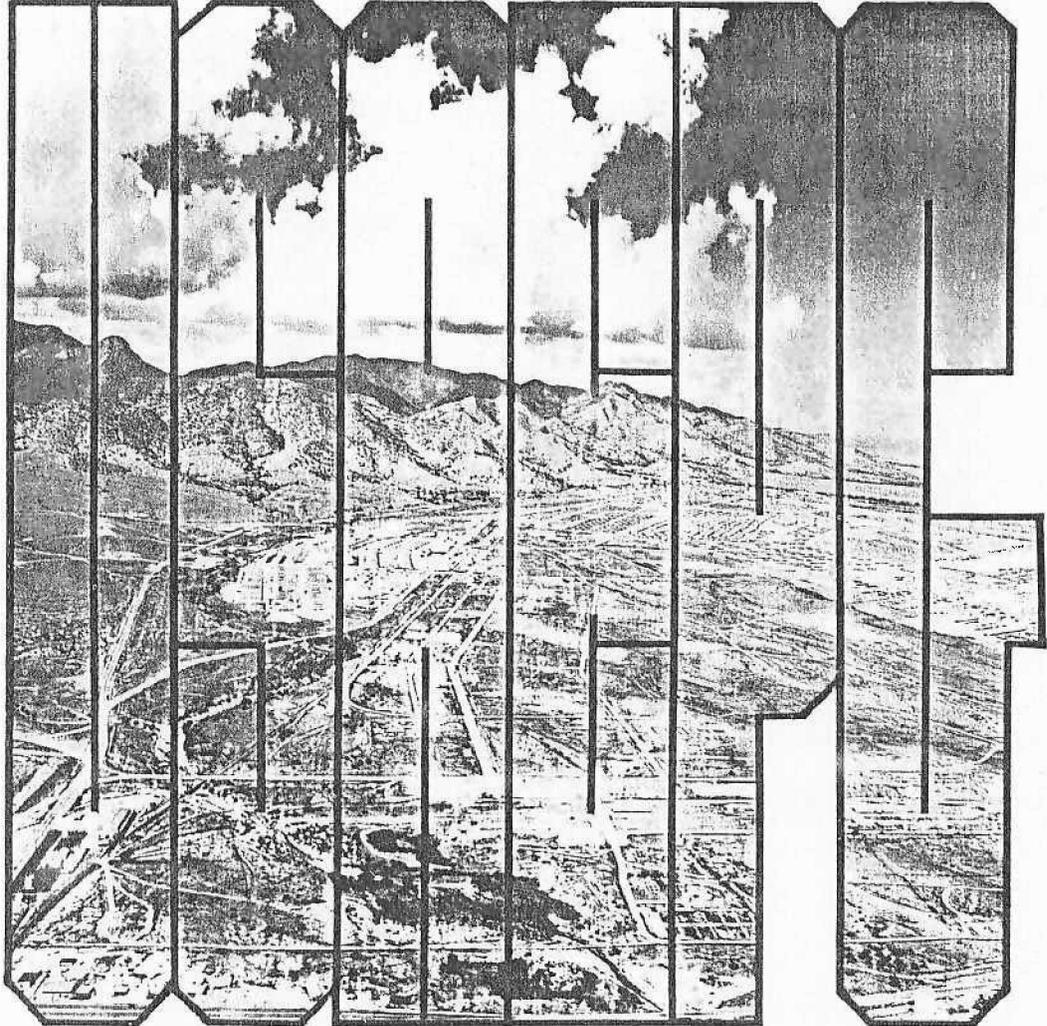


GUIDE

to

FORT HUACHUCA

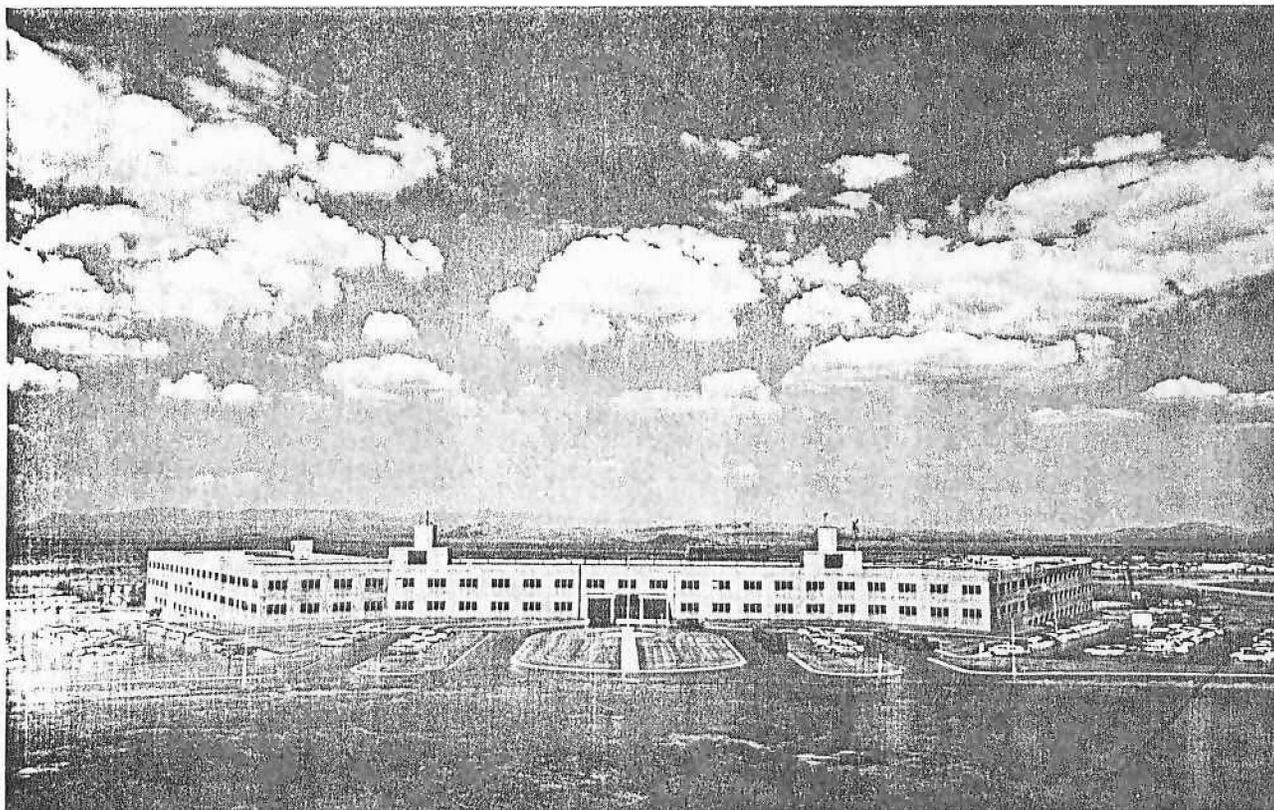


United States Army Electronic Proving Ground

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THIRD EDITION

FORT HUACHUCA TODAY



GREELY HALL

MISSION AND FUNCTIONS

The Mission of the U.S. Army Electronic Proving Ground is three-fold:

- To conduct engineer test of communications-electronic equipment and systems.
- To conduct user tests of this equipment, both as individual devices and as systems.
- To propose and develop men Command Control Systems.

One of the most important functions of this Army Signal Corps installation is to test and evaluate field communications systems, which are so vital to Command Control. Among the major projects in this area are: an automatic electronic switchboard, a mobile radio central, and tropospheric scatter radio transmission.

Field testing equipment which will provide an around the clock, all-weather watch over the battlefield is another function of the Proving Ground. This realm of activity is known as combat surveillance and includes almost any electronic or electro-mechanical de-

vice, airborne or on the ground, which can provide an accurate and fast examination of the combat area and the sky over it. Projects in this field include: an aerial surveillance system (Drone), guidance and control systems, ground and airborne radar, and photo transmission systems.

In the field of electronic warfare, the Proving Ground is testing devices which can disrupt an opponent's communications and reduce his combat capabilities. These are known as ECM, or electronic countermeasures. Also being evaluated are equipments which will protect our own communications systems from in-



MAJOR GENERAL FRANCIS F. URRHANE
Commanding General
U.S. Army Electronic Proving Ground
Fort Huachuca, Arizona

