DIGITAL RADIOGRAPHIC SYSTEM

RADspeed DR WIRELESS

Evolving the Digital Work Flow
High Productivity and Reliability: Hallmarks of Shimadzu X-Ray Systems!

With over a century of experience in manufacturing X-ray apparatus, Shimadzu’s expertise in X-ray systems is well recognized. For years, Shimadzu’s X-ray products have been associated with legendary reliability, cost-effectiveness and quality in the medical industry. Shimadzu’s digital radiographic systems are imbued with the Shimadzu heritage. Additionally, our digital radiographic system features state-of-the-art technology that enhances productivity, user-operability, patient comfort and safety.
CXDI-70C wireless

Innovative wireless Flat Panel Detector for increased versatility in your DR room

Canon’s first wireless, cassette-size digital radiography system gives you more freedom; whatever your DR application, the CXDI-70C gives you more flexibility when it comes to treating patients.

The new CXDI-70C Wireless system is as easy to use as a film or CR cassette. However, by removing the need for a sensor cable, it offers all the advantages of high-end digital radiography without the restrictions of traditional systems. The delivery of X-ray images is faster and more precise, enhancing overall efficiency and reducing exposure errors. Outstanding image quality provides greater diagnostic precision and efficient medical examinations. The detector has the same dimensions as a traditional film cassette and fits directly into existing Bucky tables, allowing digital upgrade without having to modify existing analogue imaging equipment. Easy to use and lightweight, the CXDI-70C Wireless gives you increased flexibility and more freedom to provide an enhanced level of care to more patients. Canon’s data management system combined with wireless technology is another step to help improve your workflow.

- Better workflow: Using a DR system saves more than 60 percent of your time because registering the patient and cassette handling are no longer a part of the workflow.
- Flexible solutions: Whatever the procedure – you can perform your examination and read the image in a few moments wherever you are.
- Upgrade to any system: Canon DR systems can be retrofitted to any X-ray system to upgrade your conventional unit to the latest DR technology level. Existing one-detector systems can be upgraded to multi-detector systems to improve workflow.

125 microns
2800 x 3408 Pixels (9.5 Megapixels)
CsI
3.4 kg (7.5 lb.)
Preview image: 3 seconds
Superior Image Quality

The CXDI-70C Wireless incorporates a new Canon-developed glass substrate with a pixel pitch of 125 microns that delivers high quality clinical images with higher resolution. Its CsI scintillator provides an increased level of sensitivity lowering the radiography dose possible in spite of the higher resolution compared to current 160 micron models.

Results In Seconds

A preview image is produced immediately after X-ray exposure, allowing for quick image confirmation, timely network distribution, and speedy diagnoses. If another image is required, the sensor is ready for the next X-ray exposure in moments thanks to its rapid refresh cycle.

Wireless Standard / Network Capabilities

Considered much faster than conventional standards (i.e. 11a, 11b) the CXDI-70C Wireless is equipped with IEEE 802.11n. DICOM 3.0 compatibility enables seamless data transfer to any DICOM devices, PACS, or RIS for efficient data management, printing, archiving, and remote viewing of images. Such workflow efficiency means less wait time for patients, as well as higher patient throughput and places less of a burden on staff.

High-Sensitivity DR Technology

The CXDI-70C Wireless advanced LANMIT detector technology acquires high-resolution, high-contrast diagnostic images with minimal X-ray exposure to patients, making it the ideal device for paediatric and orthopedic applications. The Amorphous Silicon Flat Panel Detector has a scintillator comprised of Cesium Iodide (CsI) crystals that optimize light-channelling properties for effective X-ray absorption and high signal to noise performance.
The Perfect Team in Digital Radiography

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A variety of portfolio, no compromise

Flexibility across the whole Radiology Dept.
**Sophisticated Synchronization Functions Make**

**Advanced X-Ray Tube Support Allows Efficient System Operation**

**Revolutionary Auto-Positioning**

**Allows the Operator to Focus On Patient Care**

The auto-positioning feature is interlocked with the APRs. This function moves the ceiling-mounted X-ray tube support to any desired position at the press of a single button and can automatically set the X-ray tube angle. Effortless tube positioning allows the operator to focus on patient care. Naturally, manual operation is also possible to make fine positioning corrections extremely simple.

Pressing a single button on the remote control smoothly moves the ceiling mounted X-ray tube support to pre-registered positions. Movement stops immediately after the remote control button is released. Up to two remote control units can be used.

**Bucky Unit Automatically Follows Irradiation**

Easily synchronize the longitudinal travel of the table’s Bucky unit with the X-ray tube support position. In addition, for oblique radiography, the X-ray field can be controlled according to the APR. Synchronization between the X-ray field and Bucky unit provides fast positioning even for complex orthopedic positioning.

**APRs Synchronized with the X-Ray High Voltage Generator**

Radiography parameters and techniques can be changed beside the patient as well as on the wall-mounted console in the control room. The operator can prepare for radiography without leaving the patient. This sophisticated synchronization of the X-ray tube support and X-ray high voltage generator effectively exploits the convenience of dual consoles.

