the STAR. You must fly the STAR accurately for this to work.

    As a reminder, the MAAD parameter will delay a landing clearance until Simple ATC sees that the angle difference between your aircraft heading the runway heading is less than the MAAD. This allows you to approach the FAF on the downwind and be relatively close to the airport and not getting a landing clearance based purely on your distance to the field. With MAAD set to around 45 degrees you need to be more closely lined up on final to get the landing clearance.

SimpleATC will display some approach hints to help you manage your descent. The following image shows the approach hint that will be displayed during the en route phase of the flight when you are within 100 NM of the airport. It displays the remaining distance before you will be instructed to contact approach control as well as the suggested altitude you should be at and the decent rate you would need to cross the contact point at the suggested altitude. The decent rate is constantly updated based on your ground speed and current altitude. The calculation also assumes you are heading directly to the airport. Many STARS take you around an airport so you may actually have much more time to get down. Generally you will want to be 2,000' above the airport elevation when you are 9 NM from the runway threshold.
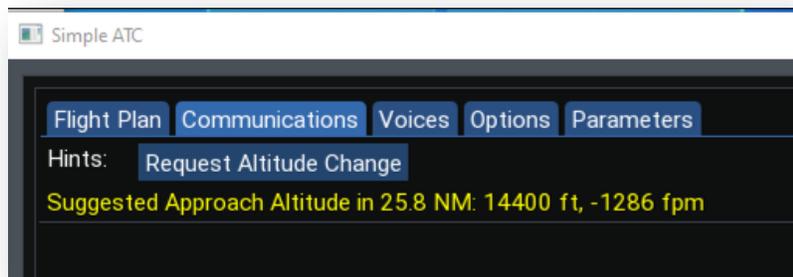
Once vectors have been assigned you, will see hints displaying the bearing to the fix, the remaining distance, the recommended altitude, and the decent rate needed to cross that point at the recommended altitude. If the runway has an ILS or Localizer the frequency and Navaid ID will be displayed. If the frequency looks like a button you can click on it to tune your NAV1 radio to the frequency.
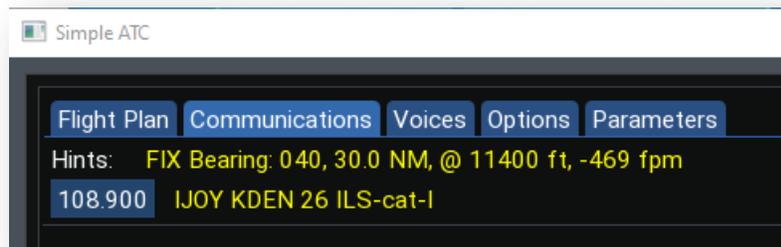
Tips:

- When SimpleATC gives you turn instructions act on them promptly.
- Watch your speed and altitude, too fast and too high may make it difficult to capture the ILS
- If there is no ILS or localizer you are expected to make the appropriate turn at the FAF to line up with the runway heading
- Make sure your HSI is in Localizer mode. It is easy to forget that you left it in GPS mode
- Don't forget to arm APR mode. You will intercept the glideslope shortly after reaching the FAF and you want the autopilot to be properly configured while you are still below the glideslope.
- SimpleATC is completely unaware of terrain. If you are flying in to an airport with mountains it might be best to use your GPS / FMS to fly an appropriate STAR and add waypoints to the GPS to get you the FAF. Using SimpleATC vectors in a mountainous area may result in a crash.
- Don't select vectors too late in the process. SimpleATC may give you odd vectors to trun your aircraft around and proceed away from the airport to an intermediate fix further out. This tends to be an issue if you choose vectors late in the process and you are generally heading right towards the runway threshold on a heading that that more closely aligns with the runway heading.

Cancelling Flight Following

If you are VFR with Flight Following you have the option to cancel flight following during the en route phase of the flight. There will be a cancel button the communications tab that can be clicked. You can also request cancelation my mapping the following command to a button or keyboard.

