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Analog Generator

SPG170A



SPG170A NTSC Sync Generator.

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FEATURES

- Digitally Generated Black Burst
- Digital Genlock
- High Stability Internal Reference
- Configurable Pulse Outputs
- Pulse Timing Independent of Black
- Four Character ID Presets
- Eight Genlock and Sync Timing Presets
- Remote Control
- Optional SMPTE Color Bars, ID and Audio Tone

APPLICATIONS

- Master or Slave Sync Generation in Broadcast or Post Production Facilities

The SPG170A sync generator offers all the features expected in a sync generator, plus the advantages of digital accuracy and system flexibility. Ideal for either master or slave generator operation, the SPG170A features stable performance and a rugged 1.75 in. package. The SPG170A Option 1 provides even more versatility by adding SMPTE color bars with programmable identification and audio tone.

Digital Accuracy

All SPG170A signals are digitally generated to provide excellent SCH and timing accuracy. The SPG170A also has a digital genlock to ensure consistent color framing and to eliminate timing drift inherent in other genlock systems. This microprocessor-based system calculates genlock input burst phase and sync timing to control output timing and color framing. All outputs are correctly SCH phased, even if the SPG170A is locked to an improperly SCH phased input. When no input signal is present, it switches to an internal oscillator. This high stability crystal oscillator, enclosed in a constant temperature oven, ensures long term frequency accuracy and stability.

SMPTE Color Bars with ID and Audio Tone (Option 1).



System Flexibility

The flexibility of the SPG170A's pulse outputs allows you to configure it to your specific system needs. The SPG170A has eight sync generator outputs: SYNC, SUBCARRIER, BLANKING, BLACK BURST and four selectable outputs. The selectable outputs can be used for BURST FLAG, H DRIVE V DRIVE and COLOR FRAME PULSE, or they can be used to provide an additional set of outputs for the pulses most commonly used in modern television facilities. Horizontal blanking can be set to 10.5, 10.7 or 10.9 μ s and vertical blanking can be set to either 19 or 20 lines.

Front panel controls are provided for phasing of all outputs relative to the genlock source. In addition, a separate set of timing controls is provided to move the pulse and subcarrier outputs relative to the black burst and test signal outputs. This simplifies system timing and eliminates delay lines. Up to eight genlock and sync timing settings may be stored in nonvolatile memory to prevent loss in the event of a power failure. The timing presets may be recalled through the remote control port. A front panel lockout feature prevents inadvertent changes to the front panel timing controls.

By specifying Option 1, basic video and audio test capabilities are added to the SPG170A. Option 1 includes SMPTE color bars and audio tone generators for setting program levels. Also, a preset ID of up to 12 characters can be added over the SMPTE color bar output. This ID is stored in nonvolatile memory from the front panel, and up to four preset IDs can be recalled through the remote control. Additionally, the remote control allows the ID to be replaced by a countdown, providing a tape leader function. The vertically locked 450 Hz audio tone provides a unique method for checking audio edit quality. The audio tone can be combined with a variable rate click to distinguish various audio sources.

Total System Solution

Tektronix provides a cost-effective solution to your sync and test signal requirements. The SPG170A NTSC Sync Generator is ideal in a master sync system with the ECO170A Synchronous Changeover and TSG170A NTSC Television Generator.

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