

# Cordless Portable Digital **x-ray**



## About **DEXCOWIN**

COMPANY NAME\_ DEXCOWIN CO., LTD.

ESTABLISHMENT DATE\_ OCTORBER 15. 2004

MAIN BUSINESS\_ PORTABLE X-RAY THAT USE BATTERY  
(DENTAL SURGERY)

ALL-IN-ONE STYLE DIGITAL X-RAY IMAGE PROCESSING UNIT  
(COMPUTER, X-RAY, DIGITAL SENSOR, BATTERY)

ADDRESS\_ #606, Woolim Lions Valley II 680, Gasan-dong, GeumCheon-Gu, SEOUL, KOREA  
TEL. 82-2-2027-2880 FAX. 82-2-2027-2884

[www.dexcowin.com](http://www.dexcowin.com)

CERTIFICATES\_



AWARDS\_



Designed by gtl.com.co.kr  
02-545-7179 www.gtl.com.co.kr

**DEXCOWIN**  
Creative Innovation and Technology



# CEO MESSAGE

## For the better life & Customer Satisfaction...

DEXCOWIN aims the creative innovation of technology and develops various model's X-ray equipments and digital radiography connection products through ceaseless research and development.

Our company is based on the development of the industry and the medical diagnosis equipments. And our company established for continuous competitions in business area and customer satisfaction.

Especially ADX4000 improves the digital technology a further step for the future by cooperating X-ray, Digital Sensor and PC the first time in the world.

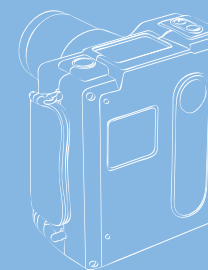
Working with the university research institute to develop the device and to commercialize the research technology of imaging program, our company tries to contribute for the increase of national profit and to be selected as the national core research institute.

# HISTORY

- 2008
  - .02 Nominated as INOBIZ Company
  - .01 Import & Sales Certified in Taiwan · Australia
  - .01 Patent registered [Patent #10-0799314] Portable Dental Digital X-ray Equipment
- 2007
  - .06 SINO dental exhibition in China participation
  - .04 CCC(China) certificate
  - .04 IDS exhibition in Singapore participation
  - .03 Kuangchou exhibition in China participation
  - .02 AEEDC Dubai 2006 Participation
  - .02 Chicago Dental Midwinter meeting Visit
  - .01 Turkey income medical equipment registration completion.
  - .01 Malaysia income medical equipment registration completion.
- 2006
  - .12 Japan FDA certified sales & Import in Japan
  - .10 Milan International EXPODENTAL participation
  - .10 Dubai FDI Annual World Dental Congress participation
  - .06 SINO dental exhibition in China participation
  - .04 Sales & Import certified in China(CCC certificate)
  - .04 IDS exhibition in Singapore participation
  - .03 Kuangchou exhibition in China participation
  - .02 AEEDC Dubai 2006 Participation
  - .02 Chicago Dental Midwinter meeting
  - .01 Sales & Import certified in Turkey · Malaysia
- 2005
  - .12 2005 Digital Innovation Ministry of Commerce a minister Best Award
  - .10 Venture design Award / ADX4000
  - .10 Milano International Expo Italy participation
  - .09 Moscow - exhibition participation
  - .09 Turkey - EDAD Kongresi Istanbul participation
  - .09 Patent Application - Portable digital X-ray device(No. 10-2005-036126-6)
  - .09 ISO13485 Approval
  - .09 CE0086 [ADX4000 / DX3000] Certification
  - .07 Venture business member certification
  - .07 DEXCOWIN CO.,LTD company attachment institute establishment certification No.20052253
  - .07 Korea Industrial Technology Association certification No.20050631
  - .06 Good technology enterprise choice
  - .06 Venture business certification acquisition No.051127032-1-01150
  - .06 Turkey exclusive sale contract(SUN & RAY)
  - .06 China SINO exhibition participation
  - .05 Ukraine dental surgery exhibition participation
  - .05 Foreign countries sale incorporation(DEXCO & SOLUTION CORPORATION)
  - .04 Medical equipment manufacture item permission completion(No.05-308)-Wireless digital X-ray(ADX4000)
  - .04 Medical equipment manufacture item permission completion(No.05-308)-Portable X-ray system(DX3000)
  - .04 Battery drive style portable All in One system(ADX4000) development completion
  - .04 International Dental Show in German participation
  - .04 Battery drive style portable All in One system(ADX4000) development completion
  - .03 Battery drive style portable X-RAY(DX3000) development completion
  - .03 CE /ISO13485, KGMP certification progress
  - .02 Distributorship agreement with Osstem implant for domestic supply
  - .02 Domestic supply conclusion with Osstem that is the domestic maximum Implant company
- 2004
  - .12 Patent and registration of design application(ADX4000)
  - .10 DEXCOWIN CO.,LTD company attachment institute establishment
  - .10 Foundation(DEXCOWIN CO.,LTD)

