

Color Pattern Generators

CG-950 SERIES

NTSC Color Pattern Generator

CG-951 (NTSC)

PAL Color Pattern Generator

CG-952 (PAL)

- ※ Remote Control Option (Factory Option)
- RF Output Option (Factory Option)

OUTLINE

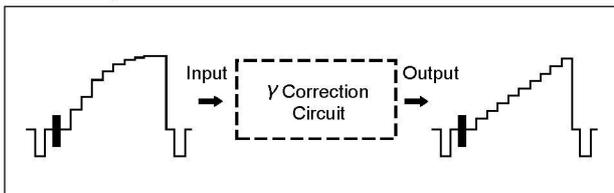
The CG-951 (NTSC)/CG-952(PAL) are color pattern generator incorporating a 10-step staircase signal generator featuring variation of the luminance level of each step, in addition to the generator of color bar, crosshatch, raster and other patterns required for adjustments and inspections of video equipment and color TV. Based on the CG-930 Series of color pattern generators highly approved with excellent cost efficiency, the CG-951/CG-952 are provided with additional new functions such as a variable 10-step staircase signal generator, RGB output and Y/C separate outputs. With its improved resolution, the CG-951/CG-952 are also compatible with a wide range of modified patterns.



FEATURES

Variable 10-Step Staircase Generator Making For Easy Adjustment of the Gamma-Corrector Circuit of LCD Displays

With both CRT and LED, the display brightness is not linearly proportional with the input signal but there is a curve for each type of display. Since the current video signal has been corrected for the curve of CRT, the color hue may be altered slightly if it is displayed on a LCD without correction. To prevent this, a very complicated adjustment using color bar signals or staircase signals with equal level intervals has been required for the gamma corrector- circuit of LCD displays. However, the CG-950 series incorporates a variable 10-step staircase signal generator which can simulate the curves. By applying a staircase signal with simulated curve, the output from the correction circuit of LCD displays can be made linear, facilitating the adjustment and reducing the adjustment process as well. The variable 10-step staircase generator can be preset to output up to 5 kinds of staircase signals.



RGB Output and Y/C Separate Outputs Provided as Standard In Addition to Composite Video Output

In addition to the composite video output for video equipment and a large variety of monitor equipment, an RGB output and Y/C separate outputs are provided as standard. An RF output can also be added optionally.

Burst Signal ON/OFF with Any Pattern

To facilitate checking of the color killer circuitry, the burst signal ON/OFF function can be used with all patterns.

Selection of 9 Raster Patterns

The raster patterns for use in the purity adjustment allow selection of intermediate colors (yellow, cyan, magenta) by combining R, G and B. As a result, 9 kinds of outputs including 100% white, 75% white, yellow, cyan, green, magenta, red, blue and black are available. The luminance and chrominance signals can additionally be switched ON/OFF.

Two Color Bar Patterns

Split color bars (SMPTE) and full-field color bars are built in. The full-field color bars are available in 8 colors including black (100% white, 75% white, yellow, cyan, green, magenta, red, blue or black). In addition to the luminance and chrominance ON/OFF switching, R, G and B can also be switched ON/OFF independently.

Setup 0%

While conventional NTSC equipment used 7.5% setup level, a 0% setup level which is becoming the new mainstream is provided.

EEPROM Memory

The panel setups and the 10-step staircase setups are stored in EEPROM so that they will not be cleared even after the power is turned off. As the EEPROM does not need a battery for back-up, there is no need to worry about battery exhaustion.

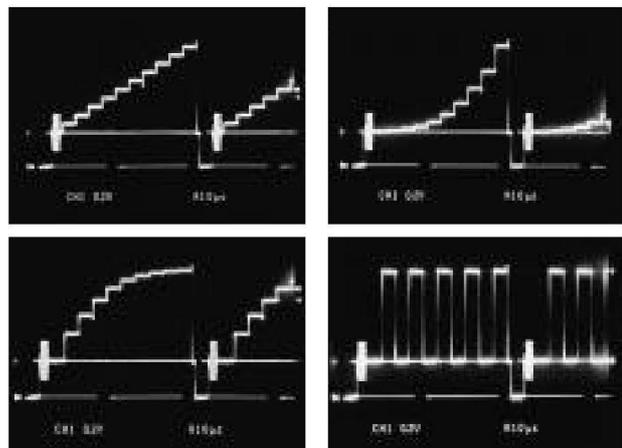
Composite Sync and Vertical Sync Outputs Provided as Standard

The sync signal output can be switched to the composite sync and vertical sync, which is convenient for waveform observation on an oscilloscope.

Example of Modified Patterns

- Horizontal color bars. ● 10-Step MOD. ● Oblique color bars.
- Circle . ● Checkers. ● Center-cross. ● Scroll.
- ※ Please consult us for the modification costs.