SRS/X-ATC-Chatter/Request_Cancel_Flight_Following

Triggering Cancel Flight Following

Besides pressing the button on the SimpleATC window you can also trigger the request by pressing the ident button on your transmitter and then pressing the PTT within 5 seconds.

Reporting a Missed Approach

If you are on an IFR plan into a towered airport you will have the option to report a missed approach once you have been cleared for the approach by either approach control or the tower. Initiating the Missed Approach Report can be done by pressing the Missed Approach button on the SimpleATC communications tab or my activating the command:

SRS/X-ATC-Chatter/Report_Missed_Approach

Once initiated you will be prompted for a transmission where you can adjust the hold point distance and hold climb altitude. Note: that if you have copilot handles radios turned on the transmission will occur automatically with the default value.

The hold point distance determines how far from the airport you must travel before you will be cleared for a second approach to the runway. The default value will vary depending on if you at an airport with radar services or a smaller towered field with no radar services.

If you execute a missed approach at an airport with radar services and you were in contact with the tower and the time you reported the missed approach you will be directed to contact approach control 30 seconds after being cleared to fly the missed approach procedure. Approach will clear you for a second approach to the runway once you are past the hold point distance from airport.

Along with the hold point distance you also have the ability to adjust the hold climb altitude. This defaults to 5000 feet above a larger airport and 3000 feet above a smaller towered field. Note, SimpleATC is not aware of the terrain. Adjust this value based on the missed approach procedure and the surrounding terrain.

Triggering a Missed Approach

Besides pressing the button you can also trigger a missed approach using two other techniques with the PTT.

1. By raising your flaps from a lower position to a more raised position and then press the PTT within 5 seconds.
2. By starting a climb with greater than 300 FPM vertical speed and then pressing the PTT.

Diverting

You have the ability to request a diversion to an alternate airport as long as you are in the en route or Approach phases of a flight. The Communications tab of the Simple ATC UI will display a Request Diversion checkbox. When checked you will have the ability to specify the new destination airport, preselect a runway, arrival, or approach and a new plan altitude. You can then activate the diversion.

If you are IFR or in contact with an Approach controller they will clear you to the new airport and give you a heading to the new destination as well as climb or descend instructions based on your current altitude and new plan altitude. If you are on a Flight Following plan and in contact with a center controller the Pilot will advise ATC of your new destination. If you are VFR and not in contact with an Approach controller your plan's destination airport will simply be updated with the diversion airport.
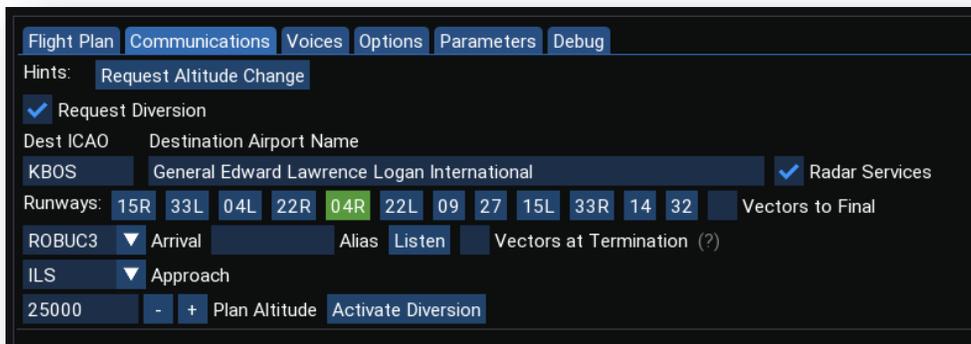
Deviating From the Route

When you are en route on an IFR plan you have the option to notify ATC that you will be deviating from the assigned route for weather, traffic, or terrain. If you do notify ATC of a route deviation you will then have the option to report when you are back on the route.

