① DOES THE CHAPTER WANT A FLY-IN
② WHEN → MID AUG OR SEPT
③ REQUIRE PEOPLE

ARK - PARK

December 1980

enter by main door

OTTAWA 245

NEWSLETTER

••CARB HEAT••

HOT AIR AND FLYING RUMOURS

110

EAA CHAPTER 245

OTTAWA - CANADA

CHAPTER EXECUTIVE

President	Frank Cianfaglione	900 Garwood Ave	K1V 6X1	731-5001
Vice-President	Louis Saumweber	125 Cartier St	K2P 1K6	236-1212
Secretary	Jim Butler	12-126 Woodridge	K2B 7S9	829-5750
Treasurer	Dick Moore	79 Monterey Dr	K2H 7A9	820-4586
Program	Don Cybulski	161 Drummond St	K1S 1K3	238-8983
Membership	Louis Saumweber	125 Cartier St	K2P 1K6	236-1212
Historian	Ken Martin	79 Rita Ave	K2G 2G9	224-6327
Editor	Roger Fowler	3-2049 Baseline	K2C 0C8	828-8603
Publisher	~~Frank Tait~~	~~146 Old Colony Rd, Kanata~~	~~K2L 1M4~~	~~836-1210~~

This newsletter is the official publication of Ottawa and District EAA Chapter 245 and is published monthly to promote the aims of Sport Aviation in the Ottawa area.

Articles, letters and items of interest are gratefully appreciated in helping to make this publication YOUR newsletter and the type of newsletter YOU want.

Chapter 245 cannot accept responsibility for errors, omissions or false information but will make a conscientious effort to be reasonably accurate in published material.

Chapter 245 meets at 8:00 pm, the third Friday of each month. Meetings are normally held at Algonquin College, Lees Avenue Campus, but this is subject to change, so contact any of the above executive for meeting information.

EAA Chapter 245 Meeting of 27 Nov. '80
(held at Algonquin College, Lees Ave., Room 41)

-attendance: 45, including 8 visitors.

-meeting was opened at 8:03 p.m. by Frank Cianfaglione, who informed us that we have a donut deficit. Ken Cavers suggested we all put $1.00 in the pot. We did.

-Eric Taada reported on hangar/lounge progress. Foundation, walls, and 4 roof trusses are in place (see update following). To date, a total of 41 people have worked on the hangar; some of them for more than 5 days. 144 mandays of work have so far been invested.

-Dick Moore reported that total expenditure on hangar/lounge so far amounts to $5900, about 1.5 times last year's estimate. We have $79 left in the bank. We need more money to continue in the spring.

QUESTION: If more people are permitted to buy a share in the hangar/lounge, should they have to pay more than the $100 paid by the original 33 shareholders. It has been suggested that shares have appreciated substantially in value since the hangar and clubhouse are now en situ.

-Don Kernohan asked if we have insurance on the project. Ted Slack replied that we did not as yet but would be purchasing a temporary policy for $10,000 and $1 million liability.

-Frank has a letter from Father John MacGillivray, an honorary life member who is now a Parish Priest of 3 churches in Antigonish, N.S. He sent his regards and a donation of $200 for the hangar project on behalf of Bill Peppler, in gratitude for past favours from Bill. Thank you Father John.

-there will be no meeting in December, but there will be a newsletter (or, at least, there was if you got this one in December). Your secretary wises to apologize for this newsletter being late. Roger has been tearing his hair out waiting for these minutes (or hours, as the case may be). He has, nonetheless, shown commendable tolerance and forbearance.

-membership fees (now $20) are due for 1981.

-Chris Heintz, designer of the Zenith, Tri-Z, Mono-Z, and Acro-Z, was our guest speaker. He gave a highly interesting talk on weight and balance and stability and control. Also, he showed several movies about Zenair products.

-Secretary's note on hangar: At Christmas (today) the shell is now complete, except for a few rows of roof shingles and windows, siding, etc. Hats off to those valiant, determined, insane individuals (some of them non-shareholders) who braved freezing rain (one whole day) and sub-zero temperatures (many days) to get the building up. Several people have been there every weekend (or nearly every one)--often both days--since work began on 1 Nov. We are especially indebted to Ted Slack and Eric Taada, without whose untiring efforts there would be no hangar and no clubhouse.

