

RELENTLESS MONOBLOCK AMPLIFIER



OWNER'S MANUAL

Dan D'Agostino
MASTER AUDIO SYSTEMS



A NOTE FROM DAN D'AGOSTINO

Founder, CEO, and chief designer of Dan D'Agostino Master Audio Systems

Every audio designer has a product they've always wanted to make but never could. Either they worry it would be too costly for their customers to accept, or they fear it would be too far ahead of its time, or they lack the resources to fund the research and development process. But thanks to the incredible support and encouragement that our customers and dealers have given me since our founding days, I finally felt I could build the amplifier I always dreamed of making: the Relentless monoblock.

The Relentless monoblock is the product of a simple question: "What amplifier would I build if I could build any amplifier I wanted?" The simple answer is: an amplifier without any limits.

Of course, every amplifier has at least one limit: the amount of power it can pull from a household AC circuit. But the Relentless is designed to work not only with standard 110-volt AC, but also with 220-volt/30-amp circuits, which allows it to deliver a staggering 6,000 watts of continuous power into 2 ohms. With the Relentless, every speaker ever made can achieve its best possible performance.

I designed every stage of the Relentless from scratch. The unique input stage achieves extraordinarily low noise and distortion by assuring that the positive and negative halves of the signal are perfect opposites of each other, even if the incoming signal is not perfectly balanced. The gain stage operates in the current domain instead of the voltage domain, so it cannot be affected by fluctuations in the speaker's impedance. My Super Rail design provides additional voltage to the gain stage, effectively "turbocharging" the output stage to deliver even greater dynamics and maintain an even firmer grip on the speaker. The linear open-loop response of these stages allowed me to eliminate global feedback, and thus preserve the music's subtlest details.

I couldn't have built the Relentless if I weren't confident that my customers and dealers would back me in my efforts to create the world's best audio components, bar none. I thank you for purchasing this amplifier... and for believing in my vision.

Sincerely,

Daniel D'Agostino

LEGAL NOTIFICATIONS

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WARNING

Do not expose this amplifier to moisture or excessive humidity, and do not use it outdoors. Fire hazard may result.



The lightning flash with arrowhead, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electrical shock to persons.



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating maintenance (servicing) instructions in the literature accompanying the appliance.

CAUTION

No user-serviceable parts inside. Do not open the amplifier's chassis or remove any of its screws. Contact Dan D'Agostino Master Audio Systems LLC or your dealer if you have service needs.

UNPACKING AND INSTALLATION

Package contents

If any of the following items are missing, please contact your dealer:

- ✓ 1 Relentless monoblock amplifier encased in protective vinyl sleeve
- ✓ 1 owner's manual
- ✓ 4 pair of white lifting gloves
- ✓ 1 microfiber cleaning cloth
- ✓ 1 AC power cord (selected for your voltage and socket requirements)
- ✓ 1 ratchet with custom carbon-fiber socket for binding post

Unpacking the Relentless monoblock amplifier from its case

Each Relentless amplifier weighs 570 lbs/258 kg, so it requires at least four strong adults to lift. Be sure to have a place cleared for it before you lift, and move the box as close as possible to the spot where the amplifier will rest.

Installation requirements

In most cases, the Relentless amplifiers will have to sit directly on the floor, because few shelves or stands can support their weight. If you do use a stand, make sure it has been designed specifically to support the Relentless amplifier. Stands used for other amplifiers will not be strong enough.

Adequate ventilation must be provided for the amplifier. There should be at least 6 inches of clearance on each side of the amplifier and 6 inches of clearance at the top, and the bottom vents of the amplifier must not be obstructed by thick carpet, dust, etc. The amplifier may be installed in a closed cabinet in an equipment closet, but the cabinet or closet must be designed with substantial ventilation at top and bottom; active ventilation (i.e., powered fans) is preferred. Do not place the amplifier directly on a carpeted floor.

