



## Todd Warnke

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### Dunlavy SC-III: Truth and 12 feet of speakers

The newest member of the Warnke family, Ella, a six pound bundle of energy and joy arrived six weeks ago. Of course she's named after the singer, although she has yet to show affinity for scatting. What she really likes is piano and guitar, and for some reason trumpet and violins get on her nerves. Everything she does, with one exception, is adorable. Robin thinks it's cute, but her trainer says chasing her tail stimulates her prey instincts. Oh yea, Ella's a Jack Russell terrier.

Anyway, watching her chase that sawed-off little tail reminds me of nothing as much as the High-End audio chase. The goal seems so damned attainable that chasing it is inevitable, but capturing it remains elusive. Every time you manage to sneak up on it, just as you pounce it runs off. Round and round you go, till, exhausted, you wander off to play with other toys. But you *know* that the tail is still there, and that tomorrow you'll find a way to catch it.

My way of controlling this it to seek out musical truth in each component I buy. Truth has a way of sticking around. Truthful components allow a system to jell, allow a listener to stop chasing their tail and to chase recordings instead. To listen to the music and not to equipment. So, I can hear you, just what is musical truth Todd? Well, even though defining truth is a dangerous task that has eluded philosophers for centuries, I'll attempt just that. After all, replacing speakers every year or so is also dangerous – if not to the checkbook, at least to the marriage vows.



#### MVSICAL TRVTH!

There is a camp that defines musical truth as the facts of a recording. Reveal all the facts and you've got the truth. Yet we've all heard speakers that do exactly that and still miss the truth of the music. These left brained speakers are detailed way out of proportion. They assail us with every bit of factual information on and about a recording. They don't just let you know how much spit the singer has in her mouth, but whether it is coffee or orange juice spit. They let you hear not just the back wall, but that the wall was painted by a guy named Joe, using a four inch brush, on a Thursday afternoon, while smoking Camels, non-filtereds. And these speakers are fun, at least until you want to listen to some music. While hearing the air conditioners turn on halfway through the second movement may heighten the illusion that You Are There, unless you are also getting the musical message along with the detail, such facts soon take on a life of their own, unrelated to music. In truth, detail alone is like a turkey carcass after Thanksgiving dinner ... there is structure but it only *hints* at the actual events and pleasures that transpired at the feast.

Another group of rabid audiophiles defines truth solely as "meaning" or "musicality". In many ways this argument seems to have a lot going for it, till you consider how little basis is needed to find meaning. In the real world, look at how little is needed to create meaning. Aliens, Nostradamus, Scientology, tea leaves, and the rabid belief that the Broncos are going to win the Super Bowl this year all exist on the thinnest of facts and yet give great meaning to those who believe (BTW, count me in that last group. I'll be placing my bet at CES). In audio terms, we've all listened to speakers through which a grand and an upright piano can sound remarkably similar. In other words, speakers that deliver very little factual content. Yet some of these speakers actually make music sound downright meaningful. Take car speakers

for example. I find that listening to my cheap, factory am/fm radio, using the original speakers in my '86 Mazda pickup is, quite often, a moving experience. No, when all four Beatles hit the final chord of "A Day In The Life," you can't tell that four different pianos are being used, or even that they are grand pianos. But you *know* that you just experienced a great song. Unfortunately, meaning, musical or otherwise, can be fabricated on the flimsiest of foundations. This is not truth either.

So then, what is truth, musical truth? To this listener it is the precise (and all too rare) balance of aural facts and emotional feeling, where each serves to illuminate, not consume, the other. Truth needs meaning to give it life and definition, and facts to sustain that life. When meaning comes to dominate, either by exerting itself over the facts (such as happens with some of the "pace and rhythm" British speakers) or because the speaker just isn't capable of presenting the facts (such as in my truck), what results is cult. We listen not to learn and to expand our mind and emotions, but to satiate our existing drives. On the other hand, when the facts of a recording are presented as the dominant theme we quickly become aural accountants. As each detail is presented we deposit in an account, adding and subtracting with great ease but little involvement. However, when musical meaning is augmented by aural fact, meaning deepens and facts have purpose. The result is the truth, the musical truth. We hear both what made the performance, and why it was made.

For me, this definition helps explain why some systems work better than others. Why system synergy is vital to system enjoyment. Why some lesser priced components, lacking ultimate detail retrieval but having an excellent detail/meaning balance, sound so good. It also gives me a valid way to judge the balance of a component. Raise the involvement level, and it better add the facts to achieve the proper balance. Up the detail and it must up the musicality if it wants to speak the truth.

