

## TEXT 6

### **Field Artillery**

According to the dictionary, the word artillery stands for very large guns that are moved on wheels or metal tracks, or it can also mean the part of the army that uses these.

Field artillery is a general term covering several varieties of large-calibre weapons; currently these fire an explosive shell or rocket and are of such a size and weight as to require a specialized mount for firing and transport. Weapons covered by this term in the modern era include “tube” artillery such as the howitzer, cannon, mortar, and “rocket” artillery.

The types of tube artillery are generally distinguished by their ballistic trajectory. Cannons (such as infantry support guns) are typically low-angle weapons designed for a direct-fire role. Mortars are high-angle weapons originally used to drop shells behind the walls of a city. Cannon howitzers are capable of both high- and low-angle fire. They are most often employed in an indirect-fire role.

Talking about field artillery, we mean mobile weapons used to support armies in the field.

Subcategories include infantry support guns, howitzers, cannon howitzers and mortars.

Infantry support guns (cannons) directly support infantry units;

Howitzers are capable of high- or low- angle fire with a short barrel;

Cannon howitzers are capable of high- or low- angle fire with a long barrel;

Mortars are lightweight weapons that fire projectiles at an angle of over 45 degrees to the horizontal.

Depending on the categories of the guns, artillery is used in a variety of roles. Mortars fire relatively short range and small-calibre projectiles in a high arc against targets that cannot be reached by low-angle (less than 45 degrees) fire, such as troops on the reverse slope of a hillside. Modern mortars, because of their lighter weight and simpler, more transportable design, are usually organic to infantry and armour units, allowing greater responsiveness and negating their shorter range.

Howitzers are long ranged weapons that generally fire in a flatter arc – the target is seldom in view of the firer. Howitzers are generally used in direct and general support of infantry and armour, where the guns of a battery or even battalion will be massed to fire simultaneously onto a single point or area target.

Modern field guns falls into 2 categories: towed and self-propelled. As the name implies, towed artillery has a prime mover, usually a jeep or truck, to move the piece, crew, and ammunition around. Self-propelled howitzers are permanently mounted on a carriage or vehicle with room for the crew and ammunition and they are capable of moving independently in order to move quickly from one firing position to another – to both support the fluid nature of modern combat and to avoid “counter-battery fire”.

Modern field artillery (Post-World War I) has 3 distinct parts: the forward observer (FO), fire support centre (FSC), and fire unit. Because of the fact that artillery is an indirect fire weapon, the FO must take up a position where he can observe the enemy using tools such as binoculars and laser range finders and designators and call back fire missions on his radio. This position is inside the manoeuvre unit, together with its commander. Using a standardized format, the FO sends either an exact target location or the position relative to his own location, a brief target description, recommended ammunition to use, and any special instructions such as “danger close”<sup>1</sup>. The FO does not talk to the guns directly – he deals generally with the fire direction centre (FDC).

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<sup>1</sup> It is the warning that friendly troops are within 600 metres of the target, requiring extra precision from the guns.

Typically, there is one FDC for a battery<sup>2</sup> of six or eight guns. The FDC computes firing data for the guns. In recent decades, FDCs have become computerized, allowing for much faster and more accurate computation of firing data.

Radar has had a major impact on artillery. Coupled to computers it can accurately track a projectile in flight back to its firing point. This can be used as targeting information for “counter-battery fire” – artillery bombardment of an enemy artillery site. Radar improves the ability to return fire quickly and accurately. This greatly increases the all-weather flexibility of modern artillery.

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<sup>2</sup> It is a group of artillery or cannon, so grouped in order to facilitate battlefield communication and the organization of barrages.