SHARE THE AIR

AN IN-FLIGHT GUIDE TO: SHEPPARD AIR FORCE BASE/ WICHITA FALLS MUNICIPAL AND SURROUNDING AREA

DEC 11

CONTENTS

INTRODUCTION

The area surrounding Sheppard Air Force Base/Wichita Falls Municipal Airport is host to a great variety of aviation activities. Numerous airline, other civil aviation, and military training flights take place at Sheppard Air Force Base/Wichita Falls Municipal Airport and in the surrounding area.

Take a few minutes to read through this guide. It offers valuable advice on "Sharing the Air" in the Texoma region.

This guide was created by the Flight Safety Office at Sheppard Air Force Base. Please refer any questions or comments to Public Affairs Office at (940) 676-2732, Flight Safety Office at (940) 676-5000 or the Air Traffic Control Office at (940) 676-7677.

This guide is current as of Dec 2011. Please refer to current aviation publications for the latest aeronautical information.

Why do we publish our Share the Air Book?

18 Jan 05- Midair collision between a T-37B and an Air Tractor AT-502B near Hollister, Oklahoma. **The commercial pilot in the AT-502B was fatally injured.**

LIST OF RECENT NEAR-MIDAIR COLLISIONS:

05 Mar 08- T-38 versus civilian climbing out of Kickapoo
13 Aug 08- T-38 versus pipeline aircraft 1 mile off Runway 33 left SAFB
01 Oct 08- T-38 crosses over a civilian airplane while descending out of Comer
17 Oct 08- T-38 climbs for departing traffic out of Kickapoo
07 Dec 08- T-38 climbs for civilian traffic at Annaa
15 Apr 09- T-37 descending on VOR DME / A versus Air Tractor
27 Jan 10- 2-ship T-6 formation versus Evac flight helicopter at 1500' MSL between the T-6 pattern entry point Bridge and the Class D air space
27 Apr 10- T-6 versus civilian traffic in military operations area (MOA)
30 Apr 10- T-6 versus civilian traffic from Kickapoo in T-6 VFR traffic pattern shortly after T-6 entered the pattern at the town of Dean and was descending to 1500' MSL

WICHITA FALLS MUNICIPAL
SHEPPARD AFB

Wichita Falls Municipal/Sheppard AFB is unique in that it is the only United States Air Force flight training base that hosts a civilian municipal airport.

When flying to or from the base, there are several important points to be aware of. During most times when the 80th Flying Training Wing is flying, Sheppard Tower controls Runways 17/35 and 15C/33C. Runways 15R/33L and 15L/33R are controlled by separate runway supervisory units (RSUs). These RSUs control either T-38 or T-6 aircraft on separate UHF frequencies.

During normal operations, civilian aircraft primarily takeoff and land on Runway 17/35. T-38 aircraft utilize a west traffic pattern from 2,300 to 5,000 feet MSL on Runway 15R/33L. It is imperative that aircraft operating on Runway 17/35 comply with altitude restrictions (usually to remain at or below 1,800 feet MSL) given by Sheppard Air Traffic Control. This will decrease the chance of a conflict with traffic operating from other runways.

Due to the intensity of air traffic operations in the vicinity of Wichita Falls Municipal/Sheppard AFB, **contact Sheppard approach control on 118.2 (120.4 for runway 33) within 25 nautical miles.**

Approach control will provide VFR advisories to the maximum extent possible.

Solo students are not authorized. Dual civilian training operations restricted to Rwy 17/35 full stop only when SAFB is flying. Touch and go's permitted only when no SAFB flying and restricted to Rwy 17/35 only.

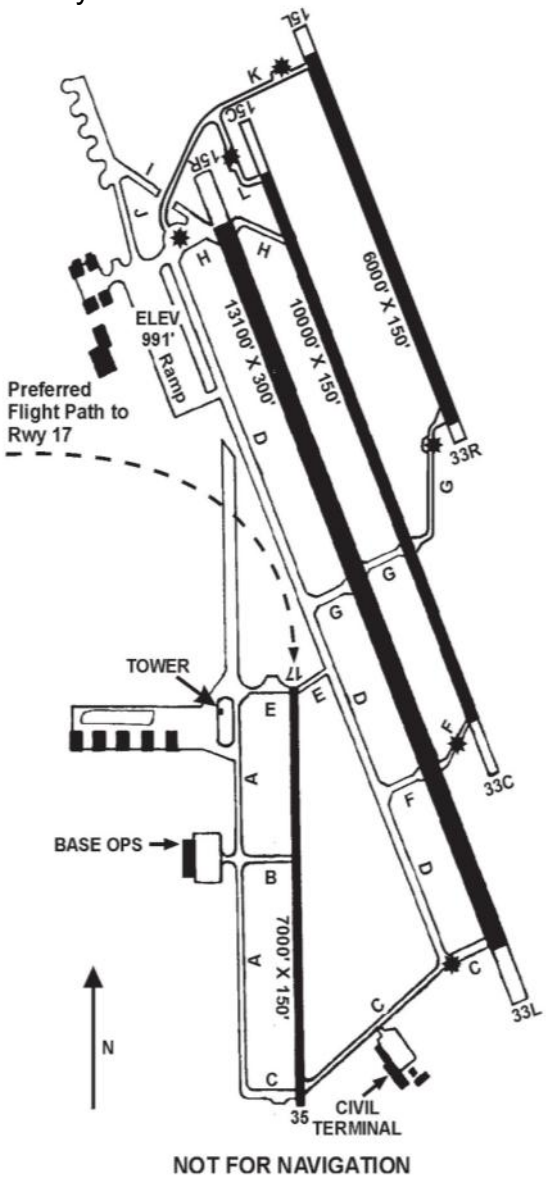
WICHITA FALLS MUNICIPAL

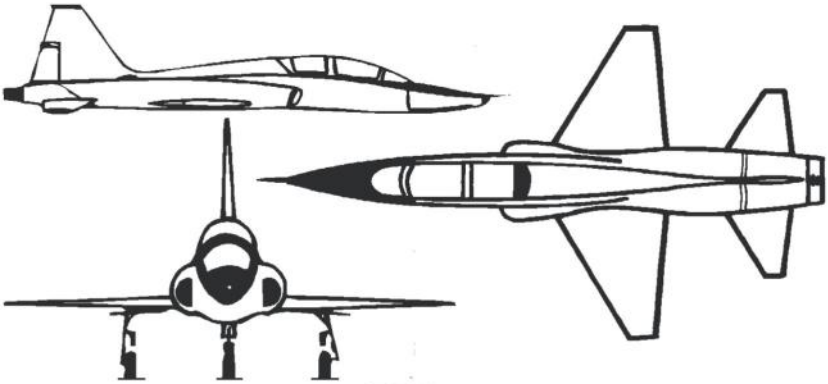
CONTACT SHEPPARD APPROACH
CONTROL ON 118.2 WITHIN 25 NM
120.4 for runway 33

WARNING!!
The final approach to Runway 17 requires a steep, descending right turn from base leg with almost no straight-in portion. Overshooting this turn presents the most serious potential for conflict in the Sheppard environment due to the high performance, high density traffic on Runways 15R and 15L. Extreme caution should be exercised when landing on Runway 17 so as not to overfly Military Parking Ramp or the taxiway parallel to Runway 15R.

Pattern entry will be at or below 2,300 feet MSL from either the SPS VORTAC or Kickapoo Airport. Maintain 1,800' MSL in the pattern for Runway 17/35.

Lead-in landing strobes define the ground track a pilot should follow when flying a VFR approach to Runway 17.





T-38C

THE NORTHROP T-38 "TALON"

MISSION : ADVANCED JET PILOT TRAINING

CREW : USUALLY TWO (INSTRUCTOR PILOT AND STUDENT PILOT). CAN BE AND OFTEN IS, FLOWN BY SOLO STUDENT PILOTS.

NORMAL TAKEOFF GROSS WEIGHT: 12,500 LBS

LENGTH: 46" 4' WINGSPAN: 25" 3'

ENGINES : TWO GENERAL ELECTRIC J85-GE-5 AXIAL FLOW TURBO-JET ENGINES WITH AFTERBURNER. MAXIMUM THRUST - 2,050 LBS EACH ENGINE AT 100% RPM, 2900 LBS. EACH ENGINE IN FULL AFTERBURNER.

PERFORMANCE DATA

DEPARTURE: AIRSPEED WILL NORMALLY BE 300 KNOTS (345 MPH) BELOW 10,000' FEET MSL, 350 KNOTS (410 MPH) ABOVE 10,000' MSL. RATE OF CLIMB WILL VARY BETWEEN 2,000 TO 10,000 FPM.

