

# TSG-271 PAL Television Generator

## TEST SIGNAL GENERATOR (CONTINUED)

(Sin x)/x	
Bandwidth	6 MHz
Pedestal	124.9 mV
Peak	575.1 mV
Flat Fields	0 mV, 350 mV, and 700 mV
Red Field	
Luminance Pedestal	157 mV
Chrominance Amplitude	663.8 mV
ITS	
CCIR	Lines 17, 18, 330, and 331
EBU	Lines 17, 18, 330, and 331
UK	ITS 1 and ITS 2
APL	12.5% and 87.5%; sequence is 36 lines flat field and 12 lines test signal

## SYNC GENERATOR

Subcarrier Output	
Frequency	4.43361875 MHz
Stability	±1 Hz over temperature; typically less than 1ppm per year drift after initial aging
Amplitude	2 V ±0.2 V
Return Loss	30 dB to 4.43 MHz
Black Burst Output	
Phasing	Within 2° of the test signal output
Pulse Outputs (General Characteristics)	
Amplitude	2 V ±0.2 V (4 V selectable)
Impedance	75 Ω
Return Loss	30 dB to 5 MHz
Risetime	250 ns ±25 ns
Pulse Outputs (Signals)	
Sync	Mixed line and field
Blanking	Mixed line and field
Line	11.84 ±0.1 μs (11.6 or 12.1 selectable)
Field	25 lines (24 selectable)
Burst Flag	
PAL Pulse	H/2 squarewave; selectable polarity; factory set high for 135°

Frame Reference	Selectable pulse or squarewave
Pulse	Low for line 7, field 1
Squarewave	Low for fields 1 through 4

The Frame Reference output may be user configured to provide a second comp sync output.

## Pulse Outputs (Timing Range)

Approximately 3.5 μs advance and delay relative to the test signal, black burst, and subcarrier outputs

## GENLOCK

Genlock Input	
Configuration	75 Ω loop through
Return Loss	≥40 dB to 5 MHz
Burst Amplitude	300 mV ±6 dB
Sync Amplitude	300 mV ±6 dB
Burst Lock Range	4.43361875 MHz ±20 Hz
Jitter	
Color Lock	≤0.4 typical
Monochrome Lock	≤10 ns
Genlock Timing Range	
Line	Approximately 7 μs advance and delay
Field	1 line advance and delay

## POWER SOURCE

Mains	
Voltage Range	90 to 132 Vac or 180 to 250Vac
Power Consumption	40 W typical, 60 W maximum

## ENVIRONMENTAL

Temperature	
Operating	0°C to 40°C
Non-Operating	-40°C to 65°C

## PHYSICAL CHARACTERISTICS

Dimensions	mm	in
Height	44.0	1.734
Width	483.0	19.0
Depth	561.0	22.1
Weight	kg	lb
Net	6.14	13.5
Shipping	10.4	22.9

## ORDERING INFORMATION

When ordering, please use the following nomenclature.  
**TSG-271 PAL Television Generator**

### OPTION

- Option 01** — Adds Character ID, Audio Tone, and Tape Leader Countdown  
**Kit to add Option 01 to the TSG-271** — Order TVGF02
- Option M2** — Remedial Service Support
- Option M8** — Calibration Service