

ComLog

Digital Voice Recorder

Features & Highlights

- **Twelve to hundreds of recording channels** – up to 144 channels in a single chassis.
 - Record servers interconnect via LAN/WAN, controlled by single or multiple workstations forming a multi-node system.
- **Workstations are standard PC's running the user application under Windows 95/98/Me/NT4/2000.**
 - Each workstation can playback up to 8 channels simultaneously.
 - “Network playback” of audio. Any Windows workstation using TCP/IP can be a fully operational playback workstation. In addition, an “instant recall” version of the application is available to be used as a PC workstation playback terminal.
 - In addition to the proprietary “Transcription” re-record function, that copies calls with all call information (date time, channel, etc.), Windows .MP3 files can be easily created for quick digital copies of audio.
 - Variable speed playback with pitch correction can be enabled for any playback.
 - A “skip over silence” feature can be enabled to quickly review only the audio on a selected channel.
 - AGC can be enabled individually for each playback channel, on demand. (Note that AGC is performed selectively for playback only – rather than at the input - in order to maintain the integrity of the input signal. A wide dynamic input range and an individual input gain setting insures adequate input signals.)
 - Each workstation can access multiple record servers; multiple workstations can co-exist in the system – each having independent audio control through its own speakers.
 - With each inclusion of “Playback-over-the-network”, simultaneous and synchronized playback from multiple recorders is also possible.
 - Each workstation has a “stereo” audio connection to the record server for balance control of playback channels. (A playback session could be configured to play certain channels to one speaker, while other channels to the second speaker.)

- **Up to four re-writeable media drives can be configured for archiving**, connected in series. Single archive drive configuration is possible because recording to archive drive may be suspended – to use the drive for playback. Once the playback session is completed, the non-archived material will be transferred to the archive (i.e. archive will catch-up). **Now supporting re-writeable 9.4GB DVD-RAM disks.**
- **Media Catalog** – The system incorporates an extensive on-line media catalog spanning the complete archive period. A playback request of recorded information not in the instant recall buffer will be prompted with a request to insert the appropriate DVD-RAM disk. A storage map configuration setup item sets the archive time span and quantity of media for the archive. An attempt to overwrite a media prior to its expiration date will be refused. Additional media can be added to the archive in such a case.
- **Archive media is formatted “on-the-fly”** to decrease the “Ready” time for new media.
- **All archive writes are cached and confirmed back to the main server** to insure integrity of the information. Operations are not “cleared” as “written to archive” until the operation is confirmed. End of media over-lap is performed to maximize the chances of a particular message being confined to a single archive media.
- **Instant recall buffer is a standard 9.0GB SCSI hard disk.** The system could be equipped with any available size hard disk. A system can also be equipped with an optional RAID array hard disk configuration to provide redundant (N+1), fault tolerant storage. Over 10,000 hours of storage can be available “on-line” using large capacity disk drives.
- **Redundant power supplies on Model DLS2420 record server.** Three power supplies connected in an N+1 manner, whereby two of the three can power a fully loaded system.
- **There are three main logs** kept, in addition to the actual recorded audio. These are:
 - Status Event Log: All system status items including errors and faults;
 - User Event Log: All major user actions;
 - Channel Event Log: All recording channel events (VOX, Hook Switch, Ring, CLID, Dialed Number, and Dialed Digit).
- **Local on-line event/message (i.e. telephone call or radio conversation) searches** are performed to quickly locate calls. The information can be sorted by Date/Time, event type, CLID, or Dialed Number.

- **Front Panel Status Display**
 - Audible alarm
 - Visual alarm status indicators, Green (“system good”), Yellow (“warning”), Red (“major”).
 - Visual “drive” status indicators for 2 instant recall hard disks.
 - Visual “drive” Status indicators for 4 archive drives – with “installed”, “ready”, “almost full”, and “full” LEDs.
 - Power supply status indicators (3 supply, DLS2420 chassis only).
- **Each input is individually configurable for:** Name (ID), input gain, VOX level, VOX release time, Hold up time (post VOX for keeping phrases and conversations together within delimited messages – while keeping recording to a minimum utilizing VOX), compression rate, recording “beep”, SSOX feature (see below), and radio diagnostic tone “notch” filter.
- **A self-diagnostic feature** can be enabled to perform periodic continuity tests on each input in the system. This feature insures an input is capable of recording even before it is called upon to actually record. An error would be triggered if an input was not usable.
- **Input modules can be assigned as STANDBY redundant modules** in the event that an input module fails. The inputs of the standby module would be connected in parallel with those of the “main” module. An automatic switch over would occur in the event of a failure to the primary input module.
- **Input modules:** The system architecture, being time slot oriented, is designed to interface to both analog input types as well as standard digital formats.
 - **Input Types:** (currently available)
 - Telephone with CLID and ANI;
 - Radio (with two pairs per input for RX & TX monitoring, to take into account 10dB differences between them);
 - Contact Closure;
 - Voltage Sense.
- **An integrated 2175Hz notch filter** and short noise burst (<50ms) filter to inhibit false triggering of VOX.
- **Each “DSP” module contains resources for 60 record channels.**

- **Flexible internal/external time source and type.**
 - RS-232 external Time source input for connection to Spectracom's ;
 - Reads time from a selected PC workstation for network time synchronization;
 - Optional IRIG-B support (using add-on card).
 - System Time uses Local Time or UCT (with all workstation times displayed using a "local offset" adjustment).
 - Time adjustment features to gradually adjust the system time (catch-up or lag-back) in order that time gaps or overlaps are avoided. This feature can be set to be performed in a fast, medium or slow tracking mode.

