

FOR RETAIL USE ONLY
CONFIDENTIAL

KEY REASONS TO BUY THE

MATRIX™

Six Channel Line Driver **PLUS**

Key Features and Benefits of the Matrix PLUS:

Six input and output channels, can be independent or linked

Benefit – One, two or even three sources can be used with one MATRIX Plus. Great for level matching different sources, or for optimizing the signal of a source unit with separate front, rear, and subwoofer outputs.

Input for optional dash mounted remote (ACR-1)

Benefit – Allows level adjustment from the comfort of the front seat.

High voltage line driver capable of 13 volts peak signal

Benefit – Increased signal level allows amplifiers to perform at their maximum potential.

Adjustable 24 db of signal gain and 12 db signal cut

Benefit – Allows level matching of up to 3 different components, and ability to optimally adjust system amplification.

Output voltage indicators

Benefit – Allow a simplified yet accurate method to properly adjust the system gain for maximum signal to noise ratio and highest output capability.

Bulletproof 5 year warranty (when installed by an authorized AudioControl dealer)

Benefit – We believe in our product and our dealers so we back it up with one of the longest warranties in the business.

Who is the Customer?

Source Units With Multiple Outputs Although many source unit manufacturers offer source units with six RCA outputs (front, rear, sub), few realize that the maximum voltage output of the source unit is now spread over these multiple channels. The MATRIX Plus has been designed to work with these type of units by offering six channels of input and output for maximum voltage at all times.

In Car Video and Multi-media In today's world of integrating multi-media systems and video games with performance autosound systems, source units from different manufactures are typically used. Unfortunately the output levels for these sources are all over the map with some being too high and many being too low. To assist in this daunting level matching task, the MATRIX Plus has up to 24 dB of boost or 12 dB of cut to optimize the signal level of any source unit.

Maximum SPL Vehicles An autosound system that utilizes multiple amplifiers will require multiple outputs. The MATRIX Plus provides a unique linking ability that allows two input channels to be configured to produce up to six output channels, each of which can drive up to seven amplifiers. In addition, the low impedance output of the MATRIX Plus helps keep everything running peaceful and powerful.

**Make
Better
Sound**

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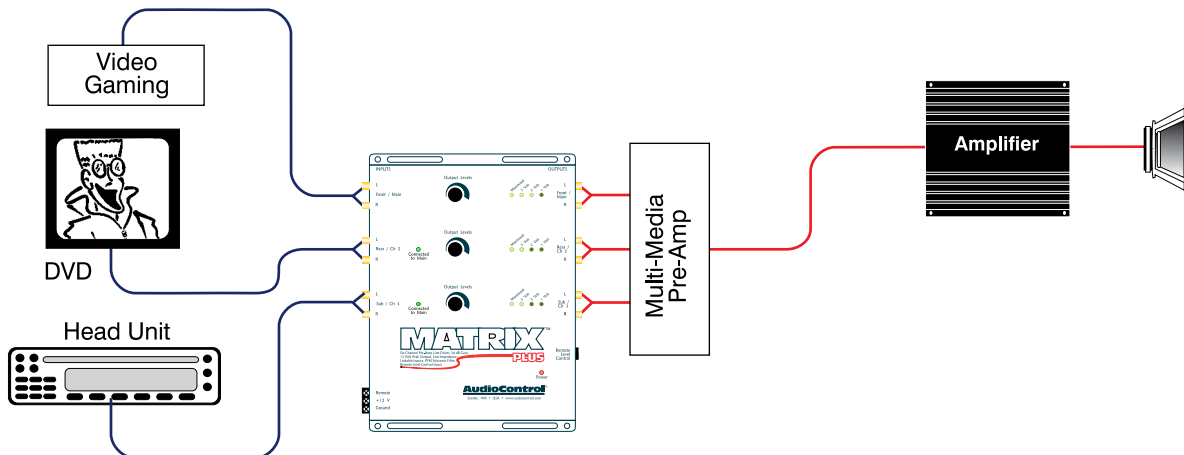
Year Warranty

