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For many loudspeaker designers, creating a single-driver, crossover-less, full-range design represents something of a Holy Grail. To do this with a driver measuring a mere 2.75 inches to cover the entire audible spectrum requires a certain audacity, but Robert Gaboury (Arteluthe) is seasoned professional in this area. With the Vivace Mini, Robert's goal was to create a speaker that would be the ideal partner for a low-power tube amplifier. The Mini, which clocks in at a highly sensitive 92 dBA at 2.83V and a nominal impedance of 16 ohms, represents the first product of an alliance with Triode Labs' amplifier designer Frank Ng, under the banner of Finale Audio.

SMALL PERHAPS, BUT...

The idea of using such a small driver may surprise at first. It helps to remember though that the smaller the driver, the closer it approaches the theoretical ideal of a point source and its advantages, i.e., better acoustic imaging and fewer phase errors. Another advantage is less inertia, the

Finale Audio Vivace Mini Speakers and F-168 Integrated Amplifier

Adventures in High Sensitivity

small driver being better able to quickly react and store less energy. In musical terms, these advantages translate into an increase in the sharpness of music attacks and increased clarity across the sound spectrum.

COGNITIVE DISSONANCE

Small and stylish, the **Vivace Mini** charm immediately with their looks. They won't, however, fully reveal their musical talents until well positioned and firmly anchored to the floor. I found the biggest challenge in getting to know these speakers came down to cognitive dissonance, because they force the listener to question some well-established beliefs. Firstly, the driver: how is it possible to reproduce the full sound spectrum with such a small cone? Then the lightweight cabinet, which seems at complete odds with the approach of many speakers where weight and heavy damping are the main weapons in taming vibration. For the Vivace Mini, Robert Gaboury uses a cabinet formed from a double layer of thin HDF (0.25 in) with a middle layer of PVC adhesive for damping and stiffness. Bass response is achieved through a hybrid technique combining the benefits of a transmission line and a compression chamber, that Robert Gaboury calls an 'air cannon'. The enclosure is strongly reinforced by the panels of the folded transmission line, thereby minimizing cabinet vibration and retransmission of parasitic vibration. The cabinet is decoupled on three tall spikes that Finale Audio claims provide higher definition, more open treble and clearer bass. That may be so, but the tripod spikes provide very little lateral stability. No reviewer's feet were impaled during this review, but some close calls in knocking the speakers over - and cold sweats - clearly highlighted the need for stabilizing bars under the speakers. The good news is that the commercial versions will have these bars, as shown in the photograph accompanying this text.

The rear of the enclosure is also an exercise in simplicity, with only the transmission line's vent and a pair of gold-plated terminals interrupting the smooth surface. The terminals accept 4 mm plugs, spades or bare wires. Finale specifies a maximum power of 40 watts for the Mini



and a frequency bandwidth of 50 to 20,000 Hz, with no mention of the variation in decibels over this range. In my listening room, I measured a fairly linear response ranging from 50 to 10,000 Hz, the point at which the frequency response drops off gradually.

SETUP AND TRIBULATIONS

The speakers and their partnering amplifier, the Triode Labs F-168, were delivered well run-in. After a bit of experimentation, I installed the speakers 18 inches from the front wall and 12 inches from the side walls, pointed down the length of my listening room (14' x 10' x 7.5' high). As sources, I used CDs on the Naim CDX player with an XPS power supply or 16/44 WAV files on a USB key played back through the Naim DAC, with its updated firmware. As initially set up, the Vivaces showed some of their strengths, including a sound stage that, frankly, surprised me with its width, height (well above the speakers) and stability. However, listening ease was not always within reach. Despite their evident liveliness, the Minis showed an emphasis of certain treble frequencies, with peaks around 1,000 and 2,000 Hz, imparting a shrillness to female voices and a touch of acidity to violins. Also, bass frequencies were out of sync with the rest of the sound spectrum. I worked my way back up the audio chain to see if the problem lay elsewhere. I replaced the Bis Audio Vivat speaker cables by a set of Naim's NACA5, then tried the Tellurium Q Black, but neither improved the treble edginess. I replaced the F-168 amplifier by the Naim SuperNait2, then the Sonneteer Alabaster, then finally the small Ion Obelisk 2, gaining each time a little sweetness and listening ease. But still, something was pulling my attention to the sound and away from the music. I played around with various known interconnects and power cables, but after a few days I resigned myself to the fact that this review was going to be something of a challenge. Dismayed, I called our editor to review what I had done and discuss options. He suggested placing the speakers on wooden boards and very firmly pressing down to drive the spikes into the wood. Two cherry wood planks later and after leaning heavily on the tops of the speaker cabinets, I

