

General Instruction

Fixed Channel Modulator DTM Series Model OP-860D

FEATURES

These SAW Modulators are designed for outstanding performance in any CATV system up to 860MHz

- Fixed Channel Modulators for use in Adjacent Channel CATV Headends
- SAW Filtered-VSB Filtering.
- Independent Internal Power Supply
- Synthesized Oscillators-Crystal Referenced, Phase locked (Including the Aural Carrier)
- Surface Mount Technology.

Video Section

Input	NTSC
Input Impedance	75 Ohms, Unbalanced
Frequency Response	+/- 1.0dB
Bandwidth	4MHz
Differential Gain	4% Max
Differential Phase	4 Deg Max
Video S/N	≥48 dB

Audio section

Input: 50kHz-15KHz	0.6V
Impedance	600 Ohms, Balanced
Frequency Response	+/- 1.0dB
Frequency Tolerance	+/- 500Hz 5.5MHz
Frequency Deviation	+/- 50 KHz
Harmonic Distortion	1% Max
Preamphasis	50us

IF Section

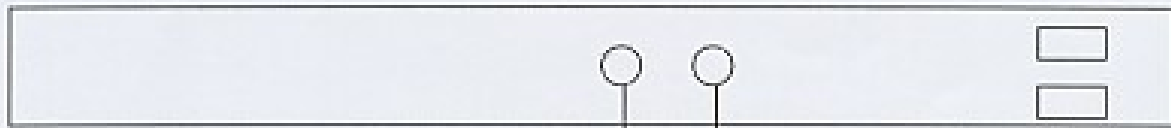
Video-Sound Spacing	+4.5MHz
Vestigial Sideband Width	1.25MHz

RF Section

Output Frequency	47-860MHz
Frequency Tolerance	± 5 KHz
Output Level	≥50dBmV
Adjustable	-20dBmV
Output Impedance	75 Ohms, Unbalanced

Spurious Output	<-60 dB
Return loss	>14 dB

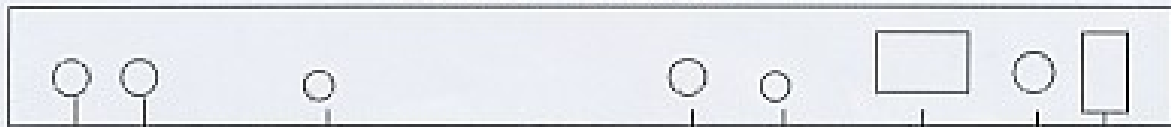
FRONT--- PANEL



1. Video modulation
2. Audio deviation

1 2

REAR ---PANEL



1. Video input.
2. Audio input.
3. Sound carrier to picture carrier level ratio, A/V.
4. RF output.
5. RF level Adjust.
6. AC220V Power output.
7. AC220V power input.
8. AC220V power switch.

Operating Instructions

DTM Series Model OP-860D Fixed Channel Modulator

INTRODUCTION

Thanks you for purchasing the Model DTM Series Modulator. This modulator Contains the latest in CATV electronics. This includes Synthesized Crystal Referenced phase Locked Oscillators, Phase Locked FM Audio modulation, SAW filtered IF and Microprocessor Control.

Modulator DTM Series model OP-860D

- Connect to a proper AC electrical source as indicated on the back of the unit.
- Observe the front panel channel display window, while power is applied. The LED will illuminate, the unit is now ready for operation.
- Connect the RF OUT to the TV via attenuator (the TV max input RF level Less than 30dBmV), set the TV channel same as the modulators channel.
- Connect a 1.0 volt peak-to-peak video source to the rear panel 'video' Input.
- Connect the 0.6 volt audio source to the rear panel 'audio' input.
- Adjust the front panel Video control and Audio Control to obtain the best picture and sound.
- The A/V has been preset before sold. Do not attempt to adjust the A/V in Case of unnecessary.
- Using a Field Strength Meter or spectrum Analyzer to the rear panel RF OUT, adjust the rear panel output level to the desired level. the Recommended output level is between +50dBmV(+110dB μ V) to +53dBmV(+113dB μ V).

Important Notices

Suggestions for Headend Racking and Maintenance

For prolonged equipment life and operating stability, the following recommendations are made:

- All headends should be installed in an environmentally controlled dust-free room having a nominal temperature of 80°F (26°C) and 60% humidity. The room should be protected from rodents and insect pests.
- All equipment should be mounted in standard equipment racks or cabinets
- All equipment should be rack spaced at one panel height, 1.75 inches (4.44cm). There should be nothing between the equipment preventing air circulation.
- Please make certain headend wiring and current capacity has adequate safety margins. Never cascade AC powering strips. Use separate outlets. If AC power is subject to fluctuation, we recommend a constant voltage transformer be used. Beware of ground loops and be certain all wiring is bonded and properly grounded. Consult a code book as needed.
- All equipment racks should be electrically bonded together and earth grounded
- All equipment interconnecting RF cables should be a minimum of double shielded and quad shielded is recommended. Poorly shielded cable causes cross-modulation picture degradation between equipment.
- Always use the coax connector intended for the coaxial cable used. Be certain it is installed as recommended by the manufacturer. Connectors should be RF shielded.
- RF Input and RF Output cables should be on opposite sides of the equipment rack. Never bundle input and output RF cables together.
- Operate each modulator and processor at the RF output level recommended. If it is necessary to reduce the RF Output level, always operate the equipment as recommended and reduce the RF
- When the headend is initially placed in service, create a record of all operating parameters for each channel's equipment. Referring to these records during routine maintenance provides a helpful record of operating changes.