

Firing Tables and Ballistics Division

Mission

The primary mission of the Firing Tables and Ballistics Division (FTaB) is ballistic characterization of munitions and the development of aiming data, ballistic fire control information and ballistics fire control software for all unguided and certain guided combat weapon systems in the U.S. Army inventory, select tri-service systems, and select foreign military sales cases. This includes small caliber infantry systems, mortars, tank fired munitions, artillery, missiles, and rockets.

AUTHORITY: AMC Regulation 25-30, "Development and Control of Firing Tables and Ballistic Fire Control Information"

Major Responsibilities

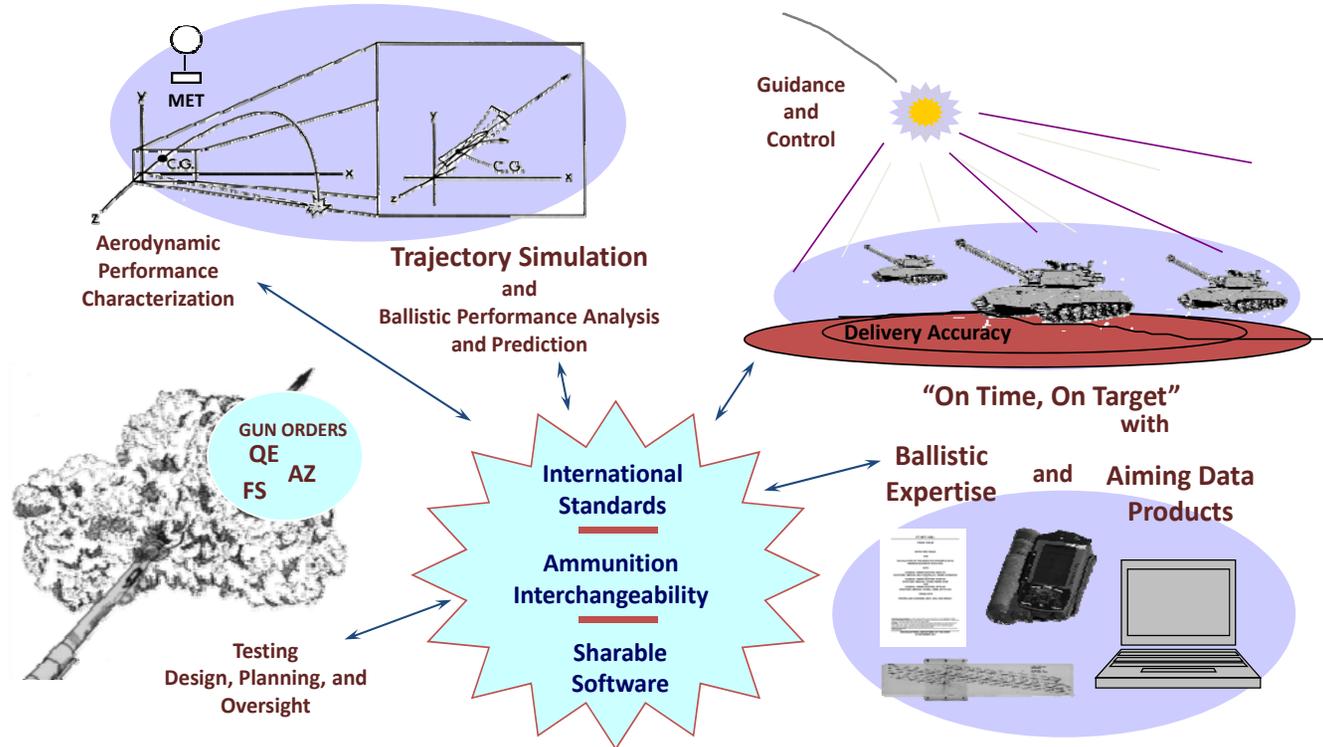
- Characterization of projectile ballistic performance
- Development of analytical algorithms, methodology, ballistic trajectory models, and data bases relating to stability and flight performance of conceptual, developmental, and fielded ammunition in free flight, course corrected flight, and full guided flight
- Development of ballistic algorithms, methodologies, and data bases relating to fire control computers and manual backups
- Development of ballistic fire control software (Ballistic Kernels)
- Supply of ballistic, flight dynamic, and general ballistic expertise and support to DoD and industry for munitions and fire control equipment in the development cycle
- Development of a rational basis for NATO and multinational standardization agreements involving interior and exterior ballistic simulation models, ballistic algorithms, firing table elements, and fire control methodology
- Publication and distribution of Tabular Firing Tables
- FTaB is the primary source for U.S. forces for the interchangeability of NATO ammunition fire control information.

Current Business Areas

Research and Development

- Ballistic characterization and technology
- Guidance and control systems
- Aiming data development
- Manual backup aiming data
- Indirect fire delivery accuracy

Ballistics Fire Control Domain



Software Development

- Ballistic software engineering
- NATO Sub-Group 2 Sharable (Fire Control) Software Suite (S⁴) products: NABK, TAFT, NAGIK-TEDM, NAMK-METM, NIFAK and NASS
- International standardization agreements (STANAGs)
- Ammunition interchangeability

Emerging Business Areas

- Ballistic fire control meteorological forecasting using METGMs
- Joint Services ballistic support
- NATO Technical Sharable Software (NTSS)
- Applied interior ballistics

Crosswalk of FTaB and ARDEC Technology Areas

ARDEC and FTaB Business Area Synergy

FTaB Business Areas	ARDEC Technology Areas										
	Smart Munitions	Indirect Fire	Direct Fire	Soldier Weapons	Mines and Demolitions	Gun Propulsion	Fuzing and Lethal Mechanisms	Fire Control	Insensitive Munitions	Pollution Prevention R&D	
Ballistic Characterization and Technology	●	●	●	●	○		○				● Total
Guidance and Control	●	●	○					○			○ Partial
Aiming Data Development		●	●	○	○	○		●			○ Planned
Manual Backup Aiming Data		●	●	●	○			●			
Ballistic Kernel CSCIs		●	○	○				●			
Demonstration Fire Control Systems	○	●	●	○				●			
International Standardization	●	●			○		●				

Firing Tables and Ballistics Division

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Product Assurance

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Publications

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STRATEGIC THRUST AREAS

- Fire control methodology and software for advanced technical demonstrations and advanced warfighting experiments
- Ballistic characterization and ballistic support for advanced, developmental, and smart munitions
- Projectile guidance and control technology
- Standardization, cost avoidance initiatives, and development of reusable and sharable software to ultimately create a horizontal domain in fire control ballistics
- Unification of the fire control ballistics software domain through the development and application of ballistic kernel software products
- Cooperative efforts with NATO and allied countries involving ballistic technology and testing, ammunition interchangeability, and enhanced meteorology



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U. S. ARMY

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RESEARCH, DEVELOPMENT AND



ARMAMENT RESEARCH, DEVELOPMENT,
AND ENGINEERING CENTER

Weapons and Software Engineering Center

Fire Control Systems and Technology
Directorate



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Approved for public release; distribution is unlimited.

LOCATIONS

