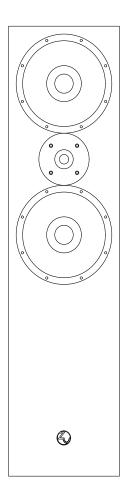
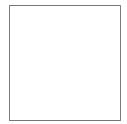
# OMEN DEF Mk.II





AD COPY + SPECIFICATIONS

01 | 2015



ZU AUDIO OMEN DEF Mk.II [REV-A] LOUDSPEAKER SYSTEM SPECIFICATIONS + INFORMATION

Update: the wider bolt-on plinth is available as an accessory through the Zu website. The wide plinth provides increased stability and topple-over resistance as well as improved fidelity. The wide plinth is highly recommended for Omen Def Mk.II loudspeakers featuring the upgraded (and much heavier) Zu/Radian-850 tweeter assembly—in fact, we may insist.

All new and ready to set your pants on fire. Omen Def Mk.II further defines its position as the price-to-performance world-beater, do everything well, high fidelity loudspeaker.

Omen Def is recognized as a rock-solid performer and amazing for the money. It vividly and naturally recreates recordings and has a uncanny ability to compliment and work with the acoustics and architecture of most any room. Its also easy to drive and mates well with nearly all amplifiers. And now with easy bolt-on and plug-and-play upgrades, most notably the tweeter, the sky's the limit and you can get there at your own pace. That's right, Omen Def Mk.II (besides being amazing in its least expensive form and not just a little better than its predecessor) allows easy user changes and updates—tweeter, high-pass network, cable harness (futures), full-range drivers (these too will get better one day), the addition of optional plinths... all can be done in your own home with simple bolt-on style builds—no soldering, no surgery, no mistakes and no nonsense.

Here's just a few of the powers we've blessed Omen Def Mk.II with:

- Deeper sense of ease in all tones, textures, phrasing and dynamic shades.
- Magnified cogency of intelligence and transient—better pop, shove, hit and attack.
- Sanctification of the inner detail—bass through treble, not simply treble hyped.
- And significantly elevated emotional teleportation powers.
- All while engineered to allow easy DIY upgrade and future update of many aspects of its design, most notably
  the tweeter. Oh, and by blessed you know we mean, engineered with mad science with clear targets nailed to
  the door of sonic bliss.

Yes, the price went up, but less than the direct costs of the improvements. Omen Def remains the clear leader in the high value, do everything well, hi-fi speaker category. As you can tell, we're pretty stoked on our new Omen Def Mk.II, so if you want a speaker that delivers the music and just the music, you'll want Omen Def—quite simply the biggest sound per dollar (pound, yen or euro) you've ever heard.

### **OMEN DEF [MK.II] QUICK SPECS**

Height: 47" [119.5cm] (without footers or optional wide plinth) Footprint:  $12 \times 12"$  [30.5 x 30.5cm] (without optional wide plinth)

Weight: 85 pounds [39kg] each (standard, without optional wide plinth, or Zu/Radian-850 tweeter)

Bandwidth: 30 – 25kHz Efficiency: 101 dB SPL 1W, 1m

Impedance: 8 ohm

Power Amp Range: 2 – 400 watt Made In Ogden, Utah—U.S.A.



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### **ENOUGH WITH THE HYPE, WHAT'S CHANGED**

- Cabinet superstructure.
- All metal-to-metal fastener systems—no more wood screws, anywhere.
- Tweeter assembly and mounting technology.
- High-pass tweeter filter, featuring ClarityCap MR capacitors.
- Cable harness, featuring Zu Event internal cable.
- ZuB3 input connection + parallel 5-way binding posts.
- Machined from billet nameplate.
- Finish quality.

#### WHAT HASN'T CHANGED

- Full-range driver, the heart and soul of Omen Def and the source from which everything hinges; Omen Def Mk.II continues to feature our really swell, high-output, nano-sanctified (ZU103ND/G1-16) 10" full-range driver, the very same used in Dominance, Definition Mk.IV and Druid Mk.V, to give real sounding dynamic scale/expression and holistic playback.
- The architecture, with its Scandinavian inspired line s and subtle tension.

