

121B

ALL CHANNEL TV MODULATOR

Analog TV development & production facilities



General

This unit is TV modulator that outputs all channels of each country system.

Features

Modulation Section

- ① Corresponding to TV signal of 7 systems.
- ② Enhanced sound modulation function (Possible to make simultaneous modulation of AM and FM).
- ③ Equipping channel indication and character indication function.
- ④ Corresponding to external and internal IFa (Sound intermediate frequency signal).

Converter Section

- ⑤ Output level range (-89dBm ~ +10dBm)
(Level Low mode -99dBm ~ +0dBm)
- ⑥ Video and sound separate heterodyne system
- ⑦ P/S level range (-64dB ~ 0dB)
(But, range of -64dB ~ -6dB at AM modulation)
(Level Low mode -54dB ~ 10dB)
- ⑧ RF frequency polarity NORMAL/INVERT
- ⑨ With sound internal modulation (Provided sweep function for 10Hz ~ 150KHz)

Composition

Main Unit	1
Dimensions	425(W)×99(H)×480(D) mm (Excluding projections)
Weight	Approx. 17 kg
Accessories	
Power Cable (Including 3pin→2pin converter)	1
Rack Mount Adapter.....	1set
Instruction Manual and Test Result Sheet	1
Power Source	
Input Voltage Allowable Range	: AC90V~AC132V (50Hz/60Hz) AC180V~AC250V (50Hz/60Hz)
Power Consumption	: Approx. 110VA
Operating Environment	
Temperature	: +5°C ~ +40°C
Humidity	: 45% ~ 85%RH (No dew generation)

Rating

- **Video Input**
 - Connector BNC-R
 - Impedance 75 Ω
 - Input Level 1Vp-p (Sync. negative)
- **Audio Input**
 - Connector BNC-R (Unbalanced)
 - Impedance 600 Ω
 - Input Level 0dBm or 2Vp-p of TV sound multiplex composite signal
- **External IFa Input**
 - Connector BNC-R
 - Impedance 50 Ω
 - Input Level -7dBm
- **RF Output**
 - Connector N-R
 - Impedance 50 Ω
 - Output Level Range -89dBm ~ +10dBm
- **RF Output Frequency Range**
27MHz ~ 1200MHz 10KHz step

• P/S Level Range

-64dB ~ 0dB 1dB step
(But, range of -64dB ~ -6dB at AM modulation)

• Channel Indication

Kind of indication character Numerical number and alphabet

• Sound Internal Modulation Signal

10Hz ~ 150KHz 10Hz step

Performance

Corresponding to 7 systems

CCIR-M, B/G, I, L, OIRT/D/K
Others, provided EQ ON/OFF function.

Video Section

① Frequency vs. Amplitude Characteristic

Within ±0.5dB against reference value of each system

② Frequency vs. Group Delay Characteristic

Within ±50nsec against reference value of each system

③ Non-Linearity Distortion

DG : ±2% DP : ±1°

④ Waveform Response Characteristic

2T pulse : Within Kb · Kp2
Sag : Within 2%

⑤ S/N

More than 60dB

⑥ ICPM

Within ±1°

Audio Section

AM Modulation :

① Frequency vs. Amplitude Characteristic

Within ±0.5dB for 20Hz ~ 150KHz

② Non-Linearity Distortion

Within 0.5% for 20Hz ~ 150KHz

③ S/N

More than 60dB

FM Modulation :

① Frequency - Amplitude Characteristic

Within ±0.5dB for 20Hz ~ 150KHz

② Non-Linearity

Within 0.7% for 20Hz ~ 150KHz

③ S/N

More than 65dB (DE-EMPHASIS ON)

RF Characteristic

① Output Frequency Accuracy

Within ±300Hz

② Output Level Range

-89dBm ~ +10dBm 1dB step
(At level Low -99dBm ~ 0dBm)

③ P/S Level Range

-64dB ~ 0dB 1dB step
(Under level Low -54dB ~ 10dB)
(But, in case of AM modulation, range of -64dB ~ 0dB)

④ Unnecessary Emission

More than -60dB (Both for in-band and out-band)
(But, excluding in case of output of output frequency of 27MHz ~ 50MHz)

⑤ RF Frequency Polarity

Normal/Invert

Channel Indication

Indication Character Figure and alphabet.