

Student Technology Fee

Grant Proposal

2008.013

2007-08

1) Network?
2) quote for equipment requested?
3) PC-wired?
4) wiring?

Dr. Jim McCrory

Approved

Denied

Comment: _____

Diana Hamilton

Approved

Denied

Comment: _____

Gary Gatch

Approved

Denied

Comment: _____

Mike McDonald

Approved

Denied

Comment: _____

Dale Martin

Approved

Denied

Comment: _____

Student Technology Fee
Grant Proposal Request Form
Fiscal Year 2007-08

FF

2008.013

Northwestern State University of Louisiana

#1 nr

ALL BLANKS MUST BE FILLED COMPLETELY

Prepared by: Kelli Haynes For: Digital Imaging Laboratory Equipment

Department/Unit: Radiologic Technology College: College of Nursing Campus: Shreveport

Which NSTEP Goals/Objectives does this project meet? Objective #3

Requested equipment will be located/installed/housed? Building: Warrington Imaging Lab

Are department property policies and procedures in place for requested equipment? Yes

Which individual will be responsible for property control of the requested equipment?

Signature:  Date: 10/29/07

Grant Proposal Requested Amount: \$ 48,450 Budget Attached (circle one): YES/NO

Grant delivered to Student Technology located in Watson Library, Room 113. Date _____

The grant proposal must include all specifications, description, model number, quotation, cost, state contract number, and vendor for each item. If the proposal does not include all requested information, it will be returned to requestor.

<p>1. Describe target audience.</p> <p>The audience for this proposal is comprised of the Radiologic Technology students in the clinical phase of their education on the Shreveport Campus. Currently, there are 35 students enrolled in the clinical phase of the program. In the spring of 2008, another 20 students will be admitted to the program, for a grand total of 55 students using the requested equipment.</p>
<p>2. Describe project/initiative for which you are requesting funds.</p> <p>Radiologic technology is currently experiencing a major evolution in the technology utilized in imaging and processing. While the traditional radiology department once depended on film as the medium for recording a patient's diagnostic images, most are now transitioning to an environment in which film is no longer the storage medium. Diagnostic images are now being created and stored electronically, utilizing digital technology. This new technology has created a challenge for educators to keep pace with the quickly changing clinical environment; curricular</p>

challenge for educators to keep pace with the quickly changing clinical environment; curricular changes are on the horizon. In fact, the proposed revision of the ASRT Radiography Curriculum includes content related to digital technology (ASRT, 2006). Moreover, the content outline for the ARRT Certification Examination in Radiography includes digital imaging content (ARRT, 2005). Therefore, it is imperative that radiologic technology programs incorporate digital technology content and practice in curricula to assure that students are prepared to succeed on the certification examination and to subsequently practice in the workplace environments which are being infused with digital technology.

Currently, the Shreveport campus has an energized laboratory for simulation and instructional purposes. However, it does not have a digital imaging system. We respectfully request \$48,450 to purchase the digital imaging equipment for the Shreveport laboratory.

Description of Equipment	Quantity	Unit Price
1. CR reader & CR workstation (Software & Monitor)	1	\$48,450
2. Cassette/Imaging Plate 14X17	1	Included in above quote
3. Cassette/ Imaging Plate 10X12	1	“
4. Shipping		“
5. Applications, Installation & Training		“

3. State measurable objectives that will be used to determine the impact/effectiveness of the project.

- Student knowledge of digital imaging is applied and demonstrated in simulated laboratory setting.
- Students demonstrate competence in use of digital imaging equipment in simulated laboratory setting.
- Students perform competently in clinical setting with patients utilizing digital imaging equipment in the actual clinical environment.

4. Indicate how each project objective will be evaluated.

- Faculty will validate the student’s ability to obtain quality radiographic images utilizing the digital imaging equipment.
- Faculty will evaluate the student’s on laboratory assessments using the digital imaging equipment to meet program goals and objectives related to technology.
- Students will demonstrate competency in the clinical setting to meet requirements for the registry exam for professional practice.

5. If funded, which NSTEP <http://www.nsula.edu/nstep/NSTEP.pdf> objective(s) will this funding of this project advance. How will funding of the project advance the University and College/unit technology plan?

This project will advance the following objective:

Objective #3- To upgrade student technology laboratories with modern technology

The College of Nursing’s technology plan includes upgrading all simulation laboratories with

equipment that closely mirrors the technology that is utilized within the healthcare environment. The addition of this imaging equipment will support and advance this plan.

6. Provide a justification for funding of this project. Estimate the number of students that will be served per academic year and in what ways. Please indicate also any unique needs of the target group.

- An average of 60 students per semester will have access to this digital imaging equipment. The lab is available to students for use anytime they need to practice certain procedures. In the spring semester of each year, approximately 20 students are required to use lab equipment to simulate radiographic procedures.

- **Item #1 Computed Radiography (CR) reader and Computed Radiography (CR) workstation – Software and Monitor (\$48,450)**

The existing energized simulation laboratory on the Shreveport campus currently produces x-rays on film which has recently become an outdated practice. The components listed in this item are a package from Agfa© that will allow the students to produce digital images for evaluation and practice. The production phase (CR reader) and evaluation phase (CR workstation) of these digital images constitute an invaluable instructional tool that will allow the students to identify properties related to digital imaging and the effects on image quality. The cost of this digital system is \$48,450, and includes the following Agfa© components:

1. Agfa “CR 30 SP series CR reader
2. CR NX Server: Dell Optiplex PC workstation with Intel Pentium processor and hard drive, CD R/W drive, keyboard, mouse, and Windows XP Pro operating system
3. 19” Flat Panel Monitor with touch screen capabilities
4. CR Patient Demographic data software
5. Online Processing Software

- **Items #2 and #3 Cassette/ Imaging Plates**

Cassettes hold the imaging plates that are necessary for the production of the radiographic images. With digital imaging, special cassettes are required for image production. There are various sizes that can be used, but the two that we have requested, 14x17 inches and 10x12 inches, are the standard sizes for clinical practice of patient positioning. The absence of cassettes would make image production impossible. These items have been included in the cost of the package listed above.

- **Items #4 and #5 Shipping and Installation**

The shipping costs of this equipment are included in the item #1 cost.

7. List those individuals who will be responsible for the implementation of the project/initiative and indicate their demonstrated abilities to accomplish the objectives of the project.

Laura Aaron, PhD, RT(R)(M)(QM): Program Director

Kelli Haynes, MSRS, RT(R): Clinical Coordinator

Becky Britt, MSRS, RT(R)(M)

Tammy Curtis, MSRS, RT(R)

Ben Wood, MSRS, RT (R)

- The above faculty members are assigned to the Shreveport campus for the Radiologic Technology Program. Because the faculty hold a substantial number of years in the clinical setting as well as the educational setting, faculty are able to provide instruction and supervise students in the use of the digital imaging equipment to meet the objectives

of this proposal.
<p>8. Describe any personnel (technical or otherwise) required to support the project/initiative.</p> <p>Faculty will be overseeing supervising students in the use of the equipment in the laboratory setting. No additional personnel will be needed to meet the objectives of this proposal.</p>
<p>9. Provide a schedule for implementation and evaluation.</p> <ul style="list-style-type: none"> • Decision to fund proposal: November, 2007 • Monies made available during first quarter of 2008 • Digital imaging equipment to be ordered the week monies become available • Shipping time is 6-8 weeks • Implementation in laboratory to begin the first week of June, 2008 • Evaluation to begin immediately upon receipt of the equipment in the lab by the faculty.
<p>10. Estimate the expected life of hardware and software. Explain any anticipated equipment/software upgrades during the next five years.</p> <p>The lifespan of the equipment is expected to be approximately 10-15 years. No upgrades are expected or any additional maintenance required.</p>
<p>11. Explain in detail a plan and policy that will be in place to ensure property security/controls for any equipment received through a Student Technology Fee.</p> <p>If you are requesting equipment that will be either/or checkout to students or moved within the department, you must provide a checkout/loan policy.</p> <p>The equipment will be stored in a locked laboratory. The only people who have access or a key to this laboratory are the faculty and the security guard onsite. The students will only be able to use the equipment with a faculty member present.</p> <p>The equipment is mounted in the laboratory and is not able to be checked out to students or removed from campus for any reason.</p>

Attach two (2) letters of support for the project from the following individuals: the requesting department's Dean, the appropriate Vice President (for non-academic units), or the SGA President from the requesting campus (for student requests).

Student Technology Fee Grant Proposal Checklist:

- X Is all information requested provided (items 1 – 11)?
- X Is a detailed budget attached?
- X Is all specifications, description, model number, quotation, cost, state contract number, and vendor provided for each item?
- X Are your two (2) letters of support attached?
- N/A If equipment is to be checked-out/loaned, is your policy attached?



Northwestern State University

A Member of the University of Louisiana System



College of Nursing
1800 Line Avenue
Shreveport, Louisiana 71101-4853

Office of the Dean
Telephone (318) 677-3100
Fax (318) 677-3127
PlanchockN@nsula.edu

October 24, 2007

Student Technology Fee Grant Review Committee
Northwestern State University
Natchitoches, LA 71497

Members of the Committee,

On behalf of the students and faculty in the Radiologic Technology program, this letter will serve as my strong support of the proposal submitted by the Radiologic Technology program to acquire digital imaging laboratory equipment for the Shreveport campus. The emphasis on supporting student learning through the provision of technology-advanced equipment is not only imperative, but a mandate by the accrediting and licensing agencies for Radiologic Technology programs. Our students must become clinically competent in the performance of these skills as they have become a critical component of the patient assessment practice within the health care environment within which they will be employed. It is, therefore, essential that the College of Nursing increase its level of technology integration within the existing learning environment and your approval of this proposal will foster our initiative in that regard.

I urge the Committee members to act favorably on this proposal. In so doing, the students will be the benefactors of greater learning support and opportunities. I look forward hearing of your approval action in the near future.

Sincerely,

Norann Y. Planchock

Norann Y. Planchock, PhD, APRN, BC, FNP
Dean and Professor
College of Nursing

October 24, 2007

Information Technology Fee Grant Committee
Northwestern State University
Natchitoches, LA 71497

Committee Members,

On behalf of the Shreveport Student Government Association (SSGA), it is my pleasure to offer this letter in support of the proposal by the Radiologic Technology program to acquire digital imaging equipment for the Shreveport x-ray laboratory. Learning these clinical skills has become a critical component of the Bachelor of Science in Radiologic Technology (BSRT) curriculum and this equipment is requisite to students becoming efficient in these procedures. The provision of this equipment will assist the near 300 BSRT students to be better prepared to fulfill the practice expectations when they graduate - - - they will be more competent practitioners and thus, more readily employable in their chosen field.

