



BG-100 TV Master Sync Signal Generator

In the broadcast system and studio program production system of TV station, if the asynchronous video signals are switched, the video will cause serious distortion/flicker, and the audio will generate noise. This time, sync generator is necessary. It provides reference sync signal, and the each equipment of the system will take the reference sync signal as its standard to synchronize the video signals. Thus, the image and sound will keep continuous and stable broadcast when the signal is switched.

BG-100 is a sync generator integrating dual-channel video sync signals generation unit, audio test signal generation unit and protection changeover unit. Dual-channel video sync signals generation unit supports both manual and automatic changeover mode. The H, V and subcarrier phase of the video signals will be ensured to consist when the changeover is done between

main channel and backup channel. It can generate 2 channels standard color bar signal (NTSC/525 or PAL/625) and 16 channels black burst signal. One channel of 2 color bar signals can be overlaid with prompting characters (up to 8).

Audio signal generating circuit can generate a stereo audio signal (frequency is 1KHz). One of the channels can be inserted 3sec Audio Click as the mark of L/R channel.

Redundant PSU ensures the stability and reliability of the operation.

BG-100 is ideal for providing high precise, stable and reliable reference sync source signal for the equipment in broadcast TV system.

BG-100 TV Master Sync Signal Generator



DESCRIPTION

BG-100 is a dual video sync & audio test signal generator and ECO (Emergency Changeover). It has built-in 2 sets of black burst signal generating unit/color bar generation/audio test signal generating circuit. One of 2 sets of signal generating circuit can be selected (via one detection adjustment and signal changeover circuit) to output. It supports automatic & manual changeover. BG-100 takes the high precise active temperature compensation crystal oscillator as its reference clock source, and it can generate high precise and stable reference signal. BG-100 can be genlocked through receiving external REF video signal. H, V and subcarrier phase of video signal is consistent when sync signal changeover between master and backup channel. BG-100 can generate 2 channels standard color bar signal (NTSC/525 or PAL/625) and 16 channels black burst signal. One channel of 2 color bar signals can be overlaid with and prompting characters (up to 8).

Audio signal generating circuit can generate a stereo audio signal (frequency is 1KHz). One of the channels can be inserted 3sec Audio Click as the mark of L/R channel.

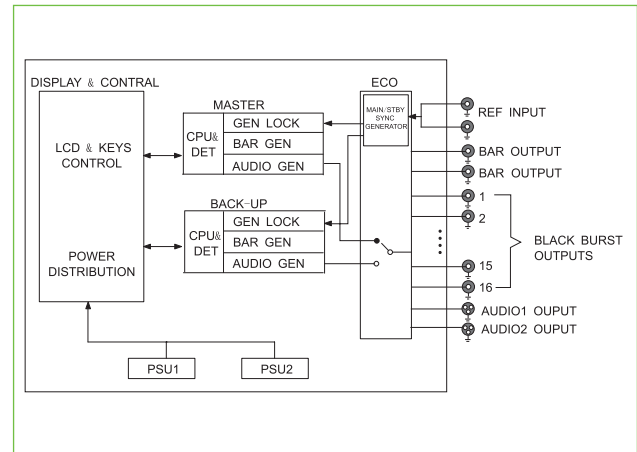
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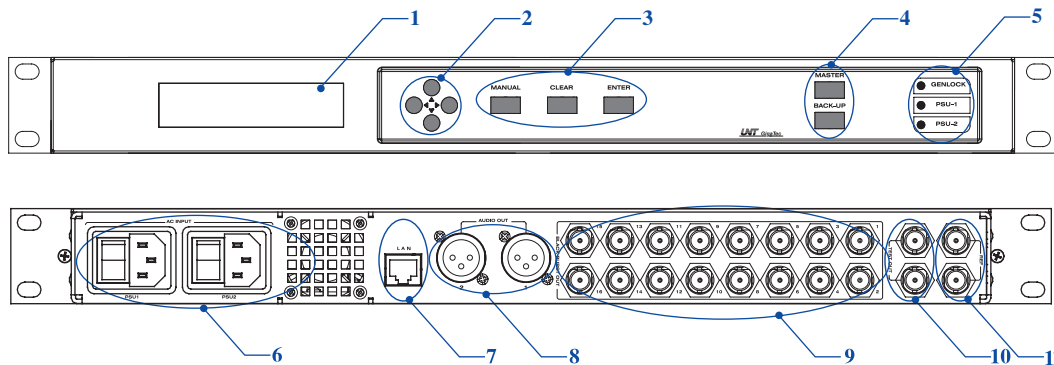
KEY FEATURES

