AI_ATC

What is it?

AI_ATC is a study level simulation of ATC procedures at Nellis Airforce base.

It is designed to help virtual pilots study, plan and execute realistic procedures for Nellis AFB and the Nevada Test and Training Range (NTTR).

Who is it for?

Virtual pilots interested in learning realistic ATC procedures and familiarizing themselves with the Phraseology. It is intended to be used by small\medium sized groups to practice procedures and build confidence in communicating with ATC. It can be flown in both single player and multiplayer environments.

REFERENCE MATERIAL

Nellis AFB Local Flying Procedures

- https://static.e-publishing.af.mil/production/1/nellisafb/publication/nellisafbi11-250/nellisafbi11-250.pdf

NTTR Operations

- https://static.e-publishing.af.mil/production/1/nellisafb/publication/afi13-212v1_accsup_nttrsup_add_a/afman13-212v1_nttr_add_a.pdf

FAA – Air Traffic Control (JO 7110.65BB)

- https://www.faa.gov/documentLibrary/media/Order/7110.65BB_Basic_dtd_2-20-25.pdf

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ACKNOWLEDGEMENTS

- **MOOSE Framework**
  https://flightcontrol-master.github.io/MOOSE/
- **VFR Charts** by Tim “Stretch” Morgan
  https://forums.pilotedge.net/viewtopic.php?t=8983
- **F-10 Map Drawings** by Dark_S3ntry
  https://www.digitalcombatsimulator.com/en/files/3335725/
- **YouTube Content and Testing** by Garf @ DCS Hacks
  https://www.youtube.com/@DCSHacks
- **VoiceAttack Profile & SME**: Cabi~599
- **AI_ATC Community Manager**: Hayds_93
- **Helicopter Mission:** Gideon
- A special thank you to the **Beta Test Team** for their valuable insights!

HELP SUPPORT AI_ATC

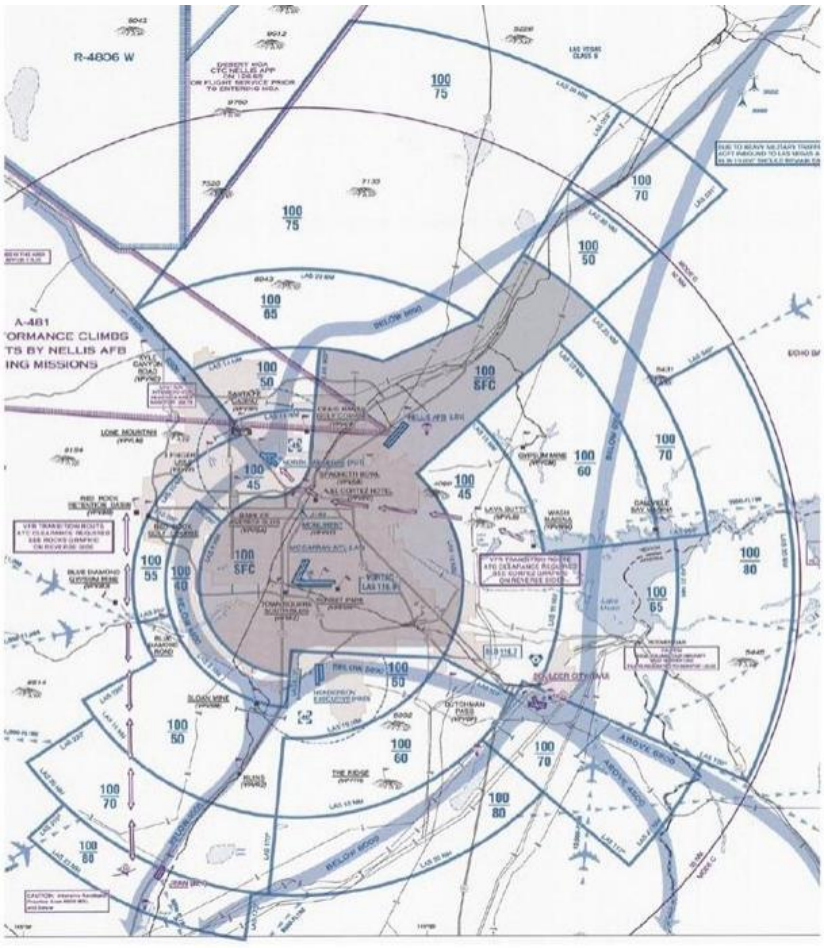
- Support AI_ATC on Patreon
  https://patreon.com/Avalanche110?utm_medium=unknown&utm_source=join_link&utm_campaign=creatorshare_creator&utm_content=copyLink
- Support AI_ATC on GiveSendGo
  https://www.givesendgo.com/AIATC

