



DIAMOND[®]



Product Owners Manual
AMPLIFIERS

Serial Number _____

Date Of Purchase _____

SPECIAL THANKS

Thank you for choosing a Diamond Audio D3 amplifier. The team here at Diamond insists that you listen to music as the artist intended, and that's what drives us to develop and engineer cutting edge audio solutions that are true to any audiophiles guidelines. Each of Diamonds products are conceived, designed, engineered, tested and sold by pure audio fanatics. Each one of us on the Diamond team realizes how important audio performance is to you, because it is equally important to us. So rest assured that you have purchased an amplifier with no compromise.

Thanks Again,

The Diamond Team

CAUTION

Prolonged exposure to sound pressure levels in excess of 100 dB can cause permanent hearing loss. Diamond Audio D3 amplifiers produce enough power to make most speaker systems exceed that level. Please exercise restraint and protection during their operation in order to preserve your ability to enjoy their fidelity for years to come.

SPECIFICATIONS

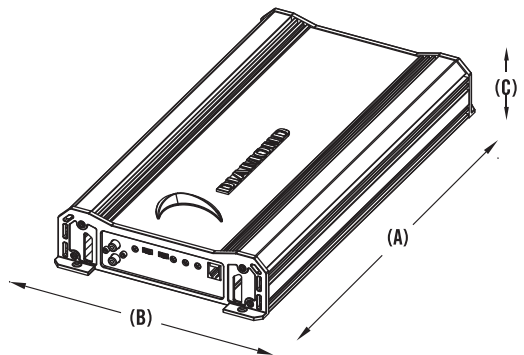
Model	Frequency Response	Signal-to-Noise Ratio	THD	Channel Separation 75 dB	Input Range 250 mV - 2.5 V	DC Range	Fuse Rating
D3 400.2	20 - 20k Hz	100 dB	0.05%	(min.) 75 dB	(HL 0.5 - 5 V) 250 mV - 2.5 V	10.8 - 15.6 V	40 A
D3 400.4	20 - 20k Hz	100 dB	0.05%	(min.)	(HL 0.5 - 5 V)	10.8 - 15.6 V	40 A
D3 600.1	20 - 250 Hz	90 dB	0.1%	n/a	250 mV - 3 V	11.5 - 14.4 V	70 A

RMS POWER

Model	4 Ohm Stereo	2 Ohm Stereo	4 Ohm Mono	2 Ohm Mono	1 Ohm Mono
D3 400.2	100 x 2	200 x 2	400 x 1	n/a	n/a
D3 400.4	50 x 4	100 x 4	200 x 2	n/a	n/a
D3 600.1	n/a	n/a	300 x 1	450 x 1	600 x 1

PHYSICAL DIMENSIONS

Model	(A) Length	(B) Width	(C) Height	Weight
D3 400.2	13.5"	8.5"	2.25"	9 lbs
D3 400.4	14.5"	8.5"	2.25"	10 lbs
D3 600.1	17"	8.5"	2.25"	13 lbs



APPEARANCE/FEATURES

- Low Profile and Compact Custom Aluminum Heatsinks
- Gold Plated Terminals
- Pulse-width Modulated (PWM) MOSFET Power Supply
- Oversized Power Supply Devices for Enhanced Thermal Efficiency
- Selectable Crossovers
- Short Circuit and Reverse Polarity Protection
- "Soft Start" Muting on Remote Turn-on to Eliminate Turn on "Thump"

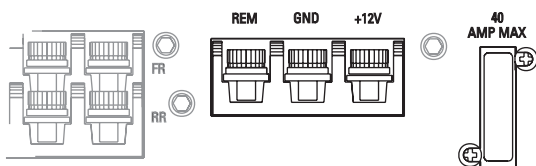
PROFESSIONAL INSTALLATION

To achieve maximum performance and life time warranty coverage (see warranty statement), Diamond Audio strongly recommends that a factory authorized Diamond retailer professionally installs your new amplifier. The D3 amplifier is an awesome component with category leading technology, proper attention must be taken during installation to ensure optimum performance. The authorized Diamond retailer you purchased your amplifier from has the training, expertise, and tools for proper installation. If you decide to install your amplifier yourself, please read this manual through to become familiar with the amplifiers install and set up procedures.

