

# Stun grenade

A **stun grenade**, also known as a **flash grenade**, **flashbang**, **thunderflash** or **sound bomb**,<sup>[1]</sup> is an ostensibly non-lethal explosive device, used to temporarily disorient an enemy's senses. It is designed to produce a blinding flash of light of around 7 million candela (cd) and an intensely loud "bang" of greater than 170 decibels (dB).<sup>[2]</sup> It was first used by the British Army's Special Air Service in the late 1970s.<sup>[3]</sup>

The flash momentarily activates all photoreceptor cells in the eye, blinding it for approximately five seconds. Afterward, the victim perceives an afterimage that impairs their aim. The sheer volume of the detonation also causes temporary deafness in the victim and also disturbs the fluid in the ear, causing a loss of balance. Despite the nonlethal intentions behind the grenade, the resulting concussive blast still has the ability to cause injuries, and the heat created has been known to ignite flammable materials. The fires that occurred during the Iranian Embassy siege in London were caused by stun grenades coming into contact with flammable objects.

**Stun grenade**



M84 stun grenade

**Type** Non-lethal explosive device

## Contents

### Construction

### Hazards

List of incidents

### References

### External links

## Construction

British technical experts created the first "flash bang" or "stun" grenade for the

Special Air Service's Counter terrorist wing.<sup>[4]</sup>

Unlike a fragmentation grenade, stun grenades are constructed with a casing made to remain intact during detonation, containing most of its explosive force and avoiding fragmentation injuries, while having large circular cutouts to allow the light and sound of the explosion through. The filler consists of a pyrotechnic metal-oxidant mix of magnesium or aluminium and an oxidizer such as potassium perchlorate or potassium nitrate.

## Hazards

---

Stun grenades are usually designed to be non-lethal and cause no damage to the target. However, permanent hearing loss has been reported.<sup>[5][6]</sup> Also, other injuries and deaths have been officially attributed to their use. These include the following:

### List of incidents

- In 1989, police in Minneapolis, Minnesota, conducted a drug raid at the home of an elderly couple, Lloyd Smalley and Lillian Weiss, after receiving inaccurate information from an informant. The stun grenades police used in the raid set the home on fire. Police said they were certain no one was inside, and so, at first, made no attempt at rescue. Smalley and Weiss died of smoke inhalation.<sup>[7][8][9][10][11]</sup>
- In May 2003, a woman named Alberta Spruill died from a heart attack after a police team detonated a stun grenade at her residence in Harlem, New York while looking for a drug dealer who was already in police custody. Her family eventually won a \$1.6 million civil suit against the city.<sup>[12]</sup>
- In February 2010, police in Minneapolis, Minnesota, raided the apartment of Rickia Russell looking for drugs. While Russell was eating dinner with her boyfriend, the police threw a stun grenade after breaching the door. The exploding stun grenade gave Rickia 3rd degree burns on both calves and burns to her head. No drugs were found in Russell's apartment and the Minneapolis City Council agreed to pay \$1 million in damages.<sup>[13]</sup>
- In January 2011, a California man named Rogelio Serrato died of smoke inhalation after a stun grenade launched by a police SWAT team ignited a fire in his home.<sup>[14]</sup> The man was believed to have been hiding in the attic when the fire broke out.<sup>[15]</sup>
- In February 2011, a North Carolina SWAT police officer was injured at his home when a stun grenade accidentally detonated while he was attempting to secure his equipment. He underwent emergency surgery, but later died of his injuries.<sup>[16]</sup>

