

## NICE TO KNOW

The following sections, Parts V, VI and VII, although essential to the background education of the fencing coach, are considered 'nice to know' information as they do not form part of the evaluation process for Level III certification.

### **Part V. Coaching Theory.**

- Part-whole learning - a continuation of the CFA coaching Philosophy.
- Timing - explanation of how timing and its control is used in Fencing.
- Speed and accuracy - a discussion of how these two skills effect the teaching of the sport.

### **Part VI. General**

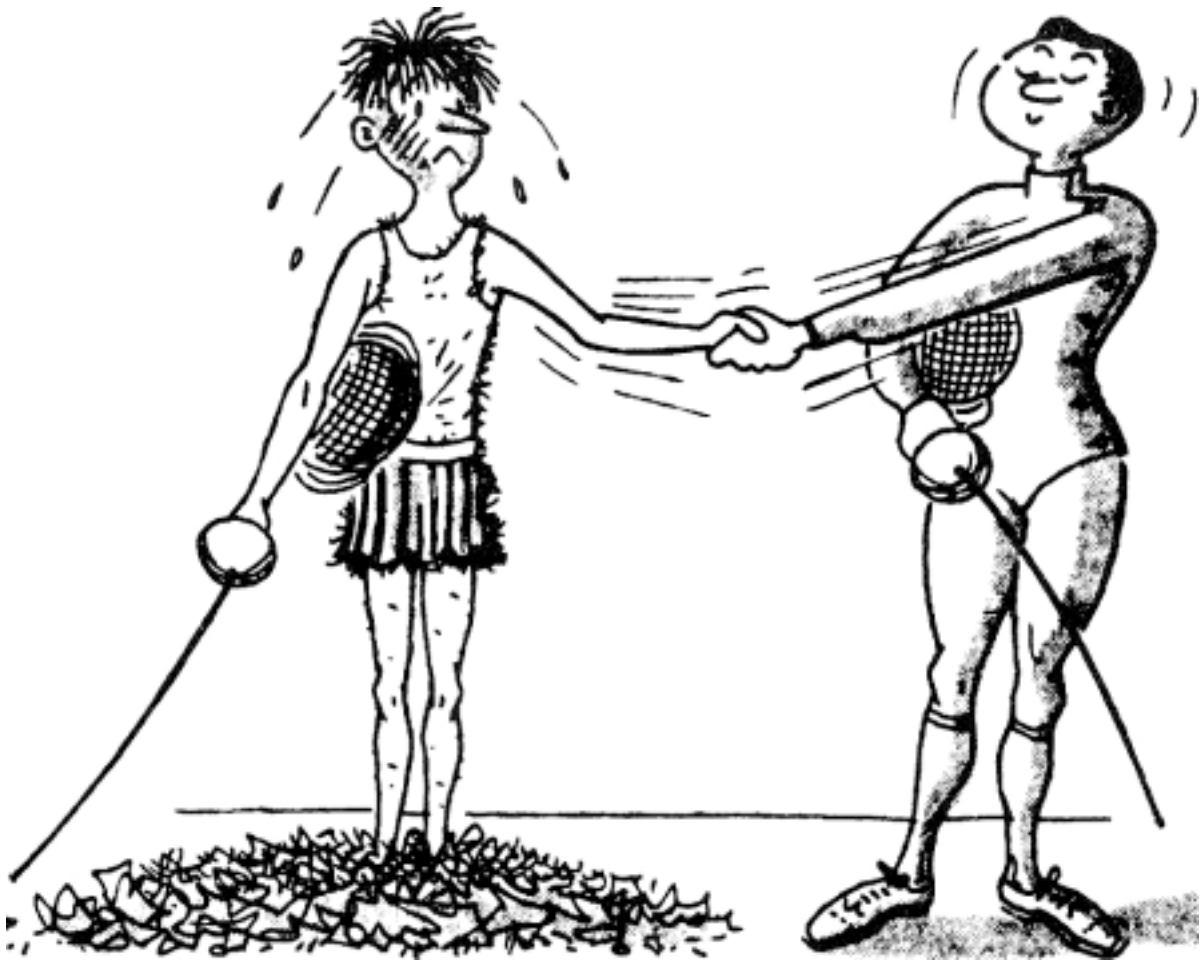
- Judging of Hits - a few elementary rules which effect the fencing phrase.
- Care of Electrical Equipment - how to look after the personal equipment of a Foil or Epee fencer.

### **Part VII. Fitness**

- Fitness Plan - easy to learn fitness program, specific to the sport, which can be used anywhere without space or equipment.
- Circuit Training - the fundamental principles of this form of training are explained and an example is given of a general fitness circuit.

### **Part VIII. Practical component**

- Log sheets - for the use of the coach in recording hours of coaching for Level III certification.



PART V  
COACHING THEORY  
Part-Whole Learning  
Speed and Accuracy

## **PART-WHOLE LEARNING**

### **Related to Club Activity and the Individual Lesson**

In the Level 1 Manual we discussed the learning process of Whole-Part-Whole. It was stated that for purposes of motivation, maintaining the beginner's interest and enthusiasm, it was necessary to present the 'whole' sport of fencing, to present the complete competitive structure of the sport expressed in simplified terms. Hence the introduction of Mini-Epee as a vehicle for this concept.

