

**BK PRECISION**

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## **Instruction Manual**

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**Model 1257 NTSC Pattern Generator**



## SAFETY GUIDELINES

### WARNING

An electrical current of over 10 milliamps passing through the heart will stop most human hearts. Voltage of as low as 35Volts dc or ac rms should be considered hazardous since it can produce lethal current under certain conditions. Be sure to observe the following safety precautions:

1. There are no high voltages in the color pattern generator, but the equipment under test usually contains hazardous high voltage. Always follow the safety recommendations of the manufacturer of your equipment.
2. Some equipment may be wired as a "hot chassis" type; equipment using two-wire power plugs are always suspect and it may even include those with polarized plugs. Never touch chassis of "hot chassis" type equipment to avoid the possibility of a serious, possibly fatal electrical shock.
3. Don't expose yourself needlessly to high voltage; only remove housings and covers when necessary.
4. Familiarize yourself with the equipment being tested and the location of its high voltage points. However be aware that high voltage may appear at unexpected points in defective equipment.
5. Never work alone. Someone should be nearby to render aid if needed. Training in CPR(Cardio-pulmonary resuscitation) is highly recommended.

## Service Information

**Contact B&K Precision to receive a repair Return Authorization tracking number.** This number must be clearly written on the exterior of the shipping carton and will assist us with the processing of your return. 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.

**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.

B&K Precision Corp.  
1031 Segovia Circle  
Placentia, CA 92870  
Phone: 714-237-9220  
Facsimile: 714-237-9214

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

## Model 1257 NTSC Pattern Generator

### FEATURES:

- ◆ Tests Video Cassette Recorders, Video Disc Players And Televisions with Audio and Video or S-Video inputs
- ◆ Provides Composite Video, Audio, and S-video outputs
- ◆ Switch selectable Interlaced or Progressive scans
- ◆ Provides NTSC Color bars, Cross-hatch, Dots, Staircase, Circle, Center Cross, window, and Color Raster.
- ◆ Standard RCA connectors for Audio & Video and Min-Din for S-Video.
- ◆ Single push button selectable patterns with hold down reverse.
- ◆ Standard 9V Battery or adapter power source
- ◆ Low battery indicator

### OPERATION:

1. Place the scan type switch to the proper position for the type of unit to be tested.
  2. Connect the video and audio or S-video output which ever are appropriate to the corresponding inputs of the equipment under test.
  3. Turn on the power to both the unit under test and the NTSC Generator.
  4. Press the video pattern push-button to step to the desired pattern.
- By holding the video pattern switch, the output will scroll back to the previously displayed patterns.

## SPECIFICATIONS

### Video Pattern

Color Bars: white, yellow, cyan, green, magenta, red, blue, and black.

Crosshatch: 15 vertical x 11 horizontal white lines on black raster.

Dot: 15 vertical x 11 horizontal white dots on black raster.

Stair Case: Linear staircase signal with 5 equal steps from black to white.

Circle: Circle with 1x1 crosshatch

Raster: White, red, green, blue, yellow, cyan, magenta and black.

Window: White window on black background.

Center Cross: Centering box on screen.

**SCANNING SYSTEM :** Interlace and Progressive.

**COMPOSITE VIDEO:** 1.2V p-p into 75 ohms.

**S-VIDEO:** Chrominance output : 0.75V p-p into 75 ohms  
Luminance plus Sync Output: 1V p-p into 75 ohms

**SOUND:** 1Khz audio tone      **Dimensions:** 1.5" x 3.8" x 5.7"

**POWER:** One 9V batter or common AC adapter (not included)  
(9V DC, 100mA 5.5mm x 2.1mm center pin +)

## Controls and Indicators

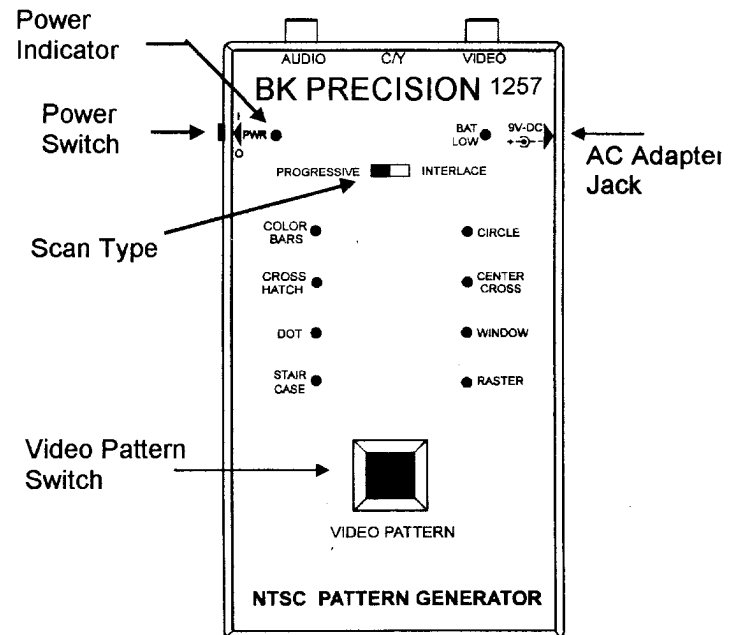
1. **Power Switch** – Power on or off
2. **Power Indicator** – LED to show when Power is on.
3. **Function Indicators** – Indicates active function color bar, cross hatch, dot, stair case, circle, center cross, window, and raster.
4. **Progressive/Interlace switch** – Selects scan type.
5. **Video Pattern** – Step through color bars, Crosshatch, Dot, Staircase and, circle, center Cross, Window, and Raster.
6. **Bat Low** – Indicates battery condition.
7. **AC Adapter Jack** – 9V DC, 100mA center pin + Adapter input.

