

ARCAM

FMJ P777 Seven Channel Power Amplifier



- Seven channel high performance power amplifier
- 7x 150w per channel (8ohms)
- 7x 230w per channel (4ohms)
- Fully Balanced XLR inputs
- Unbalanced RCA inputs with "loop through"
- 12v trigger input for standby control
- Ultra stable thermal management
- Two massive toroid transformers
- Audiophile sonic performance for movies and music
- Ideal partner for AV888 processor
- Arcam FMJ 5 year Warranty

Having gained a world class reputation for amplifier design over thirty years, Arcam introduce the P777 multi channel amplifier for home cinema and music reproduction. Using technology honed thorough the development of dozens of award winning amplifiers, the P777 is the company's highest performing multi channel amplifier yet.

The P777 is a natural partner to the AV888 AV processor in high performance home cinema installations. Using Sanken output devices with ultra-stable thermal management from the company's stereo product line, the P777 offers huge power and control with even the most demanding loudspeakers and programme material. The Arcam development team have left nothing to chance while designing the P777. Literally hundreds of hours critical listening and fine tuning ensure it is equally at home with movies or music and will delight all who experience it.

Subtle detail is retrieved with startling realism even though the P777 is a true power house amplifier with huge output potential. Over 1.6kW of continuously available power is available to drive loudspeakers with clarity and precision and control. Substantial heat sinking and a computer controlled twin fan cooling system ensure it remains cool even under extreme duress with an all aluminium construction ensuring chassis temperatures are kept low while electro-magnetic interference is kept away from delicate audio signals.

The Two oversize toroid power transformers feed the seven power amplifier channels with separate secondary windings for each channel. The centre channel, often the most important as it carries dialogue information, is fed from both transformers for maximum performance. "Soft Start" circuit is deployed to reduce inrush load on the incoming mains supply at switch-on with the toroid standby transformer and control circuits kept in their own aluminium enclosure for additional screening.

The P777 is one of the finest multi channel amplifiers in the world and is specifically designed for the most ardent home cinema enthusiast or advanced custom installer. Available in black or silver finish, the P777 comes with Arcam's five year FMJ warranty.

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FMJ P777 Seven Channel Power Amplifier

P777 Features and specifications

Audio

- 7 x 150 watts per channel (8 ohms, 20Hz-20kHz, all channels driven)
- 7 x 230 watts per channel (4 ohms, 20Hz-20kHz, all channels driven)
- Peak output current +/- 30amps per channel
- Modular construction with seven independent and fully isolated channels
- Four Sanken heavy duty bi-polar output transistors per channel
- Advanced current feedback design with high slew rate and very low distortion at all audio frequencies
- All-aluminium chassis and casework for best sound quality
- Comprehensive protection circuitry
 - DC offset protection
 - VI limiting on each output stage
 - Software controlled thermostatic fan
 - Over temperature protection

Inputs and Outputs

- Balanced (XLR) input connections
- Unbalanced (RCA) inputs with "loop through" output
- 12v Trigger (3.5mm mono jack) input for standby control

Power Supply Features

- Balanced (XLR) input connections
- Twin 1500 VA toroidal power transformers with separate secondary's for each power amplifier
- Separate low noise toroid transformer for standby operation
- 140,000 micro-farads total reservoir capacitance
- "Soft Start" turn on system to prevent large inrush currents

Custom Install Features

- 12v trigger input (3.5mm)
- Heavy duty IEC power inlet
- Middle Atlantic rack shelf available
- Balanced and unbalanced inputs
- Unbalanced input "loop through" connection
- Twin large and quiet temperature controlled fans

General

- Available in black or silver finish
- Size – 435mm (17.1in) wide, 460mm (18.1in) deep, 185mm (7.3in) high
- Weight 31kg (68.3) nett, 35kg (81.6lbs) packed

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FMJ AV888 HD AV Pre-amp Processor



- Ultra High Performance AV Pre-amp Processor
- Wolfson 8741 DACs for superior sound quality
- Ultra-clean audio signal path
- Fully Balanced XLR Outputs
- HDMI 1.3a dual output video switching
- Video trans-coding & scaling to 1080p
- High precision decoding for HD audio formats
- Dolby Volume* gain processing
- 3 zone outputs
- Ethernet/USB audio playback / Internet radio
- IR and full duplex RS232 control
- Reference standard audio & video performance
- FMJ 5 Year Warranty

Since the early 1990's, Arcam has been dedicated to bringing high fidelity sound to the world of home cinema. Using audio technology usually reserved for audiophile stereo equipment, Arcam have pushed the boundaries for combined music and movie reproduction. The AV8 and AV9 AV processors have won numerous awards for sound and video quality around the world while Arcam's audiophile AV receivers have gained wide critical acclaim in the more affordable sector.

