



★★★★★
Guitarist
GOLD

AER Acousticube 3 £1,495

AER pushes the boundaries of acoustic amplification, even further with more dynamic range and greater versatility than ever before. But just how much better can an Acousticube get? **by Benji Bartlett**

With a deserved reputation as the pinnacle of acoustic amplification, AER's third version of the Acousticube has some well-respected heritage behind it. For those not familiar with the original and Ila Acousticubes, the concept behind these amplifiers was to provide acoustic musicians with a dedicated, powerful and tonally

transparent amplifier that was easily portable and equipped with all the connections that any musical situation could require. The Acousticube 3 is a continuation of these ideals, including many developments in materials and electronics that have arisen in the years since the previous version.

The main improvements are instantly audible and comprise of a

vastly increased 44V dynamic range. If you aren't savvy on dynamics, this means that the amplifier is instantly able to handle plus or minus 22V of musical energy. If we put that in perspective, the average piezo pickup on an acoustic guitar can throw out in excess of 10V when you whack a chord, and even more if you're playing hard percussive techniques. With 22V



either way, the AER Acousticube has plenty of clean headroom to spare, so you get a more accurate reproduction of your guitar.

The cabinet of the amplifier itself has also been changed. It now comprises a bass-reflex enclosure that's completely separate from the electronics, housing a brand new eight-inch Kevlar-coned speaker along with a one-inch dome tweeter. These changes adhere to the 'extreme sturdy yet small' AER ethos, and with a host of new buttons, corresponding LEDs and rear panel connectivity, the control panel looks very different to that of its predecessor, despite occupying the same tiny space.

Because most of the improvements with the Acousticube 3 are electronic, it's worth reiterating the mechanical differences. Just the speaker upgrade alone has shaved an impressive 1.5kg off the overall weight of the amplifier, making an already portable system even more manageable.

Like the Acousticube IIa, this version uses digital effects, including reverb, chorus, digital delay and flanger. The difference is that this time you can edit the effect parameters using the included AER software via a USB cable plugged into your PC. This flexible effects management allows you to edit, re-route and store your favourite patches in the location of your choice, and you can restore the factory presets.

The new onboard effects comprise mainly of reverbs and delay, with a selection of modulation effects. AER has ditched the pitch-based harmony effects of the Acousticube IIa as many players simply weren't using them.

Once you've plugged your guitar into the cube, you have a choice of six different input stages to match the amplifier to your pickup system or microphone. The choice is: Piezo for passive systems; Line for active preamps or magnetic pickups; Mic, 9V and 48V phantom power for Mic mode; and E/P, which is used for electret microphones or piezo pickups. A pad button adds further versatility to ensure maximum level before clipping, in conjunction with the gain control: no matter what instrument, pickup system or source is being used.

Tonal shaping comes courtesy of the usual triumvirate of bass, middle and

AER ACOUSTICUBE 3	TEST RESULTS
Build quality	★★★★★
Features	★★★★★
Sound	★★★★★
Value for money	★★★★★

■ **WE LIKED** Unmatchable detail, dynamics and volume; excellent digital effects and stunning tone; footswitch and gig bag included in the package

■ **WE DISLIKED** Nothing – the industry-standard Acousticube just got better!

treble controls, and is further enhanced by a colour button that activates a mid-range contour. Channel 2 is a carbon copy of this control set but operates, as you'd imagine, on input 2.

Despite offering a vast array of digital effects, the controls for the effects section are simple. The program dial selects the patch, the pan knob governs the stereo spread when using the Acousticube with a PA or extension speaker, and the return knob controls the amount of effect that's blended to your original signal. At the far right of the control panel, next to the master volume knob, the pre-master control provides easy access to your recording out/send to PA levels.

The rear of the amplifier also ascribes to the Swiss Army knife approach and caters for virtually every eventuality. There are outputs for tuner, headphones, a sub speaker and stereo recording outputs. These share space with a master insert, stereo outs, stereo auxiliary input with level control, master presence control, notch filter, a switchable pre/post effect DI with level control, master control footswitch socket and send and return for a switchable parallel/series effects loop. The mic input is round here too, and if you can think of anything else that you could ever possibly need then you'd better call AER.

