

Moving Beyond Silver Discs

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Source: Playback



Micromega's WM-10 AirStream WiFi Music Streamer--available in silver or basic black

Playback recently received and tested the Micromega WM-10 WiFi Music Streamer (\$1595), an unassuming black box that seems to be exactly what a lot of people are looking for (even if they don't know it yet). The WM-10 was launched at CES 2010 and offers the ability to play high quality audio streams remotely using the Wi-Fi (802.11n) wireless system.

OVERVIEW

Consider this music streamer if: you want to store your music collection on your computer but play it back on your main audio system in another room, and if you value a smooth, relaxed sound.

Look further if: you want a music client, but value maximum resolution and vividness (and can pay for it)

Ratings:

- **Audio Quality:** 8.5
- **Features:** 9
- **User Interface:** 8.5
- **Value:** 8

FEATURES

What Does It Do?

Some people find the parts and pieces of a computer audio system a bit confusing. So, before we get into the WM-10 specifically, let's review some of the general concepts behind products of this kind.

Products like the WM-10 assume that the customer has (or is willing to buy) a *music server*. A music server is a device for:

- Downloading music files via an Internet connection.
- Ripping music files from CDs.
- Storing music files (on a hard disk or other mass storage).
- Organizing the library of music files that you've stored.
- Streaming the music files (creating a bitstream usable by a D/A converter).

Since a music server can be configured using an existing PC or Mac, almost everyone is in the situation of having a music server. Audiophiles may wish to have a dedicated music

server, of course, to avoid competition for resources between computing activities and music activities.



A music server could be hard wired to a D/A converter and from there be plugged into amplifier and speakers or headphones. As an alternative, one could purchase a *music client* (also known as a networked music player or music streamer). Here we use the term music client because it fits the server-client metaphor borrowed from computing (where the server is the base for massive central data storage and organization and the clients are remote devices for viewing and lightly manipulating data). The music client receives music data streams from the music server over some kind of network connection, then performs D/A conversion, and finally outputs analog audio signals to an existing audio system.

So, in summary, the WM-10 is a music client. It is designed to work with a music server (that is, with a Mac or PC with iTunes and Wi-Fi). The WM-10 receives Wi-Fi music streams from the server and does D/A conversion. In turn, you plug the WM-10 into your preamp or receiver via a stereo analog connection. You control the songs that are being streamed from the server using an iPod Touch or iPhone (or via the server itself).

The WM-10 Design

With the above in mind, the concept of the WM-10 is pretty simple. The first idea is that audiophiles will probably want to place their PCs and audio systems in different rooms. This isn't some whole house audio lifestyle B.S., but rather an arrangement that is very desirable because PC components tend to be noisy so that the easiest way to nip noise problems in the bud is to relegate PCs and related items to another room. It can also be a practical matter. Audio equipment is often placed in a more relaxed living space in the home than computer gear, which is typically assigned to a functional workspace. The WM-10 is therefore conceived as a remote client.

The second idea behind the WM-10 is that remote clients should ideally be wireless. Many homes are not fully wired with Ethernet connections in all the right places, so wireless connections are simply an easier way to go. One could conceivably use AC powerline networking connections instead, but some designers are concerned about how easily and well this works.

The third notion behind the WM-10 is that audiophiles will want a high quality music client if they want one at all. While the WM-10 starts life as a humble Apple Airport Express, Micromega has redesigned it, making modifications in three critical areas. Micromega has installed a higher quality power supply. They've also redesigned the clock circuitry for better D/A performance. Finally, instead of the Apple's standard Toslink digital output, Micromega has used an S/PDIF output for easier and better interfacing to external DACs (should you not want to use the internal DAC of the WM-10).



While on the subject of quality, I would add that Micromega chose the Airport Express because it uses an excellent chipset, which is capable of decoding 24bit/176k and 24bit/192k high-resolution files. As a practical matter, this is more a future-proofing capability than something you can use right now, since the Airtunes protocol embedded in Apple's WiFi implementation doesn't yet allow these high resolution data rates.

To install the WM-10, you simply plug it into your preamp/amp/receiver via RCA stereo outputs on the back of the WM-10. Next, you set your music server's wireless interface to connect to "Airstream". The WM-10 then is directly connected to your music server; it doesn't go through your existing network (although you can reconfigure the unit into an existing wireless network so that you'll have simultaneous access to the Internet and music streaming). Using an Apple iPod Touch or iPhone, you download a free application called "Remote" from the App Store. The iPod then sees (via your network) your iTunes library and you can select albums, artists and songs just like you do with the locally stored songs on the

iPod. The iPod relays your commands via WiFi to the server and the server obeys. Volume can be controlled via the iPod or via your preamp (the WM-10 can be connected directly to an amp; I did not test this feature due to limitations of my amplifiers).

How Does It Work?

I was impressed with the ease of installation. Computer set-up often involves the strategic use of profanity and the search of forums for secret tips on how to make two components designed to a “standard” actually talk to each other. But in this case, setup took about 15 minutes and everything worked the first time. Part of this is because Micromega’s instructions are quite detailed.

