



VIRTUAL AIR TRAFFIC SIMULATION NETWORK
NORTH AMERICA REGION – USA DIVISION
vZAU – CHICAGO ARTCC

**ZAU ORDER
01.110B**

Effective Date:
August 6, 2020

SUBJECT: Air Traffic Control

This policy prescribes general procedures and guidance for use by individuals providing ATC services on the VATSIM network within the Chicago ARTCC boundary, including any facility therein. Any controller providing ATC services- whether assigned to the Chicago ARTCC or with visiting status- must be familiar and comply with the provisions of this order that pertain to their operational responsibilities and use their best judgment when encountering situations not covered by it.

The procedures prescribed by this order are general, and are not specific to any facility within vZAU, but rather the entire area. They may be supplemented by facility-specific SOPs.

Please note, this order is intended for use on the VATSIM network and only applies in a virtual environment simulated on the VATSIM network. It is not applicable for live operations in the National Airspace System.

The procedures contained within this order prescribe how the ATC facilities/positions are to be operated and-- in conjunction with FAA Orders 7110.10, 7110.65, 7210.3 and various vZAU Orders-- will be the basis for performance evaluation, training, and certifications.

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Chapter 1. Introduction

1-1. Purpose of this Order

This order establishes broad and general standard operating procedures for all facilities and control positions within the VATSIM Chicago ARTCC-- referenced as the ATC facility-- and supplements FAA 7110.65, Air Traffic Control.

1-2. Audience

All VATSIM Chicago ARTCC personnel, as well as those with a visiting status. Anyone providing ATC services at any facility within the vZAU ARTCC must be familiar and comply with the provisions of this order.

1-3. What This Order Cancels

The following Orders/Notices are cancelled and superseded; their content has been added to this Order:

- a. ZAU 01.110A General ATC, dated 07/06/2020.

1-4. Explanation of Changes

- a. This is the third version of this order.

1-5. Mission

- a. It is the mission of the Chicago ARTCC to provide safe and efficient air traffic services to simulated air traffic on the VATSIM network.
- b. The Facility will strive to maintain a professional, friendly, supportive and educational environment for both network controllers and pilots.

1-6. Word Meanings

As used in this Order:

- a. *Must*, or an action verb in the imperative sense, means mandatory.
- b. *Should* means recommended
- c. *May* and *need not* mean optional
- d. *Will* indicates futurity

1-7. Abbreviations and References

This Order uses abbreviations and refers to words/phrases as defined in the following tables:

TBL 1-1-1
Abbreviations

ABBR / REFERENCE	DESCRIPTION
ATM	Air Traffic Manager
DATM	Deputy Air Traffic Manager
CIC	Controller In Charge
IAW	In accordance with
SOP	Standard Operating Procedures
LOA	Letter of Agreement
CTR	En-route Control/ Center (Chicago Center may be assumed unless otherwise indicated)
APP	Approach Control
DEP	Departure Control
GND	Ground Control
DEL	Clearance Delivery
RWY	Runway
TWY	Taxiway

TBL 1-1-2
Word/Phrase References

WORD/PHRASE	DESCRIPTION
The Facility	VATSIM Chicago ARTCC, as an organization
ATC Facility	Any air traffic control facility/position within the ZAU ARTCC, unless otherwise indicated
Controller(s)	Any individual(s) providing ATC services within the ZAU ARTCC, unless otherwise indicated
The Network	Any VATSIM server
Primary airport	The main airport hosting Class B or C airspace
Secondary airport	Any airport other than a primary, usually Class D airspace
Satellite airport	Any secondary airport within a TRACON/RAPCON
Final approach	The segment of flight where an aircraft is within 6 flying miles to the runway
The website	http://www.chicagoartcc.org and any/all associated features/programs

Chapter 2. General

2-1. Radar Clients

Three radar clients are in use at vZAU: VRC, vSTARS, and vERAM. These are the only clients supported by The Facility. Controllers must be familiar with and competent on the client of their choosing.

