ShibaSoku

Specifications

Examples of video signals


Monoscope Pattern 4:3


Monoscope Pattern 16:9

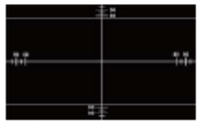

Circle 4:3


Circle 16:9


Full Colorbar


8 Colorbar

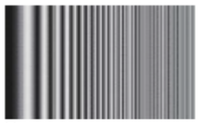

Horizontal Colorbar


Marker


Dot


Checker2

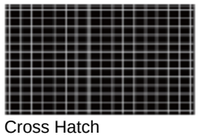

Multi Burst

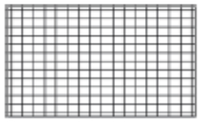

Hsweep


3Line Zebra


Stair5

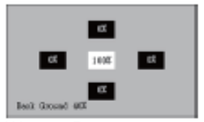

Vstair10


Cross Hatch


Cross Hatch BK


Apl


Pluge


Window Pattern


Line&Window


Line Window


Special Pattern
TG39AA010


Dining Table
TG39AA011


Stationery
TG39AA012

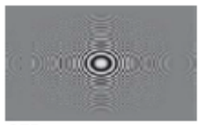

Toys
TG39AA013


Presidential Residence
TG39AA014


Lobster and Fruits
TG39AA015


Chestnuts
TG39AA016

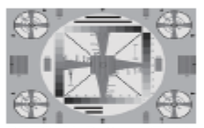

New Year's Gift
TG39AA017


CZP
TG39AA018


VSWEEP
TG39AA019


Skin Color Chart
TG39AA020


RETOMA Pattern (NTSC)
TG39AA021


RETOMA Pattern (PAL)
TG39AA021


Multi Pattern (NTSC)
TG39AA022


Multi Pattern (PAL)
TG39AA022

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ShibaSoku

TG39BC

TELEVISION INSTRUMENTS

MULTI TEST SIGNAL GENERATOR

General

This TG39BC of Multi-TV format Test Signal Generator is designed to support the testing requirements of eight television systems -NTSC, NTSC-50 Hz, NTSC-4.43 MHz, PAL, PAL-60 Hz, PAL-M, PAL-N and SECAM. Video signal generated are composite video and GBR signals, or YCBCR and S-VHS (Y/C) signals. They are also equipped with SCART connector outputs (European systems), and a combination function, with a maximum number of combined patterns is more than 50 raised to the eight power.
The RF section generates an RF signal of 30 MHz to 955 MHz. Settings for the RF signal included frequency settings, specifying the input channel (VHF, UHF and CATV), and the channel can be set easily even if its frequency is not known. When a channel has been specified and set, the standard characters of this equipment can be superimposed on the screen. A surface acoustic wave filter (SAW filter) is also built into each TV system in this equipment, giving the quality of high accuracy for all broadcasting standards. Since the vision carrier and sound carrier have an inverting function; the equipment can also be used for the French LOW channel (SECAM-L system only).
Equipped with over 100 types of standard video output signals including monoscorpe pattern, color bar, stair step, multi burst and white signals, the TG39BC signal generators are ideal for inspecting resolution, color reproducibility, frequency response, linearity, S/N and others. This generator can be used for many systems because it is provided with not only various mode selection functions for for video signals including ON/OFF toggling of burst signals, switching between color and monochrome, switching between interlace mode and non-interlace mode (262 lines/field or 312 lines/field), and switching of aspect ratio between 4:3 or 16:9, but also the scroll function.
Equipped with an external video input connector and an external audio input the TG39BC signal generators also includes models equipped with the sound MPX, teletext and closed captioning functions, offering the ideal selection of the signal generator that exactly meet any customer requirement.
Not only pursuing the versatility of television systems and signal selection but also useful functions and switch arrangement have been considered from the standpoint of operational ease. As the signal source for research and development, production facility and any other location which requires a wide range of test signals.