I only encountered two problems. The first problem involves sleep mode. When you start a listening session, it simply takes a while for everything to wake up and connect with the WiFi systems (direct from the WM-10 for music streams and via your WiFi network for remote commands). Related to this, you have to remember to set the iPod Touch to “Auto-Lock: Never” so that it won’t go into sleep mode. If it does go into sleep mode, it takes a while to find the WiFi signal when it wakes up, which makes it a very slow remote. Neither of these are WM-10 issues; they are a byproduct of using ancillary systems that have sleep mode.

The second problem is somewhat obscure, but some of you will want to know about it. My server has SonicStudio Amarra player software installed and integrated with iTunes. For whatever reason, the volume control on iTunes and the volume control on Amarra fight with each other when you change songs using the iPod Touch. There may be a way around this, but I haven’t found it (yet).

SONIC CHARACTER

The WM-10 raises more than the usual number of sonic issues, so this section will be longer than normal. Specific issues include:

“Can a WiFi music client like the Micromega WM-10 sound good?”

“Is the Micromega WM-10 worth the extra price over a much less expensive such as the Apple Airport Express on which it is based?”

For those of you not inclined to want to know all the ins and outs of this, a summary may be helpful at this point.

First, the WM-10 sounds very good, and based on my listening tests I would say that, with standard CD files (44.1k/16 bit), WiFi clients like the WM-10 could be appropriate for use in many high-end systems. I would add that, based on my tests, those who are interested in WiFi clients might productively start out with an Airport Express to see if it gets their musical juices flowing. If you like what the Airport Express does, you might then consider stepping up to the WM-10.

I found that the Airport Express was surprisingly effective when compared with a high end DAC or disc player system. That said, I would add that the Micromega WM-10 offers certain specific sonic benefits over the Airport Express, though only you can determine whether those benefits are worth the \$1500 price differential you'd have to bear. Music lovers on tight budgets will, for obvious reasons, want to stick with the Airport Express (or some other low cost music client). But conversely, audiophiles who realize that the difference between good sound and great sound is the sum of many small, hard-won sonic improvements will likely appreciate the specific advantages of the WM-10 offers, and happily pay the extra money. Note, too, that the WM-10, unlike the Airport Express, is sold through a network of high-end audio dealers who can provide before-the-sale product demonstrations and after-the-sale service.



WM-10, rear panel

Now, let's go on to the details. We can characterize DACs as differing primarily in four areas: resolution, smoothness, tonal balance and dynamics.

I place resolution first on the list because it is a factor that one can't easily compensate for elsewhere in one's system. Once lost, resolution can't really be recovered. The good news is that the WM-10 delivers quite high resolution. Complex passages are well resolved. Not only that, difficult treble passages are delivered without excessively splash or nastiness.

Resolution also impacts the sense of depth that a DAC delivers. The WM-10 does well on this score, serving up a good sense of depth. With the WM-10, you simply feel as if

musicians are positioned on a deeper soundstage that unfolds far behind the plane of the speakers. I find this latter feature helps create a superior sense of virtual reality because the sound is less locked onto the speakers.

The WM-10 also offers a smooth and relaxed sound. Too many DACs in my experience have some additive distortions in the treble range that impart an edgy quality that distracts from the sense of the music being real. The WM-10 isn't like that at all, instead giving the listener the sense that the player gets out of the way without imposing aggressive-sounding distortions or colorations.

In terms of tonal balance, I would characterize the WM-10 sound as being on the slightly warm side, not because it emphasizes bass, but because the mid-treble range comes across in a very slightly reticent fashion. If you have a system that leans toward an edgy, cold, or overly analytical sound, the WM-10 might balance things out nicely.

When we come to dynamics, the WM-10 has a very controlled presentation. That's good, though I did find that some music felt a little more reserved than it would if heard live.

Mostly, if you heard the WM-10 without comparison, I think you'd say it sounds really good. I don't think you'd immediately comment on its transparency, but you'd probably comment on the smoothness and sense of low distortion it gives. Then you'd get down to enjoying the music. Given the convenience of playing music from a PC or Mac, with your complete library at your fingertips, the WM-10's sound will likely be more than adequate to make you forget about silver discs in trays.

MUSICAL EXAMPLES

On "Goodbye Pork Pie Hat" from Stanley Clarke's *Live at the Greek* [Slamm Dunk/Epic], the WM-10 offers excellent instrumental separation. Najee's tenor sax can blend in with the guitar and keyboards on some systems, but the WM-10 resolves them nicely.

On that same track, the introductory section has some cymbal work that is delivered with exemplary clarity and smoothness, though a little more depth can be had from this track.

On the Alison Krauss disc *Forget About It* [Rounder], the title track has a bass and kick drum combo that is very well defined on the WM-10. However, I wouldn't swear that this is due to something special in the WM-10's low frequencies; it may simply be that the warm treble presentation makes it easier to focus on the bass quality.

On Eva Cassidy's *Live At Blues Alley* [Blix Street Records], Eva snaps her fingers on Irving Berlin's *Cheek to Cheek*, and the WM-10 dulls the snaps ever so slightly. The sound of the venue on this track is present, but it is not as three-dimensional as you'd hear live.