CRUISE: MAXIMUM RANGE IS APPROXIMATELY 900 NAUTICAL MILES (1,035 STATUTE MILES). MAXIMUM AIRSPEED IS 710 KNOTS (820 MPH) OR 1.2 MACH. NORMAL CRUISE AIRSPEED IS ABOUT 300 KNOTS (345 MPH).

ARRIVAL : AIRSPEED DURING DESCENT AND ARRIVAL IS NORMALLY 300 KNOTS (345 MPH).

TRAFFIC PATTERN : VFR PATTERN AIRSPEED IS 300 KNOTS (345 MPH). FINAL APPROACH AIRSPEED IS 165 KNOTS (190 MPH) WITH LANDING GEAR EXTENDED AND FULL FLAPS.

SPECIAL CHARACTERISTICS

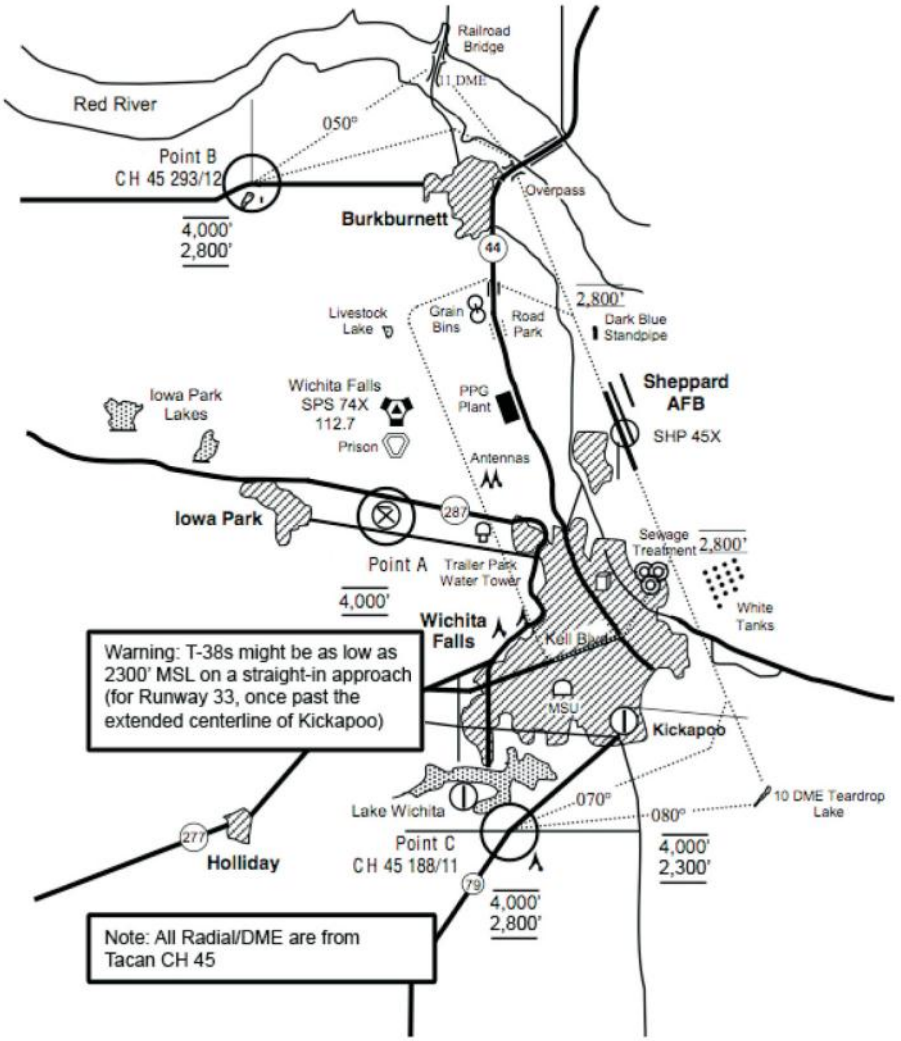
GRAY COLORING OF THE AIRCRAFT AND ITS RELATIVELY SMALL SIZE MAKE IT DIFFICULT TO SEE. BECAUSE THE T-38 FLIES AT SUCH A HIGH AIRSPEED AND THE FRONTAL PROFILE IS EXTREMELY SMALL, IT PRESENTS A VERY REAL PROBLEM IN MIDAIR COLLISION AVOIDANCE. THE WAKE TURBULENCE OF A T-38 IS SIGNIFICANT.

COMMUNICATIONS: *UHF and VHF*
NAVIGATION SYSTEMS: TACAN, ILS, LOCALIZER, *VOR*

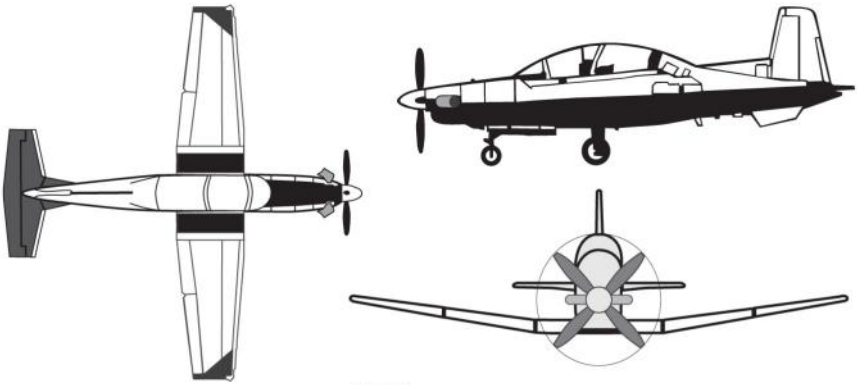
TRAFFIC COLLISION AVOIDANCE SYSTEM TCAS (shows T-38 pilot all squawking aircraft).

T-38 VFR TRAFFIC PATTERNS
RWY 15R/33L

Straight-in	**2,300' MSL**
Normal Overhead	**2,800' MSL**
Breakout	**4,000' MSL**
High Pattern	**4,500' MSL**
Falls Pattern	**5,000' MSL**



* All DME's off SHP CH 45



T-6 II
TEXAN

MISSION: PRIMARY STUDENT JET TRAINING

CREW: USUALLY TWO (INSTRUCTOR PILOT AND STUDENT PILOT). CAN BE AND OFTEN IS, FLOWN BY SOLO STUDENT PILOTS.

NORMAL TAKEOFF GROSS WEIGHT: 6,500 LBS.

LENGTH: 33" 4' WINGSPAN: 33" 5'

ENGINE: PT 6A-68 FREE-TURBINE TURBOPROP

PERFORMANCE DATA

DEPARTURE: AIRSPEED WILL NORMALLY BE 180 KNOTS (190 MPH). RATE OF CLIMB WILL VARY BETWEEN 1,000 TO 5,000 FPM.

MAXIMUM AIRSPEED IS 316 KNOTS (365 MPH). NORMAL CRUISE AIRSPEED IS ABOUT 200 KNOTS (230 MPH)

ARRIVAL: AIRSPEED DURING DESCENT AND ARRIVAL IS 200 KNOTS (230 MPH).

TRAFFIC PATTERN: VFR PATTERN AIRSPEED IS 200 KNOTS (230 MPH). FINAL APPROACH AIRSPEED IS 100 KNOTS (115 MPH) WITH LANDING GEAR EXTENDED AND FULL FLAPS.

SPECIAL CHARACTERISTICS

BLUE AND WHITE COLOR. WAKE TURBULENCE OF AT-6 IS MINOR.

