

# AS953B

## TELEVISION INSTRUMENTS

### MPX TV SOUND SIGNAL GENERATOR



#### General

The AS953B MPX TV sound signal generator, based on the sound subcarrier system, is designed for the inspection, adjustment and design of sound multiplex receiver and tuner demodulator circuitry. In addition, if the TV channel signal generator is modulated with the unit's signal, it can also be used for the inspection and adjustment of the sound circuitry of receivers as TV signals.

When the AS953B's built-in oscillator is set to a single signal input, 100 Hz, 400 Hz, 1 kHz, 3 kHz and 7.5 kHz signals are available as well as external signals. Adjustments and inspections are quickly and easily performed using the soft fingertip control function switches (MONO, L+R, L, R, L - R, MAIN, and SUB). When set to a dual signal input, the main channel and sub channel signals can be selected independently with the external signal, which makes the AS953B ideal for inspections involving stereo signals and other multiplex signal programs.

The sub channel output band-pass filter can be switched ON and OFF, and since a delay equalizer circuit is incorporated into the band-pass filter, FM signals with minimal distortion, even through the band-pass filter, can be obtained.

The AS953B is also equipped with built-in oscillation frequency, function, mode, and output signal remote control functions for enhanced operational ease.

#### Features

- MONO, L+R, L, R, L - R, MAIN, SUB functions are provided.
- Suitable for Stereo products.
- Individual MAIN, SUB, PILOT signals are provided.

#### Specifications

- Input signals
  - Main channel section (MAIN/L)
    - Number of inputs 1
    - Connector type BNC,  $600 \Omega \pm 5\%$ , unbalanced
    - Input level 0 dBm
    - Pre-emphasis 75  $\mu$ s, ON/OFF selectable
    - Frequency response
      - $\pm 0.5$  dB, 50 Hz to 12 kHz
    - Distortion  $< 0.05\%$
    - S/N ratio  $> 80$  dB (at 1 kHz, 0 dBm reference)
    - Line delay 15 to 25  $\mu$ s  
(variable in 1  $\mu$ s increments)
  - Sub channel section (SUB/R)
    - Number of inputs 1
    - Connector type BNC,  $600 \Omega \pm 5\%$ , unbalanced
    - Input level 0 dBm
    - Pre-emphasis 75  $\mu$ s, ON/OFF selectable
    - Subcarrier frequency 31.468 kHz (2fH),  $\pm 1 \times 10^{-4}$
    - External sync Synchronized to fH
    - Frequency deviation Max. 10 kHz (at 100% modulation)
    - Frequency response
      - $\pm 0.5$  dB, 50 Hz to 7 kHz
      - +0 to -1 dB, 7 to 10 kHz
      - +0 to -1.5 dB, 10 to 12 kHz
    - S/N ratio  $> 65$  dB (at 400 Hz, 0 dBm reference)
    - Distortion  $< 0.5\%$ , 50 Hz to 1 kHz  
 $< (fm/2000)\%$ , 1 to 12 kHz  
fm = frequency modulation
- Crosstalk
  - Main to sub channel
    - $< -60$  dB, 50 Hz to 7 kHz
    - $< -50$  dB, 7 to 12 kHz
  - Sub to main channel
    - $< -60$  dB, 50 Hz to 1 kHz
    - $< -50$  dB, 1 to 7 kHz
    - $< -40$  dB, 7 to 12 kHz
- Stereo separation  $> 40$  dB (at 1 kHz reference)

Specifications

- Control channel (pilot signal)
  - Control subcarrier frequency 55.069 kHz (3.5 fH)
  - Modulation frequency 922.5 Hz (MPX program)  
982.5 Hz (stereo program)
  - Modulation 60% AM
- Output signals
  - Number of outputs 3 (600 Ω x 1 or 75 Ω x 2, selectable)
  - Connector type BNC, 600 or 75 Ω, unbalanced
  - Main channel output level 0 dBm, 600 Ω  
2.2 Vp-p, 75 Ω
  - Sub channel output level 0.8 times main channel output (100%)  
for stereo signals  
0.6 times main channel output (100%)  
for MPX programs
  - Control channel (Pilot signal) output level 0.08 times (peak value) main channel  
output (100%)
  - Note: Output values given when terminated with rated  
impedance.
  - Output attenuator 0 to 40 dB (variable in 10 dB increments)
- Built-in oscillator
  - Output frequency 100, 400 Hz, 1, 3, 7.5 kHz
  - Distortion <0.03%
- Subcarrier sync (fH) input
  - Input level 1 to 5 Vp-p
  - Frequency range 15.734 kHz ± 10 Hz
- Remote control Negative logic, TTL level
- General specifications
  - Power supply AC 100 to 240 V ± 10%, 50/60 Hz
  - Power consumption Approx. 30 VA
  - Operating temperature range 0°C to 40°C
  - Relative humidity 25% to 90% RH (non-dewing)
  - Dimensions 426 (W) x 149 (H) x 360 (D) mm
  - Weight Approx. 10 kg

Discontinued

