

AN/TSC-86 Satellite Communications Terminal

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General Information

The AN/TSC-86 can provide simultaneous communications with up to four other terminals. Included in the terminal is modulation, demodulation, multiplexing, and signal conditioning equipment necessary for processing multiple, medium-, wideband-digital voice, data, and teletype signals. The electronics are housed in an S-280 shelter with mobilizer. A power pallet containing two 30 kW generators is employed as part of the terminal. The terminal also consists of two antenna groups: the 8-ft group, AS-3036 and the 20-ft group, AS-3199.

The communications subsystem accepts VF, teletypewriter, and baseband digital signals from external cable transmission networks and combines them with on board teletype and voice orderwire signals to form a composite, multiplexed, digital signal called the mission bit stream. This bit stream is applied to a bulk encryption device before routing to the digital data modem by the modulated 70-MHz panel for conversion to SHF and transmission. Received signals are processed in a similar manner, except in the reverse order.

Technical Characteristics

Type of Service	Multichannel
Frequency Range:	
Transmit.	7.25 to 8.4 GHz
Receive	7.25 to 7.75 GHz
Planning Range	16,093 km (10,000 mi)
Power Input	120/208 V AC, 50/60 Hz
Power Source	30-kW generator (two each)
Power Output	1 kW max
Antenna System	One quick-reaction, 8 ft parabolic one 20-foot parabolic that can transmit and receive multiple carriers
Set-Up Time	Approximately one hour to satellite acquisition with small antenna; within 12 hours for large dish

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