

**BLONDER  
TONGUE**  
LABORATORIES, INC.

# MDDM-860

## MICRO ATSC/QAM DEMODULATOR

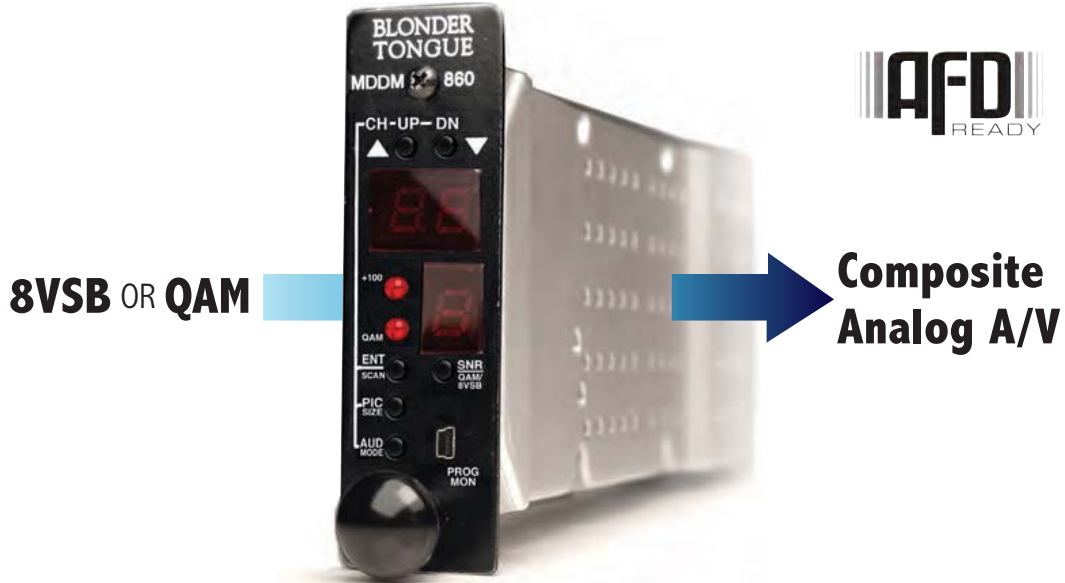
### 1x 8VSB/QAM ▶ 1x AV

The MDDM-860 is a digital demodulator and decoder that receives one input in ATSC 8VSB (digital off-air) or “clear” QAM (digital cable) format and delivers one NTSC composite analog video and stereo audio output.

The unit allows delivering of a digital off-air program to viewers with an analog TV set. It also allows operators to cherry-pick channels from a clear QAM cable lineup.

Headends processing analog broadcasts using Blonder Tongue’s MIDM demodulators and MICM modulators can be upgraded seamlessly to process digital broadcasts by simply replacing the MIDM with a MDDM.

DIGITAL  
COLLECTION  
DEMODULATORS



## FEATURES

- Compact design allows for deployment of 6 channels (6 MDDM modules + 6 MICM modulators) in 2RU
- NTSC Composite Analog Video output is in 480i format and supports Closed Captioning (EIA-608)
- Input standards supported are digital off-air (8VSB) and digital cable (ITU-B QAM 64 and 256)
- Scans all 8VSB or QAM channels and stores in memory for quick channel selection
- Demodulates HDTV/SDTV digital signals to NTSC video and analog L/R audio
- On-site firmware updates/status monitoring available through front-panel
- Die-cast Chassis Offers Superior Protection against Ingress or Egress
- Adjustable picture sizes for 16:9 to 4:3 image conversion
- Supports Mono, Stereo, and SAP audio modes

## ORDERING INFORMATION

Model	Stock #	Description
MDDM-860	6273	ATSC/QAM Demodulator
MIRC-12V	7715	Rack Chassis (holds up to 6 MDDM + 6 MICM modulators)
MIPS-12C	7722C	110 V/60 Hz power supply (one per chassis config. above)
MICM	7797D	Micro channel modulator