2-2. Behavior

- a. Controllers are expected to maintain the highest standards of courtesy, professionalism, and patience while working an ATC Facility, both on the network and on any other communication venue such as *Discord*; arguments, intolerance, laziness, and general disregard are unacceptable.
- b. Controllers are expected to comply with all applicable vZAU, VATUSA, VATNA, and VATSIM orders and policies while staffing an ATC Facility – this includes the VATSIM Code of Conduct and Code of Regulations.

2-3. Temporary Altitude Fields

- a. Temporary altitude fields are intended as a reminder, and not used in lieu of required coordination within The Facility.
- b. When handoffs will not occur at prescribed altitudes, active coordination methods must be used.
- c. The last radar Controller working an aircraft should clear any temporary altitudes set.

2-4. Scratchpad Entries

Where scratchpad entries are prescribed, entries should be:

- a. DEPARTURES
 1. Inserted by DEL, GND, or TWR **only when a radar facility is staffed** that is providing the departure function.
 2. Removed by the radar facility providing the DEP function prior to the aircraft becoming “enroute”.
- b. ARRIVALS
 1. Inserted by the radar facility that is providing the APP function.
 2. Removed by the facility providing the TWR function as soon as possible after the aircraft lands.

2-5. Pilot Difficulties

Due to the nature of The Network, there will be times the controller will need assistance with aircraft having some sort of difficulty. Examples include an aircraft who started taxiing without contacting you, entered your airspace and never responded to a contact request, a stuck mic on your frequency, someone who does not know how to squawk, etc.

- a. First, if you have time, try your best to solve the problem.

1. Explain and help the pilot do what they are having difficulty with.
 2. For unresponsive pilots, send a contact request. Try contacting them on advisory frequency.
- b. If the problem is still ongoing, or you do not have time to solve the problem, contact a Network Supervisor by using the “.wallop” command.
1. When contacting a supervisor, ensure you provide:
 - The callsign of the aircraft, if known
 - The location of the aircraft
 - A description of the problem
 2. Examples:
 - .wallop UAL2083 started taxiing at KORD and will not contact me.
 - .wallop N12345 entered my airspace at KMDW and will not respond.
 - .wallop AIRFORCE1 east of KCID does not know how to squawk a beacon code.

Chapter 3. Position Staffing

3-1 Major Facilities

Chicago O’Hare International Airport (KORD) is the only designated Major Facility. As such, Controllers may not staff any position that serves KORD for which they have not been endorsed, IAW VATSIM Global Ratings Policy.

3-2. Facility Priorities

As a “customer service” gesture, Controllers are urged – but not mandated – to staff the highest position for which they are certified/endorsed. Except during events, positions should be staffed IAW the following list of facility priorities:

- a. CHI_CTR: If needed, CTR may be split into multiple sectors IAW ZAU 01.100, Chicago Center – Standard Operating Procedures.
- b. CHI_APP: Under normal circumstances, TWR at KORD and KMDW should be staffed prior to splitting APP sectors.
- c. MKE_APP: Under normal circumstances, TWR should be staffed prior to splitting APP sectors.
- d. ORD_TWR/GND/DEL or MDW_TWR/GND/DEL
- e. Other Class C TRACONS

***NOTE**—This is not required. It is recommended to staff positions in this order due to the traffic demands within the vZAU ARTCC. It is nothing more than an attempt by The Facility to provide the most comprehensive ATC coverage where The Network demands it most. However, Controllers may work any position for which they are certified/endorsed.*

3-3. Selection

- a. Before logging on to an ATC Facility, the incoming controller shall ensure the position he/she is about to staff is available. Controllers should logon to The Network as an “_OBS” callsign to verify the position is vacant.
- b. If the position is already staffed, the CIC will determine assignments. If a CIC is not logged on, The Controller currently staffing the position may opt to:
 - Continue staffing the position or,
 - Assign the incoming controller the position using the Position Relief Checklist
- c. Arguments over position staffing will not be tolerated. If a CIC is logged on, he/she has final determination as the ATM’s representative. Otherwise, the situation should be handled IAW 3-3b and should be referred to the ATM or DATM through email, *Discord*, or other venues.

