Tri-Cities ATCT (TRI)

Tower and Approach Control

ZTL

Standard Operating Procedures

4 May 2024

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Chapter 1. Introduction

1-1. PURPOSE

This Order establishes standard operating procedures for use by persons providing air traffic control services at the (TRI) Airport Traffic Control Tower (ATCT) on the VATSIM network. This Order is designed to supplement VATUSA and ZTL directives.

1-2. AUDIENCE

This order applies to anyone controlling Tri-Cities (TRI) Tower and Approach Control positions on VATSIM.

1-3. DISTRIBUTION

This Order is available in the ZTL Files Library located at https://www.ztlartcc.org/controllers/files, under SOPs.

Chapter 2. General

2-1. POSITIONS AND FREQUENCIES

Position	Frequency	STARS
Tower CIC (TCIC)		
TRACON CIC (CIC)		
Clearance Delivery/Ground Control (CD/GC)	121.7	
Local Control (LC)	119.5	T
East Radar (ER)	125.5	E
West Radar (WR)	134.42	W
Final Radar (FR)	128.05	F

2-3. COMBINING POSITIONS

a. **Tower/TRACON combined:** the entire facility combines to East Radar.
b. **Tower:**
   i. Tower CIC combines to/decombines from any position. To the extent possible, Tower CIC should not be combined with Local Control.
   ii. Flight Data combines to/decombines from Ground Control.
   iii. Ground Control combines to/decombines from Local Control.
c. **TRACON:**
   i. Tracon CIC may be combined to/decombined from either West Radar or East Radar.
   ii. West Radar combines to/decombines from East Radar.

Chapter 3. Tower Cab

3-1. USE OF ACTIVE RUNWAYS

    a. **Calm wind runway.** There are neither formal runway use programs nor noise abatement procedures at TRI. Runway 23 is the calm wind runway and is used for arrivals when weather conditions are less than ILS CAT I minima.

    b. **Runway 9/27 inactive.** Ground Control has control of runway 9/27 while it is inactive.

    c. **Taxiing on runways.** Any operation on a runway except crossing it shall be done on Local's frequency.

    d. **Runway 5 wingspan restriction.** Do not allow simultaneous operation of aircraft on taxiway A with a wingspan greater than 79ft (Airport Design Group III thru VI) from taxiway Y to the approach end of runway 5, while aircraft are operating on runway 5. ***EXAMPLE**- CRJ9, B737, A319, and larger.*

3-2. CLEARANCE DELIVERY/GROUND CONTROL (CD/GC)

a. **ATIS.** Maintain the ATIS. Advise the TRACON CIC and all Tower positions when the ATIS is updated.
  i. In addition to the content required FAAO 7110.65, include the following statement: *"V-F-R departures advise Ground Control of type aircraft, requested altitude, and on-course heading."*

b. **Clearances:**
  i. **All departures.** Assign departure frequency and beacon code.
    1. If the TRACON is combined, assigned East Radar frequency.
    2. Assign West Radar frequency to aircraft routed west of the RY 5/23 extended centerline.
    3. Assign East Radar frequency to aircraft routed east of the RY 5/23 extended centerline.
    4. For any aircraft requesting multiple practice approaches, assign East Radar frequency.
  ii. **VFR departure instructions.** No altitude restriction is required.
  iii. **SVFR clearances.** Assign an altitude at or below 3,500ft. If the pilot requests the pattern altitude use the phraseology *"PATTERN ALTITUDE AT OR BELOW 3,000."*
  iv. **IFR clearances.** Assign the KINGS SID or runway heading, and an altitude of 10,000 or requested if lower. The TRI ODP is NOT authorized except when explicitly requested/required by the pilot.

c. **Managing ground traffic:**
  i. **Area of jurisdiction.** All movement areas, not including the active runway(s).
  ii. **Mandatory coordination with Local Control.**
    1. Aircraft requesting intersection departures.
    2. Departures on other than the active runway.
    3. Runway crossings.
    4. Operations on an active runway (must occur on Local Control frequency).
  iii. **Runway 23 ILS critical area.** Instruct aircraft to hold short of the critical area when the reported ceiling is less than 800ft and/or visibility is less than 2SM.