The AV888 redefines both the feature set and sonic performance of high end AV processing and pre-amplification. The result of a massive 2 ½ year ground-up development programme, it features all new state of the art audio stages and balanced audio connectivity. Combined with its natural partner, P777 power amplifier, the AV888 represents a new standard for AV amplification.

Wolfson 8741 Digital to Analogue converters are deployed across all seven channels bringing ultra linear conversion of digital audio signals. Individual, multi-regulated power supplies feed all critical audio stages with studio grade Burr Brown DRV134 balanced line drivers used for balanced audio outputs to drive longer cable runs or active speaker configurations with extreme fidelity.

To help eliminate the large volume jumps often found in broadcast TV sound user selectable Dolby Volume* processing is included, a world's first for an AV processor. In addition Dolby Volume includes programme dependant tonal correction to deliver a richer, more realistic sound experience at low listening levels.

The AV888s internal video processing delivers sublime video using broadcast quality scaling and frame rate conversion from Pixelworks. Up-conversion of all video inputs to HDMI output at all commonly used standard or high definition resolutions is possible making system integration a simple affair. Full RS232 and IR connectivity are deployed along with IP control and dedicated interface for control and audiophile playback of iPods using the rDock or rLead.

Arcam's world wide reputation for sound quality has come from over thirty years of experience and legendary attention to detail. All of this experience has been brought to bear in the development of the AV888 and as a result its sound quality is simply world-class. No matter what the program material, from the most explosive block blockbuster action to the most subtle musical detail, the AV888 will delivers simply breathtaking performance.

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ARCAM

AV888 HD AV Pre-amp Processor

AV888 Features and specifications

- **Analogue Audio**
- Audiophile quality components for best sound quality
- Multi-channel 7.1 analogue input for DVD-A or SACD sources
- Stereo direct mode bypasses and disables all digital processing for 2 channel analogue sources
- 9 stereo analogue inputs (including one MM phono input & front 3.5mm AUX input)
- Zone 2 stereo audio, from analogue inputs (Source and volume control independent from main zone)
- Zone 3 stereo audio, from analogue inputs, linked to Zone 2, volume control independent
- Support for iPod via Arcam rLead / rDock (independent of RS232 connection)

Digital Audio

- State of the art Analog Devices ADSP-21366 & ADSP-21367 DSPs for surround decoding
- Wolfson 8471 high end 24bit 192kHz audio DACs
- Crystal Semiconductor stereo ADC and precision electronic volume controls
- Burr Brown DRV134 Balanced line drivers
- Dolby TrueHD, Dolby Digital+, Dolby Digital EX, Dolby Pro Logic IIx, DTS HD Master Audio*
- DTS High Resolution Audio, DTS-ES Discrete, DTS-ES Matrix, DTS96/24, DTS Neo:6**
- Dolby Volume gain management and Tonal correction processing*
- Dolby Volume processing for balancing of program material gain and tonal balance
- Adjustable crossover switching 40Hz, 60Hz, 80Hz, 100Hz, 120Hz, 150Hz
- 8 digital inputs 4 rear optical, 3 co-axial, 1 front 3.5mm optical AUX input
- Global audio delay, adjustable from 0-1000 milliseconds, to compensate for video processing delays in digital displays and sources with auto lip-sync for compatible displays

Video

- 5 HDMI inputs (up to 1080p, Deep Colour)
- 2 HDMI outputs (up to 1080p, Deep Colour)
- 5 Component inputs, one monitor output (up to 1080i)
- 5 S-video inputs, one monitor output, 2 tape outputs
- 5 Composite video inputs, one monitor output, 2 tape outputs
- Full video up/down conversion & frame rate conversion of all inputs where technically allowed
- Video enhancements (per input): Edge enhancement, Mosquito noise reduction, Random noise reduction, Block noise reduction

