



## **Intsruction Manual**

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### **231A Multi-Network Cable Tester**

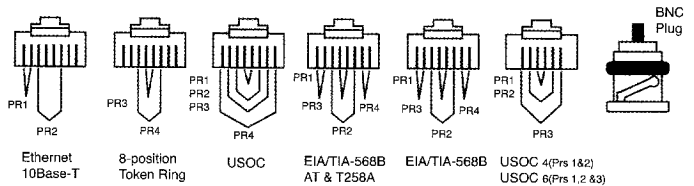
## INTRODUCTION

The 231A is an innovative, practical tester that can easily read the correct pin configuration of 10BASE-T, 10BASE-2, RJ45/RJ11 modular, 258A, TIA-568A/568B and Token Ring cables by comparing one transmitting end to the corresponding receiving end. The included remote terminator allows the user to test installed cable either at a wall jack or a patch panel. Verifying continuity and testing for faults such as open, shorted and crossed pairs has never been easier and more affordable.

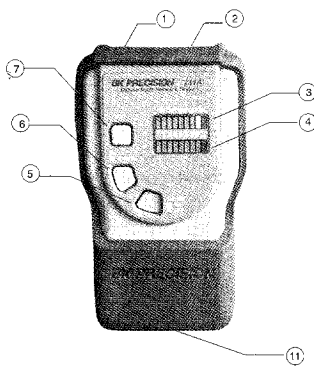
## FEATURES

- Displays the actual pin configuration of 10BASE-T and 10BASE-2 Ethernet, RJ45/RJ11 modular, 258A, Tia-586A/586B and Token Ring cables
- Provides easy to read continuity and fault status display
- Checks for continuity, open wire, shorted pair and crossed pair faults
- Allows for remote testing of installed cables from wall jack or patch panel
- Tests shield wire integrity
- Auto or manual scanning

(Diagram 1)



## PRODUCT PROFILE



(Diagram 2)

1. RJ45 JACK
2. RJ45 JACK
3. LED DISPLAY FOR SOURCING END (JACK 1)
4. LED DISPLAY FOR RECEIVING END (JACK 2)
5. POWER SWITCH
6. LED SCANNING MODE SWITCH
7. TEST SWITCH FOR MANUAL SCAN
8. RJ45 JACK
9. LED DISPLAY FOR RECEIVING END  
(SAME AS JACK 2)
10. GROUND LED FOR RECEIVING END
11. BATTERY COMPARTMENT (9V)  
(ON BACK OF THE UNIT)

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## OPERATION

### I. Loopback Test

#### 1. 10BASE-T Test

1.1 Plug one end of the tested cable into the transmitting RJ45 jack on the master unit marked with a '▲' and the other end of the cable into the remaining receiving RJ45 jack

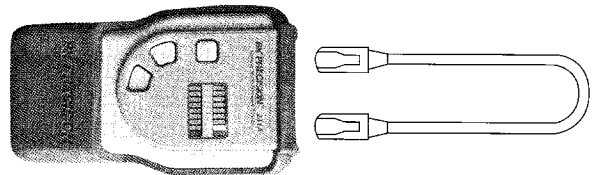
1.2 Slide power switch on. The upper row of LEDs will start to scan in sequence if the Auto/Manual button is set on "Auto" mode. The LED for pin 1 will light up if the button is in "Manual" mode

**Note: Make sure the battery power is sufficient. Insufficient battery power will lead to dimmed LEDs and incorrect results.**

1.3 Switch back and forth from Auto or Manual scanning mode by pressing the Auto/Manual button on the side of the master testing unit

1.4 Once both ends of the cable are plugged in properly, the second row of LEDs will illuminate according to the corresponding LEDs in the top row

1.5 Read the results of the LED display for the pin configuration status of the tested cable. If you fail to read the results the first time in Auto mode, you may wait for the second LED scan, or simply switch to Manual mode for pin by pin testing. In Manual mode, pressing the square "Test" button will advance testing to the next pin.