3-4. LOCAL CONTROL (LC)

a. **Area of jurisdiction.** Active runways and the tower airspace.
b. **Automatic departure releases.** Local has automatic releases in accordance with Chapter 7. Use runway heading, unless otherwise coordinated, except for VFR helicopters and single engine props. Ensure field 16 is properly marked, per Chapter 5, if you need to restrict TRACON's control for turns.
c. **Control of VFR arrivals.** Local has control for VFR arrivals in accordance with Chapter 7.
d. **Pattern traffic.** Ensure that aircraft in the traffic pattern stay within 4.3NM of the airport.
e. **LUAW.** Line Up and Wait (LUAW) is authorized.

Chapter 4. TRACON

4-1. EAST/WEST/FINAL RADAR (ER/WR/FR)

a. TRI provides Terminal Radar Service Area (TRSA) service within the TRI TRSA.

b. **Sequence authority.** When split, WR establishes the sequence for the active runway.

c. **Coordination between TRACON sectors.**

    i. **RY 5/23 departures.** A STARS tag constitutes a point-out to the adjacent TRI sector.

    ii. **RY 9/27 IFR departures.** If the aircraft will initially enter the opposite sector, the sector that will work the departure will coordinate the release with the opposite sector before releasing the aircraft with LC.

    iii. **RY 9/27 VFR departures.** The sector that will work the aircraft is responsible for appropriate coordination with the opposite sector before the aircraft leaves tower airspace.

    iv. **Arrival sequence.** WR establishes the sequence for the active runway.

d. **Communication transfer to LC.** After all conflicts have been resolved, transfer communications to LC at or before 5NM from the airport unless otherwise coordinated.

e. **Opposing bases.** Ensure vertical separation until another form of separation is established.

f. **Procedures when Final Radar (FR) is open.**

    i. FR has control for descent and turns up to 30 degrees.

    ii. ER shall feed IFR aircraft either level at 6,000 or descending to 8,000.

    iii. WR shall feed IFR aircraft either level at 5,000 or descending to 7,000.

    iv. All VFR aircraft shall be fed at or descending to 4,000.

    v. All arriving aircraft must be sequenced onto a downwind heading for FR.

Chapter 5. Departure Flight Progress Strips

a. Ground Control in the tower cab is responsible for filling out flight progress strips on all IFR/VFR departures.

1 Aircraft ID	5 Beacon code	8 Destination	9 IFR: Route 9 :VFR: On-course heading	10 Reported ATIS	11 N/A	12 CFR time**
3 Aircraft type/suffix	6 P-time			13 Check for clearance readback	14 Intersection	15 Runway
4 CID (auto)	7 Expected altitude		9A Remarks*	16 Departure sector***	17 Heading other than runway heading	18 N/A

* Remarks as follows:

++FRC++ Full Route Clearance

++FRC/XXX++ Full Route Clearance issued up to a particular fix (XXX).

++EDCT XXXXz++ EDCT time when issued by ZTL. Aircraft must depart within 5 minutes before/5 minutes after the EDCT.

** Call For Release (CFR) release time issued by ZTL. Aircraft must depart within 2 minutes before/1 minute after the time.

