INV-83 Reloadable Smoke Device Instructions

NOTICE TO LAW ENFORCEMENT:

This reusable smoke device canister is engineered exclusively for smoke-generating compositions.
Critical design features deliberately prevent use as an explosive, destructive, or incendiary device:
• Intentionally vented body – relieves pressure and emits smoke; cannot build sufficient pressure for fragmentation
• Threaded sections separate at approximately 30 psi – engineered mechanical weak point to prevent containment of high-pressure events
• High-temperature rubber isolation valve – physically separates internal combustion zone from external combustible materials
• Aluminum body melts at 660°C – incapable of containing thermite or any reaction exceeding ~1200°C
• Ignition system is spark-based, instantaneous, and not gasless – creates immediate, high-risk premature initiation hazard if high explosives are present
• Open-system architecture – no sealed pressure vessel exists
This device cannot be readily converted into an explosive, destructive, or incendiary device without major redesign and fabrication.
Any attempt to load this canister with explosive compositions, high explosives, thermite, incendiary mixtures, or other prohibited materials will result in immediate catastrophic failure of the device, most likely producing incomplete reaction, premature initiation, and/or operator injury rather than a functional explosive/incendiary effect.
This product complies with current ATF classification requirements for smoke devices and is NOT regulated as an explosive under 27 CFR § 555.
Law enforcement personnel:
Presence of this canister alone does not constitute evidence of an explosive, destructive, or incendiary device under federal law.

Possession of this smoke device in unaltered condition is lawful under federal law when possessed by civilians.
All users must comply with all applicable federal, state, and local statutes regarding pyrotechnics and smoke devices.

Section 1: Fuze Assembly
Option A: SPP's
Option B: Chemical

Note: The chemical ignition method (Option B) is superior to the small pistol primer method (Option A). A chemical fuze kit may be ordered and shipped separately from the INV-83 Kit. This separation is intentional to avoid potential ATF regulatory misunderstandings associated with the inclusion of a canister, and to reduce the risk of local law enforcement misinterpreting the included 20-pack of threaded rivets—used to fabricate reusable individual igniters—as "shrapnel."

