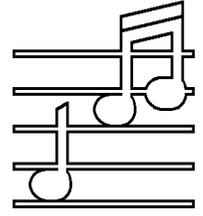


# AUDIO BASICS



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## New Low Priced High Performance Speakers from B&W

Normally we wouldn't start the month reviewing a specific product, but these two new speakers from B&W deserve your front page attention. We are talking about the new DM600 at \$350/pair list price (the smallest in the photo, at the bottom right) and the new DM610 at \$500/pair list (the middle sized speaker). The DM620, which has been in the line for a year, is shown in the background as a size comparison. As our readers know, we are very high on the B&W 600 series speakers. The DM640 with our revised crossovers are what we call the world's best \$4000 a pair loudspeakers for \$1500 a pair. The DM630 at several hundred dollars less is excellent too, with just a little less deep bass impact. The DM620 at \$800/pair list are probably the lowest priced really fine floor standing speakers around. But up till now that is where the 600 series line stopped. Other lower priced B&Ws were available, but not with their super premium aluminum dome tweeter or special polypropylene cone woofer. Previous small models didn't offer B&W's non-resonant synthetic molded front panel either, which provides a definite reduction in stray resonances and reflections.

Now B&W has brought their high end technology to lower priced models and the DM600 and DM610 fill ecological niches that are certain to please you.



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p u b l i s h e r .

Our first reactions to these two new models were “wow” and “wow again” with no agonizing required.

Both speakers are significantly more transparent and have usefully better resolving power than what has come before at this price. Box coloration is absolutely nil. There are no vowel sound overtones (that Eee or Aah or Ooh or Uoo sound along with the music indicating that the speaker is putting out more information than what came in and that there are serious resonance problems - usually inevitable with lower priced speakers). Both speakers have deeper clean bass response (with no boom or mud) than you would expect for their size or price because low distortion bass was the goal. Most designers seem to keep forgetting (or have never learned) that underdamped bass is not bass at all and that no matter what the specification sheet says, if it is muddy it doesn't sound like deep bass – it sounds like mud (or a big car radio). B&W usually remembers the right way to design for *musical* bass, and with the DM600 and DM610 they have done just that.

The DM600 is tiny (13.8" high x 8" wide x 9.6" deep) and weighs about 10 pounds. Its a 2-way system with 6.5" plastic woofer and B&W's incredible and proven 25mm metal dome tweeter. It is a sealed box design. The cabinet is a very attractive vinyl black ash with charcoal trim and grill. It is a very articulate and open speaker – probably the highest definition ever at this price.

We were amused by some of the British press reviews of the DM600. Although all were impressed, some (who should have known better) thought under some conditions the DM600 was too revealing. All they were doing was reviewing their own inadequate electronics. What do they want, a fogged up window on the work of music? If you have a speaker that doesn't tell you when the recording techniques or playback

electronics are not up to snuff, then that speaker cannot tell you everything about the music either. If they want a messenger that doesn't ever bear bad news, then they are not going to get all the messages. With Audio by Van Alstine electronics, you are going to love the DM600 because in this price range you will hear more of the music than ever before.

What are the limitations of the DM600? Of course its bass energy is less than with the bigger B&Ws (but what is there is so clean) and its efficiency is three dB less than typical of B&W (87 dB) so you really need a clean 50 watts per channel to drive a pair (Delta 120 on up). The efficiency drop is because of the small box. It is necessary to design the gain of the tweeter down to the gain of the woofer in this size box to get a flat frequency response. The other limitation is that it will faithfully tell you that your audio system is terrible if it is. This is not the speaker to use as an extension from your TV set or with a mid-fi surround sound system. But for a high resolution system in a small room or with reasonable portability you probably cannot do better without spending much, much more. Now if B&W would only bring back the Acoustitune!

Of course the DM610 is a good answer to those limitations. Think of it as a more efficient version of the DM600 with a significantly more powerful and extended bottom end but giving up none of the spaciousness, definition, and low coloration of the smaller speaker. It is really a fine \$2000/pair loudspeaker system for \$500/pair. By this I mean that the sound of the DM610, hidden behind a fancy furniture grade cabinet or a set of door sized planar screens, dressed in exotic woods and machine work, and described with arrogant urgency in a multi-page 4-color brochure, would bring \$2000 or more in the audio salon. Actually I suspect most artsy-craftsy

speaker designers would kill to get this sound from their giant bug-zappers. You can get it for just \$500/pair suggested list price.

