



## MTS-5 BTSC STEREO GENERATOR



Leaming Industries' MTS-5 BTSC stereo generator provides cable systems with a high quality BTSC (stereo TV audio) signal while conserving rack space. Each MTS-5 is self-powered and up to two MTS-5s may be mounted into one 1-3/4" rack space. Each MTS-5 accepts Left and Right baseband audio (usually from a VCII) and generates a BTSC stereo signal.

For versatility in interfacing the generator with a TV modulator, the MTS-5 provides composite baseband and 4.5 MHz outputs, as well as separate video and 4.5 MHz loop-throughs. Therefore, the MTS-5 can be used with most TV modulators.

The Built-in Stereo and SAP AGC's (Automatic Gain Control) are provided to maintain average program levels within a reasonable range without reducing the dynamic range to the extent that quiet passages are no longer quiet and loud passages are no longer loud. It includes a gated-gain low-distortion compandor with a fast attack and slow release. When the program level falls over 20 dB below normal, the compandor assumes that there is a pause in the program and holds its gain setting for 10 seconds. The compandor then slowly resets its gain to 0 dB. The AGC is enabled by a front panel switch. All controls are easily accessible from the front panel. A Bessel-null test-tone is built in for simple and accurate set-up when using the composite baseband output.

### FEATURES:

- Compact design: Two (2) MTS-5s mount into one 1-3/4" rack space
- True Automatic Gain Control (AGC) reduces routine level adjustments
- Bessel-null test-tone for simple, accurate installation
- Dual 10-segment audio level LED bargraphs

- Baseband and 4.5 MHz outputs standard
- Dual stereo inputs for local ad insertion
- Typical stereo separation greater than 30 dB
- Frequency Response flat out to 14 kHz
- Optional SAP (Second Audio Program) can be added inside
- dbx licensed companding (true BTSC format)

## SPECIFICATIONS

### OVERALL PERFORMANCE

#### FREQUENCY RESPONSE:

20 Hz to 14 kHz,  $\pm 1$  dB

SAP: 20 Hz to 10 kHz,  $\pm 1$  dB

#### DISTORTION:

0.5% maximum THD

#### SEPARATION:

>26 dB, 20 Hz - 13.5 kHz

>30 dB, 20 Hz - 10 kHz, typical

#### SIGNAL-TO-NOISE RATIO:

>65 dB, overall through receiver and expander

#### PILOT REJECTION:

>50 dB

#### COMPRESSORS, L-R & SAP:

dbx licensed (BTSC Standard)

#### DISTORTION:

Stereo: 0.5% max THD

SAP: 1% max THD

#### SIGNAL-TO-NOISE RATIO:

>65 dB, overall through receiver and expander

#### PILOT REJECTION:

>60 dB

#### AUDIO PROCESSING:

Automatic Gain Control (AGC)

2:1 Compressor (dB),  $\pm 10$  dB

#### TEST TONE:

2.5 V<sub>p-p</sub> at 10.4 kHz

First Bessel-Null Frequency for 25 kHz deviation of audio carrier

#### AUDIO BASEBAND INPUT

#### NOMINAL INPUT LEVEL (APL):

0 dBm, adjustable  $\pm 10$  dB

(Peak Program Level is 10 dB above APL)

#### AUDIO INPUT IMPEDANCE:

100 k-ohms, balanced

#### BTSC OUTPUTS

#### COMPOSITE STEREO BASEBAND OUTPUT LEVEL:

5 V<sub>p-p</sub> into hi-Z load

(Source imp. 75 ohms)

#### 4.5 MHz OUTPUT:

4.5 MHz Output Level  
    .4 V<sub>p-p</sub> into 75-ohm loop, adjustable  
4.5 MHz Harmonics  
    -50 dB re .250 V p-p or better  
Deviation, peak  
    ±25 kHz, mono  
    ±50 kHz, stereo  
    ±100 kHz, maximum  
Audio Carrier Stability  
    Frequency-locked to horizontal sync

#### FRONT PANEL INDICATORS

L&R Peak-reading 10-segment LED bargraphs  
A & B Input selection LED  
Video Sync/4.5 MHz Carrier Frequency Unlocked LED  
Stereo Mode LED  
AGC ok

#### FRONT PANEL CONTROLS

Input Level ("A" L&R and "B" L&R)  
A/B Input Switch with remote position  
Stereo/Mono/Test Switch  
4.5 MHz Carrier Level  
AGC and SAP on and off

#### CONNECTORS

Four F-type (BNC optional):  
    4.5 MHz Output Loop  
    Video (sync) Input Loop  
Remaining connectors are detachable  
screw-terminal plug blocks:  
Two 5-pin plug blocks:  
    "A" Audio Input and "B" Audio Input:  
    Pin 1      Right +  
    Pin 2      Right -  
    Pin 3      Ground  
    Pin 4      Left +  
    Pin 5      Left -  
One 4-pin plug block:  
    Pin 1      SAP  
    Pin 2      Ground  
    Pin 3      BTSC Composite Baseband Output  
    Pin 4      Ground  
One 5-pin plug block:  
    Pin 1      A/B Input Select  
    Pin 2      Sync Output  
    Pin 3      Ground  
    Pin 4      18 V Out  
    Pin 5      SAP Remote

#### Optional

SAP (Second Audio Program) board can be added at any time

#### POWER AND MECHANICAL

#### POWER:

105-125 V, 50-60 Hz, 10 Watts

SIZE:

1.6" H x 8.75" W x 18" D  
Mounts on 1/2 of a PMU422 19" panel mount

WEIGHT:

3-1/2 lb. net, 6 lb. shipping

Specifications subject to change without notice.

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