



**BLONDER  
TONGUE**  
LABORATORIES, INC.

# MICM SERIES

## MICROCHANNEL MODULATOR

MICM series of products are fixed-channel analog audio/video modulators available in the following models:  
**MICM-45C:** The fourth generation of the MICM series, it is available in NTSC channels 2-135 (54-860 MHz), G, and I channels in the same frequency range.

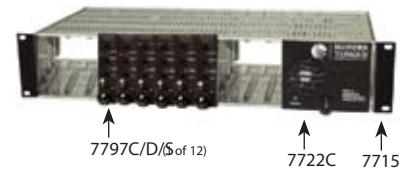
**MICM-45D:** is the same as MICM-45C, but with audio AGC (Automatic Gain Control) that eliminates loudness among program sources. It is available in NTSC channels 2-125 (54-806 MHz) and PAL B, G, and I channels in the same frequency range.

Optional stereo audio output is available for both MICM-45C and MICM-45D, but for NTSC models only.



### FEATURES

- Compact design allows for deployment of 12 channels in 2RU
- Integrated Stereo encoder available for NTSC channels
- Utilizes SAW filters for improved performance
- Die-cast chassis for RFI immunity



### ORDERING INFORMATION

Model	Stock #	Description
MICM-45C	7797C 600	Fixed-channel Audio/Video Modulator, +45 dBmV, 54-600 MHz
MICM-45C	7797C 860	Fixed-channel Audio/Video Modulator, +45 dBmV, 600-860 MHz
MICM-45S	7797S 600	Fixed-channel Audio/Video Modulator, Stereo, +45 dBmV, 54-600 MHz
MICM-45S	7797S 860	Fixed-channel Audio/Video Modulator, Stereo, +45 dBmV, 600-860 MHz
MICM-45D	7797D 600	Fixed-channel Audio/Video Modulator, Audio AGC, +45 dBmV, 54-600 MHz
MICM-45D	7797D 806	Fixed-channel Audio/Video Modulator, Audio AGC, +45 dBmV, 600-806 MHz
MICM-45DS	7797DS 600	Fixed-channel Audio/Video Modulator, Audio AGC, Stereo, +45 dBmV, 54-600 MHz
MICM-45DS	7797DS 806	Fixed-channel Audio/Video Modulator, Audio AGC, Stereo, +45 dBmV, 600-806 MHz
MIRC-12V	7715	Rack Chassis (holds up to 12 modulators)
MIPS-12C	7722C	100-240 VAC; 50/60Hz power supply (one per chassis)

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# SPECIFICATIONS

## INPUT

Video Connector:	"F" Female
Impedance:	75 Ω
Return Loss:	20 dB
Input Level:	1.0 volt Peak-to-Peak (87.5% depth of modulation)
Frequency Response:	1.0 dB Peak-to-Valley (fv to fv+4.2 MHz)
Peak-to-Peak Video-to-RMS Hum Ratio:	64 dB
Signal-to-Noise Ratio:	65 dB(Weighted; 4MHz bandwidth)
Differential Gain:	2.0%(87.5% depth of modulation)
Differential Phase:	2.0 degree (87.5% depth of modulation)
Chrominance/Luminance Delay:	Per FCC Requirements
Mono Audio (standard) Connector:	RCA
Input Impedance:	Greater than 10 kΩ, unbalanced
Input Level: (for 25 KHz deviation)	
MICM-45C	0.4 volt peak-to-peak (min.)
MICM-45D	0.5 to 4.0 volt peak-to-peak(constant AGC range)
Frequency Range:	50 Hz to 12 kHz
Frequency Response:	± 0.5 dB
Total Harmonic Distortion:	1% @ 25 kHz deviation
Signal-to-Noise Ratio:	
MICM-45C	N/A
MICM-45D	70 dB
Stereo Audio(optional) Connector:	RCA
Input Impedance:	Greater than 10 kΩ, unbalanced
Input Sensitivity(for 55 kHz peak deviation)	
MICM-45C	1.0 volt peak-to-peak (with pilot tone)
MICM-45D	0.5 to 4.0 volt peak-to-peak (AGC Range with pilot tone)
Frequency Response:	+/- 0.75 dB(50 Hz to 12 kHz)
Separation:	20 dB @ 50 Hz to 10 kHz

## OUTPUT

Connector:	"F" Female
Impedance:	75 Ω
Return Loss:	15 dB
Frequency Range:	
MICM-45C	54 to 860 MHz (NTSC CATV Ch. 2 -135)
MICM-45D	54 to 806 MHz (NTSC CATV Ch. 2 -125)
Power Level:	+45 dBmV
Power Level Range:	10 dB continuously adjustable
Carrier-to-Noise(In Channel)	
MICM-45C	65 dB
MICM-45D	63 dB
Broadband Noise:	-90 dBd@ +45 dBmV output level, 4 MHz bandwidth
Spurious Outputs:	-66 dBc
Aural/Visual Carrier Ratio:	-11 to -19 dB continuously adjustable
4.5 MHz Aural Inter-carrier Freq. Tolerance	±250 Hz; 32 to 122 °F to 50 °C)
Visual Carrier Frequency Tolerance	
Standard Channels	±10 kHz; 32 to 122 °F to 50 °C)
FCC Aeronautical Channels	±5 kHz; 32 to 122 °F to 50 °C)

## GENERAL

Dimensions(W x D x H)	
MICM Modules:	1.0 x 7.78 x 3.5 inches (25 x 198 x 89 mm)
MIPS-12C Power Supply:	4.6 x 7.5 x 3.5 inches (106 x 191 x 89 mm)
MIRC-12V Chassis:	19 x 12.0 x 5.25 inches (483 x 305 x 133 mm)
Power	
MIPS-12C Power Supply:	100-240 VAC; 50/60 Hz
Power Dissipation:	~ 3 W(per MICM Module)
Weight	
MICM Module:	0.65 lbs (0.3 kg)
Fully Loaded Chassis:	18.2 lbs (8.3 kg)
Operating Temperature:	32 to 122 °F (0 to 50 °C)
Storage Temperature:	-13 to 158 °F (-25 to 70 °C)
Operating Humidity:	0 to 95% RH @ 35 °C max, non-condensation
Storage Humidity:	0 to 95% RH @ 35 °C max, non-condensation

## ALARMS/MONITORING/CONTROL

Front-Panel Indicators	
Power:	Green LED
Stereo:	Red LED(when equipped)
Video Over-modulation:	N/A
Audio Over-modulation:	N/A
Front-Panel Control	
Output Level :	Potentiometer
Video Level:	Potentiometer
Audio Level:	Potentiometer
Aural Carrier Level:	Potentiometer

## RELATED PRODUCTS

Model	Description
AM-60-860	Frequency-agile Audio/Video modulator, +60 dBmV, 54-860 MHz, 1RU
MAVM	Fixed-channel Audio/Video modulator, +60 dBmV, 54-860 MHz, 1RU
AMCM	Frequency-agile Audio/Video modulator, +45 dBmV, 54-860 MHz, Twelve modulators in 2RU
ACM	Frequency-agile Audio/Video modulator, +45 dBmV, 54-806 MHz, Twelve modulators in 2RU
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