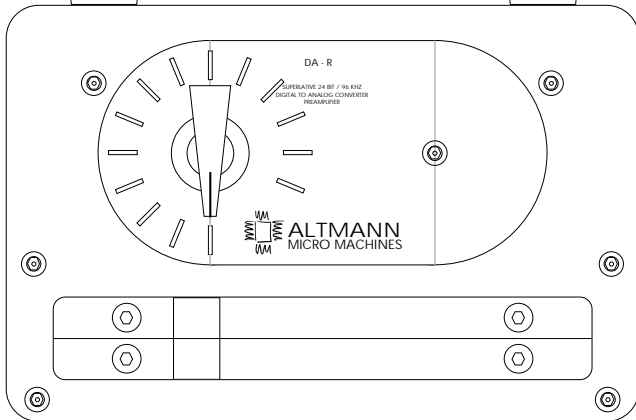
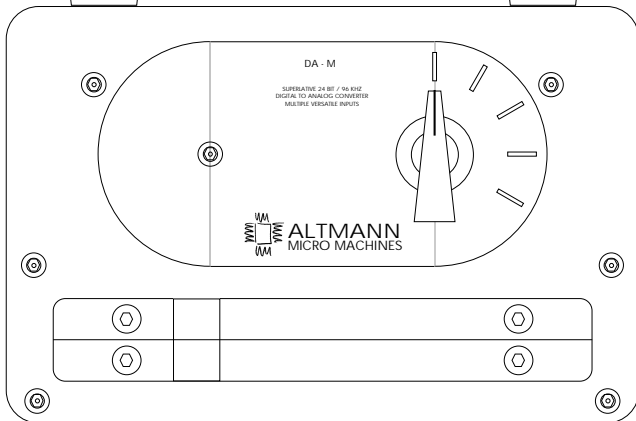


SUPERLATIVE 24 BIT / 96 KHZ DIGITAL TO ANALOG CONVERTER

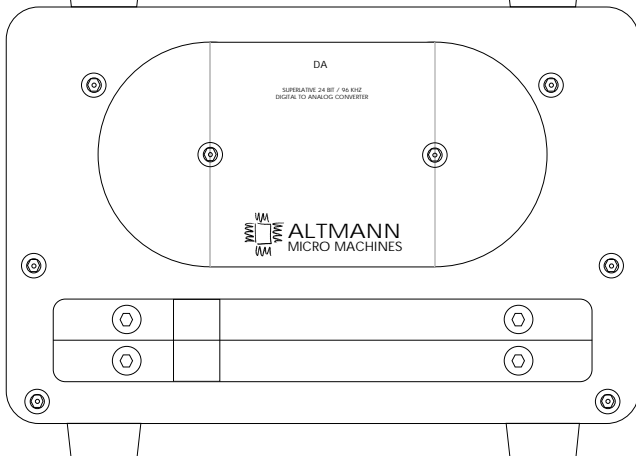
ALTMANN DA-MR



ALTMANN DA-R



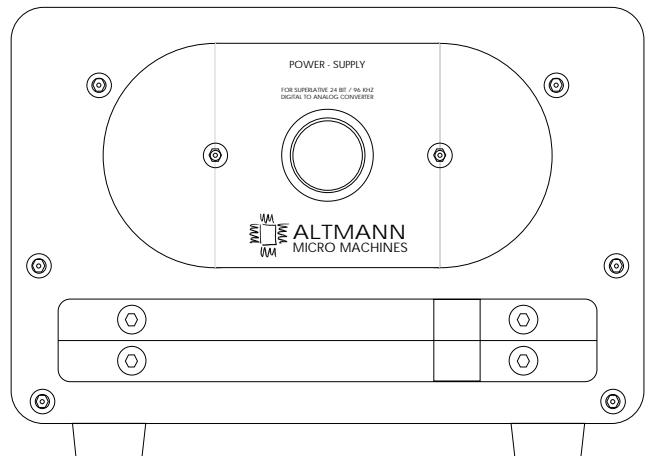
ALTMANN DA-M



ALTMANN DA

ALTMANN DA POWER-SUPPLY

USER'S MANUAL



INTRODUCTION

CONGRATULATIONS

You've just become the proud owner of the world's finest digital to analog converter. When people come up to compliment you on your sound, you can smile knowingly ... and hopefully you'll tell them a little about us!

This digital to analog converter system has been designed, tested, improved and again & again tested and refined to deliver maximum musical performance of any style, in any situation. Despite of its professional motivation, this digital to analog converter system is very easy to install and to operate.

INTEGRATED SYSTEM

The idea behind this DA converter is to implement a CD & DVD-compatible high-precision sign magnitude digital to analog conversion and a powerful high-speed analog post-processor into a single unit.

In order to deliver the highest possible audio reproduction quality - and this is our single goal - the ultra-clean power-supply of your ALTMANN DA is placed in a separate housing.

Your ALTMANN DA automatically locks to any sampling frequency between 32 and 96 kHz and even above, no matter if your input signal has 16, 18, 20 or 24 bits.

The ALTMANN DA has an integrated 8-times oversampling digital filter and the finest colinear converters, together easily featuring a sample output frequency of 768kHz with true 24bit resolution.