A special word of thanks is also due to John Guertin who

showed up one Saturday morning (29 Nov.) with a huge construction crane from Hurdman Brothers Ltd. to save the day. We had erected 4 roof trusses by hand--12 hands (6 people) to be exact--the previous Sunday, and it wasn't exactly easy. John hoisted the remaining trusses in place with great finesse. He said he would have liked to have been there to help on other days, but work prevented this; so he thought he could best help by bringing a crane. He didn't want me to tell this, but he gave $50 for gas out of his own pocket to Hurdman Brothers Ltd., who very kindly permitted him to use the crane. Many, many thanks to John Guertin and Hurdman Brothers Ltd.

-Secretary's note on secretarying (secreting?): Being your secretary for one-and-a-half terms (I didn't know when--or how!--to quit) has been a privilege. Although my contribution has been mainly in a passive role, I'm glad to have been in office when a lot of exciting things were happening. It is now my very great pleasure to hand the "robes of office" over to my good friend--or at least, former friend--Laurent Ruel. I was delighted that he did not refuse the nomination, although it may have been a poor way for me to show my appreciation for his driving me to many meetings. I know that Laurent will make a superb secretary.

Jim Butler.

NOTES FROM TALK BY CHRIS HEINTZ

The centre of gravity (CG) location is determined by a summation of moments. For airplanes of standard configuration (non-canard types, etc., that is) the longitudinal CG location is normally about the 1/4-chord point of the wing, which places it approximately above or below the centre of pressure for low-wing or high-wing configurations, respectively, or approximately between centres of pressure for biplanes and triplanes. The centre of pressure (CP) is determined by flight loads $L_w \pm L_t$, where L_w is load on wings and L_t is load on tail. On most airplanes, the CG and CP are positioned so as to provide positive stability and also to cause the nose to pitch slightly down when throttle is closed or if engine quits, thereby tending to cause the airplane to maintain flying speed.

Lateral transfer of CG due to emptying of a fuel tank may cause the aircraft to fly with one wing low. Because of dihedral angle, the horizontal projection of the lower wing is longer than that of the raised wing, thereby creating more lift to compensate for asymmetrical loading and tending to level the aircraft. Large differences in asymmetrical loading may require holding opposite aileron to maintain level flight. If a long flight with this condition is planned, a temporary trim tab of either of the two types shown in Fig. 1 can be affixed to an aileron with duct tape, or equivalent. The tab is made from .020 or .032 in. thick aluminum. Its length must be determined by trial. To correct for a persistent tendency to fly with one wing low, a permanent tab may be attached to an alieron using screws or pop rivets.

On most conventional aircraft, the tailplane is designed to

create "lift" in a downward direction. This download on the tail creates a lot of induced drag. Consequently, most conventional aircraft will fly faster with aft CG than with forward CG, since less downward "lift" on the tail is required to maintain flight. Similarly, a slightly aft CG condition gives better landing capability and a shorter takeoff run--a good point to remember for a short-field takeoff.

Conversely, a forward CG condition requires more download on the tail to maintain flight, thereby creating more induced drag. Consequently, the aircraft flies slower. Additionally, when landing with forward CG, more download on tail is required to round out. If the CG is forward of limit, the pilot may be unable to round out properly; the aircraft will either stall and sink to the ground (if flown too slowly), or else engage the ground at excessive speed and bounce. The latter eventuality is aggravated on a taildragger. Because main wheels are forward of CG, they cause the aircraft to bounce nose-high and stall.

The least induced drag occurs when there are no tail loads; i.e., when the CG is very close to the centre of lift (centre of pressure, about 1/4 chord point of wing).

Stability takes three forms: positive stability (stable), neutral stability (indifferent), and negative stability (unstable). These three forms are illustrated in Fig. 2. Fig. 3 shows the flight characteristics of each form. If an aircraft is stable and is disturbed from level flight, it will try to return to level flight and will do so after a few steadily decreasing oscillations. An indifferent aircraft will continue--or try to continue--flight in whatever direction or position it assumes or is placed in. An unstable aircraft will tend to either go through a series of steadily increasing oscillations or take either of the other two flight paths shown.

