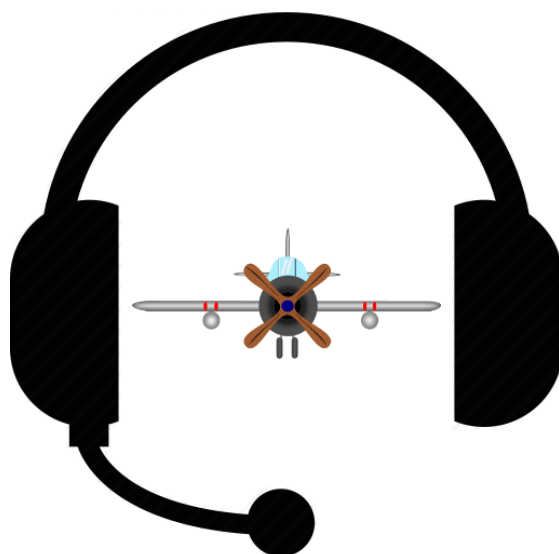


FS VOICE

A voice enabled program to interface with vPilot for VFR flights using FSX, P3D v3 and P3D v4.



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REQUIREMENTS AND INSTALLATION

This program requires vPilot to be installed, configured with the PTT button or key set, and running. Microsoft .Net version 4 or later is also advised.

The program has been tested in Windows 10 64Bit in the .Net version 4 environment. It may work with other versions but has not been tested and cannot be guaranteed to work outside of that environment.

FS Voice must be installed on the same computer as vPilot and run in Administrator mode.

Note: Changes made to PTT settings in vPilot whilst FS Voice is running will not be reflected in FS Voice until FS Voice is restarted.

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UNINSTALL

Uninstall will remove all of FS Voice files but will leave the flight data files untouched.

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DESCRIPTION

The program enables standard VFR text messages to be created for transmission into vPilot and covers the three basic phases of flight – Departure, Enroute and Arrival plus an additional panel for maintaining the Enroute ATC Request and Unicom Action lists.

The program interacts with voice commands. Available commands are shown as buttons which can also be used if voice commands are not being recognised.

It is designed with Unicom in mind though it may also be used as a prompt when communicating with online ATC by selecting the option “ATC Prompts Only” in the “Voice Options” menu bar dropdown list or **[ATC ON]**.

This will not only change the messages produced but also interact with the PTT button/key defined in vPilot. With ATC on FS Voice the messages cannot be sent to vPilot and FS Voice will display the status of the PTT the button or key (ON/OFF).

Whilst the status is ON FS Voice does not act on what you’re saying.

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INITIAL RUN

On first running the application FS Voice checks for the location of vPilot’s vPilotConfig.xml by looking in the "standard" location on your computer, usually "C:\Users\username\AppData\Local\vPilot", and by searching the registry.

It also installs two additional DLL files into vPilot’s folder and a plugin DLL into vPilot/Plugins folder.

If FS Voice fails to detect to detect the file’s location, you will be prompted with a file dialog to enable the file’s location to be selected.

FS Voice cannot continue without this information

FS Voice also installs two flight data files that are used by the two tutorials. These are EGSSEGSS.fsv and EGKBEGSS.fsv and are placed in your “Documents/FS Voice Flight Data” folder.

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Voice commands are shown below in **Red**.

PROGRAM CONTROL

The following commands are available at various times for controlling the program by voice.

- Quit** – prompts for confirmation before exiting the program (always available)
- START** – enables voice commands for messaging (dependent on which panel is displayed)
- STOP** – disables voice commands for messaging
- SEND** – when available send the active message to vPilot
- Panels Off** – will switch the data input panels off and the window size is reduced
- Panels On** – will switch the data input panels on and restore the window to its full size

When the **SEND** command is used, vPilot gains focus to transmit the message passed by FS Voice. FS Voice then returns the focus to the flight simulator. **Note: In some systems there may be a delay in the vPilot responding in a timely manner.**

The text box adjacent to **SEND** where the standard messages appear allows for these messages to be altered or as a free text entry. The **Quit**, **START** and **STOP** commands when displayed are always active.

When **Quit** or the menu bar item **Quit** has been selected you will be prompted to confirm the application exit with either **YES** or **NO** voice commands or using the buttons provided.

