VIDIX·Ⅱ

Direct Digital Radiography System

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VIDIX·II

Direct Digital Radiography System

JW Medical

These days, hospitals are rapidly digitalizing and you can easily find a digital diagnostic system in most modernized hospitals. The radiology department, especially, is leading the digitalization and evolving in a rapid speed which you cannot see in other suite. The biggest change is the adoption of PACS(Picture Archive Communication System), and for this it is hard to find a film processor, in modernized hospitals. This brought a big change in the radiology department by accelerating the use of the CR(Computer Radiography). If the film scanning is the 1st generation, you can say that the digital scanning is the 2nd generation, which was opened by the CR.

However, the digitalization of the radiography department does not stop here. An epochal digital system called the FPD (Flat Panel Detector) opened the gates of the 3rd generation where you do not need a middle method such as a film processor or CR reader to achieve images, but can scan and achieve images at the same time. Wherewith, Choongwae Medical Corporation steps into the 4th generation leading the digital medical environment of the 21st century in Korea with a unique technology using the direct detector. Choongwae Medical Corporation promise you that we will keep on contributing to develop the digitalization of hospitals as a leader of global digital healthcare, for accurate application and better care provision.

Introduction of **FPD**

FPD(Flat Panel Detector) is a core technology of radiology department equipments. It has developed the CR and made it possible to obtain precisive and high quality images. Not many companies in the world can provide such technology, and in Korea most companies which introduces DR imports the detector which is the key technology of the system. Choongwae Medical introducing the latest DR system with its own technology was a surprise in Korea, and now, as a representative of the DR in Korean market, Choongwae Medical is introducing its high technology to the world.

The detector "Flaatz", which is developed by Choongwae Medical is a direct conversion type detector. The detector can be divided into two types; in-direct conversion type and direct conversion type. By using the direct conversion type, there is no light generated when the radiology signal is converted into an electronic signal. This will decrease the diffusion and you will be able to keep most of the data and get a high quality diagnostic image which will provide you clean and clear information of the patient.

Another big difference with "Flaatz" and other 17x17 detectors is that the noted size is the original size itself. If you consider other 17x17 sized detectors, which are made up with 4 panels, you will be able to avoid bad influence on the image after long term of usage, due to the unstable decrement of the semiconductor.
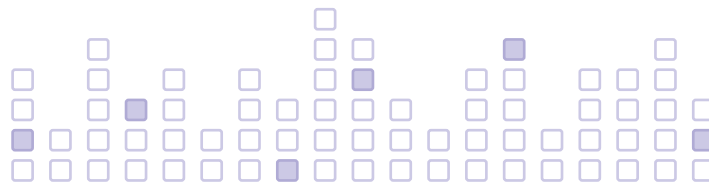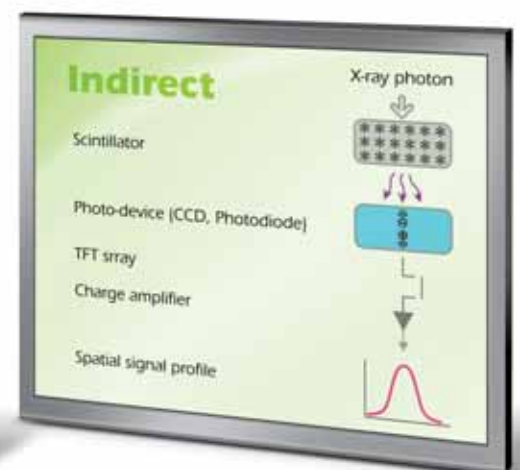
Direct vs Indirect
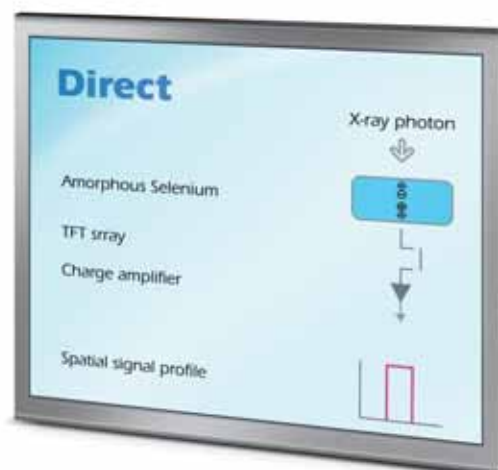
Thanks to no light blurring, very high MTF value can be acquired. Furthermore, high efficiency in detection can be acquired through a direct conversion.

