



# THE ARTILLERY WORLD

## 175-mm GUN UNITS ACTIVATED

Two 175-mm gun battalions, the 2d Gun Battalion, 32d Artillery and the 6th Gun Battalion, 9th Artillery, were activated at Fort Sill in January. These are the first U. S. Army units to be equipped with the M107 175-mm self-propelled gun (fig 1). Each battalion will consist of a headquarters battery, a service battery, and three firing batteries. The personnel strength of a 175-mm gun battalion will be 30 officers, three warrant officers, and 507 enlisted men.



**Figure 1. Test configuration of the M107 175-mm self-propelled gun.**

The M107 weighs 31 tons and fires a 147.3 pound projectile to a range of 32,800 meters. The M113 tube is 428 inches long (60 calibers) and has a rifling twist of one turn in 20 calibers. This weapon is capable of traversing 30° right and 30° left of center, and may be elevated from +2° to +65°. The M107 is 10 feet 4 inches wide, 8 feet 11 1/2 inches high, and is 42 feet long in firing position. With the tube retracted for traveling, the overall length is reduced to 37 feet 3 inches. The 175-mm gun employs pneumatic puller equilibrators and a hydro-pneumatic recoil mechanism.

Graphical firing tables based on FT 175-A-O (Rev) have been developed by the US Army Artillery and Missile School (USAAMS). This equipment, based on the provisional firing tables, may be used until the final firing tables are published. The graphical firing table, complete except for 10 mil site for high angle fire, will be gratuitously issued to all 175-mm gun units as they are activated. A graphical site table is currently being developed.

## PERSHING-CHINOOK TESTS

The Pershing missile is shown below undergoing a post-flight countdown during the conduct of recent tests. The tests, known as the Pershing-Chinook



**Figure 2. Pershing missile receiving post-flight countdown.**

systems compatibility tests, were conducted by an Army-Industry team at Orlando, Florida. All elements (less tracked vehicles) of the Pershing system were airlifted by the Chinook, then mated at the site. A total of fourteen helicopter loads are required to transport the entire system. In the photograph above, the fire control equipment is housed in the large shelter at the left, with the power supply adjacent to it.

## CANADIAN ARTILLERY AIMING POSTS

Artillery units of the Canadian Army are making interesting modifications to a historic item of field artillery equipment, the aiming post. Steel steps have been welded to the lower portions of posts, to facilitate firm emplacement. Each post is marked with prominent stripes on the quadrant seen by the gunner, and the remaining quadrants are covered with camouflage paint. The Canadian Army is also experimenting with the use of phosphorescent paint on the striped quadrants, to supplement their lighting equipment in night firings. The modified aiming posts can still be easily stored in regular carrying cases.

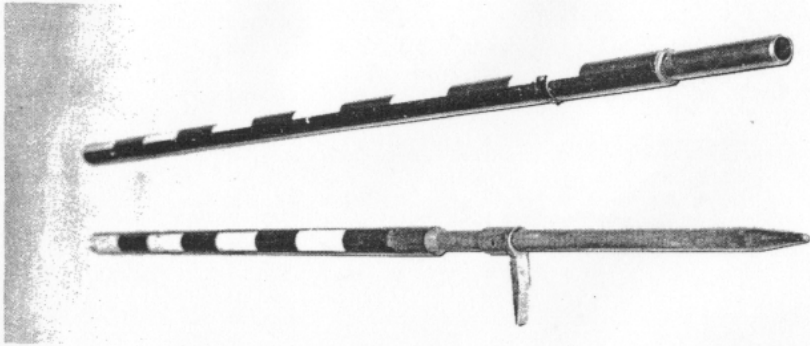


Figure 3. Canadian artillery aiming posts.

### IMPROVED DEVELOPMENTAL CYCLE FOR GFT'S AND GST'S

A new streamlined developmental cycle is expected to reduce by two-thirds the time required to manufacture and issue graphical firing and site tables to troops (fig 4). The new procedures shown are considered the necessary minimum to insure an adequate supply of quality graphical equipment for troop use. The streamlined cycle is expected to average seven months as compared to an average of more than 1 1/2 years for what has been the standard developmental cycle.