When the program is exited, FS Voice saves all the data to its own temporary data storage and is automatically loaded on re-running the application. This data is **not** saved to file unless the “Save Flight Data” has been used.

There is an additional button, **Hard Mute** which is used to turn on and off all voice control in the application.

FS Voice does not need to be visible to work.

The program uses Window’s speech system which on occasion can stop. Just click on the Stop then Start buttons to reset.

Mandatory entries have a yellow background and may change depending whether Unicom or ATC messages are active.

The application’s window position is recorded and used on subsequent running.

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MENU BAR ITEMS

The following are the available options from the dropdown items. Alternative voice commands in **RED**.

- ❖ File
 - Save Flight Data – Save the current flight data to file
 - Load Flight Data – Load saved flight data from file
 - Quit – Exit the application saving current data (not to file) [QUIT]
 - Confirm Exit – Yes or No to exit the program or not [YES] or [NO]

- ❖ Flight Phase
 - Departure – Selects and shows the Departure panel [DEPARTURE]
 - Enroute – Selects and shows the Enroute panel [ENROUTE]
 - Arrival – Selects and shows the Arrival panel [ARRIVAL]

- ❖ Voice Options
 - ATC Prompts Only – Toggles showing ATC prompts only on or off [ATC ON] or [ATC OFF]
 - When checked (on):
 - changes to only showing ATC type message prompts
 - PTT Button/Key status is displayed (RED when not pressed and GREEN when pressed)
 - While the PTT button is pressed FS Voice ignores what is being said
 - Buttons Only – Switches voice off commands

- ❖ Program Options
 - Always on Top – Select whether the application should always remain visible
 - Hide Data Input Panels – Switches the display of the data input panels on or off [PANELS ON] or [PANELS OFF]
Window size is reduced if panels are off
 - Reduce Size – When activated the program display is set to about 80% of its normal size and the option text changes to “Restore Size”.
When “Restore Size” is activated the display reverts to its normal size and the option text returns to “Reduce Size.”
 - Enable Hard Mute Button/Key – Enables the use of the previously set button or key to turn hard mute on or off
 - Hard Mute Settings – Gives access to either viewing the current hard mute settings or to set a button/key
 - View Current Settings – View the current button or key settings for hard mute
 - Set Button/Key – Used to set the button or key to be used for hard mute
If using a joystick button and more than one joystick exists, the joystick needs to be selected from the dropdown list before scanning for the button
If using the keyboard, only a single key press is acceptable
The system detects and does not allow the same Joystick/Button or key selection as defined in vPilot as the PTT button/key
 - Auto Update – When checked the program will automatically check for updates every 7 days
 - Check for Updates – Checks whether an update is available
This will reset the date when the last auto update date was performed essentially restarting the clock for auto-updates
Your virus protection software may need to be configured to enable updates or require manual override of any warnings

- ❖ List Maintenance
 - Enroute ATC Requests – Select and show the ATC Requests Maintenance panel
 - Add, Change, Delete or Reset the Enroute ATC Request list items
 - Enroute Unicom Actions – Select and show the Unicom Actions Maintenance panel
 - Add, Change, Delete or Reset the Enroute Unicom Actions list items

PANELS

DEPARTURE PANEL

This can be selected from the drop-down “Flight Phase” menu or by saying **DEPARTURE**

D E P A R T U R E	ICAO	A/C Reg	A/C Type			Initial Position		
	EGKB	G-VTRS	Cessna 172			CIX Apron		
	Circ. Dir.	Flight Type	QFE	Runway	Suffix	Holding Pt	Taxi Out Route	
	right	departure	993	21		A1	K & A	
	Exit Direction	Zone Exit Waypoint			Exit Alt	QNH	POB	
	South-East	Sevenoaks VRP			2000	1013	1	

The departure data fields are:

- ❖ ICAO – four-character ICAO code for the departure airfield
- ❖ A/C Reg – Aircraft registration or callsign
- ❖ A/C Type – Make and model of aircraft in plain text (not code)
- ❖ Initial Position – Initial parking position (dropdown list or free text)
- ❖ Circ. Dir – Circuit direction – left or right from dropdown list
- ❖ Flight Type – Either circuits or departure from dropdown list
- ❖ QFE – QFE value for the airfield
- ❖ Runway – Runway number (when less than 10 single digits used – formatted correctly in messages)
- ❖ Suffix – Runway suffix – L, C or R from dropdown list
- ❖ Holding Pt – Holding point
- ❖ Taxi Route Out – Taxi route to runway/holding point

Following fields are only visible when the Flight Type is set as departure

- ❖ Exit Direction – Direction of departure from the circuit
- ❖ Zone Exit Point – Zone exit point
- ❖ Zone Altitude – Zone altitude when exiting the circuit
- ❖ QNH – QNH for the airfield

When departure panel is displayed, and voice commands are active the following commands and buttons become available.