By now, I know you're asking, what does this have to do with the Dunlavy SC-III speakers? Their ability to deliver an accurate and complete factual picture, along with natural and total musical meaning, push the standard reviewer envelope. They are exactly that rare type of product that both confirms ones aspirations and pushes one to new levels of understanding. In short, by their accurate and involving presentation they force a synthesis of both. They demand that you look for neither the yin or the yang, but instead comprehend the truth of a recording. But now I'm jumping ahead of the story, so let's back up a bit and meet the cast.

## The Cast and Their Roles

[JOHN DUNLAVY]

John Dunlavy has recently become widely known, largely due to his comments in the internet newsgroups. After more than 25 years involved in High-End audio design and manufacture, the last several have seen his design philosophies widely circulated and hotly debated. Not that those in the know have been unaware of him before the Net, it's just that his recent comments have introduced John to those not in the industry. Many of his ideas have been used in speaker design for many years. For example, every time you look at a tweeter surrounded by felt to control cabinet diffraction you are looking at and hearing a John Dunlavy idea and patent (and more than likely you're listening to a patent violation as well, but that's a story for another day). Still, in many ways it is unfortunate that his recent prominence has come by way of his firm and frank comments in the newsgroups rather than as a result of his speakers, since the proof of his design philosophy is readily available.

To understand that design philosophy, you must have some understanding of John Dunlavy himself. Like many audio designers, he did not start out in audio. But unlike the garage electrician, John started out in pure science. Back in the 40's and 50's he studied wave theory, and then graduated to antenna research and design. This expertise was put to much use by the US government in top secret military design. John's accomplishments led to a prominent standing in the international science community. The

recognition led to his co-chairing several UN panels with leading Soviet, American and European Scientists. With this background and hard science approach, he has developed a design approach that solves known problems with elegance and precision. Yet his love of music, he played acoustic bass for years in a pick-up jazz band and records his local symphony orchestra for radio broadcasts, infuses his approach with an understanding of the magic of music.

In the late 60's and early 70's, while affiliated with Corpus Christi State University, he had the opportunity to conduct research on acoustics and music reproduction. Using students as subjects he ran repeated tests on aural memory, phase sensitivity and acuity, room interaction and other topics. Taking the results of these experiments and coupling them with his background in antenna and wave theory, John began to design speakers that focused on elimination of audible and measurable distortions, with a high priority given to phase and time alignment. The result of these experiments was a company called Duntech. The Sovereign, Black Knight and others were among the justifiably famous speakers of the line. After nine years in Australia, when an opportunity came to expand production facilities to the US, John and his wife Joan returned home. Changes in the Duntech business and business relations led to his departure from that firm in 1992 (many of the details of these events can be found in Manufacturers Comments in *Stereophile* from several years ago). In 1993 he then founded Dunlavy Audio Labs in Colorado Springs. Building a state of the art design and production facility led to the latest statements of his design philosophy, the Signature Collection line of speakers.

The SC line, consisting of the SC-I, II, III, IV, V, VI and the recently added SC-I A/V, all feature Dunlavy's symmetrical driver array or SDA. Often confused for the D'Appolito alignment, Dunlavy's SDA deals with several speaker design goals at once. To achieve a point source radiation pattern, all drivers, with the exception of the tweeter, are paired. Using the SC-III as an example, this means that each loudspeaker has a pair of bass drivers and a pair of mid-range drivers with the bass drivers mounted at the top and the bottom of the cabinet, the tweet in the middle, and the mids between the bass and the tweeter. To achieve time alignment, each driver is mounted so that its acoustical center is on a vertical line with each of the other drivers. Thus, the bass drivers are on mountings that move them out a bit, as compared to the mid-range drivers, which are mounted flush on the cabinet. The tweeter is recessed and surrounded by felt to control diffraction.

To ensure phase accuracy, 1st order crossover slopes are the only types used throughout the speaker. A major problem with first order slopes is that each driver must be able to perform with great linearity well out of its passband. To achieve this type of driver quality, Dunlavy tests every driver, rejecting the majority and storing the specs for those that pass. Once the specs are stored, drivers are selected to build pairs of speakers. Sets of four woofers, four mids and pair of tweeters are computer selected within a response deviation of less than .25 dB. This accomplishes one more of John's production goals, precisely re-creating the sound of the design master. This tight production tolerance is one of, if not the tightest in the industry. It is also tighter, as inflammatory as this sounds it is no exaggeration, by an order of magnitude than several other high end speaker companies.

