



# SMALLBORE KD CLINIC

## Prepared for: THE MENACE

Prepared by: BlindDog

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Proposal number: 1

## EXECUTIVE SUMMARY

### Preface

- Full distance KD ranges are few and far between. Without limited access to 400 yard ranges most of our activity around KD is in theory and principal as we learn and teach it.
- Often there are students that come to the second day to shoot AQT's avoiding the first day and a half of the program. Also we have students that have previously qualified Rifleman come midday on the second day to shoot.
- How do we continue to build upon the programs we have to accelerate the interest and growth of Appleseed?
- There is an expressed interest from shooters for a one day program.

(Excerpts from Appleseed guidelines and principals)

**Effectiveness.** Unlike many other programs, AS is committed to being effective, which means reality oriented, constantly reflecting on the results of our actions, evaluating them, and modifying them so that they become even more effective. The Internal after Action Reports (IAARs) are a concrete example of this. Effectiveness is an issue for the program, but is an issue for each volunteer in it, as well. You donate your valuable time and energy to a cause you care much about. Surely you want every second of that time and every ounce of that energy to advance the program as much as possible. You want to be as effective as you can be.

**You have a good idea?** You need to be ready to implement it. Since anyone enthusiastic in this program is chock-full of good ideas, (so much so that) in the early days of the program, we quickly recognized there were far more good ideas than people to make them happen. Hence the rule that, "if your idea is good, you're the best person to make it happen". In other words, don't expect some other overworked volunteer drop everything to do it for you (see #23, below).

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## PROJECT APPLESEED

## SMALLBORE KD CLINIC

**Seize every opportunity to advance Appleseed™. At the recent NC AIBC, I was asked,**

“Fred, what do you recommend we do, as a concrete step to take immediately to help this program?” The answer I gave was probably unexpected: Change your thinking. Become so attuned to helping this program that your first thought, in any situation, is **“How can I make this help Appleseed™?”** If AS is about reigniting the spirit of the American Revolution in hearts and minds, and if our enemies Ignorance, Apathy, and Laziness, assisted by their evil handmaidens Arrogance and Complacency have had generations to establish their control, then we need to be on the attack, every chance we get. You need to start “thinking Appleseed™”. Whatever set of facts confront you; you automatically cast for an opportunity to turn those facts to advancing the program.

### Objective

The objective is to introduce a new Appleseed Clinic that students/shooters could enroll in. The program would be known as the “Smallbore KD” program.

### Goals

1. Grow Appleseed with additional opportunities to hook/attract shooters where we have additional opportunities to continue to teach Heritage and spread the flames of Liberty.
  2. The Program would strongly encourage Battle Sight Zero on the course versus “knob twiddling”.
  3. Provide more opportunities for Red Hats (Instructors) to not only teach KD principals and Battle Sight zero only in theory but through live fire exercises where the student can apply these principals. lecture but on a course
  4. Allows a Sharpshooter qualified student a different opportunity on the range with us. Another reason to come back if you are almost a Rifleman but cant wait to shoot at different distances or learn battle sight zero.
  5. Project Appleseed another opportunity to ignite others in preserving our Liberty and Heritage. (See Goal number one and repeat!)
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## Project Outline

- The program would be a one day program.
- Eligible participants -
  - Are required to shoot a traditional two day Appleseed and qualify with at-least a Sharpshooter score of 170 to qualify for this Appleseed Smallbore KD Clinic.
  - As in a KD clinic the Shoot Boss could have discretion for special invitations or referrals he or she may receive.
- The first part of day could be spent on instruction and demonstration and zeroing rifles for Battle Sight zero. Lunch focuses on the Strikes, history and heritage. Afternoon gets into shooting AQT's recording DOPE and hands on instruction at the firing line and at the targets.
- Course of fire is exactly the same as a full distance KD but at the following distances.
  - 25 yds Standing
  - 50 yds Sitting
  - 75 yards Rapid Prone
  - 100 yards prone
- Students can qualify on this course and obtain a Smallbore KD patch.
  - Scoring is similar to full distance KD in that it is the number of hits on target versus scoring based on the value of the 3, 4 or 5 value of each shot.

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## How do we do this to replicate a full distance KD?

If you're still with me at this point you may be saying how the heck you going to do that with a .22 LR? If one uses a 25 yd/meter zero we know that Battle Sight zero would work from 25 to 75 but there is a big drop at the 100 yard line which would require a significant hold over.