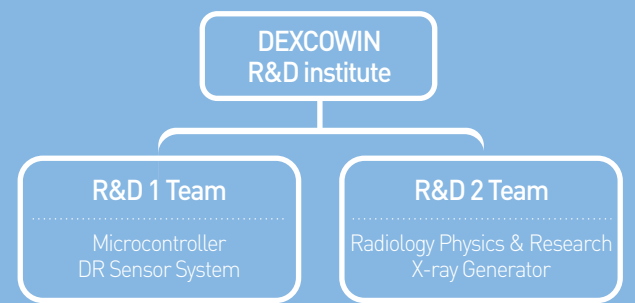
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# INSTITUTE INTRODUCTION

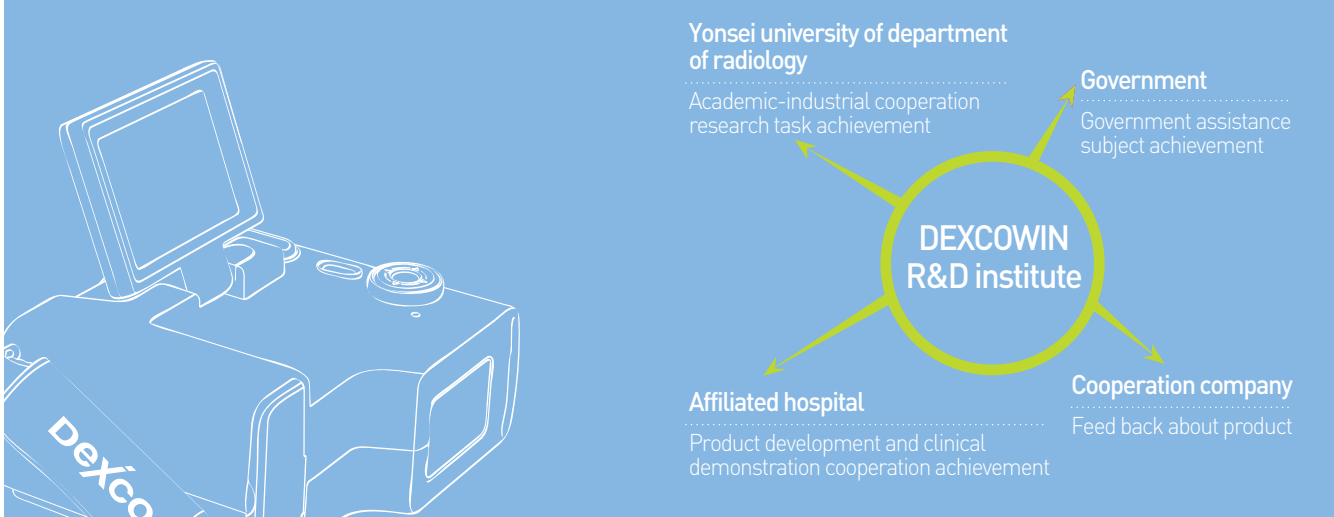


DEXCOWIN research institute developed ADX4000(all-in-one style portable dental x-ray device) for the first in the world. Management of R&D putting first. There is consisted of professional researcher more than worthy scholar and doctor by field such as biomedical engineering, electronics, information engineering. Academic-industrial cooperation establishment with Yonsei university of department of radiology, we are achieving cooperation R&D. And, is doing the best effort to develop product for patient from product plan to development stage through clinical demonstration network with dental surgery hospital.