Light is generated by the 1st step interaction at a scintillator, resulting in dispersion of light. Therefore, it causes the decrease of the image resolution.

The Indirect Conversion Detector cannot be produced in normal TFT production facilities. Furthermore, a process of producing photodiodes is required to be added. Therefore, an independent production line should be constructed.

Direct
Digital
Radiography
System

Table Auto-tracking Function

Synchronized

Introduction of **Dual** system

Model: CXD-DR80D The Dual Digital X-Ray System of Choongwae Medical is designed for the ideal operation. The 6-directed table and bucky stand ceiling will allow you to scan whichever part you hope to see, and the table and bucky stand ceiling has a synchronization function increasing the ease of use. With the auto-tracking function, the detector which is attached on the table moves, when the ceiling moves right and left, and let the radiologists take care of the patient, and not the equipment. Even if you do not have the Whole Spine CR, you can also scan the whole spine for even scoliosis directly and rapidly with the DR by using the bucky stand.

Table Auto-tracking Function

The detector under the table moves with the tube and automatically matches the center of the scan when the tube moves up and down towards the table. This allows you to match the center of the scan automatically when the patient is lying on the table. Also, when you scan the angle, the detector automatically calculates the distance of the angle and it matches the center of the scanning range by the direction of the tube.

Synchronized

You can automatically set and maintain the SID to 100cm by setting the table up and down. By this, you don't have to set the height of the table to match the SID according to the size or condition of the patient.

Whole Spine Scan

To scan the whole spine with the CR and the DR of other companies, you need to use the multi CR-cassette. However with our DR system, you can easily and swiftly scan the whole spine automatically by 2~3 divided scan and merging the images.

Whole Spine Scan | Wide Movement Range of Table | Wide Movement Range of Table

Wide Movement Range of Table

The table is very wide and the movement range is flexible so you can easily move the patient from the bed to the table. When you set the table very low, you can easily scan the upper side and lower side of the body. The foot-paddle which controls the table is attached on the front and the back so you can take care of the patient on either side.

Auto Collimation

For radiology scan, the exposure volume is very important. Where ever the DDR is located, the designated dose is automatically controlled and the X-ray is shot only in the designated sector, allowing you to have a better image and decrease the exposure dose.

Ceiling LCD Function

Different from other companies, Choongwae Medical does not use the LED but the LCD. You can see the display and also operate the system with the touch screen. You can not only bring the work list and set the condition of scanning while seeing which patient is on the list, but you can also reduce patient waiting time by viewing the scanned image right after the scan through the pre-view function. In addition, you can easily set the position of the center by displaying the center line on the table mode and stand mode and view the scanning sector.

Introduction of *Single* system

Model: CXD-DR80D The key function of the single system is that the detector of the bucky stand can tilt from 90 degrees to -20 degrees. With the help of this function, you can scan not only on the bucky stand but also on the table with only the basic configuration. Even if you need to scan the lung or adnominal, you do not have to equip a high-priced dual system but simply use the single system of Choongwae Medical. This will bring cost efficiency and you can also utilize the space you have right now.
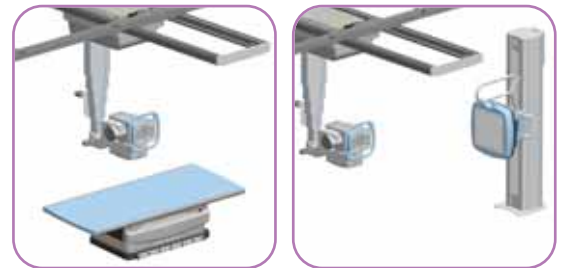
Bucky Stand Tilting

The bucky stand can be tilted, by setting 90 degrees on the upper side and -20 degrees on the lower side. The one-touch-button allows you to easily get in control.

Bucky Stand Tilting Examination

It is not easy to scan the arm or the feet of patients on a table, when they have pain on the shoulder or on the heel. By using the bucky stand tilting function, the system enables accurate positioning and patient can scan their required part with ease.

