

# VAICOM PRO

Interactive Voice Communications Plugin for DCS World



Community  
Edition Version  
2.9.3

## User Manual

Community Revision  
Release 2.9.3.0  
February 2024

**DCS**  
SERIES



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# PREFACE

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On 31 OCT 2022 Hollywood\_315 open sourced VAICOM PRO, his awesome AI communications software for DCS Word. VAICOM PRO has been the launch pad for VR pilot in DCS to create a immersive environment free from the constraints of keyboard or mouse controlled radio menus.

A group of community members have patched his work to make it compatible with DCS 2.8.XXXX. This is a standalone installer that will replace your previous version of VAICOM PRO.

We have tested this version and believe that most bugs have been squashed that were present in the last paid version. That said, there are still things we are working on and items not fully implemented. If you do find a bug, please use the issues on GitHub to report them.

This manual has been updated to reflect the current state of VAICOM PRO.

For updates and support, please visit our VAICOM PRO Community Discord.

We owe our gratitude to Hollywood\_315 for this amazing product, and the Community Fixers for keeping it a viable option for virtual pilots everywhere.

Some things we are thinking about going forward. Integrating the Moose script into the direct command structure and creating Moose class recipients rather than relying on imported menus and other magic!

Anyway, we hope you enjoy 2.9.3.0 Fallon.

-VAICOM PRO Community Team



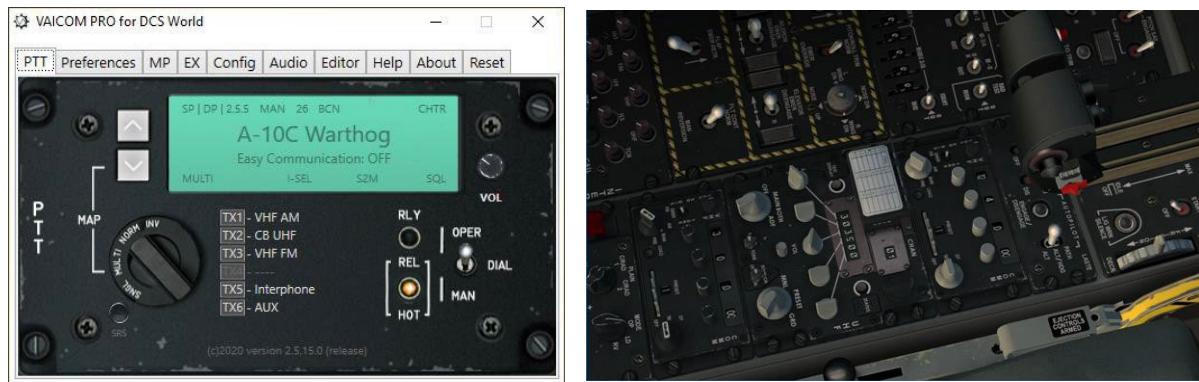
# INTRODUCTION

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Welcome to VAICOM PRO Community!

For unleashing the full immersive potential of Eagle Dynamics' cutting-edge combat flight simulation DCS World, the cumbersome menu-based interaction for communications has traditionally been one of the major stumbling blocks. On-screen menus not only block the view but also take unnatural and time-consuming F-key keyboard steps to send even the simplest radio message to an AI unit. For a truly realistic and immersive combat flight experience something far more advanced is needed.

Enter VAICOM PRO. VAICOM PRO Community is a unique plugin for VoiceAttack which links advanced voice recognition directly into the DCS core engine. This allows for a deeply immersive experience. With its 100% keyboard- and menu-free approach VAICOM PRO is the ideal complement for your HOTAS and (VR or regular) headset setup.



Built on a UDP/JSON network interface, VAICOM PRO Community unlocks the full breadth of AI radio communications as a natural and transparent extension of the DCS simulation environment. Forget about sluggish F-keys and don't let on-screen menus interfere with the view. With VAICOM PRO Community, the menu system is bypassed. You communicate with all airborne and ground-based AI units in real-time using only your voice and your aircraft radio devices just like in real life.

With the new interface design, standard VA limitations such as keyboard locale dependencies, potential flow sync issues, incidental view switches etc. are things of the past. Setup has never been easier. VAICOM PRO Community has no dependencies on any external apps or mods but is compatible to work alongside your other favorite peripheral tools.

VAICOM PRO Community has a wide range of options and features that can be directly controlled from its configuration window. It works with all current DCS aircraft modules, and even has auto-configuration features for new aircraft modules and theater releases. This User Manual document contains all the detailed information for setup, configuration, and usage.

Happy flying!



# NEW IN THIS VERSION

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Plugin release 2.9.3



## VAICOM PRO plugin 2.9.3.0

This update adds another Chatter theme targeted for Navy flyers using the NTTR terrain. It was part of my learning journey into the construction of the Chatter Extension. Now that is complete, it will allow the addition of other themes to suit new terrains. Also, some work on the UI and databases. It completes the work to ensure Vaicom Pro remains compatible with future versions of Voice Attack (@Gary, Thanks for the help!)

- Complete Net 7 compatibility assurance.
- Added option to delete only the Imported keywords from the database.
- Added new Chatter theme Fallon.(Navy range and ATC chatter, includes some BFM training chatter)
- Added all terrains to the Kneeboard time zone check.

### Known Issues

- F-14 A/B Tomcat, wheel chocks must be set then removed in some cases.
- Due to module design, Mirage F1 and A10-C kneeboard is not on the first page
- Mirage f1 Kneeboard cover causes issues (recommend deleting it (1.png) from \\DCS\World\OpenBeta\Mods\aircraft\Mirage-F1\Cockpit\Mirage-F1\Mirage-<version>\KNEEBOARD\pages folders.



# QUICK SETUP GUIDE

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Are you experienced? Here's the quick summary guide to get you started quickly. It is still recommended to read through this User Manual at least once since there are quite a few areas that require specific attention.

Here is the quick start summary:

- Make sure VoiceAttack runs as administrator and plugin support is enabled.
- Download the plugin installation file from the GitHub.
- Installation instructions can be found in the release.
- Download and run the MSI installer.
- Now launch VoiceAttack and configure VoiceAttack settings in the options window (for details see the ‘VoiceAttack options’ section further down this document).
- Also check DCS options,
- Next, import the profile ‘VAICOM PRO for DCS World.vap’ from the ‘Profiles’ subfolder. This is created after the first run of Voice Attack with Vaicom Pro installed.
- In the profile, assign the HOTAS buttons and/or keyboard keys you want to use for Push-To-Talk. Make sure to set up both the ‘Press’ and ‘Release’ command for each button.
- Press LCtrl+LAlt+C to open the plugin configuration window. It has several pages.
- Launch a mission in DCS World and try out some voice commands using PTT. Check the PTT tab to see the current PTT mapping layout. With DCS World running, keep the plugin config window open to try out various options (Preferences page) by switching them on and off.
- Export the keywords database as .csv file from the keyword editor page to have a handy readout of the full keywords set (there are some 1065 keywords in the standard library).
- Use the Keywords Editor and Training Mode to finetune things further to your needs.



# SYSTEM SETUP AND CONFIGURATION

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Below is the detailed setup guide for VAICOM PRO.



## System Requirements

- Windows 10 or 11
- Voice Attack 1.10.6 Paid Edition recommended due to number of commands.
- DCS World 2.8 or higher

## Before installation



Before installation note the following:

- VoiceAttack needs to run as admin. Inspect the VA desktop shortcut by right clicking and in the Compatibility tab select 'run this program as administrator'.
- VAICOM PRO does not require any mods or external tools (such as Autohotkey and what have you) to be installed. If you use mods that's fine as these should under normal circumstances not conflict with VAICOM PRO.
- VAICOM PRO automatically re-configures after bi-weekly DCS version updates without user intervention needed. Do restart VoiceAttack and then start DCS after a DCS World update.
- Manual DCS-side (.lua) files installation should normally not be needed as this is automatically done by the plugin on initialization. Manual install of .lua files is not recommended unless for advanced users deploying a custom setup.
- If your Windows account does not have sufficient privileges this could potentially lead to issues but most likely things will still work without problems. If you can run VoiceAttack without issues on your system then VAICOM PRO should generally be fine also.

## Network

VAICOM PRO uses network protocols for data exchange. Make sure you open the Windows Firewall for VoiceAttack/VAICOM PRO if necessary (you will automatically be prompted by Windows in that case) and make sure Antivirus is not blocking. For reference VAICOM PRO uses IP ports 33333, 33334, 33491 and 33492 and 44111, all on UDP protocol.

## Note for STEAM users



If you run DCS STEAM edition and the plugin does not work expected after initial install, run a DCS Repair and delete the export.lua file from Saved Games. Then select the Custom Path option on the Config tab. Set the slider to steam (and to open beta if you are opted in to the STEAM open beta version). Click SET to select the DCS program files folder and restart both VoiceAttack and DCS. This will make sure the required .lua code is put in the right locations.



# PLUGIN FILES INSTALLATION

## Prerequisites

Before installing the VAICOM PRO plugin have the following installed on your system:

- DCS World 2.8 or higher
- VoiceAttack (version 1.10.6 or higher)
- A decent-quality microphone/headset suitable for voice recognition.

## Auto Installer Package (MSI)

Uninstall your previous version of VAICOM PRO via the Remove Apps function in windows. Then simply run the installer and follow the instructions. If you do not uninstall previous versions you will be prompted by the installer.

## Manual Plugin files install

Then if you haven't done so yet download the VAICOM PRO plugin latest version from the GitHub



Extract the downloaded .zip file.

VAICOMPRO.zip

Inside the zip is a folder named VAICOMPRO. This VAICOMPRO folder with its contents needs to be placed in the VoiceAttack Apps folder. Typically, this is located at

*C:/Program Files/VoiceAttack/Apps/*

**Note:** Older VA installers may use the (x86) folder instead. Inspect both folders if needed.



, drag the VAICOMPRO folder with its content in there so that this becomes:

*C:/Program Files/VoiceAttack/Apps/VAICOMPRO/*

.. and that's it for the base installation. There is no mods or other software to

install. Proceed with setting the VoiceAttack options.

# INSTALL TROUBLESHOOTING

Carefully follow the install steps on the next pages. Things somehow not working?

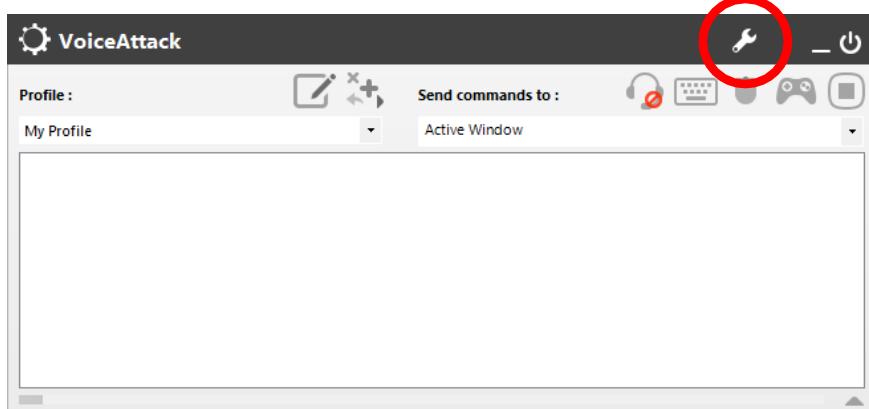
Refer to the separate Troubleshooting Guide at the end of this document or visit the Discord.



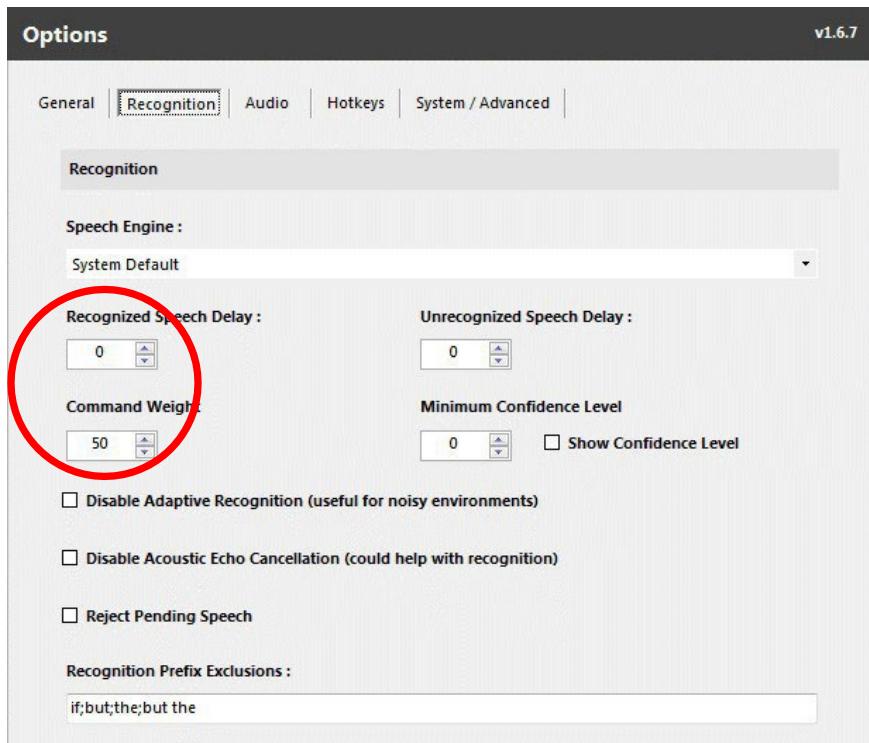
# SETTING VOICEATTACK OPTIONS

Configure VoiceAttack without DCS running. First of all, start VoiceAttack and make sure it runs as admin. To confirm this, inspect the properties of the VoiceAttack shortcut on your desktop and verify that the ‘run this program as administrator’ option is checked in the Compatibility tab.

In VoiceAttack, open the Options window by pressing the wrench icon.



In VoiceAttack options window apply the following settings:



**Note:** On the Recognition page the Windows Speech Recording Device is set, make sure it matches the microphone device you are using and that the input signal is sufficiently strong. The VA audio bar is a good indicator: this should show a wide range of deflection while speaking. Optionally (un)check the **Disable Adaptive Recognition** and **Disable Echo Cancellation** options to improve signal quality if you have problems getting adequate recognition. Proper mic placement is important for input quality: a headset setup is recommended. Avoid audio driver tools like Sonic Suite, these can cause issues.



## TAB GENERAL



- Enable Plugin Support: **ON**
- Joystick Options: (enable HOTAS devices here you intend to use with PTT)

## TAB RECOGNITION

- Speech Engine: **System Default** or select the engine you intend to use.
- Recognized Speech Delay: **0 (zero)**
- Unrecognized Speech Delay: **0 (zero)** **Note:** for VSPX processing set to 700, see page 18.
- Command Weight: **85** or higher recommended.
- Minimum Confidence Level: **60** or higher recommended.

## TAB AUDIO

- Notification Sounds: **OFF**
- Sound File Volume Offset: **100%**
- Audio Output Type: **Integrated Components**

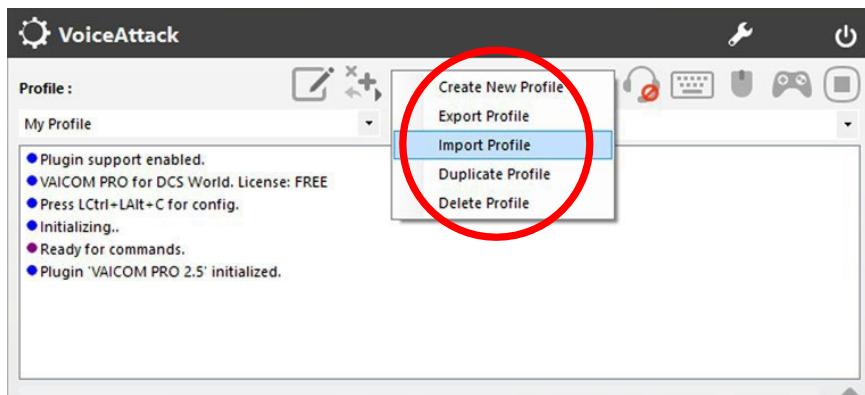
## TAB HOTKEYS

- Recognition Global Hotkey: **Disabled**
- Mouse Click Recognition: **None**
- Joystick Button Recognition: **Disabled**
- Stop All Commands Hotkey: **Disabled**

## TAB SYSTEM / ADVANCED

- Cancel Blocked Commands: **ON**

When done with setting these options, import the VoiceAttack profile (.vap file) called 'VAICOM PRO for DCS World' in the Profiles subfolder (the plugin will have automatically created several subfolders on initialization). After the profile is imported, restart VoiceAttack.

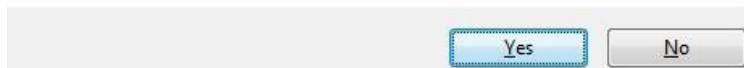




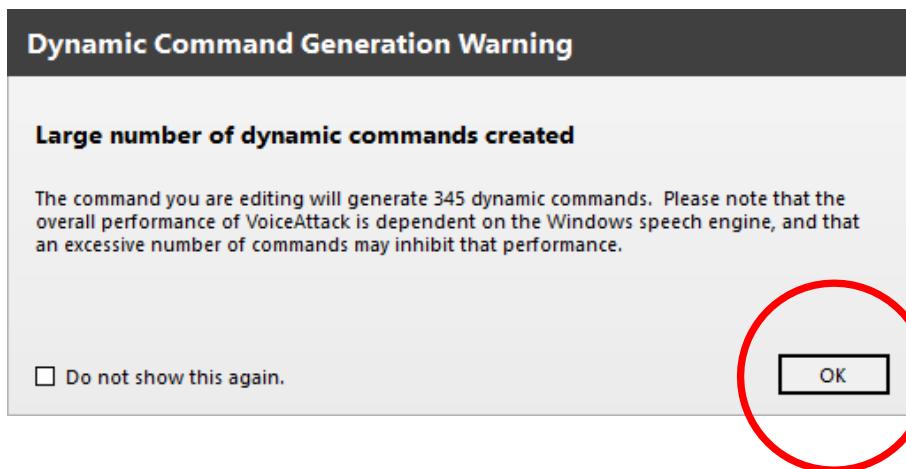
**Note:** with VAICOM PRO you will only use this single VoiceAttack profile for all DCS modules. You do not switch profiles. VAICOM PRO automatically detects the active DCS aircraft module and instantly adjusts its settings internally without the need to manually switch aircraft or to refer to another profile in VoiceAttack.

When the profile loads for the first time you may get a warning message. If so, simply press YES to accept and continue.

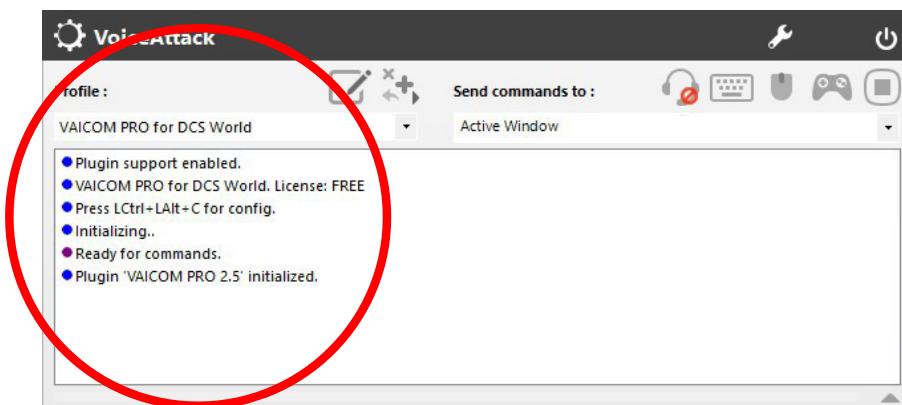
The profile you are importing contains actions that execute applications and/or kill processes. This is potentially dangerous to your system. Import anyway?



The VAICOM PRO for DCS World profile contains a large number of keywords. At some point you may see a popup with a statement to this effect. Modern PC systems are perfectly capable of handling this without issue; if you see this message simply press OK to confirm.



When the Profile initializes you will see a few startup messages in the VoiceAttack log window.

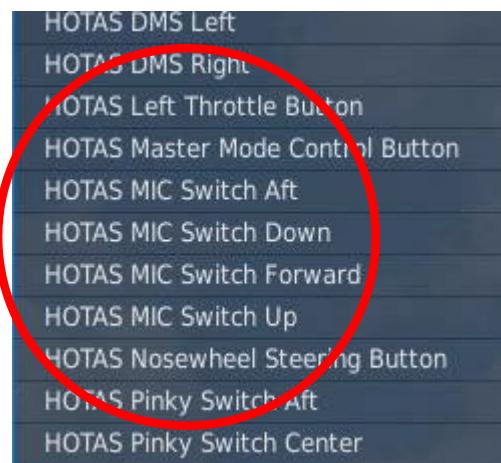


## DCS WORLD OPTIONS

VAICOM PRO is designed to automatically work with existing DCS World versions, normally without user configuration needed. The below guidelines apply to all DCS World versions. Start DCS World and check these options in the DCS World configuration section:

### HOTAC MIC keys:

Decide which keyboard keys and which HOTAS buttons you want to use with VAICOM PRO for Push-To-Talk functions. Now make sure these keys/buttons used with VAICOM PRO are not used anywhere in DCS config. Specifically, make sure the keys/buttons used with VAICOM PRO PTT are not mapped to **HOTAS MIC** or **Comms Menu** functions in DCS config. More on PTT mapping in the next section.



**NOTE:** The functionality of the plugin is not impacted if these fields are not cleared but it's highly recommended to clear them to avoid any menus being shown when pressing these buttons, which would spoil an otherwise menu-free experience.



### Sound settings:

**50%**

VAICOM PRO audio is optimized for all audio sliders set to 50% in DCS World configuration (assuming equal levels in Windows audio mixer). Change this if you want relatively louder or softer DCS audio.

### Easy Communications:

**ON** or **OFF** can both be used with VAICOM PRO. The setting is recognized automatically by the plugin and its behavior changes accordingly.

### Subtitles:

**ON** or **OFF**. For maximum immersion it is recommended to switch subtitles off. However, if you are new to VAICOM PRO and/or testing certain features with pilot voice switched off it can be useful to have visual confirmations by switching subtitles ON in DCS config.

Done for DCS settings. Proceed with Push-to-Talk configuration.



# PUSH-TO-TALK SETUP GUIDE

VAICOM PRO uses Push-To-Talk for all voice commands. One of the main things to do for the setup of VAICOM PRO is to think about the push-to-talk configuration you wish to deploy on your system. You can use your HOTAS for this, your keyboard, or a combination.

By default, the PTT and Chatter functions in the profile are mapped to keyboard keys 1-6 and 0, and also to a set of joystick buttons on 'Joystick 1' device. However, this is mainly for example purposes and it is recommended to change this to match your own setup and preferences as per below. This section will provide you with the basics for a typical setup and advanced users can take off from there. **Note:** for advanced PTT setups such as with Simple Radio Standalone (SRS), refer to page 25-26.

## Joystick and keyboard mapping in VoiceAttack

Consult the [VoiceAttack manual](#) if you are not yet familiar with basic setting up of keyboard- and joystick shortcuts in VoiceAttack, but this is really kind of self-explanatory. For HOTAS use you'll first need to activate the joystick device you want to use with Push-to-Talk functions in the VA Options window. Use the '+' labels in VA. Then edit the profile to set up your preferred PTT buttons using the 'TX' mapping labels.

The screenshot shows two windows side-by-side. On the left is the 'Joystick Options' window, which has a red circle around the 'Enable Joystick' checkbox and its associated Throttle and Hat switch settings. On the right is the 'Edit a Profile' window for 'VAICOM PRO for DCS World', which has a red circle around the TX mapping table. The table lists 12 entries under the 'Push-To-Talk' category, each consisting of a Spoken Command (e.g., 'Transmit TX1 press'), a Shortcut (e.g., '[1]'), a Button (e.g., 'Joystick 1 Button 4'), a Description (e.g., 'TX1 (VHF AM)'), and a Category ('Push-To-Talk').

| Spoken Command                        | Shortcut                | Button              | Description               | Category            |
|---------------------------------------|-------------------------|---------------------|---------------------------|---------------------|
| Transmit TX1 press (voice disabled)   | [1]                     | Joystick 1 Button 4 | TX1 (VHF AM)              | Push-To-Talk        |
| Transmit TX1 release (voice disabled) | [1]                     | Joystick 1 Button 4 | TX1 (VHF AM)              | Push-To-Talk        |
| Transmit TX2 press (voice disabled)   | [2]                     | Joystick 1 Button 5 | TX2 (UHF)                 | Push-To-Talk        |
| Transmit TX2 release (voice disabled) | [2]                     | Joystick 1 Button 5 | TX2 (UHF)                 | Push-To-Talk        |
| Transmit TX3 press (voice disabled)   | [3]                     | Joystick 1 Button 6 | TX3 (VHF FM)              | Push-To-Talk        |
| Transmit TX3 release (voice disabled) | [3]                     | Joystick 1 Button 6 | TX3 (VHF FM)              | Push-To-Talk        |
| Transmit TX4 press (voice disabled)   | [4]                     | Joystick 1 Button 3 | TX4 (AUTO)                | Push-To-Talk        |
| Transmit TX4 release (voice disabled) | [4]                     | Joystick 1 Button 3 | TX4 (AUTO)                | Push-To-Talk        |
| Transmit TX5 press (voice disabled)   | [5]                     |                     | TX5 (Interphone)          | Push-To-Talk        |
| Transmit TX5 release (voice disabled) | [5]                     |                     | TX5 (Interphone)          | Push-To-Talk        |
| Transmit TX6 press (voice disabled)   | [6]                     |                     | TX6 (AUX)                 | Push-To-Talk        |
| Transmit TX6 release (voice disabled) | [6]                     |                     | TX6 (AUX)                 | Push-To-Talk        |
| *AAA*, *Abort Inbound*, *Abort Ref... |                         |                     | AI Communications         | Keywords Collection |
| *Chatter*                             | [0]                     | Joystick 1 Button 2 | Chatter ON/OFF            | Extension pack      |
| Configuration (voice disabled)        | [Left Ctrl+Left Alt...] |                     | Open Configuration Window | Configuration       |

## The TX 1-6 mapping system

It is helpful to understand the TX labeling system used by VAICOM PRO. If you inspect the VAICOM PRO VoiceAttack profile you will see that there are 6 pairs of commands in the Push-to-Talk category, each with the names referring to 'TX1' to 'TX6', where each TX pair consists of one 'press' and one 'release' command. The trick is this: you need to assign each keyboard key or joystick button you want to use for PTT to

- a TX press command, and
- the corresponding TX release command.

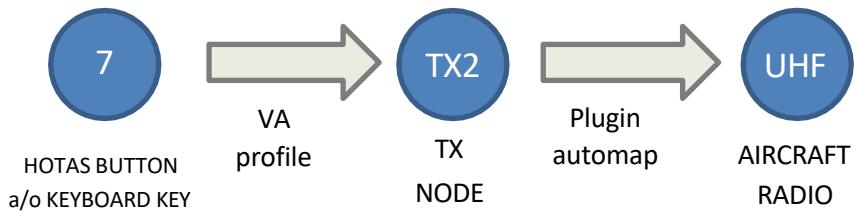
Press and release must refer to the same key/button: so you assign each key/button twice.



**NOTE:** Make sure you get this right for each press/release combo. You'll notice that the Release commands have this option selected: 'shortcut is invoked only when all keys/buttons are released'.



Inside the VA profile you can map the Transmit (TX) nodes to your physical keyboard keys and/or HOTAS buttons by editing the ‘Press’ and ‘Release’ commands for each TX. Inside the plugin, the TX1 to TX6 nodes are automatically mapped to the available radios for the active DCS aircraft module during gameplay. So when you map your physical key to a TX node the plugin will use it for push-to-talk with the corresponding aircraft radio:



This auto/mapping for each DCS module is done with a standardized method which enables you to configure just a single generic hardware layout on your rig that you can use with all DCS aircraft for PTT without having to reconfigure each time you switch aircraft type in DCS World. Once set up, things should become really easy.



On the left an example PTT layout is shown for the Warthog HOTAS Throttle. The VAICOM PRO plugin always tries to map the available aircraft radio device types according to this logic:

- TX1: → VHF AM
- TX2: → UHF
- TX3: → VHF FM
- TX4: → AUTO
- TX5: → Interphone
- TX6: → AUX

With that in mind you can see how the button mapping shown here would make sense.

The setup shown here is the recommended generic mapping. This should work across different DCS modules without the need to switch configuration. Using a generic setup like this will allow you to fly with all the various DCS modules with a maximum of ease and consistency.

