TG35CX

TELEVISION INSTRUMENTS

DIGITAL TEST SIGNAL GENERATOR

General

The TG35CX is test signal generator supporting next-generation and existing HDTV, 525P, 625P, NTSC and PAL TV formats as well as VGA, SVGA, XGA and SXGA standards for multiscan monitors. In addition to the rich array of built-in test signals, the TG35CX includes a custom waveform generation function that lets users freely produce custom waveforms. This unit is also equipped with a wideband frequency synthesizer supporting clock speeds up to 160 MHz, permitting users to freely produce signal waveforms supporting Hi-Vision and perform sync settings. In addition, levels, frequencies, phase and other items for standard signals and synchronization are easily adjusted.

Analog video output of Y/CR(PR)/CB(PB), G/B/R, Y/C/VBS signals (selectable), and D1 serial digital output, are provided as standard features. Other digital outputs are available as options. A variety of interfaces are also available as options, enabling the connection of multimedia-related devices. Moving picture areas can be tested using the TG35CX's scrolling and bounce functions. Besides the test signals, still picture patterns (optional) can be generated as well.

Features

- Equipped with two sets of analog outputs that are selectable among Y/CR(PR)/CB(PB), G/B/R, and VBS/Y/C.
- Generates still pictures and two-dimensional patterns (optional).
- D1 serial digital output provided as standard equipment.
- Variety of digital outputs are available as options (standard sync only).
- Custom waveform generation function permits the generation of signals other than the standard test signals.
- Settings other than standard sync settings for items such as line frequency, field frequency and number of lines are possible.
- Custom waveform data and sync setting data can be stored on a magneto-optical (MO) disk, floppy disk or built-in hard disk.
- Smooth scrolling function enables horizontal, vertical and diagonal scrolling of output signals. The TG35CX can thus be used as a pseudo moving picture generator.
- The bounce function enables adjustment of the bounce interval.
- Genlock function provided (for standard sync only).

Specifications

- **Standard television systems**
  - NTSC-M — Conforms with EIA RS-170A
  - PAL-M/N/B/G/D/H/I
    — Conforms with CCIR Rep 624-3 or ITU-R BT.470
  - 525P — Conforms with SMPTE 293M
  - 625P — Conforms with ITU-R BT.1358
  - HDTV-1 — Conforms with BTA S-001B
  - HDTV-2 — Conforms with SMPTE 274M
  - HDTV-3 — Conforms with SMPTE 295M
  - HDTV-4 — Conforms with SMPTE 296M
- **Multi-scan monitor formats**
  - VGA/SVGA/XGA/SXGA
    — Conforms with VESA
- **Output formats**
  - NTSC/PAL — Y/CR(PR)/CB(PB), G/B/R, and VBS/Y/C.
  - HDTV/525P/625P
    — Y/CR(PR)/CB(PB) and G/B/R
  - VGA/SVGA/XGA/SXGA
    — GBR/VD/HD: HD 15-pin
  - Note: GBR is 75 Ω terminated
- **Genlock functions**
  - · Ref. sync or HD — For genlock (standard sync only)
    - NTSC/PAL composite
      — BB or VBS signal
    - NTSC/PAL component
      — Bi-level sync signal
    - 525P/625 — Bi-level sync signal
    - HDTV — Tri-level sync signal
    - VGA — Horizontal sync signal (during HD/VD sync input)
  - Lock range — Reference level operates at +3 to -6 dB
  - Lock jitter or phase for TV
    — Genlock timing error within ±2° or ±5 ns (during standard TV format)
  - Lock phase for VGA
    — Genlock timing error within ±100 ns (during standard TV format)
  - Connector type — BNC, 75 Ω, auto-terminated, × 2
  - · VD — Vertical sync signal (during HD/VD sync input)
  - Connector type — BNC, 75 Ω, auto-terminated, × 2

