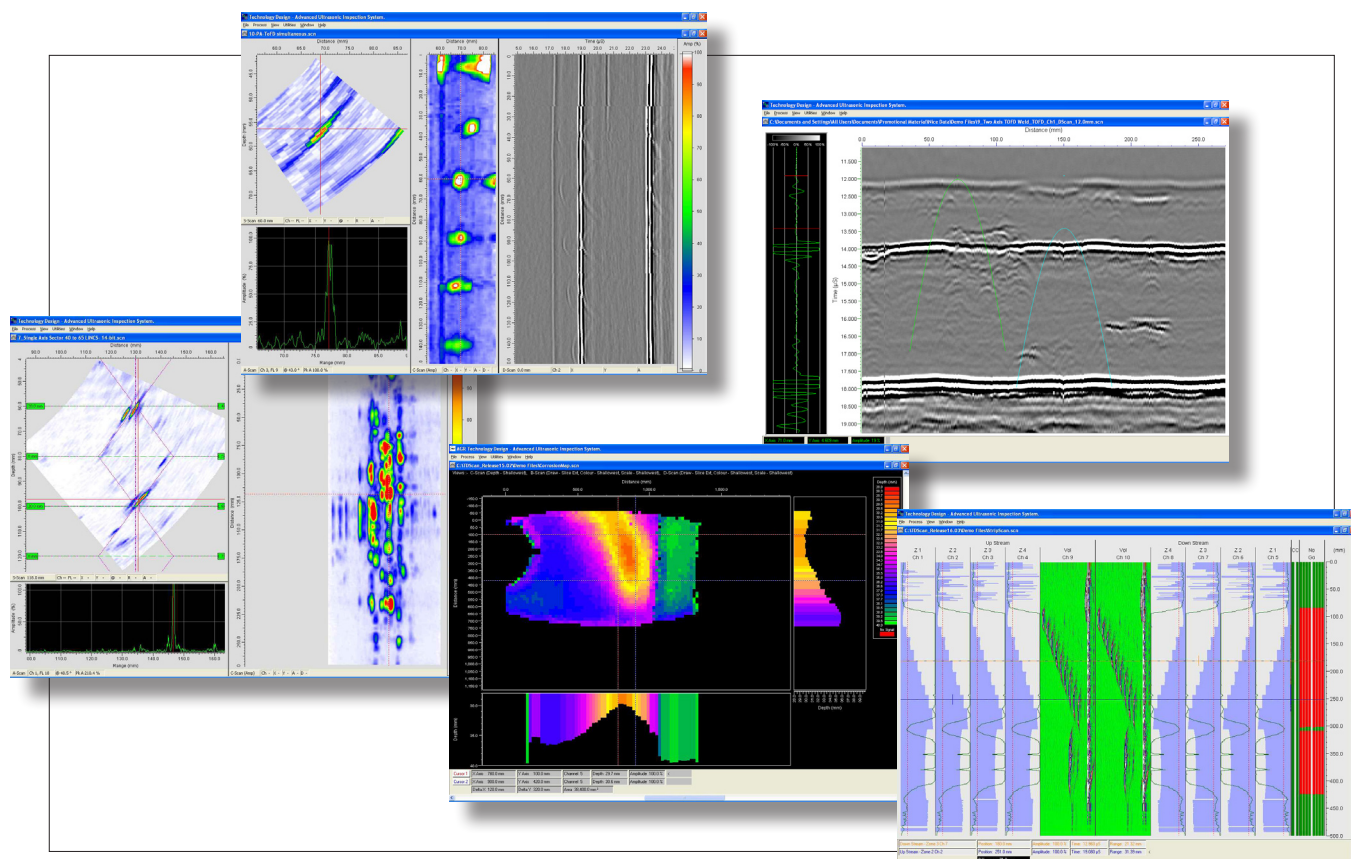




## Advanced Software • Multi-Function Ultrasonic Inspection Systems



### Features

- Intuitive user friendly menus
- Powerful, easy to use analysis tools
- Fully integrated TOFD, Pulse Echo and Phased Array
- Ideal for manual, semi & automated inspections
- One software suite for all instruments in the TD range
- Unrivalled performance.
- Real-time A, B, C, D & S-scan imaging
- Weld geometry overlays
- TD Super-View for complete user controlled imaging

### Techniques

- Phased Array
- ToFD
- Pulse Echo
- Corrosion Mapping

### Applications

- Pressure Vessels Welds
- Pipeline Welds
- Structural Welds
- Forgings & Castings
- Turbine Disks & Blades
- Aircraft Components
- Hydrogen Damage Surveys
- Corrosion Surveys

### Software Options

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

## TD-Scan Software Specification & Features

### General

Easy to use Windows XP Pro® based software provides a fully integrated TOFD, Pulse Echo and Phased Array capability in our tough, feature rich portable ultrasonic acquisition units. Ideally suited to either semiautomated or automatic inspection, whether you are using the miniature TD Pocket-Scan, TD Handy-Scan, TD-Scan or our top-of-the-range TD Focus-Scan, our Advanced Ultrasonic Software provides unrivalled performance.

Intuitive user friendly menu's guide the user through each operation, with all parameters definable on a channel by channel basis. With our TD-Scan and TD Focus-Scan units the software can also be controlled by shortcut keys integrated into the front panel to provide mouse-free operation.