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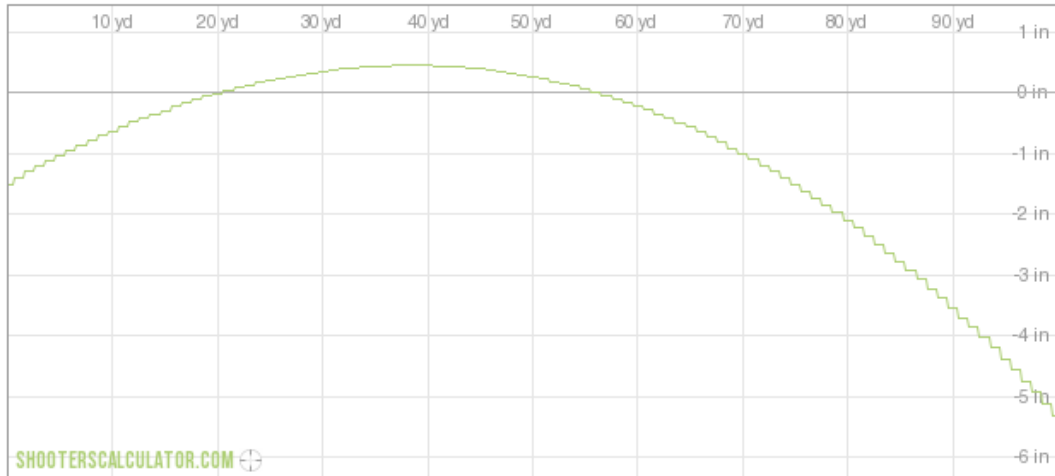
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But if one zeroes a .22 LR at 10, 15 or even 20 yards we've got a chance of obtaining a Battle Sight zero allowing one to leave their sights and scope alone through the course of fire from 25 to 100 yards. I've run some different ballistics for obtaining a Battle Sight zero with standard and high velocity rounds. The best match from preliminary data shows that sighting a .22 LR with high velocity ammo (1235 FPS/CCI Mini Mag high velocity) we have a .22 Rifle capable of going across the course at Battle Sight zero. We have a zero at 20 yards and back on center of target at 50 yards in the below illustration and chart.

Other ballistic data is shared below.

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## 22 LR High Velocity



[CREATE A LINK TO THIS GRAPH AND CHART](#)

Drag Function: G1  
Ballistic Coefficient: 0.122  
Bullet Weight: 40 gr  
Initial Velocity: 1235 fps  
Sight Height : 1.5 in  
Shooting Angle: 0°

Wind Speed: 10 mph  
Wind Angle: 90°  
Zero Range: 20 yd  
Chart Range: 100 yd  
Maximum Range: 1897 yd  
Step Size: 10 yd

Corrected For Atmosphere  
Adjusted BC: 0.127  
Altitude: 0 ft  
Barometric Pressure: 29.92 Hg  
Temperature: 80° F  
Relative Humidity: 50%  
Speed of Sound: 1139 fps

Range	Elevation	Elevation	Elevation	Windage	Windage	Windage	Time	Energy	Vel <sub>(x+y)</sub>
(yd)	(in)	(MOA)	(MIL)	(in)	(MOA)	(MIL)	(s)	(ft.lbf)	(ft/s)
0	-1.50	0.00	0.00	0.07	0.00	0.00	0.00	135	1235
10	-0.62	5.87	1.71	0.14	1.28	0.37	0.03	128	1200
20	-0.01	0.03	0.01	0.32	1.53	0.44	0.05	121	1169
30	0.36	-1.13	-0.33	0.62	1.98	0.58	0.08	115	1139
40	0.45	-1.07	-0.31	1.04	2.48	0.72	0.10	110	1113
50	0.27	-0.51	-0.15	1.57	2.98	0.87	0.13	105	1088
60	-0.21	0.34	0.10	2.19	3.48	1.01	0.16	101	1066
70	-1.00	1.36	0.40	2.92	3.98	1.16	0.19	97	1045
80	-2.10	2.50	0.73	3.75	4.46	1.30	0.22	94	1027
90	-3.53	3.74	1.09	4.66	4.94	1.44	0.25	90	1009
100	-5.31	5.06	1.47	5.66	5.40	1.57	0.28	88	993



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Shooting Angle: 0°

Wind Speed: 10 mph  
Wind Angle: 90°  
Zero Range: 15 yd  
Chart Range: 100 yd  
Maximum Range: 1839 yd  
Step Size: 10 yd

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Barometric Pressure: 29.92 Hg  
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Speed of Sound: 1139 fps

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(yd)	(in)	(MOA)	(MIL)	(in)	(MOA)	(MIL)	(s)	(ft.lbf)	(ft/s)
0	-1.50	0.00	0.00	0.08	0.00	0.00	0.00	102	1070
10	-0.42	3.97	1.15	0.13	1.27	0.37	0.03	98	1049
20	0.32	-1.51	-0.44	0.28	1.34	0.39	0.06	94	1030
30	0.73	-2.32	-0.67	0.52	1.66	0.48	0.09	91	1012
40	0.81	-1.92	-0.56	0.85	2.03	0.59	0.12	88	995
50	0.53	-1.01	-0.29	1.27	2.41	0.70	0.15	85	980
60	-0.11	0.17	0.05	1.76	2.80	0.81	0.18	83	965
70	-1.12	1.53	0.44	2.34	3.19	0.93	0.21	80	951
80	-2.52	3.00	0.87	3.00	3.57	1.04	0.24	78	938
90	-4.31	4.56	1.33	3.73	3.95	1.15	0.27	76	926
100	-6.51	6.20	1.80	4.53	4.32	1.26	0.31	74	914

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20	0.36	-1.68	-0.49	0.32	1.53	0.44	0.05	121	1169
30	0.90	-2.84	-0.83	0.62	1.98	0.58	0.08	115	1139
40	1.17	-2.79	-0.81	1.04	2.48	0.72	0.10	110	1113
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80	0.65	-0.77	-0.22	3.00	3.57	1.04	0.24	78	938
90	-0.75	0.80	0.23	3.73	3.95	1.15	0.27	76	926
100	-2.55	2.43	0.71	4.53	4.32	1.26	0.31	74	914

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