

Analog Generator

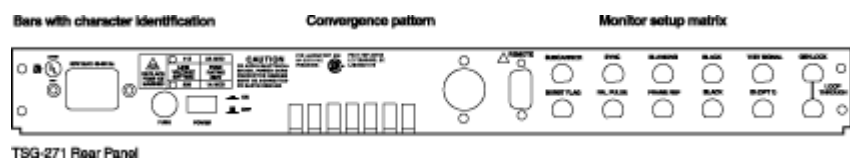
TSG271

Features

- Precise 12-Bit Digitally Derived Test Signals
- SCH Phase Accuracy, Guaranteed by Use of a Single DAC
- Conforms to EBU Statements D23 and D25
- Stable Internal Reference, Ideal for Master Sync Operation
- Reliable Slave Operation Through Use of Digital Genlock
- Separate Front Panel Genlock and Sync Timing Controls

Applications

- Test Signal and Sync Generation for Broadcast and Post Production
- Equipment Maintenance
- Digital Composite Plant Operations



TSG-271 Rear Panel

TSG271 rear panel.

The TSG271 PAL Television Generator provides a comprehensive set of test signals integrated with a high stability master sync generator. The TSG271 is well suited for operational applications as well as equipment performance verification and maintenance.

Test Signals

The TSG271 uses digital signal generation and a precision 12-Bit DAC to ensure test signal accuracy and long term stability. Digital generation of the composite PAL signal, without analog modulators, allows use of a

single DAC to inherently match chrominance and luminance timing. This ensures accurate SCH phasing. With the TSG271's simple front panel controls you can select the following test signals:

- Color bars
- Color bars over red
- Pluge
- Convergence
- White window
- Grey window
- Ramp
- Modulated ramp
- Staircase
- Modulated staircase
- Pulse and bar with window
- Field squarewave
- Multipulse
- Multiburst
- Line sweep
- $(\sin x)/x$
- Flat fields
- Red field
- ITS (CCIR, EBU, UK)
- APL level

Both 100% and 75% color bars over red are provided with a narrow blanking white flag to help verify proper blanking width throughout the system. Color bar signals are also available with normal blanking width.

Composite video outputs, both test signal and black burst, include a white pulse inserted on line 7 of field 1 for color-frame identification.

The ITS signals are available as full field signals and in the field blanking interval.

Sync Generator with Digital Genlock

The TSG271 sync generator's stable color standard and unique digital genlock make it ideal for either master generator or slave operation. All outputs are correctly SCH phased, even if the TSG271 is locked to an improperly SCH phased reference input. The digital genlock calculates sync timing and subcarrier phase to properly identify color framing of the reference signal. The TSG271 automatically senses composite video reference input and, in the absence of a reference input signal, automatically switches to its own internal reference. With its constant temperature oven, this high stability crystal oscillator ensures long term frequency stability.

Flexible Timing Controls

Front panel controls allow phasing of all outputs relative to the genlock source. In addition, a separate set of timing controls move the pulse outputs relative to the black burst and test signal outputs. This simplifies system timing and eliminates delay lines. All timing settings are stored in nonvolatile memory to prevent loss in the event of a power failure. A front panel lockout feature prevents inadvertent changes to the front panel timing controls.

Remote Control

Remote selection of internal/external reference, ID preset, genlock and sync timing presets, test signal and tape leader count-down is provided. Selections are made with ground closures through a rear panel connector.

Packaging

The TSG271's rugged 1.75 inch package makes it ideal for outside broadcast vans, or anywhere space is at a premium.