MOUNTING

D3 amplifiers do not utilize any fan driven cooling system. Care must be taken to provide a sufficient flow of air around the amplifier for the thermal management system to operate at peak efficiency. Air should be able to flow over the top and sides of the amp freely. Adding a fan to your system can be beneficial in keeping your amp cool. A minimum 2 inches of space around the amplifier is recommended to ensure proper air flow. Never mount any amplifier where it can get wet. Water damage is not covered under warranty.

Mounting your amplifier inside an enclosure is not a good idea unless that enclosure is equipped with ventilation fans to circulate fresh air through the enclosure.



DC CONNECTIONS

D3 amplifiers need proper power and ground connections to deliver maximum performance and efficiency. Your new amplifier has a regulated power supply. It is designed to make full power even if the voltage changes. It will draw more current at lower voltages to make that power. Try to ground your system to a single point in the vehicle. The gauge of the power and ground cables must be capable of handling the current needed by the entire system. Power and ground cables must be of the same gauge. If the alternator is not capable of supplying enough power for both the vehicle AND the audio system, a high output alternator should be installed for best performance.

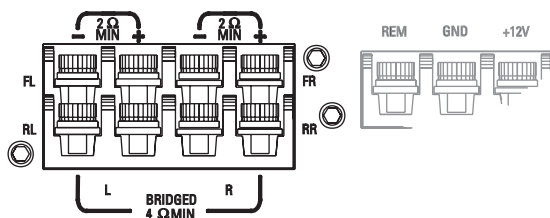
Power & Ground (12VDC)

D3 amplifiers are designed to accept up to 4 gauge power and ground spade terminals, in some systems this may be overkill, but bigger is always better when it comes to power and ground connections.

Strip approximately 1/4 inch of insulation from the end of the power/ground cable going to the amplifier. Crimp the proper spade terminal onto the power/ground cable, insert the terminal into the power block on the end of the amplifier and tighten the screw. Repeat for each amplifier installed.

Turn-on (REM)

Locate the terminal labeled “REM” on the end of the amplifier. Your source unit should have a wire in its harness labeled “REMOTE” or “AMP TURN-ON.” Run this wire from your source unit to the amplifiers REM connection. Strip approximately 1/2 inch of insulation from the wire, crimp a 12 gauge spade terminal onto the wire, insert the terminal into the power block on the end of the amplifier and tighten the screw.



SPEAKER CONNECTIONS

Diamond Audio recommends using speaker wire of at least 16 gauge. Lay out the wire in the vehicle from the individual speaker locations to the amplifier(s). Observe safe wiring precautions.

D3 amplifiers will accept speaker wire spade terminals up to 12 gauge. Locate the speaker terminal block on the end of the amplifier. Strip approximately 1/4 inch of insulation from the wire, crimp a 12 gauge spade terminal onto the wire, insert the terminal into the speaker block on the end of the amplifier and tighten the screw. Repeat for all speaker wires. Please observe recommended minimum speaker impedances to prevent possible damage.

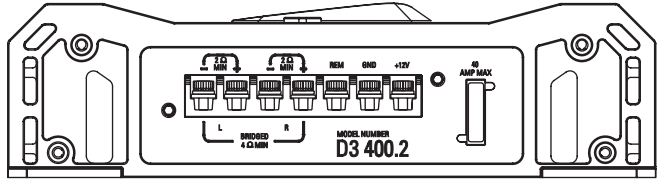
SETTING THE GAIN

This control matches the output voltage of the source unit or processor to the amplifier inputs. Rotating this control to the “MIN” mark (counterclockwise) configures the D3 amplifier to accept input voltages as high as 5V RMS. This control should be set as low as possible. The basic procedure for setting input gains is as follows:

1. Adjust all amplifier gain controls to just above the minimum setting (fully counterclockwise).
2. Using the highest quality source (usually CD) play some music and slowly turn up the source unit until you can hear distortion. Now turn down the volume until the distortion stops. This is your maximum source unit level.
3. Turn up the amplifier gain until audible distortion starts. Turn down the gain to the point JUST BELOW the start of the distortion.
4. Repeat step 3 for all amplifiers in your system.

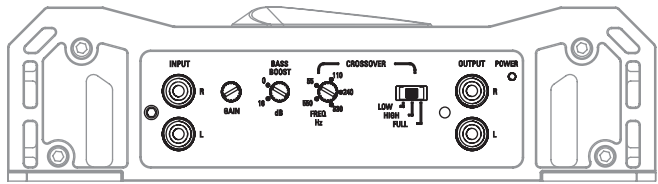
D3 400.2

Bridging



The channels on the D3 400.2 amp are capable of being bridged to a 4 Ohm mono output. Creation of the mono channel is accomplished by using the left channel positive (+) output connection of the amplifier for the speaker positive and the right channel negative (-) output connection of the amplifier for the speaker negative.

