

IntraPhase 32/128 Phased Array

The **IntraPhase 32/128 Phased Array system**, manufactured by **WesDyne NDE Products & Technology**, consists of a phased array acquisition system and personal computer running standard **IntraSpect** software. The PC is a full featured computer that performs the acquisition, analysis and storage of the data. The system hardware is capable of operating up to four data sets with any combination of phased array or conventional UT probes.



Phased Array System Features

- **Maximum number of elements in system: 128**
- **Number of elements to fire as one group: 32**
- **Maximum number of focal laws: 500**
- **Controllable features per firing sequence**
 - Delay per element 0 - 5 microseconds in 5 nanosecond steps
 - Gain per element 0 to 40 dB in 0.1 dB steps of analog gain
 - User defined Start element, End element, Group size, Step size
- **Pulsar Voltage 10 – 200 V, tunable square wave**

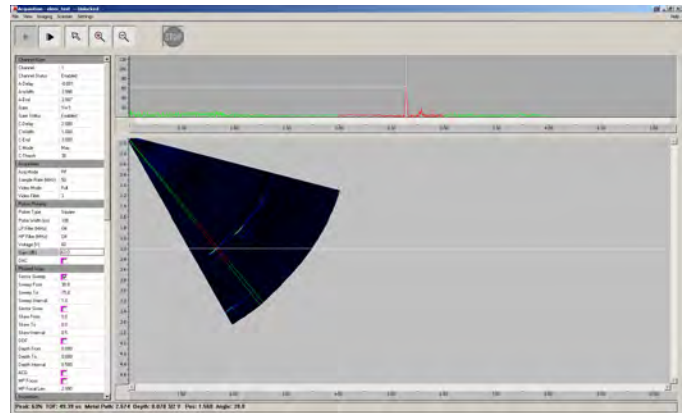
- **4 data sets of phased array or conventional ultrasonics**
- **User selectable A/D rate: 20, 25, 50, and 100 MHz**

Receiver Section Features:

- **Frequency Response: 0.15 MHz to 16 MHz**
- **Dynamic Range: 72 dB in 0.1 dB increments**
- **Low and High pass Filters: 1 to 10 MHz in 1 MHz steps**
- **DAC Dynamic Range: 40 dB**

Data Analysis Standard Features

- **Data Acquisition and Data Analysis on Windows XP laptop or desktop PC**
- **Simultaneous C-scan, Sector B-scan (S-scan), and A-scan Display**
- **Color Maps, Gates, and Variable Range can be altered for the graphic displays. Time-of-Flight and Amplitude Based Statistics Functions**
- **Fast Fourier Transform (FFT) Function**
- **Weld Overlay Function**
- **RF or Video acquisition and display modes**



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SPECIFICATION: AMDATA IntraPhase 32/128 Phased Array Acquisition & Analysis System

Host Computer

- Laptop or Desktop PC running Windows XP

Data Acquisition Standard Features

ARRAY PHASING SYSTEM ELECTRONICS

The IntraPhase 32/128 phasing system is comprised of a self contained pulser/receiver, A/D, and phased array processing.

- Number of elements in system: 128
- Max number of elements to fire as one group: 32
- Max number of group firing sequences: 500
- Controllable features per firing sequence
 - Delay per element 0 - 5 microseconds in 5 nanosecond steps
 - Gain per element 0 to 40 dB in 0.1 dB steps of analog gain
 - User defined Start element, End element, Group size, Step size
- Amplifier bandwidth: 0.15 - 16 MHz
- Max PRF: 20 kHz
- Digitization resolution: 200 MHz
- Pulser Section Features:
 - Pulser voltage 10 - 200 V
 - Variable width square wave 50 – 500 nsec
 - Pulser damping
- Receiver Section Features
 - Frequency response: 0.15 to 16 MHz
 - Gain range: 0 to 72 dB, 0.1 dB Increments
 - Low and High Pass Filters: 1 to 10 MHz in 1 MHz steps
- Data Acquisition Section Features
 - Adjustable Digitization Rate Selectable of 20, 25, 50 and 100 MHz
 - 50 MHz A/D Conversion
 - Max gate width 8K points
- DAC Section Features
 - Dynamic range: 40 dB
 - Maximum slew rate: 40 dB/μsec
 - Maximum number of operator selected points: 16
- Data Recording Modes
 - Full RF Wave Data Collection/Storage Mode
 - Hardware Based, Positive, Negative, or Full Wave (Selectable) Video Detection Data Collection/Storage Mode
 - Peak Amplitude/Time-of-flight Data Collection/Storage Mode
 - Pulse-Echo, Through Transmission, or Pitch-Catch, Modes
- Permanent Storage of Test Setups
- Complete Digital Computer Control
- Interactive Graphics Emulate Conventional Ultrasonic Instruments

Data Analysis Standard Features

- Complete Data Acquisition and Data Analysis
- Multi-tasking Operation
- Simultaneous C-scan, S-scan/B-scan, and A-scan Display
- Scaleable Screen Size
- C-scan Display
 - Four Software Flaw Gates, One Interface Gate, and One Tracking Gate per Channel
 - Color Maps, Gates, and Variable Range can be altered for C-scan Display
 - Time-of-Flight and Amplitude Based Statistics Functions
 - ASCII data conversion
 - Hysteresis Correction Function
 - Histogram Function
 - C-scan Annotation Function
 - Auto Analysis Defect Sizing Function
- S-scan Display
 - Zoom Function
 - S-scan, B and B-prime Mode Displays
 - Color and Gray Scale Mode Displays
 - Fast Fourier Transform (FFT) Function
 - Weld Overlay Function
 - Calibrated Depth Measurement Function
 - Curvature Correction Function
 - Time Base Display Selectable as TOF, Metal Path, or Depth
- A-scan Display
 - Zoom Function
 - RF or Video Display Mode
 - Time Base Display Selectable as TOF, Metal Path, or Depth
- TIFF Data Conversion Function
- Volumetric Projection Analysis

Included Accessories

- Appropriate Application Software License, Standard Package for IntraSpect Ultrasonic Imaging System

Available Alternative Features

- Automated Scanner Kit



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