For best possible sound quality and maximum output, you must connect each Relentless monoblock amplifier to at least a dedicated 20-amp outlet. If your speakers are rated at 4 or 2 ohms impedance, and you want the amplifier to be able to achieve its maximum rated power, you will have to have two 220-volt/30-amp sockets installed, one for each amplifier. This is the same type of outlet commonly used to power electric clothes dryers and ovens, and any licensed electrician can install them.

MAKING CONNECTIONS TO THE RELENTLESS MONOBLOCK AMPLIFIER

Speaker cables

Install the speaker cables first. We recommend the use of high-quality cables terminated with spade or ring lugs that will fit the amplifier's binding posts. We advise against the use of bare-wire connections.

Note that the positive (+) binding post has a red ring and the negative (-) binding post has a black ring. Double-check to confirm that you are connecting your speaker cable's conductors to the appropriate binding posts—red to positive, black to negative. If your cables are marked to show desired signal flow, orient the cable so that the installation conforms to the cable manufacturer's instructions.

Carefully loosen each speaker binding post to install speaker cables tipped with spade lugs or rings. Turn counter-clockwise to loosen. If using spade lugs, insert each spade lug so that its two tines straddle the binding post, then tighten the binding post nut with a binding post wrench. If using rings, remove the binding post nut entirely, place the ring on the binding post, then replace the nut and tighten it securely.

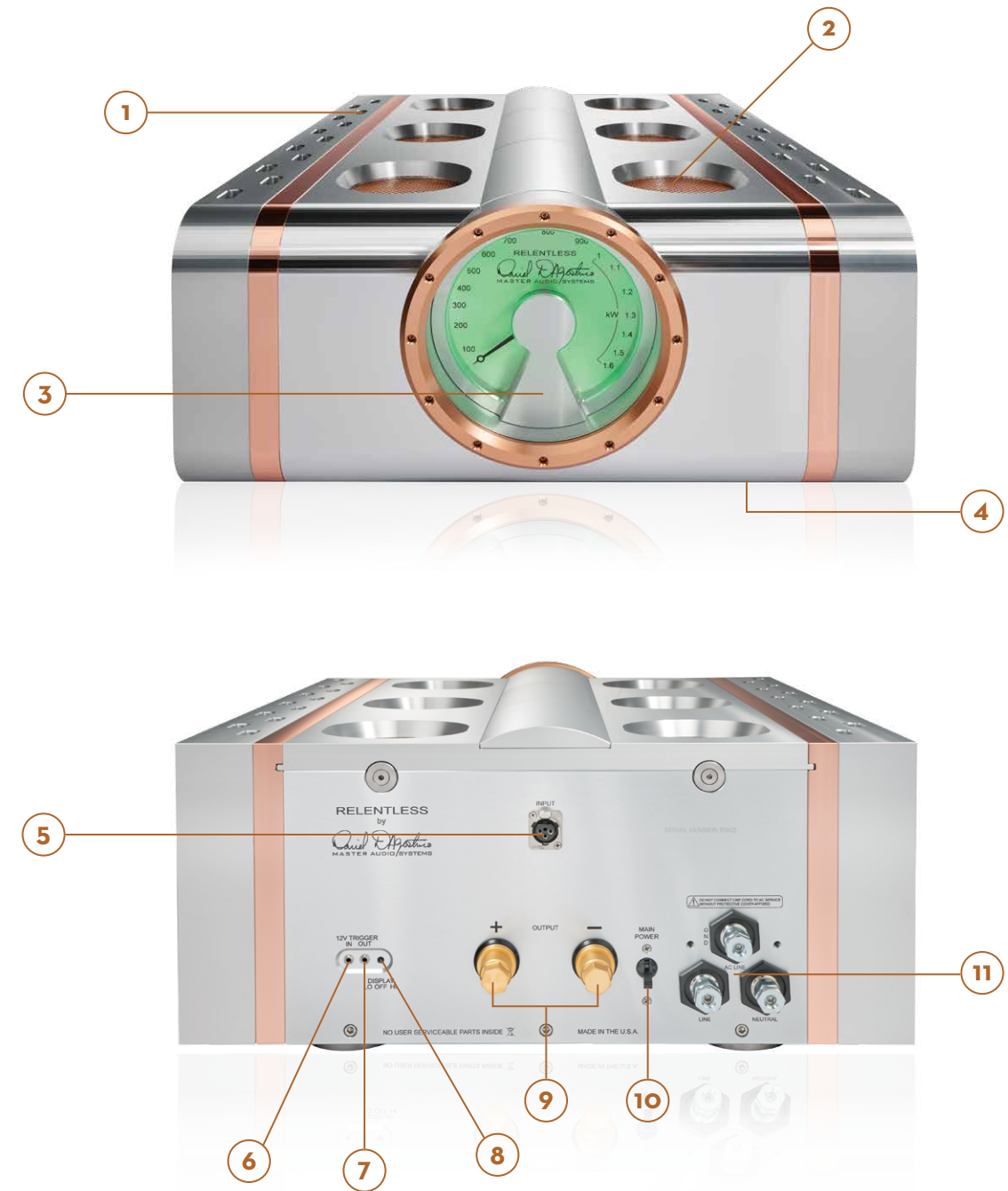
A firm connection, tight enough that the spade lug or ring cannot move, is all that's needed. Do not use a conventional wrench to tighten the binding posts. **Be sure the wires are not in contact with one another.**

