The Best of Both Worlds...

The DFX-7 Series
Flaw Detector & Thickness Gauge

Flaw Detector:
- Sizing Toolkits: DAC, AWS, TCG, DGS.
- Exceptional visibility in sunlight (AMOLED) color VGA display (320x240 pixels).
- P.R.F. - 8 to 333 Hz, adjustable.
- Screen Refresh Rate: Adjustable 60 & 120 Hz.
- Detection: Z-Cross, Flank & Peak.

Thickness Gauge:
- Measurement: Variety of modes to address a number of applications.
- Large data storage with multiple formats: Alpha numeric grid and sequential w/auto identifier.
- Up to 12 hours of battery life using 3 AA cells.
- Windows PC interface software included.
**DFX-7 SERIES SPECIFICATIONS**

### General
- **Size:** 2.5W x 6.5H x 1.24D in (63.5 x 165 x 31.5mm).
- **Weight:** 14 ounces (.397kg), with batteries.
- **Case:** Extruded aluminum body with nickel plated aluminum end caps (gasket sealed).
- **Display:** 1/4 VGA AMOLED color display (320 x 240 pixels). Viewable area 1.7 x 2.27 in (43.2 x 57.6 mm). 16 color palette, multiple color options, and variable brightness.
- **Screen Refresh Rate:** Selectable 60 or 120Hz.
- **Display Views:** Flaw Detector: Full wave, +/- Rectified, or RF. Thickness Gauge: Digits, +/- Rectified, RF, or B-Scan.
- **Timing:** Precision 25MHz TCXO with single shot 100 MHz 8 bit ultra low power digitizer.
- **Measurement Gates:** Two independent gates (Flaw), and three gates (thickness). Start & width adjustable over full range. Amplitude 5-95%, 1% steps. Positive or negative triggering for each gate with audible and visual alarms.
- **Operating Temperature:** 14 to 140F (-10C to 60C).
- **Environmental:** Meets IP65 requirements.

### Calibration
- **Automatic Calibration:** Longitudinal (straight), or Shear (angle).
- **Probe Types:** Single Contact, Dual, Delay, and Angle.
- **Units:** English (in), Metric (mm), or Time (μs).
- **Velocity:** 0.0100 to .6300 in/μs (256-16,000 m/s).
- **Test Range:** 0 to 0.280in (7.11mm) minimum, to 0.050 in to 100 ft. (0.63mm to 3048 cm).
- **Zero Offset (Probe Zero):** 0-999.999 μs.
- **Material Velocity Table:** Contains longitudinal and shear velocities for a variety of material types.

### Pulser
- **Pulser Type:** Two adjustable square wave pulsers and receivers.
- **P.R.F.:** 8 to 333Hz in selectable steps (8, 16, 32, 66, 125, 250, 333Hz).
- **Pulser Voltage:** 200 volt peak amplitude, rise/fall time < 10ns into 50ohm.
- **Pulse Width:** 40 to 400 ns. Selectable step options 40, 80 & 400 ns (labeled spike, thin & wide).

### Receiver
- **Gain:** 0 to 110dB with 0.2dB resolution. Manual and AGC control.
- **Damping:** 50, 75, 100, 300, 600, & 1500 ohms.
- **Frequency Bands:** DFX-7 & 7+: Broadband 1.8 - 19 MHz (-3dB).  DFX-7+: Three narrow bands at 2MHz, 5MHz, 10MHz.
- **Horizontal Linearity:** +/- 0.4% FSW.
- **Vertical Linearity:** +/- 1% FSH.
- **Amplifier Linearity:** +/- 1 dB.
- **Amplitude Measurement:** 0 to 100% FSH, with 1% resolution.
- **Delay:** 0 - 999in (25,375mm) at steel velocity.

### Flaw Detector Features
- **TRIG:** Trigonometric display of beam path, depth, surface distance, and curved surface correction. Used with angle beam transducers.
- **DAC:** Up to 8 points may be entered and used to digitally draw a DAC curve. Reference -2, -6, -10, (-6/-12), (-6/-14), (2/-6/-10) dB. Amplitude displayed in %DAC, dB, or %FSH.
- **AWS:** Automatic defect sizing in accordance with AWS D1.1 structural welding code.
- **AVG/DGS:** Automatic defect sizing using probe data. Stores up to 64 custom setups.
- **TCG:** Time corrected gain. 50 dB dynamic range, 20 dB per microsecond, up to 8 points for curve definition.
- **Measurement Mode:** Pulse-Echo (P-E) measures from 0.025 in to 100 ft. (0.63mm to 3048 cm).
- **Auto-Cal:** Provides automatic calibration with two reference points.
- **Detection Modes:** Zero Crossing, Flank and Peak.
- **Display Freeze:** Hold current waveform on screen.
- **Peak Memory:** Captures peak signal amplitude.

### Thickness Gauge Features
- **Measurement Modes (Dual Element):**
  - **Pulse-Echo Mode (P-E):** (Pit & Flaw Detection) measures from 0.025 in to 100 ft. (0.63mm to 3048 cm).
  - **Pulse-Echo Coating Mode (PECT):** (Material, Coating, Pit & Flaw Detection): Material: 0.025 in to 100 ft. (0.63mm to 3048 cm). Coating: 0.001 to 0.100 inches (0.01 to 2.54 millimeters).
  - **Pulse-Echo Temp Comp Mode (PETP):** (Pit & Flaw Detection) Auto temperature compensation -measures from 0.025 in to 100 ft. (0.63 mm to 3048 cm).

### Thickness Gauge (Features) - (Con’t)
- **Echo-Echo Mode (E-E):** (Thru Paint & Coatings) measures from 0.050 to 4.0 inches (1.27 to 102 millimeters). Will vary based on coating.
- **Echo-Echo Verify (E-EV):** (Thru Paint & Coatings) measures from 0.050 to 1.0 inches (1.27 to 25.4 millimeters). Will vary based on coating.
- **Coating Only Mode (CT):** (Coating Thickness) Measures from 0.0005 to 0.100 inches (0.0127 to 2.54 millimeters). Range will vary +/- depending on the coating.
- **Custom Setups:** 64 user configurations.

### Memory
- **Log Formats:** Grid (Alpha Numeric), or Sequential (Auto Identifier).
- **Graphics On:** 8,000 readings, A/B Scan image, & all gauge settings for every reading.
- **Graphics Off:** 210,000 readings (coating, material, min & max. Thickness gauge only).

### Power Source
- **Battery:** Three 1.5V alkaline, 1.2V AA Nicad cells, 1.2V AA Ni-MH, or other or other equivalent power source. Battery life (continuous use): Alkaline (12 hrs), Nicad (5hrs), and Ni-MH (12hrs), with default settings.

### Connections
- **Output:** RS232 serial interface. PC software & USB converter cable included.
- **Transducer Connectors:** Two LEMO 00 connectors.

### Certification
- **Thickness Gauge:** Factory calibration traceable to NIST & MIL-STD-45662A.
- **Flaw Detector:** EN12668-1 compliant.

### Warranty
- **2 year limited**

**MADE IN THE USA**

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