

M/710 Bolt Lock Design Review

The current company strategy regarding multiple position safeties and the introduction of a bolt lock feature is as follows: year 2001 – M/700 three position w/bolt lock, M/710 two position w/o bolt lock; year 2002 – M/710 three position w/ bolt lock. The development of a bolt lock feature for the M/700 appears to be straight forward, incorporate the previous bolt lock design with an additional detent position for the safety arm. This will provide a 3 position safety function with an automatic bolt lock when the safety is in the rear most detent position. In the middle position the firearm will remain in a safe condition but the bolt would not be locked, thus allowing the bolt to be opened. The forward position would allow the firearm to be fired. Due to the commonality of the M/700 and M/710 components, the bolt lock strategy assumed the bolt lock design of the M/700 would be applicable to the M/710. Unfortunately, due to the receiver insert and bolt assembly interaction of the M/710, incorporating the M/700 three position safety/bolt lock design will not be possible. Reviewing the design options, the most feasible design will depart from the prerequisite of three positions for safety travel. The design would incorporate a two position safety movement with an automatic bolt lock when the safety is placed in the rear or "safe" position, similar to the previous M/700 bolt lock function. A bolt lock release would be incorporated so that the bolt lock could be disengaged without removing the safety from the rearward or "safe" position.

I believe the main objective of the corporate strategy was to provide a bolt lock feature for the Remington line of centerfire bolt action rifles. The most common design approach by our competitors has been through the incorporation of a three position safety. Although relatively easy to accomplish for the M/700 rifle line, the M/710 design does not lend itself to the introduction of a bolt lock via a three position safety design. The M/710 design/concept could be described as a two position safety with a releasable bolt lock. From a customer viewpoint, when the bolt is closed and the safety is positioned to the rear or "safe" location, the bolt is locked such that an inadvertent bump will not open the bolt. To open the bolt, the operator will be able to depress the bolt lock release without requiring a movement of the safety from the rearward or "safe" position.

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