Telephonics' STARCOM audio Intercommunications System (ICS) is designed for secure communications, meeting the diverse needs of airborne, shipborne and ground-based applications.

System Design

STARCOM is specifically designed to provide reliable intercommunications in high-noise environments. The system has gained widespread acceptance in both domestic and international markets with 27 different platform types incorporating STARCOM in numerous configurations. The STARCOM system design is based on an analog, distributed architecture which can accommodate both large and small configurations. All active electronics are incorporated into individual crew stations providing maximum operator control while eliminating the possibility of a system-wide failure that can be associated with a centralized system.

System Configuration

The STARCOM system consists of a Communication System Control (CSC) unit and an Audio Distribution Unit (ADU). The CSC is the heart of the system and provides individual on/off and volume control for radios and receive-only devices. Operators can communicate hands-free using STARCOM's Voice Operated (VOX) keying interphone. The basic CSC controls five radios and an interphone communication. The ADU interfaces all elements of the ICS and maintains crosstalk isolation performance of 100 dB. The ADU is a completely passive unit with no active circuitry and is extremely reliable with no single point of failure.

Two additional units, the Navigation Receive Unit (NRU) and the Maintenance Station Unit (MSU) located on the ICS only, add increased functionality and flexibility to the STARCOM system. The NRU provides up to six additional on/off and audio level controls for monitoring individual receivers such as radios, navigation equipment, Aircraft Survivability Equipment (ASE), Radar Warning Receiver (RWR) and jamming equipment. The unit is connected to one of the CSC's direct audio inputs and can be controlled by the master volume control knob. The NRU features six additional direct audio inputs (three controlled and three uncontrolled) for aural warnings and also provides a CALL feature.

The MSU is a derivative of the CSC that contains the headset driver as well as the microphone amplifier circuits and is designed to provide interphone transmit/receive capabilities and aural warnings. Optional configurations provide additional functions.

Intercommunication Systems

Performance		
Power Requirements:	Unit: 28 Volts @ 230 mA	
	Panel: 115 Volts/400 Hz @ 10 mA; or +28 Volts @ 230 mA; or 5 Volts AC/DC @ 1.0 A	
Panel Lighting:	Aviation red, green, white, blue/white	
	NVIS green per MIL-L-85762A	
Signal Levels:	COM Radios:	2.75 Vrms, nominal receive levels; 0.39 Vrms, nominal transmit levels
	NAV Receivers:	2.75 Vrms, nominal receive levels
	Direct:	2.75 Vrms, nominal receive levels
	Interphone:	0.39 Vrms, nominal receive and transmit levels
Impedances:	Receive/Transmit/Interphone:	150 ohms
	Microphone:	5 ohms Dynamic (M-87 or equivalent); 150 ohms Electret (M-170 or equivalent)
	Headphones:	8 ohms
Headphone Nominal Max Drive Levels:	1.25 Vrms, 1.50 Vrms or 2.65 Vrms	
Control Functions:	Key Lines:	Conducts up to 1 amp to ground when keyed
	Main Volume:	0 to 40 dB
	PTT Lines:	Radio, ICS, PVT
	Status Output:	For remote display
	Radio Monitor:	Individualized to 24 dB
	NAV:	To 24 dB (1 control/3 controls)
	Direct 2-uncontrolled	2-master volume only
	Remote Select:	Sequential - Up/down; Dedicated 5-way switch
Environmental:	MIL-STD-810	
	EMI:	MIL-STD-461
Reliability:	Mean Time Between Failure: 10,000 hours rotary-wing, 20,000 hours fixed-wing	

Main Features

Accommodates up to five Receiver/Transmitters (R/Ts), six navigation receivers, two ICS channels and controlled/uncontrolled audio warning signals.

- External switching can provide alternate connection to additional R/Ts and receive channels

- Radio and navigation receive channels that can be individually monitored and level controlled

- Selected R/T channels are automatically monitored

- Improved audio intelligibility due to individual volume controls, increased volume range, better audio signal-to-noise ratio and reduced crosstalk

- Main and private interphone channels

- Remote radio transmit selection available for Hands on Throttle and Stick (HOTAS) or Hands on Collective and Stick (HOCAS) operations

- Hands-free operation via VOX that performs in high-noise environments

- Remote radio transmit selection indication provided for interface with Control Display Unit (CDU)/Flight Management Systems (FMS)

- An adjustable threshold allows for an optional VOX setting as determined by ambient acoustic noise. The quieter headset reduces crew fatigue on long missions.

- Provides communications with isolation between radio transmit output channels and other signals greater than 120 dB

- Available MIL-L-85762A Night Vision Goggle (NVG) compatible or standard edge-lit front panels

- Adapters available for direct C-6533 replacement

For additional information, contact Telephonics at 631.755.7000 or visit www.telephonics.com.

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