



SURREY POLICE BOARD

ADMINISTRATOR

Regular Meeting Agenda

Venue: Virtual
Date: April 25, 2024
Time: 12:00 PM

ITEM	PRESENTER
A. CALL TO ORDER	Mike Serr
The Surrey Police Board recognizes that our work takes place on the ancestral, traditional, and unceded territories of the Coast Salish Peoples.	
B. ADOPTIONS	
1. Adoption of the Agenda – April 25, 2024	Mike Serr
2. Adoption of Minutes – March 13, 2024	Mike Serr
C. PRESENTATIONS/DELEGATIONS	
1. Presentations	
a. South Asian Community Hub (SACH) Daljit Gill-Badesha, Executive Director (Presentation)	Chief Lipinski
2. No Delegation Requests	
D. CONSENT ITEM	
1. Letter from ADM Lewis – Approval of the TASER 7 Conducted Energy Weapon and Amendments to related BC Provincial Policing Standards –Dated March 25, 2024 – For Information	Chief Lipinski
E. REPORTS	
CHIEF CONSTABLE REPORTS	
1. Transition Updates - Verbal Verbal - For Information	Chief Lipinski
2. SPS Cedar (Xep'ay) Award Report 2024-R007 - For Information	Chief Lipinski Stephen Hurst
3. Financial Update - Year to Date Expenditures – March 31, 2024 Report 2024-R008 – For Information (Presentation)	Chief Lipinski Nathan Wong

F. INFORMATION

No information.

G. CORRESPONDENCE

No correspondence.

H. NEW BUSINESS

No new business.

I. NEXT MEETING

The next meeting of the Surrey Police Board will be held on May 29, 2024.

Mike Serr

J. MOTION TO HOLD A MEETING IN A CLOSED SESSION

Mike Serr

It is in order for the Board to pass a motion to close the meeting to the public pursuant to Section 69 (2) (c), and (d) of the *Police Act*, which states:

(2) if it believes that any of the following matters will arise in a meeting or hearing held by it, a board or committee may order that the portion of the meeting during which the matter will arise be held in private:

(c) a matter concerning labour contract discussions, labour management relations, layoffs or another personnel matter;

(d) a matter concerning information that a person has requested he or she be allowed to give in private to the board or committee.

K. ADJOURNMENT

Mike Serr



SURREY POLICE BOARD

Regular Meeting Minutes

Venue: Virtual
Date: March 13, 2024
Time: 2:00 PM

Present:

Mike Serr, Administrator

Regrets:

Jennifer Hyland, Deputy Chief
Nathan Wong, Sr. Finance Mgr.

Guests:

Jasmin Chatrath, Fraser Health
Tobin Copley, Fraser Health

Staff Present:

Norm Lipinski, Chief Constable
Mike LeSage, Deputy Chief
Lav Mangat, Superintendent
Todd Matsumoto, Deputy Chief
Allison Good, Superintendent
Melissa Granum, Executive Director
Marion Chow, Executive Assistant
Nicola Webb, Human Resources Consultant
Gayle Wlasiuk, Executive Services Manager

The Surrey Police Board recognizes that our work takes place on the ancestral, traditional, and unceded territories of the Coast Salish Peoples.

A. CALL TO ORDER

The March 13, 2024, Regular Board meeting was called to order at 2:00 PM.

B. ADOPTIONS

1. Adoption of the Agenda – March 13, 2024

The agenda for the March 13, 2024 Regular board meeting was approved.

2. Adoption of Minutes – January 19, 2024

The minutes of the January 19, 2024 Regular board meeting were approved.

C. PRESENTATIONS/DELEGATIONS

1. Presentations

- a. Fraser Health Authority – Opportunities for Improved Speed Management with Intersection Safety Cameras
Jasmin Chatrath and Tobin Copley
(Presentation)

The Surrey Police Board received the presentation and thanked both Ms. Chatrath and Mr. Copley for their presentation and attendance at the meeting.

The Fraser Health Authority delegation left the meeting at 2:27 PM.

- b. **Community Engagement Update**
(Presentation)

The Surrey Police Board thanked Superintendent Good for her presentation and the update on SPS's community engagements.

The Board asked Superintendent Good as to how other community groups that have not engaged with the Community Engagement Team could reach out and connect for a meeting.

Superintendent Good advised that community groups wishing for an opportunity to connect with SPS can do so through the following: Twitter and via email to Community Engagement, Media Relations and the general SPS email.

2. No Delegation Requests

D. REPORTS

CHIEF CONSTABLE REPORTS

1. Hiring, Diversity and Deployment Update

Report 2024-R003 - For Information

The Surrey Police Board received the report for information.

2. Police Resources in British Columbia 2022 Publication

Report 2024-R004 - For Information

The Surrey Police Board received the report for information.

3. Year-End Report: 2023 Expenditures - – Preliminary Financial Results

Report 2024-R005 – For Information

The Surrey Police Board received the report for information.

4. Transition Updates

-Verbal - For Information

The Surrey Police Board received the verbal update from the Chief Constable.

EXECUTIVE DIRECTOR REPORT

1. Surrey Police Board – 2023 Per Diems

Report 2024-R006 - For Information

The Surrey Police Board received the report for information.

E. INFORMATION

No information.

F. CORRESPONDENCE

No correspondence.

G. NEW BUSINESS

No new business.

H. NEXT MEETING

The next meeting of the Surrey Police Board will be held on April 25, 2024.

I. MOTION TO HOLD A MEETING IN A CLOSED SESSION

It is in order for the Board to pass a motion to close the meeting to the public pursuant to Section 69 (2) (c), and (d) of the *Police Act*, which states:

(2) if it believes that any of the following matters will arise in a meeting or hearing held by it, a board or committee may order that the portion of the meeting during which the matter will arise be held in private:

- (c) a matter concerning labour contract discussions, labour management relations, layoffs or another personnel matter;
- (d) a matter concerning information that a person has requested he or she be allowed to give in private to the board or committee.

Motion approved.

J. ADJOURNMENT

The Surrey Police Board meeting adjourned at 2:58 PM.

Certified correct:

Marion Chow, Executive Assistant

Mike Serr, Administrator



March 25, 2024
Ref: 663453

Chief Constables of Municipal Police Departments
Chief Officer, Metro Vancouver Transit Police Service
Chief Officer, Stl'atl'imx Tribal Police Service
Deputy Commissioner, Commanding Officer, RCMP "E" Division

Dear Sirs/Madams:

Re: Approval of the TASER 7 Conducted Energy Weapon and Amendments to related BC Provincial Policing Standards

I am writing to inform you that, in my role as Director of Police Services, I have approved the TASER 7 Conducted Energy Weapon (CEW) for operational use in British Columbia. Further, the Minister of Public Safety and Solicitor General has approved related amendments to the BC Provincial Policing Standards (BCPPS or Standards) on CEWs, effective as of March 20, 2024.

In reaching my decision, I considered the information produced during the approval process required by the British Columbia Provincial Policy Directive 1.2.1 P, including the recommendation from the *Intermediate Weapon and Restraint Advisory Panel* (panel) that I approve the weapon. British Columbia Provincial Policy Directive 1.2.1 P:

<https://www2.gov.bc.ca/assets/gov/law-crime-and-justice/criminal-justice/police/standards/1-2-1p-intermediate-weapons-approval-process.pdf>

The amendments to Standards 1.3 – Conducted Energy Weapons and Standards 3.2 – Provincially Approved Training Courses are enclosed for your convenience and are available online on the government BC Provincial Policing Standards webpage:

<https://www2.gov.bc.ca/gov/content/justice/criminal-justice/policing-in-bc/policing-standards>.

Specifically, the amendments include:

- refining the threshold of CEW use (BCPPS 1.3.1 – Threshold and circumstance of Use);
- adding the TASER 7 and removing the X26 from the list of approved CEW models (BCPPS 1.3.2 – Approved CEW Models);
- requiring additional reportable deployment information (BCPPS 1.3.3 – Internal CEW Controls and Monitoring);

.../2

Sirs/Madams
Page 2

- refining the definition of a medically high-risk discharge (BCPPS 1.3.4 – Medical Assistance to CEW Discharges);
- extending the CEW testing frequency (BCPPS 1.3.6 – CEW Testing and Maintenance); and,
- changing the Province’s role in related to the design of practical training (BCPPS 3.2.1 - CEW Operator Training).

Finally, staff in my office are completing updates to the Province’s mandatory online CEW Operator training and will notify your agencies when these updates are finalized. Although you may now begin to purchase TASER 7 CEWs and to make associated arrangements, per amended BCPPS 3.2.1 (1) and (2), the widespread operational use of the TASER 7 is contingent on adjusting your agencies’ training to align with the Provincial Training Outlines (see enclosure). Your training officers and use of force coordinators will receive more information shortly. Additionally, per BCPPS 1.2.1P(13)(b), your internal policies and procedures must reflect the amended CEW Standards before you authorize your officers to deploy the TASER 7 operationally.

If you have any questions about the amendments to the Standards or about the CEW training updates, please contact Marc Hunter, Senior Program Manager at Marc.Hunter@gov.bc.ca.

Regards,



Glen Lewis
Assistant Deputy Minister
and Director of Police Services
Policing and Security Branch

Attachments: Approved BC Provincial Policing Standards on CEWs:

- BCPPS 1.3.1 - Threshold and circumstance of Use
 - BCPPS 1.3.2 – Approved CEW Models
 - BCPPS 1.3.3 – Internal CEW Controls and Monitoring
 - BCPPS 1.3.4 – Medical Assistance to CEW Discharges
 - BCPPS 1.3.6 - CEW Testing and Maintenance
 - BCPPS 3.2.1 - CEW Operator Training
- CEW Operator Practical Training Outlines

pc: Chairs of Municipal Police Boards
Chair, SCBCTA Police Services Board
Chair, Stl’atl’imx Tribal Police Services Board

BC Provincial Policing Standards

Section 1.0 – Use of Force

Effective: January 30, 2012

Sub Section 1.3 – Conducted Energy Weapons (CEW)

Revised: February 1, 2015
and March 20, 2024

Subject 1.3.1 – Threshold and Circumstances of Use

Definitions

Bodily Harm – any hurt or injury to a person that interferes with the health or comfort of the person and is more than merely transient or trifling in nature.

CEW Display – the act of pointing, aiming, or showing the CEW at or to a person, without discharging the CEW, for the purpose of generating compliance from a person. A display may include a visible electrical discharge across the front of the device or an audible alert.

CEW Draw – the act of unholstering or removing the CEW from the holster without discharging it, as a preparatory step so that it is ready for use should it become necessary (i.e., not used to generate compliance).

Conducted Energy Weapon or CEW – a weapon that when discharged uses a conducted electrical charge in order to incapacitate a person, or to generate compliance through pain.

Crisis Intervention and De-escalation (CID) Techniques – verbal and nonverbal communications that are designed to de-escalate crises.

Officer – a constable appointed under the *Police Act* or an enforcement officer appointed under s. 18.1 of the *Police Act*.

Reasonable Grounds – includes both a subjective and an objective component and means that the officer must personally believe that the decision or action is necessary, and in addition, the decision or action must be able to stand the test of whether a reasonable person, placed in the position of the officer, would reach the same conclusion.

Standards

CEW discharge

The Chief Constable, Chief Officer, or Commissioner must ensure that:

- (1) Prohibit Officers from discharging a CEW against a person unless:
 - (a) The person is causing Bodily Harm to either themselves, the Officer, or a third party; or
 - (b) The Officer is satisfied, on Reasonable Grounds, that the person's behaviour will imminently cause Bodily Harm either to themselves, the Officer, or a third party.
- (2) In addition to Standard (1) above, prohibit Officers from discharging a CEW against a person unless the Officer is satisfied, on Reasonable Grounds, that:
 - (a) Crisis Intervention and De-escalation (CID) Techniques have not been or will not be effective in eliminating the risk of Bodily Harm; and
 - (b) No lesser force option has been, or will be, effective in eliminating the risk of Bodily Harm.
- (3) Prohibit Officers from discharging a CEW on a person for longer than five seconds or exposing a person to an additional CEW discharge, unless the Officer is satisfied, on Reasonable Grounds, that:
 - (a) The initial five-second discharge was not effective in eliminating the risk of Bodily Harm; and
 - (b) A further discharge will be effective in eliminating the risk of Bodily Harm.
- (4) Ensure that Officers:
 - (a) Issue a verbal warning prior to discharging a CEW against a person, unless such a warning would place any person at further risk of Bodily Harm or imminent Bodily Harm;
 - (a. 1) Consider the backdrop prior to discharging a CEW against a person, to assess the potential risk to bystanders or other Officers if probes miss the intended subject;
 - (b) Do not discharge a CEW near flammable, combustible, or explosive material, where there is a risk of these igniting;

British Columbia Provincial Policing Standards
Subject 1.3.1 – Threshold and Circumstances of Use

- (c) Do not discharge a CEW against a person where the person is at risk of a fall from an elevated height, unless the Officer has Reasonable Grounds to believe that the potential for death or grievous Bodily Harm is justified;
- (d) Do not discharge a CEW against a person in water where there is a danger of the person drowning due to incapacitation from the CEW, unless the Officer has Reasonable Grounds to believe that the potential for death or grievous Bodily Harm is justified;
- (e) Do not discharge a CEW against a person operating a vehicle or machinery in motion, unless the Officer has Reasonable Grounds to believe that the potential for death or grievous Bodily Harm is justified;
- (f) Do not discharge more than one CEW simultaneously against a person, unless the Officer has Reasonable Grounds to believe that the potential for death or grievous Bodily Harm is justified; and
- (g) Avoid a person's head, neck, or genitalia as target zones for discharge of the CEW.

(5) Ensure that Standards (1) to (4) above apply to discharges in any mode.

CEW Draw or Display

The Chief Constable, Chief Officer, or Commissioner must:

- (6) Prohibit Officers from drawing or displaying a CEW unless the Officer is satisfied on Reasonable Grounds that the situation has the potential for Bodily Harm.

Policies and procedures

The Chief Constable, Chief Officer, or Commissioner must:

- (6.1) Ensure that policies and procedures clearly establish that a CEW Display is not a replacement for Crisis Intervention and De-escalation (CID) Techniques.
- (7) Ensure policies and procedures are consistent with these *BC Provincial Policing Standards*.

BC Provincial Policing Standards

Section 1.0 – Use of Force

Effective: January 30, 2012

Sub Section 1.3 – Conducted Energy Weapons (CEW)

Revised: February 1, 2015
and March 20, 2024

Subject 1.3.2 – Approved CEW Models

Definitions

Conducted Energy Weapon or CEW – a weapon that when discharged uses a conducted electrical charge in order to incapacitate a person, or to generate compliance through pain.

Director – the Director of Police Services referred to in section 39 (1) of the *Police Act*.

Standards

Approved CEW models

The Chief Constable, Chief Officer, or Commissioner must ensure that:

- (1) Only the CEW models approved by the Director are used. The approved models are: TASER® X26P and TASER® 7.

Policies and procedures

The Chief Constable, Chief Officer, or Commissioner must ensure that:

- (2) Policies and procedures governing CEWs are developed prior to CEWs being used and amended as needed to reflect the transition to a new CEW model.
- (3) Policies and procedures are consistent with these *BC Provincial Policing Standards*.

BC Provincial Policing Standards

Section 1.0 – Use of Force

Effective: January 30, 2012

Sub Section 1.3 – Conducted Energy Weapons (CEW)

Revised: March 20, 2024

Subject 1.3.3 – Internal CEW Controls and Monitoring

Definitions

CEW Event Log Download – the process that occurs when technical event log data is downloaded from a device. Event log data includes date, time, duration of discharge, as well as other parameters, events, and information.

Bodily Harm – any hurt or injury to a person that interferes with the health or comfort of the person and is more than merely transient or trifling in nature.

CEW Display – the act of pointing, aiming, or showing the CEW at or to a person, without discharging the CEW, for the purpose of generating compliance from a person. A display may include a visible electrical discharge across the front of the device or an audible alert.

CEW Probe Cartridge – an encasement that contains blast doors, probes, wires, AFIDs and other components that is attached to and required for probe deployment of a CEW. Cartridges vary in length of wire, probe type and distance probes will travel to embed in a person to deliver an electrical charge from the CEW.

Conducted Energy Weapon or CEW – a weapon that when discharged uses a conducted electrical charge in order to incapacitate a person, or to generate compliance through pain.

Officer – a constable appointed under the *Police Act* or an enforcement officer appointed under s. 18.1 of the *Police Act*.

Operational CEW Discharge – the act of firing a CEW in any mode against a person, whether intentional or not, and including when the CEW is discharged but malfunctions or is unsuccessful in reaching the intended person.

British Columbia Provincial Policing Standards
Subject 1.3.3 – Internal CEW Controls and Monitoring

Operational CEW Download – the process that occurs when technical data is downloaded from the CEW after an operational discharge of the CEW involving a subject. Operational CEW download data includes date, time, and duration of the weapon’s discharge(s).

Use-of-Force Report – the information that must be provided, in a provincially-approved format, when an officer applies force against a person.

Standards

CEW control processes

The Chief Constable, Chief Officer, or Commissioner must:

- (1) Ensure an up to date inventory of all CEWs and CEW Probe Cartridges controlled or owned by the police force is maintained.
- (2) Ensure secure storage of CEWs and CEW Probe Cartridges so that only person(s) authorized by the Chief Constable, Chief Officer, or Commissioner have access to CEWs and CEW Probe Cartridges.
- (3) Implement a documentation process for authorized Officers to sign out and return CEWs and CEW Probe Cartridges, in a manner that ensures all CEWs and CEW Probe Cartridges can be tracked and accounted for by identifying: assigned Officer; CEW unique identifier; number of CEW Probe Cartridges; and the date and time the CEW and CEW Probe Cartridges were signed out and returned. This applies to both personal issue CEWs and CEWs available for shared use by any authorized Officer within the police force.
- (4) Ensure that there is a person responsible at all times for the control process referred to in Standard (3) above.

Post CEW discharge requirements

The Chief Constable, Chief Officer, or Commissioner must:

- (5) Ensure that, after an Operational CEW Discharge:
 - (a) The CEW is removed from service;
 - (b) An Operational CEW Download is conducted;
 - (c) A copy of the Operational CEW Download report is linked to the Officer’s Use-of-Force Report; and
 - (d) If serious injury or death occurred proximate to the discharge, the CEW is not returned to service until it is tested, and repaired and retested if required (see *BCPPS 1.3.6 CEW Testing and Maintenance*).

Monitoring and review

The Chief Constable, Chief Officer, or Commissioner must:

- (6) Designate a person responsible for internal CEW incident monitoring that would include being responsible for:
 - (a) Ensuring that, for every Operational CEW Download report there is a corresponding Use-of-Force Report and vice versa; and
 - (b) Accounting for any discrepancies between the Operational CEW Download report and the Use-of-Force Report.
- (7) Ensure that a CEW Event Log Download is conducted for each CEW at least annually and a record of the download data is maintained on file.
- (8) Conduct, annually, an internal review of CEW controls and the use of CEWs by police officers in the police force to determine compliance with the *BC Provincial Policing Standards* and the police force's policies and procedures, and to identify potential training or policy development issues. At minimum, the review should examine and document, both at the Officer level and for the police force overall:
 - (a) The circumstances and manner in which CEWs are being used (e.g., imminent Bodily Harm threshold, number and duration of cycles, number of probes deployed); and
 - (b) The reporting of CEW use by police officers.

Reporting

The Chief Constable, Chief Officer, or Commissioner must:

- (9) Submit annually a written report to the Minister of Public Safety and Solicitor General and the board that must include:
 - (a) Aggregate counts of CEW Displays and operational discharges; and
 - (b) A summary of the annual review conducted as per Standard (8) above.

Policies and procedures

The Chief Constable, Chief Officer, or Commissioner must:

- (10) Ensure policies and procedures are consistent with these *BC Provincial Policing Standards*.

BC Provincial Policing Standards

Section 1.0 – Use of Force

Sub Section 1.3 – Conducted Energy Weapons (CEW)

Subject 1.3.4 – Medical Assistance to CEW Discharges

Effective: Standards (1) to (3):

January 30, 2013; Standards (4) to (6):
January 30, 2012

Revised: March 20, 2024

Definitions

Conducted Energy Weapon or CEW – a weapon that when discharged uses a conducted electrical charge in order to incapacitate a person, or to generate compliance through pain.

Officer – a constable appointed under the *Police Act* or an enforcement officer appointed under s. 18.1 of the *Police Act*.

Standards

Automated external defibrillators (AEDs)

The Chief Constable, Chief Officer, or Commissioner must:

- (1) Ensure that, for a rural police force that provides policing to a jurisdiction of less than 5,000 population, CEW operators who have been assigned a CEW while on-duty must also be equipped with an AED that is to be carried in their police vehicle.
- (2) Ensure that, for an urban police force that provides policing to a municipality of greater than 5,000 population, all on-road patrol supervisors must be equipped with AEDs that are to be carried in their police vehicles.
- (3) Ensure that all Officers who are authorized to use an AED receive and maintain training in accordance with the British Columbia Emergency Health Services consent requirements for police use of an AED.

Requests for medical assistance

The Chief Constable, Chief Officer, or Commissioner must:

- (4) Ensure that, if an Officer uses an AED on a person, emergency medical

British Columbia Provincial Policing Standards
Subject 1.3.4 – Medical Assistance to CEW Discharges

assistance, either from paramedics or a hospital, is sought as soon as possible.

(5) Ensure that Officers request paramedic attendance at all medically high-risk incidents before discharge of the CEW or, if that is not feasible, as soon as possible thereafter. Medically high-risk incidents include when a CEW is discharged in:

- (a) Probe mode across the person's chest;
- (b) Any mode for longer than five seconds, including a single discharge cycle that exceeds five seconds, or an additional discharge from the same or another CEW; or
- (c) Any mode against anyone who the Officer has reason to believe is:
 - (i) an emotionally disturbed person,
 - (ii) an elderly person,
 - (iii) pregnant,
 - (iv) a child, or
 - (v) a person with a medical condition (e.g., heart disease, implanted pacemaker, or defibrillator).

Policies and procedures

The Chief Constable, Chief Officer, or Commissioner must:

(6) Ensure policies and procedures are consistent with these *BC Provincial Policing Standards*.

BC Provincial Policing Standards

Section 1.0 – Use of Force

Effective: March 20, 2024

Sub Section 1.3 – Conducted Energy

Revised: N/A

Weapons (CEW)

Subject 1.3.6 – CEW Testing and Maintenance

Definitions

Conducted Energy Weapon or CEW – a weapon that when discharged uses a conducted electrical charge in order to incapacitate a person, or to generate compliance through pain.

Function Test – a CEW's built-in capability to verify whether the energy weapon's core electronics are working properly.

Monophasic Charge – the maximum of the absolute values of A and B, where A= the integral of all positive current in a pulse, and B= the integral of all negative current in a pulse.

Net Charge – the integral of the value of the current waveform for a specified portion of the pulse.

Peak Current – the peak of the current waveform for the pulse.

Peak Voltage – the peak of the voltage waveform for the pulse.

Professional Engineer – a person who is registered or licensed to practice as a professional engineer under the *Engineers and Geoscientists Act of British Columbia*, or the appropriate Act of another province, with training or experience in electrical engineering and who carries out and accepts responsibility for professional activities involving the practice of professional engineering.

Pulse – a short discharge of electrical energy.

Pulse Duration – the time between the points at which the voltage waveform crosses through a specified start point voltage to a specified end point voltage.

Pulse Repetition Rate – for an interval which contains N pulses, the pulse repetition rate is (N-1) divided by the time from the first to last pulse.

Standards

Routine precautions

The Chief Constable, Chief Officer, or Commissioner must ensure that:

- (1) Before the start of every shift each CEW is examined to ensure it is in good working order. If a CEW does not appear to be in good working order, it is not to be used operationally.
- (2) Further to Standard (1), for any CEW models equipped with an internal Function Test capability, a Function Test is performed. Any CEW that fails the Function Test is not to be used operationally until it has been examined, repaired as required, and successfully passes the Function Test.
- (3) Responsibility for conducting the tasks outlined in Standards (1) and (2) above is clearly assigned.

Inventory maintenance

The Chief Constable, Chief Officer, or Commissioner must ensure that:

- (4) Each CEW is examined for damage at least once per year. If a CEW is damaged in a way that impairs its proper functioning, it is not to be used operationally until it is repaired and successfully passes the Function Test.
- (5) Responsibility for the task outlined in Standard (4) is clearly assigned.

Testing of electrical output

The Chief Constable, Chief Officer, or Commissioner must ensure that:

- (6) Agencies with an inventory of 100 CEWs or greater, test the electrical output of a random sample representing at least 10% of CEWs each year, while agencies with fewer than 100 CEWs test all CEWs at least once every five years.
- (7) Testing is conducted in accordance with the protocols described in the *Test Procedure for Conducted Energy Weapons* Version 3.0, attached to this Standard as Appendix "A";
 - (a) Testing is conducted by a third party independent of the manufacturer; and
 - (b) The test procedure has been verified to meet the *Test Procedure for Conducted Energy Weapons* by a Professional Engineer.

British Columbia Provincial Policing Standards

Subject 1.3.6 – CEW Testing and Maintenance

- (8) Ensure that if, after testing, a CEW does not meet all the following specifications, the CEW is either destroyed, or repaired and retested, before being used operationally. The CEW must:
- (a) Not have a Monophasic Charge higher than 180 μC for any individual Pulse; and
 - (b) Meet the manufacturer's specifications for the following:
 - (i) Pulse Repetition Rate,
 - (ii) Peak Voltage,
 - (iii) Peak Current,
 - (iv) Net Charge, and
 - (v) Pulse Duration.

Records

The Chief Constable, Chief Officer, or Commissioner must:

- (9) Ensure that, for each CEW in use in the police force, a record of testing is maintained showing:
- (a) The dates testing occurred;
 - (b) The units tested (e.g., by serial number); and
 - (c) The results.

Policies and procedures

The Chief Constable, Chief Officer, or Commissioner must:

- (10) Ensure policies and procedures are consistent with these *BC Provincial Policing Standards*.



BC Provincial Policing Standards

Section 1.0 – Use of Force

Effective: March 20, 2024

Sub Section 1.3 – Conducted Energy

Revised: N/A

Weapons (CEW)

Subject 1.3.6 – CEW Testing and

Maintenance – Appendix “A”

Appendix “A” for BCPPS 1.3.6 – CEW Testing and Maintenance

Test Procedures for Conducted Energy Weapons

Version 3.0

2021/02/17

**Test Procedure
for
Conducted Energy Weapons**

Version 3.0

2021/02/17

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Test Procedure for Conducted Energy Weapons

0.0 Disclaimer

The persons referred to as “Authors” herein include the following list of individuals and their organizations: Andy Adler (Carleton University), Dave Dawson (Carleton University), and Ian Sinclair (MPB Technologies). The term “implementers” includes all individuals and organizations which choose to implement any or all of the recommendations in this paper.

0.1 Limited Purpose

The Authors prepared this paper for a readership limited to test personnel and their employer organizations (“Readers”). The purpose of the paper is to assist the Readers by providing a set of recommendations intended to allow Readers to carry out tests on Conducted Energy Weapons (“CEWs”) in a controlled and repeatable manner across jurisdictions. The consistent application of the recommendations may enable Readers to establish that they have followed consistent procedures to determine that their CEWs are performing within specification at time of test. The consistent application of the recommendations may also enable the collection of uniform data to allow future assessment of any trends in performance.

0.2 No Warranty

This paper is provided on the terms “As Is, Where Is”, and the Authors give no warranty or representation of any kind whatsoever as to the appropriate policies for the use of, nor the safety of the use of CEWs. The Authors expressly disclaim all express or implied warranties relating to the contents of the paper. The Authors give no warranty or representation of any kind whatsoever that the recommendations contained in this report are comprehensive. The Authors give no warranty or representation of any kind whatsoever that the recommendations are up to date beyond the date on which the paper is published.

0.3 Working Paper Only

This paper is a “working paper” meaning that it reflects the knowledge of the Authors relating to the procedures for testing of CEWs as at the time the paper is written, without any commitment to update or revise the paper.

0.4 Implementer Responsibility

The Implementer acknowledges and agrees that it is possible and probable that new developments will give rise to a need for new testing limits and it is incumbent upon the Implementer to ensure that he/she understands that the paper is up to date to the knowledge of the Authors, only to the time it is written. The Implementer understands and accepts exclusive liability for the decision to rely on the paper and the decision to implement some or all of the recommendations.

0.5 Implementer Indemnifies Authors

THE IMPLEMENTER SHALL INDEMNIFY AND SAVE THE AUTHORS HARMLESS FROM AND AGAINST ANY CLAIMS, LIABILITY OR COST (INCLUDING LEGAL COSTS) TO WHICH THE AUTHORS MAY BE SUBJECT OR THAT MAY BE BROUGHT AGAINST THE AUTHORS BY REASON OF THE IMPLEMENTER’S DECISION TO IMPLEMENT ANY OR ALL OF THE RECOMMENDATIONS IN THE PAPER.

1.0 Foreword

Several studies including the Braidwood Commission report⁵, the Report of the Standing Committee on Public Safety and National Security of the Conducted Energy Weapon⁷, the report of the Commission for Public Complaints against the RCMP⁸ and other provincial reports and coroners' recommendations have discussed the need for reliable uniform testing of Conducted Energy Weapons (CEWs) independent of the manufacturer.

This Test Procedure will enable organizations across Canada to test CEWs in a reliable, repeatable manner to determine whether they are operating within manufacturer's specifications. Test results so obtained will be usable in various ways.