#### **DETAIL ON THE CHANGES**

**Cabinet**—less cabinet talk. Yes, she looks nearly the same on the outside (a good thing) but all new and improved on the inside. Cabinet of Omen Def Mk.II is quieter, quicker, more precise... a significant step forward and designed from a comprehensivist position, engineering all system elements to best work within the whole. Webbing, bulkheads and other superstructural elements materially improve transfer of undesirable driver generated mechanical energy from driver housings into the cabinet structure which is then quickly transferred or damped. Cabinet/drivers/interface is designed to work in unison with the superstructure and features constrained layer, stressed member and mixed materials tech to better realize supermodel-level stereophonic performance goals.

**Fasteners & Interfaces System**—No more wood screws (though the old ones we used were killer). All fastener systems are now metal-to-metal and relay on compression not shear strengths.

**Tweeter Driver**—Tweeter assembly is all new, including the driver. Driver is designed and made by Eminence, and has many of the same features found in the top shelf Radain drivers, like toughened aluminum alloy with mylar damping and larger than traditional diaphragm for better dynamic behavior and electroacoustic power transfer. The new driver also uses a dual-wall rear chamber feature to reduce mechanical/acoustic feedback and thus distortion.

**Tweeter High-Pass Network**—Staying true to comprehensivity and of keeping systems as simple as possible, tweeter and high-pass network were developed to allow the most basic of circuits, a single capacitor. Advantages in designing on a fundamental level usually allows further refinement through better components, and so it is with Omen Def Mk.II—funds that normally get gobbled up in complex solutions to basic problems are freed allowing us to put that cash into ClartiyCap MR capacitors and Zu Event based leads.

**Tweeter/cabinet/lens mounting**—Compression mounting of the tweeter assembly, using the full thickness of the cabinet as a compressed layer, significantly strengthens the driver baffle area, making what's typically the weakest area of the cabinet into the strongest. To reach our unusually high and broad compression targets, we engineered the thrust plate for extra large contact area with tweeter driver and cabinet and precision machine the mating surfaces.



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#### SUMMARY OF SPIEL

We introduced our new super-duper, high-output, nano-sanctified 10" full-range driver (the same used in Dominance, Definition Mk.IV and Druid Mk.V) in the Omen Def a few years back, revision Mk.I-B. This is still our state-of-the-art full-range driver. We did this to give Omen Def increased dynamic shove and expression, putting it very near the efficiency and dynamics of Definition. The improvements from the full-range driver were significant and made for a loudspeaker that could energize any living room with the dynamics and scale of a rock concert yet still reveal the tiny nuances of an intimate performance. Omen Def does all this without "hi-fi" artifice and needs only a handful of watts to prove it.

Omen Def is conceived and create on our Definition platform, but with our entry-level "Omen" production scale, schedule and price values. It's a speaker that can go toe to toe with many of the best loudspeakers in the world, is happy with the vast majority of amps, looks sweet, is built to last a lifetime, and all at a price that most working music heads can afford.

Omen Def is about stuffing the bulk of the performance features of our renowned Definition into a similarly sized loudspeaker but at a greatly reduced cost. Omen Def Mk.II gives you roughly 80% or more of the Definition's performance for about a quarter of the price. To get there sacrifices in sound are made, mainly in the very deep bass and upper treble areas as you can hear when Omen Def and Definition are placed side by side. But hey, for the price difference, who's complaining. And now with the ability to change out the tweeter for the very same as used in Definition... all you need is a pair of our Undertone subs.

Omen Def is suitable for solid-state as well as vacuum tube amplifiers—and able to mix it up with amp's from budget to high-end, and from flea watt to mega.

Omen Def is the value standard—no apologies and no reservations. Full-bodied, forceful, delicate, sweet and engaging—aggressive when appropriate, restrained and polite when required, and always seductive.