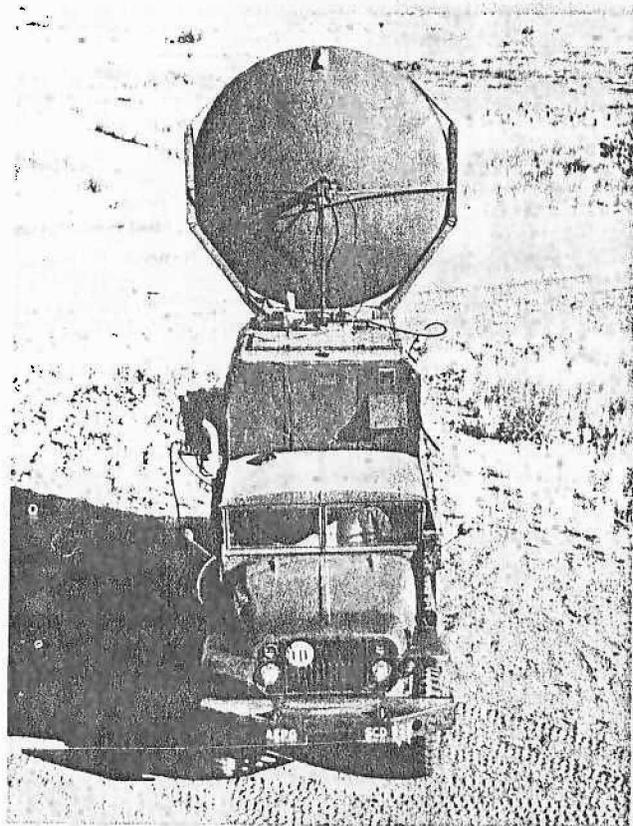
ference. These are known as counter-counter-measures.

Aviation and electronics have merged into what is now known as avionics and it is in this area of endeavor that tests are being made on navigation and communications systems, air traffic regulation, flight instrumentation and stabilization, and aircraft identification.

As automation is introduced into the tactical Field Army, important developments are taking place at the USAEPG. Typical is the Fire Support System in which automatic data processing equipment is used to plan and execute first round artillery accuracy. In a military pay project, history was made at Fort Huachuca when Army personnel were, for the first time, "Paid by Computer."

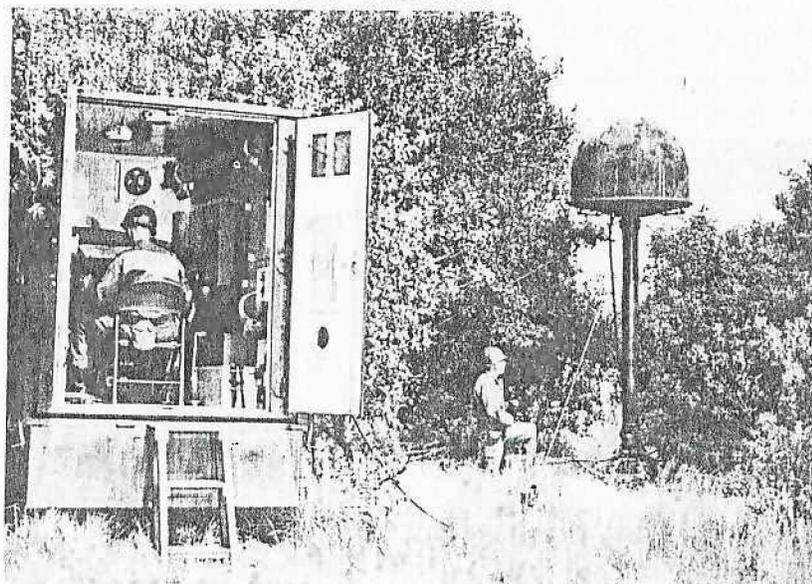
Another function of this installation is to furnish meteorological support to Army Research and Development projects. In carrying out this function, twelve teams are now assigned to projects as far north as Greenland and as far south as the Panama Canal Zone. They are assisting the Army's Quartermaster Corps, Transportation Corps, Engineer Corps and others in special test programs. Also research is being done in the field of micrometeorology, or small scale weather variations.

