



## SECTION 1: GENERAL INFORMATION

### 1.1 INTRODUCTION

Riser-Bond Instruments' Model 1205C is a multipurpose Metallic Time Domain Reflectometer, Cable Fault Locator. Model 1205C combines the latest in technology and user-friendly operation, creating the most versatile and accurate troubleshooting test set available.

Model 1205C is designed to quickly and easily locate cable faults in metallic cables. Using time domain reflectometry, or cable radar, the Model 1205C transmits a signal down the cable. Impedance discontinuities along the length of the cable reflect some or all of the signal energy back to the instrument. These reflections are measured and displayed as both a waveform and a numeric distance to the fault.

Riser-Bond Instruments' Model 1205C is Microprocessor controlled to provide the operator quick, simple, and accurate measurements of cable lengths, conditions, and faults. Digitized waveform, auto-distance calculation, and fault severity (dBRL) are all displayed simultaneously.

The Model 1205C will test all types of metallic paired cable for opens, shorts, impedance discontinuities, faulty connectors, water problems, bridge taps, load coils, rodent damage, intentional and accidental tampering, bad splices, and system components.

#### Physical Dimensions:

Height: 10.5 inches (267 mm)  
Width: 9.75 inches (247.6 mm)  
Depth: 5 inches (127 mm)  
Weight: 8 lbs (3.6 kg)

Power: Lead acid or NiCad battery pack.

Charger: 12 VAC, 1A (minimum) charger.

#### Environmental:

Operating temperature: 0°C (+32°F) to +50°C (+122°F)  
Typical temperature: -15°C (+5°F) to +60°C (+140°F)  
Storage temperature: -20°C (-4°F) to +60°C (+140°F)  
Humidity: 95% maximum relative humidity, non-condensing.

#### Display:

128 X 256 dot-matrix, Liquid Crystal Display (LCD) with  
Electroluminescent backlighting.

#### Horizontal Resolution:

<2000 ft (610 m): <.25 ft (.07 m) at .999 VOP  
<.07 ft (.02 m) at .300 VOP  
>2000 ft (610 m): 1 ft (.10 m) at any VOP

Vertical Resolution: 14 bits with 93 dots displayed on the LCD.

#### Output Pulse:

Adjustable output pulse widths of 2, 10, 100, 1000, 2000, and 4000  
nsec. Amplitude is less than +/- 5 volts.

#### Maximum Range:

63,700 feet (19,400 meters) at .999 VOP  
38,600 feet (11,700 meters) at .600 VOP  
Range varies with VOP. Maximum testable cable lengths varies  
with pulse width and cable type.

Vertical Sensitivity: Greater than 65 dB.

Distance Accuracy: +/- .5 ft (.15 m) plus +/- .01% of reading.  
*Accuracy will vary with VOP and cable type.*

#### Input Protection:

400 volts (AC+DC) from DC to 400 Hz and decreases to 10 volts  
at 1 MHz.

#### Output Impedance:

Front panel selection of 50, 75, 93, and 125 ohm, +/- 5%.

Auto dBRL: 2 digit auto dBRL calculation at cursor set.

Velocity of Propagation: Keypad selection from .300 to .999.

Waveform Storage: *All with 14 Bit vertical resolution.*

|           |                               |
|-----------|-------------------------------|
| Standard: | 4 at 12,000 samples/waveform  |
|           | 8 at 6,000 samples/waveform   |
|           | 16 at 3,000 samples/waveform  |
| Optional: | 16 at 12,000 samples/waveform |
|           | 32 at 6,000 samples/waveform  |
|           | 64 at 3,000 samples/waveform  |

#### Automatic/Manual Noise Filter:

Standard: Two averaging filters.  
Optional: Multifunction/level filter routines.

Output Connector: Front Panel Female BNC.

Serial I/O Port: RS-232

#### Accessories:

Standard: Battery pack, Battery charger, Connectors,  
Manual, WAVE-VIEW software diskettes, Shoulder  
strap, Clip-on accessory bag.  
Optional: Custom soft-side carrying case, Strand hooks  
kit, Additional waveform storage package, Additional  
filtering package, Extended warranty.