Omen Def over-delivers on performance, much more than all that Zu driver goodness and machined aluminum suggest. Omen Def is a combination of the technologies developed in Zu Definition loudspeaker, combined with the production methodology of Omen—the result is a standardized high-volume loudspeaker that delivers quality, performance, and good looks at a sane price. Omen Def is quite simply one of the most versatile loudspeaker systems out there—its sensitivity and efficiency deceives small amplifiers into thinking they're power monsters, with resolution of tone and dynamic expression demonstrate clearly the benefits of moving up the amp' food-chain to more esoteric gear. Omen Def is built to last a lifetime: cabinet material, adhesives, driver assemblies... every component is a high quality part, creating a loudspeaker system to constantly remind you of the greatest gigs you ever attended.

#### SO WHAT'S WITH THE NAME?

Omen Def feature the exact same full-range drivers used in Definition, uses the same dual full-range Definition driver array, thus the Def, short for Definition. Omen because it's all about maximum sound for the money, with minimum stylistic extravagance. Whatever it's called the result is classic Zu—clean, simple aesthetics, attractive proportions and sound quality that'll blow your socks off.



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#### TECH: OMEN DEF MK.II ACOUSTIC TECHNOLOGIES

Third generation ZuGriewe electroacoustic loading ZuGriewe is a cabinet / driver / room acoustic impedance architecture. The technology was developed by Ron Griewe and Sean Casey, with its beginnings developed for motorcycle / automotive engine systems for improving power output through pulse and pressure management within an increased bandwidth.

#### TECH: ZU103ND/G1-16 FULL-RANGE 10" DRIVER

This is the same driver we developed for and use on our flagship loudspeaker Dominance. The same driver is also being used on the Definition Mk.IV and Druid Mk.V, delivering stunning attack, shove, resolution and bandwidth.

Features include a maximal motor for expanded dynamic contrast and reduced harmonic distortion; a lightweight neutrally-hung voice coil assembly with a paper/Kapton former; a linear inline layup of the inner cone for best resolution of detail; a diamagnetic shorting assembly for dynamic damping of the moving mass when playing at concert levels; nanotech-impregnated paper cones designed to support wide bandwidth; and a machined from billet phase cone with concentric maximal-length sequence diffusion for smooth high frequencies. All this is anchored to a heavy aluminum alloy frame with overbuilt bonded and riveted yoke/magnet/top-plate assembly.

The nano materials and application process reduce weight while increasing strength and propagation velocity without incurring any sacrifices in damping. We lay-up the paper pulp as a core material, and essentially infuse a liquid solid matrix over it. We use nano-processed and nano-engineered materials and key components in the matrix include nanosphere ceramic balloons, nanofiber cristobalite and amorphous fumed silica. Adhesives and binders include melamine, epoxy and nitrocellulose (aircraft dope). Bitting into the paper core is the first lay-up matrix of nanofiber cristobalite and fumed silica. On this you have a stratum of nitrocellulose and nanospheres. Moving past the lighter, stronger, higher velocity cone you have the Eminence made voice-coil assembly with is combination of paper, Kapton, copper windings and proprietary Eminence adhesives. The center "phase" plug is a carry-over from the research and testing we did with Essence, and gives this driver a more linear management of high frequencies and broader dispersion from the directly-coupled-to-voicecoil inner cone. And as dynamic contrast (to-the-max shove and pop) are of primary importance to us, we mated the new nanotech driver with the same super-tweeter assembly used in Definition Mk.III, reworking the high-pass filter a bit to blend smoothly with the high-resolution high-output full-range driver.

#### **FINISH**

Standard wood finishes for Omen Def are top coated by UV protecting premium grade conversion varnish. All finish work is done in Zu's custom finish shop.



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#### TIPS ON GETTING GREAT SOUND FROM OMEN DEF MK.II

(Download the owner's manual, lots of good stuff in it.) Omen Def loudspeakers get 600 hours of high-intensity factory burn-in to ensuring they will sound great within just a few days of play (longer if transported in the cold).