- On 28 May 2014, a 19-month-old baby boy's face was severely burned and mutilated when a stun grenade was thrown into his playpen by a SWAT team serving an arrest warrant for a suspected drug dealer in Cornelia, Georgia. The baby survived with facial disfigurement.<sup>[17]</sup> The family received \$3.6 million in settlements in 2016.<sup>[18]</sup>
- On 3 August 2014, a Macedonian fan of the FK Vardar football team was seriously injured during a football match after trying to throw a stun grenade used by police when a fight between the police and the fans broke out in the stands of Stadion Tumbe Kafe stadium in Bitola. The grenade exploded in his hand causing him to lose two fingers and suffer severe damage to the structure of his arm.<sup>[19]</sup>
- In August 2018, Michelle Fawcett suffered severe chemical burns and other injuries when a stun grenade was fired into a crowd of antifascist protesters in Portland, Oregon and struck her on the arm.<sup>[20]</sup>
- In October 2019, a 19-year-old undergraduate student suffered a severe head injury when a stun grenade was fired into a crowd of protesters outside the Greek Parliament in Athens, Greece by police. <sup>[21]</sup>
- On 14 November 2019, a protestor in Baghdad died in a hospital from wounds resulting from a stun grenade that was thrown into a crowd of protesters during a clash with Iraqi authorities.<sup>[22]</sup>

## References

---

1. "Drugs raid recovers tonnes of cocaine and marijuana in Chile" (<https://www.telegraph.co.uk/news/worldnews/southamerica/chile/11072826/Drugs-raid-recovers-tonnes-of-cocaine-and-marijuana-in-Chile.html>). September 3, 2014.
2. "Measurement of Exposure to Impulsive Noise at Indoor and Outdoor Firing Ranges during Tactical Training Exercises" (<https://www.cdc.gov/niosh/hhe/reports/pdfs/2013-0124-3208.pdf>) (PDF). Retrieved 2013-08-25.
3. "SAS - Weapons - Flash Bang | Stun Grenade" (<http://www.eliteukforces.info/special-air-service/weapons/stun-grenade.php>). Eliteukforces.info. Retrieved 2013-05-29.
4. Bonneville, Leigh, *The SAS 1983-2014 (Elite)*, Osprey Publishing, 2016, ISBN 1472814037 ISBN 978-1472814036, p.9
5. <https://kashmirobservers.net/2016/local-news/stun-grenades-cause-permanent-hearing-loss-dak-9896>
6. <https://www.wired.com/2009/08/military-still-trying-to-replace-dangerous-stun-grenades/>
7. [Governmentabuse.info](http://governmentabuse.info/reports/view/1754) (<http://governmentabuse.info/reports/view/1754>)

