

ACCURACY AND CHRONOGRAPH DATA

Federal 223 Rem. 55-gr. FMJ BP223BL

Average Velocity
Standard Deviation
Muzzle Energy
Maximum Spread
Maximum Shot Radius
Average Group Radius

MSAR STG-556

2827 fps
29 fps
976 ft.-lbs.
1.23 in.
0.65 in.
0.50 in.

FN FS2000 Tactical Bullpup

2844 fps
32 fps
987 ft.-lbs.
2.07 in.
1.13 in.
0.81 in.

Steyr AUG A3-SA-USA

2838 fps
24 fps
983 ft.-lbs.
2.70 in.
1.49 in.
0.99 in.

American Tactical 5.56x45mm 62-gr. FMJ

Average Velocity
Standard Deviation
Muzzle Energy
Maximum Spread
Maximum Shot Radius
Average Group Radius

MSAR STG-556

2996 fps
33 fps
1096 ft.-lbs.
2.06 in.
1.17 in.
0.83 in.

FN FS2000 Tactical Bullpup

3045 fps
49 fps
1132 ft.-lbs.
2.37 in.
1.23 in.
1.09 in.

Steyr AUG A3-SA-US

2955 fps
23 fps
1066 ft.-lbs.
2.66 in.
1.35 in.
0.94 in.

Monarch (Barnaul) 223 Rem. 55-gr. FMJBT

Average Velocity
Standard Deviation
Muzzle Energy
Maximum Spread
Maximum Shot Radius
Average Group Radius

MSAR STG-556

2861 fps
31 fps
999 ft.-lbs.
3.08 in.
1.66 in.
1.00 in.

FN FS2000 Tactical Bullpup

2878 fps
32 fps
1011 ft.-lbs.
2.81 in.
1.45 in.
1.09 in.

Steyr AUG A3-SA-US

2891 fps
13 fps
1020 ft.-lbs.
2.44 in.
1.23 in.
0.89 in.

*To capture velocity data, we used a CED M2 chronograph (\$200, Brownells) with the first skyscreen set 10 feet from the muzzle. Test conditions were 85 degrees with 10-mph winds from 6 o'clock. Because two of the guns lacked backup iron sights, we shot accuracy tests at 50 yards using an Insight Tech MRDS on the front slot of each top rail. We used a variety of adhesive targets from Birchwood Casey, including the fluorescent-orange 6-inch Target Spot as the best choice to contain ten-shot strings during 50-yard accuracy testing. To tabulate the results, we scanned the targets and used the Ruler tool inside Photoshop CS3 to find the group centers and measure the various impacts to the thousands of an inch, and rounded the results to the hundredths of an inch. To calculate **Average Group Radius**, we fired 10 shots, then found the center of the 10-shot group. We then measured the distances from the group center to each shot, and averaged them. **Maximum Shot Radius** is the distance from a group's statistical center to the center of the most distant hole—the worst shot in the string. **Maximum Spread** (group diameter) is the distance between the centers of the two widest shots in the group.*