

ART Plus

CdTe-Sensor Technology



Best Sensor Technology for Great Diagnostic Value

“The AJAT sensor provides the unique opportunity among panoramic systems to adjust the focal layer to the ideal for the individual patient...”

*Dr. Allan G. Farman,
Professor of Radiology and Imaging Science*

Oy AJAT Ltd is a Finnish company which operates at the state-of-the-art facilities in Espoo, Finland. We develop, manufacture and sell advanced X-ray imaging devices for dental and industrial applications.

Our innovations draw on our expert and dedicated human resources. The result is the latest available imaging technology: CdTe-sensor. To our customers, this means the highest quality possible.

Because AJAT is involved from the conception stage to delivery and beyond, we are dedicated to fulfill your needs down to the finest detail. We are known for reliability and quality of our technology and you will be as pleased to use our products as we are to create them.



ART Plus

CdTe-Sensor Technology

ART Plus represents a new generation of extra-oral dental X-ray imaging systems. The new CdTe (Cadmium Telluride) sensor technology provides up to 300 individual images per second during a single panoramic exposure. These images are combined to produce multiple panoramic layers of unparalleled quality and clarity.

CdTe-sensor is a unique technology that, unlike any other dental radiology sensor, directly converts X-rays to electronic signals. X-rays are not converted to light, therefore no blurring occurs and image clarity and contrast are increased up to 300 %.

Blurred images with mispositioned patients or unclear images with specific anatomical features that were difficult to diagnose using conventional panoramic systems, can now be easily resolved without additional exposures, using ART Plus autofocus or manual focus features.

CdTe-Sensor Technology vs. Conventional CCD/CMOS

AJAT CdTe-Sensor

X-rays

CdTe (X-rays converted to electrical signals)

Electric Circuit

Sharp Image



CCD/CMOS

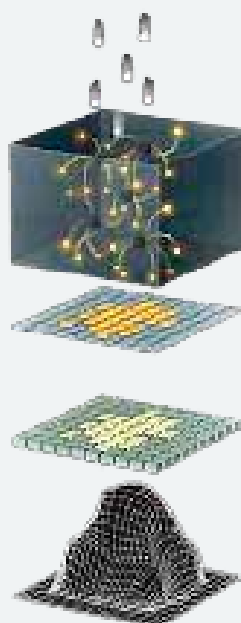
X-rays

Phosphor Screen (X-rays converted to light)

Optical lens

Electric Circuit

Image



ART Plus

Advanced Diagnostic Tools

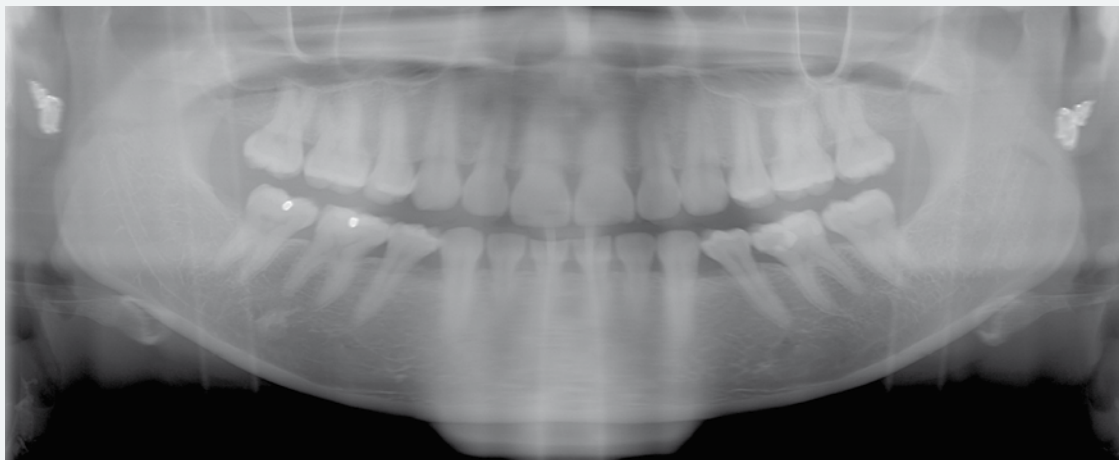
The benefit of focus and two-dimensional rotation tools is quickly realized when unclear details are easily adjusted for high diagnostic value without the need of additional exposures.