YOUR SPECIFIC APPLICATION

Since professional and high-end audio applications are complex and demanding systems, ALTMANN offers different DA converter models in order to promote a perfect design integration.

Please understand, that all of our DA converter models deliver unsurpassed audio performance.

All ALTMANN DA converter have XLR and Cinch audio outputs and an external power supply.

The ALTMANN DA is the base model and features 1 Toslink and 1 Cinch digital input.

The ALTMANN DA-M features 2 Toslink, 2 Cinch, 1 ST optical, 1 XLR and 1 BNC digital inputs, that are switchable on the front panel.

The ALTMANN DA-R features a high-grade volume control and can directly be connected to a power amplifier. Since we do not believe in any external preamplifier being able to handle our fine signal losslessly, the ALTMANN DA-R was designed to easily satisfy even extremely demanding listeners.

The ALTMANN DA-MR is the - top of the line - machine integrating all features in a single product.

All ALTMANN DA converter models can be ordered with selected components: DA-S, DA-MS, DA-RS, DA-MRS.

PACKAGE CONTENTS

Each ALTMANN DA comes in two boxes, one containing the DA converter and one containing the ALTMANN DA POWER-SUPPLY.

Also included:

1 AC power cable

1 DC power cable for interconnecting the DA with its POWER-SUPPLY

1 optical TOSLINK digital cable

1 registration card

This manual

WARNING

The ALTMANN DA is able to produce significant levels of output energy. In order to save your equipment -and your ears - from blowing up, **always start with zero volume, especially when playing unknown program material!**

Please keep in mind, that if there are other people in your room, they may not be used to audition at high volume levels, or may never have heard uncompromised musical reproduction in their life before. If you are not alone, please ask your fellow listeners if they feel comfortable with your preferred volume level.

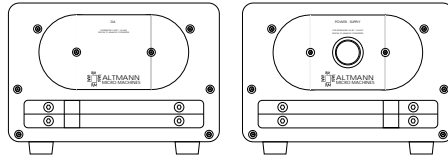
Always remember: The most valuable and most sensitive part of your audio equipment are your ears.

MODELS

There are 4 different models available:

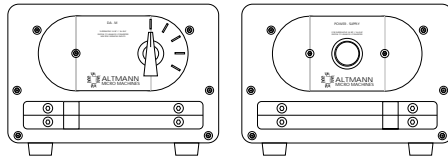
ALTMANN DA:

standard model



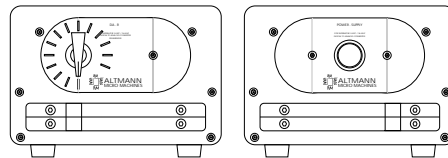
ALTMANN DA-M:

multiple versatile inputs



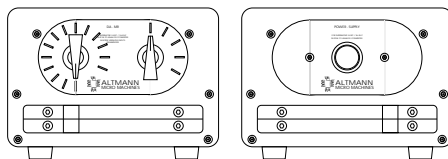
ALTMANN DA-R:

preamplifier with volume control



ALTMANN DA-MR:

multiple versatile inputs & preamplifier with volume control

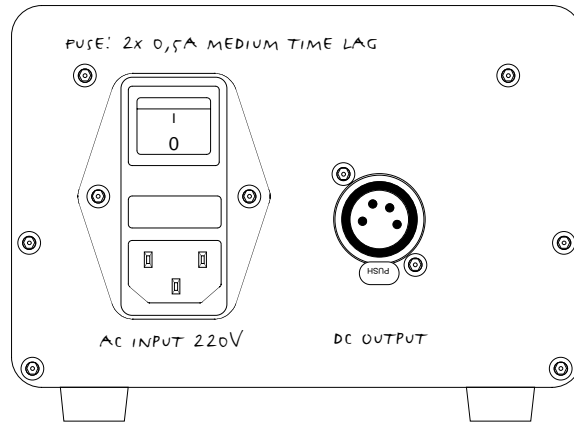


All models come with the same power supply.

Please refer to your specific model, when reading the following installation directives.

EXTERNAL CONNECTIONS

ALTMANN DA POWER SUPPLY:



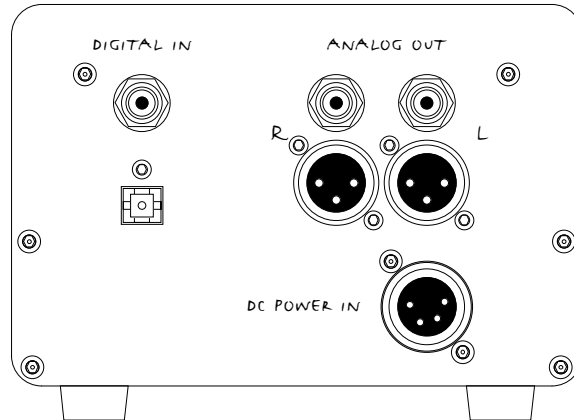
Please check that the voltage rating under the AC input socket (220V in this case) matches your AC wall outlet.

