# AVM 60 A/V PROCESSOR

# NEW 11.2-CHANNEL AUDIO/VIDEO PROCESSOR







- Dolby Atmos
- DTS:X Ready
- ARC™ Anthem Room Correction
- 4 Speaker Profile Memories
- Quad Core Digital Signal Processing
- Two Sub Out Jacks (parallel)

- Premium 32-bit / 768 kHz
   Differential-Output D/A Converters
- Wireless Network Connection
- DTS Play-Fi® Local and Streaming

#### **HDMI & VIDEO**

- HDMI 2.0a
- HDCP 2.2
- 4:4:4 Subsampling at 4K60 (18.2 Gbps)

- High Dynamic Range (HDR)
- BT.2020 Color Gamut
- On-Screen Display with 4K 50/60

Blu-ray

Dolby Atmos

A N T H E M

· 4K 50/60 Switching



- Works on ALL Channels
- Improved Algorithms for seamless integration between speakers and subwoofers

Few A/V Preamplifier-Processors offer the innovation and performance found in the all new AVM 60.

Features include Dolby Atmos immersive audio decoding, future upgrade for DTS:X, support for UHD Blu-ray and 4K60 through HDMI 2.0a with HDR. HDCP 2.2 and 18.2 Gbps are also included allowing

switching for compatibility with the latest video formats.

Audiophile-friendly features include a toroidal power supply, premium differential-output D/A converters with 32-bit conversion and sampling rate optimized filters for hi-res sound. Premium A/D converters with 106 dB signal to noise ratio ensure the highestquality sound when using analog sources.

DTS Play-Fi offers easy-to-use music playback from popular streaming services and locally networked sources, controlled through iOS, Android or PC apps.

ARCIII)













Rev. 012716

# ARC (ANTHEM ROOM CORRECTION)

The Easy-To-Use Anthem Room Correction Kit Delivers Professional Results In Any Room



#### What is ARC?

Simply put, Anthem Room Correction quickly "corrects" the effects that reflective surfaces such as walls, floors and ceilings have on the sound radiating from a loudspeaker. Removing the effects of these obstacles allows your audio equipment to achieve a more natural sound in any room, as close to the lab standard as possible.

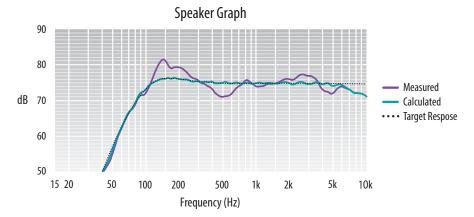
On a more complex level, ARC is a proprietary digital signal processing software that works with a specially-engineered calibration microphone and your PC to quickly and easily optimize audio for your unique listening space. Anthem engineers developed the ARC system while researching how to replicate the audio-lab standard of performance in non-lab environments. This groundbreaking research was conducted in conjunction with the National Research Council of Canada, the Canadian government's research and

technology organization.

Anthem engineers realized that real world listening experiences had little in common with the controlled environment of the audio lab. That's because even the best loudspeakers are affected by room anomalies like furniture. These obstacles cause standing waves, resonances, and reflections that can color the sound you hear. Imagine the sound waves

advanced algorithms to eliminate the negative effects of the obstacles in the room, adjusting response and correcting phase effects. When ARC removes the obstacles, what's left is the lab standard performance.

ARC also detects how much the room reinforces low frequencies due to its boundaries and pressurization. ARC senses where each speaker's low-frequency



coming from your speakers as ripples on a water surface. That makes it easy for you to understand how the ripples of sound bounce off any obstruction they encounter. You can immediately see the benefit of removing the obstacles.

ARC digitally compares a room's acoustic signature to that of the lab standard. It measures the response of each speaker relative to the listening area. Then it uses

response declines and sets high-pass filters accordingly, ensuring natural-sounding levels of deep, well-blended bass.

ARC does all this, and more, instantly and automatically. The result is a replication of the lab standard right in your room, for "perfect" speaker performance in any listening space.



#### How does it work?

The ARC Kit is easy to use, and just a few simple steps can customize your loudspeakers for your unique listening space.

Each ARC-ready component comes with a complete ARC Kit, consisting of software and microphone calibration file from our website, a professional quality mic stand and high quality connectors. You will need a Windows-based laptop computer with a CD drive.