*When installed by your
Authorized AudioControl dealer*

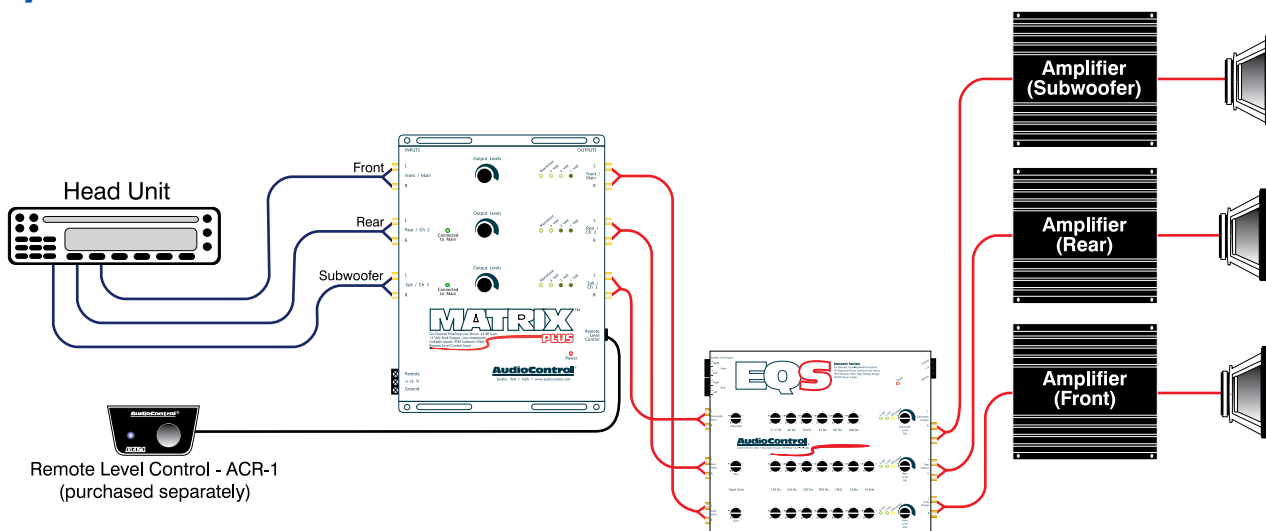
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System Diagrams

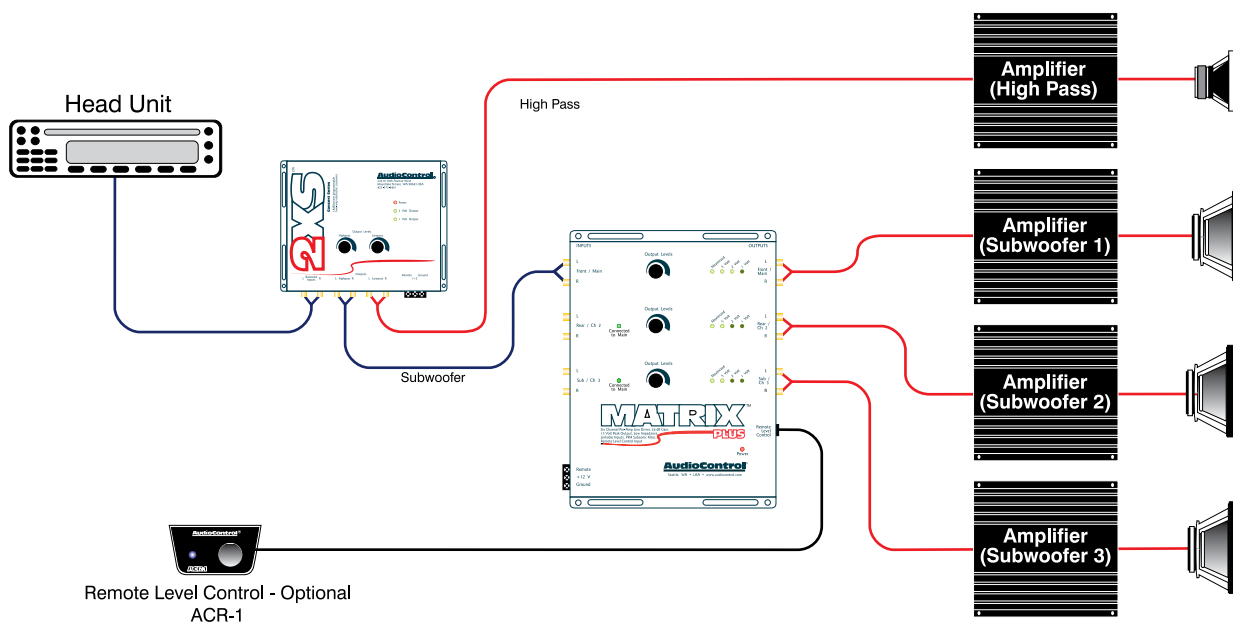
System #1 - Car Theater - Level Matching