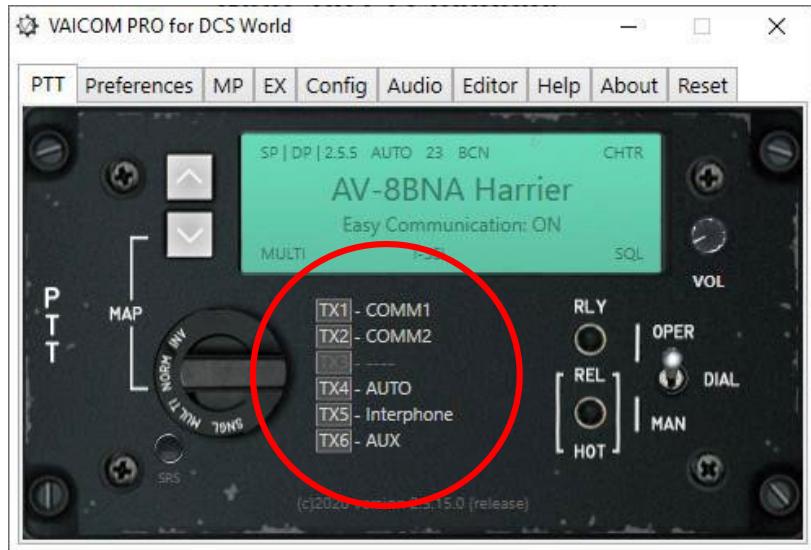
However, if you only fly specific aircraft you may want to tailor your PTT buttons to just suit those. For some DCS aircraft only a single radio is available (e.g. WWII aircraft). Others may have no FM radio or a combined UHF/AM stack etc. So for each DCS module the PTT/radio mapping layout will look slightly different. This can be checked in the PTT page of the Configuration Window. If you want a tailored setup, use the PTT page and TX labels to guide you with the appropriate mapping that will work best for your situation.

In the shown example the center push button is used to toggle chatter (CHTR) on/off, useful only if the Chatter Themes extension pack is installed. If you do not use chatter you could use the center button for e.g. a separate Interphone function by mapping it to TX5. Up to your preference.



## More on PTT mapping

The PTT details can be viewed in the PTT page of the plugin configuration window while DCS is running. Press LCtrl+LAlt+C to open the Configuration Window. The various functions of this window are described in more detail in the Configuration Window chapter. For now, click on the PTT tab.



To see all the radio slots, set the PTT Mode selector dial to NORM or MULTI (more on the PTT mode options on page 33).

### TX1-TX3:

For DCS aircraft with multiple MIC hotkeys, the plugin maps the available aircraft radios to TX1-TX3. If less than three radios are available for the current aircraft, one or more of these TX nodes will be disabled.

### TX4:

This node is reserved for the AUTO function. AUTO automatically uses the correct radio for the called recipient. AUTO is only available when Easy Communication is set to ON. With Easy Communication set to OFF, TX 4 has no function and the node is disabled. If you fly only with Easy Communication OFF or you do not intend to use AUTO, then there is no need to map any key/button to TX4.

### TX5:

This node is dedicated to an Interphone key specifically for talking to ground crew. This key is optional since ground crew can also be addressed using any of the other TX1-TX4 or TX6 nodes. TX5 is there to have the possibility of a dedicated Interphone key for advanced setups, but it can be ignored if you want to be more economical.

### TX6:

TX6 is also optional. It is currently reserved to be used as a dedicated PTT key for cockpit device control commands. These are not available at time of VAICOM PRO 2.5 plugin release but may come in the form of future expansion pack releases. Also, you can use TX6 as a PTT for your own voice commands if you want to enrich the VoiceAttack profile with some of your own commands which use VA's standard method of sending virtual keypresses. If you feel no need for this you can disregard TX6 for your setup. Always use TX6 with your own commands if you want to use the plugin's Exposed Variables.



# USING VAICOM PRO

## HOW IT WORKS (IN A NUTSHELL)

### Speech recognition

VAICOM PRO uses VoiceAttack to interface with Microsoft Windows Speech Recognition. Primary language support is English (US/UK). However translated dictionaries can also be used with other MSWSR languages such as French, Spanish, German,... The engine can be trained with your voice for improved recognition, see Training Mode section. Push-to-Talk must be used always in combination with VAICOM PRO PTT as described in the PTT setup section. Commands will not work without PTT.

### Keyword-based interpretation

VAICOM PRO uses dynamic keyword-based speech interpretation. This means you have a great amount of flexibility in the way you phrase your command. From the extracted keywords you use in your spoken sentences VAICOM PRO derives which message to send, with which parameters, and to which specific recipient. VAICOM PRO has an internal commands- and recipients database which can be referenced by one or more voice command phrases (or 'aliases'). In the keyword editor you can tweak and manipulate these voice command phrases in detail if needed.

### Dynamic state picture

At mission time VAICOM PRO dynamically maintains an active state 'picture' of the current mission environment. Triggered by PTT it continuously requests and receives mission data updates from the DCS World simulation. This data exchange is based on sending and receiving JSON objects over UDP network protocol. Amongst other things this approach makes it possible to run VAICOM PRO and DCS on different machines connected over a local network.



Data exchange is real-time and so there exists effectively a sync-lock between DCS and the VAICOM PRO plugin at all times. The comms menu system is not used and neither are DirectX keys. Instead, VAICOM PRO talks with the finite state machine /event core engine of DCS directly. This ensures a 100% integrated system where any flow sync issues are excluded by definition.

You can think of the State as a virtual map of the environment where all relevant AI units are mapped onto. VAICOM PRO is aware of all the addressable AI units in the area each with a unique ID, callsign, range and status. When a radio message is sent by VAICOM PRO, it targets the message at a specific AI unit i.e. the one you selected. This means that something like shifting menu positions or contents (a problem that cannot be tackled with vanilla VoiceAttack using just keypresses) are no longer relevant and cannot interfere with your conversations. There is a wealth of other advantages to this advanced real-time system.



## USING PUSH-TO-TALK

All voice communications must take place using one of the six available push-to-talk nodes (TX1 -TX6). Each TX node refers to a specific radio. Depending on the radio configuration of your current aircraft some TX nodes may be inactive. You can check this in the PTT page from the Configuration Window. When you press and release an active PTT key you hear a short burst of static noise. You can start speaking right away and when recognized the command will execute immediately. You can release PTT immediately after you finished speaking i.e. just as in real life.



**Note:** Commands are executed immediately and you can release PTT almost immediately, hold for another 0,5 second after you finish your voice command.



**Note:** Also, you may hold the PTT after the command was executed and issue a next one. This will be executed without the need to first release and press the PTT key. Again, as in real life.



**Note:** Advanced PTT setups including dynamic switching for human communication such as Voice Chat and Simple Radio Standalone are covered on page 25-26.

## DEFAULT SPEECH PROCESSING MODE: THE MICROPAUSE

**Note:** Below applies only to the default speech processing model! Not for VSPX processing.



This is important especially for beginning users: apart from speaking slowly and well-articulated to improve your recognition rates, carefully observe the following. When issuing your voice commands, leave small (0,5 sec) pauses between the recipient and the command phrase. This takes some getting used to but becomes second nature in no time. Especially in the beginning leave a short silence in between like for example in ‘Darkstar, ...Request Picture.’ This will help the recognition engine to better catch on to what you’re saying. Once you get this rhythm it’s easy. Your recognition rates will increase rapidly. After a while (when the engine is better trained) you can speed this up a bit.



**Note:** As a timing aid: if in Preferences you have enabled the option ‘use audio hints’, you will hear a short soft blip when the recipient was recognized after which you can continue with completing the voice command.

## THE BEEPS

The UI audio feedback system of VAICOM PRO consists of a limited set of standardized sounds which provides you with useful information during gameplay. The following UI sounds are used:

- Confirmation (beep)
- Awaiting additional input (blip)
- Recipient not available (click)
- Error (thud)
- Ambiguous (flat beep)

In the configuration window there is the option to switch off the UI sounds if you feel you don’t need them (sure about that?). Some sounds also relate to the Use Audio Hints setting in Preferences.



## OPTION: VSPX SPEECH PROCESSING

As an alternative to VAICOM's default speech processing mode, VSPX speech processing can be selected in Preferences. VAICOM's Single Pass eXtraction mode provides a faster interpretation model for processing spoken sentences than the default model used by VAICOM to handle speech content.

**Note:** VAICOM's interpretation module is independent of any desktop language or MS Speech recognition engine used: it is specifically tailored for DCS and deals with the order and context of keywords in relation to module radio settings to assess the correct command- and message actions to be deployed in the sim core. You can use VSPX with any language.

Using VSPX or not can be a matter of personal preference on which model suits you best. Models can be switched between with just a few steps, see below. It is recommended to work with the default processing model first and try out VSPX later to get a feel for the differences.

The main differences between VSPX and default processing are as follows:

- VSPX is tailored for fast speakers: if you like to blurt things into the mic instead of slowly articulating: VSPX may well be the thing for you.
- VSPX does NOT use the micropause between recipient and command. On the contrary, sentences must be spoken in one go. Do not wait for any blips. Hurry up!
- VSPX does not allow use of Sender keywords (see page 55). So instead of default 'Darkstar,... Boar 2-1,... Request Picture' you'll just say 'Darkstar Request Picture'.
- In the keywords editor you will be able to add your own asterisk (\*) wildcards at the start and end of command phrases to allow for additional freedom of speech.
- In the keywords editor, you will not get feedback on your VA profile with the TEST button (this may follow in a later plugin update). When in doubt if your VA profile is up-to-date, follow the FINISH steps (see page 37).
- All other workings are equal between the two modes.

### Switching Between Modes

To change between Default and VSPX modes, follow these steps:

- In Preferences, (de)select VSPX option: you will see a pop-up. Press OK.
- Follow the FINISH steps in the keywords editor to update your VA profile,
- In VoiceAttack options put these settings as follows:

#### Unrecognized Speech Delay

VSPX OFF:      0ms.  
VSPX ON:      600-1000ms: 700ms recommended.

Done. The green light on the editor page shows whether VSPX is activated.



## SPECIAL COMMANDS: ‘SELECT’

The ‘Select’ special voice command is used to set your conversation to a particular recipient in a category. With Easy Communications ON, this also tunes the radio. With Easy Communications OFF, Select also tunes the radio but only when the ‘Select Tunes Radio’ option is enabled in Preferences. Primarily, Select sets the dialog to a recipient. This means that after you have selected a recipient, any next commands you issue in this recipient category will be directed to the selected recipient unit. All this is actually quite simple in practice and best clarified by some examples.

### **Easy Communications ON:**

Get in a new mission with an A-10C aircraft or similar that starts on the runway ready for departure. Now to see how the Select voice command works with Easy Comms on, manually change the tuning of your UHF radio to some meaningless frequency. Keep watching your radio panel and then on UHF call: ‘Flight,... Select.’ (or ‘Enfield,... Select.’ If that is your current flight group callsign). You’ll notice that the radio frequency automatically switches to that of your flight.

On VHF AM call ‘Soganlug,...Select.’ and watch the frequency change on your VHF AM radio. You are now tuned to Soganlug ATC and ready to have a chat with them. Now if your next call on VHF AM does not mention ‘Soganlug’ keyword but is for example “ATC,.. request vector”, or even simply e.g. ‘inbound’, the call goes to Soganlug since this is the currently selected ATC. All ATC calls go to this recipient now until you switch to another ATC recipient by using Select again.

### **Easy Communications OFF:**

Run the same mission as above but this time with easy comms set to off. You’ll notice that the radios do not get tuned this time, you need to do this manually. However, if you have used the Select command to set your conversation to Soganlug then calling e.g. ‘ATC, ready for departure’ after that calls Soganlug airfield. So it works the same as with Easy Comms ON just without the radio tuning. If (recommended) you enable the option ‘Select Tunes Radio’ however, the radio gets tuned also with Easy Comms off.

### **Select Nearest**

You can use the ‘nearest’ keyword in your voice commands to call or select to the closest unit in the category, e.g. ‘Nearest Airfield,... Directions to Final’ or ‘Nearest Tanker,... Select’. When you start a new mission, the nearest ATC is selected automatically. This means you can call ‘ATC,...Request Engines Start’ immediately without having to use the Select command first.

### **Instant Select option**

You can make use of the additional Instant Select feature. When this option is switched on, the Select command is no longer needed to switch recipients. Instead just naming a recipient in your call e.g. ‘Anapa,...inbound’ switches to Anapa tower immediately. With easy comms ON the radio is automatically tuned for the new recipient. This provides a fast (although perhaps not entirely realistic) means of switching dialog between recipients without the need to involve the Select command at all.



## Using Select for manual radio tuning.

Make sure the Radio Control commands are included in your profile (if needed use Config/Export). For DCS modules that support this (not all do), you can use Select for manual radio tuning. Try 'Select two five zero decimal five' for 250.500MHz and 'Select Channel 5' for Channel selection on compatible radios.

## SPECIAL COMMANDS: 'OPTIONS'

When the Options command is enabled in Preferences it can be used to briefly peek at the on-screen menu. To use Options, the 'Disable Menus' option in Preferences can be either selected or deselected: Options can be used in either case.

This command is intended primarily for less experienced users who are not (yet) entirely comfortable to fly without menus. The Options voice command (e.g. 'Vaziani,...Options.' or 'AWACS,... Options, etc.) gives you the option to briefly check which commands are available for this recipient at any given time. After inspecting the menu, you can then speak the command phrase you intend to use. Also, for very dynamic flows e.g. JTAC engagement this can be useful as a reminder, since during the various complex stages different commands are appropriate.

**Note:** Be aware that the Extended command set that can be used by VAICOM PRO contains more commands than those listed in the DCS comms menus! In the end it is advisable to train yourself to use the full VAICOM PRO command set without referring to immersion-breaking menus at all. You can do without them, which is more or less the point of this plugin in the first place :) Practice!

## SPECIAL COMMANDS: MENU CONTROL

Although use of menus in general is strongly discouraged and not needed when using the plugin, there are still some areas where it can be unavoidable. For this, some specific menu control commands are available. These commands are particularly intended for use with the Descend, Cargo and Other menus but can be used with any on-screen menu. The 'Take' command lets you select a particular item from a menu that is shown on screen.

The flow is like this:

- Call e.g. 'Cargo,... Options.' and hold the PTT button. The on-screen menu appears.  
Say 'Take 2' to select the second listed item (i.e. F2).
- For Other menu call 'Server,... Options' or 'Mission,... Options'.  
The F10 menu appears.  
Say 'Take 5' to select the fifth item (F5), etc.

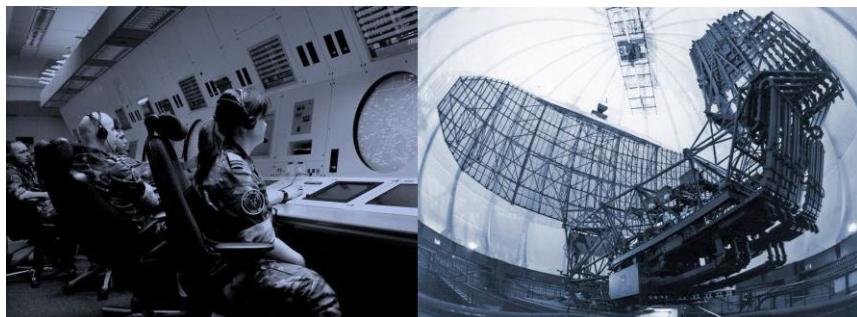
## SPECIAL COMMANDS: REPLIES

Reply keywords have been added to enliven the conversation. Refer to the Keywords Reference section for a listing. Reply statements are void in function but it makes the interaction more fun and realistic if you can reply to a call with 'Roger, Wilco, Negative' etc. as appropriate for the dialog.



## CRYSTAL PALACE AOCS: 'BRIEFING', 'STATUS', 'INTERROGATE'

As a unique feature, VAICOM PRO makes available AOCS (Air Operations Control Station) - default callsign Crystal Palace: a virtual ground station that provides you with tactical information on coalition units. At any time during a mission (and you having been sloppy during preflight briefing again) you may find yourself wondering whether a particular unit (AWACS unit 'Darkstar', say) is actually around in the current mission area. You could issue a random command or open a menu to find out whether the unit is listed there, but a cleaner way (no more menus from now on, remember) is to use the Interrogate or Status voice command for the AOCS ground station to get all the details.



**i** The AOCS command station is located at your ATC of departure. When you use Easy Communications OFF setting, Crystal Palace must be contacted like any other coalition unit i.e. using radio tuning (for Easy Comms ON this is not needed). Its contact frequencies are:

- AM 071.000 MHz
- AM 142.000 MHz
- AM 284.000 MHz

By contacting AOCS you can quickly and conveniently get info on units in the mission without using menus. Useful examples of AOCS calls include:

- 'Crystal Palace,...Briefing': AOCS will read out the current mission brief,
- 'Crystal Palace,...Status': AOCS will provide a general units overview summary,
- 'JTAC,...Status' or 'Firefly,...Interrogate': AOCS will provide JTAC 'deep interrogate' details.

When you call e.g. 'Darkstar,...Interrogate', you will hear:

- A confirmation beep if AWACS unit Darkstar is in the area (and a click sound if not),
- Followed by a detailed unit briefing by AOCS, if Deep Interrogate is enabled in preferences.

Deep Interrogate provides very specific unit detail such as range, direction and altitude, as well as the radio frequencies on which to contact specific units. By providing this real-time info dynamically at any time, AOCS can be a valuable asset to any mission.

AOCS is available in both Single Player and Multiplayer modes, for Multiplayer you need to enable it on the MP page. The 'Crystal Palace' keyword can be changed in the keywords editor if you prefer to use a different callsign for the AOCS unit.

**i** **Note:** AOCS makes use of the MS Windows Text-To-Speech engine, make sure it is set up correctly.



## GETTING STARTED: FLYING A BASIC MISSION

To train with VAICOM PRO, enter a basic standard single player mission and practice with that first. Once you get the hang of it move on to more demanding stuff. Easy Comms ON is recommended for the initial getting acquainted stages, once that works well move on to Easy Comms OFF. When first practicing you can leave Pilot voice on or (recommended) enable subtitles to get visual confirmation. Switch them off again at your earliest to maximize the immersion factor.

**Note:** Keep in mind that for e.g. WWII-era aircraft with basic radio systems typically only a small number of preset frequencies can be used. These frequencies are set by the mission designer. You can only reach recipients that match these pre-programmed radio frequencies. The same goes for example for using JTAC. You can engage with JTAC from any aircraft, but the JTAC frequency/ modulation type set in the mission editor must be suitable to be tuned by the aircraft radio system.

The following assumes A-10C aircraft but you can use any other module as well for this.

### On the Ground

Test ground crew communications when standing still on the ramp or runway. To try out, press and hold the TX1 | VHF AM or TX5 | Interphone hotkey and call "Chief, Ground Power Off". Wait for crew response. When you try to call Crew when airborne you will hear a 'Recipient N/A' click sound.

### ATC

When the mission starts your radio will be tuned to the nearest airfield automatically. So, when on the ramp you can start immediately by calling 'ATC, Request Engines Start' on VHF AM. Request taxi to runway and when lined up call 'Ready for Departure'.

### Flight: Formation and Maneuvers

Once airborne fly around in circles and have your wingman change formation. Note that you can address your wingman directly for formation calls, e.g. "Two, Go Trail" will be executed by your wingman, instead of having to call "Flight, Go Trail" (which works also). This is appropriate for two- ship formations. As fun feature you can also use your virtual buddy's callsigns when calling flight members: e.g. call "Gopher, break right" to have your wingman 2 exit formation. If your group current callsign is e.g. Uzi you can use it to address your flight e.g. call 'Uzi, Go Spread Four' instead of the generic 'Flight, Go Spread Four'.

### Flight: Engage

Have your wingman attack some ground targets. A line like "Two... engage ground targets from the East with Mavericks" is said in one go. Do not wait for any menus to appear while you issue your commands! You can use the word ordering in this example (i.e. direction before weapon directive), since VAICOM PRO will interpret the phrase contents automatically based on keywords and will send out the correct command to DCS accordingly. Wait for wingman's reply.



Also, you can be looser in your formulations e.g. a line like 'Two... take out that Triple A with Guns' will be understood by VAICOM PRO. Experiment a bit with loose formulations throwing in the appropriate keywords. Call "Two... rejoin" after you've seen enough action.

### **AWACS, Tanker, ...**

Call "AWACS,.. Options" to see available AWACS commands (hold the PTT key). Call AWACS on VHF AM for example with "Wizard, Colt 11, Request Picture". For a tanker approach with 'Texaco, Chevy 22, Approaching for Refuel' and continue from there.

### **JTAC**

JTAC communications are the most interactive in DCS World, going through various stages. There's a wide range of commands available for Type1/2/3 attacks with smoke, Laser, and IR target designation scenarios. The VAICOM PRO keywords set includes several JTAC commands which are not listed in the menus. As a unique feature VAICOM PRO allows JTAC engagement with all aircraft types including helicopters. This is something that cannot be done with the communications menu system and opens up a whole new spectrum of engagement scenarios for DCS World. The Extended Command set must be activated for this in Preferences.

Refer to the Keywords Reference section and read the separate section on JTAC flows. Do not rush your JTAC training. Dynamic JTAC engagement dialogs are complex and take practice but are also in the end amongst the most rewarding.

## **ADVANCED USAGE**

### **Importing F10 Menus**

Some missions make use of the 'Other'(F10) menu for special commands. If in Preferences the option 'Import F10 Menus' is enabled the F10 menu items will be added to the keyword database. The imported keywords cannot be used immediately, the updated keywords list must first be added to the VA profile. See Keywords Editor section in the Configuration Window chapter.

### **Importing new Theaters**

The plugin is prepared to deal with new DCS Theater releases. If the 'Import new Theater' option is enabled the plugin will scan for new ATCs on mission start and add them as recipients to the database. After import is done you need to reload the database in the Keywords Editor and then paste the updated keywords list in the VoiceAttack profile. Refer to the Keywords Editor section in the Configuration Window chapter.

### **Importing new Modules**

If the 'import new modules' option is enabled in Preferences you can fly with a new module and it will be added to VAICOM PRO's database without additional action required. Useful for e.g. Early Access releases that are not yet on the VAICOM PRO list of supported modules.



# MULTIPLAYER

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## ABOUT MULTIPLAYER

VAICOM PRO is fully compatible with Multiplayer and has an advanced feature set for MP-specific use. In Preferences you can enable the ‘Use with Multiplayer’ option which allows you to use VAICOM PRO in the same way in Multiplayer mode as with Single Player mode. The plugin maintains a state picture of the mission environment provided by the multiplayer server. The addressable AI units are available for communications in the same manner as with Single Player in as far as mission design is compatible with standard functions.

### Prerequisites

For working with Multiplayer, on the MP page the ‘Use with Multiplayer’ setting must be enabled. On the MP server, the setting Allow Player Export must be enabled.

### MP Server Special Menus

Through the ‘Import F10 Menus’ function it is possible to add server-specific commands to the voice commands set. Imported F10 menu items get ‘Action’ in front of the phrase: for example an imported menu item ‘Push to Waypoint 2’ would become ‘Action Push to Waypoint 2’ on import. This can then become anything you like in the keywords editor. This import will only work if the server has implemented the F10 menu in the standard compatible manner (which is the case for most servers).

### MP limitations

Multiplayer mission designers can take great liberties in mission design, e.g. by introducing custom callsigns, custom menus and all kinds of other tweaks outside of the default spectrum. VAICOM PRO cannot support these by default. Where the mission design makes use of the standard features, VAICOM PRO will support them. But some limitations may apply on some specific servers. Nevertheless, VAICOM has a comprehensive toolset built-in to do complete dynamic AI comms in Multiplayer mode, working in mostly the same manner as in Single Player.

## VOIP INTEGRATIONS

### On Mixed AI/Human Environments

Multiplayer theaters typically consist of a large number of coalition units populated by both AI and human players. In this multiplayer area, VAICOM PRO does not provide the human-to-human communications: for this various other VoIP tools are available that can be used in parallel with VAICOM PRO. VAICOM PRO is used for AI communications, and ideally all these tools share a common framework so that DCS users can have a unified comms experience. With the latest plugin version this goal has come one step closer.

Specifically, DCS Simple Radio Standalone (2.0.7.0 and higher) and Eagle Dynamics’ Voice Chat VoIP feature are now integrated with VAICOM PRO. This means that users can have a single TX setup for VAICOM and VC/SRS sharing the same set of PTT keys/buttons, where VAICOM PRO controls the mic



states for the VoIP tools as required. The aim is that in the end VAICOM PRO users will have a seamless and realistic communications experience in a complex dynamic DCS World multiplayer environment with a relatively simple setup by using VAICOM PRO.

### Why use VoIP integrations

In a multiplayer environment, your radio can be tuned to frequencies that are not used at all, to channels that are populated with human players, populated with AI units, and/or to channels with a mix of both recipient types. The ideal setup deals with all these scenarios.

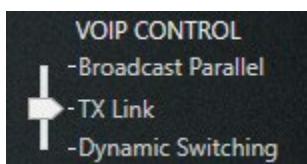
In the most simplistic view, you could assign a set of buttons that trigger both VAICOM TX nodes and VC/SRS push-to-talk for the corresponding radios at the same time. And indeed, this is the most realistic in principle: if you then press a PTT button, your mic audio is sent to both humans via SRS and, in parallel to VAICOM / speech recognition engine. However, there are a few snags to address here especially for comms on mixed-population channels:

- If the speech recognition engine is exposed to stuff you're saying to other human players, it will try to make sense of it, setting off incidental triggers leading to all kinds of mismatches and potential erroneous commands sent to random AI units. This gets messy easily and should be avoided. So ideally the speech engine does not listen to you when you're talking to humans.
- At the same time, you may not want your human fellow players hear you talking to AI (although that would actually be the most realistic experience). Depending on how confident and experienced you are, there can be good reasons you may want to have your Bogey Dope exchanges with the AI AWACS unit shielded from your human-to-human communications on the same frequency.

The plugin integrations with both Voice Chat and SRS take the above into account.

### VoIP integration modes

VAICOM PRO remote controls the microphone listening states for VoiceAttack as well as SRS and Voice Chat dynamically, based on the preferences set on the MP page under the VOIP CONTROL header. There are three independent VoIP integration modes, selectable by the slider:



1. Broadcast Parallel is the simplest mode, where mic audio is transmitted to both AI (speech recognition) and humans (VoIP) at the same time, using standard TX press-and-hold.
2. TX Link allows use of different types of Push-To-Talk, i.e. short-press for transmit to AI (speech recognition) and press-and-hold for transmission to humans (VoIP). **Important:** if you plan to use this advanced hybrid mode you need to adjust your VA profile, see below.
3. Dynamic Switching uses regular Press-And-Hold to start transmitting to AI (speech recognition), after which the transmission can be switched to VoIP while holding.



## Setting up VoIP clients

Start by configuring the clients you want VAICOM to control.



**Note:** these settings for VC and SRS apply in the same way for all integration modes.

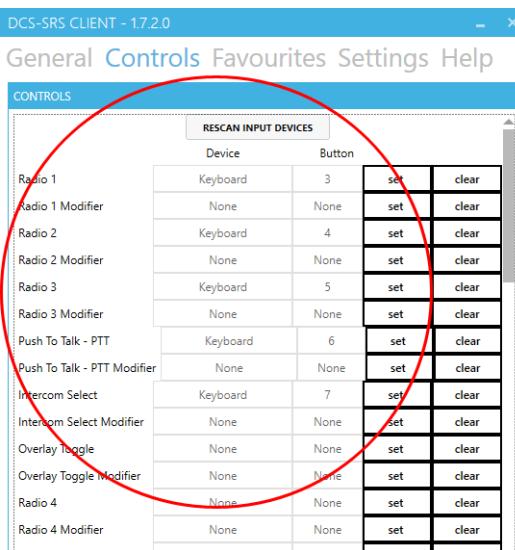
### Setting up Voice Chat

Enable the option Voice Chat Integration on the MP tab. VAICOM PRO will now automatically control the mic listening state for Voice Chat in multiplayer mode. No additional action is required.

### Setting up DCS-Simple Radio (SRS)

Enable option SRS Integration on the MP tab and select SRS PTT Mapping (optional, recommended). The recommended SRS Client setup for use with VAICOM goes like this:

- (SRS Controls Page) Set the same buttons/keys for Radio 1-3 that you use for TX 1-3.
- (SRS Settings Page) Radio Switch works as Push To Talk (PTT): ON
- (SRS Settings Page) Allow INCOCKPIT DCS Controlled PTT: OFF.
- (SRS Settings Page) Allow VAICOM TX Inhibit: ON.



VAICOM PRO now controls SRS Client mic states using one of the three integration modes.



**Note:** SRS can be tested with in Single Player mode: start SRS server on your desktop and have the SRS client connect to address 127.0.0.1. Then fly a Single Player mission.

**Note:** integration does not apply for SRS Expansion / AWACS radios.

**Note:** SRS PTT mapping is independent of SRS integration and can be enabled anytime.

This setting makes sure that radios are assigned to the TX nodes in the same slots as in SRS.

Although not strictly necessary, if you use SRS in parallel with VAICOM PRO it is recommended to enable SRS PTT Mapping.

Credits to @Ciribob and the SRS team!



