

RESTRICTED

**BRIEF DESCRIPTION OF SCS-2, SCS-3, AND
"SUPERMAN" FIGHTER CONTROL NET SYSTEMS**

The radio art has made rapid progress during the last few years, moving up to higher and higher frequencies. VHF is a British terminology for very high frequency, corresponding to what is more familiarly known as ultra high frequency (UHF) in America. The frequency range of VHF equipment is from 99 to 156 megacycles.

Pilots accustomed to the noise and static in the high frequency (HF) systems still being used in the armed forces, both here and in England, often say of this very high frequency (VHF) equipment, "it's as good as a public telephone."

There are, generally speaking, three VHF systems used for control of tactical aircraft:

- a. SCS-2 System
- b. SCS-3 System
- c. "Superman" System

CONTROL NET SYSTEM SCS-2 (semi-fixed communications equipment for ground control of interceptor pursuit operations) consists of a control center (SCR-561), a radio transmitting station (SCR-562), a radio receiving station (SCR-563), a homing direction finding station (SCR-564), three fixed direction finding stations (SCR-565), a mobile homing and direction finding station (SCR-566), and a mobile relay transmitting and receiving station (SCR-567). This equipment is designed to facilitate control of a number of squadrons of aircraft. The radio transmitting and receiving equipment is provided for ground-to-air and air-to-ground communications, while the radio direction finding equipment is provided for the locating of friendly aircraft in flight. The entire system is con-

nected to the control center by land wire lines so that all information relative to the location of aircraft is transmitted to the controller by means of wire telephone facilities. In some cases this information is transmitted to the controller by radio when telephone communication is impracticable.

CONTROL NET SYSTEM SCS-3 is used in the same manner and for the same purposes as control net system SCS-2, but is made up of different radio sets. The equipment making up this system formerly consisted of the following mobile radio sets:

- 1 SCR-572, Control Center
- 3 SCR-573, Transmitting Station
- 3 SCR-574, Receiving Station
- 4 SCR-575, Mobile Direction Finding and Homing Station

It is anticipated that control net system SCS-3 will be composed of the following radio sets, instead of the above mentioned radio equipment:

- 1 SCR-642, Control Set (Fixed)
- 3 SCR-643, Transmitting Station (Fixed)
- 3 SCR-644, Receiving Station (Fixed)
- 4 SCR-645, Direction Finding and Homing Station (Fixed)

Control net system SCS-3 is very flexible and the above information is to be used only as a guide.

"SUPERMAN" CONTROL NET SYSTEM (mobile communications equipment for ground control of tactical aircraft), consists of a transmitting and receiving station (SCR-567 or SCR-573 and 574) and mobile direction finding and homing station (SCR-566). This equipment is designed to provide only homing facilities and air-ground, ground-air communications with tactical aircraft.

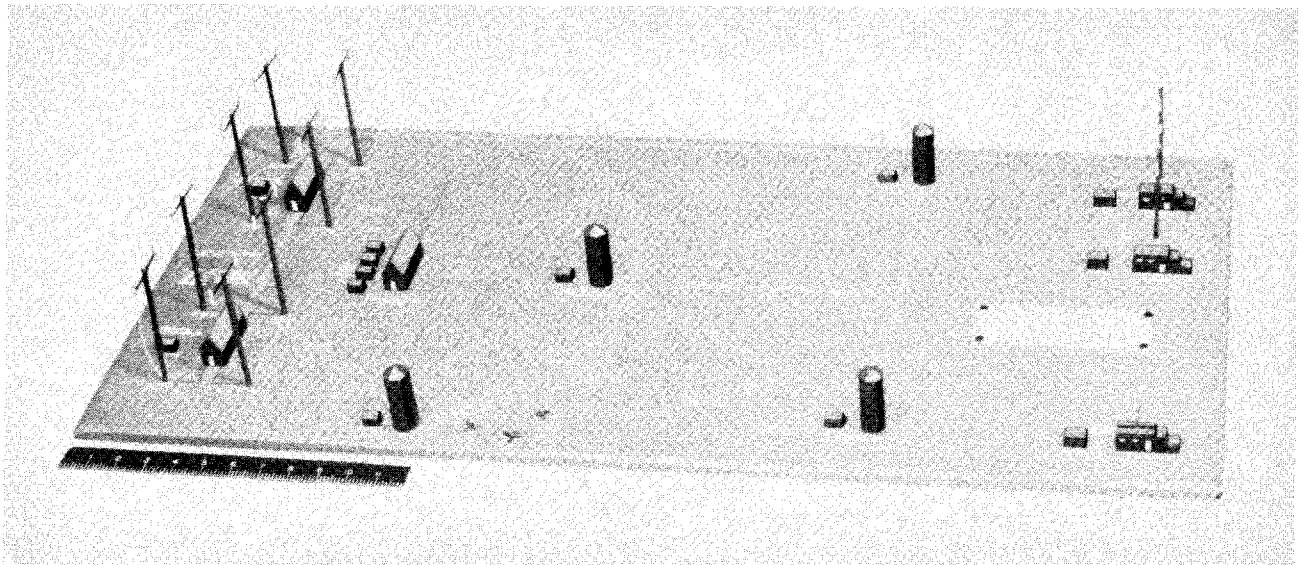


Figure 1 - Model of Typical SCS-2 Installation - Detail View of Plan