- **System Security**
 - Each user is assigned a log-in name and password.
 - System "maps" are used as the configuration profiles of the system.
 - User "rights" for certain privileges and channels are assigned in a map.
 - User rights are assignable from full system access – to simple playback only access.
 - These rights can include Edit or View access to the Channel Map, Storage Map, User Map, Time Map, and System Maintenance.

- **More workstation information ...**
 - Flexible Message (or call) and "event" searches can be performed to quickly locate information, using various search criteria, as well as specific channel inclusion.
 - Messages can be viewed in a LIST format showing Start Date/Time, Channel, Duration, and associated CLID or Dialed number information, or in a GRAPHICAL "Time Line" format, showing messages in a time relational format. A simple mouse "Click" on a message will cue up the message for playback.
 - Standard "CD" type Navigator keys allow for PLAY, CUE, STOP, FAST FORWARD, REWIND, NEXT MESSAGE, and PREVIOUS MESSAGE.
 - The playback window simultaneously shows the System Time, Reference Time (message start), Message Duration, Relative Time (into message), and Time Remaining (in message).

- A channel activity window shows whether a channel is enabled and active. When this window is active, all system channels are shown on the screen simultaneously.
- Channels can be monitored in near "real time".
- A Multi-Node window shows, at a glance, the status of each node within the overall system. Accessing nodes at a workstation is performed with simple point and click operations.
- A system can be configured to provide multi-channel output in order to direct time synchronised output channels to different locations, for event or incident recreation.

- **Digital Transcriber**
 - The Digital Transcriber feature provides a means to copy audio segments to digital audio files that can be stored onto writeable CD's (or other formats) for playback on any multi-media PC. Unlike standard audiocassette re-recordings, the channel, date, and time information is maintained in the file. These files are reproduced on a standard multi-media PC or notebook PC using the ComLog Workstation application.
 - The Workstation allows the creation of "play lists" that script a re-recording to a transcription folder. Calls in a play list can be annotated with text up to 256 characters, and can be saved for later review. Ideal for incident saving or creating training aids. The resulting sound files from a transcription maintain all time and event information as were present in the original recording.
- **Off-line Reproducer**
 - An off-line Reproducer is available that can replay recordings previously recorded onto an archived DVD-RAM or Digital transcription.
- **Instant Recall**
 - Instant Recall "client" applications can be used on multiple PC workstations to perform simple call review functions.
- **Remote Alarm Monitoring** - A remote alarm panel (19") is available to provide both audible and visual status monitoring at a remote location. Each is equipped with a set of alarm contacts.
- **An intelligent database interface** is being developed to associate various types of external data such as CAD, radio ID, and other call data with the recorded audio.

Specifications . . .

Recording Media	9.4 GB DVD-RAM
Instant Recall Buffer	9, 18, 36, 72GB – Single, dual, RAID-5 (to 144GB)
Max Rewind Time	Instant
Channel Capacity	Model DLS2410 – 12 to 48 channels Model DLS2420 – 12 to 144 channels
Multi-Server Capacity	16
Recording Time per Media	9.4 GB DVD-RAM – up to 1450 Ch-Hrs.
Media Drive Expandability	DLS2420 – 4 archive drives DLS2410 – 2 archive drives
Playback	Voice over LAN; up to 8 channels simultaneously
Power Consumption	DLS2420 – 400W max.; DLS2410 – 200W max.
Operating Temperature	0 – 50C
Humidity (non-cond.)	10 – 80% (non-cond.)
Signal-to-noise Ratio	>70dB, C message weighting
Frequency Response	300 – 3400Hz
Distortion	Depends on compression rate and output signal
Compression	12 – 32kbps user selectable per channel
Input Impedance	600ohms or > 10K ohms
Input Gain Adjustment	Variable from 0dB - +22.5dB
Record Activation	VOX, Hook-switch, Contact Closure
VOX Start Time	8ms
VOX Holdover Time	15ms to 5sec., Adjustable
VOX Threshold	Adjustable, -60dBm to -10dBm
User Interface	PC – Windows 95/98/NT4
Modular Cabinets	Available in Desktop or Rackmount versions
Telephone/Radio Interface	Telephone and Radio modules (specify per 12ch.)
Diagnostics	Built-in – run continuously in background
AGC Threshold	(on playback only) -50 to -10dBm
AGC Attack Time	(on playback only) 1 –50ms; release 10-240ms
AGC Release Time	(on playback only) 10 – 240ms
Simultaneous Record Playback	Yes
Type of Alarms	6 levels; major and minor with or without audible, Informational or non-loggable
Type of Security	Multi-user with passwords –Individual user privileges and channels rights
Media Remaining Indicator	On server – LED indicators; at workstation in %
Instant Recall	Yes
Instant Message Recall	Yes
Copy Media	Yes
Software Upgradable	Yes –from workstation or remote
External Time Inputs	IRIG-B, Leitch, NetClock, CTSDS, Network
Time Output	IRIG, SMPTE
Channel Capacity	144 per Record Server – > 1000 with multiple Servers
On-line Help	Yes
Event, User, and Status (error) Log	Yes
Record “Beeps”	Selectable per channel
Languages of user interface	English, French
Warranty	1 year

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