## Setting up plugin VoIP integration modes

Below are instructions for using the three different modes. It is recommended to choose a preferred mode and then use this throughout. During testing observe the various mic state indicators



|             |   |
|-------------|---|
| XMIT (LCD): | <i>Transmission active</i>  |
| RLY:        | <i>Mic audio relayed to VoIP (VC/SRS)</i>                           |
| REL HOT:    | <i>Mic audio transmitted to speech recognition after TX release</i> |
| PHONES:     | <i>Mic audio transmitted to speech recognition</i>                  |

Sound notification can optionally be enabled (recommended) to signal when VoIP transmit is active.

### 1. Broadcast Parallel

When Broadcast Parallel is selected, all your transmissions and commands will be audible for your fellow player using VC/SRS on the same frequency. This is the most realistic mode, and no additional configuration is required. Use with press-and-hold on any TX.

### 2. TX Link

TX Link mode allows to differentiate between short-press PTT for transmission to AI (speech recognition) and press-and-hold for transmission to humans (VoIP). Optionally apply the MP Only checkbox to use this behavior only in Multiplayer, with normal PTT in Single Player mode.



**Note:** Using the TX Link option requires editing of the VAICOM PRO for DCS World profile in VoiceAttack and is recommended for advanced users only. Although below configuration steps are not difficult, they must be executed with care, as improper VA profile configuration will impact normal PTT functioning. Reminder: a fresh default .vap profile file can always be retrieved for reference by using the Export button on the Config tab.

Carefully apply the below settings to configure VoiceAttack for use with the TX Link option. In the VA profile, edit the TX Press and corresponding TX Release commands. Notice that in non-TX Link profile configuration, the ‘long-pressed’ checkboxes are not selected. For using TX Link you will be selecting these checkboxes. They need to look exactly as follows for all TX 1-6

#### TX PRESS:

|  |
|--|
| <b>Clear</b>   |
| <input type="checkbox"/> Do not allow key to be passed through                     |
| <input type="checkbox"/> Shortcut is invoked only when all keys are released       |
| <input type="checkbox"/> Shortcut is invoked when pressed twice (double tap)       |
| <input type="checkbox"/> Invoke also on single press (Advanced)                    |
| <input checked="" type="checkbox"/> Shortcut is invoked when long-pressed          |
| <input checked="" type="checkbox"/> Invoke also on short/standard press (Advanced) |
| <input type="checkbox"/> Repeat command while keys are held down                   |

#### TX RELEASE:

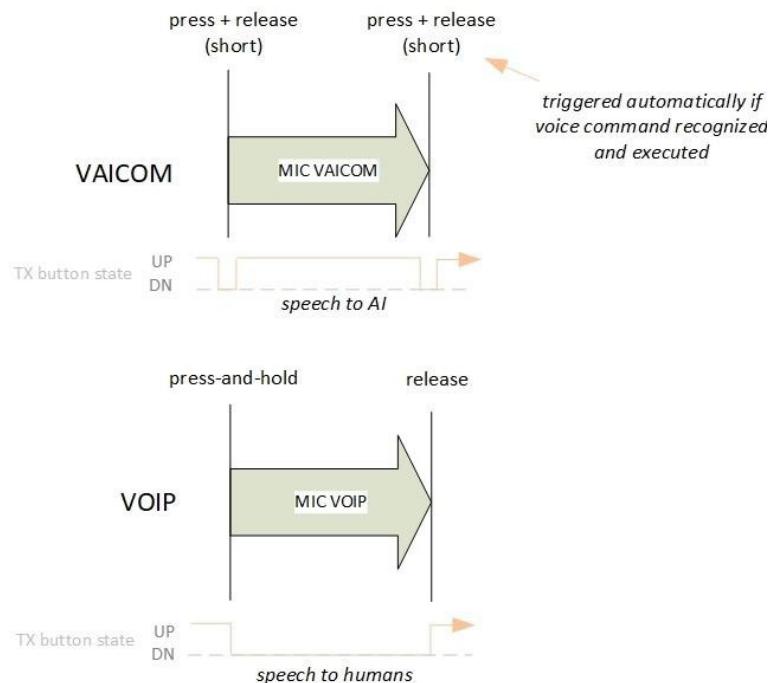
|   |
|---|
| <b>Clear</b>  |
| <input type="checkbox"/> Do not allow key to be passed through                          |
| <input checked="" type="checkbox"/> Shortcut is invoked only when all keys are released |
| <input type="checkbox"/> Shortcut is invoked when pressed twice (double tap)            |
| <input type="checkbox"/> Invoke also on single press (Advanced)                         |
| <input checked="" type="checkbox"/> Shortcut is invoked when long-pressed               |
| <input type="checkbox"/> Invoke also on short/standard press (Advanced)                 |
| <input type="checkbox"/> Repeat command while keys are held down                        |



Enable SRS Integration and/or Voice Chat Integration options on the MP tab. The settings in SRS Client must be as described above on page 25. Next, in VoiceAttack options / Hotkeys tab, set all long press threshold values to 100ms:

|   |     |     |
|---|-----|-----|
| Joystick button long press threshold (ms) | 100 | ▲ ▼ |
|---|-----|-----|

When flying an MP mission, you can now use the TX nodes in the following ways:



Transmissions to AI are not heard by human players and speech recognition is disabled while talking to humans via VoIP. This allows for an efficient setup using standard TX nodes during MP sessions without assigning any separate dedicated buttons/keys to e.g. SRS.

### 3. Dynamic Switching

Lastly, Dynamic Switching can be selected, which gives granular control over VoIP transmission behavior. The selection boxes for Dynamic Switching are explained on MP Settings page 31.

To test dynamic switching mode, enable Auto Switch and Hold AI Transmission. In a random mission call e.g. 'ATC,... Request Vector', and keep holding the PTT button after you have finished your command to the AI unit. You hear the beep and now see the RLY light automatically switch on: VoIP is activated and as long as you keep holding the TX key you can speak to your human teammates (e.g. say ATC request vector again but this time using your team-agreed brevity code). When you release the PTT key, the transmission ends, and the command is sent to the AI ATC unit. Switching can also be done 'manually' by invoking the 'Switch' voice command.



# THE CONFIGURATION WINDOW

Press **LCtrl+LAlt+C** to open the plugin configuration window. For this to work the VAICOM PRO for DCS World profile must be loaded and VA's keyboard shortcuts must be on (look for a keyboard icon).

The configuration window has several tabs to control settings and configuration options. Almost all options can be activated and deactivated on the fly and in real time. Unless stated otherwise there is no need to restart VAICOM PRO or DCS World to apply the changed settings.



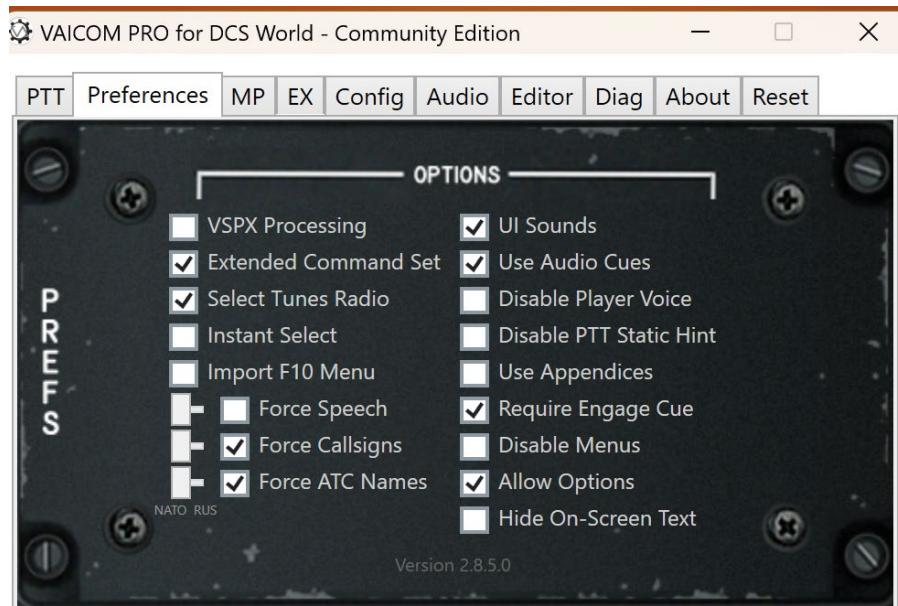
## ABOUT PAGE

This displays the current VAICOM PRO Community Release.



## PREFERENCES PAGE

The Preferences page allows you to select/deselect a number of options.



- **VSPX Processing:** Enables single pass speech processing mode, see page 17.
- **Extended command set:** VAICOM PRO has a wider set of commands available than those shown in the standard communications menus. Also, VAICOM PRO allows for cross-module command usage so that for example JTAC is available across all aircraft. To make use of the enriched command set, select this option. Refer to the Keywords Reference section for details.
- **Select Tunes Radio:** The Select voice command tunes the radio for the called recipient. With this option enabled not only when Easy Comms is ON but also when OFF.
- **Instant Select:** For Easy Communications ON: the ‘Select’ voice command is used to lock a conversation to a specific AI recipient in a category (see chapter: Using VAICOM PRO). When selecting the Use Instant Select option, mentioning a recipient name in your voice command is sufficient to switch the default recipient in the category to this recipient immediately without using the Select voice command. When the option is deselected, the Select voice command must be used to switch to a recipient.
- **Import F10 Menu:** adds mission F10 (Other) menu items to the keywords database. Enable this option and fly the mission: items are added as new keywords starting with ‘Action’. Go to the Keywords Editor and follow the FINISH steps to update the VA profile to use the new voice commands: using an imported keyword will execute the menu item command.
- **Force Speech:** enable to force the speech language across all modules/coalitions e.g. for all communications in English even when flying Russian aircraft or vice versa.
- **Force Callsigns:** enable this setting to use NATO-style callsigns (‘Springfield’) or Russia /Numeric-style callsigns (‘100’) at all times.
- **Force ATC Names:** some Russian-built modules such as the KA-50 use alternative ATC naming for the Caucasus / Black Sea theater. These alternative names are not part of the VAICOM PRO default keyword set (If they must, PRO users can add these themselves in the Keyword Editor). For uniformity (recommended) enable this setting to use standard NATO ATC naming across all modules. The feature is set to ON by default.



- **UI sounds:** deselect to switch off the VAICOM confirmation beep sounds. Feedback will be absent: recommended only for advanced users.
- **Use Audio Hints:** switch on for additional audio feedback, e.g. a sound will inform you when you try to call a non-available recipient or when you use the wrong radio (with Easy Comms ON).
- **Disable Player Voice:** when selected the in-game pilot voice is silenced so you do not hear repeated what you just said yourself. Highly recommended for a realistic experience.
- **Disable PTT Static Hint:** remove the PTT noise that indicates Vaicom is transmitting.
- **Use Appendices:** when selected, Engage commands can be further specified by additional directives for use of weapons and attack direction, as in ‘Two, engage artillery with guns from the east’. When deselected, appendices are ignored.
- **Require Engage cue:** when selected, an engage cue like ‘Engage’, ‘Attack’, ‘Strike’... must be used in your voice command to issue an engage target command to your flight members. When deselected, just mentioning a target (e.g. ‘air defenses’) in your sentence is sufficient. The option is set to ON by default.
- **Disable Menus:** when selected, all on-screen communications menus are set to invisible. You can no longer see or use the menus (except by using the Options command). Recommended for advanced users seeking maximum immersion and realism.
- **Allow Options:** when selected, the ‘Options’ voice command can be used to show the on-screen communications menu for a recipient. This can be helpful e.g. for less advanced users to see which commands are available at any given time during a mission. Recommended to disable for advanced users. Note: more commands are available than visible in the menus.  
Note: The Options command can also be used when the Disable Menus option has been selected.
- **Hide On-Screen Text:** (requires DCS restart) will keep a clear screen, i.e. no on-screen text briefings and messages will be shown. Recommended for a realistic simulation experience.



## MP PAGE

On this tab you find preference settings for multiplayer mode.



- **Use with Multiplayer:** enables or disables VAICOM PRO functions when DCS World is running in multiplayer mode.
- **Display Info:** shows on-screen info about human players on the selected frequency.
- **AOCS:** have Crystal Palace AOCS unit available also in multiplayer mode to provide dynamic updates about coalition units.
- **SRS Integration:** allows VAICOM PRO to automatically control SRS mic listening states
- **SRS PTT mapping:** maps the TX slots according to the radio layout used by Simple Radio Standalone. This is recommended whenever SRS is used together with VAICOM PRO.
- **VoiceChat Integration:** allows VAICOM PRO to control Voice Chat mic listening states.
- **VoiceChat Open Mic:** sets Voice Chat mic in a permanent listen state regardless of PTT use.
- **VoIP Control Mode slider:** Transmit simultaneously or use wither the advanced TX Link option for combined Push-To-Talk or Dynamic Switching mode (see page 26).
- **Use Switch Command:** allows manual switching to VoIP. Keep holding PTT (e.g. after you've sent a message to an AI unit) and say 'Switch': VoIP transmission will be switched on and you can now speak to human player using VC/SRS until you release your PTT key.
- **Auto Switch:** Keep holding the PTT key after the AI command is recognized. VoIP transmission will be automatically switched on; you can speak with human players on the frequency until PTT key is released.
- **Ignore Select:** No auto-switching is performed after executing a Select command.
- **Hold AI Transmission:** Instead of immediate transmission, the message to AI is not transmitted until the PTT key is released. This generally results in better-timed AI unit responses in a multiplayer environment when using Switch / Auto Switch.
- **Sound Notification:** A notification sound is played if mic audio is audible to human players on VoIP i.e. via SRS or Voice Chat.

## EX PAGE

On this tab you find preference settings for various plugin extensions.



### AIRIO

- **Enable** Disabling or enabling the AIRIO extension requires a restart of both VA and DCS.
- **Show Messages** Displays on-screen call confirmations and options / hints for Jester/Iceman voice commands.
- **Hints Only** Displays messages only for incomplete commands: hints for correct voice command usage are shown on-screen.
- **ICS HOT MIC:** Must be set inside the F-14 cockpit to enable/disable intercom hot mic.  
**Note:** Overall recognition may be less reliable when using open mic.



### Aircraft Carrier Comms

- **Suppress Auto** No automatic pilot messages are generated by the sim.

### AOCS Setting for the Air Operations Control Station extension.

- **Auto Brief:** Automatically reads the briefing at the start of a new mission.
- **Concise:** Reads only the mission briefing summary.
- **Deep Interrogate:** (SP only) AOCS provides detailed units data w/ range bearing altitudes.

### CHATTER Setting for the Chatter Themes extension pack:

- **Enable** Disabling or enabling the Chatter extension (hot switchable).
- **Auto start:** Starts background chatter sounds when VAICOM PRO launches.
- **Link to Radio Power:** Mutes chatter when no DCS mission is running, chatter is audible only when radios are powered on in the aircraft (non-FC3 aircraft only).
- **Theme:** Choose an available theme. **Note** AUTO sets the theme automatically for each mission based on the aircraft module.



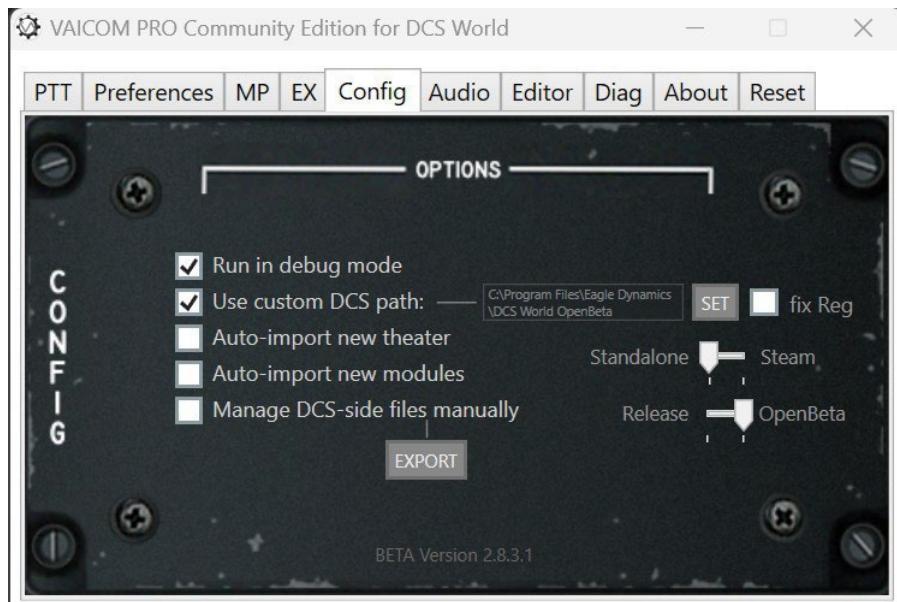
## KNEE

- **Enable**: Disabling or enabling the Kneeboard extension requires a restart of both VA and DCS.
- **Slider**: Sets the kneeboard transparency in Display mode. Has no effect in VR mode.
- **Auto Browse**: Automatically selects the appropriate category tab when a recipient is called (i.e. when awaiting additional input).



# CONFIGURATION PAGE

The Configuration page sets the details for your local PC setup.



- **Run in debug mode:** provides additional details in the VoiceAttack log window during gameplay and creates a logfile in the Logs subfolder. Recommended to switch this on when trying to track a reproducible problem for support purposes. Otherwise leave off.
- **Auto-import new theaters:** when enabled VAICOM PRO scans for new ATCs and adds them to the keyword database. Once they are added and the VA profile is updated with the new keywords, the new airfields can be used with VAICOM PRO as recipient units.
- **Use custom DCS path:** The plugin scans Windows registry for DCS World installation paths on startup. A custom path can be set here to indicate where a DCS World program folder is located. When this option is selected, the auto-installation routine on plugin startup will use this path and install the required lua code in the selected folder. First, use the sliders to select the DCS World version i.e. release or open beta and standalone or steam. For DCS standalone versions, the install paths stored in Windows Registry are sometimes not correct which can lead to a non-functioning plugin. Optionally you can correct the registry by ticking the 'fix reg' checkbox. Press SET to browse to your DCS World program files folder (example see screenshot). Lastly, restart VA and DCS.
- **Auto-import new modules:** With this option selected, VAICOM will automatically add unknown new modules to its database.
- **Manage DCS-side files manually:** Select this option if you want to manually install files. Not recommended normally. The Export button exports lua files to the Export subfolder.

## PTT PAGE

The Push-To-Talk radio mapping page can be used to view the assigned hotkeys for the various aircraft radios. Since the available radio config is different for each DCS module, the PTT setup will be different for each aircraft.

**Main Display:** The LCD display will inform you about the active aircraft module and whether this module has a single physical MIC hotkey for the pilot to operate or multiple. By selecting the PTT mode selector dial, different PTT mapping modes can be applied to suit your setup. The display also shows whether the Easy Communication setting is set to ON or OFF, along with some additional info. Use the Up and Down buttons next to the display to choose which TX node you want to use for single-hotkey PTT (see below). If no module is detected None Detected is displayed.



- **PTT Mode Selector:** Use the selector dial to choose one of four available PTT modes:
  1. **NORM (default):** This is the standard PTT mapping, aircraft modules with multiple physical MIC hotkeys in the aircraft will use multiple TX nodes. Aircraft with just a single MIC hotkey will use a single TX node: select which one with the Up/Down buttons.
  2. **MULTI:** Use this PTT mode if you want to use separate hotkeys for all aircraft radios, including for modules with just a single physical MIC hotkey in the actual plane (such as most helos and WWII aircraft). On the display, the 'S2M' (Single-to-Multi) bug lights up to indicate singles are now mapped to a multi-PTT layout.
  3. **SNGL:** Select this mode if you prefer to have just a single PTT hotkey in your setup for all aircraft. Modules with multiple PTT hotkeys will now be mapped to a single TX node. Use the Up/Down buttons to select which TX to use. The 'M2S' (Multi-to-Single) bug lights up.
  4. **INV:** Both S2M and M2S light up in the Inverse mode, signaling that all single hotkey modules are mapped to multiple TXs, and all multiple hotkey modules are mapped to a single TX node.

- **TX1-TX6 listing:** In the VoiceAttack profile you determine which physical keys or HOTAS buttons you want assign to TX1-TX6. Consult the section PTT Configuration for details on this. VAICOM PRO automatically maps the available set radio of radio devices of the active module to TX1-TX6 by applying a standardized logic as follows:
  - If the module has multiple radios and a VHF AM radio is available, it is mapped to TX1. This radio is typically used for recipients like AWACS, ATC, Tankers, etc.
  - If a UHF radio is available it is mapped to TX2. Also, when there is only a single radio available (e.g. as often with WWII fighters) it is mapped to TX2.
  - If the module has multiple radios and a VHF FM radio is available, it is mapped to TX3. For example, JTAC communications are typically done over VHF FM radio.
  - When Easy Communications is enabled in DCS options, the AUTO option is available on TX4. This PTT key automatically uses the correct radio for the intended recipient. When Easy Communications if off this key is disabled.
  - Ground Crew can be contacted over the dedicated Interphone key on TX5. This uses the onboard intercom button. Ground Crew can also be contacted using any of the other TX keys however, so use of this key is optional.
  - The AUX function on TX6 can be used for non-radio communications functions e.g. for non-VAICOM PRO commands that you added yourself. Future extension may use this node also.

If a radio slot is not used this is indicated by ' ' and the PTT key is disabled.

- **Operate Dial switch:** Used for special cases. Several aircraft (specifically, helos) with a single MIC hotkey have a radio selector dial to select the radio to be used. When easy communications is ON the selector dial is always operated automatically by VAICOM PRO. This option determines whether VAICOM PRO also operates this dial automatically (OPER) or not (MAN) when Easy Communication is set to OFF.  
**Note:** Most (e.g. UH-1H) but not all modules show the dial moving when this function is used. But even when not visible the function works in all cases.
- **SRS PTT mapping:** the button next to the PTT Mode Selector Dial switches between default PTT radio slots assignment or Simple Radio Standalone (SRS) – compatible mapping. When SRS PTT mode is selected, the module radios are assigned to TX slots in the same order as in SRS. This means that TX1 always corresponds to SRS radio 1, TX 2 to SRS radio 2 and TX 3 to SRS radio 3. This way a universal multiplayer-compatible setup can be achieved if desired, with SRS and VAICOM PRO sharing the same PTT keys.
- **VOL:** set the volume of background chatter.
- **RELAY LIGHT:** the light will notify when in multiplayer mode voice speech is forwarded to human players on SRS/Voice Chat. See pages 23-26.
- **Hot Release button:** May be applied when VAICOM PRO is used in combination with additional (daisy-chained) profiles in VoiceAttack e.g. containing commands for cockpit control. Selecting Release Hot keeps VoiceAttack in listening state (hot mic) after TX keys are released. Non-VAICOM PRO commands can then be used without PTT.  
All VAICOM PRO communications commands still require PTT to be used.  
**Note:** Trying to use a VAICOM PRO command in Release Hot mode without pressing PTT will generate a (harmless) red log message stating 'the command is not available in this session'.



## AUDIO PAGE

The Audio tab is used to control the settings related to sound redirection. VAICOM sounds such as PTT squelch, AOCS and chatter can be sent to a specific audio device.

**Note:** **ADJ / PAN SELECTORS** are no longer functioning with DCS 2.5.6 onwards and these are now permanently greyed out. Due to the architecture changes ED has made in 2.5.6, audio redirection for comms must now be set in DCS settings itself. Look on the Audio page in DCS options and select the preferred output device from the dropdown menus there.



- **ON/OFF SWITCH:** The main switch on the right side of the panel determines whether to use the audio redirect feature (OPER) or not (OFF). When set to OFF, the system is bypassed and everything functions as normal. When set to OPER, the comms audio is redirected to the device selected in the dropdown list. The indicator light will switch to green when the selected audio device initialized correctly. If there is a problem with initialization, the indicator light will start blinking and playback on this device will not be possible: select another device from the dropdown.
- **PAN SLIDERS** Left/Mid/Right/Random panning for AOCS and Chatter audio can be set with the sliders.
- **INIT:** When redirect is enabled, this button can be used at any time to reset the audio device.

**Note:** The drop down list is not Plug-and-Play: restart VA if you have added or removed audio devices.



## KEYWORDS EDITOR

The VAICOM PRO keywords database can be fine-tuned and edited on this page. Advanced users can use this to tailor the keywords to their individual preferences. The counter at the top left of the page shows the current total number of keywords ('command phrases' or 'aliases') in the database. The keywords editor tab contains tools to manipulate the keywords database. This is for advanced users, so if you're new to this: try to work with the default keywords set first before you move on to tweaking things to your preference. Get acquainted with the various options and make sure you understand the steps to change and update the VA profile.



At the heart of the editor is the command phrase drop-down list. Here you can select any of the available voice command phrases. Command phrases are the building blocks of voice commands.

- **Drop-down list** VAICOM PRO voice commands are built upon keyword phrases that are recognized in your spoken command sentences during gameplay. The complete set of voice command phrases is listed alphabetically. Each command phrase refers to a specific command segment. In the two lines above the drop-down list, the command segment and its category are shown for reference.
- **Alias Cycle Button** Any command segment can be referred to by one or more different voice command phrases i.e. aliases, meaning you can use different voice commands to trigger the same result. For example, for the 'Engage' command segment you can use 'Engage', 'Strike' or 'Attack' aliases. Next to the drop-down list is a button with a figure. This figure refers to the number of aliases for the current command segment: if there is more than one alias then you can use this button to cycle through the available aliases.
- **Database Counter** The counter on the top left of the window show the total number of keywords in the current database. The figure will update as keywords get added or deleted. If the Reload button is lit, press it to update the dropdown list and this counter.
- **Edit voice command:** select the keyword you want to edit from the drop-down list. Above the drop-down box it is shown to which command the keyword is mapped.
  - **Keywords Training Mode:** press the microphone icon to open Microsoft Windows Voice Recognition. Here you can train the computer to better recognize your voice.



Also, you can add specific words to the Speech Library. See the section on Keywords Training Mode below for a more detailed description.

- **EXPORT/IMPORT:** exports the categorized keyword list as a .csv (Comma Separated Value) file which can be printed out for easy reference. .csv files are readable by Microsoft Excel, Google Spreadsheets and similar generic tools. Press the white arrow button to import keywords to your database from a previously exported .csv file (the Export button changes to Import). An import database file may also contain translated dictionaries in other languages supported by MS speech recognition (e.g. Spanish).
- **CANCEL:** the changes are not stored.
- **FINISH** press this when done editing, see below:



### **IMPORTANT: CHANGES IN THE KEYWORDS DATABASE NEED TO BE REFLECTED IN THE VOICEATTACK PROFILE, THIS REQUIRES A MANUAL STEP (FINISH):**

When you have made changes in the keywords editor follow the correct steps to make sure you can use your up-to-date keywords. The keyword list of the plugin current database needs to be reflected in the VoiceAttack profile. A manual action is required:

The screenshot shows two windows side-by-side. On the left is the 'Edit a Command' dialog, which lists command triggers like 'When I say', 'When I press keys', etc., and defines the sequence of actions to execute. On the right is the 'Edit VA Profile' dialog, which contains a list of commands. At the bottom of the VA profile window, there is a red circle around the 'Import Commands' button and the '501 commands' count.

**update VA profile:**

- Click **FINISH**
- Edit VA profile (pencil icon)
- Edit Keyword Collections command
- Clear 'When I Say' contents (Ctrl-A, Delete)
- Paste the new content (Ctrl-V)
- Store with OK.



**Note:** Multipart commands must be consolidated i.e. collapsed, see -- icon in above screenshot.

1. When done editing press the **FINISH** button: the new keyword list is now in Windows clipboard,
2. In the profile edit the Keyword Collections command and paste (Ctrl-V) the keyword list in the 'when I say' field after first clearing the field with Ctrl-A, Delete. Store with OK.



## DIAG PAGE

Use the DIAG button to get a basic diagnostics summary.



## RESET PAGE

This page allows the plugin to be reset to its factory defaults. It contains a Master Reset button with which you can reset one or several of the following items: Keywords database, Preferences and configuration settings, VoiceAttack profile (.vap file), DCS theme, Lua code (refer to page 42). After a reset you'll need to restart VoiceAttack.



### Plugin uninstall:

To completely uninstall VAICOM PRO, select all above options and reset. Next, do not restart VoiceAttack. Instead remove the VAICOMPRO subfolder and its contents from the VoiceAttack Apps folder. Done.



## OPTIONAL: THE VAICOM PRO APP (VAICOMPRO.exe)



**Note:** Use of the VAICOM PRO application is currently optional. No plugin function described in the manual depends on this app in any way, and you can do without it if you don't want to use it.

In the VAICOMPRO folder where VAICOMPRO.dll is located, you'll find a VAICOMPRO.exe executable file. This is the VAICOM PRO application. The VAICOMPRO app is an extremely lightweight tray app, using 0% CPU and resources. It can be run to provide the following functions:

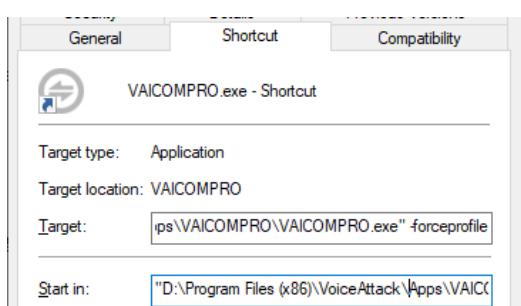
- When starting the VAICOM PRO app, it begins with automatically launching VoiceAttack for you, so it is a convenient one click starting point.
- If you create a shortcut for the app and add the -forceprofile argument, it also automatically selects the VAICOM PRO for DCS World profile for you in VA (see below).
- The app runs in the system tray. Anytime VoiceAttack exits or crashes (i.e. enters non-responsive state), the VAICOM PRO app automatically restarts VA so you can continue flying your mission hands-free.
- It also has a manual force VA reset option (right click)
- Bonus feature: double clicking the tray icon opens the plugin configuration window.