Custom Install Features

- Independent Zone 2 (audio & video), with fixed/variable volume
- Zone 3 audio with fixed/variable volume (follows Zone 2)
- Balanced audio outputs (XLR) for long cables or active speakers
- RC-5 remote input jacks for all three zones
- IP control over Ethernet
- IR pass through for source components
- Full suite of discrete IR RC-5 codes, including separate on / off etc
- 12Volt triggers, on / off for zones 1, 2 and 3
- Full duplex RS232 control input for more complex control systems
- Optional network card

General

- Supplied with back-lit CR102 learning remote
- control with support for up to 7 other components and a huge on-board code library
- Large, high contrast dimmable VFD front panel display
- User switchable between 120 & 230 volt
- mains supplies
- Size – 435mm (17.1in) wide, 415mm (16.3in) deep, 185mm (7.3in) high
- Weight 12kg (26.5lbs) nett, 17kg (37.5lbs) packed

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* "Dolby TrueHD", "Dolby Digital+", "Dolby Digital EX", "Dolby Pro Logic IIx" & "Dolby Volume" are trademarks of Dolby Laboratories Licensing Corporation. ** "DTS High Resolution Audio", "DTS-ES Discrete", "DTS-ES Matrix", "DTS96/24", "DTS Neo:6" are trademarks of Digital Theatre Systems.

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AV888 White Paper

Introduction

After launching to fantastic reviews and great customer acclaim, the obvious evolution of the AVR600 AV receiver was the development of a pre-processor version.

There were no features that needed to be added, so the development team focused on improvement of the already class-leading AVR600 sound quality. The result of months of painstaking listening tests is the AV888 pre-processor.

With its stunning clarity & detail, this product is the ideal complement to the Arcam P777 multi-channel power amplifier.



Analogue Input

Linearising the inputs

Analogue input switching using analogue switches in a virtual earth configuration is a high quality method for switching. However, analogue switches are not completely linear, so it is possible to further improve this arrangement by placing another switch, which does not actually switch, in the feedback path. Instead of the input signal passing through a resistor followed by a switch and the feedback signal passing through just a feedback resistor, the input signal and the feedback signal both go through identical paths. The result is improved purity and clarity for analogue inputs.



