

Course Title:		Less Lethal			
Certification:		STC#03733907 Pepperball STC#07151324 LL Shotgun STC#04162054 Stinger Grenade STC#08267337 40mm			
Certification Date:		5/20/19 Pepperball 05/21/19 LL Shotgun 00/00/00 Stinger Grenade 05/20/19 40MM			
Expiration Date:		5/20/2021 Pepperball 05/21/2021 LL Shotgun 00/00/00 Stinger Grenade 05/20/21 40MM			
Review Date:		Pepperball 06/29/19 LL Shotgun 06/29/19 Stinger Grenade 06/29/19 40MM 06/29/19			
Time Block	Estimated Time	Learning Objective	Topic	Brief Overview of Topic/Instruction	Instructor
0700-0800	60	Introduction to Less Lethal Shotgun	Less Lethal Device Bean-Bag Shotgun	Department policy, firearms safety rules, nomenclature, loading and unloading, bean bag characteristics, deployment considerations, general care.	DTU Staff
0800-0810	10	Break 0800-0810			
0800-1100	180	Less Lethal Shotgun application and deployment	Less Lethal Device Bean-Bag Shotgun	List firearm safety rules, demonstrate Patrol Ready, chamber challenge and safely unload. Give verbal warnings, deploy two rounds on pre-staged target.	DTU Staff
1100-1200	60	Lunch 1100-1200			
1200-1300	60	Introduction to Pepperball Launcher	Less Lethal Device Pepperball Launcher	Department policy, nomenclature, launcher operations, chemical agent effects, projectile characteristics, deployment considerations, general care.	DTU Staff
1300-1310	10	Break 0800-0810			
1310-1600	180	Pepperball Launcher application and deployment	Less Lethal Device Pepperball Launcher	Demonstrate how to make Pepperball launcher operational, deploy training rounds on pre-staged target. Loud verbal commands, deploy training rounds on primary and secondary target and demonstrate how to make the device safe.	DTU Staff
Day 2					
0700-0800	60	Introduction to Stinger Grenade	Less Lethal Device Stinger Grenade	Identify nomenclature, effects, deployment considerations, tactical commands/strategies, render safe procedures, and ATF reporting.	DTU Staff
0800-0810	10	Break 0800-0810			
810-1100	170	Stinger Grenade application and deployment	Less Lethal Device Stinger Grenade	Verbally describe how to ready the Stinger Grenade. Explain where and how to deploy device. Student will deploy on instructors command.	DTU Staff
1100-1200	60	Lunch 1100-1200			
1200-1300	60	Introduction to 40MM Single and Multi-Launcher	Less Lethal Device 40MM Launcher	Department policy, types of munitions, function check, deployment considerations, general care.	DTU Staff
1300-1310	10	Break 1300-1310			
1300-1600	180	40MM Single and Multi-Launcher practical application/deployment	Less Lethal Device 40MM Launcher	Describe the single and multi-shot 40mm less lethal launcher platform nomenclature. Demonstrate a functions check. Give loud verbal commands, deploy the single and multi-shot launcher on static targets. Demonstrate how to make the device safe.	DTU Staff

LESS-LETHAL SHOTGUN



DETENTION IN-SERVICE TRAINING UNIT

P&P REVIEW

- **I.85 USE OF DEFENSIVE DEVICES**
 - <https://ssp.sdsheriff.com/DSB/DetentionPP/Section%20I%20Security%20and%20Control/I.85%20Use%20of%20Defensive%20Devices.pdf>
- **I.89 USE OF FORCE**
 - <https://ssp.sdsheriff.com/DSB/DetentionPP/Section%20I%20Security%20and%20Control/I.89%20Use%20of%20Force.pdf>
- **ADDENDUM F: USE OF FORCE GUIDELINES**
 - <https://ssp.sdsheriff.com/DepartmentResources/DeptPP/Procedures%20Section/Use%20of%20Force%20Guidelines-Addendum%20F.pdf>
- **FACILITY GREEN SHEETS & POST ORDERS**

FIREARMS SAFETY RULES

- ✓ *Treat every weapon as if it were loaded.*
- ✓ *Never point a weapon at anything you don't intend to shoot.*
- ✓ *Keep your finger straight and off the trigger until you intend to deploy.*
- ✓ *Be mindful of your target's background, and surrounding areas.*

Addendum F

Less Lethal Force:

A lawful and within policy application of force delivered with the intent to subdue a subject, rendering them non-threatening and/or to gain their compliance.

Force includes the pointing of any firearm or weapon designed to fire a projectile and any incident involving the actual or attempted detention of a subject at gunpoint (defined as holding the barrel of a weapon on target).

Intermediate weapons:

Hard intermediate weapon control includes saps and batons when used to deliver strikes. Less lethal munitions used for long range impact also fall within the intermediate weapon's category.

Addendum F (Continued)

Less Lethal Munitions:

Extended range, kinetic energy impact specialty munitions that may be used from a distance ("Bean Bag", PepperBall, LL 40mm).

Less Lethal specialty munitions:

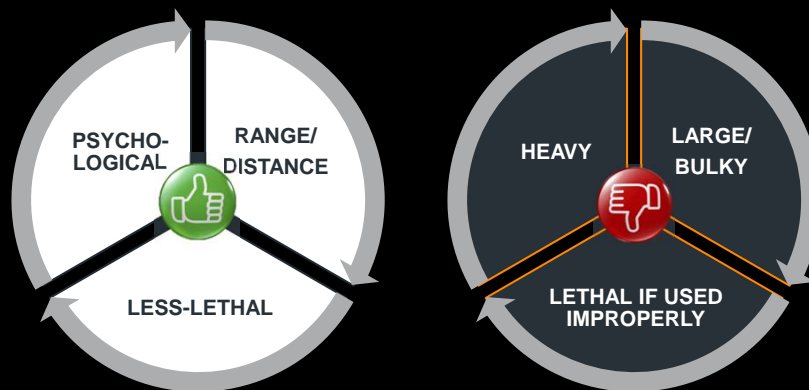
Projectiles used to stop aggressive behavior which, if not stopped, may result in injury or death. These projectiles are manufactured from wood, foam rubber, and other softer-than-lead materials. When used properly, by trained personnel, this type of munition is less likely to result in death or serious injury.

PRIORITY OF HUMAN LIFE

1. HOSTAGES & INNOCENT CIVILIANS
2. LAW ENFORCEMENT PERSONNEL
3. SUSPECTS



ADVANTAGES & DISADVANTAGES



USES FOR LESS LETHAL SHOTGUN

- **Riot** and Crowd Control.
- Armed subjects in custody.
- **Subjects displaying assaultive behavior and/or aggravated active aggression.**
- **Tactical Operations.**

LOADING AND UNLOADING

- PATROL READY
- UNLOAD FROM PATROL READY
- UNLOAD FROM CHAMBER CHALLENGE

KNOW THE DIFFERENCE



LESS LETHAL SHOTGUN



- **No pistol grip.**
- Side saddle hard ammo carrier.
- Forend light (Not featured on image).
- **Orange furniture (Synthetic stock and forend).**
- **Smooth bore barrel.**
- Less Lethal shotguns will fire lethal rounds.

NOMENCLATURE



RESPONSIBILITY

- **YOU** are responsible for the rounds loaded into the shotgun
- **YOU** are responsible for all rounds discharged from the shotgun.
- **ALWAYS** verify 12ga. rounds are less lethal (CTS # 2581 Super-Sock) before loading the less lethal shotgun.

VERIFY ROUNDS!



LESS-LETHAL BEAN BAG ROUNDS

GEN 1



GEN 2

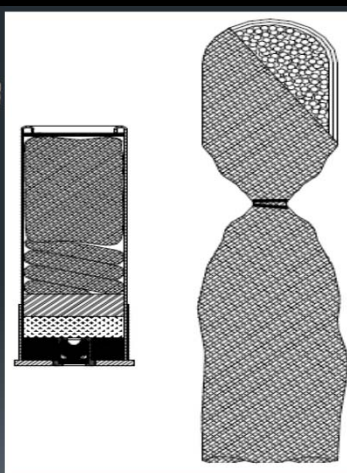


GEN 3



BEAN BAG CHARACTERISTICS

- **Manufacturer:**
 - Combined Systems
- **Model:**
 - CTS #2581 Super Sock
- **Description:**
 - 40 gram “Bean Bag”
 - #9 lead birdshot in a Kevlar sock
 - Smooth bore barrel (shotgun)
 - *Velocity – 280 fps at 10 yards*
 - *Muzzle Energy – 110 ft/lbs*



OPTIMUM RANGE

0 *feet* – Minimum

50 *feet* – Maximum

ISSUES

Penetration

Energy

Accuracy

Flight Stability

KINETIC ENERGY

- A form of energy created by the movement of mass.
- It is expressed in foot pounds.
- A foot pound is the amount of energy it takes to move one pound a distance of one foot.

ENERGY COMPARISON

- CPR compressions generate approximately .5 ft./lbs.
- A fastball generates approximately 97 ft./lbs.
- A .38 Special generates approximately .377 ft./lbs.
- A **CTS #2581 Super Sock** less lethal round generates approximately **110 ft./lbs.**

BLUNT FORCE

Upon contact with the human body. A blunt object creates a “SHOCK WAVE” effect. This is a product of the energy (Speed + Mass) delivered by the impact.

BLUNT TRAUMA INJURY

Compression of the tissues beyond their recoverable limit is the general injury mechanism associated with blunt trauma. If the compression is too fast, too deep, or a combination of both, serious injury or death may result.

POTENTIAL INJURIES

- Damage to organs and blood vessels are the dominant injuries associated with blunt force trauma.
- Penetrating Trauma: ***The unintended and most undesirable outcome in the use of less lethal specialty munitions.***
- **Serious Injury:** *“means a serious impairment of physical condition, including but not limited to: loss of consciousness, concussion, bone fracture, protracted loss or impairment of function of any bodily member or organ, a wound requiring extensive suturing, and serious disfigurement.” - Addendum F*

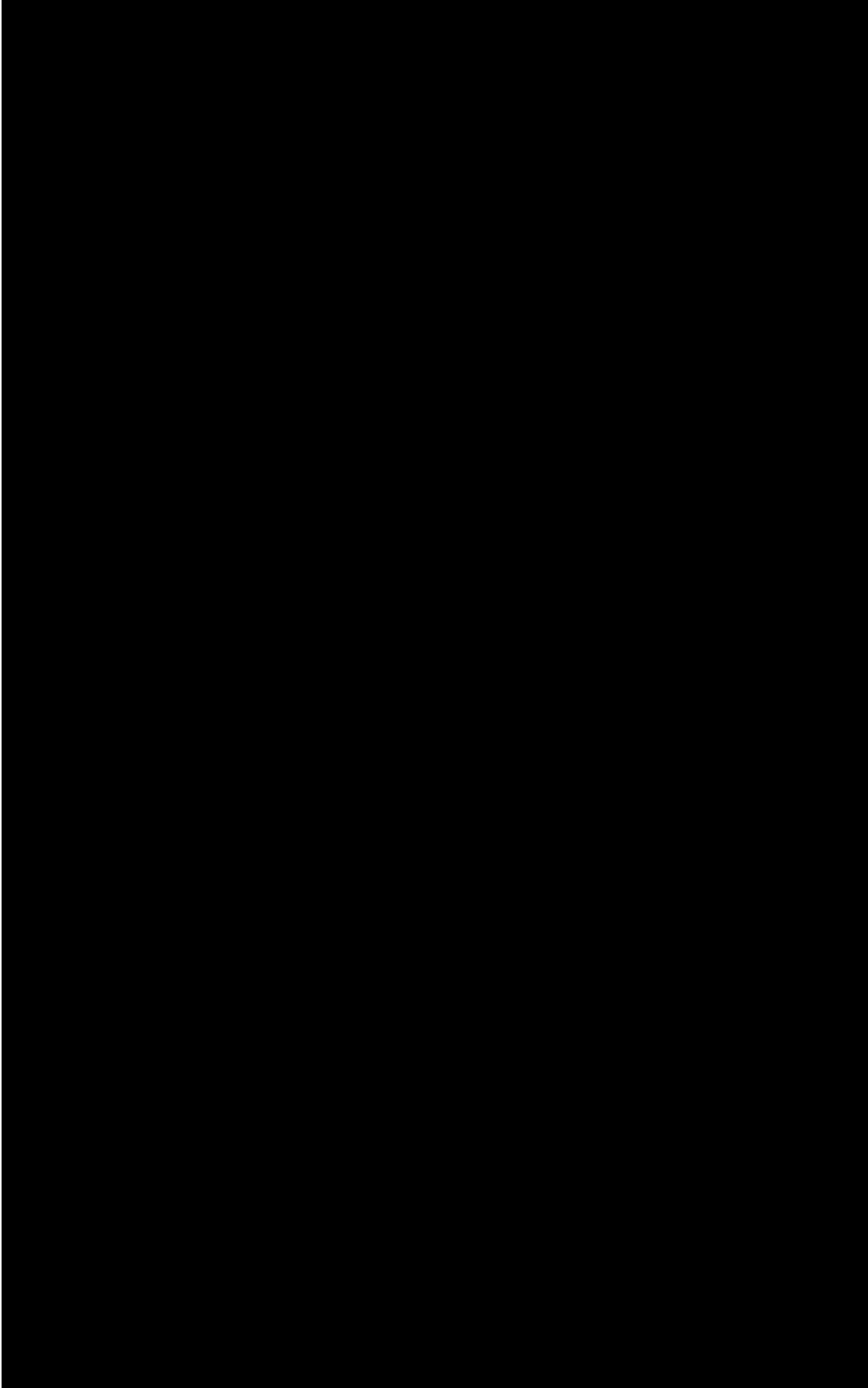
DEORLE v. RUTHERFORD



VERBAL WARNINGS

In situations where any force used is capable of causing serious injury or death, there is a requirement that, whenever feasible, the deputy must first warn the suspect that force will be used if they do not comply.

- ADDENDUM F SECTION: USE OF FORCE GUIDELINES



REPORTING PROCEDURES:

- Notify supervisor as soon as practical, but no later than end of shift.
- Take photographs and document details promptly.
- Render first aid to subjects who were struck by a specialty munition.
- ***Force includes the pointing of any firearm or weapon designed to fire a projectile***
- ***One SO-120 Supplemental Report must be completed for each inmate struck by the Super Sock in NetRMS.***
- In the event of death caused by a specialty munition, Department personnel will follow the procedures set forth in section 8.2 of the Sheriff's Department Manual of Policy and Procedures and in the detentions setting, section M.7 of the Detentions Services Policy and Procedure.



