



15 Wing Moose Jaw



**15 Wing Flight
Safety
306-694-2222
Ext 5372**



What Are We Flying?



Fleet Stats



CT-156 Harvard (T-6 based on Pilatus PC-9)

- Radar?
NO
- TCAS / TAS?
Soon
- Altitude?
500 to 31,000
- Speed?
Up to 316kts



We can fly 17 or more at any given time



Fleet Stats



CT-155 Hawk

- Radar?
NO
- TCAS or TAS?
NO
- Altitude?
250 to 48,000
- Speed?
Up to 575kts



We fly 6 in Moose Jaw and 8 in Cold Lake at any given time.



Fleet Stats



CT-114 Tutor

- Radar?
NO
- TCAS / TAS?
NO – Avionic Update soon
- Altitude?
250 to 40,000+
- Speed?
Up to 412kts



Snowbirds are the only user now. Usage depends on season. More local flights during the winter.



Military Flying Operations



Trivia Time

15 Wing:

- Fly 125 sorties per day
- 22,258 hrs per year
- 122,706 movements per year
- Peak Hour 212 movements per hour.
(Peak Hr #1 in Canada)

The Airspace

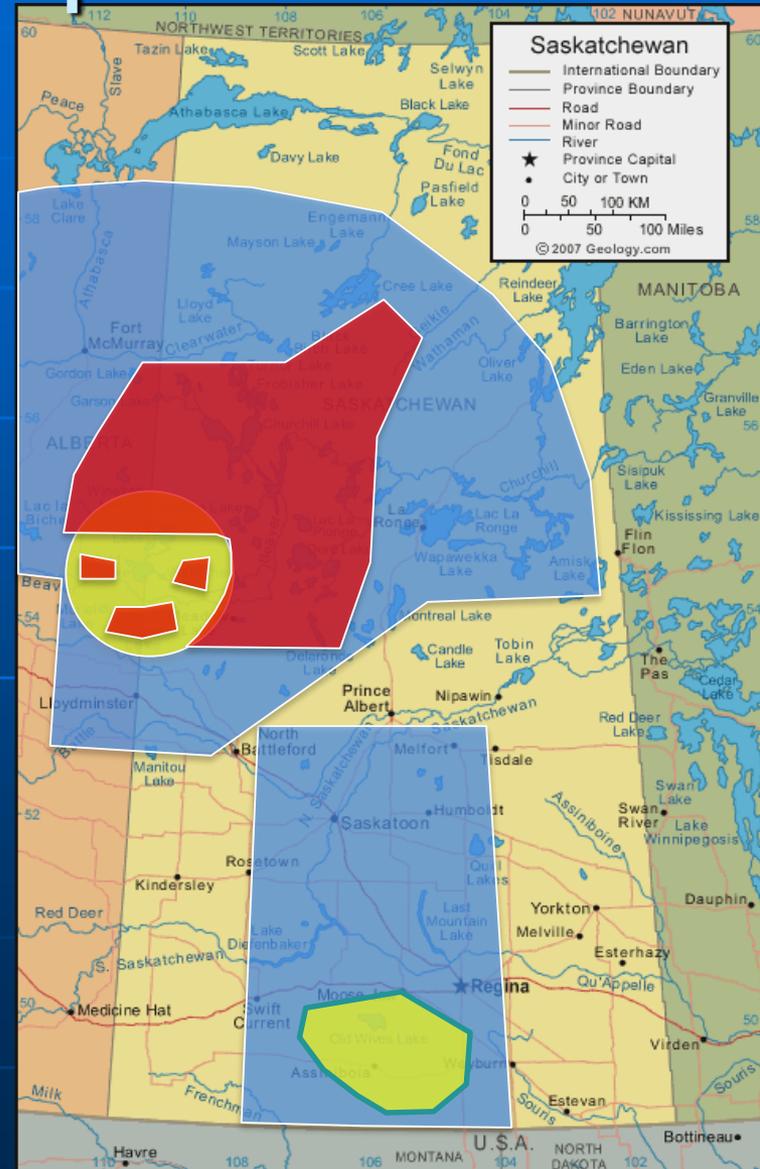
Moose Jaw MTCA