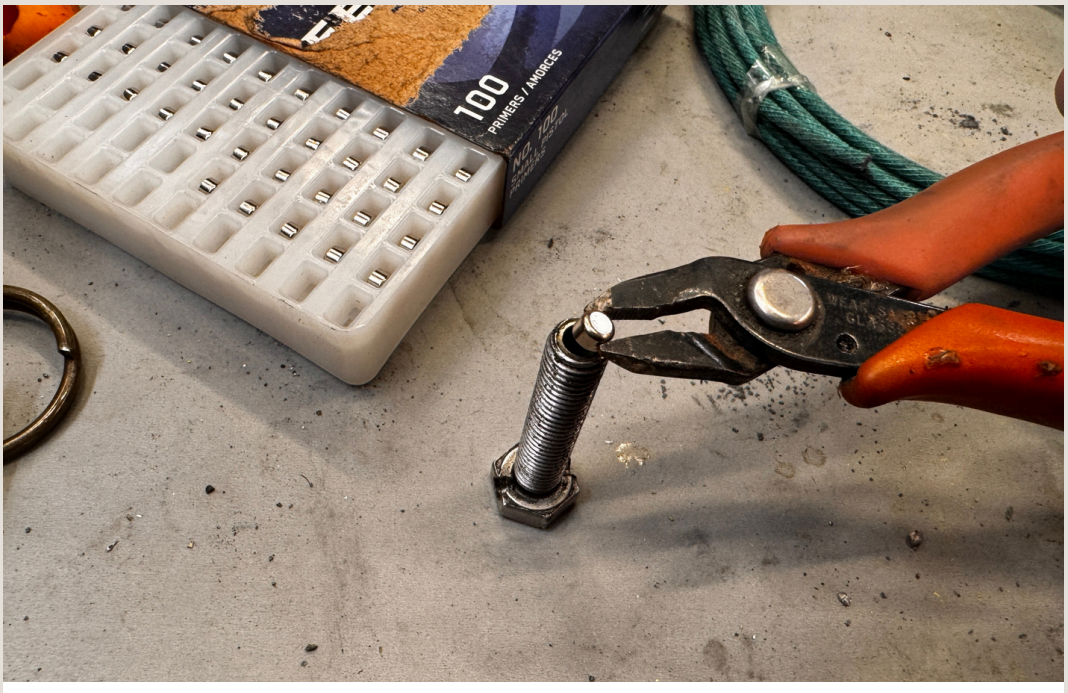
Option A: Small Pistol Primers

1) Slice a 3' piece of Visco fuse down the middle and dump powder into mixing cup by rolling fuse between thumb and forefinger. NOTE: this is just a simple way to aquire a priming powder to prime fuze to increase probability of ignition from SPP. Any primer composition will work.

2) Use a few drops of NC Lacquer to make a primer powder slurry. It dries quickly so only mix a little bit at a time. NOTE: Other binders can be used, but, NC Lac. has the highest sensitivity and is recomended in this case.

3) Cut popscicle stick flat and mix into a slurry

4) Apply slurry to outside of visco fuse. No need to overapply.

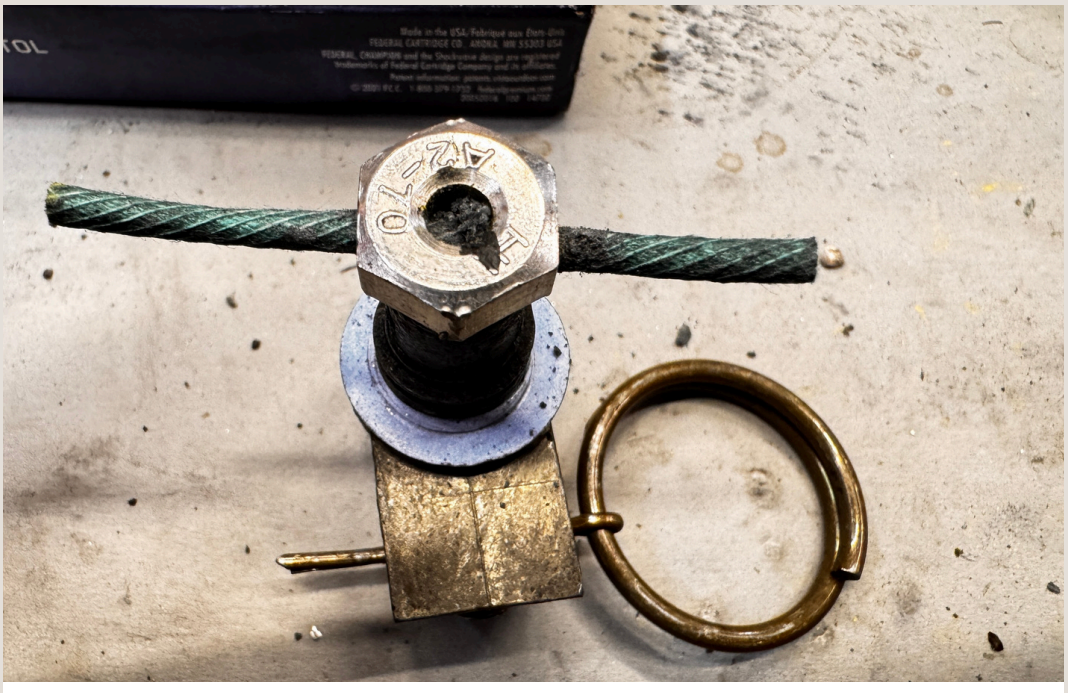


5) Load a Small Pistol Primer into the bottom of supplied bolt.

6) Press SPP into primer pocket. Use a vise or press if needed/available

7) Screw bolt into fuze head from the bottom

8) bring primer flush or just slightly above strike plate as seen above



9) Load primed fuse into bolt centering primed section

10) Apply painters tape to secure fuse into fuze. also cover hole on bottom because it will prevent smoke comp from interfering with the ignition.