3-4. Opening Procedures

- a. CONNECTING
 1. Where applicable, the Controller must connect using a callsign which matches the position being opened. Refer to vZAU Facility List for a list of approved callsigns.
 2. If relieving another Controller already staffing the same position, the relieving Controller will connect with either
 - i. An “A” appended to the callsign
 - Ex: CHI_35_CTR is staffed. Relieving Controller would connect “CHI_3A_CTR”
 - ii. A “1” appended to the callsign
 - Ex: CHI_Z_APP is staffed. Relieving Controller would connect “CHI_1Z_APP”

- b. COMMUNICATIONS

Where applicable, the Controller must use the following voice/frequency information:

1. Position Name: a name to identify the position being opened. (See vZAU Facility List)
 2. Frequency: a frequency for the position being opened. (See vZAU Facility List)
 3. Voice Server: The introduction of *Audio for VATSIM* has made voice servers not required.
 4. Voice Channel: The introduction of *Audio for VATSIM* has made voice channels not required.
- c. POSITION RELIEF
 1. When relieving another Controller working the same position or opening a position with airspace being controlled by another Controller, the relieving Controller must initiate and

follow the Position Relief Checklist prior to assuming control of the airspace. (See Appendix A1)

2. The Position Relief Briefing should be conducted on *Discord* but can be accomplished via text.

d. NOTIFICATION

1. When opening a newly staffed position, the Controller must notify all other affected Controllers that the position is opened. This is done after connecting to The Network, priming selected frequencies, and receiving a Position Relief Briefing (if applicable).
2. Notification must be made via the ATC chat feature of the radar client, and may also include a notification on *Discord*, and must include the frequency being opened.
3. In some circumstances, extra care should be taken when opening a position which directly affects another (i.e.: CHI_DEP opening with ORD_TWR and CHI_APP being staffed). In these circumstances, the opening Controller should tell the affected Controllers directly, especially when aircraft instructions will change.

e. CONTACT REQUESTS

1. When opening a position with airspace not being controlled by another Controller, and there are aircraft in the area of jurisdiction who are not talking to ATC, the Controller shall send each a contact request.
2. **Contact requests MUST NOT be sent to an aircraft during a critical phase of flight:**
 - i. Takeoff
 - ii. Landing
 - iii. Final Approach

3-5. Closing Procedures

a. POSITION RELIEF

1. When closing a position with airspace that will be absorbed by another Controller, the outgoing Controller must give a Position Relief Briefing prior to relinquishing control of the associated airspace. (See Appendix A1)
2. The Position Relief Briefing should be conducted on *Discord* but can be accomplished via text.

b. NOTIFICATION

1. To the maximum extent possible, Controllers should provide at least a 10-minute warning prior to closing, both on the control frequency and through ATC chat.
2. Controllers must notify everyone affected when the position is being closed, including both Controllers and aircraft on frequency. This is done after giving a Position Relief Briefing (if applicable).

- i. When another Controller will absorb the airspace, aircraft must be instructed to contact the appropriate facility for further ATC service.
3. Notification must be made via frequency, the ATC chat feature, and may also include a notification on *Discord*.
4. In some circumstances, extra care should be taken when closing a position which directly affects another. In these circumstances, the closing Controller should tell the affected Controllers directly, especially when instructions to aircraft will change.