# SPECIFICATIONS

## INPUT

<b>Connector:</b>	"F" Female
<b>Standards</b> <b>8VSB:</b> <b>QAM:</b>	ATSC Digital Television Standard A/53E ITU-T J.83 (64 and 256 QAM)
<b>8VSB Mode</b> <b>Tuning Range:</b> <b>Symbol Rate:</b> <b>Bandwidth:</b>	UHF (NTSC Ch. 14-78), VHF (NTSC Ch. 2-13) 10.762 Msymbols/sec 6 MHz
<b>QAM Mode</b> <b>Tuning Range:</b> <b>Symbol Rate:</b> <b>Bandwidth:</b>	CATV (NTSC Ch. 2-135) 5.3606 Msymbols/sec (QAM 256); 5.057 Msymbols/sec (QAM 64) – Auto Detect 6 MHz
<b>Single Channel Power Level:</b> <b>8VSB Power Level:</b> <b>QAM Power Level:</b> <b>Return Loss:</b> <b>Impedance:</b>	-32 to +45 dBmV -20 to +30 dBmV -20 to +20 dBmV 12 dB 75 Ω

## OUTPUT

<b>Connector</b> <b>Video:</b> <b>Audio:</b>	"F" Female RCA; Left & Right
<b>NTSC Composite Video</b> <b>Level:</b> <b>Flatness:</b> <b>Video to Noise Ratio:</b> <b>Differential Gain:</b> <b>Differential Phase:</b> <b>Format:</b> <b>Aspect Ratio:</b> <b>Closed Captioning:</b>	1 Volt Peak-to-Peak 1.0 dB p/v (30 Hz to 4.2 MHz) 70 dB ± 0.75% ± 0.50 degree 480i AFD, Center Cut, Letterbox, Full, Zoom 1, Zoom 2 EIA-608
<b>L/R Analog Audio</b> <b>Level:</b> <b>Frequency Response:</b> <b>Audio Signal-to-Noise Ratio:</b> <b>Modes:</b>	1.0 to 1.2 Volt Peak-to-Peak (at -20 dBFs input) 10.0 to 10.5 Volt Peak-to-Peak (at 0 dBFs input) 2.0 dB p/v (30 Hz to 20 kHz) 67 dB (at -20 dBFs input) Stereo, Mono, SAP

## GENERAL

<b>Dimensions (W x D x H)</b>	1.15 x 7.5 x 3.5 inches (29 x 191 x 89 mm)
<b>Power:</b>	110 VAC/60 Hz or 220 VAC/50 Hz
<b>Power Dissipation:</b>	7 W (per MDDM module)
<b>Weight:</b>	0.8 lbs (0.36 kg)
<b>Operating Temperature:</b>	32 to 122 °F (0 to 50 °C)
<b>Storage Temperature:</b>	-13 to 158 °F (-25 to 70 °C)
<b>Operating Humidity:</b>	0 to 95% RH @ 35 °C max, non-condensation
<b>Storage Humidity:</b>	0 to 95% RH @ 35 °C max, non-condensation

## ALARMS/MONITORING/CONTROL

<b>Front-Panel Indicators:</b>	Major program channel (2-digit LED display) Minor program channel (1-digit LED display) Channel scan (2- & 1-digit LED displays) +100 Channel (Red LED) SNR (2- & 1-digit LED displays) QAM LED (Red LED) No Lock (flashing QAM LED) Picture size (2- & 1-digit LED displays) Audio mode (2- & 1-digit LED displays) Firmware revision (2-digit LED display) Software revision (2- & 1-digit LED displays) Unit reset (2- & 1-digit LED displays)
<b>Front-Panel Monitoring/Control:</b>	CH UP/DN push-buttons (increment major or minor channel up/down) ENT push-button (enters or confirms selection) SCAN push & hold-button (initiates channel Scan) PIC SIZE push-button (adjusts picture size/aspect ratio) AUD MODE push-button (adjusts audio mode and closed captioning) SNR push-button (measures input signal-to-noise ratio) QAM/8VSB push&hold-button (toggles between QAM & 8VSB) ENT & SNR simultaneously (stops scan at anytime) PIC SIZE & AUD MODE simultaneously (unit reset) PROG MON (custom mini USB-to-RS232 interface for control & monitoring)

## RELATED PRODUCTS

Model	Description	Notes
DAP	8VSB/QAM-to-Composite Analog Processor	1RU
AQD	8VSB/QAM-to-Composite Analog Demodulator	Eight Demodulators in 3RU
AQT	8VSB/QAM-to-QAM Transcoder	Eight Transcoders in 3RU
AQP	8VSB/QAM-to-QAM Processor with subband input	1RU
AQM	1x1 ASI-to-QAM Modulator	Six modulators in 2RU
DQMx	4x1 ASI and 8VSB/QAM-to-QAM Multiplexer	1RU
DHDP	Digital High Definition Processor	1RU & 2RU
AMCM	Analog RF Amplifier	Twelve Modulators in 2RU