8. Karren Mills, "City Image Tarnished By Allegations of Police Racism," Associated Press, March 21, 1989. Google News (<https://news.google.com/newspapers?nid=861&dat=19890321&id=yCgcAAAAlBAJ&sjid=f1kEAAAAlBAJ&pg=5737,4567990>)
9. David Chanen, "Police device used in search is considered safe, official says," Minneapolis Star Tribune, March 17, 2000, p. 7B. Highbeam.com (<https://web.archive.org/web/20150328150104/http://www.highbeam.com/doc/1G1-62420698.html>)
10. The case is also cited in "Botched Police Raids not so rare" Google News (<http://www.mapinc.org/drugnews/v07/n1471/a03.html>) Archived (<https://web.archive.org/web/20170313123147/http://www.mapinc.org/drugnews/v07/n1471/a03.html>) 2017-03-13 at the Wayback Machine
11. The case is also cited in "Botched raid costs Minneapolis \$1 million", Star Tribune December 9, 2011 Star Tribune (<http://www.startribune.com/local/135343023.html?page=all&prepage=1&c=y>)
12. Shaila K. Dewan (2003-10-29). "City to Pay \$1.6 Million in Fatal, Mistaken Raid" (<https://www.nytimes.com/2003/10/29/nyregion/city-to-pay-1.6-million-in-fatal-mistaken-raid.html?ref=albertspruill>). The New York Times. Retrieved 2013-05-29.
13. Carlyle, Erin (2011-12-10). "Rickia Russell wins \$1 million police brutality settlement after burns from a stun grenade" ([https://web.archive.org/web/20141013040739/http://blogs.citypages.com/blotter/2011/12/rickia\\_russell\\_police\\_brutality\\_flashbang\\_grenade.php](https://web.archive.org/web/20141013040739/http://blogs.citypages.com/blotter/2011/12/rickia_russell_police_brutality_flashbang_grenade.php)). City Pages. Archived from the original ([http://blogs.citypages.com/blotter/2011/12/rickia\\_russell\\_police\\_brutality\\_flashbang\\_grenade.php](http://blogs.citypages.com/blotter/2011/12/rickia_russell_police_brutality_flashbang_grenade.php)) on 2014-10-13. Retrieved 2014-10-07.
14. Gratz, Matt (2011-07-26). "California SWAT burns innocent man to death with flash-bang stun grenade" (<https://web.archive.org/web/20130426072926/http://politicalfailblog.com/archives/3417>). Political Fail Blog. Archived from the original (<http://politicalfailblog.com/archives/3417>) on 2013-04-26. Retrieved 2013-05-29.
15. "Rogelio Serrato died in a fire during the Jan. 5 raid in the 200 block of San Antonio Drive" (<http://www.fugitive.com/2011/01/13/rogelio-serrato-died-in-a-fire-during-the-jan-5-raid-in-the-200-block-of-san-antonio-drive>). Fugitive.com. Retrieved 2013-05-29.
16. <https://www.washingtonpost.com/wp-dyn/content/article/2011/02/26/AR2011022602047.html>
17. "Toddler critically injured by 'flash bang' during police search" (<http://www.ajc.com/news/news/breaking-news/toddler-critically-injured-by-flash-bang-during-po/nf9XM/>). 2014-05-29. Retrieved 2014-05-30.
18. AMBER ARNOLD (2016-03-01). "Family of baby injured during raid awarded \$3.6 million" ([https://madison.com/wsj/news/local/crime-and-courts/family-of-baby-injured-during-raid-awarded-million/article\\_c40a233c-9f25-5912-83c2-b18885541fe7.html](https://madison.com/wsj/news/local/crime-and-courts/family-of-baby-injured-during-raid-awarded-million/article_c40a233c-9f25-5912-83c2-b18885541fe7.html)). Associated Press, State Journal. Retrieved 2019-08-01.

19. "Macedonia: Fan nearly lost hand after police throw grenade in the away sector" (<https://web.archive.org/web/20140805213623/http://m.ultras-tifo.net/news/2678-shock-in-mkd-3-8-2014.html>). 2014-08-03. Archived from the original (<http://m.ultras-tifo.net/news/2678-shock-in-mkd-3-8-2014.html>) on 2014-08-05. Retrieved 2014-08-03.
20. Wilson, Jason (5 August 2019). "Woman says she was permanently disfigured by Portland police at protest" (<https://www.theguardian.com/us-news/2019/aug/05/portland-police-protests-woman-claims-disfigured>). *The Guardian*. Retrieved 5 August 2019.
21. "Student rally episodes and chemicals - A flash-hit head injury" (<https://thepressproject.gr/episodia-ke-chimika-sto-fititiko-syllalitirio-enas-travmatias-apo-krotou-lampsis/>). *ThePressProject*. 24 October 2019. Retrieved 24 October 2019.
22. <https://www.thebaghdadpost.com/en/Story/44648/4-killed-dozens-wounded-in-clashes-against-security-forces>

## External links

---

- FM 3-23.30 "Grenades and Pyrotechnic Signals (<http://www.globalsecurity.org/military/library/policy/army/fm/3-23-30/ch1.htm>)". [globalsecurity.org](http://www.globalsecurity.org), 1 September 2000. Ch. 1, Sec. 10. "Stun Hand Grenades". Retrieved on 26 May 2011.

---

Retrieved from "[https://en.wikipedia.org/w/index.php?title=Stun\\_grenade&oldid=933441802](https://en.wikipedia.org/w/index.php?title=Stun_grenade&oldid=933441802)"

---

**This page was last edited on 1 January 2020, at 00:15 (UTC).**

Text is available under the Creative Commons Attribution-ShareAlike License; additional terms may apply. By using this site, you agree to the [Terms of Use](#) and [Privacy Policy](#). Wikipedia® is a registered trademark of the [Wikimedia Foundation, Inc.](#), a non-profit organization.