Under no circumstance a DA POWER-SUPPLY with a 110V rating should be connected to a 220V wall outlet.

The DC output must be connected to the DC input socket of one ALTMANN DA. The DC cable that is included in the package must be used for interconnection.

The DC output socket must be connected to no other equipment than one ALTMANN DA.

ALTMANN DA & ALTMANN DA-R:



Each ALTMANN DA converter system has a stereo pair of Cinch and XLR analog outputs.

The DC power input socket must be connected to no other equipment than one ALTMANN DA POWER-SUPPLY.

The ALTMANN DA & ALTMANN DA-R have two digital inputs: one coaxial Cinch socket and one optical TOSlink socket.

Each digital input is able to process 16 to 24 data words at sampling frequencies from 32 kHz to 96 kHz.

Each ALTMANN DA or DA-R can be connected to 2 digital output devices. However, since the ALTMANN DA and DA-R have no input selector switch, it is essential for operation, that only one digital input is driven at a time.

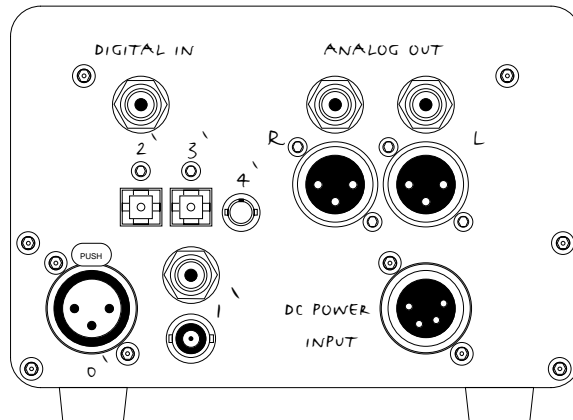
RULE: The 2 digital inputs of the ALTMANN DA and the ALTMANN DA-R can be connected to 2 digital output devices, but can only accept one active signal. The other input signal must be muted.

Since some digital output devices do stop sending data, even when not playing, they should be switched off, so that the other digital input becomes available.

The TOSlink input is able to override the coaxial Cinch input.

RULE: When a 24 bit / 96 kHz digital signal is fed into the coaxial Cinch digital input, the TOSlink input should be disconnected and the TOSlink input socket should be closed with the supplied plug.

ALTMANN DA-M & ALTMANN DA-MR:



Each ALTMANN DA converter system has a stereo pair of Cinch and XLR analog outputs.

The DC power input socket must be connected to no other equipment than one ALTMANN DA POWER-SUPPLY.

The ALTMANN DA-M & ALTMANN DA-MR have 7 digital inputs: 2 coaxial Cinch sockets, 2 optical TOSlink sockets, 1 optical ST socket, 1 coaxial BNC socket and 1 XLR socket.

Each digital input is able to process 16 to 24 data words at sampling frequencies from 32 kHz to 96 kHz.

The 7 digital inputs of the ALTMANN DA-M & ALTMANN DA-MR are divided into 5 digital input groups, that can be selected by turning the switch at the front plate.

- Group 0: 1 XLR digital input
- Group 1: 1 coaxial Cinch digital input and 1 coaxial BNC digital input
- Group 2: 1 coaxial Cinch digital input and 1 optical TOSlink digital input
- Group 3: 1 optical TOSlink digital input
- Group 4: 1 optical ST digital input

Each group is selected by setting the source switch on the front plate to the corresponding clock-position of the desired group (fe. if you want to hear group 2: move the switch to the 2 o'clock position).

Each ALTMANN DA-M or DA-MR can be connected to 7 digital output devices. However, there may be a conflict, if both inputs belonging to one digital input group are used at the same time.

RULE: The 2 digital inputs of the same digital input group can be connected to 2 digital output devices, but can only accept one active signal. The other input signal must be muted.

Since some digital output devices do stop sending data, even when not playing, they should be switched off, so that the other digital input becomes available.

The TOSlink input is able to override the coaxial Cinch input.

RULE: When a 24 bit / 96 kHz digital signal is fed into the coaxial Cinch digital input of group 2, the TOSlink input of the same group should be disconnected and the TOSlink input socket should be closed with the supplied plug.

INSTALLATION

You are now integrating your ALTMANN DA into your audio system. In order to understand the following directives, please choose your application from the application examples on the following pages.

Before installing your ALTMANN DA, turn all volume controls completely down and shut down your amplifier, preamplifier and all digital sources you want to connect (fe. CD-player, DVD-player, DAT, etc.).

Place the ALTMANN DA and the ALTMANN DA POWER-SUPPLY next to each other on a stable horizontal platform. It is not necessary, to place the Power-Supply to a separate platform since it does not produce mechanical or electrical disturbance.

The ALTMANN DA POWER SUPPLY is available as 220V model and as 110V model. Please check, if you have the correct power supply before connecting to your AC plug.

Interconnect the ALTMANN DA and the ALTMANN DA POWER-SUPPLY with the supplied low voltage power cable. Use only the supplied cable.

Connect the audio outputs of the ALTMANN DA to your preamplifier (if applicable) or main-amplifier.

Connect your digital source to one of the digital inputs of your ALTMANN DA.

