

## Model 5405

### Dual Analog Sync Generator

The 5405 Dual Analog Sync Generator is a stable video timing source that is perfect for local reference generation in broadcast, remote trucks and post. Two dual independent composite reference signals are generated.

The 5405 can operate from an internal precision frequency reference as a stand-alone Master Sync Generator or lock to a video reference. For the ultimate in precision, the 5405 can lock to an external 10 MHz source, such as an atomic standard or GPS receiver.

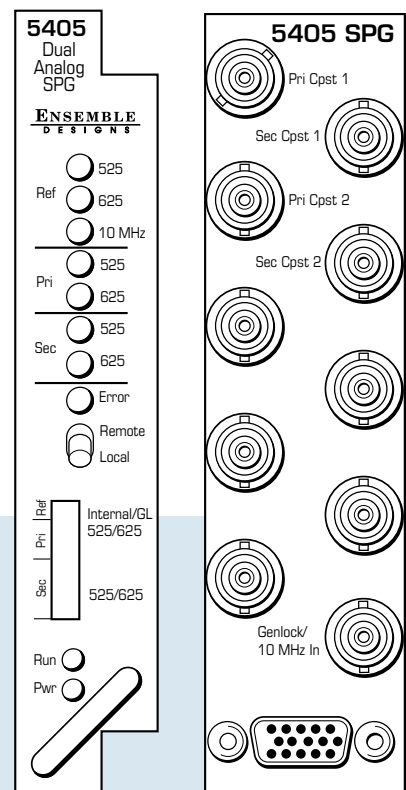
The primary output consists of two identical composite outputs. A separate pair of composite outputs form the secondary sync generator. Facilities that require multiple outputs can use the 5150 Distribution Amplifier module in conjunction with the 5405.

Each output set can be timed with respect to the reference to any point in the television frame. Color framing tracks the reference signal. Timing adjustments for primary and secondary outputs are configured independently. The 5405 can be configured to output 525 and 625 standards simultaneously. The secondary output can also track the primary.

Module control and monitoring is accessed through an Avenue Control Panel, and/or an Avenue PC.

#### Features

- » Use as Master Sync Gen or lock to external reference or GPS
- » Two pair of composite outputs
- » Primary and secondary outputs are independently timeable
- » Can provide 525 and 625 outputs simultaneously
- » Remote control, monitoring and alarms



**Reference Input**

Number Two: External or Frame Master Reference  
Signal Type 1 V P-P PAL, NTSC, or 10 MHz  
Return Loss >40 dB DC to 5.5 MHz

**Composite Outputs**

Number Two Primary, Two Secondary  
Signal Type NTSC/PAL  
Impedance 75 Ω  
Return Loss >40 dB DC to 5.5 MHz  
Frequency Response ±0.1 dB, 0 to 5.0 MHz  
Output DC ±50 mV  
K Factor <1.0%  
Differential Phase <1.0 degree  
SCH Phase ±2 degrees  
Delay Adjustable over full frame in sub-degree steps  
Color Framing Tracks Ref, user selectable

**Accuracy and Timing Stability**

Internal TCXO  
PAL Fsc 4.43361875 MHz ±1 Hz  
NTSC Fsc 3.579545 MHz ±1 Hz  
Long Term Drift <1 ppm/year  
Analog Jitter <1 ns  
Genlock (External or Master Reference)

**General Specifications**

Power Consumption 10 watts  
Temperature Range 0 to 40°C ambient (all specs met)  
Relative Humidity 0 to 95%, noncondensing  
Altitude 0 to 10,000 ft

