



Conducted Electrical Weapons

Beyond the Myths



Dennis Root, LPI, BIA, FCPP, FCP

- 27 Years Law Enforcement Experience
- Nationally Recognized Expert
- Teaching Conducted Electrical Weapons since 2003
- Former Master Instructor for Axon (formerly TASER International)
- Currently hold 15 Instructor Certifications, most Master Level
- Been Responsible for the development and oversight of CEW programs for the Martin County Sheriff's Office & Palm Beach Shores Police Department



Professional Disclaimer

- I am considered politically incorrect.
- I am opinionated.
- I frequently show graphic videos.
- My presentation may (usually does) contain harsh language.
- My goal is to inform you, not offend you.



For Educational Purposes

- What did you see?
- Did everyone respond the same?
- Were there people who were able to move or grab?
- Do you think their actions represent real life?



Conducted Electrical Weapons (CEWs)

- Definition
 - A weapon designed to use propelled wires or direct contact to deliver electrical discharge to primarily affect motor functions and/or the sensory nervous system.
- Florida State Statute 943.1717 – Law Enforcement & Corrections
 - Dart Firing Stun Gun
 - Must encounter “Active Physical Resistance”
 - Training must include the effect a dart firing stun gun may have on a person
 - Basic skills course must be a minimum of 4-hours
 - After completing the basic skills course, the operator **MUST** complete an annual training course that is a minimum of 1-hour duration



Conducted Electrical Weapons (CEWs)

- Florida State Statute 790.01 - Unlicensed Carry of Weapons & Firearms
 - (3) This section does not apply to:
 - (b) A person who carries for purposes of lawful self-defense, in a concealed manner:
 - 2. A nonlethal stun gun or dart firing stun gun or other nonlethal electric weapon or device that is designed solely for defensive purposes.
- Florida State Statute 790.053 - Open Carry of Weapons
 - (2) A person may openly carry for purposes of lawful self-defense:
 - (b) A nonlethal stun gun or dart firing stun gun or other nonlethal electric weapon or device that is designed solely for defensive purposes.



What have you heard the weapons can do?

- The weapons can:
 - Cause NMI
 - Cause muscle contractions
 - Cause significant pain stimulus
 - Cause the person to become rigid
 - Cause screaming
 - Cause uncontrolled movements
 - Provide evidence
 - Tell on the operator
- The weapons won't
 - Cause electrocution
 - Continue beyond timed cycle without input
 - Deploy themselves
 - Have the same affect on every person
 - Change the laws of gravity
 - Differentiate or discriminate
 - Fix goofy



TASER Weapon Types

- Law Enforcement Weapons
 - TASER M26
 - X26
 - X26P
 - X2





TASER Weapon Types

- Civilian Weapons
 - TASER Pulse
 - TASER Bolt
 - TASER X26C
 - TASER X26P
 - TASER Strikelight





Weapon failure vs. Operator Error

- Myth – Probe Hit = Exposure
 - Probes do not have to penetrate skin
 - Arc can jump 1 inch per probe or 2 cumulative inches
- Myth - No maintenance required
 - Weapons must be conditioned
 - Daily function test recommended
 - Will show on data logs
 - Most issues are operator related





Forensic Information

- Myth – “The weapon provides no forensic value.”
 - Cartridge Serial Number & AFIDs
 - Accordion Effect of the TASER Cartridge Wires
 - TASER Cartridge Wires & Probes for Electrical Exposure
 - Data Downloads for M26 and X26
 - Trilogy Logs for the X26P and X2





Training Records

- Look for the following
 - Lesson Plans
 - When were they created
 - When were they revised
 - What version program is it
 - Sign-in Rosters
 - How long was the class
 - Who was the instructor
 - When did the class take place
 - Where did the class take place
 - Written Examinations
 - Date examination was taken
 - Is the examination signed
 - Were they made aware of the correct answer for the questions they got wrong?
 - Proficiency Examinations
 - Date proficiency completed
 - Instructor evaluating the proficiency



Validating Training



- State requirements for initial certification
- State requirements for annual retraining
- Organizational policy requirements
- Manufacturer training requirements