The VAICOM PRO icon is visible in the system tray while running and can be exited at any time with right click menu. Note that closing VA does not close the VAICOM PRO app (it will restart VA).



**Note:** Before you start considering using the app, the plugin .dll must be installed according to the instructions in this manual and confirmed working correctly. The VAICOMPRO.exe file is located in the VoiceAttack Apps/VAICOMPRO folder, same location as VAICOMPRO.dll. Leave it there.

Create a shortcut if you want to e.g. start it from your desktop. By creating a shortcut, you will also have the option to add a command line option (see screenshot).



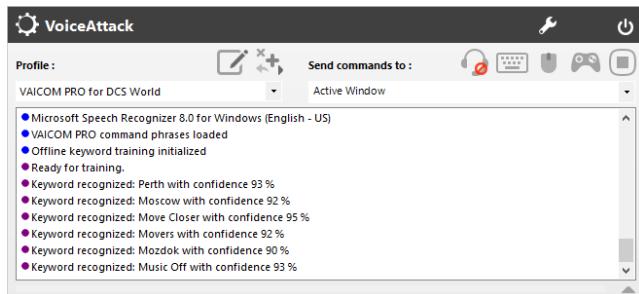
Command line option -forceprofile automatically loads the VAICOM PRO for DCS World profile into VoiceAttack (it must be in VA's profile dropdown list) on launch, even if another one was active earlier. Also, if you incidentally switch to another profile during the session, the app will immediately re-load the VAICOM PRO for DCS World profile in VA automatically. This safeguard ensures continuity and auto-corrects any unintended in-flight profile switching.



# KEYWORDS TRAINING MODE

Clicking on the square microphone icon on the Keyword Editor page takes you in and out of Keywords Training Mode. When this special mode is active you can train the individual keywords / phrases with the Microsoft Windows Speech Recognition engine.

A separate MS voice recognition window opens for this purpose. This recognizer is loaded with the complete set of VAICOM PRO keywords (some 470 by default) but with no other keyword sets. This means it will only recognize the VAICOM PRO phrases as defined in the database and any other words you say will be rejected. This creates a dedicated focused training environment. In Training Mode, you control start/stop listening by clicking on the round mic icon in the Recognizer window.



For Keywords Training Mode observe the following:

- Use Training Mode without DCS World running.
- In Training Mode you do not use PTT: all TX nodes are disabled.
- Instead you enable Listening in the Microsoft Speech Recognition window by clicking the round microphone icon, leaving it in Listening mode until done.
- Keep the Keyword Editor page from the plugin Configuration Window open.
- Once MSVR is listening, click on the keywords dropdown list in the Editor page and use the Arrow Up and Arrow Down keys on your keyboard to step through the individual command phrases.
- Read each command phrase out loud and check in the VA log if it is properly recognized.
- In the VoiceAttack window you will see when a phrase was recognized and with which confidence level (%). Higher is -you guessed it- better.

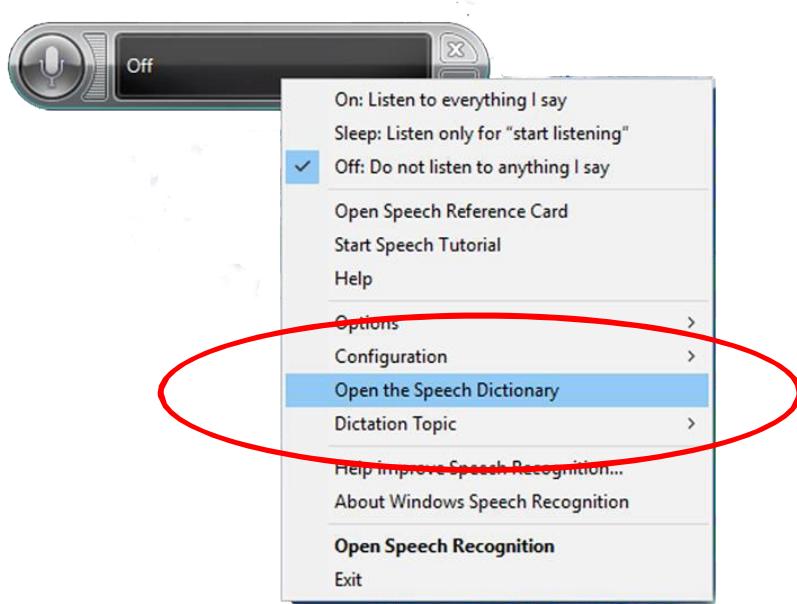


- If a word is not recognized immediately, keep trying. Try changing emphasis. If after several tries you cannot make the recognizer understand a particular phrase, make a note and continue training with the next words. Read below on next steps for these stubborn words.
- It is recommended to grab some coffee and in a 30 mins. session go through each of the 470 keywords. It will help you memorize all the available phrases (some of which you perhaps not even knew existed). This will train the engine, and you can isolate which words are troublesome for recognition for your personal case (as this can vary quite a bit).
- Once you are done with training you will need to manually close the MSVR window yourself, the plugin will not do this for you.
- Click on the square microphone icon again to exit Training Mode.

### Managing problematic words

In the large collection of keywords there are likely a few words that give trouble i.e. the recognizer does not catch them effectively with your voice. For troublesome words you can do these things:

- Use the Keyword editor to change the phrase into something that is better recognized by the engine, or:
- Add the keyword to the Microsoft Speech Library.



When you right-click the Recognizer window you have the option to select 'Open the Speech Dictionary'. You can add new words here to improve their recognition. You can add new words here by using copy/paste from the drop-down list in the Keywords Editor window and then record a new pronunciation with your voice. For some situations this can work miracles to improve the overall recognition of specific stubborn keywords / phrases.



**Note:** It is recommended to do this only for words that you cannot get properly recognized. Adding all VAICOM PRO keywords for example is definitely not recommended, it should normally only be a small number for which this step is required.



# ADVANCED CONFIG & DCS UPDATING

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## Important Information about DCS World updates

Every time DCS is updated to a newer version or repaired It will overwrite the files VAICOM PRO needs to function correctly. This is not normally a problem, as each time VAICOM PRO is run it will re-build its files in DCS.

Problems arise if VAICOM PRO is not shutdown prior to updating or repairing DCS. Similarly after a DCS update, If DCS is started before VAICOM PRO, the software can not apply the required patching to DCS and issues will be encountered in the way VAICOM PRO interacts with DCS.

## Order Of Operation

It is important that you follow this order of operation when Running Vaicom Pro.

- Start Voice Attack and VIACOM PRO as Admin (It will patch/ build the required scripts) or update itself if an update is available.
- Start DCS World

**Note:** If you turn on Debug in preferences you will see VAICOM PRO build its files .



## Managing DCS-side (lua) files manually

Each time the VAICOM PRO plugin initializes it checks for local DCS World installations and whether the required .lua script files to run VAICOM PRO are already installed. If not, it will install them automatically. You can select the ‘Managing DCS-side files manually’ option to disable this feature. You can then manage the lua files yourself.

**Note:** Manual .lua install is prone to user error and definitely not recommended in general.  
Manual .lua files handling should not be necessary except in very particular circumstances.



**Note:** For below steps note that each DCS version has its own set of folders so you may need to repeat these steps for other DCS versions if you have more than one version installed.

Press the Export button to find these new .lua files in the Export subfolder:

1. **Export.lua** This is an append file. Open this file in Notepad++ and select all contents for copy with Ctrl-A, Ctrl-C. Next find the existing export.lua file in the Saved Games/DCS/Scripts folder (create a new empty export.lua file if it doesn't exist yet). Then Paste (Ctrl-V) the contents into the export.lua below whatever else may already be in there.
2. **VAICOMPRO.export.lua** Create a subfolder named ‘VAICOMPRO’ (use capitals) in Saved Games/DCS/Scripts. Place the exported file VAICOMPRO.export.lua in there.
3. **RadioCommandDialogsPanel.lua** This is an append file. Open the file in Notepad++ and select all contents for copy with Ctrl-A, Ctrl-C. Next find this folder: ‘DCSWorld\Scripts\UI\RadioCommandDialogPanel’ and open the existing RadioCommandDialogsPanel.lua file there with Notepad++. At very lower end of this file paste the copied contents with Ctrl-V and save.
4. **TabSheetBar.lua** Append file, found in the same folder as 3). Follow the same append steps.
5. **gameMessages.lua** is placed in the Scripts/UI folder.
6. **speech.lua** Also an append file. Add the contents of this file at the end of the speech.lua file located in folder ‘DCS World\Scripts\Speech’.
7. Do the same with **common.lua**, in the same folder as speech.lua.

Once the above is all done you can clear VAICOM PRO’s Export subfolder.

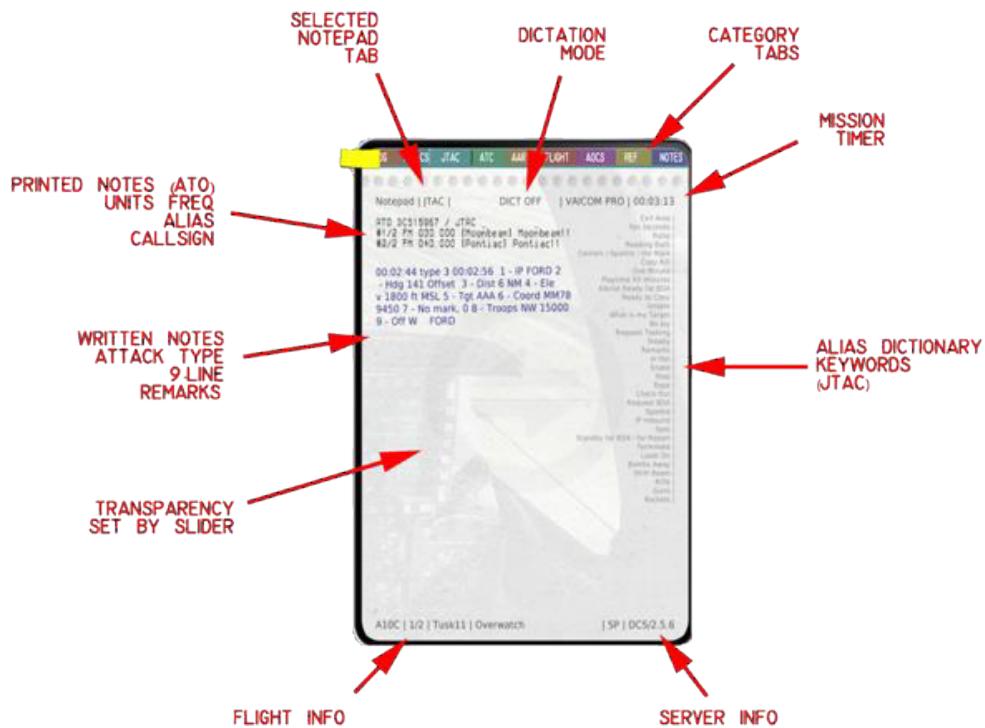


# INTERACTIVE KNEEBOARD EXTENSION

The ultimate in DCS integration is VAICOM PRO's dynamic kneeboard extension. This optional add-on allows you to have direct in-sim access to written-down references of important communications such as for JTAC 9-lines and remarks, AWACS and AOCS status reports, and to add your own dictated notes using just the standard DCS kneeboard. Working with the kneeboard as your dynamic scratchpad during the mission brings immersion to unprecedented levels. What's more, it also provides reference to your own personalized alias keywords database, so you will have an immediate view on the voice commands available to you when needed. Perfect for initial training and when learning to work with advanced voice comms.

## Overview

VAICOM PRO's kneeboard page is automatically bookmarked, as shown by the yellow post-it. At the top, it shows tabs for the various notepad categories. At the start of the new mission, it defaults to the first tab which shows printed Air Tasking Order (ATO) and briefing summary information.



Other tabs include those for categories such as ATC, AWCS and JTAC, and lastly there is a NOTES tab for your own notes added by voice using Dictation Mode.



## **Opacity**

The notepad's overall opacity can be set with the vertical slider on the EX tab of the plugin configuration window. This slider affects transparency on desktop monitors only: in VR mode the kneeboard is always opaque.

## **Mission timer**

At the top right you can check the mission timer to see how long your mission has been running. Some written notes will have timestamp references. As a side note: if you are on long missions, you will see that your notepad page gradually becomes more smudgy!

## **Dictionary keywords**

At the right-hand side of each category page there's a listing of command aliases for that category. So e.g. on the JTAC tab, JTAC command keywords are shown. This listing is based on your personalized VAICOM database: if you have edited the default database using the keywords editor it will be reflected here. Note that only one alias is shown for each command. This means that if you have several aliases for a command you will not see all of them listed. You'll still need to memorize keywords: the idea is not to have a complete dictionary on here, but a fast and convenient backup in case you forgot something. This is especially useful if you're a new VAICOM PRO user learning the various commands.

## **Browsing through tabs**

You can open/close the kneeboard by saying 'Kneeboard'. Browse to a specific tab with the "Page" keyword, i.e. "AWACS,...Page". Say "Show Notes" to select the dictation page and "Show Tasking Order" to bring up the ATO briefing summary tab.

When the Auto Browse option is selected (EX tab), tabs are automatically and dynamically selected: if you say 'JTAC,..' and the 'awaiting additional input' blip is heard, the kneeboard will instantly switch to the JTAC tab. You can then read relevant info from the notepad page before completing your voice command. Note: this does not apply to VSPX recognition mode.

## **ATO categories info**

Printed at the top of each category page is a unit list excerpt from the Air Tasking Order. It tells you which units are available in the mission and the frequency on which to contact them. In the square brackets, the corresponding callsign alias is shown i.e. the recipient keyword you should use with your voice commands to hail them. If you have edited the recipient alias in the keyword editor, it will be reflected here.

## **Written notes**

The written notes (blue ink) are added automatically as new information becomes available through your various communications with AI units. There are various messages e.g. AWACS alpha check, ATC vectors, AOCS updates etc. of which summaries will be written on your notepad during the mission. For example, when you contact a JTAC operator and establish 9-line information exchange, VAICOM PRO will automatically scribble the 9-line data on the JTAC page for you using a condensed shorthand style. Like in reality, it will take a second or two to write things down.



## How to use

Writing of notes is automated and does not require specific additional user action.

- As always, use PTT for every command.
- Use the “Kneeboard” voice command to toggle kneeboard visible
- Call e.g. “AWACS...Page” or “JATC...Page” etc. to browse to a tab  
(enable the Auto Browse option (EX) to browse without use of the Page command)
- To test, check in with a JTAC operator and request nine-line briefing (“Ready to Copy”)
- During the JTAC response, the nine-line info appears as written notes on the JTAC page,
- Request AWACS vector to home base and a note gets added,
- Etcetera.

**Note:** Not every single reply you get from a recipient will necessarily be written down on the notepad. Only relevant info is penned.



**Note:** When the page is full, additional lines will be added at the expense of the topmost lines. You cannot browse back i.e. only most recent notes are visible on the page.

## Dictation Mode

Dictation Mode is used to add your own notes to the kneeboard using speech. The dictation notes are written on the NOTES tab. This tab is automatically selected when you enter dictation mode or when you call ‘Show Notes’. At the top of the page, a red [DICT ON] bug informs you if Dictation Mode is active.

How to use dictation mode:

A PTT key must be used for speech, also in Dictation Mode. Start by pressing PTT (any TX node) and calling ‘start dictate’ to switch on Dictation Mode. Now, press PTT again and say any random phrase that comes to mind. Dictation Mode (that is, Windows Speech Recognition) will try its best to make sense of what you said, and a written line will be added to the NOTES tab. The line can take about a second to appear on the kneeboard: this is normal.

MS Windows will do its best to come to sensible sentence based on your speech, but mileage may vary. Bear in mind that the recognition function is NOT handled by the plugin (or VoiceAttack for that matter) but by Windows itself.

Hold PTT or release PTT and press PTT again to start entering your next line to the notepad. If the captured line is okay, just continue with the next line. If the line was not okay, you can use the ‘correction’ keyword to erase the last line and then try again.

When you’re finished dictating, say ‘end dictate’ to exit Dictation Mode. The bug will show DICT OFF. The notes are kept on the NOTES page and you can use ‘show notes’ to browse back to them at any time.

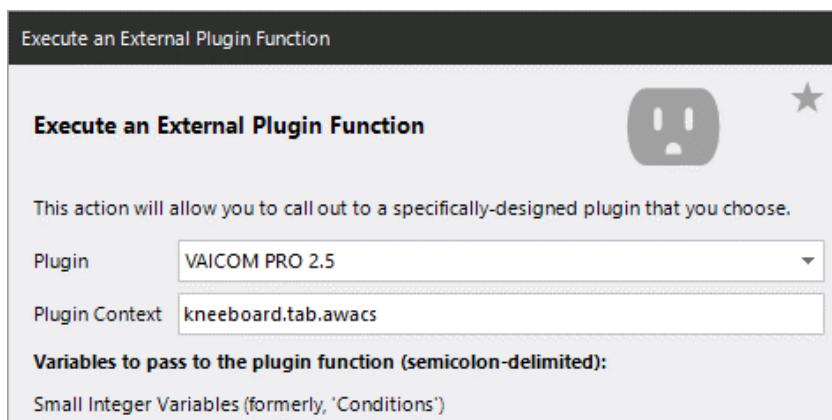


## Advanced option: keyboard/joystick control

For normal use you do not need keyboard or joystick to control the Interactive Kneeboard functions. However, if you do wish to have the ability to browse the category tabs with keyboard keys / joystick buttons, you can add additional commands to your VoiceAttack profile to do so. Also, the kneeboard opacity slider can be controlled in this way if desired.

Proceed as follows:

- Create a new command in VoiceAttack profile,
- Use option Other / Advanced / Execute an External Plugin Function,
- In the plugin context field, putting any of the available API control commands listed below
- Configure any key/button to trigger this command,
- Etcetera.



API control commands:

- kneeboard.tab.log
- kneeboard.tab.aocs
- kneeboard.tab.jtac
- kneeboard.tab.tanker
- kneeboard.tab.awacs
- kneeboard.tab.atc
- kneeboard.tab.flight
- kneeboard.tab.ref
- kneeboard.tab.notes
- kneeboard.tab.prv
- kneeboard.tab.nxt
- kneeboard.opac.up
- kneeboard.opac.dn

## Keywords reference

Refer to page 80 for a listing of all Interactive Kneeboard -related keywords.



# AIRIO DIALOG EXTENSION

---

The AIRIO Dialog extension for VAICOM PRO is a highly advanced voice-based AI interface which lets you have immediate dialogs with your F-14 Jester back seater (as well as Iceman AI when you're in the backseat) without seeing any on-screen menu wheels or using the keyboard. AIRIO makes the interaction with Jester 100% natural and adds greatly to speed and immersion in the heat of complex missions where close flight crew cooperation is critical.

## Before setting up

- You must have a fully working plugin installation before installing AIRIO. VAICOM PRO plugin version must be 2.8.0 or higher, VoiceAttack version 1.10.3 or higher.
- You must have the plugin automatic lua files install mechanism working (using default automatic or via the Custom Path option) in order to use the AIRIO extension. AIRIO does not work with manual .lua installation (which is not recommended in any case, unless in very exceptional circumstances).
- The AIRIO system replaces the Menu Wheel: the Menu Wheel is not available when AIRIO is enabled and vice versa. However, a back-up is available using the Options command, i.e. 'Jester,.. Options' (or 'Ice,.. Options') brings up the Jester menu. Keep holding PTT and use 'Take 1', .. 'Take 2' etc. voice commands to step through the options, just like with the regular Options function (see page 19). Releasing the PTT button closes the Jester menu.
- AIRIO commands are only available when flying the F-14 module.



## Setting up

- Confirm on the EX tab that the Enable option is selected.
- Enable Extended Command Set on Preferences page. Restart both VA and DCS.
- After VA restart, new keywords will have been added to your alias database. Follow the regular FINISH steps (see page 30) to update your VA profile with the new keywords.
- Restart VA again, and then start DCS.
- In DCS options under Special, confirm the Radio Menu setting for the F-14 is Default.
- Look on next page for adding additional AIRIO commands to your VA profile.

## Adding additional VA profile commands for AIRIO

Follow below steps to add these AIRIO commands to your VAICOM PRO for DCS World profile.

**Note:** Unless these commands are added to your VA profile you will e.g. not be able to use the AIRIO options for assigning map markers to steerpoints, to radar scan a particular (altitude, range) sector and for manual frequency tuning by Jester on Datalink, AN/ARC-182 and TACAN devices.



| - Extension packs   |     |                              |                |
|---|-----|------------------------------|----------------|
| *Chatter  | [0] | Joystick 1 Butt...           | Chatter ON/OFF |
| Link Tune [0..9] [0..9] decimal [0..9]                                  |     | AIRIO - Datalink manual t... | Execute exte   |
| Map Marker [1..10] to [Waypoint 1; Waypoint 2; Waypoint 3; Steerpoi...  |     | AIRIO - Map Markers          | Execute exte   |
| Radio Tune [0..3] [0..9] [0..9] decimal [0..9] [0; 2 5; 5 0; 7 5;]      |     | AIRIO - AN/ARC-182 manu...   | Execute exte   |
| TACAN Tune [X-Ray;Yankee] [0..1] [0..9] [0..9]                          |     | AIRIO - TACAN manual tun...  | Execute exte   |
| - Keyword Collections   |     |                              |                |
| *AAA*; *Abort Inbound*; *Abort Refuel*; *Abort Startup*; *Abort Take... |     | AI Communications            | Execute exte   |
| - Push-To-Talk  |     |                              |                |
| Transmit TX1 press (voice disabled)                                     | [1] | Joystick 1 Butt...           | TX1 (VHF AM)   |
|   |     |                              | Start VoiceAt  |

To start, open your profile in VoiceAttack and look for in total 9 AIRIO commands in category Expansion packs. If these commands are already present then no action is needed. If not, follow below steps to add them:

1. Open the plugin Configuration page and on the Config tab click on the EXPORT button.
2. The export folder contains a file called '**VAICOM PRO AIRIO.vap**'
3. In VoiceAttack, select Import Profile and import this VAICOM PRO AIRIO.vap file
4. Next edit the VAICOM PRO AIRIO profile (click pencil icon)
5. Right-click on each command (there are 9) and select Copy To.. VAICOM PRO for DCS World.
6. Done (the AIRIO profile can now be deleted).

Continue to use your VAICOM PRO for DCS World profile as usual.

#### Edit a Profile

| Profile Name  | VAICOM PRO AIRIO             | Options                          | New Command     | Edit       | Delete      |
|---|------------------------------|----------------------------------|-----------------|------------|-------------|
| Spoken Command  | Description                  | Actions                          |                 |            |             |
| - Extension packs   |                              |                                  |                 |            |             |
| Link Tune [0..9] [0..9] decimal [0..9]  | AIRIO - Datalink manual t... | Execute external plugin, 'VAI... |                 |            |             |
| Radio Tune [0..3] [0..9] [0..9] decimal [0..9] [zero; two five; five zero; s... | AIRIO - AN/ARC-182 manu...   | 'VAI...                          |                 |            |             |
| TACAN Tune [X-Ray;Yankee] [0..1] [0..9] [0..9]                                  | AIRIO - TACAN manual tun...  | 'VAI...                          |                 |            |             |
|   |                              |                                  | Import Commands | 3 commands | list filter |
|   |                              |                                  | S               | K          | M J P X F   |
|   |                              |                                  | Apply           | Done       | Cancel      |



**Note:** As an alternative to above steps, advanced users can daisy-chain the AIRIO profile to their VAICOM PRO for DCS World master profile if desired.



## Usage / During flight

- You can use any TX node for AIRIO commands, using the TX5/ICS node would be the formally correct way to do it. ICS Hot Mic functionality is also available as an option.
- AIRIO database aliases can be manipulated (edited, new aliases added, translated etc.) just like the regular dictionary keywords.
- RIO and Iceman are optional recipients: you can use their names ("Jester,...") in your phrases but you don't have to, all RIO commands are automatically directed to your crew member.
- Do not consider the Menu Wheel names/labels/listings to be your commands reference. When using AIRIO, refer only to the commands reference tables stated in this user manual (pages 63-70).
- Audio Redirect is not available for Jester speech: it is recommended to switch off Redirect or select (default) device.



### Jester manual tuning commands

Complementary to the recipient-based tuning offered by the VAICOM PRO plugin (using the Select command for radio tuning to a specific recipient, TACAN Tune Texaco to tune TACAN immediately to a nearby tanker, etcetera), AIRIO now also has the option to have Jester execute manual device tuning. The RIO can be made to perform frequency tuning for the AN/ARC-182 radio, Datalink and TACAN devices. Voice command usage is as follows:

#### Link Tune [0..9] [0..9] decimal [0..9]

Sets the Datalink frequency. Examples:

"Link Tune two two decimal seven"

– DL frequency is set to 322.70 MHz

"Link Tune zero five decimal four"

– DL frequency is set to 305.40 MHz

#### Radio Tune [0..3] [0..9] [0..9] decimal [0..9] [0; 2 5; 5 0; 7 5;]

Sets the AN/ARC-182 radio frequency. Examples:

"Radio Tune two three five decimal nine zero "

– Radio frequency is set to 235.900 MHz

"Radio Tune zero eight five decimal zero two five"

– Radio frequency is set to 085.025 MHz

#### TACAN Tune [X-Ray;Yankee] [0..1] [0..9] [0..9]

Sets the TACAN frequency. Examples:

"TACAN Tune X-Ray one two nine "

– TACAN channel is set to 129X,

"TACAN Tune Yankee zero eight six"

– TACAN channel is set to 086Y.

#### Scan Sector, Angels [0..70] for/at [0..150]

Radar scan specific sector (use multiples of 5 for the numbers). Example:

"Scan Sector, Angels fifty for forty five"

– Scan sector at 50.000ft range 45NM.

#### Map Marker [1..10] to [Waypoint 1..3 ; Steerpoint 1..3 ; Fixed Point; Initial Point; Surface Target; Home Base; Defense Point; Hostile Zone; Grid]

Sets the map marker as reference point. Examples:

"Map marker one to waypoint two "

– F10 Map marker 1 is assigned to WP2,

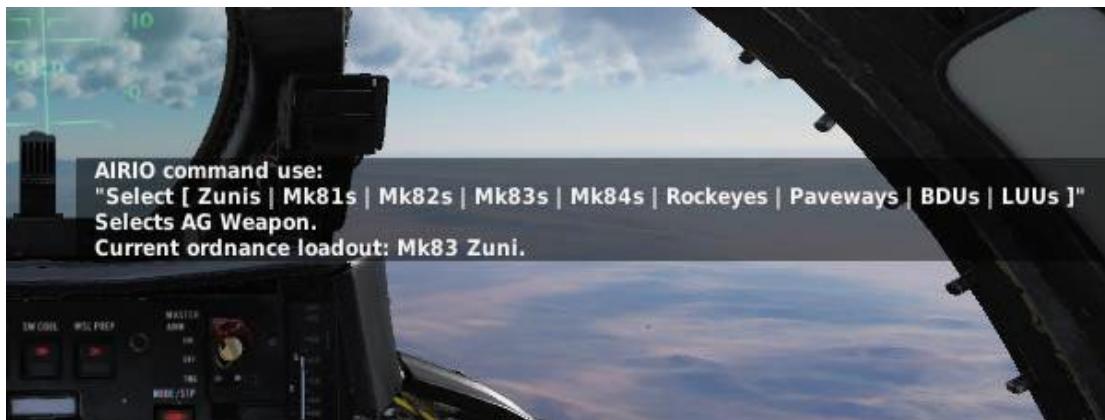
"Map marker seven to surface target "

– F10 Map marker 7 is assigned as target.

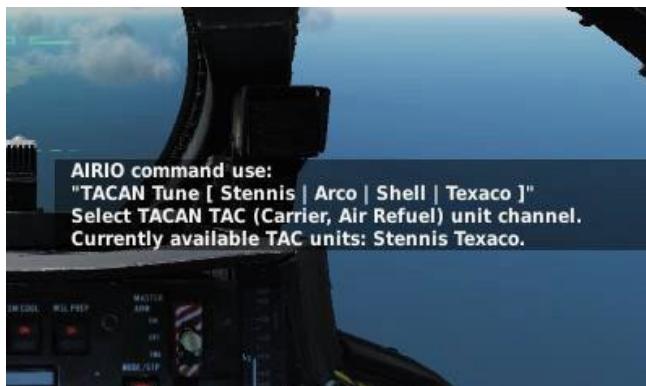


### In-flight assistance: show options

- There are various AIRIO root commands that you can use during flight to provide you with guidance if needed. These will provide on-screen information when the ‘Hints’ setting is selected on the EX tab. In the reference tables these root commands are listed with ‘(show options)’.



