

# An Analog Stereo Revival Part Two

By Paul DiComo

In the [first installment](#) of the story of my analog reawaking I described how I rediscovered the joys of listening to vinyl records on a 2-channel audio system. In this installment we'll look at the hardware you'll need to start enjoying records in your home. But don't worry, I won't urge you to spend thousands on an analog rig (unless you really want to); a great sounding phono system can be assembled for as low as \$100.

The first thing you're going to need is a turntable. In my case I hadn't tossed out my old turntable; I had a twenty year old Rega Planar 3 hibernating in the attic. I'm willing to bet that a fair number of you have a turntable gathering dust somewhere in your house. Other than drive belts, there's not much on a turntable that will deteriorate with age, so unless you've got money burning a hole in your wallet there's no need to run out and buy a new turntable just yet; use what you already own or pick up something used. If you find in time that you've gotten sucked in to the analog wonderland you can always upgrade; but if you don't fall in love, you haven't lost much.



*Paul's Rega P3 was rescued from the attic*

## Buying Used

If you're looking for a used unit, besides EBay and classified ads, estate sales, yard sales and record conventions are good potential sources of cheap turntables. Record "conventions" are gatherings of used record dealers (more on that in the third installment of this series next month) and it was at one of these that I lucked into a used AR manual turntable for \$20. I really didn't need another turntable but I just couldn't resist the bargain. A thorough cleaning, new belt (\$10) and phono cartridge (\$49) later and I had a perfectly serviceable turntable that I now use for playing poor condition LPs and 45s. In its day the AR had a well earned reputation for being an audiophile bargain and it still is.



*The venerable AR XA turntable*

## Old Turntable Maintenance

If your turntable is belt drive, don't guess, just replace the belt. Google search "turntable belts" to find on-line sources for belts, or if you have a more esoteric brand such as a Rega, VPI or Linn, contact the manufacturer or importer. If the turntable is idler wheel rim-driven at very least clean the inner rim of the platter, the idler wheel and the motor capstan. If after doing that the turntable has a hard time maintaining correct speed you will probably need a new idler wheel.

If your turntable is direct drive there are no drive system parts that need to be serviced or replaced. Regardless of the drive type if the

turntable is more than a few years old you should lubricate the main platter bearing. Almost all brands of turntable have fan sites and forums chock full of maintenance advice. Look'em up or contact the manufacturer for specific bearing lubrication and maintenance instructions.

Old turntables are often dirty. Plastic parts should be cleaned with mild detergent solutions. Never use ammonia or solvent cleaners on plastic or wood parts. Wood bases should be first cleaned with Murphy's Oil Soap or other wood specific cleaner and then oiled with furniture oil. Plastic dustcovers that are scratched and hazy can be cleaned with a mild detergent and then treated with Maguire's Automotive Plastic Polish to get out the surface scratches and haze.

For those of you who don't have an old turntable sitting around and are too busy to track down a good used table, there is always the option of buying new. Both PRO-JECT and Rega offer simple but high quality under-\$400 turntables that come with a great sounding Ortofon moving magnet cartridge. Either would be a fine choice for someone who wants to dip a toe into the analog world without making a big financial commitment or deal with the cartridge choice chore described below.



*PRO-JECT's \$400 Debut III comes in a variety of snazzy colors*

### Phono Cartridge Choice

The next thing you're going to need is a phono cartridge. Unless you are certain that your old one is in great condition, I wouldn't take the risk of using a phono cartridge & stylus that you don't know the

history of and/or is more than a few years old. I say "risk" because a worn stylus will destroy a record with one play. There are rubber suspension parts in cartridges that may deteriorate with time and a cartridge with an out of spec suspension will sound bad and could also ruin your records. Don't cheap out on this step; buy a new cartridge or stylus.

Most of the phono cartridges on the planet are of the Moving Magnet variety and with every MM cartridge I'm familiar with the stylus is user replaceable. Your local audio dealer may stock replacement styli but the odds are you'll have to look online. Examine your cartridge carefully to find the model number. In some cases you'll have to remove the cartridge from the head-



*Replaceable Styli*

shell (after first removing the head-shell from the tonearm) to find the model name/number printed on

the top. Once you have the model check with online analog gear retailers like [Music Direct](#) or [The Needle Doctor](#). Unless you have something very obscure, you should be able to find a replacement stylus.



*Typical removable head-shell*

Moving Coil cartridges do not have replaceable styli, but many MC manufacturers offer stylus re-tipping for much less than the cost of a new cartridge. Consult your local high-end audio retailer or on-line resources to see if your MC cartridge can be renewed.

There is an upside to chucking your old cartridge for a new one rather than replacing the stylus: it is an opportunity to upgrade. If your old cartridge was a budget model you really should consider moving on up. Phono cartridges have as profound an impact on the sound of an analog system as the loudspeakers.

Picking a cartridge isn't trivial; phono cartridges sound as different from one another as speakers do. Unfortunately one seldom has an opportunity to listen to a variety of cartridges through before buying so guidance from knowledgeable sources will be your best guide. The best USA magazines for analog advice are *Stereophile* and *The Absolute Sound*.

It is important to match the cartridge with the turntable's tonearm. A high compliance cartridge requires a low effective mass tonearm whereas a low compliance cartridge works best with a high effective mass tonearm. Without taking a crash course in the physics of cartridges and tonearms your best bet is to rely on a retailer to guide your choice. Choose a retailer who sells turntables on a daily basis and who appears knowledgeable about cartridge/tonearm matching. Proper cartridge set-up is essential to getting low record wear and the best sound; a good dealer will be happy to do that for you. Sadly not all towns have analog-savvy retailers; in that case there are on-line retailers who specialize in analog hardware such as MusicDirect.com. Call to get live advice.