Besides SDA and first order crossovers, John Dunlavy feels that a significant part of accurate speaker performance depends on a speaker's ability to partner with an amp. To assist with that, every SC model has a near-flat impedance curve, with a low of 3 ohms but a high of only 6 ohms. Even though the impedance is low, with such little variation, frequency response should remain flat when driven by a well designed amp. In addition, with 92dB efficiency across the line, amplifier power is not a serious issue.

Differences among speakers in the SC line are primarily cabinet size and the number of drivers. The I and the II are two-ways, the III and the IV are three-ways, while the V and the VI are four-ways. The tweeter remains the same throughout the range, a one inch fabric dome model. Some of the other drivers are used in more than speaker one as well. For example, the bass driver on the I is the mid driver on the III, IV and the VI, while the bass driver on the II is used as the upper bass/lower mid driver on the V. Using the same engineering approach and many of the same drivers across the line means that the entire group sounds of one piece. What does change as you move from speaker to speaker is bass extension. The minus 1.5 dB limit of the I is 75 cycles, the II is 55, the III is 45, the IV is 35, while the V is 25 and the VI is 18.

Since the Dunlavy SDA uses first order crossover slopes, bass drivers on the smaller speakers are called upon to sound good well past the range of those used in the average two-way, which limits their low bass extension. This means that the only path to more bass is to use more drivers. It also explains why so many of the drivers are re-used in the line. When you are already using high-quality drivers, you only need and or change driver size when you need more bass.

Oh, there is one more difference between the models, with more drivers and more bass comes more size, much more. While the I is stand mounted, each of the other speakers are floor standers. The II is 65 inches tall, the III and IV are 72 inches, the V is 75 inches and the VI is 78 inches. Width ranges from 8 to 18 inches, while depth is from 10 to 33 inches. Yes, you read that right, the VI is 78 by 18 by 33 inches. The SC-III, which we are going to listen to here, is a much more WAF accepting size of 72 by 9 by 12 inches. While two 6 foot speakers sound like a lot, their small footprint means that they take up about the same floor space as a pair of stand mounted monitors. The finish on the review pair, Rosewood, was true furniture grade and stunning. Robin actually loves the way these speakers look, as do I.

### Leftist Tendencies

One of my fears was that with such precisely designed speakers setup would be painstaking. I was wrong. The SC-III loudspeakers sounded good just thrown in the room, but also rewarded fine tuning. After several weeks of break in, and several more of fiddling, the speakers ended up 43 inches out in the room, separated 96 inches (center to center) and toed in so that I could just see the inside panels. I sat 90 inches from a line parallel with the speaker faces. This is a slightly greater than 60 degree spread, which I have found to work well in my room, with many different speakers. The Dunlavy manual also suggests starting at 60 degree and then moving out to as much as 75 degrees. My room will allow such a spread, but my wife won't, at least for long. With the SC-IIIs I found that 60 degrees or a tad more worked just fine, but that taking them even further did result in a wider but just as stable soundfield. On the other hand, anything less than 60 degrees and things began to congeal.

Even during setup and burn in I was struck by the speed of the Dunlavys (Dunlavies, Dunlavi?). Speed, all too often, is seen as a treble or transient issue. In fact, it has application across the frequency range. Fast bass results in impact and power with out overhang and sloppiness. Fast mids deliver immediacy and delicacy, and fast treble results in purity, while transients need speed to mimic real life. The SC-III does all this well. For example, listen to Me'Shell Ndegeocello's *Peace Beyond Passion* (my favorite album of last year). Her remake of the Bill Withers' tune "Who is he, and what is he to you" has some delectable Billy Preston organ. The speed of the bass gives the organ organic, and fantastic detail as well as tremendous power and impact. It also gives the drum programming visceral slam with out any slop. As for the rest of the range, the strings are airy, extended, and pure. The acoustic bass is warm, fast and detailed as hell. Cymbals shimmer and dance. On "Deuteronomy: Niggerman", Joshua Redman's sax and Bennie Maupin's bass clarinet are full, quick and tight. And on "Ecclesiastes: Free my heart", Allen Cato's guitar wails with all the force and power of mountain lion. In each of these cases the speed of the Dunlavy speakers allowed for the natural detail of the instruments to

### Todd Warnke Associated Components:

DAS kept reminding me, "List your components." And it's not that I purposely didn't, it's just that I got so wrapped up in telling you about the SC-IIIs that I failed to remember till the e-mail flood about exactly that jolted me. Anyway, here's the list, when you get done you'll realize why it "slipped" my memory.