You have now installed the ALTMANN DA into your audio system.

POWERING UP PROCEDURE

RULE: The ALTMANN DA should always be the first component of your audio system to be switched on, and the last component to be switched off.

Turn all volume controls completely down.

Switch on the ALTMANN DA on the back of the ALTMANN DA POWER-SUPPLY. The control lamp of the ALTMANN DA POWER-SUPPLY will light up.

Then, switch on your digital source (fe. CD-player, DVD-player, DAT, etc.).

Verify, that the volume setting is completely down.

Then, switch on your preamplifier (if applicable) and main amplifier.

Apply a digital source to your ALTMANN DA (fe. load a CD and press the play button on your CD player).

Increase the volume slowly to your desired level.

Enjoy!

RULE: To prevent latch up conditions, it is essential, that a digital input is only activated (connected, switched on) after powering up the ALTMANN DA.

Fe: First switch on the ALTMANN DA, then switch on your digital source (CD-player).

If for any reason, it is not possible to switch off a digital source, it is recommended to disconnect it from the ALTMANN DA and reconnect it, after the ALTMANN DA has been switched on.

RULE: The ALTMANN DA and the ALTMANN DA POWER-SUPPLY are designed for continuous 24h usage. In order to obtain the best possible performance, a power-down is only recommended, if the unit will not be used for a longer time-period.

POWERING DOWN PROCEDURE

RULE: The ALTMANN DA should always be the last component of your audio system to be switched off.

Turn all volume controls completely down.

Switch off your main amplifier or power amplifier. Switch off your preamp if applicable.

Then, switch off all of your digital sources.

Then, switch off the ALTMANN DA on the back of the ALTMANN DA POWER-SUPPLY. The control lamp on the front of the ALTMANN DA POWER-SUPPLY will go off.

For a complete power down, switch off the rest of your audio equipment.

RULE: To prevent latch up conditions, it is essential, that a digital input is only activated (connected, switched on) after powering up the ALTMANN DA.

Fe: First switch on the ALTMANN DA, then switch on your digital source (CD-player).

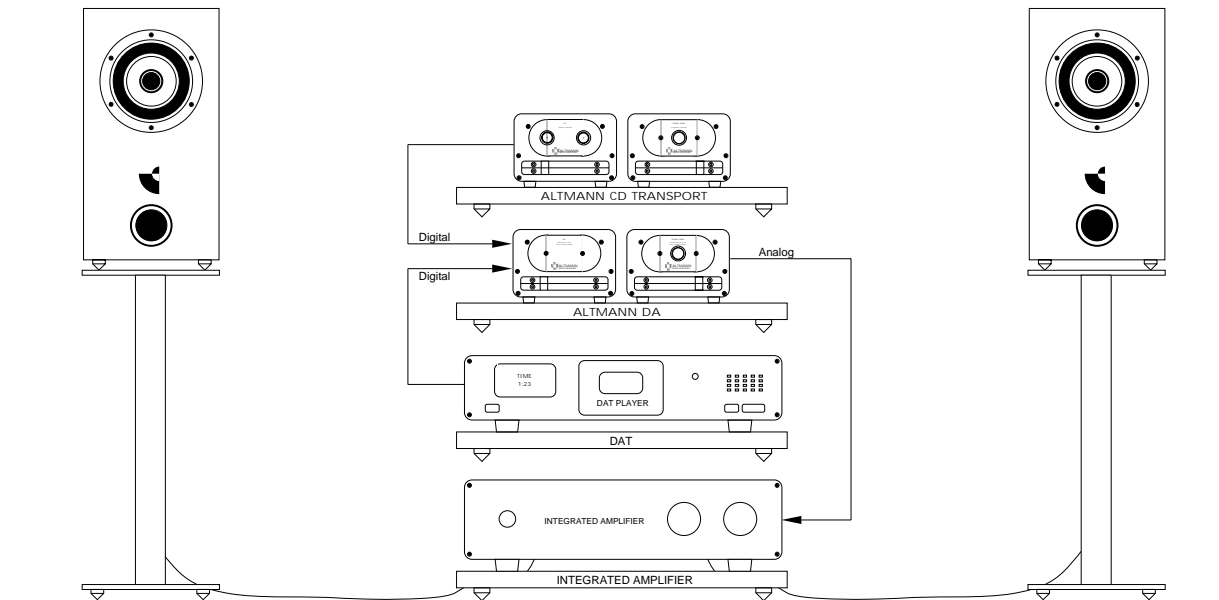
If for any reason, it is not possible to switch off a digital source, it is recommended to disconnect it from the ALTMANN DA and reconnect it, after the ALTMANN DA has been switched on.

The ALTMANN DA is designed for continuous 24h usage. In order to obtain the best possible performance, a power-down is only recommended, if the unit will not be used for a longer time-period.