The practice of Radiologic Technology is continuously being enhanced by the infusion of cutting-edge technology and it is essential that we assist our students to be educated utilizing the latest and best technology available. This grant will enhance the integration of advanced technology for BSRT students.

Please consider supporting this proposal in a favorable manner. If I can be of assistance to the committee, please do not hesitate to call upon me.

Respectfully,



President
SSGA

October 22, 2007

To Whom It May Concern:

I am writing this letter in support of a new digital imaging laboratory for the Shreveport campus. We the students of the radiologic technology class of Northwestern State University are in need of a new digital imaging lab. Radiology is an ever evolving medical field of study. Film was once the common medium for imaging, but now is being replaced with digital imaging equipment. All of the hospitals that the students rotate through for clinical assignments have digital equipment. It is fairly difficult for the students to transition from our film based lab to the digital facilities. In comparison to the digital facilities our film based lab can not demonstrate the technical changes that are needed for digital imaging. By having a digital imaging lab students can become familiarized with digital equipment before entering into the clinical environment, and be able to practice with equipment similar to the hospital therefore, increasing the student's competency and confidence.

I appreciate your support for this worthy project.

Sincerely yours,



Von Darius Heard

Association of Radiologic Technology Students /President



MEMORANDUM

Northwestern State University of Louisiana
College of Nursing

#13

from the desk of Kelli Haynes

To Whom it May Concern:

The Digital Imaging Laboratory Equipment we are requesting from the Student Technology Committee is a stand alone system. This equipment will not network with any Northwestern State University computer equipment. Also, the equipment will not need support from NSU.

Sincerely,

Kelli Haynes

Kelli Haynes, MSRS, RT(R)
Assistant Professor/Clinical Coordinator
Radiologic Technology Program

#13

Alexandria X-Ray

3835 Independence Dr.
Alexandria, LA 71303
Ph: 877-793-9729
Fax: 318-767-9000

5150 Interstate Dr, Suite 213
Shreveport, LA 71109
Ph: 318-635-3295
Fax: 318-635-3296

DATE: 19 September 2006

TO: North Western State University
ATTN: Becky Britt
1800 Line Avenue
Shreveport, LA 71106
Ph: 318-677-3066
Fax: 318-

BY: _____
Irene Spolarich

WE ARE PLEASED TO SUBMIT THE FOLLOWING QUOTATION

EA	AGFA: CR Package	\$48,450.00	
	<p>AGFA: "CR 30 SP" SERIES CR PACKAGE: CR 30.0 L CR READER > Single Cassette Feed > Throughput: 50 plates per hour (depending upon size and application) > Fits anywhere: small footprint, table top, low energy requirements > Excellent image quality with fiber optic bundles, flying spot laser and state-of-the-art MUSICA image processing. > The easy to service modular design is sure to reduce down time and improve serviceability.</p> <ul style="list-style-type: none"> • Flying spot: proven scan technology • Scanning at 10 pixels/mm • Auto-calibrations and auto-corrections built in • W 69 x D 70 x H 46 cm <p>CR NX SERVER: DELL OPTIPLEX GX620 PC WORKSTATION, INTEL PENTIUM 4, 3.4 GHZ, 2 GB DDR2 SDRAM, 1 X 80 GB SATA HARD DISCS, CD R/W DRIVE, KEYBOARD, MOUSE; WINDOWS XP PRO SP2 OS</p> <p>19" FLAT PANEL MONITOR > BARCO 19" Black Touch screen LCD w/ELO resistive touch and serial controller</p> <p>CR ID SOFTWARE > ID Software records patient demographic and examination data in a study-oriented format onto the memory chip embedded in the ADC cassette via radio frequency ID and QC on one exam screen</p>		

<p>1 EA</p>	<p>DICOM PRINT > Printer ready configuration can print to Agfa's Drystar dry printers and other DICOM enabled printer</p> <p>DICOM STORE / SEND > DICOM-Store Connection Software allows you to perform online transmission in the DICOM standard communication protocol format. Images can be transmitted via network or modem to PACS, remote stations, or other modalities</p> <p>"P-Value" DISPLAY OUTPUT</p> <p>DICOM CD EXPORT – Dicom CD burning for image duplication</p> <p>CR NX ON-LINE PROCESSING AND MUSICA™ SOFTWARE > On-line Processing Software performs multiple tasks: automatic image-processing (utilizing MUSICA® Software) of the incoming raw data from the CR unit > Automatic Window/Level setting > Manual "black-border" collimation > Sensitometry mapping > HIPPA Security Log and IHE workflow compatibility > Also supplies user with a Basic QC-Viewer for basic image corrections</p> <p>NX RIS Connectivity Software: New & Improved RIS Link with DMWL, DICOM query by accession and Procedure Code Mapping Software Package connecting the ADC ID station with existing information systems, such as a RIS or HIS. RISLINK allows the relevant patient file in the information system to be accessed from the ID station, either directly or via manual input, Windows, a mapped Worklist, a DICOM Worklist or accession number</p> <p>NX Precision Tools NX Precision Tool Software NX Precision Tools includes: Annotation (advanced/programmable) Tools Ortho Measurement Tools Digital Imaging Measurement Tools MUSICA Image Processing Control panel</p> <p>Details of Precision Tools Advanced annotations content Patient positioning markers (available on both Examination and Editing screens), Zoom/rotate image, Add predefined text, Add free text with/without arrow, Invert image, Apply shutters, Show/hide histogram</p> <p>Advanced measurements content Linear and circular calibration, angle, surface measurement of an circular, rectangular, free hand or polygonal annotation, distance measurement, leg length difference measurement, scoliosis measurement, perpendicular, line with midpoint, set different colors</p> <p>NX Optiview Software Square marker - Indicator for a manually flipped or rotated image</p>		<p>Included</p>
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	<ul style="list-style-type: none"> • Displayed on softcopy/hardcopy for a safety view <p>Grid line suppression</p> <ul style="list-style-type: none"> • Detection & removal of grid patterns caused by stationary grids • Removal of Moiré effect on monitor <p>Black Border Software Provides computerized "automatic" Black Border (use for PACS users)</p>		
4 EA	CR CASSETTES: 35 X 43 CM CASSETTE-PLATE SET WITH MD 40 PLATES		Included
4 EA	CR CASSETTES: 24 X 30 CM CASSETTE-PLATE SET WITH MD 40 PLATES		Included
	PROFESSIONAL AND TECHNICAL SERVICES		
1	AGFA APPLICATIONS – INCLUDES 2 DAYS OF TRAINING FOR EACH SYSTEM		Included
1	AGFA CR INSTALLATION		Included

CR 30 SP PACKAGE

FOR QUANTUM MEDICAL IMAGING

The CR 30 SP Package introduces Agfa's new CR 30-Xe digitizer, an exciting new table top CR designed specifically for the smaller practice. The compact and convenient CR 30-Xe is easy to install, use and maintain, providing seamless integration, from X-ray exposure to print or softcopy.

The CR 30 SP Package includes features that provide the same high image quality & advanced functionality of packages with more expensive full size models, because every patient deserves the highest image quality technology can deliver without compromise. Loaded with easy to use NX software features, designed to optimize workflow and make patient care your number one priority, this great package comes complete with the software and hardware you need to Go Digital today.

The Most Frequent Tasks Are The Easiest To Do

The radiographer can perform all their daily tasks using NX's Worklist and Examination windows. The Worklist window allows the radiographer to enter patient data or to select it from the Modality Worklist. In the Examination mode, the radiographer can capture the patient identification and QC the image all in the same window. The Fast Preview feature allows confirmation of correct positioning and exposure within seconds, even while the final image is being completed.

Excellent Image Quality

The CR 30 SP Package includes MUSICA®, Agfa's Multi Scale Image Processing software. MUSICA uses patented contrast equalization algorithms to automatically process the image. The result is enhanced visualization of even subtle features in both bony and soft tissue for uncompromising image quality.

The Standard CR 30 Package Includes Software Loaded With Functionality:

- Window and level, flip, rotate, image reversal
- DICOM print, store, export
- CD burn with viewer
- Advanced annotation to an image, including markers, predefined text, drawing lines or geometrical shapes, applying shutters to mask areas of the image and more
- Pan and zooming for a more detailed view
- Advanced measurement of distance and angles
- Histogram display for image analysis
- Advanced access to MUSICA image processing parameters to fine tune for specific studies
- RIS LINK for remote data entry

For a broad range of applications...

 **Quantum**
MEDICAL IMAGING
Innovations in Digital Imaging.

AGFA 
HealthCare

CR 30 SP GENERAL TECHNICAL SPECIFICATIONS

Digitizer type

- CR 30-Xe Single Plate Reader
- Throughput: Recommended for practices requiring throughput of 40 per hour or less

LCD display

- Machine status and error conditions

Grayscale resolution

- Data acquisition: 16 bits/pixel
- Output to processor: 12 bits/pixel

Reader dimensions and weight

- (W x D x H): 693 x 701 x 464 mm (27.2 x 27.6 x 18.2 in)
- Depth including input tray: 769 mm (30.3 in)
- Weight: Approx. 98 kg (216.05 lbs)

Power

- 120V/60Hz (USA)
- Standby 120W, max 250W, 15A fuse

Minimum Requirements

- CR MD 4.0T General Casette
- CR MD 4.0 General Plate
- NX

Environmental conditions

- Temperature: 15 to 30 °C (59 to 86 °F)
- Humidity: 15 to 75% RH
- Magnetic fields: max. 18 µT in conformance with EN 61000-4-8: level 2
- Rate of change of temperature: 0.5 °C/minute (0.9 °F)

Environmental effects

- Noise level: max. 65 dB(A)
- Heat dissipation: standby 120 W, max. 250 W

Approvals

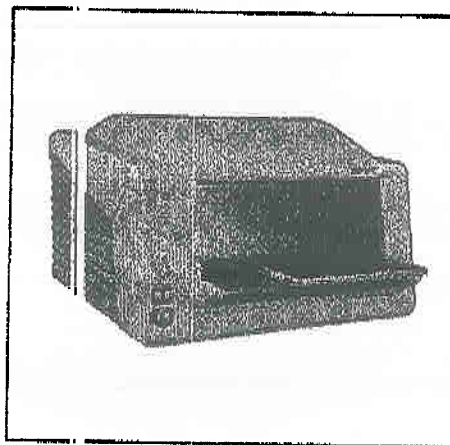
- UL, cUL, CE

Transport Details

- Temperature: -25 to +55 °C (-4 to 131 °F), -25 °C for max. 96 hrs
- Humidity: 5 to 95% RH