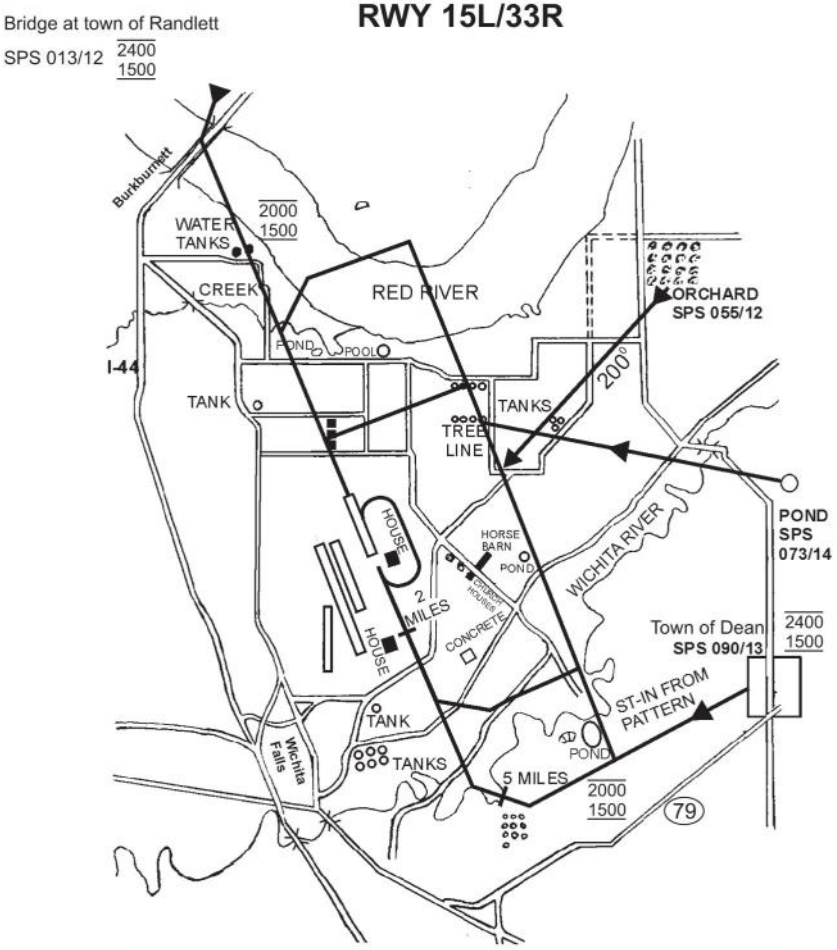
COMMUNICATIONS: UHF AND VHF

NAVIGATION SYSTEMS: VOR, ILS, LOCALIZER, GPS
ALL ARE EQUIPPED WITH TAS/NACWAS SYSTEMS
ALL WITH AN OPERATING SQUAWK CAN BE PICKED UP BY THESE SYSTEMS

T-6 VFR TRAFFIC PATTERN
RWY 15L/33R

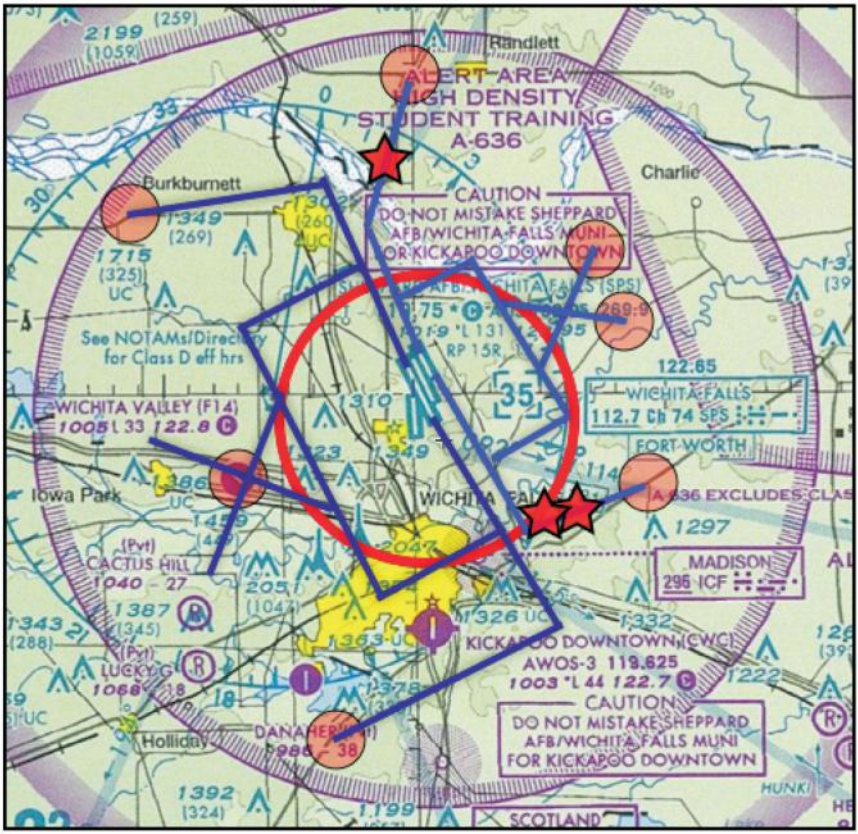
Straight-in	**1,500' MSL**
Normal Overhead	**2,000' MSL**
Breakout	**3,000' MSL**
Chase Pattern	**3,500' MSL**
Emergency Landing Pattern	**4,000' MSL**

T-6 VFR TRAFFIC PATTERN
RWY 15L/33R



T-6's will fly their Emergency Landing Patterns outside Class D airspace
T-6's might fly as low as 1500' MSL from the pattern entry points towards Class D airspace

SHEPPARD AFB TRAFFIC PATTERN



latest civ. vs mil. near midair collision Points

RDR/VFR dropoff

Class D airspace

T-38 pattern (simplified, ref pg. 6)

T-6 pattern (simplified, ref pg. 8)

T-6 - EAST PATTERN
T-38 - WEST PATTERN

T-6 MILITARY OPERATING AREAS
8500’ MSL - FL 220 MON - FRI

T-38 MILITARY OPERATING AREAS
8000’ MSL - FL 230 MON - FRI

AVOID FLYING THROUGH MILITARY OPERATING AREAS

KICKAPOO AIRPORT

Kickapoo Airport is approximately 8 miles south of Sheppard AFB.

Sheppard AFB conducts intensive student jet training both day and night.

Numerous airline and other civilian aircraft operate out of Sheppard AFB.

The T-38 straight-in pattern passes less than 3 miles to the east of Kickapoo Airport at 2,300' MSL.

Advice for Kickapoo users:

Squawk 1200 (unless otherwise assigned) and mode C (altitude) if equipped.

Contact Sheppard approach (118.2) or Sheppard departure (120.4) when operating to, or from, Kickapoo.

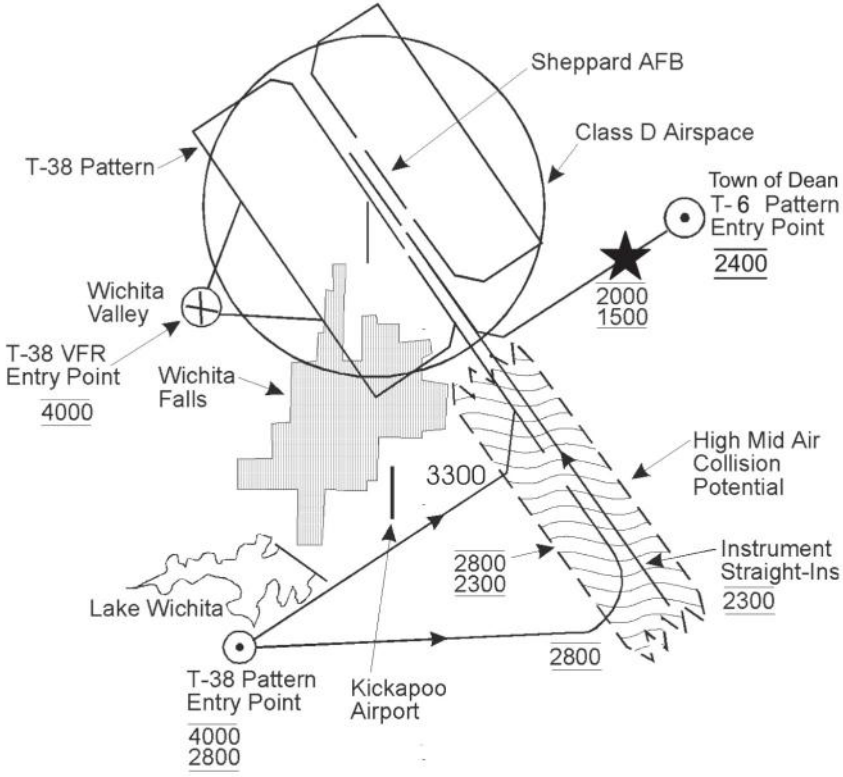
If proceeding toward the extended centerline of runway 33 remain below 1,800' MSL. In all other cases remain below 2,200' MSL until in contact with approach/departure or until well clear (10 miles from Sheppard AFB).

CONTACT SHEPPARD APPROACH [118.2] OR DEPARTURE [120.4]

When 33 is the operational runway, there is a traffic conflict with Kickapoo Airport, T-38 approaches versus Kickapoo departures.

CAUTION

HIGH MID/AIR POTENTIAL FOR AIRCRAFT ARRIVING OR DEPARTING KICKAPOO



★ Latest near midair collision with T-38 and civilian departing Kickapoo at 2000' MSL on 21 Nov 11

If practical avoid flight between the town of Dean and the Class D airspace since T-6's on a straight-in will be as low as 1500'MSL.

WICHITA VALLEY AIRPORT

Wichita Valley Airport is approximately 6 miles west of Sheppard AFB.

Sheppard AFB conducts intensive student jet training both day and night.