WELCOME TO NELLIS:

AI_ATC simulates air traffic control operations for **Nellis AFB** and the **Nevada Test and Training Range (NTTR)**. Within this simulation, pilots interact with nine agencies, each handling a specific phase of flight:

- **Nellis Clearance**: Issues route clearances to departing aircraft.
- **Nellis Ground**: Coordinates the movement of aircraft on ramps and taxiways to and from the runway.
- **Nellis Tower**: Manages take-offs, landings, and runway operations.
- **Nellis Departure**: Provides departure control within Nellis Class B airspace.
- **Nellis Approach**: Guides arriving aircraft within Nellis Class B airspace.
- **NATCF Lee**: Routes aircraft through the Lee transit corridor.
- **NATCF Sally**: Handles aircraft transiting the Sally and Elgin corridors.
- **BLACKJACK**: Authorizes entry and exit of scheduled airspace within the NTTR.
- **ATIS**: Delivers continuous automated weather and airport information broadcasts.

Note: Class B Airspace is defined as 30DME from the LAS TACAN.



RADIO CHANNELIZATION:

Nellis AFB uses local radio frequency Channelization. All radio frequencies are preset to a specific channel number.

CHANNEL	AGENCY	COMM-1 UHF	COMM-2 VHF
1	INTRAFLIGHT FREQUENCY	305.000	155.970
2	NELLIS CLEARANCE	289.400	120.900
3	NELLIS GROUND	275.800	121.800
4	NELLIS TOWER	327.000	132.550
5	NELLIS DEPARTURE	385.400	135.100
6	NELLIS APPROACH	273.550	124.950
7	NATCIF SALLY	317.525	126.650
8	NATCIF LEE	254.400	119.350
9	SOF BULLSEYE SOF	305.600	142.750
10	EMERGENCY APPROACH	343.725	
11	ATIS	270.100	
12	CREECH AFB TOWER	360.625	118.300
13	NOT USED		
14	KC-135-TEXACO-1-1	297.500	
15	KC-135MPRS-SHELL-1-1	295.400	
16	BLACKJACK	377.800	
17	SHOWTIME	343.300	125.300
18	RANGE 76 JTAC	309.800	133.000
19	NOT USED		
20	HAVE QUICK TOD CHECK	300.050	

NOTE: AI_ATC can broadcast on either **UHF** or **VHF** but not both. In most use cases the default UHF channel is sufficient.

INTERACTING WITH AI_ATC:

You can interact with AI_ATC using the F-10 Radio menu. Simply tune your radio to the agency you want to talk to and select the F-10 Radio option.

We recommend a ***Crawl, Walk, Run*** approach when you first start using AI_ATC.

Start by completing the included **Tutorial mission**. It will walk you through the basics of how to use AI_ATC and local procedures at Nellis AFB.

Execute F-10 commands manually for your first few flights. Once you are familiar with the F-10 Menu structure, move onto setting up *VOICE ATTACK* and learning the Phraseology.

A complete guide on how to install voice attack and the AI_ATC profile is included separately.

Once you have installed *VOICE ATTACK*, start by practicing a few simple commands on the desktop. Make sure everything is working as desired, then move onto using it in DCS.

Don't be afraid to revert back to manually selecting menu items, you will only get good at using Phraseology through **PRACTISE, PRACTISE** and more **PRACTISE!**

GENERAL AVIATION:

The learning curve to AI_ATC will depend on your level of general aviation knowledge.

General Aviation is a topic not broadly discussed, studied or practiced within the DCS player base.

We **HIGHLY** recommend you consume a steady diet of general aviation material. We have curated a number of YouTube videos to help you along this path.