Cancelling an ATC Request

If you trigger a missed approach, flight level change, or cancel flight following you can cancel the transmission request by pressing the cancel button. You can also do this by holding the PTT button pressed for more than 1 second. Lastly, you can map a button or key to:

SRS/X-ATC-Chatter/Cancel_Transmission

Simple ATC Options
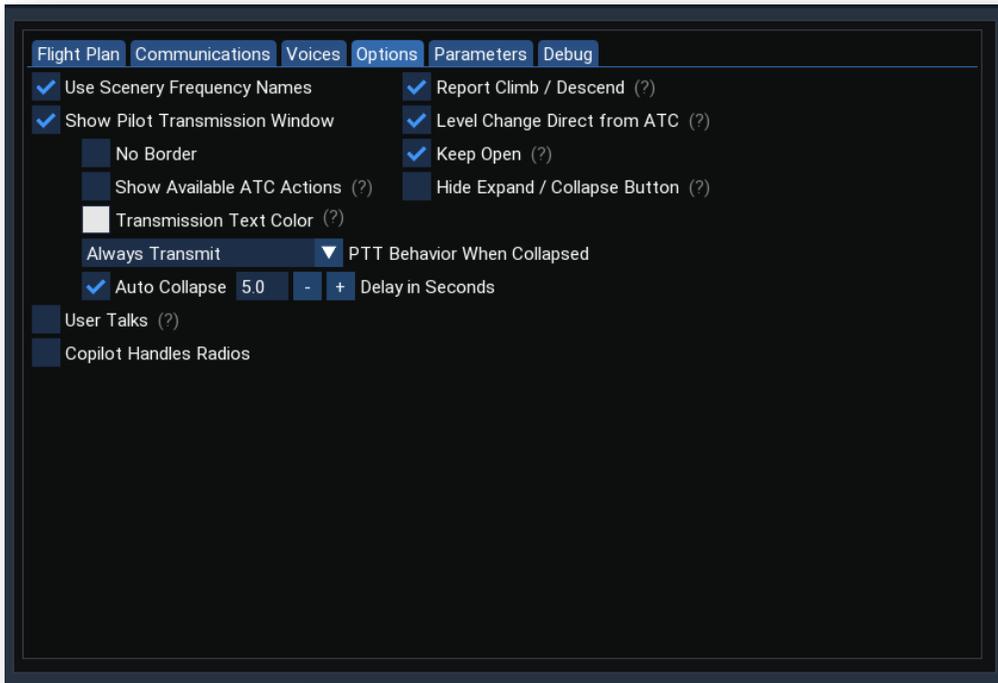
Use Scenery Frequency Names

X-ATC-Chatter can derive the Approach, and Departure frequencies from the scenery files. You may be aware that are large number of the X-Plane airports were created by volunteers using the World Editor (WED). For the most part the naming convention used by the volunteers to name the COM frequencies at and airport is fairly consistent but it cannot be guaranteed. You can see the names the scenery developer used when you see the facilities listed using the Nearby Facility dialog.

If you enable this option X-ATC-Chatter will attempt to use the scenery facility names when generating the text to speech for hand-offs and check-ins. As an example, Six Eight Five Delta Whiskey, contact Boston Departure at 134.7. With this option disabled X-ATC-Chatter will use the generic name, Approach, Departure, etc.

Report Climb / Descend

When on IFR or VFR with Flight Following flights SimpleATC will report if you are climbing or descending based on your current altitude and the cleared to / plan altitude when checking in with a new controller. With this option enabled you must request a flight level change to establish a new cleared to altitude otherwise the check in transmission may not reflect your true intentions.

With this option disabled you can fly any altitude regardless of what your plan or current cleared to altitude is as the climbing / descending text will not be included in the check-in transmission,

Level Change Direct from ATC

When you initiate a request for flight level change you have the option on IFR flights to have this be a request followed by the corresponding instruction from ATC or you can have the direct instruction from ATC without the need for the request transmission.

This checkbox will also be available on the transmission UI's so you can change it during the flight level change request.