System #2 - Six Channel Source Unit



System #3 - Maximum SPL System



MATRIX PLUS

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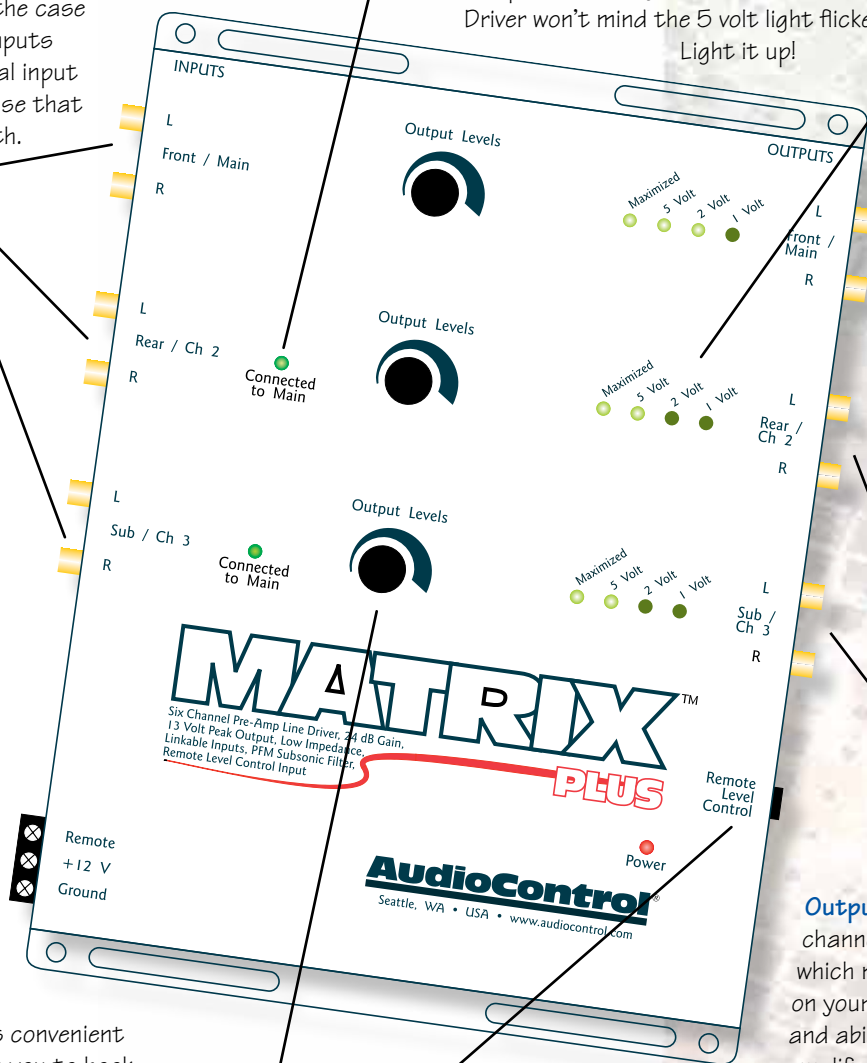
Key Features of the Matrix Plus™

Input Linking: There is amazing flexibility with the Matrix Plus for routing one input to one, two, or three outputs. These "Connected to Main" LEDs light when the jumpers under the cover are set to route the main input to outputs "Channel 2" and/or "Channel 3".

Balanced Differential Inputs:

The Matrix Plus will accept up to six channels of input signal which means it will work with source units that have six channels of output or it will accommodate three two-channel source units as in the case of multi-media. All of the inputs utilize a balanced differential input circuit, which can cancel noise that radiates into the signal path.

Voltage Indicator LEDs: These lights will tell you when the signal level is at 1 volt, 2 volts or 5 volts. You'll most likely want at least the 2-volt light to flicker, more if the rest of your components can handle it. Any AudioControl component that you connect after the Matrix Plus Line Driver won't mind the 5 volt light flickering. Go ahead. Light it up!



Power Connector: This convenient little connector allows you to hook up all the power and turn-on wires for your Matrix Plus Line Driver in the convenience of a well-lighted area and then plug them in by feel all at once in your trunk's cavernous darkness.