If the CG is slightly aft of its rear limit, the aircraft will likely be indifferent. If it is further aft, the aircraft will be unstable. With aft CG an airplane is easier to get into a spin, but harder to get out.

For design purposes (or if you don't know where it should be), the following formula will give a very close approximation of where the CG of a conventional airplane should be:

Referring to Fig. 4,

$$\frac{X}{MAC} = K + 0.37 \frac{S}{s} \times \frac{L}{MAC}$$

where X is the distance, in inches, from wing leading edge datum to CG
MAC is mean aerodynamic chord, in inches
K is 0.19 for low-wing configurations or 0.21 for high-wing configurations
S is wing area, sq. ft. (including fuselage section between wing roots)
s is horizontal tail area, sq. ft.
C_t is mean aerodynamic chord of horizontal tail (tailplane), inches.
L is distance, in inches, from CG to the 1/4-chord point of tailplane.

Note that $\frac{X}{MAC}$ gives CG position in percentage of MAC. It should

ON JAN 5 THE ACTIVE MEMBERS HAD A MEETING TO DISCUSS HANGAR MATTERS. THE GROUP RESOLVED TO CHARGE THEMSELVES $20/YR EACH TO COVER WORKSHOP AND HANGAR OPERATION. THE INITIATION FEE OF $100 1979 WOULD BE RAISED TO $120 IN 1981 TO TRACK INFLATION.

RESOLUTION

Resolve that all members who have contributed $100 to the Hangar Fund automatically become Members unless they wish to become an Associate member with the $100 becoming a loan to the Chapter to be repaid when and if the Chapter has the resources. This loan and any other loan from the Chapter membership is subject to Article XIV (2) (a) of the by-laws. Members desiring to exercise the Associate membership option with the loan to the Chapter, must make their desire known to the Chapter Secretary within three (3) months from the date of adoption of the amendments to the by-laws regarding Associate membership.

Those that have paid $100. + $20 should have hangar use free or for minimum charge - priority on those that have not paid or worked on hangar.

NO!

- THE GROUP PROPOSES A CHAPTER AIR FAIR FOR AUG 16 AT CARP FEATURING FREE AIRPLANE WATCH WEIGHT AND BALANCE. GARY FANCY HAS VOLUNTEERED TO COORDINATE

- PAR TATE HAS OFFERED TO ORGANIZE A CHAPTER AUCTION

- JIM BUTLER AND IRVING SLONE ARE WORKING ON A PRESS RELEASE FOR PROSPECTIVE TENANTS.

B. PROPOSED CHANGES ARE UNDERLINED.

BY-LAWS OF THE EXPERIMENTAL AIRCRAFT ASSOCIATION CHAPTER 245

ARTICLE I Name of Organization

The name of the organization shall be the EXPERIMENTAL AIRCRAFT ASSOCIATION CHAPTER 245, hereinafter referred to as the Chapter.

ARTICLE II Location of Office

The office for the transaction of business for the Chapter shall be located in the Ottawa region of Ontario.

ARTICLE III Purpose and Aims of the Chapter

The Chapter is formed for the following purposes:-

(a) To promote interest in and the study and practice of aviation with special emphasis on homebuilt aircraft.

(b) To teach and train persons in the construction, rigging, maintenance and repair of aircraft and the care, maintenance and repair of all motive power used in the propulsion of aircraft.

(c) To make use and conduct experiments in connection with flying and aviation generally and the training of persons therein and to promote fly-ins and other exhibitions of aircraft and to offer for competition and to distribute prizes in connection therewith; or for any other purposes likely to tend to the advancement of the art, science and practice of flying, aircraft building, aeronautics and aviation in general.

(d) To acquire, hold and operate all manner of aircraft not exceeding a gross weight of 3000 pounds.

(e) To operate said aircraft from any airport in the vicinity of Ottawa provided that the permission of the owners (operators) has been obtained.

(f) To acquire, hold and operate buildings, equipment, property and airports to foster and promote the foresaid purposes.

(g) To carry out such functions as described in paragraphs (d), (e) and (f) above requiring substantial capital and additional annual fees when, in the view of the Board of Directors, sufficient interest and support exists. These Chapter functions shall hereinafter be referred to as Activities.

