

# UK 1401 ULTRASONIC TESTER FOR CONCRETE AND NON-METALLIC MATERIALS



The UK 1401 equipment is designed for time and velocity measurements of longitudinal ultrasonic waves in materials such as concrete, rock, marble and any other similar products.

With this data, it is possible to evaluate the strength and quality of materials and structures.

The characteristic used for this estimation is the correlation between the velocity of ultrasonic waves in material and its physico-mechanical properties.

## APPLICATIONS

Measurement of ultrasonic velocity or time of flight for the evaluation of the quality of the material (strength, degradation, homogeneity, ...).

Estimation of the carrying capacity of concrete pillars and supports (method based on relation of ultrasonic velocities in different directions)

Detection near the surface of defects in concrete structures

Evaluation of porosity and fracturing in rocks, degree of anisotropy and texture in materials

## FEATURES

Dry acoustic contact, no water or grease Couplant as usually needed with ultrasonic equipments.

Automatic calculation of the ultrasonic velocity with digital display on the LCD screen (either velocity or time of flight).

Result totally independent of the degree of probe pressure.

Audio indication of valid ultrasonic signal.

Pocket size equipment.

Automatic switch-off.

Internal memory for up to 8000 measurements.

Infrared port for data transfer to an external computer.

The built-in ultrasonic probes are equipped with conical shape protectors and are firmly fixed on the lateral side of the UK1401 at a distance of 150 mm.

## TECHNICAL SPECIFICATIONS

Time of flight range (ms)	15-75
Ultrasonic velocity range (m/s)	2000-999
Time of flight accuracy (ms)	0,1
Operating ultrasonic frequency (KHz)	70
Repetition rate of the ultrasonic pulse (pulses /s)	5
Power supply	3 dry batteries 1,5V type AA or Ni Cd
Autonomy (hours)	100
Internal memory capacity	8000 measurements
Operating temperature range	-20°C to +50°C
Dimensions	181 x 65 x 31 mm
Length of ultrasonic probes	32 mm
Weight	400g

The basic set : UK 1401 unit, 3 dry batteries, bag, reference block



Russell NDE Systems Inc.  
4909-75 Avenue NW  
Edmonton, AB. T6B 2S3 Canada  
Toll Free: (800) 661-0127  
Ph: (780) 468-6800 Fax: (780) 462-9378  
e-mail: info@russelltech.com  
www.russelltech.com