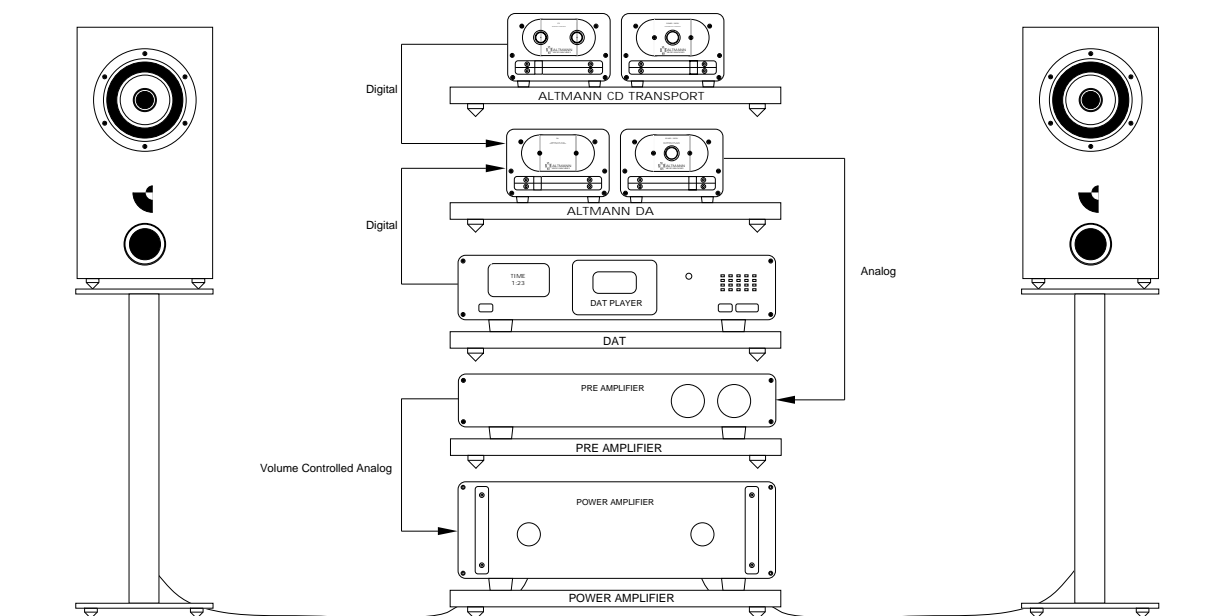
APPLICATIONS

The following pages contain implementation examples of the ALTMANN DA into different audio systems.

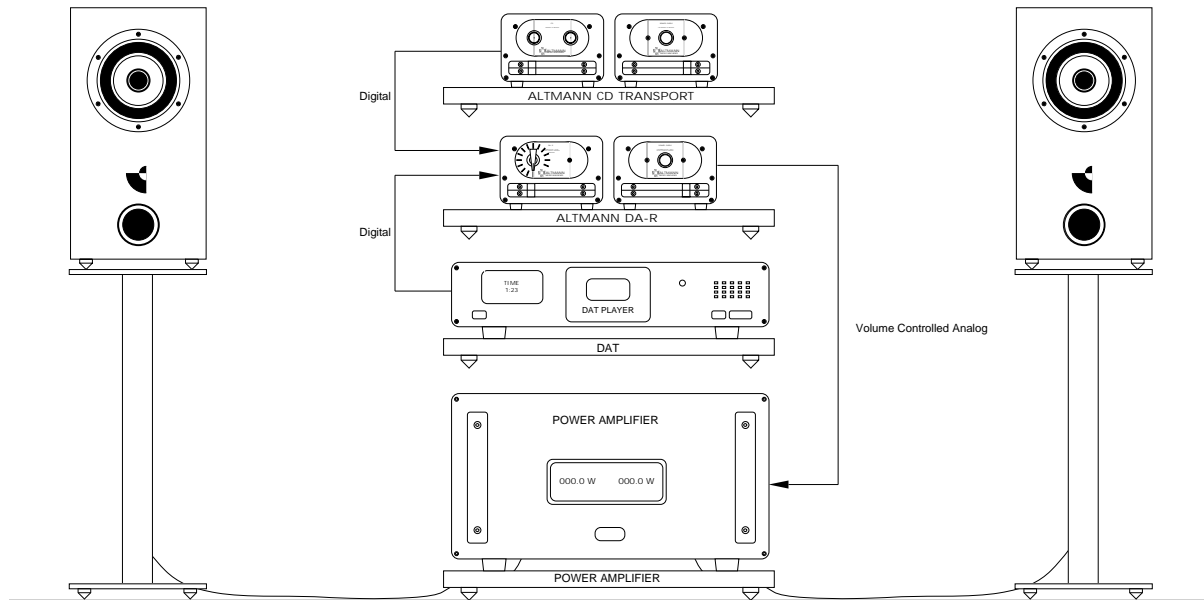
SIMPLE APPLICATION:



The ALTMANN DA drives an integrated amplifier (top) or a preamp / poweramp combination (bottom).