The transport used throughout the review period was the ol' reliable JVC 1050. The coax link between that and the Audio Alchemy DTI-Pro was, at various times, an Ensemble Digiflux 75, the JPS Labs digital coax (more to come on that one), and a one off Audio Magic coax that is the most neutral cable I've ever heard. Between the Pro and the Audio Alchemy DDE 3.0 (modded by Dusty Vawter and yours truly) was the Audio Magic Mystic Reference I2S cable. Other dacs were the Meridian 563 and the Assemblage DAC-2. The analog tether joining the dac and the pre-amp was, at most times, the superbly musical Cardas Cross, although the JPS Labs Super Conductor, Nordost Red Dawn and Audio Magic Sorcerer saw a lot time there as well. My reference pre-amp is the Audible Illusions L-1 (usually stocked with Bugle Boy tubes). In addition, the deathly quiet Audio Synthesis Passion passive control unit saw a bit of time with the Dunlavys, as did the Exposure XIV. Joining the pre and power amps was, normally, Nordost Red Dawn or

shine.

This speed comes from several sources, the most important of which may be the careful driver matching Dunlavy Audio Labs employs in the manufacturing process. Mis-matched drivers introduce distortions that, besides the obvious frequency errors, lead to timing errors, or at least masking, as well. One of the reasons 'stats sound fast is that, speaking with one voice, they avoid mis-matched drivers. This speed results in clarity and coherence as well.

Speaking of which, the SC-IIIs are, even more than my much loved Sound-Lab Dynastats, are the most coherent speakers I've heard. In spite of the load placed on the drivers due to the first order crossovers (or more accurately, due to the tight production tolerances), driver to driver transition is seamless. For example, piano, regardless frequency, sounded organic, flowing, and harmonically consistent.

This coherence and clarity combine to make for a speaker that reveals everything about everything upstream. Cable changes were very easy to listen to and understand. Tube rolling was great fun since extremely subtle nuances were easily detected and described. On the other hand, this detail level did not happen at the loss of musical information. I found that listening to and for the facts of recordings and instruments was easily separated from listening to music. I could focus on performance, musical or electrical, on a whim.

As for frequency response, in range and octave to octave balance it was simply splendid. The bass extends to 45 Hz (-2 dB), which some may grumble about, but is about all my room will support. As for bass quality, whether playing Terry Evans, Seal, or Ndegeocello, when the bass throbbed, so did the room. And when it glided, like Scott LaFaro's playing on the Bill Evan's disk *Waltz for Debbie*, you were carried along like Ginger Rogers following a Fred Astaire lead. Highs were grainless, delicate and as pure as the water a nearby brewery talks about. As for the octave to octave balance, think of the mid-band coherence of a great 'stat and extend that same balance from 45 cycles to the limit of your ear. Yes, they are that good.

Staging, as indicated earlier, benefited from a good speaker spread. When given proper room the speakers did the best Cheshire Cat act my room has seen (disappearing completely, but leaving *me* with the smile). Instruments were positioned evenly, right to left, with no lumping at or near the speakers nor in the center. Depth was natural, and, where the recording indicated, square with the front line.

Dynamically the SC-IIIs proved to be master of both the subtle and the profane. When called upon to rock out, they moved serious air, and with F-15 speed and power. Playing Rage Against The Machine resulted in a quick visit from my neighbor as well as a threat of a Home Owners Association action. On the

Audio Magic Sorcerer (I really love the Audio Magic wires, detailed but extremely musical as well). Magnan III and JPS Labs also spent time there as well. Amps saw the most change, although I must stress that the SC-III worked well with each of them. I started with the Warner Imaging VTE-201S (at 100 watts and \$2495, one of the best bargains in the high-end), spent some time with the McCormack DNA-0.5 Deluxe, an Exposure XVIII and finally ended up with the Blue Circle Audio BC-6. Speaker wire was Cardas HexLink 5-C, Audio Magic Sorcerer, JPS Labs Super Conductor, or Nordost Red Dawn. Other speakers on hand during the review period were the SoundLab Dynastats, Platinum Studio 1s, PSB Stratus Silvers and Kharma Ceramique 2.0s. Power cords on the amp and pre-amp were MIT Z-Cords, while the absolutely incredible JPS Digital power cords connected the transport and dacs. These cords plugged into an Audio Power 116 power wedge. Cones and feet ranged all over the place, although the Golden Cones and squares dominated the setup. And (finally) all this equipment sat on the furniture quality SoundRack Reference stand. Whew!