COMPETITIVE COMPARISONS

As context for the comparisons I'm going to talk about, one needs to know that DACs tend to perform differently than analog gear (which is what most audiophiles are used to talking about). It takes quite a bit of listening to find those few discs that separate DACs from each other in musically meaningful ways. That's because most DACs can decode many bitstreams almost perfectly. There are however, challenging musical passages that then separate one DAC from another. By contrast, analog gear, especially transducers like speakers, will tend to impose their own sonic flavors on most music, at least to some degree. Another way of saying this is that the differences between DACs tend to seem small because DACs often sound quite similar until you hit that occasional "ah ha" track. We will not be talking here about "night and day" differences, then, at least the way most people mean that term. That doesn't, however, mean these differences aren't musically meaningful for some.

With that in mind, let's consider the WM-10 and the Apple Airport Express upon which it is based. The two sound quite similar, as you should now expect with most DAC comparisons.

The Airport Express differs in a few areas. First, it doesn't have the same resolution as the WM-10. You notice this because the Airport Express blurs instruments together in complex passages, whereas the WM-10 resolves the instrumental lines more clearly.

Secondly, the WM-10 sounds smoother than the Airport Express. The Airport Express seems to put a little more edge on high frequencies. The Airport Express, perhaps as a result of its treatment of instrumental edges, sounds a bit brighter than the WM-10. It can be hard to say which DAC is right on this score, and—all other things being equal—you may find that which unit you prefer turns out to be a matter of system matching more than anything.

The Airport Express does sound a bit livelier than the WM-10, though quite possibly because of the edge "enhancement" mentioned above. This liveliness might make it more appealing for some and give it the kiss of death in other systems because it isn't as smooth or resolving.

Overall, I'd have to say the WM-10 is more accurate than the Airport Express. At the same time, it is worth acknowledging Apple's achievement, given the price of the Airport Express.

This basic high quality is no doubt part of why Micromega used the Airport Express as the basis of the WM-10 in the first place.

Whether the WM-10 is worth the extra money is really up to each consumer. Certainly, the WM-10 costs \$1500 more, which is real money. At the same time, many audiophiles have plunked down that kind of money to achieve similar or lesser gains in resolution and smoothness. In that context (also allowing for the dealer service you'll get with the WM-10 that an Apple Store can't even contemplate) the extra money will be a worthwhile investment for some.

To add additional context, I compared the WM-10 sound to my reference EMM Labs CDSA player, as usual evaluating differences in the context of the absolute sound (that is, the sound of live, unamplified music). This might seem unfair, given that the EMM Labs player cost \$10,000 in its (very recent) day. My goal, I can assure you, was not to set up an impossible task for the WM-10. Rather, I wanted to know, as readers will, how close the WM-10 comes to DACs that are roughly state-of-the-art.

For the most part, the WM-10 and the EMM Labs CDSA sound very similar. Again, I would say that is to be expected.

That said, when we get to the actual presentation of micro-dynamic resolution we find the place where I think the WM-10 can be bettered, just as the WM-10 betters the Airport Express. With the EMM Labs DAC you really get the sense of the venue on some recordings and you hear the decay of each instrument to a lower level. The WM-10 delivers less of this sense, though you will still be able to hear the acoustic characteristics of the recording venue clearly.

The trick that expensive DACs like the EMM Labs pull off is to deliver heightened resolution while sounding just as smooth and even more dynamically alive than a DAC like the WM-10. From listening to many DACs, I can vouch for the fact that this is not easy.

Now, returning to the question of value, I'd say the CDSA makes the WM-10 look like a bargain. Let's remember that the EMM Labs player's sonic differences with the Micromega are small. Then, let's remember that the CDSA costs \$8500 more than the WM-10. Those who view the \$1500 difference between the Apple and the Micromega as absurd might think that EMM Labs customers live in the lunasphere, but I'd offer a different view. Subtle differences can be very meaningful, if you care about music. I'd certainly be willing to pay for the kind of differences we're discussing (and I put my money where my mouth is when I bought my reference player).

BOTTOM LINE:

Audiophiles who particularly value resolution, smoothness and ease of use, will like the WM-10. It performs admirably and allows a user interface that can change the way you listen to music. Experienced listeners would note that the Micromega doesn't quite dig into the music as far as some of the very best DACs can, but for many this will be moot point (since it would involve comparing the WM-10 with products so expensive that they might be priced beyond of reach for the majority of listeners).

SPECIFICATIONS

Micromega WM-10 Wi-Fi Music Streamer

Sample Rate: 16 bits/44.1 kHz (based on Airtunes limitations)

Linearity at -90 db: < 0.5 db

Dynamic Range: > 96 db

Output Level: 2V RMS

File Formats Supported: AAC, AIFF, Apple Lossless, MP3, WMA, WAV

Dimensions: 16.9 in. wide, 2.75 in. tall, 9.8 in deep

Weight: 8.8 lb.

Warranty: 2 years