resumed listening. Bingo! I was no longer listening to the same speakers: the aggressive peaks were largely mitigated, bass was better articulated and in synch with the rest of the music. The transformation was substantial; I had never heard such a big difference with such a simple tweak. Greatly relieved and with listening ease almost fully restored, I could get back to seriously listening to the speakers hooked up to their natural partner, the Finale Audio F-168.

FINALE AUDIO F-168 INTEGRATED AMPLIFIER

It's official: white is the new black. And the purest white is True-North White, available only on Finale Audio amplifiers. Joking aside, the casework of the open-architecture F-168 picks up nicely on the Vivace's aesthetics and showcases the high-level components that go into this integrated amp. From the oversized EDCOR power transformers, to the quartet of 6BM8/ECL82 tubes, the list of ingredients used by Finale Audio in the F-168 reads like a who's who of audiophile components: Nichicon, Panasonic, Rubycon, Dale, Vishay, Yageo, Murata, Caddock, and more.

The F-168 is a push-pull pentode design operating in class AB and providing 8 watts per channel into 8 ohms. Finale Audio uses a positive and negative feedback system in a circuit called ADFS for Automatic Differential Feedback System, where bias adjustment is automatic. With this topology, Finale claims to have found the solution to minimizing drifts in phase and in sound quality, to provide the most realistic playback. The size of the amp (14 x 9 x 7 in.) makes it very easy to site, ideally at hand, because there is no remote control. If you have inquisitive small children or pets, a protective tube cage is offered as an option. The amp has three inputs on RCA connectors and a single pair of speaker terminals.

I switch on the F-168 to let it warm up, contemplating the incandescent tubes, fascinated by the fact that one can almost see the amplifier in operation, imagining the flow of electrons from the cathode, modulated by the low-level signal applied to the grid and then captured by the anode. Try doing that with transistors! I marvel to think that John Ambrose Fleming's 1904 invention (the Fleming diode), refined by the American inventor Lee de Forest in 1907 (the Audion lamp), is still so revered for its amplification capabilities. I reread the list of components selected by Finale Audio to ensure optimal working conditions for these tubes, impressed once again. Then I remind myself that, as in gastronomy and in wine, the art is in the assembly but the result is in the tasting.

MUSIC, AT LAST

Enchantment

In 'Portrait of A Romantic' on his *Private City* album, John Surman illustrates perfectly the sound world that he loves to explore. Here the **Vivace Minis** erect an acoustic image that easily doubles their height. The virtues of no crossover circuit show themselves as a lack of phase error, which translates into a surprising accuracy and stability of instrument location in the sound stage.

Surman begins this track with a quivering flute, neatly establishing the mystical atmosphere into which glides



the effervescence of an electric piano and then the bass clarinet. The woody tone and harmonics of the instrument are beautifully captured by the Finale ensemble, clearly showing how the instrument is an extension of the artist's mind. But where is he leading us? The clarinet evokes a strange creature that emerges from the depths of a mysterious lake; the flute returns but the image is fleeting, so I play the track again, captivated and curious to understand, or at least to feel once again these elusive emotions.