In above screenshot the hint is shown for the ‘Select Stores’ command as an example. The displayed message provides info for general command usage, and also shows the options currently available: AG stores types Mk83 and Zuni are loaded on the aircraft so commands ‘Select Zunis’ and ‘Select Mark 83s’ can be used here.



Above example hint screenshot is for ‘TACAN Tune’ command: the TACAN TAC units Stennis and Texaco are active in the current mission area and can be used in commands: i.e. ‘TACAN Tune Stennis’ or ‘TACAN Tune Texaco’. Similar info is in place for ‘Link Host’ DL command.

- If desired, download or create kneeboard pages for AIRIO keywords reference when familiarizing with the various AIRIO commands: [AIRIO kneeboard by @SpeedyE420](#)
- VAICOM PRO’s regular commands (‘Select’) can be used to tune radios in the F-14. The radio for which you have pressed the corresponding TX/PTT key is tuned (i.e. ARC-159, ARC-182).
- For Easy Comms Off, make sure the Select Tunes Radio option is selected in Preferences.
- Optionally you can use the ICS HOT MIC switch in the aircraft to talk to your RIO without using PTT. VoiceAttack will then be in listening state throughout the mission. Note: be aware that using open mic can lead to less reliable overall speech recognition.



# DIALOGS TRAINING REFERENCE

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Below flow tables provide a training reference for practicing procedural dialogs with voice recognition using VAICOM PRO.

For ATC and JTAC specifically it can be helpful to get a basic idea of the regular steps involved and their order. You are not specifically tied to these steps as there is no sync to be maintained between DCS and VAICOM PRO. The communications interface is directly with the FSM core of DCS World which means you can issue any voice command at any time. Whether you will get an appropriate response or not will depend on the stage of the flow. But, you cannot 'get stuck' in dialogs as was an issue with previous VAICOM versions which relied on using the menu interface.

## ATC dialogs

Below tables capture regular procedure steps taken for the various ATC stages ('happy flows'). In addition to these there are additional commands that can be used with ATC. See Keywords Reference section for full ATC commands listing.

### Stage Ground – before takeoff

| status             | use voice command      | notes                          |
|--------------------|------------------------|--------------------------------|
| Parked at the ramp | Request Engines Start  | Then execute startup procedure |
| Ready for Taxi     | Request Taxi to Runway | Proceed to Runway, hold short  |
| Ready for Takeoff  | Ready for Departure    | Line up and take off           |

### Stage Air

| status          | use voice command | notes |
|-----------------|-------------------|-------|
| Navigating      | Request Vector    |       |
| Inbound         | Inbound           |       |
| Approaching     | Overhead Approach |       |
| Request Landing | Request Landing   |       |

### Stage Ground – after landing

| status            | use voice command       | notes                |
|-------------------|-------------------------|----------------------|
| Landed, on runway | Request Taxi to Parking | Exit to parking area |



## JTAC dialogs

Below tables show typical example dialog for the various JTAC stages ('happy flows'), to be used as a guideline for training voice commands with JTAC engagements (especially when you have menus set to invisible). In addition to these there are additional commands for JTAC, such as Repeat Brief, What is My Target, Unable etc. which can also be used most of the time during the engagement. You can state the command phrases literally as written here, but you are free to vary the exact way you state your commands since VAICOM interpretation is keyword-based.

**Note:** Look carefully into these flows as they also contain additional commands such as 'Copy Miss' which are not part of DCS' standard package. There are several more interesting keywords that you can use, listed in the Keywords Reference section ('Guns! Guns! Guns!').

### JTAC type 1/2 engagement

#### Stage Establish (check in)

| ref | player call                             | JTAC call  | remarks           |
|-----|---|--|-------------------|
|     | 'JTAC, Enfield 11, playtime 30 minutes' |  | Enfield checks in |
|     |   | 'Enfield 11, this is Firefly. Welcome, advise when ready for 9-line' |                   |

#### Stage Briefing

| ref | player call                | JTAC call                                     | remarks              |
|-----|----------------------------|---|----------------------|
| B   | 'Enfield 11 ready to copy' |   |                      |
|     |                            | (reads 9-line), advise when ready for remarks |                      |
|     | 'Any remarks?'             |   |                      |
|     |                            | (reads remarks)                               |                      |
|     | 'Copy nine line'           |   | or 'Reading Back'... |
|     |                            | Readback correct.<br>Advise when IP Inbound.  |                      |

#### Stage IP Inbound

| ref | player call              | JTAC call | remarks |
|-----|--------------------------|-----------|---------|
| IP  | 'Enfield 11, IP Inbound' |           |         |
|     |                          | Continue. |         |

#### Stage Setup (for WP type)

| ref | player call    | JTAC call                           | remarks                 |
|-----|----------------|-------------------------------------|-------------------------|
|     |                | Mark is on the deck.                |                         |
|     | 'Tally Smoke.' |                                     | or 'Contact the Mark'   |
|     |                | (reads target distance from marker) | Proceed to Stage Engage |

#### Stage Setup (for IR type)

| ref | player call | JTAC call | remarks             |
|-----|-------------|-----------|---------------------|
|     | 'Sparkle'   |           | Commands IR wand on |
|     |             | Sparkle.  |                     |
|     | 'Snake'     |           |                     |
|     |             | Snake...  |                     |



|  |                    |            |                         |
|--|--------------------|------------|-------------------------|
|  | 'Steady'           |            |                         |
|  |                    | Steady.... |                         |
|  | 'Contact Sparkle.' |            | Proceed to Stage Engage |

#### Stage Setup (for LASE type)

| ref | player call  | JTAC call | remarks                            |
|-----|--------------|-----------|------------------------------------|
|     | '10 seconds' |           |                                    |
|     | 'Laser On'   |           |                                    |
|     |              | Lasing.   |                                    |
|     | 'Shift'      |           |                                    |
|     |              | Shift...  |                                    |
|     | 'Tally Ray.' |           | Or 'Spot'. Proceed to Stage Engage |

#### Stage Engage

| ref | player call                     | JTAC call                | remarks   |
|-----|---------------------------------|--------------------------|---|
|     | 'Enfield 11, In from the West.' |                          |   |
|     |                                 | Cleared Hot!             | Enfield fires   |
|     | 'Enfield 11, Exit Area'         |                          | Enfield egresses  |
|     |                                 | Target is not destroyed. | Enfield is a poor shot  |
|     | 'Copy Miss.'                    |                          | Syncs to re-engage (ref IP). <b>Note:</b> you'll hear 'IP Inbound' if player voice enabled. |

#### (re-engaging after initial miss)

| ref | player call         | JTAC call                                     | remarks                               |
|-----|---------------------|---|---------------------------------------|
|     |                     | Enfield 11, continue.                         |                                       |
|     |                     | Mark is on the deck.                          | WP type attack                        |
|     | 'Copy Smoke'        |   |                                       |
|     | 'Tally Smoke'       |   | When visual on mark                   |
|     |                     | (reads target distance from marker)           |                                       |
|     | 'What's my Target?' |   | Optional but typical step             |
|     |                     | Target is AAA.                                |                                       |
|     | 'In from the East'  |   |                                       |
|     |                     | Cleared Hot!                                  |                                       |
|     |                     | Target destroyed.                             | Finally.                              |
|     | 'Confirm kill'      |   | Syncs back to Briefing stage (ref B). |
|     | 'Request new task'  |   | i.e. Ready to Copy 9-line             |
|     |                     | (reads 9-line), advise when ready for remarks |                                       |

#### Stage Establish (check out)

| ref | player call                          | JTAC call    | remarks            |
|-----|--------------------------------------|--------------|--------------------|
|     | 'Firefly, Enfield 11, checking out.' |              | Enfield checks out |
|     |                                      | Thanks, bye. |                    |



# KEYWORDS REFERENCE

---

The following tables provide an overview of the keywords used by VAICOM PRO. You can use the keyword editor to change the phrases to your personal preference and add additional keywords.

## Generic voice command structure

VAICOM PRO voice command interpretation is keyword-based. All VAICOM PRO voice command phrases are used in the VoiceAttack profile with an asterisk wildcard before and after the phrase, indicating the keyword can be used anywhere in a spoken sentence. The generic structure for VAICOM PRO voice commands is as follows

[<recipient>] , [<sender>\*] , [<cue>] <command> [ <appendices>]

where the elements are

**Recipient** Recipient class e.g. ‘AWACS’ or recipient callsign e.g. ‘Magic’.

**Sender** Player callsign, e.g. ‘Springfield 11’. Use of player callsign is optional and for general command interpretation it is not required to use.

**Note:** \*) with VSPX speech processing mode, sender cannot be used.



**Note:** During a mission you can use your flight callsign e.g. ‘Springfield’ as a recipient alias for Flight. So instead of “Flight, close formation” you can call “Springfield, close formation”. Unit numbers e.g. ‘14’ etc. are all ignored.

**Cue** A specific keyword to set the context. For example for the Engage command you are required by default to use a cue word in your sentence such as ‘Attack’, ‘Engage’, or ‘Strike’ . You can switch this off in Preferences, in which case just mentioning a target in your sentence is enough to issue an Engage command without using a cue word.

**Command** Any valid command for the recipient class e.g. ‘Request Picture’ for AWACS. A message is not complete without reference to a command.

**Appendices** For engage commands, additional info can optionally be provided. ‘Two, Engage Air Defenses’ is valid, but in addition e.g. the appendix ‘from the North with Mavericks’ can be added to make it more specific. **Note:** support for specific appendices (direction, weapon) varies per DCS module. To use, the option must be enabled in Preferences.

## LEGEND

- = not available

O = available for specific modules only

X = available



| ref                         | voice command phrase / alias | category | command segment       | FREE | PRO | remarks |  |  |
|-----------------------------|------------------------------|----------|-----------------------|------|-----|---------|--|--|
| <b>Appendices Weapon</b>    |                              |          |                       |      |     |         |  |  |
|                             | Missile                      | Appendix | with Missiles         |      | O   |         |  |  |
|                             | Maverick                     |          |                       |      | O   |         |  |  |
|                             | Pickle                       | Appendix | with Unguided Bombs   |      | O   |         |  |  |
|                             | Bomb                         |          |                       |      | O   |         |  |  |
|                             | Stores                       | Appendix | with Guided Bombs     |      | O   |         |  |  |
|                             | Guided                       |          |                       |      | O   |         |  |  |
|                             | GBU                          | Appendix | with Rockets          |      | O   |         |  |  |
|                             | Paveway                      |          |                       |      | O   |         |  |  |
|                             | Rocket                       | Appendix | with Rockets          |      | O   |         |  |  |
|                             | Dart                         |          |                       |      | O   |         |  |  |
|                             | Marker                       | Appendix | with Markers          |      | O   |         |  |  |
|                             | Paint                        |          |                       |      | O   |         |  |  |
|                             | Smoke                        | Appendix | with Guns             |      | O   |         |  |  |
|                             | Gun                          |          |                       |      | O   |         |  |  |
|                             | Strafe                       | Appendix | with Guns             |      | O   |         |  |  |
|                             | Bullet                       |          |                       |      | O   |         |  |  |
| <b>Appendices Direction</b> |                              |          |                       |      |     |         |  |  |
|                             | from the North               | Appendix | from the North        |      | O   |         |  |  |
|                             | from the NorthEast           | Appendix | from the NorthEast    |      | O   |         |  |  |
|                             | from the East                | Appendix | from the East         |      | O   |         |  |  |
|                             | from the SouthEast           | Appendix | from the SouthEast    |      | O   |         |  |  |
|                             | from the South               | Appendix | from the South        |      | O   |         |  |  |
|                             | from the SouthWest           | Appendix | from the SouthWest    |      | O   |         |  |  |
|                             | from the West                | Appendix | from the West         |      | O   |         |  |  |
|                             | from the NorthWest           | Appendix | from the NorthWest    |      | O   |         |  |  |
| <b>Cues</b>                 |                              |          |                       |      |     |         |  |  |
|                             | Engage                       | Cue      | Engage                |      | X   |         |  |  |
|                             | Attack                       |          |                       |      | X   |         |  |  |
|                             | Strike                       |          |                       |      | X   |         |  |  |
|                             | Weapons Free                 |          |                       |      | X   |         |  |  |
|                             | Cleared Hot                  |          |                       |      | X   |         |  |  |
| <b>Commands</b>             |                              |          |                       |      |     |         |  |  |
|                             | <b>Flight   Engage</b>       |          |                       |      |     |         |  |  |
|                             | My Target                    | Flight   | Engage My Target      | X    | X   |         |  |  |
|                             | My Contact                   |          |                       | X    | X   |         |  |  |
|                             | Bandit                       | Flight   | Engage Bandits        | X    | X   |         |  |  |
|                             | Bogey                        |          |                       | X    | X   |         |  |  |
|                             | Outlaw                       | Flight   | Engage Bandits        | X    | X   |         |  |  |
|                             | Hostile                      |          |                       | X    | X   |         |  |  |
|                             | Ground Target                | Flight   | Engage Ground Targets | X    | X   |         |  |  |
|                             | Group                        |          |                       | X    | X   |         |  |  |
|                             | Armor                        | Flight   | Engage Armor          | X    | X   |         |  |  |
|                             | Tanks                        |          |                       | X    | X   |         |  |  |



|  |                          |        |                                 |   |   |  |
|--|--------------------------|--------|---------------------------------|---|---|--|
|  | Movers                   |        |                                 | X | X |  |
|  | Column                   |        |                                 |   |   |  |
|  | Artillery                | Flight | Engage Artillery                | X | X |  |
|  | Air Defense              |        |                                 |   |   |  |
|  | AAA                      | Flight | Engage Air Defenses             | X | X |  |
|  | SAM                      |        |                                 |   |   |  |
|  | Utility                  |        |                                 |   |   |  |
|  | Vehicles                 | Flight | Engage Utility Vehicles         | X | X |  |
|  | Trucks                   |        |                                 |   |   |  |
|  | Infantry                 |        |                                 |   |   |  |
|  | Soldiers                 | Flight | Engage Infantry                 | X | X |  |
|  | Troops                   |        |                                 |   |   |  |
|  | Ship                     |        |                                 |   |   |  |
|  | Vessel                   | Flight | Engage Ships                    | X | X |  |
|  | Skunk                    |        |                                 |   |   |  |
|  | D-link Target            | Flight | Engage Datalink Target          | X | X |  |
|  | D-link Targets           | Flight | Engage Datalink Targets         | X | X |  |
|  | D-link Target by Type    | Flight | Engage Datalink Target by Type  | X | X |  |
|  | D-link Targets by Type   | Flight | Engage Datalink Targets by Type | X | X |  |
|  | Complete and Rejoin      | Flight | Complete objective and Rejoin   | X | X |  |
|  | Complete and RTB         | Flight | Complete objective and RTB      | X | X |  |
|  | Ray Target               | Flight | Ray Target                      |   | X |  |
|  | My Enemy                 |        |                                 |   |   |  |
|  | Clear my Six             | Flight | Engage My Enemy                 | X | X |  |
|  | Cover Me                 | Flight | Cover Me                        | X | X |  |
|  | <b>Flight   Maneuver</b> |        |                                 |   |   |  |
|  | Radio Check              |        |                                 |   |   |  |
|  | Heads Up                 | Flight | Radio Check                     |   | X |  |
|  | Pincer Right             | Flight | Pincer Right                    | X | X |  |
|  | Pincer Left              | Flight | Pincer Left                     | X | X |  |
|  | Pincer High              | Flight | Pincer High                     | X | X |  |
|  | Pincer Low               | Flight | Pincer Low                      | X | X |  |
|  | Break Right              | Flight | Break Right                     | X | X |  |
|  | Break Left               | Flight | Break Left                      | X | X |  |
|  | Break High               | Flight | Break High                      | X | X |  |
|  | Break Low                | Flight | Break Low                       | X | X |  |
|  | Clear Right              |        |                                 |   |   |  |
|  | Clear Starboard          | Flight | Clear Right                     | X | X |  |
|  | Clear Left               |        |                                 |   |   |  |
|  | Clear Port               | Flight | Clear Left                      | X | X |  |
|  | Pump                     | Flight | Pump                            | X | X |  |
|  | Anchor Here              | Flight | Anchor Here                     | X | X |  |



|  |                           |        |                      |   |   |             |
|--|---------------------------|--------|----------------------|---|---|-------------|
|  | Hold Position             |        |                      |   |   |             |
|  | Reference My Steerpoint   | Flight | Anchor at Steerpoint | O | O | N/A for FC3 |
|  | Reference My Spee         | Flight | Anchor at SPI        | O | O | N/A for FC3 |
|  | Reference Point           | Flight | Anchor at Point      | X | X |             |
|  | Return To Base            |        |                      |   |   |             |
|  | Go Home                   | Flight | Return To Base       | X | X |             |
|  | RTB                       |        |                      |   |   |             |
|  | Go to Tanker              | Flight | Fly to Tanker        | X | X |             |
|  | Join                      | Flight | Join Up              | X | X |             |
|  | Fly Route                 | Flight | Fly Route            | X | X |             |
|  | Continue                  |        |                      |   |   |             |
|  | Kick out to 1 mile        | Flight | Make Recon 1 Mile    |   | X |             |
|  | Kick out to 2 miles       | Flight | Make Recon 2 Miles   |   | X |             |
|  | Kick out to 3 miles       | Flight | Make Recon 3 Miles   |   | X |             |
|  | Kick out to 5 miles       | Flight | Make Recon 5 Miles   |   | X |             |
|  | Kick out to 8 miles       | Flight | Make Recon 8 Miles   |   | X |             |
|  | Kick out to 10 miles      | Flight | Make Recon 10 Miles  |   | X |             |
|  | Check my Spee             | Flight | Make Recon at Point  |   | X |             |
|  | <b>Flight   Tactical</b>  |        |                      |   |   |             |
|  | Radar On                  | Flight | Radar On             | X | X |             |
|  | Radar Off                 | Flight | Radar Off            | X | X |             |
|  | ECM On                    | Flight | ECM On               | X | X |             |
|  | Music On                  | Flight | ECM On               | X | X |             |
|  | ECM Off                   | Flight | ECM Off              | X | X |             |
|  | Music Off                 | Flight | ECM Off              | X | X |             |
|  | Smoke On                  | Flight | Smoke On             | X | X |             |
|  | Smoke Off                 | Flight | Smoke Off            | X | X |             |
|  | Jettison Stores           | Flight | Jettison Weapons     | X | X |             |
|  | Fence In                  | Flight | Fence In             |   | X |             |
|  | Fence Out                 | Flight | Fence Out            |   | X |             |
|  | Out Cold                  | Flight | Out                  |   | X |             |
|  | <b>Flight   Formation</b> |        |                      |   |   |             |
|  | Go Line Abreast           | Flight | Go Line Abreast      | X | X |             |
|  | Go Trail                  | Flight | Go Trail             | X | X |             |
|  | Go Wedge                  | Flight | Go Wedge             | X | X |             |
|  | Go Echelon Right          | Flight | Go Echelon Right     | X | X |             |
|  | Go Starboard              | Flight | Go Echelon Right     | X | X |             |
|  | Go Echelon Left           | Flight | Go Echelon Left      | X | X |             |
|  | Go Port                   | Flight | Go Echelon Left      | X | X |             |
|  | Go Finger Four            | Flight | Go Finger Four       | X | X |             |
|  | Go spread Four            | Flight | Go Spread Four       | X | X |             |
|  | Close Formation           | Flight | Close Formation      | X | X |             |
|  | Close Up                  |        |                      |   |   |             |
|  | Move Closer               |        |                      |   |   |             |
|  | Keep It Tight             |        |                      |   |   |             |



|              |                            |        |                          |   |   |  |
|--------------|----------------------------|--------|--------------------------|---|---|--|
|              | Open Formation             | Flight | Open Formation           | X | X |  |
|              | Open Up                    |        |                          |   |   |  |
|              | Go Wide                    |        |                          |   |   |  |
|              | Spread Out                 |        |                          |   |   |  |
|              | Close Group                | Flight | Close Group Formation    |   | X |  |
|              | Go Heavy                   | Flight | Helo Go Heavy            | X | X |  |
|              | Helos go Echelon           | Flight | Helo Go Echelon          | X | X |  |
|              | Helos go Spread            | Flight | Helo Go Spread           | X | X |  |
|              | Helos go Trail             | Flight | Helo Go Trail            | X | X |  |
|              | Go Overwatch               | Flight | Helo Go Overwatch        | X | X |  |
|              | Go Helo Left               | Flight | Helo Go Left             | X | X |  |
|              | Go Helo Right              | Flight | Helo Go Right            | X | X |  |
|              | Go Helo Tight              | Flight | Helo Go Tight            |   | X |  |
|              | Go Cruise                  | Flight | Helo Go Cruise           |   | X |  |
|              | Go Combat                  | Flight | Helo Go Combat           |   | X |  |
| <b>ATC</b>   |                            |        |                          |   |   |  |
|              | Request Engines Start      | ATC    | Request Engines Start    | X | X |  |
|              | Request Startup            |        |                          |   |   |  |
|              | Request Hover              | ATC    | Request Hover            | X | X |  |
|              | Request Taxi to Runway     | ATC    | Request Taxi to Runway   | X | X |  |
|              | Request Takeoff            | ATC    | Request Takeoff          | X | X |  |
|              | Request Departure          |        |                          |   |   |  |
|              | Ready for Takeoff          |        |                          |   |   |  |
|              | Ready for Departure        |        |                          |   |   |  |
|              | Abort Takeoff              | ATC    | Abort Takeoff            | X | X |  |
|              | Cancel Departure           |        |                          |   |   |  |
|              | Directions to Final        | ATC    | Request Azimuth          | X | X |  |
|              | Request Vector             |        |                          |   |   |  |
|              | Inbound                    | ATC    | Inbound                  | X | X |  |
|              | Abort Inbound              | ATC    | Abort Inbound            | X | X |  |
|              | Cancel Approach            |        |                          |   |   |  |
|              | Request Landing            | ATC    | Request Landing          | X | X |  |
|              | Request Taxi for Takeoff   | ATC    | Request Taxi for Takeoff |   | X |  |
|              | Request Taxi to Parking    | ATC    | Request Taxi to Parking  |   | X |  |
|              | Tower Request Takeoff      | ATC    | Tower Request Takeoff    |   | X |  |
|              | Inbound Straight           | ATC    | Inbound Straight         |   | X |  |
|              | Overhead Approach          | ATC    | Approach Overhead        |   | X |  |
|              | Straight Approach          | ATC    | Approach Straight        |   | X |  |
|              | Instrument Approach        | ATC    | Approach Instrument      |   | X |  |
| <b>AWACS</b> |                            |        |                          |   |   |  |
|              | Request Vector to Bullseye | AWACS  | Vector to Bullseye       | X | X |  |
|              | Request Vector to bandit   | AWACS  | Vector to Bandit         | X | X |  |
|              | Bogey Dope                 |        |                          |   |   |  |
|              | Request Vector to Base     | AWACS  | Vector to Base           | X | X |  |
|              | Directions to Base         |        |                          |   |   |  |



|               |                                    |        |                     |   |   |  |
|---------------|------------------------------------|--------|---------------------|---|---|--|
|               | Request Vector to Tanker           | AWACS  | Vector to Tanker    | X | X |  |
|               | Directions to Tanker               |        |                     |   |   |  |
|               | Declare                            | AWACS  | Declare             | X | X |  |
|               | Request Picture                    | AWACS  | Request Picture     | X | X |  |
| <b>Tanker</b> |                                    |        |                     |   |   |  |
|               | Approaching for Refuel             | Tanker | Intent to Refuel    | X | X |  |
|               | Approaching Nose Cold              |        |                     |   |   |  |
|               | Approaching Switches Safe          |        |                     |   |   |  |
|               | Abort Refuel                       | Tanker | Abort Refuel        | X | X |  |
|               | Breakaway<br>Returning Observation |        |                     |   |   |  |
|               | Ready Precontact                   | Tanker | Ready Precontact    | X | X |  |
|               | Astern Center                      |        |                     |   |   |  |
|               | Astern Left                        |        |                     |   |   |  |
|               | Astern Right                       |        |                     |   |   |  |
|               | Stop Refueling                     | Tanker | Stop Refueling      | X | X |  |
|               | Stop Fuel                          |        |                     |   |   |  |
|               | Fuel is Good                       |        |                     |   |   |  |
| <b>JTAC</b>   |                                    |        |                     |   |   |  |
|               | Playtime 5 minutes                 | JTAC   | Check In 5 minutes  | O | X |  |
|               | Playtime 10 minutes                | JTAC   | Check In 10 minutes | O | X |  |
|               | Playtime 15 minutes                | JTAC   | Check In 15 minutes | O | X |  |
|               | Playtime 20 minutes                | JTAC   | Check In 20 minutes | O | X |  |
|               | Playtime 25 minutes                | JTAC   | Check In 25 minutes | O | X |  |
|               | Playtime 30 minutes                | JTAC   | Check In 30 minutes | O | X |  |
|               | Playtime 35 minutes                | JTAC   | Check In 35 minutes | O | X |  |
|               | Playtime 40 minutes                | JTAC   | Check In 40 minutes | O | X |  |
|               | Playtime 45 minutes                | JTAC   | Check In 45 minutes | O | X |  |
|               | Playtime 50 minutes                | JTAC   | Check In 50 minutes | O | X |  |
|               | Playtime 55 minutes                | JTAC   | Check In 55 minutes | O | X |  |
|               | Playtime 60 minutes                | JTAC   | Check In 60 minutes | O | X |  |
|               | Check Out                          | JTAC   | Check Out           | O | X |  |
|               | Checking Out                       |        |                     | O | X |  |
|               | Game Over                          |        |                     | O | X |  |
|               | Ready to Copy                      | JTAC   | Ready to Copy       | O | X |  |
|               | Remarks                            | JTAC   | Ready for Remarks   | O | X |  |
|               | Reading Back                       | JTAC   | Nine-line Readback  | O | X |  |
|               | Copy Nine Line                     |        |                     | O | X |  |
|               | Request Tasking                    | JTAC   | Request Tasking     | O | X |  |
|               | Ready for Tasking                  |        |                     | O | X |  |
|               | New Target                         |        |                     | O | X |  |
|               | Request BDA                        | JTAC   | Request BDA         | O | X |  |
|               | Damage Report                      |        |                     | O | X |  |
|               | What is my Target                  | JTAC   | What is my Target   | O | X |  |
|               | Unable                             |        |                     | O | X |  |



|  |                       |      |                      |   |   |  |
|--|-----------------------|------|----------------------|---|---|--|
|  | Showstopper           | JTAC | Unable to Comply     | O | X |  |
|  | IP Inbound            | JTAC | IP Inbound           | O | X |  |
|  | Copy Miss             |      |                      |   |   |  |
|  | One Minute            | JTAC | One Minute           | O | X |  |
|  | In Hot                |      |                      |   |   |  |
|  | In from the North     |      |                      |   |   |  |
|  | In from the NorthEast |      |                      |   |   |  |
|  | In from the East      |      |                      |   |   |  |
|  | In from the SouthEast |      |                      |   |   |  |
|  | In from the South     |      |                      |   |   |  |
|  | In from the SouthWest |      |                      |   |   |  |
|  | In from the West      |      |                      |   |   |  |
|  | In from the NorthWest |      |                      |   |   |  |
|  | Exit Area             | JTAC | OFF                  | O | X |  |
|  | Attack Complete       |      |                      |   |   |  |
|  | Copy Kill             |      |                      |   |   |  |
|  | Advise Ready for BDA  | JTAC | Advise Ready for BDA | O | X |  |
|  | Contact               |      |                      |   |   |  |
|  | Target Visual         |      |                      |   |   |  |
|  | No Joy                | JTAC | No Joy               | O | X |  |
|  | Contact the Mark      |      |                      |   |   |  |
|  | Tally Mark            |      |                      |   |   |  |
|  | Tally Smoke           |      |                      |   |   |  |
|  | Tracking smoke        |      |                      |   |   |  |
|  | Sparkle               | JTAC | Sparkle              | O | X |  |
|  | Snake                 | JTAC | Snake                | O | X |  |
|  | Pulse                 | JTAC | Pulse                | O | X |  |
|  | Steady                | JTAC | Steady               | O | X |  |
|  | Rope                  | JTAC | Rope                 | O | X |  |
|  | Contact Sparkle       |      |                      |   |   |  |
|  | Tally Sparkle         |      |                      |   |   |  |
|  | Tracking Sparkle      |      |                      |   |   |  |
|  | Stop                  | JTAC | Stop                 | O | X |  |
|  | Ten Seconds           | JTAC | Ten Seconds          | O | X |  |
|  | Laser On              | JTAC | Laser On             | O | X |  |
|  | Shift Beam            | JTAC | Shift                | O | X |  |
|  | Spot                  |      |                      |   |   |  |
|  | Tally Ray             |      |                      |   |   |  |
|  | Tally Beam            |      |                      |   |   |  |
|  | Tracking Beam         |      |                      |   |   |  |
|  | Terminate             | JTAC | Terminate            | O | X |  |
|  | Guns Guns Guns        | JTAC | Guns!Guns!Guns!      |   | X |  |
|  | Bombs Away            | JTAC | Bombs Away!          |   | X |  |
|  | Rifle                 | JTAC | Rifle!               |   | X |  |