11) Reinstall spoon then You’re done!

Option B: Chemical Igniters

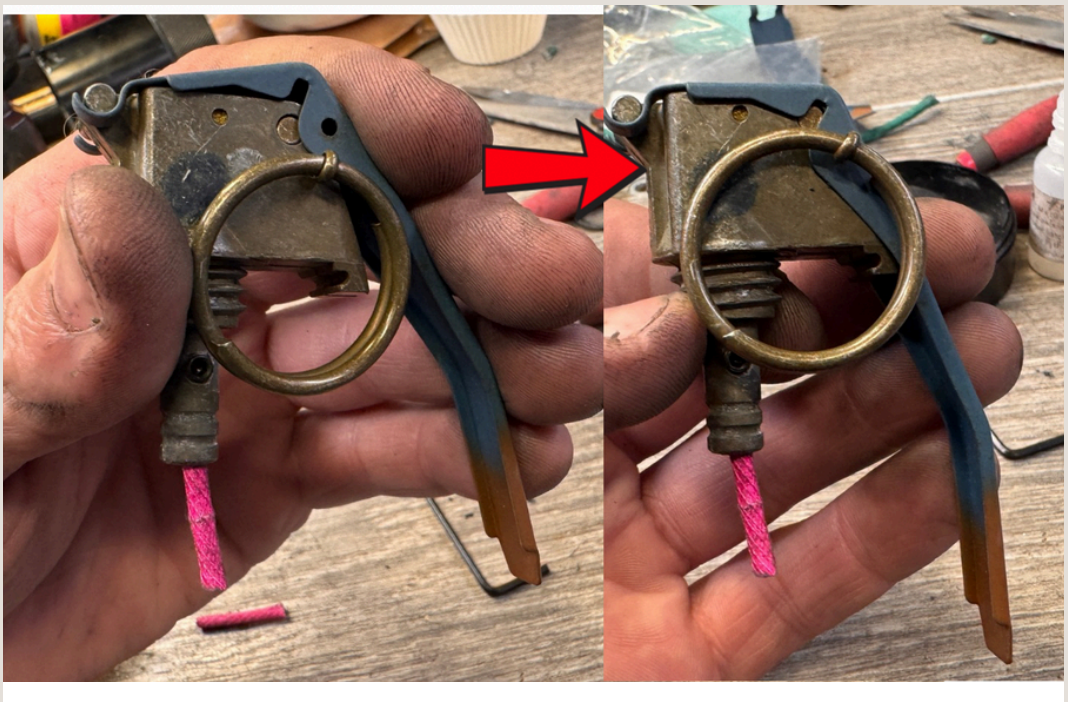
1)Assemble fuze and cock back striker using pull pin to retain. Do not use spoon. Nip/pinch the striker pin to roughen up the point. We are not cutting it, just creating drag when you run your finger over it (one time thing). SIDE NOTE: READ THE TIPS THAT ARE ON KIT COMPONENT LABELS.

2) Screw a 3” length of visco fuse (thickness 1/8” or 3mm cannon fuse) up into threaded rivet. Fuse end can be cut straight (old instructions said diagonal—not crazy). Screw it up to 1/8” from top of rivet.

3) Using the Silent Fuze Ignition Comp: Mix a pea-sized amount at a time dropwise with the parlon solution to make a paste. It will dry rapidly in mixing cup but can be rewet. Pack paste into rivet and flatten. Dried clumps can be used in your next batch.