**Ceiling-Mounted X-Ray Tube Support for Versatile Positioning**

X-ray tube support vertical range of 1,600 mm ensures sufficient SID when examining supine patients and low focal point radiography of standing patients. This support also rotates on the vertical and horizontal axis in addition to fixed positioning at any desired angle, enabling fast positioning at complex angles for orthopedic applications.

**Manual Operation**

**Auto Synchronization**
Synchronized Vertical Movements of the X-Ray Tube Unit and Bucky Table

The focal point of the X-ray tube unit moves up and down in conjunction with the vertical positioning of the X-ray Bucky stand and X-ray Bucky table. This allows the operator to attend the patient in a standing position while positioning the equipment. For a table study, the X-ray tube automatically moves to a preset SID, enabling accurate and fast positioning.

Auto Stitching Radiography

Images are taken while swinging the X-ray tube and moving the FPD. These images are automatically stitched together to obtain wide-range images along the body axis instantly.

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Manual Operation

Auto Synchronization

Automatic synchronization even at oblique positions.

Screens Are Synchronized Through Communication

Pressing a single button on the remote control smoothly moves the ceiling mounted X-ray tube support to pre-registered positions. Movement stops immediately after the remote control button is released. Up to two remote control units can be used.

Sophisticated Synchronization Functions Make System Operation Even Easier

System Operation Even Easier
Next-Generation Collimator Reduces X-Ray Dose to the Patients

Automatic Beam Hardening Filter
When the APR is selected for the region being imaged, the collimator filter also switches. Using the filter preset for each APR, such as the extremities or abdomen, minimizes unnecessary exposure to obtain high-quality radiographic images at the optimal X-ray dose.

Area Dosimeter
This dosimeter measures dose information and transfers it to the X-ray high-voltage generator. The dose information can be displayed on the DR operators console, sent to PACS in the DICOM header and included on printed images.

Confirm X-Ray Beam Projection Field Immediately Before Exposure
When controlling radiography operations from the control room, the irradiation field lamp automatically turns on before exposure to allow confirmation of the region to be imaged.

Auto field size selection
The exposure field size of the collimator is automatically selected in response to the image size set on DR system.

Click-Stop Collimator Rotation
When rotating the collimator relative to the X-ray tube, the collimator can be click-stopped in 3 positions, 0 degrees and ±45 degrees, allowing quick adjustment of collimation. (The collimator can also be quickly returned to the original (0˚) position.)

Cushioning Gently Protects Patients
If a patient suddenly sits up after an examination, they could potentially hit their head on the instrument. Therefore, the bottom of the X-ray tube support and collimator edge is covered with rubber cushioning material to carefully protect patient.

Illumination switch

Patient Care Concept

Color-Coded Status Indicator
The console panel indicates the status of the X-ray generator using color perimeter display with audible sound. The hand switch also lights up to indicate ‘Ready Status’. This advanced feature allows the operator to concentrate on patient care:

- Infant and frail elderly patients who need constant attention
- Split-second timing is required for patients who have difficulty holding their breath.
- Quick positioning and image capture when required

Illumination Color and Alarm Sound
When Preparation for Exposure Is Complete
The LCD screen and illumination color can change according to the Bucky table or X-ray tube settings selected. Different alarm sounds can also be specified for various events, such as when preparation for exposure is complete.

Using Bucky stand

Using Bucky table

Advanced APR Allows 800 Different Radiography Parameter Configurations
Seven Exposure Directions
Advanced APR (Anatomical Program)
Up to 800 Anatomical Programs can be registered on the system. Registering the conditions as programs associated with examination area and technique allows conditions to be set up smoothly.

Each technique selection has 10 anatomical regions that can be selected. Each anatomical region has 20 user-definable associated techniques. Furthermore, up to 7 different directions can be stored in each technique key; each time one direction is taken, the exposure conditions can be automatically changed according to the next direction. This feature is particularly effective for inspections of areas requiring exposure from several different directions, such as for orthopedic surgery.

Displays Exposure Back-Log of 512 Cases
Up to 512 cases can be archived and displayed as the exposure back-log. The radiography parameters used to obtain the results can be reset.

Color LCD Touch Panel Allows Intuitive Operation

Easy-to-Operate, Fully Featured, Intelligent X-Ray High Voltage Generator
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Advanced APR Allows 800 Different Radiography Parameter Configurations

<table>
<thead>
<tr>
<th>Examination Regions</th>
<th>Radiography Techniques</th>
</tr>
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<tbody>
<tr>
<td>Maximum 10 regions</td>
<td>Maximum 20 techniques</td>
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Seven Exposure Directions
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Illumination switch
Configuration

X-Ray Tube Support

CH-200
- Color LCD touch screen rotates automatically with tube rotation
- Individual programmable switches for locks
- Quick positioning with new-style operation handle
- Easy to clean surface
- All free button for full-way motion release
- One-hand operation for vertical tube movement
- Lock release buttons on rear of tube suspension
- Spring balanced for easy movement
- Reliable locking system allows any angulations to be held in position