Chapter 4. Tower & Airport

4-1. Operational Hours

At towers that close daily, Controllers may provide Class D tower services:

- IAW actual published hours as listed on the Facility List

4-2. Runway Selection

- a. TWR—or the Radar facility providing the TWR function—determines the active runway(s).
- b. Except where a “runway use” program is in effect, use the runway most aligned with the wind when 5 knots or more, or the “calm wind” runway when less than 5 knots, unless:
 1. A pilot requests a different runway.
 - i. IAW VATSIM Policy, Controllers may not deny a pilot’s request to use a runway other than the one designated active. However, this does not prevent Controllers from delaying the aircraft until such time the operation can be conducted safely with minimal impact on other air traffic.
 - ii. When traffic conditions immediately prevent the operation, instruct the aircraft to hold and advise of the anticipated delay time and reason.

EXAMPLE—

“N123AA, CLEARED TO FYTTE INTERSECTION, HOLD AS PUBLISHED. EXPECT FURTHER CLEARANCE ZERO ONE FIVE THREE, FOR YOUR REQUEST.”

Or

“N359CW, RUNWAY ONE ZERO LEFT AT DELTA DELTA, TAXI VIA ALPHA NINER, KILO. EXPECT ONE ZERO MINUTE DEPARTURE DELAY DUE TO OPPOSITE DIRECTION TRAFFIC.”

- c. An operational advantage will be gained.

4-3. Approach Selection

- a. The radar facility providing the APP function determines the approach in use at primary, secondary, and satellite airports. If no Radar facility is staffed, TWR should not advertise approach information, only runways in use.

4-4. Voice ATIS

- a. TWRs must setup a voice ATIS when staffed.
 - 1. Radar facilities providing the TWR function may setup a voice ATIS for one of their airports.
 - 2. GND/DEL may only setup a voice ATIS when the Controller is an S1 and coordination has been made with the TWR or Radar facility providing the TWR function.
 - 3. When TWR or a Radar facility providing the TWR function allows GND/DEL to setup an ATIS, the TWR / Radar Controller is responsible for the content and quality.
- b. If a voice ATIS is operating for an airport, do not include any METAR or runway information for that airport in your Controller Information.
- c. Notify all affected positions when an ATIS code changes, along with any significant change.

4-5. IFR Departures

- a. Unless specified in a facility SOP, published on a SID, or otherwise coordinated, all IFR departures will be assigned 3,000 feet MSL, and told to expect filed altitude 10 minutes after departure.
- b. Unless facility SOPs authorize automatic releases:
 - 1. TWR must obtain an IFR release from the radar facility providing the DEP function- when staffed- for each IFR departure prior to allowing the aircraft to depart. As a standard, releases will usually include initial headings.

EXAMPLE—

“EAST DEPARTURE, EXECUTIVE TOWER, RELEASE.”

“EAST DEPARTURE.”

“REQUEST RELEASE N528PC RUNWAY ONE SIX.”

“N528PC TURN LEFT HEADING ZERO NINER ZERO, RELEASED, TANGO MIKE.”

“MIKE SIERRA.”

NOTE— *The departure runway is not required during the release call when the aircraft is departing the runway advertised on the ATIS, the runway is active on the Information Display System, or the departing runway has been previously coordinated.*

- c. When traffic conditions/airspace configurations permit, an “On Course” release may be issued by the radar Controller. This allows an aircraft to proceed on course instead of flying an assigned heading.

EXAMPLE—

“N331MT, TURN LEFT ON COURSE. RUNWAY THREE ONE, CLEARED FOR TAKEOFF.”

NOTE-- Clearance to “proceed on course” does not require the aircraft to be RNAV equipped. Pilots without GPS/RNAV equipment may still navigate their aircraft on course without assistance from ATC. However, the pilot may request lateral guidance to his/her first fix, in which case an initial heading must be provided.

- d. If no radar facility is staffed that would provide the DEP function, no initial heading or departure instruction will be issued.
- e. TWRs with automatic releases authorized in a facility SOP should release aircraft IAW the specific SOP.