Make sure you have 1/4" [6mm] or so gap between the bottom of the loudspeakers and the floor. The finger ports are part of the ZuGriewe box loading technology. They are not ports as used in a bass-reflex design (Helmholtz resonators in all their forms) but the finger ports do need to see the acoustic space of the room. Blocking them turns the Omen Def into an interesting but "sealed" design and the bass output will be dramatically lowered.

In addition the installed ball-end footers, for use with hard surface flooring, Omen Def also ship with spikes to be used to punch through and anchor the speaker through carpets and rugs.

You might also consider the use of the optional wide plinth (15 1/2" square by 1 1/4" tall) which will increase the torsional stability of the loudspeaker. The wide plinth will also allow you to safely angle the speaker forwards or back to further dial-in the sound to your taste and your preferred listening height. The wide plinth also improve fidelity by reducing floor/cabinet feedback. If you have Omen Def fitted with the Zu/Radian-850 based tweeter assembly we highly recommend the use of the optional wide plinth—the added weight of the Zu/Radian assembly makes the loudspeaker top heavy.

Those using Zu cable should also consider using the ZuB3 connection (via Neutrik speakON® 8-pole concentric connector found on the nameplate of the Omen Def Mk.II). This connection improves bandwidth and lowers contact resistance compared to 5-way binding posts—ZuB3 also ensures you always have things connected as they should be. Zu will reterminate your Zu loudspeaker cable to ZuB3 free of charge.

Thanks for your interest in Omen Def—please don't hesitate to call or email, we love what we do and we're here to help.



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### **ZuB3 CONNECTOR INFORMATION**

OmenDef Mk.II features ZuB3 termination interface, and 5-way binding posts. You can use standard or oversized spades, banana plugs, bare wire, or ZuB3. We make it easy for you. For best results we do recommend ZuB3 terminated Zu cable.

ZuB3 is a cable archetype that measures and performs differently than other cable formats (twisted pairs, coax, braids, or ribbons)—a difference we believe significantly improves performance. Zu Druid-5 loudspeakers feature this cable geometry inside, and connecting Zu cable from the amplifier to the loudspeaker via ZuB3 ensures best fidelity. Reasons include:

- maintaining the cable's electric and magnetic features through the wall of the speaker
- lower contact resistance (better than half the resistance of pure copper lugs and spades)
- ensured correct channel phase (SP+ to SP+, SP- to SP-) as the connectors are indexed
- no possible short-circuiting of amplifier

ZuB3 interface connection via speakON® 8-pole concentric connectors maintains the electric and magnetic properties of the ZuB3 cable and lowers contact resistance over other bulkhead/cabinet wall pass-throughs. For those that wish to use other cables, Omen Def Mk.II also features parallel 5-way binding posts. Users that own Zu loudspeaker cables can have their cable reterminated, free of charge, so performance can be maximized.

NOTE: We highly recommend factory termination. However, ZuB3 via Neutrik speakON termination convention is outlined here for reference.

### ZUB3™ VIA NEUTRIK® SPEAKON™ 8-POLE TERMINATION CONVENTION

Pin-outs for ZuB3 via Neutrik speakON 8-pole / single channel	
SPEAKER +	SPEAKER -
SPEAKON 1+ SPEAKON 2- SPEAKON 3-	speakon 1- speakon 3+ speakon 4-
UNUSED: 2+, 4+	·
SP+ 1+ SP+ 2- SP+ 3- SP- 1- SP- 3+ SP- 4-	
NEUTRIK 8-POLE SPEAKO	n cable-end connectors feature pozidriv # $1$ setscrews $\qquad \qquad \bigoplus$



#### ZU AUDIO OMEN DEF Mk.II [REV-A] LOUDSPEAKER SYSTEM SPECIFICATIONS + INFORMATION

Design High efficiency, high output, moderate 8 ohm impedance, direct radiating, floor-standing loudspeaker.

Omen Def Mk.II features Zu's full-range Zu103ND/G1-16 driver, ZuGriewe driver/box/room acoustic loading technology, no crossover or filters on full-range drivers, complimented by a dynamic tweeter featuring 1.7" voice-coil and machined 6061-T651 billet lens assembly, providing the acoustic sparkle

and resolution from 12kHz and up.