Plug the kit's custom Calibration Microphone into your computer and into your ARC-ready Anthem AVM 60. Place the microphone at each of the listening positions in your room (a minimum of five, maximum of ten), and allow ARC to take a sound sample from each location.

The proprietary ARC software measures the difference between the speaker's ideal lab-standard response, and their real-world performance in your room. Then, its sophisticated DSP accurately equalizes response and creates intricate crossover curves so that the performance of the speakers in your room meets the ideal lab standard!

Now you're hearing exactly what our audio engineers intended you to hear: Pure, natural, transparent sound, no matter what challenges your room presents!

### BRING YOUR MOVIES TO LIFE, AS NEVER BEFORE

#### DOLBY ATMOS®



What is Dolby Atmos? Dolby Atmos® is a revolutionary new audio technology that transports you into extraordinary

entertainment experiences.

- Fills your room with captivating sound
- Sound comes from all directions, including overhead, to fill the room with astonishing clarity, richness, detail, and depth.
- Puts sounds into motion all around you
- The specific sounds of people, music, and things move all around you in multidimensional space, so you feel like you are inside the action.
- Delivers the full impact of the artist's work
- Artists have amazing new capabilities to tell their stories, accent their games, or perform their music to achieve the greatest expressive impact.

How does Dolby Atmos audio work?

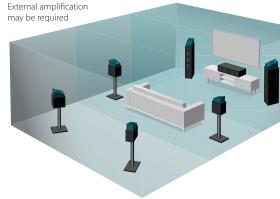
Dolby Atmos is the first home theater system that is based not on channels but on audio objects. What is an audio object? Any sound heard in a movie scene—a child yelling, a helicopter taking off, a car horn blaring—is an audio object. Filmmakers using Dolby Atmos can decide exactly where those sounds should originate and precisely where they move as the scene develops.

Thinking about sound in this way eliminates many of the limitations of channel-based audio. In a channel-based system, filmmakers have to think about the speaker setup: Should this sound come from the left rear surrounds or the left side surrounds? With Dolby Atmos, filmmakers just have to think about the story: Where is that yelling child going to run? How will the helicopter move overhead after takeoff? The Dolby Atmos system, whether in the cinema or the home theater, has the intelligence to determine what speakers

to use to precisely recreate the child's movement in the way the filmmakers intend. They can now precisely place and move sounds as independent objects in multidimensional space, including anywhere overhead, so you can hear them as you would naturally. reality to your listening experience. Dolby Atmos helps weave the audio story to match what's happening on the screen.

#### Dolby®-Enabled Height Speakers

2 or 4 may be used, 6 positions shown



#### DIS:X READY



next generation

audio codec from DTS that leverages object-based audio to enable new audio experiences in immersion and interactivity.

DTS:X places sound where it would occur naturally in space, creating the most lifelike, multi-dimensional audio experience ever. Free from channel restrictions, sound can be placed and moved to where you would hear it in the real world. Because DTS:X doesn't require any specific speaker layout, you can arrange your home theater system however you want it. With DTS:X you're in control of your listening experience. That hard-to-hear line in a movie can be lifted out of the background sounds for a more personal entertainment experience.

#### Works With All DTS Content



DTS will playback all DTS formats including DTS Digital Surround and DTS-HD Master Audio. DTS:X bitstreams are

backward-compatible with older DTS AVRs and sound great.

#### **Object-Based Audio**

An audio object is the combination of the waveform where captures the audio, and metadata which represents the spatial location in which the object should be heard. Audio objects free content from specific speaker layouts for optimal listenina.

This means the same DTS:X content will sound great whether it's rendered on stereo or a fully immersive surround sound system.

#### **Immersive**



DTS:X places sound where it would occur naturally in space, creating the most lifelike, multi-dimensional audio

experience ever. Be prepared — this improved immersion and heightened realism makes horror movies scarier, comedies more laugh-out-loud, and car chase scenes even more

#### Interactive



You are in control of your listening experience. That hardto-hear line in a movie can be improved at a

touch — lift the dialogue out from the background sounds when you want clarity and experience a more personal entertainment experience.

#### DTS PLAY-FI®



Limitless music. App-controlled convenience. Wireless connectivity. Everyone wants instant access to their

digital audio library, anywhere in the home. And **Anthem's AVM 60** with **DTS Play-Fi** technology is the perfect, high-performance means of delivery.