4-6. IFR Missed Approaches

- a. Except where specified in a facility SOP: IFR aircraft that conduct a missed approach at a controlled airport may be instructed by the TWR to execute the published missed approach, or issued runway heading and assigned 5,000 feet MSL.
- b. If a radar facility is staffed and providing the APP function, TWR must notify the radar Controller as soon as possible of the missed approach-- the radar Controller may want the aircraft on an alternate climb-out.

Chapter 5. Satellite Towers**5-1. Definition**

For vZAU/VATSIM purposes, “Satellite Tower” describes any Class D tower that directly underlies Center airspace (outside of a TRACON).

5-2. Termination of Radar Service

Because of the simulated lack of radar coverage, CTR must terminate radar service to any aircraft being handled by the sector prior to switching the aircraft to TWR. To accurately simulate this on The Network, the aircraft’s track should be dropped at an appropriate time, even when the TWR is not staffed.

EXAMPLE—

“NOVEMBER THREE ALPHA BRAVO, RADAR SERVICES TERMINATED, CONTACT OSHKOSH TOWER ONE ONE EIGHT POINT FIVE.”

5-3. IFR Termination Notification

Just as CTR must provide TWR with IFR inbound notification, TWR must notify CTR when an IFR aircraft has landed or has cancelled IFR.

EXAMPLE—

TWR-- "EAST FEEDER, OSHKOSH TOWER, ARRIVAL."

CTR—"EAST FEEDER."

TWR-- "N12345 DOWN AT 0155."

Chapter 6. Basic Radar

6-1. Lowest Assigned Altitude

- a. Unless otherwise prescribed in a SOP or defined in an MVA map, no aircraft will be assigned an altitude lower than the MIA (Minimum IFR Altitude) published for the arrival airport.
- b. MIA information may be obtained from any Low Enroute Chart. Where different MIAs are published, Controllers shall use their best judgment when choosing which to assign.

NOTE-- VFR aircraft may be expected to fly at any altitude unless otherwise restricted by ATC.

6-2. Transfer of Control Points (TCPs)

Controllers generally do not have permission-- or "control"-- to issue any control instruction to an aircraft outside their airspace unless it is defined in a LOA or SOP. Within vZAU ARTCC and unless otherwise defined in a LOA or SOP, controllers receiving a handoff have control as follows:

- a. ARRIVALS
 1. APP Controllers have control of arriving aircraft on contact for turns up to 30-degrees and descent.
- b. DEPARTURES
 1. CTR Controllers have control of departing aircraft on contact for turns up to 30-degrees and climb.
- c. SECTOR-TO-SECTOR
 1. The receiving Controller has control within 10 miles of his/her sector boundary for turns up to 30-degrees, altitude, and speed.

Chapter 7. Terminal Radar

7-1. IFR Inbound Notification

- a. vZAU ARTCC simulates all controlled airports within each TRACON as having a Certified Tower Radar Display.
- b. Arrivals to primary airports are not handed off to the TWR. Instead, the TWR's radar display is considered inbound notification, and communications are transferred without a transfer of radar identification.

***NOTE--** This means the aircraft will remain on a CTR or APP tag all the way to the ground. The aircraft is not “flashed” to the primary tower under normal circumstances.*

7-2. Departure Altitudes

- a. Except as defined in facility SOPs, LOAs, or where altitudes are published on a SID:
 1. All IFR departures from a TRACON/RAPCON with a cruise altitude above the DEP airspace will be assigned the highest altitude within the Terminal Airspace prior to communications transfer to CTR or UNICOM.

Chapter 8. Enroute Radar

8-1. TRACON/RAPCON Arrival Altitudes

- a. Except as defined in facility SOPs, LOAs or where altitudes are published on a STAR:
 1. All IFR arrivals into a TRACON/RAPCON with a cruise altitude above the top of the Terminal Airspace will be assigned the top altitude of that Terminal Airspace.
 2. If an aircraft has a cruise altitude that is at or below the top of Terminal Airspace:
 - i. the aircraft must be level at time of handoff
 - ii. handoff must be initiated at least 15 miles from the Terminal Airspace boundary.