## INSTITUTE ORGANIZATION



## RESEARCH COOPERATION





Remote Control



Backscattered shield

# ADX4000

## DIGITAL X-RAY

Model	ADX4000
X-ray generator	inverter
Tube voltage	60kV (fixed)
Tube current	1mA (fixed)
Tube type	Stationary
Tube focal spot	0.8mm
Target angle	20°
Exposure time (increase 0.05sec)	0.05~1.35sec
Power requirement	DC 14.2~16.8V
weight	2.2kg
Detector	Film / Digital Sensor
Power supply	Rechargeable battery
Display	3.5" TFT-LCD (radiation image display)
Image processing	Brightness/contrast/invert/zoom/mirror
Connect with sensor	E2V Digital CCD Sensor

## FEATURES OF PRODUCT

- Convenience of cordless
  - Using of charging battery-pack of loading/unloading type
- Incredible reduction of X-ray exposure
  - Up to 1/7 of existing X-ray systems
- More compact than existing portable dental X-ray in size and weight (2Kg)
- Adopting high-frequency circuit of inverter type
- Simultaneous using of digital sensor and film is possible
- More than 300 radiography is possible with one time charging of battery
- Image checking in real-time by built-in TFT LCD
- Acquisition of X-ray images of high quality using built-in diverse image processing technology
- The memory device of big capacity to manage and store the taken images
- Transmission of X-ray images to PC by way of USB cable

## Dental Digital Radiography System

## NAME OF PARTS & FUNCTIONS



- 1 Handle
- 2 Digital Sensor Port & Cover
- 3 Cone
- 4 X-ray Field (50mm round-style)
- 5 Exposure Button & Lamp
- 6 Silicon Grip
- 7 Power Button & Lamp
- 8 Navigation Button



- 1 TFT LCD Screen
- 2 USB Connector Cover
- 3 Remote Control Connector
- 4 Navigation Button
- 5 Label
- 6 Dental Digital Sensor
- 7 Power Button & Lamp

## Digital CCD Sensor (E2V)



Digital Sensor  
Length of : 3m

### Model : AT71JA180MCVEZD

Sensor Active Area (mm <sup>2</sup> )	30 x 20
Sensor Thickness (mm)	6.9
Sensor Active Pixels	800 x 1200
Pixel Size	25µm Square pixels
Maximum Resolution	20 lp/mm
Cable Length	3m

### Model : AT71JA199MCVEZD

Sensor Active Area (mm <sup>2</sup> )	36.5 x 25.9
Sensor Thickness (mm)	6.9
Sensor Active Pixels	1872 x 1330
Pixel Size	19.5µm Square pixels
Maximum Resolution	25.6 lp/mm
Cable Length	3m

## Specification (Battery & Charger)



Battery-pack

Material : Lithium-Polymer

### Charge Condition

Current : 1.0 A  
Voltage : 16.8 VDC  
Temperature : 0°C ~ 40°C

### Use condition

Max. current : 10 A  
Voltage range : 12 (min) ~ 16.8 (MAX) V  
Temperature : -20°C ~ 40°C  
Full charging & discharging : 300 times  
Recharging cycle : 1.5 ~ 2.0 hrs



Charger

Model : JBL910A-1600  
Input Voltage : 100 ~ 250 VAC  
Output Voltage : 16.8 VDC  
Current : 1.0 A

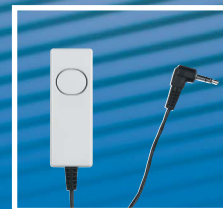
# Portable X-ray System



## DX3000

### PORTABLE X-RAY

Model	DX3000
X-ray generator	inverter
Tube voltage	60kV(fixed)
Tube current	1mA(fixed)
Tube type	Stationary
Tube focal spot	0.8mm
Target angle	20°
Exposure time	0.05~1.25sec - Digital Sensor
(increase 0.05sec)	0.20~1.35sec - Film
Power requirement	DC 14.2~16.8V
weight	1.8kg
Detector	Film / Digital Sensor
Power supply	Rechargeable battery
Display	Graphic LCD



Remote Control



Backscattered shield

### FEATURES OF PRODUCT

- Convenience of cordless
  - Using rechargeable Li-polymer battery-pack
- Great reduction of X-ray exposure
  - Up to 1/7 of existing X-ray systems : 60kV, 1mA
- Adopting high-frequency circuit of inverter type
- X-ray system the most suitable to diverse digital sensors.
  - Simultaneous use of digital sensor and film
- More than 300 exposures are possible with one time charging of battery
- More compact size/weight than existing portable dental X-ray : 1.8Kg

## NAME OF PARTS & FUNCTIONS



- 1 LOW battery indicating lamp
- 2 Skid-proof grip
- 3 EXPOSURE lamp
- 4 EXPOSURE button
- 5 Cone
- 6 Radiation Aperture  
[X-ray field : 50mm round-style]
- 7 Battery pack cover
- 8 Remote Control Connector



- 1 Time (Mode) control button
- 2 LCD Window
- 3 Power button & lamp
- 4 Label
- 5 Focal Spot location Pointer
- 6 Handle

