

# BondaScope 3100

Multi-Mode Handheld Ultrasonic Bond Tester

## Full Multi-Mode... Resonance, Pitch-Catch & Mechanical Impedance

RF, Flying Dot Impedance, High Speed Swept Frequency - (Pitch-Catch & MIA)  
Tone Burst and Spike Drive in Pitch-Catch  
Bond Profile, SplitScan, SplitView Mode  
Xor Digital Phosphor EL Display Mode  
User Adjustable TRUE Digital Persistence  
Hi-Bright 5.7" Electroluminescent Display  
Storage for Over 250 Display Images  
Li-Ion Battery Power Source



 **NDT Systems**  
Worldwide Excellence In Ultrasonics

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# BondaScope 3100

Unparalleled Multi-Mode Performance and Versatility

**FEATURING:**

Resonance  
Pitch-Catch  
Mechanical Impedance  
Swept Frequency  
Bond Profile

The All New BondaScope 3100 is the latest in a series of Highly Affordable, Feature-Rich, High Performance Ultrasonic Bond Testers available from NDT Systems, Inc., the originators of the first Microprocessor Based, Impedance Plane Resonance Bond Tester. New, Industry-Leading Features of the BondaScope 3100 include Bond Profile Mode, Split Screen, High Energy Pulsed Pitch-Catch Mode, Unique Sweeping Mechanical Impedance Analysis Mode (SweepMI), Separate Phase and Amplitude Alarm Ability, Xor Digital Phosphor EL Display Mode, True User-Adjustable Display Persistence and Much More. Probes are dry or liquid film coupled (dependant on selected test mode).

**Bond Profile** is a time-encoded (linear encoded optional) scanning presentation whereby the Phase/Amplitude are plotted in Real-Time, yielding a Time-Based trend pattern allowing for easier user interpretation. Operators generally find trended information easier to comprehend and therefore can have a much higher confidence level in the inspection. NDT Systems, Inc. was first to offer this in the BondaScope 300, Miniature Pitch-Catch Bond Tester.

**Applications** include the inspection of metallic, non-metallic and combination metallic/non-metallic bonded structures for a variety of anomalous conditions. Detectable anomalies include measurable levels of unbonds, voids, delaminations, inclusions, porosity, fiber damage, core damage, bondline thickness variations, and certain material properties. Inspectable configurations include adhesively-bonded laminates, advanced fiber composites and honeycomb to mention a few. Some typical applications include multi-layer laminates, graphite/resin composites, boron fiber composites, Kevlar composites, glass fiber composites, composite-to-substrate, composite-to-composite, honeycomb structures, skin-to-honeycomb, honeycomb-to-honeycomb, impact damage and many more.

## SPECIFICATIONS

**Modes:** Resonance (RF & Flying Dot); Pitch Catch (Tone Burst - Adjustable Frequency, Cycles and Amplitude) High Energy Pulsed Mode. Swept Frequency; Mechanical Impedance Analysis (MIA) Fixed and Swept Frequency... Industry First.

**Display:** 240 x 320 Pixels, Quarter-VGA, 5.7" Diagonal High-Bright EL

**Probe Connector:** Standard 11-Pin Fischer - Adapts to other available probes.

**Frequency Range:** 250Hz - 1.5MHz Probe and setup specific

**Alarms:** Box, Polar and up to 8 individual and individual-sized "Ring Gates" centered at stored Reference Dot locations in Impedance Plane operation. Positive or negative operation.

**Storage:** 100 Setups and 250 Screens with Real-Time Date and Time Stamp. Full 32 character Alpha-Numeric File naming with 8 lines of 32 characters for user comment or instruction.

**Master Supervisor Setup and Lockout:** Supervisory mode allows individual instrument setups parameters to be totally locked, totally unlocked, or allow the user to operate ONLY within the supervisory-defined parameters. For instance, allow frequency change within 24-28KHz and gain within 35-40dB and no change to alarm etc. Available to EVERY instrument setup parameter! ...Another Industry First

**Inputs & Outputs:** TTL for Alarm - Positive or Negative, Latched or Momentary, 0-5VDC - Phase, Amplitude, X and Y Dot Location. Rate continuous in Resonance and Mechanical Impedance, USB Standard

**Power:** Single Li-Ion High Energy Battery Smart Cell. In-Battery Microprocessor reports current charge and time to empty - Approximately 8 Full Hours Operation

**Conditioning Fast Charger:** Provides extended battery life and charge condition calibration. 85-240VAC Auto Sensing

**Dimensions:** 9.25"H x 5.5"W x 2.9"D - (235x140x74mm)

**Weight:** 5 Pounds including battery

**Operating Temperature:** -10° to 140°F (-23° - 60°C)

**Accessories and Options include:**

Full Range of Resonance, Pitch-Catch and MIA probes and cables, Pelican Style transport case, Instrument Soft Pouch, Spare Batteries, Bond Profile Encoding Card, Data Storage and Transfer Software - Windows Based.

**Contact Us** regarding Probe Fixtures and Custom Application Requirements.

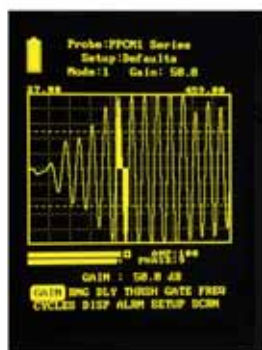


BondaScope 3100 & Probes  
Along with BondaScope 300 & 350

**NDT Systems**  
Worldwide Excellence In Ultrasonics



RF & Bond Profile  
In "SplitView" Mode



Gated and Alarmed RF  
Presentation



BondaScope 2100, The World's FIRST Microprocessor-Based Impedance Plane Bond Tester Still Factory Serviced & Supported. (Circa - 1977) Patent No. 4,215,583

Specifications subject to change without notice - 1007

**ADVANCED NDT LTD**

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