The design, functionality and sound of the Acousticube are above and beyond the call of duty in every respect



The footswitch enables you to toggle between two stored effects

AER ACOUSTICUBE 3

PRICE: £1,495 (inc footswitch and gig bag)

ORIGIN: Germany

TYPE: Two-channel acoustic combo with digital FX

OUTPUT: 120W, 8-inch Hexacone speaker

DIMENSIONS: 330 (w) x 330 (h) x 265mm (d)

WEIGHT (kg/lb): 13/28.7

CABINET: 15mm birch plywood with acrylic black splatter finish

SPEAKERS: 1 x 8-inch Hexacone Driver with Neodym Magnet and 1 x 1-inch dome tweeter, both 8 ohm

CHANNELS: Ch 1: jack and XLR (on rear) input with mode switch for passive piezo, active preamps, mic, electret, 9V and 48V phantom power, pad, mute and colour switches. Bass, middle, treble. Ch 2: identical

CONTROLS: Ch 1 and Ch 2: gain with clip LED, bass, middle, treble, colour, mode, mute, pad for each channel. Program (reverb select), pan, return (FX), pre master, master volume

FOOTSWITCH: Two button memory/effect (cable included)

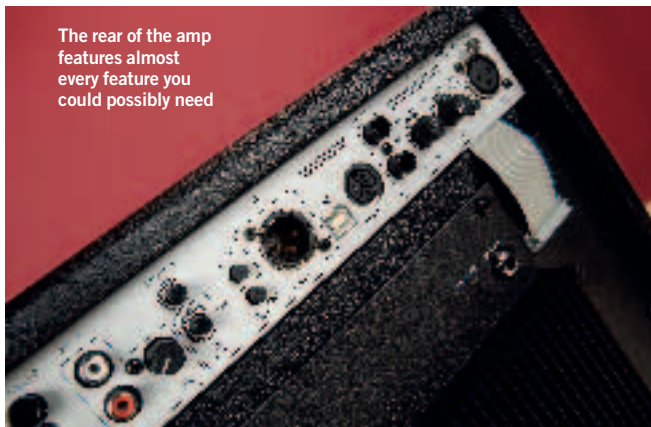
ADDITIONAL FEATURES: Digital effects (9 x room, 13 x hall, 15 x church, 6 x cathedral, 4 x glass, 3 x church, 4 x warm, 3 x bright, 10 x acoustic and outdoor spaces, 10 x delay, 6 x chorus, 4 x flanger, 11 x FX combinations)

OUTPUTS: Tuner, phones, sub, line, left, right, record Ch 1/2, master insert. Stereo Aux in with level control, presence, DI level, DI-pre/post effect, DI XLR, notch, USB interface for PC editing of digital FX parameters, FX send/return with pan and series/parallel switch, mic input, ground lift, ext speaker out

ACCESSORIES: Two-button footswitch controller pedal, padded gig-bag, controller cable, CD with FX edit software

RANGE OPTIONS: Alpha (£465): two inputs, digital reverb, 40W. Compact 60 (£646): single channel 60W combo, two digital effects. Compact Mobile (£795): Compact 60 tone, rechargeable battery. Domino (£895): portable 120W PA, four-channel combo. The AG8 (£395): 60W monitor extension speaker

Westside Distribution
0141 248 4812
www.aer-amps.de



The rear of the amp features almost every feature you could possibly need

The rivals

Fender Acoustasonic SFX11	£699
Ashdown Acoustic Radiator 2	£699
Fishman Loudbox Performer	£699

Fender's dual-channel Acoustasonic is less easily portable but features 32 digital effects, a pseudo stereo effect dubbed Stereo Field Expansion (SFX) for a wider onstage spread, and it comes equipped with a footswitch. Ashdown's Acoustic Radiator 2 boasts 160W from 2 x 8-inch drivers with dual tweeter array. With phase switches, a VU meter, variable vacuum tube harmonics and a powerful EQ, including dual variable notch filters and Alesis digital FX, the Radiator is feature packed. The Fishman Loudbox's full-rounded sound and straightforward control layout make it a worthy choice for high-quality portable acoustic amplification, with an amazing 130W RMS of solid-state power

→ **SOUNDS:** It's difficult to get across that the most important attribute of an acoustic amplifier is not to impart a 'sound' of its own on your instrument. And if a sound must be imparted during the course of the operation of the amplifier, then it must be a good sound. But just what is a good sound?