Interconnect cables

Connect the XLR cable to the input by pushing the cable onto the jack. To release the XLR cable, push on the small tab on the end of the jack then grasp the cable by the plug and gently pull it out. Never grasp interconnect cables by the cable itself—you could damage the cable.

12-volt trigger input and output

The 1/8-inch (3.5mm) 12-volt trigger input and output jacks allow the Relentless to turn on automatically when connected to a preamp or home automation system with 12-volt trigger output. Connect a cable with a 1/8-inch plug (stereo or mono) on each end from the preamp's 12-volt trigger output to the amplifier's 12-volt trigger input, and a second cable of the same type from the amp's 12-volt trigger output to the other amplifier's 12-volt trigger input. The amplifiers will automatically power up whenever the preamp is powered up.

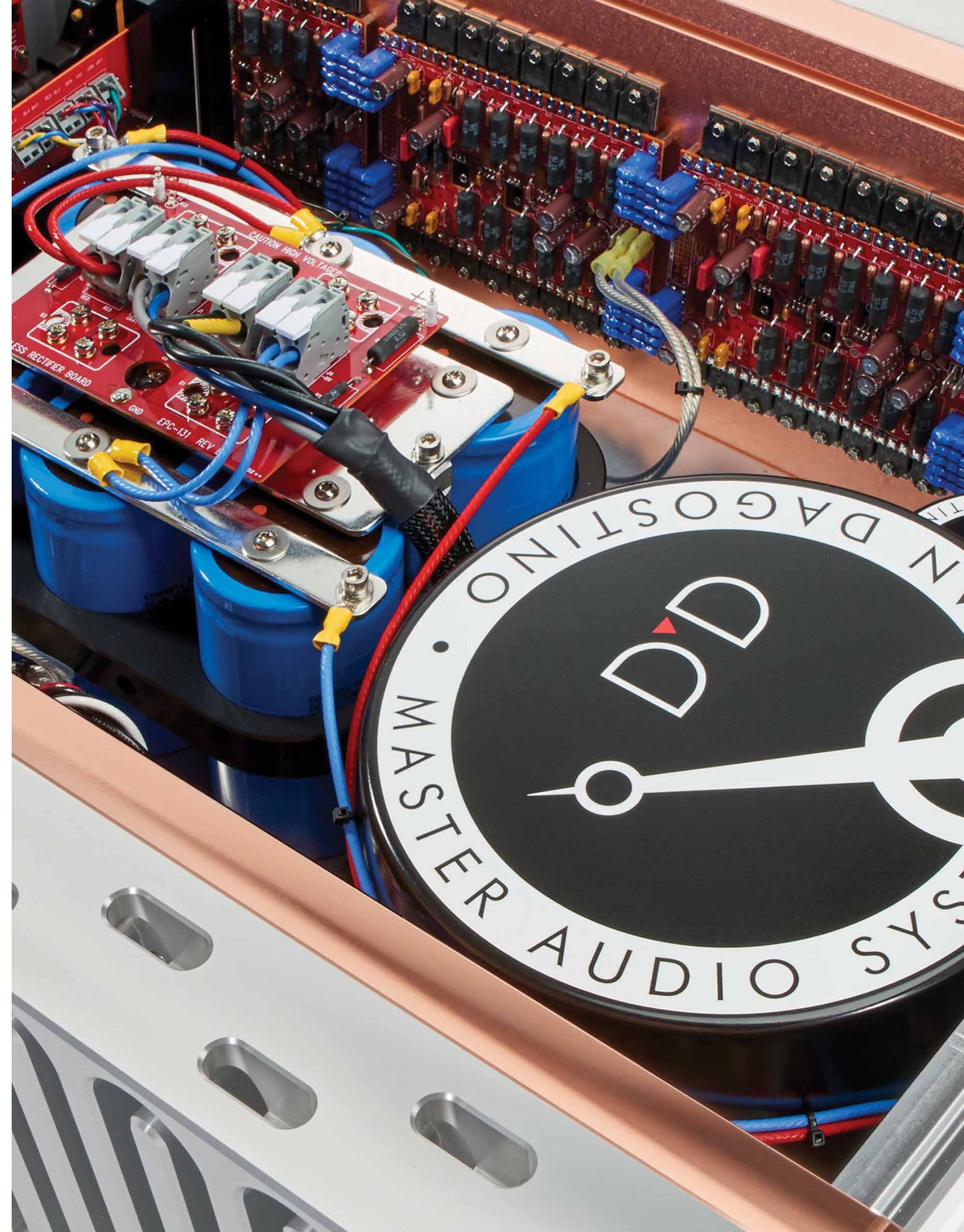
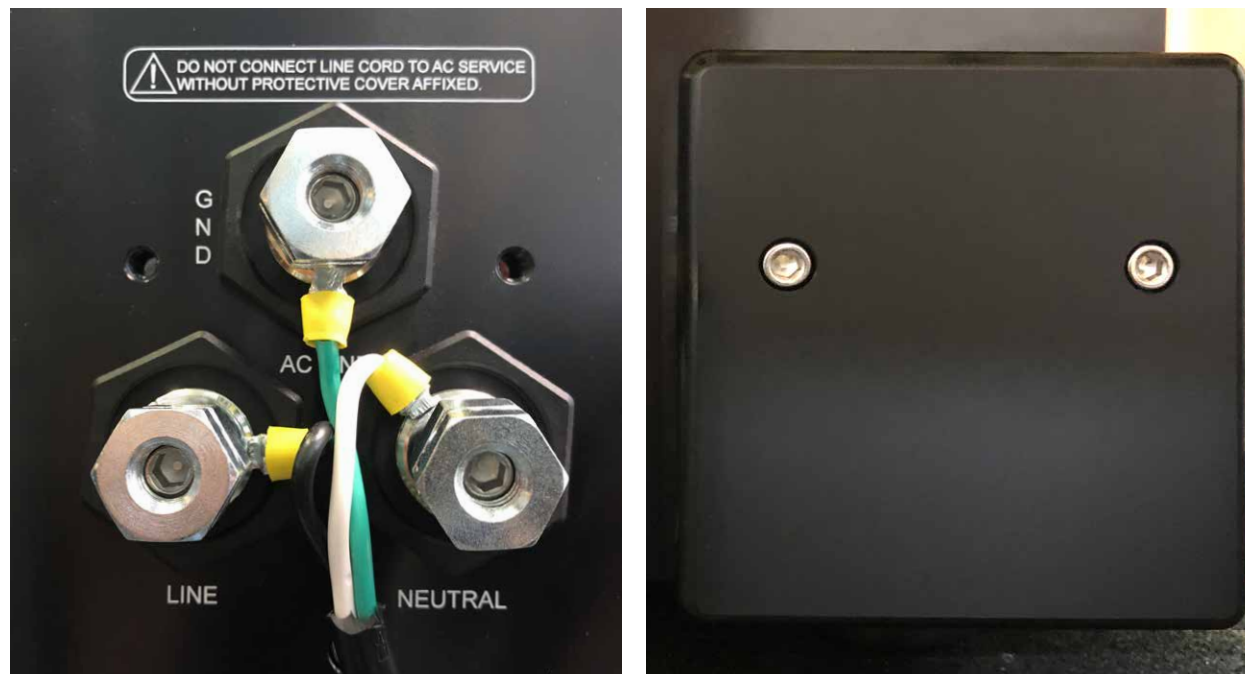