- ❖ **Taxi Out** – Places the taxi out/initial request message to the active message (send) window
- ❖ **Take Off** – Places the takeoff message to the active message (send) window
- ❖ **Circuit Departure** – Places the circuit departure message to the active message (send) window (only for departures)
- ❖ **Zone Exit** – Places the zone exit message to the active message (send) window (only for departures)
- ❖ **SEND** or use the button to transmit the contents of the active message (send) text to vPilot. Contents can be manually edited prior to sending.
- ❖ Data entry in the numeric fields (QFE, Runway, Exit Alt, QNH and POB) can be done in one of three different ways –
 - Click the nudge buttons to increase/decrease contents by one – holding the button down rapidly changes the value
 - Put the mouse over the field and use the mouse scroll wheel to rapidly change the contents
 - Click into the field and manually enter a new value

ENROUTE PANEL

This can be selected from the drop-down “Flight Phase” menu or by saying **ENROUTE**

This panel is disabled if “circuits” was chosen in the departure panel.

The data fields are:

- ❖ ICAO – four-character ICAO code for the airfield being transited
- ❖ Runway – Runway being transited
- ❖ Suffix – Suffix of runway being transited – L, C or R from dropdown list
- ❖ Zone Alt – Current altitude at time of message
- ❖ QNH – QNH on which Zone Altitude is based
- ❖ Heading – Heading at time of message
- ❖ EWP Time – Estimated time at the Zone Entry Waypoint
- ❖ EWP Mins – Estimated Minutes to Zone Entry Waypoint
- ❖ PWP Miles – Miles to Zone Entry Waypoint from current position (also used as position reporting distance)
- ❖ Compass Position – Compass bearing relative to the Zone Entry Point
- ❖ Zone Entry Waypoint – Zone entry point when
- ❖ Zone Exit Waypoint – Taxi route to runway/holding point
- ❖ Unicom/ATC type – Taxi route to runway/holding point
- ❖ FROM – Direction of travel (used when no exit point is defined)
- ❖ TO – Direction of travel (used when no exit point is defined)

When enroute panel is displayed, and voice commands are active the following commands and buttons become available.

- ❖ **Zone Transit** – Places the Unicom Action/ATC Request message to the active message (send) window
- ❖ **Inbound** – Places the Inbound message to the active message (send) window
- ❖ **Overhead** – Places the Overhead message to the active message (send) window
- ❖ **Clear** – Places the Clear message to the active message (send) window
- ❖ **Zone Exit** – Places the zone exit message to the active message (send) window

- ❖ **SEND** to transmits the contents of the active message (send) text to vPilot. Contents can be manually edited prior to sending.

- ❖ Data entry in the numeric fields (Runway, Zone Alt, QNH, Heading, EWP Mins, and PWP Miles) can be done in one of three different ways –
 - Click the nudge buttons to increase/decrease contents by one – holding the button down rapidly changes the value
 - Put the mouse over the field and use the mouse scroll wheel to rapidly change the contents
 - Click into the field and manually enter a new value

- ❖ Data entry into the EWP Time field is achieved by clicking on the hours or minutes then using the nudge buttons to increase/decrease as required– holding the button down rapidly changes the value

ARRIVAL PANEL

This can be selected from the drop-down “Flight Phase” menu or by saying **ARRIVAL**

The data fields are:

- ❖ ICAO – four-character ICAO code for the arrival airfield
- ❖ Runway – Arrival runway number
- ❖ Suffix – Arrival runway suffix – L, C or R from dropdown list
- ❖ Circ. Dir. – Circuit direction – left or right from dropdown list
- ❖ QFE – QFE value for the airfield
- ❖ Landing Type – Either “to land” or “touch & go” from dropdown list
- ❖ Taxi In Route – The planned taxi route to parking position
- ❖ Parking Position – The planned parking position

The ICAO, Runway, Suffix, Circ. Dir and QFE fields above are auto-completed if circuits was chosen in the departure panel.