- The CEW inventory of a given police service can be tested on acceptance and regularly thereafter to ensure all issued weapons are functioning as intended.
- Any CEW involved in an incident resulting in personal injury will be able to be tested after the incident to reliably determine its operating parameters.
- All data collected from weapons tests across Canada will be known to be reliable and comparable. As a result, new data will be able to be added to the growing body of knowledge concerning CEW operation over time so that future research may be able to determine trends in age or other factor related changes in performance

This document contains a set of recommendations for measurement of the performance characteristics of conducted energy weapons. It represents the opinions of its authors (Section 8.0), a group of subject matter experts who have been involved in research on or testing of CEWs, and is subject to the disclaimer presented in 0.0. Previous versions of this document are available^{1,2}, and at least one author has published comments¹³. Other test recommendations have been published by DRDC¹⁴ and IEC¹⁵.

None of the authors has any financial or personal interest in Axon Enterprises or any other CEW manufacturer. Several of the authors have discussed weapons testing with staff from Axon Enterprises.

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Andy Adler, David Dawson, Ian Sinclair, "Test Procedure for Conducted Energy Weapons, Version 3.0", 2021-02-17, DOI: 10.22215/cewtp2021

It is available online via: <http://dx.doi.org/10.22215/cewtp2021>
<https://curve.carleton.ca/CEWCollection/CEWTest-Procedure-2021-ver3.0.html>

2.0 Introduction

2.1 Purpose

The CEW Test Procedure:

- Establishes a methodology by which testing facilities and personnel across Canada will be able to test CEWs and determine whether they are operating within manufacturers' specifications,
- Defines data collection requirements so that data collected during the testing of any CEW in Canada may be used in forensic analysis of that weapon and may also be added to a central data base for future research and data mining programs,

2.2 Scope

This Test Procedure is meant for use with Conducted Energy Weapons that have the following characteristics:

- They are hand held
- They use a pulse or pulse train to deliver electrical energy to the target
- They are meant to function by causing temporary human electro-muscular incapacitation

2.3 Revision Log

Version	Date	Modifications
1.0	2010-07-08	Initial Release
1.1	2010-07-31	Added monophasic charge parameter
2.0	2017-02-17	Addition of X2 and X26P in new Appendix C. Section 3.3: Altered sampling rate, trigger settings. Section 3.8: Added requirement for gap for X2 testing Added Section 3.9 Bibliography Clarified definition of Net Charge for different units.
3.0	2021-02-17	Addition of T7 in new Appendix D Section 1.0: Added references to related work Section 3.4: Added warning calibrate voltage probes Section 3.4: Added requirement inspect the spark gap Section 4.2: Added requirement visually inspect spark

2.3 Definitions

Pulse	A short discharge of electrical energy
Peak Voltage	Peak of the voltage waveform for the pulse
Peak Current	Peak of the current waveform for the pulse
Net Charge	The integral of the value of the current waveform for a specified portion of the pulse
Monophasic Charge	The maximum of the absolute values of A and B, where A = the integral of all positive current in a pulse, and B = the integral of all negative current in a pulse.
Total Charge	The integral of the absolute value of the current waveform for the full pulse duration
Burst Length	Time from the first pulse to the last pulse for a single firing of the CEW
Pulse Duration	The time between the sample points at which the voltage waveform crosses through a specified start point voltage to a specified end point voltage.
Electrode	The electrical connection between the weapon and the subject/load (also referred to “probe” or a “contact”)
Advanced Cross Connect	A mode of operation of the Taser 7 weapon in which pulses are fired between all four electrodes from two cartridges
Pulse Repetition Rate	For an interval which contains N pulses, the Pulse Repetition Rate is (N-1) divided by the time from the first to last pulse.

Detailed descriptions and values for these parameters are included in the appendices for specific models of CEW.

3.0 Test Equipment

3.1 Introduction

The equipment required for the electrical testing is listed in this section.

3.2 Calibration

All test equipment must be calibrated yearly to national standards.

3.3 Data Acquisition and Storage System

- Minimum resolution of 1% of the maximum specified voltage (Section 10 of Appendices)
- Minimum bandwidth of 10 MHz and sampling rate of 5 MSamples/s or sufficient to achieve at least 1% maximum voltage sampling error as per good engineering practice.
- Anti-aliasing low pass filter (5 MHz) in accordance with good engineering practice
- Minimum 8 bit digitization of stored sample data
- Sufficient storage capacity to record all pulses
- Adequate pretrigger interval if pulse triggering is used
- The data acquisition system shall either: 1) capture the entire data stream, or 2) have a trigger setting to capture all pulses which exceed ± 50 V amplitude.

3.4 Voltage Probe

- Voltage reduction probe (e.g. 1000:1 or 100:1)
- Minimum 10kV rating or reduced through a voltage divider in the load.
- Note that voltage probes can easily be damaged by the high voltages from a CEW. Voltage probes must be regularly calibrated and faulty probes discarded.

AND/OR

3.5 Current Probe

- Suitable for ranges to 30 A

3.6 Resistive Load

- Pure resistance (low reactance, non-inductive) at 100 kHz.
 - Note: wire wound resistors are not generally acceptable.
- 10 W power rating
- Value specified in appendices for specific models of CEW.

3.7 Connecting wires

- Should be as large a gauge as practical in order to minimize impedance
- Should be kept as short as possible
- If probe wires are used, keep them from touching the load resistors, cartridges, other wires or the CEW

3.8 Mounting Jig

- A jig or other mounting method is required to stabilize the weapon and allow hands-off operation during test. It will typically employ one or two spent cartridges. The Mounting Jig will connect to a resistive load described in the relevant appendix. A mechanical/electrical system equivalent to a spent cartridge may be used. If so, it must include a housing designed to firmly hold the weapon and expose it to equivalent electrical connections and spark gap as would be seen with a spent cartridge.

- The mounting jig is required to have a spark gap equivalent to the tested scenario.
- For M26/X26E/X26P cartridges, the spark gap is part of the cartridge.
- For the X2 and T7, the spark gap is external to the cartridge and is normally provided by the distance to the wires⁶. A suitable gap should be part of the jig for the X2/T7.
- For the T7, two spent cartridges are required in the mounting jig to fill both bays.
- The residue from sparking can accumulate in the spark gap of a spent cartridge and lead to incorrect readings. Regular inspection and, if necessary, replacement, of spark gaps is required.

3.9 Insulating Surface

- The test set up should be mounted on an insulating surface to ensure protection of the test staff from electrical discharge.

4.0 General Procedure

4.1 Initial Inspection

Carry out a visual inspection of the weapon prior to testing. If there are obvious physical deficiencies such as poor fitting of the battery pack or safety and trigger switches, do not proceed with the electrical testing.

4.2 Visual Inspection of Spark

Conduct a short (approximately 1 second) firing of the test CEW (empty, with cartridges removed). The operator should verify visually that sparks follow the correct pathway between electrodes. (For CEWs with multiple cartridges, all spark pathways should be visually validated)

4.2 Measurement

Insert the weapon into the test jig and fire it for a single trigger pull. Acquire and store relevant data from the full electrical bursts. Obtain quantitative data on

- Peak Voltage (measured directly or calculated by measuring the peak current and multiplying by the load resistance).
- Peak Current (measured directly or calculated by measuring the peak voltage and dividing by the load resistance).
- Net Charge (derived from the current pulse; the portion of the pulse over which Net Charge is calculated is specific to the CEW under test; see the relevant appendix.)
- Total Charge.
- Monophasic Charge.
- Pulse Duration.
- Pulse Repetition Rate.

4.3 Analysis

Determine if the CEW is In Tolerance or Out of Tolerance by comparison of measured values with specifications.

5.0 Specific Procedure

5.1 Introduction

This procedure describes the methodology for test set up, conduct and analysis. Detailed test equipment operating procedures have not been provided, but have been described elsewhere^{6,9}. Good engineering practice, proper laboratory processes and familiarity with laboratory measurement equipment is expected. Detailed quantitative data for determining compliance with manufacturer's specifications are given in the appendices for specific models of CEW.

5.2 Initial Inspection

Prior to beginning testing, record the following

- Manufacturer of the test weapon
- Model number and Serial number
- Battery model and serial number (if available without opening unit under test)
- Battery capacity (if available without opening unit under test)
- Software version installed (if available without opening unit under test)
- Temperature, humidity and atmospheric pressure of the test environment

CAUTION: High voltages will be present during the test. Exercise caution in the layout of the equipment and conduct of the test to avoid exposure to the high voltage.

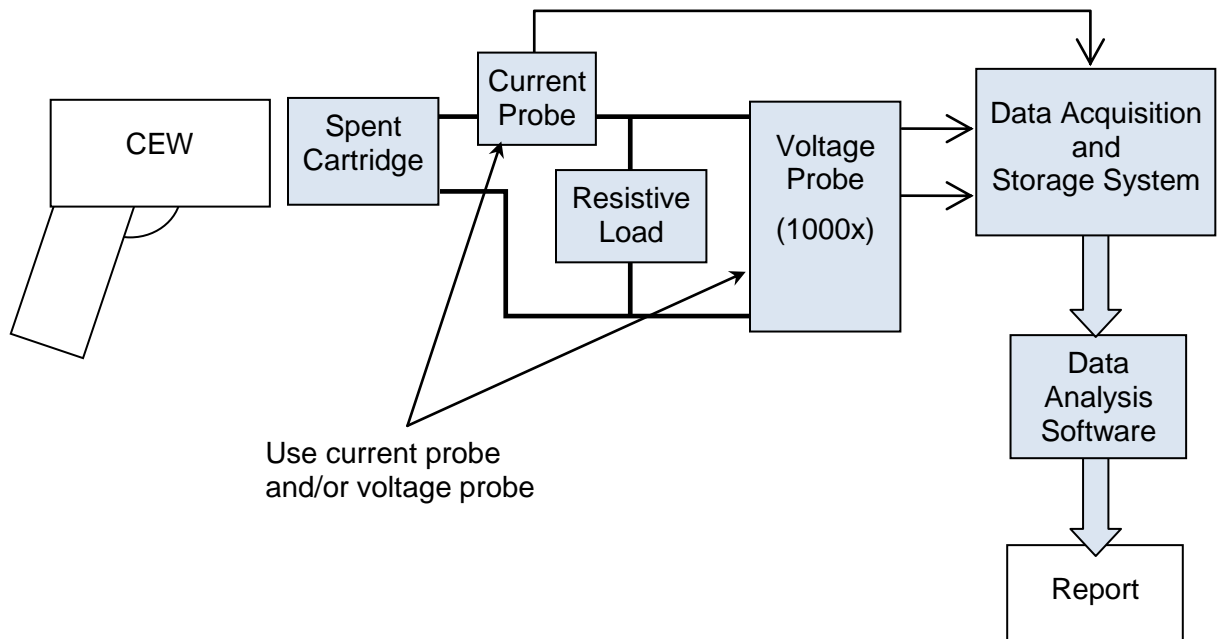


FIGURE 1: TEST SETUP FOR A CEW WITH ONE CARTRIDGE.¹

¹ The T7 must be tested with two cartridges, as described in Appendix D.

5.3 Measurement

5.3.1 Setup

- Set up the test equipment on the insulating surface.
- Select a sampling rate on the Data Acquisition System.
- Connect the probe(s) to the test apparatus:
 - connect the high voltage probe across the test load.
 - AND/OR
 - place the current probe around the appropriate lead from the weapon to the load.
- Connect the probe leads to the Data Acquisition System.
- Prepare the weapon for test by stabilizing it.
- Set up the weapon in the test jig or similar apparatus to allow hands-off support.

5.3.2 Test

- Connect the weapon across the test load. (Note 3)
- Pull the trigger on the weapon to initiate the burst.
- Allow the weapon to fire for the full duration of the burst.
- Verify that all data has been acquired and stored.
- Fire the weapon two more times and record the data. (Note 4)
- Verify data has been acquired and stored.
- Identify the data records with the serial number of the weapon under test.

Note 1: We consider the test loads recommended by TASER International and Axon (600 ohms for the X26/X26P/X2/T7 and 500 ohms for the M26) to be an adequate model of the impedance load of the body. More recent weapons (X26P, X2, T7) measure the load and adapt the current to a target charge per pulse. Older CEWs have relatively little variation in charge with load. Savard et al¹², found a variation of approximately 25% from the average current across loads below 1000 Ohm. Such variation may be accounted for by the safety factor.

Note 2: The full procedure with three weapon firings is meant to collect additional data for future data analysis. This should be used for acceptance testing and regularly scheduled maintenance testing. For users wishing to conduct daily testing, only two firings are required in order to determine weapon compliance with manufacturer's specifications.

6.0 Data Analysis

6.1 Data Analysis Software

Tests may be run most efficiently with data analysis software. (Note 5)

6.2 Parameters averaged over the last second of the burst

The software will determine the following from pulses that fit into the last second of the burst during the first firing of the weapon:

- Pulse Repetition Rate

6.3 Parameters averaged over the last 8 pulses

The analysis software will also determine the following by averaging data from the last 8 pulses recorded for the second firing of the weapon:

- Peak Voltage
- Peak Current
- Net Charge (Note 4)
- Pulse Duration

6.4 CEW status as per manufacturer specifications

All of the previous five values are required in order to determine whether the electrical output of the weapon is within manufacturer's specifications. Compare the output of the analysis software with the manufacturer's specifications given in the appendix. Determine for each of the parameters whether the weapon's performance was:

- Above Tolerance
- In Tolerance
- Below Tolerance

6.5 Within Specification

If all five parameters are In Tolerance, then the weapon may be reported as having performed within manufacturer's specifications. (Note 5)

6.6 Charge Measurements

The analysis software will determine the following for each pulse in each of the three firings of the weapon:

- Monophasic Charge
- Total Charge

CEWs with Monophasic Charge for any individual pulse in excess of the value listed in the corresponding appendix should be declared Out of Tolerance (Note 6).

6.7 Parameter Statistics over the burst

The software should calculate and store, for each of the seven parameters listed (Pulse Repetition Rate, Peak Voltage, Peak Current, Net Charge, Pulse Duration, Monophasic Charge and Total Charge) the value for each pulse for each firing.

In addition, the maximum, minimum and average of each parameter for all pulses in each of the three firings should be calculated and stored. Note that the average pulse repetition rate is the pulse repetition rate for the burst length, and not the average of the pulse repetition rates for each pulse in the burst.

Note 3: An implementation of the analysis software has been created by Carleton University. This software may be used in the analysis of the stored data. It is available under an open-source license (Adler et al, 2011⁴).

Note 4: The appropriate period over which *Net charge* is calculated varies with CEW model. For clarity, this document provides specific terminology for each calculation. For the M26, the *Strike Phase Net Charge* is used; for the X26/X26E, the *Main Phase Net Charge* is used; for the X26P/X2, the *Full Pulse Net Charge* is used. See the corresponding appendices for details.

Note 5: If a weapon performs out of tolerance, replacement of the batteries or Digital Power Module may bring the weapon to within expected performance. Note that for some weapons, introduction of a new DPM may introduce new operating software, which will create an essentially new configuration for the weapon. This procedure should only be carried out if prior agreement on this policy has been established with the owner of the weapon and, in any event, a complete test series should be repeated on the new weapon/power system combination and reported as a separate test with a separate test report.

Note 6: There is no electrical safety specification which applies exactly to the waveforms of complex CEW discharges. In our opinion, the most relevant specification is that of IEC TS 60479 Part 2 (Section 11) which considers the "effects of unidirectional single impulse currents of short durations" (0.1 ms and above). This section of the specification defines curves based on the "probability of fibrillation risk for current flowing through the body from the left hand to both feet". We base our calculation on the "C1 curve" which is defined as "no risk of fibrillation"¹⁰. For a 0.1 ms pulse, this is equivalent to a 710 μC charge. To account for differences in body size and placement of stimulation electrodes, we recommend an additional safety factor of four be imposed, so the maximum allowable value for any individual stimulating pulse would be the value listed in the corresponding appendix for specific models of CEW. Since CEW waveforms are not unidirectional, two possible parameters may be compared to the IEC 60479-2 based threshold: 1) Total Charge, or 2) Monophasic Charge. Total Charge is a more conservative measure, however, Monophasic Charge may be justified based on physiological models such as Reilly et al¹¹. Based on our understanding of the current literature, Monophasic Charge is the appropriate measure³.

7.0 Sample Report Format

7.1 Report Format

The following report format is presented as a sample which shows all of the relevant information collected during testing. Comments in Line 7 could include, for example, notes on the operation of the CEW display or on its general appearance or on obvious discrepancies in the operation of the device itself.

Conducted Energy Weapon Test Report	Date:
Weapon: (mfr and model)	Serial Number:
Police Service:	Police Officer:
Test Service:	Tester:

Visual Inspection	Case <input type="checkbox"/> Battery <input type="checkbox"/> Electrodes <input type="checkbox"/>
Data Download Performed	<input type="checkbox"/>
Comments	
Software Version	
Battery Charge	
Battery Model and Serial	
Temperature	
Humidity	
Atmospheric Pressure	

	Max			Min			Avg			Avg-TI		
	1	2	3	1	2	3	1	2	3	1	2	3
Firing No												
Peak Voltage (V)												
Peak Current (A)												
Net Charge (µC)												
Pulse Duration (µs)												
Pulse Rep Rate (P/s)												
Monophasic Charge (µC)												
Total Charge (µC)												
Burst Length (s)												

Within Specifications: Yes / No

Note: The “Net Charge” definition for the weapon under test should be used (Note 6).

7.2 Data Protection

If an electronic report is used, care should be taken to electronically protect the data from corruption. Digital signatures or encryption may be employed.

8.0 Acknowledgements

This Test Procedure was developed as a result of an initiative spearheaded by Carleton University, Systems and Computer Engineering who organized workshops on the topic of CEWs with partial funding from Public Safety Canada and the Canadian Police Research Centre (CPRC). These workshops brought together a wide range of participants with experience in the field to discuss concerns around the use of these weapons and to develop suggestions for a way forward.

The group which put together Version 2.0 and this version of this document included the following participants:

Dr. Andy Adler, Carleton University

Mr. Dave Dawson, Carleton University

Dr. Ian Sinclair, MPB Technologies Inc.

The first version of this document (version 1.1, 2010-07-31)¹ included the following participants:

Mr. Ron Evans, Datrend Systems Inc.

Mr. Laurin Garland, Vernac Ltd.

Mr. Mark Miller, Datrend Systems Inc.

9.0 Bibliography

- ¹ A Adler, D Dawson, R Evans, L Garland, M Miller, I Sinclair, "Test Procedure for Conducted Energy Weapons Version 1.1", 2010-07-31, <http://curve.carleton.ca/papers/2010/CEW-Test-Procedure-2010-ver1.1.pdf>
- ² A Adler, D Dawson, I Sinclair, "Test Procedure for Conducted Energy Weapons, Version 2.0", 2017-02-17, <http://dx.doi.org/10.22215/cewtp2017>
- ³ A Adler, D Dawson, R Evans, L Garland, M Miller, I Sinclair, R Youmaran, "Toward a Test Protocol for Conducted Energy Weapons" *Modern Instrumentation*, 2(1):5-7, January 2013 DOI:10.4236/mi.2013.21002
- ⁴ A Adler, O Marsh, DP Dawson, "Documentation of the Carleton University Conducted Energy Weapons (CEW) Test Analysis Software", Defence R&D Canada – Centre for Security Science Contract Report, DRDC CSS CR 2011-18, October 2011, http://cradpdf.drdc-rddc.gc.ca/PDFS/unc114/p535480_A1b.pdf
- ⁵ TR Braidwood. "Why? The Robert Dziekanski Tragedy". Braidwood Commission on the Death of Robert Dziekanski. British Columbia, May 2, 2010. <http://www2.gov.bc.ca/assets/gov/law-crime-and-justice/about-bc-justice-system/inquiries/braidwoodphase2report.pdf>
- ⁶ JR Bray, F Cameron, "Electrical Testing of TASER X2 and TASER X26P Conducted Energy Weapons", DRDC-RDDC-2014-C116, especially Section 3.4 "Adapters and Test Leads". cradpdf.drdc-rddc.gc.ca/PDFS/unc200/p800111_A1b.pdf
- ⁷ G Breitzkreuz. Study of the Conductive Energy Weapon – TASER. Report of the Standing Committee on Public Safety and National Security, 39th Parliament, 2nd Session. June 2008. <https://www.publicsafety.gc.ca/lbrr/archives/cn75434829-eng.pdf>
- ⁸ Commission for Public Complaints Against the RCMP. 2008-2009 Annual Report. Section "CPC Reports and Findings: RCMP Conducted Energy Weapon (TASER (R) Use. <https://www.cccc-cctcp.gc.ca/pdf/CPC-AR08-09-eng.pdf>
- ⁹ DP Dawson, Y Maimaitijiang, A Adler. "Development of a Performance Calibration System for X-26 TASERs". International Workshop on Medical Measurement and Applications (MeMeA), Ottawa, Apr 30 – May 1, 2010
- ¹⁰ IEC/TS 60479-2:2007, "Effects of current on human beings and livestock – Part 2: Special Effects", Figure 20, "Threshold of ventricular fibrillation".
- ¹¹ JP Reilly, AM Diamant and J Comeaux. Dosimetry considerations for electrical stun devices. *Physics in Medicine and Biology*, 54 (2009) 1319-1335. <http://iopscience.iop.org/0031-9155/54/5/015>
- ¹² P Savard, R Walter, A Dennis, "Analysis of the Quality and Safety of the Taser X26 devices tested for Radio-Canada / Canadian Broadcasting Corporation by National Technical Systems, Test Report 41196-08.SRC", Dec 2, 2008, <http://www.cbc.ca/news/pdf/taser-analysis-v1.5.pdf>

¹³ L Garland, "Conducted Energy Weapons: Gaps analysis for test procedure (Version 1.1)", DRDC CSS 3781-2010-32BJ, Sept 2010.
<https://www.publicsafety.gc.ca/lbrr/archives/cnmcs-plcng/cn25078-eng.pdf>

¹⁴ D Wood, JR Bray, B Simms, "Technical performance testing of conducted energy weapons: Recommended practices to ensure consistent and quality results", DRDC CSS TR 2013-025, October 2013
<https://www.publicsafety.gc.ca/lbrr/archives/cn26669-eng.pdf>

¹⁵ IEC 62792:2015, Measurement method for the output of electroshock weapons. 2015-02-03.
<https://webstore.iec.ch/publication/21809>

Appendix A
Detailed Specifications
TASER M26

Appendix A

Detailed Specifications

TASER M26

A.1 Introduction

This appendix gives details of the waveform, definitions and specifications for the parameters of interest for the TASER M26. The parameters of interest are based on

A.2 Pulse Waveform

The TASER M26 pulse consists of a damped oscillation with a $17 \mu\text{s}$ time constant. The initial half sinusoid is known as the "Strike Phase" as shown in Figure A1. The pulses are delivered in a burst as shown in Figure A2. The burst consists of about 75 pulses over 5 seconds, at the rate of 15 pulses per second if an alkaline battery is used. The burst has 100 pulses at the rate of 20 pulses per second if a NiMH battery is used.

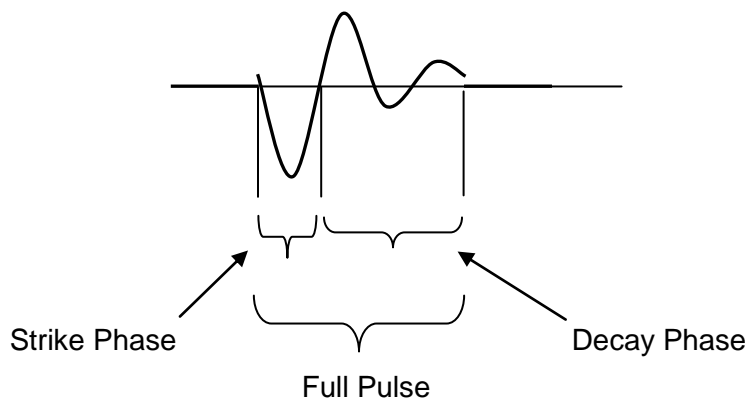


FIGURE A1: PULSE, CONSISTING OF STRIKE PHASE AND DECAY PHASE

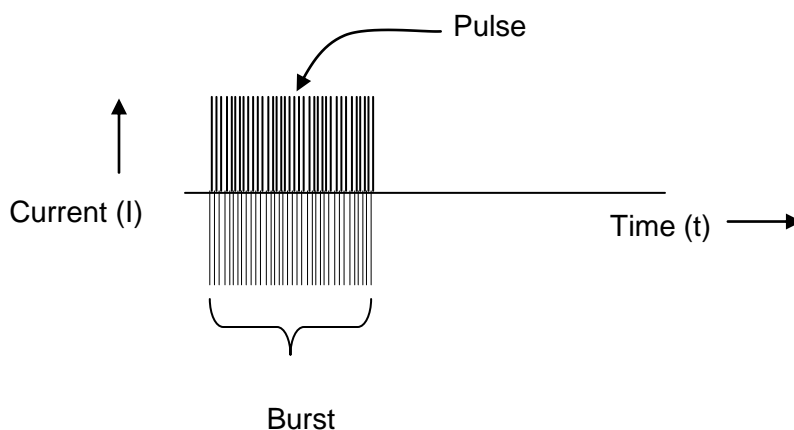


FIGURE A2: BURST OF APPROXIMATELY 75 OR 100 PULSES

A.3 Parameters of Interest

Information is derived primarily from the Strike Phase, since this is the pulse that captures the motor neuron. It is 10 μs long, and delivers about 100 μC of charge in a single direction, whereas the remainder of the pulse delivers about 100 μC spread over 40 μs in alternating negative and positive directions.

Some plots show the Strike Phase above the axis, some show it below the axis (Figure A3). This is merely a question of how the load is connected to the scope. Either orientation of the pulse shows the same thing.

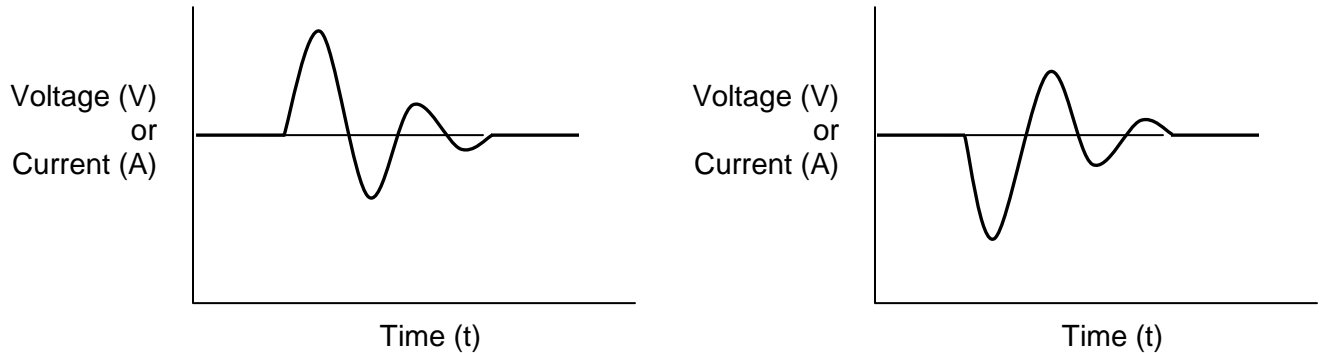


FIGURE A3: M26 PULSE INVERSIONS

Parameters of individual M26 pulses will be calculated as shown in Figure A4 to Figure A8. These describe, respectively,

- peak voltage (strike phase)
- peak current (strike phase)
- net charge (strike phase)
- pulse duration (full pulse),
- pulse repetition rate
- Monophasic Charge
- Total Charge

For the M26, the *Net Charge* is to be calculated over the *Strike Phase*. This parameter is also known as the *Strike Phase Net Charge*. (See Section A.5.)