(h) To print, publish and sell and distribute literature which would foster and promote the foresaid purposes.

(i) To buy and sell materials, parts and components which are used in connection with the building of aircraft or other aviation experiments.

(j) To accept donations, gifts, legacies and bequests for the purpose of fostering and promoting the foresaid purposes.

(k) To carry on all the foresaid functions without pecuniary gain to its members.

ARTICLE IV Conditions of Membership

The conditions of membership in the Chapter shall be as follows:-

1. Types of Membership

(a) Associate Member - An Associate member shall be a person who has paid such annual fees as may be fixed from time to time by the Board of Directors but who shall not be entitled to vote at any meeting of the members of the Chapter for a period of three (3) years from joining the Chapter. At the end of the three year initiation period, each Associate member shall be entitled to one (1) vote at each Annual General Meeting or special meeting of the members of the Chapter except in matters relating to the Activities. A person shall become an Associate member on payment of such prescribed fees and may be confirmed as an Associate member at the next meeting of the Board of Directors. Following payment of such fees and failing confirmation at such meeting, the Associate member shall have the prescribed fees refunded to him and shall cease to be an Associate member. Each Associate member shall have all social privileges of the Chapter.

(b) Member - A Member shall be a person admitted as an Associate member and who has paid an Activity Initiation fee and such additional annual fees as may be fixed by the Board of Directors. Each Member shall have all Associate member privileges of the Chapter and the three year initiation period shall be waived. Each Member shall be entitled to one (1) vote at each special meeting of the members of the associated Activity. The Members of each Activity shall elect a manager of the Activity who shall automatically become a member of the Board of Directors. All financial and operational aspects of each Activity shall be with the members of the Activity with the approval of the Board or Directors. Each Activity shall formulate and enforce a set of Rules and Regulations appropriate to the running of the Activity with the approval of the Board of Directors.

(c) Life Member - A Life member shall be a person admitted as such by the Board of Directors and who has paid the entrance fees as prescribed by the Board of Directors. Each Life member shall be entitled to all the privileges of an Associate member of the Chapter. A Life member may become a Member upon paying an Activity Initiation fee and such additional annual fees as fixed by the Board of Directors.

(d) Honorary Life Member - An Honorary Life member shall be a person admitted as such by the Board of Directors, provided, however, that the number thereof, at any one time, shall not exceed three (3). Each Honorary Life member shall be entitled to all the privileges of a Life member of the Chapter.

(e) Associations, Societies or Corporations - Associations, Societies or Corporations may be admitted as Associate members by the Board of Directors upon paying all annual fees as prescribed by the Board of Directors and by indicating compliance with any special regulations which the Board of Directors may invoke. In the event that any Association, Society or Corporation is admitted as a member, it may, by notice in writing to the Chapter, nominate a representative who may on its behalf exercise all or any of its rights of membership until such time as such nomination is revoked. Notice of such revocation shall be given in writing to the Chapter Secretary. Such a representative shall be entitled to all the privileges of an Associate member of the Chapter.

(f) Members of the Chapter in good standing and entitled to vote at each Annual General Meeting or special meeting of the members of the Chapter are hereinafter referred to as Members.

2. Termination of Membership

Membership in the Chapter shall not be transferable and shall lapse and cease to exist:-

(a) upon the death of a member;

(b) if he submits his resignation to the Board of Directors and the same is accepted by the Board of Directors;

(c) if cancelled by resolution passed by the affirmative vote of two-thirds (2/3) of the Members present at any special meeting duly called for the purpose;

(d) if he fails to pay any fees due within the time prescribed by the Board of Directors;

(e) if his nomination as representative of an Association, Society or Corporation is revoked.

ARTICLE V Meetings of Members

(a) The Annual General Meeting of the Members shall be held on the third (3rd) Friday in October or on such day in each year as the Board of Directors may, by resolution, determine.

(b) A special meeting of the Members may be convened, at any time, by order of the President or Vice President or of the Board of Directors and shall be held at the place which the directors have previously established as the customary meeting place.