The following fields are shown when “departure” was chosen in departure panel

- ❖ QNH – QNH for the airfield
- ❖ Join Height – Circuit join height
- ❖ Join Type – Selected from dropdown list
- ❖ Zone Entry Point – Zone entry waypoint
- ❖ EWP Mins – Minutes to zone entry waypoint
- ❖ EWP Miles – Miles to zone entry waypoint

When arrival panel is displayed, and voice commands are active the following commands and buttons become available.

- ❖ **Zone Entry** – Places the Zone Entry message to the active message (send) window (not available when “circuits” chosen in departure panel)
- ❖ **Deadside** – Places the Deadside message to the active message (send) window (not available when “circuits” chosen in departure panel or join type is not either overhead or standard overhead)
- ❖ **Downwind** – Places the Downwind message to the active message (send) window
- ❖ **Base** – Places the Clear message to the active message (send) window
- ❖ **Finals** – Places the zone exit message to the active message (send) window
- ❖ **Taxi In** – Places the zone exit message to the active message (send) window
- ❖ **SEND** to transmit the contents of the active message (send) text to vPilot. Contents can be manually edited prior to sending.
- ❖ Data entry in the numeric fields (Runway, QFE, QNH, Join Height, EWP Mins, and EWP Miles) can be done in one of three different ways –
 - Click the nudge buttons to increase/decrease contents by one – holding the button down rapidly changes the value
 - Put the mouse over the field and use the mouse scroll wheel to rapidly change the contents
 - Click into the field and manually enter a new value

LIST MAINTENANCE

ENROUTE ATC REQUESTS

Chosen from the dropdown menu bar will display the ATC Request Maintenance panel.



You can add, change, or delete entries to the ATC Request Type list available in the Enroute panel.

You can also reset the list back to the default.

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UNICOM ACTION TYPES

Chosen from the Chosen from the dropdown menu bar will display the Unicom Request Maintenance panel.



You can add, change, or delete entries to the Unicom Action Type list available in the Enroute panel.

You can also reset the list back to the default.

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Below is an example script outlining the processes in using FS Voice for flights that are circuits. Voice commands in **RED**.

Note: If ATC OFF has been selected only Unicom messages will appear in the SEND text box
 If ATC ON has been selected a PTT button will be displayed, the messages will act as only a prompt, and while the PTT key or button is pressed FS Voice will ignore what you're saying to ATC. The ATC type messages cannot be sent to vPilot.

1. Load the flight data for the tutorial
 - a. Click on File/Load Flight Data and select the file EGSSEGSS.fsv
2. Selecting and completing the Departure Panel
 - a. Select panels on via menu bar/Program Options by unchecking the "Hide Data Input Panels" **[PANELS ON]**
 - b. Select Departure Panel via menu bar/Flight Phase/Departure **[DEPARTURE]**
 - c. Complete all the data items on the panel with as much data as possible
 Items with yellow background are mandatory fields and must be entered. The mandatory fields are dependent on whether ATC is ON or OFF
 Entry in the numeric fields (QFE, Runway and POB) can be done in one of three different ways –
 Click the nudge buttons tin increase/Decrease contents by one
 Put the mouse over the field and use the mouse scroll wheel to rapidly change the contents
 Click into the field and manually enter a new value
3. Selecting and completing the Arrival Panel
 - a. Select Arrival Panel via menu bar/Flight Phase/Arrival **[ARRIVAL]**
 - b. Complete all the data items on the panel with as much data as possible
4. Selecting panels and messages in progress of flight
 - a. Select Departure Panel via menu bar/Flight Phase/Departure **[DEPARTURE]**
 - b. Start the voice recognition by using the START button or voice command **[START]**
 This will display the departure messages available either by buttons or voice commands
 - c. Select TAXI OUT button or voice command **[TAXI OUT]**
 - d. Select SEND to send the current message to vPilot **[SEND]**
 - e. Select TAKE OFF button or voice command to select take off message **[TAKE OFF]**
 - f. Select SEND to send the current message to vPilot **[SEND]**
 - g. Select Arrival Panel via menu bar/Flight Phase/Arrival **[ARRIVAL]**
 - h. Select DOWNWIND button or voice command to select the downwind message **[DOWNWIND]**
 - i. Select SEND to send the current message to vPilot **[SEND]**
 - j. Select BASE button or voice command to select the downwind message **[BASE]**
 - k. Select SEND to send the current message to vPilot **[SEND]**
 - l. Select FINAL button or voice command to select the downwind message **[FINAL]**
 - m. Select SEND to send the current message to vPilot **[SEND]**
 If performing Touch and Go repeat from 3.a otherwise continue to next step changing flight type as required
 - n. Select TAXI IN button or voice command to select the taxi in message **[TAXI IN]**
 - o. Select SEND to send the current message to vPilot **[SEND]**