Cold Lake MTCA

CLAWR

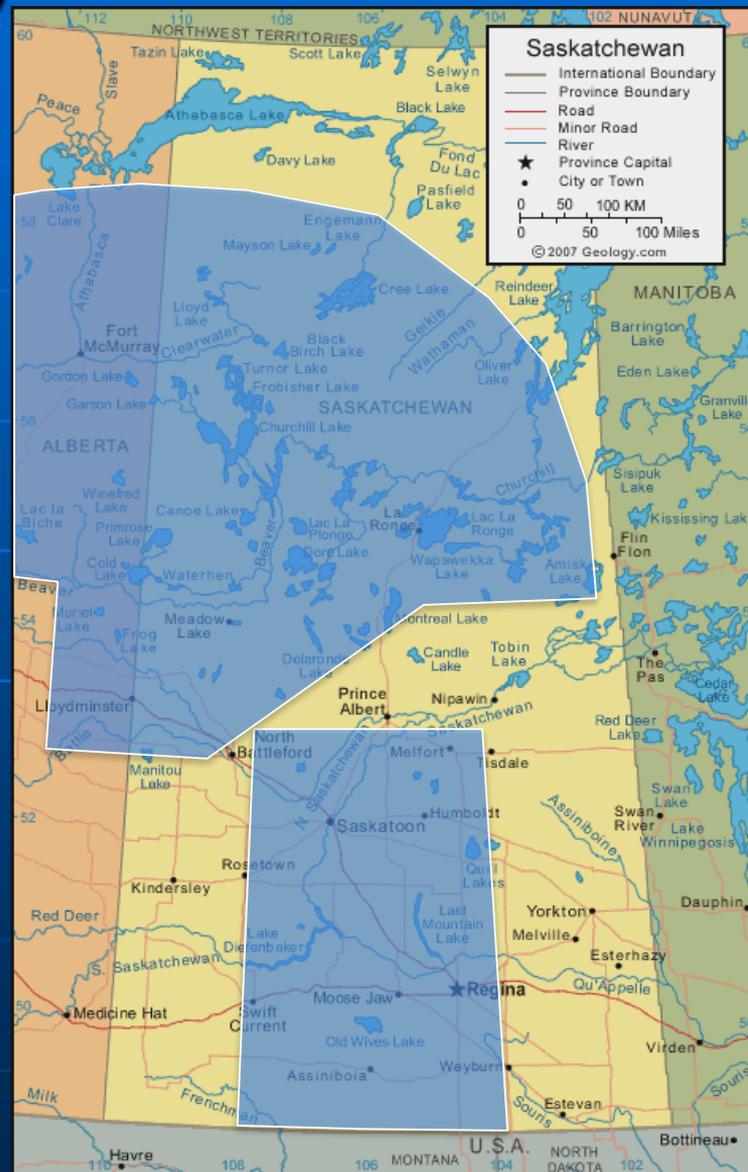
Moose Jaw LFA

Cold Lake LFA

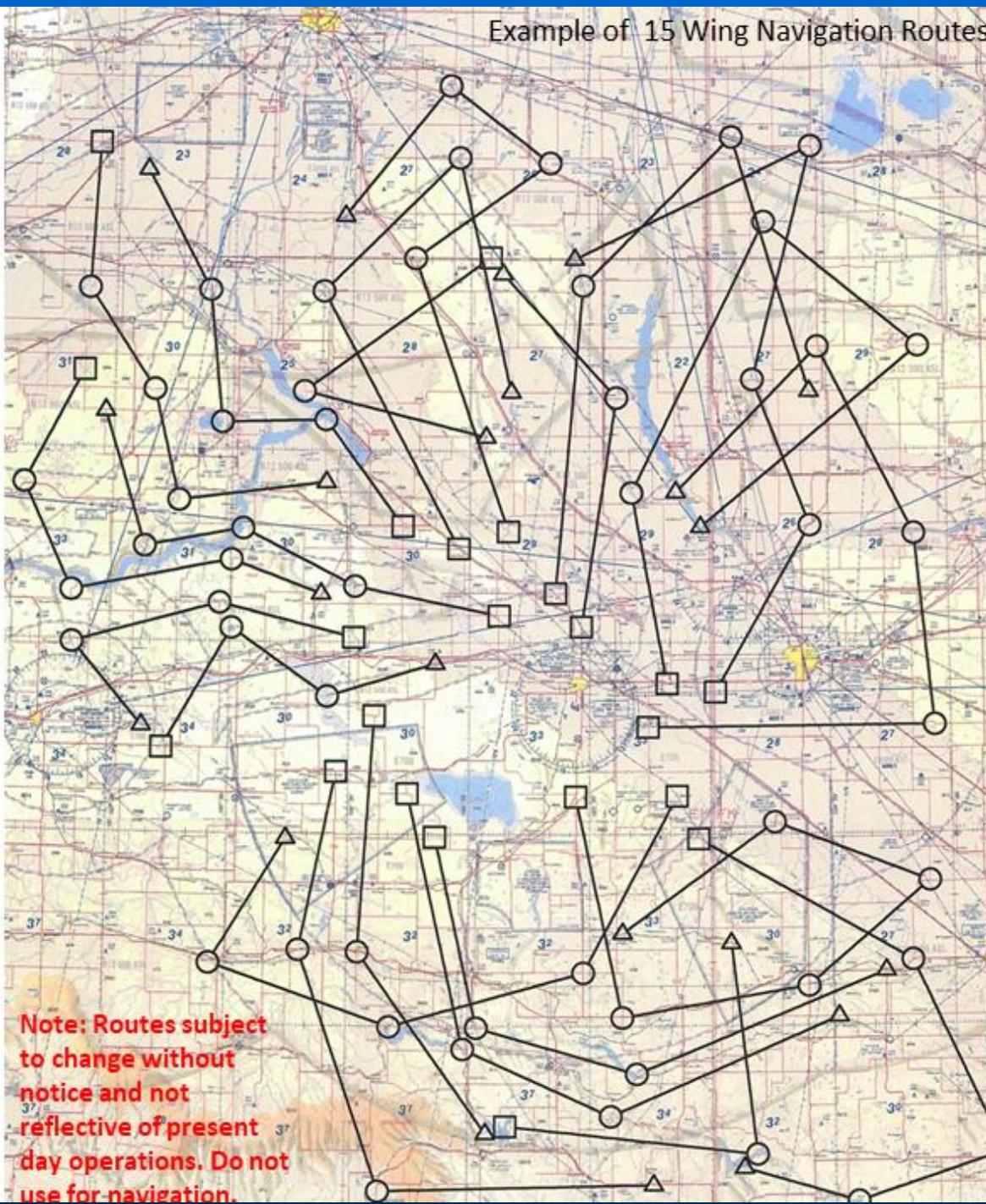


Military LFA

- Low Flying Training Missions
 - Minimum 250'AGL
 - Single or Multi-Ship
 - Monitor 126.7 VHF
- Harvard 240KTS
- Hawk 420KTS
- Hornet 540KTS (CLAWR)



Example of 15 Wing Navigation Routes



Note: Routes subject to change without notice and not reflective of present day operations. Do not use for navigation.

