Sometimes something really new can be found in updated legacy devices.

That's the case with the latest incarnation of the Stax SR-L700 MKII Earspeakers, a reference design which is one of the most impressive devices for listening to music that I've ever heard.

Highlights

SR-L700 MKII Earspeaker and the SRM-D10 Portable Driver Unit for Earspeakers

- Best headphones I've heard and these are not the top of the line products from Stax.
- Comfortable, but they do require an external driver unit. The sheep leather ear pads are easy on the ear and head.
- Exchangeable cable structure
- Extremely wide frequency response (7-41,000 Hz!)
- Open Air design will appeal to many who don't want to be cut off from room sounds.
- Expensive, but the advantages are immediately audible.
- I reviewed the SRM-D10 Portable Driver Unit which does not require AC current, but it is heavy and something extra to carry around.

This latest ‘earspeaker’ from Stax, who feels that the term ‘headphones’ doesn’t do justice to their products, impressed me and every audiophile that auditioned my review unit. They are comfortable, highly revealing, and really require the best quality program material. Playing some garden variety CDs will immediately make it clear that the recordings are not the best. Even little details in the recording room like the HVAC or the movement of music stands are quite apparent. This is both a blessing because the Stax SR-L700 MKII Earspeakers are so revealing and a curse because you will hear ‘everything.’ Stax headphones will spoil you for anything else. While expensive, they deliver, and people who enjoy listening to headphones in a serious way will want to audition them.

Introduction

First off, what is an electrostatic driver and how is it different from other headphones?

I’ll give you a simplified explanation of the differences.

Most headphones use dynamic drivers. They are basically a scaled down version of the speakers that might be powering your desktop speakers. A small coil carrying the signal moves the driver and produces music.

Planar drivers are now getting very popular among discriminating listeners. They are similar to dynamic drivers, but instead of focusing the magnetic field on a small section of the driver, a planar driver is wired to work on the whole panel of the driver, using more points of contact and more magnets.

Electrostatics have a long history, and Stax was a pioneer in the design. Koss also offered, and still offers, some electrostatic designs. Simply put, electrostatic drivers are usually a thin mylar that is sandwiched between two conductive plates. Electrostatic headphones require an amplifier or energizer box to set the drivers in motion, so we’re reviewing the Stax Headphones

with the required accessory amplifier. Stax has a variety of amplifiers at different price points, but I liked the idea of a portable driver unit so that's what I'm evaluating here.

The SR-L700 MKII Earspeaker has the classic Stax electrostatic sound, and by that I mean smooth and extended high frequencies, fast transient response and deep bass. The company has been in business since 1938 starting with the design and sale of condenser microphones and then moving on to electrostatic tweeters and then finally to headphones – aka Earspeakers in the late 1960s. Stax has also produced Electrostatic speakers and even an amplifier.

I owned a pair of the Stax electrostatic Lambda Earspeakers many years ago when I was in college. Sadly, the driver box went out after a couple of years, and I was a poor student and couldn't afford to fix them. I sold my Stax as-is to a more well-off student, and he enjoyed them for many years after that. I envied him.

When I heard that the descendant of that very Earspeaker was alive and well in a much more evolved product, the SR-L700 MKII, I just had to hear it.

While Stax makes many driver units that will power their headphones, I was most interested in a portable unit that did not need to be plugged into house power. The SRM-D10 is a rechargeable unit. You can listen anywhere without need of AC power. It seemed like the way to go for my lifestyle.

Design

Externally, the Stax headphones on review look very similar in design to the Lambda headphones I owned more than 30 years ago. However, there are many changes and all are for the good. The cable, which was formerly permanently attached, is now unplug-able and easily replaced. Headphone cables get strain during their daily use, and this is a most welcome change.

The headphone structural elements are now made of aluminum. In the MK2 models, changing the case holder design from conventional linear style into moderate curve form

SR-L700 MKII EARSPEAKER AND THE SRM-D10 PORTABLE DRIVER UNIT FOR EARSPEAKERS SPECIFICATIONS

SR-L700 MKII Earspeakers

FIXED ELECTRODE:
MLER (Multi-Layer Electrodes)

ATTACHED CABLE CONDUCTOR:
6N (99.9999%) OFC + silver plated annealed copper wire

EAR PAD:
genuine sheep leather (skin touching portion), artificial leather (surrounding portion)

WEIGHT:
371g, 508g (including cable)