The DM610 is 19.3" high x 9.3" wide x 11.9" deep and weighs 17 pounds. It uses the same 25mm metal dome tweeter but has a bigger 8" polypropylene woofer and a lot more cabinet volume. Efficiency is up to 89 dB and a clean 25 watts per channel will drive it just fine. (A Super 70i and a pair of DM610s puts you in vacuum tube heaven). The same attractive black finish is used as with the DM600. I've been listening to a pair of DM610s all afternoon as I write this and they keep drawing me more and more into the music. I am impressed! They are easily worth the additional cost if you have the space and budget for them (remember that the DM610 demands a bit less from your amplifier).

*Hi-Fi World* recently reviewed the DM610 in England and rated it best of those tested. *What Hi-Fi* gave the DM600 a similar top of class rating. I think the DM600 and DM610 speakers are better than these ratings. Both magazines thought you needed to carefully match the speakers to the electronics (does this mean that matching dull and slow speakers with bright and harsh electronics yields good sound too?). You always need to match your components (good with good with good) – no great secret. The DM600 and DM610 simply make that starting point less expensive.

Both have matching stands for just \$50 a pair (and you really should use them – bookshelves are terrible places to put bookshelf speakers). We have the 600s and 610s in stock now. Buy from us now and we will throw in the stands at no extra charge.

Finally, you need to know that the V201 small bookshelf speaker remains in the line. It is very nice and its price has now been reduced to \$199/pair list and it is more than ever worth the money. It makes a fine remote, video, or kids' system speaker. I have one pair of opened demo B&W V201s in new condition – the first \$150 gets them. I need the room to demo the DM600s.

### **New Lights for the FM-5 Tuner**

An *Audio Basics* subscriber has provided me with a good solution for the unavailability of bayonet style panel lights for the Dyna FM-5 and AF-6 tuners (both stock and with our circuits).

Ted LeMire has informed me that useful substitute parts are available right at your local Radio Shack store, provided you know what to look for.

Actually you have to replace the lamps and the lamp holders too because the available 12V lamps won't fit in the original holders. The new ones are the same size as a 3AG fuse – so the replacement holder is simply a single panel mount 3AG size fuse holder – an eloquent solution.

What you need are two Archer (Radio Shack) #270-739 fuse holders and two Archer #272-1137 pilot lamps (12V 250mA).

Drop the faceplate, undo the dial cord (make notes as to how it is wound or you will never remember how to put it back together again) and swing the faceplate down so you can access the lamp holders. Replace both with the new Radio Shack parts, wiring them in the same as the originals. Snap in the new lamps and your FM-5/AF-6 should be illuminated again. A bit of fingernail polish or tape on the lamp can cut down or re-direct its output if the new lights are too bright. If only all solutions to obsolete parts were this easy. Thanks, Ted.

### **Hot Flash! Hughes Price Reduction!**

Hughes has just reduced the retail price of the AK-100 SRS processor by \$100 and of course then so have we. An A.V.A. rebuilt unit upgraded with a bundle of new fast quad op-amps so that it plays both space and music fantastically well is now \$495.00 instead of \$595.00. Remember you need only one power amp and two stereo speakers. It works!

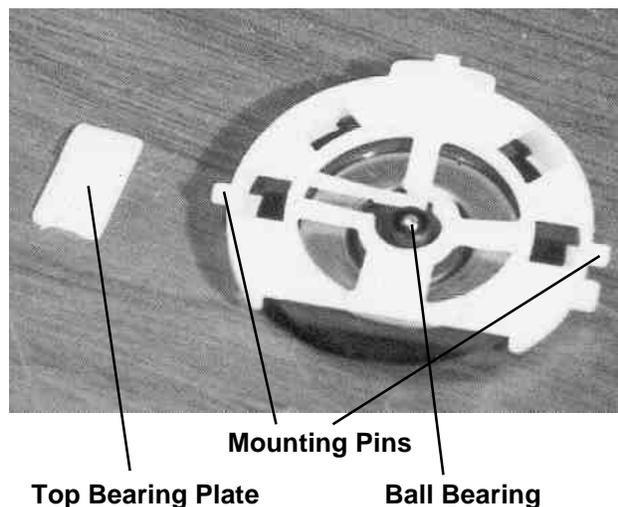
## An Easy Cure for CDB610 Mistracking

We have used the Magnavox - Philips model CDB610 CD Player (not exclusively) as the basis for our upgraded circuits sets for over two years. The model has many virtues. It has a solid and stable chassis, a useful display, remote control, and of course it has the improved CM4 transport and the tried and true Philips 16-bit chip set with 4 times oversampling, digital filters, and dual D to A converters - all at a reasonable price and with a long unchanged production run. Philips got it right and built a whole bunch of them.