1. Heat sink venturis
2. Top panel vents
3. Power meter
4. Standby/power button
5. XLR audio input
6. 12-volt on/off trigger input
7. 12-volt trigger output
8. Three-position toggle switch for power meter brightness
9. Speaker cable binding posts
10. Main power switch
11. AC power cord terminals

AC cord

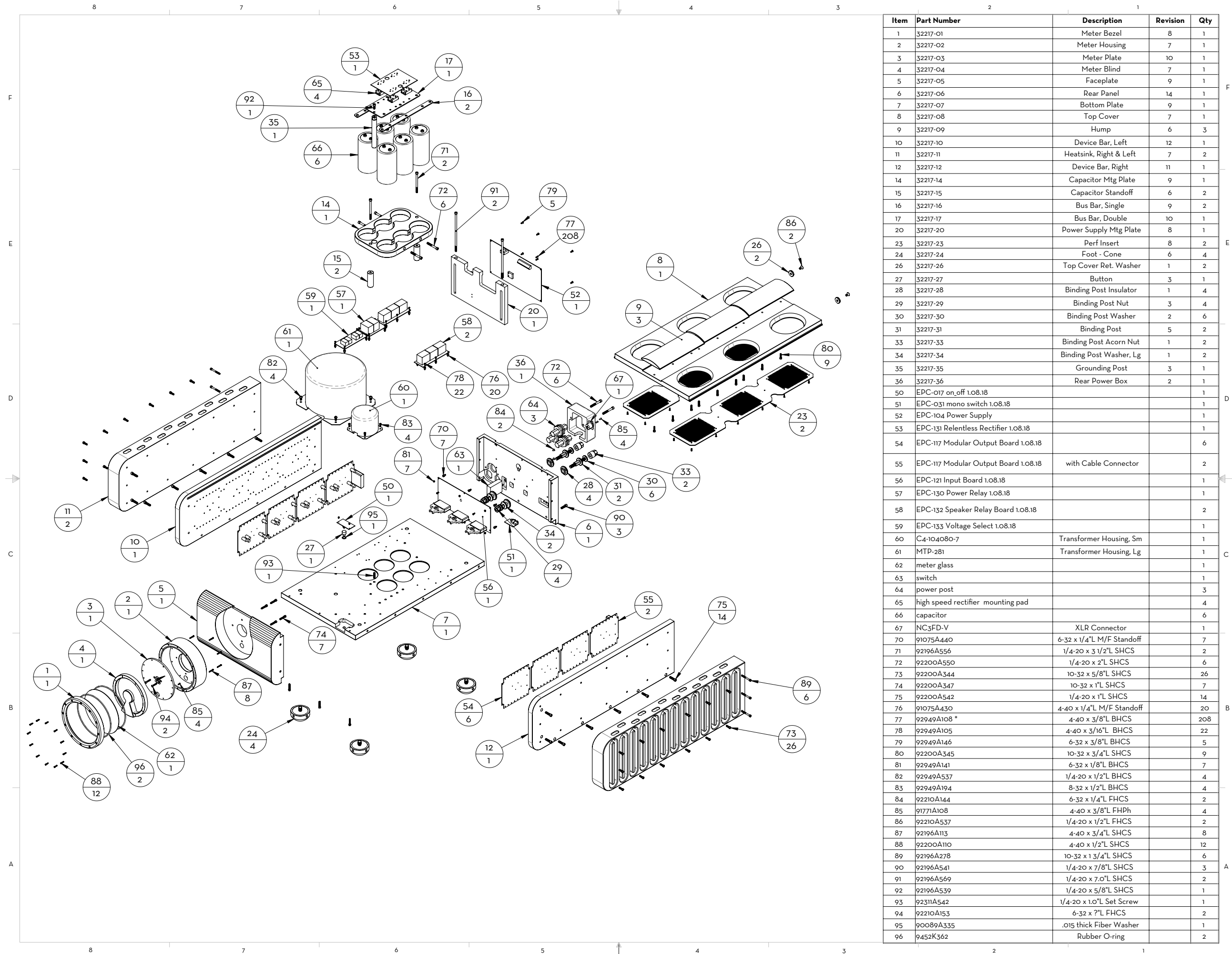
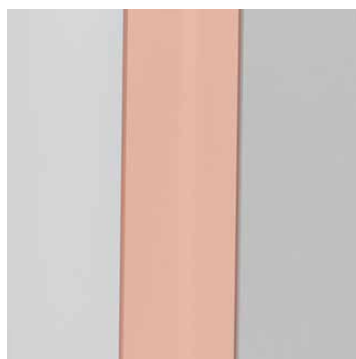
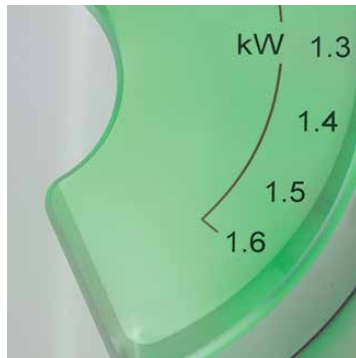
The Relentless amplifier is fitted with threaded terminals for its power connections, rather than the IEC connector found on almost all other power amplifiers. Your amplifier has been shipped with the appropriate power cord for the voltage and socket available in your region/country. We strongly recommend you have a licensed electrician connect your power cable, to ensure the connections are correct. **Incorrect power connections will void your warranty and can damage your amplifier.**