Our software provides real-time A, B, C, D & S-scan imaging with probe angle and geometry (skip) correction performed on-line and off-line. The user is provided instantly with a true representation of the material under test and with our enhanced analysis tools the process of defect interpretation and condition assessment is smooth and remarkably quick.

TD Super-View® was developed with the operator in mind: that means, full control of the data display online and offline. The operator has the flexibility of choice to divide the main display window into 4 display areas and further subdivide each display area into multiple sub-areas presenting A, B, C, D or S scans on the screen as desired. The operator has the choice of displaying the above data from individual channels or as a composite view of all active channels. Data from different scan modes can also be viewed simultaneously, for instance ToFD and Pulse Echo data from different channels can be viewed. The Choice is Yours!

Our CommsBridge software is a small application that allows you to control either the TD-Scan or the Focus-Scan units remotely across an Ethernet link. This is useful for analysing data at a remote location using your corporate network or if you use your unit as a 'black box'.

### Hardware Setup Controls

Channel number	128 Software channels	TX/RX	Control Select probe connections
Channel Mode	Phased Array, ToFD, Pulse echo	Digitiser Control	8 or 14 Bits per sample
Pulse Width	Enter probe frequency—auto calculate		Up to 200Mhz sample rate
Amplifier Control	Gain—user controlled		Up to 256 averaging
	Select number of TCG (max 8)		

### Probe Setup Controls

Array Geometry	Linear	Offsets	Horizontal—distance from centreline, Vertical—distance from adjacent probe
Probe Angle	User defined		Flat Geometry
Wave Type	Shear, Compression	Skip Correction	Phased array only—response homogenisation
Probe Delay	Millimetres or microseconds	Balance Elements	None, Hamming, Gaussian, Blackman-Harris
Direction (Skew)	User defined in relation to a centre line	Apodization	
Strip-Scan	Active when Strip-Scan selected in 'Scanner'		

### Gate Controls

Peak Time	Gate Crossing, Peak tip	A-scan mode	Off, Always, If Peak in Gate
I/F Trigger	Off—no interface trigger, On—interface trigger activated for emersion	Peak Mode	Off, All Peaks, First-Thinnest, First-Thickest
			Between, Between-Thinnest, Between-Thickest, Loss of Signal
I/F Trigger Setup	On, Off		

### Filters

Rectifier	Disabled (RF), Full wave, Half wave-, Half wave+	Low Pass Filter	User selectable
Filter	Post rectification signal smoothing	High Pass Filter	User selectable

### Focal Law Generator (F-Law) - Phased Array only

Focus Mode	Range, Horizontal, Vertical	Manual Delay Entry	On, Off
TX Control	First Active element	RX Control	First Active element
	Number of active elements		Number of active elements
	Index points/Stride	Dynamic Focussing	Focal Range Minimum & Maximum
	Focal range	Angle Emission point override	User defined adjustments
	Element 1 connection	Angle Control	Swept, Fixed
Wedge Parameters	On, off	Swept angle (Sectorial)	Minimum/maximum angle, angular Step
	First Element at—Top or Bottom	Fixed Angle	Tx / Rx angles
	First element height	Focal Law Balancing	Interactive procedure to equalise amplitude across a range of focal laws
	First element to diffuser		
	Angle (of probe face to scan surface)		
	Ultrasonic velocity of wedge		

### Other

Time Corrected Gain	8 curves (1 per channel)	Report Generator	User definable headings & input text & scan image printing
Image Colour Palettes	Amplitude, depth, user definable		
Import Setups	From setup file or existing scan file	TD Super-View	User defined data presentation on & offline

### Scanner Controls

Manual Input	Manual un-encoded scanning	Single Axis	Semi & automated, encoded or free run
XY Raster (Dual Axis)	Semi & automated, encoded or free run	Rotational / Radial	Semi & automated tube scanning
Arm Scanner	Dual axis rotating arm scanners for corrosion mapping	Video Tracking	Track probe position using video camera for corrosion mapping
Motion Control	PID Loops for accurate positional control		

### Data Analysis

TD Super-View	A,B,C,D & S scan, P/E, P/A, ToFD	Normal Data Presentation	Strip-Scan	Zone discrimination for pipelines
	User definable panel configuration for data images		ToFD	Full ToFD analysis
	View data from multiple channels individually or over-layed		Pulse Echo	Corrosion Mapping, Welds
	Image filtering, zoom functions		Long Range	Corrosion mapping -inaccessible areas
	Corrected skip overlay	ToFD		Straighten, linearise, SAFT, lateral/backwall removal, contrast, parabolic cursors, overlay text, echo-dynamic, file split/join, data reversal, create bitmap, output data as text
	User definable weld overlays			
	Defect sizing by cursors or echo-dynamic			
	Off-line gain control			
	Dynamic sizing range up to 400% FSH	Strip-Scan		Views (time/amplitude, map, off, volumetric channels, couplant check, Go/no-go), auto defect mark-up & size calculation
	Output data as text			
	Depth, Range, Amplitude, angle, Channel, focal Law, distance information in real time			
	C-scan gate let you pinpoint areas of interest	Corrosion Mapping		Single/Dual cursors, C-scan +end views, Min/Max values, output data as text, Re-gate, Change colours, View control (peak modes, pixel size), text overlay, join files, save bitmap