DIGITAL TABLE
SONIALVISION
VERSA 100R/100
Launched in 2001, the Sonialvision Digital Table System was designed as the standard for the 21st Century.
Stable image quality, a multitude of functions and a system design thought out to the smallest detail provided a glimpse of the future.

Sonianvision Versa takes this system forward yet another step.
This multi-purpose digital table leads the way to the future.

The Embodiment of the Leading-Edge Digital Table has Arrived!
LCD monitor is optional.
State-of-the-Art Digital Technology Yields High-Speed, High-Definition Images

Simple Windows®-based Operability

This new digital radiography unit is designed around the highly reliable Windows operating system, which makes the rapid processing of high-definition images possible using simple operations. The graphical user interface and mouse provide an intuitive operation environment that is easy to learn and to use.

One-million-pixel CCD Camera Produces High Image Quality

Extremely valuable for gastrointestinal examinations, the newly developed one-million-pixel CCD camera produces 12-bit high-definition, high-contrast 1024 x 1024 matrix images. Also, to ensure no detail is missed during esophageal imaging, the latest digital technology is used to capture images at up to 15 frames per second.

High-Speed, High-Definition Images Capture Every Detail

- High-resolution: 1024^2 matrix
- High-density-resolution: 12 bit, 4096 gradations
- High-speed data acquisition: MAX 15 fps
A new image processing function, Auto Image Optimization (AIO), has been developed to create clearer, optimized images in real-time. Able to be preset for a variety of radiography positions and directions, AIO displays optimized images in real-time by extracting the effective image area of a histogram, adjusting brightness and contrast, and performing gamma processing.

Accumulated digital images are recorded in real-time to an internal large-capacity high-speed hard disk. Images can also be saved externally to DVD-R/CD-R media, allowing storage of up to 2000 (DVD-R) DICOM format frames on a single disk.

A high-visibility LCD panel is used for all X-ray setting screens. The design of these easy-to-view color-coded screens simplifies APR selection.

Cassette radiography functions for IP/film are provided as standard. To handle multiple cassette sizes, the automatic size recognition function allows rapid and easy cassette radiography setup.

The Sonialvision Versa incorporates high-precision photo-timers allowing up to four fields* for cassette radiography of left and right lung, abdomen and lateral chests. The result: stable, high quality, lateral lung and abdominal radiographs not subject to distortion as with typical three field detectors.

* LCD monitor is optional.
Wide Range of Movements Support All Types of Examinations

X-Ray Tube and Collimator Travel of 155 cm\(^1\)
Provides Full-Body Coverage Without Patient Movement

Up to 155 cm\(^1\) of X-ray tube and collimator travel is guaranteed at all table tilt angles. When performing contrast-medium examinations that are dangerous if the patient is moved or examinations on elderly patients and emergency patients, this amount of travel allows safe and rapid positioning at reverse tilt angles without moving the X-ray tube and collimator. (Ceiling height of 285 cm and SID of 110 cm)

Orthopedic Procedures Benefit From High X-Ray Incidence Angles

Sonialvision Versa offers a previously unheard of \pm 40° X-ray angle of incidence. This allows positioning for inlet and outlet views of the pelvis and for radiography of fractures without forcing the patient into uncomfortable positions.

For Bariatric Imaging

The table’s heavy-duty design supports a patient load of up to 318kg (700 lb) in the horizontal position. This is the best in its class.

Easily Perform Examinations of Knee Joints and Lower Extremity Venography

The table can be tilted to any required angle while observing the target area. This allows dynamic observations of the knee joints and lower extremity venography. Movement of the X-ray tube and collimator is not required. (Ceiling height of at least 285 cm)

Full-body coverage without moving the patient

Maximum 198 cm\(^1\) image field (in case of 35 cm x 43 cm IP), e.g. urological examinations at the lower edge of the table.

Wider fluoroscopic and radiographic image field to both ends of the tabletop without spot film device allows efficient examinations with normal positioning and without patient anxiety, e.g. urological examination.