Low Level Nav Routes

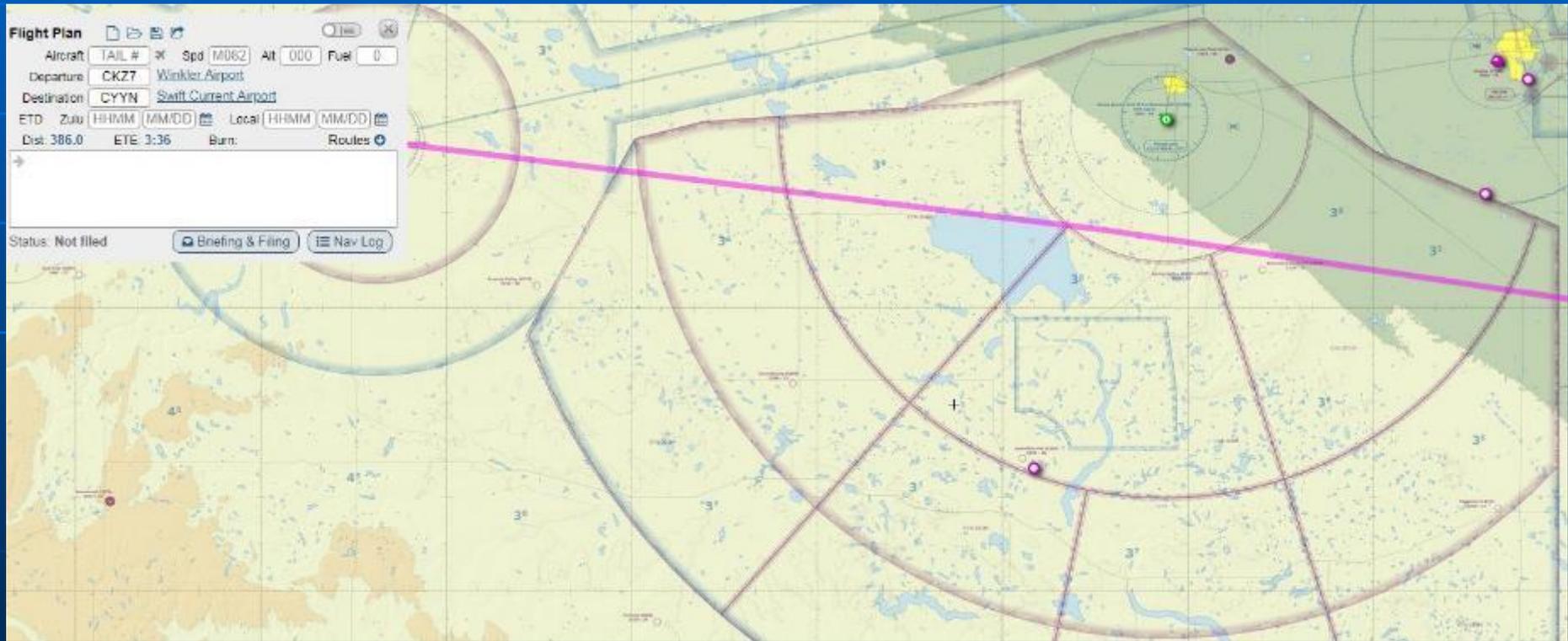
- Harvard routes only
- Hawks do not use pre-planned routes
- Up to 8 aircraft (or formations of 2 or 4 aircraft) at a time
- Flown between 250 and 500ft AGL
- Routes also flown 3,000 to 10,000 MSL
- Speeds between 240kts and 500kts
- Position reports on 126.7MHz



NEW Incidents



Civilian Traffic through training area





SEE AND AVOID

- New terminology is Sense and Avoid
- Harvard, Hawk and Tutor do not have TAS, PCAS, TCAS, ADS-B, etc. yet. Harvard will have TAS and ADS-B soon
- Mk 1 Eyeball only

TECHNIQUE / HOW TO LOOK

- Humans have a predator eye. We see movement. If a threat has zero line of sight, you need to create line of sight.
- How? Move your head!



Factors Affecting Look Out



- What about Head on Speeds?
 - Main contributing factor with 15 Wing Aircraft.



Head On Speed Difference



3 Miles Visible

10 miles No Aircraft in sight

180 55

55 600



Head On Speed Difference



1.5 Miles Identifiable

5 Miles Just Visible





Head On Speed Difference



1 Mile



180

18

3 Miles Identified as an Aircraft!

18

600



Head On Speed Difference



0.3 Miles Hey its Johnny!!



1 Mile It's a Military Jet!!





SEE AND AVOID

Max detection range nose on? 4 to 6nm?

Cessna vs Cessna closing velocity? 4nm/min

Harvard vs Harvard closing velocity? 8nm/min

Hawk vs Hawk closing velocity? 14+nm/min

If you miss an aircraft at 5 or 6nm with your perfect lookout in perfect weather, that aircraft could hit you in 20 to 30 seconds.

How long did your perfect scan take? Did you check your fuel, alt, heading, formation lead or wingman in between?

Then add environmentals such as sun, poor visibility, haze, mist, etc. What about the aircraft hiding behind the canopy bow, mirrors, under the wings, etc.



Flying in the MTCA

- M-F Normal Hours 0800 to 1830
- Winter Hours 0900 to 1930
- M-F Night Flying ??? to ???

- Weekend Flying 0800 to 1830?
 1600 to 1800 Sundays?

