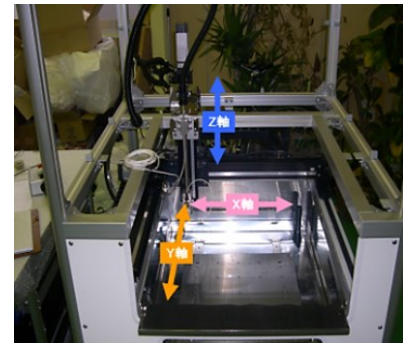


# GSCAN Ultrasonic Scanning System

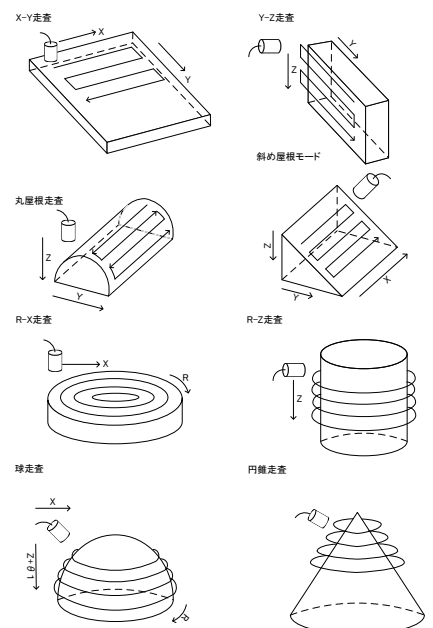
GSCAN , with ultrasonic flaw detection technology, analyzes inner flaw existence without destroying products. To facilitate ultrasound transmission, the target is water immersed and scanned automatically to illustrate its thickness, flaw position, and uneven distribution of material, etc. GNES, leading the market over tens of years, have developed the software easy to use. With its credited quality, it is widely used for quality control in manufacturing and mobility industries.

Using water, which has reasonable ultrasound transmission rate, as contact medium facilitates automatic scanning of complex shape object. (Objects with various shape including board, cylindrical, spherical shape can be automatically\* scanned with 0.01mm pitch.)

\* settings and scan plan required



Description	Specification
Mechanical sect. external dimension (Std.)	WxDxH: 900mm x 730mm x 1725mm (*1)
Water tank inner dimension (Std.)	WxDxH: 1150mm x 1040mm x 840mm (*2)
Mechanical sect. range of motion (with 6 axis) (*3)	X: (scan range) 300-1000mm (resolution) 0.01mm (max. speed) 300mm/sec, servo motor
	Y: (scan range) 300-約800mm (resolution) 0.01mm (max. speed) 300mm/sec, servo motor
	Z: (scan range) 250-約800mm (resolution) 0.01mm (max. speed) 150mm/sec, servo motor
	R: (turntable): (scan angle) 360° rotation (max. speed) 30/rpm, servo motor (scan range) (R-Z) 500mm, (R-X) 1100mm
	θ1(horizontal swing): (scan angle) 270°, pulse motor (resolution) 0.02° or less
	θ2(vertical swing): (scan angle) 330°, pulse motor (resolution) 0.02° or less (*4)
Control panel external dimension	WxDxH: 800mm x 500mm x 1750mm
Power supply	Three-phase 200V 3KVA
(*1) depending on water tank size (*2) customizable (*3) scan range is customizable (*4) θ2 electric motion is option for small type	



\* Specification is subject to change without notice. Consult us for details of PC.

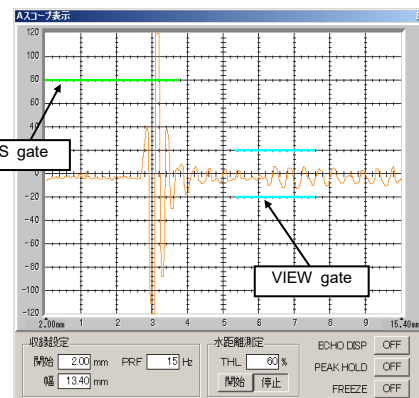


# Image and Waveform of Real-time Scan Result

While the data of waveform and echo height of each coordinate is stored, all the scan result data for designated area are also stored. For example, between the thickness that follows the surface echo exceeding the threshold, the waveform of certain echo height is recorded, and the level of flaws can be visualized for the entire designated area by coloring in accordance with echo height. Also, pointing a certain coordinate in the scanned image and referring to its recorded waveform, the detailed status of the flaw can be checked.

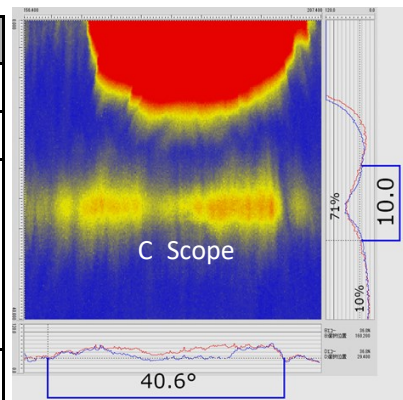
## Variety of software settings and analysis functions!

Settings	Description
UT device setting Scan conditions	All settings of UT device can be sent from PC. Max. 100 settings can be stored as files including scan conditions.
Scan area	Can be set by "2 position scan planning method", designating start and end position, or by pointing certain positions on the scanned
Water path distance	The distance between the probe and the workpiece can be measured/displayed using the surface echo of the workpiece.
Go to cursor position	The probe can be moved to a certain position by pointing any point on the scanned plain view image.

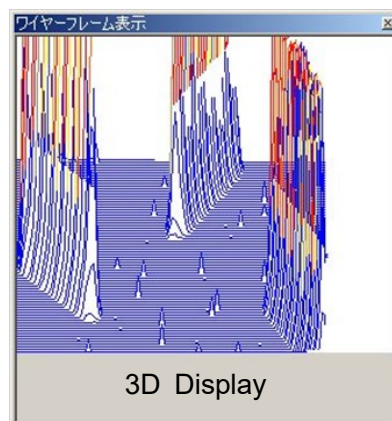


A Scope

Analysis function	Description
Scanned image	C scope, B/D scope
Color tones	Gradation/mono tone/binarization
Image analysis	Enlarge/shrink function Display with magnification ratio Measurement with various cursors - Cross hairs cursor: Echo height, waveform of the cursor position - Straight line cursor: distance between two designated points - Square cursor: width and height of designated area
Plain view image	Plain view or cross section image is displayed based on echo height or depth.
A Scope (software gate)	Waveform of a designated point on the plain view scanned image can be generated/displayed from the stored data.
FFT analysis	Frequency analysis can be done based on the waveform of a designated point.
Full wave cross section image	Complete cross section image can be shown based on a designated cross section waveform.
3D display	Simple 3D display based on the position of reflection source (X/Y and Z position) and echo height.
Image scale	A workpiece can be shown in actual size both on PC display and printed matter when settings made.



B Scope/D Scope (right)



3D Display

\* Standard specifications of hardware/software are listed., but can be customized in accordance client needs. Contact us for details.

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