*** Ground Control must only fill out when ER/WR are split. For LC, see Chapter 3 Section 4.

Chapter 6. Airspace

6-1. INTRAFACILITY AIRSPACE

a. **Tower Airspace.** Local Control owns:
   i.   4.3NM around the Tri-Cities airport at and below 3,000ft.
   ii. The Departure Corridor for the active departure runway (5 or 23) at or below 10,000ft, defined as 1.5NM on both sides of the runway centerline starting at the departure end and extending to 10NM.

b. **East Radar/West Radar.** Airspace is divided by extending to the RY5/23 centerlines to the TRACON boundary. Airspace is 10,000ft and below, excluding Tower airspace and, when open, Final Radar.

c. **Final Radar.** When open, airspace is 6NM on either side of the active runway centerline from the approach end of that runway to an 18NM final, 8,000ft and below.
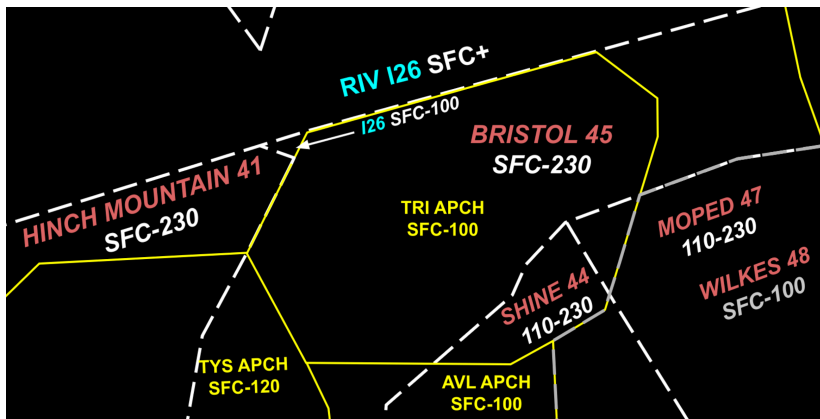
Figure 6-1. Tower Airspace/Departure Corridor
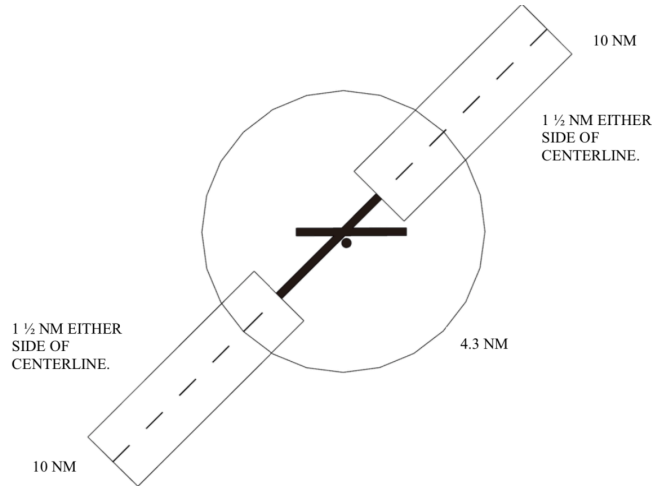
6-2. INTERFACILITY AIRSPACE

a. TRACON owns the airspace delegated to TRI by ZTL. Refer to the TRI-ZTL Letter of Agreement.

Figure 6-2. Interfacility Airspace

Chapter 7. Tower/TRACON Coordination

7-1. DEPARTURE COORDINATION

    a. **Automatic releases.** Local Control has automatic releases for all departures except IFR departures from RY9/27, unless otherwise coordinated.

    b. **Departure headings.** Departures must be assigned the following takeoff headings.
        i. **All IFR:** runway heading.
        ii. **VFR multi-engine props/VFR turboprops/VFR jets:** runway heading.
        iii. **VFR single-engine props:**
            1. **RY23:** heading 180 to 270 to remain in the appropriate radar sector.
            2. **RY5:** heading 360 to 090 to remain in the appropriate radar sector.
            3. **RY27 with RY23 active:** runway heading.
            4. **RY9 with RY5 active:** runway heading.
            5. **All other departures or the ODP:** only as verbally coordinated.
            6. Mark the assigned heading in field 17 of the strip.
        iv. **VFR helicopters:** any heading or on course. Put assigned/on course heading in field 17.

    c. **Control for turns.** By default, ER/WR has control for turns within their sector. If LC marks field 16 ENT or WNT, this indicates the aircraft may only be turned up to heading 140 (ENT) or 320 (WNT), until the aircraft is at least 3 miles from the extended centerline of RY 5/23.

    d. **Successive departure separation.** LC is responsible for initial separation between all departures (3 miles, 15 degrees, visual, etc) and between successive departures and arrivals. LC must separate VFR helicopters from all known traffic. Any altitude assignments issued to VFR aircraft shall be indicated via the data block (+###).