X-Ray High-Voltage Generator

UD150B-40/V-40/L-40
- Newly designed large capacity and high frequency inverter
- Large readout LED
- Touch screen display
- Communication with CH-200 display
- Quick setup with jog dials and Up/Down buttons
- Micro processor controlled
- Automatic exposure control
- Self diagnostic function with display of error codes
- 80, 65 and 50 kW output selection

Bucky Table

BK-200
- Elevating horizontal radiographic table
- Maximum lifting weight is 295 kg (650 lbs)
- 4-way floating top and electromagnetic locks
- Size sensing cassette tray
- Table top collision protection sensor
- Convenient and safe foot controls by kick switch
- Selectable extensive options
- Flat CFRP-tabletop (option)

Bucky Stand

BR-120/BR-120T
- Vertical travel to accommodate all patient ranges and studies
- Size sensing cassette tray
- Remote collimation control (option)
- Compact design Bucky unit for easily examined sitting patients
- Selectable extensive options
- Equipped with a tilting Bucky unit (BR-120T)
Canon CXDI Series

**CXDI-70C**

**Wireless system**
- Large imaging area of 35cm x 43cm
- High resolution with 125 micron pixel pitch
- High sensitivity with CsI Scintillator
- Lightweight around 3.4kg
- Approximately max. 800 images (15s Cycle @1s sleep) with a fully charged battery
- Detachable handgrip and grid
- Battery powered
- Wiring unit (optional)

**CXDI-60C**

**Detachable Panels**
- Lightweight and ultra compact
- Ideal size for tabletop exams
- Delivers unmatched digital image quality
- True portability and flexibility

**CXDI-401 series**

**Fixed Panels**
- High resolution with 125 micron pixel pitch
- Easy upgrades to existing radiography equipment
- Meeting the RoHs Directive

<table>
<thead>
<tr>
<th>Specifications</th>
<th>CXDI-70C Wireless</th>
<th>CXDI-401C</th>
<th>CXDI-401 COMPACT</th>
<th>CXDI-60C</th>
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</thead>
<tbody>
<tr>
<td>Purpose</td>
<td>General Radiography</td>
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</tr>
<tr>
<td>Method</td>
<td>Cassette size detector: scintillator &amp; amorphous silicon (a-Si)</td>
<td>Flat panel detector: scintillator &amp; amorphous silicon (a-Si)</td>
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<tr>
<td>Sensor</td>
<td>LANMIT (Large Area New-MOS sensor and TFT)</td>
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<td>Scintillator</td>
<td>CsI (CsI Tl)</td>
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</tr>
<tr>
<td>Pixel pitch</td>
<td>125 x 125 microns</td>
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<td>160 x 160 microns</td>
</tr>
<tr>
<td>Pixels</td>
<td>2,800 x 3,408 (9.5 M Pixels)</td>
<td>3,320 x 3,408 (11.3 Megapixels)</td>
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<td>1,464 x 1,776 pixels (2.6 million pixels)</td>
</tr>
<tr>
<td>Images Size</td>
<td>Automatic sizing up to 14 x 17 in. (35 x 43 cm)</td>
<td>17 x 17 in. (43 x 43 cm)</td>
<td>17 x 17 in. (43 x 43 cm)</td>
<td>Automatic sizing up to 9 x 11 in. (23 x 28 cm)</td>
</tr>
<tr>
<td>A/D</td>
<td>14-bit</td>
<td>14-bit</td>
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<tr>
<td>Grayscale</td>
<td>4,096 grayscale (12-bit)</td>
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<td>Access time</td>
<td>Approx. 3 seconds after X-ray exposure</td>
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<td>DICOM</td>
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<tr>
<td>Dimensions</td>
<td>15w x 18h x 0.61 in. (384 x 460 x 15mm)</td>
<td>21.65 x 21.65 x 2.32 in. (550 x 550 x 59 mm)</td>
<td>18.11 x 18.11 x 0.59 in. (460 x 460 x 15 mm)</td>
<td>13.5w x 13.5h x 0.9 in. (344 x 380 x 22.5mm)</td>
</tr>
<tr>
<td>Weight</td>
<td>7.5 lbs (3.4kg) w/battery</td>
<td>28 pounds (12.8 kg)</td>
<td>15.43 pounds (7 kg) without cable</td>
<td>Sensor unit: 5.5lbs (2.5kg)</td>
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</table>
Founded in 1875, Shimadzu Corporation, a leader in the development of advanced technologies, has a distinguished history of innovation built on the foundation of contributing to society through science and technology. We maintain a global network of sales, service, technical support and applications centers on six continents, and have established long-term relationships with a host of highly trained distributors located in over 100 countries. For information about Shimadzu, and to contact your local office, please visit our Web site at www.shimadzu.com.

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※ The appearances and specifications are subject to change for reasons of improvement without notice.
※ Certain configurations may not be available pending regulatory clearance. Contact your Shimadzu representative for information on specific configurations.
※ Before operating this system, you should first thoroughly review the Instruction Manual.