# DigiCart™



**DigiCart™**
RANDOM ACCESS
DIGITAL AUDIO RECORDER
STEREO / 16 BIT LINEAR

*360 Systems*

DigiCart 1.05
Please Insert Disk

*360 Systems*
Broadcast Products Group

360 Systems' new DigiCart™ is an advanced digital recorder designed from the ground up for use in broadcast. It works exactly like conventional cart machines, but with some notable improvements. DigiCart provides the premium quality sound of digital audio with rugged, removable magnetic disk cartridges.

DigiCart fits right into existing studios without making big changes. It's the same size as today's most popular carts. Audio, remote control and cue signals work the same way they always have. And station personnel don't have to be retrained — one look at

discs and DAT recorders to revolutionize the music industry. It produces ruler-flat response with absolute stereo phase accuracy, no high end roll-off or peaks, no wow and flutter, and no adjustments ever.

A single model of DigiCart provides total format flexibility: Recording can be done in stereo or mono, with sample rates of 48K, 44.1K, 32K, or 22.05K. Different formats can be combined on a single disk, with information including title, running time, and recording format displayed right on the front panel. Each time a new cue is selected, DigiCart automatically

Audio Disks. Over the last ten years, Bernoulli disks and the Bernoulli drive technology have been used by major businesses and industrial firms worldwide. Today, they rank as the *leading* high-density computer backup disk.

Unlike CD's and DATs, DigiCart's Digital Audio Disks provide exceptionally long life in a rugged cartridge enclosure. They can be banged and dropped, but they never skip, and they don't need a protective case for rack storage. With more program material on every disk, DigiCart disks become more economical than standard tape carts. They're more reliable too — they provide the same outstanding audio quality after thousands of plays that they did when first recorded.

## Random Access To Every Selection

Insert a Digital Audio disk into DigiCart's drive and the first cut is ready to play. A large Cue Select knob makes it easy to dial up additional selections. It's even possible to cue up new selections while playing the first! Cueing time to the next cut — any cut, is immediate.

## Expanded Storage Capacity

DigiCarts are designed so it's easy to expand their storage capacity in the field. An optional hard disk providing up to four hours of stereo can be installed inside DigiCart's chassis. For even longer storage times, a companion hard disk enclosure with up to five additional drives is also available. All this adds up to total storage capacity in excess of *two days*, with every cue on every drive available for immediate playback.

## DigiCart As A Production Tool

DigiCart's production-oriented features mean more efficient use of
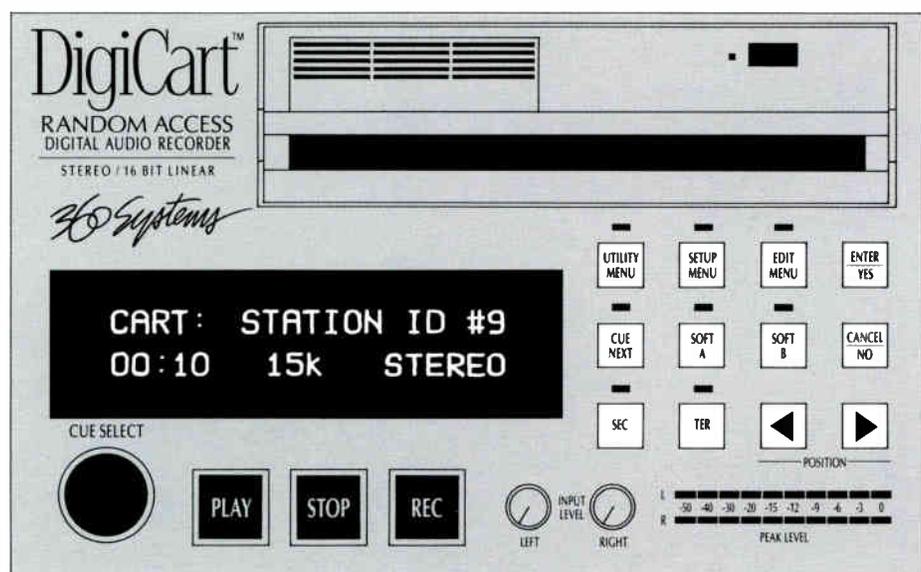
DigiCart and it's clear how it works.

What's even clearer is the on-air sound provided by DigiCart. Now everything from music and jingles to station ID's, commercials, and news actualities can have the extra impact of digital quality that's become so powerful in today's competitive broadcast market.

## Premium Quality Digital Audio

DigiCart offers the same 16-bit performance used by compact

reads a "cue header" stored on the disk, and instantly configures itself for correct playback.

For music and jingles, recording at a 48K sample rate will produce an audio bandwidth of 20 KHz. For voice overs and news items, recording at lower sample rates can make the most of storage time, while still delivering excellent digital quality.

## Durable Digital Media

A unique advantage of DigiCart is its use of removable Digital

production time. DJ's will discover DigiCart offers amazing speed and ease of operation for creating wild "morning zoo" effects and

## Disk Playing Times
### Approximate times shown in stereo minutes

| Disk Drives | 48K (20 KHz) | | 44.1K (20 KHz) | 32K (15 KHz) | 22.05K (10KHz) |
|---|---|---|---|---|---|
| | Linear | AC-2 | Linear | Linear | Linear |
| Cartridge | 4 | 21 | 4 | 5.5 | 8 |
| HD-200 | 20 | 107 | 22 | 30 | 44 |
| HD-400 | 36 | 192 | 40 | 55 | 80 |

"impromptu" audience responses. News people can transfer their source material, edit it, then organize it for sequential playback and take it straight to the on-air studio.

Digital Audio Disks can be used for quick transfers of audio between different machines in news, production, and control facilities, without the time and quality loss of analog tape. And, an optional digital audio interface will soon be available for direct digital transfers from DAT's, CD's, and digital VTR's.

### Non-Destructive Editing

Finally, there's an *economical* way to perform simple production tasks entirely in the digital domain. DigiCart performs head trims, tail trims, fades and even level adjustments of pre-recorded material. All of DigiCart's editing features are non-destructive, so you'll never have to worry about mistakes. Simply re-do your edit until you're satisfied with the result.

