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## EarsOn HEADPHONES ON REVIEW



# Fostex TR-Series Dynamic Headphones

*Dynamic drivers—as open as you want them to be* | Reviews by Mike Metlay

*In our March 2016 issue, we reviewed the RP-Series Mk3 headphones from Fostex. The RP (Regular Phase) headphones, with their foil-etched film planar drivers, are a design type that's been a Fostex staple for years, and this series was interesting because it provided users with their choice of three enclosures: open-back, closed-back, and semi-open. With the new TR-Series, Fostex is offering the same choice, now in a comfortable, lightweight design with a more conventional dynamic driver.*

*At the end of this review, we'll discuss the different sounds of the three models—the open TR-70, the closed TR-80, and the semi-open TR-90. But first, we'll go over the many things these headphones have in common.*

## TR on the outside

Each TR-Series headphone comes with two sets of interchangeable earpads, two interchangeable 3-meter (10') cables—one straight and one coiled—that share a gold-plated screw-on 1/4" TRS adapter, and a drawstring carrying bag. The cables have a TRS minijack at one end, and a locking TRRS minijack that attaches to the left earcup. The manual features a diagram that shows how the positive and negative signals from the two drivers are brought out to the TRRS port and combined to TRS with a shared ground in the cable.

Aside from the distinctive earcup caps for the three enclosure styles, the three TR-Series phones look and feel identical. All of the models weigh around 300 grams (about 10.5 ounces) and feature the familiar Fostex padded headband and sliding adjustment bars to fit the user's head.

On each of the three designs, the extra-thick contoured earpads are a joy to wear for long periods and greatly ease potential fatigue. While one can swap the thick earpads for the thinner ones without tools, it takes a minute or two of fiddling to do properly. Your own comfort needs may be different from mine (some people really hate thick earpads) and there's no dramatic difference in audio quality

after changing earpads, so you should feel free to choose and use the pads that work best with your head and ears.

Also the same from model to model is the extremely light weight of the overall design. There's basically no listening fatigue with any of these models; they hold to the head in comfort and it's easy to forget you have them on. This isn't all that unusual for open designs, but in a closed or semi-open headphone it's a real revelation. About the only issue you might run into is having them stay in place if you have a smaller-than-average head.

## TR on the inside

The TR-Series phones all have 40 mm drivers that offer 100 mW maximum input power handling and a 5 Hz—35 kHz frequency response. Sensitivity varies by model and by impedance; these three models are actually six, because each one is available in either a 250Ω or 80Ω impedance. We tested the 250Ω models.

The 250Ω impedance requires a slightly higher-power headphone amp than other headphones (they're intended to travel between professional and hi-fi headphone amps), but the various D/A converters and interfaces in my home and office studios had no trouble driving these headphones to comfortably (and uncomfortably!) loud levels. If I ever heard any issues with level, it would be on laptops and iOS devices with less powerful direct minijack outputs, but these were minor differences at best. If you're really concerned about such applications, Fostex makes all three of these headphones available in an 80Ω impedance to accommodate those devices. I didn't test the two impedances head to head, so I can't comment on whether there's a difference in audio quality between the two, but I would suspect such differences to be negligible in nearly every use case.

## TR on the ears

All three of the TR headphones demonstrate remarkable clarity and presence, with an ever so slightly mid-forward audio signature that makes it easy to work with lead vocals, guitar, and other center-stage sound sources. Highs are smooth and defined without being overly shrill or crisp; one doesn't hear

the amazingly extended treble that's a highlight of some really expensive headphones, but for tracking and mixing work, I didn't feel I was missing out on anything other than "sizzle for its own sake". The sound is, for want of a better word, practical. You're not hearing anything flashy for the sake of showing off; you're hearing your music in all its detail and weight, as you should be in the studio.

So what are the differences between the three models? Primarily in the shape and extension of the low end, which is clear and spacious on the open TR-70, round and lush without being overblown on the closed TR-80. This is where the "neither fish nor fowl" nature of the semi-open TR-90 really shines. I found myself gravitating to its lovely combination of fullness and air in the lows and low mids; if I put it on after listening to the TR-70, I said, "Wow, the bass is much fuller... like a closed phone," and if I put it on after listening to the TR-80, I said, "Wow, the bass breathes so much more... like an open phone!"

That openness in sound on the TR-90 corresponds to an equal lack of isolation. Like the TR-70, it's quite audible at a distance when worn, and can't be used in front of an open mic in a tracking situation. I get the impression that because all three share essentially the same enclosure, with subtle internal alterations to porting that are driven by audio considerations, tracking-room isolation was a secondary consideration in these designs. That said, the closed TR-80 does a good job of isolation unless the talent insists on blasting levels.

So do I have a favorite among the three? Interestingly, I think I lean most toward the TR-90, simply because the vast majority of my early studio work as a young engineer was done on a famous high-impedance semi-open headphone, the classic AKG K240M. I still have my pair and use them regularly, and Fostex is one of the relatively few pro audio brands still actively developing and promoting semi-open phones. Many younger engineers might not even remember when there was more to choose

from than open and closed designs, and they might wonder why you'd bother. The TR-90 is its own explanation! When done properly, a semi-open phone isn't a "worst of both worlds" compromise between open and closed; its bass response is a "best of both worlds" blend of open air and closed power. That's exactly what the TR-90 provides, although I wouldn't be surprised if many users lean toward the air of the TR-70 or the punch of the TR-80.

Whichever model you choose, though, you'll find elements in common: fantastically clear and detailed sound, a lovely light and comfortable wearing experience, and enough options in earcups and cabling to handle nearly every need. Fostex has demonstrated that it can rock the world of dynamic headphones just as convincingly as it has with its RP models. ➤

**PRICES: \$199.99 each**

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