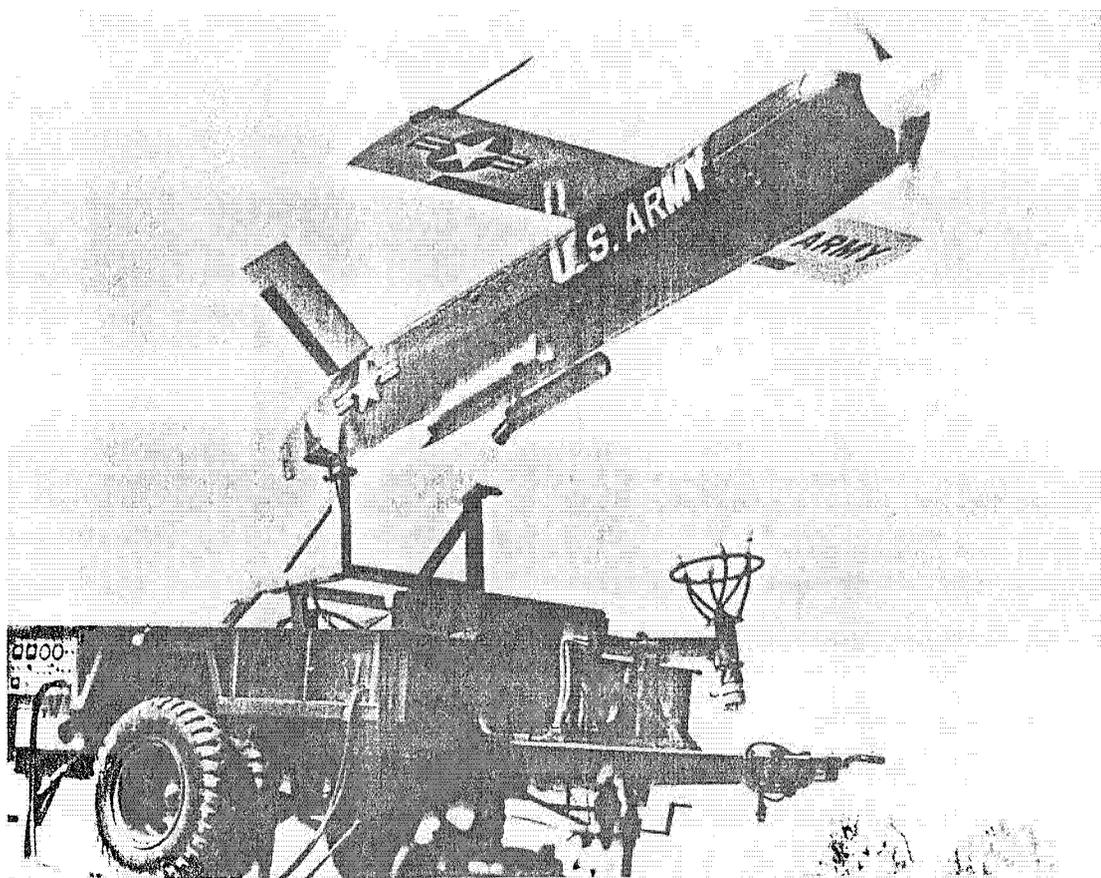
Actually, testing programs of the Proving Ground extend about 300 miles to the West to include the Electromagnetic Environmental Test Facility with headquarters at the Yuma Test Station. Radio frequency interference tests are being conducted in the EEMTF area with the ultimate goal of interference-free and compat-



RADIO SET MOUNTED ON A 2½ TON TRUCK
USED BY SIGNAL COMMUNICATIONS DEPT.

FIELD OPERATIONS





AERIAL SURVEILLANCE DRONE SYSTEM AT ZERO LAUNCH

ible operation of most, or all, of the Army's electronic and radio devices.

In carrying out its mission and performing its various functions, the U.S. Army Elec-

tronic Proving Ground serves as a connecting link between the developers of electronic devices and systems and the troops in the field who will be the ultimate users of these devices and systems.

U.S. ARMY COMBAT SURVEILLANCE AND TARGET ACQUISITION TRAINING COMMAND

The U.S. Army Combat Surveillance and Target Acquisition Training Command at Fort Huachuca is a Class 1 activity under the U.S. Continental Army Command, Fort Monroe, Virginia.

The Mission of USAC&TATC is as follows:

Provide training for individuals and units in utilization, operation, and maintenance of combat surveillance and target acquisition equipment.

Provide information and assistance to various military activities including service schools for the development of operational concepts and techniques and procedures relat-

ing to the employment of combat surveillance equipment.

Provide information, as requested by various military agencies, on experience factors gained through daily continued use in courses of instruction of combat surveillance and target acquisition equipment.

Contribute to the Army-wide combat surveillance effort by providing assistance, and by maintaining close coordination with developmental, testing and doctrinal preparing agencies.

Assist the Commanding General, USAEPG, in the development of operational procedures for

field testing combat surveillance and target acquisition equipment.

The equipment with which USACSTATC is primarily concerned includes: Drones, pilotless aircraft which monitor and photograph a combat zone; Airborne radar which is flown over the battle field to monitor combat situations previously undetectable by the unit commander; Tracking and plotting radar which monitors and controls the flight pattern of both manned and unmanned aircraft to predetermined pinpoint areas; Ground surveillance radars which are the eyes and ears of the field commander.