The Agfa/Quantum CR 30 SP Package includes:

- CR 30-Xe Single Plate Reader with automatic cassette / plate handling
- CR NX Workstation
- Dell Optiplex™ GX620 PC Workstation, Intel Pentium 4, 3.4 GHZ, 2GB DDR2 SDRAM, 1x80 GB SATA Hard Discs, CD R/W Drive, Keyboard, Mouse; Microsoft Windows XP Pro™ SP2 OS (min. specification)
- 19" flat panel black high quality LCD Barco Monitor
- CR NX SP Premium Software
- Patented MUSICA Image Processing Software
- CR NX Precision Tools
- Modality Worklist
- CR NX ID & Examination Software
- DICOM Store/Send & DICOM Print
- "P-Value" Display Output For Compatible PACS
- DICOM CD Export For DICOM CD Burning With a Viewer
- 2 CR 30-X, 35x43 Cassettes With MD 4.0 Imaging Plates
- 2 CR 30-X, 24X30 Cassettes With MD 4.0 Imaging Plates



Quantum Medical Imaging, LLC
2002 Orville Drive North
Ronkonkoma, NY 11779 USA
Tel: (631) 567-5800
Fax: (631) 567-5074
E-mail: info@qmteam.com
www.quantummedical.net

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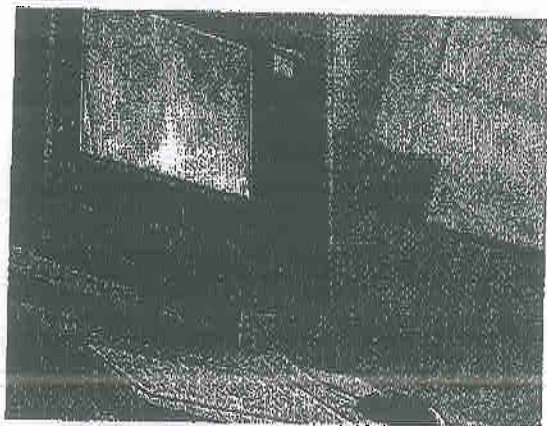
2104 09/06

 **Quantum**
MEDICAL IMAGING

Innovations in Digital Imaging.

AGFA 
HealthCare

NX for Digital Radiography



NX is the radiographer's image identification and quality control tool.

NX has an intuitive interface that offers complete ease of use at the point-of-care.

AN EXCEPTIONAL TOOL FOR IMPROVED RADIOGRAPHY WORKFLOW AND EFFICIENCY, MADE FOR AND WITH THE RADIOGRAPHER IN MIND.

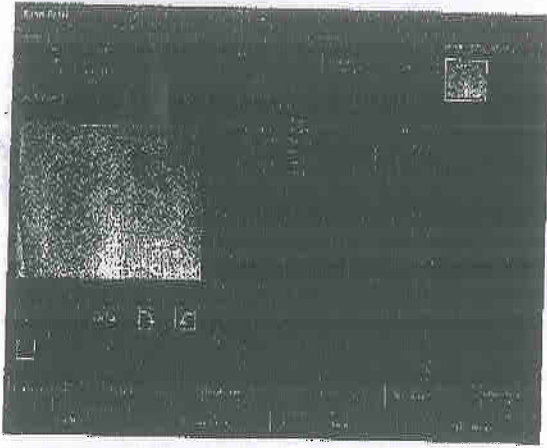
- Designed for intuitive use
- Convenient workflow at point-of-care
- Facilitates hospital integration

Extensive range of benefits:

NX offers a broad array of benefits specifically developed with the radiographer in mind. With the touch screen, the radiographer can complete all standard tasks quickly and effortlessly. Thanks to the intuitive interface, easy access to the system is assured, providing more flexibility and efficiency in the radiology department.

With Agfa's image processing, the radiographer spends less time adjusting, allowing faster image delivery to the radiologist. The in-room integration means a more convenient workflow for the radiographer throughout the imaging process. Offering improved interoperability with other systems within the hospital, NX delivers a higher level of integration.

AGFA 
HealthCare



The Examination window touch screen is intuitive, comprehensive and easy to use.

Designed for intuitive use

Increased flexibility thanks to minimal learning curve

The screen windows have been purposely designed to answer all of the specific needs of the radiographer: identifying patients, performing examinations, controlling image quality and transmitting the verified images. The touch screen makes the Worklist and Examination windows easy to use and quick to complete tasks.

With the intuitive GUI, only minimal training is needed to work effectively on NX: any radiographer can make use of it, increasing the overall flexibility of the staff.

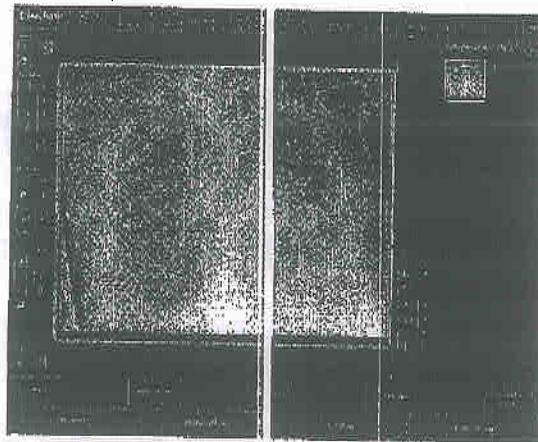
The most frequent tasks are the easiest to do

NX's Worklist and Examination windows cover all of the radiographer's daily tasks: In the Worklist window, the radiographer can enter patient data or select it from an RIS-based worklist (optional), while in the Examination window, he can identify a cassette, define the examinations to perform and take the necessary steps to prepare an image for diagnosis. The Examination window's Fast Preview allows correct positioning and exposure to be determined even while the final image is in the process of being completed.

The hybrid touch screen/mouse provides the greatest efficiency

When precision work is needed, the mouse provides access to a broad array of special tools through the Editing window, such as manual collimation, window leveling, burn and edited image saved as New.

The Editing window is optimized for hardcopy and softcopy viewing environments, with additional print tools available when images are displayed in the WYSIWYG print preview.



The Editing window is optimized for soft- and hardcopy viewing environments.

Image processing

MUSICA™ provides excellent image quality

NX includes Agfa's technologically advanced image processing as part of the standard package. The Multi-scale Image Contrast Amplification algorithm, MUSICA, composes the digital image in a number of different frequency ranges (or detail sizes) and modulates the signal amplitudes (or contrast) within each of these ranges. This results in an exceptional perceptibility, enhancing details. Both the radiographer and the radiologist benefit from an improved workflow and higher productivity. From acquisition to reading, the entire process is quicker and more efficient.

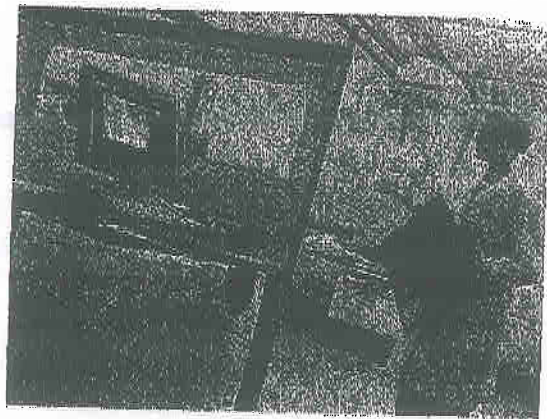
Convenient workflow at point-of-care

More efficient workflow reduces examination time

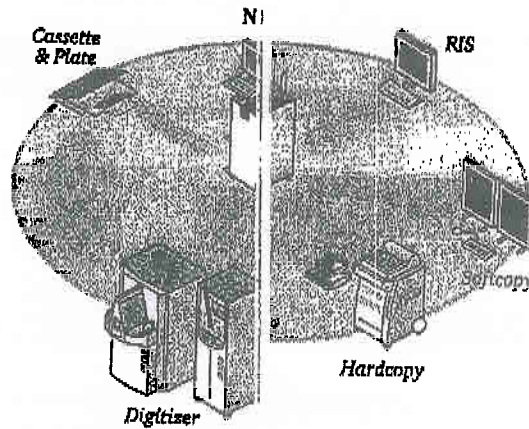
With NX, there is no longer a need for the radiographer to leave the patient to perform any ID or image quality control activities.

More comfort and less waiting increases patient satisfaction

The improved patient proximity provides greater efficiency and workflow for the radiographer, with more comfort and a shorter waiting time for the patient.



An Agfa digitizer placed in the same room as NX to achieve a perfect workflow at the point-of-care.



An essential part of hospital integration

Connectivity between hospital systems and networks means better patient care

NX plays a significant role in the hospital's goal of providing maximum patient comfort and care and improving communications throughout the facility via a total integration of systems. It supports the latest evolutions of hospital integration philosophy for improved interoperability.

NX is DICOM compliant and in accordance with IHE guidelines:

- DICOM images can be easily transmitted to a display station or imager for diagnosis. When sending to a PACS system, NX receives the message that images have been securely stored. Export of DICOM images to a CD-ROM for creating referral handouts is also included.
- An administrative tool is available to configure access rights for different users. With its password protection, NX provides security for patient information.

Optional Features for NX

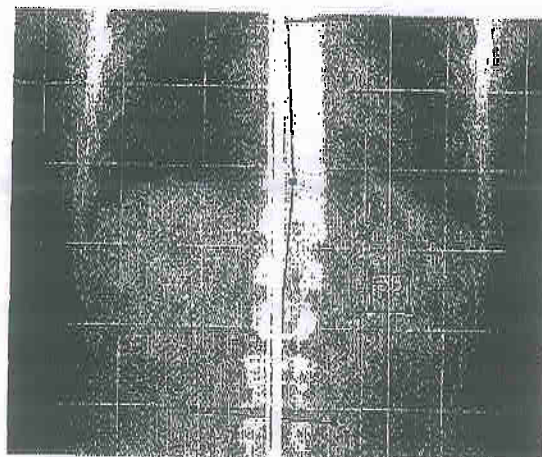
NX COVERS ALL OF A RADIOGRAPHER'S DAILY NEEDS. WHEN A FACILITY HAS SPECIALIZED REQUIREMENTS, NX CAN PROVIDE SPECIFIC TOOLS NECESSARY FOR THE RADIOGRAPHER WITH MULTIPLE AVAILABLE OPTIONS.

IMAGING OPTIONS

NX Precision Tools

NX Precision Tools allows the radiographer to fine-tune the image and deliver more specific information to the radiologist.

