

HEADQUARTERS
32ND ANTI-AIRCRAFT ARTILLERY BRIGADE
PUBLIC INFORMATION OFFICE
BUSHEY HALL, BUSHEY
HERTFORDSHIRE

FOR IMMEDIATE RELEASE:

WEYBOURNE, NORFOLK, August 13, 1954 - The United States Army's new 75mm Skysweeper, large caliber automatic anti-aircraft artillery weapon, was fired at radio controlled and towed targets here today, before high ranking British Army officials and members of the press.

The 39th AAA Battalion of the U.S. Army's 32nd AAA Brigade, first unit in Europe to receive the Skysweeper, is presently carrying out its Skysweeper conversion firing.

Although not intended to be a demonstration of the capabilities of the weapon, British Army officials and members of the press were invited here today to witness the practice firing.

British officials invited included General Sir Maurice S. Chilton, GOC in C of the British AA Command, Major General Fanshawe, GOC, 1st AA Group, Major General Tapp, GOC, 2nd AA Group, Brigadier Chaytor, Commander 16th AA Brigade and Air Commodore Widdows, Sector Commander, Eastern Sector.

Colonel Charles H. Blumenfeld, Commander of the 32nd AAA Brigade, with headquarters at Bushey Hall, Bushey, Herts, was host to the British officials and the press. Assisting Colonel Blumenfeld with the day long program were Lt. Col. Royal L. Leidy, plans and operations officer for the Brigade; Lt. Colonel Frank D. Pryor, Jr., commanding officer of the 39th AAA Battalion; and Captain Beverly J. Dunlap, commandant of the American Firing camp at Langhen, adjoining Weybourne, where lunch was served during the noon hour.

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75mm Firing con't

The new gun which can find and track approaching aircraft as far away as 15 miles, is capable of firing on and defeating air targets as far away as four miles. The weapon, equipped with radar, computer, and gun all on one carriage, operates day or night regardless of weather conditions, even when aircraft are invisible in a blanketing fog.

Development of the gun was started by Army Ordnance late in World War II when a new weapon was needed to overcome the limitations of the 40mm gun in providing defense against high-speed, medium altitude aircraft.

The Skysweeper fired today from this British range is a part of Battery ^B of the 39th AAA Battalion, commanded by Captain ~~Walter R. Hook.~~ ^{NICHOLAS MARSELLA.}

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Tp: Gadebrook 4348

FACT SHEET

75mm Skysweeper

NOMENCLATURE

75mm gun, T33E1, and
75mm AA mount, T69

DESCRIPTION

General:

1. Army's largest caliber automatic anti-aircraft artillery weapon - an artillery machine gun.
2. First weapon with radar, computer and gun on one carriage - - first fully integrated gun and fire control.
3. A three-in-one unit designed to spot and track with radar, and aim and fire the gun semi-automatically at any enemy aircraft flying near-sonic speeds at low and medium altitudes. Can also be used against moving ground targets such as tanks.
4. Finds and tracks approaching aircraft as far away as 15-miles.
5. Fires on and defeats air targets as far away as 4-miles.
6. Operates day or night regardless of weather conditions -- even when aircraft are invisible in a blanketing fog.
7. In the event of closely-grouped enemy planes, target selection can be made by the operator.
8. Unit is mobile and is towed by a cargo tractor. It can be emplaced and have its radar operating in 20 minutes on either rough or level terrain.
9. Unit weighs 10-tons -- is air transportable. In the traveling position it is 25-foot long, 8-foot wide, and 7-foot high.

GUN AND AMMUNITION:

10. 75mm AA, with automatic loading features.
11. Armed with a proximity fuze, high explosive shell weighing 12½ pounds are fired at a rate of 45-rounds per minute.
12. A proximity or radar fused shell explodes automatically at a predetermined distance from the target.
13. Ammunition is automatically fed and rammed into the gun from two 11 - round magazines by an electrically operated loaded-rammer.
14. Firing is controlled remotely by either the radar-operator or computer-operator.