Features

- Conforms to eight television systems: NTSC, PAL, SECAM, PAL-M, PAL-N, NTSC-4.43 MHz, NTSC-50 Hz and PAL-60 Hz.
- Three composite analog outputs conforming to the eight television systems, are output from the front and rear. The front output VBS3, rear output VBS2, and RF video signals are provided with a vary function for internally generated video signals. Either GBR or YCR analog output, which confirms to eight television systems, is output. The GBR output can be switched to GBR or YCR.
- The TG39BC is equipped with one SCART connector and one 4-pin mini DIN connector.
- HS, VS and C.SYNC output connector, it is each equipped with one system.
- A WSS (Wide Screen Signaling) signal can be superimposed. The information in the 14 bits can be set individually.
- Scroll function is loaded. Can be set scroll speed (10 steps) and directions arbitrarily.
- The monoscope pattern signal has the 4:3 and 16:9 aspect ratio.
- In the VBS2 output, characters are superimposed (any of the same channel, RF output frequency, and V-CHIP rating for the RF output can be displayed).
- Using pattern option, natural pictures, and signal such as CZP and V SWEEP can be employed (TG39AA011 to TG39AA022).
- As an option, GP-IB unit can be built-in (TG39AA001).
- Two video signal input is equipped (BNC and RCA pins). An external signal is modulated and can be output as an RF signal. However, in case of external input, TELETEXT signal of TG39BC cannot be added.
- Internal audio oscillator generates 400 Hz, 1 kHz, sweep and sine wave audio within 50 Hz to 10 kHz in steps of 10 Hz.
- The RF signal level can be varied in steps of 0.5 dB, and video RF signal modulation can be varied in steps of 0.5%.
- The audio RF signal deviation (modulation) can be varied in steps of +/-0.5 kHz (0.5%).
- The P/S ratio in can be varied in steps of 0.5 dB in the range 0 to 30.0 dB.
- The video RF and audio RF signals can be turned on or off independently.
- The sound MPX functions corresponding to various nations can be equipped. When sound multiplex function are used, the sound carrier level of the first and second sounds (and the QPSK signal) can be varied independently.
- The teletext and the closed captioning functions can be equipped. All rating of closed captioning V-CHIP are supported.
- The closed captioning CC1 to CC4 and T1 to T4 can be set to that they can be set individually.
- The 8/30 Format1 output can be set ON and OFF. In addition, the NI (Network Identification) code can be set to any code.

●Specifications

Output signal	Specifications
Number of VBS output	Rear/2(VBS1,VBS2),Front/1(VBS3)
VBS output level	VBS1:1.0vp-p 75Ω VBS2:I/O level ratio = 1:1(External),same as VBS3(Internal) VBS3:1.0Vp-p 75Ω(0 to 150% variable)
Number of GBR/YCbCr output	Rear:1 output each(switchable)
GBR/YCbCr output level Y+Sync signal	NTSC(STD,4.43MHz):1Vp-p(714.3+285.7mVp-p) PAL (STD,60Hz,M,N):1Vp-p(700.0+300.0mVp-p)
GBR/YCbCr output level CbCr signal	700.0mVp-p(100% mode) 525.0mVp-p(75% mode)
GBR/YCbCr output level GBR signal	700.0mVp-p (G on Sync 1.0vp-p)
Number of S-VHS output	Rear/2(4-pin mini DIN, SCART)
S-VHS output level Y+Sync signal	NTSC(STD,4.43MHz):1Vp-p(714.3+285.7mVp-p) PAL (STD,60Hz,M,N):1Vp-p(700.0+300.0mVp-p)
S-VHS output level C signal	NTSC(STD, 4.43MHz) : 681.2mVp-p (Cyan) PAL (STD, 60Hz,M,N), NTSC-50Hz : 663.8mVp-p(Cyan)
Number of HS, VS, C, SYNC output	Rear/1 output each, more than 1.5Vp-p/75Ω
RF output frequency	30 to 955MHz (in steps of 50kHz),±3ppm
RF output level	29 to 109 dBμ/75Ω (in steps 0.5dB)
RF output characteristic	*Spurious : -60dB or Less (at maximum output setting) DG/DP : 3% / 3degrees or less
RF oytput P/S ratio	-30 to 0 dB (in steps of 0.5dB)
Video modulation setting	0 to 100% (in steps of 0.5%)
Audio modulation setting	0 to ±100kHz (in steps of ±0.5kHz)/0 to 100% (in steps of 0.5%)