PepperBall®

Detention In-Service Training Unit

PEPPERBALL DEFINED

- PepperBall is a less-lethal chemical agent delivery system that uses high-pressure air launchers to deliver chemical agents from a safe distance.
- Combines chemical agent exposure with kinetic impact.

ADDENDUM F

- **Less lethal munitions** used for long range impact and electronic immobilization devices also falls within the intermediate weapon's category.
- **Non-lethal chemical agents** are used as a means of overcoming resistive or aggressive behavior. They may be used prior to hands-on control, if a physical confrontation appears to be unavoidable and injury may result.

P&P REVIEW

- **I.85 USE OF DEFENSIVE DEVICES***
 - <https://ssp.sdsheriff.com/DSB/DetentionPP/Section%20I%20Security%20and%20Control/I.85%20Use%20of%20Defensive%20Devices.pdf>
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- **FACILITY GREEN SHEETS & POST ORDERS**

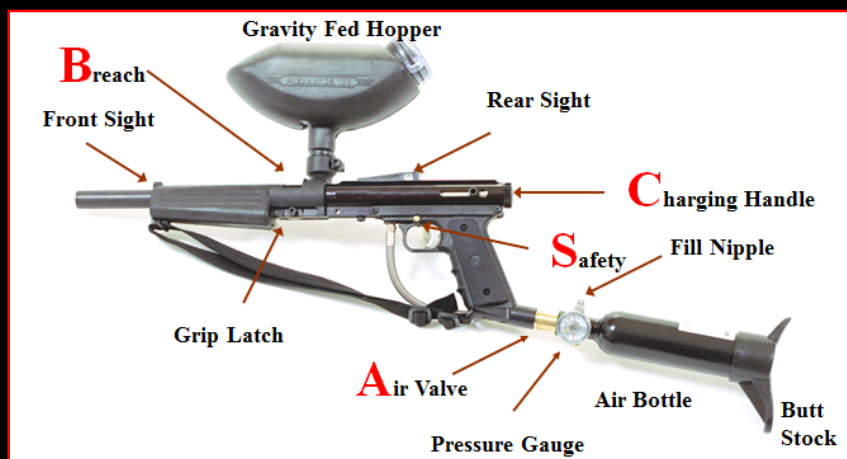
PEPPERBALL LAUNCHER

SA200 LAUNCHER

- 3,000 psi HPA bottle
- Gravity-fed hopper
- Firing rate: 6 rounds per second
- Action: Semi-auto
- Weight: 3.5 lbs.