VOLUME CONTROL APPLICATION:



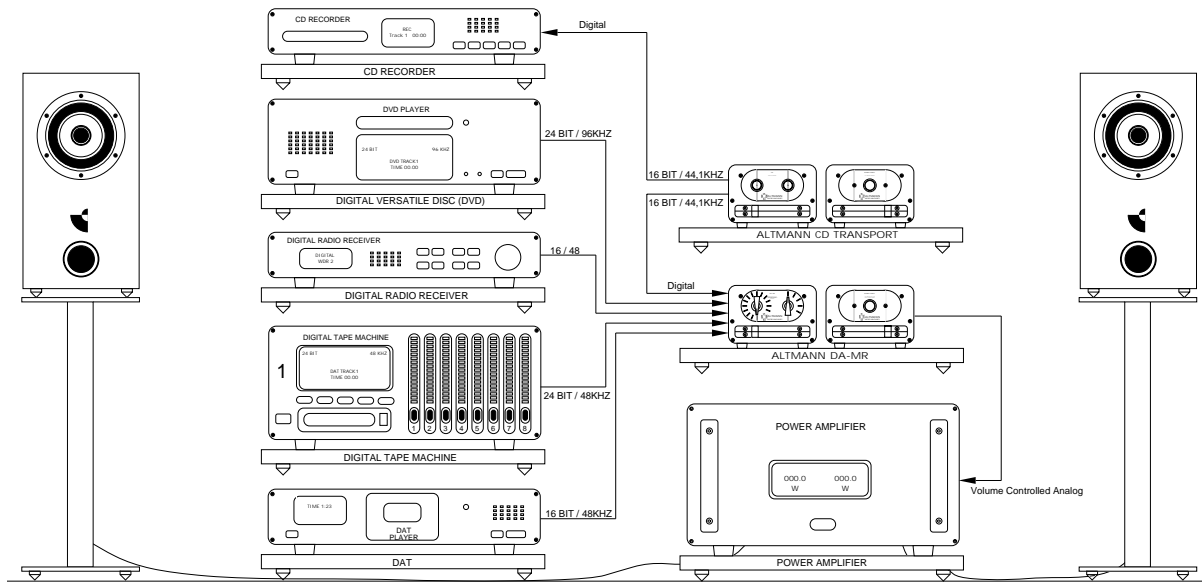
The ALTMANN DA-R directly drives a power amplifier.

High quality analog volume control is performed inside the ALTMANN DA-R.

This application features extremely short signal paths as it eliminates the need of a separate preamplifier, the additional cables and the associated losses in signal quality.

The analog volume is controlled directly at the source of the signal, ensuring excellent performance.

MULTIPLE INPUTS APPLICATION WITH VOLUME CONTROL:



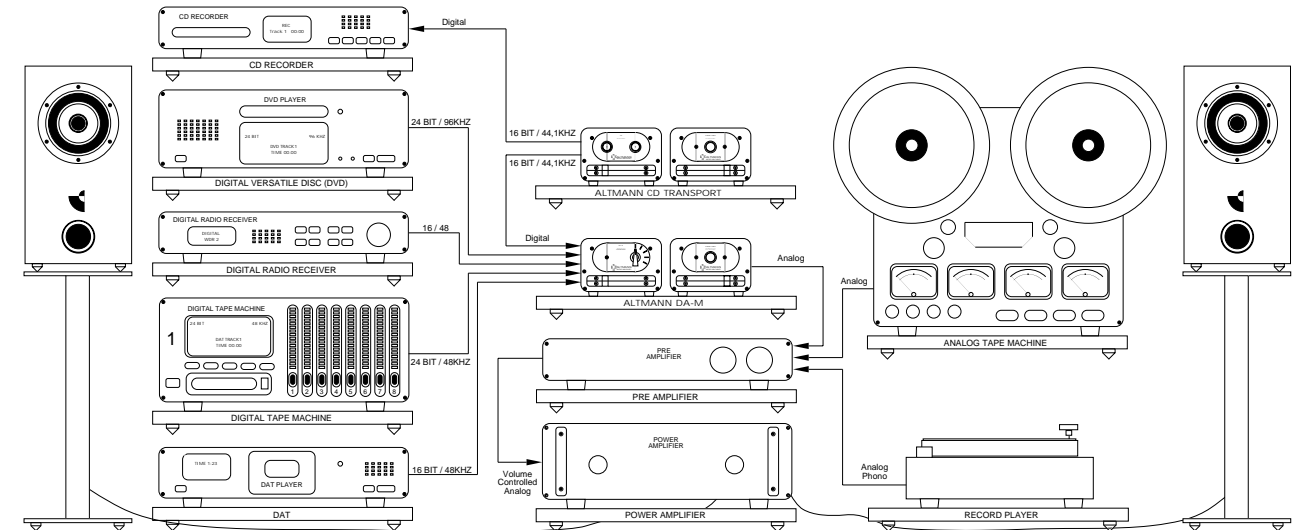
The ALTMANN DA-MR is connected to several digital input devices, that can be selected on the front-panel.

Each digital input device supplies different data word lengths and sampling frequencies, which are automatically recognized and processed by the ALTMANN DA-MR.

The ALTMANN DA-MR also features high quality volume control and directly drives a power amplifier.

This application demonstrates the versatility of the ALTMANN DA-MR while supplying unsurpassed musical performance.

MULTIPLE MIXED SOURCES APPLICATION:



This application features both analog and digital sources.

The ALTMANN DA-M is connected to several digital input devices, that can be selected on the front-panel.