But because we have used this model for so long and have re-worked so many of them, we have discovered one little weak point – *a minor mechanic glitch that may make you think you need expensive repairs when you really don't.* Even the Philips field engineers don't seem to know about this one and its easy cure (too bad - it would save them money). We seem to be the only ones who have spotted the potential difficulty, its symptoms, and its easy (and likely do-it-yourself) fix. Even though we know about it and can take care of our clients easily, this problem can infest a stock CD player too. Thus telling you about the cure herein may save you the cost of an unnecessary transport replacement or trip to the repair shop. The symptom is mis-tracking. It is likely to be worse at the beginning of the CD and there is a good chance that after track 2 or 3 the problem will vanish. The problem is much more likely to occur if you habitually leave CDs in the player for an extended time or if you use a mat or plate on the CD to increase its mass or thickness.

The problem is an easy and inexpensive to fix “dimpled” top bearing plate.

### Hub Clamp (Top View)



The photo above shows the culprit – a piece of white nylon plastic the size of your little fingernail.

In the CD player the compact disc is held in place during play. It rests on a hub attached to the motor and is held down by a hinged top clamp. The clamp has a weighted circular hub at its apex. The clamp spring presses this hub down against the CD and a ball bearing at the top center of the top hub rests against the Top Bearing Plate to reduce friction and ensure smooth operation. The CD then is actively clamped by the action of the transport suspension springs from the bottom and the hub clamp spring from the top. The entire transport, CD and all, floats in the chassis, well isolated from external vibrations and damped from self generated ones. That is why it works so well (no extra cost gadgets necessary).

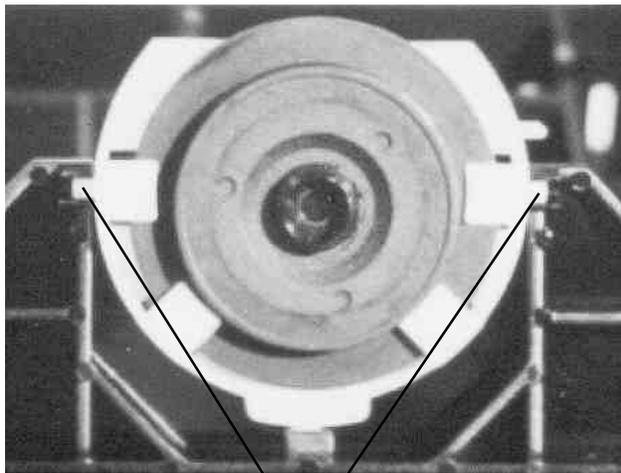
The Top Bearing Plate has a smooth flat surface, so that the hub assembly can self-center on out-of-round CDs to minimize radial vibration and maximize trackability, even with out of spec and warped CDs.

The problem occurs if the Top Bearing Plate becomes “dimpled.” A dimple can start if a CD is left in the transport for a long time,

causing the ball bearing to be pressed into the same spot on the plate. It might also occur if the same CD is played time after time after time.

If a dimple starts, then the hub will no longer self-center on the CD. Instead, the hub will be forced into the dimple (making it worse with time) and the hub will force the CD off center to fit where the dimple is. This will cause a radial shake in the playing CD and possible mistracking if the servo-system cannot keep up. Because the CD rotates fastest on the early tracks (nearest the center of the CD) the vibration is worse then and mistracking is more likely to occur.

The cure is really simple – inspect the top bearing plate and replace it if it is dimpled. It takes about two minutes and costs about \$5.00. All you need is one NAP 483546697034 top bearing plate for the CDB610 CD Player.



Hub Clamp Snap-In Mounting Pins

Work on your machine only if it has the symptoms of this problem and only with the AC power and connections to the system unplugged. To access the top bearing plate you will need only a #10 Torx screwdriver (available at Sears) to remove the two cover screws. No other tools are required.

The second photo is a CD's eye view of the hub – looking up at it. This identifies the two pins that hold the hub assembly in the clamp. The pins snap in and out of their holders.

**CAUTION! THE BALL BEARING IS LOOSE IN THE ASSEMBLY. DON'T LOSE IT!**

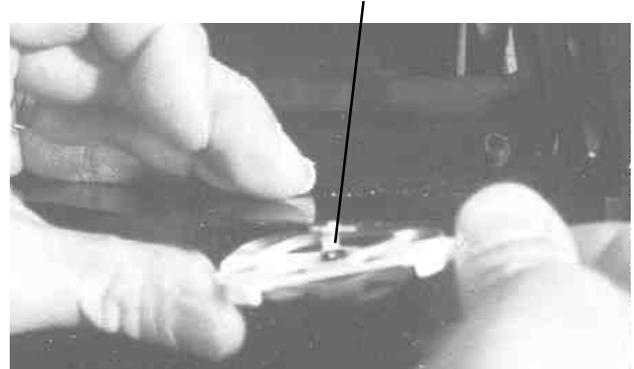


Photo three shows how to remove the hub without “spilling the bearing.” You lift the spring loaded clamp only enough to gently snap out the hub. Tipping it too far will spill out the bearing and you get to search for it – we don't have spares.