SA 200 NOMENCLATURE



TIPPMANN LAUNCHER



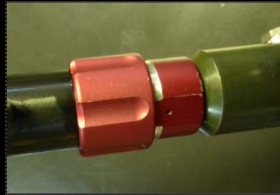
FT-12 NOMENCLATURE



LAUNCHER OPERATION

REMEMBER YOUR ABC'S

AIR



BREACH

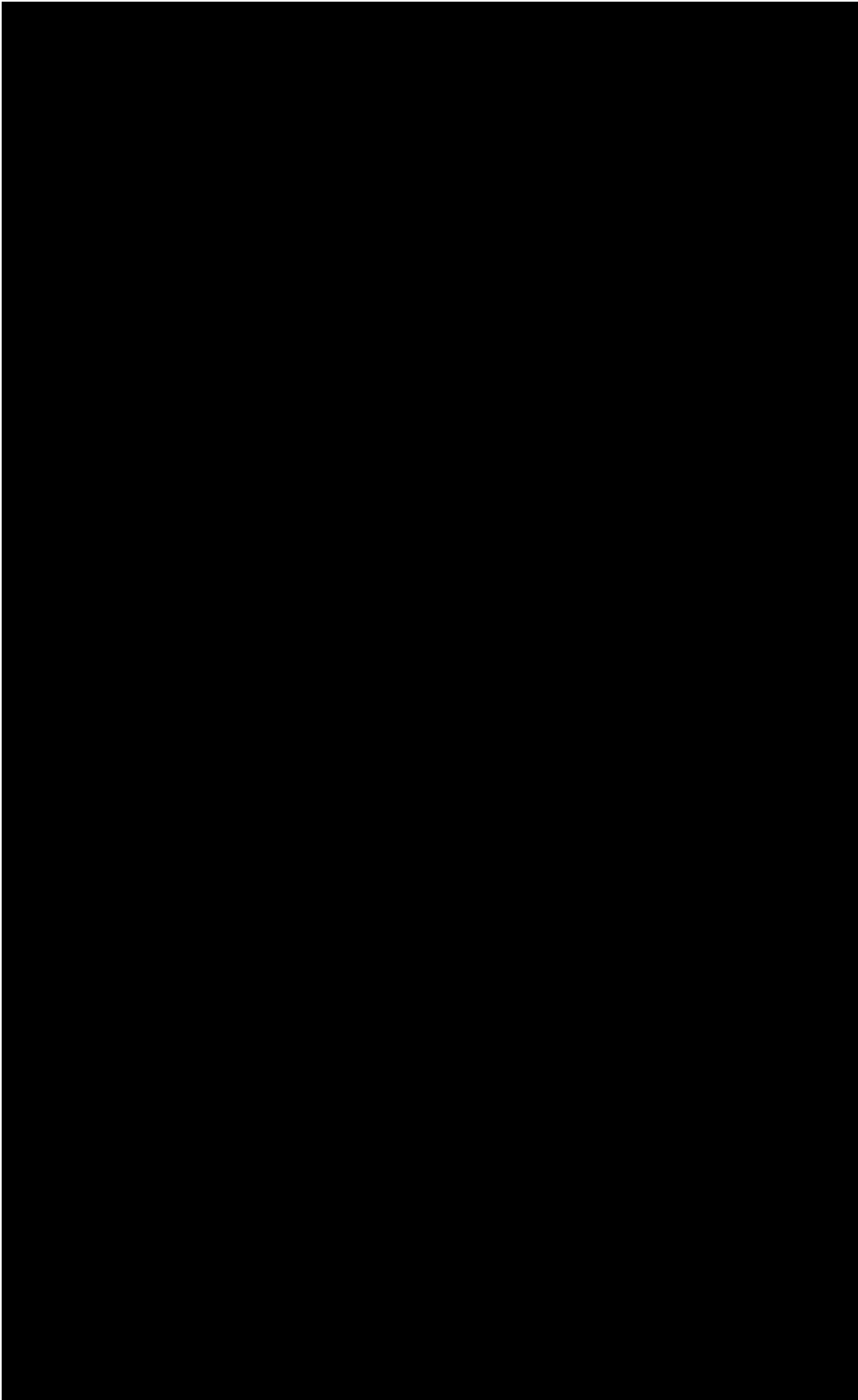


CHARGING HANDLE



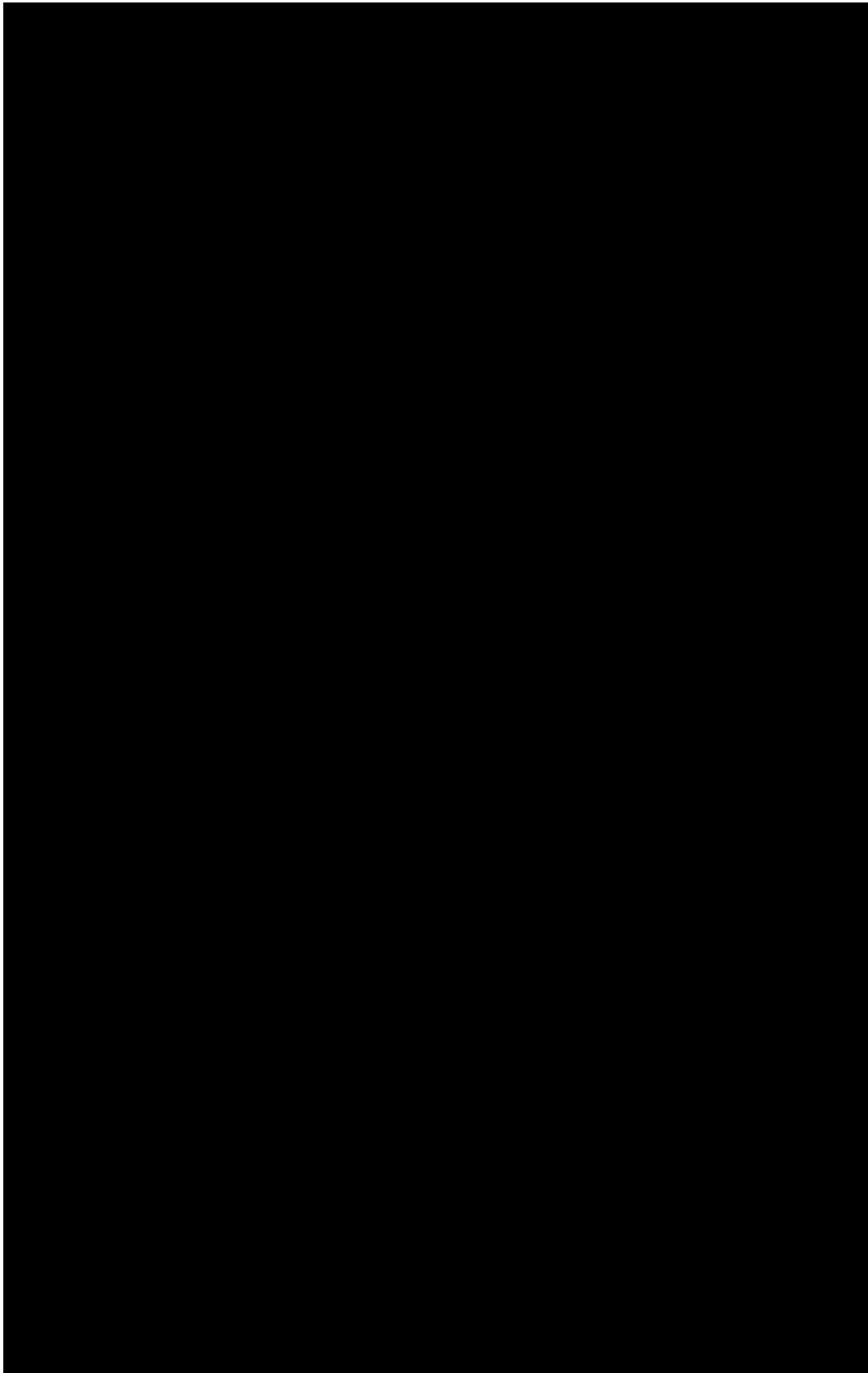
SAFETY

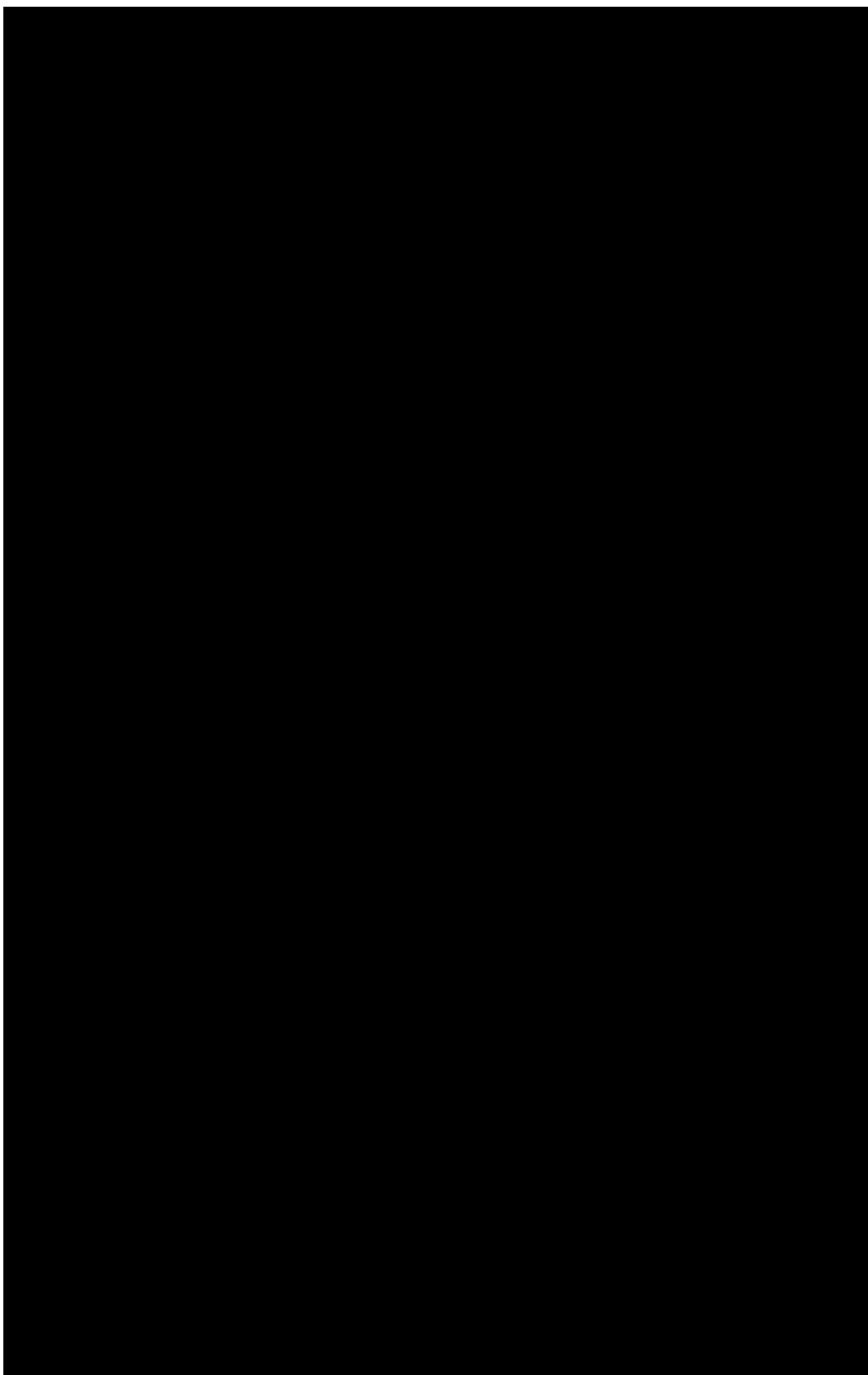


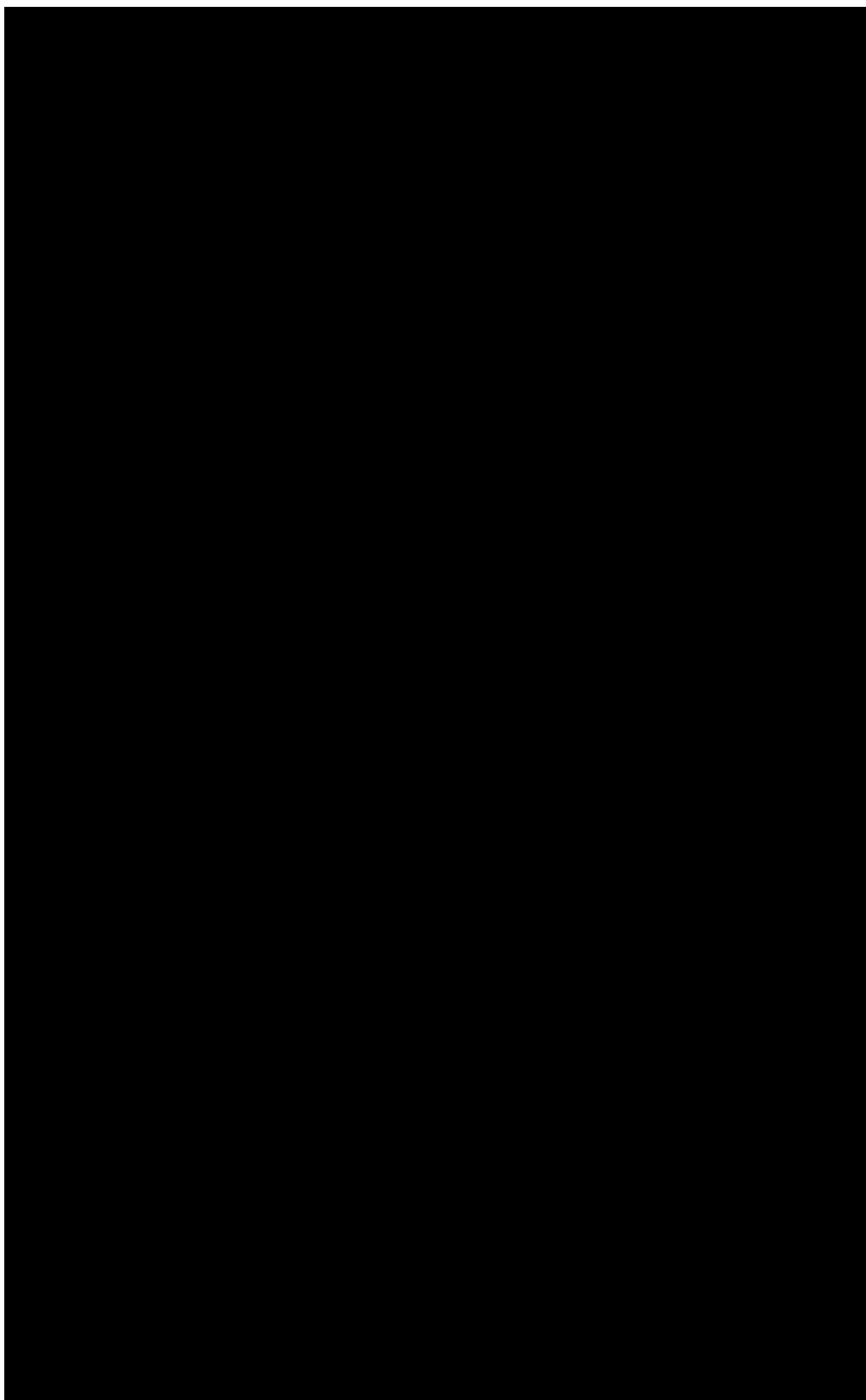


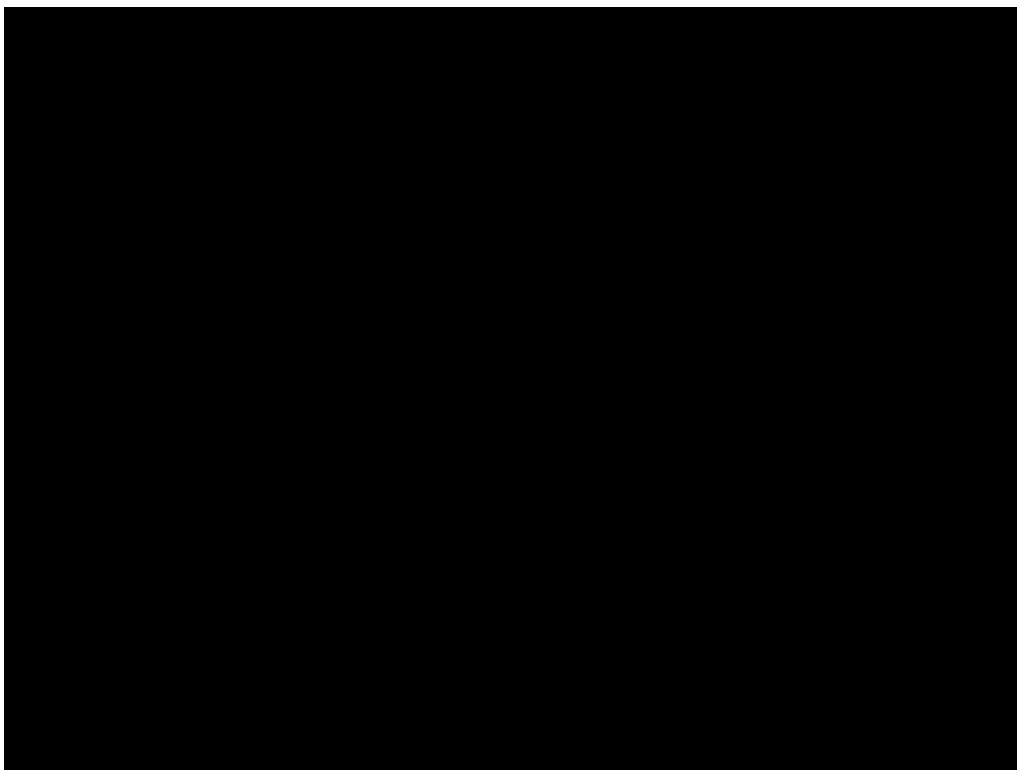
WHAT IS A PEPPERBALL PAVA?

- PAVA is one of six capsaicinoids found in pepper plants.
- PAVA is one of the hottest capsaicinoids and is an amide of Pelargonic Acid and Vanillylamine (thus, PAVA).
- PepperBall® products contain only purified non-oil based PAVA.
- PepperBall Technologies Inc. PAVA is produced at a pharmaceutical grade
- PAVA is also used in Tabasco sauce, spice packs and cooking oils.
- PepperBall PAVA is non Flammable









ANAPHYLACTIC SHOCK / REACTION

- 0.05% Are allergic to O.C.
- Anaphylaxis is a severe, whole-body allergic reaction to a chemical that has become an allergen.
- Symptoms develop rapidly, often within seconds or minutes.
- Symptoms may include the following:
 - ✓ Abdominal Pain/Cramping
 - ✓ Abnormal Breathing Sounds
 - ✓ Anxiety
 - ✓ Confusion
 - ✓ Cough
 - ✓ Diarrhea
 - ✓ Difficulty Breathing
 - ✓ Difficulty Swallowing
 - ✓ Fainting, Light-Headaches
 - ✓ Hives, Itchiness
 - ✓ Nasal Congestion
 - ✓ Palpitations
 - ✓ Skin Redness
 - ✓ Slurred Speech
 - ✓ Wheezing

DECONTAMINATION

- Fresh Air and Cool Clean Water
- Normal Recovery Time 10 minutes
- Keep Calm
- Assure Suspect is Safe
- Condition Temporary
- Unusual Reaction
- Cross-contamination



REPORTING PROCEDURES

- One SO-120 Supplemental Report must be completed for each inmate struck by the PepperBall Launcher in NetRMS.
- Again, photograph all injuries. Ensure to take the photos ASAP. Do not wait a prolonged period of time to take the photos!

**San Diego County
SHERIFF'S DEPARTMENT**

USE OF FORCE SUPPLEMENTAL REPORT

DATE	TIME	DIVISION	AGENCY	OFFICER	REPORTING OFFICER
APPLICANT'S NAME		APPLICANT'S POSITION		APPLICANT'S OFFICE	
APPLICANT'S AGENCY		APPLICANT'S SUPERVISOR		APPLICANT'S STATUS	
APPLICANT'S PHONE NUMBER		APPLICANT'S FAX NUMBER		APPLICANT'S E-MAIL ADDRESS	
APPLICANT'S STREET ADDRESS		APPLICANT'S CITY		APPLICANT'S STATE	
APPLICANT'S ZIP CODE		APPLICANT'S COUNTY		APPLICANT'S COUNTRY	
<input type="checkbox"/> PEPPERBALL LAUNCHER <input type="checkbox"/> TASER <input type="checkbox"/> OTHER					
NUMBER OF DISCHARGES: _____ NUMBER OF CONTACTS: _____ NUMBER OF STRIKES: _____					
USE CHEMICAL SPRAY EMPLOYER? <input type="checkbox"/> YES <input type="checkbox"/> NO FURTHER CONTACT REQUESTED? <input type="checkbox"/> YES <input type="checkbox"/> NO					
COMMENTS: SOURCE: TRAINING/AIDANCE					

HPA NOMENCLATURE

High Pressure Air:
3000psi
Max Pressure Bottles



HPA Bottles have two over-pressure relief valves: one protects the bottle from bursting (5K); while the other protects the launcher and user (1.5K)

FILL STATION NOMENCLATURE

Compression Knob



Quick-Release Fitting
(O-ring inside)



MAINTENANCE BY END USER

- Damp cloth to wipe the launcher down
- Do NOT use gun cleaning solvents or gun oils





D.T.U.

DEF-TECH
Stinger Grenade
Certification Course

The slide features a logo for the San Diego County Sheriff's Office D.T.U. (Defensive Tactics Unit) on the left. The logo is a seven-pointed star with a central seal depicting a landscape with a sun, mountains, and a river. The words "SHERIFF" and "SAN DIEGO COUNTY" are written around the seal. To the right of the logo, the letters "D.T.U." are written in a large, blue, serif font. Below this, the text "DEF-TECH Stinger Grenade Certification Course" is displayed in a blue, sans-serif font. The background of the slide is white with a blue gradient at the bottom.

Learning Objectives

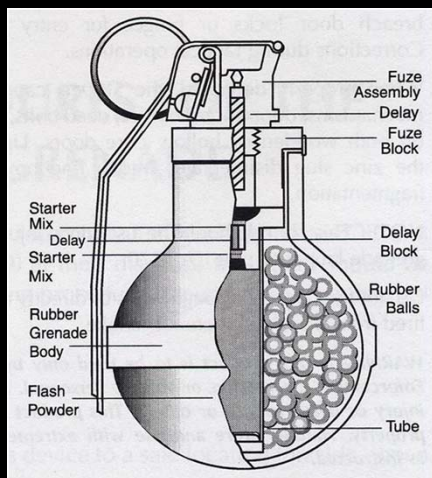
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Stinger Grenade Background