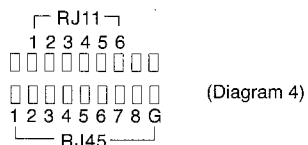


(Diagram 3)

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## 2. Modular Cable Test

2.1 Please follow directions for the 10BASE-T Cable Test and refer to Picture 4 for the correct LED pin out display



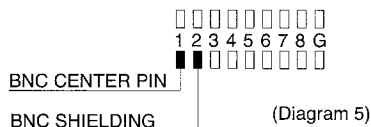
## 3. 10BASE2 Cable Test

3.1 Plug the two attached BNC adapter cables on both RJ45 jacks. Then connect the tested cable to each end of the BNC adapter cables

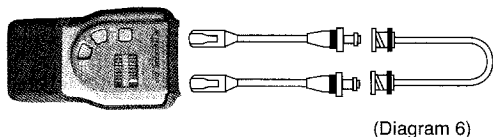
3.2 For the remaining testing procedures, please refer to steps 1.2 to 1.5

Note:

1. The center pin of BNC should be read on LED 2. Please refer to picture 5.



2. As the 10BASE-2 cable has only two wires, we suggest you read the result of the LED scan using Manual mode.



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## II. Remote Test

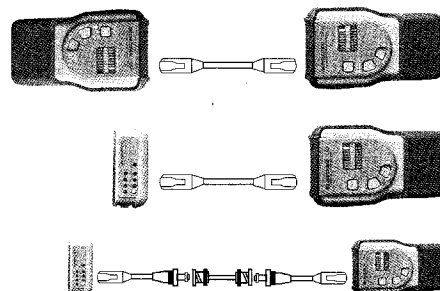
1. Plug one end of the tested cable to the transmitting RJ45 jack on the master unit marked with a '▲' and plug the other end into the remote terminator. If the tested cable is installed in a patch panel or wall plate, you may use the included patch cable to solve the connector gender problem. Please refer to pictures 7 & 8.

2. Now, set the Auto/Manual switch to Auto mode for one-person testing.

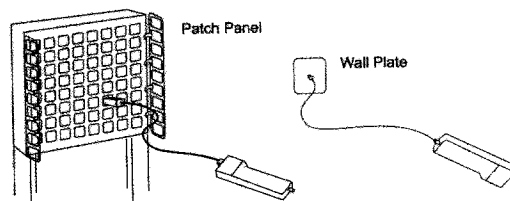
3. Read the test result from LED display on remote terminator.

**Note: The LED display on the remote unit will scan in sequence corresponding to the transmitting end of the master unit.**

(Diagram 7)



(Diagram 8)



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#### TEST RESULTS

1. Continuity: 

1	2	3	4	5	6	7	8	G
1	2	3	4	5	6	7	8	G

 Pin 2 has continuity
2. Open: 

1	2	3	4	5	6	7	8	G
1	2	3	4	5	6	7	8	G

 Pin 2 is opened
3. Short: 

1	2	3	4	5	6	7	8	G
1	2	3	4	5	6	7	8	G

 Pin 2 and Pin 3 are shorted
4. Miswire: 

1	2	3	4	5	6	7	8	G
1	2	3	4	5	6	7	8	G

 Pin 3 and Pin 6 are miswired

#### Caution:

1. Operating the tester in live circuits may damage the tester
2. Leaving the battery in the tester for long periods of time without use could drain power from the battery

## BK PRECISION®

### Limited One-Year Warranty

B&K Precision Corp. warrants to the original purchaser that its product and the component parts thereof, will be free from defects in workmanship and materials for a period of one year from the date of purchase.

B&K Precision Corp. will, without charge, repair or replace, at its' option, defective product or component parts. Returned product must be accompanied by proof of the purchase date in the form a sales receipt.

Exclusions: This warranty does not apply in the event of misuse or abuse of the product or as a result of unauthorized alterations or repairs. It is void if the serial number is alternated, defaced or removed.

B&K Precision Corp. shall not be liable for any consequential damages, including without limitation damages resulting from loss of use. Some states do not allow limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you.

This warranty gives you specific rights and you may have other rights, which vary from state-to-state.

Model Number: \_\_\_\_\_

Date Purchased: \_\_\_\_\_



## **Service Information**

**Warranty Service:** Please return the product in the original packaging with proof of purchase to the below address. Clearly state in writing the performance problem and return any leads, connectors and accessories that you are using with the device.

**Non-Warranty Service:** Return the product in the original packaging to the below address. Clearly state in writing the performance problem and return any leads, connectors and accessories that you are using with the device. Customers not on open account must include payment in the form of a money order or credit card. For the most current repair charges contact the factory before shipping the product.

Return all merchandise to B&K Precision Corp. with pre-paid shipping. The flat-rate repair charge includes return shipping to locations in North America. For overnight shipments and non-North America shipping fees contact B&K Precision Corp..

**Include with the instrument your complete return shipping address, contact name, phone number and description of problem.**