A.4 Peak Voltage and Peak Current

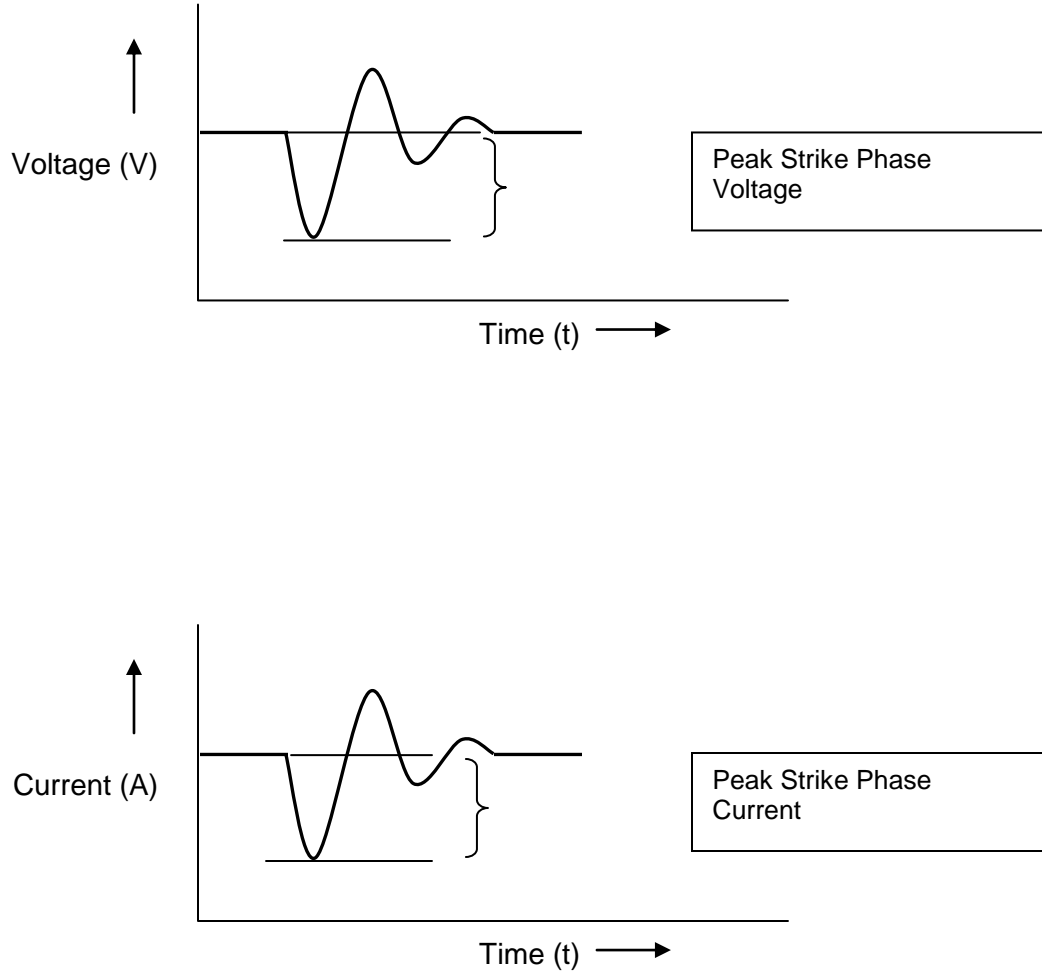


FIGURE A4: M26 PEAK STRIKE PHASE VOLTAGE AND CURRENT

A.5 Net Charge (Strike Phase Net Charge)

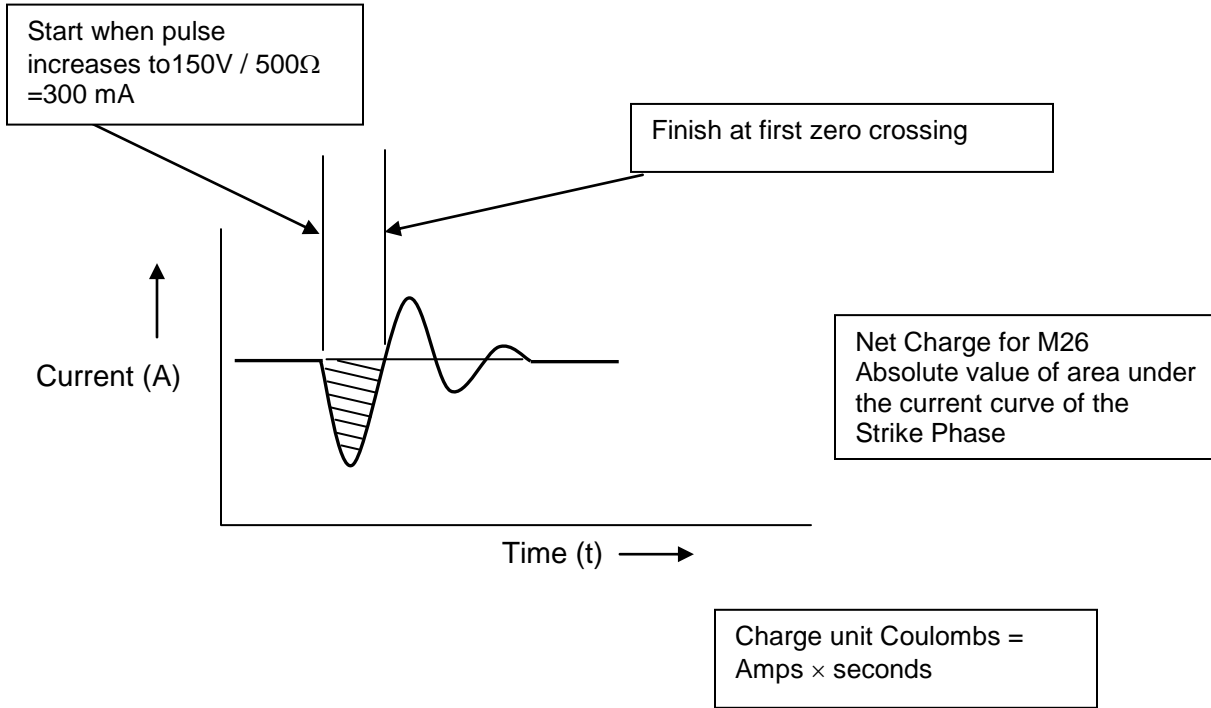


FIGURE A5: M26 STRIKE PHASE NET CHARGE

A.6 Pulse Duration

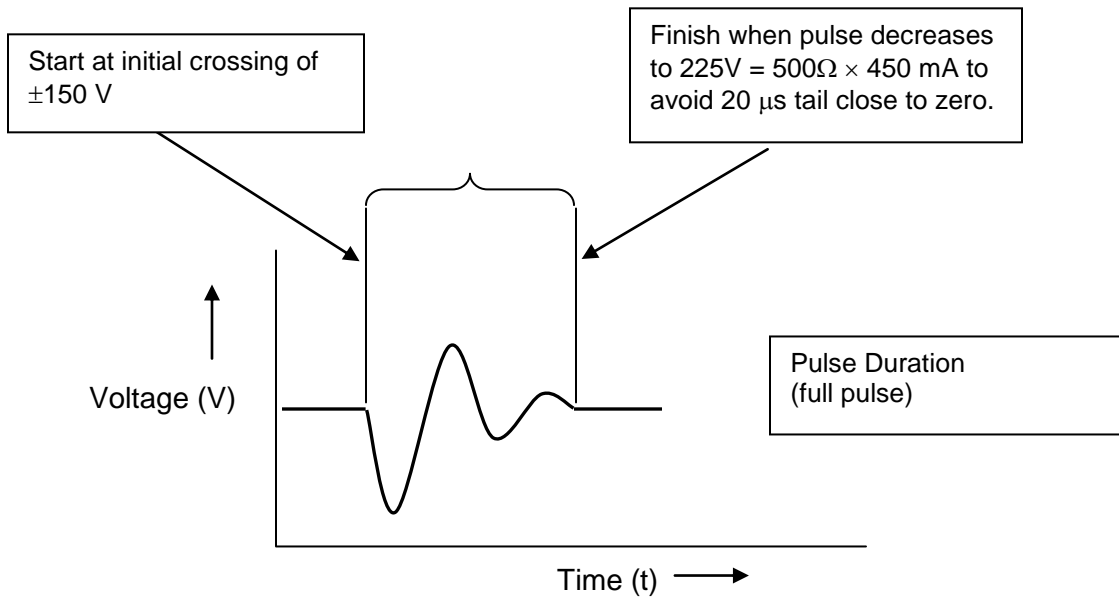


FIGURE A6: M26 FULL PULSE DURATION

A.7 Pulse Repetition Rate

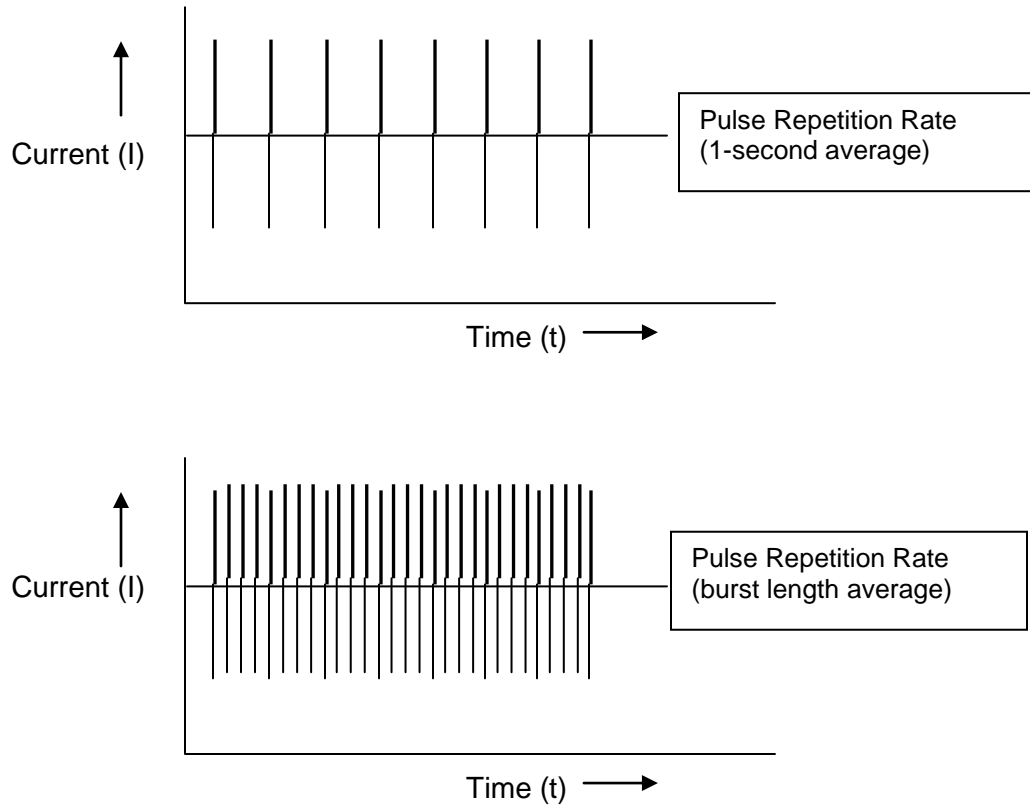


FIGURE A7: M26 PULSE REPETITION RATE

A.8 Monophasic Charge and Total Charge

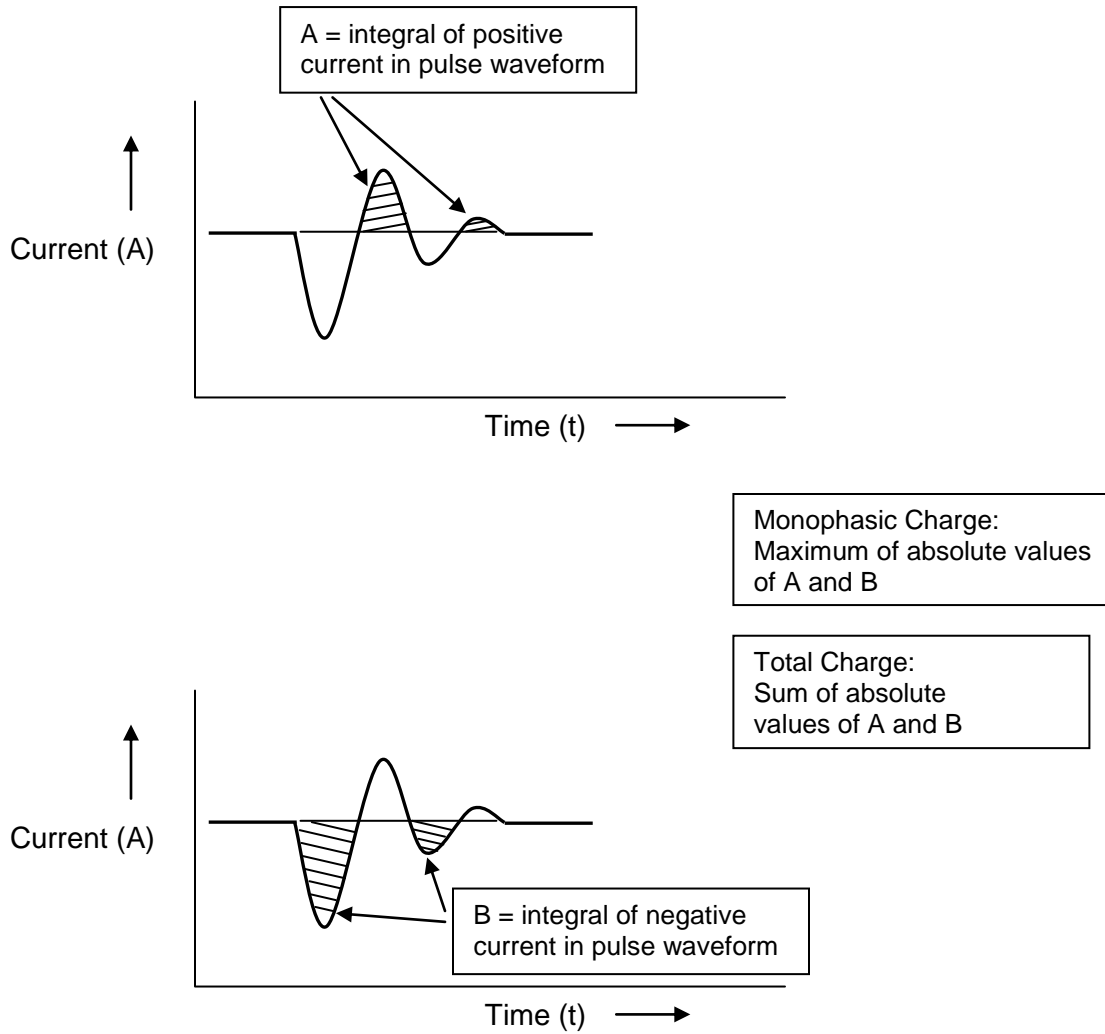


FIGURE A8: M26 MONOPHASIC CHARGE

A.9 Specifications

Advanced TASER™ M26 Electronic Control Device Specification Version 2.0, 2009-02-06 ¹ contains the following electrical specifications.

TABLE A1: TASER M26 SPECIFICATIONS AS PER TI

Item	Value
Waveform	Damped oscillation
Peak loaded voltage	6,900 to 9,400 V
Strike Phase Net Charge	70 to 120 μC
Pulse duration	32 to 60 μs
Pulse rate (NiMH rechargeable cells)	15 to 26 pulses per second
Pulse rate (alkaline cells)	11.25 to 19.5 pulses per second

Two other specifications, Strike Phase Duration and Full Pulse Net Charge are also listed in the specification, but are not included here. The values listed are taken to be sufficient for the purpose of characterizing a device.

The TI specifications call the beginning of the pulse the “Main Phase”. For the purpose of this testing and reporting, this nomenclature has been changed to “Strike Phase” in order to avoid confusion with the Main Phase of the X26 pulse.

The “Strike Phase” is both the arc-creating and current-delivering phase in the M26; the remainder of the pulse could be termed the “Decay Phase”, as it represents the pulse decay in the form of a damped sinusoid.

It is noted in the TASER documentation in part as follows:

- output specifications were derived from a 500 Ω resistive load
- output specifications may vary depending on temperature, battery charge, and load characteristics.
- Pulse rate specifications at room temperature. Temperatures below 32 F (0 C) can significantly reduce the pulse rate.

¹ Taser International, Advanced Taser M26 Series Electronic Control Device Specification Version 2, 2009-02-06, Was: http://www.ecdlaw.info/outlines/EC_02-01-09_M26-Spec.pdf

A.10 Test Details

These test details are required in order to determine whether the unit under test is operating within manufacturer's specifications. Additional test data such as maximum, minimum and average for each parameter from all pulses over all three firings should also be reported.

TABLE A2: TASER M26 SPECIFICATIONS WITH TEST CONDITIONS¹

Parameter	Condition	Spec into 500 Ω Load ²
Peak Voltage	Peak of absolute value of voltage, on a pulse averaged over the last eight pulses	6900 – 9400 V
Peak Current ³	Peak of absolute value of current, on a pulse averaged over the last eight pulses	13.8 – 18.8 A
Net Charge (Strike Phase Net Charge)	Area under Strike Phase current vs time curve, on a pulse averaged over the last eight pulses	70 – 120 μ C
Pulse Duration	Between initial point of waveform ⁴ and final point ⁵ , on a pulse averaged over the last eight pulses	32 – 60 μ s
Pulse Repetition Rate	Average over last second of the pulse burst ⁶ - Alkaline battery - NiMH battery	15 +5/-4 pps 20 +6/-5 pps
Monophasic Charge ⁷ (see Note 6 on Page 10))	The maximum of the absolute values of A and B, where A = the integral of all positive current in a pulse and B = the integral of all negative current in a pulse.	< 180 μ C

¹ TASER International TASER M26 Specifications have been applied

² Load resistor is 500 Ω non-inductive high voltage pulse-tolerant

³ Peak current specs calculated from peak voltage: e.g. 13.8 A = 6900 V/500 Ω

⁴ Initial point is first sample in the pulse where absolute voltage reaches 150 V with 500 Ω load

⁵ Final point is last sample in the pulse where absolute voltage drops below 225 V with 500 Ω load

⁶ Also known as a "cycle" in Axon nomenclature

⁷ Monophasic Charge is not part of TASER International Specifications

A.11 Sample Test Data

Test data to be measured/calculated during a typical test are as follows:

TABLE A3: TASER M26 CEW TEST OBSERVATION DETAILS

Parameter	Method of Measurement	Typical Values
Model Number	Device label	M-26
Serial Number	Device label	P1-009601
Battery Status	Battery usage record. Power supply voltage	< 25 discharges 12 Vdc
Lab Temperature	Thermometer in the lab	26 C
Battery Version	Battery labels. Power supply description	Duracell Ultra Fixed DC Supply
Load resistance	Multimeter	495 Ω

TABLE A4: TASER M26 CEW OPERATING PARAMETERS, TYPICAL VALUES

Parameter	Method of Measurement	Typical Values
Peak Voltage	Maximum voltage out of all samples during Strike Phase.	7400 V
Peak Current	Maximum current out of all samples during Strike Phase.	15.2 A
Net Charge (Strike Phase Net Charge)	Current at each sample of the strike phase multiplied by the time between data samples, all samples then summed up.	105 μC
Pulse Duration	Time between crossing of initial and final thresholds of the full pulse	40 μs
Pulse Repetition Rate	Number of pulses during the burst minus 1 divided by the burst length.	14.5 pps

Note that Axon also specifies Full Pulse Net Charge and Strike Phase Duration as parameters for the M26. It is believed that Strike Phase Charge and Full Pulse Duration are the more important parameters. This also maintains consistency with the parameters measured for the X26 model.

Appendix B
Detailed Specifications
TASER X26E

Appendix B Detailed Specifications TASER X26E

B.1 Introduction

This appendix gives details of the waveform, definitions and specifications for the parameters of interest for the TASER X26E. (The weapon previously labelled X26 was designated as the X26E when the X26P was introduced.)

B.2 Pulse Waveform

The TASER X26E pulse consists of an “Arc Phase” and a “Main Phase” as shown in Figure B1. The pulses are delivered in a burst consisting of approximately 95 pulses over 5 seconds, at the rate of 19 pulses per second, as shown in Figure B2.

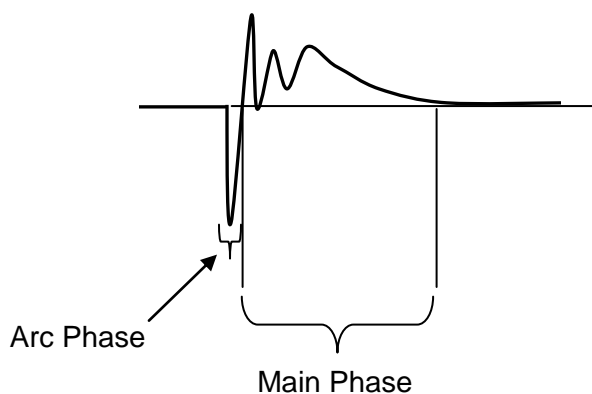


FIGURE B1: PULSE, CONSISTING OF ARC PHASE AND MAIN PHASE

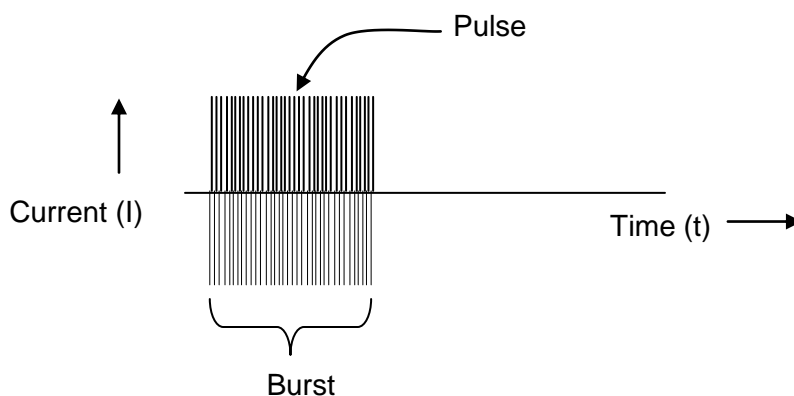


FIGURE B2: BURST OF APPROXIMATELY 95 PULSES

B.3 Parameters of Interest

Information is derived primarily from the main phase, where most of the pulse energy resides. The main phase delivers about 100 μC of charge, whereas the arc phase has only 10 μC . The purpose of the arc phase is to create an arc to allow efficient delivery of current during the main phase

The arc phase has a faster rise time and a higher peak than seen on many oscilloscopes, because of integrating effects in voltage and current probes. For this reason, measurements of the peak voltage, peak current and charge of the arc phase may be in error.

Parameters of individual X26 pulses are calculated as shown in Figure B4 to Figure B8. These describe, respectively,

- peak voltage (main phase)
- peak current (main phase)
- net charge (main phase)
- pulse duration (full pulse),
- pulse repetition rate,
- Monophasic Charge
- Total Charge

For the X26/X26E, the *Net Charge* is to be calculated over the *Main Phase*. This parameter is also known as the *Main Phase Net Charge*. (See Section B.5.)

B.4 Peak Voltage and Peak Current

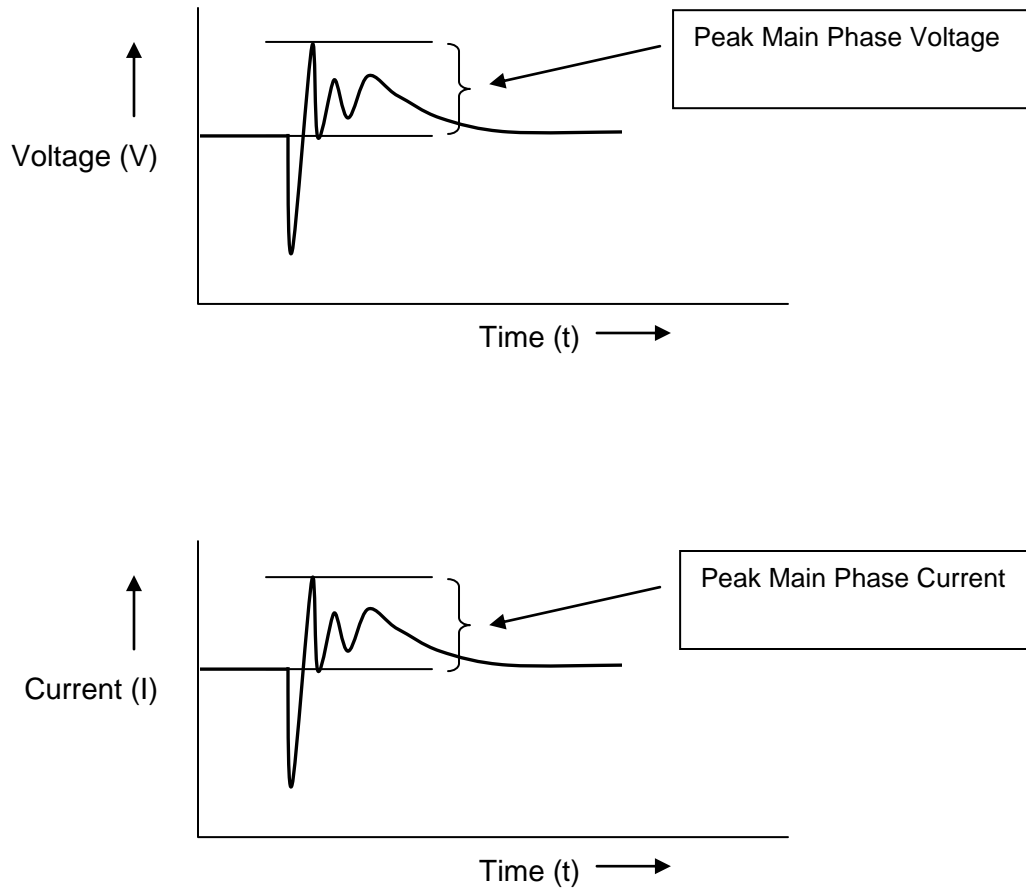


FIGURE B3: X26 PEAK MAIN PHASE VOLTAGE AND CURRENT

B.5 Net Charge (Main Phase Net Charge)