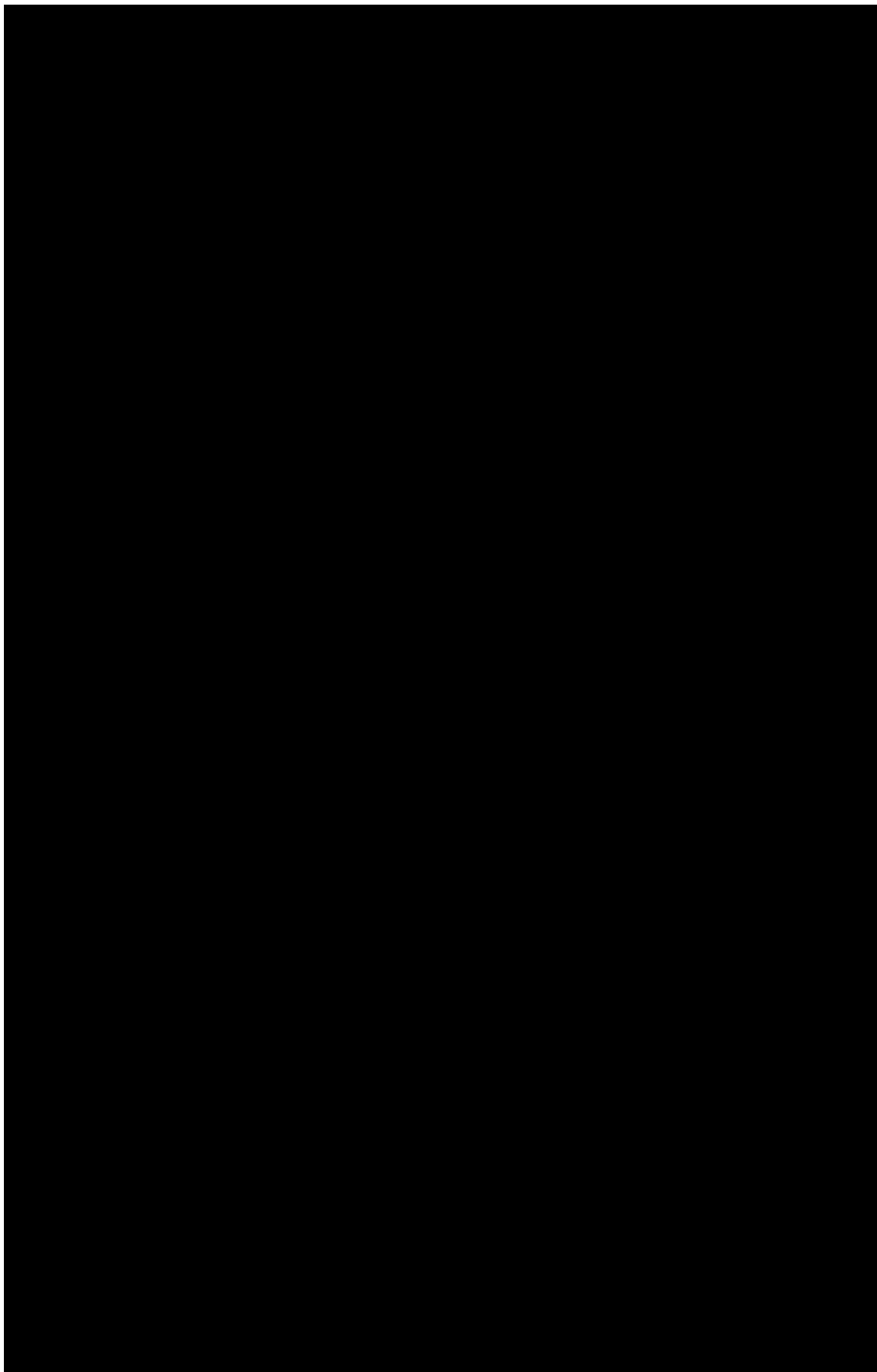
▶ munition device. impact distraction

Stinger Grenade Nomenclature

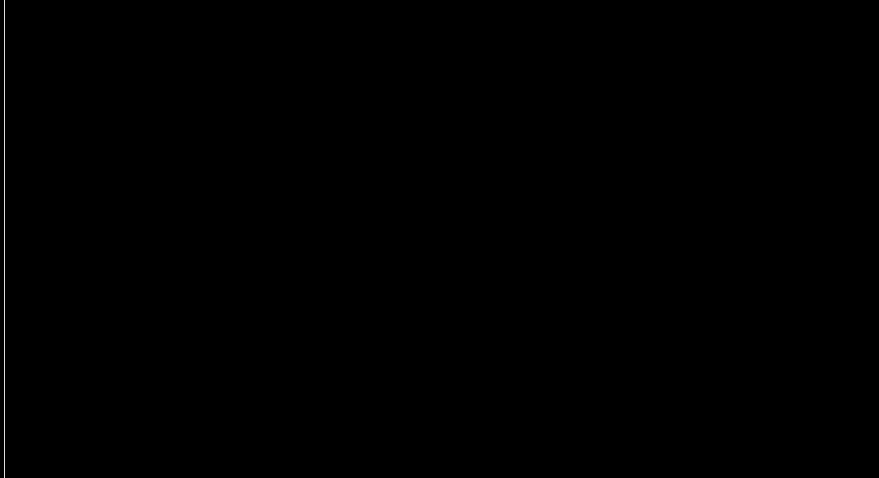


▶ A two second delayed detonation pyrotechnic

▶ 180 rubber pellets deployed 50 ft. @ 300 fps in a circular pattern

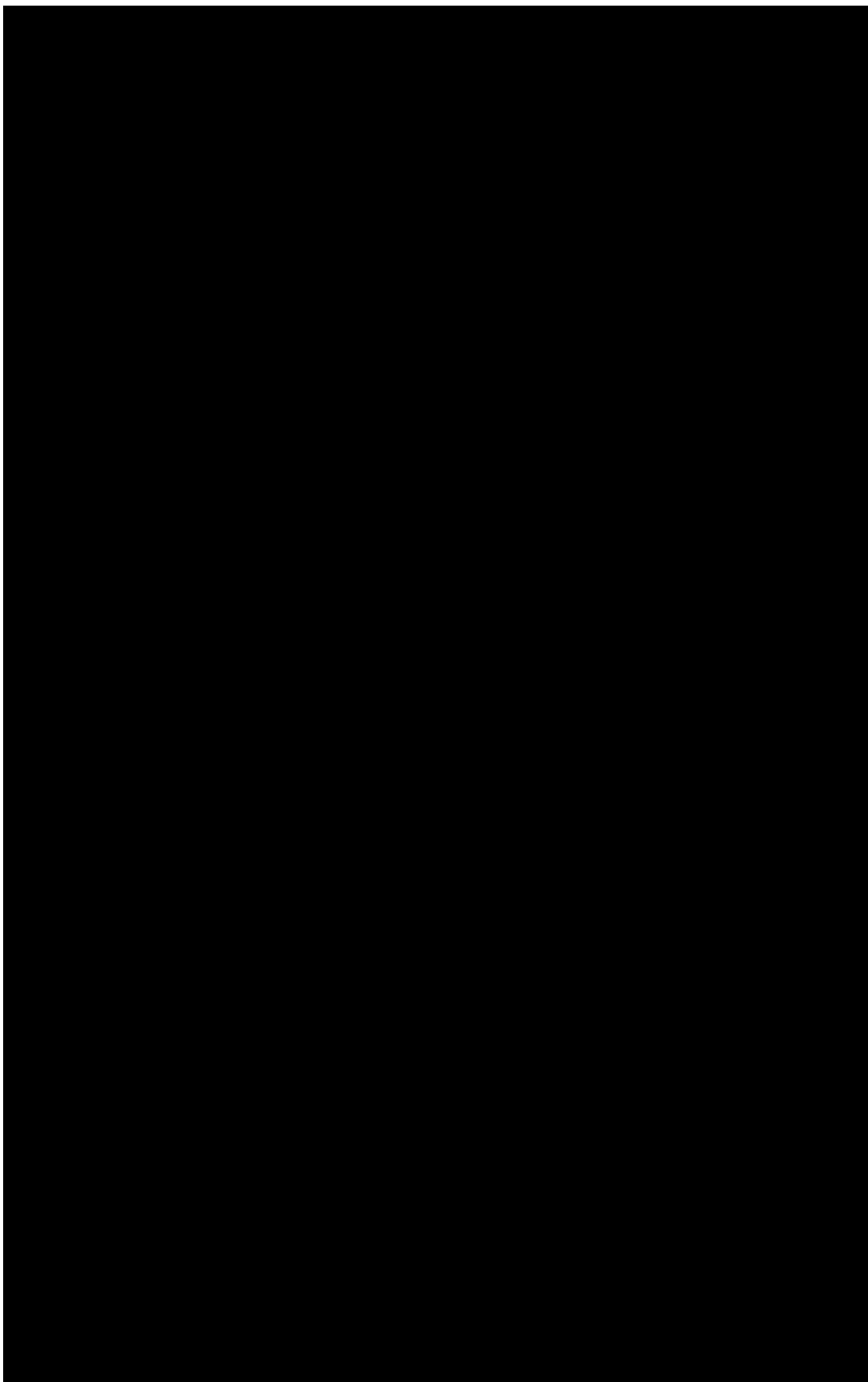