***NOTE--** Any deviation from this procedure must be coordinated between affected Controllers.*

Appendix
vZAU Position Relief Checklist

A1.

Version 1.0

1. **Preview the position (Relieving Controller)**
 - a. Verify Radar Client setup and frequencies
 - b. Observe the operational situation
 - c. Familiarize yourself with weather, NOTAMs, and other pertinent information affecting the area of jurisdiction.
 - d. Monitor communications and observe current and pending traffic and correlate what you hear with what you see.
 - e. Advise the controller being relieved that you have previewed the position and briefing may begin by completing the following steps:
 - i. Set your primary frequency to that of the position you are about to take control
 - ii. State that you are “ready for the brief”

2. **Position Relief Briefing (Controller Being Relieved)**

POSITION RELIEF – CHICAGO CENTER

- a. Weather Trends
- b. Special Requests
- c. Preapproved Coordination with other Sectors (pointouts, control, traffic management requirements)
- d. Coordination Requests
- e. ATC Staffing Affecting the Position (adjacent CTR sectors, APP sectors, TWRs staffed)
- f. Class Bravo Flow / Runway / Approach In Use (Depending on APP staffing)
- g. Traffic
 - i. Inbounds
 - ii. Outbounds
 - iii. Overflights
 - iv. Handoffs (pending, projected, accepted)
 - v. Holding
 - vi. Awaiting Release
 - vii. Flight Following

NOTE—ITEMS a-d MAY BE OMITTED IF THE RELIEVING CONTROLLER STATES THEY “HAVE A THROUGH D”.

POSITION RELIEF – APPROACH / DEPARTURE

- a. Weather Trends
- b. Special Requests
- c. Preapproved Coordination with other Sectors (pointouts, control, traffic management requirements)
- d. Coordination Requests
- e. ATC Staffing Affecting the Position (adjacent CTR sectors, APP sectors, TWRs staffed)

- f. Runway / Approach In Use at Primary Airport (satellite airports if traffic exists)
- g. Traffic
 - i. Inbounds
 - ii. Outbounds
 - iii. Overflights
 - iv. Handoffs (pending, projected, accepted)
 - v. Holding
 - vi. Awaiting Release
 - vii. Flight Following

NOTE—ITEMS a-d MAY BE OMITTED IF THE RELIEVING CONTROLLER STATES THEY “HAVE A THROUGH D”.

POSITION RELIEF – TOWER / GROUND / DELIVERY

- a. Weather Trends
- b. Special Requests
- c. Preapproved Coordination with other Sectors (pointouts, control, traffic management requirements)
- d. Coordination Requests
- e. ATC Staffing Affecting the Position (CTR/APP sector providing radar, TWR, GND, DEL)
- f. Runway / Approach In Use
- g. Traffic
 - i. Inbounds
 - ii. Outbounds Awaiting Takeoff Clearance
 - iii. Pattern Traffic
 - iv. Overflights
 - v. Taxiing (if applicable)
 - vi. Taxi Routes
 - vii. Awaiting Release (if applicable)
 - viii. Awaiting Clearance
 - ix. Awaiting Taxi

NOTE—ITEMS a-d MAY BE OMITTED IF THE RELIEVING CONTROLLER STATES THEY “HAVE A THROUGH D”.

3. Assumption of Position Responsibility (Both Controllers)

- a. Ask any remaining questions.
- b. Relieving Controller states, "My Control" and operating initials.
- c. Controller being relieved states, "Your Control" and operating initials.
- d. This indicates the responsibility for that position has successfully been transferred. At this point, the controller being relieved is no longer on position.

4. Review the Position

- a. Observe the position and monitor frequencies to ensure that nothing has been forgotten. If something has been forgotten or needs to be clarified, the controller being relieved should pass that information as soon as possible during this step.
- b. After approximately one minute has passed, the controller being relieved has completed this step and the Position Relief Checklist is complete.