Anthem's AVM 60 A/V Processor can take full dynamic advantage of the better-than-CD-quality sound quality delivered by the DTS Play-Fi® streaming technology.

# Partnered with the leader in Wi-Fi streaming.

DTS PlayFi Wi-Fi streaming technology supports a host of high quality file formats. Controlled directly from your smart device or computer in any operating system, the "Open Ecosystem" of DTS Play-Fi technology makes it easy to stream music throughout your home, and to add more wireless streaming devices on the fly.

#### **Features and Functions:**

 All the music in the world at your control Stream from your digital music library or an online audio service like Spotify, Songza, Pandora, and more ...

Your Music

# iTunes amazon music

#### **Music Services**

To learn more about the latest subscription-based music services visit our website.

 FREE DTS Play-Fi app that's easy to set up on any smart device, with an intuitive interface, and the ultimate audio flexibility.











Stream via DTS Play-Fi using Android, iOS, or PC

#### Formats Supported by DTS Play-Fi®

Uncompressed  24-bit / 192 kHz compatible	Lossless	FLAC (Free Lossless Audio Codec)	54 MB for Average Song
		WAV (Waveform Audio File Format)	54 MB for Average Song
Compressed	Lossless	FLAC (Free Lossless Audio Codec)	27 MB for Average Song
		ALAC (Apple Lossless Audio Codec)	27 MB for Average Song
	Lossy	MP3 (MPEG-1 or MPEG-2 Audio Layer III)	7 MB for Average Song
		AAC (Advanced Audio Coding)	7 MB for Average Song