### Powerful Play-Listing Features

DigiCart's Stack Mode can be used to create play lists of any length and store them on a disk for later recall. There are no limits to the number of cues in a Stack, or to the number of Stacks stored on a disk. Play lists can also be downloaded from a computer, using

DigiCart's standard serial interface.

Stack playback options include seamless follow-on play from a single start command, or sequential

playback triggered by commands from an operator, satellite network, or local automation system. When combined with DigiCart's editing features, Stack Mode provides broadcasters with a powerful tool for compiling and editing news items and interviews, creating automatic spot rotation, jingles, promos and music beds.

### Automation Ready

With DigiCart, it's not just a catch phrase. DigiCart *is* automation ready, with an EIA-422 serial port using the popular ES-Bus protocols, plus a BCD automation interface and GPI inputs.

The serial port gives *complete control* of all DigiCart functions from an external computer. Broadcast automation and live-assist systems use the DigiCart as a primary storage medium for spots, and provide complete on-screen playlisting. An optional "AT" keyboard provides cue titling and convenient remote control of most DigiCart operations.

### Emphasis On Economy

Cue listing and immediate follow-on play features allow a single DigiCart to replace several triple stacks at a fraction of the cost. Just one model of DigiCart has enough flexibility to be used for news, spot production, and on-air

DigiCart uses rugged, removable Digital Audio Disks.

playback, as well as archiving of source material.

Maintenance is kept to a minimum too — no biasing, alignment, or any of the other usual analog headaches. DigiCart employs modular construction with plug-in PC cards — so even the disk drives can be changed in a matter of minutes.

## A Word About Reliability

360 Systems pioneered high reliability digital audio systems for industry ten years ago. We've replaced analog cart machines with modern digital systems throughout the world.

Our only business is high quality digital audio, so we're concerned about our product's "real world" survival. That's why you'll find DigiCart is loaded with the professional extras that make it at home in any broadcast environment; like R.F. suppression on balanced inputs, balanced outputs, and XLR connectors.

## Affordable Excellence

On-air digital audio quality has finally become an affordable option for broadcasters. Even with true 16-bit sound and its flexible feature set, DigiCart is priced about the same as mid-line analog cart machines. Which isn't good news for makers of analog cart machines, but is very good news for broadcasters competing in quality-oriented markets.

For more information contact:
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Tarzana, California 91356 U.S.A.
Phone (818) 342-3127
Fax (818) 342-4372

## Features/Specifications

### AUDIO PERFORMANCE

| | |
|---|---|
| Bandwidth | 10 Hz to 20 KHz ± .5 dB; optionally 15 KHz or 10 KHz |
| Quantization | 16 bit linear |
| Dynamic Range | 92 dB typical |
| Signal-to-Noise | 92 dB typical |
| Distortion (THD + N) | −88 dB @ full scale; −74 dB @ −20 dB |
| Interchannel Phase Deviation | <0.1 degree at 15 KHz |
| Interchannel Crosstalk | >90 dB at any frequency |
| Input Circuit | Electronically balanced with R.F. suppression; Input Z = 40k ohms each leg; XLR-3 connectors |
| Common Mode Rejection | Better than 60 dB |
| Maximum Input Level | + 18 dBu single ended, + 24 dBu differential |
| Output Circuit | Phase corrected differential outputs, short circuit proof, RF protected; Output Z = 100 ohms |
| Maximum Output Level | + 18 dBu single ended, + 24 dBu differential |

### GENERAL SPECIFICATIONS

| | |
|---|---|
| Recording Medium | Removable magnetic disk cartridge |
| Data Compression | Optional Dolby AC-2 data reduction provides increased digital audio storage |
| Reliability | Typical media lifetime: >2,500 plays<br>Expected component lifetime: >5 years |
| Hard Disk MTBF | >250,000 hours, five year warranty |
| Cartridge Drive MTBF | >60,000 hours |
| No. Cuts/Cartridge | Unlimited |
| Start/Restart Time | Instantaneous from any location |
| Cue to Next Cut | Instantaneous |
| Cue Outputs (GPI) | Secondary, Tertiary with front panel LED's |
| Cue Erase/Replace | Secondary and Tertiary cues may be individually erased without playing to their location |
| Display | Large character 2-line × 20 character fluorescent |
| Level Metering | Quasi-Peak responding LED display |
| Input Controls | Input level controls on front panel |
| Operating Controls | Play/Record/Stop plus 12 menu related buttons |
| Remote Control | Standard remote buttons with lamp drive; 25-pin "D" connector |
| Serial Remote | Full machine control via EIA-422/ES Bus interface; 9-pin "D" connector |
| Form Factor | 3-U half-rack; stand-alone or rack mounting with accessory shelf. |
| Circuit Cards | Plug-in cards; FR-4 epoxy glass stock, with 94-VO flame retardant rating; Gold plated edge connectors and socketed IC's |
| Agency Approvals | All AC components UL recognized, FCC approvals pending |
| Power Requirements | 100/120/230 volts, 50/60 Hz, 75 watts |

Specifications and pricing subject to change without notice.
AC-2 is a trademark of Dolby Laboratories, Inc.
DigiCart is a trademark of 360 Systems.
U.S. and foreign patents applied for.
Made in U.S.A.