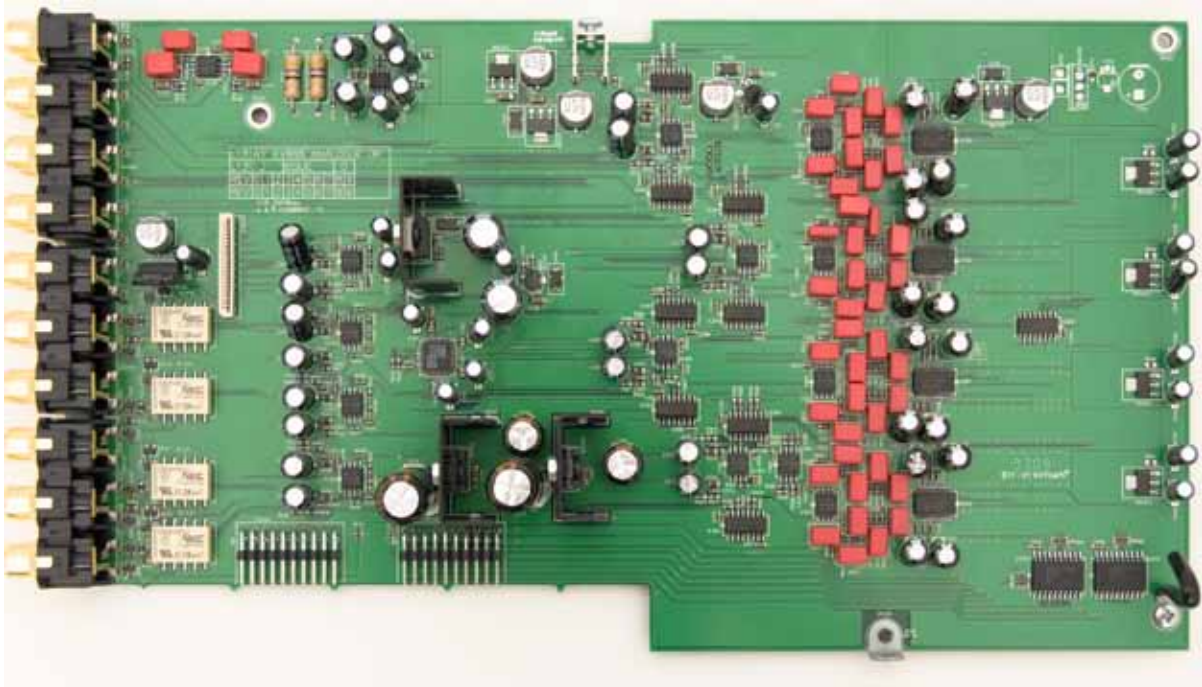
A more direct path

Analogue bypass is a key feature on Arcam AV products, allowing a bypass of the A/D converter, DSP processing and D/A conversion for users that want to listen to analogue stereo sources without processing. For ultimate performance when in this mode, the AV888 has a flat cable linking the analogue input PCB to the analogue output PCB, transferring the signals from the input switch to the volume control via the shortest route possible.

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Preliminary information: Arcam's policy is one of continuous improvement - we reserve the right to change any features without notice

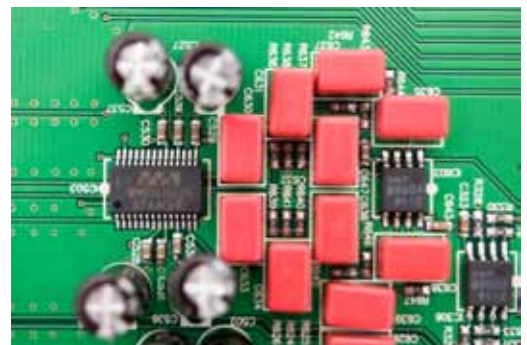
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Analogue Output

Highest performance D/A conversion

Instead of the traditional 8-channel D/A conversion, the AV888 has four stereo Wolfson WM8741 D/A converters. Not only are these currently the highest performance D/A converters available, the use of stereo D/A converters allows for the optimum layout for decoupling around the converter and the post-filter. Eight channel D/A converters appear initially more convenient to use, but do not offer the best possible performance and the layout is normally compromised by the need to have so many components for eight sets of post filters.



Wolfson 8741 DAC and post filter



Individual DAC power supply regulator

Power supplies

The main power supply was redesigned, optimising pre-amplifier performance.

Despite already having a regulated supply on the main power supply PCB, each of the four stereo D/A converters has a local sub-regulated supply to prevent current draw from one D/A converter affecting any of the others.

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Balanced Outputs

Balanced outputs have been provided for the ultimate in sonic performance and improved immunity to the pickup of externally generated noise signals. This also allows more flexibility for installations as longer cable runs from the AV888 to the amplifiers are possible.

Tuners

The AV888 has no tuners to prevent any RF interference. For the user that requires the finest hi-fi tuner, the Arcam T32 is the perfect partner for the AV888.



Mechanical chassis damping

Mechanics

Also critical to the sonic performance of any product is the mechanics of the chassis & cover. The AV888 has additional damping material to mechanically “deaden” both parts as resonances here can have a detrimental effect on the sonic performance of the product.



Gold-plated balanced XLR outputs

Mask of Silence

As with all other Arcam product, extensive audio tuning takes place using a variety of techniques. All paths – direct, stereo A/D, digital D/A - are considered and checked individually to ensure that optimisation of one path does not have a detrimental effect on any other. Carefully placed ferrite, damping & RF shielding materials are placed in key points within the product to fully optimise the sound.



Mechanical damping of critical components



Mask of Silence RF shielding

Conclusion

The Arcam AVR600 platform ushered in a new era of high performance High Definition audio and video from Arcam. The AV888 preamp processor takes this to the next level by uniting the finest available electronic components with a no-compromise design philosophy, all fine-tuned by Arcam’s expert listening team. The AV888 will provide breathtaking Arcam sound quality for all analogue and digital inputs and deserves to be at the heart of any truly high performance, high definition system.

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