Using the potato launcher

1. After waiting the necessary time for the solvent vapors to dissipate, now you can test the ignition device. Depressing the plunger briskly should produce a good spark to jump across the screw threads.

2. When a reliable spark is verified, test fit the threaded plug into the adapter.

3. With the cap off, load a potato! With the chamber on the ground, place a potato over the end of the launcher, and press it down with your palm, shaving off the excess, creating a cylindrical potato plug. Make sure the potato contacts the wall firmly all around, or it will not fire or not that well. Ram the potato down to within 2" of the breech of the combustion chamber, using a broomstick.

4. With the potato firmly seated in the breech, pick up the launcher and holding with one hand, dispense a few seconds of hairspray or right guard directly into the chamber. Don't use too much; it will just make a mess. Quickly close by screwing on the end cap hand tight, do not use a tool to tighten to two turns or you will likely never get it off again.

5. Point the launcher in a safe direction, and depress the BBQ plunger. That potato you rammed down there should exit at a quite rapid rate with a loud bang, and depending on where you aimed and at what angle you pointed, it went anywhere from 6 inches to ~200 yards from the muzzle. Pretty cool. If it worked, great! Remove the end cap (this may require a tool), vent the spent gasses getting a fresh load of air, and repeat as necessary!

POTATO LAUNCHERS ARE NOT TOYS!! WHEN USED IN AN UNSAFE MANNER THEY CAN BE EXTREMELY DANGEROUS. SEVERE INJURY OR EVEN DEATH CAN RESULT FROM MISUSE. NEVER, FOR ANY REASON, LOOK DOWN THE BARREL OF A LOADED POTATO LAUNCHER. POTATO LAUNCHERS SHOULD BE TREATED WITH THE SAME RESPECT AS A REAL FIREARM.
NOTES:

1. PVC PIPE AND PIPE FITTINGS ARE NOT APPROVED BY THE MANUFACTURER TO BE USED FOR THE CONSTRUCTION OF POTATO LAUNCHERS.
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2. IT IS HIGHLY RECOMMENDED THAT YOU WAIT AT LEAST 24 HOURS FOR THE PVC CEMENT TO FULLY CURE PRIOR TO USING THE POTATO LAUNCHER.
3. THESE SCHEMATIC/INSTRUCTIONS ARE PROVIDED AS IS. NO GUARANTEE IS MADE THAT THE FINISHED DEVICE WILL OPERATE PROPERLY. RESULTS MAY VARY.
4. THESE SCHEMATIC/INSTRUCTIONS ARE TO BE VIEWED AND INTERPRETED SOLELY AT YOUR OWN RISK. THE MATERIAL WITHIN THESE DRAWINGS ARE PRESENTED PRIMARILY FOR EDUCATIONAL AND ENTERTAINMENT PURPOSES ONLY.
5. THE USE OF HIGH POWERED FUELS SUCH AS ACETYLENE AND/OR NITROUS OXIDE OR PURE OXYGEN IS HIGHLY DISCOURAGED. AVOID USING POTATO LAUNCHER WHEN TEMPERATURES ARE LOW AS PVC TENDS TO BE MORE BRITTLE.
6. USE COMMON SENSE!!! NEVER POINT THE POTATO LAUNCHER OR ANY OTHER WEAPON AT YOURSELF OR ANYONE ELSE! DO NOT USE THE DEVICE TO SHOOT ANYTHING ELSE EXCEPT POTATOES. TREAT THE POTATO LAUNCHER AS IF IT WERE A REAL FIREARM AND TAKE EXTREME CAUTION BEFORE AND AFTER EVERY TIME IT'S FIRED.

ADDITIONAL MATERIALS AND TOOLS:
- PVC PRIMER WITH DYE
- PVC CEMENT, MEDIUM BODY
- ELECTRICAL TAPE
- UTILITY KNIFE
- HAMMER WRENCH
- HANDHELD ELECTRIC OR CORDLESS
- 1/16" DIAMETER DRILL
- HALF ROUND RUE OR LATHE
- RAG

ASSEMBLY INSTRUCTIONS:
1. MANUFACTURE BARREL AND COMBUSTION CHAMBER PER DRAWINGS PROVIDED.
2. LIGHTLY SAND EACH JOINT THAT WILL BE CEMENTED TOGETHER.
3. PRIME JOINTS FOLLOWING DIRECTIONS ON CONTAINER.
4. CEMENT FITTINGS TOGETHER AS SHOWN.
5. IT IS HIGHLY RECOMMENDED THAT YOU WAIT AT LEAST 24 HOURS FOR THE PVC CEMENT TO FULLY CURE PRIOR TO USING THE POTATO LAUNCHER.
6. DRILL 1/16" DIAMETER HOLES THROUGH BOTH COUPLING AND COMBUSTION CHAMBER AS SHOWN.
7. SLIDE LEADS FROM IGNITOR OVER EACH SCREW BETWEEN THE HEAD OF THE SCREW AND WASHER.
8. USING AN ADJUSTABLE WRENCH, SELF TAP THE SCREW SLOWLY INTO THE PRE-DRILLED HOLES UNTIL THE WASHER SITS FLUSH ON OUTSIDE OF COUPLING.
9. USING ELECTRICAL TAPE, POSITION THE IGNITOR IN A PLACE THAT IS COMFORTABLE FOR USE. REMEMBER TO COVER ANY EXPOSED METAL WITH ELECTRICAL TAPE TO AVOID GETTING SHOCKED.
10. TEST IGNITOR MAKING SURE THERE IS ABSOLUTELY NO PROPELLANT INSIDE THE COMBUSTION CHAMBER. WHAT YOU ARE LOOKING FOR IS AN ARC BETWEEN THE ENDS OF BOTH SCREWS WHEN YOU PRESS THE IGNITOR BUTTON.
11. YOU ARE NOW READY TO TEST YOUR POTATO LAUNCHER.

<table>
<thead>
<tr>
<th>ITEM NO.</th>
<th>PART NUMBER</th>
<th>DESCRIPTION</th>
<th>VENDOR / MANUFACTURER</th>
<th>QTY.</th>
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<tr>
<td>1</td>
<td>4 IN SCHEDULE 40 STRAIGHT COUPLING (SxS)</td>
<td>MCMASTERCARR</td>
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<td>2</td>
<td>4 IN (SPGxFPT) CLEAN-OUT ADAPTER</td>
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<td>4&quot; IN SCHEDULE 40 CLEANOUT PLUG</td>
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<tr>
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<td>BARREL</td>
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<tr>
<td>5</td>
<td>#10 x 2-1/2&quot; LG. SEALING HEX HEAD MACHINE SCREW</td>
<td>MCMASTERCARR</td>
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<tr>
<td>6</td>
<td>STANDARD GRILL IGNITOR w/ SIDE BURNER</td>
<td>ANY HARDWARE STORE</td>
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