*DigiCart/II* | Digital Audio Hard Disk Recorder
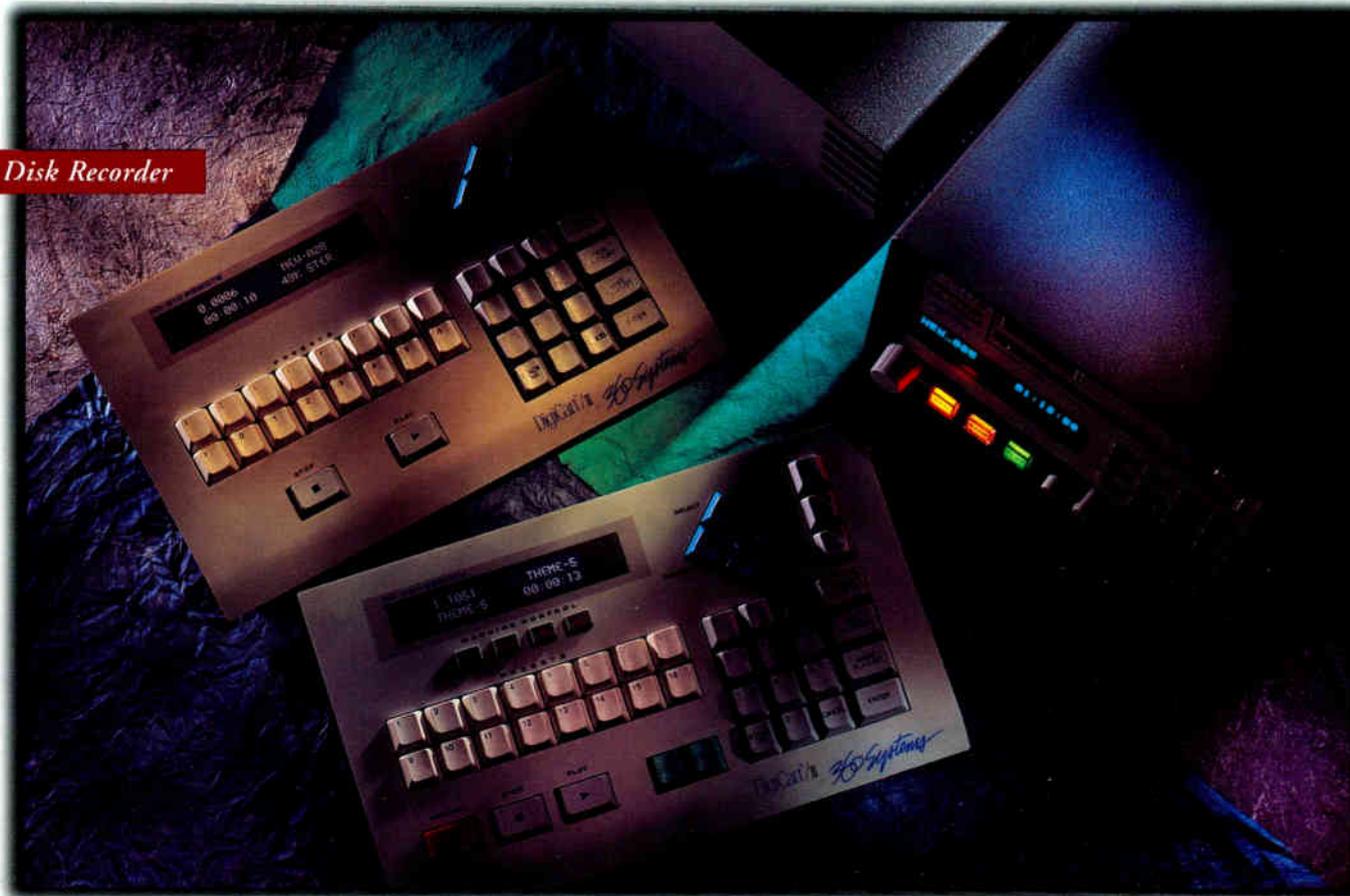


ALL DIGITAL MEDIUM – PREMIUM QUALITY AUDIO

INSTANT ACCESS –  PLAYBACK WITH ZERO SHUTTLE DELAY

INTERNAL HARD DISK –  UP TO 32 HOURS AUDIO STORAGE

REMOVABLE HIGH CAPACITY MEDIA – OVER 1 HOUR

DIGITAL AUDIO WORKSTATION FEATURES – DSP/PRECISE EDITING

FULL DIGITAL INTERCONNECT – AES/EBU STANDARD

D-NET –  FILE TRANSFER NETWORK

DigiCart®/II

360 Systems®

## Affordable Performance and Proven Technology

**w**hen 360 Systems first introduced the DigiCart audio recorder, its unique combination of features and attractive price made it an immediate best seller. With DigiCart/II, the benchmark is refined: More powerful software, even greater storage options, and enhanced remote control capabilities.

DigiCart/II earns it's keep by doing the work of three machines: a hard disk recorder, a mini audio workstation and a digital cart machine. This impressive combination sets a new standard for versatility and performance.

With singular accuracy, DigiCart/II makes flawless 16-bit recordings, either in linear mode or with Dolby AC-2 data reduction for extended recording times. And in playback mode, it's never been easier to instantly access a vast number of cuts with just a few key strokes. Simply make a selection, hit play— and audio's rolling before your finger leaves the button.

## Mini-workstation

To make things interesting, a variety of workstation features add efficiency and creativity to your work. Like DSP editing functions that produce smooth fades and precision edits, with speed and finesse.

A built-in hard disk turns DigiCart/II into a virtual sound library. And for moving audio between machines, proven Bernoulli disk technology excels in reliability and cost-effectiveness. The transfer rate is speedy too; audio files copy perfectly in the digital domain at an impressive 10-to-1 rate. Additionally, audio files can be moved between machines via the D-NET File Transfer Network at speeds up to 8 times faster than normal.
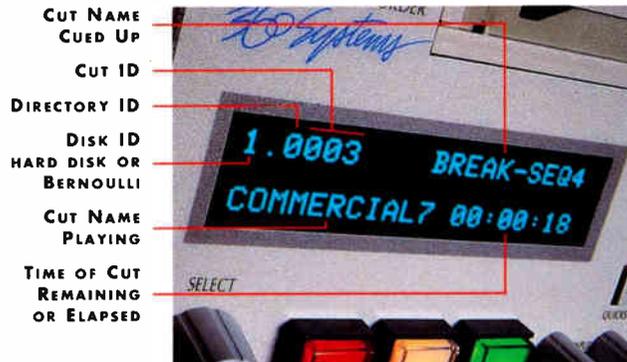
Playback options range from locate-and-play of a single cut, to programmed playlists. To enhance operations, a trio of remote control units expand the playback capabilities in the production studio as well as on-the-air.

*Display Shown with Cut in Cued Position.*

CUT NAME
CUT ID
DIRECTORY ID
DISK ID
HARD DISK OR
BERNOULLI
LENGTH OF CUT
SAMPLING RATE
DOLBY MODE
SWITCHED IN

CUT NAME
CUED UP
CUT ID
DIRECTORY ID
DISK ID
HARD DISK OR
BERNOULLI
CUT NAME
PLAYING
TIME OF CUT
REMAINING
OR ELAPSED

*Display Shown in Play Mode.*

DigiCart/II's instant-access to disks, directories, and audio files clearly illustrates its speed advantage. No waiting for rewind or fast forward cueing. No hunting for a particular cut between leader tapes. Essentially, zero shuttle time.

