

Video Pattern Generator

MODEL 2401

Key Features:

- Analog pixel rate 165MHz
- 2K x 2K Graphic size
- NTSC / PAL / SECAM signal
- S-Video / CVBS / SCART / RGB
Color Component / D-Terminal
- Bi-level SDTV format
- Tri-level HDTV Format
- Closed Caption function (NTSC)
- V-Chip function (NTSC)
- Teletext function (PAL)
- Y, Pb, Pr / Y, Cb, Cr / Y, R-Y, B-Y output
- PC remote control
- User Define Key
- Built-in variety of video timings
& patterns
- Scrolling Pattern
- USB interface
- ESD protection circuit
- Economy



VIDEO PATTERN GENERATOR MODEL 2401

Along with the rapid development of LCD TV industry, all manufacturers are facing the competition of producing high value added and low cost products; and seeking for a total test solution to meet their needs has become the first priority.

Chroma 2401 Video Pattern Generator with the features described below is specially designed to fit in the requirements and application of production line for LCD-TV manufacturers.

1. Various Analog TV Signals Support

It has many built-in standard Analog TV signal outputs, such as RGB, YPbPr, CVBS for tests in Multimedia Display, Monitor and TV production.

2. Lightweight Design

The size of Chroma 2401 VPG is close to A4 that is portable and handy for various kinds of spaces or locations.

3. Exclusive Signals

The mapped international standard signal sources are provided for diverse Video signals requirements such as the requisite TV and HDTV that are applied in the configuration of production line planning and test workstation.

4. Convenient & Rapid Function

The test programs created in advance increase the production efficiency; in addition for the frequently used function keys, users can edit the USER KEY to work with compound functions in specific test to save the test time.

5. USB Interface

The convenient USB interface can use USB Disk on PC to edit test programs, patterns and even to upload or download the upgrade programs to 2401 to reduce engineer's workload in setup and management.

6. Large Capacity

It has built in large capacity of storage memory that allows users to swap and save for different UUT without backup or download.(1000 TIMINGS and PATTERNS, 500 PROGRAMS)

7. Abundant Test Patterns

It includes standard static, dynamic and pattern screens to check the characteristics response, white balance and residual of UUT. Also it can use PC to create the test patterns required.

8. Extended Control

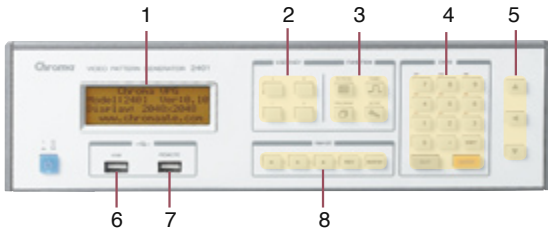
The default extended function on the front/rear panel is able to add remote control device or output control device for on-line link automatically.



Chroma

PANEL DESCRIPTIONS

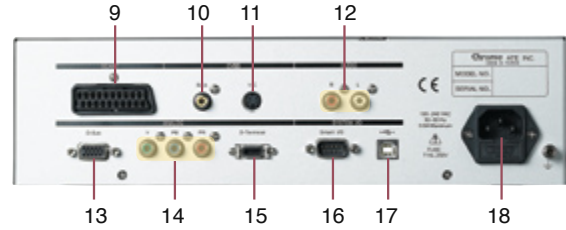
Front View



- 1. LCD Display
- 2. User Key
- 3. Function Group
- 4. Data Group
- 5. Direction Key
- 6. USB Port

- 7. Remote for Chroma optional
- 8. Image Group for signal on/off select

Rear View



- 9. SCART output
- 10. CVBS output
- 11. S-Video output
- 12. Analog Audio output: R/L
- 13. RGB/D-sub Analog output
- 14. YPbPr Component output
- 15. D-Terminal output
- 16. Smart I/O for control
- 17. Host USB port
- 18. AC Line Input