Numerous airline and other civilian aircraft operate out of Sheppard AFB.

T-38 jet aircraft pass overhead Wichita Valley at 4,000 MSL en route to Sheppard AFB.

Advice for Wichita Valley users:

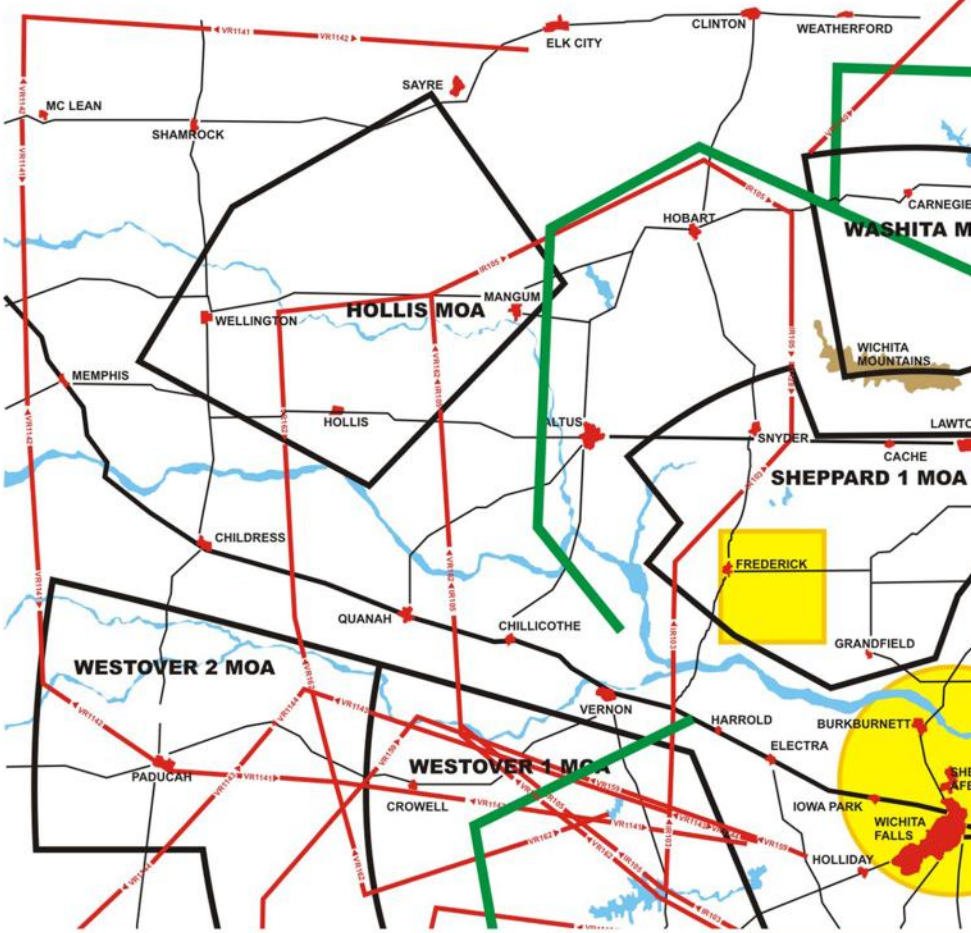
Squawk 1200 (unless otherwise assigned) and mode C (altitude) if equipped.

Contact Sheppard approach (118.2) or Sheppard departure (120.4) when operating to, or from, Wichita Valley.

Remain below 2,200 feet MSL until in contact with approach/departure or until well clear (10 miles from Sheppard AFB).

CONTACT SHEPPARD APPROACH [118.2] OR DEPARTURE [120.4]

Sheppard Low Level Routes (Not to scale, do not use for navi



T-38 MILITARY TRAINING ROUTES (MTRS)

Depicted by the RED LINES. MTRs extend 10 NM either side of course and are flown 500' to 1500' AGL. Speeds in excess of 400 Knots make for a VERY HIGH THREAT ENVIRONMENT. Attempt to cross these routes at 90 DEGREE ANGLES ABOVE 3000' AGL. Contact FSS for MTR information.

T-6 MILITARY TRAINING ROUTES (MTRS)

Depicted by the GREEN LINES. MTRs extend 5 NM either side of course and are flown 500' to 1500' AGL. Speeds up to 250 Knots make for a VERY HIGH THREAT ENVIRONMENT. Attempt to cross these routes at 90 DEGREE ANGLES ABOVE 3000' AGL. Contact FSS for MTR information.

FREDRICK MUNICIPAL AIRPOR

student training in progress from s
Pattern speeds are up to 200 knot
communicates on UHF radio frequ
supervisory unit provides traffic ad
Unicom). Normal operations occu
during daylight hours.

SHEPPARD AIR FORCE BASE

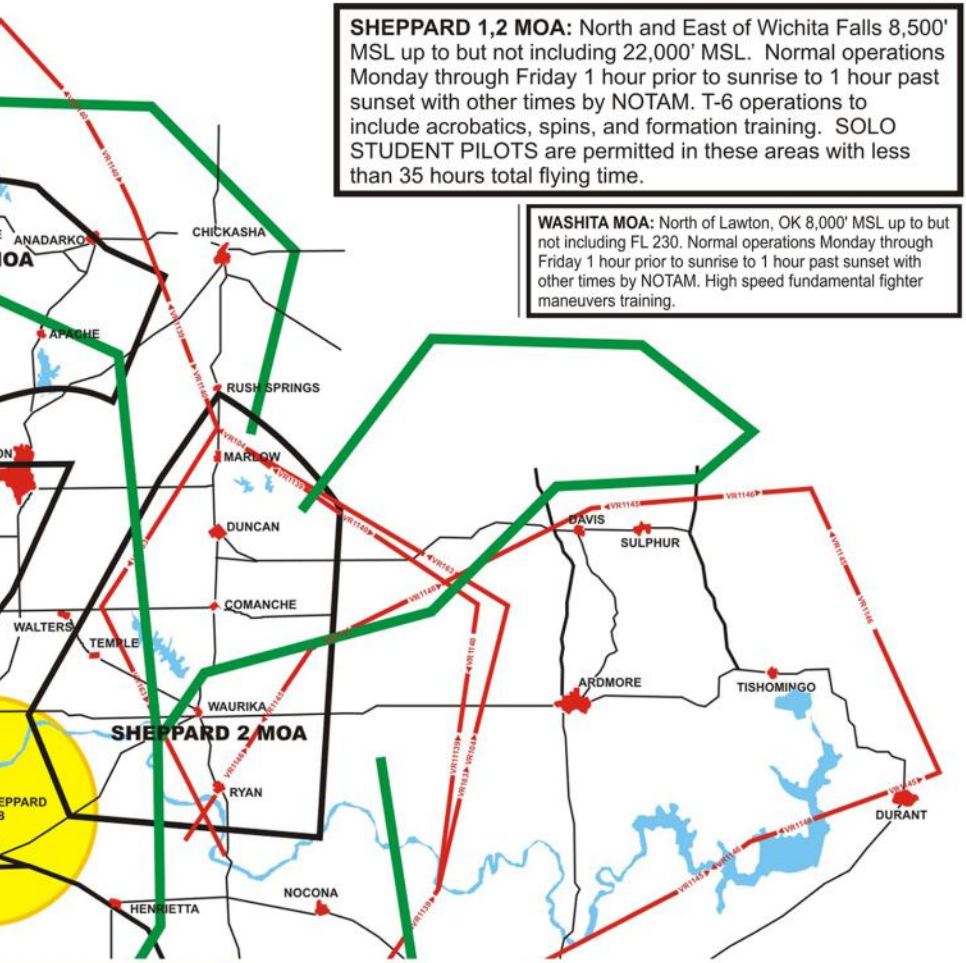
and T-38 student training in prog
MSL. Pattern speeds are up to 3
EXTREME CAUTION transiting t
and WICHITA VALLEY airports a
patterns overfly both airports.

igational purposes.)

HOLLIS AND WESTOVER 1,2 MOA: West and Northwest of Wichita Falls 9,500' MSL up to but not including FL 230. Normal Operations Monday through Friday 1 hour prior to sunrise to 1 hour past sunset with other times by NOTAM. High speed (up to 500 knots) T-38 operations to include acrobatics, formation training and SOLO STUDENT FLIGHTS.

SHEPPARD 1,2 MOA: North and East of Wichita Falls 8,500' MSL up to but not including 22,000' MSL. Normal operations Monday through Friday 1 hour prior to sunrise to 1 hour past sunset with other times by NOTAM. T-6 operations to include acrobatics, spins, and formation training. SOLO STUDENT PILOTS are permitted in these areas with less than 35 hours total flying time.