Bucky Stand Tilting

Bucky Stand Tilting Examination

Bucky Stand Tilting Examination

Decubitus scanning

Assistance Handle for the Bucky Stand

Decubitus scanning

You can scan the decubitus of the abdominal and the side of the knee by using the bucky stand and mobile table, which lets you free from using the CR cassette.

Assistance Handle for the Bucky Stand

To prevent the movement of the patient while scanning the chest, there is a handle attached on the upper side of the system. By the assistance of this handle, you can decrease the artifact occurred by movements of the patients, especially pediatrics and the olds.

Simple and stable operating **solution**

Functional changes of the existing imaging systems have been increasingly required as the informationalization of the hospitals has been accelerating so rapidly. In the meantime, importance of compatibility and connectivity to all kinds of medical devices and information solution has been getting larger and larger. VIDIX System provides the network compatibility and the functions that meet the work flows of the hospital.

MWL (Modality WORKLIST) You can easily manage the waitlist of the patients with the 'MWL' mode.

MANAGEMENT You can manage the patients and their images by the 'Management' mode. After scanning the patient, you can edit, erase and transfer the image.

CONFIGURATION You can set the configuration of VIDIX II by the 'Configuration' mode. There are various configurations so that you can set the VIDIX II, under the configuration which you can operate the system most efficiently.

MERGE With the 'Merge' mode you can achieve more than 2 images and merge it into one image.

NEW You can add information of patients, who are under emergency or requires manual input, on the list by using the 'New' mode.

EXIT You can finish the program with the 'Exit' mode.

Sample of Merged Image

The 'Merge' mode helps you scan the whole body or a long bone. With the merge stand, you can scan images from 2 to 4 in succession and merge the images afterwards.

User Friendly Interface

It provides the operational environment in which users can operate the system with ease and simplicity by arrangement of the operating order and the functions satisfying the work flow of the users: the user interface with a simple design of the structure reflected, the patient information communication system for rapid examination, etc.

Versatile functions

The partitioned X-ray photography and the photography technique by its field size used for conventional film-type X-ray and CR are applied to this DDR system as they are. It helps users feel familiar with the VIDIX system in operation. And by displaying the information on the patient and examination results, it can prevent an occasion of re-examination caused by a wrong operation in advance. The functions necessary for hospital conditions such as automatic management and search of saved data, editing function of the patient information wrongly obtained by an X-raying, etc. are provided.

Standard Imaging Information and Connectivity

The VIDIX Series integrated at DICOM network can provide all strong features of the up-to-date network. Transmission of the waiting patient information, X-ray photography and the images can be realized, as the VIDIX Series were developed in conformity with DICOM standard. A very quick and rapid examination can be made, as instant searching and judging of the diagnostic results right after X-raying.

Stable and optimized Image Processing Workstation

The operating software of the VIDIX S series is developed to provide various functions and is designed as an optimal system to realize stable operation. Saving the images, it can restore the image information in case of missing or a loss. Therefore, in any case, just an easy handling can make it possible to resume the operation of the system in normal condition quickly.

Layout for Digital X-ray System Room
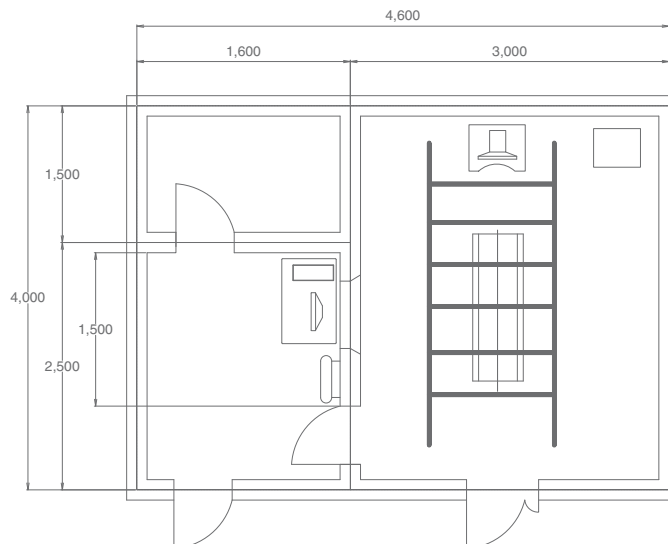
6-way Table
Bucky Stand
X-ray Control electronics box
Ceileing foe tube supporter
X-ray controller
Werkstation table