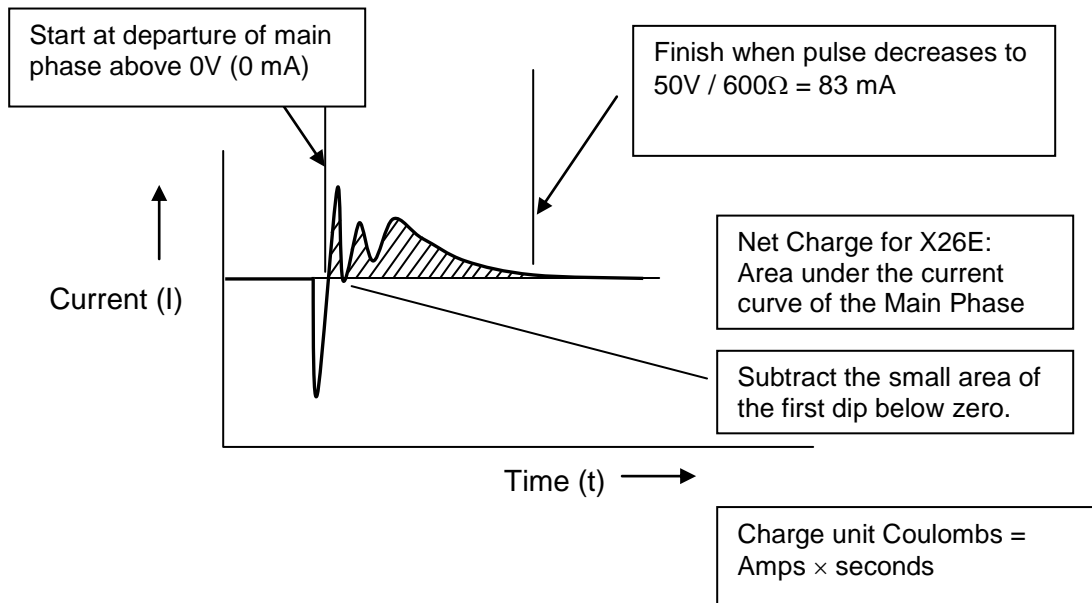


FIGURE B4: X26 MAIN PHASE NET CHARGE

B.6 Pulse Duration

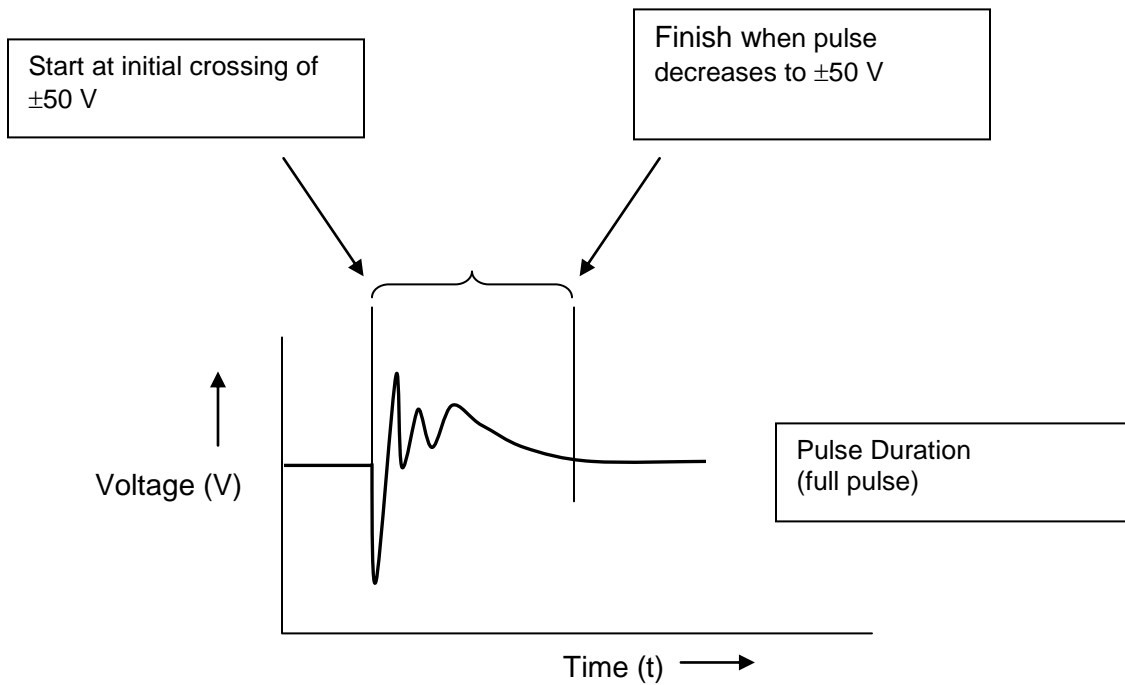


FIGURE B5: X26 PULSE DURATION

B.7 Pulse Repetition Rate

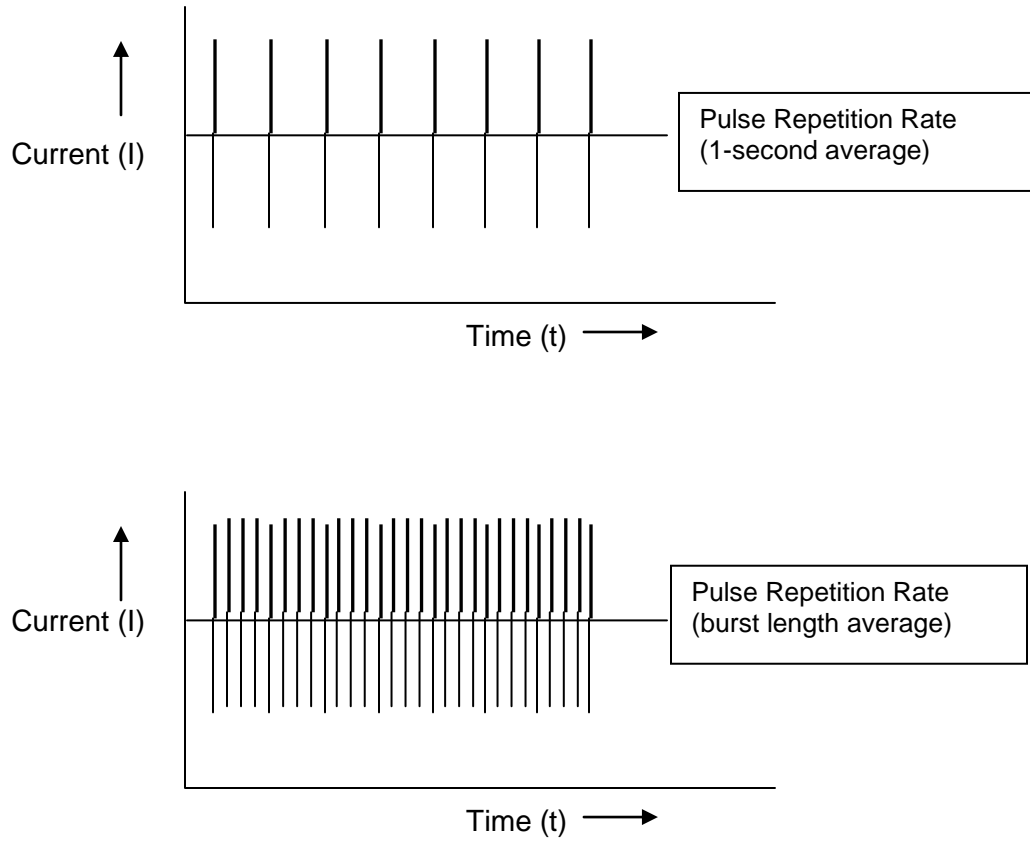


FIGURE B6: X26 PULSE REPETITION RATE

B.8 Monophasic Charge and Total Charge

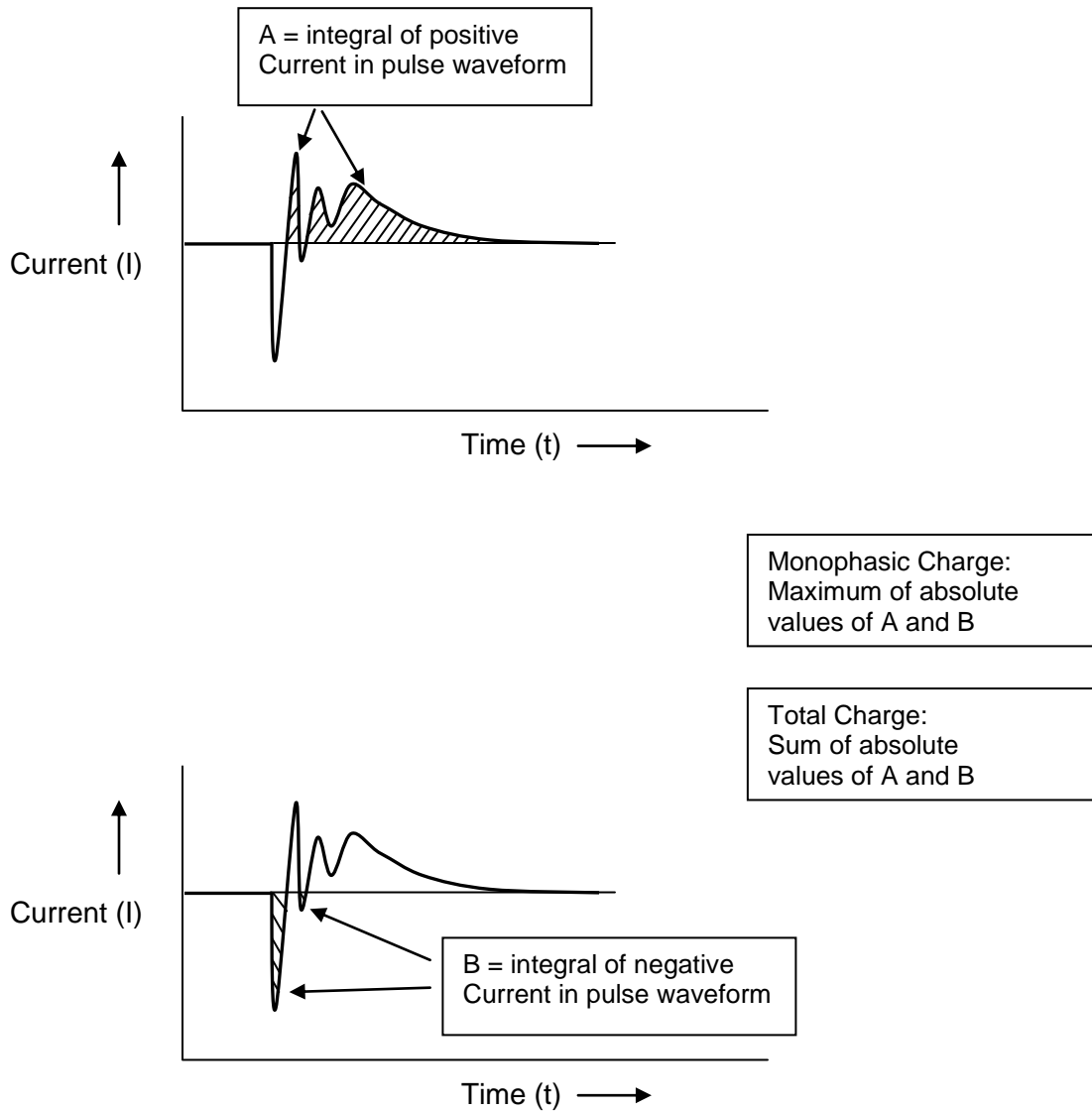


FIGURE B7: X26 MONOPHASIC CHARGE

B.9 Specifications

The TASER™ X26E Spec Sheet¹ contains the following electrical specifications.

TABLE B1: TASER X26 SPECIFICATIONS AS PER AXON

Item	Value
Waveform	Complex shaped pulse
Peak loaded voltage	1,400 to 2,520 V
Main Phase Net charge	80 to 125 μC
Pulse duration	105 to 155 μs
Pulse rate	16.5 to 20 pulses per second

It is noted in the TASER documentation as follows:

- output specifications were derived from a 600 Ω resistive load
- output specifications may vary depending on temperature, battery charge and load characteristics
- Pulse rate specifications are at room temperature. Temperatures below 32°F (0 C) can significantly reduce the pulse rate

¹ <https://my.axon.com/s/article/X26E-Spec-Sheet>

B.10 Test Details

These test details are required in order to determine whether the unit under test is operating within specifications. Additional test data such as maximum, minimum and average for each parameter from all pulses over all three firings should also be reported.

TABLE B2: TASER X26 SPECIFICATIONS WITH TEST CONDITIONS¹

Parameter	Condition	Spec into 600 Ω Load ²
Peak Voltage	Peak of main phase voltage (following arc phase), on a pulse averaged over the last eight pulses	1400 – 2520 V
Peak Current ³	Peak of main phase current (following arc phase), on a pulse averaged over the last eight pulses	2.3 – 4.2 A
Net Charge (Main Phase Net Charge)	Area under main phase current vs time curve, on a pulse averaged over the last eight pulses	80 – 125 μC
Pulse Duration	Between initial point of waveform ⁴ and final point ⁵ on a pulse averaged over the last eight pulses	105 – 155 μs
Pulse Repetition Rate	Average over last second of the pulse burst ⁶	16.5 – 20 pps
Monophasic Charge ⁷ (see Note 6 on Page 10))	The maximum of the absolute values of A and B, where A = the integral of all positive current in a pulse and B = the integral of all negative current in a pulse.	< 180 μC

¹ TASER International TASER X26 Specifications have been applied

² Load resistor is 600 Ω non-inductive high voltage pulse-tolerant

³ Peak current specs calculated from peak voltage: e.g. 2.3 A = 1400 V/ 600 Ω

⁴ Initial Point is first point in the pulse where absolute voltage reaches 50 V with 600 Ω load

⁵ Final point is last point in the pulse where absolute voltage drops below 50 V with a 600 Ω load

⁶ Also known as a “cycle” in Axon nomenclature

⁷ Monophasic Charge is not part of TASER International Specifications

B.11 Sample Test Data

Test data to be measured/calculated during a typical test are as follows:

TABLE B3: TASER X26E CEW TEST OBSERVATION DETAILS

Parameter	Method of Measurement	Typical Values
Model Number	Device label	X-26
Serial Number	Device label	X00-157163
Battery Status	LED display in device	30% to 97%
CEW Temperature	LED display in device	26 C
Software Version	LED display in device	15, 18, 20, 21, 22
Battery Version	Label on the side of the DPM	21, 22, or XX if indecipherable
Load resistance	Multimeter	595 Ω

TABLE B4: TASER X26E CEW OPERATING PARAMETERS, TYPICAL VALUES

Parameter	Method of Measurement	Typical Values
Peak Voltage	Maximum voltage out of all samples during main phase.	1905 V
Peak Current	Maximum current out of all samples during main phase.	3.2 A
Net Charge (Main Phase Net Charge)	Current at each sample of the main phase multiplied by the time between data samples and summed.	105 μC
Pulse Duration	Time between crossing of initial and final thresholds of the full pulse	135 μs
Pulse Repetition Rate	Number of pulses during the burst minus 1 divided by the burst length.	17.5 pps

Appendix C
Detailed Specifications
TASER X26P and X2

Appendix C

Detailed Specifications

TASER X26P and X2

C.1 Introduction

This appendix gives details of the waveform, definitions and specifications for the parameters of interest for the TASER X26P. The TASER X2 has identical waveform specifications, but with two cartridge respectively. In practice, the X2 can have a slightly longer pulse duration, due to the smaller spark gap on the respective cartridge, but this does not change the specified values.

C.2 Pulse Waveform

The TASER X26P pulse consists of an “arc phase” and “main phase” as shown in Figure C1. The pulses are delivered in a burst consisting of approximately 95 pulses over 5 seconds, at the rate of 19 pulses per second, as shown in Figure C2.

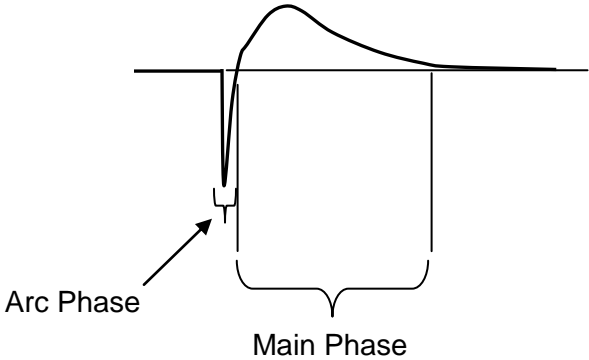


FIGURE C1: PULSE, CONSISTING OF ARC PHASE AND MAIN PHASE

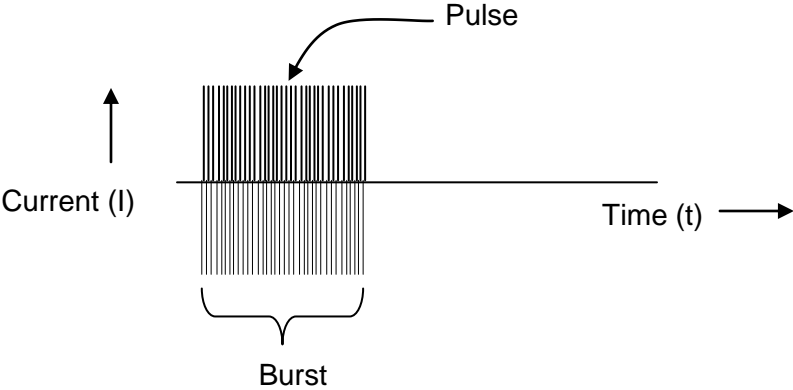


FIGURE C2: BURST OF APPROXIMATELY 95 PULSES

C.3 Parameters of Interest

Information is derived primarily from the main phase, where most of the pulse energy resides. The main phase delivers about 70 μC of charge, whereas the arc phase has only 7 μC . The purpose of the arc phase is to create an arc to allow efficient delivery of current during the main phase. Note that the full pulse net charge parameter will subtract the charge of the arc phase from the main phase, and thus will have a value of approximately 63 μC .

The arc phase has a faster rise time and a higher peak than seen on many oscilloscopes, because of integrating effects in voltage and current probes. For this reason, measurements of the peak voltage, peak current and charge of the arc phase may be in error.

Parameters of individual X26P pulses are calculated as shown in Figure C4 to Figure C8. These describe, respectively,

- peak voltage (main phase)
- peak current (main phase)
- net charge (full pulse)
- pulse duration (full pulse),
- pulse repetition rate,
- Monophasic Charge
- Total Charge

For the X26P/X2, the *Net Charge* is to be calculated over the *Full Pulse*. This parameter is also known as the *Full Pulse Net Charge*. (See Section C.5.)

C.4 Peak Voltage and Peak Current

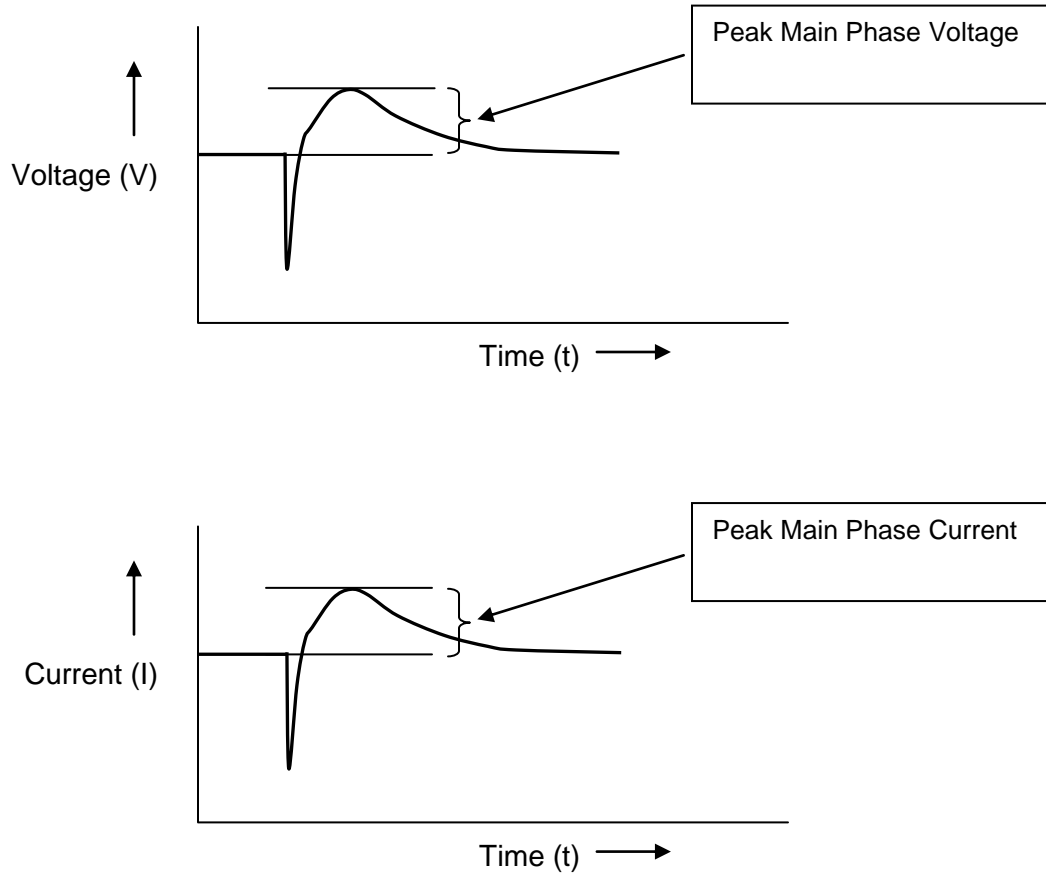


FIGURE C3: X26P PEAK MAIN PHASE VOLTAGE AND CURRENT

C.5 Net Charge (Full Pulse Net Charge)

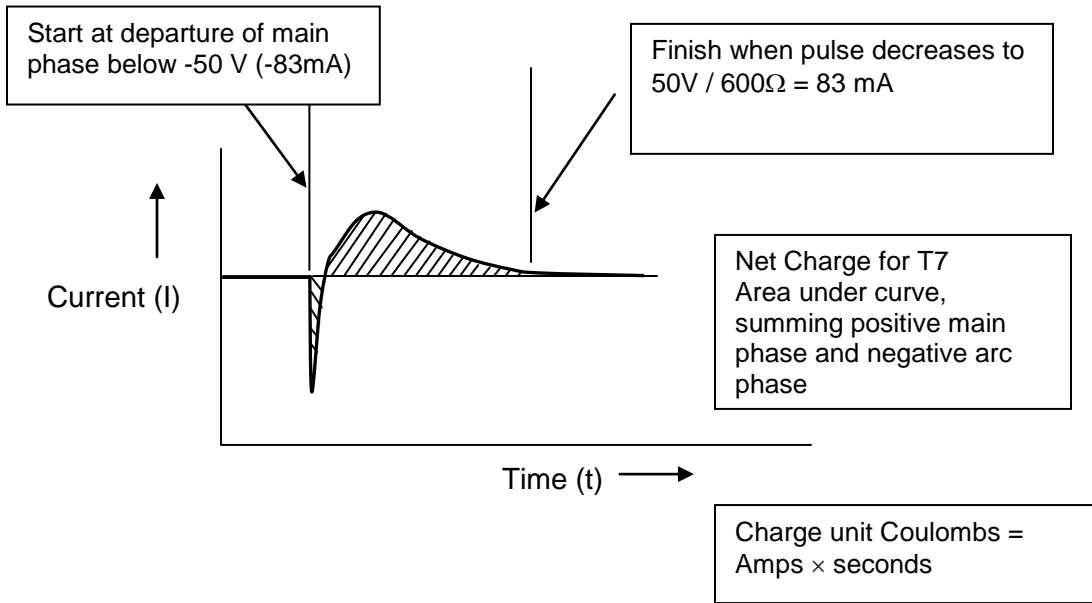


FIGURE C4: X26P FULL PULSE NET CHARGE

C.6 Pulse Duration

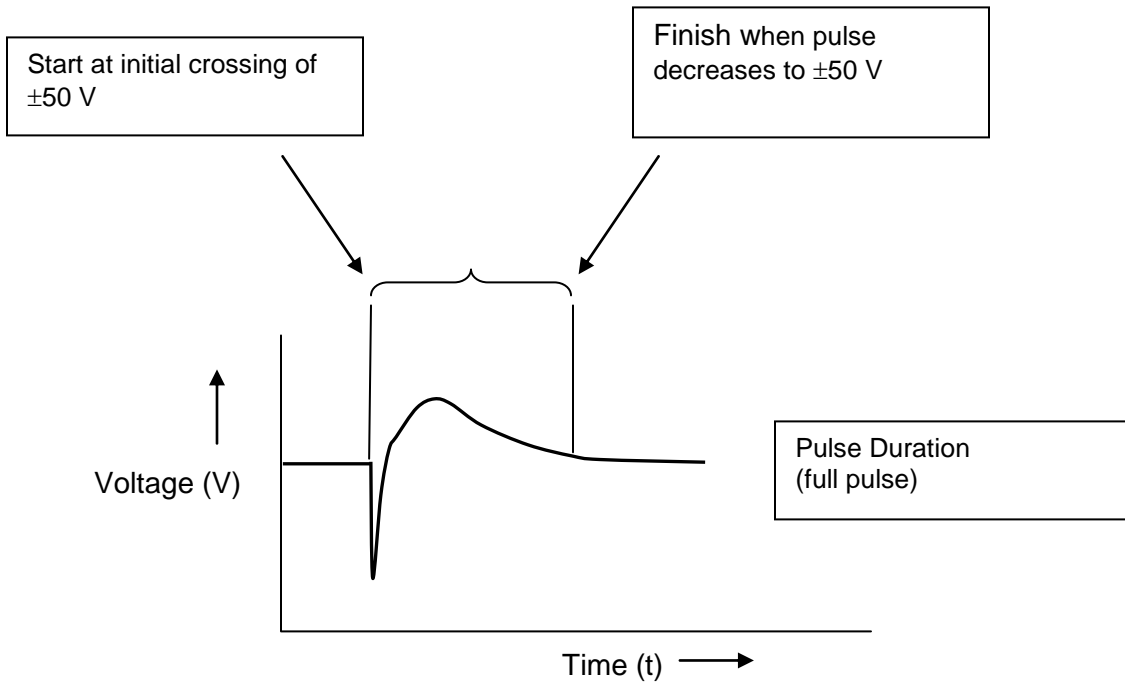


FIGURE C5: X26P PULSE DURATION

C.7 Pulse Repetition Rate

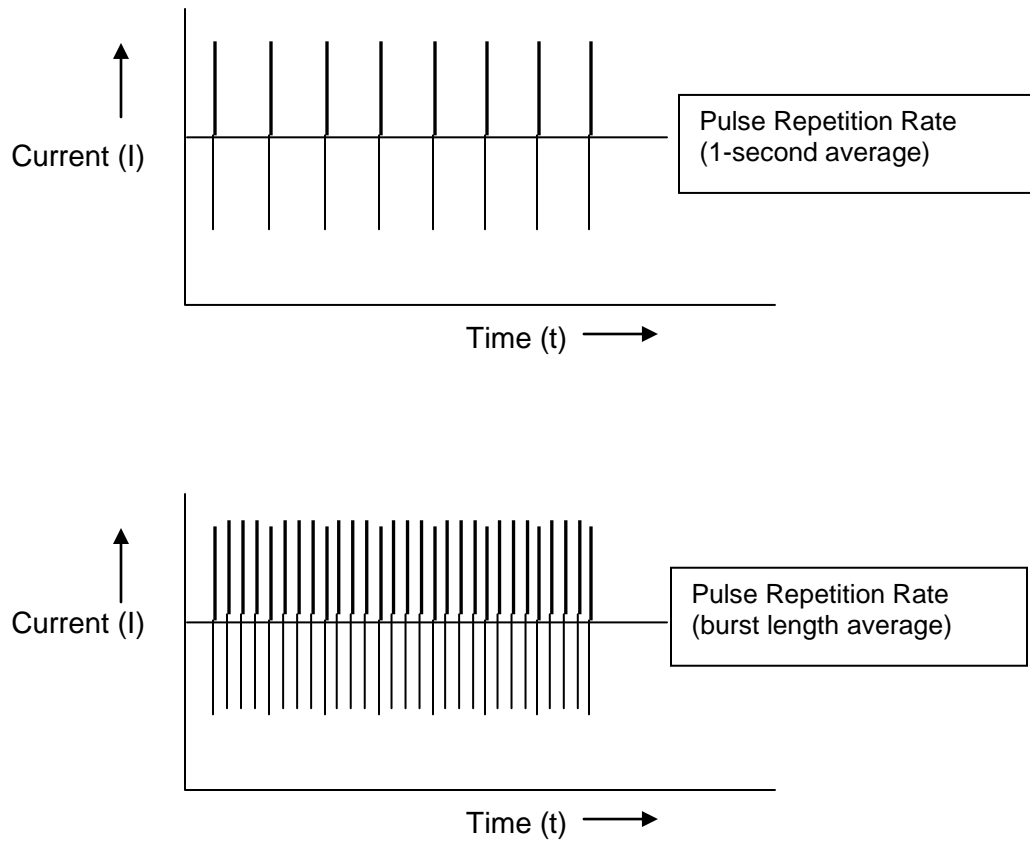


FIGURE C6: X26P PULSE REPETITION RATE

C.8 Monophasic Charge and Total Charge

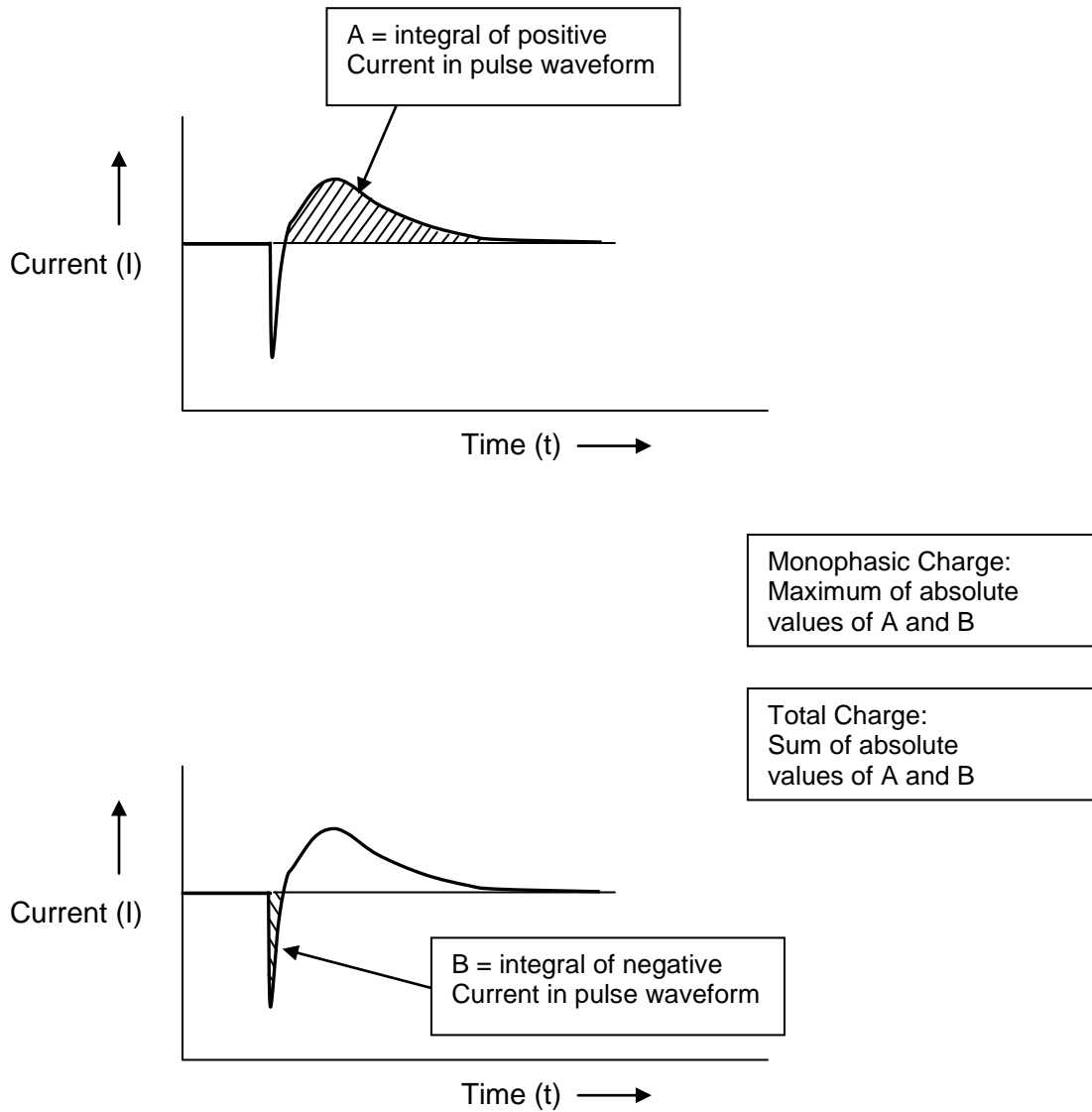


FIGURE C7: X26P MONOPHASIC CHARGE

C.9 Specifications

The TASER™ X26P Spec Sheet¹ contains the following electrical specifications. The TASER™ X2 Spec Sheet² shows the same electrical specifications.

TABLE C1: TASER X26P SPECIFICATIONS AS PER AXONI

Item	Value
Waveform	Complex shaped pulse
Peak loaded voltage	840 to 1,440 V
Full Pulse Net Charge	54 to 72 μC
Pulse duration	50 to 125 μs
Pulse rate	18 to 20 pulses per second

It is noted in the TASER documentation as follows:

- output specifications were derived from a 600- Ω resistive load
- output specifications may vary depending on temperature, battery charge and load characteristics
- Pulse rate specifications are at room temperature. Temperatures below 32°F (0 C) can significantly reduce the pulse rate

¹ <https://my.axon.com/s/article/X26P-Spec-Sheet>

² <https://my.axon.com/s/article/X2-Spec-Sheet>

C.10 Test Details

These test details are required in order to determine whether the unit under test is operating within specifications. Additional test data such as maximum, minimum and average for each parameter from all pulses over all three firings should also be reported.