Benefits

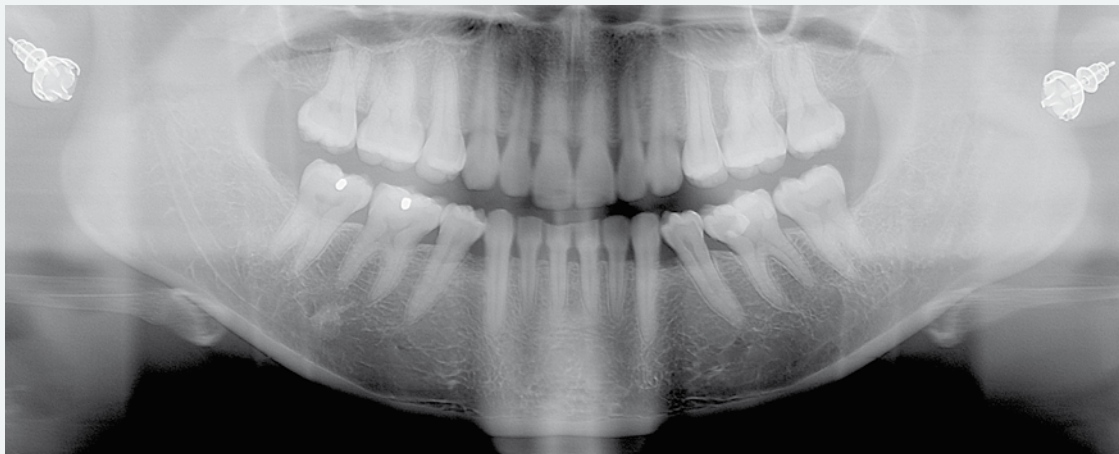
- ▶ Up to 300 % Better Image Quality
- ▶ Up to 3 times less radiation
- ▶ Auto & Manual Focus
- ▶ Multi Focal Layer Imaging
- ▶ TWAIN & DICOM Compliant
- ▶ Spine Compensation
- ▶ Quick Real Time Imaging



Before autofocus



After autofocus



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Sensor Specifications

- ▶ CdTe-CMOS direct conversion digital sensor
- ▶ DQE > 90 % at 90 kVP
- ▶ MTF > 75 % at 2 lp/mm
- ▶ Image resolution > 5 lp/mm
- ▶ Up to 300 images per second
- ▶ Dynamic Range > 16 bits
- ▶ DICOM compliant
- ▶ TWAIN compliant
- ▶ Storage format 16 bit or 8 bit tiff, png
- ▶ Operating system: Windows XP Professional, Vista (32 bit)

high speed + low noise + direct conversion = the sharpest image



ART Plus

Operations

Precise patient positioning is done by means of 3 laser beams. Positioning tools include bite block and auxiliary chin rest. A pushbutton unlocks the brakes of the vertical movement. Temporal resting bars and a self-standing base are optional.



Control

Examination types can be quickly selected from the control panel. There are 7 types of examinations and 4 patient sizes, which can be combined. Technical factors are selected based on the type of examination and patient size. The values can be also adjusted manually.



Radiology

The X-ray generator features constant potential with high frequency electronics. A thermal protection minimizes the waiting time. Combined movements of the carriage rotation are program controlled.



CdTe-Sensor Technology



Panoramic X-ray

- ▶ Constant potential high-frequency multi-pulse X-ray generator microprocessor controlled
- ▶ Focal spot 0.5 mm IEC 336
- ▶ Technique factors: anodic voltage from 61 to 85 kV, anodic current from 4 to 10 mA, maximum exposure time 15 s
- ▶ Source to image distance 51 cm
- ▶ Panoramic examinations: Adult, Child, Left-Side Dentition, Right-Side Dentition, Anterior Dentition, Temporomandibular joint (TMJ), Open/Closed Mouth, Maxillary Sinus
- ▶ Weight 200 kg
- ▶ Space occupied: minimum height 220 cm, maximum height 227 cm, minimum width 96 cm, useful width 126 cm, minimum depth 103 cm

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As a developer,
we are renowned for innovation.
As a manufacturer,
our watchword is quality.
As a business partner,
we guarantee commitment.



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