To connect the power cable, remove the two screws on the plastic cover that protects the AC cable terminal connections. Remove the nut on the amp's positive terminal, place the spade ring of the positive (+) conductor of the cable over the terminal, then replace the nut. Tighten the nut firmly but gently with a 3/4-inch socket wrench. Use of excessive force on the socket wrench could damage the terminal. Repeat the process for the negative (-) and ground conductors, then replace the plastic cover and tighten the two screws down to secure it.



A LOOK INSIDE

Premium parts and precision machining of copper and aluminum are fundamental in achieving the uncompromising performance and build quality of the Relentless monoblock amplifier. The Relentless is designed, fabricated and assembled by hand using USA machinists, vendors and parts procurement.



Item	Part Number	Description	Revision	Qty
1	32217-01	Meter Bezel	8	1
2	32217-02	Meter Housing	7	1
3	32217-03	Meter Plate	10	1
4	32217-04	Meter Blind	7	1
5	32217-05	Faceplate	9	1
6	32217-06	Rear Panel	14	1
7	32217-07	Bottom Plate	9	1
8	32217-08	Top Cover	7	1
9	32217-09	Hump	6	3
10	32217-10	Device Bar, Left	12	1
11	32217-11	Heatsink, Right & Left	7	2
12	32217-12	Device Bar, Right	11	1
14	32217-14	Capacitor Mtg Plate	9	1
15	32217-15	Capacitor Standoff	6	2
16	32217-16	Bus Bar, Single	9	2
17	32217-17	Bus Bar, Double	10	1
20	32217-20	Power Supply Mtg Plate	8	1
23	32217-23	Perf Insert	8	2
24	32217-24	Foot - Cone	6	4
26	32217-26	Top Cover Ret. Washer	1	2
27	32217-27	Button	3	1
28	32217-28	Binding Post Insulator	1	4
29	32217-29	Binding Post Nut	3	4
30	32217-30	Binding Post Washer	2	6
31	32217-31	Binding Post	5	2
33	32217-33	Binding Post Acorn Nut	1	2
34	32217-34	Binding Post Washer, Lg	1	2
35	32217-35	Grounding Post	3	1
36	32217-36	Rear Power Box	2	1
50	EPC-017 on_off 1.08.18			1
51	EPC-031 mono switch 1.08.18			1
52	EPC-104 Power Supply			1
53	EPC-131 Relentless Rectifier 1.08.18			1
54	EPC-117 Modular Output Board 1.08.18			6
55	EPC-117 Modular Output Board 1.08.18	with Cable Connector		2
56	EPC-121 Input Board 1.08.18			1
57	EPC-130 Power Relay 1.08.18			1
58	EPC-132 Speaker Relay Board 1.08.18			2
59	EPC-133 Voltage Select 1.08.18			1
60	C4-104080-7	Transformer Housing, Sm		1
61	MTP-281	Transformer Housing, Lg		1
62	meter glass			1
63	switch			1
64	power post			3
65	high speed rectifier mounting pad			4
66	capacitor			6
67	NC3FD-V	XLR Connector		1