Production September 2014 (Mk.I-A November 2010, Mk.I-B August 2012)

HWD47 x 12 x 12" [119.4 x 30.5 x 30.5cm]

**Footprint** 12 x 12" [30.5 x 30.5cm]

85 pounds [39kg] (standard, without Zu/Radian tweeter assembly or wide plinth) Weight

Packaged FlexPak, one loudspeaker per shipping box, 95 pounds [43kg]

2x Zu103ND/G1-16, 10-1/3" full-range nanotech driver in Zu Definition array covering 30 - 12kHz **Driver Complement** 

Zu/ASD1001 tweeter assembly

**Component Tolerance** 0.5% driver pair matching, 0.1% on all other electrical components

> ZuB3 plus 5-way binding posts accepting: 1/4" spade [6.3mm fork], 5/16" spade [8mm fork], bare wire Inputs

≤ #4 AWG, banana plugs

101dB SPL @ 1W. 1m Efficiency

Impedance 8 ohm, nominal full bandwidth (5 ohm minimum at 270 Hz)

Average Room / Moderate Volume 2 - 4 watt 4 - 16 watt

Large Room / Loud

Large Room / Concert Level 16 - 50 watt 400 watt Max Music Input Power Max sustained RMS Power 300 watt

> 30 - 25kHz Bandwidth

**Horizontal Acoustic Center** 35" [89cm]

Horizontal Listening Window 45° **Vertical Listening Window** 20°

**Full-range Driver Network** none

1st order @ 12kHz acoustic Super-tweeter Network

> **Internal Cabling** Zu Event

> > Cabinet North American made high-density comp-60 composite, skinned with real wood veneer

Spike / Feet Insert Thread 3/8–16 TPI (9/16" hex nut, 14mm wrench can be used but is tight)

hard surface ball-end footers installed with S.S. 9/16" jam nuts, also included are carpet spikes Included With Loudspeaker

**Manufacturers Country Of Origin** U.S.A. [98%]

> Life Expectancy 100 years plus, all parts

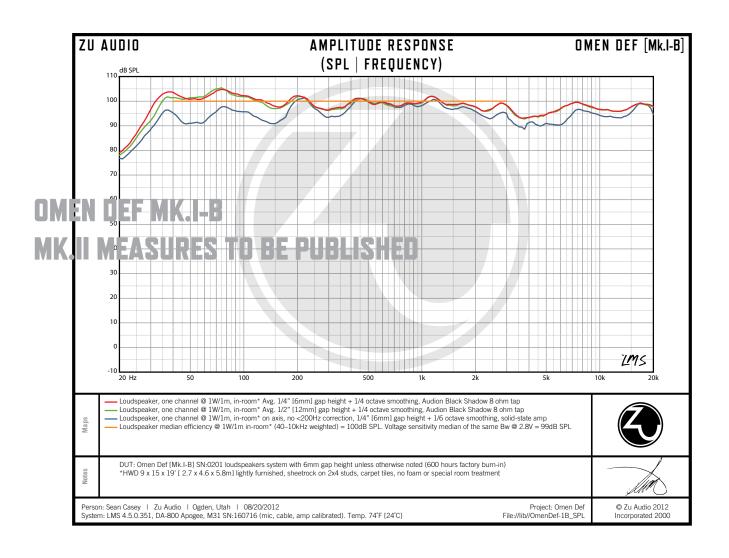
CE | RoHS | WEEE Compliance

5 years limited on cabinet and drivers—warranty does not cover misuse, abuse, components upstream Warranty & Service

from the loudspeaker system, modifications or non-factory service.

