

Y, P_B, P_R component output, D1 connector, S connector provided



LT 436 NTSC PATTERN GENERATOR

GENERAL

The LT 436 Analog Test Signal Generator is applicable to the NTSC system. Since various patterns (e.g., still picture pattern of a lady with a carnation, monoscope pattern, color bar, 8-color raster, line sweep) are provided, resolution, color reproducibility, linearity, high-voltage regulation, character reproducibility can be tested using a single unit. With the Y, P_B, P_R component signal output and D1 and S connectors, this instrument can be used for adjusting and inspecting a variety of AV equipment.

LT 436 Rear Panel



FEATURES

Color still picture pattern

A full-color still picture pattern can be stored inside the instrument. Users can transfer and use their original date for the still picture date. The sample pattern stored inside the instrument when it is shipped from the factory is Leader's original still picture pattern. In addition, an ITE color matching chart (a lady with a carnation) is provided as a fixed color still pattern in addition to the rewritable color still picture pattern.

Monoscope pattern

The monoscope pattern with a horizontal resolution of 1000 TV lines is provided. Since color bar is superimposed on this pattern, resolution and color reproducibility can be tested simultaneously.

Y, P_B, P_R component signal output

Since component signals can be output together with the composite signal, this instrument can be used for adjusting and inspecting AV equipment equipped with component signal input.

D1 connector

D connector (D1) is built-in for digital broadcasts. *D connector is used as the component signal interface prescribed by EIAJ.

S connector

Since an S connector is provided to output Y/C separation signals, this instrument can be used for adjusting and inspecting AV equipment equipped with S connector input.

Various test patterns

Since various patterns (e.g., still picture pattern, monoscope pattern, color bar, 8-color raster) are provided, this instrument is ideal for a wide variety of adjustment and inspection applications.

SPECIFICATIONS

LT 436

Video Signal

Video Signal (Common)

Scanning System: 525 lines, interlace scanning
Field Frequency: 59.94 Hz ±25 ppm
Line Frequency: 15.734 kHz ±25 ppm
Output Impedance: 75 Ω

Composite Signal

Color System: NTSC (525/60)
Subcarrier Frequency: 3.579545 MHz ±25 ppm
Output Level
Video Level: 714 mV ±22 mV (100% white)
Sync Level: 286 mV ±9 mV
Color Burst Level: 286 mVp-p ±9 mV
Phase Error: ±3°
Output Connector: BNC, RCA jack
Number of Outputs: 1 each

Y/C Signal

Signal Specifications: Same as composite signal
Output Connector: S connector
Number of Outputs: 1

Y, P_B, P_R Signal

Y Output Level
Video Level: 700 mV ±21 mV (100% White)
Sync Level: 300 mV ±9 mV
P_B, P_R Output Level: ±350 mV ±21 mV (100% saturation)
Output Connector: BNC, D connector
Number of Outputs
BNC 1 each
D Connector 1
 * The number of active scanning lines is 483; same as the composite signal.

D Connector Output (D1)

Specifications: Conforms to EIAJ CP-4120 standards.
Video Signal
Signal Specifications: Same as Y, P_B, P_R signal
Output: Always output (Inserting a plug does not turn output off.)
Identification Signal
Lines 1, 2, 3: 0 V
DC Impedance: 10 kΩ
Auxiliary Lines
Lines 1, 2, 3: NC
Connector
Connector: D connector (conforms to EIAJ RC-5237 standards.)
Pin Assignments:

Pin No.	Signal Name	Pin No.	Signal Name
1	Y	8	Line 1
2	Y GND	9	Line 2
3	P _B	10	Auxiliary line 2
4	P _B GND	11	Line 3
5	P _R	12	Detects whether a plug is inserted. GND
6	P _R GND	13	Auxiliary line 3
7	Auxiliary line 1	14	Detects whether a plug is inserted.

Patterns

Patterns Displayed

Color Bar: Full-field color bar (100/0/100/0 or 100/0/75/0, selectable)
 SMPTE color bar (setup:0% 75/0/75/0, saturation)
 Split-field color bar(75/0/75/0, saturation)
Raster: White, yellow, cyan, green, magenta, red, blue, black (100% or 75% saturation, selectable)
Line Sweep: 0.1 to 5.0 MHz
Marker: 0.5, 1, 2, 3, 3.58, 4.5 MHz
Pulse & Bar: Modulated 12.5 T pulse, 2 T pulse, 2 T bar
Step: Level of 0 to 100% is divided into 10 equal steps, 11 levels.
Monoscope Pattern: Color component ON/OFF
 Maximum horizontal resolution: 1000 TV lines
 Scale in units of %
 Color bar superimposed
 Color component ON/OFF (including color burst)
 Black/white reversible
Convergence: 17 (V) x 14 (H) lines
 Black/white reversible
Window: Black/white reversible
Character: Alternately displays two lines corresponding to 94 (H) x 24 (V) or 47 (H) x 24 (V) alphanumeric characters.
 Black/white reversible
 * Color burst is not superimposed.

Still Picture Sample Pattern

Resolution 755 dots(H) x 483 dots(V)
 Display color 24 bits full color
 Fixed Pattern: a lady with a carnation(color matching chart conforming to ITE standards)
 * Leader Electronics Corp. encodes ITE digital standard picture data (GBR data) for this pattern.

Rewritable pattern: Original sample pattern.
Color Still Picture Storage: Date can be changed by transferring bitmap date. Windows application program for transferring date is provided.

* Note that when date is transferred, internal date is overwritten; the default sample date cannot be used after an arbitrary date transfer.

Sending Still Picture Pattern

Original Data: Windows-type bitmap data
Sending Method: Using accessory software and RS-232C connector
Time Required: Approx. 15 minutes (at baud rate of 38.4 kbps)
Accessory Software Operating Environment: Windows 95, 98, NT, 2000

Level Variable

Applicable Pattern: White raster, Window
Variable Range: 0 to 100% (continuous)

Sound Signal

Frequency: 1 kHz ±150 Hz
Output Level: 1 Vp-p ±0.1 V
Output Impedance: 10 kΩ ±2 kΩ
Output Connector: RCA jack
Number of Outputs: 2

RF Signal

Output System: M
Output Channel
JAPAN: CH10, CH11
USA: CH12, CH13
Sound Carrier Frequency: 4.5 MHz
Sound Modulation Frequency: 1 kHz ±150 Hz
Output Level: At least 0.5 mVrms
Output Impedance: 75 Ω
Output Connector: F
Number of Outputs: 1

* This model is simplified. Therefore, double-sideband modulation is used for the RF system and parameters (e.g., P/S) do not conform to official standards.

RS-232C Connector

Operation: Sending still picture pattern

Environmental Conditions

Operating Temperature Range: 0 to 40°
Operating Humidity Range: ≤ 90% RH (without condensation)
Spec-Guaranteed Temperature Range: 10 to 30°C
Spec-Guaranteed Humidity Range: ≤ to 85% RH (without condensation)
Operating Environment: Indoor use
Operating Altitude: Up to 2000 m
Overvoltage Category: II
Pollution Degree: 2

Power Requirements:

90 to 250 VAC universal, 50/60 Hz
 20 W max.

Dimensions, Weight:

213 (W) x 88 (H) x 300 (D) mm
 (excluding projections)
 3.0 kg

Accessories:

Floppy disk (LT 436 series application software) 1
 Power cord 1
 Instruction manual 1

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