WASHITA MOA: North of Lawton, OK 8,000' MSL up to but not including FL 230. Normal operations Monday through Friday 1 hour prior to sunrise to 1 hour past sunset with other times by NOTAM. High speed fundamental fighter maneuvers training.



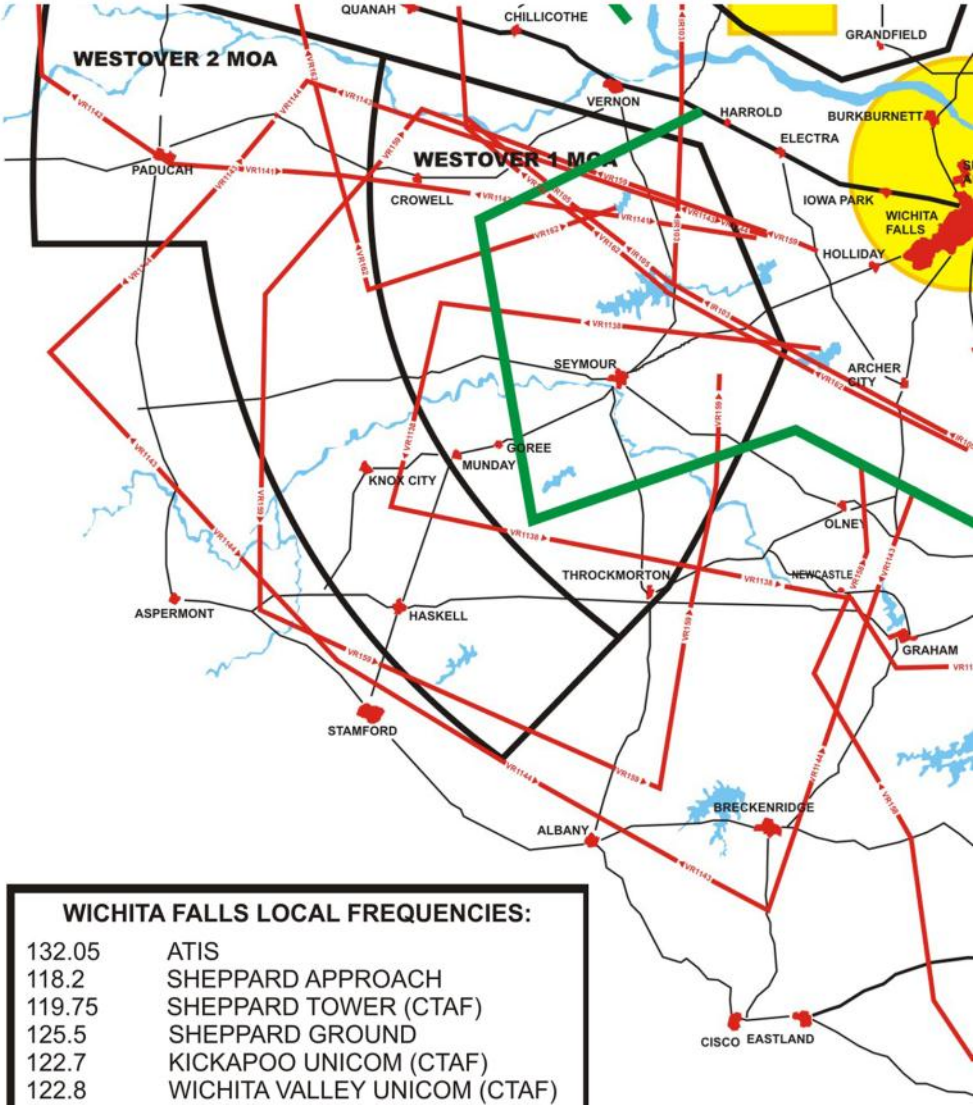
RT: Very HIGH DENSITY T-6
surface to 4,200' MSL.
ts. All military traffic
uencies but runway
dvisories on 123.05 (Frederick
r Monday through Friday

: Very HIGH DENSITY T-6
ress from surface to 5,000'
300 knots. EXERCISE
to and from KICKAPOO
s Sheppard VFR traffic

WICHITA FALLS LOCAL FREQUENCIES:

132.05	ATIS
118.2	SHEPPARD APPROACH
119.75	SHEPPARD TOWER (CTAF)
125.5	SHEPPARD GROUND
122.7	KICKAPOO UNICOM (CTAF)
122.8	WICHITA VALLEY UNICOM (CTAF)
122.9	DANAHER UNICOM (CTAF)

Sheppard Low Level Routes (Not to scale, do not use for navi



WICHITA FALLS LOCAL FREQUENCIES:

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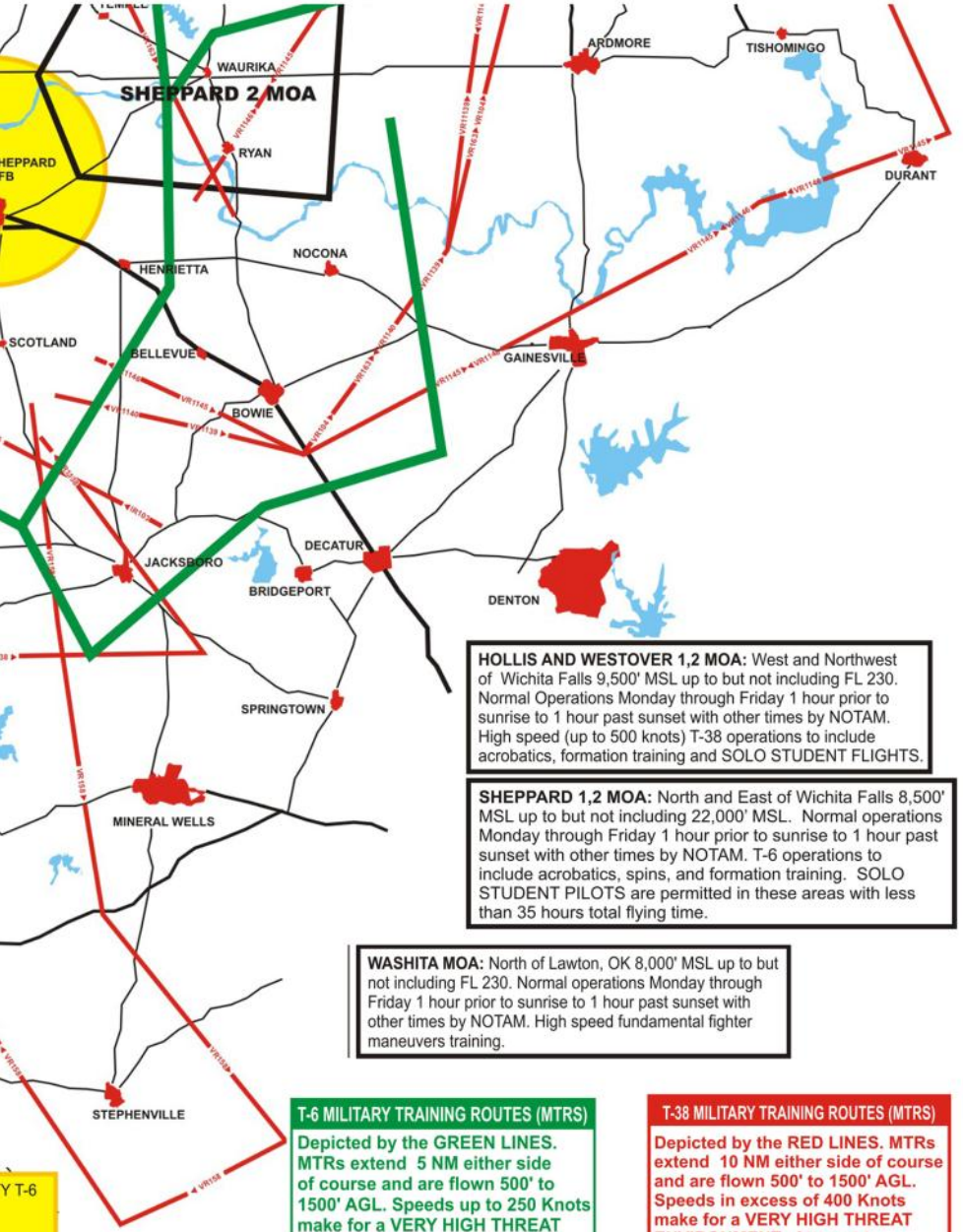
122.7	KICKAPOO UNICOM (CTAF)
122.8	WICHITA VALLEY UNICOM (CTAF)
122.9	DANAHER UNICOM (CTAF)

SHEPPARD AIR FORCE BASE: Very HIGH DENSITY T-6 and T-38 student training in progress from surface to 5,000' MSL. Pattern speeds are up to 300 knots. EXERCISE EXTREME CAUTION transiting to and from KICKAPOO and WICHITA VALLEY airports as Sheppard VFR traffic patterns overfly both airports.

