

## Shipboard Integrated Voice Communication Systems (SIVCS)



SIVCS is a communications system using Denro's Model 3080/Rapid Deployment Voice Switch (RDVS) and the Programmable Integrated Communications Terminal (PICT). The Primary System Mission is shipboard Air Traffic Control (ATC) and internal shipboard communications. SIVCS is currently deployed on aircraft carriers and other classes of ships with similar requirements.

The SIVCS system is based on an open-architecture which exploits new technologies, new products and enhances interoperability. The structure of the system is scalable and the subsystems are all modular. Configurations can be quickly and economically expanded to meet a ship's increased communications needs with the addition of interfaces and/or software.

A SIVCS uses Touch Entry Displays (TEDs) for positions and PICTS connecting secure radio interfaces, analog circuits and Integrated Services Digital Network (ISDN) circuits.

The standard TED provides single-action access and multiple pages of color display controls specifically designed for ATC. A weatherized version is available for above deck applications. The PICT provides programmable access to telephones and ships interior communications operators.

The SIVCS system is ISDN-compliant, is completely digital, and provides non-blocking communications for intercom, interphone, and radio functions. Voice, video and data signals are routed over digital TDM buses throughout the system. The SIVCS is easily expanded by adding trunk, radio or position interface circuit cards and switch control units as needed. The system includes a PC terminal with diagnostic software for identifying possible system faults, as well as providing additional maintenance capabilities with circuit card LED fault/status indicators.

## Shipboard Integrated Voice Communication Systems (SIVCS)

### PRODUCT SPECIFICATIONS



System Functions:	Integrated intercom, telephone and radio communications
System Availability:	>0.99999
Classes of Service:	Non-blocking; programmable through a Configuration Control Terminal
System Architecture:	TDM method using 64KB PCM digitized voice switching
Switching Control Scheme:	Distributed processors under digital communications control via a LAN
Traffic:	Supports a minimum of 1200 calls/busy hour (average hold of 30 seconds)
Blocking:	100% non-blocking
Call Setup:	<200 ms
Call Access:	<100 ms
Call Delay:	2.0 sec max
PTT Delay:	<50 ms
Call Completion:	>99.999%
Warm Start:	<15 sec
Speed Calling:	Up to 23 digits per number (1000 numbers system wide)
Programmable Buttons:	Up to 100 per terminal
Last Number Redial:	One button access
Recorder Output:	All positions, telephone and radio interfaces are 600 ohms
Frequency Response:	300 Hz to 3000 Hz, $\pm 1$ dB, 600 ohms, balanced to ground, >6 dB/octave rolloff below 300 Hz and above 3000 Hz
Impulse Noise:	0 hits above 40 dBmCO in a 3-minute period
Idle Channel Noise:	<20 dBmCO at any transmit output; < 25 dBmCO at receive headset jack
Crosstalk Isolation:	Better than 70 dB
Trunk Circuits:	600 or 900 ohms selectable impedance
Radio Circuits:	600 ohms impedance
Microphone Jack Input:	50 ohms impedance
Headset Jack Output:	600 ohms impedance
Headset Hearing Protection:	Amplitude Limiting to -12 dBm max, tone notching filter (DSP)
Receive Signal Level Regulation:	$\pm 1.0$ dB of nominal receive level over a range of $\pm 8$ dB with AGC enabled; AGC on/off selection
Transmit Signal Level Regulation:	$\pm 1$ dB for 15 dB of compression, $\pm 15$ dB AGC optional
Radio/Trunk Channel Receive Level:	+30 dBm to - 30 dBm (1 dB step adjustments)
Radio/Trunk Channel Transmit Level:	+30 dBm to - 30 dBm (1 dB step adjustments)
Radio Channel Push-to-Talk:	Dry connect, ground, - 48V, external voltage, or simplex arrangement. Relays meet FCC Part 68.302 and FCC Part 68.304 requirements.
Information Tones:	Dial, Busy, Reorder (Fast Busy), Ringback, Unauthorized, Zip, Chime, Guard, and Conference Notification
DTMF Signaling:	Per ANSI/EIA/TIA 464A
Interface Options:	Radio best signal selection option; E1, T1 or ISDN interfaces for positions, trunks, and radios, European MFC-R2 interface options
Digital Interface:	T1, DS1, and fractional T1 services and E1 services in accordance with CEPT
Telecommunications Interfaces:	Public Switched Telephone Network (PSTN), Federal Telecommunication System 2000, PBX w/DTMF and Pulse Dial signaling. Tie trunk 4-wire E+M, Analog w/loop start and ground start, National ISDN PRI/BRI.AT&T 5ESS and Northern Telecom DMS 100
Voice/Data:	Meets ITU H.320 (p64), H.324 (modem), and H.120 standards
Radio Communications Interfaces:	Plain or secure signaling, cipher mode select, PTT preemption
System Power:	-48 Vdc operation
AC-DC Supply:	92 Vac to 264 Vac, 47 Hz to 63 Hz, Single Phase
Battery System:	Sealed, Maintenance-Free, Non-venting battery set
Temperature:	40 - 104°F (4 - 40°C)
Relative Humidity:	10 - 95% non-condensing
Operator Instruments:	Headset with PTT, Handset with PTT, Footswitch with PTT, Hand Microphone with PTT, Speaker, Programmable Integrated Communications Terminal (PICT)

For more information, please contact:

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