- Cadet Operations?
 - Spring and Fall
 - As per NOTAM
 - CFS 3nm to 10K



Flying in the MTCA



- ATIS is UHF only so you can't get ATIS to see if we are flying evenings or weekends.
- Control zone goes from class D to E (SFC to 8,000)
- Military control zones are generally 10nm radius. (not including area north of Hwy 1)
- Call Tower on 126.2 before flying into the control zone
- If they tell you to stay out of the control zone there is a good reason for it.
- Airport is closed after hours. You can fly through the MTCA and control zone but you cannot land (including touch and go)



Flying in the MTCA



- If planning to avoid the MTCA, stay north of Hwy 1.
- Call Terminal on 119.0 if flying into the MTCA.
- Keep out of the CYR303 (SFC to 10,000ft)
- Stay out of the CYA(M) if possible (below 6,000ft). If not then exercise extreme caution when flying.
- Keep a good lookout for aircraft.
- We fly very dynamic profiles and are not flying the appropriate altitude for direction of flight.
- We are not monitoring 126.7 in the MTCA only on Low Level Navigation routes.
- If you see someone then make the miss early. Don't expect them to see you or avoid you.

Moose Jaw MTCA (Military Terminal Control Area)



CAUTION
HEAVY MILITARY TRAFFIC IN MOOSE JAW
MTCA & CVA. VFR FLIGHT FOLLOWING
WITH MOOSE JAW TERMINAL 118.0
RECOMMENDED WHEN ACTUAL.

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WITH MOOSE JAW TERMINAL 118.0
RECOMMENDED WHEN ACTUAL.

CVA 315 (M)
8000 TO BELOW FL300
14-0000Z MOH-PTB WHEN
MT TERMINAL IS OPEN
GTT OCCL BY NOTAM
(E2903)

CVA 324 (M)
8000 TO BELOW FL300
14-0000Z MOH-PTB WHEN
MT TERMINAL IS OPEN
GTT OCCL BY NOTAM
(E2903)

CVA 325 (M)
8000 TO BELOW FL300
14-0000Z MOH-PTB WHEN
MT TERMINAL IS OPEN
GTT OCCL BY NOTAM
(E2903)

CVA 327 (M)
8000 TO BELOW FL300
14-0000Z MOH-PTB WHEN
MT TERMINAL IS OPEN
GTT OCCL BY NOTAM
(E2903)

CVA 310 (M)
8000 TO BELOW FL300
14-0000Z MOH-PTB WHEN
MT TERMINAL IS OPEN
GTT OCCL BY NOTAM
(E2903)

CVA 322 (M)
8000 TO BELOW FL300
14-0000Z MOH-PTB WHEN
MT TERMINAL IS OPEN
GTT OCCL BY NOTAM
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CVA 311 (M)
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(E2903)



IF PLANNING TO SPRAY WITHIN 10NM OF CYMJ:

- Call Tower at (306) 694-2222 ext 5574
 - Takeoff time, location of field, max alt, time on station
- Call Tower on 126.2MHz
 - Enroute to area
 - Squawk 1200 if able (may be assigned a different code after)
 - Leaving area
- NORDO?
 - Spray after hours if possible (1830 usually)
 - Or on weekends if possible



What can we do?

If you hear us on 126.7 we could be closer than you think. Please report your position – don't assume.

If we know you are there we will climb – we can do it fast.

Make radio calls leaving your field and base of operations



What Can We Do?



Transponders on – We will have TAS on Harvards soon

Let us know in advance where you will be working and we will avoid area or stay high to let you work.

If you see us close (1000' or less) or have to move to get out of our way please call 15 Wing FS. 306-694-2222
Ask for Wing Flight Safety

CFB MOOSE JAW - SHARE THE AIR



CT156 Harvard

Length-10.18 m Maximum Speed-310 Kts
Wingspan-10.21 m Service Ceiling-31,000 Ft
Height-3.25 m Range-450 NM

Power-Pratt & Whitney PT6A-68 turboprop
NOT EQUIPPED WITH RADAR OR TCAS



CT114 Tutor

Length-9.75 m Max. Speed-400 Kts
Wingspan-11.12 m Service Ceiling-38,700 Ft
Height-2.84 m Range-350 NM