Udo Roesner, one of AER's founding fathers, put it like this: "A good sound is one that's balanced across all the frequency ranges, full and pleasant, and never annoying to the ear at any sound pressure level."

With that in mind, the sound of the amplifier is largely down to the quality and tonality of your acoustic guitar, pickup system and/or microphone. Without coming to your living room and setting up the AER with your guitar, it's difficult to say how it will sound, but what we can say is this: no matter what guitar the Acousticube is presented with, if you take the time to select the correct mode and optimize the gain so that clipping only occurs on your loudest passages, the AER is capable of some of the fullest, punchiest, lightning response bass; the

most juicy, robust and musical mid-range; and some of the most detailed, airy, crystalline treble frequencies you're ever likely to experience. Even when the volume is high, the sound is comfortable and non-fatiguing, with excellent balance and no irritation.

With massive amounts of headroom available, the AER responds equally well to nylon string guitars as it does to steel strings, 12 strings and archtop electrics. We threw everything we had at the Acousticube 3 and it just took it all in its stride without breaking a sweat. And that's before we even blended any of the effects in...

One of the reasons the AER sounds so good, no matter what the volume, is that a dynamic control circuit is fitted. This doesn't work on the complete signal like most compressor-based dynamic control systems do. It only works on the peak areas of the signal that are in danger of distortion. The bass frequencies might end up with a slightly reduced volume as the dynamic control deals with them, but no frequencies are cut out or eliminated from the sound. The dynamic control only reduces the level of problem frequencies as and when it's necessary, and it does so without the unpleasant 'pumping' effect of most compressors, resulting in a spectacular sound every time.

When you add these effects to the amp's other features, it's like being upgraded to first class and then being told that you can also fly the plane if you'd like. Exhilarating reverbs that don't interfere with the fundamental tonal character of your instrument can

be likened to a multitude of different rooms in a mansion for you to explore and enjoy. Each one is a different size and offers a different character. One thing's for sure, though – you'll never grow tired of exploring them, not even after you've programmed in your favourites for daily use via the included footswitch. This allows toggling between two stored effects, as well as on/off of effects loops 1 and 2.

Verdict

The Acousticube 3 is without doubt the best-sounding dedicated acoustic amplifier we've ever heard. It punches way above its weight sonically, and with so many useful features aimed at the performing musician, you'll start to question how you ever lived without it. It's not a cheap amplifier by any standard, but it's easy to see where every penny has gone. The design, functionality and sound are above

and beyond the call of duty in every respect, making the AER Acousticube 3 the perfect choice for the professional

acoustic performer. It doesn't take a genius to work out why players like Tommy Emmanuel, Bob Brozman, Martin Taylor and Jan Akkermann are playing AER. No stone has been left unturned by the dedicated and thorough R&D team at AER, and this has resulted in a versatile amplifier that's the perfect evolution of an incredibly good modern classic. **G**

The rear of the amplifier also ascribes to the Swiss Army knife approach and caters for virtually every eventuality

AER Acousticube 3

Guitarist RATING



Even though there are a huge number of effects, using them is remarkably simple

Acoustic visions

After 13 years at the top of the acoustic amp market, AER opens its doors to *Guitarist's* prying eyes **Words and pictures Benji Bartlett**

The AER facility in Recklinghausen, near Dusseldorf in Germany, is a small but perfectly formed unit, much like the amplifiers it produces. One thing was very evident from the moment we stepped through the doors: company founders Michael Eisenmann and Udo Roesner are utterly obsessed with acoustic tone.