*1 SONIALVISION VERSA 100 with 12”I.I.
Innovative Control Console Offers Exceptional Ease-of-Use

The new console features a new, innovative design. The high-visibility panel design features ergonomically arranged switches and handles which ensure comfortable operation and provide the desired degree of control.

Action Memory

The Action Memory permits table movement protocol settings, X-ray parameter settings and digital processing selection settings with a single action. This feature allows quick examination setting without looking away from the console, allowing examination to proceed without interruption.

Rapid Table Movement Ensures Fast Examinations

The high-speed movement of all table parts provides rapid positioning and ensures examinations are smooth and stress-free.

Space-Saving Design Permits Installation Up to 10 cm From a Wall

Shimadzu’s unique, compact design provides a wide radiography field with an X-ray tube and collimator that cover the patient’s entire body. This allows installation just 10 cm from a wall in an approximately 10 m² examination room that ensures a large workspace and allows staff to easily provide support during examinations.
Digital Table Equipped With a Wide Range of Functions

**DSA Achieves a True Multipurpose System**

High-speed, high-definition realtime DSA is available at 7.5 fps on a 1024 x 1024 matrix. Dynamic images are played back immediately after imaging. The resulting high-quality, 12-bit (4096-gradation) density resolution images have exceptional diagnostic value.

**Examining Wheel-Chair Patients**

Sonialvision Versa features a 1.5 m SID imaging function as standard, exposing near actual size images. When performing radiography examinations on patients in wheelchairs, the magnification rate can be minimized to maintain adequate radiography distance.

**Motion Tolerant RSM-DSA**

Shimadzu’s proprietary Real-Time Smoothed Mask Digital Subtraction Angiography (RSM-DSA) is a revolutionary new DSA application that eliminates the need for acquiring mask images.

- **Breath-Holding Not Required**
  Provides higher diagnostic-value DSA images with no artifacts from digestive tract gases or patient body movements.

- **No Need For Mask Image Reduces Exposure**
  No mask run is required, allowing use of far less contrast medium.

- **Freedom in Framing**
  No artifacts from body movements or breathing eliminates need to immobilize the patient and allows movement of imaging location together with flow of contrast medium.

**Examining Stretcher Patients**

90 degree rotation of the X-ray tube/collimator easily and effectively accommodates emergency patients on stretchers.

**Tomosynthesis (Digital Multislice Tomography)**

Tomosynthesis uses digital data from a single tomographic scan to create an image of slice desired.

- **Expands Examination Range**
  Tomosynthesis allows recording of images at any angle required for diagnosis, including a variety of table angles or with the patient standing to apply gravity.

- **Reduces Examination Time and Eliminates Need For Additional Imaging**
  Since any slice can be reconstructed from a single tomographic scan, total recording time is much less than conventional digital tomography. Also, fewer imaging errors help to shorten patient exposure and immobilization times, reducing patient stress.

- **Fewer Metal Artifacts – Useful for Orthopedic Examinations**
  Slice images can be viewed without the influence of metal artifacts that is often seen in CT images. This is useful in follow-up examinations after orthopedic surgeries where metal objects have been implanted.
User-Friendly Adjustable-Height Table

Designed for the comfort of patient and operator alike, this system features Shimadzu’s table-lift mechanism. The tabletop can be set at the appropriate height for surgical procedures or, to reduce the load on care staff when moving the patient. When the I.I. retracting function is used, the table can be lowered to just 63 cm*. (SONALVISION VERSA 100R with 12” I.I.)

Full Flat Tabletop Facilitates Patient Movement and Posture Changes

This perfectly flat tabletop simplifies patient movement and provides the optimal examination environment.

Safe and Comfortable Examination Environment

Contact safety switch
The imaging system is equipped with a safety switch that automatically halts movement in the unlikely event the equipment contacts an object during a procedure. This important feature ensures the safety of both the operator and patient.

Overhang detector switch
The imaging system also features a second safety switch that automatically stops movement if a finger or other body part overhangs the table during an examination. This switch offers an extra safeguard to the patient.