Anyway, remove the top hub and inspect the little white plate at its apex for a dimple. If it has one that is your problem. Replace the top bearing plate with a new one.

If you have one of our machines under warranty we will do it for you – or send you a new plate free if you need one (call us for advice). If your machine is from elsewhere or is out of warranty we can supply a new plate for \$5.00 (shipping included). Again, call us to make sure this is the proper cure. The plate is unique to the 610 model – it is not a fix for other machines.

There is only a 1 in a 100 chance your CDB610 chassis has this problem (most have run just fine for many hours now). But if you do have a tracking problem this sure beats the cost of a new transport – which doesn't fix the problem as the old top bearing plate isn't changed. Aren't you glad we told you about this low cost fix?

### Used Equipment & Summer Specials

**Two (and only two) integrated control amplifiers are available at special low prices.** We regret to inform you that we have completely depleted the stock of new Dyna SCA-50 chassis. However we do have two Dyna SCA-80 control amp chassis left.

One has been completely refinished as new. The top, main chassis, and back panel has been stripped and professionally refinished black. We can put this unit together with all new internal parts and circuits and turn out a complete lower powered Omega II Control Amplifier for the price of a Delta Control Amplifier - \$695 for the complete preamp - amp combination - and we will include gold ground plane RCA jacks and 5-way binding post output jacks at no extra cost. You will get our very best solid state amplifier circuits and our Omega II preamp circuits - complete with tone controls - for little more than the price of a preamp alone. The only thing original will be the gold Dyna SCA-80 faceplate but it is in good condition and includes like new gold knobs. Match this with a set of 600 series B&W loudspeakers and you will have a true state of the art quality low priced audio system. Sorry, no system discounts possible - we are offering this control amp at an exceptionally low price. Of course it has our new two year parts and labor warranty. Add \$15 for shipping in the continental USA. We can wire this unit for 240V operation at no extra charge.

We can do it one more time – we have that second SCA-80 chassis available but it isn't refinished. **How about a complete Delta Control Amplifier for \$495.00** using this chassis as is! Add \$75 if you want gold jacks and 5-way binding posts. You will get a quiet, clean and easy to use amp-preamp combination for the price of our Omega II preamp alone – it is like getting the power amplifier for free! Order soon, this value will vanish very quickly. It comes complete with our 2 year parts and labor warranty. Add \$15 for shipping in the continental USA. We can wire this unit for 240V operation at no extra charge.

**We have one lower priced Fet-Valve preamp available.** It has new never used circuits installed in a well used Dyna Pat-5 chassis. We built it up as a wiring guide early in the production run. Now everyone here knows how to build Fet-Valve preamplifiers perfectly so the wiring sample isn't needed for that purpose any more. It has new gold

jacks and our AVA silver faceplate and knobs and a very nice black cover. The main chassis bottom is dulled and grey but that is the part you don't look at. It is yours for \$895 (3/4 of new) with a new 2 year parts and labor warranty. If you want a black AVA faceplate and knob set add \$75.00. Shipping is \$10.00 in the continental USA. Add \$50 for an international transformer if you need it wired for 240V.

**We have several good Dyna St-120 chassis available and that means a special low summer price on Omega II 150 amplifiers while this supply lasts.** The normal price is \$645. Right now we can supply you with a complete unit for \$545 – as long as you don't mind the original Dyna chassis finish. We have a couple of refinished chassis too. Add \$50 if you want one of these. Shipping is \$15 in the continental USA and these units can be wired for 240V at no extra charge.

**Looking for an exquisite small amplifier?** We have one nice original Dyna St-80 chassis available and that will hold a 25 watt per channel version of the Omega II amplifier circuits. Get our best 300 volt per microsecond active feedback amplifier performance for just \$445. It is dead silent, as rugged as an anvil, and stunningly musical. Just the thing for small electrostatics, tweeters, Grado headphones, or full range B&W 600 series speakers. We only have one and it can be wired for 240V operation at no extra charge. Get it now! Add \$15 for shipping in the continental USA.

**Finally we have a good used complete Dyna Pat-5 preamp available.** So, we can offer you a complete AVA Omega II Preamp for only \$75 more than the price of the rebuild alone (\$370) including a new gold plated jack set. Obviously if you want a black AVA faceplate and knob set too you will be better off ordering a complete new unit (\$495.00) but if saving money is more important then styling details this unit will give you all new AVA Omega II circuits and save you \$125.00. It can be wired for 240V at no extra charge and carries a 2 year parts and labor warranty on our circuits.

Our 30 day satisfaction guarantee applies to all these units subject to the normal 15 % restocking fee. These are all one-time special values so don't wait too long before ordering. Thanks for your interest.

*Frank and Darlene Van Alstine*