In operation, the selected cut name (and number) are clearly shown on the display, leaving no chance for a mistake. Once a cut is playing, the next one selected is ready to play on command. The sequence can be automated for follow-on play by hitting the play button before the current cut finishes.

**LOOP** makes a file play repetitively. As soon as it ends, it restarts without a break. Loops are perfect for background atmospheres and music vamps.

**PAUSE** puts the machine on hold during record or playback.

**PRESET** buttons play cuts from a single keystroke, with zero delay. They operate like samplers, producing rapid fire effects and music bits on demand. Up to 16 "Hot-Keys"™ are assignable on the remote control units, and 100 on the accessory keyboard.

## RECORDING

**RECORDING** on DigiCart/II goes far beyond conventional machines. Files of any length— from seconds to hours— are recorded in stereo at 48K, 44.1K, or 32K sampling rates. To expedite the recording process, DigiCart/II drops into record mode when audio is detected at a preset level. Quasi-peak reading meters provide an accurate view of recording levels. And selectable Dolby AC-2 coding yields over five times as much storage, with truly professional audio quality.
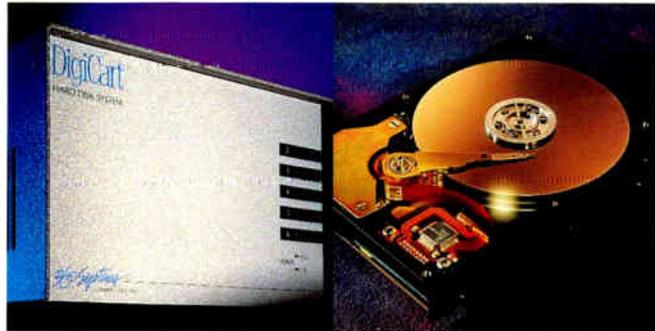
*HDS Hard Disk System*



## STORAGE MEDIA

DigiCart/II comes standard with a high reliability hard disk that stores two hours of audio. Greater storage of four to eight hours is available with the mid size disks. And for really big projects, choose from a range of gigabyte-size disks for up to 32 hours of 20 kHz stereo.

DigiCart/II also sports a field proven multi-format Bernoulli disk drive. The associated removable disks are available in three sizes and offer storage capacities of 30, 49, and 68 minutes each. The disk itself is enclosed in a durable cartridge for protection against rough handling, dust, and heavy use in real world environments.

Removable disks are great for transporting audio files from one machine to another, or for that matter, from one city to another. They're also ideal for archiving and backing up the hard drive— without any quality loss. Bernoulli disks are computer quality, and provide a very attractive price per-minute storage medium.

## MASSIVE STORAGE

Expanded storage capacity can be achieved by supplementing DigiCart/II with its companion Hard Disk System. The HDS houses up to five drives for additional storage of 160 hours.

**ROTATING STACK**

**LINEAR STACK**
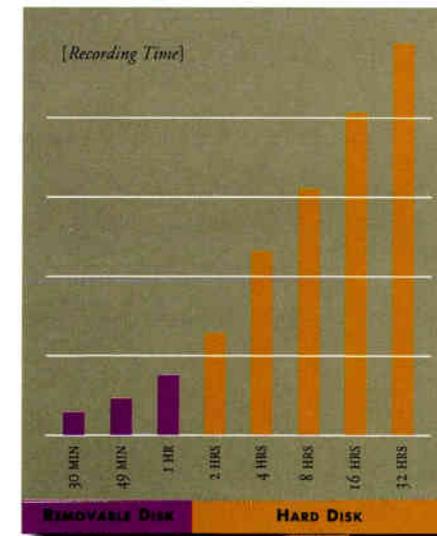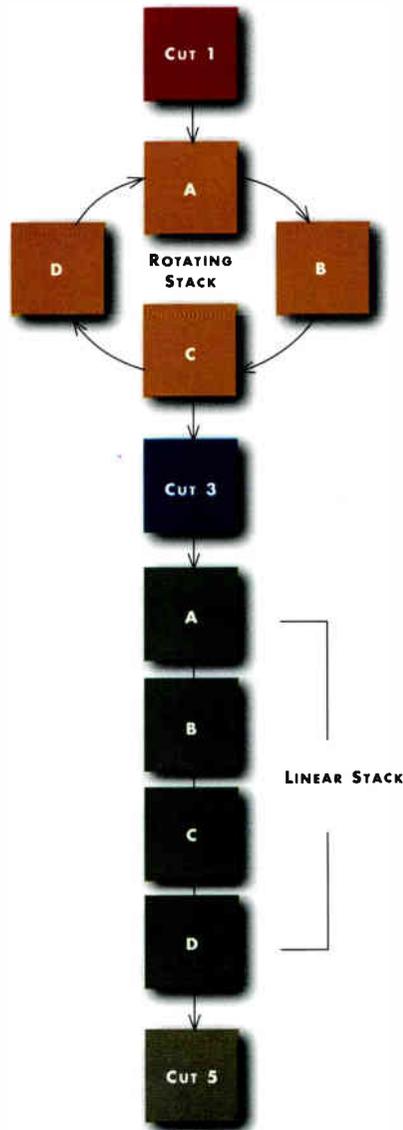
**P**laylists really show off DigiCart/II's strengths. They do the job of a number of cart machines, better and faster. There's no need for constant loading of endless carts; a few keystrokes have replaced them. What's more, playlists can be previewed before airing, saving time and preventing mistakes.

Essentially, playlisting stacks up selected cuts— somewhat like a high-speed juke box but with seamless transitions between cuts. Stacks of any size can be created in various arrangements.

**FOLLOW-ON PLAY** quickly assembles a Stack, on-the-fly. While one cut is playing, a single keystroke loads a new cut in the Stack for consecutive playback.

**QUICKSTACKS™** are temporary Stacks that play through to completion, without breaks. They're great for on-air use since they're fast to build.

**LINEAR STACKS** are QuickStacks that have been stored on disk. They can be recalled, edited, and selected for playback at any time.

**ROTATING STACKS** break after each cut in the Stack. With each play command, the Stack rotates (advances) to the next cut.

