

# PUNDIT 7

## Ultrasonic non-destructive integrity testing made easy



An essential tool for investigating the structural integrity of a wide range of materials:

- Concrete
- Ceramics and refractories
- Timber
- And many others

## PUNDIT7

PUNDIT 7 can be used in the laboratory or on site to investigate uniformity; cavities; cracks; fire/frost damage; delamination; deterioration and strength.

PUNDIT 7 is one of the PUNDIT family of instruments which are widely accepted as the world standard for ultrasonic pulse velocity testing, in terms of accuracy and reliability.

## KEY BENEFITS

- Large high visibility LCD graphics display.
- Light, portable and simple to operate.
- Remote control from a PC via the serial port.
- Produce your own control programmes on a PC to generate custom applications - ideal for research or high volume production testing.
- Largest range of transducer options (24kHz to 1MHz, exponential, waterproof and wheel probes)

## KEY FEATURES

- Signal strength indicator.
- Oscilloscope output connections to view received signal waveform.
- Integral serial port (RS232).
- Auto ranging transit time display.
- On screen display of all test settings.
- Real-time clock.
- Wide pulse repetition frequency range.
- Four transmitter voltage options.
- Auto-detecting mains power supply.
- Built-in rechargeable batteries.

## SPECIFICATION

### Transit Time Measurement

- **Range:** 0.1 $\mu$ s to 6553 $\mu$ s
- **Autoranging between two scales:**  
0.1 $\mu$ s to 999.9 $\mu$ s  
1.000ms to 6.553ms
- **Resolution:** 0.1 $\mu$ s

### Display

- **Type:** 64 x 128 dot graphics blue LCD with white LED backlight.
- **Viewing area:** 56mm x 38mm
- **Settings/status:** Displayed on screen.
- **Signal strength:** Moving bar indication of signal strength. Numerical value available from serial port.

### Transmitter

- **Energising pulse:** 1000V, 750V, 500V, 250V
- **Pulse width:** < 1.0 $\mu$ s

### Receiver

- **Bandwidth (-3dB):** 10kHz to 1.25MHz
- **Sensitivity:** 250 $\mu$ V
- **Impedance:** 500k $\Omega$

### Outputs

#### Rear Panel BNC Connectors.

- **Oscilloscope:** Received signal with 10x amplification.
- **Time base sync pulse:** 1V positive pulse
- **Analogue:** Rectangular pulse with a length equal to the non-zeroed transit time.
- **Serial Port:** RS232 9-pin D-Type connector.
- Real-time clock for date-stamping of all readings.
- Full control from PC for all settings.

### Power Supply

- **Battery:** Internal rechargeable NiMH battery pack with capacity for over 12 hours continuous use.
- **Charger:** Built-in charger.
- **Mains:** 85 - 265Vac 50/60Hz auto sensing power supply.

### Environmental

- **Operating Temperature Range:** 0°C - 40°C
- **Instrument dimensions:** 105 x 220 x 230 mm
- **Instrument weight:** 1.8kg
- **Shipping weight:** 5kg net, 6kg gross

## PUNDIT7

### PUNDIT 7 KIT:

Order code: **PCI012**

### The PUNDIT 7 is supplied as standard with:

- Two 54kHz transducers.
- Calibration Bar.
- Two 3m transducer cables.
- RS232 serial cable.
- Mains cable.
- Ultrasound couplant.
- Operating Manual, Technical Reference Manual, Bibliography and Application Notes on CD.



### Optional Extras:

- Carrying bag for easy use on site.  
Order code: **PCI012C**
- Transducers ranging from 24kHz to 1MHz in frequency - see separate data sheet.
- A range of amplifiers and attenuators to cover all applications.
- Cables of any length up to 30m.
- Couplants available to suit all testing applications.

## LITERATURE

### Standards:

EN 12504-4 and ASTM C597

### Reference Literature:

See our Technical Reference Manual and extensive Bibliography.

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