TYPE:
push-pull electrostatic sound element, open-air type enclosure

SOUND ELEMENT SHAPE:
oval

FREQUENCY RESPONSE:
7 – 41,000Hz

ELECTROSTATIC CAPACITANCE:
110pF

IMPEDANCE:
145k Ω

SOUND PRESSURE SENSITIVITY:
101dB

BIAS VOLTAGE:
580V DC

CABLE:
parallel 6-strand, low-capacity wide cable

CABLE LENGTH:
2.5m full length

MSRP:
$1569.00

SRM-D10 Portable Driver Unit

OUTPUT:
5-pin PRO bias Stax Earspeaker

DIGITAL INPUT:
MicroUSB

INPUT:
3.5mm analog

SUPPLY VOLTAGE:
DC 14V (charger included)

FREQUENCY RESPONSE:
20Hz – 40KHz (+0dB,-3dB)

RATED INPUT LEVEL:
230mV (100V output)

HARMONIC DISTORTION:
<0.025% / 1KHz-10KHz

INPUT IMPEDANCE:
10 KΩ (analog input)

MAXIMUM OUTPUT VOLTAGE:
200Vr.m.s / 100Hz-10KHz

POWER CONSUMPTION:
6.4W (USB input) 5W (analog input)

RECOMMENDED OPERATING TEMPERATURE:
0-35°C, <90% RH (No condensation)

DIMENSIONS:
75(W) X 32(H) X 141(D) mm

NET WEIGHT:
450g

MSRP:
$899.00

WEBSITE:
https://staxheadphones.com

COMPANY DIRECTORY:
STAX

SECRETS TAGS:
stax, earspeakers, electrostatic, earspeaker review, review 2020

produces the effect that ear pads fit more naturally on both-sides-of-the-head part. Moreover, the curve form gives high rigidity and prevents the headphones from generating unnecessary distortion or twist at the time of wearing, resulting in the great improvement of fit and feeling. In an open-air type earspeaker, which these are, the degree rise of adhesion at the time of wearing greatly contributes to the improvement of low-frequency reproduction.

The headband (ARC) assembly of the SR-L700 MKII is equipped with 10-click slider mechanism for head pad height adjustment adopted from the older SR-009 Earspeakers. Once adjusted, the

slider always maintains its optimal position to make readjustment unnecessary. It makes for a very comfortable fit.

High performance pure copper HiFC™, developed by Hitachi, is used in the core wires on the Earspeaker. HiFC™ has various stated advantages, including low capacitance 6N high purity 99.99999% copper wires. The entire cable is then arranged in a flat, wide format configuration to lower the capacitance between each wire and then enclosed in a durable plastic covering.

The ear pad design is carefully hand crafted with genuine lamb leather for good comfort, even during long listening sessions.

The SRM-D10 Portable Driver Unit

This portable, rechargeable unit is something new for Stax, and I think it makes life easier if you are a traveler or multi-room user. The SRM-D10 can also function as a very high quality DAC that can play high resolution files up to DSD128. It features a micro-USB input for using this device as a DAC and a 35mm analog input to get audio from your source device. The unit is

powered by Lithium Ion batteries, and it can be fully charged in about 3 hours. The amplifier comes with its own AC charger.

Setup

Getting started with the headphones is simple enough. First, charge the SRM-D10 Amplifier. A small LED glows red when the unit is charging, and turns off when charging is complete. Unattached to its charging cable, the LED glows green while it is in use. There is a power/volume control which feels high in quality.

On the back of the amplifier is the DC in port, the USB DAC port, and the analog input. A switch lets you select between use as a DAC and as an analog input to drive the Earspeakers.

In Use

This was the part I was looking forward to. Would these super expensive Earspeakers blow the headbands off some really high quality planars and dynamic headphones I had on hand? Like much in life, the answers are a bit complicated.

In general, the high frequencies are superior on the Stax Earspeakers. It's more than high frequencies though. Transient response is lightning fast. Quick percussion hits, plucked strings, acoustic guitars are all very clear and involving. On my planar headsets those transients aren't as well defined, although when not comparing them to the Stax, they sound just great.

Bass is another story. Electrostatic headphones like the Stax aren't historically thought of as really deep bass reproducers. I find the SR-L700 MKII Earspeakers have greatly improved in low end from the Lambda's I had years ago. Bass is tighter. It's very clean, but still doesn't reach quite as deeply as some of my planars. If I listen for a few minutes to the Stax phones the low end sounds just great. I let a few audiophiles audition them, and all liked the bass, and were over the moon with the high frequencies and transients.

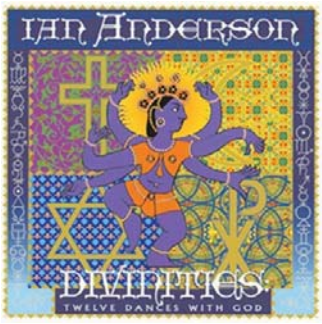
We all agreed that while the bass on the Stax was not quite as deep as some of the headphones I compared them to, they seemed cleaner and more effortless. Without strain, I think, are the best words to describe it.