TABLE C2: TASER X26P SPECIFICATIONS WITH TEST CONDITIONS¹

Parameter	Condition	Spec into 600 Ω Load ²
Peak Voltage	Peak of main phase voltage (following arc phase), on a pulse averaged over the last eight pulses	840 – 1440 V
Peak Current ³	Peak of main phase current (following arc phase), on a pulse averaged over the last eight pulses	1.4 – 2.4 A
Net Charge (Full Pulse Net Charge)	Area under <u>full pulse</u> current vs time curve, on a pulse averaged over the last eight pulses	54 – 72 μ C
Pulse Duration	Between initial point of waveform ⁴ and final point ⁵ on a pulse averaged over the last eight pulses	50 – 125 μ s
Pulse Repetition Rate	Average over last second of the pulse burst ⁶	18 – 20 pps
Monophasic Charge ⁷ (see Note 6 on Page 10)	The maximum of the absolute values of A and B, where A = the integral of all positive current in a pulse and B = the integral of all negative current in a pulse.	< 180 μ C

¹ From Axon TASER X26P Specifications. The electrical specification of the TASER X2 is the same.

² Load resistor is 600 Ω non-inductive high voltage pulse-tolerant

³ Peak current specs calculated from peak voltage: e.g. 2.4 A = 1440 V / 600 Ω

⁴ Initial Point is first sample in the pulse where absolute voltage reaches -50 V with 600 Ω load

⁵ Final point is last sample in the pulse where absolute voltage drops below 50 V with a 600 Ω load

⁶ Also known as a “cycle” in Axon nomenclature

⁷ Monophasic Charge is not part of TASER International Specifications

C.11 Sample Test Data

Test data to be measured/calculated during a typical test are as follows:

TABLE C3: TASER X26P CEW TEST OBSERVATION DETAILS

Parameter	Method of Measurement	Typical Values
Model Number	Device label	X-26P
Serial Number	Device label	X12004RY1
Battery Status	LED display in device	30% to 99%
CEW Temperature	LED display in device	23 C
Software Version	LED display in device	N/A
Battery Version	Label on the side of the DPM	X1
Load resistance	Multimeter	610 Ω

TABLE C4: TASER X26P CEW OPERATING PARAMETERS, TYPICAL VALUES

Parameter	Method of Measurement	Typical Values
Peak Voltage	Maximum voltage out of all samples during main phase.	1202 V
Peak Current	Maximum current out of all samples during main phase.	1.97 A
Net Charge (Full Pulse Net Charge)	Current at each sample of the <u>full pulse</u> multiplied by the time between data samples and summed.	69.2 μC
Pulse Duration	Time between crossing of initial and final thresholds of the full pulse	88.4 μs
Pulse Repetition Rate	Number of pulses during the burst minus 1 divided by the burst length.	19.15 pps
Monophasic Charge	The maximum of the absolute values of A and B, where A = the integral of all positive current in a pulse and B = the integral of all negative current in a pulse.	79.0 μC

Appendix D
Detailed Specifications
TASER 7

Appendix D Detailed Specifications TASER 7

D.1 Introduction

This appendix gives details of the waveform, definitions and specifications for the parameters of interest for the TASER 7 (aka T7). Like the TASER X2, it has two cartridges, but it contains many internal updates and multiple modes of operation. The test procedure is based on the Advanced Cross-Connect (ACC) mode, in which pulses are fired between four electrodes on the two cartridges. This mode is activated when the unit discovers two spent cartridges in its barrels. We consider validation of the weapon in ACC mode to be a complete test of the electrical output pathways of the weapon.

The typical Advanced Cross-Connect sequence is shown spatially in Figure D1 as an interaction among four electrodes, seen from the point of view of the user. The same sequence is shown in time in Figure D2, in which the temporal pattern is evident. The weapon will vary the pulse sequence if not all probes are connected via a low-resistance pathway.

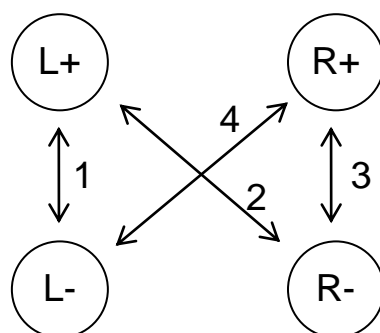


FIGURE D1: FIRING SEQUENCE AMONG FOUR POLE POSITIONS

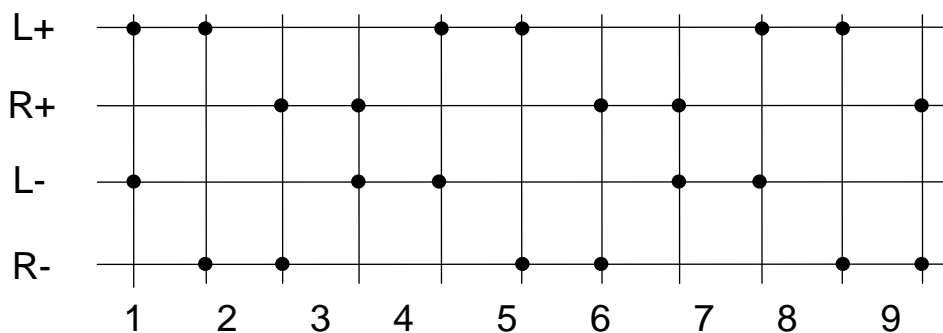


FIGURE D2: TYPICAL FIRING SEQUENCE AS A FUNCTION OF TIME

D.2 TEST SETUP

The test setup shown in Figure 1 is modified to accept the output from four terminals. The revised setup is shown in Figure D3, with a detail of the Test Load in Figure D4.

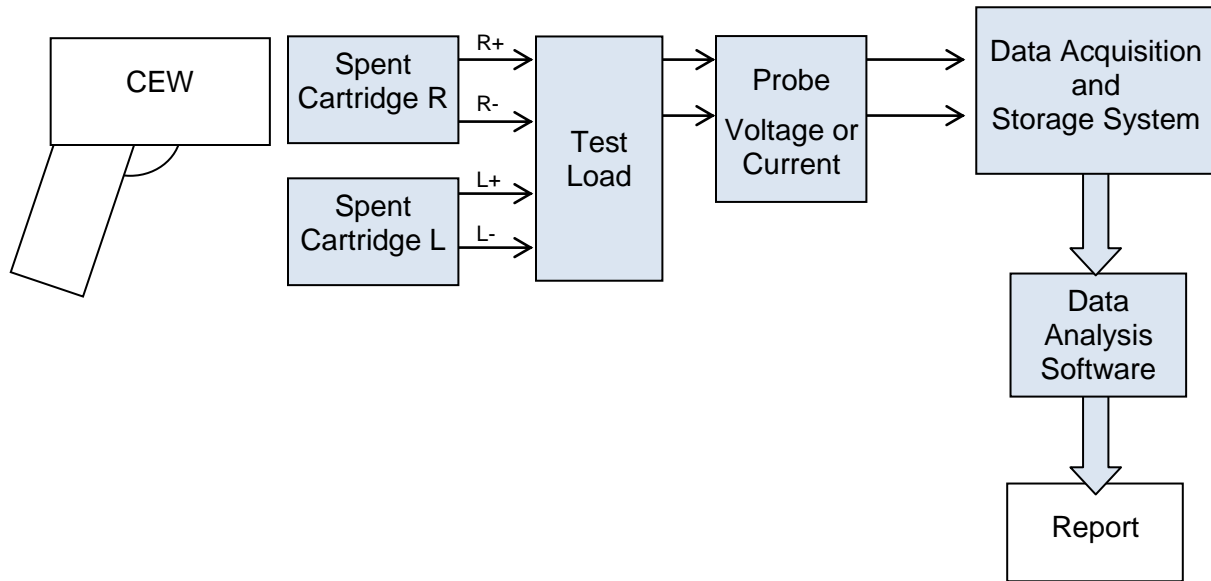


FIGURE D3: TEST SETUP FOR TESTING TASER 7

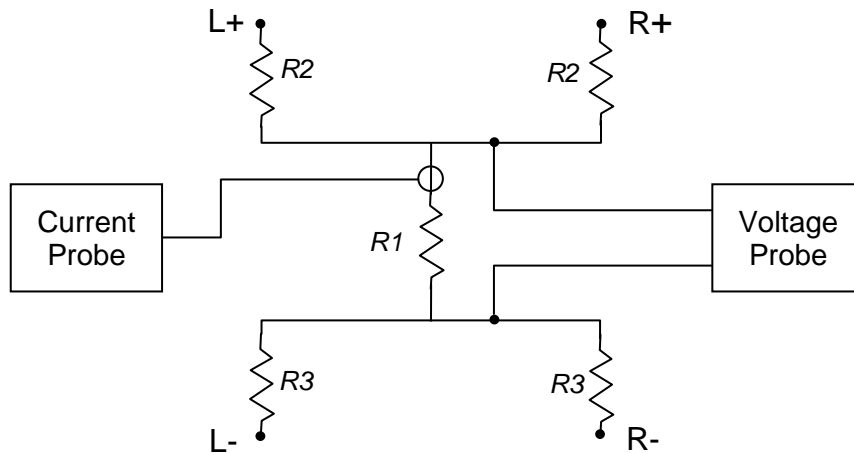


FIGURE D4: LOAD CONFIGURATION – CURRENT PROBE OR VOLTAGE PROBE

Load Resistance Selection

The load is an H-configuration, with four resistors $R2$ connected to the device electrodes by the same four wires that are used with the four darts associated with two cartridges. A sensing resistor $R1$ connects the top part of the H to the bottom part.

The path from positive to negative electrode should be 600 ohms. Thus $R1 + R2 + R3 = 600 \Omega$. The path between same-polarity electrodes should also be close to 600 ohms, to mimic the resistance of the human body.

Inside the H-load, the sensing resistor forms a voltage divider and thus allows a lower-voltage to be sensed. For example, if $R1 = 10$ ohms and $R2 = R3 = 295$ ohms¹, then the maximum expected voltage developed across the sensing resistor $R1$ would be $10/(295+295) = 1/60$ of a 2.6 kV pulse², or 43 V. Choose an appropriate probe, but design and build the load to protect the user from accidentally touching any high voltage points with the probe.

Resistor Tolerance

The design intention of the T7 is to produce 63 μC of charge per pulse. It does this by varying the voltage across different loads to maintain the current necessary to produce that much charge in a pulse. For the voltage peak value to be within specification, the 600-ohm load should be accurate to within 5% and known to within 1%.

According to specifications in Table D1 below, the charge must be held within about 10%. The measurement system should have 10 times this accuracy, so the charge should be measured to an accuracy of 1%. As discussed in Section 3.3, the data acquisition system should have a digitization error of better than 1%. The sense resistor should therefore be known to better than 0.1%, and should be 10 ohms (within 10%).

Therefore, a suitable choice of resistances would be: $R1 = 10 \pm 1$ ohms and $R2 = R3 = 295 \pm 15$ ohms.

¹ So that $R1 + R2 + R3 = 10 + 295 + 295 = 600$ ohms between positive and negative electrodes. The resistance between same-polarity electrodes is then $R2 = 2 R3 = 590$ ohms.

² The maximum expected pulse voltage, according to Table D1 in Section D.10, Specifications

D.3 Pulse Waveform

The TASER X7 pulse consists of an “arc phase” and “main phase” as shown in Figure C1. The pulses are delivered in a burst consisting of approximately $5 \times 44 = 220$ pulses over 5 seconds, at the rate of 44 pulses per second, as shown in Figure C2.

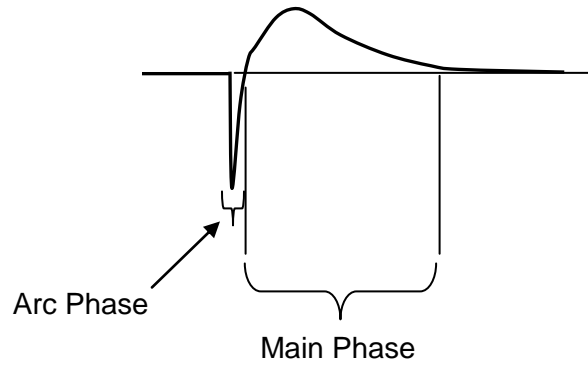


FIGURE D6: PULSE, CONSISTING OF ARC PHASE AND MAIN PHASE

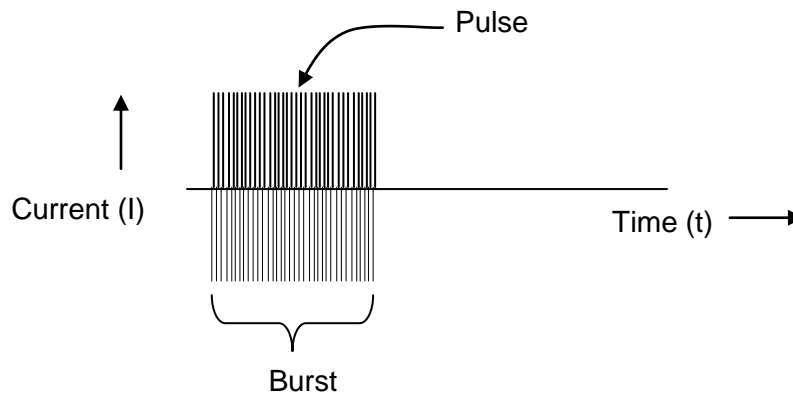


FIGURE D7: BURST OF APPROXIMATELY 220 PULSES

D.4 Parameters of Interest

Information is derived primarily from the main phase, where most of the pulse energy resides. The main phase delivers about 70 μC of charge, whereas the arc phase has only 7 μC . The purpose of the arc phase is to create an arc to allow efficient delivery of current during the main phase. Note that the full pulse net charge parameter will subtract the charge of the arc phase from the main phase, and thus will have a value of approximately 63 μC .

The arc phase has a faster rise time and a higher peak than seen on many oscilloscopes, because of integrating effects in voltage and current probes. For this reason, measurements of the peak voltage, peak current and charge of the arc phase may be in error.

Parameters of individual T7 pulses are calculated as shown in Figure C4 to Figure C8. These describe, respectively,

- peak voltage (main phase)
- peak current (main phase)
- net charge (full pulse)
- pulse duration (full pulse),
- pulse repetition rate,
- Monophasic Charge
- Total Charge

For the T7, the *Full Net Pulse Charge* is to be calculated over the *Full Pulse*. This parameter is also known as the *Full Pulse Charge* in Axon nomenclature. (See Section D.6.)

D.5 Peak Voltage and Peak Current

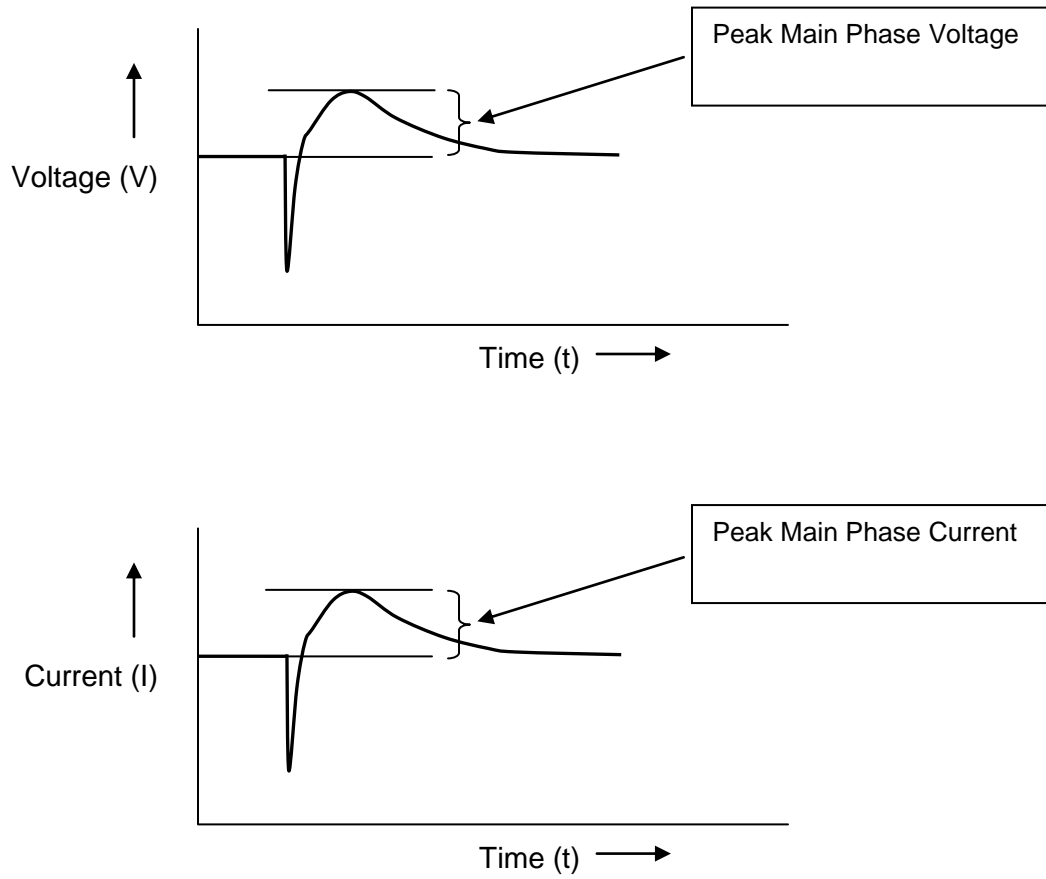


FIGURE D8: T7 PEAK MAIN PHASE VOLTAGE AND CURRENT

D.6 Net Charge (Full Pulse Net Charge)

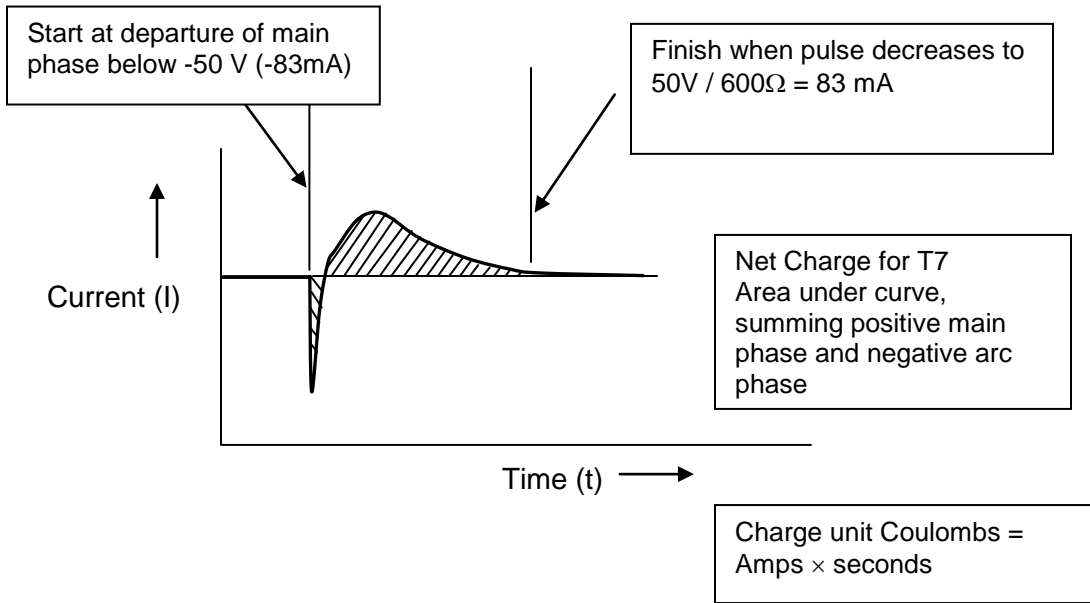


FIGURE D9: T7 FULL PULSE NET CHARGE

D.7 Pulse Duration

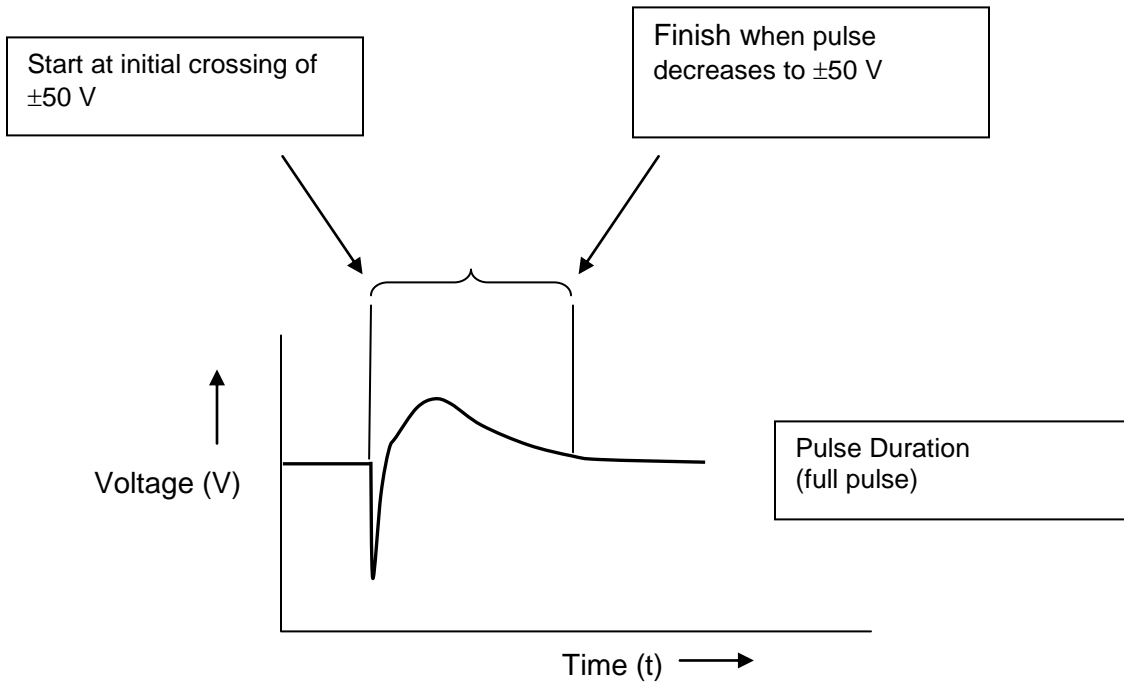


FIGURE D10: T7 PULSE DURATION

D.8 Pulse Repetition Rate

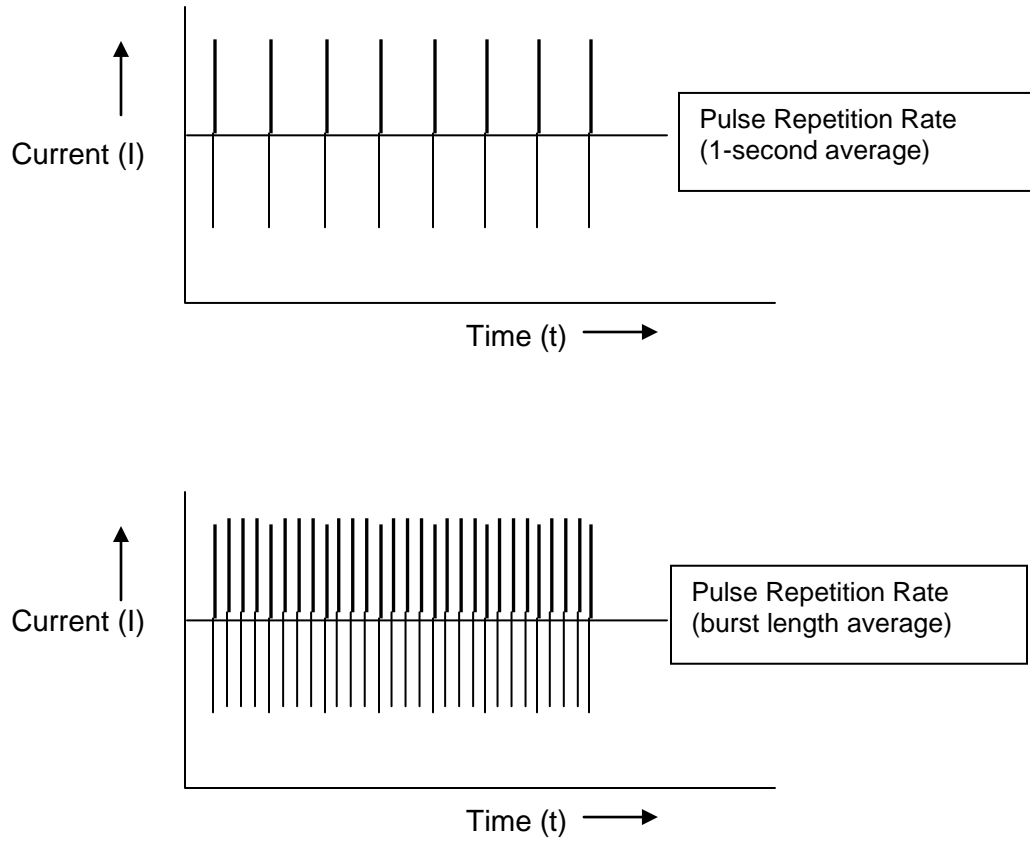


FIGURE D11: T7 PULSE REPETITION RATE

D.9 Monophasic Charge and Total Charge

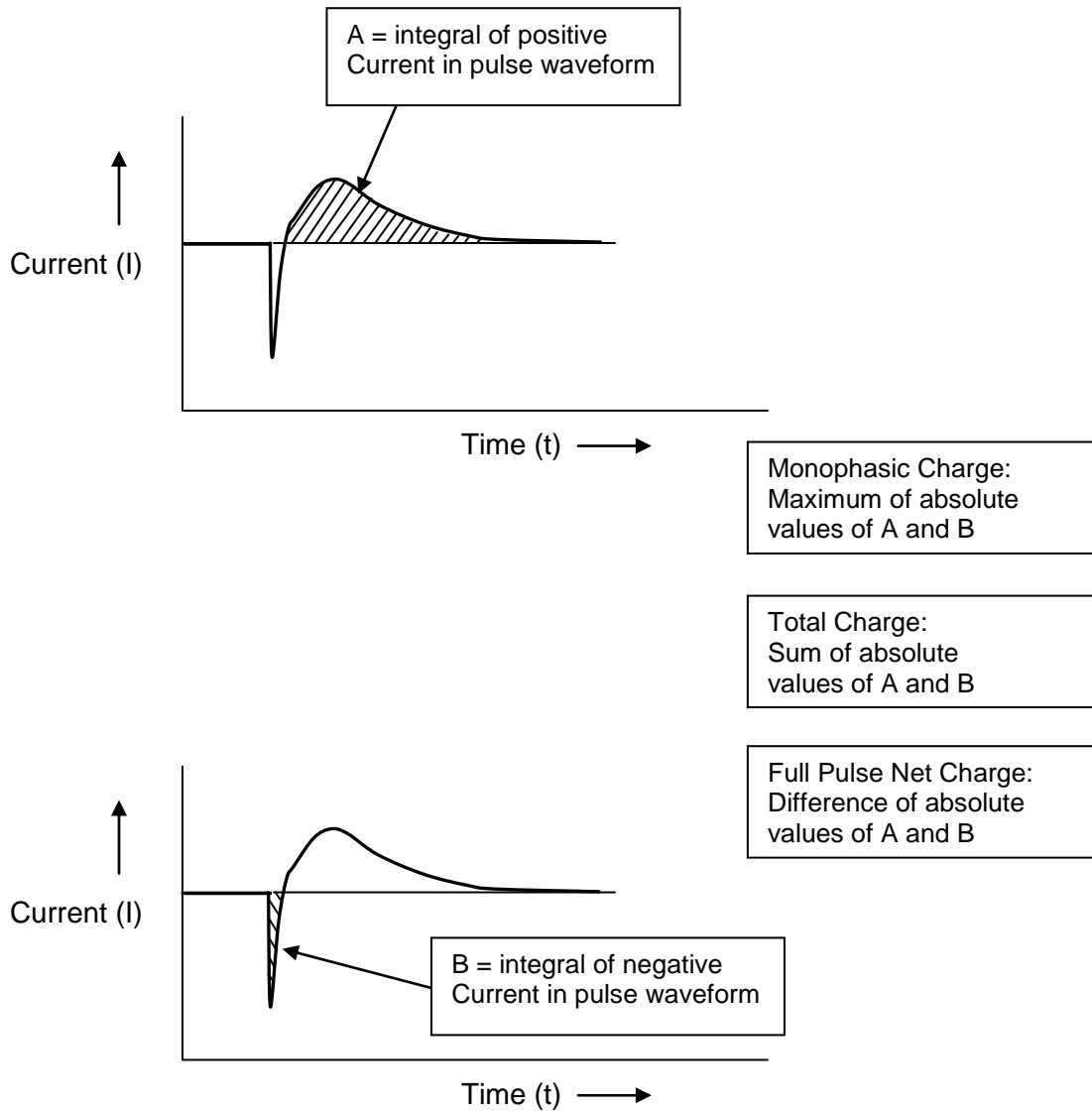


FIGURE D12: T7 MONOPHASIC CHARGE

D.10 Specifications

Pass-fail specifications for the TASER 7 are shown in Table D1 below.

TABLE D1: TASER 7 SPECIFICATIONS

Item	Value
Pulse repetition rate	44 ± 2 pulses per second
Full pulse charge	57 to 69 microCoulombs
Peak loaded voltage	1500 to 2600 volts
Pulse duration: full waveform	35 to 55 microseconds

These are drawn from specifications set out by Axon¹, with the exception of the pulse repetition rate, which is listed by Axon as 22 ± 1 pps.

The 22 ± 1 pps specification is associated with operation of the CEW in Test Mode, after the device has been set up with an Inert Resettable TASER 7 cartridge.

In the Advanced Cross-Connect mode used in this test procedure, a single channel operates at 44 pps, or twice the rate of the single channel operating in Test Mode.