70	91075A440	6-32 x 1/4" L M/F Standoff		7
71	92196A556	1/4-20 x 3 1/2" L SHCS		2
72	92200A550	1/4-20 x 2" L SHCS		6
73	92200A344	10-32 x 5/8" L SHCS		26
74	92200A347	10-32 x 1" L SHCS		7
75	92200A542	1/4-20 x 1" L SHCS		14
76	91075A430	4-40 x 1/4" L M/F Standoff		20
77	92949A108 *	4-40 x 3/8" L BHCS		208
78	92949A105	4-40 x 3/16" L BHCS		22
79	92949A146	6-32 x 3/8" L BHCS		5
80	92200A345	10-32 x 3/4" L SHCS		9
81	92949A141	6-32 x 1/8" L BHCS		7
82	92949A537	1/4-20 x 1/2" L BHCS		4
83	92949A194	8-32 x 1/2" L BHCS		4
84	92210A144	6-32 x 1/4" L FHCS		2
85	91771A108	4-40 x 3/8" L FHPH		4
86	92210A537	1/4-20 x 1/2" L FHCS		2
87	92196A113	4-40 x 3/4" L SHCS		8
88	92200A110	4-40 x 1/2" L SHCS		12
89	92196A278	10-32 x 1 3/4" L SHCS		6
90	92196A541	1/4-20 x 7/8" L SHCS		3
91	92196A569	1/4-20 x 7.0" L SHCS		2
92	92196A539	1/4-20 x 5/8" L SHCS		1
93	92311A542	1/4-20 x 1.0" L Set Screw		1
94	92210A153	6-32 x 7" L FHCS		2
95	90089A335	.015 thick Fiber Washer		1
96	9452K362	Rubber O-ring		2

OPERATION

Initial power-up of the amplifier

Make sure the main power switch on the back of the amplifier is in the up position. The power meter will be illuminated in red. The standby/power button is located on the front underside edge of the amplifier, right of the meter. Pressing the button will power up the amplifier, and the power meter will change to green. After power is switched on, the Relentless amplifier requires approximately 30 minutes to reach optimal operating temperature. Although the amplifier will sound excellent upon initial listening, the sound quality will improve as it warms up, much as the flavor of a fine red wine improves if it is allowed to breathe for a few minutes.

During operation

The Relentless amplifier requires no adjustments during normal operation. If there is no sound or the sound quality is in some way impaired, consult the “Troubleshooting” section in this manual.

Power meter setting

The Display Low/Off/Hi switch on the back of the amplifier adjusts the illumination of the meter. Move it to the left (when looking at the amp from the rear) for low brightness and to the right for high brightness. If the switch is in the center position, the meter light will be turned off. The Relentless amplifier’s power meter has self-adjusting sensitivity, so it will automatically provide a setting that delivers the most useful response for any given power level.

