

# NDT Test Station

## Repeatable Manual Inspection

**NDT-TS2**

**NDT  
Test Station**

The Modal Shop's NDT Test Station, Model NDT-TS2 Resonant Inspection System is an ideal Resonant Acoustic Method testing system when repeatable manual inspections are required. The innovative Test Station provides a means of repeatable manual inspections by allowing precise control of part positioning with an adjustable table ranging up to 6.25 inches (158.75 mm) in height. Photo eye sensors trigger the integrated industrial impactor when a part is in position.

Once impacted, the objective part inspection requires no human interpretation. The system includes a laptop PC, running NDT-RAM software which acquires data for analysis from each part and then delivers a simple Pass or Fail result. The included light tower provides a clear, visual indication of a part's test status after impact for the operator to sort the part accordingly.



The NDT-TS2 includes the following components, preassembled as a turnkey system:

- Light tower for visual part status indication
- Photo eye sensors for automated impact trigger
- Aluminum frame with adjustable table
- Laptop PC mounted on adjustable swing arm
- PLC control
- Industrial impactor and foot trigger switch
- Microphone
- LanSharc™ Smart Digital Controller
- NDT-RAM™ software

As with all Resonant Inspection systems from The Modal Shop, testing ensures fast, objective sorting of parts. Quality testing has never been easier.

### TYPICAL USES

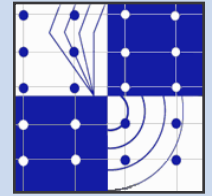
- Production - End-of-Line Inspection
- Production - Process Monitor
- Field Service - Troubleshooting
- Quality Control - Spot Checking
- Engineering - Development

### SUCCESSFUL APPLICATIONS

- Metal Injection Molding (MIM)
- Powdered Injection Molding (PIM)
- Powdered Metal
- Brazing
- Small Metal Parts
- Ceramics
- Composites
- Stampings
- Pressurized Containers

### BENEFITS

- Test: Manually loaded parts are fully inspected
- Versatility: Tests many different parts on a single system
- Ease of use: No part preparation, elaborate fixturing or magnetizing required
- Easy-to-learn and use application software
- No human interpretation needed
- Generates production report, with statistical analysis
- Industrial packaging for reliable factory operation
- Eliminates or reduces false failures
- Provides four access levels of security
- Ensures the confidence of knowing that every part is 100% QA tested
- Light tower for pass/fail indication



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A P C B GROUP CO.

Helping you test,  
model, and modify  
the behavior of  
structures and processes.

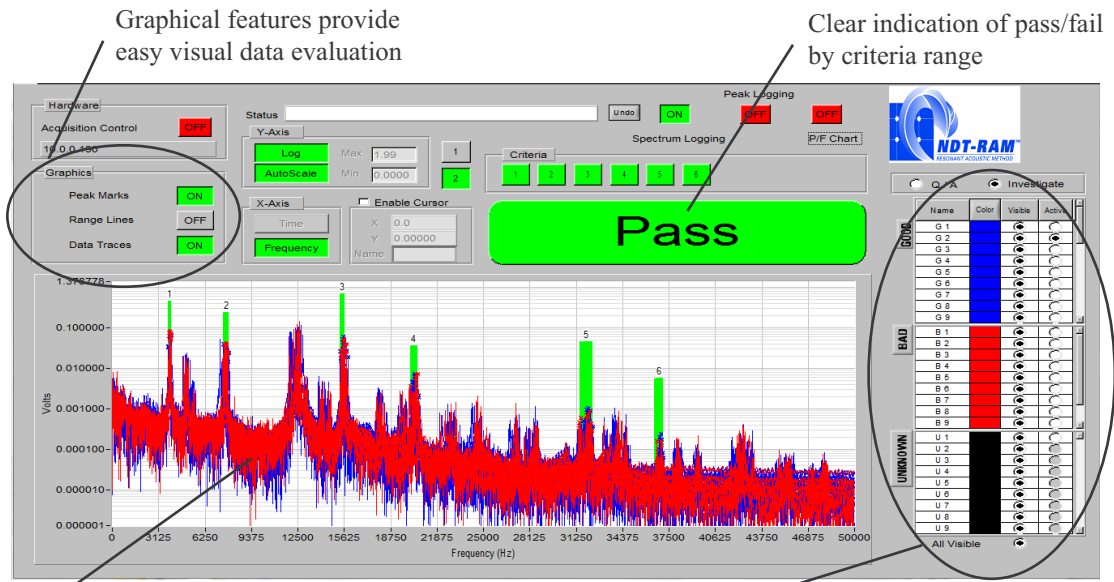
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“Simplifying with Smart Sensing Solutions”

# NDT-RAM Software Graphical User Interface

NDT-RAM Software Showing Resonant Frequencies and Sort Result



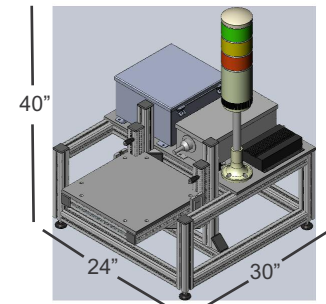
Data shows color-coded spectra for good and bad parts against acceptable criteria ranges

Investigate Mode supports up to 1500 part spectra, labeled good, bad or unknown

NDT-RAM application software compares each part's resonant signature against reference criteria limits and accepts or rejects the part accordingly. The system report generation feature allows for full part signature archival and statistical analysis of your parts and manufacturing processes.

Impact height can be adjusted by loosening the two locking handles, adjusting the platform to the proper height, and re-tightening both handles.

The light tower status indicator provides prominent visual display of passed or failed parts, green light for passed and red for failed. A system fault or error is indicated with a yellow light.



**Part Throughput**

Manual load by operator Typical 5 to 10 seconds between parts

**Pass/Fail Mechanism**

User defined criteria ranges Up to 20 frequency bands

**Acoustic Measurement**

Response sensing Prepolarized microphone - PCB 130 series  
Frequency range Up to 50 kHz

**System Control**

PLC 8 inputs/6 outputs modular expandable  
Computer Laptop PC provided

**Overall Dimensions (Width x Depth x Height)**

24 in x 30 in x 40 in (60.96 cm x 76.2 cm x 101.6 cm)

**Adjustable Table**

Height adjustment 0 – 6.25 in (0 – 158.75 mm)  
Table dimensions (length x width) 13.5 in x 13.5 in (34.29 cm x 34.29 cm)

**Weight**

90 lb (40.8 kg)

**Industrial Impactor Force**

50–500 lbf (222–2224 N)

**Part Detector via Photo Eye Sensors**

Adjustable height 0 – 4 in (0 – 101.6 mm)

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