# COMPARISON CHART

AUDIO FEATURES         11.2         11.2         11.2         11.2         12.2	COMITATION CHART	AVM 60	MRX 1120	MRX 720	MRX 520
Amplifier Channels         11         7         5           Dolby Atmos         .         .         .         .           Dolby TuneD         .         .         .         .           DTSX Ready         .         .         .         .           DTSHD Master Audio         .         .         .         .           Anthem Room Correction         .         .         .         .           Speaker Profile Memories         4         4         4         4           Crossover Settings         40-250 Hz         40-250 Hz         40-250 Hz         40-250 Hz           Digital Signal Processor         Quad Core 32-bit         Quad-Core 32-bit         70-00 Mm         900 ms           Dily Sylor Adjustment Range         300 ms         300 m	AUDIO FEATURES				
Dolby Armos	Preamplifier Channels	11.2	11.2	11.2	5.2
Dotby TrueHD	Amplifier Channels		11	7	5
DTSA/ Ready	Dolby Atmos				
DTS-HD Master Audio	Dolby TrueHD				
Anthem Room Correction         .         .         .         .           Speaker Profile Memories         4         4         4         4         4         4         4         40-250 Hz         40-250 Hz <td>DTS:X Ready</td> <td></td> <td></td> <td></td> <td></td>	DTS:X Ready				
Speaker Profile Memories         4         4         4         4         4         4         40-250 Hz         40-2	DTS-HD Master Audio				
Crossover Settings         40-250 Hz         77F-Core 32-bit         <	Anthem Room Correction				
Digital Signal Processor         Quad-Core 32-bit         Quad-Core 32-bit         Quad-Core 32-bit         Tri-Core 32-bit           Lip-Sync Adjustment Range         300 ms         300 ms         300 ms         300 ms         300 ms           Dolby Volume	Speaker Profile Memories	4	4	4	4
Lip-Sync Adjustment Range         300 ms	Crossover Settings	40-250 Hz	40-250 Hz	40-250 Hz	40-250 Hz
Dolby Yolume	Digital Signal Processor	Quad-Core 32-bit	Quad-Core 32-bit	Quad-Core 32-bit	Tri-Core 32-bit
DTS Play-FIP Music Player – Local and Streaming	Lip-Sync Adjustment Range	300 ms	300 ms	300 ms	300 ms
Spotlify Connect	Dolby Volume				
FM Tuner         .         .         .           Optical Inputs         3         3         3           Coaxial Inputs         2         2         2           All Digital Inputs Accept 24-8it / 192 kHz         .         .         .           Stereo Analog Inputs         5         5         5         5           Stereo Analog Direct Mode         .         .         .         .         .           Premium 768 kHz / 32-Bit Differential-Output D/A Converters         . <td>DTS Play-Fi® Music Player – Local and Streaming</td> <td></td> <td></td> <td></td> <td></td>	DTS Play-Fi® Music Player – Local and Streaming				
Optical Inputs         3         3         3           Coaxial Inputs         2         2         2         2           All Digital Inputs Accept 24-Bit / 192 kHz         .         .         .         .           Stereo Analog Inputs         5         5         5         5           Analog Direct Mode         .         .         .         .           Premium 768 kHz / 32-Bit Differential-Output D/A Converters         .         .         .         .           32-Bit Conversion for all Digital and Analog-DSP Sources         .         .         .         .         .           Sampling Rate Optimized D/A Filters         .         .         .         .         .         .           Subwoofer Jacks (parallel)         2         2         2         2         2         2           Optical Output (passthrough of coax/optical in)         .         .         .         .         .         .           Any Source Downmix to Line-Out         .         .         .         .         .         .           Any Source Downmix to Zone 2 (if following Main source)         .         .         .         .         .           Zone 2 Plays Analog Sources         .         .         <	Spotify Connect				
Coaxial Inputs         2         2         2           All Digital Inputs Accept 24-Bit / 192 kHz         .         .         .           Stereo Analog Inputs         5         5         5           Analog Direct Mode         .         .         .           Premium 768 kHz / 32-Bit Differential-Output D/A Converters         .         .         .           32-Bit Conversion for all Digital and Analog-DSP Sources         .         .         .           Sampling Rate Optimized D/A Filters         .         .         .         .           True Balanced XLR Pre-Out         .         .         .         .         .           Subwoofer Jacks (parallel)         2         2         2         2         2           Optical Output (passthrough of coax/optical in)         .         .         .         .         .           Any Source Downmix to Line-Out         .         .         .         .         .         .           Any Source Downmix to Zone 2 (if following Main source)         .         .         .         .         .         .           Zone 2 Plays Analog Sources         .         .         .         .         .         .           LISTENING MODES         11.2 chann	FM Tuner				
All Digital Inputs Accept 24-Bit / 192 kHz  Stereo Analog Inputs  5 5 5 5 5  Analog Direct Mode  Premium 768 kHz / 32-Bit Differential-Output D/A Converters  32-Bit Conversion for all Digital and Analog-DSP Sources  33-Bit Conversion for all Digital and Analog-DSP Sources  34-Bit Conversion for all Digital and Analog-DSP Sources  35-Bit Conversion for all Digital and Analog-DSP Sources  36-Bit Conversion for all Digital and Analog-DSP Sources  37-Bit Conversion for all Digital and Analog-DSP Sources  38-Bit Conversion for all Digital and Analog-DSP Sources  39-Bit Conversion for all Digital and Analog-DSP Sources  30-Bit Conversion for all Digital Analog Sources  30-Bit Conversion for all Digital Analog	Optical Inputs	3	3	3	3