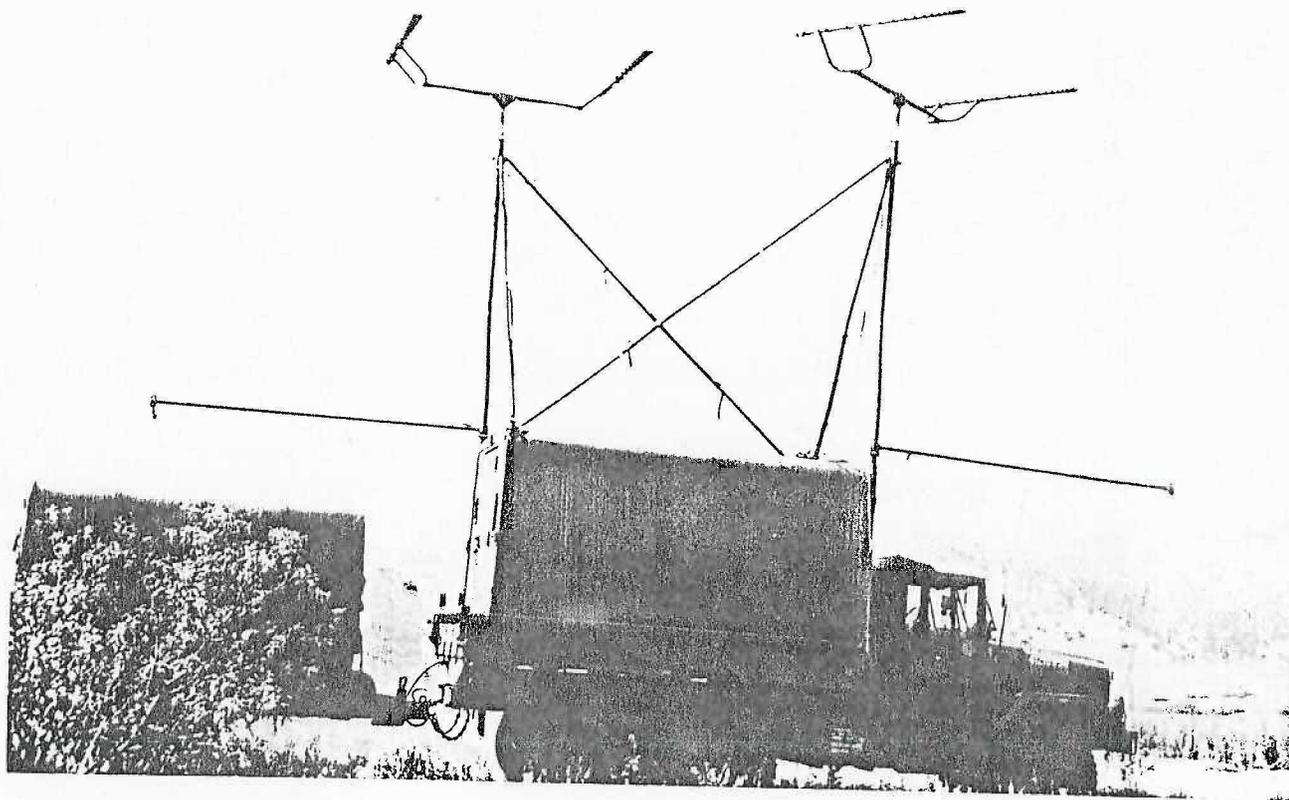
There are three instructional departments in USACSTATC, each with a primary mission of training personnel and units in operation and maintenance of the combat surveillance and target acquisition equipment. The Aviation De-

partment trains men to operate and maintain airborne radar sets.

The Drone Department trains students in launch operation, airframe and engine maintenance, control system maintenance, and drone control. The controllers learn to maneuver the drone expertly. This is done by sight tracking the drone within visibility limitations and then tracking with radar.

The airframe and engine mechanics are trained to perform simple repairs or completely rebuild a drone. The control system mechanics maintain the drone CS in operational condition.

The Radar Department instructs students in the maintenance and operation of ground surveillance and tracking and plotting radars. They are taught to identify targets and observe activity on the battlefield.



SHOWN IN THE PHOTOGRAPH ABOVE IS A RADIO REPEATER SET EQUIPPED WITH A LOG PERIODIC ANTENNA AND A QUICK ERECTABLE MAST. USING THIS SYSTEM THE ANTENNA ARRAY AND THE MAST CAN BE MADE OPERATIONAL BY TWO MEN WITHIN FIVE MINUTES.