Full Flat Table

I.I. retracting function

Digital Recording of Fluoroscopic Images during Examinations

Fluoroscopic images can be recorded in the internal memory at up to 100 frames during fluoroscopy. These images can be viewed using instantaneous or cyclic playback to reduce exposure during fluoroscopic diagnosis.

Iris Collimator

The iris collimator achieves high image quality and dose reduction; a precision, iris collimator is adopted to achieve exposure field to match the selected I.I. input size automatically.

Pulsed Fluoroscopy Modes

- 30 fps
- 15 fps
- 7.5 fps
- 3.75 fps

Low-Dose Pulsed Fluoroscopy

Incorporates the Newest Low-Dose Pulsed Fluoroscopy

Low-dose digital pulsed fluoroscopy offers excellent image quality and allows the frame rate to be selected as 3.75, 7.5, 15, or 30 fps to suit the subject of the examination. This significantly reduces X-ray exposure dose while providing quality images for guide-wire visualization or endoscopy during long-term non-vascular IVR.

Iris Collimator

Field of view of I.I.

Conventional Collimator

Detected with IR sensor

Imaging system automatically stops

Touch sensor

Imaging system automatically stops
Parallel Processing Improves Throughput

This system’s use of concurrent processing allows the writing of image data to and reading from a DVD-R/CD-R disc even during fluoroscopy and radiography. If desired, images can also be transferred to a Viewer and output to film.

Each type of processing is made as independent as possible to shorten the wait time required for peripheral, non-examination processing. The result is an improvement in overall throughput, producing a more efficient examination environment.

DICOM Media Storage / Print

The system can archive the images to DVD-R/CD-R by DICOM Media Storage format and can print the images by DICOM laser printer through DICOM network.

DICOM Storage / Worklist

Furthermore, the system can transfer the images to DICOM PACS network or can obtain the patient information from HIS/RIS network as an optional feature.

Side Station

The side station enables the use of DICOM-compatible viewing system to allow image observation, processing, printout and server transfer to be performed during examinations. It also enables the use of the tomosynthesis feature that reconstructs images of any arbitrary plane.
SONIALVISION VERSA

Configuration

R/F table | ZS-100IR / ZS-100I
---|---
Digital radiography unit | DAR-8000i (including 1-megapixel CCD TV camera)
Diagnostic X-ray high-voltage unit | UD150B-40/V-40/L-40 (80kw/65kw/50kw)
X-ray tube unit | 0.3/0.8P324DK series (400 kHU)
| 0.6/1.2P324DK series (400 kHU)
| 0.4/0.7JG326D series (750 kHU)
Image intensifier | IA-12L/HS13 / IA-16L/HS12

ZS-100IR / ZS-100I

- Digital table unit: 1
- X-ray automatic iris collimator: 1
- Remote-control console: 1
- Local-control console (option): 1
- Control box: 1
- Shoulder rest: 1
- Hand grip (two types): 1 each
- Table mattress: 1
- Compression cone: 1
- Barium cup holder: 1

Installation Environment

<table>
<thead>
<tr>
<th>System</th>
<th>Temperature</th>
<th>RH</th>
</tr>
</thead>
<tbody>
<tr>
<td>ZS-100IR / ZS-100I</td>
<td>10˚C to 40˚C</td>
<td>30% to 85%</td>
</tr>
<tr>
<td>DAR-8000i / UD150B-40</td>
<td>10˚C to 35˚C</td>
<td>30% to 75%</td>
</tr>
</tbody>
</table>

Dimensions

<table>
<thead>
<tr>
<th>Unit : mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Digital R/F table ZS-100IR / ZS-100I</td>
</tr>
<tr>
<td>Weight : 1400 kg</td>
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</tbody>
</table>

| Control cabinet (included in generator) |
| Weight : 240 kg |

| Control box (included in ZS-100IR / ZS-100I) |
| Digital imaging system DAR-8000i |

*LCD monitor is optional.*
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