

# TG59A

# **Advanced Test Signal Generator**

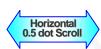














**Pull-down output** 



Bounce function



#### General

The TG59A provides HDMI output as well as HDTV 27 systems up to 1080/60P along with SDTV 8 systems. It is suitable for use as standard signal generator; evaluation and the testing of the television format corresponding to the many TV systems through its high-quality analog signal wave. The TG59A is cost performance signal generator and its easy operation is available through its simple user menu and key assignment.

The TG59A incorporates many variety of function such as HDMI Ver.1.3 output plus SD/HD-SDI output (AP type model), xvYCC evaluation image (Still pictures as an option), 2-2/2-3 pull-down output, the image scroll function (settable by 0.5 dots horizontally), bounce function and output level and the phase variable function, etc.

The TG59A is suitable and useful in many scenes such as TV sets R&D, evaluation for video engine circuits or devices, operation in production line. QC test items which are necessary for long persistence in the test signal quality on QC division will also be fit through its performance.

#### Features

- Small and light weight (approx. 7 kg) design in easy for transport.
- Excellent analog video signal waveform accuracy that exceeds the class
- TG59A has well rich output format (SDTV, HDTV, VESA) \*\* TG59 supported not over 165MHz in VESA format.

SDTV		NTSC, NTSC-4.43, PAL-B/G/D/H/I, PAL-M, PAL-N, PAL-60, 525P, 625P
HDTV	1035 line*1	60i, 60i (/1.001)
	1080 line*1	60i, 60i (/1.001), 50i, 60p, 60p (/1.001), 50p, 30p, 30p (/1.001), 25p,
		24p, 24p (/1.001), 30PsF, 30PsF (/1.001), 25PsF, 24PsF, 24PsF (/1.001)
	720 line*1	60p, 60p (/1.001), 50p, 30p, 30p (/1.001), 25p, 24p, 24p (/1.001)
	1080(1250*2) line*1	50i

\*1: Effective scanning lines \*2: Total scanning lines

HDMI Ver1.3 output as standard

12bit video data for deep color evaluation.

xvYCC (Colorbar, Special Ramp pattern, Raster) as standard.

Provide Special Pattern package for xvYCC (22 patterns). (option)

- Supports 2-2, 2-3 Pull-down function.
- Supports an effective scroll & bounce function for the evaluation of animation and the brightness response.
- Simulation by non standard signal such as level restrictions will also be made through level & phase variable functions.
- Over 50 kinds of test signal patterns for each TV format.
- Capable of BMP, TIFF, JPEG data conversion to the test signal on TG59A by standard software installed by USB.



### Specifications

Analog Video Signal Output (common TG59AX/AP)

Accuracy of output level

YPbPr Standard value within +/- 3% GBR Standard value within +/- 3%

But In case of standard value is within

300.0 mV

Standard value within +/- 100mV

C Standard value within +/- 3%

Phase contrast between channels

TV Standard value (0.0 ns) within +/- 1.0 ns VESA Standard value (0.0 ns) within +/- 1.0 ns

Frequency quality (TV format)

Y, G, B, R DC to 60 MHz, 714/700 mVp-p (= 0.0

dB) within +/- 0.3 dB

Pb, Pr DC to 30 MHz, 700 mVp-p (= 0.0dB)

within +/- 0.3 dB

S/N

TV DC to 30 MHz, 714/700 mVp-p (=0.0

dB) not over 60.0 dBrms

VESA Noise level not over 10.0 mVp-p

Linearity

TV Standard value within +/- 3%

But In case of standard value is within

300.0 mV

Standard value within +/- 100mV VESA Standard value within +/- 3%

But In case of standard value is within

300.0 mV

Standard value within +/- 100mV

Analog Audio Signal Output (common TG59AX/AP)

Channel 2ch

Frequency 400 Hz, 1 kHz, 3 kHz, MUTE Level 0 dBFS, -18 dBFS, -20 dBFS

Output Level 1.0Vp-p (0 dBFS, 600 Ω ohm dead-end)

HDMI Output (common TG59AX/AP)

Output port 2 ports
Output format YPbPr, GBR

Video output format

CEA-861D (59 Formats)

Video sampling

YPbPr (4:2:2/4:4:4), GBR (4:4:4)

Color depth 8 bit, 10 bit, 12 bit Internal audio 8ch LPCM Audio sampling frequency

32 kHz, 44.1 kHz, 48 kHz

Audio frequency 400 Hz, 1 kHz, 3 kHz, MUTE

Audio bit value 16 bit, 20 bit, 24 bit

Audio level 0 dBFS, -18 dBFS, -20 dBFS

External audioinput S/PDIF

xvYCC Supported 601, 709

Info-Frame edit function

DVI-D Output supported dot clock is 165 MHz format

Need HDMI-DVI cable option

SDI Output (TG59AP only)

Output port BNC 2 outputs (SD/HD switch)
Standards Supported SD-SDI SMPTE259M

Supported HD-SDI SMPTE292M 10bit, 4:2:2 Single link SDI output

Video output format

SDTV NTSC (525i), PAL (625i)

HDTV HDTV formats

Not support 1080/60p (59.94p), 1080/50p and 1080 (1250) /50i

Audio signal output

Standards

SD-SDI Supported SMPTE272M
HD-SDI Supported SMPTE299M
Channel Max. 8CH (common SD/HD)
Output frequency
Output level 0 dBFS, -18 dBFS, -20 dBFS

Sampling frequency 48 kHz Quantized Bit 20 bit, 24 bit

General Specifications
 Operating temperature

5°C to 40°C, 30% to 90%RH (non dew)

Power supply AC 90 to 135, 180 to 264 V / 47 to 63 Hz

Power consumption Max 300 VA

Dimensions 330 (W) x 150 (H) x 370 (D) mm

Weight Approx. 7 kg

Accessory AC cable 1 set

3P-2P convert plug 1 set
HDMI cable 1 set
Manual 1 set
Operation Manual 1 set
Test Signal Manual 1 set
RS232C I / F Manual 1 set
Image tools Manual 1 set

### Selection Guide

Model Output Signal	TG59AX	TG59AP			
Analog Signal	А	А			
HDMI1.3	А	А			
SD/HD-SDI	N/A	А			



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