

Maritime Surveillance Aircraft

Digital Intercom System

Advanced Communication Management



Fully digital replacement intercom for maritime surveillance aircraft – total engineered replacement solution.

Telephonics now offers a total replacement solution for Maritime Surveillance Aircraft (MSA) intercommunication systems with its SDI advanced digital intercommunication system. The Telephonics SDI is an all digital intercom that provides excellent audio quality, high

reliability, reduced system weight and is highly affordable.

SDI is the best solution to a replacement for the old analog intercom aboard MSA platforms is Telephonics latest digital intercom, the SDI. Customers all over the world

have chosen SDI as a new or replacement intercom for a wide variety of military platforms. SDI has proven itself to be an economical, reliable, easy to use system for aircraft communications management.

A Modern Digital Intercom

SDI provides full digital audio and digital control for communications and audio management. This design eliminates the interference noise found in older analog systems, and reduces wiring, weight and complexity. The system allows significantly greater functionality and flexibility than older systems, providing the user or integrator the means to provide a custom solution to a replacement intercom requirement.



Maritime Surveillance Aircraft Intercom System

Customers and Programs

System Architecture

The SDI system consists of two major assemblies: the Interface Control Unit (ICU) to which all the radios, audio inputs, warnings and aircraft interfaces are connected; and the Control Audio Panel

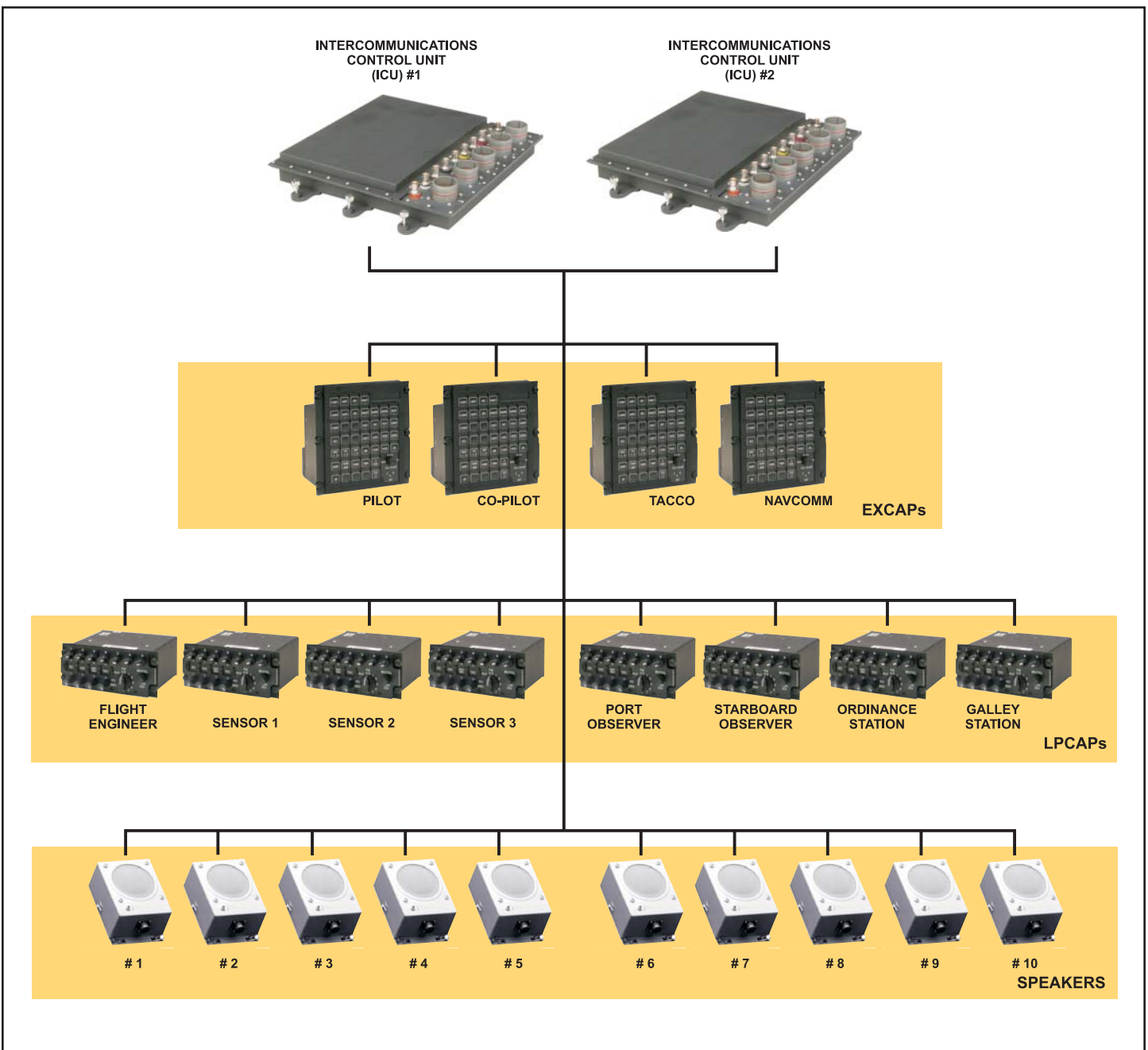
(CAP), the operator control panel used to select audio sources and system functions.