At Level 3 we are dealing with people who have now taken up the sport and who wish to be coached in the more exacting technical skills of combat, to improve their own game and to achieve better results in competition.

If they have gone through the Mini Fencing program they should now have a working knowledge of the complete, though elementary, structure of combat, Presiding, Judging, equipment and rules, the functions that go to make up a competition. These fencers are now "hooked on the sport" and have become permanent members of a club.

The learning process now becomes 'Part-Whole' and the individual lesson from a fencing coach plays an increasingly important role. The more proficient the fencers become, the more they will rely upon the individual lesson for their improvement.

The following principles have developed into an almost universal format for club activity in fencing:

#### **1. Warm-Up**

Footwork, games general loosening exercises, etc., carried out in groups or individually.

#### **2. Individual Lesson**

A one-on-one relationship between the pupil and his/her coach - the coach concentrating upon a particular aspect of the pupil's repertoire of movements, tactical situations or mobility.

#### **3. Combat**

Freeplay with other club fencers or organised mini competition in which the fencer tries out his/her existing repertoire of movements or new ones he/she has learned.

#### **4. Open/Provincial/National Competitions**

Where the fencer tries out his/her game under the stress and psychological restrictions of possible recorded failure.

The feedback from this freeplay, outside the restrictions of serious open, provincial, or national competition, becomes a most important aspect of continued learning at club level and is the level which stimulates the fencer, the coach and the lesson.

The success or failure of techniques learned in the lesson, tried out in the relatively free environment of club freeplay, helps the fencer to form a very individual repertoire of attacks, defence and counter attacks which eventually will make up his/her tactical approach to official competition.

This form of fencing club activity, practiced with only minor variations throughout the fencing world, has its roots in two main phenomena:

1. The social aspect of a minor sport such as fencing insists that most clubs exist as an evening activity, pursued mainly by adults after their professional daily chores have *been* completed. Hence members arrive at the club at varying times throughout the evening. The only possible way to organise club activity and learning is through the

individual lesson and freeplay. Some larger clubs are fortunate enough to have beginner classes starting at the beginning of a term, hence the emphasis in Level 2 upon the group practice lessons. It is recognised by the Coaching Committee that beyond the beginner stage, club learning evolves around the individual lesson and freeplay.

2. It is not impossible to learn high grade competition fencing in a 'Whole' fencing environment, experiencing the skills of attack and defence only in an entirely combative situation, but it is highly unlikely. The complexities of the sport, with its finely tuned co-ordination, distance and timing, makes it necessary to isolate these qualities from the competitive environment and practice them in a lesson with a coach, sometimes quietly and without external interferences. Many subtle aspects of fencing can only be learned initially in a very controlled learning situation before they are exposed to the sometimes chaotic responses of combat. However, to continue 'Part' practices to the exclusion of the 'Whole' practice in competition would make fencing a recreational activity where the perfection of fencing techniques is an end in itself.

What is learned in the lesson or 'Part' practice must be reinforced in combat and modified to cope with the difficult cues and responses presented by the opponent. It is never possible for the fencing coach to cover all of the eventualities inherent in the fencing bout; he can hope to cover but a few. It is therefore up to the pupil to use these moves first in freeplay in the club to see how to make a particular move work and become effective. Then, armed with this new knowledge and ability, the pupil may try them in official competition before accepting them as part of his/her repertoire and tactics.

A fencer may learn many moves which later on are discarded as ineffective. He/she will, and should, only retain those which suit his/her particular habit patterns. Hence, movements which are good for some fencers are not always good for others. It is this 'Part-Whole' process of learning with the accompanying feedback processing of success or failure which shapes the fencers' game and approach to the sport.

### TIMING

Timing may be defined as the creation of the most favourable temporal conditions for a response. Conditions for the response are the most favourable when it can be made with the best control, at the best moment. The expert performer is able to make an activity look easy because of the preselection of most appropriate actions, made at the 'right time'; the 'right time', that is, for himself, not for the adversary!

Here are a few examples:

- launching the attack when the opponent is unable to escape by moving away.
- hitting the opponent with a riposte whilst he is on the lunge and before he can recover to the 'en garde' position.
- making a counter attack 'in time'.
- remising on a complicated riposte.
- deceiving a parry - (compound attack).
- making the opponent miss by side stepping or turning.
- arrying late - or early - on an attack.
- deceiving the opponent's preparation on the blade (pressure or beat).

Good timing, therefore, is essential to smooth and easy combat. If timing is lost due to the pressure being too great, the skill will undoubtedly break down. This results in having less time to recognize the important cues in the display and, consequently, having less time in which to respond to them.

The performer is then:

- hit with the attack or riposte instead of successfully parrying
- with the counter attack which he has drawn but failed to parry
- with the blade contacted in the feint rather than successfully deceiving the parry - and so on.

Anticipation, therefore, is an aid to good timing. Being able to foresee what is going to happen and consequently predetermining one's own actions, gives more time to see the cues and to carry out the necessary responses. Such movements as deceiving or evading the opponent's actions require a great ability to anticipate.