Pilot Transmission Window

There is optional translucent window that can be enabled on the Simple ATC panel Options tab. When enabled a translucent window containing the pilot transmission and approach options will appear anytime a pilot transmission needed. The window will disappear as soon as the transmission is sent.

This feature is useful if you have a single monitor on your system and you want to know when it is time to make an unsolicited transmission. The following list is an example of these unsolicited transmissions:

- Position reports at uncontrolled airports
- Position and intention reports when VFR without flight following into D, C, and B airports
- Initial contact with ATC when requesting flight following after departure from an uncontrolled airport

Although the Pilot Transmission window does not have a title bar you can still move it around after it is open my clicking toward the top of the window with the left mouse and then dragging.

No Border

The Pilot Transmission Window will be drawn with no border or decorations

Keep Open

This option works in conjunction with the Pilot Transmission Window. When set the Pilot Transmission will remain open after the first occurrence of a pilot transmission. However, if there is no transmission, the window will be very short and invisible as it has a transparent background with no text or controls to show.

This feature is particularly useful in a VR environment where you want to retain the position of the window.

Show Available ATC Actions

With this option enabled the transmission window will also contain the ATC actions like requesting / initiating a flight level change, reporting a missed approach, or canceling flight following.

When there options are available the transmission window will show collapsed. You can expand by a single click of the PTT button or by using the expand / collapse arrows assuming you did not hide then with the following option.

Hide Expand / Collapse Button

If you have the **Show Available ATC Actions** enabled then the transmission window will likely be available during significant portions of a flight leaving the small expand arrow button visible. If you plan to always use the PTT to expand and collapse the transmission window you may wish to enable this options so the expand and collapse arrows will never be shown.

Use this option with caution. When enabled you may have a collapsed transmission window with an active transmission that you won't be able to see as the expand arrow will be hidden.

Transmission Text Color

Depending on where you decide to place the Pilot Transmission Window in the cockpit it maybe in a location where the background is light making it difficult to read the default white transmission text. You can use this color picker to choose the text color and vary its opacity.

PTT Behavior When Collapsed

You can choose the behavior of the Push to Talk Command (PTT) when the Pilot Transmission Window is collapsed. This dropdown has three options

1. Always Transmit – This will transmit the pilot communication with the PTT is activated regardless of the collapsed state of the Pilot Transmission Window.
2. Always Un-collapse First – If the Pilot Transmission Window is collapsed it will be expanded but the transmission will not occur until the next activation of the PTT after the window has expanded.
3. Un-collapse if input needed – If the Pilot Transmission Window is collapsed and input is needed as in ATIS letter selection or runway / pattern selection, then the window will be expanded for input but the transmission will not occur until the next selections are made and the PTT is activated a second time. If not input is required the transmission is activated on the first push of the PTT.
4. Briefly Un-Collapse – Assuming you have Auto Collapse enabled, see below, with a delay greater than zero seconds this option will expand a collapsed Pilot Transmission Window and reset the timer. If you do not transmit before the next time delay expires the Transmission Window will again collapse.

Auto Collapse

You can enable this option to cause the Pilot Transmission Window to automatically collapse after a specified period of time from when the transmission is available. A delay of 0.0 seconds will cause the window to be activated but in a collapsed state.

User Talks

With this option enabled Simple ATC will not generate the text to speech for Pilot Transmissions allowing you to verbalize the Pilot Transmission. Hold down the PTT switch and speak the transmission as it is displayed. The transmission will be considered complete when you release the PTT.

Note: The Say Again feature will not work if you have this option enabled.

Say Again

If you are still tuned to the same frequency as the last ATC controller transmission you can request that the controller repeat his/her last transmission using Say Again. Say Again is initiated by pressing the PTT button for more than one second.

Copilot Handles Radios

Simple ATC has the ability for the copilot to handle tuning the radios and making the necessary radios calls. You can enable this capability using the options tab on the Simple ATC panel.