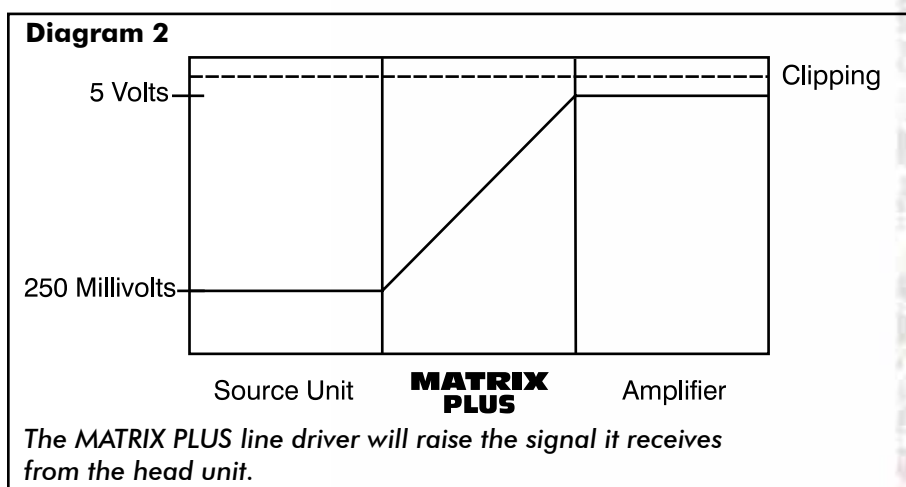
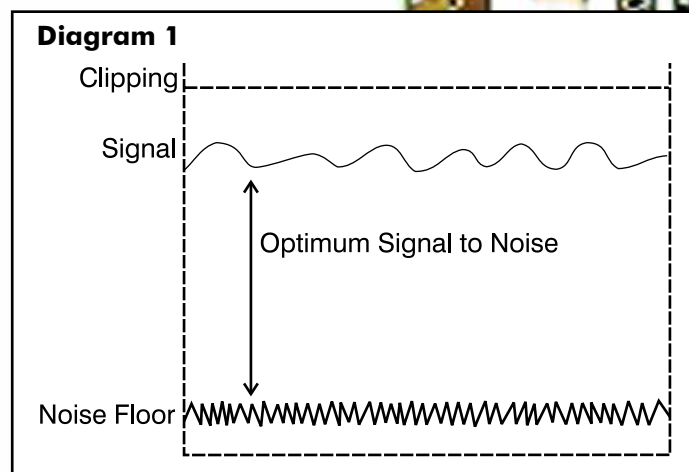
Remote Level Control Input: Input for optional ACR-1 dash mountable remote level control.

Level Control: The MATRIX Plus provides up to 24dB of signal gain or 12 dB of signal attenuation (cut). This allows you to raise a pre-amp signal as high as 13 volts peak output or reduce it as required to match the levels of multiple sources.

Outputs: The Matrix Plus has six channels of low impedance output, which means each pair of outputs on your Matrix Plus has the strength and ability to drive more than just one amplifier. In fact, you can drive up to 7 amplifiers off of each pair of outputs, which means you have the possibility of driving 21 stereo amplifiers or even 42 mono amplifiers! Wow!

Why Level Match?

High voltage levels in audio systems give you a better signal to noise ratio. You need a high signal to noise ratio to reduce the thermal hiss which is present in all audio systems (sometimes even worse in digital systems). As shown in Diagram 1, you need the maximum signal level to be below clipping but as far as possible above the noise floor. Amplifiers like to receive the hottest possible signal (generally 2 to 5 volts) below clipping to allow them to provide the maximum amount of dynamic range. Unfortunately, a majority of the source



units available only produce a very small fraction of what the amplifier wants, and this limits the audio systems performance potential. As shown on the gain map in Diagram 2, the MATRIX Plus raises the signal level coming from the head unit to a level that is desirable to the amplifier. You achieve maximum performance!

MATRIX Plus SPECIFICATIONS

All specifications are measured at 14.4 VDC (standard automotive voltage) As technology advances, AudioControl reserves the right to continuously change our specifications, like our weather.

Maximum input/output level.....	9.5Vrms/13V peak
Frequency response.....	10Hz-100kHz;±1dB
Total harmonic distortion.....	0.005%
Signal to Noise ratio.....	-110dB
Inputs/Outputs.....	2, 4, or 6
Input Impedance.....	20 K Ohms
Output impedance.....	50 Ohms
Output gain.....	- 12 dB to + 24 dB
PFM Subsonic Filter.....	33Hz/18 dB per octave
Power supply.....	Transformer isolated PWM DC/DC converter
Power draw.....	250mA
Recommended fuse rating.....	1 Amp
Size.....	8.7" x 6.7" x 1.15"
Weight.....	2.25 lbs
Country of Origin.....	USA

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This literature was conceived, designed, and written under the protective canopy of the lush, green, misty rain forest on a drizzly, gray overcast day at our home in the Pacific Northwest.

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