When anticipating a fencer's actions, one must take into consideration the possibility of error. One can never be certain of what is going to happen, until after the event. Therefore, a certain amount of confidence is required to gamble upon any prediction. Practice in observation and deducing the opponent's game is a necessary part of training experience and will show when a 'calculated risk' is worth taking. Being over cautious in one's game does not lead to good anticipation or to the full benefit of good timing; especially in the intermediate stage of learning one should experiment often in 'calculating the risk' and following it through. This is the only way to find out whether one is able to read the opponent's game and to be able to rely upon this assessment. Obviously, errors will be made in the beginning and one may even fall foul of one's own traps. Practice however, will develop a greater understanding and ability to select the right cues in the display and the correct response to them.

Remember, fencing should be a battle of wits as well as an exchange of relative techniques. Quite often, it may be necessary to sacrifice technique in order to produce a particular, unorthodox but successful movement '*at the right time*'.

## **SPEED AND ACCURACY**

Fencing is a sport where speed and accuracy are of utmost importance.

Although the application of speed is relative, in other words it can sometimes be a fault to be too fast just as it is to be too slow; the practice of improving speed whilst maintaining a balanced technique and co-ordination is a life time study. After all, at intermediate and advanced levels, moving fast is an integral part of the sport. Once speed is acquired, it is then possible to control speed and regulate it to that of the opponent.

The eternal question, discussed by coaches and sports psychologists worldwide, is; should the coach aim to develop speed as soon as possible and then concentrate upon accuracy and co-ordination? - or - should the coach develop accuracy and co-ordination first and allow speed to develop naturally? Speed then becomes the by-product of control and co-ordination. One can also say that accuracy is the by-product of control and co-ordination. Not all coaches and sport psychologists agree upon the answer to this question, if indeed there is an answer. Certainly the answer must vary from one individual performer to the next - and - from one sport to the next.

The author is firmly convinced that in fencing it is easier to speed up accurate and controlled movements than it is to control, co-ordinate and develop accuracy in already fast movements. The ability to move fast or not is already inherent in the performer's athletic qualities right from the beginning. Tests on beginners, showing individual reaction time and muscular qualities such as slow and fast twitch (Level 2 Theory), strength and endurance, will determine these inherent qualities. The question is, "how do we, as fencing coaches, channel, train and develop these qualities into a new skill - Fencing?"

Many coaches during the recent years of fencing competition development favour the development of speed early in the fencer's program, often at the expense of control and accuracy. It must also be confessed that these fencers achieve very good competition results very early in their development. The problem exists mainly in the long term view.

Are these fast and successful intermediate fencers capable of improving their control and co-ordination when they reach national standards and then onward to international standards where they will meet fencers at home and abroad of excellent speed, accuracy and control?

We think not. Development of speed too soon to achieve early success in competition generally produces a performance ceiling too low for continued advancement up to the highest international grade. In our opinion maximal speed should be developed out of sound control and co-ordination - out of effective, economical and accurate technical application. Speed will develop out of confidence in one's own performance and gradual emphasis on the part of the coach.

Of course, there will always be exceptions to this theory. One can always find these exceptions in order to prove a point and perhaps a coach would be justified in applying the opposite theory to individual cases. This manual, however, attempts to put forward theories which will apply to the majority of those who will be trained through a national method, the Canadian Fencing Association's certification program. This thought has considerable influence upon the theories propagated by this coaching manual.

Whilst definitely favouring one side of the discussion, it must not be implied that artificially slow movement is recommended for the learning of fencing skills. On the contrary, it should be understood that very slow movement learning produces a coordination which is also artificial, a co-ordination that is not the same when the movement is performed at speed. Slow motion may be necessary for analysis and understanding.

Film and video tape taken at normal speed then slowed down for analysis is an excellent visual aid. Having understood what the performer has to do, he/she should be encouraged to practice at a natural speed whilst having sufficient control to assess feedback and thus modify the move until something near the correct one is achieved. It is the insistence upon a speed beyond that which should come later in the training program, when the performer has developed accuracy and economic movement.

As we are dealing with ballistic movement in all actions involving the lunge and fleche, natural speed must be such that correct co-ordination is possible due to the momentum of the act. A ballistic movement is described as one in which the contraction of the positive muscle group relaxes before the end of the movement so that there is a momentum phase free of muscular action.

It should be evident from this statement that ballistic movements such as actions involving the lunge and fleche should have sufficient initial speed to provide momentum throughout the action in order to achieve the correct co-ordination. Speed and accuracy may be priorities included early in the training program but they must be applied **equally**. Accuracy must not be forsaken for speed otherwise one could finish up with a very fast fencer who cannot hit the target! If this does happen the coach would be well advised to change that person to epee where the target is unlimited.

Perhaps more important than the all out desire to attain maximal speed, is the acquiring of the ability to regulate speed. Not all fencers are fast. Even at international level there are noticeable differences in speed from one fencer to another. The ability to regulate speed will allow the fencer to fence at a fast tempo when the opponent is fast, at a slower tempo when the opponent is slow, or to change from fast to slow and vice versa with either type of opponent when it is tactically desirable to do so.