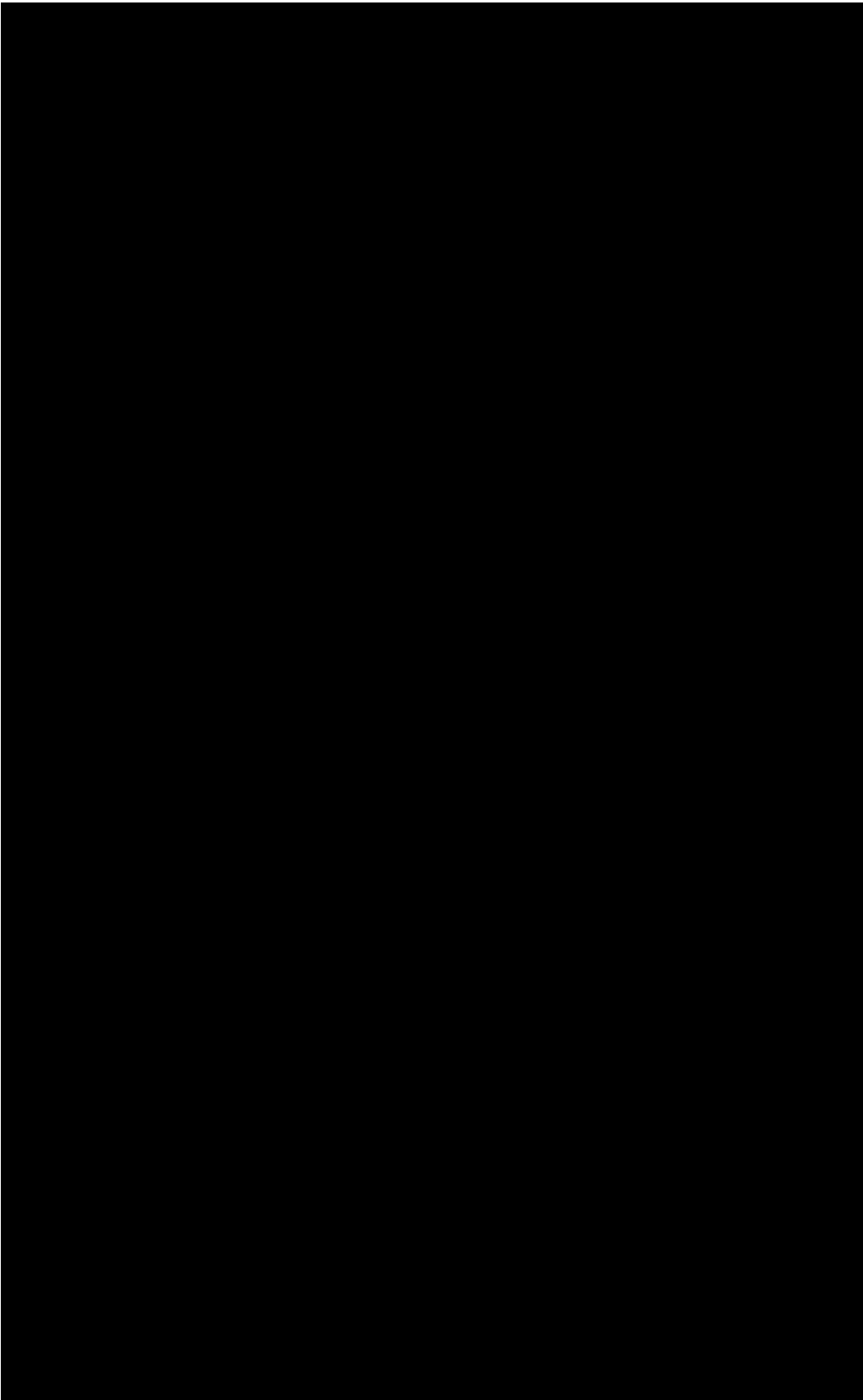
Stinger Grenade ground and air bursts

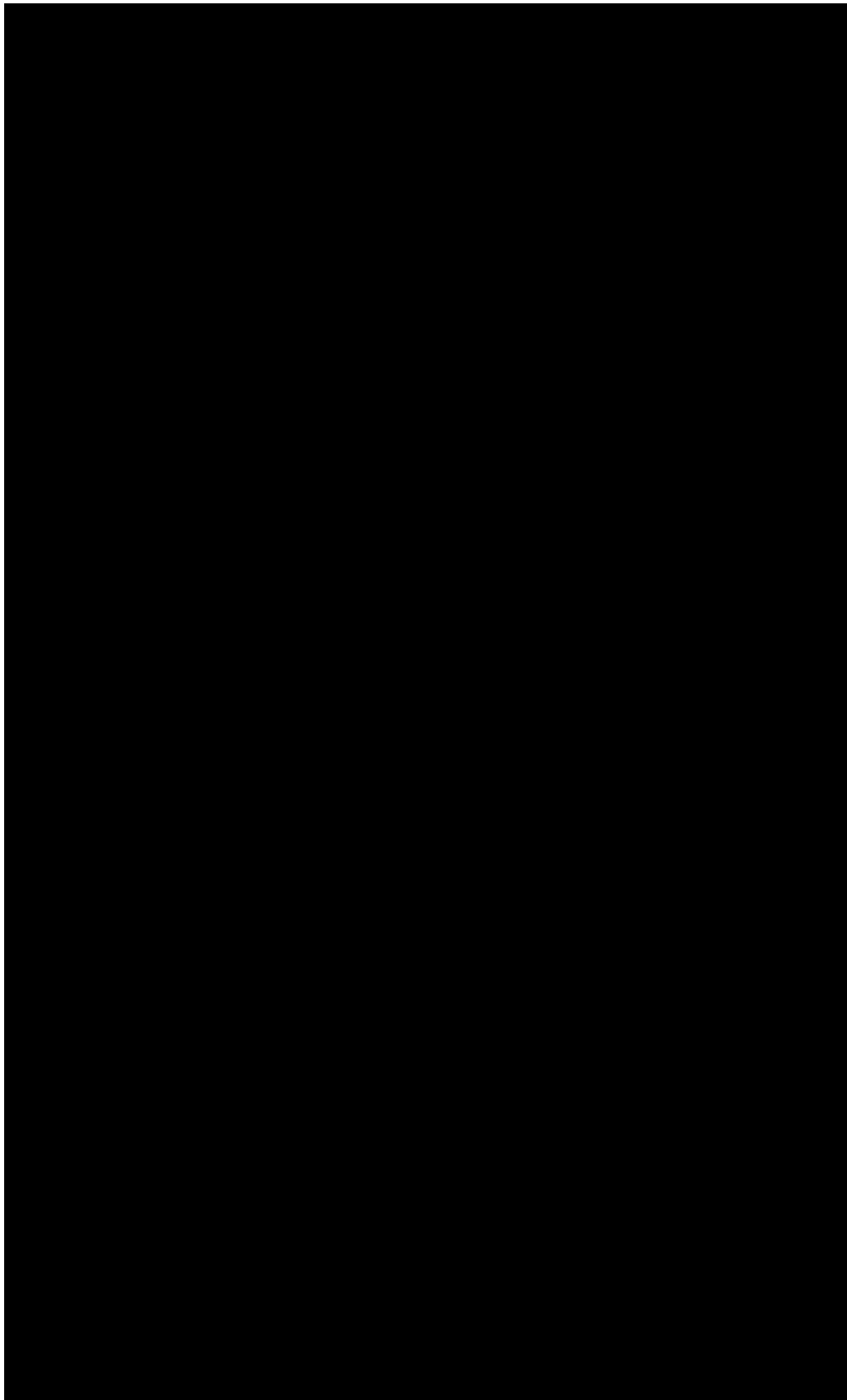


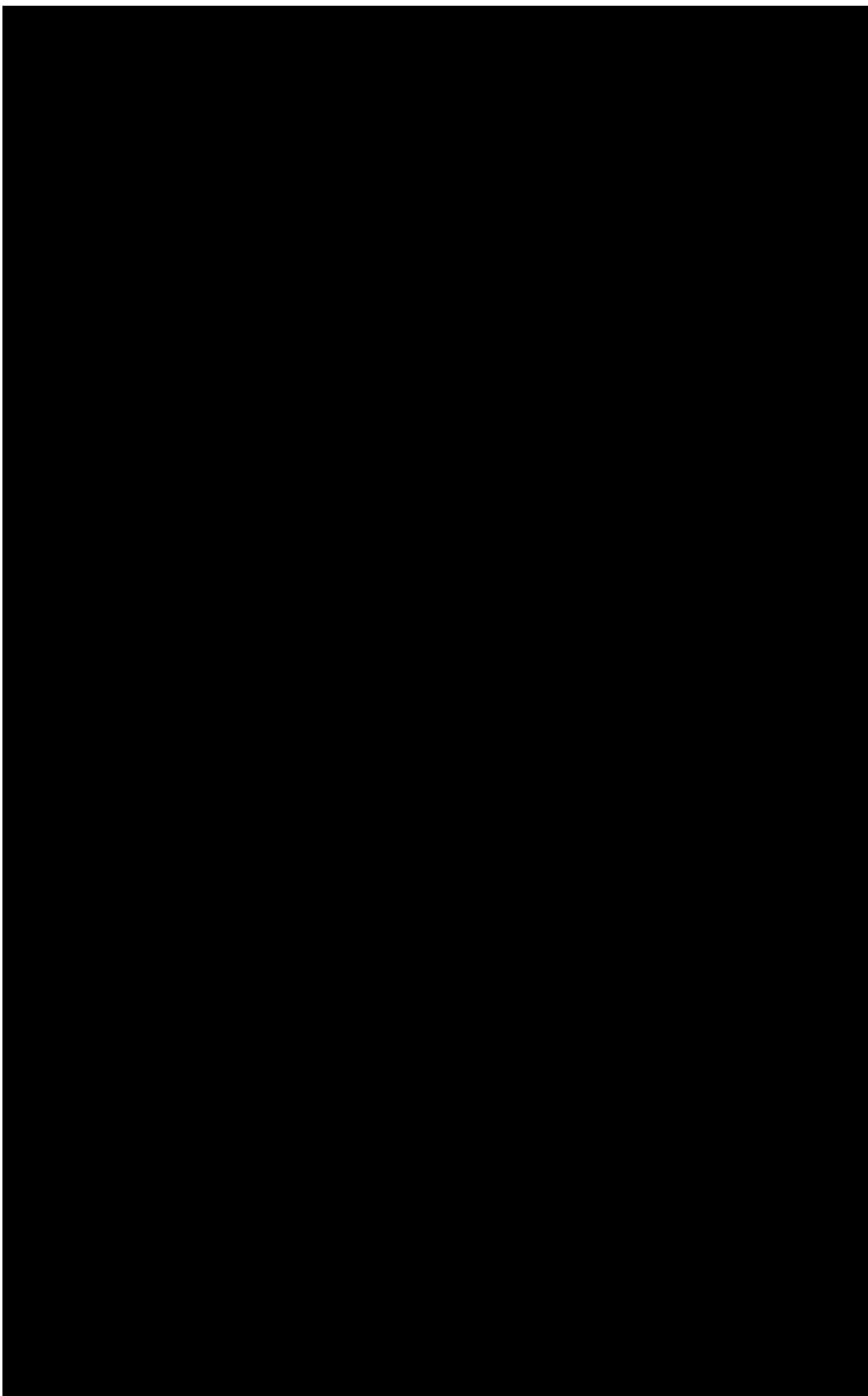
Occupy Oakland Flashbangs

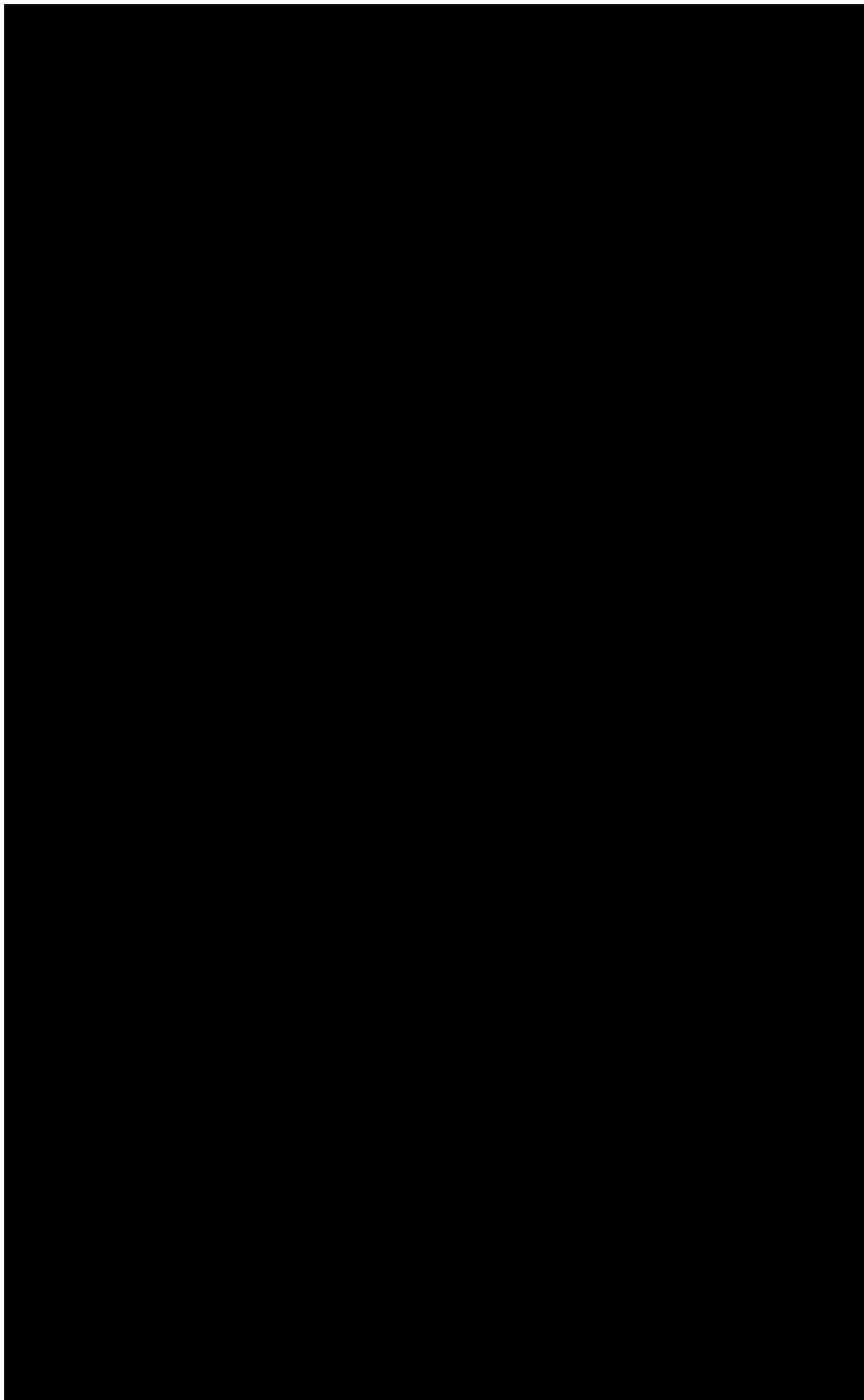


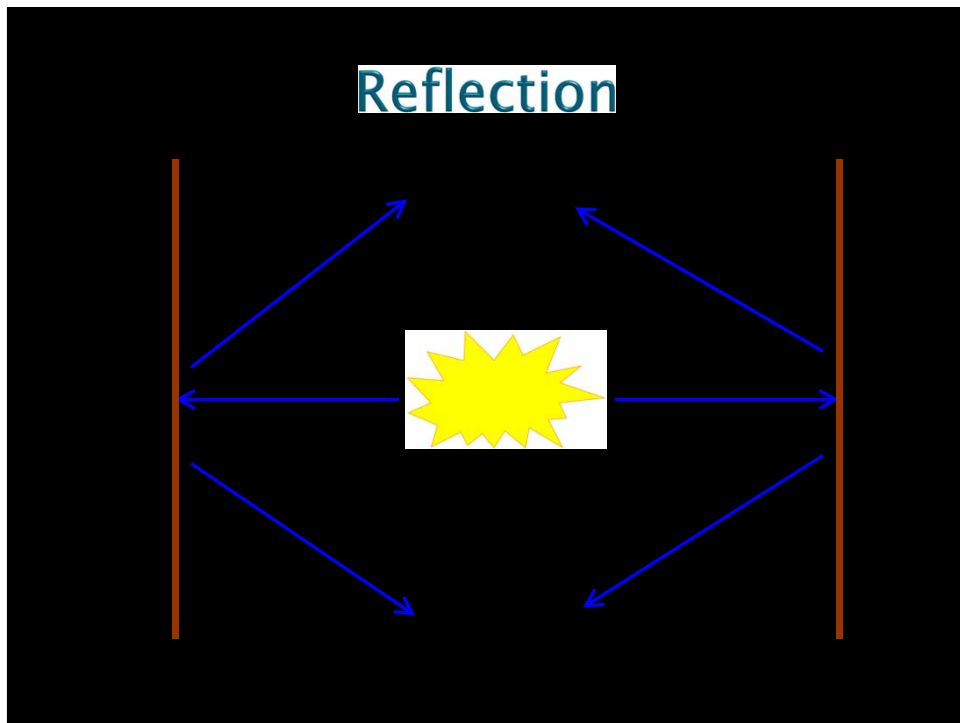
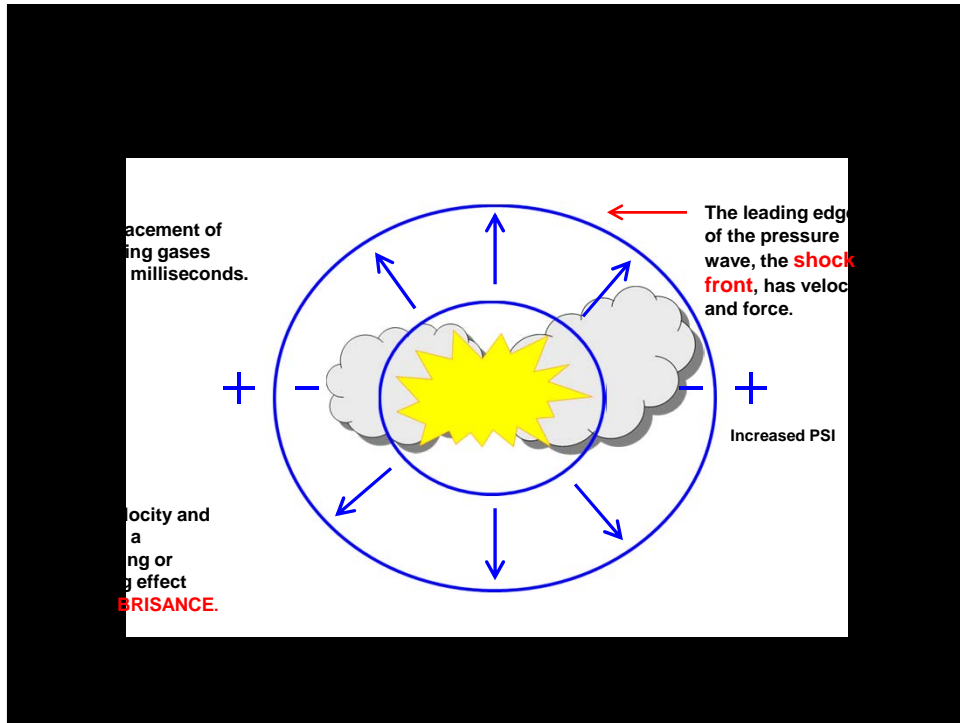