**COMBO STACKS** are a group of linear or rotating Stacks linked together. They're the next best thing to an automation system, since they contain many sequenced cuts. For example, a combo Stack may include a linear stack within a rotating Stack; these may also be tied to individual cuts.

Expand DigiCart/II's capabilities with three new remote control units. Each is designed for specific applications and features the basic transport controls as well as individual items like menus, pause, loop and cut select. The remotes select audio files in three ways. First, typing in an index number rapidly locates and retrieves a cut, no matter where it's filed. Alternately, typing in a cut name puts a high-speed search program into action. And, for single-key access, map cuts to the Hot-Keys for immediate playback.

**RC-220 REMOTE** This full-featured remote control duplicates DigiCart/II's front panel in a low profile, small footprint package. It's designed primarily for production work, but doubles for playback operations as well. Featured are 16 programmable presets for instant playback, and a keypad for rapid cut selection. Control up to four machines from a single RC-220.

**RC-210 REMOTE** The RC-210 is a simplified control panel, designed expressly for on-air playback operations. Features include rapid playlist selection, 16 user-programmable presets, and cut access by index numbers.

**RC-205 KEYBOARD** This compact keyboard is perfect for titling directories and audio files. It maps up to 100 presets to Hot-Keys— a powerful feature for production and sound effects applications. Also, all essential DigiCart/II front panel buttons are conveniently duplicated by the RC-205's function keys.

*Remote Control Ports*

Communication between DigiCart/II and other equipment is easy, thanks to an extensive set of remote control commands and interface options. For simple interfacing, all the necessary elements are supplied for setup of fader starts or custom control panels. GPI inputs control record, stop, and play; with tally lamp drivers available for remote button illumination.

Presets are automatically configured for direct access to 100 separate audio files and playlists, in any combination. For more advanced applications, DigiCart/II's serial port opens the door to a powerful set of command protocols. Complete documentation is readily available for developers and system integrators.

**EDIT**

*All Edit Functions are sub-frame accurate to ensure precise timing.*

DigiCart/II takes on a new personality as a mini-workstation. Thanks to non-destructive editing, changes to audio files are quick and *completely reversible.*

With pinpoint accuracy, edit markers can be placed and readily auditioned. This applies to head and tail trims as well as fades. If the audio file needs to be restored to its original form, the edit markers are simply reset to their starting positions.

Different edited versions of a recording are made as needed. The new markers are stored as part of the audio file, and are included when copies or transfers are made. Subsequently, edited files can be "cut and pasted" together as playlists, then combined and stored as a single, unique file.

**EDIT MENU** options include trims, fades, and level sets. During the editing process, edit markers are adjusted until the edits points are just right. **HEAD TRIM** sets the starting point of the cut, and can be used for rapid "roll-ins". **TAIL TRIM** sets the ending point of a cut. **FADE IN** sets the length of the fade-in. **FADEOUT** sets the length of a fade-out. **OUTPUT GAIN** changes the level setting for each individual cut. Very helpful when level balancing a series of cuts that play together in sequence. **PRE ROLL** provides a roll-in for tail edits, and precise back-timing.



EDITED CUT

HEAD TRIM  FADE IN          FADE OUT  TAIL TRIM

SEC

ORIGINAL CUT
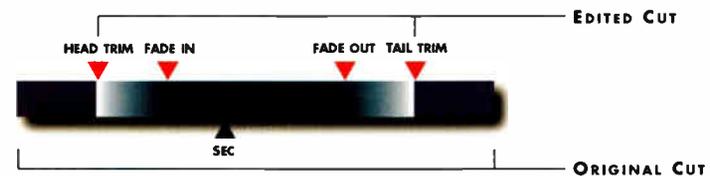
## EDITING STACKS (PLAYLISTS)

**ASSEMBLE AND INSERT EDITING** modes are available for building and editing Stacks. Just like splicing tape, cuts are assembled together as Stacks. As each new cut is added to the Stack, it becomes the last cut to play in the sequence. Alternately, a cut may be inserted between others. The new Stack can be permanently welded into a single cut after editing is completed. **APPEND** adds a new cut to the bottom of the Stack. **INSERT** places a new cut at any position in the Stack. **REMOVE** deletes a cut from the Stack. **TRUNCATE** removes all cuts past a selected point in the Stack.
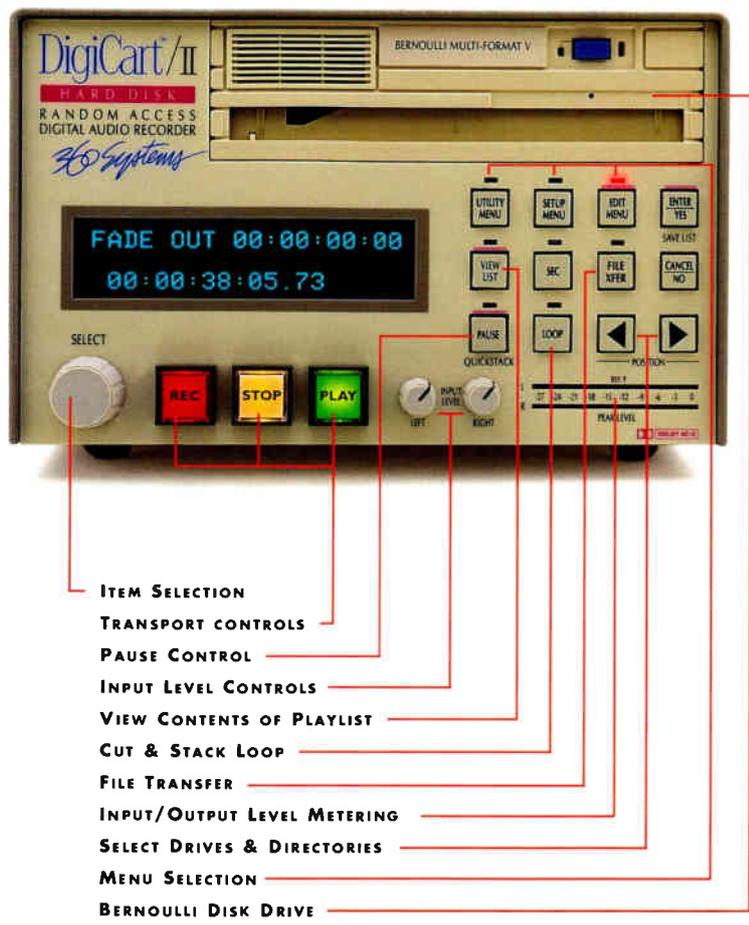
## OTHER MENU OPTIONS