Bear in mind throughout all of these discussions the old saying "what is good for some people is not good for others". This is a point worth remembering when conducting group or individual lessons. In all technical skills, speed and timing should be modified to suit the performer's individual psychological and physiological make-up. This attitude will do much to develop a flexible approach to every problem.



**PART VI**  
**GENERAL**

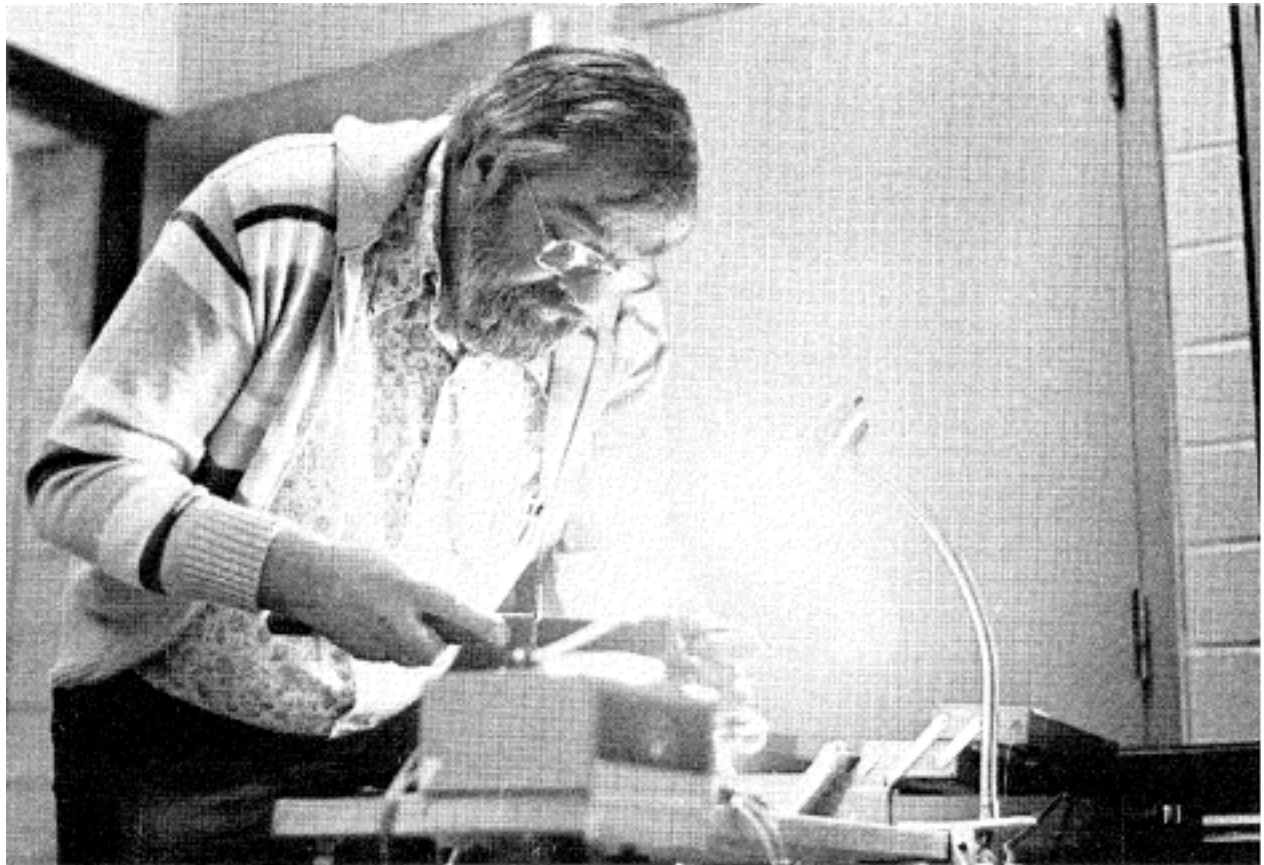
Judging of Hits  
Care of Electrical Equipment

### **Judging of Hits (F.I.E. Rule 237, page 53, and 422, pages 73-75):**

In foil and sabre, it is wise for all coaches to know by heart when the attacker or defender is considered at fault and is alone counted as a hit in the case of a double hit (coup double). When a double hit occurs it is the result of a distinctly faulty action on the part of one of the fencers, unless it results from the situation of simultaneous attacks (attaques simultanées), which is the simultaneous conception and execution of an attack by both fencers. In this latter case of simultaneous attacks, neither scores a hit at foil or sabre but they are both counted as hit at epee.

When a double hit occurs and there is not an interval of time (temps d'escrime) between the hits:

1. The fencer who is attacked is alone counted as hit:
  - if he makes a stop hit on his opponent's simple attack made from correct fencing distance,
  - if, instead of parrying, he attempts to avoid the hit and does not succeed in doing so,
  - if, after a parry is effected, he makes a momentary pause which gives the opponent the right to re-attack (remise, reprise or redoublement),
  - if, during a compound attack, he makes a stop hit without being in time,
  - if, having his point in line (arm straight and point threatening the target) and being subjected to a beat or prise de fer which deflects his blade, he attacks or places his point in line again instead of parrying a direct hit made by his opponent.
  