(c) The Board of Directors shall call a special meeting of the Members, if required

so to do, by requisition in writing, signed by not less than twenty-five percent (25%) of the Members, stating the purpose of the meeting and delivered to the President, Vice President or Secretary. Such meeting shall be called within ten (10) days and held within twenty-one (21) days of the receipt, by the President, Vice President or Secretary, of the requisition.

(d) A printed, written or typewritten notice, stating the day, hour and place of each special meeting and the general nature of the business to be transacted, shall be served, either personally or by sending such notice to each Memner through the post in a prepaid wrapper or letter, not less than ten (10) days before the date of the meeting, to such address as appears on the books of the Chapter, or, if no address be shown therein, then to the last address of such Member known to the Secretary, provided always that a meeting of the Members may be held for any purpose at any time and at any place, without notice, if all the Members entitled to notice of such meeting are present in person or if the absent Members shall have signified their assent, in writing, to such meeting being held. Notice of any meeting or any irregularity in the notice thereof may be waived by any Member.

(e) The non-receipt by any Member or Members of notice of any meeting shall not invalidate any resolution or any proceedings taken at any meeting.

(f) The Chairman may, with the consent of any meeting, adjourn the same from time to time and no notice of such adjournment need be given to the Members. Any business which might have been brought before or dealt with at the original meeting in accordance with the notice calling the same, may be brought before or dealt with at an adjourned meeting.

(g) A quorum for any meeting of Members shall be at least one-quarter (1/4) of the numbers of Members on the books of the Chapter.

(h) In the absence of the President and Vice President, the Members present shall choose another director as chairman and, if no director is present or if all the directors present decline to take the chair, then the Members present shall choose one of their number to be chairman.

(i) (i) Every question submitted to any meeting of Members shall be decided, in the first instance, by a show of hands.

(ii) If, at any meeting, a poll is demanded on any question, it shall be taken in such a manner as the chairman directs.

(iii) In the case of an equality of votes the chairman shall, both on a show of hands and on a poll, have a casting vote in addition to the vote to which he may be entitled as a Member.

(iv) A declaration by the chairman at any meeting, unless a poll is demanded, that a resolution has been carried or carried unanimously or by any particular majority or lost or not carried by a particular majority shall be conclusive evidence of the fact.

ARTICLE VI Directors

1. The affairs of the Chapter shall be managed by a board of seven elected directors and one director from each Activity, hereinafter referred to as the Board.

2. The qualification of a director shall be the holding of a voting membership in good standing or a nomination under Article IV (1) (e).

3. (a) The elected directors of the Chapter shall be elected at the Annual General Meeting and their terms of office shall be for two (2) years from the meeting at which they are elected except as outlined in Article VI (3) (c) or until their successors are elected.

(b) Any vacancy or vacancies from time to time occurring in the Board may be filled by such directors as remain in office, notwithstanding that such directors may not constitute a quorum of directors.

(c) A person appointed by such directors as remain in office to fill any vacancy on the Board shall hold office only until the next Annual General Meeting at

which time the Members will elect a new director to either complete the remaining year in the term of office or to commence a new term as the case may be.

4. The office of a director shall be vacated:-
(a) upon the death of a director;
(b) if he is found to be a lunatic or becomes of unsound mind;
(c) if he ceases to hold membership or nomination referred to in Article IV (1)(e) required to qualify him for the office;
(d) if by notice in writing to the Board, he resigned his office;
(e) if he is removed by the affirmative vote of two-thirds (2/3) of the Members at a special meeting called for the purpose.

5. (a) Three of the Board members, including the Vice President and Secretary, shall retire at the Annual General Meeting on years which are even numbers. Four directors, including the President and Treasurer, shall retire at the Annual General Meeting on years which are odd numbers.
(b) A member may not serve more than two (2) consecutive terms on the Board except that he may serve a third term in the position of President.
(c) Time spent on the Board as a result of a directors' election under Article VI (3) (c) shall not be construed to be a term of office in applying Article VI (5) (b).
(d) A retiring director shall retain office until the dissolution or adjournment of the meeting at which his successor is elected.
(e) Election of directors shall not be by ballot unless demanded by majority of the Members present.

6. The directors may exercise all such powers of the Chapter as are not, by these by-laws, required to be exercised by the Members in general meeting.