Note: It is important that a 4 Ohm minimum total speaker impedance load is observed when bridging the amp! If an impedance load of less than 4 Ohms is used, you will eventually damage your amplifier and void your warranty.



RCA

INPUT

The RCA cables from your source unit should be inserted here.

OUTPUT

These RCA outputs are used to provide unfiltered signal to an processor or another amplifier.

Crossovers

The Diamond D3 400.2 amplifier features a second-order 12dB/octave electronic crossover that is selectable for highpass or lowpass modes. These filters are then adjustable between 55 and 550 Hz.

Bass Boost

Acts like an equalizer with an adjustable gain fixed at 45 Hz. Adjust from left to right clockwise to give as much as 18 dB of boost at that frequency. If there is a noticeable lack of low end extension in the system, use this to boost the bass.

Caution: If any unusual noise like popping or crackling, or unwanted distortion occurs when adjusting the bass boost, immediately turn the boost down to avoid damaging your speakers.

Crossover Mode

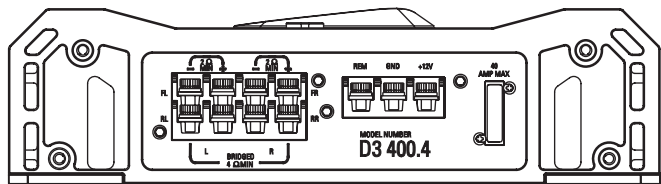
Switches electronic crossover between off, lowpass, or highpass modes. When in HP or LP mode, the 12 dB/oct crossover is implemented at the frequency set on the frequency knob.

Crossover Frequency

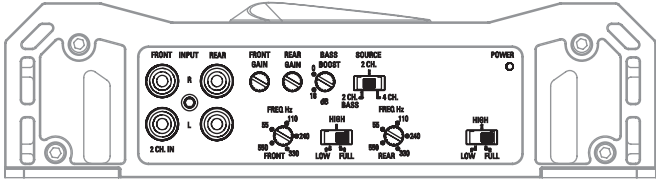
Adjustable left to right clockwise from 55 Hz up to 550 Hz.

D3 400.4

Bridging



Note: It is important that a 4 Ohm minimum total speaker impedance load is observed when bridging the amp! If an impedance load of less than 4 Ohms is used, you will eventually damage your amplifier and void your warranty.



RCA

FRONT/REAR INPUTS

The RCA cables from your source unit should be inserted here.

Crossovers

The Diamond D3 400.4 amplifier features second-order 12dB/octave electronic crossovers that are selectable for highpass or lowpass modes. These filters are then adjustable between 55 and 550 Hz.

Bass Boost

Acts like an equalizer with an adjustable gain fixed at 45 Hz. Adjust from left to right clockwise to give as much as 18 dB of boost at that frequency. If there is a noticeable lack of low end extension in the system, use this to boost the bass.

Caution: If any unusual noise like popping or crackling, or unwanted distortion occurs when adjusting the bass boost, immediately turn the boost down to avoid damaging your speakers.

Crossover Mode

Switches electronic crossover between off, lowpass, or highpass modes. When in HP or LP mode, the 12 dB/oct crossover is implemented at the frequency set on the frequency knob.

Crossover Frequency

Adjustable left to right clockwise from 55 Hz up to 550 Hz.

Input Mode

Switches between input modes.

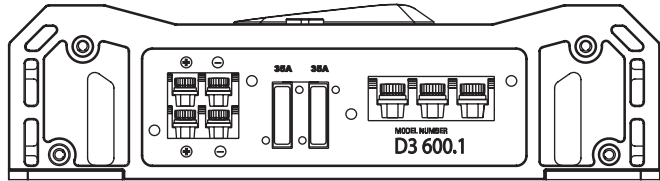
2 CH BASS - Input from only one set of RCA's in mono mode. Rear channels use front inputs for a mono signal. Only for use when the amplifier is used for subwoofers.