|                    |                    |      |                       |   |   |  |
|--------------------|--------------------|------|-----------------------|---|---|--|
|                    | Rockets            | JTAC | Rockets!              |   | X |  |
|                    | Standby for BDA    | JTAC | BDA                   |   | X |  |
|                    | Standby for Report | JTAC | In-flight Rep         |   | X |  |
| <b>Ground Crew</b> |                    |      |                       |   |   |  |
|                    | Request Refuel     | Crew | Request Refueling     |   | X |  |
|                    | Load Cannon        | Crew | Request Cannon Reload |   | X |  |
|                    | Request Rearming   | Crew | Request Rearming      | X | X |  |
|                    | Apply Air          | Crew | Apply Air             |   | X |  |
|                    | Request Repair     | Crew | Request Repair        | X | X |  |

|                         |                              |        |                         |   |   |             |  |  |
|-------------------------|------------------------------|--------|-------------------------|---|---|-------------|--|--|
|                         | Stow the Boarding Ladder     | Crew   | Stow Boarding Ladder    | X | X |             |  |  |
|                         | Run Inertial Starter         | Crew   | Run Inertial Starter    | X | X |             |  |  |
|                         | Request HMD                  | Crew   | Request HMD             |   | X |             |  |  |
|                         | Request NVG                  | Crew   | Request NVG             |   | X |             |  |  |
|                         | Turbo On                     | Crew   | Turbo On                | X | X |             |  |  |
|                         | Turbo Off                    | Crew   | Turbo Off               | X | X |             |  |  |
|                         | Ground Power On              | Crew   | Ground Power On         | X | X |             |  |  |
|                         | Ground Power Off             | Crew   | Ground Power Off        | X | X |             |  |  |
|                         | Place the Wheelchocks        | Crew   | Wheelchocks Place       |   | X |             |  |  |
|                         | Remove the Wheelchocks       | Crew   | Wheelchocks Remove      |   | X |             |  |  |
|                         | Open the Canopy              | Crew   | Canopy Open             |   | X |             |  |  |
|                         | Close the Canopy             | Crew   | Canopy Close            |   | X |             |  |  |
|                         | Connect Air Supply           | Crew   | Connect Air Supply      |   | X |             |  |  |
|                         | Disconnect Air Supply        | Crew   | Disconnect Air Supply   |   | X |             |  |  |
| Generic                 |                              |        |                         |   |   |             |  |  |
|                         | <b>Radio Control</b>         |        |                         |   |   |             |  |  |
|                         | Select (AM/FM) xxx decimal x | n/a    | Radio tune mod freq MHz |   | X | Profile cmd |  |  |
|                         | Select Channel [1-20]        | n/a    | Radio tune channel      |   | X | Profile cmd |  |  |
| <b>Reply Statements</b> |                              |        |                         |   |   |             |  |  |
|                         | Roger                        | (any)  | Roger                   | X | X |             |  |  |
|                         | Copy                         | (any)  | Copy                    | X | X |             |  |  |
|                         | Affirm                       | (any)  | Affirm                  | X | X |             |  |  |
|                         | Wilco                        | (any)  | Wilco                   | X | X |             |  |  |
|                         | Negative                     | (any)  | Negative                | X | X |             |  |  |
|                         | Repeat                       | (any)  | Repeat                  | X | X |             |  |  |
|                         | Say Again                    | (any)  |                         | X | X |             |  |  |
| <b>Special Commands</b> |                              |        |                         |   |   |             |  |  |
|                         | Select                       | (any)  | Select Recipient        | X | X |             |  |  |
|                         | Options                      | (any)  | Show Options            | X | X |             |  |  |
|                         | Switch                       | (any)  | Switch to VoIP          | X | X |             |  |  |
|                         | Interrogate                  | (any)  | Check Unit              | X | X |             |  |  |
|                         | Status                       |        |                         |   |   |             |  |  |
| AI Unit Recipients      |                              |        |                         |   |   |             |  |  |
|                         | <b>Flight recipients</b>     |        |                         |   |   |             |  |  |
|                         | Flight                       | Flight | Flight                  | X | X |             |  |  |



|  |         |           |         |   |   |  |
|--|---------|-----------|---------|---|---|--|
|  | Element | Flight    | Element | X | X |  |
| Section                                    | Flight  | Element   |         | X | X |  |
| One  | Flight  | Wingman 1 |         | X | X |  |
| Lead                                       | Flight  | Wingman 1 |         | X | X |  |
| Winger                                     | Flight  | Wingman 2 |         | X | X |  |
| Two  | Flight  | Wingman 2 |         | X | X |  |
| Three                                      | Flight  | Wingman 3 |         | X | X |  |
| Four                                       | Flight  | Wingman 4 |         | X | X |  |
| <b>Flight recipients   Buddy Callsigns</b> |         |           |         |   |   |  |
| -  | Flight  | Wingman 1 |         | - | - |  |

|                        |        |        |              |   |   |                                     |
|------------------------|--------|--------|--------------|---|---|-------------------------------------|
|                        | Gopher | Flight | Wingman 2    | X | X |                                     |
|                        | Pyro   | Flight | Wingman 3    | X | X |                                     |
|                        | Bozo   | Flight | Wingman 4    | X | X |                                     |
| <b>JTAC recipients</b> |        |        |              |   |   |                                     |
| JTAC                   |        |        |              |   |   |                                     |
| Patrol                 | JTAC   | JTAC   | Nearest JTAC | X | X |                                     |
| Operator               |        |        |              |   |   |                                     |
| Nearest Patrol         | JTAC   | JTAC   | Nearest JTAC | X | X |                                     |
| Axeman                 | JTAC   | JTAC   | Axeman       | X | X |                                     |
| Darknight              | JTAC   | JTAC   | Darknight    | X | X |                                     |
| Eyeball                | JTAC   | JTAC   | Eyeball      | X | X |                                     |
| Finger                 | JTAC   | JTAC   | Finger       | X | X |                                     |
| Firefly                | JTAC   | JTAC   | Firefly      | X | X |                                     |
| Moonbeam               | JTAC   | JTAC   | Moonbeam     | X | X |                                     |
| Playboy                | JTAC   | JTAC   | Playboy      | X | X |                                     |
| Pointer                | JTAC   | JTAC   | Pointer      | X | X |                                     |
| Warrior                | JTAC   | JTAC   | Warrior      | X | X |                                     |
| Whiplash               | JTAC   | JTAC   | Whiplash     | X | X |                                     |
| Boar                   | JTAC   | JTAC   | Boar         |   | X | also Player Group / Flight callsign |
| Chevy                  | JTAC   | JTAC   | Chevy        |   | X |                                     |
| Colt                   | JTAC   | JTAC   | Colt         |   | X |                                     |
| Dodge                  | JTAC   | JTAC   | Dodge        |   | X |                                     |
| Enfield                | JTAC   | JTAC   | Enfield      |   | X |                                     |
| Ford                   | JTAC   | JTAC   | Ford         |   | X |                                     |
| Hawg                   | JTAC   | JTAC   | Hawg         |   | X |                                     |
| Pig                    | JTAC   | JTAC   | Pig          |   | X |                                     |
| Pontiac                | JTAC   | JTAC   | Pontiac      |   | X |                                     |
| Springfield            | JTAC   | JTAC   | Springfield  |   | X |                                     |
| Tusk                   | JTAC   | JTAC   | Tusk         |   | X |                                     |
| Uzi                    | JTAC   | JTAC   | Uzi          |   | X |                                     |
| Pinpoint               | JTAC   | JTAC   | Pinpoint     |   | X |                                     |
| Ferret                 | JTAC   | JTAC   | Ferret       |   | X |                                     |
| Shaba                  | JTAC   | JTAC   | Shaba        |   | X |                                     |
| Hammer                 | JTAC   | JTAC   | Hammer       |   | X |                                     |



|  |                  |      |                        |   |   |  |
|--|------------------|------|------------------------|---|---|--|
|  | Jaguar           | JTAC | Jaguar                 |   | X |  |
|  | Deathstar        | JTAC | Deathstar              |   | X |  |
|  | Anvil            | JTAC | Anvil                  |   | X |  |
|  | Mantis           | JTAC | Mantis                 |   | X |  |
|  | Badger           | JTAC | Badger                 |   | X |  |
| <b>ATC recipients</b>                    |                  |      |                        |   |   |  |
|  | ATC              | ATC  | ATC                    | X | X |  |
|  | Tower            |      |                        |   |   |  |
|  | Traffic          |      |                        |   |   |  |
|  | Nearest ATC      | ATC  | Nearest Airfield       | X | X |  |
|  | Nearest Airfield |      |                        |   |   |  |
|  | Proxy            |      |                        |   |   |  |
| <b>ATC recipients   Theater Caucasus</b> |                  |      |                        |   |   |  |
|  | Anapa            | ATC  | Anapa-Vityazevo        | X | X |  |
|  | Batumi           | ATC  | Batumi                 | X | X |  |
|  | Beslan           | ATC  | Beslan                 | X | X |  |
|  | Gelendzhik       | ATC  | Gelendzhik             | X | X |  |
|  | Gudauta          | ATC  | Gudauta                | X | X |  |
|  | Khanskaya        | ATC  | Maykop-Khanskaya       | X | X |  |
|  | Kobuleti         | ATC  | Kobuleti               | X | X |  |
|  | Kolkhi           | ATC  | Senaki-Kolkhi          | X | X |  |
|  | Senaki           |      |                        |   |   |  |
|  | Krasnodar        | ATC  | Krasnodar-Center       | X | X |  |
|  | Krymsk           | ATC  | Krymsk                 | X | X |  |
|  | Kutaisi          | ATC  | Kutaisi                | X | X |  |
|  | Lochini          | ATC  | Tbilisi-Lochini        | X | X |  |
|  | Tbilisi          |      |                        |   |   |  |
|  | Minvody          | ATC  | Mineralnye Vody        | X | X |  |
|  | Mozdok           | ATC  | Mozdok                 | X | X |  |
|  | Nalchik          | ATC  | Nalchik                | X | X |  |
|  | Novorossiysk     | ATC  | Novorossiysk           | X | X |  |
|  | Pashkovsky       | ATC  | Krasnodar-Pashkovsky   | X | X |  |
|  | Sochi            | ATC  | Sochi-Adler            | X | X |  |
|  | Soganlug         | ATC  | Soganlug               | X | X |  |
|  | Sukhumi          | ATC  | Sukhumi-Babushara      | X | X |  |
|  | Vaziani          | ATC  | Vaziani                | X | X |  |
| <b>ATC recipients   Theater Nevada</b>   |                  |      |                        |   |   |  |
|  | Creech           | ATC  | Creech                 | X | X |  |
|  | Indian Springs   |      |                        |   |   |  |
|  | North Las Vegas  | ATC  | North Las Vegas        | X | X |  |
|  | Graceland        |      |                        |   |   |  |
|  | Henderson        | ATC  | Henderson Executive    | X | X |  |
|  | McCarran         | ATC  | McCarran International | X | X |  |
|  | Las Vegas        |      |                        |   |   |  |



|  |                |     |                    |   |   |  |
|--|----------------|-----|--------------------|---|---|--|
|  | Laughlin       | ATC | Laughlin           | X | X |  |
|  | Bullhead       |     |                    |   |   |  |
|  | Tonopah        | ATC | Tonopah Test Range | X | X |  |
|  | Silverbow      |     |                    |   |   |  |
|  | Groom Lake     | ATC | Groom Lake         | X | X |  |
|  | Dreamland      |     |                    |   |   |  |
|  | Boulder City   | ATC | Boulder City       | X | X |  |
|  | Boulder        |     |                    |   |   |  |
|  | Nellis         | ATC | Nellis             | X | X |  |
|  | Nellis Control |     |                    |   |   |  |

| <b>ATC recipients   Theater Normandy</b> |     |                        |  |   |  |  |
|--|-----|------------------------|--|---|--|--|
| Beny                                     | ATC | Beny-sur-Mer           |  | X |  |  |
| Sainte Croix                             | ATC | Sainte-Croix-sur-Mer   |  | X |  |  |
| Lantheuil                                | ATC | Lantheuil              |  | X |  |  |
| Bazenville                               | ATC | Bazenville             |  | X |  |  |
| Sommervieu                               | ATC | Sommervieu             |  | X |  |  |
| Longues                                  | ATC | Longues-sur-Mer        |  | X |  |  |
| Molay                                    | ATC | Le Molay               |  | X |  |  |
| Saint Laurent                            | ATC | Sainte-Laurent-sur-Mer |  | X |  |  |
| Saint Pierre                             | ATC | Saint Pierre du Mont   |  | X |  |  |
| Deux Jumeaux                             | ATC | Deux Jumeaux           |  | X |  |  |
| Chippelle                                | ATC | Chippelle              |  | X |  |  |
| Cricqueville                             | ATC | Cricqueville-en-Bessin |  | X |  |  |
| Cardenville                              | ATC | Cardenville            |  | X |  |  |
| Brucheville                              | ATC | Brucheville            |  | X |  |  |
| Meautis                                  | ATC | Meautis                |  | X |  |  |
| Azeville                                 | ATC | Azeville               |  | X |  |  |
| Cretteville                              | ATC | Cretteville            |  | X |  |  |
| Picauville                               | ATC | Picauville             |  | X |  |  |
| Biniville                                | ATC | Biniville              |  | X |  |  |
| Lessay                                   | ATC | Lessay                 |  | X |  |  |
| Maupertus                                | ATC | Maupertus              |  | X |  |  |
| Evreux                                   | ATC | Evreux                 |  | X |  |  |
| Forde                                    | ATC | Forde                  |  | X |  |  |
| Tangmere                                 | ATC | Tangmere               |  | X |  |  |
| Funtington                               | ATC | Funtington             |  | X |  |  |
| Chailey                                  | ATC | Chailey                |  | X |  |  |
| Needs Oar                                | ATC | Needs Oar Point        |  | X |  |  |

| <b>ATC recipients   Theater Persian Gulf</b> |     |                 |   |   |  |  |
|--|-----|-----------------|---|---|--|--|
| Al Maktoum                                   | ATC | Al Maktoum Intl |   | X |  |  |
| Al Minhad                                    | ATC | Al Minhad AFB   |   | X |  |  |
| Dubai  | ATC | Dubai Intl      | X |   |  |  |
| Dubai Control                                |     |                 |   |   |  |  |
| Sharjah                                      | ATC | Sharjah Intl    |   | X |  |  |



|  |               |     |                   |  |   |  |
|--|---------------|-----|-------------------|--|---|--|
|  | Abu Musa      | ATC | Abu Musa Island   |  | X |  |
|  | Sirri         | ATC | Sirri Island      |  | X |  |
|  | Sirri Island  |     |                   |  |   |  |
|  | Fujairah      | ATC | Fujairah Intl     |  | X |  |
|  | Bandar Lengeh |     |                   |  |   |  |
|  | Lengeh        |     |                   |  |   |  |
|  | Khasab        | ATC | Khasab            |  | X |  |
|  | Qeshm Island  | ATC | Qeshm Island      |  | X |  |
|  | Havadarya     | ATC | Havadarya         |  | X |  |
|  | Bandar Abbas  | ATC | Bandar Abbas Intl |  | X |  |
|  | Lar Airbase   | ATC | Lar               |  | X |  |



|   |     |                            |  |   |  |
|---|-----|----------------------------|--|---|--|
| Lar   |     |                            |  |   |  |
| Kerman Airport                              | ATC | Kerman                     |  | X |  |
| Kerman                                      |     |                            |  |   |  |
| Shiraz International                        | ATC | Shiraz Intl                |  | X |  |
| Shiraz                                      |     |                            |  |   |  |
| Al Dhafra                                   | ATC | Al Dhafra AFB              |  | X |  |
| Al Bateen                                   | ATC | Al-Bateen Airport          |  | X |  |
| Abu Dhabi                                   | ATC | Abu Dhabi International    |  | X |  |
| Sas Al Nakheel                              | ATC | Sas Al Nakheel             |  | X |  |
| Kish  | ATC | Kish International Airport |  | X |  |
| Lavan Island                                | ATC | Lavan Island Airport       |  | X |  |
| Al Ain International                        | ATC | Al Ain International       |  | X |  |
| Jiroft                                      | ATC | Jiroft Airport             |  | X |  |
| Liwa Airbase                                | ATC | Liwa Airbase               |  | X |  |
| Al Safran                                   |     |                            |  |   |  |
| Ras Al Khaimah                              | ATC | Ras Al Khaimah             |  | X |  |
| Ras Tower                                   |     |                            |  |   |  |
| Sir Abu Nuayr                               | ATC | Sir Abu Nuayr              |  | X |  |
| <b>ATC recipients   Theater Channel map</b> |     |                            |  |   |  |
| Dunkirk                                     | ATC | Dunkirk Mardyck            |  | X |  |
| Hawkinge                                    | ATC | Hawkinge                   |  | X |  |
| Saint Omer                                  | ATC | Saint Omer Longuenesse     |  | X |  |
| Calonne                                     | ATC | Merville Calonne           |  | X |  |
| High Halden                                 | ATC | High Halden                |  | X |  |
| Detling                                     | ATC | Detling                    |  | X |  |
| Drucat                                      | ATC | Abbeville Drucat           |  | X |  |
| Lympne                                      | ATC | Lympne                     |  | X |  |
| Manston                                     | ATC | Manston                    |  | X |  |
| <b>ATC recipients   Theater Syria map</b>   |     |                            |  |   |  |
| Hariri                                      | ATC | Beirut-Rafic Hariri        |  | X |  |
| Riyaq                                       | ATC | Rayak                      |  | X |  |
| Hamat                                       | ATC | Wujah Al Hajar             |  | X |  |
| Kiryat                                      | ATC | Kiryat Shmona              |  | X |  |
| Mezze                                       | ATC | Mezze                      |  | X |  |
| Qabr as Sitt                                | ATC | Qabr as Sitt               |  | X |  |
| Rene Mouawad                                | ATC | Rene Mouawad               |  | X |  |
| Marj as Sultan                              | ATC | Marj as Sultan North       |  | X |  |
| Der Salman                                  | ATC | Marj as Sultan South       |  | X |  |
| Marj Ruhayyil                               | ATC | Marj Ruhayyil              |  | X |  |
| Dumayr                                      | ATC | Al-Dumayr                  |  | X |  |
| Haifa                                       | ATC | Haifa                      |  | X |  |
| An Nasiriyah                                | ATC | An Nasiriyah               |  | X |  |
| Al Qusayr                                   | ATC | Al Qusayr                  |  | X |  |
| Khalkhalah                                  | ATC | Khalkhalah                 |  | X |  |
| Ramat David                                 | ATC | Ramat David                |  | X |  |
| Megiddo                                     | ATC | Megiddo                    |  | X |  |



|  |               |     |                          |  |   |  |
|--|---------------|-----|--------------------------|--|---|--|
|  | Shemer        | ATC | Eyn Shemer               |  | X |  |
|  | Latakia       | ATC | Bassel Al-Assad          |  | X |  |
|  | Abu al-Duhur  | ATC | Abu al-Duhur             |  | X |  |
|  | Taftanaz      | ATC | Taftanaz                 |  | X |  |
|  | Hatay         | ATC | Hatay                    |  | X |  |
|  | Rasin         | ATC | Kuweires                 |  | X |  |
|  | Minakh        | ATC | Minakh                   |  | X |  |
|  | Jirah         | ATC | Jirah                    |  | X |  |
|  | Adana         | ATC | Adana Sakirpasa          |  | X |  |
|  | Incirlik      | ATC | Incirlik                 |  | X |  |
|  | Paphos        | ATC | Paphos                   |  | X |  |
|  | Thalah        | ATC | Tha'lah                  |  | X |  |
|  | Larnaca       | ATC | Larnaca                  |  | X |  |
|  | Lakatamia     | ATC | Lakatamia                |  | X |  |
|  | King Hussein  | ATC | King Hussein Air Collage |  | X |  |
|  | H 3           | ATC | H3                       |  | X |  |
|  | H 3 Southwest | ATC | H3 Southwest             |  | X |  |
|  | H 3 Northwest | ATC | H3 Northwest             |  | X |  |
|  | Ercan         | ATC | Ercan                    |  | X |  |
|  | Damascus      | ATC | Damascus                 |  | X |  |
|  | Beirut        | ATC | Beirut-Rafic Hariri      |  | X |  |
|  | Al Tanf       | ATC | Al Tanf                  |  | X |  |
|  | Akrotiri      | ATC | Akrotiri                 |  | X |  |

#### ATC recipients | Theater Sinai map

|  |                             |     |                             |  |   |  |
|--|-----------------------------|-----|-----------------------------|--|---|--|
|  | Al Mansurah                 | ATC | Al Mansurah                 |  | X |  |
|  | AzZaqaziq                   | ATC | AzZaqaziq                   |  | X |  |
|  | Salihiyah                   | ATC | Salihiyah                   |  | X |  |
|  | Blileis Air Base            | ATC | Blileis Air Base            |  |   |  |
|  | Blileis                     |     |                             |  |   |  |
|  | Inshas Airbase              | ATC | Inshas Airbase              |  | X |  |
|  | Abu Suwayr                  | ATC | Abu Suwayr                  |  | X |  |
|  | Ismiliyah                   | ATC | Al Ismiliyah                |  | X |  |
|  | Cairo International Airport | ATC | Cairo International Airport |  | X |  |
|  | Cairo                       |     |                             |  |   |  |
|  | Cairo West                  | ATC | Cairo West                  |  | X |  |
|  | AbuSultan                   | ATC | Difarsuwar Airfield         |  | X |  |
|  | Jandali                     | ATC | Wadi al Jandali             |  | X |  |
|  | Fayed                       | ATC | Fayed                       |  | X |  |
|  | Baluza                      | ATC | Baluza                      |  | X |  |
|  | Kibrit Air Base             | ATC | Kibrit Air Base             |  | X |  |
|  | Kibrit                      |     |                             |  |   |  |
|  | Melez                       | ATC | Melez                       |  | X |  |
|  | Bir Hasanah                 | ATC | Bir Hasanah                 |  | X |  |
|  | Hasanah                     |     |                             |  |   |  |
|  | El Arish                    | ATC | El Arish                    |  | X |  |



|  |               |     |               |  |   |  |
|--|---------------|-----|---------------|--|---|--|
|  | El Gora       | ATC | El Gora       |  | X |  |
|  | Abu Rudeis    | ATC | Abu Rudeis    |  | X |  |
|  | Kedem         | ATC | Kedem         |  | X |  |
|  | Ramon Airbase | ATC | Ramon Airbase |  | X |  |
|  | Ramon         |     |               |  |   |  |
|  | Hatzerim      | ATC | Hatzerim      |  | X |  |
|  | Hatzor        | ATC | Hatzor        |  | X |  |
|  | Palmahim      | ATC | Palmahim      |  | X |  |
|  | Tel Nof       | ATC | Tel Nof       |  | X |  |
|  | Nevatim       | ATC | Nevatim       |  | X |  |
|  | Sdee Dov      | ATC | Sde Dov       |  | X |  |
|  | Ben Gurion    | ATC | Ben Gurion    |  | X |  |
|  | Ovda          | ATC | Ovda          |  | X |  |

|  |                   |     |                             |  |   |  |
|--|-------------------|-----|-----------------------------|--|---|--|
|  | Saint Catherine   | ATC | St Catherine                |  | X |  |
| <b>ATC recipients   Theater Marianas map</b>       |                   |     |                             |  |   |  |
|  | Andersen          | ATC | Andersen AFB                |  | X |  |
|  | Boonie            |     |                             |  |   |  |
|  | Guam              | ATC | Antonio B. Won Pat Intl     |  | X |  |
|  | Guam Centre       |     |                             |  |   |  |
|  | Agana Tower       |     |                             |  |   |  |
|  | Rota              | ATC | Rota Intl                   |  | X |  |
|  | Tinian            | ATC | Tinian Intl                 |  | X |  |
|  | Saipan            | ATC | Saipan Intl                 |  | X |  |
| <b>ATC recipients   Theater South Atlantic map</b> |                   |     |                             |  |   |  |
|  | Mount Pleasant    | ATC | Mount Pleasant              |  | X |  |
|  | Goose Green       | ATC | Goose Green                 |  | X |  |
|  | San Carlos        | ATC | San Carlos FOB              |  | X |  |
|  | Port Stanley      | ATC | Port Stanley                |  | X |  |
|  | De Tolhuin        | ATC | Aerodromo De Tolhuin        |  | X |  |
|  | Rio Grande        | ATC | Rio Grande                  |  | X |  |
|  | Puerto Williams   | ATC | Puerto Williams             |  | X |  |
|  | San Julian        | ATC | San Julian                  |  | X |  |
|  | Ushuaia Heli Port | ATC | Ushuaia Heli Port           |  | X |  |
|  | Ushuaia           | ATC | Ushuaia                     |  | X |  |
|  | Pampa Guanaco     | ATC | Pampa Guanaco               |  | X |  |
|  | Puerto Santa Cruz | ATC | Puerto Santa Cruz           |  | X |  |
|  | Rio Chico         | ATC | Rio Chico                   |  | X |  |
|  | Rio Gallegos      | ATC | Rio Gallegos                |  | X |  |
|  | Franco Bianco     | ATC | Franco Bianco               |  | X |  |
|  | Luis Piedrabuena  | ATC | Comandante Luis Piedrabuena |  | X |  |
|  | Porvenir          | ATC | Porvenir Airfield           |  | X |  |
|  | Punta Arenas      | ATC | Punta Arenas                |  | X |  |



|  |   |     |                                   |   |   |
|--|---|-----|-----------------------------------|---|---|
|  | Aeropuerto de Gobernador Gregores<br>de Gobernador Gregores | ATC | Aeropuerto de Gobernador Gregores | X |   |
|  | Rio Turbio  | ATC | Rio Turbio                        | X |   |
|  | El Calafate   | ATC | El Calafate                       | X |   |
|  | Puerto Natales  | ATC | Puerto Natales                    | X |   |
|  | O'Higgins   | ATC | Aerodromo O'Higgins               | X |   |
| <b>ATC recipients   FARP</b>             |   |     |                                   |   |   |
|  | Platform  | ATC | Helipad                           | X | X |
|  | FARP  |     |                                   |   |   |
| <b>ATC recipients   FARP (blue)</b>      |   |     |                                   |   |   |
|  | Berlin  | ATC | Berlin                            | X | X |
|  | Dallas  | ATC | Dallas                            | X | X |
|  | Dublin  | ATC | Dublin                            | X | X |
|  | London  | ATC | London                            | X | X |
|  | Madrid  | ATC | Madrid                            | X | X |
|  | Moscow  | ATC | Moscow                            | X | X |
|  | Paris   | ATC | Paris                             | X | X |
|  | Perth   | ATC | Perth                             | X | X |
|  | Rome  | ATC | Rome                              | X | X |
|  | Warsaw  | ATC | Warsaw                            | X | X |
| <b>ATC recipients   FARP (red)</b>       |   |     |                                   |   |   |
|  | Kaemka  | ATC | Kaemka                            | X | X |
|  | Kalitka   | ATC | Kalitka                           | X | X |
|  | Kapel   | ATC | Kapel                             | X | X |
|  | Otkrytka  | ATC | Otkrytka                          | X | X |
|  | Podkova   | ATC | Podkova                           | X | X |
|  | Shpora  | ATC | Shpora                            | X | X |
|  | Skala   | ATC | Skala                             | X | X |
|  | Torba   | ATC | Torba                             | X | X |
|  | Vetka   | ATC | Vetka                             | X | X |
|  | Yunga   | ATC | Yunga                             | X | X |
| <b>ATC recipients   Aircraft Carrier</b> |   |     |                                   |   |   |
|  | Carrier   | ATC | Carrier                           | X | X |
|  | Nearest Carrier   | ATC | Nearest Carrier                   | X | X |
|  | Admiral Kuznetsov   | ATC | CV 1143.5 Admiral Kuznetsov       | X | X |
|  | Carl Vinson   | ATC | CVN-70 Carl Vinson                | X | X |
|  | Tarawa  | ATC | LHA-1 Tarawa                      |   | X |
|  | Perry   | ATC | FFG-7CL Oliver Hazard Perry       |   | X |
|  | Stennis   | ATC | CVN-74 John C. Stennis            |   | X |
|  | Normandy  | ATC | CG-60 Normandy                    |   | X |