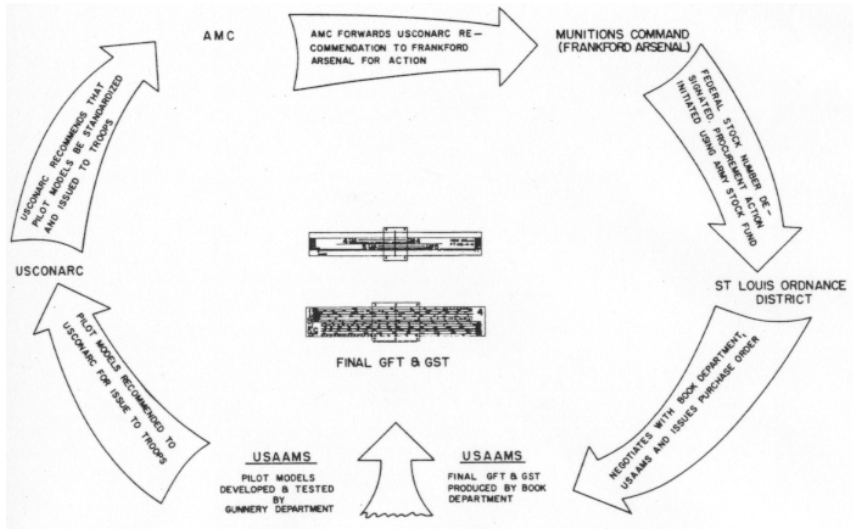
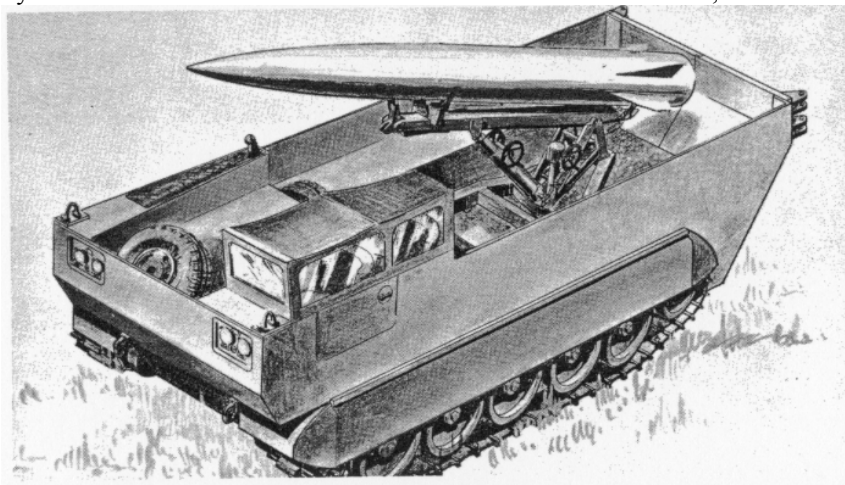


Figure 4. GFT and GST streamlined developmental cycle.

In the past, the major items of equipment were developed through procedures which delayed the manufacture of graphical equipment until after the firing tables were issued. Several significant changes in the new cycle include the elimination of testing by the US Army Artillery Board, the elimination of the formal standardization requirement, the use of the Army Stock Fund, and the issuing of a purchase order to replace the formal contract. The new standardization and procurement procedures should provide for concurrent issue of firing tables and associated graphical equipment.

#### **LANCE MISSILE**

An artist's concept of the Lance missile (described in the Newsnote section of the January 1963 issue) has been made available to ARTILLERY TRENDS by the Public Information Office at Redstone Arsenal, Alabama.



**Figure 5. Artist's concept of Lance missile and Launcher.**

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#### **FAMSEG**

An important element of the US Army 1st Field Artillery Missile Brigade (Fort Sill) is the Field Artillery Missile Systems Evaluation Group (FAMSEG). The primary mission of FAMSEG is to render technical assistance to field units in the emplacement, checkout, and firing of guided missiles, nuclear warheads, and nuclear projectiles. This assistance is rendered by teams of personnel who are highly trained in technical operating procedures. FAMSEG contains a division for each field artillery guided missile and nuclear weapons system. Personnel of the group have received extensive military and civilian schooling and have had considerable practical experience in the field artillery unit(s) of their particular specialty. FAMSEG personnel travel extensively, visiting units throughout the United States and making annual visits to units in USAREUR and USARPAC. The services of FAMSEG may be obtained upon request; for complete instructions, see paragraph 5, USCONARC circular 350-7.