ARTICLE VII Meetings of Directors

1. (a) Meetings of the Board may be held either at the head office or elsewhere as the directors may from time to time determine.
(b) A meeting of directors may be convened by the President or any other three (3) directors at any time and the Secretary thereupon shall give proper notice of the meeting.

2. (a) Notice of any directors' meeting shall be delivered, mailed or telegraphed to each director not less than three (3) days (exclusive of the day on which the notice is delivered, mailed or telegraphed but inclusive of the day which notice is given) before the meeting is to take place.
(b) Notice of any meeting or any irregularity in the notice thereof may be waived by any director.

3. (a) A majority of the directors shall form a quorum for the transaction of business.
(b) Matters arising at any meeting of directors shall be decided by a majority of votes. In the case of an equality of votes, the Chairman, in addition to his original vote, shall have a second or casting vote.

ARTICLE VIII Additional Provisions as to Directors

1. No remuneration shall be paid to any director other than the actual expenses incurred by him in attending to the affairs of the Chapter and such expenses shall be paid only upon the approval of the Board.

2. The directors and other officers and every of their heirs, executors and administrators shall be indemnified and saved harmless out of the assets and profits of the Chapter from and against all actions, costs, charges, losses, damages and expenses which they or any of them, their or any of their heirs, executors or administrators shall or may incur or sustain by or by reason of any act done, concurred in or omitted in or about the execution of their duty in their respective offices except such (if any) as they shall incur or sustain by or through their own willful neglect or default respectively.

ARTICLE IX Officers

1. (a) The officers of the Chapter shall be a President, Vice President, Secretary, Treasurer and such other executive officers as the Board may determine from time to time.
(b) All of the said officers shall be members of the Board.
(c) Any two of the aforesaid officers may be held by the same person except those of President and Vice President.

2. The Board at its first meeting after election shall assign areas of responsibility or duties to each elected director.

3. The Board may appoint such employees, servants and agents as it shall deem necessary who shall have such authority and shall perform such duties and shall receive such remuneration as from time to time shall be prescribed by the Board.

4. (a) The President shall be the chief executive officer of the Chapter. He shall, if present, preside at all meetings of the Members and directors, shall sign all documents which require the signature of the President, shall perform all duties incident to his office and shall have such other powers and duties, from time to time, be assigned to him by the Board.
(b) The Vice President or Vice Presidents (in order of seniority) shall be vested with all the powers and shall perform all the duties of the President in the absence, or inability, or refusal to act of the President. The Vice President shall also have such other powers and duties as may, from time to time, be assigned by the Board.
(c) The Secretary shall issue or cause to be issued notices of all meetings of the Board and Members when directed or as authorized by these by-laws so to do, shall have charge of the seal and of the minute books of the Chapter, shall sign, with the President or other signing officer or officers of the Chapter such instruments as require the signature of the Secretary and shall perform such other duties as the terms of his engagement call for or as the Board may, from time to time, properly require of him.
(d) The Secretary or some other officer specially charged with the duty shall keep or cause to be kept a book or books wherein shall be recorded:-
i) a copy of the letters patent issued to the Chapter and any supplements or other information relative thereto;
ii) copies of all by-laws and memorandum of agreement of the Chapter;
iii) the name, address, and class of membership of each member;
iv) the names, addresses and calling of all persons who are or have been directors of the Chapter, with the dates at which each became or ceased to be such directors.
(e) The Treasurer shall have the care and custody of all the funds and securities of the Chapter and shall keep proper books of accounting thereof. He shall deposit the funds in the name of the Chapter in such bank or banks or with such depository or depositories and in such manner as the Board may, from time to time, direct. He shall at all reasonable times exhibit his books and accounts to any directors of the Chapter upon request. He shall sign or countersign such instruments as require his signature and shall perform all duties incident to his office or that are properly required of him by the Board. He may be required to give such bonds for the faithful performance of his duties as the Board, in its uncontrolled discretion, may require and no director shall be liable for failure to require any bond or for the insufficiency of any bond or for any loss by reason of the failure of the Chapter to receive any indemnity thereby provided.