**SETUP MENU** options determine how DigiCart/II records and plays; how the user interface works; and how information is displayed. **RECORDING FORMATS** – Choose from 32K, 44.1K, and 48K linear sampling rates, or Dolby AC-2 data reduction. Digital interconnects: choose AES/EBU or IEC 958/II digital, or balanced analog. **RECORD THRESHOLD** – Recording begins when audio exceeds a selected threshold level. **CUT OVERWRITE** – Replaces an existing cut with a new one. **TIME DISPLAY** – Selects elapsed or remaining time during playback. **RESTART MODE** – Cuts start immediately after a play command, or after the current cut plays to completion. **DIRECTORY SORTING** – Displays cuts in either alphabetical or numerical order. **PRESET ASSIGNMENTS** – Selected cuts or Stacks may be assigned to preset keys on a remote control or computer keyboard.

**UTILITY MENU** options deal with arranging information. Use them to format, name and number disks or directories, and to copy and delete audio files. The file transfer network set-up and operating modes are also included in this menu heading.

## DIGITAL AND ANALOG SIGNALS

Maintaining audio transfers in the digital domain makes every copy a duplicate master, without any loss in quality. Playing back in full-digital mode eliminates digital-to-analog conversions and preserves audio integrity between source and destination.

DigiCart/II employs the industry standard AES/EBU digital audio signal format. These inputs and outputs provide a compatible signal interface to other digital products such as processors, consoles and recorders. DigiCart/II also features IEC 958/II for interconnection with consumer and semi-pro equipment. Front panel menu selections offer a choice between the digital and analog connections.

The DigiCart/II digital interface is essential to facilities that wish to keep all audio signals in the digital domain.



ITEM SELECTION
TRANSPORT CONTROLS
PAUSE CONTROL
INPUT LEVEL CONTROLS
VIEW CONTENTS OF PLAYLIST
CUT & STACK LOOP
FILE TRANSFER
INPUT/OUTPUT LEVEL METERING
SELECT DRIVES & DIRECTORIES
MENU SELECTION
BERNOULLI DISK DRIVE

FOR RAPID BACKUP, A
BERNOULLI HIGH-DENSITY DISK
STORES UP TO 150 MEGABYTES
OF AUDIO.

IF ALL THE INTERNAL STORAGE ISN'T
ENOUGH, THE EXTERNAL SCSI PORT
SUPPORTS UP TO 160 HOURS OF
ADDITIONAL STORAGE.

WITH ITS POWERFUL 68020 PROCESSOR,
DIGICART/II DELIVERS THE POWER NEEDED
FOR GREAT RESULTS.

