

# Our "new" anti-aircraft artillery

## Introduction

Analogous to the reproduction of the article from Folk og Værn "Aircraft artillery and night fliers" from 1942, here is a representation from 1934. This year is identical to the model year of the majority of anti-aircraft equipment of the time, which in any case justifies the title of the article.

My starting point has been a not particularly clear photocopy, which is why it has not been possible to reproduce the three images - 75 anti-aircraft gun, listening device and searchlight - which originally accompanied the article. Instead, I have equipped the present presentation with other images of the material in question, whereby the "spirit" of the article can be maintained. The pictures all come from *the Defense Book* by Colonel T. Andersen, Gyldendal, 1941.

**"Our new Air Defense Artillery** by  
Arne Stevens



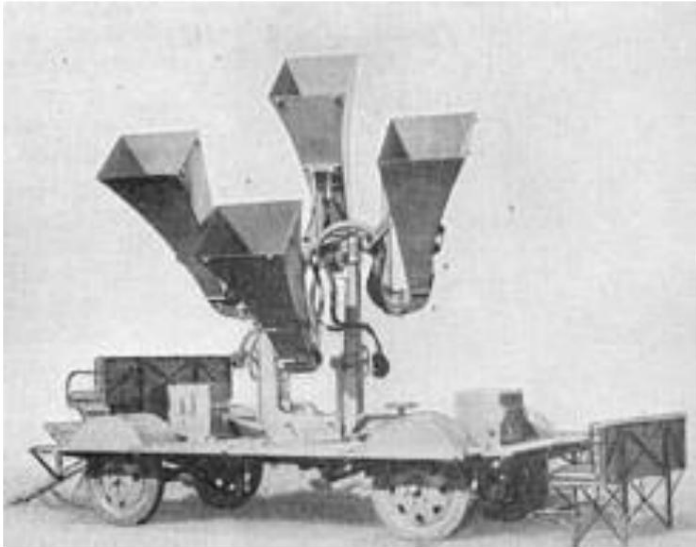
The Army Act of 1932 determined that Denmark, like other cultural countries that want to shield the population as much as possible from the danger from the air, should have a special anti-aircraft artillery. That reason was created 10. Artillery Department (Air Force Department) with 8 batteries, which will gradually be equipped with excellent, ultra-modern equipment.

The World War showed so clearly that it cannot be debated how necessary it is to mechanize fire control and target detection as much as possible if you want a favorable result from shooting at targets in the air.

This will also happen for us, but of course it will take a certain amount of time, because all devices are very expensive and - not least - because the Army's Technical Corps has been able to arrange itself in such a way with the foreign companies that have constructed protection and auxiliary organs that the work on their new manufacture is carried out in this country by our skilled Danish craftsmen and under the leadership of the Army's own excellent technicians.

On this page of Danske Soldater, we bring a few pictures of the new equipment, whose operation is as far as possible made electric.

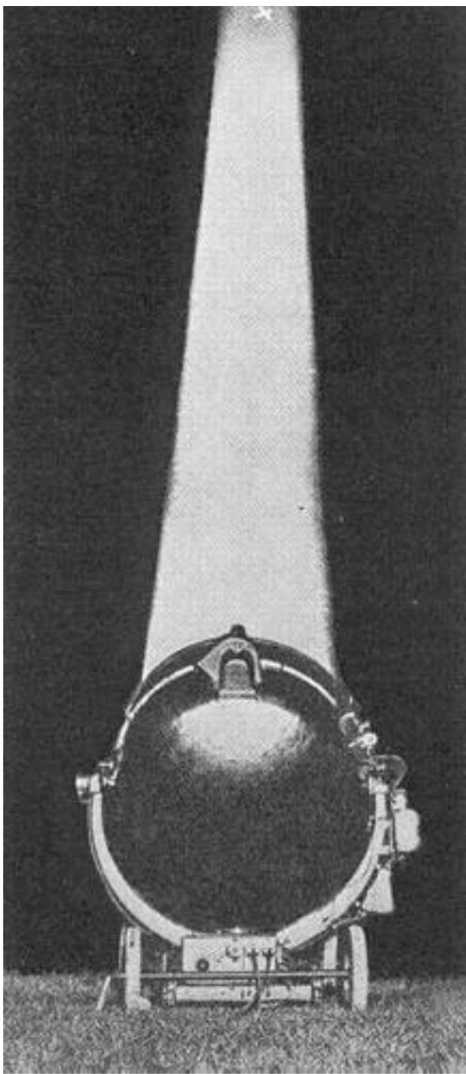
A so-called "Sperry Group" consisting of a *motor vehicle is used to determine and determine enemy airmen*, which is designed in such a way that it acts like a car on the road and, when the battery has gone into position, is transformed into a small electricity plant that supplies power for *listening device*, remote control of the *projector* and power for its light.



As the picture shows, the *listening device* consists of four metal funnels for capturing sound waves. They are constructed in such a way that you get the greatest possible sound impact by using them in this form. They are operated by 2 men, who must have good listening skills and location determination of the sounder. One aligns the device vertically, the other laterally. The two listeners sit on the platform with telephone helmets on their heads. Not everyone is a good listener. Experiments last summer showed that some young people from the Institute for the Blind were particularly good at this task, probably because they had to replace their lack of sight with sharpened hearing. On the "sofa" (the removable wheelchair) sit the other two of the operating crew and by a simple electrical device (some pointers held above one) bring the spotlight to follow the listening device both in height and side, the listening device by directing it towards the loudest sound for an invisible aviator is directed at his machine. Corrections are made in the device for the time it takes for the sound to travel from the engine to the listener, the influence of the wind, etc

When the listening device has a hold of the aviator, the searchlight is directed electrically at him, who is blinded, and at the same time you have the aviator in its cone of light, so that you can fire on him.

The *spotlight* is designed by the Sperry company. It has a mirror width of 150 cm and emits approximately 1 billion normal light. While under good conditions you can intercept an airplane at a distance of about 10 kilometers, you only reach it a few kilometers later with the light, although it is so strong that at a distance of 30 kilometers, if the searchlight is aimed at you, you can see the hands of a watch.



The battery 's *guns are* directed at the aircraft by electromechanical means. After you have captured the target in a very large "stereotelemeter" (a special 4-meter-long binoculars that displays its images stereoscopically) and are aware of its height, distance and movement, you hold it to a binoculars-equipped, very intricate and an expensive calculator that electrically ensures (tracking system) that the projectile is still aimed at the target and that the projectiles can be tempered correctly.

The cannons, like the calculator (*corrector*), *are* of English origin, constructed by the large company Vickers; one of them was on display in Tivoli at the British exhibition in the summer of 1933. It is very long (49 calibres), can be rotated all the way around the horizon and elevated 90° so that it can shoot vertically into the air. Its projectile has a very high initial velocity (805 mi per second), and it therefore also shoots far - at most 14,500 m, vertically 10,000 m. It has the same caliber size as our field gun, namely 75 mm.

In shooting position, it rests on a cross of 4 arms (cross slave). It - like all anti-aircraft equipment - is transported by motor traction.

Incidentally, I refer to pictures showing the appearance of this excellent material, and I just have to mention in conclusion that officers from numerous countries - most recently from Spain - have been up here to look at our anti-aircraft artillery, which, like our modern heavy field artillery , is exemplary in every respect - we just need more of it."

Per Finsted