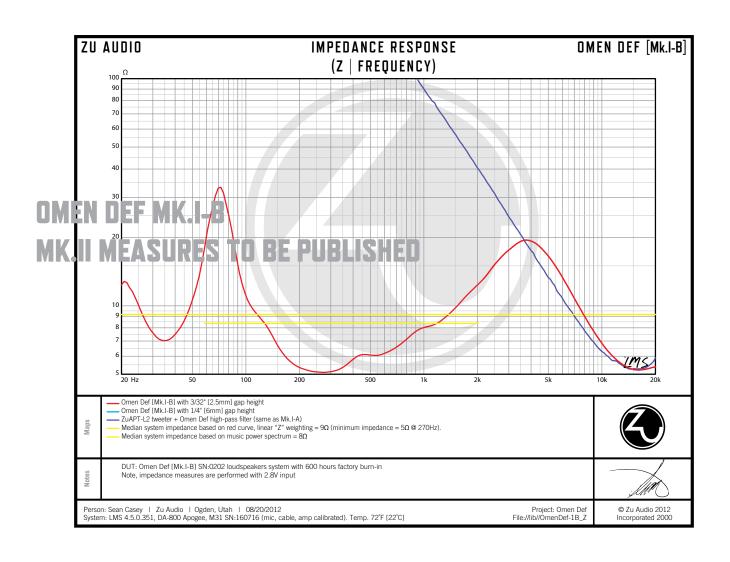


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#### **WARRANTY**

Zu products are designed and manufactured to the highest quality. However, if something does go wrong Zu will fix or replace the product free of charge. Zu Omen Def Mk.II loudspeakers have a five year limited warranty from date of purchase to original owner. If under normal home use you have any problems with drivers, cable, parts, cabinet, we will fix or replace the product. Loudspeaker warranty and service can usually be performed by the user, also known as DIY service, in such cases Zu will provide full technical support. This provides faster repair of product (reducing down time is always good), minimizes handling hassle and damage potential to both Zu and you, and reduces shipping costs.

Zu loudspeaker finish warranty covers color changes in paint, finish checking, and oxidizing. While we use the highest quality UV protecting topcoat finishes, we cannot guaranteed against fading and you should keep them out of direct sunlight, just like a piano. While every effort is made to ensure a perfect finish that will last a lifetime, this warranty does not cover damage from impact and abrasion, or seam / core construction visibilities in extreme high temperature / high humidity environments. Zu products are designed to be used in temperature and humidity controlled environments, namely your home or office unless otherwise stated. Warranty does not cover loudspeaker finish damage caused by the extremes of an uncontrolled environment.

If in the highly unlikely event that a Zu product arrives to you dead on arrival (D.O.A.), and after discussing it with a Zu tech, we will ship another of the same product at our expense and arrange for the D.O.A. product to be collected. If after inspection we find that you have misrepresented a returned product's condition, and that it was improperly handled or used, Zu will charge you for all damaged parts, labor, shipping and handling of the product.

Warranty does not apply to damage caused by operating the product outside the intended use, accident, another product, misuse, abuse, flood, fire, earthquake or any other external causes. Warranty does not cover damage caused by modification or service performed by anyone other than a Zu representative. Cosmetic damage is also excluded from warranty, as is all product that has any part of the Zu serial number removed.

When a product or part is exchanged the replacement becomes your property and the suspect or damaged part becomes Zu's property. Parts provided by Zu must be used in products for which the warranty service is claimed.

### WHAT YOU CAN EXPECT IF WARRANTY SERVICE IS NEEDED

If warranty becomes necessary, you must call or email for a return of material authorization (R.M.A.) number, or to arrange for user serviceable parts. This provides opportunity to assist in diagnosing the problem and helps us to schedule for rapid turnaround in the event that parts, service or repair is needed. Upon factory inspection of parts or product, warranty eligibility will be determined. While service options, parts availability and response times will vary, we do our best to keep you happy. International customers should know that Zu will comply with all applicable export / import laws and regulations, you may be responsible for custom duties, taxes, broker fees, freight, and other charges. When shipping of product or part is required, repackage the complete product, or part, in its original packaging. If you have any questions about packaging please call or email. Product damage caused from incorrect repackaging is not eligible for refund or warranty and the freight company may also reject your insurance claim. Until we have the product back in the shop and sign-off that it is eligible, the product is still your property, we recommend you insure or declare the full value when shipping. We also recommend that you only ship with a freight company that has a good reputation and offers tracking and insurance for the full amount.