Depending upon the number of operators and audio sources, more than one ICU may be used in an aircraft system. Each ICU can interconnect up to 8 operators.

Typically, the system uses two ICUs to accommodate a crew of 12 operators. The ICU performs the routing and distribution of audio between crew members and the platform systems. The ICU contains an imbedded processor and provision for plug-in modules for special functions and aircraft system

interfaces. In addition to an operational flight program, the ICU contains a programmable Communication Plan that allows the integrator to specify the functionality of each operator control in terms of communication access.

SDI – Secure Digital Intercommunications



Technical Features

Operator Controls

The typical MSA uses two types of operator control panels. The EXCAP, or expanded control audio panel, is used by the flight deck and full access mission crew for total communication management and rapid single-button functions.



The system can use any combination of control panels, depending upon the communication requirements of the operator. In addition to the EXCAP and LPCAP, Telephonics has several other control panels available with different types of push buttons or toggle switches, which may be used to create the most ideal user interface for the aircraft application.

The LPCAP, or low profile control audio panel, is used by other crew positions for access to audio assets at their stations. The LPCAP provides a small form factor panel for locations with limited space availability.

Expandability

The SDI system can be expanded to include:

- Up to 32 operator control panels

- Up to 88 radios or audio assets
- Customized panel human machine interface
- Available maintenance panels
- MIL-STD-1553 Interface
- Ethernet Interface
- Wireless Intercom Extension

Security

SDI is qualified to U.S. Government and international requirements for communication security providing a high level of isolation and control of compromising emanations.

Qualification

SDI is qualified to military (MIL-STD-810E, MIL-STD-461E) and commercial (DO-160) standards for environmental and electromagnetic interference. In addition, SDI may be supplied

with DO-178B software for FAA certification.

Customization

The SDI system may be further customized with unique features such as Spatial (3-D) Audio, Voice over Internet Protocol (VoIP) interfaces, crypto switching and control, wideband audio capability, custom operator control panels, and many other options.

Integrated Solutions and Installation Kits

Telephonics has prepared complete turnkey system solutions for its customers, including wiring and installation "A-Kits" which provide the installer with a complete hardware package ready for installation, either in the field or in the depot. These totally engineered kits may be customized to the exact aircraft configuration or may be purchased in an existing configuration, allowing the installer to customize the system on site.

LRU	Dimensions In (mm), HxWxD*			Weight, lbs. (Kg)	Power, Watts +28 Vdc	MTBF, Hours (AIC)
Interface Control Unit (ICU)	3.00 (76.2)	12.00 (304.8)	12.00 (304.8)	9.0 (4.1)	28.0	>33,000
Extended Control Audio Panel (EXCAP)	6.38 (123.8)	5.75 (146.0)	5.50 (139.7)	5.3 (2.4)	18.0	>54,000
Low Profile Control Audio Panel (LPCAP)	2.65 (67.3)	5.75 (146.0)	6.50 (165.1)	2.5 (1.1)	12.0	>61,000

*Depth does not include connectors.

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*Telephonics SDI
The New Standard . . . in Digital Intercommunications*



For further information contact:

Telephonics Corporation
Communication Systems Division
815 Broad Hollow Road
Farmingdale, NY 11735-3904
(631) 755-7000
Fax (631) 755-7200
www.telephonics.com