Examples of 10-Step Staircase Output Settings



COLOR PATTERN GENERATORS

SPECIFICATIONS

Patterns

Cross-hatch	20 (V) × 16 (H), white on black background, dot on the center, corner marker on the top left of screen
Dot	20(V) × 16(H), white on black background, corner marker on the top left of screen.
Window	0.5 × 0.5, white on black background.
Raster	100% white, 75% white, yellow, cyan, green, magenta, red, blue, black.
Color	Split-field color bars x 7 colors.
Full-field	Full-field color bars in order of luminance x 8 colors.
10-step	Full-field 10-step bars. Level resolution 100, up to 5 patterns can be preset.
R/G/B	Independent ON/OFF of R, G and B in color signals.

R	G	B	COLOR
OFF	OFF	OFF	BLACK
OFF	OFF	ON	BLUE
OFF	ON	OFF	GREEN
OFF	ON	ON	CYAN
ON	OFF	OFF	RED
ON	OFF	ON	MAGENTA
ON	ON	OFF	YELLOW
ON	ON	ON	75%WHITE

LUMI	ON/OFF of luminance component in color signals.
CHROMA	ON/OFF of chrominance component in color signals.
100% WHITE	Switching of white part in raster and color-bar patterns between 100% white and 75% white. (White in IQW (UVW) part is fixed at 100%.)
Burst	ON/OFF of color burst component in all patterns.

Video Output

Output level	CAL: 1.0 Vp-p (75Ω load) VAR: 0 to 1.5 Vp-p (75Ω load)
Output impedance	75Ω
Polarity	Positive (Sync signals are negative.)

S Output

Output level	Y+S (SYNC - 100% white): 1.0 Vp-p (75Ω load) C (Burst): 286 (300) mVp-p (75Ω load)
--------------	---

Output impedance 75Ω

RGB Outputs

RGB:	Output level 0.7 Vp-p (75Ω) Output impedance 75Ω
HD, VD:	Output level Approx. 4 Vp-p (open end) Output impedance 75Ω
Logic	Negative logic

Sync Output

Frequency (signal format)	H/V composite and vertical frequencies
Output level	Approx. 1 Vp-p (open end)

Output impedance 75Ω

Subcarrier Output

Frequency	(CG-951) 3.579545 MHz (100 Hz) (CG-952) 4.433619 MHz (100 Hz)
-----------	--

Output level Approx. 1 Vp-p (open end)

Output impedance 75Ω

Sync Signals

H scanning frequency	(CG-951) 15.734 kHz (CG-952) 15.625 kHz
V scanning frequency	(CG-951) 59.94 Hz (CG-952) 50.00 Hz

Color Burst

Min. 8 cycles at the back porch of H sync signal (ON/OFF switchable).

Remote Control (Optional)

Input connector	24-pin Amphenol
Input level	TTL level (H: 2.5 V or more or open. L: 0.8 V or less.)

Panel/remote switching 1 bit (negative logic)

Pattern and other control 7 bits

RF Output (Optional)

Output connector	(CG-951) F connector (CG-952) PAL connector
------------------	--

Modulation system Negative modulation

Output level 60dBμ or more

Output impedance 75Ω

Video frequency

	CH	A	B
CG-951	JAPAN CH	CH1 91.25MHz	CH3 97.25MHz
	USA CH	CH3 61.25MHz	CH4 67.25MHz
CG-952	EUROPE CH	CH2 48.25MHz	CH3 55.25MHz
	ITALY CH	CHA 53.75MHz	CHB 62.25MHz
	AUSTRALIA CH	CH1 57.25MHz	CH2 64.25MHz
	NEW ZEALAND CH	CH2 55.25MHz	CH3 62.25MHz
	U.K. CH	CH71 495.25MHz	CH77 543.25MHz

Temperature/humidity for

operation 0 to 40°C, RH 85% max.

Temperature/humidity for

characteristics in spec. 10 to 35°C, RH 85% max.

Power source 100, 120, 220, 230V AC ± 10% (max. 250V)
50/60Hz

Power consumption Approx. 28W

Case dimensions 212 (W) × 133 (H) × 272 (D) mm

Maximum dimensions 212 (W) × 156 (H) × 298 (D) mm

Weight Approx. 5.3kg

Accessories Instruction manual (1),
power cord (1)

CG-951/CG-952

Video output signal level

CG-951

Allowable value	75% White	Yellow	Cyan	Green	Magenta	Red	Blue	-I	100%White	Q	Burst	Black	Synced signal level
Luminance component (mVp-p) $\pm 4\%$	536	477	375	316	220	161	59	0	714	0	0	0	286
Chroma level (mVp-p) $\pm 5\%$	—	480	681	636	636	681	480	286	—	286	286	—	—
Chroma phase (deg) $\pm 5^\circ$	—	167	283	241	61	103	347	303	—	33	180	—	—

CG-952

Allowable value	75% White	Yellow	Cyan	Green	Magenta	Red	Blue	U	100%White	V	Burst	Black	Synced signal level
Luminance component (mVp-p) $\pm 4\%$	525	465	368	308	217	157	60	0	700	0	0	0	300
Chroma level (mVp-p) $\pm 5\%$	—	470	664	620	620	664	470	300	—	300	300	—	—
Chroma phase (deg) $\pm 5^\circ$	+V	—	167	283	241	61	103	347	0	—	90	135	—
	-V	—	193	77	119	299	257	13	0	—	270	225	—