### Specification(Battery & Charger)



Battery-pack

Material : Lithium-Polymer

#### Charge Condition

Current : 1.0A  
Voltage : 16.8 VDC  
Temperature : 0°C ~ 40°C

#### Use condition

Max. current : 10 A  
Voltage range : 12(min) ~ 16.8(MAX)V  
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Full charging & discharging : 300 times  
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Charger

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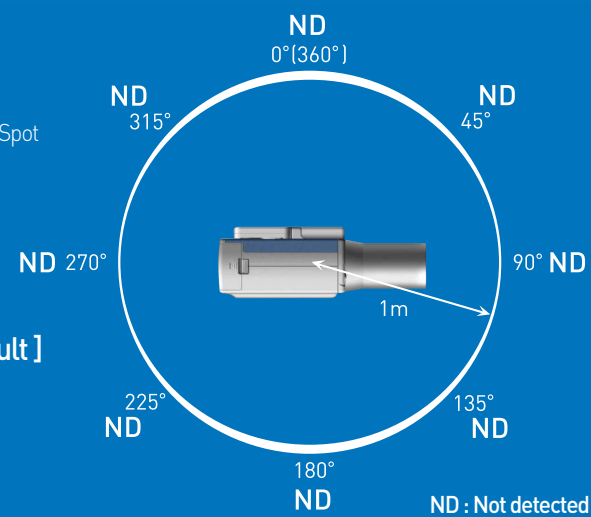


# Creative Innovation and Technology...

## RADIATION SAFETY

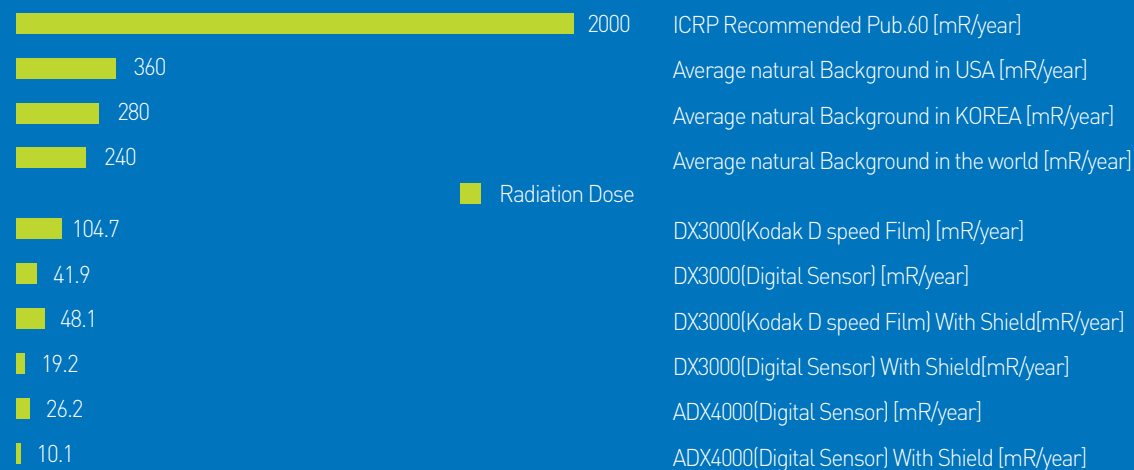
### Leakage Radiation at Product Surface (< 100cm)

- Radiation Below Detectable Limit (0.06 mR/hr) @1m From Focal Spot
- Leakage Far Below FDA Limit (25 mR/hr @1m From Focal Spot)
- Radiation < 2.5 mR/hr @5cm From Accessible Case Surface



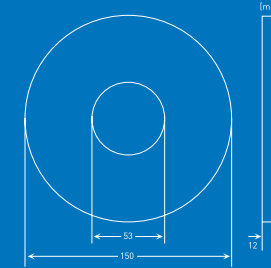
[ Korea Testing Laboratory (KTL) test Result ]

## Effect & Test result when use back - scattered shield



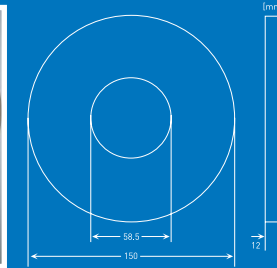
Condition | • Film : 0.5 seconds, 7,800 films/year  
• Sensor : 0.2 seconds, 7,800 images/year

## Back - scattered shield



Model Name : 4040  
Type : Lead Acrylic 12[mm]

External Diameter : 150[mm]  
Inside Diameter : 53[mm]



Model Name : 3030  
Type : Lead Acrylic 12[mm]

External Diameter : 150[mm]  
Inside Diameter : 58.5[mm]