2. The fencer who attacks is alone counted as hit:
  - if he initiates his attack when his opponent has his point in line (arm straight and point threatening the target) without first deflecting the opponent's blade,
  - if he attempts to find the blade and does not succeed (derobement or trompement) and continues the attack,
  - if, during a compound attack, he allows his opponent to find the blade and continues the attack while his opponent ripostes immediately,
  - if, during a compound attack, he bends his arm or makes a momentary pause, during which time the opponent makes a stop hit or an attack while the attacker continues his own attack,
  - if, during a compound attack, he is stop hit one period of fencing time (temps d'escrime) before he makes his final movement,
  - if he makes a hit by remise, reprise or redoublement on his opponent's parry which has been followed by a riposte which is immediate, simple and executed in one period of fencing time without withdrawing the swordarm.
  
3. When there is a double hit (coup double) each time the President is unable to clearly judge from which side the fault has occurred, he must replace the competitors en garde.



## CARE OF ELECTRICAL EQUIPMENT

### Personal Equipment

The swords, body wire, electric jacket and mask (required to be insulated for foil only) are considered to be the fencer's personal equipment and should be regularly maintained throughout the fencing season.

### Swords

Swords should be frequently inspected. Particular attention should be paid to the plastic insulation sleeve where the wire passes through the guard. This sleeve can be cut if the handle is tightened too much, making it possible for the wire to ground out on the guard. If the sleeve is cut, replace it with a new one. Next inspect the wire along the channel in the blade. Electric foil blades, because of their flexibility, often stretch the wire which, if not securely glued into position, will come loose on the blade. When this happens, place the blade in a vice and hang a weight on the point to bend the blade until the wire is flat in its groove. In this position, reglue the wire and leave until the glue is set.

The F.I.E. rules state that the body of the electric point and the foil blade for a length of 15 cm from the point must be covered with insulating material, usually plastic tape. During competition this plastic tape will become cut and ragged, eventually providing no insulation at all. The insulating tape must be constantly renewed if the electric foil is to pass inspection before every major competition.

The pommel or rear part of the handle (and all extremities of an orthopedic grip that may extend beyond the fingers when held correctly) must also be insulated to avoid contact with the metallic jacket of the foil fencer. This insulation must also be renewed when it becomes ragged.

None of the above will apply to epee except possibly the wire becoming loose in the blade. The epee blade, being less flexible than the foil blade, will mean that the wire is subject to less stress, thus obviating most of the problem. However, if the wire is not properly glued by the manufacturer or the fencer, the constant bending of the blade will find the weak spot and the wire will come out of its groove. It should be noted, however, that the handle of the epee must not be covered with padding or tape - all parts of the handle must be visible for easy inspection.

### Pointe d'arret

The most important part of the electric foil or epee is the electric point. This is spring loaded so that a pressure of 500 grams (foil) and 750 grams (epee) is required before the circuit is actuated. At foil the circuit is broken when the hit is made whereas at epee the circuit is completed when a hit is made.

It is this delicate spring which loses its tension after continued use. The tension should be tested by the correct weight, obtainable from all fencing equipment suppliers, before and during competition. If the spring is too weak (will not support the weight without actuating the circuit) it will be necessary to remove the spring by unscrewing the two small screws in the side of the barrel, being careful that the whole spring and point does not fly out under the tension of the spring. Place your free hand over the point or keep your finger on the point and slowly release when the screws are out.

Take the spring and stretch it a little, then replace and test again. Because the screws are so small, a magnetic screwdriver makes it easier to replace them. If the spring is still weak, repeat the operation and test again. If after a second attempt the spring will not resist the weight, it should be replaced.

## Body Wires

The body wire connects the electric sword to the reel wire and passes up the sword arm sleeve, under the armpit and out at the bottom of the jacket where it connects to the reel wire socket clipped to the ring on the back of the fencer's jacket. For foil, a second wire is spliced into the body wire about 12 inches from the end and has an alligator clip. This clip is attached to the metallic foil jacket and connects the jacket to the apparatus. The epee body wire has a three-pin plug on either end of the wire whereas the foil body cord has either a bayonet plug or a two-pin plug on one end and a three-pin plug and alligator clip on the other. These body wires are very strong and serviceable, but should a wire break it is better to buy another body wire than to try to repair it. Fencers tend to change body wires during competition by attaching the new one to the one already through the jacket and then pulling it through from the rear of the fencer. Any break in either body wire which has been joined and taped will most certainly pull apart during this process.

When checking the foil body wire, make sure that the screw in the tip of the bayonet plug is fully screwed down. With the three-pin plug the plastic cover can be pulled apart to expose the wire connection to each pin. The wires should be securely screwed or soldered to each pin. The alligator clip wire should be screwed and soldered to the clip.