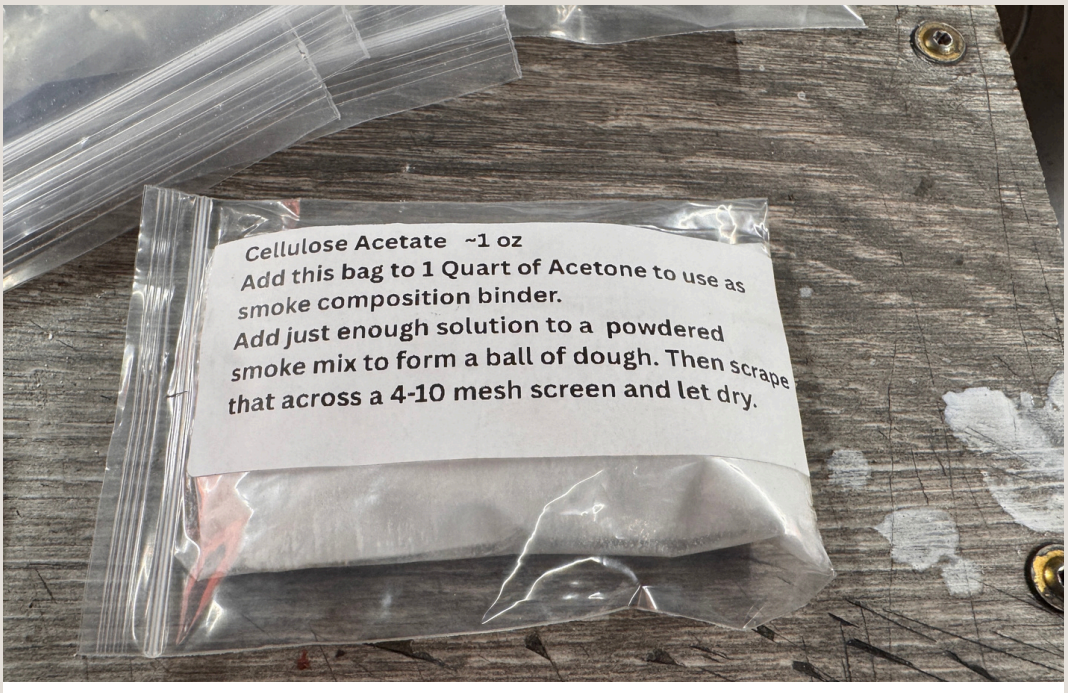
4)Well this is an ugly example woof. Mix a small amount of striker comp with parlon solution mix and apply in a thin layer to top of rivet. just need enough to cover the black beneath it. Let the igniters Air dry (fan preferred) for like 12 hours—in reality less time is required butif it’s not working it’s not dry.

5) Whilst holding gentle tension on fuse, tighten set screw to hold it in place. Trim fuse with a razor to leave 3/4” out of the bottom.



6) replace spoon and you’re good to go!

Section 2
Granulating Smoke Compositions



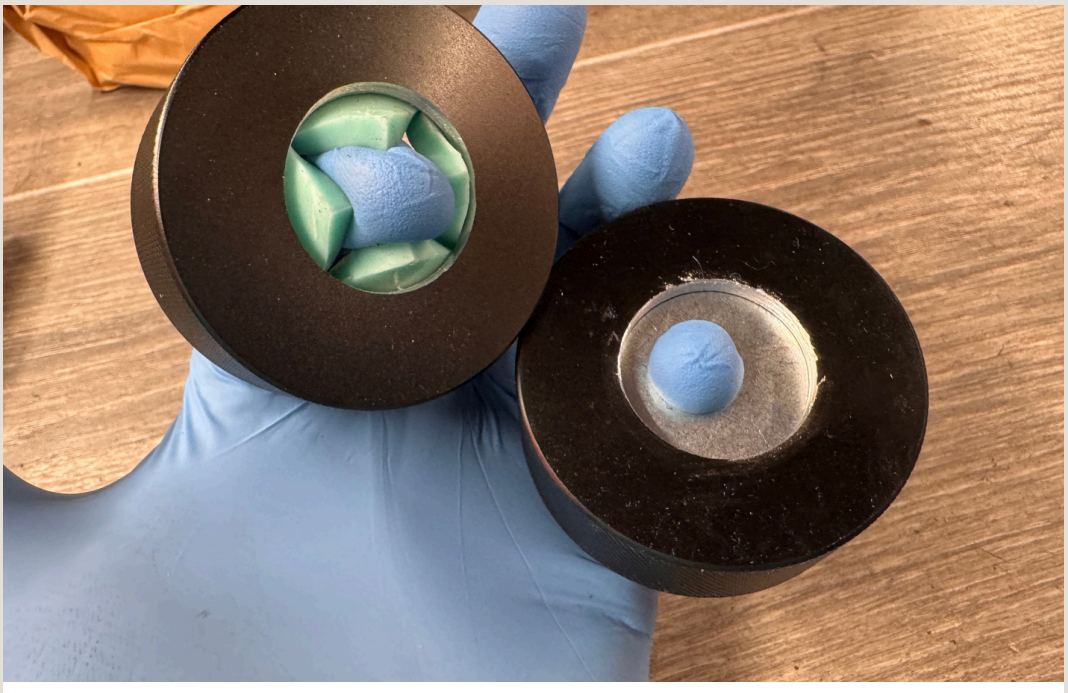
1) Add 1 oz of Cellulose Acetate to 1 Quart of aceton, mix and allow clumps to dissolve for a few hours shaking occasionall. Be sure to label container “4% Cellulose Acetate in Acetone”