15. Gun breech is opened automatically by the counter-recoil movement of the gun.

Radar:

16. Detects aircraft within a 15-mile radius and shows it visually as a "blip" on a cathode ray "picture" tube in the radar control panel.
17. Transmits target information automatically to an electro-mechanical computer.
18. Is in a large console mounted to the left of the gun tube in the front corner of the carriage surmounted by a "dishpan" antenna.
19. Two picture tubes are visible on the rear side of the console-- one is used when scanning; the other when tracking.

Computer:

20. Automatically plots range, speed and course of approaching target and determines where the gun must point so that a shell fired any instant will intercept and destroy the target-- that is, as a duck-shooter's gun must "lead" the duck.
21. Automatically feeds future target position data into a power control which translates it into corresponding gun motion.
22. Located in a large console mounted to the right of the gun tube in the front right corner of the carriage.

Mount:

23. The integrated unit of gun, radar in the left console, and computer in the right console are all mounted on a combination chassis and gun mount with 4 wheels. These are removed with their axles when emplacing the gun.
24. Specially designed shock absorbers permit towing over rough ground by a prime mover which is usually an M8 Army cargo tractor. In England however an M-54, 5 ton truck will be used for this purpose.
25. Can be emplaced on uneven ground or on slight slope.
26. A motor-driven hydraulic mechanism lowers carriage gently to the ground. Reversing the hydraulic mechanism raises the carriage.
27. A rigid pedestal and four folding outriggers extend from the mount when the weapon is emplaced.

Off Mount Equipment:

28. A target selector which is an auxiliary sighting device is used to direct the gun to more advantageous targets which the gun operators did not see.

29. A cable connecting the target selector to the mount.
30. A second cable connecting the mount to the electrical power source.

Operation:

Is almost entirely automatic. Once the gun is emplaced, the radar operator pushes a button causing the radar scanner to rotate, scanning the skies in a continuous circular sweep.

When planes appear on picture tube the operator depresses a "dead man" foot pedal which stops the rotation of the radar scanner. He immediately makes minute adjustments in range, azimuth and elevation and then releases the foot pedal for automatic operation.

Automatically, the radar continues to track the target; feeds target data to computer; computer plots future position of target and aims the gun at this future position.

As the target comes within gun range, either the computer operator or the radar operator presses a firing button. Gun continues to fire automatically.

Development and Production:

Was begun by Army Ordnance late in World War II. A new weapon was needed to overcome the limitations of the 40mm gun in providing defense against high-speed, medium altitude, aircraft.

After the military characteristics were determined, Ordnance instituted a complete research, development and production program with American industry and Ordnance Arsenals. Included among these are:

Watertown Arsenal, Watertown, Mass. (Project coordinator and technical supervisor.) Mounts, recoil mechanisms, guns and final assembly.

Sperry Gyroscope Co., Great Neck, N.Y. and
A. C. Spark Plug Division of General Motors Corp., Flint, Michigan, and
Frankford Arsenal, Philadelphia, Pa.
Fire control systems

Aetna Standard Engineering Co., Ellwood City, Pa;
Mounts and final assembly

Franklin Institute, Philadelphia, Pa. and
American Machine and Foundry Co., and
United Shoe Machinery Co., Boston, Mass.
Loader-rammers

Wheland Co., Chattanooga, Tenn., and
National Forge and Ordnance Co., Irvine, Pa., and
Cameron Iron Works, Houston, Texas, and
Watervliet Arsenal, Watervliet, N.Y.
Guns

Rock Island Arsenal, Rock Island, Ill
Loader-rammers and recoil mechanisms

Testing is done at Ordnance's Aberdeen Proving Ground in Maryland.

MAINTENANCE:

Complexity of entire unit makes necessary one of Army's longest training courses for maintenance personnel --48 weeks. This is conducted at the Ordnance School, Aberdeen Proving Ground.

TRAINING:

Integrated Fire Control Specialists Course, 9 months duration, given at Fort Bliss, Texas, the Antiaircraft Artillery Center for the United States. Such personnel are trained to maintain all electrical elements and the Fire control System.

Artillery Mechanics Course, four weeks duration, trained to maintain the gun and mount. Each gun section has one of these trained mechanics assigned. This course is also given at Fort Bliss, Texas.

The Ordnance Integrated Fire Control Detachment personnel are trained at the Ordnance School, Aberdeen Proving Ground, Maryland.

Each gun unit costs approximately 314,000 dollars.

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