7-2. ARRIVAL COORDINATION

    a. **STARS data transfer.** Quick Look is used for data transfer. Local Control must Quick Look all TRACON positions. STARS handoff to tower is used for VFR arrivals and the "in-close" procedure below (7-2b).

    b. **"In-close" procedure.** TRACON may initiate STARS handoff to Local Control for a VFR/SVFR/visual approach arrival on the departure side of the airport. If Local Control accepts the handoff, they assume responsibility for separation between that arrival and any departing aircraft. Aircraft must be instructed by TRACON to enter the appropriate downwind.

    c. **VFR helicopter arrivals.** TRACON will instruct VFR helicopters to proceed direct the airport and transfer communications to the tower at 5NM.

    d. **Transfer of control/communications.** TRACON shall transfer communications to Local Control at/before 5NM. All VFR aircraft landing KTRI must be tower's control on communications transfer.

    e. **Inactive runway arrivals.** TRACON must verbally coordinate with the tower, except for VFR helicopters.

    f. **Use of tower airspace.** TRACON may use tower airspace with tagged arrivals except the Departure Corridor (e.g. narrow downwind vectors or visual approaches).

    g. **Missed approaches.** TRACON shall coordinate the heading and altitude issued for planned missed approaches. For unplanned missed approaches/go arounds, tower shall request a heading and altitude from the appropriate sector. Visual approaches may go to the pattern; tower must advise TRACON.

    h. **Tower pattern saturation.** Upon request, TRACON shall set up arrivals to join final no closer than 6NM.

7-3. AUTOMATED POINT OUTS

a. The STARS automated point-out function may be used between all positions under the following circumstances. All other circumstances require traditional, verbal coordination.
    i. **TRACON to tower:** may be used for overflights/arrivals transitioning tower airspace.
        1. Aircraft are assumed to be levels, unless an altitude is entered in the data block (+###), and in straight flight. The secondary scratch pad "UNR" may be used for a VFR aircraft without any altitude restriction.
    ii. **Tower to TRACON:** may be used for pattern extensions. "TRI" must be in the scratch pad.

7-4. USE OF SCRATCH PADS

a. The primary scratch pad (Y) must be filled with the three letter destination airport identifier.
b. The second scratch pad (Y+) must be filled as follows:

OPE	Option returning to ER	Verbally coordinate approach and the missed approach instructions issued, unless the aircraft is on the advertised approach and published missed approach.
OPW	Option returning to WR	
TB	Requesting a full-stop taxi-back	Optional entries.
TG	Requesting a touch-and-go	
OH	Requesting the overhead	
WYS	Parking at the Wysong Ramp	
CGO	Parking at the Cargo Ramp	
NOR	Parking at the North Ramp	
GPS	RNAV (GPS) approach to active runway	Only required when not executing the advertised missed approach (e.g., ILS 23 advertised, aircraft cleared for RNAV 23).
ILS	ILS approach to active runway	
VA	Visual approach to active runway	
R23	Landing runway 23	Use for when landing an inactive runway, with verbal coordination.
R05	Landing runway 5	
R27	Landing runway 27	
R09	Landing runway 9	

7-5. OPPOSITE DIRECTION OPERATIONS

a. **Definition.** Opposite direction operations (ODO) are defined as any IFR and/or VFR operations conducted to the same runway where an aircraft is operating in a reciprocal direction of another aircraft arriving, departing, or executing an approach.