SPECIFICATIONS

ANALOG OUTPUT

Display Size	2048 x 2048
Pixel Rate Range	0.5~165MHz
Video Level	R,G,B (75 ohms) 0~1.0V programmable
Sync on Green / Level	0~0.5V On/Off programmable
White Level	0~1.2V programmable
Blank Level	7.5 IRE / 0 IRE selectable

HORIZONTAL TIMING

Total Pixels	64~8192 pixels / 2 pixels resolution
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VERTICAL TIMING

Total Pixels	4~4096 lines (non-interlace) / 1 line programmable
	4~2048 lines (interlace) / 1 line programmable

COMPOSITE SYNC

	H+V, H EXOR V, Equalization & Serration Pulse
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SEPARATE SYNC

	Hs(Xs), Vs
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VIDEO FORMAT

Video Output (D-SUB)	R, G, B Y, R-Y, B-Y Y, Cb, Cr / ITU 601 Y, Pb, Pr / ITU 709, RP177, SMPTE 240M DDC II B
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TV OUTPUT

Output Mode	NTSC	PAL						SECAM	
Subcarrier Frequency	443 4.43	M, J 3.58	BDGHI 4.43	M 3.57	60 4.43	N 4.43	Nc 3.58	4.41/ 4.25	MHz
Subcarrier Stability	±50								Hz
Video Output	Composite (RCA), S-Video								
	Burst On/Off (NTSC, PAL)								
	Contrast programmable								
	Brightness programmable								
	Saturation programmable								
Closed Caption Support (NTSC)	C1, C2, C3, C4/ T1, T2, T3, T4								
	MPAA Rating : G, PG, PG-13, R, NC-17, X								
V-CHIP (NTSC)	FCC Rating : TV-Y, TV-Y7, TV-G, TV-PG, TV-14, TV-MA								
	Canada English Rating : C, C8+, G, PG, 14+, 18+								
	Canada French Rating : G, 8 ans+, 13 ans+, 16 ans+, 18 ans+								
Teletext (PAL)	Teletext System B Level 1, 1.5								

* All specifications are subject to change without notice.

SDTV FORMAT

Timing	Progressive Mode Frame Rate (Hz)		Interlace Mode Frame Rate (Hz)		Standard
	720x483	59.94P	60/1.001		
			59.94I	59.94/2	ITU 601 SMPTE 170M
720x576	50P	50			ITU 1382
			50I	25	ITU 601

HDTV FORMAT

Timing	Progressive Mode Frame Rate (Hz)		Interlace Mode Frame Rate (Hz)		Standard
	1920x1080	60P	60	60I	
59.94P		60/1.001	59.94I	30/1.001	SMPTE 274
50P		50	50I	25	SMPTE 274
30P		30			SMPTE 274
29.97P		30/1.001			SMPTE 274
25P		25			SMPTE 274
24P		24			SMPTE 274
1920x1035			60I	30	SMPTE 240
			59.94I	30/1.001	SMPTE 240
1280x720	60P	60			SMPTE 296
	59.94P	60/1.001			SMPTE 296
	50P	50			SMPTE 296

AUDIO (ANALOG) OUTPUT

Frequency Range	50Hz ~ 20KHz
Waveform	Sine wave
Number of Channel	2 Channel (R / L)
Level Range	0V to 2V (at 600 Ohms Load)
Special Control Mode	Tone / Sweep / Mute / Repeat / Play Time

DATA STORAGE DEVICE

Default	1000 timings + 1000 patterns
Internal Memory	1000 timings + 1000 patterns + 500 programs
External Memory	USB Host interface

OTHERS

AC Input	100~240 VAC, 50~60Hz, 0.8A Maximum
Operation/Storage Temp.	+5~+40 deg.C / -20~+60 deg.C
Humidity	20~90 %

DIMENSION / WEIGHT

2401	320(W)x88(H)x240(D)mm / 3.2kg
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Developed and Manufactured by :

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