FREDRICK MUNICIPAL AIRPORT: Very HIGH DENSIT student training in progress from surface to 4,200' MSL. Pattern speeds are up to 200 knots. All military traffic communicates on UHF radio frequencies but runway supervisory unit provides traffic advisories on 123.05 (Fr Unicom). Normal operations occur Monday through Frid during daylight hours.

igational purposes.)



HOLLIS AND WESTOVER 1,2 MOA: West and Northwest of Wichita Falls 9,500' MSL up to but not including FL 230. Normal Operations Monday through Friday 1 hour prior to sunrise to 1 hour past sunset with other times by NOTAM. High speed (up to 500 knots) T-38 operations to include acrobatics, formation training and SOLO STUDENT FLIGHTS.

SHEPPARD 1,2 MOA: North and East of Wichita Falls 8,500' MSL up to but not including 22,000' MSL. Normal operations Monday through Friday 1 hour prior to sunrise to 1 hour past sunset with other times by NOTAM. T-6 operations to include acrobatics, spins, and formation training. SOLO STUDENT PILOTS are permitted in these areas with less than 35 hours total flying time.

WASHITA MOA: North of Lawton, OK 8,000' MSL up to but not including FL 230. Normal operations Monday through Friday 1 hour prior to sunrise to 1 hour past sunset with other times by NOTAM. High speed fundamental fighter maneuvers training.

T-6 MILITARY TRAINING ROUTES (MTRS)

Depicted by the GREEN LINES. MTRs extend 5 NM either side of course and are flown 500' to 1500' AGL. Speeds up to 250 Knots make for a VERY HIGH THREAT ENVIRONMENT. Attempt to cross these routes at 90 DEGREE ANGLES ABOVE 3000' AGL. Contact FSS for MTR information.

T-38 MILITARY TRAINING ROUTES (MTRS)

Depicted by the RED LINES. MTRs extend 10 NM either side of course and are flown 500' to 1500' AGL. Speeds in excess of 400 Knots make for a VERY HIGH THREAT ENVIRONMENT. Attempt to cross these routes at 90 DEGREE ANGLES ABOVE 3000' AGL. Contact FSS for MTR information.

LOW-LEVEL MILITARY TRAINING ROUTES (MTRs)

The 80th Flying Training Wing at Sheppard AFB conducts extensive low-level training within 100 miles of the base. Training is conducted from 1,500 to 500' AGL, at speeds up to 450 knots for T-38 aircraft and 250 knots for T-6 aircraft. Military pilots use the routes to maintain proficiency by simulating wartime missions. Actual wartime missions require high speed low-level penetrations to avoid detection by the enemy. MTRs are not only used by Sheppard training aircraft, but also by various other fighter, bomber, and transport aircraft. Flight in or near MTRs requires constant vigilance since the hazard potential is great. Flight through MTRs is not prohibited; however, it is not recommended.

A good safety precaution is to avoid flying below 2,000' AGL when in the vicinity of an MTR. This will keep you above high speed military jet traffic as well as providing a greater margin of safety in the event of engine failure. If you choose to operate below 2,000' AGL near an MTR, then make sure to use all available anti-collision lighting (to include landing lights, if practical) and increase your clearing efforts.

Consult the latest Sectional Aeronautical Chart for exact route locations. Call the nearest FSS for the current route status.

T- 6 Low Level Routes are depicted on the next page of this guide.

TCAS

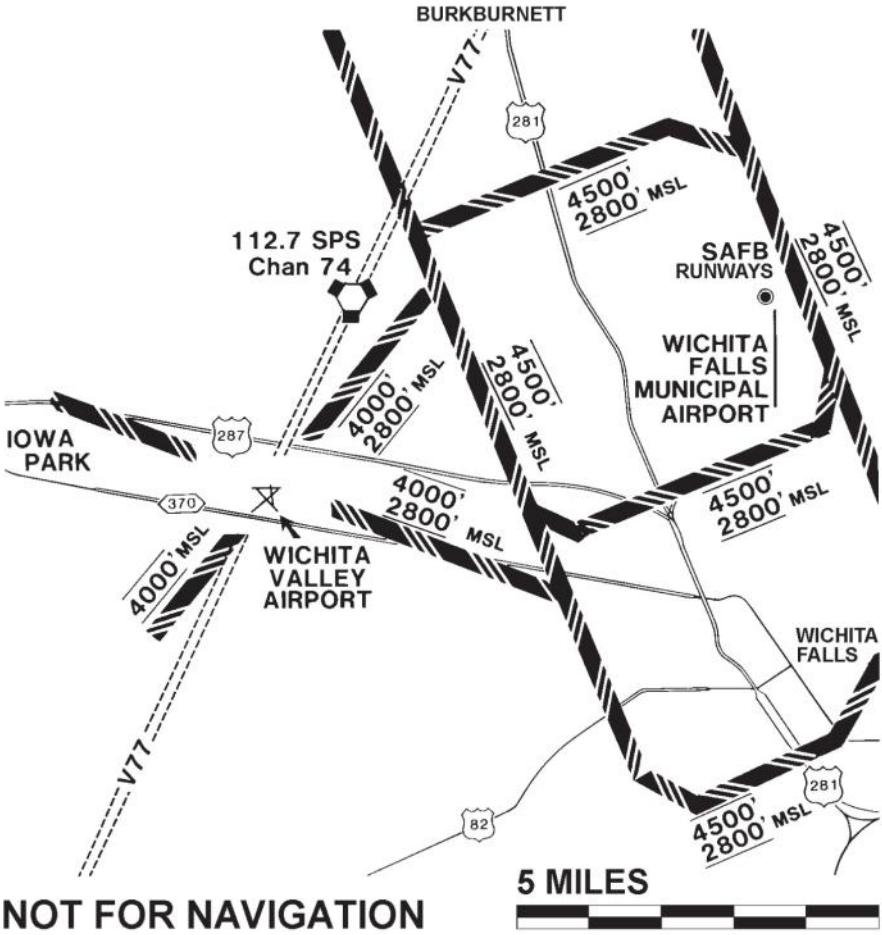
As a GA pilot, you're probably wondering "what does TCAS have to do with me?" First of all, knowing the basics of TCAS will assist you when flying in congested areas shared by the larger aircraft and you'll realize ***how important it is to have your transponder on.***

Example of a TCAS display

Airliners, larger commuter aircraft and most military aircraft are now equipped with TCAS. In order for TCAS to provide alerts and advisories, the conflicting aircraft must have an operational transponder. A Resolution Advisory (RA), which is the active vertical guidance provided by TCAS, requires the conflicting aircraft to have Mode C altitude reporting capability. **TCAS is blind to aircraft without a transponder or with their transponder turned off.**

YOUR OPERATIVE ALTITUDE ENCODING TRANSPONDER CAN HELP TRAFFIC ALERT AND COLLISION AVOIDANCE SYSTEMS (TCAS) EQUIPPED T-6 AND T-38 AIRCREWS SEE AND AVOID YOU!!!

T-38 FLIGHT PATTERNS NEAR WICHITA VALLEY AIRPORT CONTACT SHEPPARD APPROACH ON 118.2



The T-38 VFR traffic pattern is approximately 2 miles east of Wichita Valley. There is a T-38 VFR entry point directly over Wichita Valley at 4,000' MSL descending to 2,800' MSL. Also, the radar downwind for Sheppard, approximately 2 miles to the west at Wichita Valley at 5,000' MSL. Victor Airway V77 crosses this airport.

FREDERICK AIRPORT

Frederick Airport is used by Sheppard AFB T-6 trainers for high density student pilot training.

This training is conducted on weekdays, during daylight hours.

T-6 aircraft are controlled by the red and white runway supervisory units (Call sign: “Hacker”) at the end of runways 17R and 35L.

Normal T-6 pattern altitude is 2,200’ MSL. Straight-ins are flown at 1,700’ MSL.