The following table describes the checkboxes and how the copilot will manage the radios.

Copilot Handles Radios	Auto Select Runways	Preselect Runways	Operation
			The copilot will not operate the radios or any transmissions. You will need to tune the radios manually and transmit manually.
√			The copilot will manage all radio operations with the exception of those transmissions that require you to select a runway and approach.
√	√		Simple ATC will select the best runway based on wind conditions and the copilot will transmit requests and intentions immediately based on the runway assignments.
√		√	Simple ATC will allow you to preselect the runways and approaches for both the departure and destination airports at the time you file your flight plan. The copilot will transmit requests and intentions immediately based on the runways you selected.

When on the ground the copilot will trigger transmissions based on the state of the parking brake, aircraft lights, a recent activation of the PTT button, and the flight phase. Each of these triggers can be configured using the associated combo box.

Phase	Aircraft Light	Action
Clearance	Beacon Light On	Request Clearance
Taxi	Parking Brake Released	Request push back and engine start if configured on the plan
Taxi	Taxi On	Request push back of not already done and request taxi clearance
Takeoff	Landing On	Request Takeoff
Landing	Landing Off	Report Clear of the runway and request taxi to the gate

The ***Confirm Altitude Change before transmitting*** option prevents Simple ATC from immediately transmitting an altitude change request when the Copilot is handling the radios. This will allow you to

change the request altitude. With this option off the request altitude value will be populated from the current value of the autopilot altitude dataref: *sim/cockpit/autopilot/altitude*.

Pattern calls at uncontrolled airports are based on the heading of the aircraft.

- ± 20 degrees of 45 downwind entry results in a position call out on the 45
- ± 20 degrees of the downwind heading results in a turning downwind call
- ± 20 degrees of the base heading results in a turning base call
- ± 20 degrees of the runway heading results in an on final call

For an overhead join entry:

- Overhead position report will occur when you are just past your closest point of approach of the selected runway threshold.
- Dead Side Decent report will occur once you have descended 200 feet below you're the altitude you are at when you reported your overhead position.
- The remaining downwind, base, and final calls are the same as above.

Triggers

These combo boxes determine if the copilot should initiate that request when the specified trigger occurs. For each trigger this can be either the associated light or parking break state, a recent activation of the PTT command, or the trigger can be disabled by setting it to manual.

Simple ATC Parameters Tab

Parameter			Description
1200	▼		VFR Code
45	-	+	Line Up Delay (Seconds)
8.0	-	+	Landing Clearance (NM) for Airports with Radar Services
1.0	-	+	Landing Clearance (NM) for Airports without Radar Services
180	-	+	Landing Clearance MAAD (Degrees) (?)
250	-	+	Speed Limit (KIAS) below speed limit altitude
10000	-	+	Speed Limit Altitude (Feet)
700	-	+	Back Taxi Limit (Feet)

The items on the parameters tab allow you to adjust various numeric values that will affect how SimpleATC operates.

VFR Code

In the U.S. and some countries the standard VFR squawk code is 1200. In Europe and other countries it is 7000. Use this dropdown to select the proper VFR squawk code for your flight.

Line Up Delay

When you have selected the Lineup and Wait option on the flight plan, this value specifies how many seconds the tower controller will wait from the time lineup clearance is given to the time takeoff clearance will be given. Note: the time starts once you have lined up your aircraft +/- 20 degrees from the runway heading.

Landing Clearance Distance

These two values determine when ATC will issue a landing clearance at a towered airport. You can adjust the distance for smaller towered airports without radar services, typically class Delta airports, and for larger airports with radar services, typically class Charlie and Bravo airports.

Maximum Approach Angle Difference

You can adjust the Maximum Approach Angle Difference (MAAD) between 5 to 180 degrees. When set to 180 degrees ATC will issue you landing clearance as soon as you are below the distance settings previously discussed. This is because regardless of your aircraft heading you will always + or – 180 degrees compared to the runway heading. This works from for straight in approach from far away.

