

TG19C Series

TELEVISION INSTRUMENTS

MULTI TEST SIGNAL GENERATOR



General

The TG19C is an all-in-one signal generator, providing for video, sound, RF and teletext signals from a single generator unit. The user-friendly control panel and unique system architecture allow users to make combined signals including Circle On/Off. Signal sets are provided for most of the world's TV systems, including NTSC, PAL, SECAM, PAL-M, PAL-N. NTSC-4.43MHz All output signals provide Composite video, GBR, YUV and Y/C (S-VHS). In addition to the video formats, the TG19C series can also generate an RF output signal of 30 to 900 MHz which can be modulated with the user-selected TV system. An internal audio oscillator provides for either modulated 400 Hz or 1 kHz sound output. Over 500 standard test signals are provided, including monoscope, color bar, stair step, and multiburst. The user may simultaneously combine waveforms to provide custom compilation signals. The TG19C is ideal for the inspection of color-ringing, resolution, frequency response, geometry response, and linearity. Facilities are also provided for switching Burst On/Off, Color/Mono, Interlace/Non-interlace, and Aspect Ratio 4:3/16:9. Three versions of the TG19C are available to provide the customer with additional cost savings: the TG19CA is the basic model, the TG19CB includes the various sound systems of the world, and the TG19CC includes teletext systems. The mono/stereo sound systems provided are those used in Japan, USA, Korea, Germany, China, UK, Scandinavia, and France. The available teletext facilities are PDC and VPS as well as TOP, FLOF, VBI, and Closed Caption. The front panel includes a control setting memory that allows up to 99 different configurations to be recalled back at high speed. An RS-232C port is also provided for remote control. The RF and Video output levels can be set to Standard or adjusted via a rotary level control. The external input signal for Video/Sound can be modulated to an RF signal (except 2-Carrier and Nicam). The Video/Sound modulation can be changed from each standard value, and can also be changed for P/S ratio. The attractive price of the TG19C series, coupled with its high quality, make it ideal for R&D applications, inspection, quality control, repair workshops, and production lines.

Features

- Supports NTSC, PAL, SECAM, PAL-M, PAL-N and NTSC-4.43MHz TV systems.
- Outputs monoscope patterns (standard) and special patterns(optional).
- Supports sound multiplexing (for USA, Germany, UK, Scandinavia, France, China, Korea, and Japan).
- Supports teletext functions (TOP/FLOF/PDC/VPS/VBI).
- Supports aspect ratios of 4:3 and 16:9.

Specifications

- Model selection guide

| | TG19CA | TG19CB | TG19CC |
|--|---------------|---------------|---------------|
| NTSC | ● | ● | ● |
| PAL | ● | ● | ● |
| SECAM | ● | ● | ● |
| PAL-M | ● | ● | ● |
| PAL-N | ● | ● | ● |
| NTSC-4.43 MHz | ● | ● | ● |
| 2-carrier MPX(Germany, Korea) | — | ● | ● |
| BTSC(USA, Brazil) | — | ● | ● |
| FM-FM(Japan) | — | ● | ● |
| NICAM (UK, China, Scanavia, France) | — | ● | ● |
| FLOF/TOP teletext | — | — | ● |
| PDC | — | — | ● |
| VPS | — | — | ● |
| VBI | — | — | ● |
| Closed caption | — | — | ● |
| VBS output | ● | ● | ● |
| GBR output | ● | ● | ● |
| YUV output | ● | ● | ● |
| Y/C output | ● | ● | ● |
| Composite sync output | ● | ● | ● |
| Video input | ● | ● | ● |
| Sound input | ● | ● | ● |
| RS-232C interface | ● | ● | ● |
| Special pattern (TG19CA001) | ● (Option) | ● (Option) | ● (Option) |