## Insulated Mask

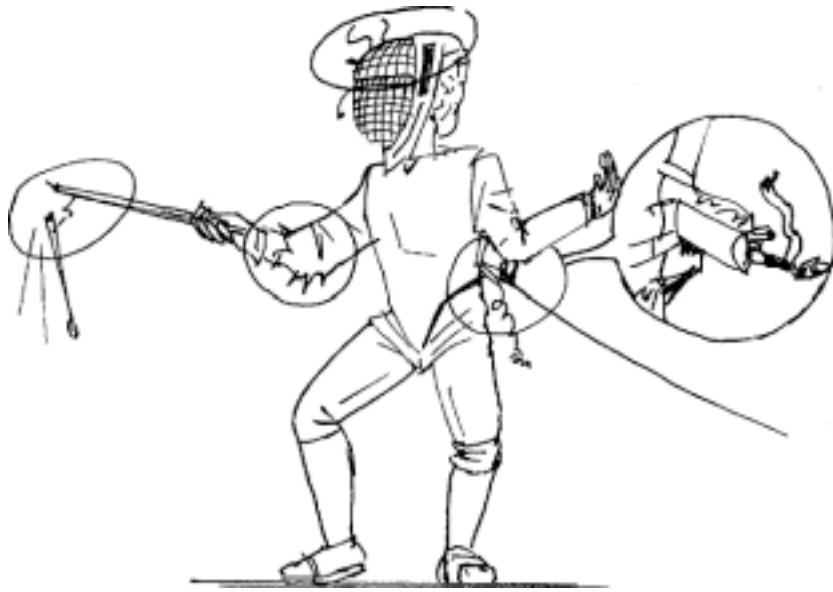
The insulated mask is for foil fencing only. In epee fencing the mask is part of the target and does not need to be insulated.

The bib of the insulated mask is covered with a thin clear plastic on the inside and the face mesh is sprayed with a plastic paint. This plastic cover on the bib stops the mask from making electrical contact with the metallic jacket, especially when the fencer is perspiring. Cracks or tears in the plastic cover will allow the mask padding and bib to become wet and this will eventually destroy the insulation, causing a hit on the mask to register on the recording apparatus as a valid hit. Should the mask insulation fail because of tears or cracks, the mask must be discarded for the competition. It is, however, still serviceable for practice or for competition use with the other weapons.

Although this chapter is concerned with maintenance of electrical apparatus and ancillary equipment it is wise to include other points to check in the mask. The most vulnerable part of the fencer is the face. Although protected by a mask, should the mask become old and unserviceable it can represent a hazard to the user. Points to look for are as follows:

- Hold the mask with the face towards you and press firmly on various points of the mesh with your thumbs. If the mesh gives way easily, discard the mask. A hard thrust with the point of a sword, particularly in epee, could penetrate the mesh and become extremely dangerous for the user. Before competition, it is advised to test the strength of the mesh using the test device described in the Regulations.
- Check that the bib is in good condition and is securely sewn to the mask. Stitches can rot due to perspiration and a gap can appear between the bib and the lower part of the mask, making it possible for a point to penetrate in the area of the throat. Some manufacturers supply masks with the bib attached only with a few press fasteners or rivets - these masks are unsafe even for practice, let alone competition.
- Next check that the tongue of the mask, the part that fits around the top of the head, is still firmly welded to the mask. This tongue is usually soft metal and can be bent to fit the head. However, continual bending will weaken the weld, resulting in the tongue becoming floppy. When this happens there is the possibility that the mask could fall off when making large movements such as lunging or fleching.

The correct way to bend the tongue so as not to weaken the weld is to hold the part inside the mask against the top of the mask whilst bending the other end.



**PART VII**  
**FITNESS**  
Fitness Plan for Fencers  
Circuit Training

## FITNESS PLAN FOR FENCERS

The following plan has been devised specifically for fencers. It should be carried out throughout the training period at least three times each week.

The plan is based upon Interval Training principles of alternate work and rest periods. These periods may be decreased or increased according to the fitness standard of the individual. If the one minute work rate is considered too strenuous to start with, the time should be decreased and gradually lengthened to one minute as strength and endurance increases.

The fencer should work with a partner who will keep the time and count the number of repetitions of each exercise. At the end of the eleven minute period they change places.

A log book should be kept stating: work and rest period, date and number of repetitions for each exercise.

During the initial stages of training, quality rather than quantity of exercise should be practiced to ensure correct technique for the future.

Example:						
Name	Work Period			Rest Period		
DATE	1 Fingers and Arm Press	2 Split Jumps	3 Lateral Twist	4 Shuttle Run	5 Sit Ups	6 Split Lunges

## **FITNESS PLAN**

### 1. Fingers and Arm Press

Standing, one full pace away from wall, facing it. Lean forward, fingers on wall shoulder height, arm straight. Arms bending and stretching in rhythm elbows at right angles. Continue for one minute.

One minute rest.

### 2. Split Jumps or Burpees. One minute work

Split Jumps - Start with one foot in front, knees bent fingers touching the floor. Jump to body upright and legs straight and feet just off the floor. Land in the starting position,

opposite foot in front, and repeat continuously for one minute.

Burpees - Standing, bend knees to hands on the floor, knees between arms. Jump feet to the rear, body and legs straight. Jump feet forwards knees between arms and stand up. Repeat continuously.

One minute rest.

### 3. Lateral Twists

Stand a pace away from a wall, back to it and feet apart. Place a chalk mark on the wall about shoulder height. Start with knees bent and fingers touching the floor. Stretch knees and body turning to touch mark on the wall, bend knees and touch floor between feet and repeat to the other side. Continue for one minute.

One minute rest.