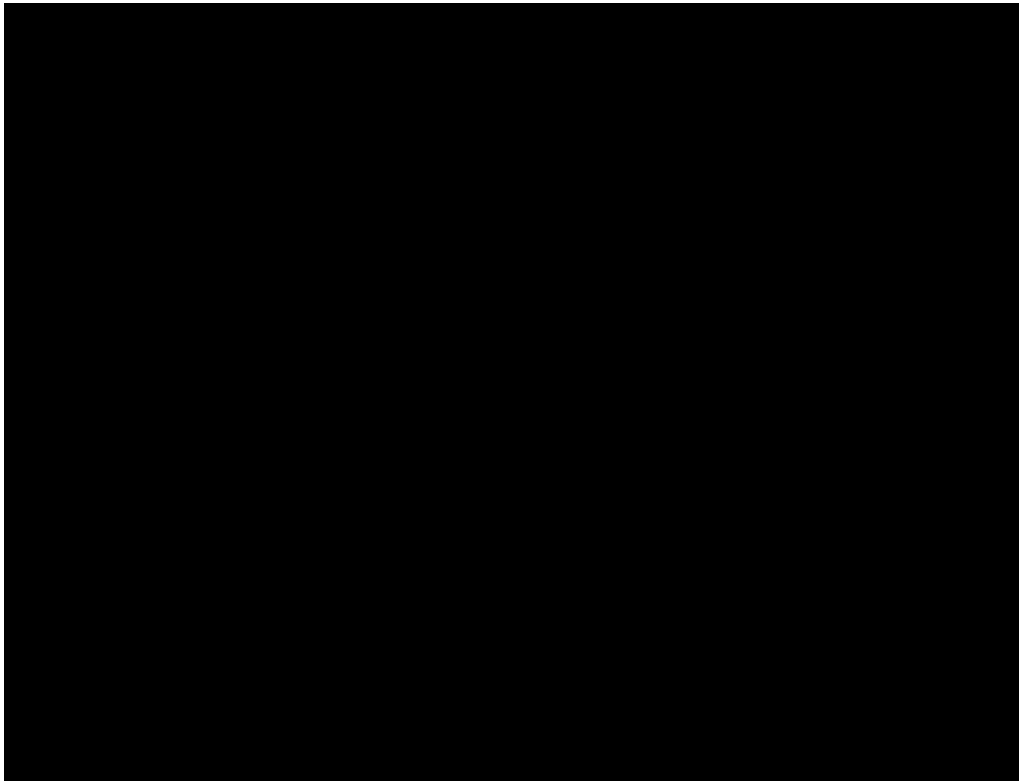










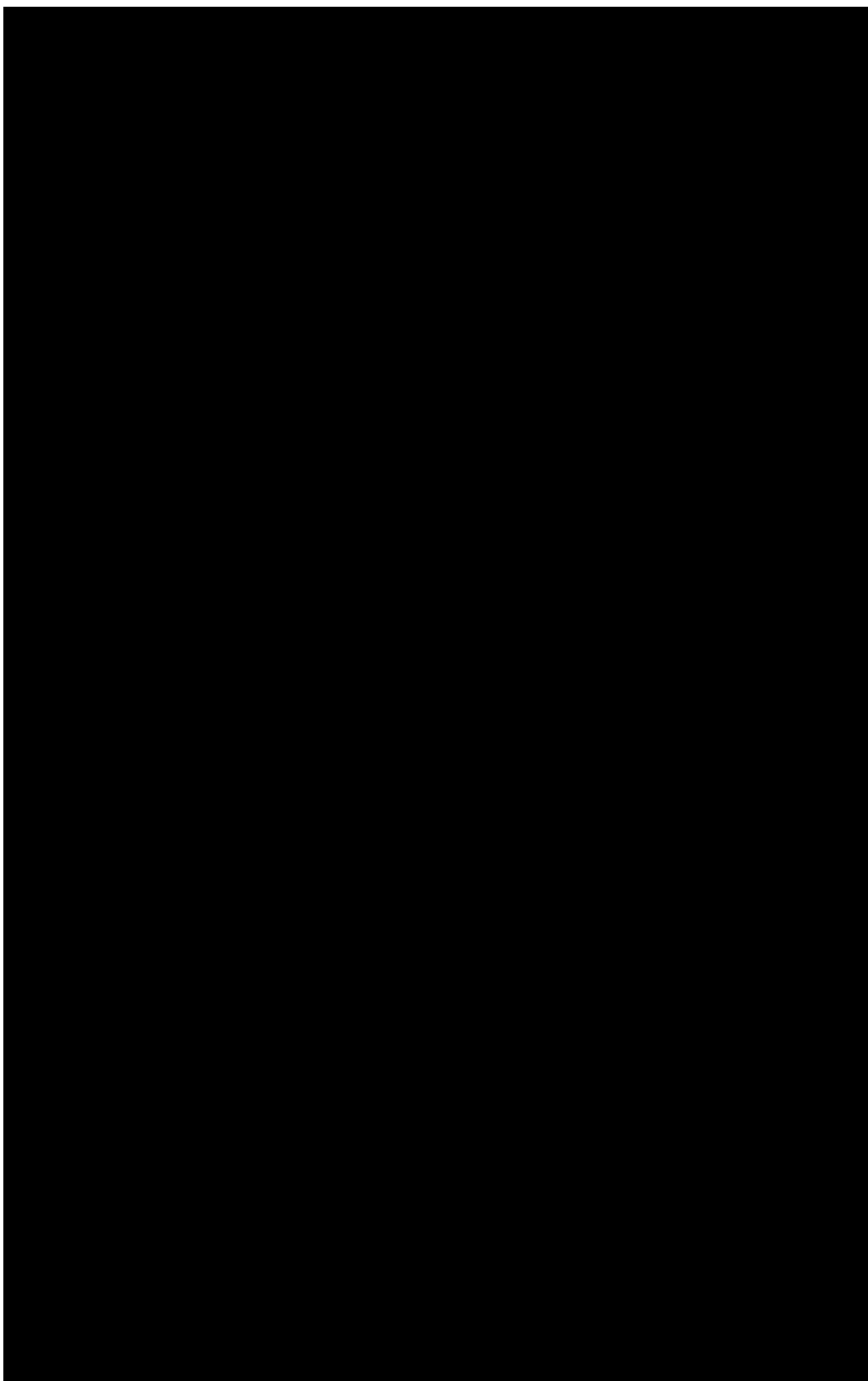


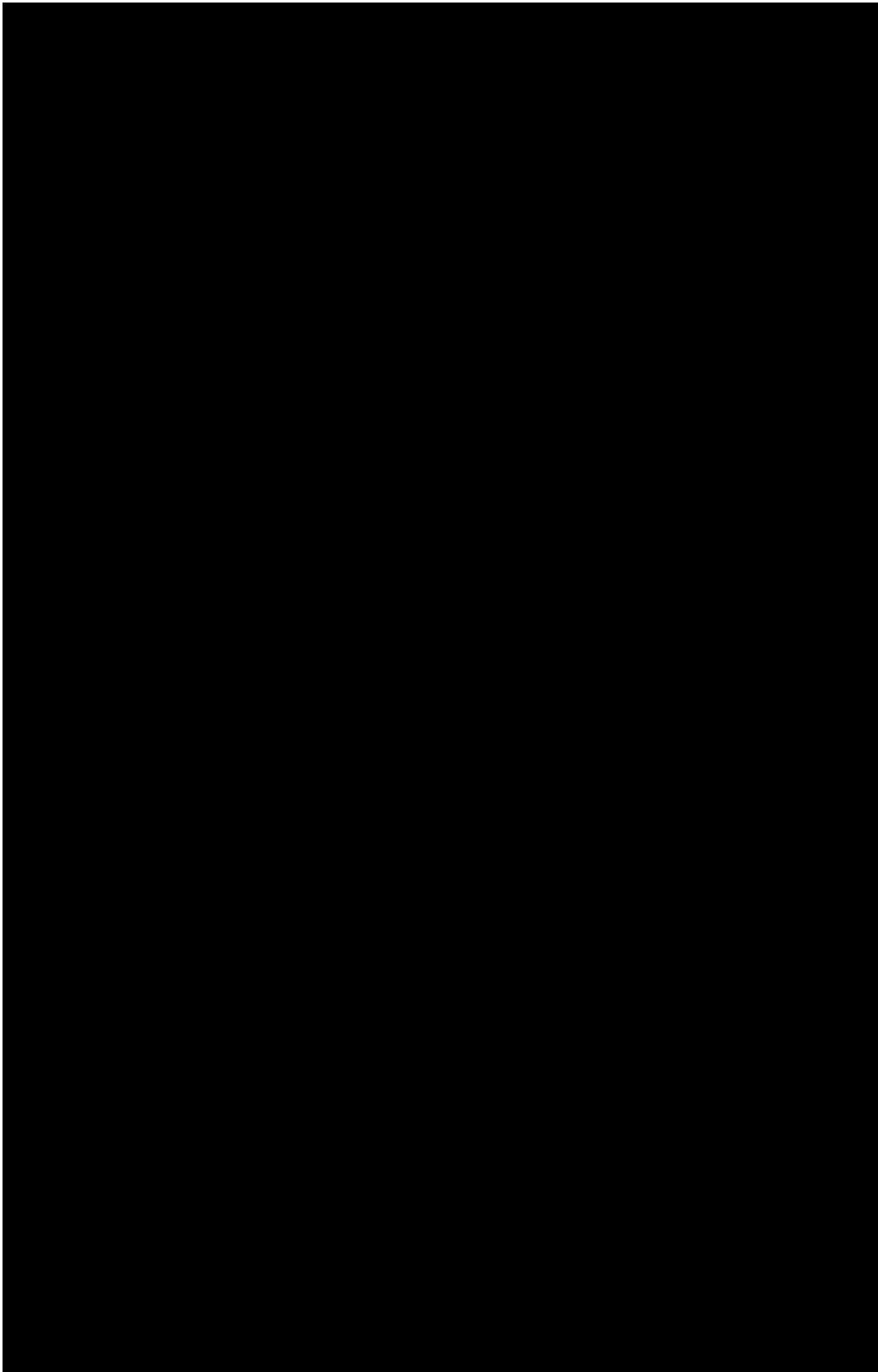
Case Law

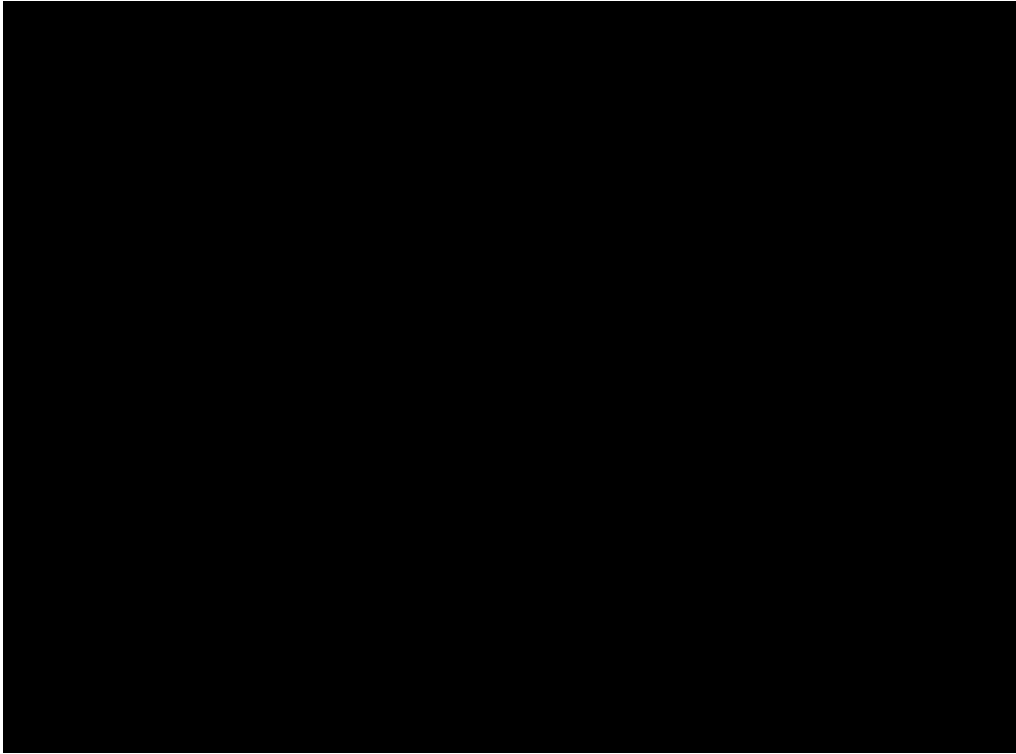
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Required Safety Equipment

- ▶
- ▶
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Render Safe Procedures

ATF Reporting

- ▶ Whenever a Stinger Grenade is deployed a report must be filed with the Bureau of Alcohol Tobacco and Fire Arms (ATF).

- ▶

- ▶

Common Errors

- ▶

- ▶

- ▶

- ▶

Questions?

40 MM Less Lethal Launcher



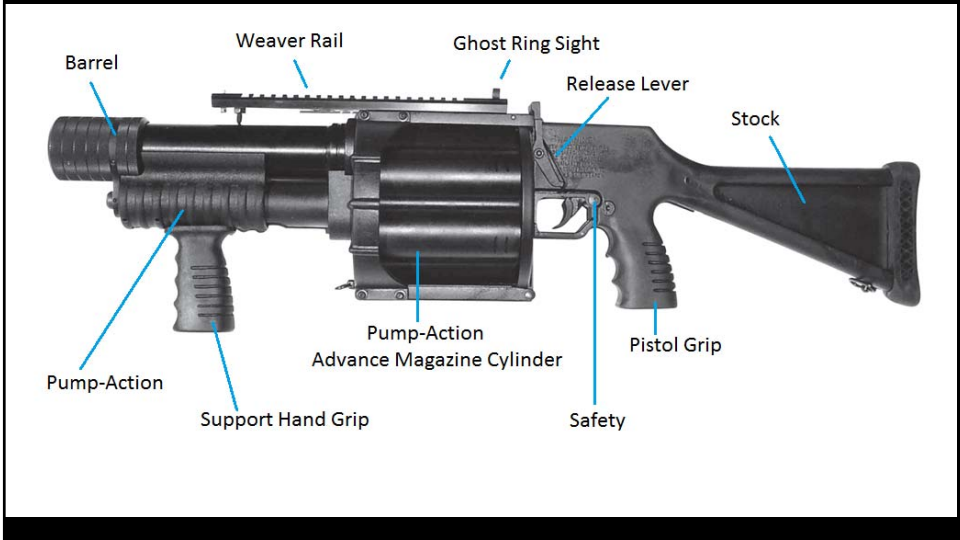
LEARNING OBJECTIVES

- Characteristics and types of 40 MM munitions
- Demonstrate function check and operation
- Discuss deployment considerations
- General Care
- Practical Application

40 MM Single and Multi Shot Launchers



Nomenclature



Nomenclature



Ghost Ring Sights



- Considered by some to be the fastest type of aperture sight.
- Accurate and easy to use and obscures the target less than nearly all other non-optical sights.