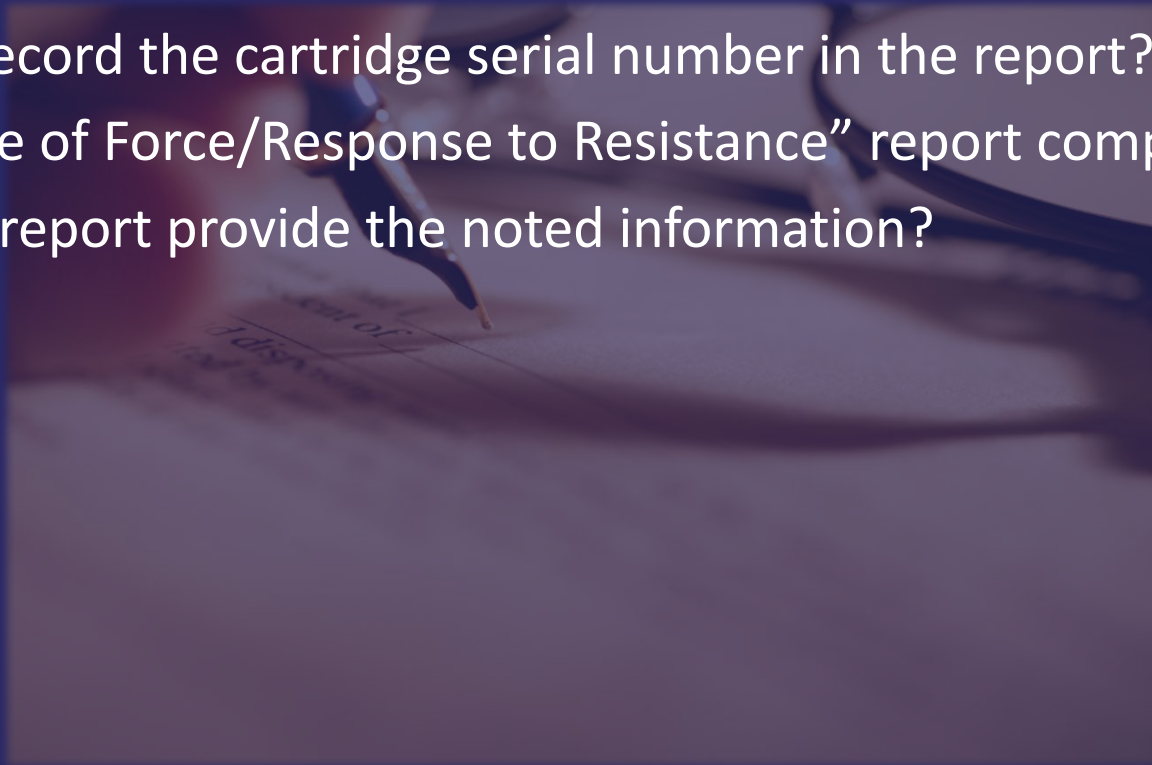
What to look for when reviewing reports

- Articulation of subject behaviors
- Was the weapon deployment “Objectively Reasonable”
- Does the officer articulate “Active Resistance”
- If data logs indicate multiple or extended cycles,
 - Are they documented?
 - How they are documented?
- Did the officer indicate they were restraining or cuffing “under power”?



What to look for when reviewing reports

- Did they record the cartridge serial number in the report?
- Was a “Use of Force/Response to Resistance” report completed?
- Does that report provide the noted information?

