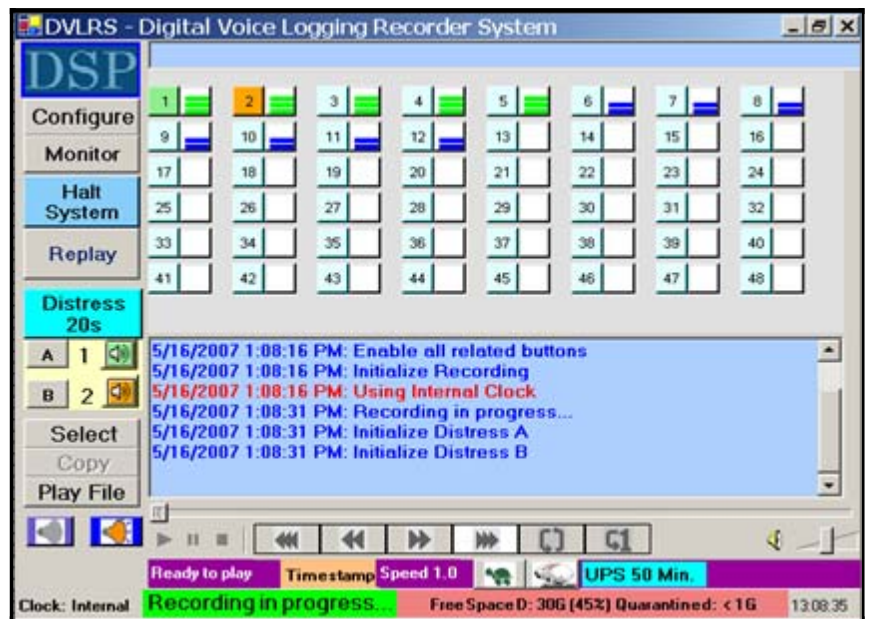




Digital Voice & Data Recorder

Model 2025 Recorder-Reproducer is specifically designed for demanding applications. It uses a state of the art carrier grade server with 16-channel Line Interface cards to provide recording capability for up to 96 audio channels. For larger systems, the Line Interface cards can be plugged into external chassis to achieve channel capacity of up to 1200. Built-in redundancy coupled with ruggedized design makes Model 2025 DVLRs well suited for critical applications requiring 24/7 operation. The server chassis occupies only 6U space in a 19-inch rack and it is only 19-inch deep.



Model 2025 Touch Entry Graphic User Interface

The Model 2025 DVLRs is capable of interfacing and recording AN/TPX-42 Radar video data via an optional RS-422 interface using the HDLC protocol. Additional data interfaces and protocol support can also be provided. The server is configured with dual Intel Xeon Processors clocked at 3.2 GHz; 1 GB of fault tolerant (ECC/Registered) DDR2 memory, 2 internal redundant (RAID-1Mirror) SCSI hot swappable drives for the operating system, 2 redundant internal (RAID-1Mirror) SCSI hot swappable drives for data storage, low-profile CD/DVD drive and hot-swappable redundant power supplies. Typically, the system can record and preserve data for up to 90 days. The archive period is user-selectable (15 to 45 days). A Quarantine feature may be used for preventing erasure of data of interest after expiration of archiving period. Key features include; Unlimited real-time Monitor, Distress Monitor (Instantaneous Playback), Time Synchronous Playback of up to four audio channels and radar data, simultaneous Record and Playback Mode, Ganged Audio Recording (combining two incoming audio channels into one recorder channel), copying of recorded voice & radar data on portable media (CD or DVD) and remote audio and alarm ports.



Model 2025 Digital Voice & Data Recorder

The system is equipped with a user friendly Touch Entry Display. A front panel mounted loudspeaker and a headset jack are provided for local monitoring and replay purposes. A user can select and playback multiple audio and data channels simultaneously. Each recording is time-stamped and signature added for authenticity and protection against tampering. The state-of-the-art design combined with Extended Life Cycle (ELC) support for longer product availability, longer warranty and spares support makes the DVLRs a best choice for demanding applications.