### OUTPUTS

RCA Connector – Audio  
 RCA Connector – Video  
 Mini-Din – S Video

## NTSC PATTERN GENERATOR

### MODEL 1257



## APPLICATIONS

The B&K Precision Model 1257 NTSC Test Pattern generator is low cost, precision, television/video signal generator. It generates a variety of test signals and patterns for comprehensive testing, servicing, and adjustment of video and television equipment. Its applications include television systems, video cassette recorders and video disc players.

The instrument can generate many different patterns, each of which is available as a composite or S-video signal. The patterns include standard NTSC color bars, staircase, black raster, and a variety of purity and convergence patterns. An engineer or technician with strong knowledge of video isolate almost any video problem.

**Audio** --- The unit produces a 1 KHz sine wave for testing audio circuitry.

**Composite Video** --- the composite video output signal may be applied to the input or injected at test points of non-RF equipment or circuitry. The signal may be injected after the video detector in television receivers or other RF equipment.

### USE of PATTERNS

**COLOR BARS** --- The NTSC color bar pattern Provides a standard reference for color adjustments and troubleshooting.

**CROSSHATCH and Dot** --- The Crosshatch is preferred for dynamic convergence, linearity and pin cushion alignment. The Dot pattern is use for static convergence.

**Staircase** --- The staircase pattern is recommended for frequency equalization adjustment in the record amplifier circuit of VCR's. This Adjustment should be set for equal record currents for all steps of the staircase input signal.

**Circle** --- Used for horizontal and vertical gain adjustment.

**Center Cross** --- The center cross pattern should intersect at the center of the screen and there should be no tilt of the horizontal line. Improper centering indicates the need for centering adjustment or a deflection circuit fault. Tilt may require repositioning of the deflector Yoke. This pattern also provides a good general check of vertical and horizontal sync.

**Window** --- The window test pattern can be used for checking low-frequency distortions (ringing, smearing, streaking) and for frequency response measurements. It can be used for simple video level checks well.

**Raster** --- The full-field color test patterns (Red, Blue and Green Field) are handy diagnostic test signals to help assess the ability of a device under test (such as a color monitor) to handle individual primary color video signal components. Often the Red, Green, and Blue test signals are displayed on a monitor while adjustments are made to the yoke magnets of the monitor's tube to ensure proper display. The Red Field signal is often used to help visually detect the presence of noise introduced by a monitor. Our eyes are extremely sensitive to the presence of such noise on a field.

Black raster is often used to help time and synchronize various parts of a video system and is also used in video noise measurements.



### 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.

To obtain warranty coverage in the U.S.A., this product must be registered by completing and mailing the enclosed warranty card to B&K Precision Corp., 1031 Segovia Circle, Placentia, CA 92870 within fifteen (15) days from proof of purchase.

**Exclusions: This warranty does not apply in the event Of misuse or abuse of the product or as a result of unauthorized alternations 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: \_\_\_\_\_

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### OTHER TEST & MEASUREMENT PRODUCTS AVAILABLE FROM B&K PRECISION

B & K Precision offer many different types of electronic test equipment to suit your needs. Below is a list of the different product categories of test equipment we offer.

High-Performance Oscilloscopes  
Oscilloscope Accessories  
High Performance Multimeters  
Handheld Digital Multimeters  
Bench Top Digital Multimeter  
Digital Multimeter Accessories  
Power Supplies  
Function Generators  
Frequency Counters  
Spectrum Analyzers

SIMM Model Tester  
Universal Device Programmers  
Insulation Testers  
Digital Thermometers  
Capacitance & Semiconductor tester  
Component Testers  
LCR Meters  
Telephone Product Testers  
Video Testers  
CRT Tester/Restorer & analyzers

For more information on these products please contact B&K Precision for your local distributor or to request literature. You can contact us at:

**B&K Precision Corp. 1031 Segovia Circle • Placentia CA,  
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**PHONE (714)-237-9220 • FAX (714)-237-9214  
(800)-462-9832**

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