| <b>AWACS recipients</b>  |        |                |  |   |   |  |
|--------------------------|--------|----------------|--|---|---|--|
| Awacs                    | AWACS  | AWACS          |  | X | X |  |
| Darkstar                 | AWACS  | Darkstar       |  | X | X |  |
| Focus                    | AWACS  | Focus          |  | X | X |  |
| Magic                    | AWACS  | Magic          |  | X | X |  |
| Overlord                 | AWACS  | Overlord       |  | X | X |  |
| Wizard                   | AWACS  | Wizard         |  | X | X |  |
| Nearest AWACS            | AWACS  | Nearest AWACS  |  | X | X |  |
|                          |        |                |  |   |   |  |
| <b>Tanker recipients</b> |        |                |  |   |   |  |
| Tanker                   | Tanker | Tanker         |  | X | X |  |
| Texaco                   | Tanker | Texaco         |  | X | X |  |
| Shell                    | Tanker | Shell          |  | X | X |  |
| Arco                     | Tanker | Arco           |  | X | X |  |
| Nearest Tanker           | Tanker | Nearest Tanker |  | X | X |  |
|                          |        |                |  |   |   |  |

| <b>Ground Crew recipients</b>   |         |          |  |   |   |  |
|---------------------------------|---------|----------|--|---|---|--|
| Crew                            | Crew    | Crew     |  | X | X |  |
| Chief                           |         |          |  |   |   |  |
| Ground                          |         |          |  |   |   |  |
| Sarge                           |         |          |  |   |   |  |
| <b>Miscellaneous recipients</b> |         |          |  |   |   |  |
| Server                          | Aux     | F10 Menu |  | X | X |  |
| Mystery                         |         |          |  |   |   |  |
| Crystal Palace                  | AOCS    | AOCS     |  |   | X |  |
| Cargo                           | Cargo   | Cargo    |  |   | X |  |
| Descent                         | Descent | Descent  |  |   | X |  |
| <b>Menu Control</b>             |         |          |  |   |   |  |
| Take 1                          | Menu    | F1       |  | X | X |  |
| Take 2                          | Menu    | F2       |  | X | X |  |
| Take 3                          | Menu    | F3       |  | X | X |  |
| Take 4                          | Menu    | F4       |  | X | X |  |
| Take 5                          | Menu    | F5       |  | X | X |  |
| Take 6                          | Menu    | F6       |  | X | X |  |
| Take 7                          | Menu    | F7       |  | X | X |  |
| Take 8                          | Menu    | F8       |  | X | X |  |
| Take 9                          | Menu    | F9       |  | X | X |  |
| Take 10                         | Menu    | F10      |  | X | X |  |
| Take 11                         | Menu    | F11      |  | X | X |  |
| Take 12                         | Menu    | F12      |  | X | X |  |
| <b>Player Group Callsigns</b>   |         |          |  |   |   |  |
| Boar                            |         | Boar     |  | X | X |  |
| Chevy                           |         | Chevy    |  | X | X |  |
| Colt                            |         | Colt     |  | X | X |  |



|  |                                     |  |             |   |   |                    |
|--|-------------------------------------|--|-------------|---|---|--------------------|
|  | Dodge                               |  | Dodge       | X | X | also JTAC callsign |
|  | Enfield                             |  | Enfield     | X | X |                    |
|  | Ford                                |  | Ford        | X | X |                    |
|  | Hawg                                |  | Hawg        | X | X |                    |
|  | Pig                                 |  | Pig         | X | X |                    |
|  | Springfield                         |  | Springfield | X | X |                    |
|  | Tusk                                |  | Tusk        | X | X |                    |
|  | Uzi                                 |  | Uzi         | X | X |                    |
|  | <b>Player Group Callsigns F-16</b>  |  |             |   |   |                    |
|  | viper                               |  | viper       | X | X |                    |
|  | venom                               |  | venom       | X | X |                    |
|  | lobo                                |  | lobo        | X | X |                    |
|  | cowboy                              |  | cowboy      | X | X |                    |
|  | python                              |  | python      | X | X |                    |
|  | rattler                             |  | rattler     | X | X |                    |
|  | panther                             |  | panther     | X | X |                    |
|  | wolf                                |  | wolf        | X | X |                    |
|  | weasel                              |  | weasel      | X | X |                    |
|  | wild                                |  | wild        | X | X |                    |
|  | ninja                               |  | ninja       | X | X |                    |
|  | jedi                                |  | jedi        | X | X |                    |
|  | <b>Player Group Callsigns F-18</b>  |  |             |   |   |                    |
|  | Hornet                              |  | Hornet      | X | X |                    |
|  | Squid                               |  | Squid       | X | X |                    |
|  | Ragin                               |  | Ragin       | X | X |                    |
|  | Sting                               |  | Sting       | X | X |                    |
|  | Jury                                |  | Jury        | X | X |                    |
|  | Joker                               |  | Joker       | X | X |                    |
|  | Ram                                 |  | Ram         | X | X |                    |
|  | Hawk                                |  | Hawk        | X | X |                    |
|  | Devil                               |  | Devil       | X | X |                    |
|  | Check                               |  | Check       | X | X |                    |
|  | Snake                               |  | Snake       | X | X |                    |
|  | <b>Player Group Callsigns F-15E</b> |  |             |   |   |                    |
|  | Dude                                |  | Dude        | X | X |                    |
|  | Thud                                |  | Thud        | X | X |                    |
|  | Gunny                               |  | Gunny       | X | X |                    |
|  | Trek                                |  | Trek        | X | X |                    |
|  | Sniper                              |  | Sniper      | X | X |                    |
|  | Sled                                |  | Sled        | X | X |                    |
|  | Best                                |  | Best        | X | X |                    |
|  | Jazz                                |  | Jazz        | X | X |                    |
|  | Rage                                |  | Rage        | X | X |                    |
|  | Tahoe                               |  | Tahoe       | X | X |                    |
|  | <b>Player Group Callsigns AH-64</b> |  |             |   |   |                    |
|  | Army Air                            |  | Army Air    | X | X |                    |



|  |   |  |             |   |   |  |
|--|---|--|-------------|---|---|--|
|  | Apache                                  |  | Apache      | X | X |  |
|  | Crow                                    |  | Crow        | X | X |  |
|  | Sioux                                   |  | Sioux       | X | X |  |
|  | Gatling                                 |  | Gatling     | X | X |  |
|  | Gun Slinger                             |  | Gun Slinger | X | X |  |
|  | Hammer Head                             |  | Hammer Head | X | X |  |
|  | Bootleg                                 |  | Bootleg     | X | X |  |
|  | Pale Horse                              |  | Pale Horse  | X | X |  |
|  | Carnivor                                |  | Carnivor    | X | X |  |
|  | Saber                                   |  | Saber       | X | X |  |
|  | <b>Player Group Callsigns C-130-C17</b> |  |             |   |   |  |
|  | Heavy                                   |  | Heavy       | X | X |  |
|  | Trash                                   |  | Trash       | X | X |  |
|  | Cargo                                   |  | Cargo       | X | X |  |
|  | Ascot                                   |  | Ascot       | X | X |  |
|  | Reech                                   |  | Reech       | X | X |  |

AIRIO Extension (F-14AB module only)

| <b>Recipients</b>        |          |        |                             |   |  |
|--------------------------|----------|--------|-----------------------------|---|--|
| Jester                   |          | AI RIO | AI RIO recipient (Jester)   | O |  |
| RIO                      |          |        |                             | O |  |
| Ice                      | AI Pilot |        | AI Pilot recipient (Iceman) | O |  |
| <b>Startup procedure</b> |          |        |                             |   |  |
| Startup                  | RIO      |        | Perform Start Procedure     | O |  |
| Assisted Startup         | RIO      |        | Assisted Start Procedure    | O |  |
| Loud and Clear           | RIO      |        | Confirm ICS test            | O |  |
| Check                    | RIO      |        | Confirm Checkpoint          | O |  |

|                        | Abort Startup     | RIO | Cancel Procedure       | O |  |
|------------------------|-------------------|-----|------------------------|---|--|
|                        | Align Fine        | RIO | INS Alignment Fine     | O |  |
|                        | Align Coarse      | RIO | INS Alignment Coarse   | O |  |
|                        | Align Minimum     | RIO | INS Alignment Minimum  | O |  |
|                        | Align Now         | RIO | INS Alignment Now      | O |  |
| <b>Radar operation</b> |                   |     |                        |   |  |
|                        | Go Active         | RIO | Radar On               | O |  |
|                        | Go Standby        | RIO | Radar Standby          | O |  |
|                        | Scan Range        | RIO | (show options)         | O |  |
|                        | Scan Range Auto   | RIO | Scan Range Automatic   | O |  |
|                        | Scan Range 25     | RIO | Scan Range 25NM        | O |  |
|                        | Scan Range 50     | RIO | Scan Range 50 NM       | O |  |
|                        | Scan Range 100    | RIO | Scan Range 100 NM      | O |  |
|                        | Scan Range 200    | RIO | Scan Range 200 NM      | O |  |
|                        | Scan Range 400    | RIO | Scan Range 400 NM      | O |  |
|                        | Scan Azimuth      | RIO | (show options)         | O |  |
|                        | Scan Azimuth Auto | RIO | Scan Azimuth Automatic | O |  |
|                        | Scan Center       | RIO | Scan Azimuth Center    | O |  |



|  |                             |     |                             |  |   |  |
|--|-----------------------------|-----|-----------------------------|--|---|--|
|  | Scan Center Left            | RIO | Scan Azimuth Center Left    |  | O |  |
|  | Scan Center Right           | RIO | Scan Azimuth Center Right   |  | O |  |
|  | Scan Left                   | RIO | Scan Azimuth Left           |  | O |  |
|  | Scan Right                  | RIO | Scan Azimuth Right          |  | O |  |
|  | Scan Elevation              | RIO | (show options)              |  | O |  |
|  | Scan Elevation Auto         | RIO | Scan Elevation Automatic    |  | O |  |
|  | Scan High                   | RIO | Scan Elevation High         |  | O |  |
|  | Scan Low                    | RIO | Scan Elevation Low          |  | O |  |
|  | Scan Level                  | RIO | Scan Elevation Level        |  | O |  |
|  | Scan Level High             | RIO | Scan Elevation Level High   |  | O |  |
|  | Scan Level Low              | RIO | Scan Elevation Level Low    |  | O |  |
|  | Track Single                | RIO | (show options)              |  | O |  |
|  | Track Single Contact Ahead  | RIO | STT Lock Contact Ahead      |  | O |  |
|  | Track Single Bogey Ahead    | RIO | STT Lock Bogey Ahead        |  | O |  |
|  | Track Single Friendly Ahead | RIO | STT Lock Friendly Ahead     |  | O |  |
|  | Track Single First          | RIO | STT Lock First              |  | O |  |
|  | Track Single Target 1-8     | RIO | STT Lock Target 1-8         |  | O |  |
|  | Break Lock                  | RIO | STT Lock Break              |  | O |  |
|  | Switch STT                  | RIO | Toggle PD-STT/P-STT         |  | O |  |
|  | VSL High                    | RIO | VSL High                    |  | O |  |
|  | VSL Low                     | RIO | VSL Low                     |  | O |  |
|  | Stabilize                   | RIO | (show options)              |  | O |  |
|  | Stabilize 15 seconds        | RIO | Ground Stabilize 15s        |  | O |  |
|  | Stabilize 30 seconds        | RIO | Ground Stabilize 30s        |  | O |  |
|  | Stabilize 1 minute          | RIO | Ground Stabilize 60s        |  | O |  |
|  | Stabilize 2 minutes         | RIO | Ground Stabilize 120s       |  | O |  |
|  | Stabilize Hold              | RIO | Ground Stabilize Indefinite |  | O |  |

|  |   |     |                             |  |   |  |
|--|---|-----|-----------------------------|--|---|--|
|  | Radar Mode                                  | RIO | (show options)              |  | O |  |
|  | Radar Mode Auto                             | RIO | Radar Mode Auto             |  | O |  |
|  | Radar Mode TWS                              | RIO | Radar Mode TWS Auto         |  | O |  |
|  | Radar Mode TWS Manual                       | RIO | Radar Mode TWS Manual       |  | O |  |
|  | Radar Mode RWS                              | RIO | Radar Mode RWS              |  | O |  |
|  | Look For A Regular Target                   | RIO | Target Size Normal          |  | O |  |
|  | Look For A Big Target                       | RIO | Target Size Large           |  | O |  |
|  | Look For A Small Target                     | RIO | Target Size Small           |  | O |  |
|  | Scan Sector, Angels [0..70] at/for [0..150] | RIO | Radar Scan Sector (alt,rng) |  | O |  |
|  | <b>AG Weapons</b>                           |     |                             |  |   |  |
|  | Select Stores                               | RIO | (show options)              |  | O |  |
|  | Select BDUs                                 | RIO | Select BDUs                 |  | O |  |
|  | Select Rockeyes                             | RIO | Select mk20s                |  | O |  |
|  | Select Mark 81s                             | RIO | Select mk81 bombs           |  | O |  |
|  | Select Mark 82s                             | RIO | Select mk82 bombs           |  | O |  |
|  | Select Mark 83s                             | RIO | Select mk83 bombs           |  | O |  |



|  |                          |     |                       |  |   |  |
|--|--------------------------|-----|-----------------------|--|---|--|
|  | Select Mark 84s          | RIO | Select mk84 bombs     |  | O |  |
|  | Select Paveways          | RIO | Select GBUs           |  | O |  |
|  | Select TALD              | RIO | Select TALDs          |  | O |  |
|  | Select LUUs              | RIO | Select LUUs           |  | O |  |
|  | Select Zunis             | RIO | Select Zuni rockets   |  | O |  |
|  | Attack Mode Target       | RIO | Set Computer Target   |  | O |  |
|  | Attack Mode Pilot        | RIO | Set Computer Pilot    |  | O |  |
|  | Set Release Single       | RIO | Toggle Pairs/Single   |  | O |  |
|  | Set Release Pairs        | RIO | Toggle Pairs/Single   |  | O |  |
|  | Set Fuse                 | RIO | (show options)        |  | O |  |
|  | Set Fuse Nose Tail       | RIO | Fuse Nose Tail        |  | O |  |
|  | Set Fuse Nose            | RIO | Fuse Nose             |  | O |  |
|  | Set Fuse Safe            | RIO | Fuse Safe             |  | O |  |
|  | Drop Weapons             | RIO | Jettison Selected     |  | O |  |
|  | Drop Tanks               | RIO | Jettison Drop Tanks   |  | O |  |
|  | Set Ripple Quantity      | RIO | (show options)        |  | O |  |
|  | Set Ripple Quantity Step | RIO | Ripple Quantity Step  |  | O |  |
|  | Set Ripple Quantity 2    | RIO | Ripple Quantity 2     |  | O |  |
|  | Set Ripple Quantity 5    | RIO | Ripple Quantity 5     |  | O |  |
|  | Set Ripple Quantity 10   | RIO | Ripple Quantity 10    |  | O |  |
|  | Set Ripple Quantity 20   | RIO | Ripple Quantity 20    |  | O |  |
|  | Set Ripple Quantity 30   | RIO | Ripple Quantity 30    |  | O |  |
|  | Set Ripple Time          | RIO | (show options)        |  | O |  |
|  | Set Ripple Time Step     | RIO | Set Ripple Time Step  |  | O |  |
|  | Set Ripple Time 10       | RIO | Set Ripple Time 10ms  |  | O |  |
|  | Set Ripple Time 20       | RIO | Set Ripple Time 20ms  |  | O |  |
|  | Set Ripple Time 50       | RIO | Set Ripple Time 50ms  |  | O |  |
|  | Set Ripple Time 100      | RIO | Set Ripple Time 100ms |  | O |  |

|  |                         |     |                         |  |   |  |
|--|-------------------------|-----|-------------------------|--|---|--|
|  | Set Ripple Time 200     | RIO | Set Ripple Time 200ms   |  | O |  |
|  | Set Ripple Time 500     | RIO | Set Ripple Time 500ms   |  | O |  |
|  | Set Ripple Time 1000    | RIO | Set Ripple Time 990ms   |  | O |  |
|  | Set Ripple Distance     | RIO | (show options)          |  | O |  |
|  | Set Ripple Distance 5   | RIO | Ripple Distance 5       |  | O |  |
|  | Set Ripple Distance 10  | RIO | Ripple Distance 10      |  | O |  |
|  | Set Ripple Distance 25  | RIO | Ripple Distance 25      |  | O |  |
|  | Set Ripple Distance 50  | RIO | Ripple Distance 50      |  | O |  |
|  | Set Ripple Distance 100 | RIO | Ripple Distance 100     |  | O |  |
|  | Set Ripple Distance 200 | RIO | Ripple Distance 200     |  | O |  |
|  | Set Ripple Distance 400 | RIO | Ripple Distance 400     |  | O |  |
|  | Select Stations         | RIO | (show options)          |  | O |  |
|  | Select Stations 1 8     | RIO | Select Stations 1,8     |  | O |  |
|  | Select Stations 2 7     | RIO | Select Stations 2,7     |  | O |  |
|  | Select Stations 3 4 5 6 | RIO | Select Stations 3,4,5,6 |  | O |  |
|  | Select Stations 3 6     | RIO | Select Stations 3,6     |  | O |  |



|                 |   |     |   |   |   |                            |
|-----------------|---|-----|---|---|---|----------------------------|
|                 | Select Stations 4 5                       | RIO | Select Stations 4,5                             |   | O |                            |
|                 | Switch Lantern                            | RIO | Toggle use LANTIRN                              |   | O |                            |
| <b>Radio</b>    |   |     |   |   |   |                            |
|                 | Radio Tune [N] [N] [N]<br>decimal [N] [N] | RIO | AN/ARC-182 tune freq<br>[N][N][N].[N][N][N] MHz |   | O | Profile cmd<br>see page 43 |
|                 | Radio Use Guard                           | RIO | AN/ARC-182 Guard                                |   | O |                            |
|                 | Radio Mode                                | RIO | (show options)                                  |   | O |                            |
|                 | Radio Mode Off                            | RIO | AN/ARC-182 Mode Off                             |   | O |                            |
|                 | Radio Mode TR                             | RIO | AN/ARC-182 Mode TR                              |   | O |                            |
|                 | Radio Mode TRG                            | RIO | AN/ARC-182 Mode TRG                             |   | O |                            |
|                 | Radio Mode DF                             | RIO | AN/ARC-182 Mode DF                              |   | O |                            |
|                 | Radio Mode Test                           | RIO | AN/ARC-182 Mode Test                            |   | O |                            |
|                 | Radio Mode AM                             | RIO | AN/ARC-182 Mode AM                              |   | O |                            |
|                 | Radio Mode FM                             | RIO | AN/ARC-182 Mode FM                              |   | O |                            |
|                 | Select ATC/TAC/etc.                       |     | (use Select command)                            | X |   | standard<br>plugin func    |
| <b>Datalink</b> |   |     |   |   |   |                            |
|                 | Link Tune [N] [N] decimal [N]             | RIO | DL tune 3[N][N].[N]0 MHz                        |   | O | Profile cmd<br>see page 43 |
|                 | Link Mode                                 | RIO | (show options)                                  |   | O |                            |
|                 | Link Mode Off                             | RIO | DL Mode Off                                     |   | O |                            |
|                 | Link Mode Fighter                         | RIO | DL Mode Fighter                                 |   | O |                            |
|                 | Link Mode Tactical                        | RIO | DL Mode Tactical                                |   | O |                            |
|                 | Link Decimal 0                            | RIO | DL Preset 300.00 MHz                            |   | O |                            |
|                 | Link Decimal 10                           | RIO | DL Preset 300.10 MHz                            |   | O |                            |
|                 | Link Decimal 20                           | RIO | DL Preset 300.20 MHz                            |   | O |                            |
|                 | Link Decimal 30                           | RIO | DL Preset 300.30 MHz                            |   | O |                            |
|                 | Link Decimal 40                           | RIO | DL Preset 300.40 MHz                            |   | O |                            |
|                 | Link Decimal 50                           | RIO | DL Preset 300.50 MHz                            |   | O |                            |
|                 | Link Decimal 60                           | RIO | DL Preset 300.60 MHz                            |   | O |                            |
|                 | Link Decimal 70                           | RIO | DL Preset 300.70 MHz                            |   | O |                            |
|                 | Link Host                                 | RIO | (show options)                                  |   | O |                            |
|                 | Link Host Stennis                         | RIO | DL Host Stennis                                 |   | O |                            |
|                 | Link Host Washington                      | RIO | DL Host Washington                              |   | O |                            |
|                 | Link Host Roosevelt                       | RIO | DL Host Roosevelt                               |   | O |                            |
|                 | Link Host Lincoln                         | RIO | DL Host Lincoln                                 |   | O |                            |
|                 | Link Host Truman                          | RIO | DL Host Truman                                  |   | O |                            |
|                 | Link Host Ticonderoga                     | RIO | DL Host Ticonderoga                             |   | O |                            |
|                 | Link Host Darkstar                        | RIO | DL Host Darkstar                                |   | O |                            |
|                 | Link Host Focus                           | RIO | DL Host Focus                                   |   | O |                            |
|                 | Link Host Magic                           | RIO | DL Host Magic                                   |   | O |                            |
|                 | Link Host Overlord                        | RIO | DL Host Overlord                                |   | O |                            |
|                 | Link Host Wizard                          | RIO | DL Host Wizard                                  |   | O |                            |
|                 | <b>Navigation</b>                         |     |   |   |   |                            |



|  |  |     |                         |   |                            |
|--|--|-----|-------------------------|---|----------------------------|
|  | Map Marker [1..10] to<br>[ Waypoint 1..3   Steerpoint<br>1..3   Fixed Point   Initial<br>Point   Surface Target  <br>Home Base   Defense Point  <br>Hostile Zone ] | RIO | Map marker to ref point | O | Profile cmd<br>see page 43 |
|  | Map Marker [0..10] to<br>Grid  | RIO | Map marker to NAVGRID   | O | Profile cmd<br>see page 43 |
|  | Navigate   | RIO | (show options)          | O |                            |
|  | Navigate Fixed Point   | RIO | Navigate Fixed Point    | O |                            |
|  | Navigate Initial Point   | RIO | Navigate Initial Point  | O |                            |
|  | Navigate Target  | RIO | Navigate Surface Target | O |                            |
|  | Navigate Home Base   | RIO | Navigate Home Base      | O |                            |
|  | Navigate Steerpoint 1-3  | RIO | Navigate Steerpoint 1-3 | O |                            |
|  | Restore  | RIO | (show options)          | O |                            |
|  | Restore Fixed Point  | RIO | Restore Fixed Point     | O |                            |
|  | Restore Initial Point  | RIO | Restore Initial Point   | O |                            |
|  | Restore Target   | RIO | Restore Surface Target  | O |                            |
|  | Restore Home Base  | RIO | Restore Home Base       | O |                            |
|  | Restore Steerpoint 1-3   | RIO | Restore Steerpoint 1-3  | O |                            |
|  | Restore Defense Point  | RIO | Restore Defense Point   | O |                            |
|  | Restore Hostile Zone   | RIO | Restore Hostile Zone    | O |                            |
|  | Enable/Disable Grid  | RIO | NAVGRID Enable/Disable  | O |                            |
|  | Grid Center  | RIO | NAVGRID Center Aircraft | O |                            |
|  | Grid Relative Plus 30  | RIO | NAVGRID Heading +30     | O |                            |
|  | Grid Relative Plus 90  | RIO | NAVGRID Heading +90     | O |                            |
|  | Grid Relative Plus 120   | RIO | NAVGRID Heading +120    | O |                            |
|  | Grid Relative 180  | RIO | NAVGRID Heading Rel 180 | O |                            |
|  | Grid Relative Minus 120  | RIO | NAVGRID Heading -120    | O |                            |
|  | Grid Relative Minus 90   | RIO | NAVGRID Heading -90     | O |                            |
|  | Grid Relative Minus 30   | RIO | NAVGRID Heading -30     | O |                            |

|  |                   |     |                         |   |  |
|--|-------------------|-----|-------------------------|---|--|
|  | Grid Absolute 0   | RIO | NAVGRID Heading Abs 0   | O |  |
|  | Grid Absolute 45  | RIO | NAVGRID Heading Abs 45  | O |  |
|  | Grid Absolute 90  | RIO | NAVGRID Heading Abs 90  | O |  |
|  | Grid Absolute 135 | RIO | NAVGRID Heading Abs 135 | O |  |
|  | Grid Absolute 180 | RIO | NAVGRID Heading Abs 180 | O |  |
|  | Grid Absolute 225 | RIO | NAVGRID Heading Abs 225 | O |  |
|  | Grid Absolute 270 | RIO | NAVGRID Heading Abs 270 | O |  |
|  | Grid Absolute 315 | RIO | NAVGRID Heading Abs 315 | O |  |
|  | Grid Coverage 30  | RIO | NAVGRID Coverage 30     | O |  |
|  | Grid Coverage 60  | RIO | NAVGRID Coverage 60     | O |  |
|  | Grid Coverage 90  | RIO | NAVGRID Coverage 90     | O |  |
|  | Grid Coverage 120 | RIO | NAVGRID Coverage 120    | O |  |
|  | Grid Coverage 180 | RIO | NAVGRID Coverage 180    | O |  |
|  | Grid 1 Sector     | RIO | Grid 1 Sector           | O |  |



|              |                             |     |                       |  |   |  |
|--------------|-----------------------------|-----|-----------------------|--|---|--|
|              | Grid 2 Sectors              | RIO | Grid 2 Sectors        |  | O |  |
|              | Grid 3 Sector               | RIO | Grid 3 Sector         |  | O |  |
|              | Grid 4 Sectors              | RIO | Grid 4 Sectors        |  | O |  |
|              | Grid 5 Sector               | RIO | Grid 5 Sector         |  | O |  |
|              | Grid 6 Sectors              | RIO | Grid 6 Sectors        |  | O |  |
| <b>TACAN</b> |                             |     |                       |  |   |  |
|              | TACAN Mode                  | RIO | (show options)        |  | O |  |
|              | TACAN Mode Off              | RIO | TACAN Mode Off        |  | O |  |
|              | TACAN Mode Rec              | RIO | TACAN Mode REC        |  | O |  |
|              | TACAN Mode Transmit         | RIO | TACAN Mode TR         |  | O |  |
|              | TACAN Mode AA               | RIO | TACAN Mode AA         |  | O |  |
|              | TACAN Mode Beacon           | RIO | TACAN Mode BCN        |  | O |  |
|              | TACAN Ground Station        | RIO | (show options)        |  | O |  |
|              | TACAN Tango Sierra Kilo     | RIO | TACAN Tune TSK (31X)  |  | O |  |
|              | TACAN Kilo Bravo Lima       | RIO | TACAN Tune KBL (67X)  |  | O |  |
|              | TACAN Bravo Tango Mike      | RIO | TACAN Tune BTM (16X)  |  | O |  |
|              | TACAN Kilo Tango Sierra     | RIO | TACAN Tune KTS (44X)  |  | O |  |
|              | TACAN Golf Tango Bravo      | RIO | TACAN Tune GTB (25X)  |  | O |  |
|              | TACAN Victor Alfa Sierra    | RIO | TACAN Tune VAS (22X)  |  | O |  |
|              | TACAN Lima Sierra Victor    | RIO | TACAN Tune LSV (12X)  |  | O |  |
|              | TACAN Lima Alfa Sierra      | RIO | TACAN Tune LAS (116X) |  | O |  |
|              | TACAN Bravo Lima Delta      | RIO | TACAN Tune BLD (114X) |  | O |  |
|              | TACAN India November Sierra | RIO | TACAN Tune INS (87X)  |  | O |  |
|              | TACAN Mike Mike Mike        | RIO | TACAN Tune MMM (90X)  |  | O |  |
|              | TACAN Golf Foxtrot Sierra   | RIO | TACAN Tune GFS (91X)  |  | O |  |
|              | TACAN Golf Romeo Lima       | RIO | TACAN Tune GRL (18X)  |  | O |  |
|              | TACAN Papa Golf Sierra      | RIO | TACAN Tune PGS (57X)  |  | O |  |
|              | TACAN Bravo Tango Yankee    | RIO | TACAN Tune BTY (94X)  |  | O |  |
|              | TACAN Echo Echo Romeo       | RIO | TACAN Tune EER (99X)  |  | O |  |
|              | TACAN Delta Alfa Golf       | RIO | TACAN Tune DAG (79X)  |  | O |  |
|              | TACAN Hotel Echo Charlie    | RIO | TACAN Tune HEC (74X)  |  | O |  |

|  |   |     |                                  |  |   |                            |
|--|---|-----|----------------------------------|--|---|----------------------------|
|  | TACAN Oscar Alfa Lima                   | RIO | TACAN Tune OAL (124X)            |  | O |                            |
|  | TACAN Bravo India Hotel                 | RIO | TACAN Tune BIH (33X)             |  | O |                            |
|  | TACAN Mike Victor Alfa                  | RIO | TACAN Tune MVA (98X)             |  | O |                            |
|  | TACAN Kilo Charlie Kilo                 | RIO | TACAN Tune KCK (89X)             |  | O |                            |
|  | TACAN Kilo Sierra Bravo                 | RIO | TACAN Tune KSB (84X)             |  | O |                            |
|  | TACAN Hotel Delta Romeo                 | RIO | TACAN Tune HDR (47X)             |  | O |                            |
|  | TACAN Mike Alfa                         | RIO | TACAN Tune MA (96X)              |  | O |                            |
|  | TACAN Sierra Yankee Zulu                | RIO | TACAN Tune SYZI (94X)            |  | O |                            |
|  | TACAN Tune                              | RIO | (show options)                   |  | O |                            |
|  | TACAN Tune [X-Ray   Yankee] [N] [N] [N] | RIO | TACAN tune Channel [N][N][N] X/Y |  | O | Profile cmd<br>see page 43 |
|  | TACAN Tune Stennis                      | RIO | TACAN Tune Stennis               |  | O |                            |
|  | TACAN Tune Washington                   | RIO | TACAN Tune Washington            |  | O |                            |