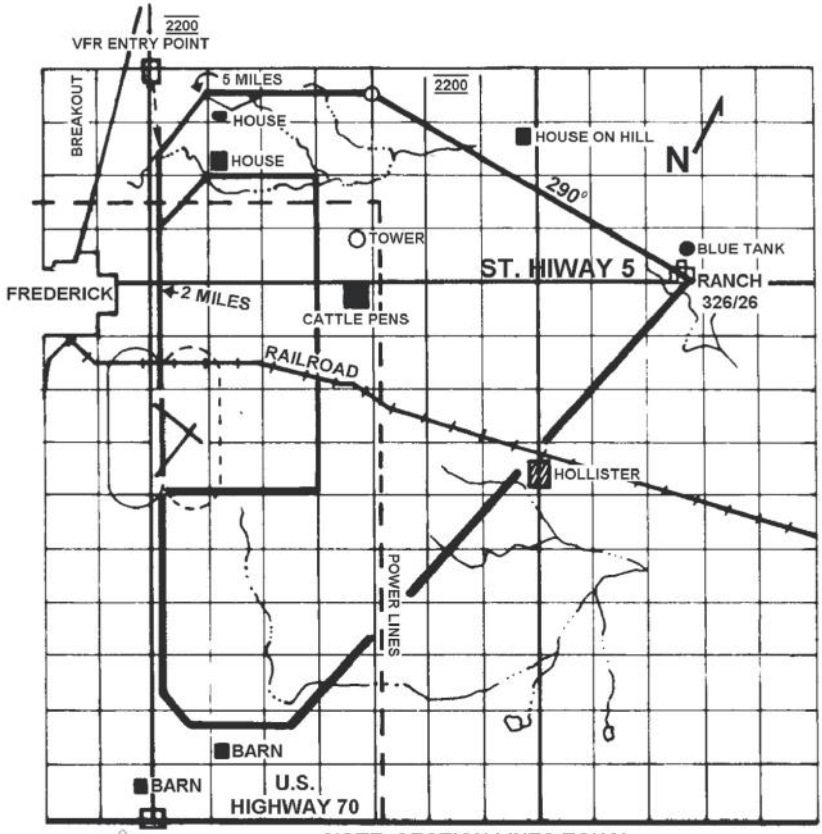
All civilian traffic should contact Hacker on 123.05 (UHF 285.7) approximately 10 miles from the field. Contact Hacker when taxiing for takeoff.

Hacker controls T-6 aircraft but is an advisory-only service for civilian aircraft.

CONTACT "HACKER" ON 123.05 FOR ADVISORIES

FREDERICK VFR TRAFFIC PATTERN

CONTACT T-6 CONTROLLER ON 123.05 (UHF 285.7)



NOTE: SECTION LINES EQUAL ONE STATUTE MILE

NOTE

T-6s may breakout of the pattern and climb to 4,200 MSL for Emergency Landing Pattern

WARNING: THIS IS A HIGH TRAFFIC AREA WITH MILITARY T-6'S.

Midair Collision Avoidance

YOUR ROLE IN COLLISION AVOIDANCE

Recent studies of midair collisions involving aircraft by the National Transportation Safety Board (NTSB) determined that:

- Most of the aircraft involved in collisions are engaged in recreational flying, not on any type of flight plan.
- Most midair collisions occur in VFR weather conditions during weekend daylight hours.
- The vast majority of accidents occurred at or near uncontrolled airports and at altitudes below 1000 feet.
- Pilots of all experience levels were involved in midair collisions, from pilots on their first solo ride, to 20,000-hour veterans.
- Flight instructors were on board the aircraft in 37 percent of the accidents in the study.
- Most collisions occur in daylight with visibility greater than 3 miles.

Here's how you can contribute to professional flying and reduce the odds of becoming involved in a midair collision:

1. Practice the "see and avoid" concept at all times regardless of whether the operation is conducted under Instrument (IFR) or Visual (VFR) Flight Rules.

2. Under IFR control, don't always count on ATC to keep you away from other aircraft.

3. Understand the limitations of your eyes and use proper visual scanning techniques. Remember, if another aircraft appears to have no relative motion, but is increasing in size, it is likely to be on a collision course with you.

4. Execute appropriate clearing procedures before all climbs, descents, turns, training maneuvers, or aerobatics.

5. Be aware of the type airspace in which you intend to operate in.

6. Traffic advisories should be requested and used when available to assist the pilot's own visual scanning -- advisories in no way lessen the pilot's obligation to see and avoid.

7. If not practical to initiate radio contact for traffic info, monitor the appropriate frequency.

8. Make frequent position reports along your route and AT UNCONTROLLED AIRPORTS BROADCAST YOUR POSITION AND INTENTIONS ON COMMON TRAFFIC ADVISORY FREQUENCY (CTAF).

9. Make your aircraft as visible as possible - turn on exterior lights below 10,000' MSL and landing lights when operating within 10 miles of any airport, in conditions of reduced visibility, where any bird activity is expected or under special VFR clearance.

10. If the aircraft is equipped with a transponder, turn it on and adjust it to reply on both Mode 3/A and Mode C (if installed). Transponders substantially increase the capability of radar to see all aircraft and the MODE C feature enables the controller to quickly determine where potential traffic conflicts exist. Even VFR pilots who are not in contact with ATC will be afforded greater protection from IFR aircraft receiving traffic advisories.

11. AVOID COMPLACENCY.

VISION IN FLIGHT

The most advanced piece of flight equipment in any aircraft is the human eye, and since the number one cause of midair collisions is the failure to adhere to the see-and-avoid concept, efficient use of visual techniques and knowledge of the eye's limitations will help pilots avoid collisions. Your vision's clarity is influenced by some characteristics of the objects you are viewing, including:

a. Your distance from the object

b. The size, shape, and movement of the object

c. The amount of light reflected by the object

d. The object's contrast with the surrounding environment

You cannot see all objects in your field of vision with equal clarity. Visual acuity is best in a central area of about 10 to 15 degrees and decreases steadily toward the periphery of the visual field.

A similar limitation of the eyes is binocular vision. For the brain to believe what is being seen, visual cues must be received from both eyes. The mind seldom believes that the object is really there if it is visible to one eye but obstructed from the other by a strut or windshield frame.

A visual limitation that few pilots are aware of is the time the eyes require to focus on an object. Focusing is all automatic reaction, but to change focus from a nearby object, such as an instrument panel, to an aircraft one mile away, may take two or more seconds.

PROPER CLEARING/SCANNING TECHNIQUES

An efficient scan pattern is paramount to visual collision avoidance procedures. In developing a proper scan technique, remember that when your head is in motion, vision is blurred and the brain will not be able to identify conflicting traffic. Therefore a constant motion scan across the windscreen is practically useless.

A proper scan technique is to divide your field of vision into blocks approximately 10 to 15 degrees wide. Examine each block individually using a system that you find comfortable (e g. from left to right or starting from the left and moving to the right, then back to the left again). This method enables you to detect any movement in a single block. It takes only a few seconds to focus on a single block and detect conflicting traffic.

A moving target attracts attention and is relatively easy to see. A stationary target or one that is not moving in your windscreen is very difficult to detect and is the one that can result in a MIDAIR COLLISION.

The time to perceive and recognize an aircraft, become aware of a collision potential and decide on appropriate action, may vary from as little as 2 seconds to as much as 10 seconds or more depending on the pilot, type of aircraft and geometry of the closing situation.

RADAR ADVISORY SERVICE

As an aid to mid-air collision avoidance, Flight Service Stations or Center provides radar advisories to VFR aircraft upon request. A transponder is required within Class C Airspace. To obtain radar advisories, state your position, altitude, and intentions, then request radar advisories. Once radar contact is established, traffic advisories will be issued for IFR and known VFR traffic (controller workload permitting).

HOW TO AVOID A MIDAIR COLLISION - A Safety Project of the AOPA Air Safety Foundation

Introduction

By definition and function, the human eye is one of the most important and complex systems in the world. Basically, its job is to accept images from the outside world and transmit them to the brain for recognition and storage. In other words, the organ of vision is our prime means of identifying and relating to what's going on around us.

It has been estimated that 80% of our total information intake is through the eyes. In the air, we depend on our eyes to provide most of the basic input necessary for performing during a flight. Through our eyes we define attitude, speed, direction, proximity to things (like the ground), and opposing air traffic that may constitute a danger of in-flight collision. As air traffic density and aircraft closing speeds increase, the problem of in-flight collision grows proportionately. A basic understanding of the eyes' limitations in target detection is some of the best insurance a pilot can have against running into another airplane and spoiling his whole day.

Profile of Midair Collisions

Studies of the midair collision problem form certain definite warning patterns. It may be surprising to some that nearly all midair collisions occur during daylight hours and in VFR conditions. Perhaps not so surprising is that the majority happen within five miles of an airport, in the areas of greatest traffic concentration, and usually on warm weekend afternoons when more pilots are doing more flying.

Also surprising, perhaps, is the fact that the closing speed (rate at which two aircraft come together) is relatively slow, usually much slower than the airspeed of either aircraft involved. This is because the majority of in-flight collisions are the result of a faster aircraft overtaking and hitting a slower plane.

Statistics on 105 in-flight collisions show that 82% were at overtaking convergence angles; 35% were from a 0-10 degree angle - - almost straight from behind. Only 5% were from a head-on angle.