For nearly 20 years, they've worked together in various incarnations. They started out running a small music retail shop, which involved amplifier repairs and development of acoustic pickups and preamplification systems for Lakewood Guitars. Thanks to this, the pair became uniquely equipped with the specific knowledge and experience needed to create the best sounding, most powerful, transparent and portable amplification for the acoustic musician. Since the launch of the revolutionary Acousticube amplifier in 1992, AER has consistently maintained pole position in acoustic amplification.

The lengths AER is prepared to go to in order to achieve this are so thorough that it's hardly surprising that some of the world's finest guitar players choose the company's amps. Not only do they test the amps with enough different acoustics and pickup systems to open an acoustic super showroom, but they also study the performance of different pickup systems fitted to popular and classic acoustic guitars in an anechoic (acoustically non-reflective) chamber.

These scientific acoustical studies have helped them understand why the good systems sound pleasing to a player's ear and has enabled them to produce a brand new pickup system of their own, called the AER AK15+, which boasts a massive dynamic range and natural sound. "Michael is the technician and I'm the musician," explains Udo when we ask for the reason behind AER's success. It's this combination of know-how and art that's at the heart of an AER amp, and just one look around the factory is testament to that.

The basic element that forms the foundation of all AER equipment is the



I, II, III... Acousticube!



Beefcake-built boards ensure a heavyweight performance from the amplifiers

cabinet construction. Using premium 15mm birch ply, the enclosures are built to be very strong, in order to guarantee the best performance from the newly introduced Kevlar-coned speaker systems. The cabinet components are shaped on CNC routing machines, then hand-inspected and assembled prior to finishing with a hard-wearing, water soluble acrylic paint. After finishing, the amplifier is ready to receive its speakers and wiring harnesses before the circuitry and control panel can be mounted.

All the AER circuit boards are designed in-house by Michael Eisenmann and feature miniaturised components as much as possible. Because of the complexity and hi-tech nature of the amps, many of these components must be hand-soldered by skilled technicians.

The whole concept of AER is to put maximum power in the smallest space possible, and to stretch the components to their limits within the essential protection of their proprietary AER Dynamic Control speaker optimising/protection circuitry. In order to maintain the best possible dynamic responsiveness, an AER amplifier must have the entire power capacity of the amp available immediately to all frequency ranges at all times.

"The signal chain must accurately reproduce every sound made by the guitar," explains Udo. "The sound produced by playing the guitar is extremely direct. With an amplification system involved it must have the same direct feel and sound, so the run-time through the system must be very fast. We aren't talking about electric guitars. The electric guitar amplifier is made to break down in a pleasant way. In acoustic amplification, we have to avoid distortion and overload at all costs. We're talking about effective use of components for maximum performance. You want the energy at the ear of the audience and not at the cooling grille on the back of the amp.



Mr. X meditates during Udo Roesner's über-cab soliloquy

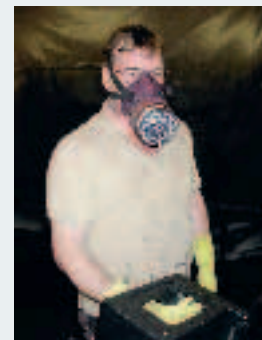


"Another important consideration is intelligibility. What you actually hear is very important. The loudness you perceive with an AER is often louder than with other systems, even if they're rated with a higher power, because of the efficiency of the amplifier."

Having seen the impressive manufacturing facility, there's just one more important job to do and that's to test the amplifiers with Udo's pride and joy: a Martin OM model. In addition to comprehensive electronic testing throughout assembly, each amplifier also receives a thorough play test with a guitar to ensure that it meets the exacting standards of perfection and excellence that have made AER the big name in acoustic amplification.

To find out what all the fuss is about for yourself and understand where the elite reputation comes from, you don't have to go to Germany – just visit your nearest AER stockist and plug in. If you're a serious acoustic performer, you can't afford not to.

For more on AER's amplifiers, see www.aer-amps.de or call Westside Distribution on 0141 248 4812.



Upper middle: Thorough electronic testing takes place at every stage in the assembly process
Middle: In time, all AER cabinet-makers turn to the dark side
Below: Proud parents Michael and Udo with one of their children