ALTHOUGH 4 MEGABYTES OF RAM ARE STAN-
DARD, YOU CAN HAVE UP TO 32 MEGABYTES
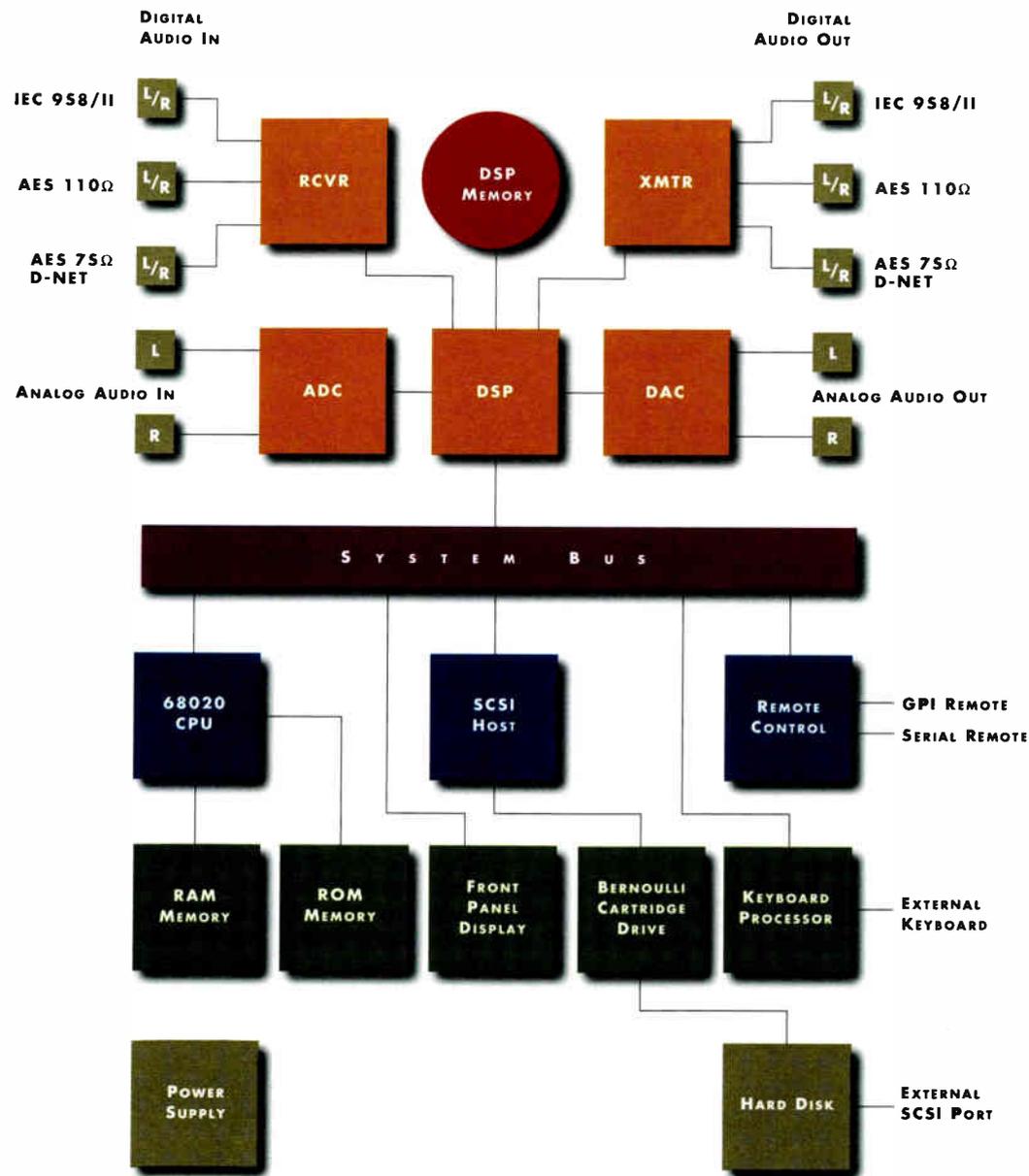TO KEEP PACE WITH FUTURE DEVELOPMENTS.
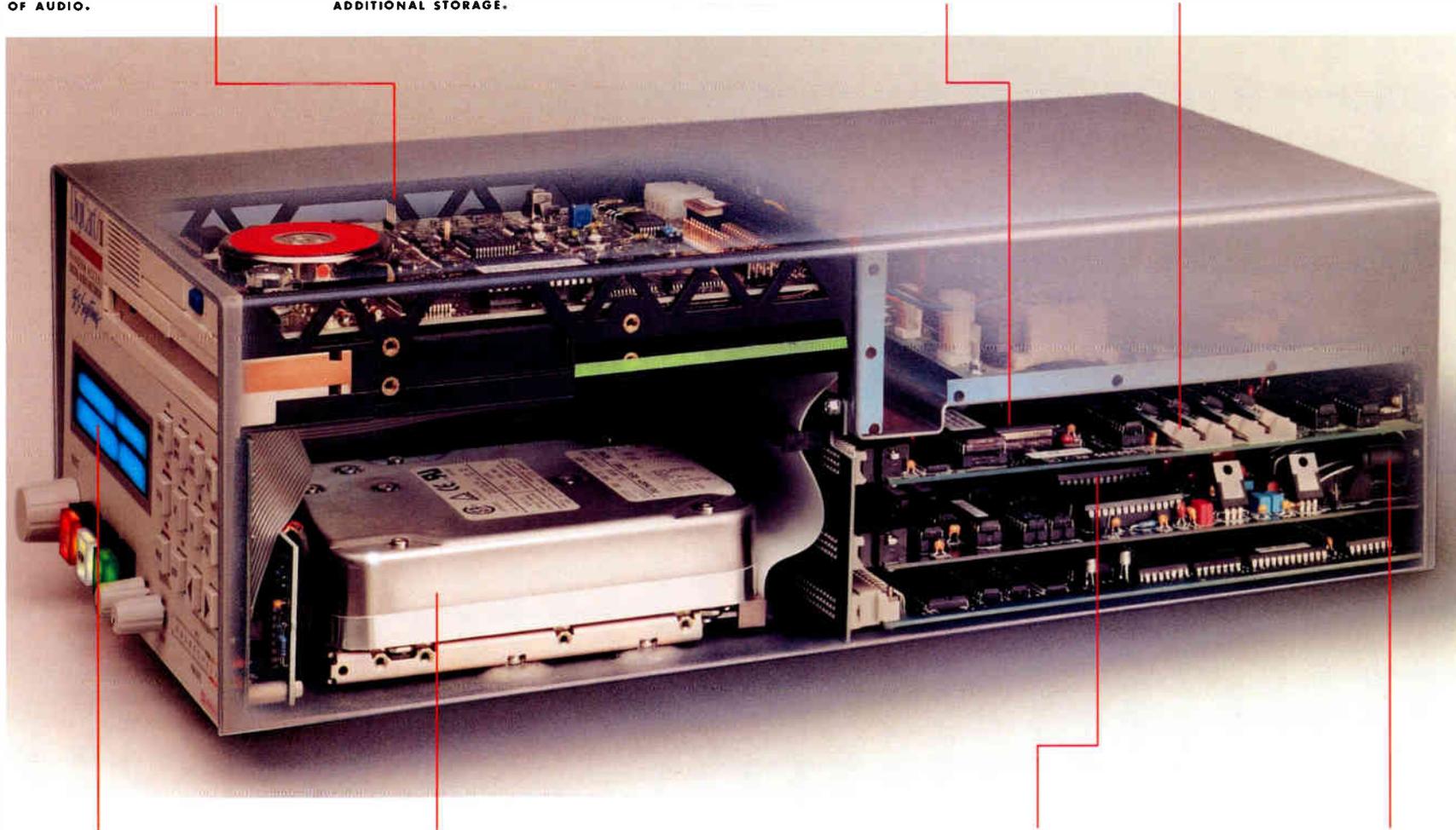
MAKING DIGICART/II EASY TO LEARN
WAS DESIGN JOB #1. ITS CLEAN
FRONT PANEL AND BRIGHT DISPLAY
MAKE IT FAST AND EASY TO USE.

HARD DISK INSIDE! OUT OF THE BOX,
DIGICART/II OFFERS DISKS WITH UP TO
32 HOURS OF STEREO STORAGE.

CREATE PRECISION EDITS, SMOOTH FADES
AND ACCURATE LEVEL ADJUSTMENTS WITH
THE HELP OF MOTOROLA'S DSPS6001
DIGITAL SIGNAL PROCESSOR.

AUDIO INS & OUTS INTERCONNECT
THROUGH AES/EBU OR IEC 958/II
DIGITAL, OR VIA BALANCED
ANALOG CIRCUITS.

NO ADJUSTMENTS NEEDED. EVER.

10

The D-NET File Transfer Network is a proprietary software program designed to provide high speed file transfers between DigiCart/II and other 360 Systems digital audio recorders. Multiple machines can be networked to exchange single audio cuts, entire directories, or drives at speeds up to 8 times faster than normal. D-NET operates at all sample rates, and transfers all cut information including audio, file headers and edit markers.

Since D-NET runs on 360 Systems' hardware, third party network cards and terminals are not required. Network management and operations are carried out from the front panel of the machine, doing away with external file servers.

D-NET is an optional feature that can be easily installed on DigiCart/IIs that have digital I/O capability. Either the AES/EBU or IEC-958/II ports can be set up as transfer ports. D-NET also supports the proposed AES standard for long haul transmission on 75 ohm coaxial cable.