¹ TASER™ 7 Series “Axon Certified Test Procedure for Testing to TASER 7 Specifications”, Version 2.0, 2019-04-10, Page 12

D.11 Test Details

These test details are required in order to determine whether the unit under test is operating within specifications. Additional test data such as maximum, minimum and average for each parameter from all pulses over all three firings should also be reported.

TABLE D3: TASER 7 SPECIFICATIONS – EXTRAPOLATED DETAILS

Parameter	Condition	Spec into 600 Ω Load ¹
Peak Voltage	Peak of main phase voltage (following arc phase), on a pulse averaged over the last eight pulses	1500 – 2600 V
Peak Current ²	Peak of main phase current (following arc phase), on a pulse averaged over the last eight pulses	2.5 – 4.3 A
Net Charge (Full Pulse Net Charge)	Area under <u>full pulse</u> current vs time curve, on a pulse averaged over the last eight pulses	57 – 69 μ C
Pulse Duration	Between initial point of waveform ³ and final point ⁴ on a pulse averaged over the last eight pulses	35 – 55 μ s
Pulse Repetition Rate	Average over last second of the pulse burst. ⁵	40 – 44 pps
Monophasic Charge ⁶ (see Note 6 on Page 10)	The maximum of the absolute values of A and B, where A = the integral of all positive current in a pulse and B = the integral of all negative current in a pulse.	< 180 μ C

¹ Load resistor is 600 ohms non-inductive high voltage pulse-tolerant

² Peak current is calculated from peak voltage, e.g. 2.5 A = 1500 V / 600 Ω

³ Initial Point is first sample point in the pulse where absolute voltage reaches 50 V with 600 Ω load

⁴ Final point is last sample point in the pulse where absolute voltage drops below 50 V with a 600 Ω load

⁵ Also known as a “cycle” in Axon nomenclature

⁶ Monophasic Charge is not part of Axon specifications

D.12 Sample Test Data

Test data to be measured or calculated during a typical test are as follows:

TABLE D4: TASER T7 CEW TEST OBSERVATION DETAILS

Parameter	Method of Measurement	Typical Values
Model Number	Device label	T7
Serial Number	Device label	X12004RY1
Battery Status	LED display in device	30% to 99%
CEW Temperature	LED display in device	23 C
Software Version	LED display in device	N/A
Battery Version	Label on the side of the DPM	X1
Load resistance, R+ to R-	Multimeter	610 Ω

TABLE D5: TASER T7 CEW OPERATING PARAMETERS, TYPICAL VALUES

Parameter	Method of Measurement	Typical Values
Peak Voltage	Maximum voltage out of all samples during main phase.	2052 V
Peak Current	Maximum current out of all samples during main phase.	3.52 A
Net Charge (Full Pulse Net Charge)	Current at each sample of the <u>full pulse</u> multiplied by the time between data samples and summed.	63.2 μC
Pulse Duration	Time between crossing of initial and final thresholds of the full pulse	48.4 μs
Pulse Repetition Rate	Number of pulses during the burst minus 1 divided by the burst length.	43.835 pps
Monophasic Charge	The maximum of the absolute values of A and B, where A = the integral of all positive current in a pulse and B = the integral of all negative current in a pulse.	74.2 μC

BC Provincial Policing Standards

Section 3.0 – Training Courses and Development

Effective: January 30, 2013

Revised: March 20, 2024

Sub Section 3.2 – Provincially-Approved Training Courses

Subject 3.2.1 – CEW Operator Training

Definitions

Conducted Energy Weapon or CEW – a weapon that when discharged uses a conducted electrical charge in order to incapacitate a person, or to generate compliance through pain.

Officer – a constable appointed under the *Police Act* or an enforcement officer appointed under s. 18.1 of the *Police Act*.

Provincially-Approved Training – training that has been acknowledged by the Director of Police Services as adequate to meet BC requirements pertaining to training on a specific topic or set of topics.

Standards

Certification

The Chief Constable, Chief Officer, or Commissioner must ensure that:

- (1) Any Officer authorized to carry and use a CEW has successfully completed:
 - (a) BC's CEW Operator online training course, or other provincially-approved online training for CEW operators; and
 - (b) practical training for the model they will be using.
- (2) Further to Standard (1), model-specific practical training conforms to Provincially-Approved Training outlines.
- (3) Officers are not permitted to revert to a previous CEW model once trained on a newer model, except in exceptional circumstances.

Prerequisites to certification

The Chief Constable, Chief Officer, or Commissioner must:

- (4) Ensure that any Officer authorized to begin training as a CEW operator:
 - (a) Has successfully completed BC's *Crisis Intervention and De-escalation (CID) Training* course, or other Provincially-Approved Training in crisis intervention and de-escalation within the previous three years; and
 - (b) Meets the selection criteria established by the police force for CEW operator training.

Recertification

The Chief Constable, Chief Officer, or Commissioner must:

- (5) Ensure that any Officer authorized to carry and use a CEW is recertified by reviewing the topics contained in BC's CEW Operator online training course, or other Provincially-Approved Training for CEW operators, and passing the final assessment or a provincially-approved equivalent of the final assessment:
 - (a) At least once each year; and
 - (b) Any time a police force determines, for any reason, that a CEW operator has not operated a CEW in accordance with any of the *BC Provincial Policing Standards*.
- (6) Ensure that any Officer seeking to be recertified to carry and use a CEW has, at minimum:
 - (a) Previously fulfilled Standard (1), above;
 - (b) Successfully completed BC's *Crisis Intervention and De-escalation (CID)* course, or other Provincially-Approved Training in crisis intervention and de-escalation within the previous three years; and
 - (c) Met the selection criteria established by the police force for CEW operator training.

Training delivery

The Chief Constable, Chief Officer, or Commissioner must:

- (7) Ensure that the CEW operator training is taught by an instructor who satisfies all the requirements in *BCPPS 3.2.3 Use-of-Force Instructor Training*.
- (8) Prohibit a trainer's or trainee's exposure to the electrical charge of a CEW.

British Columbia Provincial Policing Standards
Subject 3.2.1 – CEW Operator Training

Training records

The Chief Constable, Chief Officer, or Commissioner must:

- (9) Ensure that written records are maintained of the CEW operator certification, and recertification completed by each Officer in the police force.

Policies and procedures

The Chief Constable, Chief Officer, or Commissioner must:

- (10) Ensure policies and procedures are consistent with these *BC Provincial Policing Standards*.



BC CONDUCTED ENERGY WEAPON (CEW) OPERATOR PRACTICAL TRAINING OUTLINE – TASER X26P

(VERSION 1 – MARCH 2024)



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BC Conducted Energy Weapon Operator Training Outline – X26P, March 2024

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BC CEW PRACTICAL TRAINING OUTLINE – TASER X26P

PURPOSE OF THIS DOCUMENT

This document is the provincially-approved Practical Training Outline (PTO) for BC Conducted Energy Weapon (CEW) Operator Training on the TASER X26P. This outline is based on the BC Ministry of Public Safety and Solicitor General, Policing and Security Branch, CEW Operator Course Training Standard (CTS). Practical training for X26P certification in BC must conform to this outline.

TARGET AUDIENCE (X26P CERTIFICATION FOR NEW USERS)

This outline is for the practical training of officers selected to be certified to operate the X26P CEW model. This group will have no previous experience with CEWs, so they will require time to familiarize themselves with and practice the unique aspects of CEW operation in BC (i.e., threshold and circumstances of use, probe handling, preferred target zones, medical considerations, etc.).

CEW CERTIFICATION IN BC

BC Provincial Policing Standard (BCPPS) 3.2.1 – CEW Operator Training states that, in order to be certified to operate a CEW in BC, officers must complete:

- Provincially-approved online CEW training; and
- Practical training consistent with a Provincial Training Outline (PTO) specific to the model being trained on.

CEW RECERTIFICATION IN BC

CEW Operator recertification training is required yearly. CEW recertification training must include reviewing and completing the online CEW course. **[See BCPPS 3.2.1 (5) and (6)]**

PRACTICAL TRAINING SESSION GOAL

By the end of this practical training session, participants will be able to:

- Articulate the legal, technical, medical and accountability requirements for discharge of a CEW; and
- Safely and appropriately discharge a CEW in the work environment.

PREREQUISITES TO THIS TRAINING

BCPPS 3.2.1 (4) – CEW Operator Training requires that, in order for officers to be authorized to take the CEW Operator training, they must:

- Have completed the *BC Crisis Intervention and De-escalation (CID) Training*, or other provincially-approved training in crisis intervention and de-escalation within the previous three years; and
- Meet the selection criteria set out by their agency.

INSTRUCTOR QUALIFICATIONS

BCPPS 3.2.1 (7) requires that CEW operator training is taught by an instructor who satisfies all the requirements in **BCPPS 3.2.3 – Use-of-Force Instructor Training**.

CEW OPERATOR LESSON PLANS AND RECORD KEEPING

Any police agency in BC providing CEW training must ensure that their lesson plans conform with this PTO, or, alternatively, for the X26P, use the lesson plan included in the **Instructor Guide** for BC CEW Operator Classroom Training (2012).¹ To conform, lesson plans must cover the topics listed in Part 1 of this PTO, and include the same or similar learning outcomes found in Part 2. Given that this is a certification course for CEW operators, your agency-based training must also include a proficiency assessment component similar to that laid out in Appendix A.

The **BCPPS 3.2.1 (9)** requires that training records are maintained for each CEW Operator certification. While your agency determines its own training record-keeping processes, the following information should be retained for **each** participant.

For certification this includes:

- A record of successful completion (including date of completion) of the BC CID, or other provincially-approved CID training, within the previous three years;
- A record of successful completion (including date of completion) of the BC CEW Operator online course (or provincially-approved equivalent), within the last year;
- A record of the lesson plan that was followed for each practical certification;
- A list of all instructors present during the training;
- A completed copy of the BC CEW Practical Skills Performance Assessment (Appendix A) or your agency's equivalent assessment form, including:
 - Instructor evaluation of a participant's CEW Handling Skills; and
 - Instructor evaluation of a reality-based final assessment and verbal debrief.

¹ The **Instructor Guide** for BC CEW Operator Classroom Training (X26P-only) includes a slide presentation, participant guide and evaluation rubric for X26P training. Originally published in 2012, this resource is available by contacting Policing and Security Branch.

For annual recertification this includes:

- A record of successful completion of the BC CEW Operator online course (or equivalent);
- A record of CEW Operator proficiency (i.e., handling skills and scenario-based assessment) in agency-based use-of-force training;
- A record of successful completion of the BC CID, or other provincially-approved CID training, within the previous three years.

LENGTH OF TRAINING SESSION

The practical, face-to-face component of the BC CEW Operator course will take approximately 7 hours to complete based on a class size of under 15. Larger classes may require more time to complete the scenarios. A proposed training day agenda is found in Part 3 (pg. 9).

Preparation of Instructors

1. Familiarize yourself with this PTO and prepare a detailed lesson plan that conforms to this outline (i.e., covering the topics listed in Part 1, and including the same or similar learning outcomes found in Part 2).
2. Ensure that you allow ample time in your training session to focus on the unique learning needs for new CEW operators. For example, new CEW operators will require more time to:
 - Review how CEWs fit into the spectrum of use-of-force responses available to police in BC;
 - Practice and articulate the threshold of CEW use;
 - Learn skills pertaining to CEW safety, handling, and documentation;
 - Practice CID skills in conjunction with CEW use.
3. Familiarize yourself with all relevant BCPPS:
 - BCPPS 1.3.1 – CEW Threshold and Circumstances of Use
 - BCPPS 1.3.2 – Approved CEW Models
 - BCPPS 1.3.3 – Internal CEW Controls and Monitoring
 - BCPPS 1.3.4 – Medical Assistance to CEW Discharges
 - BCPPS 1.3.6 – CEW Testing and Maintenance
 - BCPPS 1.7.2 – Reporting and Investigation Following the Use of Force
 - BCPPS 1.9.1 – Use-of-Force Model and Techniques
 - BCPPS 3.2.1 – CEW Operator Training
4. Ensure pre-training qualifications are met for all participants and for you as the instructor. Ensure you and the participants have:
 - Successfully completed the BC CID course or a provincially-approved equivalent; within the last three years;

- Met the selection criteria established by your agency; and
 - Successfully completed the CEW online course in the previous year.
5. Familiarize yourself with the Crisis Intervention and De-escalation (CID) job aid from your CID training. Consider inviting the CID instructor from your agency to assist in evaluating the use of CID in the reality-based training scenario and verbal debrief.
6. Review and be prepared to discuss and apply your agency's policies on:
- AED availability;
 - CEW sign-in and sign-out process;
 - CEW equipment secure storage;
 - Operational downloads;
 - CEW probe removal;
 - Medical aftercare;
 - Use-of-force reporting; and
 - CEW documentation requirements.
7. Consider preparing a Participant Handout for each participant. This might include:
- CEW Operator Training Agenda;
 - Training Goal and Learning Objectives;
 - BC Provincial Policing Standards;
 - Practical Skills Performance Assessment;
 - Course Evaluation Questionnaire;
 - Copies of relevant agency policies (see section 6 above).
8. Prepare to document each participant's training record and assess their performance as required by **BCPPS 3.2.1 (9)** and your agency policy on training records keeping.
9. Pursuant to **BCPPS 3.2.1 (8)**, prohibit trainers and participants from being exposed to the electrical charge of a CEW during training.

PRACTICAL TRAINING OUTLINE – X26P

Part 1: Training Topics and Description

TOPIC 1: INTRODUCTION

This session is designed to introduce the training requirements. At the end of this session, participants will be able to:

- Explain requirements for CEW Operator Training.

TOPIC 2: APPLYING THE BCPPS AND AGENCY POLICY FOR CEWS

This session provides an opportunity for learners to review the BCPPS and their own agency policies on the topic. At the end of this session, participants will be able to:

- Explain the intent of the BC Provincial Policing Standards:
 - 1.3.1 CEW Threshold and Circumstances of Use
 - 1.3.3 Internal CEW Controls and Monitoring
 - 1.3.4 Medical Assistance to CEW Discharges
 - 1.3.6 CEW Testing and Maintenance
 - 1.7.2 Reporting and Investigation Following the Use of Force
- Explain your agency policy pertaining to CEW use:
 - AED availability;
 - CEW sign-in and sign-out process;
 - CEW equipment secure storage;
 - Operational downloads;
 - CEW probe removal;
 - Medical aftercare;
 - Use-of-force reporting; and
 - Documentation requirements.

Video Scenario (applicable only if using the 2012 BC CEW Instructor Guide). The video scenario is intended to encourage learners to apply the BCPPS in a more practical sense. The accompanying guided discussion also provides an opportunity to practice the effective articulation of use-of-force encounters.

TOPIC 3: CEW HANDLING SKILLS

This is a practical (hands-on) session that familiarizes learners with the CEW they will be operating and related CEW handling. Performance in the session is evaluated in the Practical Skills Performance Assessment form or your agency's equivalent. Upon successful completion of this lesson, participants will be able to:

- Explain CEW safety rules for training and operational use.

Note: As of 2024, the BC CEW online course does not cover the X26P parts and cartridge characteristics in detail. Instructors are required to build time into the practical training day to ensure learners meet the following learning objectives:

- Identify the parts of the CEW you will be using.
- Describe the cartridge types and their characteristics (including effective range).
- Use safe and appropriate handling of the CEW:
 - handling cartridges (loading and unloading)
 - drawing
 - holstering
 - aiming
 - spark testing
 - emergency reload

TOPIC 4: PROBE DEPLOYMENT

This is a practical (hands-on) session that familiarizes learners with the CEW operation in probe mode. Performance in the session is evaluated in the Practical Skills Performance Assessment form or your agency's equivalent. Upon successful completion of this lesson, participants will be able to:

- Operate a CEW safely and appropriately in probe mode.
- Explain the preferred target areas for CEW discharges.
- Use the appropriate response to a failed CEW discharge.
- Use the appropriate response to an ineffective CEW discharge (i.e., the initial five-second discharge was not effective in eliminating the risk of Bodily Harm).
- Explain the threshold for a second discharge against the same person (i.e., ineffective discharge as described in BCPPS 1.3.1 (3)).

Instructors must include specific direction in their lesson plans to ensure that the use of a second discharge on the same subject is always in compliance with the five-second rule set out in BCPPS 1.3.1 (3).

TOPIC 5: CONTACT MODE AND THREE-POINT CONTACT MODE

This is a practical (hands-on) session that familiarizes learners with the CEW operation in contact mode, and three-point contact mode. Performance in the session is evaluated in the Practical Skills Performance Assessment form or your agency's equivalent. At the end of this lesson, participants will be able to:

- Operate a CEW safely and appropriately in contact mode, and three-point contact mode.
- Explain the preferred target areas for CEW discharges.
- Contact mode, and three-point contact mode are used more frequently with the X26P so the use of this mode must be evaluated (along with probe mode) in the assessment portion of the course.

TOPIC 6: ASSESSMENT

This session provides an opportunity to learn by participating in a reality-based scenario. The session allows learners to demonstrate what they have learned and instructors to assess performance. Performance in the session is evaluated in the Practical Skills Performance Assessment form or your agency's equivalent.

At the end of this session, participants will be able to:

- Explain the preferred target areas for CEW discharges.
- Operate a CEW safely and appropriately in a reality-based training environment.
- Apply the relevant BC Provincial Policing Standards in a reality-based training environment.
- Use appropriate tactics as a CEW Operator in a reality-based training environment.
- Explain the rationale for the selected response to the reality-based scenario (using NUFF/IMIM).
- Use or explain appropriate CID techniques in a reality-based training environment.
- Explain how to complete a notebook entry after a CEW operational discharge.

FACE-TO-FACE EVALUATION STANDARD

The final assessment for this training is in two parts:

- Part A – Instructor evaluation of a participant's CEW Handling Skills.
- Part B – Instructor evaluation of a reality-based final assessment and verbal debrief.

Parts A and B are documented for each participant on a standardized Practical Skills Performance Assessment form or your agency's equivalent.

Learners will be assessed throughout the training session and given the opportunity for feedback and skill development. Learners will be evaluated as "pass" or "fail." Each learner's progress will be recorded in the Practical Skills Assessment Booklet.

If a participant receives even one 'unacceptable' rating, then they must re-do the activity, scenario or the verbal debrief, depending on where the rating occurred. If they do not pass the reality-based scenario or the verbal debrief on the second attempt, they must be re-scheduled for training.

If there are insurmountable issues identified with an officer's performance or they are unable to pass the verbal debrief, the instructor may have to remove the officer from the training, document thoroughly and schedule remedial training with this officer.

Part 2: Compiled List of Learning Outcomes

Upon successful completion of this course, participants will be able to:

- Explain the requirements for CEW Operator Training.
- Explain the intent of the **BC Provincial Policing Standards (BCPPS)** pertaining to CEW use.
- Explain your agency policy pertaining to CEW use.
- Explain CEW safety rules for training.
- Identify the parts of the CEW you will be using.
- Describe the cartridge types and their characteristics (including effective range).
- Use safe and appropriate handling of the CEW:
 - handling cartridges (loading and unloading)
 - drawing
 - holstering
 - aiming
 - spark testing
 - emergency reloads.
- Operate a CEW safely and appropriately in probe mode.
- Explain the preferred target areas for CEW discharges.
- Use the appropriate response to a failed CEW discharge.
- Use the appropriate response to an ineffective CEW discharge (i.e., the initial five-second discharge was not effective in eliminating the risk of Bodily Harm).
- Explain the threshold for a second discharge against the same person (i.e., ineffective discharge as described in BCPPS 1.3.1 (3)).
- Operate a CEW safely and appropriately in contact mode and three-point contact mode.
- Explain the preferred target areas for CEW discharges.
- Operate a CEW safely and appropriately in a reality-based training environment.
- Apply the relevant BCPPS in a reality-based training environment.
- Use appropriate tactics as a CEW Operator in a reality-based training environment.
- Explain the rationale for the selected response to the reality-based training scenario (using NUFF/IMIM).
- Use or explain appropriate CID techniques in a reality-based training environment.
- Explain how to complete a notebook entry after a CEW operational discharge.

Part 3: Suggested Agenda

LESSON	TOPIC	LENGTH OF TIME*
1	Introduction	10 minutes
2	Explain and apply the relevant BC Provincial Policing Standards and your agency policy (Optional video scenario)	60 minutes
3	CEW Nomenclature and Handling Skills	60 minutes
4	Operate a CEW in Probe Mode	60 minutes
	Lunch	60 minutes
5	Operate a CEW in Contact and Three-Point Contact Mode	45 minutes
6	Final Assessment of: A. Participant's CEW Handling Skills; and B. A reality-based final assessment and verbal debrief.	165 minutes (2 hours 45 mins)
7	Wrap-up and Review	20 minutes
	Total Time	8 hours

* Lesson timing will vary depending on class size, number of instructors and level of experience.

APPENDIX A: CEW PRACTICAL SKILLS PERFORMANCE ASSESSMENT FORM

CEW PRACTICAL SKILLS PERFORMANCE ASSESSMENT FORM - X26P ONLY

Participant:	Date:		
Instructor:	Date:		
PARTICIPANT MEETS THE REQUIREMENTS TO BE A CEW OPERATOR IN BC [To be completed at the conclusion of the session]	<table border="1"> <tr> <td>YES</td> <td>NO</td> </tr> </table>	YES	NO
YES	NO		

Note to Instructor: If there are insurmountable issues identified with an officer's performance or they are unable to pass the verbal debrief, you may have to remove the officer from the training, document thoroughly and schedule remedial training with this officer. If a participant receives even one 'unacceptable' rating, then they must re-do the scenario or the verbal debrief, depending on where the rating occurred. If they do not pass the scenario or the verbal debrief on the second attempt, they must be re-scheduled for training.

Provide additional comments on the back of this form if a participant is rated as 'unacceptable' in any area.

PART A: Assessing CEW Handling Skills

Note to Instructor: These skills are assessed during the training after a number of repetitions of the drills.

Assessment Criteria	ACCEPTABLE	UNACCEPTABLE
Handling Cartridges - Loading and Unloading		
Drawing the CEW		
Holstering the CEW		
Aiming the CEW – with Sights		
Aiming the CEW – with Laser		
Performing Spark Test		
Emergency Reload		
Probe Mode Discharge		
Probe Mode – Failed Discharge		
Probe Mode – Failed Discharge and Transition		
Contact Mode Discharge		
Three-Point Contact Mode Discharge		
The participant handles the CEW safely and appropriately.	YES	NO

PART B: Assessing the Reality Based Training Scenario

Note: If the learner is making mistakes in this scenario, allow the scenario to run until completion (unless safety is jeopardized or if the scenario is dragging on).

Conduct safety check prior to each scenario.

READ TO EACH PARTICIPANT		
<p>You will be responding to a suspicious person call at a residence. Dispatch has advised that the suspicious person is believed to be an ex-employee of the complainant – named John Smith. You arrive on the scene by yourself, and you are to do whatever you would do in real life until an instructor says, “STOP”.</p>		
<p>There will be a verbal debrief at the end. The debrief questions will include:</p> <ol style="list-style-type: none"> 1. What did you see? 2. What did you do? 3. Why did you do it? 4. Did you attempt a verbal warning? <ul style="list-style-type: none"> ○ If not, why not? 		<ol style="list-style-type: none"> 5. Did you use CID techniques? <ul style="list-style-type: none"> ○ If not, why not? ○ If not, what CID techniques could you have used given the opportunity? ○ If yes, describe the CID techniques you used. 6. If you have not already done so, who would you alert about the CEW operational discharge? 7. What should you do to ensure the subject’s well-being after they are the subject to a CEW discharge.
<p>You will be assessed based on the criteria set out in the Practical Skill Performance Assessment. If required, you may use the CEW Operational Guidelines job aid to help you answer the questions during the verbal debrief.</p>		
CATEGORY/OBJECTIVE	ACCEPTABLE	UNACCEPTABLE
<p>Tactics & Officer Safety</p> <p>The participant is able to use safe and appropriate tactics as a CEW Operator.</p>	<p><i>Demonstrates an awareness of the environment and applies appropriate tactics.</i></p> <ul style="list-style-type: none"> <input type="checkbox"/> Appropriately prepares CEW for duty. <input type="checkbox"/> Applies appropriate tactical considerations in response to the applicable threat cue(s) in a timely manner: <input type="checkbox"/> Maintains control of the situation. <input type="checkbox"/> Controls the subject. <input type="checkbox"/> Calls for backup. <input type="checkbox"/> Interaction is respectful. 	<p><i>Makes errors that could potentially place the public and/or police officer at risk.</i></p> <ul style="list-style-type: none"> <input type="checkbox"/> Experiences difficulty or fails to prepare CEW for duty. <input type="checkbox"/> Responds inappropriately and/or too slowly to applicable threat cue(s). <input type="checkbox"/> Takes action slowly or fails to take action. <input type="checkbox"/> Experiences difficulty or fails to control the situation. <input type="checkbox"/> Fails to use basic officer safety tactics. <input type="checkbox"/> Fails to control the subject. <input type="checkbox"/> Interaction is disrespectful.

CATEGORY/OBJECTIVE	ACCEPTABLE	UNACCEPTABLE
<p>Skills & CEW Handling Procedures</p> <p>The participant is able to use safe and appropriate CEW handling procedures.</p>	<p>Performs effectively, creating the desirable outcome.</p> <ul style="list-style-type: none"> <input type="checkbox"/> Techniques and CEW handling procedures performed effectively. <input type="checkbox"/> Manipulates intervention options safely. 	<p>Experiences difficulties that could potentially put public and/or police at risk.</p> <ul style="list-style-type: none"> <input type="checkbox"/> Techniques and CEW handling procedures are incorrect and/or performed with difficulty: Specify area of difficulty, i.e., draw, arm, aim, fire, emergency re-load (if applicable), response to failure (if applicable), etc. <input type="checkbox"/> Acts in an unsafe manner.
<p>Articulation</p> <p>The participant is able to accurately recount the scenario.</p>	<p>Accurately describes the intervention in accordance with NUFF/IMIM and links it to risk assessment.</p> <ul style="list-style-type: none"> <input type="checkbox"/> Accurate recounting of the incident. <input type="checkbox"/> Explains the selected intervention option(s) based on their risk assessment: <ul style="list-style-type: none"> i. Subject behaviour; ii. Officer perceptions; iii. Tactical considerations; iv. Situational factors. 	<p>Is unable to accurately describe the intervention in accordance with NUFF/IMIM.</p> <ul style="list-style-type: none"> <input type="checkbox"/> Is unable to recount the incident accurately. <input type="checkbox"/> Is unable to relate the selected intervention option(s) to their risk assessment.
<p>BCPPS</p> <p>The participant is able to apply the BC Provincial Policing Standards.</p>	<p>Can apply the BCPPS to the scenario with the assistance of the CEW Operational job aid.</p> <ul style="list-style-type: none"> <input type="checkbox"/> Explains the threshold of CEW use - BCPPS 1.3.1 (1). <input type="checkbox"/> Uses a verbal warning or can explain why a verbal warning was not used (i.e., may place self or others at further risk). BCPPS 1.3.1 (4)(a). <input type="checkbox"/> Uses CID techniques or can explain why they would not have been effective. BCPPS 1.3.1 (2)(a). If no CID techniques were used, can give an example of what they may have used under different circumstances. <ul style="list-style-type: none"> i. Recognize impact of officer presence; ii. Use effective behavioural cues; iii. Use effective physical cues. <input type="checkbox"/> Alerts AED operator or can explain that this would have been done when asked. BCPPS 1.3.4 (4). <input type="checkbox"/> Monitors subject for medical distress or can explain that this is what should be done. 	<p>Is unable to apply the applicable standards even with the assistance of the CEW Operational job aid.</p> <ul style="list-style-type: none"> <input type="checkbox"/> Is unable to explain the threshold for CEW use even with the use of the CEW job aid. <input type="checkbox"/> Fails to use verbal warning AND is unable to explain why. <input type="checkbox"/> Fails to use CID techniques AND has no viable explanation. <input type="checkbox"/> Is unable to provide any examples of CID techniques. <input type="checkbox"/> Fails to alert AED operator even after asked who should be advised. <input type="checkbox"/> Fails to explain that they should monitor the subject for medical distress even after being asked what should be done after an operational discharge.

COMPLETE FINAL GRADING SECTION ON PAGE 1.

BC CEW OPERATOR PRACTICAL TRAINING EVALUATION – X26P

Name: (optional)	
Date	
Instructors	

Your feedback is important. Please tick the box that best represents your opinion for each statement below. Feel free to expand on your responses in the comments section and on the back of this page.

	Excellent 5	Good 4	Average 3	Fair 2	Poor 1	N/A
Overall, I would assess this training as:						
Overall, I would rate the effectiveness of the presenter as:						
	Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree	N/A
The purpose and objectives of the training were clear.						
The training complemented the online CEW operator course.						
The training increased my knowledge of the BC Provincial Policing Standards for CEW use.						
The training increased my knowledge of agency policy on CEW use.						
This training increased my confidence in the practical operation of a CEW						
The training leaves me feeling confident that I can use a CEW safely and effectively in the field.						

This course could be improved by:

The most useful part of this course was:



BC CONDUCTED ENERGY WEAPON (CEW) OPERATOR PRACTICAL TRAINING OUTLINE – TASER 7

(VERSION 1 – MARCH 2024)



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BC Conducted Energy Weapon Operator Training Outline – T7, March 2024

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BC CEW PRACTICAL TRAINING OUTLINE – TASER 7 (T7)

PURPOSE OF THIS DOCUMENT

This document is the provincially-approved Practical Training Outline (PTO) for BC Conducted Energy Weapon (CEW) Operator Training on the TASER 7 (T7). This outline is based on the BC Ministry of Public Safety and Solicitor General, Policing and Security Branch, CEW Operator Course Training Standard (CTS). Practical training for T7 certification in BC must conform to this outline.