However, let's assume you are approaching from the opposite direction and need to fly parallel to the before making a base turn. If that approach is within the distance tolerance you will likely get a landing clearance to early. If you adjust the MAAD value to 10 then you will get your landing clearance as soon as you turn final and your heading is within 10 degrees of the runway heading and you are within the distance tolerance.

By adjusting the distance value and the MADD value you can influence when you will get your landing clearance. Let's assume you are flying into a smaller class D airport and you are going to approach on the base leg. If you would like to get your landing clearance while on the base leg you could set the MAAD to 90 and the distance to 3.

Another example is approaching on the downwind leg. At smaller airports it is quite common to be given landing clearance when you are on the downwind. In this case you would set the MAAD to 180 but decrease the distance to 1 NM.

Speed Limit and Limit Altitude

In some countries there is a speed limit below a certain altitude. As an example with the exception of some special rules in class Bravo airspace, you cannot operate your aircraft over 250 KIAS below 10,000 feet. When on a VFR flight if you exceed the specified speed limit when below the limit altitude ATC will issue a slow instruction very five minutes.

If you wish to disable that simply set the limit altitude very high.

Back Taxi Limit

As you taxi to the departure runway hold point SimpleATC will use this distance to determine if the Back Taxi option should be set in preparation for your takeoff transmission. If you are farther away from the departure runway threshold than this amount the assumption is you will want to back taxi before departing.

This same back taxi checkbox will also show up in the transmission windows when you are about to transmit your departure at an uncontrolled airport or are about to let the tower know you are ready for departure at the runway hold point. As soon as you manually check the box then SimpleATC will lock in your choice and will stop trying to set the value based on this distance.

Simple ATC Limitations

- Taxi instructions are from the stand to the runway. It does not include taxiways and hold short instructions
- No support for decent instructions when not using an arrival procedure. It is assumed you will plan and start your decent at the appropriate time. You can request new altitudes during the en route phase of the flight which may enhance realism.
- Simple ATC only supports a straight in, 45 degree downwind, or a U.K. Standard Overhead Join pattern entry at uncontrolled airports
- Simple ATC is very dependent on having accurate radio frequency designations in the scenery. As an example, an uncontrolled airport that has the CTAF frequency erroneously marked as a tower but has no ground frequency could cause Simple ATC to get confused.
- Simple ATC is completely ignorant of the surrounding terrain, obstructions, and departure procedures. It will give initial clearance instructions to fly a runway heading to an initial climb altitude. This could very well be directly into a mountain or other obstacle. In these cases just fly the appropriate departure for that runway / airport.

Limitations

- Some other add-ons will also play chatter at the same time and can conflict with X-ATC-Chatter. PassengersFX is one such add-on that has the ability to play a limited amount of ATC chatter.
- There is a bug in Apple's OpenAL implementation that prevents X-ATC-Chatter from obtaining a list of audio devices. X-ATC-Chatter can only play chatter on the default OSX audio device.
- X-Plane does not support Text to Speech on Linux so Simple ATC has no way of generating transmissions on Linux unless you use the Amazon Polly service or an external text to speech solution.

External Integrations

Playback Control

X-ATC-Chatter exposes a writable integer dataref that can be used to control chatter playback if the "External Integrations" option is checked in the control panel:

SRS/X-ATC-Chatter/integration/mode

The following values can be written to the dataref:

Value	Operation
0	External Integration is off
1	Pause Chatter Playback
2	Play Approach Chatter
3	Play Clearance Chatter
4	Play Center Chatter
5	Play Departure Chatter
6	Play Departure Airport Ground Chatter
7	Play Departure Airport Tower Chatter
8	Play Departure Airport Unicom/CTAF Chatter
9	Play Destination Airport Ground Chatter
10	Play Destination Airport Tower Chatter
11	Play Destination Airport Unicom/CTAF Chatter

All other values are ignored

Chatter Volume Control

A float dataref is available that will allow you to modify the chatter volume. The dataref will take values between 0 and 1.0. Higher values represent louder the chatter volume.

