



TD Handy-Scan^{rx} • Multi-Function Ultrasonic Inspection Systems



Features

- Highly Portable
- Exceptional Performance
- Affordable Price
- High Speed Real-time Data Collection
- Fast Inspection Speed
- Sunlight Readable Screen
- Extensive Analysis Tools
- Easy to Use Menus
- Powerful Reporting Functions
- Removable Battery
- 2 Axis Encoder; Video tracking
- Includes ESBeamTool[®]
- Import setups from ESBeamTool[®]

Techniques

- Phased Array
- ToFD
- Pulse Echo
- Corrosion Mapping
- Weld Zone Discrimination

Applications

- Pressure Vessel Welds
- Pipeline Welds
- Corrosion Surveys
- Turbine Disks & Blades
- Complex Geometries
- Forgings & Castings
- Aircraft Components
- Hydrogen Damage Surveys

Software Options

- Phased Array/Pulse Echo
- ToFD
- Strip-Scan (AUT)
- Long Range (Creep Wave & Corrosion Mapping)
- TD Super-View
- ESBeamTool[®] included

TD Handy-Scan^{RX} Hardware Specification

System Options				
64 Elements (D Type 78 way)	32 Active	8 Conventional (Lemo 00)		
General				
Number Of Focal Laws	1700 max			
Dynamic Depth Focusing	Yes			
Digitisation				
A/D Sampling Frequency	Phased Array = 8Bit & 14Bit @ 100MHz Conventional = 8Bit & 14Bit @ 100MHz			
System Bandwidth(-3dB)	Phased Array = 0.75MHz to 25MHz Conventional = 0.75MHz to 25MHz			
Max Pulse Repetition Frequency	Variable up to 5KHz			
Pulser				
Number Of Pulsers	64			
Number Of Active Pulsers	1 to 32			
Pulser Delays	0µs to 20µs in 2.5ns steps			
Output Impedance	6 Ohms			
HT Pulse Shape	Square wave			
HT Pulse Voltage	Phased Array = 5 to 200V in 1V Steps Conventional = 5 to 200V in 1V steps			
HT Pulse Width Range 2	0ns to 500ns in 2.5ns steps			
Rise/fall time	< 5ns			
Receiver				
Number Of Receivers	64			
Number Of Active Receivers	1 to 32			
Receiver Delays	0µs to 20µs in 1ns steps			
Gain Range	P/E=0 to 90dB in 0.1dB steps, P/A=0 to 72dB in 0.1dB steps			
Input Noise Level	2.5nV/(Hz) ½ across full system bandwidth			
Input Impedance	50 Ohms			
Dynamic Depth Focusing				
Operation	Dynamically optimises receive focus delays			
Range Of Operation	User specified depth/range in mm or µs			
Performance	100MHz real-time			
Receiver DAC Curves				
Number Of Curves	1 to 8			
Rate Of Gain Change	Up to 40dB/µs			
Digital Signal Filtering				
Band Pass Filters(-3dB)	Probe Frequency (MHz)	Narrow Band (MHz)	Wide Band (MHz)	Broad Band (MHz)
	1	0.75 - 1.5	0.75 - 4.0	0.75 - 25.0
	2	1.0 - 3.0	0.75 - 4.0	0.75 - 25.0
	4	2.0 - 6.0	0.75 - 8.0	0.75 - 25.0
	5	2.5 - 7.5	0.75 - 10.0	0.75 - 25.0
	7.5	1.5 - 11.25	0.75 - 15.0	0.75 - 25.0
	10	5.0 - 15.0	2.5 - 20.0	0.75 - 25.0
	15	10.0 - 20.0	5.0 -25.0	0.75 - 25.0
	20	15.0 - 25.0	0.75 - 25.0	0.75 - 25.0
Post Rectification Filters (-3dB)	No filter, 1-15MHz in 1MHz steps			
A-Scan Digitizing				
A-Scan Points Per Channel	8000 samples per channel			
Number Of Gates Per Channel	3 overlapping hardware Gates			
Gate Start/Width	User definable in 40ns steps			
Gate Reference Points	Transmit Pulse or Material Interface Echo			
Storage Modes Per Gate	A-Scans, Peak Depth and Amplitude, both			
Signal Averaging				
Number Of Channels	All (128 software channels)			
Averaging Rates	Real-time averaging 2 - 256, user definable			
Peak Processing				
Peak Storage Modes	All Peaks, First Peak, Largest Peak/s, Loss of Signal, Between			
Threshold Setup	5 to 100% in 1% steps per hardware Gate			
Number Of Peaks Per Gate	16 max			
Scanner Interface Ports				
Input Type	Encoder, Potentiometer, Video Camera			
Number of Axis	2 axis, TTL compatible			
Encoder Interface	TTL compatible, 5V @ 1A, 12V @ 0.4A			
Potentiometer Interface	0 to 2.5V, sampled at 100Hz			
Video Input	1Vpp Composite			
PC (Internal)				
Operating System	Windows® 7			
3rd Party Software	AVG Antivirus® ESBeamTool® (Eclipse Scientific)			
Processor	Intel Atom N270			
Memory	2GB			
Display Colour	TFT (Industrial type) 8.4"			
TFT Display Resolution	800 x 600 - Sunlight Readable Screen			
Storage	120GB SSD			
Ports	2 x USB, 1 x 10/100 Ethernet, 1 x Video			
Size, Weight and Environmental				
Unit Dimensions	270 x 300 x 110mm			
Weight	5Kg			
Rating	Designed to IP65			
Temperature	0°C to 40°C operating, -25°C to 85°C storage			
Battery Capability				
Operating Time	4 Hours (approx)			
DC Input	19V			
AC Input	90 to 260VAC @ 40Hz to 60Hz			

E&OE - All specifications are subject to change. It is advisable to check all information provided.