You can find them on the DCS Hacks YouTube Channel.

https://www.youtube.com/@DCSHacks

FLIGHT PLANNING:

When learning local flying procedures, plan your flight ahead of time. Choose the departure and approach you want to practice ahead of time.

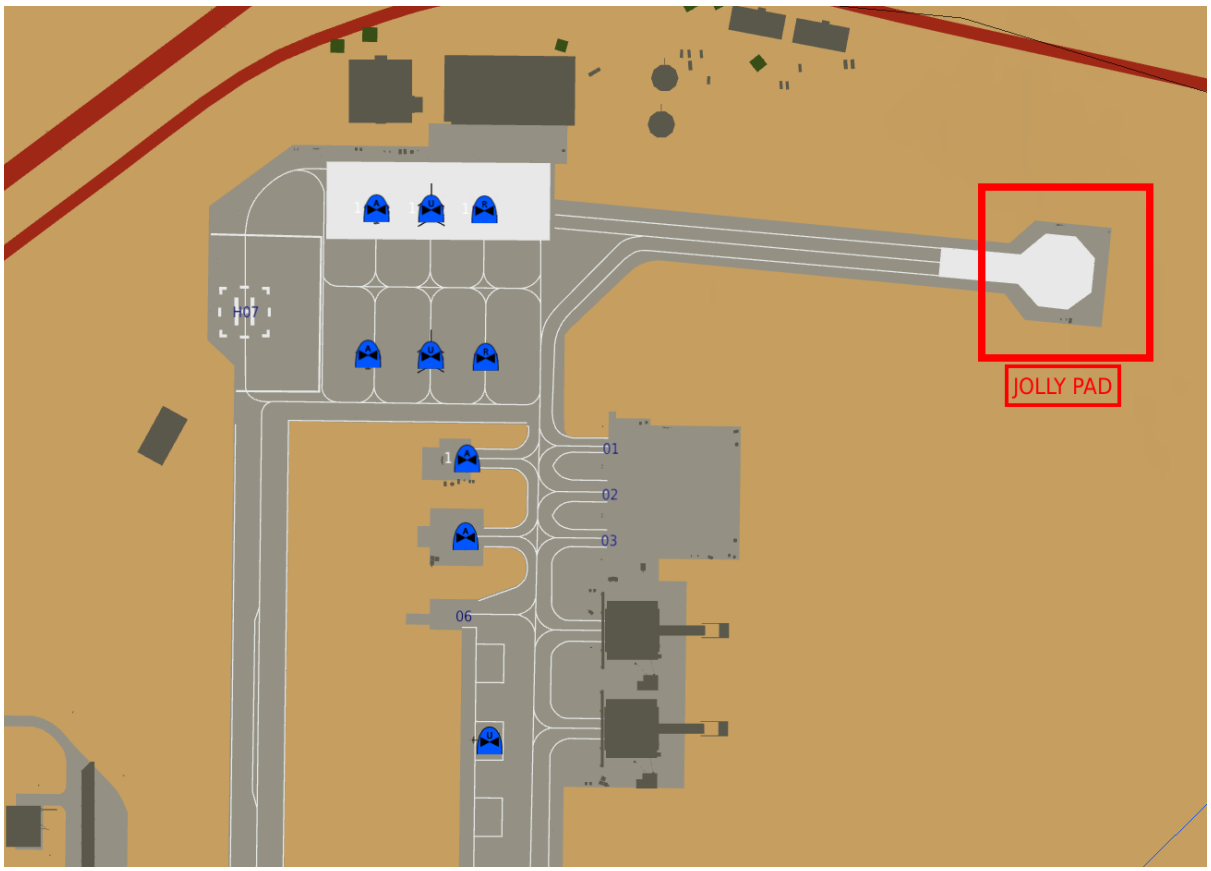
Study the included charts to gain an understanding of what your required to do ***BEFORE*** starting DCS.

There is a complete tutorial series on the DCS Hacks YT channel. Watch the video's that relate to the flight your about to undertake.

When starting out, try and master the VFR flying procedures before moving onto the more advanced IFR procedures.