- 1RU high, 19 in. wide
- Redundant PSU
- Front panel with LCD display, LED and control buttons
- High precision reference signal generation
- 16 channels Black Burst outputs, 2 channels standard color bar outputs
- Standard color bar signal output can be overlaid user-defined character
- NTSC/525 & PAL/625 optional
- 1 channel 1KHz stereo audio test signal output
- Detects MASTER&BACKUP sync signal automatically, changeover via automatic/manual
- REF video genlock
- H, V and subcarrier phase adjustable
- Non-volatile memory

BLOCK DIAGRAM



FRONT & REAR VIEW



1. **Display:** Display the menu and the status
2. **Navigation Keys:** Cursor moving & menu operation
3. **MANUAL:** Button for entering main menu
CLEAR: Button for clearing
ENTER: Button for confirming selection
4. **MASTER:** Button for selecting main signal generating unit
BACK-UP: Button for selecting backup signal generating unit
5. **GENLOCK:** External REF sync LED, alarm function (system abnormal alarm)
PSU-1: PSU-1 Status LED
PSU-2: PSU-2 Status LED
6. **PSU-1/PSU-2:** Dual power supply socket, power voltage 90 ~ 250VAC, 50/60Hz
7. **LAN:** Reserved for future use
8. **AUDIO OUT:** Audio outputs
9. **BLACK BURST:** 16 channels Black Burst signal outputs
10. **TEST OUT:** TEST OUT1, standard color bar signal output
TEST OUT2, standard color bar signal+character display output
11. **REF:** External REF video input with loop-thru

BG-100 TV Master Sync Signal Generator

SPECIFICATIONS

Mechanical

Width.....19 in. (483mm)
Height.....1RU (44mm)
Depth.....19.6 in. (498mm)

Electrical

Power Supply.....90 ~ 250V AC, 50/60 Hz
Power Consumption.....10 W

Environmental

Operating Temperature.....32° ~ 104°F (0° ~ 40°C)
Relative Humidity.....10% ~ 90%

Genlock

Connector.....BNC Hi-z loop-thru
Amplitude.....Nominal ± 6 dB (0.5 ~ 2.0Vp-p)
SCH Phase.....Nominal ± 40°
S/N Ratio.....> 40 dB
Return Loss.....> 40 dB @ 5 MHz

Performance

Push-in Range.....Fsc±5ppm
Jitter.....Burst Genlock<0.5°; Sync Genlock<10ns
Phase locking Adjustment Range...Full-color frame
SCH Adjustment Precision.....< 1.4°
Timing Adjustment Precision.....< 74 ns

Analog Audio Output

Connector.....XLR (×2)
Impedance.....22 Ω
Frequency.....1 KHz ± 20 Hz
Level.....0 dBu

Analog Video Output

2 channel — 1 TEST VIDEO output and 1 TEST VIDEO + Characters output

Standard Color Bar Signal—75% color bar

Standards.....NTSC/PAL
Connector.....BNC (×2)
Impedance.....75 Ω
Return Loss.....> 30 dB @ 5 MHz
Return Loss.....> 40 dB @ 5 MHz
Burst Amplitude Precision.....± 3%
Sync Amplitude Precision.....± 3%
Blanking Level.....< 0±50mV
SCH Phase Precision.....± 5°
Timing Adjustment Range.....Full-color frame

Black Burst Signal — Output 16 channels BLACK BURST signal for system sync

Standards.....NTSC/PAL
Connector.....BNC (×16)
Impedance.....75 Ω
Return Loss.....> 30dB@5MHz
Burst Amplitude Precision.....± 5%
Sync Amplitude Precision.....± 3%
Blanking Level.....< 0±50mV
SCH Phase Precision.....± 5°
Timing Adjustment Range.....Full-color frame

ORDERING INFORMATION

Standard Accessories

Model

BG-100-FM
BG-PWR
BG-CONTROL
BG-GENLOCK
BG-CHANGEVER

Product Description

BG-100 Frame
PSU
Control Module
Sync Signal Generation Module
Master/Backup Sync Generation Changeover Module

Optional Accessories

Model

BG-GENLOCK

Product Description

TV Master Sync Signal Generator