Although your passengers frequently are not pilots, they can greatly assist you in your responsibility to “see and avoid.” Take a few moments to brief your passengers on the importance of detecting traffic and, if possible, acquaint them with the basics of scanning. Explain how to relate traffic position with respect to the clock and encourage them to report all the traffic they see. This will invariably result in a few “false alarms,” but the possibility of a passenger detecting a threat before you do is worth the inconvenience. Besides, most passengers will enjoy the flight more if they can actively participate in the experience.

Why Do We Have Share The Air?

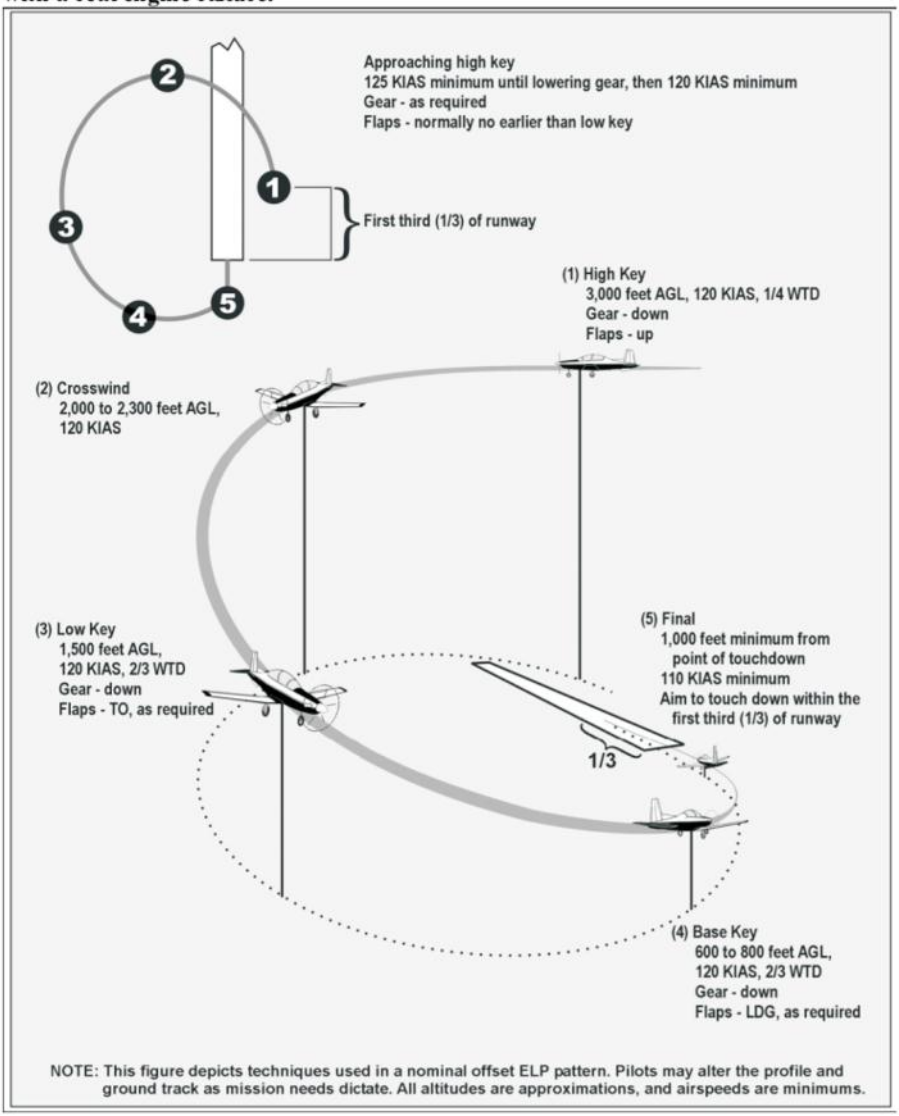
Causes of Midairs

What causes in-flight collisions? Undoubtedly, increasing traffic and higher closing speeds represent potential. For instance, a jet and a light twin have a closing speed of about 750 mph. It takes a minimum of 10 seconds, says the FAA, for a pilot to spot traffic, identify it, realize it’s a collision threat, react, and have his aircraft respond. But two planes converging at 750 mph will be less than 10 seconds apart when the pilots are first able to detect each other!

These problems are heightened by the fact that our air traffic control and radar facilities are, in some cases, overloaded and limited.

These are all causal factors, but the reason most often noted in the statistics reads: “Failure of pilot to see other aircraft” - failure of the see-and-avoid system. In most cases, at least one of the pilots involved could have seen the other in time to avoid contact if he had just been using his eyes properly. So it’s really that complex, vulnerable little organ--- the human eye -- which is the leading cause of in-flight collisions. Take a look at how its limitations affect your flight.

Emergency Landing Pattern (ELP) flown by T-6 for practice and when confronted with a real engine failure.



This pattern will be flown at the following airports for practice: Chickasha, Chattanooga, Duncan, Frederick, Lawton, Fort Sill and Pauls Valley.
Radio calls made on CTAF/UNICOM: 10 miles out, Overhead, at base and departing.

QUICK REFERENCE GUIDE

Frequencies (Check current publications)

Sheppard AFB/Wichita Falls Municipal
Approach - 118.2 / 120.4
Tower/CTAF - 119.75
Ground - 125.5
ATIS - 132.05
Clearance - 121.2 (Phone 676-8354)
Hours of operation:
Tower: M-F 0530 - 2100
Sat, Sun & Holidays *As published by NOTAM*

Approach control: M-F 0600-2100;
Sat & Sun *As published by NOTAM*

Frederick Airport
Unicom and "Hacker" advisory - 123.05

Kickapoo Downtown Airport
Sheppard Approach - 118.2 / 120.4 for runway 33
Unicom - 122.7

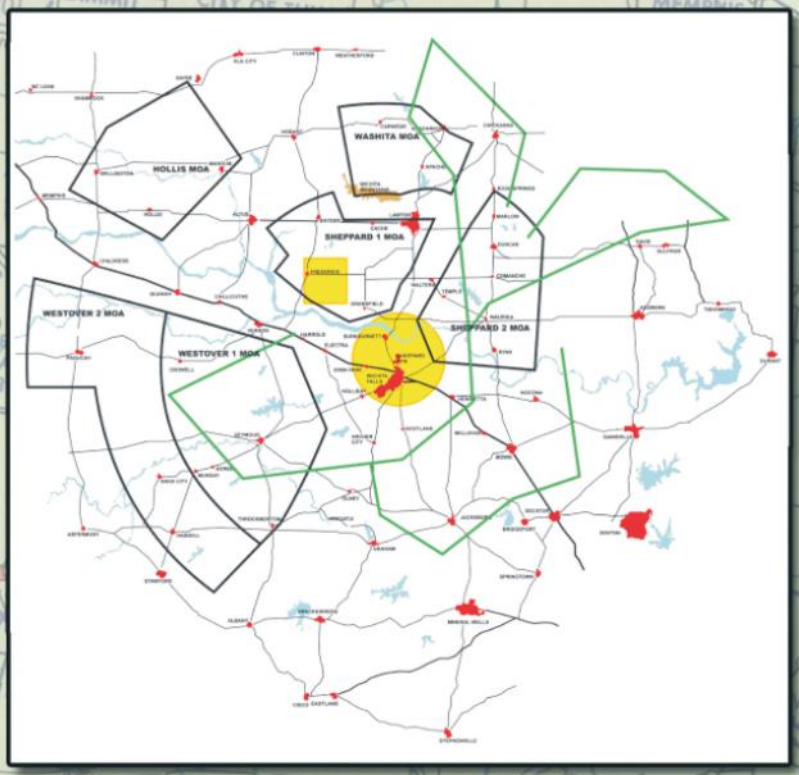
Wichita Valley Airport
Sheppard Approach - 118.2
Unicom - 122.8

Danaher Airport
Sheppard Approach - 118.2
Unicom - 122.9

Phone Numbers

Sheppard AFB Public Affairs: (940) 676-2732
Sheppard AFB Air Traffic Control Office:
(940) 676-7677
Sheppard AFB Flight Safety Office:
(940) 676-5000/5001
FAX: (940) 676-4968

FLY SMART



SHEPPARD MILITARY OPERATING AREAS

Sheppard 1,2	(T-6)	8,500-22,000 MSL	Mon-Fri	SR-1-SS+1*
Westover 1,2	(T-38)	9,500 MSL-FL230	Mon-Fri	SR-1-SS+1*
Hollis	(T-38)	11,000 MSL-FL230	Mon-Fri	SR-1-SS+1*
Washita	(AT-38)	8,000 MSL-FL230	Mon-Fri	SR-1-SS+1*

*Other times by NOTAMS

FLY SAFE