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Tactical Troop Protective Equipment

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TECHNICAL MEMORANDUM

Submitted by
Canadian Police Research Centre

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NOTE: Further information
about this report can be
obtained by calling the
CPRC information number
(613) 998-6343

SUMMARY

Tactical Troop Protective Equipment

Protective equipment for police riot squads has always been an area of interest and importance. It is imperative that police officers are properly protected from thrown objects, swung objects and anything else that may be encountered.

Constable Monique Stenhouse, formerly of the Canadian Police Research Centre worked closely with Mr. Peter Durocher, equipment specialist, for Valiquette Sports in Hull, Quebec. Mr. Durocher works with the RCMP Tactical Troops; consequently, he had much expertise to offer. He was instrumental in choosing existing sporting equipment he felt would be light, flexible, and yet offer the protection needed. He then had some of this equipment altered to suit police needs.

Constable Stenhouse then worked with the Canadian police community to have this protective equipment field tested. The overall results were positive, but as one would expect, there too were some negative comments.

The following Canadian police agencies participated in the evaluation of protective equipment purchased, and modified in some cases, to suit police needs:

Metropolitan Toronto Police

Ottawa Police

Service de Police de la Communauté Urbaine de Montréal

RCMP Burnaby Detachment

The comments received have been summarized.

The following equipment was purchased from Albion Valiquette Enterprises inc.,
Ottawa, Ontario:

protective vest(custom made)

athletic neck guard or Nectech

forearm protector(Bike Athletic Company)

groin protector(Easton Donzis Air Management)

girdle including pelvic, thigh and tailbone pad inserts(Bike Athletic
Company)

knee/shin pad(Cooper RLG pad, Bruce Hood)

broom ball gloves(DR 1150)





NECK GUARD

- comfortable to wear, does not restrict movement, good mobility
- too warm during summer but provides warmth during colder weather
- while some felt it offered little or no protection from a strike or slash; others felt there was some degree of protection
- no protection, rather gave a false sense of security



SHOULDER/CHEST GUARD

- comfortable due to adjustable capability; uncomfortable over long period of time
- light but provides no protection on sides, lower and upper back, and stomach
- bulkiness decreased mobility
- soft padding provided little protection against swung objects and no protection against edged weapons
- the harder armoured front and rear pannels offered some protection against swung and slash objects, but no protection against a stab by a knife
- armoured plates easily damaged by forced power swing
- armoured shoulders effective in attacks by swung objects, but not all shoulder area is properly protected
- thinner padding with harder plastic inserts in the kidney and rib areas may provide better protection
- chest pads should be modified to insert soft body armour panels; this may alleviate bulkiness and improve movement
- increases confidence; less fear of injury
- increases intimidation factor by giving impression officer is larger
- when worn with ballistic resistant vest underneath, is too restrictive and exhaustive over a long period of time; equipment could be designed to provide for more comfort and breathability
- when worn with ballistic resistant vest underneath, is comfortable and offers very good protection



FOREARM PROTECTOR

- comfortable to wear, light, and offers good protection
- offers no protection against slashing or stabbing
- too tight, consequently not worn(should have velcro fasteners)
- no loss of mobility
- warm/hot during summer

ATHLETIC SUPPORT

- adjustable, easy to put on but bulky to the point of discomfort
- cup offered good protection against strikes and edged weapons
- cup padding effective
- padded top piece offered little protection against impact, and none against edged weapons
- waist strap too short when put on over girdle(had to be worn over girdle to prevent friction burns)
- warm during summer
- too large



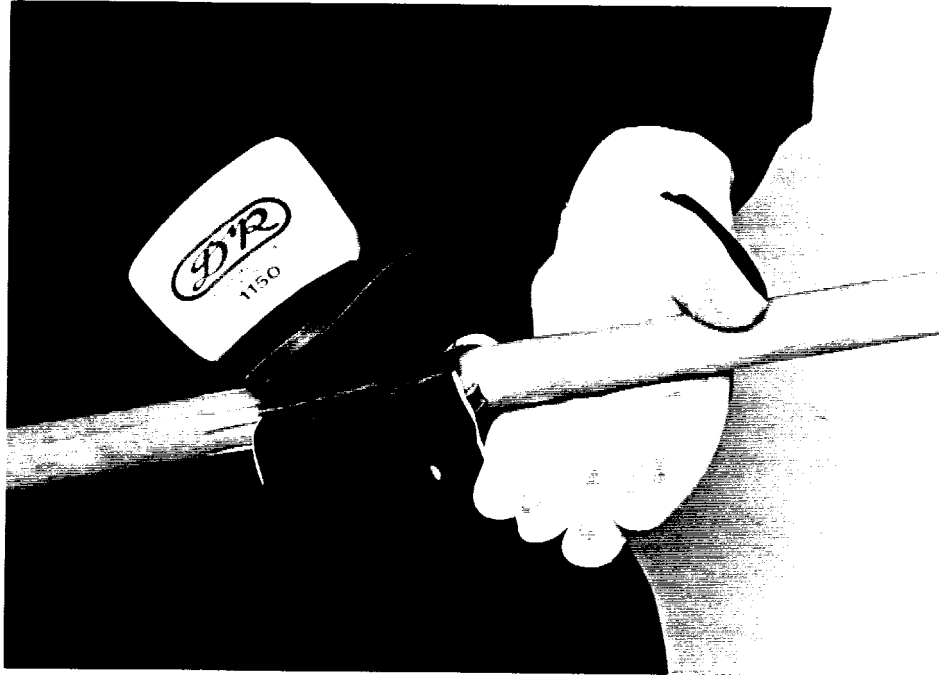
GIRDLE

- comfortable to wear and light
- thigh pads improperly positioned and offer no protection to common peroneal and lateral femoral nerves in upper thigh
- no protection for anterior femoral nerve on inside portion of leg
- hip pads ineffective during attack(should be used to protect kidneys instead)
- little protection against edged weapons and none against stabs
- met all operational needs
- was helpful to use velcro waist belt to ensure girdle did not slip down after many hours of wear
- too warm in summer, but provided warmth in colder weather
- gun belt tend to ride on top of side pads
- insufficient protection around and under the belt



SHIN PADS

- comfortable and permitted ease of movement; no loss of mobility
- adjustable straps were effective
- good protection against unarmed attack
- fairly good protection against swung or thrown objects
- both knee and shin pieces were resistant to penetration by edged weapons
- excellent protection and very comfortable
- wide securing straps prevent friction burns
- alternate set with longer leg protection would be beneficial for taller officers
- cannot be put on without removing shoes/boots
- suggest using velcro to attach to knee



GLOVES

- comfortable and no loss of mobility
- effective against unarmed attacks, and did reduce felt impact when struck with swung object
- back of gloves susceptible to slash and stabbing; leather palms resistant to slashing
- poorly constructed, stitching came out after extended use(cuff detached from glove)
- too little padding
- light and protects well
- grip inadequate for holding batons and controlling individuals