

VG-828D

Programmable Multi Signal Generator



VG-828D Can Handle Whatever Signal.

The VG-828D programmable video signal generator is equipped with a full range of output facilities including RGB analog outputs, 8-bit (max.) parallel RGB digital outputs, low-voltage serial digital (Panel Link or LVDS) outputs, and NTSC / PAL outputs. Distinguish signal corresponding to D-connector output is newly added.

Even color difference signals and tri-level sync signal are supported for the analog outputs. The software program, which is supported by Windows and which is provided as a standard accessory, facilitates the setting and registration of timing and pattern data, and it supports functions to enable user to create the special pattern data of their choice and register natural images.

Full-color bitmap displays with 16.77 million colors can be displayed. HDCP function is supported.

With a large variety of output facilities, the VG-828D can provide outputs for any kind of displays whether CRT, LCD or PDP, making it ideal for a great many applications in the technology development departments which are working with video-related equipment as well as on production lines and in inspection and maintenance operations.

VG-828D

Programmable Multi Signal Generator

multi



features

All-in-one model

The integrated design of the generator enables a wide range of output facilities, including analog outputs, parallel digital outputs, serial digital outputs and NTSC/PAL outputs.

Dot clock signals in a wide frequency range

This model supports dot clock signals in a wide frequency range of 5-250 MHz for analog outputs and 5-100 MHz in the 1/1 output mode and 10-200 MHz in the 1/2 output mode for digital parallel outputs.

Color difference signals and tri-level sync signals supported

Analog outputs can be switched between RGB signals and color difference signals at their respective timings. The user can edit and set the preferred color difference coefficient for the color difference signals. Furthermore, the generator can output tri-level sync signals complying with the set timing as video sync signals and CS signals. The separate sync signals can be individually turned ON or OFF.

D-connector output supported

Distinguish signal output of effective scanning lines • I/P • Aspect is supported. By using optional D-connector cable, it is possible to convert video signals (color difference signals) and connector type to D-connector.

Full-color output supported

Full-color displays in 16.77 million colors can be provided.

Enhanced degree of pattern setting and scroll function added

A function for scrolling in 1-dot increments vertically and horizontally has been added to compliment the conventional basic inspection patterns. (Full-screen scrolling up to 2048 x 2048 dots is possible.) By using the software program which is supported by Windows and which is provided as a standard accessory, the program data can be edited and registered and signals can be controlled using a personal computer. A function enabling users to create the special patterns of their choice and the registration of natural image is also supported. These features are powerful tools for the development and assessment of the next-generation displays and for the generation of special patterns which are invaluable for automatic equipment.

HDCP function is Supported

DVI output is equipped with HDCP function for contents protection. (supports test key and product key)

Wide range of functions

- The sync signals can be set ON or OFF manually using a panel key.
- Output video levels can be varied in real time.
- Timing data and pattern data can be independently selected.
- External control interfaces include RS-232C as well as a USB interface.
- Program data can be listed on the DUT (Display Under Test).
- Group display and auto display functions are supported.



front

machine face



rear

Programmable Multi Signal Generator

Astrodesign's VG-800 series of programmable video signal generators are very flexible video signal sources that enable users to set the video timings and create the test patterns of their choice. With complete freedom, they enable the generation of not only the video timings of existing systems such as NTSC, PAL and HiTV but also any video signals to suit the displays of personal computers and work stations with video standards whose specifications differ totally from one manufacturer to another.

The model VG-828D generator can be used in a whole host of applications including the testing, adjustment and inspection of computer displays as well as experimentation, research and development, and in uses ranging from the development of such items as video equipment, multimedia devices and medical-use video equipment to their production, servicing and maintenance. It's a product that is absolutely indispensable for workplaces with video-related equipment. Productivity can be significantly improved using just one generator.

The VG-828D proves to be invaluable:

For conducting tests, adjustments and inspections on production lines As a signal source for the research and development of video equipment For maintenance and servicing conducted on the premises of users For the acceptance inspections of imported products and the performance assessments of products to be exported

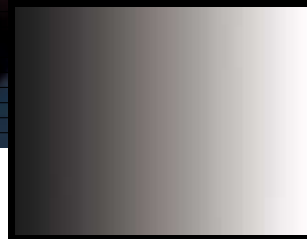
signal generator



sample



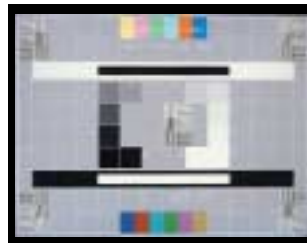
Natural image scroll



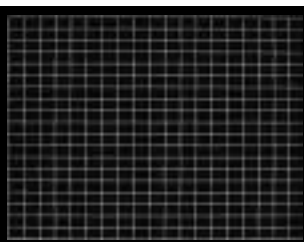
Ramp scroll



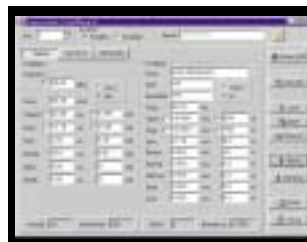
Color bars & gray scale



SMPTE color pattern



Crosshatch & dots



SP-8024 screen (Software)