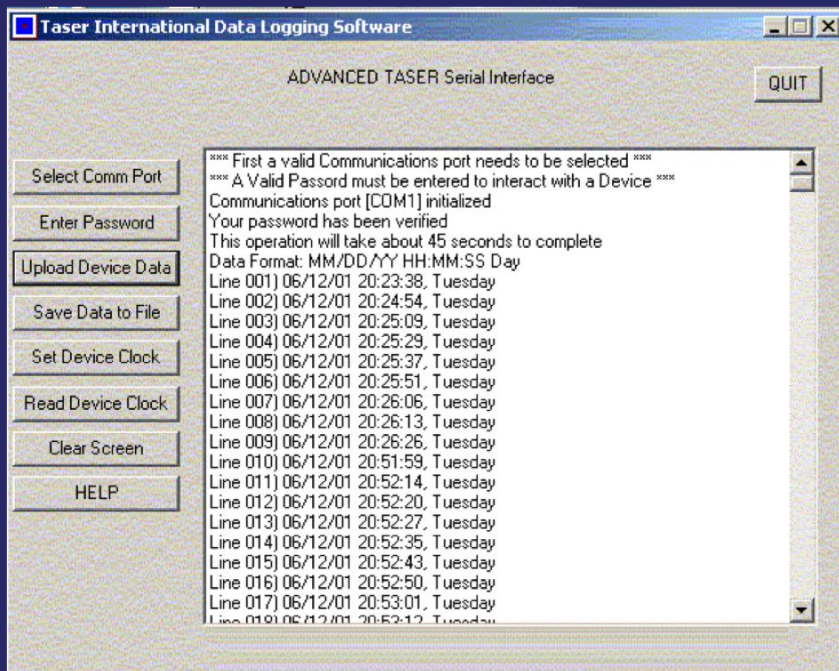




CEW Generated Information



Data Download Record – M26



- Minimal amount of data
- Approximately 595 deployments
- Stamps time at start of cycle



Data Download Record – X26

- Enhanced weapon information
 - Time
 - Date
 - Duration
 - Temperature
 - Battery Status
- Records over 1,500 deployments
- Time stamps at end of the cycle

X26 Operational Records

X26 DATAPORT DOWNLOAD

SERIAL NUMBER OF X26: X00-000410 MODEL #: X26
DATE OF DOWNLOAD: 09/08/03 19:10:29
LOCAL TIMES CALCULATED FOR: GMT - 07:00, Mountain Standard Time (Arizona)
DATA RANGE DOWNLOADED: All Data

RECORDED FIRING DATA

GMT TIME	Local Time	Duration [Secs]	Temperature [deg. C]	Battery [%]
09/09/03 01:23:12	09/08/03 18:23:12	1	30	96
09/09/03 01:23:15	09/08/03 18:23:15	1	31	96

TIME CHANGE RECORD
The log below shows the time and dates that the internal clock of the X26 has been reset.

GMT TIME	Local Time	Change Type
09/09/03 01:21:01	09/08/03 18:21:01	TO

Zoom Out Print Save As Encrypted Log Exit

DEVICE FIRE RECORDS

GMT TIME	Local Time	Duration [Secs]	Temperature [deg. C]	Batt [%]
09/09/03 01:23:12	09/08/03 18:23:12	1	30	96
09/09/03 01:23:15	09/08/03 18:23:15	1	31	96
09/09/03 01:23:20	09/08/03 18:23:20	5	31	96
09/09/03 01:23:31	09/08/03 18:23:31	10	32	96
09/08/03 19:44:29	09/08/03 12:44:29	1	31	95
09/08/03 19:44:31	09/08/03 12:44:31	2	31	95
09/08/03 19:44:36	09/08/03 12:44:36	5	31	95
09/08/03 19:44:50	09/08/03 12:44:50	12	32	95

Fire records found: 8



Trilogy™ Logs

- Event Log – Information about when the event happens
- Pulse Log – Record of the CEWs electrical energy output, during the event
- Engineering Log – Documents the CEWs performance, during the event