Here are some of the things I tested the Stax Earspeakers with:

Espana: Chesky Music – What a great musical collection, with high resolution sound. The best work on this 48 kHz/24 bit music is the Concert for 2 Guitars and Orchestra. The Stax Earspeakers put me in the recording venue, with perfectly placed acoustic guitars and the orchestra. The sinking highs of a cymbal were just perfect. The headphones could show off their transient response with the guitars. There was deep bass as well.

O Magnum Mysterium: Westminster Choir – Another winner from Chesky records and a 192 kHz/24 bit recording of a large chorus and orchestra. I especially liked track 2, *Festival Te Deum*. There's a low organ and a massed chorus.

Romantic Russia: London Symphony – This is a classic Decca recording from 1966. I listened to a FLAC rip from the original CD. It's instructive to listen to music that is a level below a modern high resolution rip. I thought the sound through the Stax Earspeakers was just fine, but the strings don't have quite the sheen they have in a more modern recording. Still, it was quite listenable, with ample high frequencies, good bass, and solid placement of the individual instruments across the soundstage. Of course that's also a matter of how skilled the producers of the recording were, but in this case they did well and the Stax Earspeakers preserved the mix.



Divinities: Ian Anderson: Another oldie but goodie. I had this in MP3 format, but it was ripped at a high bit rate (44.1 kHz/16 bit 192 kbps). Highs were lopped off at the top, bass was pretty good. Listening on these highly resolving Stax Earspeakers, it was clear his recording was not of audiophile quality. Listenable? Yes. Breathtaking? No.

Jurassic Park: 20th Anniversary Edition – A high resolution recording (192 kHz/24 bit) render of the original soundtrack with lovely strings and stable soundstage. Bass is there when the score calls for it. An ethereal chorus adds to the loveliness Stax enables.

Daft Punk: Random Access Memories – Nothing like a little techno. Not much analog about this recording, but the soundstage is precise. The resolution Stax provides makes it easy to follow all the melodic and percussion lines. The track '*Instant Crush*' has deep bass which the Stax Earspeakers deliver without distorting the vocals which are nicely centered in the mix.

Conclusions

I have to spend a little more time than usual discussing the Value of the Stax SR-L700MKII Earspeakers. At a total of $2468 for the headphones and the drive unit, the package is almost 3 times the price of some of the excellent headphones I now own, are they 3 times as good? It depends on what you value. In high quality audio equipment, small increases in quality and accuracy can cost a lot of money. It's the nature of the cost of engineering products beyond the usual mass market equipment. It's clear these Stax Earspeakers are built to the highest standard. The quality of materials, with robust connectors, switches and the volume control didn't come out of some bargain parts bin.

If you seek a quality of audio some steps above the usual, then this Stax Earspeaker should be auditioned with first rate music files. They are breathtaking. Everyone who heard them at my home wanted a pair. I felt the same way. They deliver fine audio in a way other high quality headphones I've owned and heard simply can't. But like all ultra-quality audio equipment, the price is higher than many will want to pay. Some will say diminishing returns sets in at this price. Others will want the spectacular presentation of music the Stax SR-L700MKII Earspeakers offer.

LIKES	WOULD LIKE TO SEE
• Build quality is excellent, both for the Earspeakers and the Driver Unit • The sound of music, especially live acoustic music was superb and unequalled in my experience. • I really liked the portability of the system with the rechargeable Driver Unit. It might be a bit awkward for travel, but it's perfect for listening around the house.	• A travel case for the headphones, and the Driver Unit. That would make travel less daunting. • The cord connecting the headphones to the Driver Unit is quite long. Wonderful for moving about, but a shorter cord for travel would be desirable.

The Stax SR-L700MKII Earspeakers are an absolute revelation to listen to. On any kind of music from rock to opera they are a unique listening experience. The better the program material, the more you will enjoy them. You will hear everything on your recordings; not always a good thing if you are hearing HVAC equipment or rattling music stands, but that's the level of the detail presented.

The Stax Earspeakers were very comfortable on my head, encouraging long listening sessions. The rechargeable energizer/amplifier made it easy to listen in my office, in the living room, or in the bedroom without having to hunt for an AC outlet and worrying about tripping over the cord.

The SR-L700 MKII Earspeakers are the best sound I've heard from any headphone. But that doesn't mean the headphones I own are suddenly of no value. My HiFiMAN and Sennheisers

sound as great as they always have. It's a bit like having a wonderful dinner at a terrific restaurant. It simply doesn't negate all the other great meals you've had. But the Stax Earspeakers are 'ear opening' and standard setting, and I had to keep telling myself that cost-wise these are about the middle priced offering in the Stax line, where their top Earspeaker and Energizer can run about $10,000.