

## AN/TSC-86 Satellite Communications Terminal

Status: STD-A; NSN: 5895-01-083-6891

Reference: TM 11-5895-846-14

### General Information

The AN/TSC-86 is capable of providing 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, TTY, 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 (2 each)
Power Output-----	1 kw maximum
Antenna System-----	One quick-reaction, 8-foot parabolic; one 20-foot parabolic that can transmit multiple carriers
Set-Up Time-----	Approximately 1 hour to satellite acquisition with small antenna; within 12 hours for large dish

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