TARGET AUDIENCE (T7 CERTIFICATION FOR NEW USERS)

This outline is for the practical training of officers selected to be certified to operate the T7 CEW model. This group will have no previous experience with CEWs, so they will require time to familiarize themselves with and practice the unique aspects of CEW operation in BC (i.e., threshold and circumstances of use, probe handling, preferred target zones, medical considerations, etc.).

CEW CERTIFICATION IN BC

BC Provincial Policing Standard (BCPPS) 3.2.1 – CEW Operator Training states that, in order to be certified to operate a CEW in BC, officers must complete:

- Provincially-approved online CEW training; and
- Practical training consistent with a Provincial Training Outline (PTO), specific to the model being trained on.
- Officers are not permitted to revert to a previous CEW model once trained on a newer model, except in exceptional circumstances.

CEW RECERTIFICATION IN BC

CEW Operator recertification training is required yearly. CEW recertification training must include reviewing and completing the online CEW course. **[See BCPPS 3.2.1 (5) and (6)]**

PRACTICAL TRAINING SESSION GOAL

By the end of this practical training session, participants will be able to:

- Articulate the legal, technical, medical and accountability requirements for discharge of a CEW; and
- Safely and appropriately discharge a CEW in the work environment.

PREREQUISITES TO THIS TRAINING

BCPPS 3.2.1 (4) – CEW Operator Training requires that in order for officers to be authorized to take the CEW Operator training they must:

- Have completed the *BC Crisis Intervention and De-escalation (CID) Training*, or other provincially-approved training in crisis intervention and de-escalation within the previous three years; and
- Meet the selection criteria set out by their agency.

INSTRUCTOR QUALIFICATIONS

BCPPS 3.2.1 (7) requires that CEW operator training is taught by an instructor who satisfies all the requirements in ***BCPPS 3.2.3 – Use-of-Force Instructor Training***.

CEW OPERATOR TRAINING LESSON PLANS AND RECORD KEEPING

Any police agency in BC providing practical training for T7 CEW operator certification, must ensure that their lesson plans conform to this PTO. To conform, lesson plans must cover the topics listed in Part 1 of this PTO, and include the same or similar learning outcomes found in Part 2 (i.e., action verbs must be at the same level of learning). Given that this is a certification course for CEW operators, your agency-based training must also include a proficiency assessment component similar to that laid out in Appendix A.

The **BCPPS 3.2.1 (9)** requires that training records are maintained for each CEW Operator certification. While your agency determines its own training record keeping processes, the following information should be retained for **each** participant.

For certification this includes:

- A record of successful completion (including date of completion) of the BC CID, or other provincially-approved CID training, within the previous three years;
- A record of successful completion (including date of completion) of the BC CEW Operator online course (or provincially- approved equivalent), within the last year;
- A record of the lesson plan that was followed for each practical certification;
- A list of all instructors present during the training;
- A completed copy of the BC CEW Practical Skills Performance Assessment (Appendix A) or your agency's equivalent assessment form, including:
 - Instructor evaluation of a participant's CEW Handling Skills; and
 - Instructor evaluation of a reality-based final assessment and verbal debrief.

For annual recertification this includes:

- A record of successful completion of the BC CEW Operator online course (or equivalent);
- A record of CEW operator proficiency (i.e., handling skills and scenario-based assessment) in agency-based use-of-force training;
- A record of successful completion of the BC CID, or other provincially-approved CID training, within the previous three years.

LENGTH OF TRAINING SESSION

The practical, face-to-face component of the BC CEW Operator course will take approximately 7 hours to complete based on a class size of under 15. Larger classes may require more time to complete the scenarios. A proposed training day agenda is found in Part 3 (pg. 10).

Preparation of Instructors

1. Familiarize yourself with this PTO and prepare a detailed lesson plan that conforms to this outline (i.e., covering the topics listed in Part 1, and including the same or similar learning outcomes found in Part 2).
2. Ensure that you allow ample time in your training session to focus on the unique learning needs for new CEW operators. For example, new CEW operators will require more time to:
 - Review how CEWs fit into the spectrum of use of force responses available to police in BC;
 - Practice and articulate the threshold of CEW use;
 - Learn skills pertaining to CEW safety, handling and documentation;
 - Practice CID skills in conjunction with CEW use.
3. Familiarize yourself with all relevant BCPPS:
 - BCPPS 1.3.1 – CEW Threshold and Circumstances of Use
 - BCPPS 1.3.2 – Approved CEW Models
 - BCPPS 1.3.3 – Internal CEW Controls and Monitoring
 - BCPPS 1.3.4 – Medical Assistance to CEW Discharges
 - BCPPS 1.3.6 – CEW Testing and Maintenance
 - BCPPS 1.7.2 – Reporting and Investigation Following the Use of Force
 - BCPPS 1.9.1 – Use-of-Force Model and Techniques
 - BCPPS 3.2.1 – CEW Operator Training
4. Ensure pre-training qualifications are met for all participants and for you as the instructor. Ensure you and the participants have:
 - Successfully completed of the BC CID course or a provincially-approved equivalent, within

-
- the last three years;
- Meet the selection criteria established by your agency; and
 - Successfully completed the CEW online course.
5. Familiarize yourself with the Crisis Intervention and De-escalation (CID) job aid from your CID training. Consider inviting the CID instructor from your agency to assist in evaluating the use of CID in the reality-based training scenario and verbal debrief.
6. Be prepared to discuss and apply your agency's policies on CEWs:
- AED availability;
 - CEW sign in and sign out process;
 - CEW equipment secure storage;
 - Operational downloads;
 - Use of arc display and CID;
 - CEW Probe Removal;
 - Medical aftercare;
 - Use-of-force reporting; and
 - CEW Documentation requirements.
7. Consider preparing a Participant Handout for each participant. This might include:
- CEW Operator Training Agenda;
 - Training Goal and Learning Objectives;
 - BC Provincial Policing Standards;
 - Practical Skills Performance Assessment;
 - Course Evaluation Questionnaire;
 - Copies of relevant agency policies (see section 6 above).
8. Prepare to document each participant's training record and assess their performance as required by **BCPPS 3.2.1 (9)** and your agency policy on training records keeping.
9. Pursuant to **BCPPS 3.2.1 (8)** prohibit trainers and participants from being exposed to the electrical charge of a CEW during training.

PRACTICAL TRAINING OUTLINE - T7

Part 1: Training Topics and Description

TOPIC 1: INTRODUCTION

This session is designed to introduce the training requirements. At the end of this session, participants will be able to:

- Explain requirements for CEW Operator certification and recertification in BC (see BCPPS 3.2.1 CEW Operator Training).

TOPIC 2: APPLYING THE BCPPS AND AGENCY POLICY FOR CEWS

This session provides an opportunity for learners to review the BCPPS and their own agency policies on the topic. At the end of this session, participants will be able to:

- Explain the intent of the BCPPS:
 - 1.3.1 CEW Threshold and Circumstances of Use
 - 1.3.3 Internal CEW Controls and Monitoring
 - 1.3.4 Medical Assistance to CEW Discharges
 - 1.3.6 CEW Testing and Maintenance
 - 1.7.2 Reporting and Investigation Following the Use of Force
- Explain your agency policy pertaining to CEW use:
 - AED availability;
 - CEW sign-in and sign-out process;
 - CEW equipment secure storage;
 - Operational downloads;
 - Use of arc display and CID;
 - CEW probe removal;
 - Medical aftercare;
 - Use of force reporting; and
 - Documentation requirements.

TOPIC 3: CEW HANDLING SKILLS

This is a practical (hands-on) session that familiarizes learners with the CEW they will be operating and related CEW handling. Performance in the session is evaluated in the Practical Skills Performance Assessment form or your agency's equivalent. Upon successful completion of this lesson, participants will be able to:

- Explain CEW safety rules for training and operational use.

Note: As of 2024, the BC CEW online course does not cover CEW parts and cartridge characteristics in detail. Instructors are required to build time into the practical training day to ensure learners meet the following learning objectives:

- Identify the parts of the CEW you will be using.
- Describe the cartridge types and their characteristics (including effective range).
- Use safe and appropriate handling of the CEW:
 - handling cartridges (loading and unloading)
 - drawing
 - holstering aiming
 - tilt select (if applicable in your agency)
 - reload to suit operational environment
 - emergency reload
 - arc display
- Explain that the arc display is not to be considered a CID technique.

Note: The arc display is a reportable force option available on the T7 and it can be used to warn subjects for the purpose of generating compliance.

Instructors must also include specific direction in their lesson plans to ensure that:

- The T7 arc display is not considered a crisis intervention and de-escalation (CID) technique;
- Using the arc display does not fulfill the requirements to use CID techniques as set out in BCPPS 1.3.1(2)(a); and
- The arc display does not replace a verbal warning as set out in BCPPS 1.3.1 (4)(a).

TOPIC 4: PROBE DEPLOYMENT

This is a practical (hands-on) session that familiarizes learners with the CEW operation in probe mode. Performance in the session is evaluated in the Practical Skills Performance Assessment form or your agency's equivalent. Upon successful completion of this lesson, participants will be able to:

- Operate a CEW safely and appropriately in probe mode.
- Explain the preferred target areas for CEW discharges.
- Explain the adaptive cross connect feature.
- Use the appropriate response to a failed CEW discharge.
- Use the appropriate response to an ineffective CEW discharge (i.e., the initial five-second discharge was not effective in eliminating the risk of Bodily Harm).
- Explain the threshold for a second discharge against the same person (i.e., ineffective discharge as described in BCPPS 1.3.1 (3)).
- Use the tilt select feature (if applicable in your agency).
- Explain the procedure for a second discharge against a different person.

Note: The T7 is the first dual-cartridge platform CEW approved in BC. The ability to discharge more than one cartridge with a simple trigger pull is a new feature that is advertised to have officer safety

benefits, particularly in encounters where the first set of probes fails to result in NMI. However, this feature must be used with caution as it puts subjects at increased risk from additional probe injury and elevated pain levels when adaptive cross-connect engages¹. T7 users must also consider the implications of deploying the second cartridge on a second subject when the first subject is still attached to the probe wires of the first cartridge. Unless the contact(s) made by the first set of probes are clearly disengaged, a second trigger pull may re-expose the first subject to an unauthorized second discharge and / or accidentally expose the officers who are attempting to control the first subject.

Instructors must include specific direction in their lesson plans to ensure that the use of a second discharge (or second cartridge) on the same or a different person is always in compliance with the five-second rule set out in BCPPS 1.3.1 (3).

TOPIC 5: CONTACT MODE AND THREE-POINT CONTACT MODE

This session familiarizes learners with the dual-cartridge platform CEW operation in contact mode (a.k.a., drive stun) and three-point contact mode and provide an opportunity for practice. While these modes may be used less frequently with the dual-cartridge platform CEW, it can be appropriate and effective in close-quarter circumstances.

At the end of this lesson, participants will be able to:

- Explain how to use a dual-cartridge platform CEW safely and appropriately in contact mode and in three-point contact mode.
- Explain the preferred target areas for CEW discharges.
- Practice the skills required to use a dual-cartridge platform CEW safely in contact mode, and three-point contact mode.

Note: Contact and three-point contact mode skills do not need to be evaluated in the reality-based final assessment portion of the course, but lesson plans must provide an opportunity for practice. This can take the form of practice in the classroom or gym with CEWs that have their battery removed, or inert blue training CEWs using role players or dummies. Agencies that have access to training aids, such as grappling dummies, the Axon Green Alien, etc., can conduct training with fully charged CEWs and cartridges to further instill the techniques in their officers without the risk of exposure from the live CEW circuit.

¹ Scientific Advisory Committee on the Medical Implications of Less-Lethal Weapons (SACMILL), (2020). Statement on the Medical Implications of the TASER 7TM Conducted Energy Device System.

TOPIC 6: ASSESSMENT

This session provides an opportunity to learn by participating in a reality-based scenario. The session allows learners to demonstrate what they have learned and instructors to assess performance. Performance in the session is evaluated in the Practical Skills Performance Assessment form or your agency's equivalent.

At the end of this session, participants will be able to:

- Explain the preferred target areas for CEW discharges.
- Operate a CEW safely and appropriately in a reality-based training environment.
- Apply the relevant BC Provincial Policing Standards in a reality-based training environment.
- Use appropriate tactics as a CEW Operator in a reality-based training environment.
- Explain the rationale for the selected response to the reality-based scenario (using NUFF/IMIM).
- Use or explain appropriate CID techniques in a reality-based training environment.
- Explain how to complete a notebook entry after a CEW operational discharge.

FACE-TO-FACE EVALUATION STANDARD

The final assessment for this training is in two parts:

- Part A – Instructor evaluation of a participant's CEW Handling Skills.
- Part B – Instructor evaluation of a reality-based final assessment and verbal debrief.

Parts A and B are documented for each participant on a standardized Practical Skills Performance Assessment form or your agency's equivalent.

Learners will be assessed throughout the training session and given the opportunity for feedback and skill development. Learners will be evaluated as "pass" or "fail". Each learner's progress will be recorded in the Practical Skills Assessment Booklet.

If a participant receives even one 'unacceptable' rating, then they must re-do the activity, scenario or the verbal debrief, depending on where the rating occurred. If they do not pass the reality-based scenario or the verbal debrief on the second attempt, they must be re-scheduled for training.

If there are insurmountable issues identified with an officer's performance or they are unable to pass the verbal debrief, the instructor may have to remove the officer from the training, document thoroughly and schedule remedial training with this officer.

Part 2: Compiled List of Learning Outcomes

Upon successful completion of this course, participants will be able to:

- Explain the requirements for CEW Operator certification and recertification in BC.
- Explain the intent of the BC Provincial Policing Standards (BCPPS) pertaining to CEW use.
- Explain your agency policy pertaining to CEW use.
- Explain CEW safety rules for training and operational use.
- Identify the parts of the CEW you will be using.
- Describe the cartridge types and their characteristics (including effective range).
- Use safe and appropriate handling of the CEW:
 - handling cartridges (loading and unloading) drawing
 - holstering aiming
 - tilt select (if applicable in your agency)
 - reload to suit operational environment
 - emergency reload
 - arc display.
- Explain that the arc display is not to be considered a CID technique.
- Operate a CEW safely and appropriately in probe mode.
- Explain the preferred target areas for CEW discharges.
- Explain the adaptive cross connect feature.
- Use the appropriate response to a failed CEW discharge.
- Explain the threshold for a second discharge against the same person (i.e., ineffective discharge as described in BCPPS 1.3.1 (3)).
- Use the appropriate response to an ineffective CEW discharge (i.e., the initial five-second discharge was not effective in eliminating the risk of Bodily Harm).
- Use the tilt select feature (if applicable in your agency).
- Explain the procedure for a second discharge against a different person.
- Explain how to use a dual-cartridge platform CEW safely and appropriately in contact mode, and three-point contact mode.
- Practice using a dual-cartridge platform CEW safely and appropriately in contact mode, and three-point contact mode.
- Operate a CEW safely and appropriately in a reality-based training environment.
- Apply the relevant BCPPS in a reality-based training environment.
- Use appropriate tactics as a CEW Operator in a reality-based training environment.
- Explain the rationale for the selected response to the reality-based training scenario (using NUFF/IMIM).
- Use or explain appropriate CID techniques in a reality-based training environment.
- Explain how to complete a notebook entry after a CEW operational discharge.

Part 3: Suggested Agenda

LESSON	TOPIC	LENGTH OF TIME*
1	Introduction	10 minutes
2	Explain and apply the relevant BC Provincial Policing Standards and your agency policy	60 minutes
3	CEW Nomenclature and Handling Skills	60 minutes
4	Operate a CEW in Probe Mode	60 minutes
	Lunch	60 minutes
5	Explore Contact and Three-Point Contact Mode	45 minutes
6	Final Assessment of: A. Participant's CEW Handling Skills; and B. A reality-based final assessment and verbal debrief.	165 minutes (2 hours 45 mins)
7	Wrap-up and Review	20 minutes
	Total Time	8 hours

* Lesson timing will vary depending on class size, number of instructors and level of experience.

APPENDIX A: CEW PRACTICAL SKILLS PERFORMANCE ASSESSMENT FORM

CEW PRACTICAL SKILLS PERFORMANCE ASSESSMENT FORM – T7

Participant:	Date:	
Instructor:	Date:	
PARTICIPANT MEETS THE REQUIREMENTS TO BE A CEW OPERATOR IN BC <i>[To be completed at the conclusion of the session]</i>	YES	NO

Note to Instructor: If there are insurmountable issues identified with an officer’s performance or they are unable to pass the verbal debrief, you may have to remove the officer from the training, document thoroughly and schedule remedial training with this officer. If a participant receives even one ‘unacceptable’ rating, then they must re-do the scenario or the verbal debrief, depending on where the rating occurred. If they do not pass the scenario or the verbal debrief on the second attempt, they must be re-scheduled for training. **Provide additional comments on the back of this form if a participant is rated as ‘unacceptable’ in any area.**

PART A: Assessing CEW Handling Skills

Note to Instructor: These skills are assessed during the training after a number of repetitions of the drills.

Assessment Criteria	ACCEPTABLE	UNACCEPTABLE
Handling Cartridges – Loading and Unloading		
Drawing the CEW		
Holstering the CEW		
Aiming the CEW – with Sights		
Aiming the CEW – with Laser		
Performing Function Test		
Emergency Reload		
Probe Mode Discharge		
Probe Mode – Failed Discharge		
Probe Mode – Failed Discharge and Transition		
Probe Mode – Ineffective Discharge (second trigger pull)		
The participant handles the CEW safely and appropriately.	YES	NO

PART B: Assessing the Reality Based Training Scenario

Note: If the learner is making mistakes in this scenario, allow the scenario to run until completion (unless safety is jeopardized or if the scenario is dragging on).

Conduct safety check prior to each scenario.

READ TO EACH PARTICIPANT

You will be responding to a suspicious person call at a residence. Dispatch has advised that the suspicious person is believed to be an ex-employee of the complainant – named John Smith. You arrive on the scene by yourself and you are to do whatever you would do in real life until an instructor says, “STOP”.

There will be a verbal debrief at the end. The debrief questions will include:

1. What did you see?
2. What did you do?
3. Why did you do it?
4. Did you attempt a verbal warning?
 - If not, why not?

5. Did you use CID techniques?
 - If not, why not?
 - If not, what CID techniques could you have used given the opportunity?
 - If yes, describe the CID techniques you used.
6. If you have not already done so, who would you alert about the CEW operational discharge?
7. What should you do to ensure the subject’s well-being after they are the subject to a CEW discharge.

You will be assessed based on the criteria set out in the Practical Skill Performance Assessment. If required, you may use the CEW Operational Guidelines job aid to help you answer the questions during the verbal debrief.

CATEGORY/OBJECTIVE	ACCEPTABLE	UNACCEPTABLE
Tactics & Officer Safety The participant is able to use safe and appropriate tactics as a CEW Operator.	<i>Demonstrates an awareness of the environment and applies appropriate tactics.</i> <ul style="list-style-type: none"> <input type="checkbox"/> Appropriately prepares CEW for duty. <input type="checkbox"/> Applies appropriate tactical considerations in response to the applicable threat cue(s) in a timely manner: <input type="checkbox"/> Maintains control of the situation. <input type="checkbox"/> Controls the subject. <input type="checkbox"/> Calls for backup. <input type="checkbox"/> Interaction is respectful. 	<i>Makes errors that could potentially place the public and/or police officer at risk.</i> <ul style="list-style-type: none"> <input type="checkbox"/> Experiences difficulty or fails to prepare CEW for duty. <input type="checkbox"/> Responds inappropriately and/or too slowly to applicable threat cue(s). <input type="checkbox"/> Takes action slowly or fails to take action. <input type="checkbox"/> Experiences difficulty or fails to control the situation. <input type="checkbox"/> Fails to use basic officer safety tactics. <input type="checkbox"/> Fails to control the subject. <input type="checkbox"/> Interaction is disrespectful.

CATEGORY/OBJECTIVE	ACCEPTABLE	UNACCEPTABLE
Skills & CEW Handling Procedures The participant is able to use safe and appropriate CEW handling procedures.	<i>Performs effectively, creating the desirable outcome.</i> <input type="checkbox"/> Techniques and CEW handling procedures performed effectively. <input type="checkbox"/> Manipulates intervention options safely.	<i>Experiences difficulties that could potentially put public and/or police at risk.</i> <input type="checkbox"/> Techniques and CEW handling procedures are incorrect and/or performed with difficulty: Specify area of difficulty i.e., draw, arm, aim, fire, emergency re-load (if applicable), response to failure (if applicable), etc. <input type="checkbox"/> Acts in an unsafe manner.
Articulation The participant is able to accurately recount the scenario.	<i>Accurately describes the intervention in accordance with NUFF/IMIM and links it to risk assessment.</i> <input type="checkbox"/> Accurate recounting of the incident. <input type="checkbox"/> Explains the selected intervention option(s) based on their risk assessment: <ol style="list-style-type: none"> i. Subject behaviour; ii. Officer perceptions; iii. Tactical considerations; iv. Situational factors. 	<i>Is unable to accurately describe the intervention in accordance with NUFF/IMIM.</i> <input type="checkbox"/> Is unable to recount the incident accurately. <input type="checkbox"/> Is unable to relate the selected intervention option(s) to their risk assessment.
BC Provincial Policing Standards The participant is able to apply the BC Provincial Policing Standards.	<i>Can apply the BCPPS to the scenario with the assistance of the CEW Operational job aid.</i> <input type="checkbox"/> Explains the threshold of CEW use - BCPPS 1.3.1 (1) . <input type="checkbox"/> Uses a verbal warning or can explain why a verbal warning was not used (i.e., may place self or others at further risk). BCPPS 1.3.1 (4) (a) . <input type="checkbox"/> Uses CID techniques or can explain why they would not have been effective. BCPPS 1.3.1 (2)(a) . If no CID techniques were used can give an example of what they may have used under different circumstances. <ol style="list-style-type: none"> i. Recognize impact of officer presence; ii. Use effective behavioural cues; iii. Use effective physical cues. <input type="checkbox"/> Alerts AED operator or can explain that this would have been done when asked. BCPPS 1.3.4 (4) . <input type="checkbox"/> Monitors subject for medical distress or can explain that this is what should be done.	<i>Is unable to apply the applicable standards even with the assistance of the CEW Operational job aid.</i> <input type="checkbox"/> Is unable to explain the threshold for CEW use even with the use of the CEW job aid. <input type="checkbox"/> Fails to use verbal warning AND is unable to explain why. <input type="checkbox"/> Fails to use CID techniques AND has no viable explanation. <input type="checkbox"/> Is unable to provide any examples of CID techniques. <input type="checkbox"/> Fails to alert AED operator even after asked who should be advised. <input type="checkbox"/> Fails to explain that they should monitor the subject for medical distress even after being asked what should be done after an operational discharge.

COMPLETE FINAL GRADING SECTION ON PAGE 1.

BC CEW OPERATOR PRACTICAL TRAINING EVALUATION – T7

Name: (optional)	
Date	
Instructors	

Your feedback is important. Please tick the box that best represents your opinion for each statement below. Feel free to expand on your responses in the comments section and on the back of this page.

	Excellent 5	Good 4	Average 3	Fair 2	Poor 1	N/A
Overall, I would assess this training as:						
Overall, I would rate the effectiveness of the presenter as:						
	Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree	N/A
The purpose and objectives of the training were clear.						
The training complemented the online CEW operator course.						
The training increased my knowledge of the BC Provincial Policing Standards for CEW use.						
The training increased my knowledge of agency policy on CEW use.						
This training increased my confidence in the practical operation of a CEW.						
The training leaves me feeling confident that I can use a CEW safely and effectively in the field.						

This course could be improved by:

The most useful part of this course was:



**BC CONDUCTED ENERGY WEAPON (CEW) OPERATOR
PRACTICAL TRAINING OUTLINE
CONVERSION FROM TASER X26P TO TASER 7**

(VERSION 1 – MARCH 2024)



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BC Conducted Energy Weapon Operator Training Outline – Conversion X26P to T7, March 2024

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For additional information contact:

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BC CEW PRACTICAL TRAINING OUTLINE

CONVERSION FROM X26P TO TASER 7

PURPOSE OF THIS DOCUMENT

This document is the provincially-approved Practical Training Outline (PTO) for BC Conducted Energy Weapon (CEW) Operator Training for conversion of X26P operators to the TASER 7 (T7). This outline is based on the BC Ministry of Public Safety and Solicitor General, Policing and Security Branch, CEW Operator Course Training Standard (CTS). Practical certification training in BC, for operators converting from X26P to T7 in BC, must conform to this PTO.

TARGET AUDIENCE (CONVERSION FROM X26P TO T7)

This outline is for the practical training of officers already CEW certified on the X26P (single-cartridge platform) and who are converting to the T7 (dual-cartridge platform). This group of operators are experienced CEW operators, so they will require less time reviewing existing standards and policies pertaining to CEW use and more time to assimilate the differences between the device platforms and how these differences will apply when operating a T7 in the field.

CEW CERTIFICATION IN BC

BC Provincial Policing Standard (BCPPS) 3.2.1 – CEW Operator Training states that, in order to be certified to operate a CEW in BC, officers must complete:

- Provincially-approved online CEW training; and
- Practical training consistent with a Provincial Training Outline (PTO), specific to the model being trained on.
- Officers are not permitted to revert to a previous CEW model once trained on a newer model, except in exceptional circumstances.

CEW RECERTIFICATION IN BC

CEW Operator recertification training is required yearly. CEW recertification training must include reviewing and completing the online CEW course. **[See BCPPS 3.2.1 (5) and (6)]**

PRACTICAL TRAINING SESSION GOAL

By the end of this practical training session, participants will be able to:

- Articulate the legal, technical, medical and accountability requirements for discharge of a CEW; and
- Safely and appropriately discharge a CEW in the work environment.

PREREQUISITES TO THIS TRAINING

BCPPS 3.2.1 (4) – CEW Operator Training requires that, in order for officers to be authorized to take the CEW Operator training, they must:

- Have completed the *BC Crisis Intervention and De-escalation (CID) Training*, or other provincially-approved training in crisis intervention and de-escalation within the previous three years; and
- Meet the selection criteria set out by their agency.

INSTRUCTOR QUALIFICATIONS

BCPPS 3.2.1 (7) requires that CEW operator training is taught by an instructor who satisfies all the requirements in **BCPPS 3.2.3 – Use-of-Force Instructor Training**.

CEW OPERATOR TRAINING LESSON PLANS AND RECORD KEEPING

Any police agency in BC providing practical certification training for operators converting from X26P to T7, must ensure that their lesson plans conform to this PTO. To conform, lesson plans must cover the topics listed in Part 1 of this PTO and include the same or similar learning outcomes found in Part 2 (i.e., action verbs must be at the same level of learning). Given that this is a certification course for CEW operators, your agency-based training must also include a proficiency assessment component similar to that laid out in Appendix A.

The **BCPPS 3.2.1 (9)** requires that training records are maintained for each CEW Operator certification. While your agency determines its own training record-keeping processes, the following information should be retained for **each** participant.

For certification this includes:

- A record of successful completion (including date of completion) of the BC CID, or other provincially-approved CID training, within the previous three years;
- A record of successful completion (including date of completion) of the BC CEW Operator online course (or provincially- approved equivalent), within the last year;
- A record of the lesson plan that was followed for each practical certification;
- A list of all instructors present during the training;
- A completed copy of the BC CEW Practical Skills Performance Assessment (Appendix A) or your agency's equivalent assessment form, including:
 - Instructor evaluation of a participant's CEW Handling Skills; and
 - Instructor evaluation of a reality-based final assessment and verbal debrief.

For annual recertification this includes:

- A record of successful completion of the BC CEW Operator online course (or equivalent);
- A record of CEW Operator proficiency (i.e., handling skills and scenario-based assessment) in agency-based use-of-force training;
- A record of successful completion of the BC CID, or other provincially-approved CID training, within the previous three years.

LENGTH OF TRAINING SESSION

The practical, face-to-face component of the BC CEW Operator Course will take approximately 7 hours to complete based on a class size of under 15. Larger classes may require more time to complete the scenarios. A proposed training day agenda is found in Part 3 (pg. 10)

Preparation of Instructors

1. Familiarize yourself with this PTO and prepare a detailed lesson plan that conforms to this outline (i.e., covering the topics listed in Part 1, and including the same or similar learning outcomes found in Part 2).
2. Ensure that you allow ample time in your training session to focus on the unique learning needs of X26P CEW operators who are converting to a new, dual-cartridge platform. These operators will require time to unlearn old habits and learn new ones.

Conversion CEW operators will require more time in training to:

- Compare and contrast the features and functions of the T7 with the X26P;
- Explore and practice using the T7 features that differ from the X26P; and
- Ensure that learners assimilate new second trigger-pull knowledge and skills, and unlearn old habits from their historical use and practice operating the X26 / X26P.