Model 2025 DVLRS Specifications

Audio Compression: Since voice and data recordings play such an important role in Air Traffic Control, Command & Control, Home Land Security and many other applications, every effort has been made to enhance and improve the quality of recorded audio and data. Audio compression formats available on the market range from 1:1 (16-bit PCM, no compression) to 15:1 (Real Audio). A higher degree of audio compression though reduces storage requirements, however, it results in degradation of recorded audio quality. Archives created on systems that prioritize the reduction of storage requirements at the expense of audio quality may not be justifiable for demanding environments. During our requirements investigations the importance of quality of recorded audio/data became apparent. The Model 2025 utilizes low noise differential amplifiers and transformer couplings, combined with 16-bit linear digitization and voice compression (per CCITT G-729B) to reduce storage requirements without sacrificing the quality of audio. The CCITT G-729 encoding scheme has the second highest audio quality Mean Opinion Score (MOS) of 3.92 for speech signals. CCITT G-711 u-law 64 Kbit/s encoding scheme (if recorded without any additional compression) has the next highest MOS score of 4.1. Balanced transformer coupling reduce common mode line noise pickup, hum and intra-system ground noise, and therefore help increase signal to noise ratio (Typical value achieved is 60 dB). Our Smart Audio Noise Discrimination (AND) scheme prevents recording of extraneous noise and the resulting wasted storage space. The Model 2025 Recorder-Reproducer provides the best cost effective recorder system, a solution which is especially suitable for applications where reliability, quality of voice/data, efficient use of recording media and economy are critical.

Server Specifications	Recorder Audio and Data Specifications
Processor Type: Dual Xeon processor running @ 3.2 GHz	No. of Recorder channels: 96 max. in-server, External chassis: 256 to 1200 channels for a 6 chassis system
Ethernet Ports: Four GBit integrated Ethernet Ports	Analog Channel Impedance: 600 Ohms or High Impedance (>30K)
DDR2 Memory: 1GB standard, at 266MHz	Recording Time: Typical System 90 days, (Server with 4 or 8 SCSI drives for greater capacity/channels)
Hard Drives: Dual Ultra-320 SCSI 146 GB Mirroring Drives (Hot Swappable)	Frequency Response: +/- 2.0 dB over 300-3500 Hz w.r.t. 1004 Hz, Audio Distortion: 2% Maximum
CD/DVD RW: Low-Profile Drive	Audio Input Signal Range: - 35 to +12dBm
Power Supplies: Dual Hot Swappable 600W each	Front panel speaker, Headset Jack and Alarm Reset Switch
Dimensions: 6U Height, 19-inch depth, 19-inch rack mounting	Recorded Data Integrity: Embedded Secure Hash Algorithm (SHA) signature authentication scheme
USB Connectors: Dual USB front panel ports	RS-422 RADAR Data: 64KBits/sec, stored as digital data, reproduced in original form and speed when replayed. Speed up to 1MBits/sec
User Interface: 8.4-inch Touch Entry Device, External Keyboard with trackball and optional Mouse	Remote audio ports: Two each @ 600 ohms impedance Remote Alarm: Relay contact closure, 0.5A @ 48VDC
Time Stamping: GPS Receiver (IRIG-B or Havequick)	Digitization: 16-bit Linear with 90 dB audio range, 88 dB S/N Ratio

Environmental Specifications	Audio Reproducer/Monitor Specifications
Operating Temperature: 0 °C to 50 °C	Ethernet Port: User LAN access
Safety: Per MIL-STD-882B and MIL-STD-1574A	Speaker Output: 1 Watt Max, Level adjustable
Vibration While Operating: Designed per MIL-STD-167-1 (Waiting for test and approval)	No. of channels that can be summed in an output channel: Unlimited (Simultaneous voice and data synchronization outputs available)
Shock While Operating: Designed for Light weight, Grade-B, per MIL-S-901D (Waiting for test and approval)	Headset Output: Mono/Stereo Plug, 600 Ohm Impedance, Level adjustable
Power (96 Channel System): 600 Watts (5A/120VAC typical), Rugged zed UPS w/Power-Chute S/W available	Distress Monitor: 2 channels, 5, 10 or 20 sec of last audio received Copy on CD/DVD removable media: 4 audio plus Radar data channel

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Rev. D1, July 07

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