Note: While the Flight Type in the Departure Panel is set to circuits the Enroute Panel cannot be used.
 If you wish to depart the circuit change the Fight Type on the Departure Panel to departure and additional message become available and the Enroute Panel also becomes available. Data in all panels will need to be changed as required for this change to be effective and to enable generation of correct messages.

End of Tutorial - Circuits

Below is an example script outlining the processes in using FS Voice for flights that are departures. Voice commands in **RED**.

Note: If ATC OFF has been selected only Unicom messages will appear in the SEND text box
 If ATC ON has been selected a PTT button will be displayed, the messages will act as only a prompt, and while the PTT key or button is pressed FS Voice will ignore what you're saying to ATC. The ATC type messages cannot be sent to vPilot.

A video of this tutorial is available at <http://www.penray.co.uk>.

Please note the responses on the video are slow due to the video recording using most of the system resources.

1. Load the flight data for the tutorial
 - a. Click on File/Load Flight Data and select the file EGKBEGSS.fsv
2. Selecting and completing the Departure Panel
 - a. Select panels on via menu bar/Program Options by unchecking the "Hide Data Input Panels" **[PANELS ON]**
 - b. Select Departure Panel via menu bar/Flight Phase/Departure **[DEPARTURE]**
 - c. Complete all the data items on the panel with as much data as possible
 Items with yellow background are mandatory fields and must be entered. The mandatory fields are dependent on whether ATC is ON or OFF
 Entry in the numeric fields (QFE, Runway, Exit Alt, QNH and POB) can be done in one of three different ways –
 Click the nudge buttons tin increase/Decrease contents by one
 Put the mouse over the field and use the mouse scroll wheel to rapidly change the contents
 Click into the field and manually enter a new value
3. Selecting and completing the Enroute Panel
 - a. Select Enroute Panel via menu bar/Flight Phase/Enroute **[ENROUTE]**
4. Complete all the data items on the panel with as much data as possible
5. Selecting and completing the Arrival Panel
 - a. Select Arrival Panel via menu bar/Flight Phase/Arrival **[ARRIVAL]**
 - b. Complete all the data items on the panel with as much data as possible
6. Selecting panels and messages in progress of flight

DEPARTURE

 - a. Select Departure Panel via menu bar/Flight Phase/Departure **[DEPARTURE]**
 - b. Start the voice recognition by using the START button or voice command **[START]**
 This will display the departure messages available either by buttons or voice commands
 - c. Select TAXI OUT button or voice command **[TAXI OUT]**
 - d. Select SEND to send the current message to vPilot **[SEND]**
 - e. Select TAKE OFF button or voice command to select take off message **[TAKE OFF]**
 - f. Select SEND to send the current message to vPilot **[SEND]**
 - g. Select CIRCUIT DEPARTURE button or voice command for the circuit departure message **[CIRCUIT DEPARTURE]**
 - h. Select SEND to send the current message to vPilot **[SEND]**
 - i. Select ZONE EXIT button or voice command to select zone exit message **[ZONE EXIT]**
 - j. Select SEND to send the current message to vPilot **[SEND]**

ENROUTE

 - k. Select Enroute Panel via menu bar/Flight Phase/Enroute **[ENROUTE]**
 - l. Select REQUEST button or voice command to select the request/action message ^{Note 1} **[REQUEST]**
 - m. Select SEND to send the current message to vPilot **[SEND]**
 - n. Select INBOUND button if transiting the zone for the inbound message **[INBOUND]**
 - o. Select SEND to send the current message to vPilot **[SEND]**
 - p. Select OVERHEAD button if transiting the zone for the overhead message **[OVERHEAD]**
 - q. Select SEND to send the current message to vPilot **[SEND]**
 - r. Select CLEAR button if transiting the zone for the clear message **[CLEAR]**
 - s. Select SEND to send the current message to vPilot **[SEND]**
 - t. Select ZONE EXIT button if transiting the zone for the zone exit message **[ZONE EXIT]**
 - u. Select SEND to send the current message to vPilot **[SEND]**

Note 1: The requests/actions available are limited but maintained in the List Maintenance Panels. Different requests/actions are available in Unicom and ATC ON modes.

