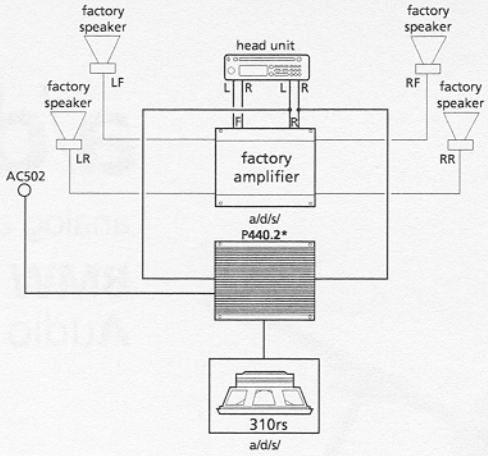
BMW E36 (1992-98)

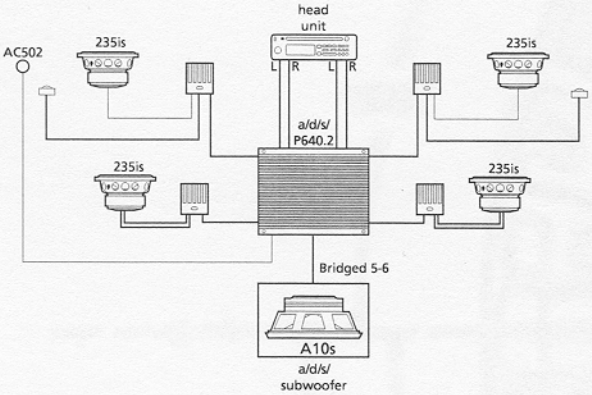
3 series system upgrades

UPGRADE I. Since the biggest shortcoming in any of the BMW factory sound systems is the lack of good low frequency response, the first upgrade will be to add a subwoofer.



The simplest way to do this is to tap off the rear input wires and feed these to an a/d/s/ amp as input. The amp could be any of our 2 or 4 channel units(P240.2, P440.2, or P4100.2). To control the amount of bass, we would use the AC502 remote subwoofer level control mounted in the front of the car (in the panel under the steering column is a good place). The on-board electronic crossovers on **all** a/d/s/ amps would be used to filter the highs from the signal for sub-woofer use.

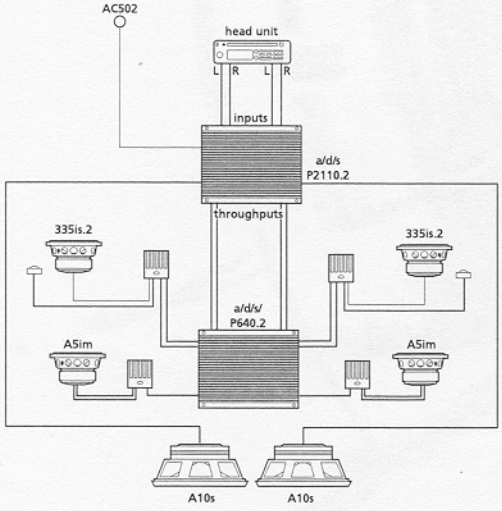
UPGRADE II. In this version of our system we'll use the subwoofer system from Upgrade I and use a 6 or 8 channel amp to power our entire system. This iteration will not use the factory amp at all.



Our front speakers will be either 235is or 335is.2 systems because the woofers in these sets will bolt right into the factory kick panel locations. Either of these sets will be a quantum leap in performance over the factory stuff. Budget will be the determining factor in our selection. The tweeters can be installed in the factory door locations and the crossovers can be mounted in the trunk.

To power this system we'll use a P640.2 amp if only one subwoofer is desired and a P840.2 amp if two subwoofers are chosen. Again, we'll use the AC502 remote subwoofer level control up front in the car to control the bass.

UPGRADE III. This is the system for the guy (or gal) who likes to listen at concert levels.



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We'll use everything we used in Upgrade II, but this time we'll dedicate a separate amp, our P2110.2, to power our subwoofers. In addition, we'll reconfigure our P640.2 to bi-amp or bi-wire our front speakers with 40 watts to each mid and 40 watts to each tweeter. This configuration will allow each speaker it's own separate channel of amplification, improving both adjustability and clarity.

Wire colors and pick-up points

At the trunk mounted stock amplifier:

White	Turn-on	
Left Front	+yellow / red -brown / orange	twisted pair
Right Front	+blue / red -brown / orange	
Left Rear	+yellow / black -brown / orange	
Right Rear	+blue / black -brown / orange	

Since the BMW head unit is common ground, all you have to do is put RCA ends on the twisted pairs and plug directly into the amplifier.

Also supplied at the stock amplifier you will find constant +12VDC and a ground referenced to the factory radio. +12VDC is red with a white stripe and ground is solid brown. These wires are a good power source for preamp components.

Our subwoofer speaker(s) could be any of our 8" through 12" models mounted in a sealed box and a secured in the truck. Since the battery is located in the trunk and the factory amp is also mounted in the trunk, all of our speaker, turn-on, and power connections can be made right in the trunk, making this a simple, quick, and effective addition to the factory sound system.

*If your car doesn't have a fold down rear seat, you can use the ski pass-thru to install an infinite baffle subwoofer and not lose **any** trunk space!

Equipment:

P4 0.2 amp		$500.00	Choose one
P4100.2 amp		$850.00	
AC502		$ 90.00	
A8s	8" single voice coil sub	$150.00 ea.	Choose one or two
A10s	10" single voice coil sub	$175.00 ea.	
A12s	12" single voice coil sub	$200.00 ea.	
308rs	8" dual voice coil sub	$200.00 ea.	
310rs	10" dual voice coil sub	$250.00 ea.	
312rs	12" dual voice coil sub	$300.00 ea.	

We can use the inputs to the factory amp to provide signal for our new amp and also maintain fader capability. Again, we'll employ the on-board electronic crossovers to low-pass filter on the subwoofer(s) and high-pass our satellite speakers.
(Satellites are our L and R, Front and Rear speakers.)

Equipment:

235is set	$350.00/pr.	Choose one
P440.2 amp	$600.00/pr.*	
A5im set	$280.00/pr.*	
P840.2 amp	$850.00 ea.	
P640.2 amp	$650.00 ea.*	
AC502	$ 90.00 ea.*	
A10s	$175.00 ea.*	
Total	**$1795.00***	

One further option, power-wise, would be to use a P840.2 for mids and highs. Two pairs of channels on this amp would be bridged to provide 120 watts to each front mid, 40 watts to each front tweeter and 40 watts to each rear speaker.

To power-up the bass, we'd use our brute, the P4100.2 in double-bridged mode to power our subs at 350 watts apiece.
We're talkin' power here!

Of course, we'll use an AC205 to control the level of our subwoofer system to match the music or our mood.

Caution: *This system should not be considered by wimps or those with heart trouble!!*

Equipment:

P640.2 amp	$650.00
P2110.2 amp	$500.00
335is.2	$600.00
A5im	$400.00
(2) A10s subs	$350.00
Total	**$2500.00**

Options:

P840.2 amp for highs (instead of P640.2)	$850.00
P4100.2 amp of bass(instead of P2110.2)	$850.00

Good Listening!

a/d/s/

made in the USA