### 4. Shuttle Run

Place marks on the floor 4' metres apart or use the on guard lines of a piste. Start with one hand touching a mark, sprint to touch the other mark with jump turns continuously for one minute.

One minute rest.

### 5. Sit ups

Start lying on the floor, feet together and hands behind neck. Partner sitting astride the ankles with hands supporting just below the knees. Sit up to right angles keeping elbows back and back straight. Lie down and repeat continuously for one minute.

One minute rest.

### 6. Split Lunges

Start with feet at right angles, fingers touching the floor, knees apart. Jump to the full lunge and return to the start position continuously for one minute.

Total time 11 minutes. Move to the next start position during the rest period.

5 minutes rest using light, relaxing exercises.

## **SUGGESTED TARGET**

Date	Fingers Armpress	Split Jumps	Lateral Twists	Shuttle Run	Sit Ups	Split Lunges
	60	70	80	30	35	70

## CIRCUIT TRAINING

One of the best forms of exercise to develop fencing fitness is circuit training. The circuit can be set up easily in the fencing salle and very little equipment is required.

This type of training is best done in pairs, one doing the circuit whilst the other counts the number of repetitions and generally acts as an assistant when support is needed. The assistant will also check the pulse rate at the end of the circuit.

### **Circuit**

Once the circuit is learned and the exercises performed correctly, the performer should set the number of repetitions by repeating each exercise to a maximum. Make sure plenty of rest is allowed between the exercises so that maximum repetitions are achieved.

The following formula is then applied:  $\text{Max reps.} \div 2 = \text{number of repetitions for each exercise}$ . When the circuit is performed three (3) times around, the performer is doing one and a half times his/her number of repetitions. However, the exercises in the circuit on page 181 are spaced so as to exercise different muscle groups in turn, thus avoiding over-firing any one group.

**Note:** The maximum number of repetitions for step ups is arrived at by stepping up with one leg leading for 2½ minutes then changing to the other leg immediately for a further 2½ minutes. The total number of repetitions is then divided by 2 to arrive at the number of repetitions for the circuit.

The token circuit on page 181 is based on ten repetitions for each exercise and should be used during the learning period to become accustomed to the circuit and exercises.

Only when the circuit is thoroughly learned should the maximum number of repetitions be attempted and the full circuit developed.

Once the full circuit is developed and circuit time and recovery rate established, the first target should be set at two thirds of the circuit time. Hence, for a circuit time of 12 minutes, the target should be 8 minutes. Once this target is achieved, further improvement targets may be set by further reducing the circuit time or increasing the repetitions whilst maintaining the same circuit time.

### **Recovery rate:**

By accurately recording the recovery rate, the performer is given immediate feedback of improved cardiovascular condition. As this condition improves, the performer will recover to a normal pulse rate much quicker, *even* though the initial rate may be much higher than previously obtained. To obtain the necessary training effect, initial pulse rates should be well over 120 counts per minute. Difficulty may be experienced in accurately counting the pulse at this level so plenty of practice is advised. There are many different views on the best way to take a pulse, for a full minute or *even* half a minute may not record an accurate reading as the pulse will drop rapidly during this period of time. It is, therefore, advised that practice is necessary in achieving an accurate reading over a period of six (6) seconds and multiplying the reading by ten (10). This may be increased up to a period of ten (10) seconds, multiplied by six (6) if difficulty is experienced. Pulse rates should be taken four times at intervals of one minute and recorded in a log book along with circuit times.

### **Log Book:**

Reference to the log book at three monthly periods should show positive improvements of both circuit times and recovery rates, thus, providing the performer with a positive feedback of continual progress.

**Performance Graphs:**

At the end of each year's activity, it is a useful exercise to draw up a graph of circuit times and recovery rates. Such a graph will show periods during the year of positive gains (regular improvements) and negative gains (plateaus: very little or no improvement). Note: During periods of negative gains, it is possible to record circuit times and recovery rates that are worse than previous recordings. The performer should not be disheartened by this as it is a normal phenomenon, especially when nearing peak condition where positive gains are small and the graph will tend to level out anyway.

Whenever possible, circuit training should be carried out under a qualified physical educationalist who will know how and when to change the circuit to increase the difficulty. He/she will also know when certain exercises may be causing too much stress and modify them, particularly if weights are being used.

