SAULT COLLEGE
of Applied Arts and Technology
Sault Ste. Marie

COURSE OUTLINE

RADIO AIDS

AVT 100-6C

revised January, 1981

RADIO AIDS
AVT 100-6

TEXT:

From the Ground Up - A.F. MacDonald

Designated Airspace Handbook - M.O.T.

Aeronautical Information Publication

STUDY AND REFERENCE GUIDE:

Sault College Curriculum Directives

Ministry of Transport Study and Reference Guide for Private Pilots' Licence

Ministry of Transport Sample Examination for Private Pilots' Licence

Ministry of Transport Study Guide for Private Pilots

GENERAL OBJECTIVE:

To give an appreciation of the system of airways in Canada and to teach

in theory, every basic principle of radio with an understanding toward Low

and High Frequency Navigation Aids, Two-way Communications Procedures and

Air Traffic Control Procedures.

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Topic No.	Periods	Topic Description	Reference
1,2,3	1	Airways Definitions Canadian Airway System General Flight Provision	AIP Part 7 MOT AIP - MOT AIP - MOT
4,5	1	Publications and Charts for VFR Flight Radio Definitions and Principles of Radio	Aeronautical Charts World Aeronautical Charts VFR Chart Supplement FGU - Radio
6	1	Radio Navigation Aids	FGU - Radio FIM - Part 7 - MOT
Test	1	MID TERM EXAM	
7	1	Radio Aids REVIEW	Study Guide for Private Pilots - M F6V - Radio MIM - Part 7 - MOT
Test	1	FINAL RADIO EXAM	
Test	1	MOT PRIVATE PILOTS WRITTEN EXAMINATION	

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SPECIFIC OBJECTIVES:

1. Airways Definitions:

   The student is to know the meaning of the following terms:

   a) Canadian Domestic Airspace

   b) Northern Domestic Airspace

   c) Southern Domestic Airspace

   d) Southern Central Control Area

   e) Northern Control Area

   f) Arctic Control Area

2. Canadian Airway System:

   The student is required to have:

   a) A basic understand of the Canadian Airway system

   b) Know the vertical dimension and airspace divisions of the Canadian Domestic Airspace area

   NOTE: Viewgraph presentation of the Canadian Domestic Airspace given during this lesson.

3. General Flight Provisions:

   The student is required to know:

   a) The IFR and VFR requirements in the High level airspace structure

   b) The IFR and VFR requirements in the Low level airway structure

   c) The block airspace limits

   d) The VFR & IFR requirements below the block airspace

   e) Cruising altitudes above 3500'

   f) Cruising altitudes below 3500'

   g) Direction of flight magnetic and true

4. Publications and Charts for VFR Flights:

   The student is required to know which charts and publications are available and usage:

   a) Aeronautical Charts 1:500,000

   b) WAC (World Aeronautical Chart) 1:1,000,000

   c) VFR Chart Supplement

5. Radio Definitions and Principles of Radio:

The student is required to know the following subject matter and the application to Radio:

a) Wave length

b) Frequency and Frequency Bands

c) Hertz (cycles)

d) Frequency utilization

e) Ground/Sky waves and line of sight transmissions

f) Phonetic Alphabet

g) Morse Code

6. Radio Navigation Aids:

The student is required to know:

a) The Rotating Light Beacon and relation to early mail routes

b) Radio Navigation Aids and usage
   - Non Directional Radio Beacon
   - Radio Range
   - Visual Aural Range (VAR)
   - Visual Ommi Range (VOR)
   - Area Navigation
   - Omega
   - Loran

c) VOR Tuning

d) Mechanics of VOR
   - To - Fm - Off
   - Aircraft Position and Needle

NOTE: A viewgraph discussion of the mechanics of VOR to take place this period

e) Reading Assignment
   - VOR TAC
   - TACAN
   - ILS
   - LORAN
   - CONSOL
   - INERTIAL NAV SYSTEM
   - DOPPLER NAVIGATION
   - RADAR - ASR - PAR
   - TRANSPONDER
   - ELT - Emergency Locator Transmitter