"SRS/X-ATC-Chatter/chatter_volume"

External Pause

An int dataref is available that allows you to control the pause state of chatter playback:

"SRS/X-ATC-Chatter/external_pause"

This dataref normally has a value of 0 and when 0 chatter pause logic is determined by X-ATC-Chatter. You can force X-ATC-Chatter to pause chatter playback by setting this dataref to a value of 1.

This may be useful for custom / complex aircraft where you may need to override the radio power logic of X-ATC-Chatter.

X-Life Integration

X-Life version 2.1 and above is now integrated with X-ATC-Chatter. You can get the X-Life open beta here:

http://jardesign.org/forum/viewtopic.php?pid=19234#p19234

When the Enable External Integrations option is enabled X-Life will begin controlling X-ATC-Chatter once X-Life traffic is enabled. X-Life will pause chatter when its ATC function wants to talk to you. The current delay is set to one half second for each word X-Life wants to say.

As you interact with X-Life ATC the controller in X-ATC-Chatter will change based on the controller you are interacting with.

This integration is intended to be used with X-Life ATC. If you are flying VFR or are only using the X-Life traffic facility then disable the External Integrations option so that X-ATC-Chatter will select the controllers based on the facility you are tuned to in COM1 / COM2.

Updates

The X-Plane 11/12 player has an X-ATC-Chatter menu item called "Check for Updates"
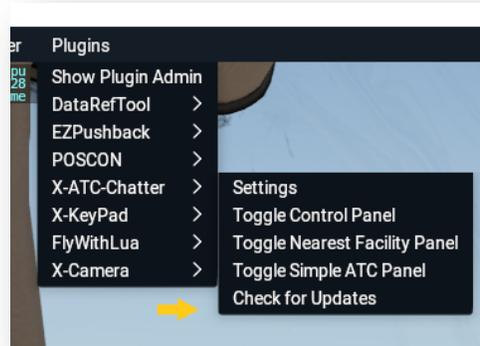
This will open a new window which will show you the latest released version as well as any beta versions if they are available. It will also check for new clip updates if you had purchased the X-ATC-Chatter collection beyond the demo clips.

You have the option to select which Regions you want updated. The update will run in the background so you can still fly in X-Plane with only minor performance degradation. You will need to restart X-Plane after the clip update for X-ATC-Chatter to incorporate the new clips into its processing.

The update process will also mark any files in the standard regions that are not part of the collection. You will have the choice to remove anything extraneous. Generally you should only place your own personal clips in the custom regions or in the User Defined area as outlined earlier in this User Guide. This allows us to delete poor quality clips from the master collection and the update process will remove those clips from the main regions if you allow it to do that.

X-ATC-Chatter will also check if new clip updates have been posted since you last started X-Plane as long as you have the purchased clip collection installed. If new clips are available you will be presented with a UI dialog box that will allow you to check for updates.

Future Development

Here are some potential enhancements we are considering.

- Potentially integrations with other ATC or Traffic programs

As you use this player please don't hesitate to give us suggestions on improvements either at our Q&A forum:

https://forums.x-plane.org/index.php?/forums/forum/401-x-atc-chatter/
or the X-ATC-Chatter demo download on X-Plane.org

or the free demo archive.

Volunteer Program

Creating the content for X-ATC-Chatter can be a bit time consuming. In order to keep the cost low we are encouraging users to volunteer to help add more high quality clips to the collection.

As a volunteer we will give you a free license to X-ATC-Chatter after you have submitted 100 high quality clips. There are also additional rewards for existing customers who contribute to the collection. If you are interested in being a volunteer review the material at the link below and follow the sign-up instructions.

https://www.stickandrudderstudios.com/x-atc-chatter-project/

Support

You can get support using a number of channels. Please visit the following link for more details:

https://www.stickandrudderstudios.com/support/