A final comment, this looks like a lot of equipment, and it is. It also raises the question, with so much equipment how can I adequately describe the sound of any single piece? First, I own a significant amount of that gear and have spent a lot of time with each piece, years in many cases. Second, being a computer geek for a living means I spend a lot of time at home, and that means I spend a lot of time listening. Third, I never change more than one piece at a time. And fourth, there is some truth to the idea that I, or anyone, cannot describe the sound of a single component. I think that system synergy is the most overlooked segment of the high-end. No piece stands alone, and thus it is *always* evaluated and judged in a system context (I know, I *should* have included this listing earlier). Synergy matters. And, just as synergy can build an overachieving system, the "Dodger Effect" can also take a system composed of components

other hand, Keith Jarrett's incredible right hand runs on "The Fire Within" from his *At the Bluenote* set were reproduced with such clarity and precision that each slight volume difference was noticeable *and* meaningful.

What can I say about the performance of the SC-IIIs that won't sound like ad hype? Well, the binding posts are recessed in a cup on the back of the speakers making cable changes difficult. And in fact, for especially thick cables, bi-wiring may be impossible. They don't come with integrated spikes, so the bottom platform "floats" on thick carpeting which gives an unstable feel to the speaker should you bump up against it. They're tall enough that dusting the top can be a chore, but then again they're tall enough that no will notice if you don't dust. I guess that about covers it.

### The Right Side

If truth is both fact and meaning, and considering how factual the SC-IIIs are, it follows that they must also open an equally compelling musical window. They do. If speed was the first thing I noticed about the SC-IIIs, the second was beauty.

If you've been following along at home you know of my stalker-like devotion to Joni Mitchell. With the recent HDCD re-issue of the meat of her catalog (*For the Roses* through *Shadows and Light*) I've had all the excuse I need to spend night after night listening to her. Even though the re-mastering helped, I've never felt the depth of her music as well as I have while listening with the SC-IIIs. *The Hissing of Summer Lawns*, even though I've listened to it 500 times, more than once moved me to tears. And for the first time I realized just how good *For the Roses* is.

Other albums, such as Cornershop's latest, *When I was Born for the Seventh Time*, were also emotionally accessible. By the way, I love this album. Wise, sly, funky and subversive, it is one of the top three albums of the year.

But perhaps the best emotional barometer of the SC-III was how it handled Rostropovich's version of Bach's Cello Suites. Rostropovich, in the liner notes, describes a "key-colour" for each of the six suites. For example, G major is light while C minor is "an intensely dark colour." He then describes his emotional reaction to each suite based its key-colour. Suite No. 1 is lightness, 2 is sorrow and intensity, and so on. Using the SC-IIIs to open the window on the recording allowed me to feel each piece exactly as the cellist described them. This was not a reaction to factual/detail cues. No, this was a pure emotional reaction.

Emotionally, these are the most direct and natural speakers I've heard. I found myself moved by Miles' dark passion, Trane's ecstatic vision, Beethoven's deep humanity, Springsteen's dignity and Kate Bush's child-like wonder and sexuality. By my definition these speakers speak the truth, the whole truth and nothing but the truth.

### Say "Bye-Bye"

The SC-III, by serving both sides of truth fully and effectively, has become the tool with which I investigate other components in my reference system. At the same time, it is an instrument for musical pleasure. That it can do both jobs equally well, and with unsurpassed skill, is the ultimate measure of its ability to speak musical truth. Besides these metaphorical attributes, its flat impedance, high efficiency and focused radiation pattern make for a speaker that is relatively easy to drive and place. In other words, it will sound good in your room and (if the other components are capable) in your system Still, what amazes me most about the SC-III is the value it delivers. For 4 big ones you get everything, except the bottom octave, of the contender for worlds best speaker, the 25 grand SC-VIs. This is like Porsche

with great individual skill and make it perform below expectations. That stands as the ultimate reason why so many components see duty during a review. The CUR (Component Under Review) that mixes easily is also easy to recommend. There are also CURs that seem difficult at first, but, given the right setting, blossom. I feel it my duty to explore a component and find out if belongs to either of those two groups, or if it belongs to another group altogether. You know (get ready to duck), where the CUR really is a dog. Fortunately, the Dunlavy SC-IIIs passed each test. They spoke with a coherent voice regardless of partnering equipment while also revealing subtle changes in the system. And that may be the ultimate compliment.

offering a special turbo model that performs exactly the same as the 75 grand model, except that it stops accelerating at 75 mph (the real world limit) and costs as much as a basic Ford Escort! But unlike the mythical Porsche, the Dunlavy SC-III is *real*. Test drive them at your current speakers peril.

...*Todd Warnke*

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**Dunlavy SC-III Loudspeakers**

**Price: \$3995 USD Light or Black Oak finish, \$4495 USD Cherry or Rosewood finish**

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