Each DigiCart/II can be set up to receive transfers at a specific address or it can place incoming transfers in a "mail box". The mail box will accept files and store them consecutively, using open index numbers. Transferred files may later be extracted and relocated to appropriate locations on a hard disk or cartridge drive.
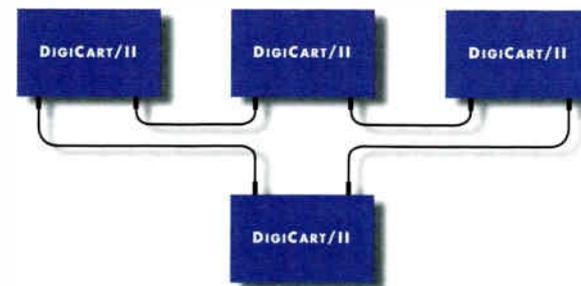


D-NET File Transfer Network, shown in a typical configuration.

**D I G I C A R T / I I   B L O C K   D I A G R A M**
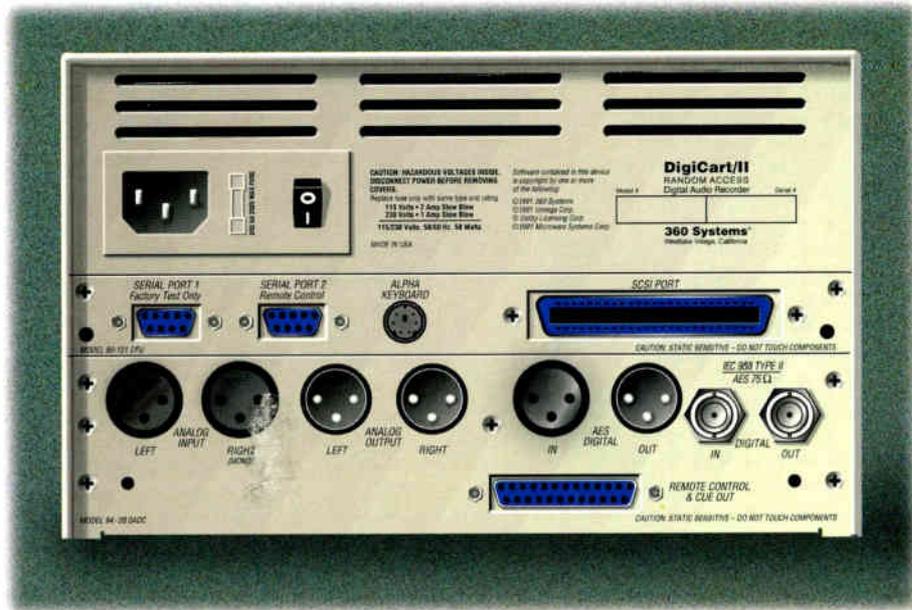
## APPLICATIONS

*Radio Broadcast*

*Television Broadcast*

*Production Studios*

*Television Production*

*Film & Video Post*

*Theater*

*Theme Parks*

*Sports Arenas*

**DigiCart®/II**

### AUDIO SPECIFICATIONS

| | |
|---|---|
| BANDWIDTH | 10 Hz to 20 kHz ± 0.5 dB; optionally 15 kHz @ Fs = 32,000 |
| QUANTIZATION | 16 bit linear |
| SAMPLING FREQUENCIES | 48K; 44.1K; 32K; Stereo or Mono |
| DATA REDUCTION | Selectable Dolby AC-2, at 48K stereo only |
| DYNAMIC RANGE | 92 dB |
| DISTORTION (THD+N) | < 0.005% ref. to full scale |
| INTERCHANNEL PHASE DEVIATION | < 0.1 degree at 15 kHz |
| INTERCHANNEL CROSSTALK | > 90 dB at any frequency |
| ANALOG INPUT CIRCUIT | Electronically balanced with RF suppression; Input Z = 40k ohms; XLR-3 type connectors |
| COMMON MODE REJECTION | Better than 60 dB @ 120 Hz |
| MAX INPUT LEVEL | +21 dBu single ended, +27 dBu differential |
| ANALOG OUTPUT CIRCUIT | Phase corrected, short circuit proof, RF protected differential outputs Output Z = 100 ohms. XLR-3 type connectors |
| MAX OUTPUT LEVEL | +16 dBu single ended, +22 dBu differential |
| DIGITAL INPUTS | AES/EBU*, XLR-3 type Conn., 110 ohms; BNC Conn., 75 ohms; IEC 958 Type II, BNC type connector w/ RCA adapter |
| DIGITAL OUTPUTS | AES/EBU*, XLR-3 type Conn., 110 ohms; BNC Conn., 75 ohms; IEC 958 Type II, BNC type connector w/ RCA adapter |

### GENERAL SPECIFICATIONS

| | |
|---|---|
| NETWORKING | D-NET file transfer format on AES ports |
| REMOVABLE CARTRIDGE | Bernoulli magnetic disk cartridge; 65, 105, 150 MB capacity |
| CARTRIDGE DRIVE RELIABILITY | MTBF > 175,000 hours |
| CARTRIDGE RELIABILITY | Typical media lifetime: > 2,500 plays |
| HARD DISK RELIABILITY | MTBF > 250,000 hours |
| DISPLAY | 2-line x 20 large character fluorescent |
| METERING & LEVEL CONTROLS | Quasi-peak responding LED display; controls on front panel |
| GPI REMOTE CONTROL | Remote contacts with return lamp drive |
| SERIAL REMOTE CONTROL | Full machine control via EIA-422 ES-Bus interface; 9-pin D connector |
| CUE CONTROLS | Secondary with LED; relay contacts on 9-pin D connector |
| CUE ERASE | Cues may be individually erased without playing to their location |
| PHYSICAL DIMENSIONS | 5.19" x 8.50" x 17.13" (130 x 213 x 428 mm) 3RU half-rack width |
| NET WEIGHT | 18.25 lbs. (8.3 kg) |
| POWER REQUIREMENTS | 115/230 volts, 50/60 Hz, 75 watts |
| COUNTRY OF ORIGIN | USA |

Specifications are stereo, 20 kHz bandwidth, linear coding unless otherwise noted.
All Specifications subject to change without notice. *AES3-1992 / EBU Tech 3250-E (1985)

**360 Systems**

**PROFESSIONAL DIGITAL AUDIO**