●Scrolling function
   Directions   Horizontal, vertical, slant or random
   Speed   Horizontal: 2 to 30 pixels/field
                 Vertical: 1 to 15 lines/field
●Bounce function Interval adjustment function
   Internal   0 to 10 fields
                 0: Bounce stop
                 10: Output ON/OFF for each period of
                 10 fields are repeated.
●Ports and interfaces
· MO disk drive   For storing 2-dimensional patterns
                  (optional), standard/custom waveform
                  data, sync data with 3.5-inch, 233MB
                  MO disks.
· Floppy disk drive For storing user-created custom
                  waveform data, sync data with 3.5-inch,
                  1.4MB floppy disks.
· Others interfaces RS-232-C, printer, key board, mouse
                  ... etc.
●Control specifications
   CPU   Pentium 200 MHz equivalent
   Main RAM   32 MB
   Built-in HDD 2.1 GB
   OS   PC-DOS J7.0/V or PC-DOS 2000
●Custom waveform generation function
· Setting contents Create test or sync signals of 1-line
                  units using functions. (possible to edit
                  standard test or sync signals)
                  Max. 32 functions can be applied to
                  each line.
                  Construct or edit vertical lines using
                  WFC.
                  Setting sync parameters (when not
                  using standard sync signals)
· Functions used RISE function
                  FALL function
                  SIN & PULSE function
                  SINE WAVE function
                  SWEEP function
                  SLOPE function
                  DOT function
· Test signal construction lines
                  Waveform data: Max. 16 types
                  Sync signal data: Max. 16 types

●Adjustable functions
                  Luminance signal level
                  Sync signal level
                  Chroma signal level
                  Burst signal level/phase/width
                  Set up level
                  Line frequency
                  Field frequency
                  Sync signal positive/negative polarity
                  Sync signal phase/width
                  SCH phase
                  Others
●Options
   TG35AX001   HD-SDI interface unit
   TG35AX002   Digital monitor interface unit (TMDS,
                 LVDS, Parallel outputs)
   TG35AX003   HDMI(complied HDCP) interface unit
   TG35BX071   ATSC 20 format sync data set
   TG35AX101   Customized waveform creation software

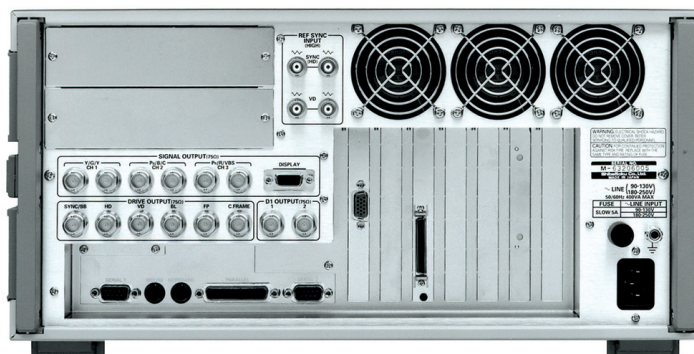Still picture patterns option (natural pictures, two-dimensional patterns)
Still picture patterns are provided by an MO disk.

Model code	Title
TG35CX021	Dining table （1SET）
TG35CX022	Stationery （1SET）
TG35CX023	Toys （1SET）
TG35CX025	White house （1SET）
TG35CX028	Omar shrimp and fruits （1SET）
TG35CX029	Chestnuts （1SET）
TG35CX032	New year's gift （1SET）
TG35CX034	High-resolution ITE chart （1SET）
TG35CX035	CZP chart （1SET）
TG35CX036	High-resolution TG91E chart （1SET）
TG35CX038	V sweep

ShibaSoku's original 8 bits pictures
Note: 1 set means a set of the same picture - one is
      YP_BP_R/GBR picture for the NTSC-M, PAL, PAL-M,
      525P, 625P, HDTV1, HDTV2, HDTV3 and
      HDTV4; the other is GBR picture for the VGA,
      SVGA, XGA and SXGA.
●General specifications
   Power supply   AC 90 to 132, 198 to 250 V, 50/60 Hz
   Power consumption
                     Approx. 400 VA
   Operating temperature range
                     5℃ to 35℃
   Relative humidity 25% to 90% RH (non-dewing)
   Dimensions   426 (W) x 199 (H) x 510 (D) mm
   Weight   Approx. 20 kg

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