HELICOPTER OPERATIONS:

Helicopters have separate procedures at Nellis AFB. The primary parking area for helicopters is adjacent to the Juliet and Hotel taxiways. Takeoff and landing clearance will be from the Jolly pad at the northern end of Nellis AFB.



Refer to the included Kneeboard for helicopter departure and approach routes.

A7.6.2. GASS PEAK Departure/Arrival. Depart helipad north direct Las Vegas International Speedway marquee/I-15. Avoid five 300' towers just to the West of Sloan Ln. Once reaching marquee/I-15, turn west direct I-215 and Pecos Rd intersection (just north of the VA hospital) and then on course. Remain at or below 500' AGL until clear of Class B airspace. Use caution for power lines in the vicinity (**Figure A7.1**).

A7.6.3. Dry Lake Departure/Arrival. Depart north/northeast to cross the North Gap (approximately 2 NM east of Jettison Hill with power line going through the gap). Remain at or below 500 feet AGL until clear of Class B airspace. Use caution for aircraft operating at Winner LZ.

A7.6.4. Red Horse Departure/Arrival. Depart helipad north until intersecting I-15. Turn right to parallel I-15 until abeam the sand dunes (N36 36.87 W114 56.05). Proceed direct to the sand dunes and remain at or below 500 feet AGL until clear of Class B airspace.

A7.6.5. Sunrise Departure/Arrival. Depart the helipad direct to the South Gap (Lake Mead Blvd between Sunrise and Frenchman Mountain). Remain at or below 500 feet AGL until clear of Class B airspace.

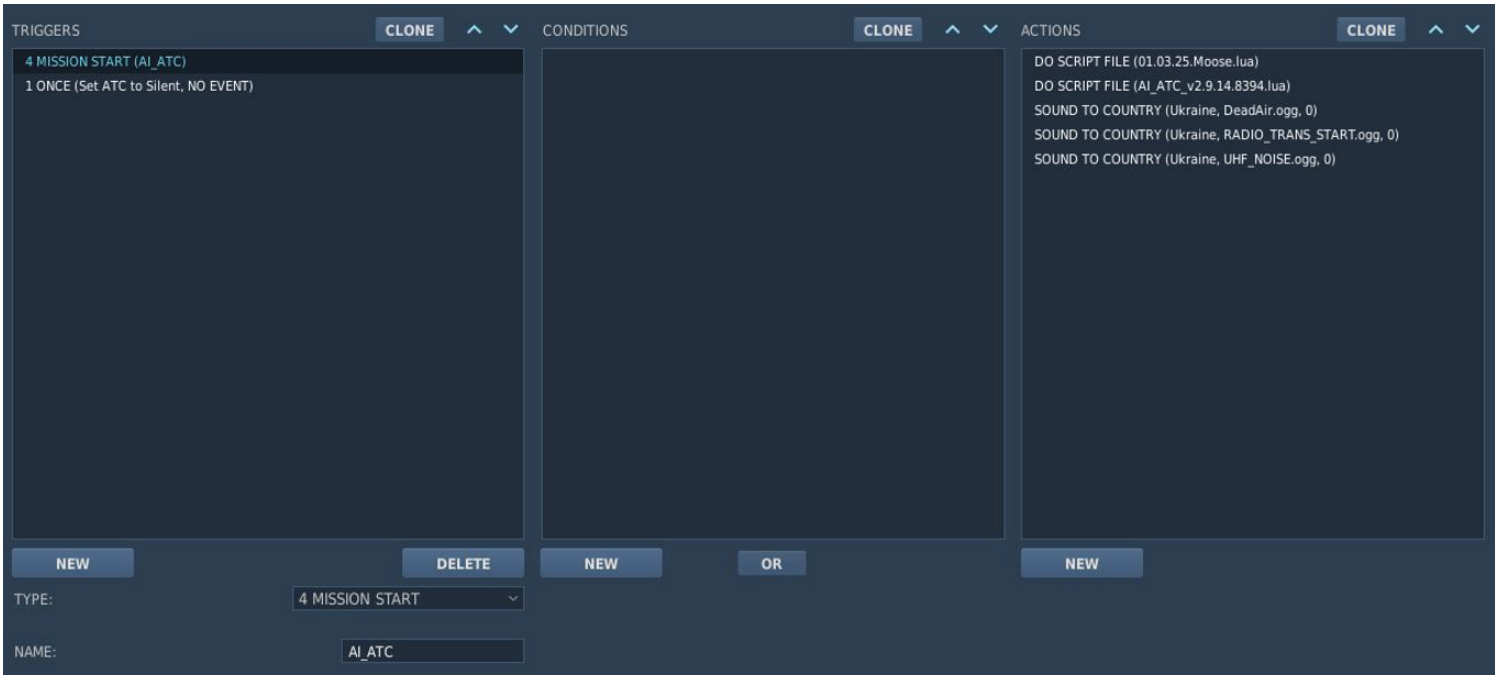
INSTALLING AI_ATC:

NOTE: *Instillation is not required for the missions included*

Adding AI_ATC Sound Files to an Existing Mission

AI_ATC uses approximately 2,500 pre-recorded sound files. To incorporate them into an existing mission, follow these steps:

1. **Add Sound Files to the Mission:**
    - Open the .miz file using your preferred archiving software (e.g., 7-Zip, WinRAR).
    - Copy the sound files into the appropriate folder within the archive.
2. **Configure the Mission in the Mission Editor:**
    - Launch the **Mission Editor** and open your mission.
    - Create a **MISSION START** trigger event:
        - Add a **DO SCRIPT FILE** action to include the MOOSE and AI_ATC script files.
        - Add a **SOUND TO COUNTRY** trigger action for the 3 miscellaneous sound files.
3. **Set DCS ATC to Silent Mode:**
    - Ensure that the DCS ATC is set to **Silent Mode**



AI_ATC OPTIONS:

AI_ATC has several customisable parameters that mission designers can use when designing a mission. Simply add the desired function to a DO SCRIPT trigger action.

Setting a Group's Callsign

AI_ATC supports **135 different callsigns** that can be preset using the following function:

AI_ATC:SetCallsign([Group name], "[callsign]", "[Integer]")

AI_ATC:SetCallsign("My F-5E", "Dragon", "31")

In this example:

- "My F-5E" is the name of the group.
- "Dragon" is the desired callsign.
- "31" is the numerical identifier for the callsign.

You can adjust the callsign and integer to match any of the 135 available options to suit your mission requirements.

Setting Radio Frequency

Each agency can broadcast on **either UHF or VHF**, but not both. By default, all agencies broadcast on **UHF**. You can change this by specifying the frequency range for an agency using the following function:

AI_ATC:SetRadioFrequency("[Agency]", "[Frequency Range]")

AI_ATC:SetRadioFrequency("Ground", "VHF")

In this example:

- "Ground" refers to the agency.
- "VHF" sets the agency to broadcast on the **VHF** frequency range.

Adding Dissimilar Groups of Aircraft

AI_ATC interacts with clients on the GROUP level. In DCS, a group can only contain one type of aircraft. However, AI_ATC allows mission designers to combine dissimilar aircraft into a single group for ATC interaction, even though they are different types. This enables mixed formations and better coordination for multiplayer scenarios.

To specify which clients make up a group, use the following function:

AI_ATC:AddPlayerToGroup([Recipient Group Name], [Donor Group Name])

AI_ATC:AddPlayerToGroup("Nellis_F/A-18C", "Nellis_F-16C")

In this example:

- "Nellis_F/A-18C" is the Recipient Group, which will be the primary group name.
- "Nellis_F-16C" is the Donor Group, which will be added to the recipient group.

AI_ATC will treat both aircraft as one group, allowing them to receive the same ATC instructions, callsigns, and sequencing.

Disabling The ATIS for FC3 Compatibility.

Modules from the Flaming Cliffs series have simplified radios. If users wish to use AI_ATC with one of these modules, you will need to disable the ATIS.

AI_ATC:StopATIS()

On Screen Voice command prompt

When learning ATC procedures and phraseology, it can be difficult to recall the specific phrase to use. AI_ATC has an option to display the expected command on screen for pilots to repeat. To enable this feature, use the command:

AI_ATC:VoiceCommandPrompt(true)