Stereo Analog Inputs 5 5 5 5 5 5 Analog Direct Mode  Analog Direct Mode  Premium 768 kHz / 32-Bit Differential-Output D/A Converters  32-Bit Conversion for all Digital and Analog-DSP Sources  Sampling Rate Optimized D/A Filters  True Balanced XLR Pre-Out  Subwoofer Jacks (parallel)  2 2 2 2 2  Optical Output (passthrough of coax/optical in)  Any Source Downmix to Line-Out  Any Source Downmix to Zone 2 (if following Main source)  Zone 2 Plays 2-channel Optical/Coaxial Sources  LISTENING MODES  AnthemLogic  Dolby Surround  Dolby Pro Logic II  Service Analog Sources  11.2 channels  5.3 channels  5.4 channels  5.5 channels	Coaxial Inputs	2	2	2	2
Analog Direct Mode Premium 768 kHz / 32-Bit Differential-Output D/A Converters 32-Bit Conversion for all Digital and Analog-DSP Sources Sampling Rate Optimized D/A Filters True Balanced XLR Pre-Out Subwoofer Jacks (parallel) 2 2 2 2 2 2 2 2 2 2 2 2 2 3 Optical Output (passthrough of coax/optical in) Any Source Downmix to Line-Out Any Source Downmix to Zone 2 (if following Main source) Zone 2 Plays 2-channel Optical/Coaxial Sources  Tuste Nalog Sources AnthemLogic AnthemLogic Dolby Surround Dolby Pro Logic II	All Digital Inputs Accept 24-Bit / 192 kHz				
Premium 768 kHz / 32-Bit Differential-Output D/A Converters  32-Bit Conversion for all Digital and Analog-DSP Sources  Sampling Rate Optimized D/A Filters  True Balanced XLR Pre-Out  Subwoofer Jacks (parallel)  2 2 2 2 2  Optical Output (passthrough of coax/optical in)  Any Source Downmix to Line-Out  Any Source Downmix to Zone 2 (if following Main source)  Zone 2 Plays 2-channel Optical/Coaxial Sources  LISTENING MODES  AnthemLogic  Dolby Pro Logic II	Stereo Analog Inputs	5	5	5	5
32-Bit Conversion for all Digital and Analog-DSP Sources  Sampling Rate Optimized D/A Filters  True Balanced XLR Pre-Out  Subwoofer Jacks (parallel)  2 2 2 2 2  Optical Output (passthrough of coax/optical in)  Any Source Downmix to Line-Out  Any Source Downmix to Zone 2 (if following Main source)  Zone 2 Plays 2-channel Optical/Coaxial Sources  Tone 2 Plays Analog Sources  AnthemLogic  11.2 channels  11.2 channels  11.2 channels  Dolby Pro Logic II	Analog Direct Mode				•
Sampling Rate Optimized D/A Filters  True Balanced XLR Pre-Out  Subwoofer Jacks (parallel)  2 2 2 2 2 2  Optical Output (passthrough of coax/optical in)  Any Source Downmix to Line-Out  Any Source Downmix to Zone 2 (if following Main source)  Zone 2 Plays 2-channel Optical/Coaxial Sources  Tone 2 Plays Analog Sources  AnthemLogic  AnthemLogic  11.2 channels  11.2 channels  11.2 channels  5.2 channels  Dolby Pro Logic II	Premium 768 kHz / 32-Bit Differential-Output D/A Converters				•
True Balanced XLR Pre-Out  Subwoofer Jacks (parallel)  2 2 2 2 2 2 2 2 Optical Output (passthrough of coax/optical in)  Any Source Downmix to Line-Out  Any Source Downmix to Zone 2 (if following Main source)  Zone 2 Plays 2-channel Optical/Coaxial Sources  Zone 2 Plays Analog Sources  LISTENING MODES  AnthemLogic  AnthemLogic  11.2 channels  1.3 channels  1.4 channels  1.5 channels  1.5 channels  1.6 channels  1.7 channels  1.8 channels  1.9 channels  1.9 channels  1.10 channels  1.11 channels  1.12 channels  1.12 channels  1.13 channels  1.14 channels  1.15 channels  1.15 channels  1.16 channels  1.17 channels  1.18 channels  1.19 channels  1.19 channels  1.10 channels  1.10 channels  1.11 channels  1.11 channels  1.12 channels  1.13 channels  1.14 channels  1.15 channels  1.15 channels  1.15 channels  1.16 channels  1.17 channels  1.18 channels  1.19 channels  1.19 channels  1.10 channels  1.10 channels  1.10 channels  1.11 channels  1.12 channels  1.13 channels  1.14 channels  1.15 channels  1.15 channels  1.16 channels  1.17 channels  1.18 channels  1.19 channels  1.19 channels  1.10 channels  1.10 channels  1.10 channels  1.11 channels  1.11 channels  1.12 channels	32-Bit Conversion for all Digital and Analog-DSP Sources				•
Subwoofer Jacks (parallel)  2 2 2 2 2 Optical Output (passthrough of coax/optical in) Any Source Downmix to Line-Out Any Source Downmix to Zone 2 (if following Main source)  Zone 2 Plays 2-channel Optical/Coaxial Sources  Zone 2 Plays Analog Sources  AnthemLogic AnthemLogic  Dolby Pro Logic II  2 2 2 2 2 2 2 3 3 3 4 4 5 5 2 5 6 6 7 7 7 8 7 8 7 8 7 8 7 8 7 8 7 8 7 8	Sampling Rate Optimized D/A Filters				•
Optical Output (passthrough of coax/optical in)  Any Source Downmix to Line-Out  Any Source Downmix to Zone 2 (if following Main source)  Zone 2 Plays 2-channel Optical/Coaxial Sources  Zone 2 Plays Analog Sources  LISTENING MODES  AnthemLogic  Dolby Surround  Dolby Pro Logic II	True Balanced XLR Pre-Out				
Any Source Downmix to Line-Out  Any Source Downmix to Zone 2 (if following Main source)  Zone 2 Plays 2-channel Optical/Coaxial Sources  Zone 2 Plays Analog Sources  LISTENING MODES  AnthemLogic  11.2 channels  11.2 channels  11.2 channels  11.2 channels  11.2 channels  5.2 channels  Dolby Surround  Oblby Pro Logic II	Subwoofer Jacks (parallel)	2	2	2	2
Any Source Downmix to Zone 2 (if following Main source)  Zone 2 Plays 2-channel Optical/Coaxial Sources	Optical Output (passthrough of coax/optical in)				
Zone 2 Plays 2-channel Optical/Coaxial Sources	Any Source Downmix to Line-Out				
Zone 2 Plays Analog Sources  LISTENING MODES  AnthemLogic  Dolby Surround  Dolby Pro Logic II  Analog Sources	Any Source Downmix to Zone 2 (if following Main source)				
LISTENING MODES  AnthemLogic 11.2 channels 11.2 channels 11.2 channels 5.2 channels  Dolby Surround  Dolby Pro Logic II	Zone 2 Plays 2-channel Optical/Coaxial Sources				
AnthemLogic 11.2 channels 11.2 channels 5.2 channels  Dolby Surround  Dolby Pro Logic II	Zone 2 Plays Analog Sources				•
Dolby Surround	LISTENING MODES				
Dolby Pro Logic II	AnthemLogic	11.2 channels	11.2 channels	11.2 channels	5.2 channels
	Dolby Surround				
DTS Neo:6	Dolby Pro Logic II				•
	DTS Neo:6				
All Channels	All Channels			•	•