- Annotations can be added to an image, such as: markers, predefined text, drawing lines or geometrical shapes, applying shutters to mask areas of the image, etc;
- The radiographer can zoom in an image for a more detailed view or zoom directly to a specific Region of Interest;
- NX Precision Tools measures distances and angles and determines leg length differences and scoliosis.
- The radiographer can show histograms for image analysis;
- Manual adjustment of the MUSICA image processing parameters allows fine-tuning for specific purposes.

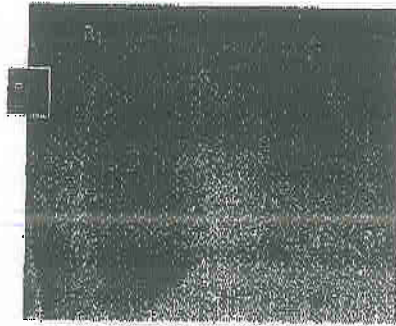


NX Precision Tools indicates scoliosis and other measurements.

NX Optiview

NX Optiview features minimize artifacts and optimize viewing quality for better reading by the radiologist.

- The area outside the diagnostic area is automatically made black or grey, even when multiple exposures are made on one plate.
- Detected repetitive patterns, caused by anti-scatter grids, are removed.
- A square marker is automatically placed in the top left corner of all images. As the image is rotated and/or flipped, the marker also moves, indicating a manual change.



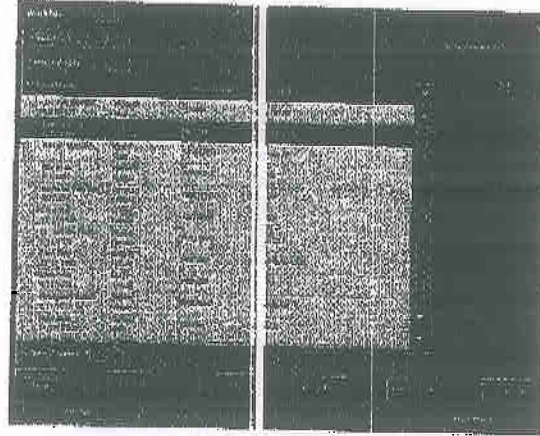
With NX Optiview's top-left corner marker, image rotation or flipping is immediately apparent.

NX Quality Assurance

NX Quality Assurance helps the hospital provide consistent image quality and minimize patient doses by monitoring dose variation on every exposure and analyzing rejected images.

- With the dose indicator, the radiographer easily sees how much the exposure dose deviates from the reference value for the examination. The indicator compares the median absorbed dose (LgM) in each digitized image with a stored reference dose value for that type of exam, to monitor the dose consistency.
- A report with details on rejected images (e.g. rejection reason, radiographer's name and date) can be created for further analysis.

CONNECTIVITY OF IONS



Connecting NX with the RIS makes patient exam details easily available.

NX RIS Connectivity

By decreasing typographical errors and allowing easy access to patient data, NX RIS Connectivity provides more consistent patient data and reduces identification time, resulting in improved radiographer workflow.

- NX connects with existing information systems, such as Hospital Information Systems (HIS) and Radiology Information Systems (RIS).
- Direct access is available to all patient data stored in the RIS, such as patient demographics, exam types and exposures. RIS Protocol codes can also be supported.

NX Integrated Workflow

NX Integrated Workflow maximizes the potential of RIS/PACS integration for dealing with emergencies, sending feedback on examinations status and of patient history consultations.

- In emergency situations, the priority of emergency exams is increased. A customized emergency name can be automatically generated for the patient, whose name might not be known at the time of arrival, to speed up administrative procedures. A trauma protocol can be configured and activated.
- The MPPS (Modality Performed Procedure Step) sends the examination status – scheduled, in-process or completed – to the RIS. With this feedback, the RIS system can start certain status-related activities, such as changing the workload, billing, etc.
- Consulting a patient's radiographic history is quick and easy. By checking the details on prior images, follow-up images can be exposed in the right position, for better comparison.

SPECIAL EXAM OPTIONS

NX Radiotherapy

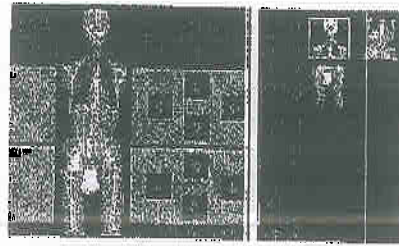
NX Radiotherapy provides easy-to-use, radiotherapy-specific support.

- Dedicated radiotherapy study groups are pre-defined: Simulation, Low Dose portal imaging and High Dose portal imaging.
- Erase settings and exposure class settings, as well as a set of enhanced algorithms and MUSICA parameter settings, are preset.

NX Full Leg/Full Spine Application

With NX Full Leg/Full Spine, images are automatically and accurately assembled, and any misalignments corrected, with minimum manual interaction. Images are created using MD4.1 Full Leg Full Spine plate and cassette sets in the CR Full Body Cassette Holder.

- The sub-images are identified, rotated, repositioned and put in the right order.
- Misalignments such as overlap, shift or perspective foreshortening are recognized and corrected if necessary. Images can then be post processed, printed and transmitted like any other CR image.

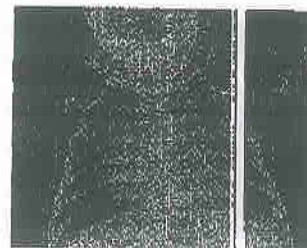


NX Full Leg Full Spine automatically stitches images for a seamless body view.

NX Paediatric

NX Paediatric optimizes paediatric images with fewer manual adjustments and provides clearly superior results, even for difficult exposures of premature newborns.

- NX Paediatric automatically selects the paediatric age group, depending on the patient's birth date.
- Each age group contains enhanced algorithms and fine-tuned MUSICA settings specially adapted to that age group, for optimized visibility of fine details.



Specially-adapted MUSICA settings provide perfect detail visibility for even the youngest patients.

technical

SPECIFICATIONS

INSTALLATION


- Carried out by a qualified Agfa application engineer
- NX software is only installed on PC's delivered by Agfa


SECURITY

- Secure profiles for key users to help facilitate your compliance with HIPAA (Health Insurance Portability and Accountability Act)

COMPLIANCE

- NX 1.0 supports enhanced features such as RIS Protocol Codes, RIS Mapping, Modality Performed Procedure Step (MPFS), Storage Commit, Grayscale Softcopy Presentation State (GSPS), Grayscale Standard Display Function (GSDF), CR or DX SOP Class for storage, presentation or processing.
- For a complete list of the DICOM conformance statements, please visit www.agfa.com/healthcare/dicom
- For a complete list of the IHE integration statements, please visit www.agfa.com/healthcare/ihe

 Agfa-Gevaert has been certified by Lloyd's Register Quality Assurance Limited to the following quality management system standard; ISO 9001:2000. The quality management system is applicable to: For Healthcare applications - Marketing, design, development and production of imaging and communication solutions (film, paper and plates, chemicals, components, equipment and software).

 Agfa-Gevaert has been awarded the Approval of Conformity certificate by Lloyd's Register Quality Assurance. It certifies that the Quality Management System for our X-Ray films conforms to the requirements of Annex V of the EEC Directive 93/42. Agfa HealthCare has been certified by Lloyd's Register Quality Assurance Limited to the following quality management system standards: ISO 9001:2000 and EN ISO 13485:2003. The quality management system is applicable to: marketing, design, development and production of imaging and communication solutions (film, paper and plates, chemicals, components, equipment and software) for Healthcare applications. Agfa-Gevaert had been awarded the ISO 9001 certificate by TÜV Zertifizierungsgemeinschaft e.V. This is applicable to Agfa's Quality Management System for design, production and servicing of Agfa Medical Equipment. Products distributed in North America are manufactured by/for Agfa Corporation, 10 South Academy St., Greenville, South Carolina 29601. Agfa, the Agfa rhombus and MUSICA are trademarks of Agfa-Gevaert N.V., Belgium or its affiliates. All other trademarks are held by their respective owners and are used in an editorial fashion with no intention of infringement. The data in this publication are for illustration purposes only and do not necessarily represent standards or specifications which must be met by Agfa. All information contained herein is intended for guidance purposes only, and characteristics of the products described in this publication can be changed at any time without notice. Products may not be available for your local area. Please contact your local sales representative for availability information. Agfa diligently strives to provide as accurate information as possible, but shall not be responsible for any typographical error.

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AGFA 
HealthCare

CR25.0™ L PACKAGE

FOR QUANTUM MEDICAL IMAGING

Small footprint, single cassette reader
for a unique range of clinical applications.

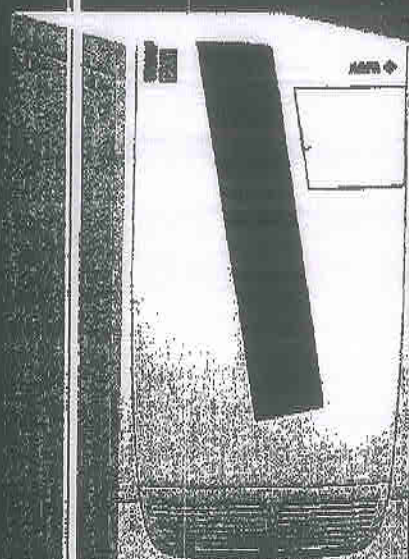
- > **CR25.0 L IS A MULTI-APPLICATION CR READER
BENEFITING FROM THREE DIFFERENT IMAGE
RESOLUTION MODES AND MUSICA® IMAGE
PROCESSING**

Broad range of applications

CR25.0 L is an economically equipped package and an ideal solution for any decentralized CR environment. CR 25.0 L is designed for General Radiology, Orthopaedics, Podiatry, Pediatric, Veterinarian and Chiropractic applications. The CR25.0 L can process up to 73 plates an hour and comes standard with patented Agfa MUSICA Image Processing to deliver outstanding, consistent image quality.

Full data

CR25.0 L has standard, high and ultra-high resolution imaging modes. Each small image plate is scanned at 10 pixels/mm (HR). HR is also an option on large imaging plates. Standard Resolution for large formats produces 6.7 pixels/mm. Ultra-High Resolution is also available for 18 x 24 and 24 x 30 cm detail cassettes and plates giving 20 pixels/mm detail.



For a broad range of applications...