Trilogy™ Logs – Event Log

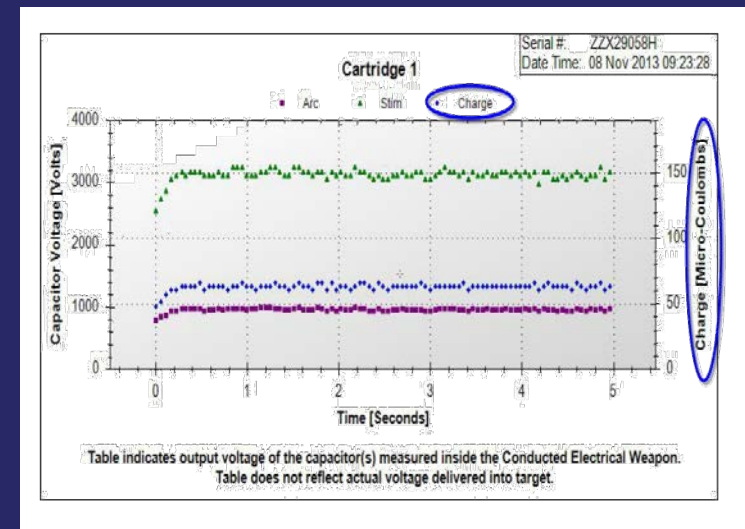
Seq #	Local Time [dd:mm::yyyy Hr:min:Sec]	Event [Event Type]	Cartridge Information [Bay:length in feet/status]	Duration [Seconds]	Temp [Degrees Celsius]	Batt Remaining [%]
1	22 Aug 2011 02:03:01	Armed	C1: Empty C2: Empty		30 30	Unknown
2	22 Aug 2011 02:03:59	Armed	C1: 35' Standard C2: Empty		30 30	Unknown
3	22 Aug 2011 02:17:36	Armed	C1: 25' Standard C2: 25' Standard		27 27	Unknown
4	22 Aug 2011 02:17:36	Trigger	C1: Deployed	5		Unknown
5	22 Aug 2011 02:17:42	Trigger	C2: Deployed	5		Unknown
6	22 Aug 2011 02:17:49	Arc	C1: Deployed C2: Deployed	5 5		Unknown
7	22 Aug 2011 02:17:55	Arc	C1: Deployed C2: Deployed	1 1		Unknown
8	22 Aug 2011 02:17:58	Arc	C1: Deployed C2: Deployed	5 5		Unknown
9	22 Aug 2011 02:18:02	Safe	C1: Deployed C2: Deployed	26 26	31 31	Unknown

- Events begin when the safety is moved
- Stores deployment events for each cartridge bay
 - Cartridge type
 - Deployment status (Deployed/Not)
 - Trigger Pull vs. Arch Switch Activation
 - Cycle Duration/Date/Time
- Records weapon configuration Changes
 - Time/Date/Sync/Light/Laser Settings/Etc.



Trilogy™ Logs – Pulse Log

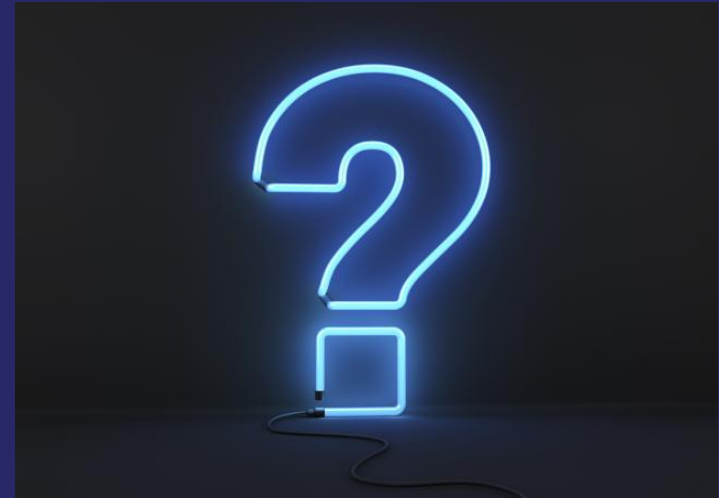
- Records pulse activity from
 - Trigger pulls
 - Arc displays
- Arc and Stimulation Information
 - Illustrates CEW efforts to achieve a complete circuit
- Charge
 - Insight into circuit completion





Trilogy™ Logs – Engineering Log

- Trade Secret
 - Shhh, don't tell anyone
- Just kidding!
 - We aren't electrical engineers





In Closing, let me ask...

- Do you see how the CEW functions?
- Are you more comfortable with what the CEW can/can't do?
- Are the CEWs perfect weapons?
 - What is the cause of most “weapon failures”?
- Do you have a good idea about how to review training information?
- Do you have a better understanding of what to look for in reports, records, and CEW data downloads?



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