

# Rifle Redesign Benefits from Combat Experience

## Simplified construction cuts production costs

The U. S. Military hasn't found an official replacement for the reliable old Garand as yet, but one leading contender is the .223-caliber (5.56 mm) AR-18. Design of this latest member of the Armalite family of weapons was dictated by combat experience with the AR-15 as well as the ability to greatly cut manufacturing costs. (The AR-15, designated the M-16 by the Army, is issued to select fighting groups in Vietnam and will shortly be issued to the regular infantry.)

Differences as compared with the AR-15 include:

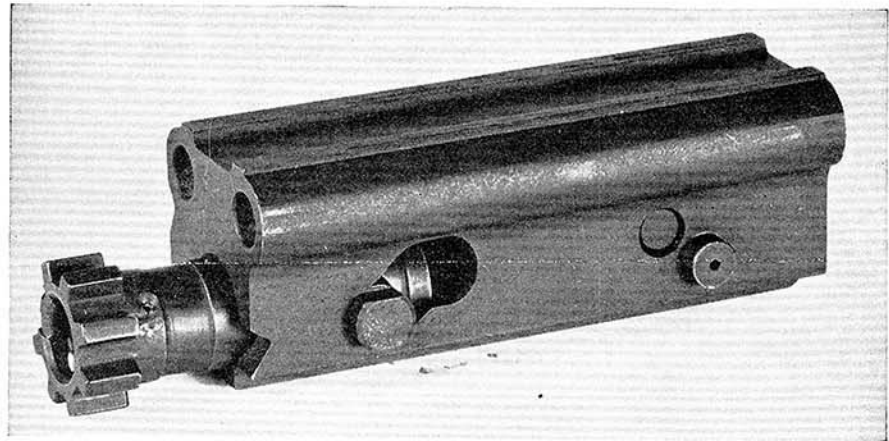
- Charging handle is provided to assure positive closure on the cartridge and ejection of the

empty case in the event of difficulties encountered under adverse conditions.

- Firing pin is spring loaded away from the cartridge to prevent inadvertent firing.
- Gas driven rod operates the action instead of bleeding gas back from the muzzle through a tube, reducing carbon deposits.
- Carrying handle is removed and sights lowered to give a lower line of sight. This improves accuracy of the weapon in "point and shoot" combat firing.
- Single bolt return spring, which extended into the stock in the AR-15, is replaced by dual



**Bolt carrier** and bolt on AR-18 are more open and looser fitting than in previous models. Design philosophy is that under combat conditions, it is easier to knock dirt out of loose fitting components than those with close tolerances.



**Empty weight** of the AR-18 is 6.4 lb; with sling and loaded 20-round magazine, 7.1-lb. Rate of fire is about 750 rounds per minute, firing fully automatic. The 5.56-mm bullet can penetrate both sides of a steel helmet at 500 yds.



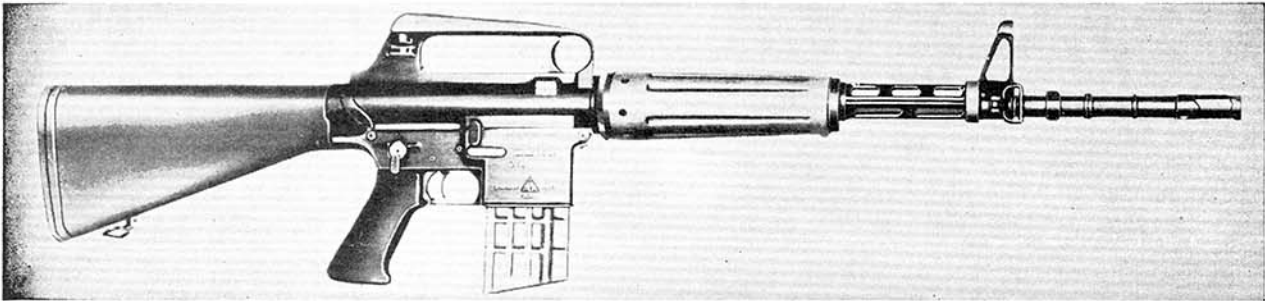
springs entirely contained within the receiver.

- Foldable stock is made of stronger material. The rifle can be fired with stock folded, and is advantageous to use in restricted areas, such as by paratroopers, tankers, and helicopter crews. Normal length is 32 in.; folded length 28 $\frac{3}{4}$  in.
- Steel stampings with loose tolerances are used as compared with machined alloy forgings of the AR-15 that require close tolerances. Overall

weight remains about the same, but manufacturing costs are reduced.

As in all automatic Armalite weapons, a seven-lug bolt engages seven lugs in the barrel extension to lock the chamber during firing.

The AR-18 has been produced in limited quantity and is now undergoing evaluation by the U. S. Army. It was designed under the direction of Charles Dorchester, Pres., and Arthur Miller, Chief Engineer, Armalite, Inc., Costa Mesa, Calif.



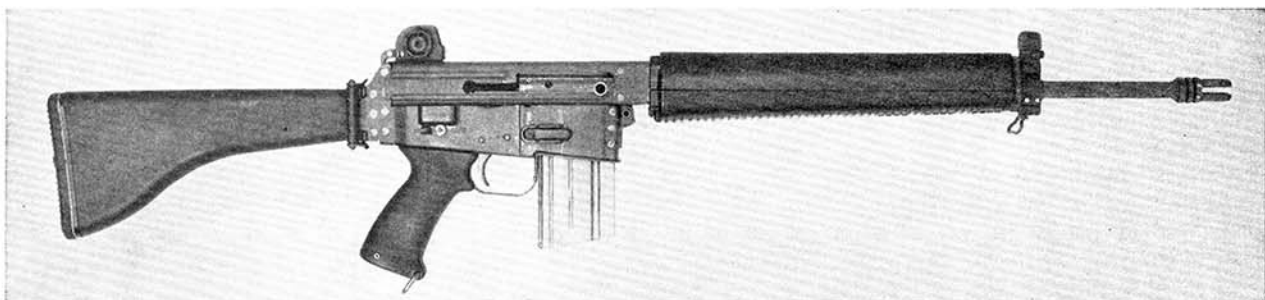
**AR-10** (1955-1960) infantry rifle fires caliber 7.62 NATO ammunition. It has been produced in limited quantities in Holland and sold to Central American and African nations.



**AR-15** (1956-1960) uses caliber 5.56-mm ammunition. Manufactured under license by Colt, the weapon has been issued as the M-16 to U.S. Forces. A nonautomatic modification is sold as a sporting rifle.



**AR-16** (1959-1960) prototype rifle firing caliber 7.62 ammunition was designed as a low-cost version of the AR-10. Because of waning interest in a 7.62 rifle, the weapon was never produced in commercial quantities.



**AR-18** (1963-present) is a scaled down version of the AR-16 and incorporates improvements gained through combat experience. It fires caliber 5.56-mm ammunition.