*Except higher harmonics wave : -55dB or less

●Sound MPX signal

Two-carrier system

TV SYSTEM	NTSC-M	PAL-B/G	SECAM-D/K PAL-D/K
Country	KOREA	GERMAN	CZE
First sound carrier frequency	4.5MHz	5.5MHz	6.5MHz
Second sound carrier frequency	4.724213MHz	5.7421875MHz	6.2578125MHz
1st sound carrier frequency (video ratio)	-13dB	-13dB	-13dB
2nd sound carrier frequency (video ratio)	-20dB	-20dB	-20dB

NICAM

TV SYSTEM	PAL-B/G/D/K SECAM-L	PAL-I
Country	SCANDINAVIA CHINA FRANCE	U.K.
Sound carrier frequency	5.85MHz	6.552MHz
1st sound carrier frequency (video ratio)	-13dB(SCA, CHN) -10dB(FRA)	-13dB
2nd sound carrier frequency (video ratio)	-20dB(SCA) -25dB(CHN) -27dB(FRA)	-20dB

BTSC/FM-FM system

TV SYSTEM	NTSC-M	PAL-B/G	PAL-N	NTSC-M
Country	USA	BRAZIL	-	JAPAN
Sound carrier frequency	4.5MHz	4.5MHz	4.5MHz	4.5MHz
Sound carrier level	-10dB	-10dB	-10dB	-10dB

●Teletext, Closed captioning

	FLOF/TOP	VBI	Closed captioning
TV system	PAL-B/G/D/K/I/N	NTSC-M	NTSC-M
Superimposition line	20Hz,21,333H,334H	16H,s79H	21H, 284H(XDS is added)
Number of pictures	21 pages each	9 pages	CC1 to CC4, T1 to T4, XDS
PDC (FLOF)	4 patterns	-	-
VPS(TOP)	16H, 4 patterns	-	-

●Standard video signals

Signal Select	Aspect ratio	Types of signals	W/B	COMBI	Remarks
CIRCLE	4:3/16:9	1	A	N/A	All patterns can be superimposed.
MARKER	4:3/16:9	1	A	N/A	All patterns can be superimposed.
DOT	4:3/16:9	1	A	N/A	All patterns can be superimposed.
CROSS	4:3/16:9	1	A	N/A	All patterns can be superimposed.
COLORBAR	4:3	8	N/A	A	For NTSC and NTSC-4.43MHz, includes setup 0% or 7.5%
CHECKER	4:3/16:9	4	N/A	A	
RESOLUTION	4:3	4	N/A	A	
WHITE	4:3	12	N/A	A	
PURITY	4:3	9	N/A	A	
STAIR	4:3	12	N/A	A	
RAMP	4:3	2	N/A	A	
CROSS	4:3/16:9	10	N/A	A	
PATTERN	4:3	15	N/A	N/A	
HLINE	4:3	6	N/A	N/A	
WINDOW	4:3	16	N/A	N/A	
MONOSCOPE	4:3/16:9	2	N/A	N/A	
COMBINATION	4:3/16:9	1	N/A	N/A	

W/B : White/Black inversion

COMBI : Signal where COMBINATION pattern is possible

A : Available

N/A : Not avilable

●Options

Model name	Items or Content
TG39AA001	GP-IB unit
TG39AA010	Special pattern (composite color pattern)
TG39AA011	Natural picture (Dining table)
TG39AA012	Natural picture (Stationery)
TG39AA013	Natural picture (Toys)
TG39AA014	Natural picture (Presidential residence)
TG39AA015	Natural picture (Lobster snd fruits)
TG39AA016	Natural picture (Chestnuts)
TG39AA017	Natural picture (New year's gift)
TG39AA018	CZP (525 systems/4.2MHz Max., 625 systems/4.8MHz Max.)
TG39AA019	VSWEEP (525 systems/4.2MHz Max., 625 systems/4.8MHz Max.)
TG39AA020	Natural picture (Skin color chart)
TG39AA021	RETOMA pattern
TG39AA022	Multi pattern (composite color pattern)

● General specifications

Memory backup time	longer than 1,000hours	
Operating temperature range	0 to 40 degrees C	
Relative humidity	25% to 90% RH (no dew condensation)	
Power supply	AC 85 to 264V, 50/60Hz	
Power consumption	Max. 100VA	
Dimensions	426(W)×149(H)×360(D)mm	
Weight	Approx. 11kg	
Accessories	AC power cable	1
	3P-2P conversion connector	1
	Instruction manual	1