# COMPARISON CHART

COMI ARISON CHARL	AVM 60	MRX 1120	MRX 720	MRX 520
HDMI AND VIDEO PROCESSING				
Inputs – Rear	7	7	7	7
Input – Front	•			
MHL – Supported Inputs	1R+1F	1R+1F	1R+1F	1R
HDCP 2.2				
HDMI 2.0a				
On-Screen Display with UHD 4K 50/60	•			
4:4:4 Chroma Subsampling at 4K60 (18.2 Gbps)				
High Dynamic Range (HDR)				
BT.2020 Color				
xvYCC, Adobe RGB, Adobe YCC601, sYCC601, Deep Color				
Outputs (parallel)	2	2	2	2
Consumer Electronic Control (CEC)				
Audio Return Channel				
Standby Pass-Through				
NETWORK CONNECTION				
Wireless				
Ethernet				
CUSTOM INSTALLATION				
IP Control				
RS-232 Control				
Control System Drivers				
IR Input				
12V Trigger Output (configurable)				
Rackmount Kit (sold separately)				
ADDITIONAL FEATURES				
Toroidal Transformer				
Advanced Load Monitoring				
Input Configurations	30	30	30	30
Power-On Input Assignment				
Auto Power Off				
Eco Mode for Standby				
Front USB Port for Updates				
Backlit Remote Control				
Android Remote Control App				
iOS Remote Control App				
	•	•	•	•

# DESIGN DETAILS







Wireless network connectivity

Easy-to-read intutive display

Brushed anodized aluminum aesthetic



AVM 60 rear view

## TECHNICAL SPECS

Preamplifier (measured at XLR output)

Maximum Output (<0.1% THD) ......8.4 Vrms, subwoofer channel 9.9 Vrms

Frequency Response, Analog-Direct

THD+N (2 Vrms output).....-95 dB

S/N Ratio (2 Vrms output, IEC-A filter) ......110 dB

**Power Consumption** 

Typical Load .......60 W 

Standby HDMI Bypass Enabled......8.2 W

Dimensions

Height......6-1/2" / 16.5 cm

Height with Rackmount Kit ......4U

Depth (not including power cord) ......14-1/2"/36.4 cm

Weight (unpacked)

AVM 60......20 lb / 9 kg



#### **CREATE YOUR** OWN DOLBY ATMOS 11-CHANNEL SYSTEM



AVM 60 Preamplifier teamed with two MCA 325s and a MCA 525