CR25.0™ L PACKAGE

An Agfa Solution for Quantum Medical Imaging

The Agfa/Quantum CR25.0 L Series

Package Includes:

- CR 25 Single Plate Reader
- CR QS Server with 17" LCD Flat Panel Monitor
- CR QS On-Line Processing Software with MUSICA
- CR QS ID Software with Direct ID Software™
- 2 CR 35 x 43 Cassette/Plate Sets with MD 40 IP (SR)
- 2 CR 24 x 30 Cassette/Plate Sets with MD 40 IP (HR)
- CR QS DICOM Store/Send and CR QS DICOM Print

Add an Option, Brighten Your Digital Future*

- CR QS Automated Black Border Software:
 - Automatic Black Border application for multi-formats and PACS users
- CR QS Auto-Routing Software:
 - Simple, one-button workflow to increase speed and productivity
- CR QS RIS-Link Software/Modality Worklist:
 - Connectivity between DICOM RIS/HIS and the CR ID Station
- Barcode reader enables easy ID

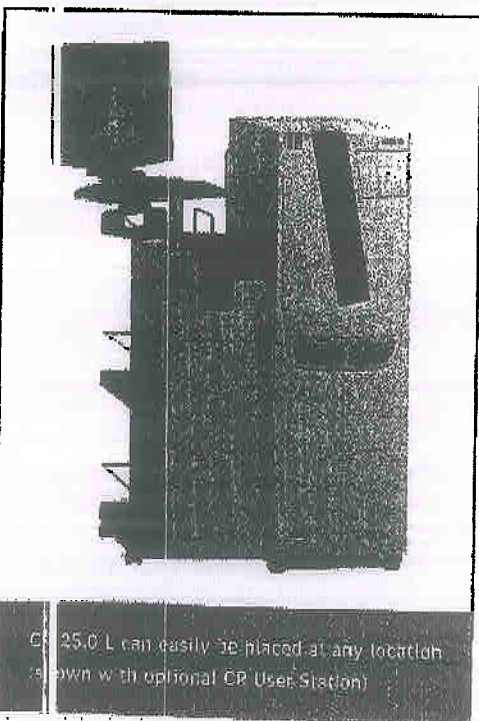
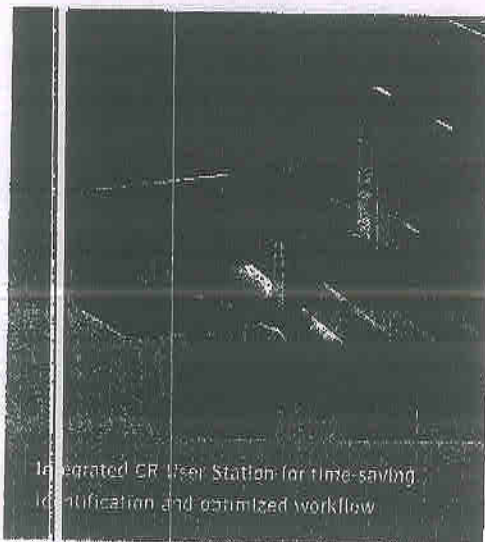
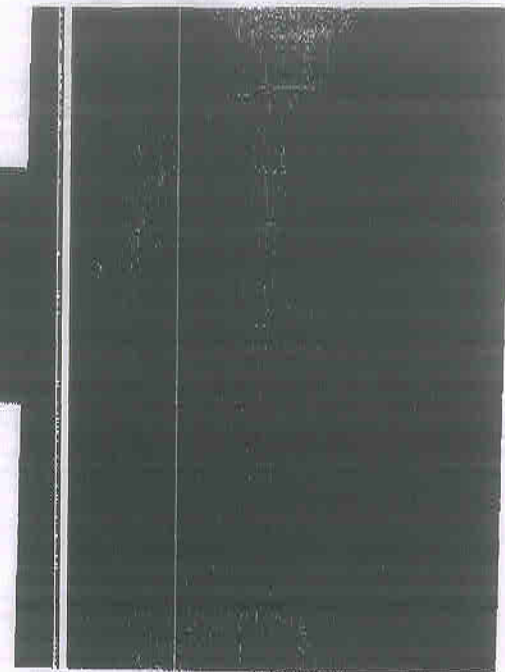
Optional CR User Station/The CRUS...

- Cassette identification functions
- Space for:
 - Workstation for image handling, processing and dispatching
 - Monitor, network switches and UPS
 - Cassette storage

Scoliosis and Long Leg Imaging Option

- CR QS Full Leg/Full Spine Stitching Software
- Cassette Holder with Planfeld Positioning Grid Pattern
- CR EZ-Lift, FLFS Cassettes and Anti-Scatter Grid

*For a complete list of available options please contact your local distributor.



CR 25.0 L can easily be placed at any location (shown with optional CR User Station)

CR 25.0™ L SPECIFICATIONS AND AVAILABLE CASSETTE SIZES

ACCEPTED CASSETTE SIZES	SPATIAL RESOLUTION	PIXEL MATRIX SIZE
Standard Resolution		
35 x 43 cm (14 x 17 in)**	6 pixels/mm	2320 x 2826
35 x 35 cm (14 x 14 in)	6 pixels/mm	2320 x 2320
High Resolution		
35 x 43 cm (14 x 17 in)	10 pixels/mm (opt: 1)	3480 x 4240
35 x 35 cm (14 x 14 in)	10 pixels/mm (opt: 1)	3480 x 3480
35 x 43 cm (automatic collimation to 21 x 43 cm)	10 pixels/mm	2020 x 4240
24 x 30 cm**	10 pixels/mm	2320 x 2920
18 x 24 cm	10 pixels/mm	1720 x 2320
15 x 30 cm	10 pixels/mm	1420 x 2920
8 x 10 in	10 pixels/mm	1950 x 2460
10 x 12 in	10 pixels/mm	2460 x 2970
Ultra High Resolution/Detail		
24 x 30 cm	20 pixels/mm	4760 x 5840
18 x 24 cm	20 pixels/mm	3560 x 4640

**Included in Agfa/Quantum CR 25.0™ L Series Packages.

COMPLIANCE / SAFETY

REGION	REGULATION	X-RAY	LASER
Europe	EN 60601-1: 1990 + A1; 1993 + A2; 1995 EN 60601-1-2: 2001	Regulation: 1987	EN 60825-1: 2001
USA	UL 2601 21 CFR Part 820: good manufacturing practice for medical devices	Applicable sections of DHHS/FDA 21 CFR Subchapter J	Applicable Sections of DHHS/FDA 21 CFR Part 1040
Canada	CSA22.2 No.601.1 No.601.1.2		

CR 25.0 I GENERAL TECHNICAL SPECIFICATIONS

CR type

- Single cassette feed
- Throughput: up to 73 plates/h (depending on size and application)

LCD display

- Machine status and error conditions

Grayscale resolution

- Data acquisition: 12 bits/pixel
- Output to processor: 12 bits/pixel

Reader dimensions and weight

- (W x D x H): 45 x 75 x 141 cm (17.7 x 29.5 x 55.5 in)
- Depth at cassette slot: 73 cm (28.7 in)
- Weight: Approx. 210 kg

Power

- 120V/60Hz (USA)
- Standby 216W, max 1440W, 15A fuse

Miscellaneous

- 17" LCD Flat Panel monitor (min)
- CR QS Server: Dell Precision Workstation
- (min) 3.6 GHz, 2x 73 GB HD, CD R/W, Windows XP OS

Environmental conditions

- Temperature: 15 to 31 °C (59 to 86 °F)
- Humidity: 15 to 75% RH
- Magnetic fields: max: 12.60 μ T in conformance with EN 61000-4-8: level 1
- Rate of change of temperature: 0.5 °C/minute (0.9 °F)

Environmental effects

- Noise level: max. 65 dB (A)
- Heat dissipation: standby 350 W, max. 2000 W

SAFETY SPECIFICATIONS

Approvals

- TUV, UL, cUL, CE

Transport details

- Temperature: -25 to +55 °C (-4 to 131 °F), -25 °C for max. 72 hours, +55 °C for max. 16 hours
- Humidity: 5 - 95% RH

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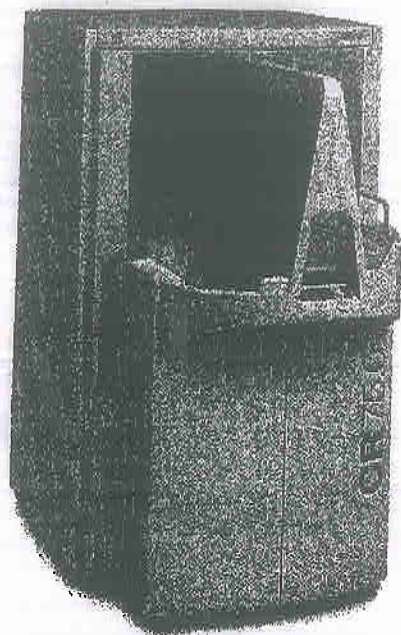
1303 10/05

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Fax: (631) 567-5074
E-mail: info@qmteam.com
www.quantummedical.net

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MEDICAL IMAGING
Innovations in Digital Imaging.

AGFA 

| see more | do more |



CR 75.0™ DIGITIZER

for Computed Radiography

*Maximizing productivity for
the complete range of clinical
applications*

- > **CR 75.0 IS A MULTI-USER DIGITIZER FEATURING A UNIQUE DROP-AND-LOAD BUFFER THAT ELIMINATES WAITING TIMES AND MAXIMIZES PRODUCTIVITY**
- > **CR 75.0 IS A MULTI-APPLICATION DIGITIZER, BENEFITING FROM THREE DIFFERENT IMAGE RESOLUTION MODES**

- No waiting times
for improved patient care
- Input/output buffer
for maximized productivity
- For a broad range of applications

Highest productivity

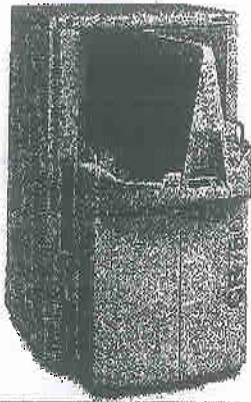
The cassette buffer eliminates waiting times and allows for a continuous workflow within the department. Zero-button operation with automated cassette handling makes CR 75.0 a highly productive and user-friendly system with a throughput of up to 115 plates an hour, depending on size and application.