Specifications

Item		Specification
Dot clock	Frequency/step	5-250 MHz(10KHz step) Parallel output (TTL, LVTTTL) 1:1, 5.0-100 MHz Parallel output (TTL, LVTTTL) 1:2, 10-200 MHz
Horizontal timing	Frequency setting accuracy Frequency/no. of dots	1-dot increment in all ranges 10-300 kHz/max. 4096 dots
Vertical timing	Frequency/no. of scanning lines	15.6-200 Hz/max. 4096 lines
Video memory/no. of colors generated simultaneously	Bitmap	4k x 4k 24 bits/ 16.77 million colors
	Window plane	1 color in 16.77 million colors for window setting using register
Analog output (BNC)	Output signals	RGB, Y/R-Y/B-Y
	Output impedance	75 Ω , fixed
	Video peak level	0.3-1.0V
	Setup level	0-0.25V
	Composite sync signal level	0-0.6V (0 to +/-0.3V with tri-level sync)
	Pedestal level	GND (auto offset)
	Level adjustment (trimmers)	Video (RGB independently adjustable) Offset (RGB adjustments coupled)
	Output control	Video output: OFF, RGB, Y/R-Y/B-Y Video sync signal: OFF, binary, tri-level
Sync signal output (BNC)	Output signals	HS, VS, CS
	Output level	More than 2V (with 75- Ω termination), +/-0.3V (with 75- Ω termination) for CS only with tri-level output
	Output control	ON/OFF, NEGA/POS1
D-conector corresponding signals (Line 1-3)	Distinguish Voltage	Line 1:3.0/2.2/5V Line2:0/5V
Parallel output (CH1, CH2)	Output signals	8 bits each for RGB HS, VS, DISP (mini D 68-pin connector x 2) CLK, SW0, SW1, SW2, SW3 VCC (output level, VCC: 5/3.3V switchable)
	Output signals	Panel Link : Single Link 25-165 MHz Dual Link : 50-260 MHz LVDS : 20-85 MHz Either one is installed
Serial output (MDR26pin,DVI)	Output signals	Panel Link : Single Link 25-165 MHz Dual Link : 50-260 MHz LVDS : 20-85 MHz Either one is installed
NTSC/PAL	Output signals	VBS, Y/C Video level, sync level and timings comply with standards (timings and levels are fixed). Frequency characteristics depend on IC frequency.
	Output impedance	75 Ω , fixed
CS pulse setting	Equalizing pulse	ON/OFF selectable
	Serration	OFF/0.5H/1H/XOR selectable
Scanning		Non-interlace
		Interlace & sync, interlace & video

Data storage

Data storage medium		Size	Model	Manufacturer
Panel ROM	EEPROM	64 Kbit	HN58C65P	Hitachi
		256 Kbit	HN58C256	Hitachi
		512 Kbit	AH-3000	Astrodesign
	EPRM	64 Kbit	2764	Various companies
Memory card	Single power supply flash card	Max. 32MB, standard 4MB	MB98A8100 series	Fujitsu

External control

Item	Specification
Remote control units	RB-614C, RB-649
Serial control	RS-232C
USB control	USB

Ratings

Item		Rating
Power supply	Supply voltage	AC 100-120V, 200-240V
	Frequency	50/60 Hz
	Power consumption	200W (max.)
Exterior	Dimensions	430(W) x 88(H) x 430(D)
	Weight	Approx. 8 kg
Environment	Ambient operating temperature	+5 +40 C
	Storage temperature	-10 +60 C
	Humidity	30-80% (no condensation)

Restrictions

The analog output and CS output Tr/Tf specifications differ from the BTA and SMPTE standards for HDTV.
The analog output and CS output Tr/Tf specifications differ from the NTSC standards.
The tri-level sync signal is set in 4-dot increments.
The VS signal is output based on the vertical reference phase point.
The level setting for the tri-level sync signal which is added to the video signals is subject to the following restriction: (Video level) (sync level). Furthermore, the amplitude level of the positive polarity sync output is coupled with the negative polarity sync output level.
The color difference signals and RGB signals cannot be output at the same time.
The NTSC/PAL output is OFF except at the estimated timing.
With NTSC/PAL, the 1:1 mode is fixed for the parallel output.
Serial output board upgrades being available in the future:170MHz LVDS (NS DS90C387) / 260MHz DVI DualISII 164) / Analog + Digital DVI-I / etc...
Please ask our sales distributors for the status accordingly.

Specifications, dimensions, etc. in this catalog are subject to change without notice due to improvements.

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