

RT20A

TELEVISION INSTRUMENTS

TV CHANNEL SIGNAL GENERATOR



General

RT20A is TV Channel Signal Generator to convert to the designated one TV channel of VHF or UHF.

Features

- Small body as 50 mm (H), and high power output as 127 dB/75 Ω
- Equipped below output display functions:
 - Vision modulation (%), Sound modulation (kHz, %), RF output level, Sound carrier
- Sync signal modulation is adjustable +/- 10 % against rated value
- Equipped position variable (vertical/horizontal) and ON/OFF function of character signal
- Equipped BNC (unbalanced) and CANNON (balanced) connector for sound input terminal
- Vision carrier and Sound carrier can be ON/OFF independently

Specifications

- Input signals
 - Video signal
 - Input level 1.0 Vp-p/75 Ω
 - Input connector BNC-R, 1 line
 - With 75 Ω IN/OUT function (by front panel switch)
 - Sound signal
 - Input level Balanced input: 0 dBm/600 Ω
 - Unbalanced input: 0 dBm/600 Ω or 1 Vp-p/75 Ω
 - Input connector Balanced input: CANNON connector 1 line
 - Unbalance input: BNC-R 1 line
 - With 75 Ω/600 Ω changing function (by front panel switch)
 - Available high-impedance setting (by internal switch)
 - Frequency range 40 Hz to 100 kHz: PRE-EMP OUT
 - 40 Hz to 15 kHz: PRE-EMP IN
- Sound IF signal
 - Input level 100 dB/50 Ω, +/- 1 dB
 - Input connector BNC-R, 1 line
 - If do not use sound multiplex, to connect the SIF IN/OUT terminal by BNC cable.

● Output Signal

· RF Signal

Vision carrier signal

Output level 127 dB/75 Ω +/- 1 dB

Output connector

BNC-R, 1 line

Sound carrier signal

Output level M system (JPN): 121 dB/75 Ω, +/- 1 dB

M system (USA): 117 dB/75 Ω, +/- 1 dB

B system: 117 dB/75 Ω, +/- 1 dB

D system: 117 dB/75 Ω, +/- 1 dB

I system: 120 dB/75 Ω, +/- 1 dB

L system: 117 dB/75 Ω, +/- 1 dB

Sound IF signal

Output level 100 dB/50 Ω, +/- 1 dB

Output connector

BNC-R, 1 line

If do not use sound multiplex, to connect the SIF IN/OUT terminal by BNC cable.

CW(38.9 MHz) signal

Output level 100 dB/50 Ω, +/- 1 dB

Output connector

BNC-R, 1 line

● Output Signal Level Variable range

Vision carrier 127 dB/75 Ω, +2 dB/-9 dB, 0.5 dB increment setting

Vision/Sound carrier power ratio

Rated output: +2 dB/-9 dB, 0.5 dB increment setting

● RF Frequency Accuracy

+/-3 x 10⁻⁵ (25 degreeed C +/-5 degrees C)

● Vision Frequency Characteristics

CCIR compliance

● Spurious Characteristics

Based on vision carrier peak level

In band Less than -60 dB

Out band Less than -50 dB

Specifications

● Vision Modulation Characteristics

- Vision modulation variable range
 - M, B/G, D/K, I system: 50% to 100%
 - L system: 50% to 100%
- Sync signal modulation variable range
 - Rating +/-10% (min.)
- DG/DP
 - DG: Less than 2%
 - DP: Less than 2 degrees
- Group delay characteristics
 - Less than 50 ns
 - (prescription: modulation 12.5T)
- M system M, full
- B system B/B, half general
- D system D/K, half hungary
- I system I, full, BBC
- L system L, full, TDF
- Waveform distortion
 - Kp: 2T pulse, less than 2
 - Overshoot: tr=0.25 μ s, less than 8%
 - Sag: tr=0.25 μ s, less than 3%

● Sound Modulation Characteristic

- Sound modulation
 - M system Positive polarity frequency modulation 25 kHz +/-2 kHz
 - B/G, D/K, I system Positive polarity frequency modulation 50 kHz +/-2 kHz
 - L system Amplitude modulation 60% +/-2%
- Sound modulation variable range
 - M system Frequency modulation 6.0 to 50 kHz
 - B/G, D/K, I system Frequency modulation 12.5 to 100 kHz
 - L system Amplitude modulation 10% to 100%
- Frequency characteristic
 - PRE-EMP OUT 40 to 100 kHz, based on 400 Hz, +/-1 dB
 - PRE-EMP IN 50 μ s, response of 15kHz on 400 Hz: 13 dB +/-1 dB
 - 75 μ s, response of 15kHz on 400 Hz: 17 dB +/-1 dB

• Distortion rate (PRE-EMP IN)

- M system Frequency deviation 25 kHz, less than 1%
- B/G, D/K, I system Frequency deviation 50 kHz, less than 1%
- L system Amplitude modulation 60%, less than 3%
- S/N ration (PRE-EMP IN)
 - M system 400 Hz/Frequency deviation 25 kHz, more than 60 dB
 - B/G, D/K, I system 400 Hz/Frequency deviation 50 kHz, more than 60 dB
 - L system 400 Hz/Amplitude modulation 60%, more than 50 dB
- Internal sound frequency 400 Hz/1 kHz changeable by switch (front panel)

● Display Function

- 7 segment LED, 3 digit display
- Vision carrier output, Sound carrier output, Vision modulation, Sound modulation

● General Specifications

- Operating temperature 0 degrees C to 40 degrees C
- Relative humidity 25 to 90% (non-dewing)
- Power supply AC90 to 250 V, 50/60 Hz
- Fuse: SLOW 2A
- Power consumption Approx. 100 VA
- Dimensions 426(W) x 49(H) x 460(D) mm
- Weight Approx. 5 kg
- Accessory
 - Power cord 1 pc
 - Operating manual 1 pc



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