Each digital input device supplies different data word lengths and sampling frequencies, which are automatically recognized and processed by the ALTMANN DA-M.

The ALTMANN DA-M drives a preamp / poweramp combination.

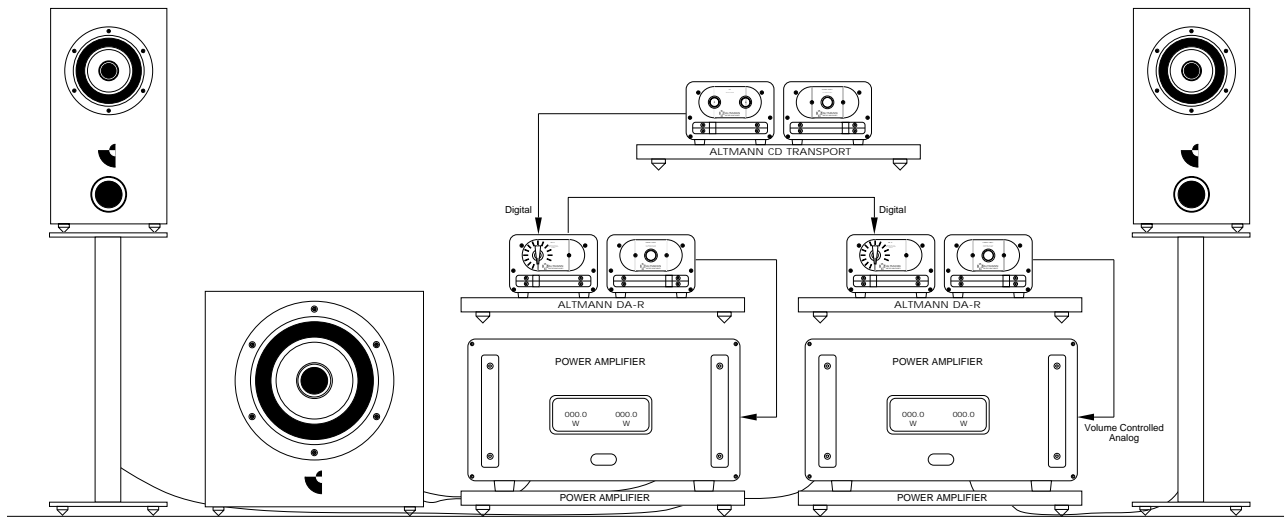
Additional analog sources (analog tape machine and record player) are connected to the preamplifier.

All digital sources are selected and routed via the ALTMANN DA-M to the preamp. The preamp switches between digital source, analog tape and record player.

Volume control is also performed by the preamp.

This application demonstrates the versatility of the ALTMANN DA-M, especially when analog and digital sources are used together in one audio system.

SUBWOOFER APPLICATION WITH SEPARATE VOLUME CONTROL:



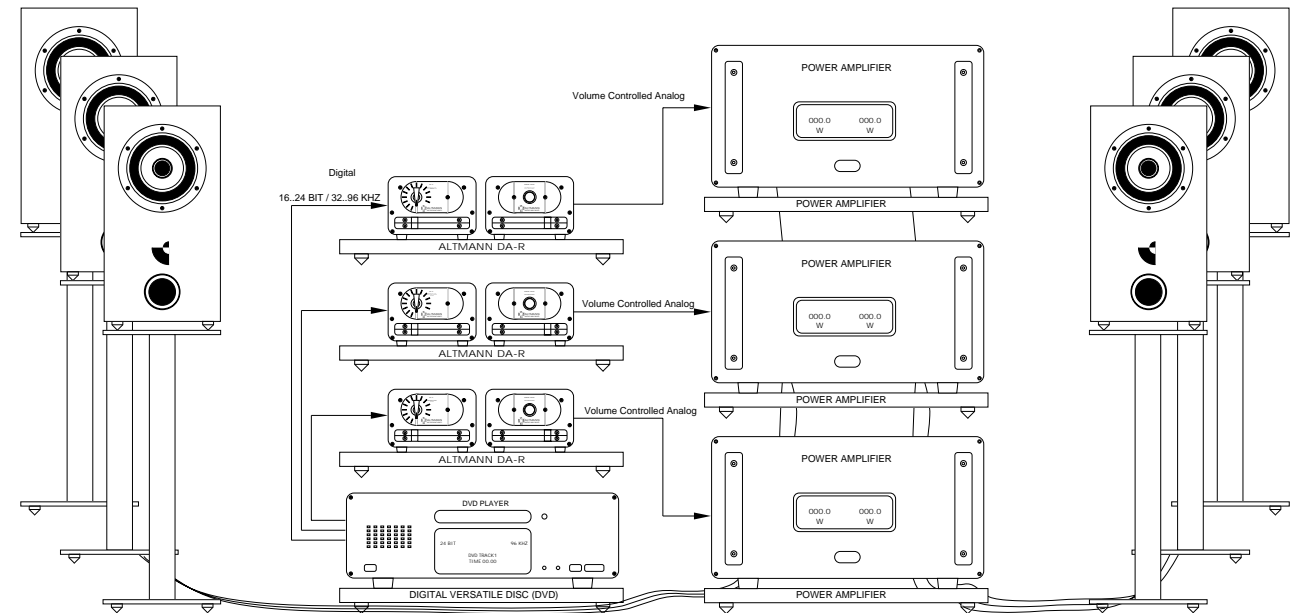
Two ALTMANN DA-R units are connected in a daisy chain to one digital output device (f.e. ALTMANN CD-TRANSPORT).