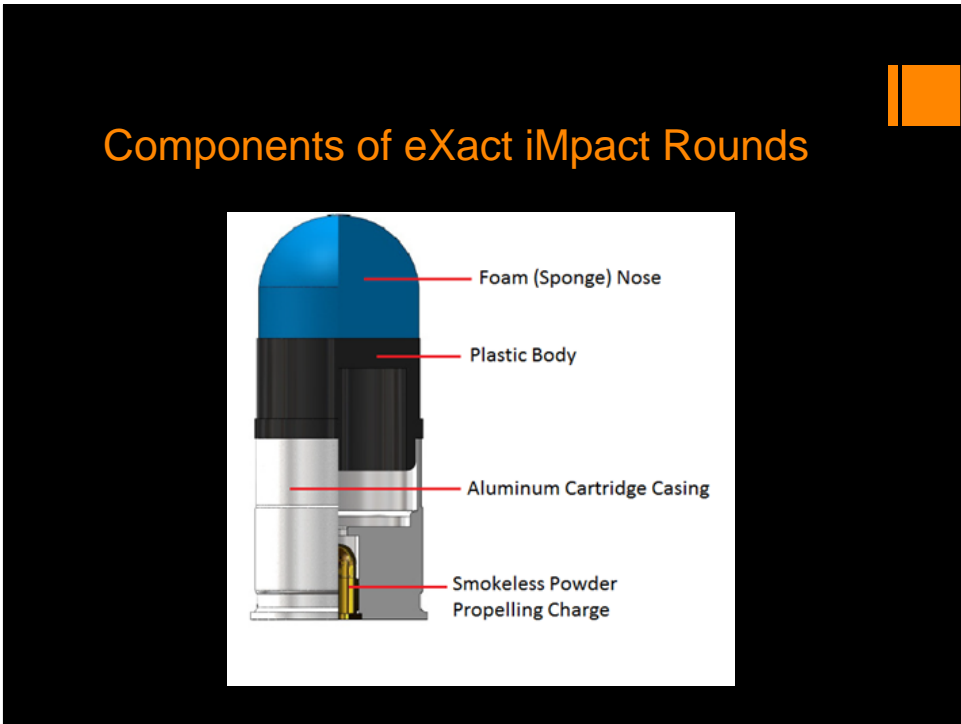
Multi-Shot Launcher

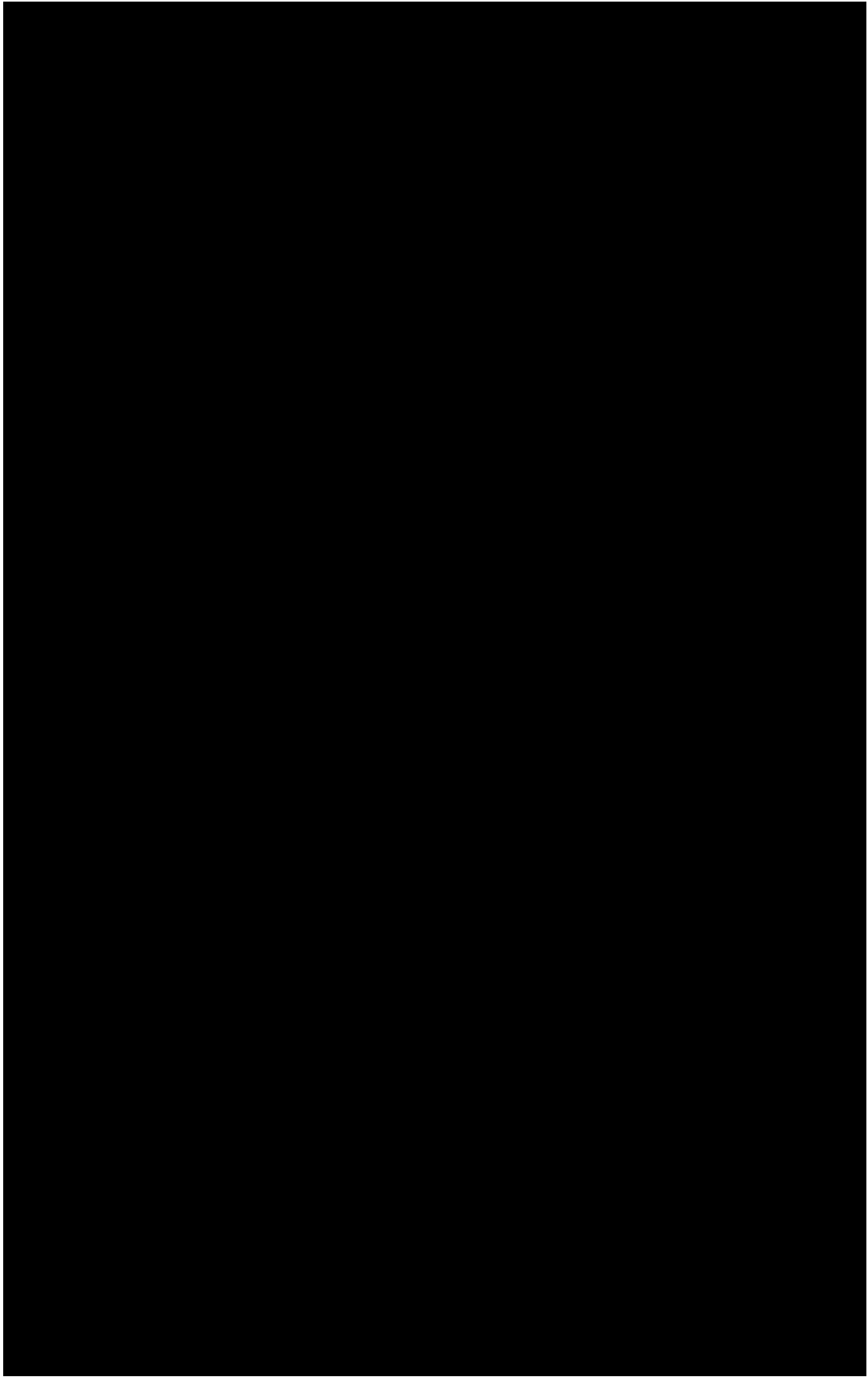
- Overall length is 2'8"
- Barrel length is 11" and rifled
- Weighs 9 lbs. (unloaded)
- Weaver Rail and ghost ring sight system
- Model Number PGL-65, Penn Arms
- 6 Shot
- Double action trigger



Single Shot Launcher

- Overall length is 2'4"
- Barrel length is 14" and rifled
- Weighs 6.75 lbs. (unloaded)
- Weaver Rail and ghost ring sight system
- Model Number TGL-1
- 1 Shot
- Single action or double action trigger pull





Training Rounds

- Training Rounds are reloadable
- Only requires one Hex Key
- Takes only seconds to reload
- Should be fired at a target with a rubber backing behind it



Training Round Reloaded



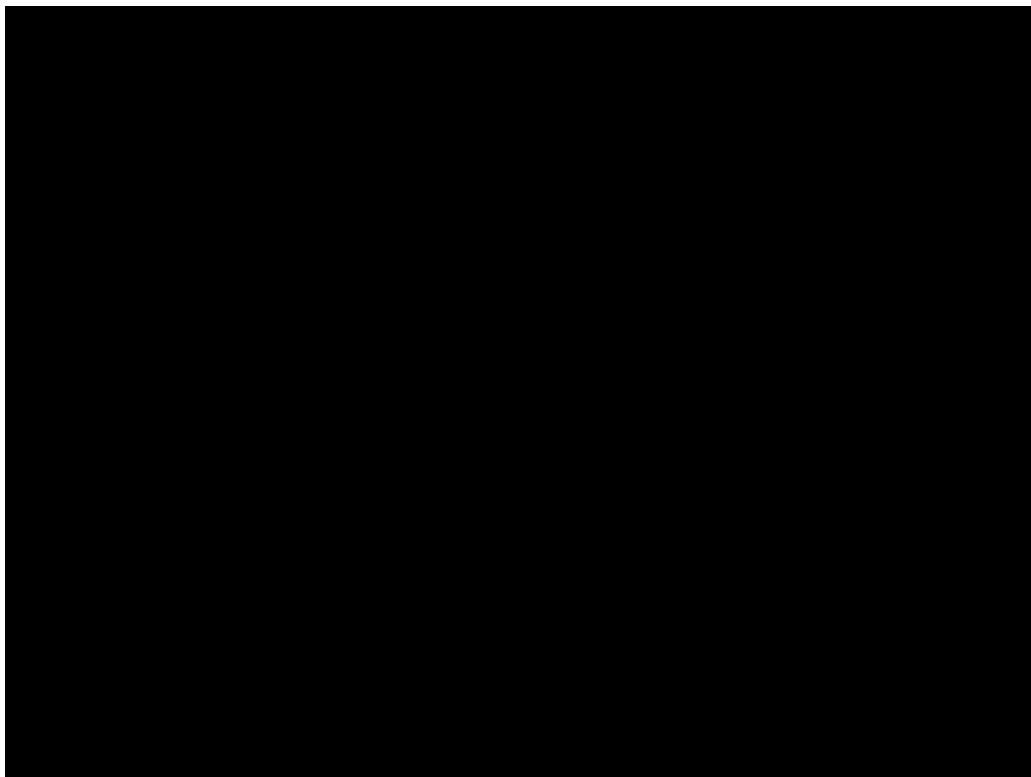
Impact Munitions

- The deployment of specialty impact munitions is generally equivalent to an expandable or fixed straight baton.



Layman's Terms





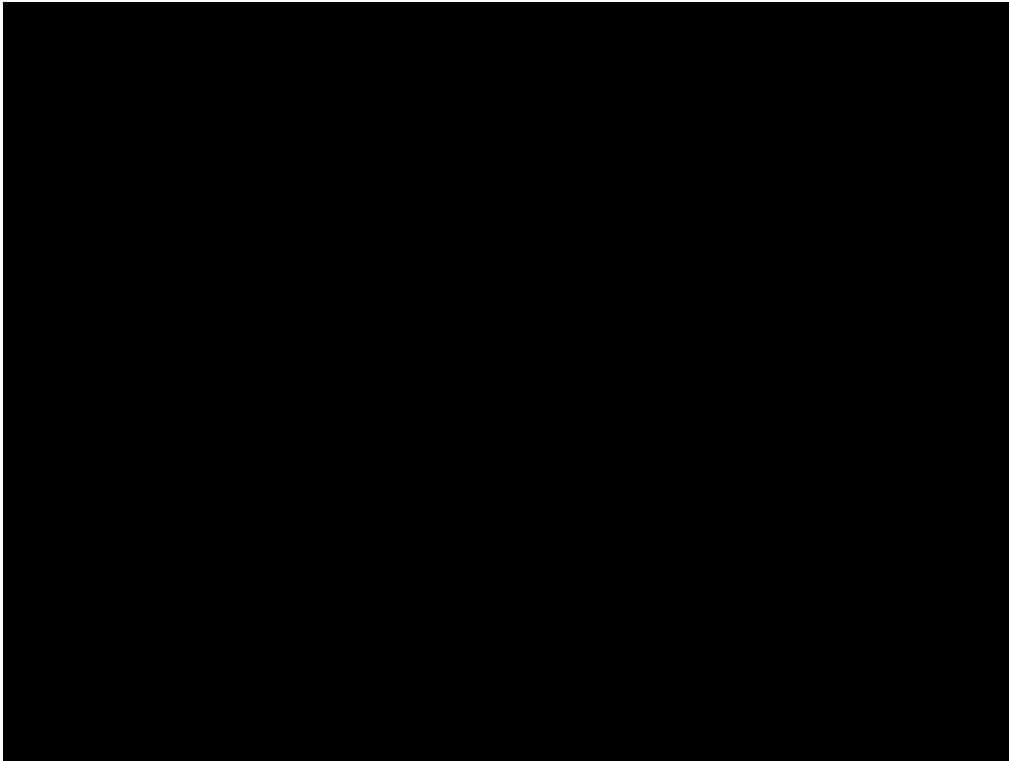
Blunt Trauma

Maximum Desired Effect

An impact of a projectile that leaves the body surface intact, but causes sufficient injury to incapacitate the subject.

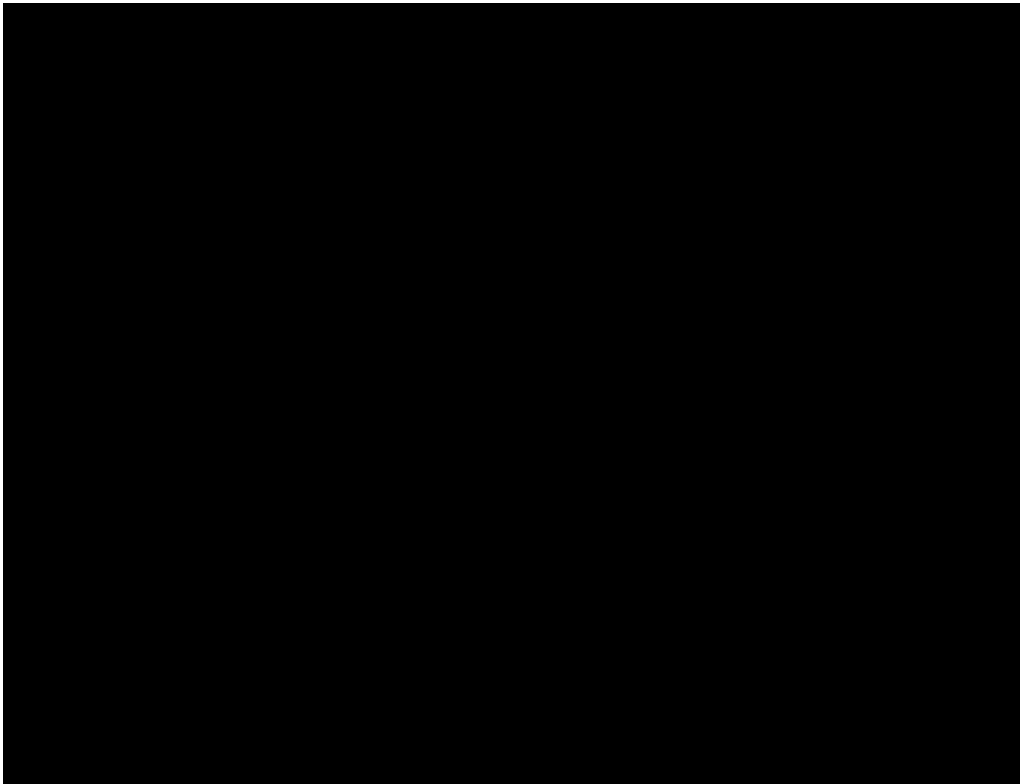
Target area is critical to reduce injury potential





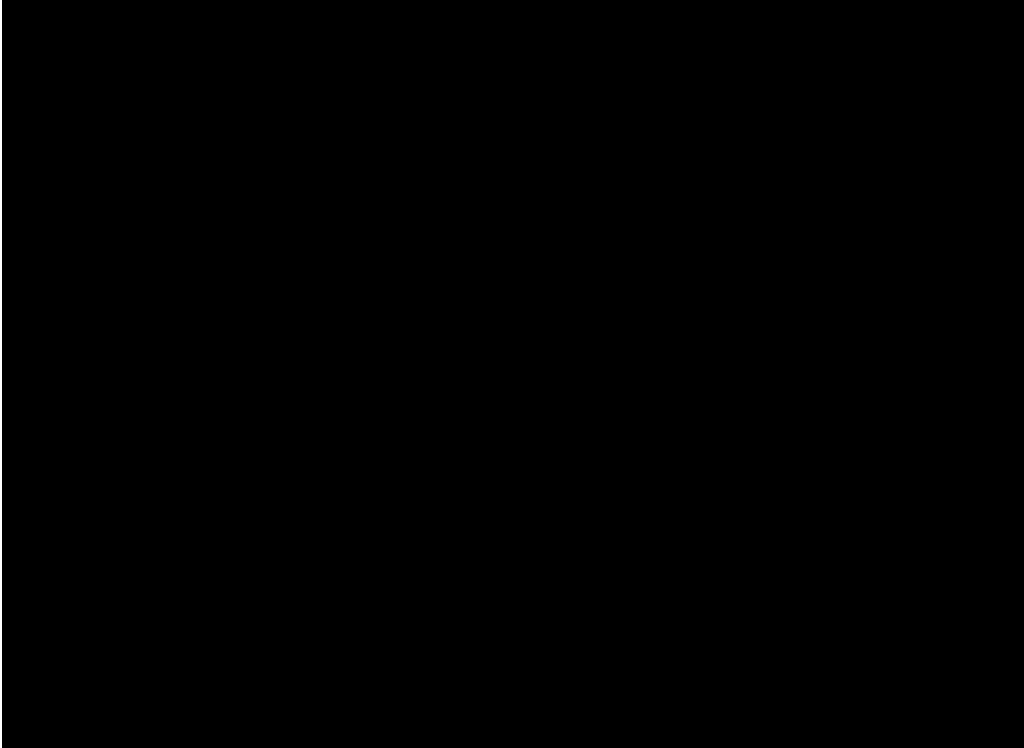
- Impact to thigh by eXact iMPact Round
- Distance of 9 feet