No waiting

The CR 75.0 digitizer requires no manual interaction and all the user has to do is to deposit the cassettes in the input buffer (up to 11 cassettes). The digitizer automatically takes cassettes from the input buffer and reads the demographic data from the memory on the cassette. It then scans the imaging plate, digitizes the

CR 75.0 DIGITIZER

for Computer Radiography



Integrated CR User Station for time-saving identification and optimized workflow

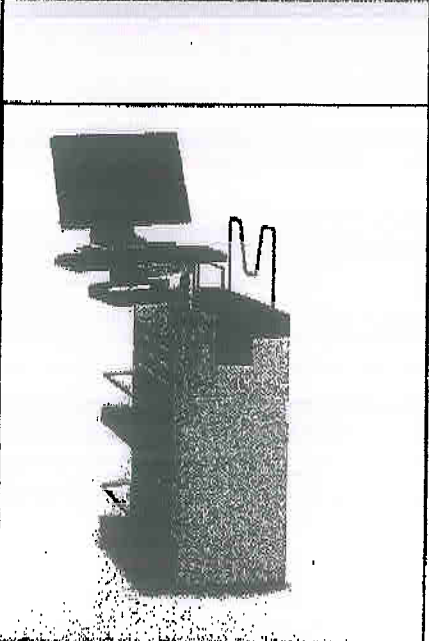
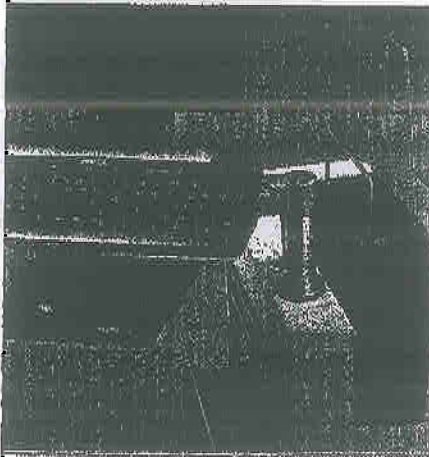


image and returns the cassette to the output buffer for new exposures.

Full data

CR 75.0 reads imaging plates at a standard resolution of 6 pixels/mm. 10 pixel/mm high resolution capability is available for all image plate sizes. 20 pixels/mm resolution will be available for dedicated 18 x 24 cm and 24 x 30 cm extremity cassettes and plates.

Compact footprint & optimal accessibility

CR 75.0 occupies a very small floorspace and at the same time provides unhindered access to several users, both at the input and the output buffer, resulting in a smooth flow of operations. This concept makes CR 75.0 the state-of-the-art solution for centralized CR environments.

Universal CR User Station

Optionally, a fully integrated CR User Station is available. The CR User Station is suitable for all CR environments:

- Decentralized CR
(Surgery, Intensive Care Unit, Emergency Room,...)
- Personal CR
- In-room CR solution.

Its modular and ergonomic design includes:

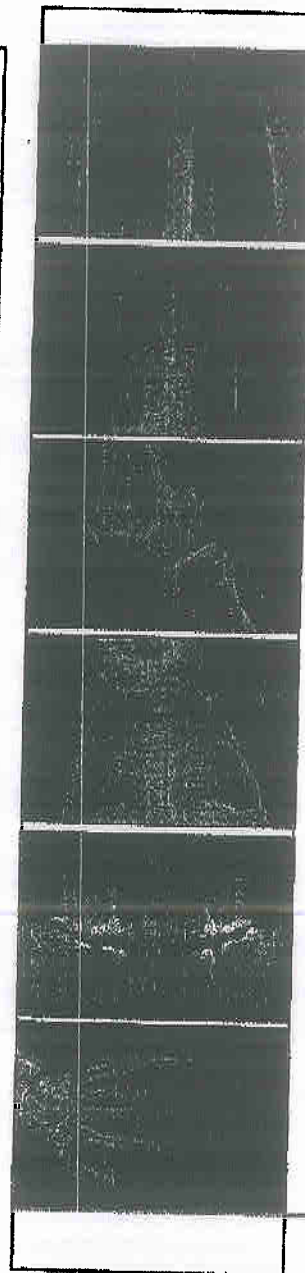
- Cassette identification functions
- Space for:
 - Workstation for image handling, processing and dispatching
 - Monitor, network switches and UPS
 - Cassette storage

An economical way to go digital

CR is compatible with all existing X-ray systems allowing X-ray departments to go digital without significant additional investment and workflow adaptations.

> CASSETTE SIZES

ACCEPTED CASSETTE SIZES	SPATIAL RESOLUTION	PIXEL MATRIX SIZE
Standard resolution		
35 x 43 cm (14 x 17 in)	6 pixels / mm	2320 x 2826
35 x 35 cm (14 x 14 in)	6 pixels / mm	2320 x 2320
High resolution		
35 x 43 cm (14 x 17 in)	10 pixels / mm (option)	3480 x 4240
35 x 35 cm (14 x 14 in)	10 pixels / mm (option)	3480 x 3480
35 x 43 cm (automatic collimation to 21 x 43 cm)	10 pixels / mm	2020 x 4240
24 x 30 cm	10 pixels / mm	2320 x 2920
18 x 24 cm	10 pixels / mm	1720 x 2320
15 x 30 cm	10 pixels / mm	1420 x 2920
8 x 10 in	10 pixels / mm	1950 x 2460
10 x 12 in	10 pixels / mm	2460 x 2970
Extremities		
24 x 30 cm	20 pixels / mm	4760 x 5840
18 x 24 cm	20 pixels / mm	3560 x 4640



> SAFETY

REGION	REGULATION	X-RAY	LASER
Europe	EN 60601-1: 1990 + A1: 1993 + A2: 1995 EN 60601-1-2: 2001	Regulation: 1987	EN 60825 - 1:2001
USA	UL 2601 21CFR part 820: good manu- facturing practice for medical devices	DHHS/FDA 21 CFR part 1002, subchapter B	DHHS/FDA 21 CFR parts 1040, 10 and 1040, 11
Canada	CSA22.2 No.601.1 No.601.1.2		

> TECHNICAL SPECIFICATIONS

General

Cassette buffer capacity and performance

- 10 cassettes of mixed sizes, both in input and output buffer
- Throughput: up to 115 plates/h (depending on size and application)

LCD display

Machine status and error conditions

Greyscale resolution

- Data acquisition: 12 bits/pixel
- Output to processor: 12 bits/pixel

Dimensions and weight

- W x D x H: 84 x 115 x 142 cm (33 x 45 x 56 in)
- At foot: 84 cm (33 in)
- At buffer: 142 cm (56 in)
- Weight: Approx. 320 kg (750.5 lbs)

Power

50/60 Hz single phase

240V +10%, max. fuse 16A

230V ±10%, max. fuse 16A

208V ±10%, max. fuse 15A (e.g. USA)

200V ±10%, max. fuse 15A (e.g. Japan)

Environmental conditions

- Temperature: 20 - 30 °C (68 - 86 °F)
- Humidity: 10 - 80% RH
- Magnetic fields: max. 12.60 µT
- Rate of change of temperature: 0.5 °C/minute

Environmental effects

- Noise level: max. 60 dB (A)
- Heat dissipation: standby 350 W, max. 2000 W

Safety

Approvals

TÜV, UL, cUL, CE

Transport details

- Temperature: -25 to +55 °C (-4 to 131 °F), -25 °C for max. 72 hours, +55 °C for max. 96 hours
- Humidity: 5 - 95% RH



Agfa-Gevaert has been approved by Lloyd's Register Quality Assurance Limited to the following Quality Management System Standards: ISO 9001:1994; EN ISO 9001:1994, and ANSI/ASQC Q9001-1994. The Quality Management System is applicable to the development, production and distribution of Agfa Medical Films.

Agfa-Gevaert has been awarded the Approval of Conformity Certificate by Lloyd's Register Quality Assurance. It certifies that the Quality Management System for our X-Ray films conforms to the requirements of Annex V of the EEC Directive 93/42 and Medical Devices Regulation 1994/3017.

Agfa HealthCare has been approved by Lloyd's Register Quality Assurance Limited to the following Quality Management System Standards: ISO 9001:1994; EN ISO 9001:1994, and ANSI/ASQC Q9001-1994.

The Quality Management System is applicable to: Selling, Servicing, Distribution, and Design of Marketing of Agfa's Product Assortment of Equipment and Sensitive Materials Used in Medical Diagnostic Imaging, Non-destructive Testing, Microfilm and Motion Picture Applications.



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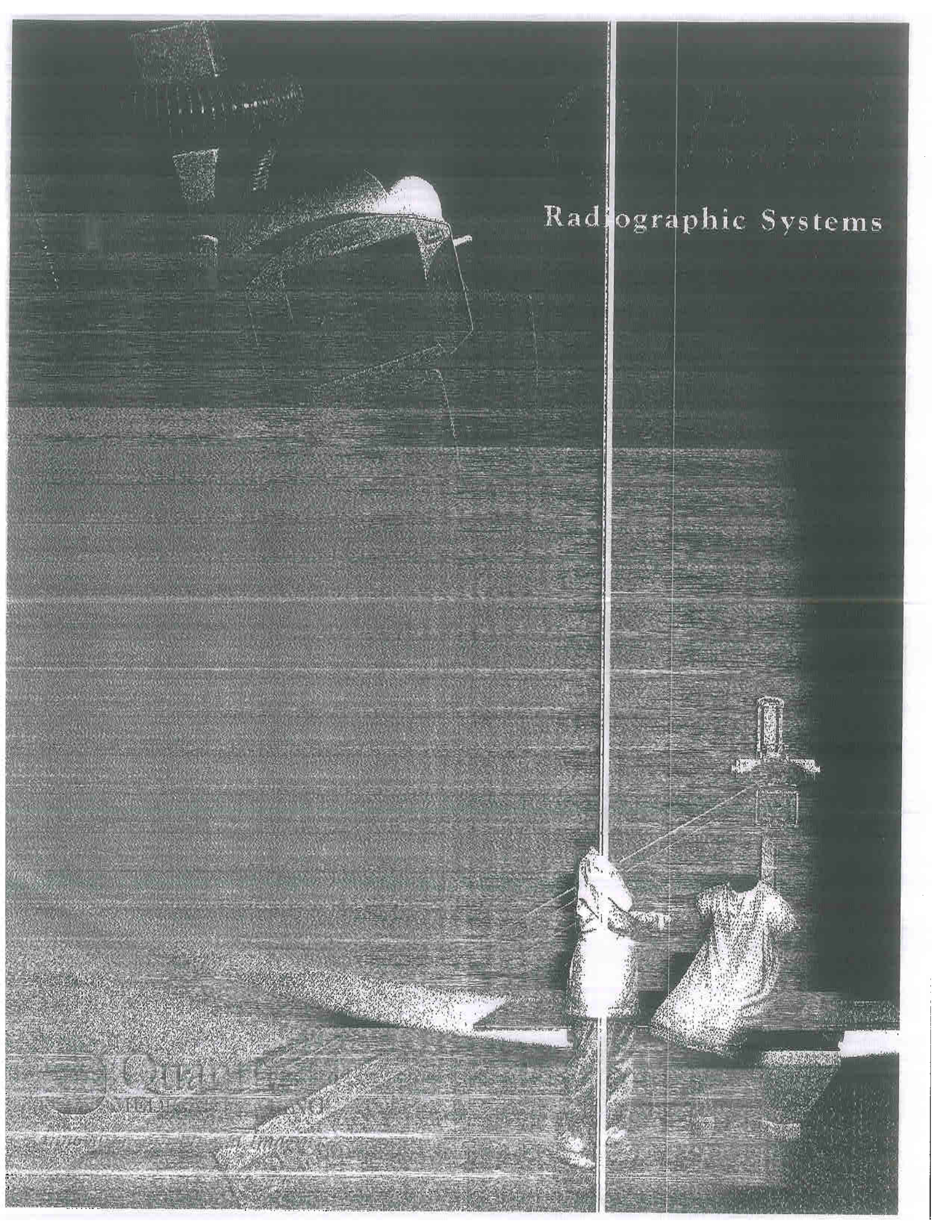
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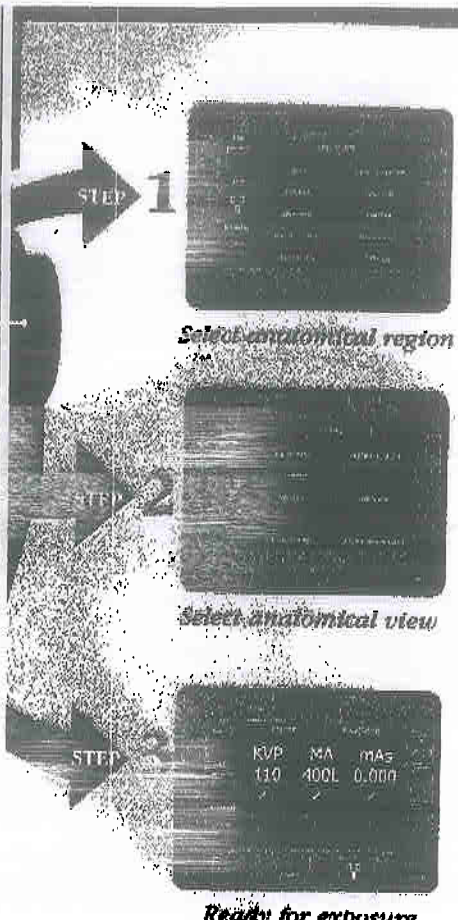
I see more | do more |