TUTORIAL – DEPARTURES (continued)

ARRIVAL

- v. Select Arrival Panel via menu bar/Flight Phase/Arrival [ARRIVAL]
The next set of messages are dependent on what type of Join Type is used or required
- w. Select ZONE ENTRY button or voice command to select the zone entry message [ZONE ENTRY]
- x. Select SEND to send the current message to vPilot [SEND]

Downwind selected to Deadside message is disabled – shown here as example only – continue at y.

- Select DEADSIDE button or voice command to select the deadside message [DEADSIDE]
- Select SEND to send the current message to vPilot [SEND]

- y. Select DOWNWIND button or voice command to select the downwind message [DOWNWIND]
- z. Select SEND to send the current message to vPilot [SEND]
- aa. Select BASE button or voice command to select the downwind message [BASE]
- bb. Select SEND to send the current message to vPilot [SEND]
- cc. Select FINAL button or voice command to select the downwind message [FINAL]
- dd. Select SEND to send the current message to vPilot [SEND]
If performing Touch and Go repeat from 3.y changing flight type as required, otherwise continue to next step
- ee. Select TAXI IN button or voice command to select the taxi in message [TAXI IN]
- ff. Select SEND to send the current message to vPilot [SEND]

End of Tutorial - Departures

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SUMMARY OF VOICE COMMANDS

PROGRAM CONTROL

- QUIT** – prompts for confirmation before exiting the program (always available)
- YES** – on QUIT dialog to confirm exiting the program
- NO** – on QUIT dialog to cancel exiting the program
- START** – starts voice message command recognition based on selected flight phase
- STOP** – stops voice message command recognition
- ATC ON** – switches to generating ATC message prompts
- ATC OFF** – switches to generating Unicom messages for transmission to vPilot
- PANELS ON** – switches to displaying the data input panels and resizes the application window to allow display
- PANELS OFF** – switches to hiding the data input panels and reduces the size of the application window
- DEPARTURE** – changes to the departure flight phase and shows available commands if message recognition started
- ENROUTE** – changes to the enroute flight phase and shows available commands if message recognition started
- ARRIVAL** – changes to the enroute flight phase and shows available commands if message recognition started

MESSAGE COMMANDS

- SEND** – transmits current Unicom message to vPilot, ATC message prompts are not sent
- TAXI OUT** – taxi out message, if ATC ON this is the initial request message prompt.
- TAKEOFF** – takeoff message
- CIRCUIT DEPARTURE** – circuit departure message
- ZONE EXIT** – zone exit message, content dependant on whether the departure or enroute flight phase is active
- REQUEST** – enroute message stating intentions for the zone, ATC on produces an ATC request message prompt
- INBOUND** – enroute reporting inbound message
- OVERHEAD** – enroute reporting overhead message
- CLEAR** – enroute reporting clear message
- ZONE ENTRY** – arrival zone entry message, with ATC ON this produces a zone entry request message prompt
- DEADSIDE** – reporting deadside message
- DOWNWIND** – reporting downwind message
- BASE** – reporting base message
- FINAL** – reporting final message
- TAXI IN** – taxi in message, with ATC on creates reporting clear of runway message prompt

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CHANGE LOG

Version 1.1.0.0

Original release.

Version 1.1.0.1

New menu bar option, "Reduce Size" and "Restore Size" added in program options to scale the program display to approximately 80%. Does not save this setting on exit (the program always starts in "normalised" size).

Version 1.2.0.0

Bug Fix. Updates were failing due to new security on web server. Fixed in this update. This update should be downloaded and run to overwrite the existing version.

Version 1.2.0.1 28/09/2018

New feature: Changing an entry in the data panel will automatically update the selected message on display.

Bug Fix. All data panels now "tab" in the correct order.