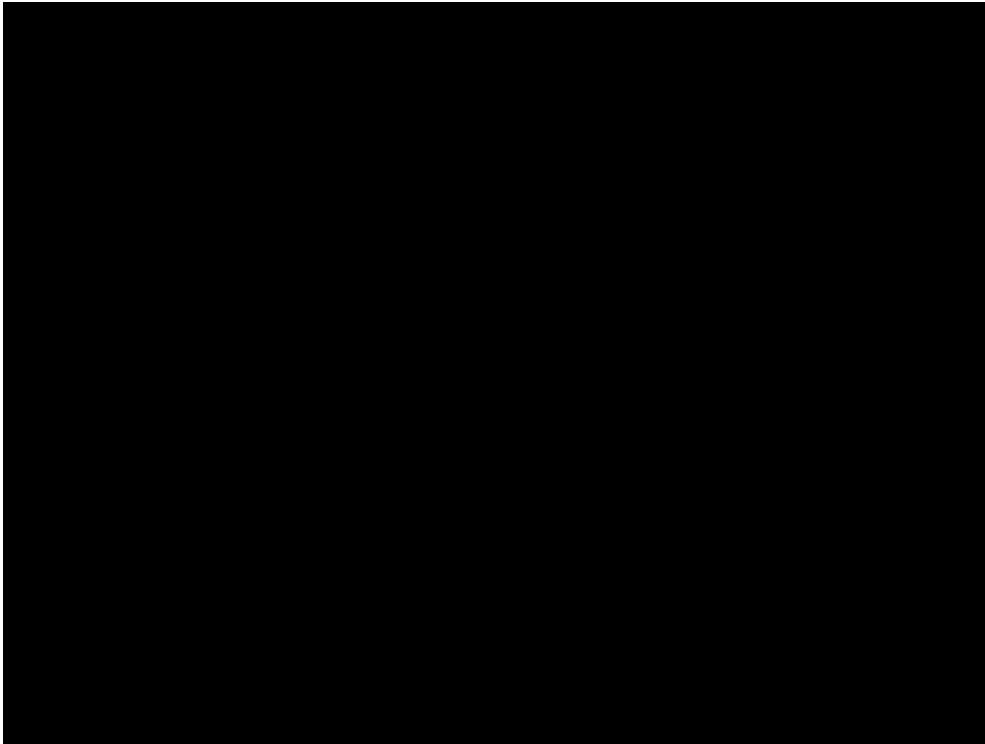




- Impact to abdomen by eXact iMpact round
- Distance of 59 feet







Close Range Engagements

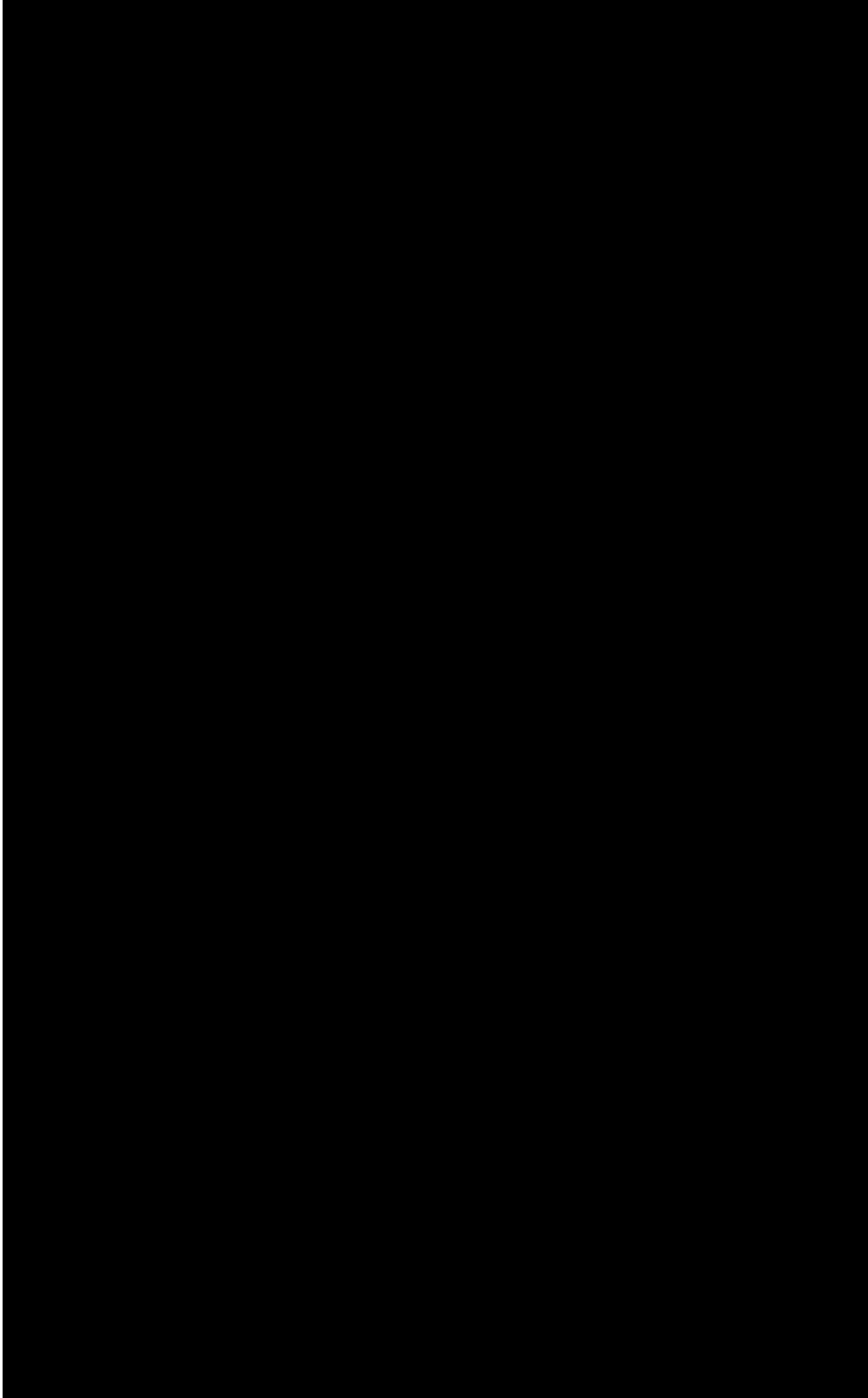
- Increases potential incapacitation
- Increases risk of serious injury

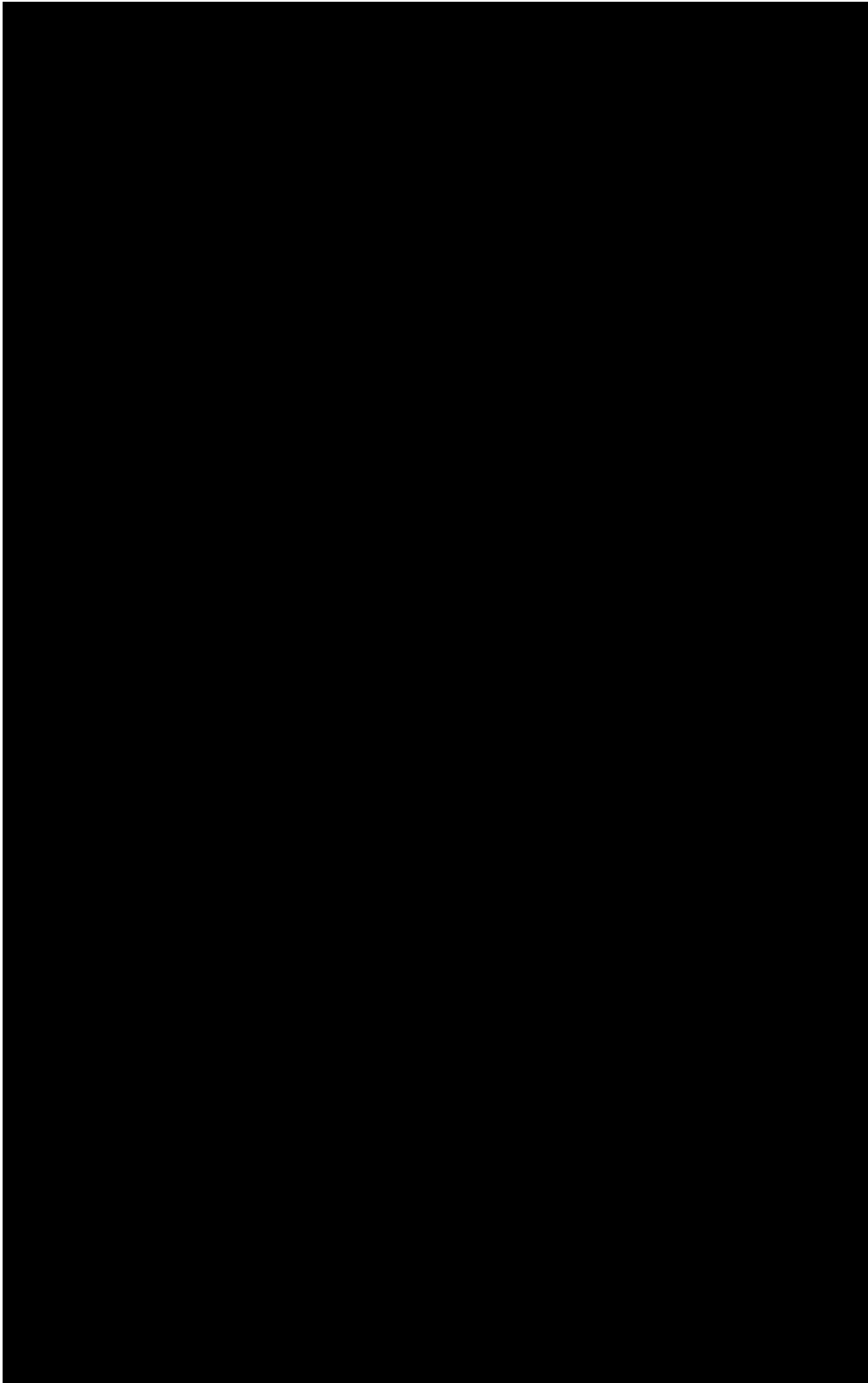


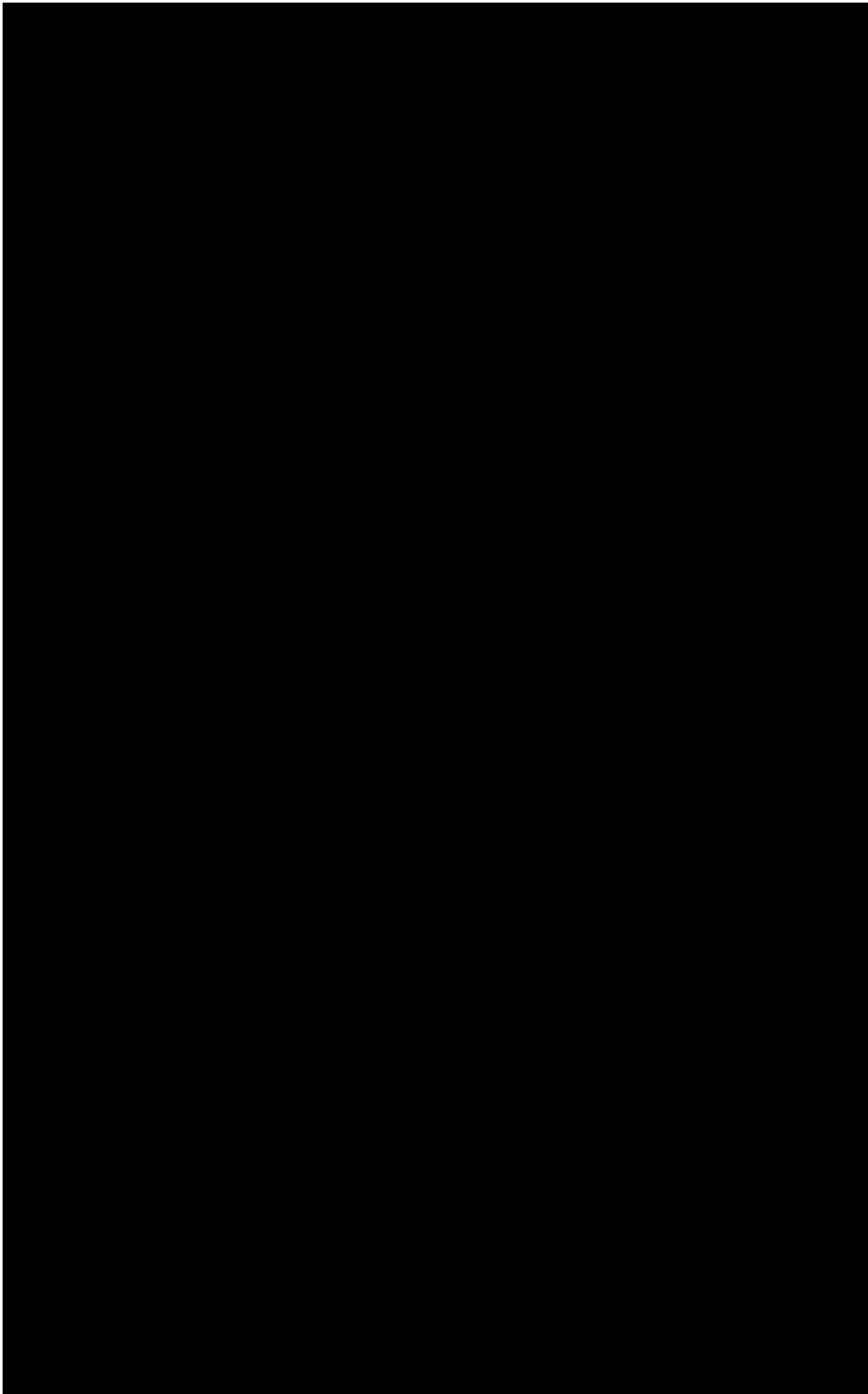
Medical



- Does an inmate need to see medical after they are struck by a 40 MM round?
 - YES
- When should medical assessment and treatment take place?
 - As soon as practical







Maintenance Detailed Cleaning

- Cleaning should be conducted after firing or stored for extended period of time with **hot soapy water and Break Free CLP**.
- Clean barrel out with a 37/40 MM Cloth Bore Brush. **Avoid wire brushes.**
- **DO NOT** use oil or lubricant in the bore.

Wrap Up

- Be familiar with the operation of the 40 MM
- Types of munitions utilized
- Cleaning and Maintenance
- Be familiar with Detentions P&P Sections as it pertains to the use of less-lethal Defensive Devices and Use of Force, Addendum F

Questions?