Specifications

● Video/RF signals

| System | | NTSC-M | PAL-B/G,D,I | SECAM | PAL-M | PAL-N | NTSC (4.43) |
|---|--|---|-------------|--------------------------------------|--|---------------------|---------------------|
| Test signals | | Monoscope pattern (4:3), Circle, Marker, Dot, Cross, Checker, Multiburst, Demodulation pattern (P), Window, White (0/10/25/50/75/100%), Stair (5/10 step, Mod. 5/10 step), Ramp, Mod. Ramp, Color Bar (Full/Split), Raster (W/Y/CY/G/MG/R/B/Black) *Special pattern (Option, except PAL-M) | | | | | |
| Outputs | VBS GBR YUV Y/C RF HD VD | | | 2 outputs, BNC, 75 Ω | 1 output, BNC, 75 Ω | 1 output, BNC, 75 Ω | 1 output, BNC, 75 Ω |
| Output level | VBS GBR YUV Y/C | V : 714 mVp-p ±5% S : 286 mVp-p ±5% | | | V : 700 mVp-p ±5% S : 300 mVp-p ±5% | | |
| Inputs | VBS Sound | 1 input, BNC, 75 Ω 1 input, BNC, 600 Ω unbalanced | | | | | |
| Input level | VBS Sound | 1 Vp-p ±0.2 V 0 dBm (0.775 Vrms) ±6 dB | | | | | |
| RF | | 109 dB / μV (0 to -25 dB Variable ATT / -30 dB Fixed ATT), 30 to 900 MHz (in 50 kHz increments) | | | | | |
| Video modulation Sound modulation P/S ratio | | STD : 87.5% | | VAR : 0% to 100% (except SECAM-L) | | | |
| Memory | | Up to 99 groups of setting | | | | | |
| Interface | | RS-232C | | | | | |
| General specifications | | Power supply | | AC 90 to 130, 180 to 250 V, 50/60 Hz | | | |
| | | Operating temperature range | | 0°C to 40°C | | | |
| | | Relative humidity | | 25% to 90%RH (non-dewing) | | | |
| | | Dimensions | | 426(W) x 149(H) x 360(D) mm | | | |
| | | Weight | | Approx. 11 kg | | | |

● MPX signals

| MPX | Germany | Korea | UK, Scandinavia, China, France | USA, Brazil | Japan |
|---------------------|---|---|---------------------------------------|--|------------------------------|
| Carrier frequency | 1st: 5.5 MHz, ±100 Hz 2nd: 5.7421875 MHz, ±100Hz | 1st: 4.5 MHz, ±100 Hz 2nd: 4.724213MHz, ±100Hz | I : 6.552 MHz B/G,D,K,L : 5.85 MHz | 4.5 MHz, ±100 Hz | 4.5 MHz, ±100 Hz |
| Frequency deviation | 1st: ±30 kHz 2nd: ±30 kHz | 1st: ±15 kHz 2nd: ±15 kHz | | Main: ±15 kHz S A P : ±9 kHz PILOT: ±5 kHz | Main: ±15 kHz Sub: ±6 kHz |

● Teletext signals

| Closed caption | NTSC-M 21H (CC1,CC2,T1,T2), 284H (CC3,CC4,T3,T4, XDS) | | |
|----------------|---|---|--|
| Teletext | NTSC - M | PAL-B/G,D,H,I,N | |
| | VBI: 9 pages | FLOF: 21 pages PDC: 16 H, 279 H TOP: 21 pages 20 H, 21 H 333 H,334 H VPS: 16 H | |



● Type of signals

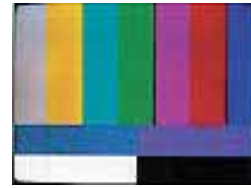
• Patterns



Monoscope pattern



Special pattern (Option)
* Except PAL-M system



Demodulation pattern

• Color Bars



Full field color bar



Split field color bar

• Stair Steps



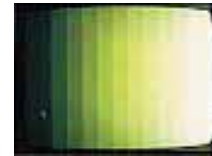
5 Step



10 Step



Mod. 5 Step



Mod. 10 Step

• Ramp



Ramp



Mod. Ramp

• Raster



White



Yellow



Cyan



Green



Magenta



Red



Blue



Black

• Others



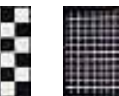
Multiburst



Window



Checker



Cross



Dot

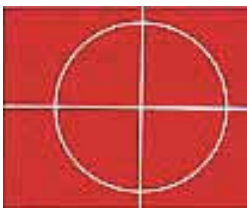


Marker



Circle

• Combined Patterns (Circle, Marker, Dot, and Cross signals are available for multiplex and other signals.)



Sample 1



Sample 2



Sample 3