2) With your powdered composition in a bowl, add enough of the CA solution to form into a ball of dough or multiple balls of dough.

3) Scrape ball of dough across a 4-10 mesh screen, into a thin layer for drying like your grating cheese all over the kitchen floor. Allow to dry until it stops smelling like acetone.

4)Load into canister or tube and compress composition into one solid pellet. You'll think the granules are crushed until after composition burns and the granules reform in the ash. It's cool as shit.

Section 3
Loading the INV-83



1) Install either Flutter Valve or Washer at base of canister. The silicone/rubber valve can only be used with low temp smoke mixes (potassium chlorate only)- to prevent flare ups of TPA or some colored dyes, for everything else, use the 1/2 ID washer. Note: The loose fit is intentional- to offset exit oriface to induce a spin-in-place vs a projectile if a smoke composition generates unexpected thrust.

2) Load smoke composition, preferably granulated. (Granulation Process will be a later section in these instructions) Load in layers compressing to a solid single pellet as you go. If using a strong press, watch for deformation of canister. Load up to approx 1/2”-3/4” from top of canister (load as much as you can fit with fuze)

3) Using a 1/2”(or greater) drill bit, by hand, drill out a core that passes all the way through bottom of canister.

4) Using 1/4” hardware cloth, cut a square 10x6 squares or 1 -1/2” x 2-1/2” then roll it up to fit inside core. We will be adding fuse before inserting.

5) Weave fast visco fuse in either a helical or teardrop pattern. Fast visco is preferable because slow visco can be ejected while it is still burning. A teardrop will ignite composition moderatel, a helix will ignite (and burn) very rapidly. I use a teardrop for the TPA Composition and a helix for colored compositions.

6) Apply a prime slurry on outside edges and sparsely on top ends of fuse. Ideally the XM-83 Starter Mixture with NC lacquer, however, there are hundreds of possible primes, like super glue and potassium perchlorate paste, 1:1 Potassium Nitrate: Sugar with NC lacquer/ PVA/ Parlon/ Dextrin, or (on Right) crushed storm matches and PVA glue (Elmer's clear school glue) paste squished onto fuse. You can even cut extra fuse open and mix the powder with PVA Glue

7) Push Screen and igniter into open core, leaving primed fuse ends up-doesn’t need to be an exact science. (Optional: spray a small amount of the acetone/cellulose acetate solution you used to granulate on top layer. This provides some resistance to crumbling and seals it against moisture if being stored.

8)Screw M-228 Fuze (with igniter installed ahead of time) head onto top of canister using 5/8-11 thread nut. NOTE: You will have to slightly bend spoon the first time to accommodate canister. Yay! You’re Done!