Radiographic Systems



Quintessence
1975

Tech
Vision



TECHVISION™: A QUANTUM EXCLUSIVE

Quantum's TechVision is truly an innovation for the Technologist. Technologists can easily view and set up all technique parameters, as well as access set-up functions right at tube-side.

TechVision eliminates going back-and-forth from the generator's Operator Control Panel to the patient, in order to prepare for patient exams. The operator has complete control to adjust exposure parameters right at the tube-side, just as if they were at the generator's Operator Control Panel. This synchronized generator solution greatly streamlines the imaging process and decreases overall examination time, while allowing the technologist to remain close to the patient, for increased patient care.

TechVision Features:

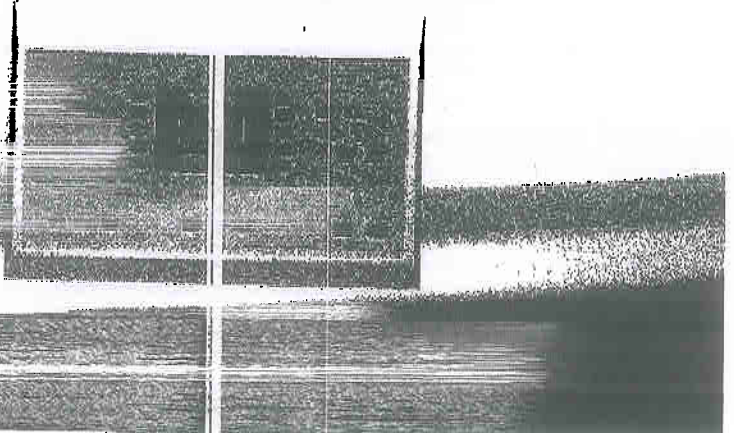
- Multi-Color (16 bit, 800 x 600 Panel, 9.4" display) Touch screen
- Technologist controls generator/technique selection at tube-side
- Full APR, AEC and Manual technique control
- Improved patient care, as technologist remains close to the patient during exam set-up procedure
- Improved patient throughput, by reducing steps taken by the technologist
- Digital Imaging Ready - Provides visual digital image "PREVIEW" and "Study Review" (with select DR solutions)

**ODYSSEY HF SERIES™
ULTRA HIGH FREQUENCY
X-RAY TECHNOLOGY... 120 kHz**

The ODYSSEY HF Series integrates revolutionary design with superb functionality, resulting in the most advanced radiographic generator ever developed.

Designed for both digital and conventional imaging and operating at a near-constant potential of up to 120 kHz, the ODYSSEY HF provides Ultra High frequency imaging for highly efficient X-ray production. Radiographic imaging is optimized through the ODYSSEY HF's simple interface, which features an easy to read LCD graphics display and also dynamic APR programmability of up to 100 APR View / 5000 Techniques, for a wide variety of standard and custom exams.

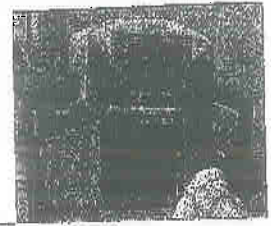
The ODYSSEY HF's unique self-diagnostics, automatic shut-off, user messaging and history reporting log features make it one of the most reliable generators on the market.



QUANTUM MEDICAL IMAGING'S "Q-Rad" Radiographic Systems provide Exceptional Value, Precision and Reliable solutions for all Imaging Applications...

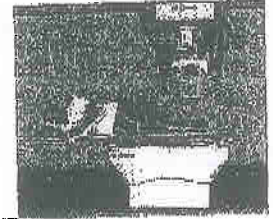
Quantum Design and Innovation

Q-Rad systems provide precision and reliability through "Smart-System Design" technology. Innovations such as TechVision™, 650 Lb patient weight capacity, FAIL-SAFE electromagnetic braking systems, collision avoidance electronics and EZ-Glide handle control are just some of the unique and valuable advantages of Quantum Q-Rad Radiographic systems.



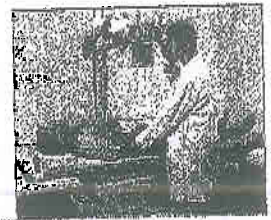
Q-Rad Ceiling-Mounted Systems

Quantum's Ceiling Mounted Radiographic Systems are designed for Hospital Emergency Rooms, Imaging Centers and Orthopedic Facilities which demand not only high quality, but also maximum flexibility, in order to accommodate all types of imaging exams. Q-Rad systems are not only aesthetically pleasing, but designed with input directly from Technologists.



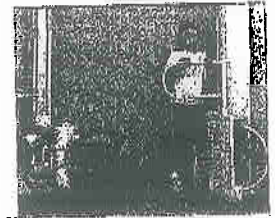
Q-Rad Floor-Mounted Systems

Designed for high patient volumes within Hospital Radiology departments, Imaging Centers, Orthopedic facilities, Surgery Centers, and Urgent Care Clinics. Quantum's Q-Rad floor mounted systems are feature-rich and provide full positioning functionality, while providing the highest degree of image quality and patient care.



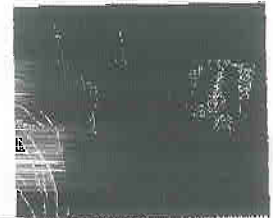
System Flexibility

Quantum's wide selection of system configuration and extensive options, as well as its line of powerful 120 kHz ULTRA High Frequency X-ray generators, accommodate every type of radiographic system requirement and exam. The systems are also flexible enough to meet various room size requirements, as well as different facility budgets.



Digital Imaging

All Quantum Q-Rad systems and components are already designed to allow use of direct digital imaging technology (DR), as well as all CR solutions. Upgradeability is fast, easy and affordable with any Quantum Q-Rad system by the use of our "D-QIX" digital solution program. Quantum also offers an extensive line of "Q-Rad-DIGITAL" system solutions. Q-Rad systems are a secure investment today and in the future.



CEILING MOUNTED TUBE SUPPORT (RS-580)

Centralized handgrips with dual soft-grips provide smooth, responsive system adjustments. Positioning of the X-ray tube is directed through a series of color-coded fingertip switches on the operator hand control, which coincide with the colors on the various rails, for vertical, horizontal and transverse movements. A convenient "All-Release" lock is built into each of the soft-grip controls.

Lighted display windows indicate system navigation for SID, tube angle and lock functions, to assist the operator with easy and precise positioning.

"QUIET-LIFT" ELEVATING, FLOAT-TOP TABLE (QT-750)

Quantum's "QUIET-LIFT" elevating, float-top table eases patient transfer and positioning. With a 650-pound (295 kg) patient capacity and a rugged lifting mechanism, the table elevates smoothly and quietly. The extra-wide (35"), and completely flat-top table surface simplifies patient transfer and positioning, while providing comfort for larger patients.

Float-top motion and elevating capability is controlled through both recessed foot controls, as well as an adjustable-position standard hand control. Patient handgrips are included, and can be positioned along the accessory rails to help stabilize the patient during exam positioning.