|  |                           |     |                          |  |   |  |
|--|---------------------------|-----|--------------------------|--|---|--|
|  | TACAN Tune Roosevelt      | RIO | TACAN Tune Roosevelt     |  | O |  |
|  | TACAN Tune Lincoln        | RIO | TACAN Tune Lincoln       |  | O |  |
|  | TACAN Tune Truman         | RIO | TACAN Tune Truman        |  | O |  |
|  | TACAN Tune Arco           | RIO | TACAN Tune Arco          |  | O |  |
|  | TACAN Tune Shell          | RIO | TACAN Tune Shell         |  | O |  |
|  | TACAN Tune Texaco         | RIO | TACAN Tune Texaco        |  | O |  |
|  | <b>Cooperation / misc</b> |     |                          |  |   |  |
|  | Keep it quiet back there  | RIO | No talking               |  | O |  |
|  | You can talk again        | RIO | Talking allowed          |  | O |  |
|  | Knock It Off              | RIO | Jester suspend           |  | O |  |
|  | Back to Work              | RIO | Jester enable            |  | O |  |
|  | Set Eject for Both        | RIO | Ejection handle both     |  | O |  |
|  | Set Eject for Single      | RIO | Ejection handle RIO only |  | O |  |
|  | No landing calls          | RIO | No landing callouts      |  | O |  |
|  | OK for landing calls      | RIO | Allow landing callouts   |  | O |  |
|  | Wake Up                   | RIO | Reset state              |  | O |  |
|  | Rock and Roll             | RIO | Walkman Play             |  | O |  |
|  | Cut it out                | RIO | Walkman Stop             |  | O |  |
|  | Skip this part            | RIO | Walkman Fast forward     |  | O |  |
|  | Go back a little          | RIO | Walkman Rewind           |  | O |  |
|  | Open Canopy               | RIO | Open Canopy              |  | O |  |
|  | Close Canopy              | RIO | Close Canopy             |  | O |  |
|  | <b>Defensive</b>          |     |                          |  |   |  |
|  | Countermeasures Mode      | RIO | (show options)           |  | O |  |
|  | Countermeasures Off       | RIO | CMS Mode Off             |  | O |  |
|  | Countermeasures Manual    | RIO | CMS Mode Manual          |  | O |  |
|  | Countermeasures Auto      | RIO | CMS Mode Automatic       |  | O |  |
|  | Flares Mode               | RIO | (show options)           |  | O |  |
|  | Flares Mode Pilot         | RIO | Flares Mode Pilot        |  | O |  |
|  | Flares Mode Normal        | RIO | Flares Mode Normal       |  | O |  |
|  | Flares Mode Multi         | RIO | Flares Mode Multi        |  | O |  |
|  | Chaff Program             | RIO | (show options)           |  | O |  |

|  |                             |     |                          |  |   |  |
|--|-----------------------------|-----|--------------------------|--|---|--|
|  | Chaff Program 1-8           | RIO | Chaff Program 1-8        |  | O |  |
|  | Display                     | RIO | (show options)           |  | O |  |
|  | Display Airborne            | RIO | RWR Airborne             |  | O |  |
|  | Display Normal              | RIO | RWR Normal               |  | O |  |
|  | Display AAA                 | RIO | RWR AAA                  |  | O |  |
|  | Display Unknown             | RIO | RWR Unknown              |  | O |  |
|  | Display Friendly            | RIO | RWR Friendly             |  | O |  |
|  | Jammer On                   | RIO | Jammer On                |  | O |  |
|  | Jammer Standby              | RIO | Jammer Standby           |  | O |  |
|  | Dispense Order              | RIO | (show options)           |  | O |  |
|  | Dispense Order Chaf Program | RIO | Disp Order Chaff Program |  | O |  |
|  | Dispense Order Chaff Single | RIO | Disp Order Chaff Single  |  | O |  |



|                          |                              |     |                          |  |   |             |
|--------------------------|------------------------------|-----|--------------------------|--|---|-------------|
|                          | Dispense Order Chaff Tight   | RIO | Disp Order Chaff Tight   |  | O |             |
|                          | Dispense Order Flare Program | RIO | Disp Order Flare Program |  | O |             |
|                          | Dispense Order Flare Single  | RIO | Disp Order Flare Single  |  | O |             |
|                          | Dispense Order Flare Tight   | RIO | Disp Order Flare Tight   |  | O |             |
|                          | Flares Program               | RIO | (show options)           |  | O |             |
|                          | Flares Program 2 by 2        | RIO | Flares Program 2x2sec    |  | O |             |
|                          | Flares Program 4 by 2        | RIO | Flares Program 4x2sec    |  | O |             |
|                          | Flares Program 10 by 2       | RIO | Flares Program 10x2sec   |  | O |             |
|                          | Flares Program 4 by 6        | RIO | Flares Program 4x6sec    |  | O |             |
|                          | Flares Program 8 by 6        | RIO | Flares Program 8x6sec    |  | O |             |
|                          | Flares Program 10 by 6       | RIO | Flares Program 10x6sec   |  | O |             |
|                          | Flares Program 6 by 10       | RIO | Flares Program 6x10sec   |  | O |             |
|                          | Flares Program 10 by 10      | RIO | Flares Program 10x10sec  |  | O |             |
| <b>LANTIRN operation</b> |                              |     |                          |  |   |             |
| new<br>2.5.11            | Designate                    | RIO | LANTIRN Designate        |  | O |             |
| new<br>2.5.11            | Undesignate                  | RIO | LANTIRN Undesignate      |  | O |             |
| new<br>2.5.11            | Don't Auto Designate         | RIO | Inhibit Auto Designate   |  | O |             |
| new<br>2.5.11            | Latch Laser                  | RIO | Laser Latch              |  | O |             |
| new<br>2.5.11            | Arm Laser                    | RIO | Laser Arm                |  | O |             |
| new<br>2.5.11            | Toggle Laser                 | RIO | Laser Toggle             |  | O |             |
| new<br>2.5.11            | Black Hot / White Hot        | RIO | Black/White Hot Toggle   |  | O |             |
| new<br>2.5.11            | Track Marker [1..10]         | RIO | Track Map Marker         |  | O | Profile cmd |
| new<br>2.5.11            | Track Boresight              | RIO | LANTIRN QHUD QADL        |  | O |             |
| new<br>2.5.11            | Snow Plow                    | RIO | LANTIRN QSNO             |  | O |             |
| new<br>2.5.11            | Track Designation            | RIO | LANTIRN QDES             |  | O |             |
| new<br>2.5.11            | Previous Target              | RIO | LANTIRN Previous Target  |  | O |             |
| new<br>2.5.11            | Next Target                  | RIO | LANTIRN Next Target      |  | O |             |
| new<br>2.5.11            | Laser Code [511-788]         | RIO | Set laser code 1511-1788 |  | O | Profile cmd |



|                                   |  |          |  |  |   |  |
|-----------------------------------|--|----------|--|--|---|--|
| new<br>2.5.11                     | Track Steerpoint 1-3   | RIO      | LANTIRN Track SP 1-3   |  | O |  |
| new<br>2.5.11                     | Track Fixed Point/IP/Surface Target/Home Base/Decision Point                                 | RIO      | LANTIRN Track FP/IP/ST/HB/MAN  |  | O |  |
| new<br>2.5.11                     | Toggle View  | RIO      | LANTIRN Toggle FOV   |  | O |  |
| new<br>2.5.11                     | Area Track   | RIO      | LANTIRN Stabilize  |  | O |  |
| new<br>2.5.11                     | Eyeballs   | RIO      | LANTIRN Control Eyeballs   |  | O |  |
| new<br>2.5.11                     | Head Control   | RIO      | LANTIRN Control Head   |  | O |  |
| new<br>2.5.11                     | Look for.. Ground Targets/ Activity / Bogeys / Active Bogeys / SAMs / Tanks / Movers / Ships | RIO      | LANTIRN Search Targets All (Active) /(Active) Aircraft/SAMs/Armor/Vehicles/Ships |  | O |  |
| new<br>2.5.11                     | Reset Lantern  | RIO      | LANTIRN Reset  |  | O |  |
| <b>AI Pilot commands (Iceman)</b> |  |          |  |  |   |  |
|                                   | Set Altitude   | AI Pilot | (show options)   |  | O |  |
|                                   | Go Angels 1  | AI Pilot | Go Altitude 1.000 ft   |  | O |  |
|                                   | Go Angels 5  | AI Pilot | Go Altitude 5.000 ft   |  | O |  |
|                                   | Go Angels 10   | AI Pilot | Go Altitude 10.000 ft  |  | O |  |
|                                   | Go Angels 15   | AI Pilot | Go Altitude 15.000 ft  |  | O |  |
|                                   | Go Angels 20   | AI Pilot | Go Altitude 20.000 ft  |  | O |  |
|                                   | Go Angels 25   | AI Pilot | Go Altitude 25.000 ft  |  | O |  |
|                                   | Go Angels 30   | AI Pilot | Go Altitude 30.000 ft  |  | O |  |
|                                   | Go Angels 35   | AI Pilot | Go Altitude 35.000 ft  |  | O |  |
|                                   | Change Altitude  | AI Pilot | (show options)   |  | O |  |
|                                   | Descent 10000  | AI Pilot | Descent 10000 ft   |  | O |  |
|                                   | Descent 5000   | AI Pilot | Descent 5000 ft  |  | O |  |
|                                   | Descent 1000   | AI Pilot | Descent 1000 ft  |  | O |  |
|                                   | Descent 500  | AI Pilot | Descent 500 ft   |  | O |  |
|                                   | Climb 500  | AI Pilot | Climb 500 ft   |  | O |  |
|                                   | Climb 1000   | AI Pilot | Climb 1000 ft  |  | O |  |
|                                   | Climb 5000   | AI Pilot | Climb 5000 ft  |  | O |  |
|                                   | Climb 10000  | AI Pilot | Climb 10000 ft   |  | O |  |
|                                   | Change Speed   | AI Pilot | (show options)   |  | O |  |
|                                   | Slow Down 200  | AI Pilot | Decelerate 200 kts   |  | O |  |
|                                   | Slow Down 100  | AI Pilot | Decelerate 100 kts   |  | O |  |
|                                   | Slow Down 50   | AI Pilot | Decelerate 50 kts  |  | O |  |
|                                   | Speed Up 50  | AI Pilot | Accelerate 50 kts  |  | O |  |
|                                   | Speed Up 100   | AI Pilot | Accelerate 100 kts   |  | O |  |
|                                   | Speed Up 200   | AI Pilot | Accelerate 200 kts   |  | O |  |
|                                   | Set Heading  | AI Pilot | (show options)   |  | O |  |
|                                   | Head Straight  | AI Pilot | Maintain current course  |  | O |  |
|                                   | Heading North  | AI Pilot | Heading North  |  | O |  |
|                                   | Heading NorthEast  | AI Pilot | Heading NorthEast  |  | O |  |
|                                   | Heading East   | AI Pilot | Heading East   |  | O |  |
|                                   | Heading SouthEast  | AI Pilot | Heading SouthEast  |  | O |  |
|                                   | Heading South  | AI Pilot | Heading South  |  | O |  |



|               |                      |          |                   |  |   |             |
|---------------|----------------------|----------|-------------------|--|---|-------------|
|               | Heading SouthWest    | AI Pilot | Heading SouthWest |  | O |             |
|               | Heading West         | AI Pilot | Heading West      |  | O |             |
|               | Heading NorthWest    | AI Pilot | Heading NorthWest |  | O |             |
| new<br>2.5.11 | Fly to Destination   | AI Pilot | Fly Destination   |  | O |             |
| new<br>2.5.11 | Orbit Destination    | AI Pilot | Orbit Destination |  | O |             |
| new<br>2.5.11 | Fly Marker [1..10]   | AI Pilot | Fly to Map Marker |  | O | Profile cmd |
| new<br>2.5.11 | Orbit Marker [1..10] | AI Pilot | Orbit Map Marker  |  | O | Profile cmd |
|               | Turn                 | AI Pilot | (show options)    |  | O |             |
|               | Turn Left 45         | AI Pilot | Turn Left 45      |  | O |             |
|               | Turn Left 30         | AI Pilot | Turn Left 30      |  | O |             |
|               | Turn Left 10         | AI Pilot | Turn Left 10      |  | O |             |
|               | Turn Left 5          | AI Pilot | Turn Left 5       |  | O |             |
|               | Turn Right 5         | AI Pilot | Turn Right 5      |  | O |             |
|               | Turn Right 10        | AI Pilot | Turn Right 10     |  | O |             |
|               | Turn Right 30        | AI Pilot | Turn Right 30     |  | O |             |
|               | Turn Right 45        | AI Pilot | Turn Right 45     |  | O |             |

#### Real ATC | Supercarrier communications

##### Supercarrier ATC Recipients

|              |             |                           |  |   |  |
|--------------|-------------|---------------------------|--|---|--|
| Roosevelt    | Carrier ATC | CVN-71 Theodore Roosevelt |  | O |  |
| Rough Rider  |             |                           |  |   |  |
| Lincoln      | Carrier ATC | CVN-72 Abraham Lincoln    |  | O |  |
| Union        |             |                           |  |   |  |
| Washington   | Carrier ATC | CVN-73 George Washington  |  | O |  |
| Warfighter   |             |                           |  |   |  |
| Stennis      | Carrier ATC | CVN-74 John C. Stennis    |  | O |  |
| Courage      |             |                           |  |   |  |
| Truman       | Carrier ATC | CVN-75 Harry S. Truman    |  | O |  |
| Lone Warrior |             |                           |  |   |  |
| Cats         | Carrier ATC | Departure                 |  | O |  |
| Marshal      | Carrier ATC | Marshal                   |  | O |  |
| Approach     | Carrier ATC | Approach / Tower          |  | O |  |
| LSO          | Carrier ATC | Landing Signal Officer    |  | O |  |
| Paddles      |             |                           |  |   |  |

##### Recovery CASE I / II / III

|                        |            |                           |  |   |    |
|------------------------|------------|---------------------------|--|---|----|
| Marking Moms           | (Marshal)  | Inbound for Carrier       |  | O | *) |
| Inbound for Carrier    |            |                           |  |   |    |
| Expect on Time         | (Marshal)  | Inbound Marshall Response |  | O |    |
| See You at Ten         | (Marshal)  | Visual at 10 NM           |  | O |    |
| Low State              | (Marshal)  | Confirm Remaining Fuel    |  | O |    |
| Confirm Remaining Fuel |            |                           |  |   |    |
| Established            | (Marshal)  | Established               |  | O |    |
| Commencing             | (Marshal)  | Commencing                |  | O |    |
| Kiss Off               | (Marshal)  | Overhead Break            |  | O |    |
| Overhead               | (Approach) | Overhead                  |  | O |    |



|  |  |            |                    |   |  |  |
|--|--|------------|--------------------|---|--|--|
|  | Tower Overhead   |            |                    |   |  |  |
|  | Approach Check In  | (Approach) | Approach Check In  | O |  |  |
|  | Checking In  |            |                    |   |  |  |
|  | Platform   | (Approach) | Platform           | O |  |  |
|  | Needles  | (Approach) | Needles Response   | O |  |  |
|  | [Hornet / Tomcat / Viking / Phantom / Greyhound / Intruder / Lightning / Prowler / Skyhawk] Ball | (LSO)      | Call the Ball      | O |  |  |
|  | Meatball   | (LSO)      | Reference Ball     | O |  |  |
|  | Clara  | (LSO)      | Request Clara      | O |  |  |
|  | Confirm  |            | Confirm            | O |  |  |
|  | <b>Launch Operations</b>   |            |                    |   |  |  |
|  | Salute!  | Crew       | Salute for Launch  | O |  |  |
|  | Request Launch   | Crew       | Request Cat Launch | O |  |  |

 \*) Supporting vessels may be on the same frequency as the actual carrier: always use Select e.g. 'Washington,.. Select'. Before entering the dialog to avoid 'go to alternate' responses from other battle group units. For approach, do not use the generic ATC 'Inbound' command but 'Inbound for Carrier' or 'Marking Moms' as listed.



**Note:** More commands are available than for users who use menus. The correct flow must be followed to get adequate responses during the various CASE I/II/III stages. Issue commands in the correct order during approach, meeting stage parameters. Refer to ED's DCS: Supercarrier guide for flow details. <https://forums.eagle.ru/attachment.php?attachmentid=231740&d=1586110211>



**Note:** Automated player calls will generate a short PTT squelch sound in VAICOM when player voice is disabled in Preferences. During dialog, messages contents are visible in the VoiceAttack log window. Automated calls can also be suppressed altogether (EX tab option) so that you can issue these calls yourself.



**Note:** The FA-18C module requires manual AM/FM modulation switching. Check this if your carrier is on FM modulation instead of default AM and you get no response.



**Note:** The Extended Command Set option must be enabled in Preferences.

| Interactive Kneeboard |                    |           |                       |   |  |  |
|-----------------------|--------------------|-----------|-----------------------|---|--|--|
|                       | Kneeboard Control  |           |                       |   |  |  |
|                       | Kneeboard          | Kneeboard | Show/hide kneeboard   | O |  |  |
|                       | Start Dictate      | Kneeboard | Dictation Start       | O |  |  |
|                       | End Dictate        | Kneeboard | Dictation Stop        | O |  |  |
|                       | Correction         | Kneeboard | Dictation Correction  | O |  |  |
|                       | Clear Notes        | Kneeboard | Clear Dictation Notes | O |  |  |
|                       |                    |           |                       |   |  |  |
|                       | Show Notes         | Kneeboard | Browse to Notes Tab   | O |  |  |
|                       | Show Log           | Kneeboard | Browse to LOG/ATO Tab | O |  |  |
|                       | Show Tasking Order |           |                       |   |  |  |



## Interactive Kneeboard Extension (continued)

|  |                          |           |                    |  |   |  |
|--|--------------------------|-----------|--------------------|--|---|--|
|  |                          |           |                    |  |   |  |
|  | AWACS Page               | Kneeboard | Show AWACS Tab     |  | O |  |
|  | Anvil Page               | Kneeboard | Show JTAC Tab      |  | O |  |
|  | Air Traffic Control Page | Kneeboard | Show ATC Tab       |  | O |  |
|  | Tanker Page              | Kneeboard | Show AAR Tab       |  | O |  |
|  | Flight Page              | Kneeboard | Show Flight Tab    |  | O |  |
|  | Crystal Palace Page      | Kneeboard | Show AOCS Tab      |  | O |  |
|  | Chief Page               | Kneeboard | Show Reference Tab |  | O |  |



# EXPOSED VARIABLES

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Users who wish to add their own commands to the ‘VAICOM PRO for DCS World’ VoiceAttack profile can easily do so. In addition, advanced users can make use of the below Exposed Variables to create additional logic in their added VA commands.

Refer to the VoiceAttack Help documentation on how to create complex commands using conditions using variables and tokens. Using the plugin’s exposed variable set you can, within the single VA profile, create a comprehensive custom command set that sends different keypresses for different aircraft.

For example, for your custom ‘Gear Up’ command you may want to send ‘G’ in the A-10C and ‘LShift+G’ in the F-15C. You can create a single Gear Up command in the VA profile, containing logic to send the correct keystrokes based on the current aircraft. The plugin makes sure that the value of the active module name variable reflects the active DCS aircraft during gameplay.

Note: a TX node must be used for PTT when using added custom commands with variables e.g. TX6. This makes sure all variables are in sync. The following exposed variables are available:

## Server

- {TXT:vaicompro.serverdata.currentserver.dcsversion} - string containing DCS version number,
- {TXT: vaicompro.serverdata.currentserver.theater} – theater name,
- {TXT: vaicompro.serverdata.currentserver.mission } – current mission title,
- {BOOL:vaicompro.serverdata.currentserver.vrmode} - value True or False,
- {BOOL:vaicompro.serverdata.currentserver.easycomms} - value True or False,
- {BOOL:vaicompro.serverdata.currentserver.multiplayer} - value True or False.

## Aircraft

- {TXT:vaicompro.playerdata.currentmodule.name}  
- this string contains the active module name e.g. 'UH-1H' or 'A-10C',
- {TXT:vaicompro.playerdata.currentmodule.cat}  
- this string contains the active module category, value is either 'Helicopters' or 'Planes'.



# PLUGIN API

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This is for advanced users only. The plugin exposes API functions for invoking via VoiceAttack. These functions are used e.g. for the Push-To-Talk keybinds. Optionally, also other API calls can be attached to keyboard keypresses, voice commands or joystick button actions. To do this, create a new command in the VA profile. In the command edit window, add a plugin action via Other -> Advanced -> Execute an External Plugin Function. Choose 'VAICOM PRO 2.8' plugin from the drop down and add the Plugin Text value from below table. The command will now invoke the plugin API call.

| Section       | Function                     | Plugin Context         | Variables |  |
|---------------|------------------------------|------------------------|-----------|--|
| Push-To-Talk  | TX1 press                    | ptt.hotkey.TX1.press   | n/a       |  |
|               | TX1 release                  | ptt.hotkey.TX1.release | n/a       |  |
|               | TX2 press                    | ptt.hotkey.TX2.press   | n/a       |  |
|               | TX2 release                  | ptt.hotkey.TX2.release | n/a       |  |
|               | TX3 press                    | ptt.hotkey.TX3.press   | n/a       |  |
|               | TX3 release                  | ptt.hotkey.TX3.release | n/a       |  |
|               | TX4 press                    | ptt.hotkey.TX4.press   | n/a       |  |
|               | TX4 release                  | ptt.hotkey.TX4.release | n/a       |  |
|               | TX5 press                    | ptt.hotkey.TX5.press   | n/a       |  |
|               | TX5 release                  | ptt.hotkey.TX5.release | n/a       |  |
|               | TX6 press                    | ptt.hotkey.TX6.press   | n/a       |  |
|               | TX6 release                  | ptt.hotkey.TX6.release | n/a       |  |
|               | PTT Release Hot toggle       | ptt.mode.release       | n/a       |  |
|               | PTT Mode prev                | ptt.mode.prv           | n/a       |  |
|               | PTT Mode next                | ptt.mode.nxt           | n/a       |  |
|               | PTT Mode SNGL                | ptt.mode.sngl          | n/a       |  |
|               | PTT Mode MULTI               | ptt.mode.multi         | n/a       |  |
|               | PTT Mode NORM                | ptt.mode.norm          | n/a       |  |
|               | PTT Mode INV                 | ptt.mode.inv           | n/a       |  |
|               | PTT Mode SRS toggle          | ptt.mode.map.srs       | n/a       |  |
|               | PTT Mode page up             | ptt.mode.page.up       | n/a       |  |
|               | PTT Mode page dn             | ptt.mode.page.dn       | n/a       |  |
|               | PTT Operate Dial toggle      | ptt.mode.dial          | n/a       |  |
| Chatter       | Chatter Toggle               | chatter                | n/a       |  |
|               | Chatter volume up            | chatter.vol.up         | n/a       |  |
|               | Chatter volume down          | chatter.vol.dn         | n/a       |  |
| Radio Control | Radio Select Channel         | dev.radio.setchn       | n/a       |  |
|               | Radio Select Mod/Freq        | dev.radio.setfrq       | n/a       |  |
| Config        | Configuration Window         | config                 | n/a       |  |
|               | Reset Config Window position | config.resetwindow     | n/a       |  |
| Database      | AI Comms keywords set        | alias.aicomms          | n/a       |  |
| AIRIO         | Manual Tune Datalink         | airio.dev.dl.tune      | n/a       |  |
|               | Manual Tune Radio            | airio.dev.radio.tune   | n/a       |  |
|               | Manual Tune TACAN            | airio.dev.tacan.tune   | n/a       |  |
|               | Radar Scan Sector            | airio.dev.radar.sector | n/a       |  |
|               | Map Markers NAVGRID          | airio.map.navgrid      | n/a       |  |
|               | Map Markers                  | airio.map.markers      | n/a       |  |
|               | Laser Code                   | airio.dev.laser.code   | n/a       |  |



|                       |                     |                      |     |     |
|-----------------------|---------------------|----------------------|-----|-----|
| Interactive Kneeboard | Opacity increase    | kneeboard.opac.up    | n/a | PRO |
|                       | Opacity decrease    | kneeboard.opac.dn    | n/a | PRO |
|                       | Browse tab previous | kneeboard.tab.prv    | n/a | PRO |
|                       | Browse tab next     | kneeboard.tab.nxt    | n/a | PRO |
|                       | Browse tab LOG      | kneeboard.tab.log    | n/a | PRO |
|                       | Browse tab AWACS    | kneeboard.tab.awacs  | n/a | PRO |
|                       | Browse tab JTAC     | kneeboard.tab.jtac   | n/a | PRO |
|                       | Browse tab ATC      | kneeboard.tab.atc    | n/a | PRO |
|                       | Browse tab AAR      | kneeboard.tab.tanker | n/a | PRO |
|                       | Browse tab AOCS     | kneeboard.tab.aocs   | n/a | PRO |
|                       | Browse tab FLIGHT   | kneeboard.tab.flight | n/a | PRO |
|                       | Browse tab NOTES    | kneeboard.tab.notes  | n/a | PRO |
|                       | Browse tab REF      | kneeboard.tab.ref    | n/a | PRO |

## TROUBLESHOOTING GUIDE

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In case you have install problems refer to below table. Uninstalling and re-installing VA/plugin is almost always pointless and a waste of time at best. More often it's counterproductive.  
Be methodical. For most up-to-date tips visit the VAICOM PRO Community Discord.

- VoiceAttack needs to be running as **administrator**. Re-confirm this.
- When troubleshooting **always** perform a DCS Repair **first** with VA not running to make sure your DCS World base installation is in order.
- The Garmin NS340 module must be **disabled** in DCS module manager.  
When testing **always** disable all mods. Once everything OK you can switch them on again.
- Make sure you run **only** compatible apps in Export.lua.  
For testing disable all other entries beside VAICOM PRO or delete the Export.lua file (in Saved Games) altogether. You can re-enable them later.
- VAICOM-compatible apps are SSA, SRS, and TacView, only **latest versions** are supported.
- Needless to say: VoiceAttack, VAICOM PRO and its extensions also need to be latest versions.

(continued on next page)



| Symptom   | Cause  | Remedy  |
|---|--|---|
| General unexpected behavior                           | VoiceAttack not running as administrator   | VA shortcut -> properties -> compatibility -> all users -> run this program as an administrator   |
| No subfolders are created                             | Plugin support not enabled in VoiceAttack  | Enable plugin support and restart VA  |
| Configuration window does not open using LCtrl-LAlt-C | Background app stealing keybinds   | Close background app  |
|   | VA keyboard shortcuts disabled   | Enable VA shortcuts   |
|   | VAICOM profile not loaded  | Load VAICOM profile   |
| Blinking Menu   | Windows multi-monitor problem  |   |
|   | Export.lua is installed correctly but Radiocommanddialogpanel.lua is not: wrong DCS path in registry or similar.                             |   |
|   | Set Custom Path (forces lua)<br>Check VA runs as admin and has R/W rights to DCS World folder  |   |
| Stuck update message                                  | Failed auto-update   | Download and install new dll file manually from website   |
| Poor recognition rate / keyword training results      | Insufficient voice training  | Follow MS Windows training first, then the plugin Keywords training.  |
|   | Mic quality/placement, audio driver  | Invest in a decent-quality headset, disable any driver "enhancements"   |
|   | Incorrect MSVR configuration   | Confirm mic device used by MS speech engine for training is the same as used by VA. In Control Panel/Advanced Speech Options select correct engine language (e.g. English US) and create a new recognition profile. Run MS Windows general speech training (>3x). |
| Commands recognized by VA but not executed in DCS     | Incorrect lua install end/or interfering 3 <sup>rd</sup> party app in Export.lua   | Delete Export.lua file (in Saved Games)   |
|   |  | Set Custom Path (forces lua)  |
| Interpretation errors                                 | Speaking too fast  | Switch to VSPX processing   |
| AIRIO command not recognized / executed               | Keywords not updated in VA profile   | Apply FINISH steps  |
| Windows 7/8 problems                                  | Windows 7 fix not installed  | Apply registry fix for Win7/8 (Support webpage)   |
| Not working after install or after each DCS update    | Invalid DCS install path in registry HKEY_CURRENT_USER\Software\Eagle Dynamics\DCS World\Path, causing lua code to end up in wrong location. | Use Config tab / Custom Path / reg fix option to set correct DCS program files path into Windows registry.  |
| Chatter not audible                                   | Audio redirected   | Inspect Audio tab, cycle REDIR  |
| Chatter not audible                                   | Aircraft radios not powered on   | Inspect setting Link to Radio Power   |