Each ALTMANN DA-R is connected to one stereo power-amplifier, allowing separate high-quality volume control for two stereo pairs.

One stereo power signal pair is used to drive a subwoofer.

This application features separate high-quality volume control for overall- and bass-frequencies, without the need of active frequency separation and associated losses.

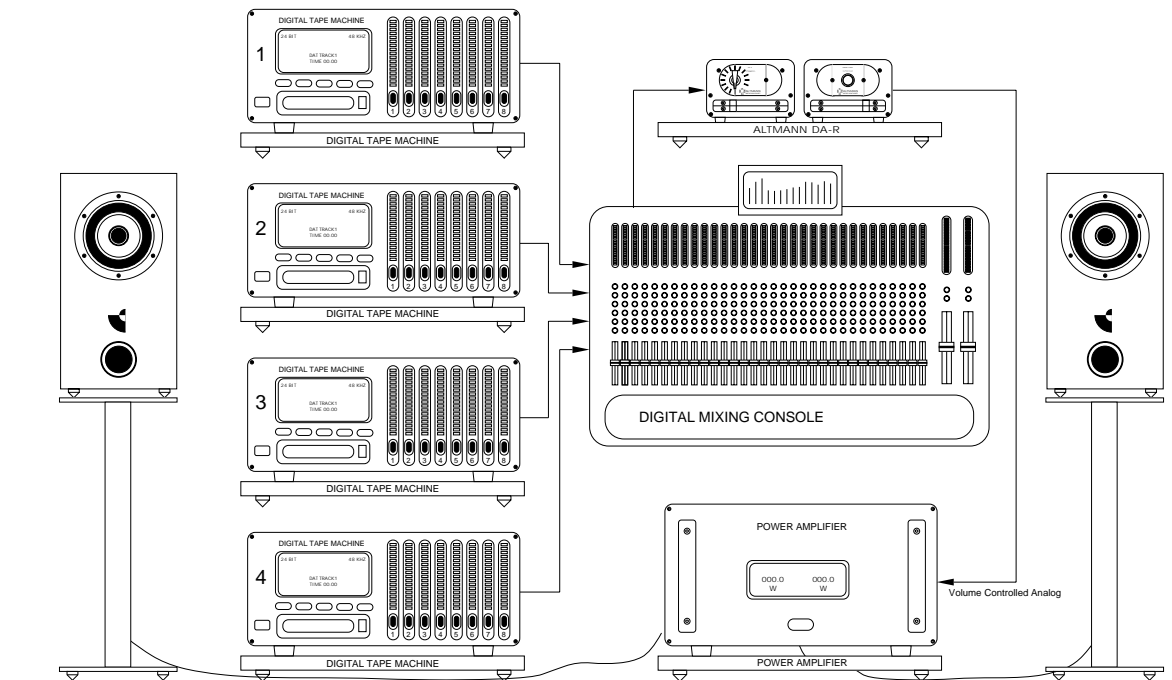
MULTICHANNEL APPLICATION WITH VOLUME CONTROL:



Three ALTMANN DA-R units are connected to a multichannel digital input device, that delivers 3 stereo pairs of digital pcm output data.

Each ALTMANN DA-R is connected to one stereo power-amplifier, allowing separate high-quality volume control for all three stereo pairs.

DIGITAL RECORDING STUDIO:



Four digital 8 track tape machines are connected to a 32 track digital mixing console.

The mixing process is monitored by one ALTMANN DA-R, which directly drives a power-amplifier.

High-quality analog volume control is performed by the ALTMANN DA-R.

For ultimate audio performance, especially if analog effects have to be slaved in, we are able to supply the ALTMANN DA-RS (with selected components).

SERVICE

The ALTMANN DA is covered by a 5 years limited warranty.

Our products are designed for a lifetime of trouble free operation. However, if your ALTMANN DA needs attention, it is essential, that you send it directly to ALTMANN Germany.

The ALTMANN DA and its POWER SUPPLY are internally sealed and cannot be repaired by third parties. It is also not allowed to open the case of either the ALTMANN DA nor the ALTMANN POWER SUPPLY. Opening the case will lead to an immediate loss of your warranty.

We are not obliged to service any of our products, even after the warranty period, if we recognize an unauthorized repair attempt.

UPGRADES

Since sometimes the application, that a product was purchased for, changes, we are always willing to upgrade our products to a level of higher functionality (fe. the ALTMANN DA can be upgradet to the ALTMANN DA-M, DA-R or DA-MR).

If you need to upgrade your ALTMANN DA, please contact us directly.

If you have any questions or need more information about our products don't hesitate to contact the next AMM-dealer or call/fax us at 0049 - 2129 - 54 260.

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