Maintenance

The Relentless amplifier requires no user maintenance other than to keep it clean and ensure that the vents remain unobstructed.

To clean the amplifier, first disconnect the AC plug. Spray a small amount of distilled water onto the supplied microfiber cloth and gently wipe the amplifier’s surface. Do not apply the water directly onto the amplifier.

TROUBLESHOOTING

If you experience any issues with the operation of your Relentless monoblock amplifier, please contact your dealer or Dan D’Agostino Master Audio Systems at service@dandagostino.com or **480.575.3069**.

RELENTLESS MONOBLOCK AMPLIFIER LIMITED WARRANTY

Dan D’Agostino Master Audio Systems LLC warrants the Relentless monoblock amplifier against manufacturing defects and defects in materials for five years from the date of purchase from an authorized Dan D’Agostino Master Audio Systems dealer, subject to the conditions listed below:

1. The warranty covers only new products purchased from an authorized Dan D’Agostino Master Audio Systems LLC dealer.
2. The warranty is non-transferable and is valid only for the original purchaser.
3. The warranty is valid only if the product has been used according to the instructions in the owner’s manual. Damage due to accidents or owner abuse or neglect is not covered under this warranty.
4. All service must be performed by an authorized Dan D’Agostino Master Audio Systems dealer. Damage resulting from service by other parties is not covered under this warranty.
5. All products returned for service must be packaged in the original container and must include a photocopy of the original purchase receipt. If the original container has been lost or discarded, contact Dan D’Agostino Master Audio Systems LLC for a replacement.
6. If the product must be shipped back to Dan D’Agostino Master Audio Systems LLC for warranty service, the customer shall pay shipping costs. Dan D’Agostino Master Audio Systems LLC will pay for return shipping.
7. Before shipping the product to Dan D’Agostino Master Audio Systems LLC for service, the customer must first obtain a Return Authorization (RA) number by calling Dan D’Agostino Master Audio Systems LLC. The RA number must be marked clearly on the side of the package.
8. This warranty covers only defects in products made by Dan D’Agostino Master Audio Systems LLC. It does not cover incidental or consequential damages, or damages to other products resulting from defects in Dan D’Agostino Master Audio Systems LLC products.
9. U.S. residents: Depending on which state you live in, you may have other rights not elaborated in this document. For further information, contact Dan D’Agostino Master Audio Systems LLC.
10. Residents of other countries: Your authorized importer or dealer bears the direct responsibility for warranty coverage of your amplifier. Please contact your importer or dealer with requests for service under warranty. Dan D’Agostino Master Audio Systems LLC will work with your importer or dealer to assure that the terms of the warranty are fulfilled.

SPECIFICATIONS

Frequency response	20 Hz to 20 kHz, ± 0 dB <0.1 Hz to 100 kHz, +0/-3 dB
Signal-to-noise ratio	>113 dB, wideband, unweighted, ref. to full power output
Gain	28 dB
Total harmonic distortion	<0.007% at 1 kHz, at 1,500 W, 8 Ω
Input impedance	100 k Ω
Output power	1,500 W RMS at 8 Ω 3,000 W RMS at 4 Ω 6,000 W RMS at 2 Ω
Output voltage	320 V peak to peak 113 V RMS
Output current	400 A peak
Slew rate	100 V/ μ s
Output impedance	<0.03 Ω , 20 Hz to 20 kHz
Damping factor	>267, 20 Hz to 20 kHz, ref. to 8 Ω
Power consumption	Standby: 40 W Idle: 480 W Maximum: 10 kW
Input	1 balanced via XLR connector
Outputs	1 pair binding posts
Dimensions	22.5 x 11.5 x 32.5 in (whd) 57.2 x 28.0 x 82.6 cm (whd)
Weight (approx.)	570 lbs / 258 kg





www.dandagostino.com

Designed, handmade and assembled in the USA using
USA machinists, vendors and parts procurement.

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