Power-General Electric J85-CAN-40 turbojet
NOT EQUIPPED WITH RADAR OR TCAS



CT155 Hawk

Length-12.42 m Max. Speed-575 Kts
Wingspan-9.08 m Service Ceiling-45,000 Ft
Height-3.98 m Range-1,415 NM

Power-Rolls-Royce Mk.871 Adour turbofan
NOT EQUIPPED WITH RADAR OR TCAS

THE THREAT

PILOT TRAINING IN PROGRESS

Approximately 150 pilots are trained at CFB Moose Jaw each year and this equates to approximately 25,000 hours of flight time on three different high performance aircraft. Normal times of operation are Monday- Friday 0800-1830 local time or 1400-0030Z, except holidays. Operations are also ceased over a two-week period during Christmas and New Years.

Operations, occasionally, occur on weekends and nights in the MTCA and Low Flying Area. For your safety (and ours), **PLEASE USE EXTREME VIGILANCE IN THESE AREAS IF YOU ARE OPERATING VFR.**

IF YOU HAVE ANY QUESTIONS, PLEASE CALL 15 WING FLIGHT SAFETY (306) 694-2222 ext 5372 OR 15 WING OPERATIONS (306) 694-2222 ext 2888.



LOW FLYING AREA

The Low Flying Area is the area depicted bounded by N49 00 W104 00 to N49 00 W108 00 to N53 00 W108 00 to N53 00 W104 00 to origin. In this area, random low level routes are conducted by CT156 Harvard aircraft at 500 ft AGL and 240 Kts as well as CT155 Hawk aircraft at 250 ft AGL and 420 Kts.

Although most of the exercises are flown at 500 ft AGL and 250 ft AGL, some exercises are flown at higher altitudes, respecting the altitude for direction of flight rules when above 3000ft AGL. This training mostly happens during daylight hours during the times mentioned in THE THREAT section.

MILITARY TERMINAL CONTROL AREA (MTCA) – 700 AGL To FL 300

Inside the MTCA there are seven CYAs and one CYR. The CYR area is used by the CT114 Tutor aircraft but pilots should be aware that the Tutor aircraft will, at times, use the airspace immediately east or west of the CYR below 6000 ft MSL. They also transit to and from CYMJ below 6000 ft MSL. Most training occurs between November and March but can be used throughout the year, during daylight hours mentioned in THE THREAT section.

The four southerly CYAs are used for CT155 Hawk training and are based at 6000 ft MSL. The three northerly areas are used for CT156 Harvard training and are based at 6000 ft MSL. There is a high density of traffic, in these CYAs, conducting aerobatics and other dynamic manoeuvres. If avoiding the MCTA is not practical then transiting BELOW the CYAs (below 6000 ft MSL) in the MTCA and contacting CYMJ TERMINAL on 119.0 for VFR flight following is highly recommended. Although most traffic in the MTCA is above 6000 Ft MSL, there is still high speed traffic below conducting low level training or transiting to and from the CYAs and CYMJ. VFR traffic flying east or west, north of the MCTA but in close proximity to CYMJ are encouraged to contact CYMJ TOWER on 126.2 for a traffic advisory.

B12 500
ASL

2618

2539

(570)

2437

2559

E70

CAUTION
HEAVY MILITARY TRAFFIC IN MOOSE JAW
MTCA & CYAs. VFR FLIGHT FOLLOWING
WITH MOOSE JAW TERMINAL 119.0
RECOMMENDED WHEN ACTIVE.

2486

2591

30

2447

2401

2526

Chaplin
Lake

Chaplin
Ck

Courval

363

2648
(364)

CYA 304 (M)

6000 TO BELOW FL190
14-0030Z MON-FRI WHEN
M.I. TERMINAL IS OPEN

rewdale

Coderre



Summary

- All we have is Mk-1 eyeball
- A good lookout is almost impossible but keep trying anyway
- If you see someone, make the miss early
- Terminal – 119.0
- Tower – 126.2



Summary

- If you hear us. We are closer than you think. Please speak up.
- If you see us and its close please call US. 306-694-2222 Ask For Wing Flight Safety





Summary - UAV



IF YOU SEE THEM

- Report it to RCMP, City Police, TC

IF YOU FLY THEM

- Know the regulations
- Follow the regulations
- Get a permit if required
- If you don't know then ask Transport Canada