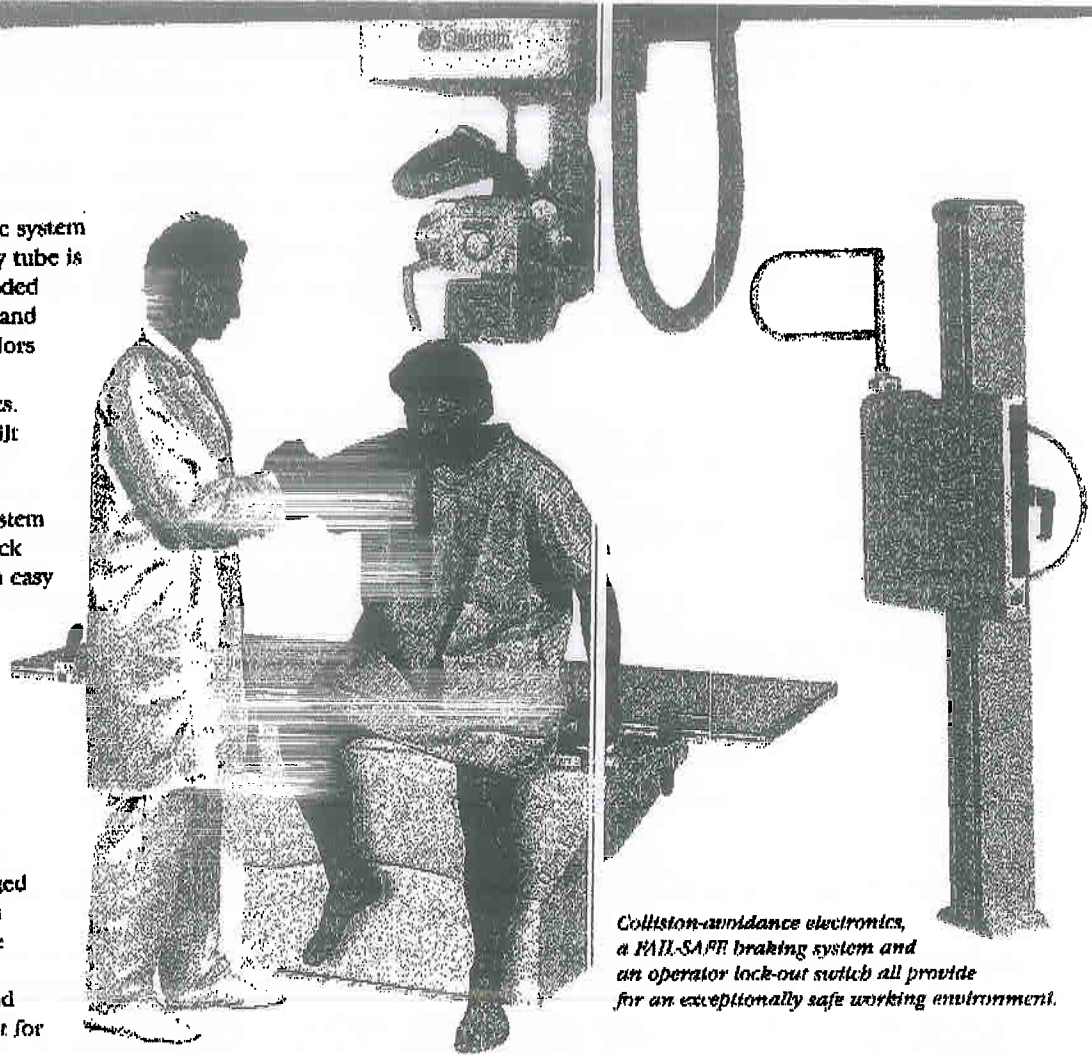
MOTORIZED SERVO-DRIVE (RS-580-MAC) with "Q-TRACK" Technology

Quantum Ceiling Systems equipped with SERVO-DRIVE and "Q-TRACK" technology provide automatic motorized alignment to the Vertical Wall Stand (Chest unit), as well as adjusting to the variable height of the Elevating table.

Q-TRACK, assists the technologist with automation for:

- faster patient positioning
- increased patient throughput
- better imaging accuracy, since the X-ray beam maintains constant alignment with the center of the image receptor

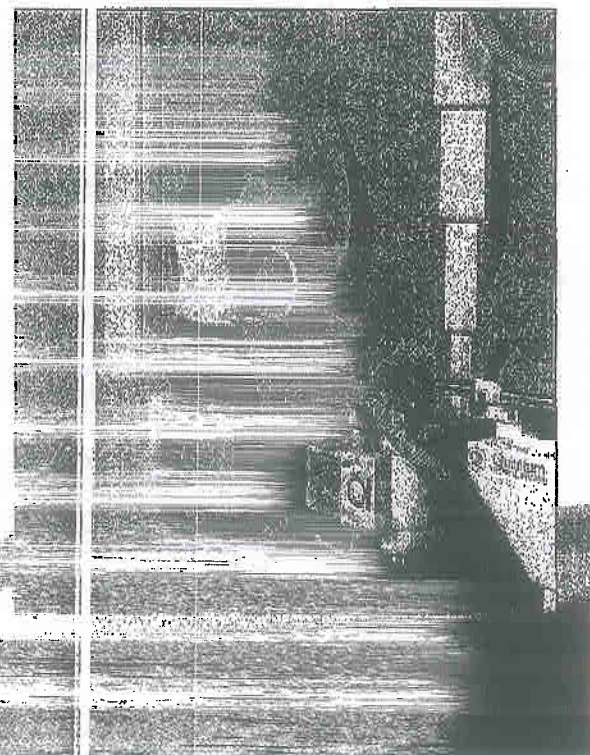
This saves staff considerable time and effort, and places their focus completely on the patient and the exam procedure.



Collision-avoidance electronics, a FAIL-SAFE braking system and an operator lock-out switch all provide for an exceptionally safe working environment.

VERTI-Q VERTICAL WALL STAND (QW-420)

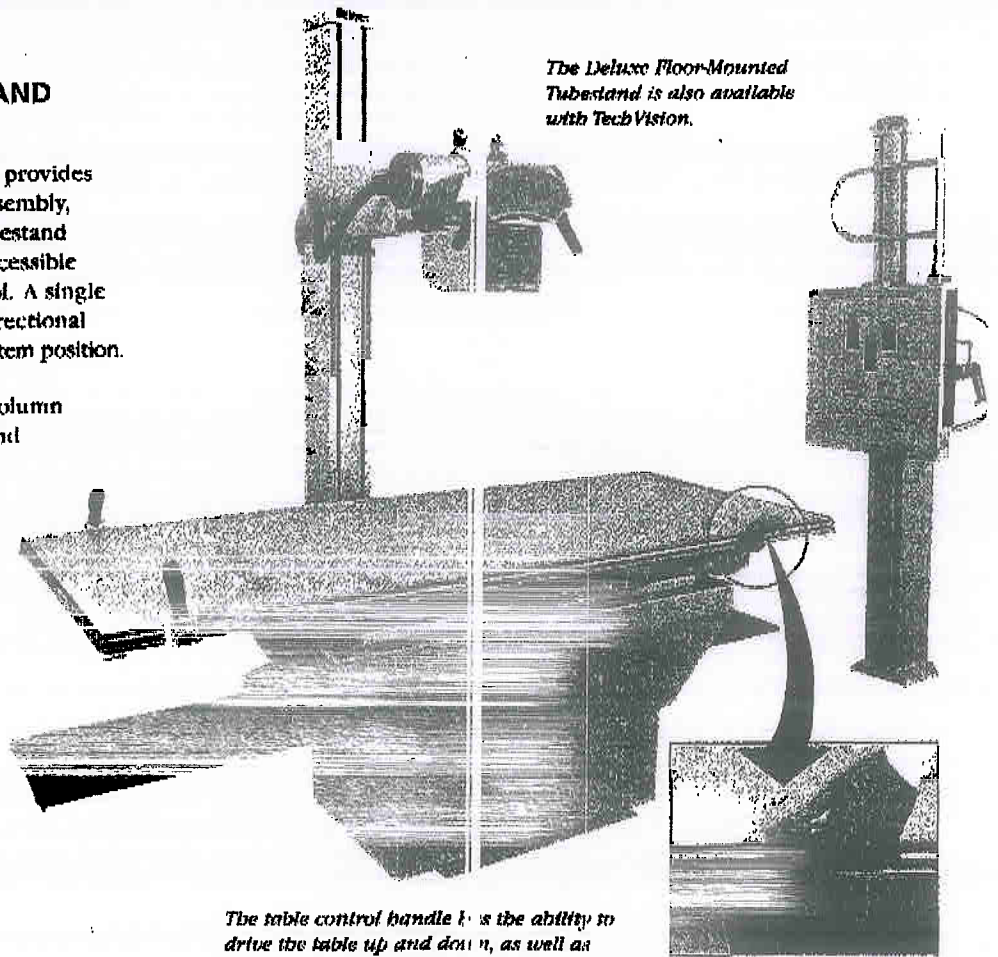
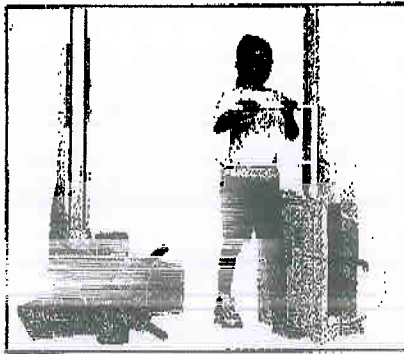
Quantum's Vertical Wall Stand, VERTI-Q, allows a variety of imaging, from skull through lower extremities, with its counterbalanced travel and minimum focal spot-to-floor distance.



DELUXE FLOOR MOUNTED TUBESTAND (QS-550)

The versatility of the QS-550 Deluxe tubestand provides extended freedom of movement of the tube assembly, allowing for a wide array of examinations. Tubestand positioning is controlled through a series of accessible fingertip switches on the operator hand control. A single switch releases all tubestand locks for multi-directional adjustments. An easy-to-read indicator displays system position.

Expansive longitudinal and transverse travel, column rotation (+/- 90°), tube angulation (+/- 135°), and trunnion rotation (+45°/-20°), assure complete radiographic coverage. Even the most challenging views, such as weight-bearing, cross-table and off-table studies are simplified through the system's generous range of motion and flexibility.



The Deluxe Floor-Mounted Tubestand is also available with TechVision.

The table control handle has the ability to drive the table up and down, as well as enabling the floating-top feature.

"QUIET-LIFT" ELEVATING, FLOAT-TOP TABLE (QT-750)

Quantum's revolutionary design of the "QUIET-LIFT" Elevating, Float-Top Table, provides a number of innovative features. With a patient weight capacity of 650 Lbs and an extra-wide design, the table is able to support the full range of patient types comfortably. Additionally, its FAIL-SAFE electromagnetic braking system and collision-avoidance electronics ensures patient and operator safety. The table lowers easily to accommodate a variety of stretcher and wheelchair patients. Quantum's QT-740 Series table has all the same key features with the exception of table elevation.

MOTORIZED SERVO-DRIVE FLOOR MOUNT (QS-550 MAC), with "Q-TRACK" Technology

Q-Rad Floor Systems are available with SERVO-DRIVE and "Q-TRACK" technology, which provides perfect motorized synchronization between the X-ray central beam and the center of the image receptor, keeping them in alignment. This saves the technologist the time and effort of not having to constantly align the tubestand to the Wall Bucky, while it also ensures greater precision. "Q-TRACK" also automatically maintains the

VERTI-Q VERTICAL WALL STAND (QW-420)

Standing examinations are easily accomplished with Quantum's VERTI-Q Vertical Wall Stand, due to the extensive range of vertical travel.