3. Familiarize yourself with all relevant BCPPS:
 - BCPPS 1.3.1 – CEW Threshold and Circumstances of Use
 - BCPPS 1.3.2 – Approved CEW Models
 - BCPPS 1.3.3 – Internal CEW Controls and Monitoring
 - BCPPS 1.3.4 – Medical Assistance to CEW Discharges
 - BCPPS 1.3.6 – CEW Testing and Maintenance
 - BCPPS 1.7.2 – Reporting and Investigation Following the Use of Force
 - BCPPS 1.9.1 – Use-of-Force Model and Techniques
 - BCPPS 3.2.1 – CEW Operator Training
4. Ensure pre-training qualifications are met for all participants and for you as the instructor. Ensure you and the participants have:

- Successfully completed the BC CID course or a provincially-approved equivalent, in the last three years;
 - Met the selection criteria established by your agency; and
 - Successfully completed the CEW online course.
5. Familiarize yourself with the Crisis Intervention and De-escalation (CID) job aid from your CID training. Consider inviting the CID instructor from your agency to assist in evaluating the use of CID in the reality-based training scenario and verbal debrief.
6. Be prepared to discuss and apply your agency's policies on:
- AED availability;
 - CEW sign-in and sign-out process;
 - CEW equipment secure storage;
 - Operational downloads;
 - Use of arc display and CID;
 - CEW probe removal;
 - Medical aftercare;
 - Use of force reporting; and
 - CEW Documentation requirements.
7. Consider preparing a Participant Handout for each participant. This might include:
- CEW Operator Training Agenda;
 - Training Goal and Learning Objectives;
 - BC Provincial Policing Standards;
 - Practical Skills Performance Assessment;
 - Course Evaluation Questionnaire;
 - Copies of relevant agency policies (see section 6 above).
8. Prepare to document each participant's training record and assess their performance as required by **BCPPS 3.2.1 (9)** and your agency policy or training records keeping.
9. Pursuant to **BCPPS 3.2.1 (8)**, prohibit trainers and participants from being exposed to the electrical charge of a CEW during training.

PRACTICAL TRAINING OUTLINE – CONVERSION TO T7

Part 1: Training Topics and Description

TOPIC 1: INTRODUCTION

This session is designed to introduce the training requirements. At the end of this session, participants will be able to:

- Explain requirements for CEW Operator certification and recertification in BC (see BCPPS 3.2.1 CEW Operator Training).

TOPIC 2: APPLYING THE BCPPS AND AGENCY POLICY FOR CEWS

This session provides an opportunity for learners to review the BCPPS and their own agency policies on the topic. At the end of this session, participants will be able to:

- Explain the intent of the BCPPS:
 - 1.3.1 CEW Threshold and Circumstances of Use
 - 1.3.3 Internal CEW Controls and Monitoring
 - 1.3.4 Medical Assistance to CEW Discharges
 - 1.3.6 CEW Testing and Maintenance
 - 1.7.2 Reporting and Investigation Following the Use of Force
- Explain your agency policy pertaining to CEW use:
 - AED availability;
 - CEW sign-in and sign-out process;
 - CEW equipment secure storage;
 - Operational downloads;
 - Use of arc display and CID;
 - CEW probe removal;
 - Medical aftercare;
 - Use of force reporting; and
 - Documentation requirements.

TOPIC 3: CEW HANDLING SKILLS

This is a practical (hands-on) session that familiarizes learners with the CEW they will be operating and related CEW handling. Performance in the session is evaluated in the Practical Skills Performance Assessment form or your agency's equivalent. Upon successful completion of this lesson, participants will be able to:

- Explain CEW safety rules for training and operational use.

Note: As of 2024, the BC CEW online course does not cover CEW parts and cartridge characteristics in detail. Instructors are required to build time into the practical training day to

ensure learners meet the following learning objectives:

- Identify the parts of the CEW you will be using.
- Compare and contrast key parts and functions of T7 with those of the X26P
- Describe the cartridge types and their characteristics (including effective range).
- Contrast T7 cartridge types and their capabilities with X26P cartridges.
- Use safe and appropriate handling of the CEW:
 - handling cartridges (loading and unloading)
 - drawing
 - holstering
 - aiming
 - tilt select (if applicable in your agency)
 - reload to suit operational environment
 - emergency reload
 - arc display
- Explain that the arc display is not to be considered a CID technique.

Note: The arc display is a reportable force option available on the T7 and it can be used to warn subjects for the purpose of generating compliance.

Instructors must also include specific direction in their lesson plans to ensure that:

- The T7 arc display is not considered a crisis intervention and de-escalation (CID) technique;
- Using the arc display does not fulfill the requirements to use CID techniques as set out in BCPPS 1.3.1 (2)(a); and
- The arc display does not replace a verbal warning as set out in BCPPS 1.3.1 (4)(a).

TOPIC 4: PROBE DEPLOYMENT

This is a practical (hands-on) session that familiarizes learners with the CEW operation in probe mode. Performance in the session is evaluated in the Practical Skills Performance Assessment form or your agency's equivalent. Upon successful completion of this lesson, participants will be able to:

- Operate a CEW safely and appropriately in probe mode.
- Explain the preferred target areas for CEW discharges.
- Explain the Adaptive Cross Connect feature.
- Use the appropriate response to a failed CEW discharge.
- Compare the result of the second trigger pull in X26P to T7.
- Explain the threshold for a second discharge against the same person (i.e., ineffective discharge as described in BCPPS 1.3.1 (3)).
- Use the appropriate response to an ineffective CEW discharge (i.e., the initial five-second discharge was not effective in eliminating the risk of Bodily Harm).
- Use the tilt select feature (if applicable in your agency).
- Explain the procedure for a second discharge against a different person.

Note: The T7 is the first dual-cartridge platform CEW approved in BC. The ability to discharge more than one cartridge with a simple trigger pull is a new feature that is advertised to have officer safety benefits, particularly in encounters where the first set of probes fails to result in NMI. However, this feature must be used with caution as it puts subjects at increased risk from additional probe injury and elevated pain levels when adaptive cross-connect engages¹. T7 users must also consider the implications of deploying the second cartridge on a second subject when the first subject is still attached to the probe wires of the first cartridge. Unless the contact(s) made by the first set of probes are clearly disengaged, a second trigger pull may re-expose the first subject to an unauthorized second discharge and/or accidentally expose the officers who are attempting to control the first subject.

The second trigger-pull issue is particularly important to address with Conversion operators. Unlike the T7, a second trigger-pull on a single-cartridge platform simply re-energizes the first cartridge so, unless they touch the probe wires, there is no risk of engaging a second person unintentionally with a second trigger pull.

Instructors must include specific direction in their lesson plans to ensure that:

- The use of a second discharge (or cartridge) on the same or a different person is always in compliance with the five-second rule set out in BCPPS 1.3.1 (3).
- Conversion learners assimilate new second trigger-pull knowledge and skills and unlearn old habits from their historical use and practice operating the X26 / X26P.

TOPIC 5: CONTACT MODE AND THREE-POINT CONTACT MODE

This session reviews contact mode (a.k.a., drive stun), and three-point contact mode discharges and compares the application of these modes between the dual-cartridge platform CEW and single-cartridge platform CEW. While these modes may be used less frequently with the dual-cartridge platform CEW, they can be appropriate and effective in close-quarter circumstances. At the end of this lesson, participants will be able to:

- Explain how to use a dual-cartridge platform CEW safely and appropriately in contact mode, and three-point contact mode
- Compare the procedure for using contact and three point-contact mode in a dual cartridge and single cartridge CEW platforms.
- Explain the preferred target areas for CEW discharges.
- Practice the skills required to use a dual-cartridge platform CEW safely in contact mode, and three-point contact mode.

Note: Contact and three point-contact mode skills do not need to be evaluated in the reality-based final assessment portion of the course, but lesson plans must provide an opportunity for practice. This can take the form of practice in the classroom or gym with CEWs that have their battery

¹ Scientific Advisory Committee on the Medical Implications of Less-Lethal Weapons (SACMILL), (2020). Statement on the Medical Implications of the TASER 7TM Conducted Energy Device System.

removed, or inert blue training CEWs using role players or dummies. Agencies that have access to training aids, such as grappling dummies, the Axon Green Alien, etc., can conduct training with fully charged CEWs and cartridges to further instill the techniques in their officers without the risk of exposure from the live CEW circuit.

TOPIC 6: ASSESSMENT

This session provides an opportunity to learn by participating in a reality-based scenario. The session allows learners to demonstrate what they have learned and instructors to assess performance. Performance in the session is evaluated in the Practical Skills Performance Assessment form or your agency's equivalent.

At the end of this session, participants will be able to:

- Explain the preferred target areas for CEW discharges.
- Operate a CEW safely and appropriately in a reality-based training environment.
- Apply the relevant BC Provincial Policing Standards in a reality-based training environment.
- Use appropriate tactics as a CEW Operator in a reality-based training environment.
- Explain the rationale for the selected response to the reality-based scenario (using NUFF/IMIM).
- Use or explain appropriate CID techniques in a reality-based training environment.
- Explain how to complete a notebook entry after a CEW operational discharge.

FACE-TO-FACE EVALUATION STANDARD

The final assessment for this course is in two parts:

- Part A – Instructor evaluation of a participant's CEW Handling Skills.
- Part B – Instructor evaluation of a reality-based final assessment and verbal debrief.

Parts A and B are documented for each participant on a standardized Practical Skills Performance Assessment form or your agency's equivalent.

Learners will be assessed throughout the training session and given the opportunity for feedback and skill development. Learners will be evaluated as "pass" or "fail." Each learner's progress will be recorded in the Practical Skills Assessment Booklet.

If a participant receives even one 'unacceptable' rating, then they must re-do the activity, scenario or the verbal debrief, depending on where the rating occurred. If they do not pass the reality-based scenario or the verbal debrief on the second attempt, they must be re-scheduled for training.

If there are insurmountable issues identified with an officer's performance or they are unable to pass the verbal debrief, the instructor may have to remove the officer from the training, document thoroughly and schedule remedial training with this officer.

Part 2: Compiled List of Learning Outcomes

Upon successful completion of this course, participants will be able to:

- Explain requirements for CEW Operator certification and recertification in BC.
- Explain the intent of the BC Provincial Policing Standards (BCPPS) pertaining to CEW use.
- Explain your agency policy pertaining to CEW use.
- Explain CEW safety rules for training and operational use.
- Identify the parts of the CEW you will be using.
- Compare and contrast T7 parts and functions with those of the X26P.
- Describe the cartridge types and their characteristics (including effective range).
- Contrast T7 cartridge types and their capabilities with X26P cartridges.
- Use safe and appropriate handling of the CEW:
 - handling cartridges (loading and unloading)
 - drawing
 - holstering
 - aiming
 - tilt select (if applicable)
 - reload to suit operational environment
 - emergency reload
 - arc display.
- Explain that the arc display is not to be considered a CID technique.
- Operate a CEW safely and appropriately in probe mode.
- Explain the preferred target areas for CEW discharges.
- Explain the adaptive cross connect feature.
- Use the appropriate response to a failed CEW discharge.
- Compare the result of the second trigger pull in X26P to T7.
- Explain the threshold for a second discharge against the same person (i.e., ineffective discharge as described in BCPPS 1.3.1 (3)).
- Use the appropriate response to an ineffective CEW discharge (i.e., the initial five-second discharge was not effective in eliminating the risk of Bodily Harm).
- Use the tilt select feature (if applicable in your agency).
- Explain the procedure for a second discharge against a different person.
- Explain how to use a dual-cartridge platform CEW safely and appropriately in contact mode, and three-point contact mode.
- Compare the procedure for using contact and three point-contact mode in a dual cartridge and single cartridge CEW platform.
- Practice using a dual-cartridge platform CEW safely and appropriately in contact mode, and three-point contact mode.
- Operate a CEW safely and appropriately in a reality-based training environment.
- Apply the relevant BCPPS in a reality-based training environment.
- Use appropriate tactics as a CEW Operator in a reality-based training environment.
- Explain the rationale for the selected response to the reality-based training scenario (using NUFF/IMIM).
- Use or explain appropriate CID techniques in a reality-based training environment.
- Explain how to complete a notebook entry after a CEW operational discharge.

Part 3: Suggested Agenda

LESSON	TOPIC	LENGTH OF TIME*
1	Introduction	10 minutes
2	Explain and apply the relevant BC Provincial Policing Standards and your agency policy	30 minutes
3	CEW Nomenclature and Handling Skills	75 minutes
4	Operate a CEW in Probe Mode	75 minutes
	Lunch	60 minutes
5	Review and compare CEW operation in Contact and Three-Point Contact Mode	45 minutes
6	Final Assessment of: A. Participant's CEW Handling Skills; and B. A reality-based final assessment and verbal debrief.	165 minutes (2 hours 45 mins)
7	Wrap-up and Review	20 minutes
	Total Time	8 hours

* Lesson timing will vary depending on class size, number of instructors and level of experience.

APPENDIX A: CEW PRACTICAL SKILLS PERFORMANCE ASSESSMENT FORM

CEW PRACTICAL SKILLS PERFORMANCE ASSESSMENT FORM T7 OR CONVERSION

Participant:	Date:	
Instructor:	Date:	
PARTICIPANT MEETS THE REQUIREMENTS TO BE A CEW OPERATOR IN BC [To be completed at the conclusion of the session]	YES	NO

Note to Instructor: If there are insurmountable issues identified with an officer's performance or they are unable to pass the verbal debrief, you may have to remove the officer from the training, document thoroughly and schedule remedial training with this officer. If a participant receives even one 'unacceptable' rating, then they must re-do the scenario or the verbal debrief, depending on where the rating occurred. If they do not pass the scenario or the verbal debrief on the second attempt, they must be re-scheduled for training. *Provide additional comments on the back of this form if a participant is rated as 'unacceptable' in any area.*

PART A: Assessing CEW Handling Skills

Note to Instructor: These skills are assessed during the training after a number of repetitions of the drills.

Assessment Criteria	ACCEPTABLE	UNACCEPTABLE
Handling Cartridges - Loading and Unloading		
Drawing the CEW		
Holstering the CEW		
Aiming the CEW – with Sights		
Aiming the CEW – with Laser		
Performing Function Test		
Emergency Reload		
Probe Mode Discharge		
Probe Mode – Failed Discharge		
Probe Mode – Failed Discharge and Transition		
Probe Mode – Ineffective Discharge (second trigger pull)		
The participant handles the CEW safely and appropriately.	YES	NO

PART B: Assessing the Reality Based Training Scenario

Note: If the learner is making mistakes in this scenario, allow the scenario to run until completion (unless safety is jeopardized or if the scenario is dragging on).

Conduct safety check prior to each scenario.

READ TO EACH PARTICIPANT		
<p>You will be responding to a suspicious person call at a residence. Dispatch has advised that the suspicious person is believed to be an ex-employee of the complainant – named John Smith. You arrive on the scene by yourself, and you are to do whatever you would do in real life until an instructor says, “STOP”.</p>		
<p>There will be a verbal debrief at the end. The debrief questions will include:</p> <ol style="list-style-type: none"> 1. What did you see? 2. What did you do? 3. Why did you do it? 4. Did you attempt a verbal warning? <ul style="list-style-type: none"> ○ If not, why not? 		<ol style="list-style-type: none"> 5. Did you use CID techniques? <ul style="list-style-type: none"> ○ If not, why not? ○ If not, what CID techniques could you have used given the opportunity? ○ If yes, describe the CID techniques you used. 6. If you have not already done so, who would you alert about the CEW operational discharge? 7. What should you do to ensure the subject’s well-being after they are the subject to a CEW discharge.
<p>You will be assessed based on the criteria set out in the Practical Skill Performance Assessment. If required, you may use the CEW Operational Guidelines job aid to help you answer the questions during the verbal debrief.</p>		
CATEGORY/OBJECTIVE	ACCEPTABLE	UNACCEPTABLE
<p>Tactics & Officer Safety</p> <p>The participant is able to use safe and appropriate tactics as a CEW Operator.</p>	<p><i>Demonstrates an awareness of the environment and applies appropriate tactics.</i></p> <ul style="list-style-type: none"> <input type="checkbox"/> Appropriately prepares CEW for duty. <input type="checkbox"/> Applies appropriate tactical considerations in response to the applicable threat cue(s) in a timely manner: <input type="checkbox"/> Maintains control of the situation. <input type="checkbox"/> Controls the subject. <input type="checkbox"/> Calls for backup. <input type="checkbox"/> Interaction is respectful. 	<p><i>Makes errors that could potentially place the public and/or police officer at risk.</i></p> <ul style="list-style-type: none"> <input type="checkbox"/> Experiences difficulty or fails to prepare CEW for duty. <input type="checkbox"/> Responds inappropriately and/or too slowly to applicable threat cue(s). <input type="checkbox"/> Takes action slowly or fails to take action. <input type="checkbox"/> Experiences difficulty or fails to control the situation. <input type="checkbox"/> Fails to use basic officer safety tactics. <input type="checkbox"/> Fails to control the subject. <input type="checkbox"/> Interaction is disrespectful.

CATEGORY/OBJECTIVE	ACCEPTABLE	UNACCEPTABLE
<p>Skills & CEW Handling Procedures</p> <p>The participant is able to use safe and appropriate CEW handling procedures.</p>	<p>Performs effectively, creating the desirable outcome.</p> <ul style="list-style-type: none"> <input type="checkbox"/> Techniques and CEW handling procedures performed effectively. <input type="checkbox"/> Manipulates intervention options safely. 	<p>Experiences difficulties that could potentially put public and/or police at risk.</p> <ul style="list-style-type: none"> <input type="checkbox"/> Techniques and CEW handling procedures are incorrect and/or performed with difficulty: Specify area of difficulty i.e., draw, arm, aim, fire, emergency re-load (if applicable), response to failure (if applicable), etc. <input type="checkbox"/> Acts in an unsafe manner.
<p>Articulation</p> <p>The participant is able to accurately recount the scenario.</p>	<p>Accurately describes the intervention in accordance with NUFF and links it to risk assessment.</p> <ul style="list-style-type: none"> <input type="checkbox"/> Accurate recounting of the incident. <input type="checkbox"/> Explains the selected intervention option(s) based on their risk assessment: <ul style="list-style-type: none"> i. Subject behaviour; ii. Officer perceptions; iii. Tactical considerations; iv. Situational factors. 	<p>Is unable to accurately describe the intervention in accordance with NUFF.</p> <ul style="list-style-type: none"> <input type="checkbox"/> Is unable to recount the incident accurately. <input type="checkbox"/> Is unable to relate the selected intervention option(s) to their risk assessment.
<p>BC Provincial Policing Standards</p> <p>The participant is able to apply the BC Provincial Policing Standards.</p>	<p>Can apply the BCPPS to the scenario with the assistance of the CEW Operational job aid.</p> <ul style="list-style-type: none"> <input type="checkbox"/> Explains the threshold of CEW use - BCPPS 1.3.1 (1). <input type="checkbox"/> Uses a verbal warning or can explain why a verbal warning was not used (i.e., may place self or others at further risk). BCPPS 1.3.1 (4)(a). <input type="checkbox"/> Uses CID techniques or can explain why they would not have been effective. BCPPS 1.3.1 (2)(a). If no CID techniques were used, can give an example of what they may have used under different circumstances. <ul style="list-style-type: none"> i. Recognize impact of officer presence; ii. Use effective behavioural cues; iii. Use effective physical cues. <input type="checkbox"/> Alerts AED operator or can explain that this would have been done when asked. BCPPS 1.3.4 (4). <input type="checkbox"/> Monitors subject for medical distress or can explain that this is what should be done. 	<p>Is unable to apply the applicable standards even with the assistance of the CEW Operational job aid.</p> <ul style="list-style-type: none"> <input type="checkbox"/> Is unable to explain the threshold for CEW use even with the use of the CEW job aid. <input type="checkbox"/> Fails to use verbal warning AND is unable to explain why. <input type="checkbox"/> Fails to use CID techniques AND has no viable explanation. <input type="checkbox"/> Is unable to provide any examples of CID techniques. <input type="checkbox"/> Fails to alert AED operator even after asked who should be advised. <input type="checkbox"/> Fails to explain that they should monitor the subject for medical distress even after being asked what should be done after an operational discharge.

COMPLETE FINAL GRADING SECTION ON PAGE 1.

BC CEW OPERATOR PRACTICAL TRAINING EVALUATION – CONVERSION X26P – T7

Name: (optional)	
Date	
Instructors	

Your feedback is important. Please tick the box that best represents your opinion for each statement below. Feel free to expand on your responses in the comments section and on the back of this page.

	Excellent 5	Good 4	Average 3	Fair 2	Poor 1	N/A
Overall, I would assess this training as:						
Overall, I would rate the effectiveness of the presenter as:						
	Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree	N/A
The purpose and objectives of the training were clear.						
The training complemented the online CEW operator course.						
The training increased my knowledge of the BC Provincial Policing Standards for CEW use.						
The training increased my knowledge of agency policy on CEW use.						
This training increased my confidence in the practical operation of a CEW.						
The training leaves me feeling confident that I can use a CEW safely and effectively in the field.						

This course could be improved by:

The most useful part of this course was:



REGULAR

REPORT DATE: April 19, 2024
BOARD MEETING DATE: April 25, 2024
BOARD REPORT # 2024-R007

TO: Surrey Police Board Administrator

FROM: Chief Constable

FILE: 60550-20-03

SUBJECT: SPS Cedar (Xep'ay) Award

RECOMMENDATION

The Chief Constable recommends that the Surrey Police Board (the "Board") receive this report for information.

BACKGROUND

As we continue to mark the important milestones in building a community-based policing service for Surrey, it is important that we acknowledge and celebrate the accomplishments of our people. SPS is committed to fully supporting our employees, from state-of-the-art training, to supporting their mental well-being, to recognizing the great work they do.

SPS is pleased to announce the establishment of the Surrey Police Service Cedar (Xep'ay) Award. This award is part of our Awards and Commendations Program and is available to all SPS employees, both sworn and civilian.

DISCUSSION

The establishment of the SPS Cedar Award represents a connection between local Indigenous people and SPS employees who act as guardians for all. The actions being awarded do not need to be associated to actions, calls for service, or initiatives related to Indigenous peoples. The Cedar Award is presented to nominated employees who best exemplify the spirit of the cedar as outlined below:

- **Guardian** relates to exemplary service delivery and/or operational performance that advances public safety by way of a single act, series of actions or initiative.
- **Provider** relates to exemplary community engagement via single act, series of actions or initiative.
- **Healer** relates to exemplary championing of wellness within the community or the SPS by way of a single act, series of actions or initiative.

Nominations will be reviewed by the SPS Awards and Commendations Committee. Accepted nominations will be shared with representatives of the Semiahmoo First Nation for their endorsement and blessing. Recipients of this award will receive a gift of cedar from the Semiahmoo First Nation and a pin depicting a cedar bough which may displayed on all Orders of Dress of their uniform, or on business attire for civilians (see photo of pin attached).

The first presentation of this award will be at our 2024 Awards and Recognition Ceremony this fall.

CONCLUSION

The above matters are provided for the Board's awareness and information.



Norm Lipinski, OOM, LLB, MBA
Chief Constable

Appendix I – Photo of Cedar Award Pin

Cedar Award Pin



REPORT DATE: April 22, 2024

REGULAR

BOARD MEETING DATE: April 25, 2024

BOARD REPORT # 2024-R008

TO: **Surrey Police Board Administrator**

FROM: **Chief Constable**

FILE: **60550-20-03**

SUBJECT: **Financial Update – Year-To-Date Expenditures (March 31, 2024)**

RECOMMENDATION

The Chief Constable recommends that the Surrey Police Board (the “Board”) receive this report for information.

PURPOSE

This report summarizes 2024 year-to-date expenditures incurred up to March 31, 2024.

BACKGROUND

The 2024 Provisional budget the board approved and submitted to the City of Surrey Council for funding approval is summarized below and will be used as the reference amount for the budget vs. actual comparisons throughout this report.

2024 Surrey Police Service Budget Summary

	Provisional Budget
SPS Operations	
Salaries and Benefits	\$ 102,761,570
Other Operating Expenditures	16,758,285
Total SPS Operations	119,519,855
Equipment/Capital Expenditures	6,636,383
Policing Transition Project Fund*	15,354,815
TOTAL EXPENDITURES	\$ 141,511,053

** In 2020, the City of Surrey ("CoS") committed \$63.68M as a one-time capital project fund for the policing transition. This fund was established to support SPS's initial startup costs and to build the IT infrastructure required by SPS to become the Police of Jurisdiction.*

As of the date of this report, Surrey Council has not yet approved the City's 2024 budget, and therefore, municipal funding for SPS has not been confirmed yet.

DISCUSSION

SPS Operations

As of March 31, 2024, year-to-date expenditures (operating and capital, not including the Police Transition Project expenditures) totalled \$19.35M (13.7% of the total provisional budget), presented below:

2024 Year-to-Date Expenditures Summary (Budget vs. Actual)

As of March 31, 2024

	Provisional Budget	YTD Actual	% Spent	Remaining Amounts
<i>SPS Operations</i>				
Salaries and Benefits	\$ 102,761,570	\$ 18,255,949	17.8%	\$ 84,505,621
Other Expenditures	16,758,285	968,177	5.8%	15,790,108
Total SPS Operations	119,519,855	19,224,126	16.1%	100,295,729
Capital Expenditures	6,636,383	124,530	1.9%	6,511,853
One-Time Policing Transition Fund	15,354,815	N/A	N/A	N/A
TOTAL SPS EXPENDITURES	\$ 141,511,053	\$ 19,348,656	13.7%	\$ 122,162,397

*** As of the date of this report, April 11, 2024, the City has not provided SPS with financial statements related to the one-time policing transition fund.*

Year-to-date, SPS has spent \$18.26M on employee salaries and benefits and board remuneration, \$125K on capital expenditures, and \$968K on other operating expenditures. (Appendix I provides a breakdown of capital expenditures by category; Appendix II provides a breakdown of other operating expenditures in further detail by Bureau.)

At the end of March, we had 399 active employees: 350 sworn members, 39 regular/permanent civilians, and 10 temporary civilians. The temporary civilians were auxiliary/on-call staff for backfill and various other roles as part of the policing transition; their salaries and benefits are allocated to the One-time Policing Transition Project Fund.

SPS Operations include salaries and benefits of \$18.26M for 389 employees (350 sworn members and 39 civilians) engaged in policing and day-to-day business operations.

One-Time Policing Transition Project (City of Surrey budget)

As of the date of this report, City staff has not provided SPS with year-to-date expenditure data on the one-time policing transition fund, and therefore, the related financial statements/content are not included in this report.

CONCLUSION

This report is presented to the Board for information.



Norm Lipinski, OOM, LLB, MBA
Chief Constable

Appendix I 2024 Capital Expenditure Summary – As of March 31, 2024

Appendix II 2024 Year-to-Date Operating Line Items (Budget vs. Actual) – As of March 31, 2024

SURREY POLICE SERVICE
2024 Capital Expenditure Summary

As of March 31 2024

	Provisional Budget	YTD Actual	% Spent
Capital/Equipment Category			
Use of Force Equipment - Firearms	\$ 389,443	\$ 13,513	3.5%
Use of Force Equipment - Less Lethal	217,200	-	-
Use of Force Equipment - Ammunition Inventory	1,102,000	-	-
Personal Issue Equipment - Uniforms	987,620	35,419	3.6%
Personal Issue Equipment - Equipment	889,670	47,252	5.3%
Specialty Equipment - Operational	250,200	13,116	5.2%
Specialty Equipment - Training	219,250	14,264	6.5%
Facilities - Training Centre	106,000	966	0.9%
Fleet	2,475,000	-	-
TOTAL CAPITAL Expenditures	\$ 6,636,383	\$ 124,530	1.9%

APPENDIX II

SURREY POLICE SERVICE
2024 Year-to-Date Operating Line Items (Budget vs. Actual)
 As of March 31, 2024

	Police Board	Office of the Chief Constable	Community Policing	Investigative Services	Support Services	2024 YTD Total	2024 Provisional Budget	% Spent
SALARIES AND BENEFITS	\$ 137,967	\$ 842,622	\$ 11,637,808	\$ 1,356,370	\$ 4,281,182	\$ 18,255,949	\$ 102,761,570	17.8%
Recruitment	-	-	-	-	232,489	232,489	1,201,719	19.3%
Consultants and Contractors	27,446	26,273	-	-	181,013	234,731	2,021,529	11.6%
Communications and Public Engagement	-	40,627	-	-	-	40,627	535,500	7.6%
Telecommunications	122	2,529	29,198	2,106	96,901	130,856	1,088,225	12.0%
IT Maintenance	-	300	-	-	40,555	40,854	5,384,617	0.8%
Other Services and Expenditures	-	633	222	93	1,765	2,713	80,194	3.4%
Insurance	-	-	-	-	-	-	206,500	0.0%
Training and Travel	1,890	4,497	2,329	2,245	102,934	113,895	1,269,830	9.0%
Meetings and Events	107	1,799	409	125	1,466	3,905	135,305	2.9%
Professional Dues and Memberships Fees	2,133	6,277	3,537	2,988	5,001	19,936	58,406	34.1%
Leases and Rentals	-	-	-	-	24,978	24,978	558,670	4.5%
Repairs and Maintenance	-	442	9,015	1,621	19,342	30,420	1,806,900	1.7%
Supplies and Materials	1,195	2,802	10,933	1,281	55,255	71,465	2,357,702	3.0%
Publications and Reference Materials	-	928	-	190	20,188	21,307	53,188	40.1%
OPERATING COSTS	\$ 32,892	\$ 87,106	\$ 55,644	\$ 10,649	\$ 781,886	\$ 968,177	\$ 16,758,285	5.8%
TOTAL OPERATING EXPENDITURES	\$ 170,858	\$ 929,728	\$ 11,693,453	\$ 1,367,019	\$ 5,063,068	\$ 19,224,126	\$ 119,519,855	16.1%