



Record high-resolution video to DVD in a DICOM format.

Technology Designed for Medicine™

MDR is the first and only medical DVD recorder to provide high resolution video recording of dynamic and static video images in a DICOM format. With its patented video recording process and DICOM recording format, MDR provides digital image records of unparalleled quality. MDR records the native high resolution monochrome, RGB or SVGA output in real time creating DICOM format DVD and CD-R media or transferring data directly to PACS via the network. MDR captures more clinical data than other recording solutions and image quality is far superior to S-VHS, S-video and MPEG formats. The superior image quality is particularly beneficial for use in speech pathology, cardiology, angio, vascular and orthopedic applications as well as for any portable imaging modality.

Improving Workflow

MDR's patented recording capability simplifies the video recording process, and provides tools which no other system

offers. Various selectable record modes support the capture of user specified seconds or minutes of image data immediately preceding or following the desired event. MDR also allows continuous linear recording of long dynamic runs or one-button capture of single frames. MDR is always ready to record images to its large internal hard disk and transfers images to DVD or CD-R media or directly to the network as a DICOM Store SCU. Patient information can be associated with the images recorded by MDR using Modality Worklist or by translating the patient information from the modality screen using a form of OCR. Capture images using the remote capture interface or the included medical grade, shielded footswitch. Images may be viewed from a PACS workstation or any Windows® PC using the DICOM viewer utility added to every disk. MDR makes it easy to record only the clinically relevant data which maximizes your efficiency and productivity during the review process.

Why MDR?

- Compatible with most video-based systems
- Modality Worklist compatibility
- Record images to DVD or CD-R media or transfer to the network as DICOM Store SCU
- Medical grade, shielded footswitch included
- Highest image quality – what you see on the monitor is what you get on disk
- Multiple or single patient records per disk
- Large capacity internal hard disk – for always-ready recording
- DICOM viewer makes images portable using any Windows PC or laptop
- MDR media is DICOM Part 10 compatible for use with most PACS

Specifications

DICOM Part 10 compatibility for recorded disks

Ethernet 10/100Base T

HIPAA compliant

DICOM Storage class SCU

Modality Worklist

*MPPS

*Storage Commit

Video Input/Output:

High resolution monochrome to 160MHz pixel clock frequency
High resolution RGB to 136MHz pixel clock frequency
Interlaced and non-interlaced formats up to 2048 x 2048 pixels

Video record rates

User selectable frame rates; full, 1/2, 1/3, 1/4, 1/5, 1/6, 1/7

Video Record Modes

Prospective - User defined limits, time and frame rate
Sequential - Conventional, Record Start, Pause, Stop control
Snapshot - High resolution still frames from streaming video

Image compression

Lossy and lossless formats
JPEG
JPEG 2000 Monochrome only

Audio Input/Output

RCA input/output

Control

-Front panel user interface
-Console control serial interface compatible with existing video tape recorder control formats
-Dual remote input foot switch or interface cable (sold separately)

ACR - Automatic Character Recognition

-Patient Name
-Patient ID
-Accession Number

Media Formats

DVD+R (12cm 4.7GB) Typical data record rate 21.6MB/s
DVD+RW (12cm 4.7GB) Typical data record rate 10.8MB/s
*DVD-R (12cm 4.7GB) Typical data record rate 21.6MB/s
*DVD-RW (12cm 4.7GB) Typical data record rate 10.8MB/s
CD-R (12cm 700MB) Typical data record rate 2.4MB/s
CD-RW (12cm 700MB) Typical data record rate 2.4MB/s

Storage capability: All image data is cached to MDR's internal 250GB (minimum) hard drive providing always record-ready performance and hours of video recording capacity. Maximum record length for DVD between 17.5 minutes to more than 120 minutes dependent on the incoming video source specifications, frame rate, compression type and compression quality settings selected by the operator.

Playback compatibility: Windows® PC with appropriate format drive, images accessible using any DICOM workstation with multiframe playback capability or by using the MDR DICOM viewer written to MDR recorded media. MPEG encoded DVD compatible with most DVD media players

MDR DICOM viewer:

-Allows review of MDR recorded images in a DICOM format from any Windows® PC
-Supports playback of extended multiframe series and single image
-Provides measurement tools and annotation capabilities
-File export capabilities including storage in DICOM and non-DICOM formats
-Windows® printing and e-mail utilities

Physical characteristics

Dimensions: H W D 132mm (5.6") x 270mm (10.6") x 366mm (14.5")
Weight: 5.45kg (12lbs.)

Power input:

100-240 V~, ± 10%, 47-63Hz, 126 VA

Classification

IEC 60601 Class I, No Applied Part
EN 60601-1-2 Class B, Group 1
IEC 60529, IP 21

Agency Approvals

UL 60601-1 (1st Edition);
EN 60601-1-2; CISPR 11B;
CAN/CSA C22.2 No 601.1-M90



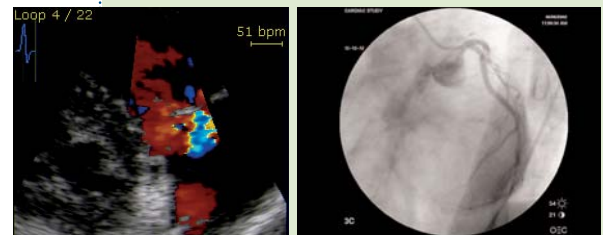
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Superior Image Quality

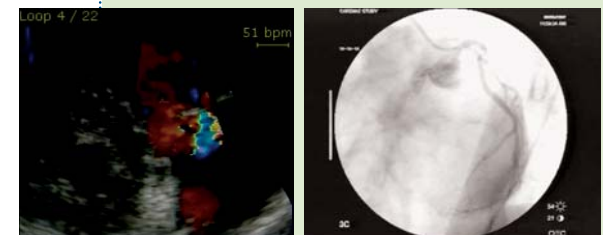
Compare the MDR image quality, clarity and details from high resolution monochrome and RGB sources with its competitors



MDR RGB input to DICOM output



S-VHS PLAYBACK



MEDICAL DVD RECORDER, S-VIDEO INPUT TO MPEG OUTPUT

MDR offers an improvement of more than 5 to 1 over standard S-video recorders



* Contact NAI regarding limitations and availability

Patent pending

Features and specifications subject to change without prior notice