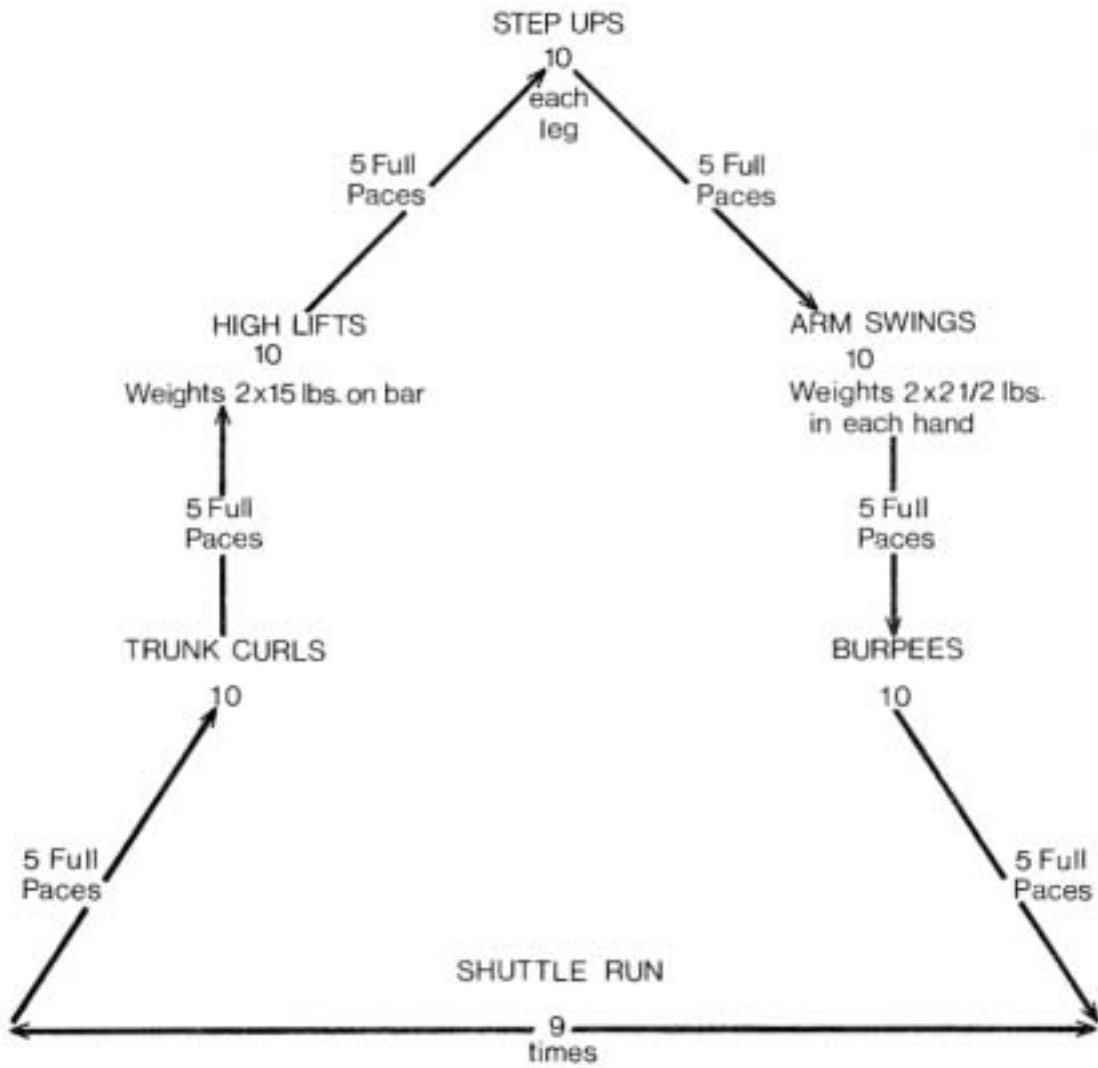
## **CIRCUIT**

1. Step Ups  
Chair height. Start with one leg leading and change to the other after 10. Up and down steps count as one.
2. Arm Swings  
Swings sideways and upward count as two. Dumb bells must have weights  $2 \times 2\frac{1}{2}$  lbs. on each.
3. Burpees  
Bend knees to hands on floor. Jump feet to rear. Jump feet forward knees bent. Stand up.
4. Shuttle Run  
Must be a constant length.
5. Trunk Curls  
Hands behind neck. Twist opposite elbow to knee as trunk is raised. Feet fixed, knees bent. Support hold feet.
6. High Lifts  
Once exercise is started, weights should not touch floor until finished. Weights  $2 \times 15$  lbs.

### **NOTES**

1. Each exercise must have 5 full paces between them in a circle as shown.
2. Circuit is completed after 3 times around.
3. Circuit time clock must be started by the performer and stopped by the performer after the third group of High Lifts (clock placed at 'step up' position).
4. Recovery Rate times must be taken immediately on completion of circuit and at 1 minute intervals for a further 3 minutes. (4 times in all). It is advisable that pulse rates are taken by someone else, not the performer.
5. All circuits must be recorded in a book showing date, circuit time, recovery rates.
6. Circuits should be done at least twice a week if physical improvement is expected. 7. After 2 practice circuits, circuit time is taken. Target is to reduce circuit time to  $\frac{2}{3}$ . When achieved, increase number of repetitions and repeat process.

FITNESS CIRCUIT



## **PRACTICAL LOG SHEETS**

You will find on the following pages practical log sheets for your personal use during the third component of the N.C.C.P. Certification Program.

This practical period should be started immediately after you have successfully completed Level 3 (Technical).

You will note that each entry must be signed by a club official. When the total number of hours have been accumulated, the log must be signed by the monitoring coaches/officials of your province.

The total number of practical coaching hours for Level 3 is **50**.

The total hours stated in the Level I Manual are **accumulative**.

When the practical component is completed, this log must be sent to the C.F.A. Technical Director at the National Office for entry into the N.C.C.P computer.

**Note:** All three components of the program, theory, technical and practical, must be completed before the coach is fully certified at Level 3.