b. **General.**
   i.   Advise the TCIC or CIC when an ODO is being conducted or requested.
   ii. All coordination concerning an ODO must state the words "OPPOSITE DIRECTION."
   iii. All coordination concerning an ODO with a VFR aircraft involved must state the words "VFR OPPOSITE DIRECTION."
   iv. Controllers must issue traffic advisories to both aircraft
        EXAMPLE- "Opposite direction traffic, one five mile final, Citation."
        EXAMPLE- "Opposite direction traffic departing runway five, King Air."
   v.   Visual separation is NOT authorized for ODOs, unless both aircraft are VFR.
   vi. The ODO cutoff point when both aircraft are IFR/SVFR is a ten (10) mile final.
   vii. ODO arrivals on downwind shall not turn base until the departure is airborne and turning to avoid conflict or the arrival aircraft crosses the landing threshold.

c. **Opposite direction departures when both aircraft are IFR/SVFR:**
   i.   Local Control must coordinate for ODO departures with the appropriate radar sector with the callsign, type aircraft, and runway.
   ii. ODO release request shall not occur until the aircraft is holding short and ready for takeoff.
   iii. The radar controller issuing the release is responsible for ensuring the cutoff point is complied with. The departure must be airborne, radar identified, and turned to avoid conflict with the ODO arrival prior to the arrival reaching the cutoff point.

d. **Opposite direction arrivals when both aircraft are IFR/SVFR:**
   i.   The radar controller must initiate coordination for ODO arrival requests with Local Control with the callsign, type aircraft, and runway.
   ii. Local Control must request release for ALL departures after an opposite direction arrival has been approved with the appropriate radar sector. For these cases, follow the ODO departure procedures.
   iii. Local Control must ensure pattern traffic is turned to avoid all conflicts before an ODO arrival reaches the cutoff point.
   iv. For ODO arrivals involving two arrivals, the radar controller must ensure that the first arrival has crossed the threshold prior to the second arrival reaching the cutoff point.

e. **Opposite direction operations when one or both aircraft are VFR:**
   i.   Local Control must initiate verbal coordination for VFR ODO with the appropriate radar sector with the callsign, type aircraft, and runway.
   ii. Local Control must issue a turn to avoid a conflict with opposite traffic. Both aircraft involved must be on LC frequency unless a VFR arrival is more than 10 flying miles from the airport.
   iii. Local Control may apply visual separation if both aircraft are VFR.

Chapter 8. Position Relief Checklists

8-1. TOWER CAB POSITIONS

1. Configuration: ATIS letter/runway and approach in use/cab staffing/TRACON staffing.
2. Traffic management initiatives (miles in trail, ground stops, etc).
3. Special operations.
4. Special instructions/coordination agreements with other positions.
5. Hazardous weather.
6. Communications status and traffic of all aircraft.

8-2. TRACON POSITIONS

1. Configuration: TRI ATIS/TRI runway and approach in use/cab staffing/TRACON staffing.
2. Neighboring sectorzation: AVL, TYS, ZID, ZTL.
3. Traffic management initiatives (miles in trail, ground stops, etc).
4. Special instructions/coordination agreements with other positions.
5. Hazardous weather.
6. Communications status and traffic of all aircraft.

8-3. FACILITY CLOSING/OPENING

a. Tower cab must make the opening/closing broadcast on all frequencies.
b. TRACON must brief and switch all traffic to ZTL, then make the opening/closing broadcast on all frequencies.
c. **Opening broadcasts:** *"Tri-Cities Tower and Approach Control are resuming T-R-S-A and Class Delta services. Tri-Cities Airport ATIS (letter) is current. (Additional information as required.)"*
d. **Closing broadcasts:** *"Tri-Cities Tower and Approach Control are suspending T-R-S-A and Class Delta services. Class Echo airspace is in effect. Air traffic control services may be obtained from Atlanta Center on (frequency). All aircraft at Tri-Cities airport are urged to use the common traffic advisory frequency 119.5 while the tower is closed. (Additional information as required.)"*