5. (a) The Board may, from time to time, appoint a general manager or manager, who may, but need not, be one of the directors of the Chapter, and may delegate to him full authority to manage and direct the business and affairs of the Chapter (except such matters and duties as by law be transacted or performed by the Board or by the Members in general meeting) and to employ and discharge agents

and employees of the Chapter or may delegate to him any less power.
(b) He shall conform to all lawful orders given to him by the Board and, at all reasonable times, give to the directors or any of them all information they may require regarding the affairs of the Chapter.
(c) If the general manager or manager is a director he shall not receive any remuneration.

6. If the office of President, Vice President, Secretary or Treasurer, one or maor, shall be or become vacant by reason of death, resignation, disqualification or otherwise, the remaining directors by resolution duly passed at any special meeting duly called and held may elect or appoint an officer or officers to fill such vacancy or vacancies.

ARTICLE X Auditors

An auditor or auditors for the Chapter whose duty it shall be to audit the accounts of the Chapter, shall be appointed and the remuneration, if any, fixed at the first meeting thereof held after the issue of the letters of patent. Such appointment and remuneration shall be valid until the next Annual General Meeting, at which meeting the Members shall appoint an auditor or auditors and fix the remuneration thereof for the period until the next Annual General Meeting, and so on from Annual General Meeting to Annual General Meeting.

ARTICLE XI Certificate of Membership

1. A certificate of membership appropriate to the class of membership conferred, shall be issued to each member in such form as may be approved, from time to time, by the Board.
2. The membership fees required of members and the time for payment of same shall be fixed by resolution of the Board in accordance with Article IV.

ARTICLE XII Documents

1. Contracts, documents or any instrument in writing requiring the signature of the Chapter shall be signed by the President, or a Vice President and by the Secretary; and all documents, contracts and instruments in writing so signed under the authority of the Board shall be binding upon the Chapter without any further authorization.
2. The seal of the Chapter, when required, shall be affixed by the Secretary to contracts, documents and instruments in writing, signed and aforesaid.
3. The term "contracts, documents and instruments in writing" as used herein shall include deeds, mortgages, hypothees, charges, conveyances, transfers and assignments of property, real or personal, immovable or movable, agreements, releases, receipts and discharges for payment of money or other obligations, conveyances, transfers and assignments of shares, stocks, bonds, debentures or other securities and other paper writings.
4. All cheques, drafts or orders for the payment of money and all notes and acceptances and bills of exchange shall be signed by such officers or person or persons, whether or not officers of the Chapter, and in such manner as the Board may, from time to time, designate and as may be required by the Chapter's bankers.

ARTICLE XIII Fiscal Year

The fiscal year of the Chapter shall be the calendar year.

ARTICLE XIV Borrowing and Insurance

1. The directors of the Chapter may, from time to time, borrow upon the credit of the Chapter to meet recurring or capital expenses. Borrowing authorized by the directors shall be restricted to that which is obtainable from the Chapter's

chartered bank.

2. The directors shall not have authority, unless prior approval of the Members at an Annual General Meeting or special meeting has been obtained, to:-
   (a) borrow money otherwise than from the Chapter's chartered bank;
   (b) sell, exchange, or otherwise dispose of any asset of the Chapter having a marketable or book value (which is greater) in excess of the greater of:-
   (i) the Chapter's gross revenue for the preceeding fiscal year;
   (ii) a sum equal to the Chapter's Associate membership times 100;
   (c) bevy a special assessment on Members.
3. The directors shall make such arrangements as they consider necessary in respect of insurance coverage and the fidelity bonding of employees.

ARTICLE XV Interpretation

In all by-laws of the Chapter, the singular shall include the plural and the plural the singular. The word "person" shall include firms and corporations and the masculine shall include the feminine.

ARTICLE XVI Amendments or Repeal

Any by-law may be amended or repealed by any Annual General Meetin or special meeting by a two-thirds (2/3) vote of the Members present and voting provided that the text of the proposed amendment or repeal has been given either at a previous Annual General Meeting or special meeting or has been mailed to each Member at his recorded address seven (7) days in advance.

ARTICLE XVII Winding Up

Upon the dissolution of the Chapter, any assets remaining after the payment and satisfaction of:-
(i) the debts and liabilities of the Chapter and
(ii) member loans in support of the Chapter operations and Activities,
shall go to the Experimental Aircraft Association of Canada.