2 CH - Input from only one set of RCA's in stereo mode, no fade. Rear channels use front inputs for a stereo signal.

4 CH - Input from two sets on RCA's for true 4 channel stereo mode. Rear channels use rear inputs for a stereo signal.

D3 600.1

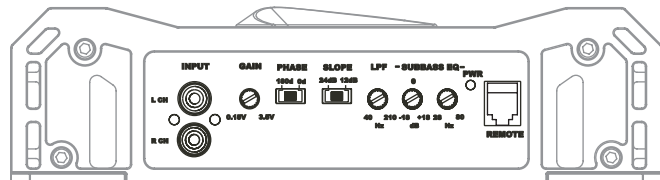
Remote Gain



The D3 mono block amplifier comes with a remote gain output. The remote gain module (included) plugs into this output to allow for gain control away from the amplifier. When you plug this module in, it replaces the gain from where it is set on the amplifier. Max (all the way clockwise) on the module is set to whatever the gain on the amp is set to.

Note: Diamond D5 & D6 remote gains do not work with the D3 600.1.

RCA



INPUT

The RCA cables from your source unit should be inserted here.

Crossover

The Diamond D3 600.1 amplifier features a lowpass electronic crossover that is selectable for 12 dB/oct or 24 dB/oct slopes. These filters are then adjustable between 40 and 150 Hz.

Phase Invert

Allows adjustment of the sub woofer phase, normal or 180 degrees out of phase.

Slope Select

Switches crossover slope between 12 dB and 24 dB. This slope is implemented at the frequency selected on the frequency knob.

Crossover Frequency

Adjustable left to right clockwise from 55 Hz up to 550 Hz.

Sub-Bass EQ

Acts as a bass EQ with an adjustable frequency setting and boost. Adjust to desirable frequency, 28 - 80 Hz, and then add the amount of boost wanted up to +18 dB. Can be used to boost missing low end frequencies in a sub woofer system.

TROUBLESHOOTING

If the LED is on, your D3 amplifier should be working correctly, if not, check all signal connections.

If the problem persists, or the amp will not power up at all, double check all power connections including all fusing.

If the amp still will not work correctly, please return to the authorized Diamond retailer you bought the amplifier from and have them trouble shoot your system or call Diamond Tech Support at 1-866-328-2834.

LIMITED AMPLIFIER WARRANTY STATEMENT

Diamond Audio Technology, Inc. (DAT) warrants this amplifier to be free from defects in material and workmanship for the lifetime of the amplifier in its original installation provided the amplifier was purchased from and installed by an authorized DAT retailer. Amplifiers purchased from but not installed by an authorized DAT retailer carry a one (1) year parts and labor guarantee.

This warranty is not transferable and applies only to the original purchaser of this amplifier in its original installation. Original purchaser must reside in the United States and register the amplifier with DAT within 30 days of installation. Warranty registration information can be found at www.diamondaudio.com or by calling 866-328-2834. Original purchaser must be able to provide proof of purchase and installation with the sales receipt from the authorized DAT retailer that sold and installed the amp.

Should a manufacturing defect occur in the first three (3) years of the above said warranty period, DAT will replace the defective product with new product of the same or equivalent value and performance. Should the defect occur after the first three (3), DAT will (at its discretion), repair or replace the defective product or parts with new or remanufactured product for as long as the amplifier is in its original installation. Damage or failure caused by any of the following is not covered under this warranty policy: negligence, improper use, abuse, product modification, unauthorized repair attempts, accident, acts of God, misrepresentations by DAT retailers, and improper/inadequate packaging during return shipping.

Warranty is void if serial numbers have been removed, altered or defaced or if protective seal is broken.

HOW TO OBTAIN WARRANTY SERVICE

In the event a DAT product should require service, you should visit the authorized DAT retailer you purchased the product from and they can expedite your claim. All claims must fall into the guidelines listed above and be accompanied by a copy of the original sales and installation receipt from that authorized DAT retailer.

Product returned for warranty service must be freight-prepaid, properly packaged and clearly marked with the Return Authorization (RA) number issued by DAT. Any product returned to DAT that is improperly packaged, does not have a RA number clearly marked on the package, or never received a RA number; may be refused upon delivery. DAT does not assume responsibility for lost or misdirected product.

Repair or replacement under this warranty is the exclusive remedy of the consumer. DAT shall not be liable for any incidental or consequential damages for breach of any expressed or implied warranty on this product. Some states do not allow the exclusion or limitation or incidental or consequential damages, or allow limitations on how long an implied warranty lasts, so the above limitations or exclusions may not apply to you. This warranty gives you specific legal rights and you may also have other rights that may vary from state to state.

Customers outside the United States should contact their local sales office to obtain information on pricing, exchange unit availability, instructions, service and warranty/non-warranty replacement or repair.



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