If you want to get started in analog inexpensively, the AudioTechnica AT95E is a good sounding “moving magnet” cartridge that sells for \$49. “Moving Magnet” and “Moving Coil” are the two main types of phono pickups. Most audiophiles agree that moving coils sound better but they are usually more expensive and require a transformer or special type of phono preamp (see the next section). There is a subset of moving coil cartridges which are “high output” and can be used with standard moving magnet phono preamps. Not surprisingly, high output MCs are immensely popular.

### **Phono Preamp**

The signal that comes out of a phono cartridge is very small—too small for an amplifier to “see” and amplify. A phono signal also needs to be equalized to sound right. A phono preamp handles both jobs, it gives the

tiny phono signal a boost that the amp can use and applies an Equalization curve. Back in the pre-CD olden days all amplifiers and receivers had built-in phono preamplifiers. If you have an older amp or receiver, take a look at the inputs to see if there is one marked “phono.” If there is you are in luck. All built-in phono preamps work with a moving magnet type cartridge and some can even handle a moving



*Sumiko's Blackbird is a great sounding high output MC cartridge*

coil cartridge. If there is a switch near the phono inputs marked MM/MC, then you are doubly lucky and can choose either a moving magnet or moving coil cartridge.



*Bellari's tube preamp is a great performer for the money*

If you're not so lucky and don't have a built-in phono preamp, you'll have to add an outboard phono preamp to your amp or receiver. Moving magnet-only preamps can be had for under \$100, such as the Bellari VP-29. Preamps that can handle either MM or MC cartridges are usually expensive but Music Hall offers the Phono Pack for around \$120. Spend a little more and you can get a sweet sounding tube phono preamp like the Bellari VP-129 (\$250) that I use in my system or the PRO-JECT Tube Box II (\$499). Like most areas of audio there is almost no limit to what you can spend on phono preamps, but if you're starting from scratch, budget preamps from the likes of Bellari,

PRO-JECT, Music Hall, ClearAudio and Rega are plenty good enough to bring out the joys of vinyl and get you hooked.

One last variation on the phono preamp theme is the addition of USB outputs to standard audio outputs. USB allows you to connect the phono preamp directly to your PC so you can transfer your vinyl collection to MP3 or iTunes. You may have records that were never released on CD that you'd like to have on your iPod and USB preamps along with audio capture and editing software like [Audacity](#) freeware enable you to make a digital copy. Both Bellari and PRO-JECT offer USB output phono stages at reasonable prices.

### **Placing Your Turntable**

If you're over a certain age you may remember the problem of records skipping when heavy footed people walked near the turntable. Or you may remember "feedback" a nasty howling noise that happened when you turned up your system too loudly. It is easy to eliminate those sorts of problems if you take a little care. If you're lucky, your listening room has a concrete slab floor in which case simply setting the turntable on a sturdy piece of furniture or audio rack will do the trick. If your room's floor rests on joists it is bound to have some degree of spring, making footfall-generated skipping more likely. Try to place the turntable in an area that has the least amount of springiness. You can experiment by placing a glass of water on the floor at various potential locations and observing how much the water ripples as you walk around the room. Once you've found the best spot, place the turntable on a piece of heavy and structurally sound furniture. There are several manufacturers of audio racks that use various techniques such as high mass and/or viscous shelf damping to minimize skipping and feedback.

If that doesn't do the trick you can add mass and/or viscous isolators to further isolate the turntable. In my case I have the turntable on a slab of marble supported by Vibrapod Cones (\$8 ea.) all on a heavy



steel audio equipment rack with thick MDF shelves. (See photo above) My system has zero skipping and feedback problems plus I'm rewarded with deep, authoritative and musical bass.

But the easiest and very effective place for a turntable is on a wall shelf. Target (the speaker stand company not the discount retailer) makes a \$200 metal two-shelf system that mounts directly to wall studs, effectively isolating the turntable from the floor. Of course your local hardware superstore will have all the parts you need to make your own wall shelf for \$20 or less.

When selecting racks, furniture and shelves for your turntable, just remember: heavy good, light bad; strong good, wobbly bad. No matter what you put the turntable on, use a bubble level and shims or adjustable spikes/feet to get the turntable as level as possible.

### **Is It Worth It?**

If you're thinking "this vinyl thing sound like a pain in the butt," I can't really argue with you. It can be time and money consuming to assemble a good record playing system. It does take time to clean and care for records. Yes, you have to get off your butt every 20 minutes or so to turn over the record. If music is just a backdrop to your life maybe vinyl isn't for you. But for me it has rekindled my love of music and turned music listening into an active pursuit. It gives me great pleasure to find records, bring old ones back to listenable condition and go through the rituals of preparing a record for play. And most of all I am rewarded by sound quality that goes far beyond what I've ever been able to get from CDs in the areas of front to back depth, detail retrieval, imaging and just plain naturalness. If music is one of your passions in life, I urge you to give records a spin (apologies for the horrible pun).

### **Next Issue**

In [Part 3](#) we'll look at where to find used and new records and how to care for them for a lifetime of listening pleasure.

*Paul DiComo is Definitive's VP of Marketing. His wife has threatened to hide his credit cards if he doesn't moderate his record buying habit.*