Calibrating the Emotions

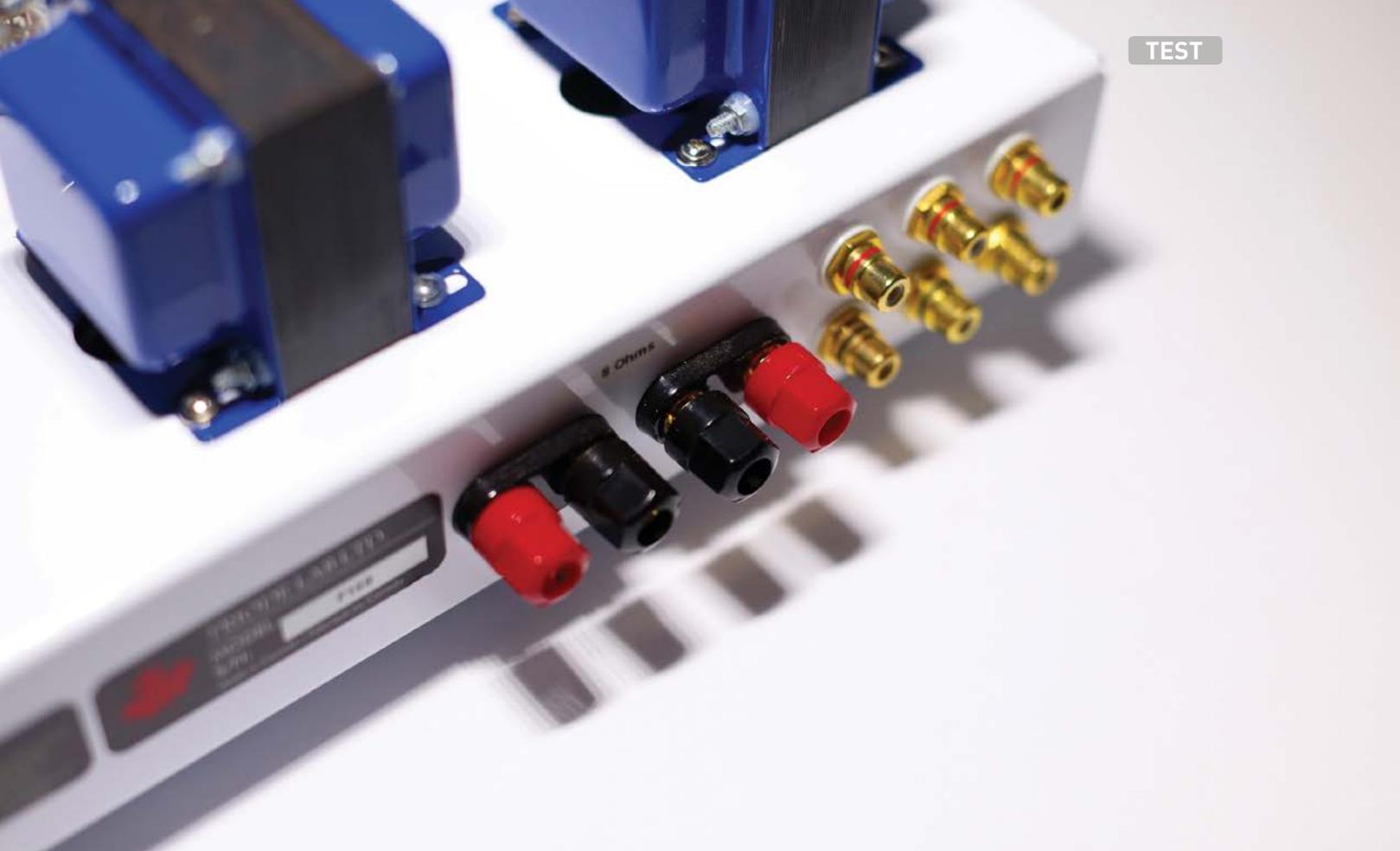
Perhaps unconsciously, I've selected music that aligns with the strengths of these speakers, but the 'Concerto for bassoon and basso continuo two violas in C Major' by Johann Georg Neruda (Sergio Azzolini directing Parnassi musici) is a pure delight, despite the slight emphasis on the violins. At the opening of the first movement 'Spirito' I find myself in the front row near the violins, very present, while a bit insistent in the treble. When the bassoon enters, the perspective changes and I feel that I have moved back a few rows. The bassoon, rich in harmonics, is well presented with just the right degree of roundness. Despite the slight treble insistence, the work fascinates and the three movements of the concerto proceed with great interest. The 'Adagio' unfolds with violins beautifully setting the melancholic atmosphere of this work. At the centre of the movement, after about a minute, the bassoon emerges from a deep silence, gently and tactfully backed by the violins. Three minutes into the movement, the orchestra suddenly changes key and emotion, as if all the musicians had suddenly turned left.

It is a striking shift and perfectly captured by the Finale speakers and amp. The last movement, 'Tempo di minuet,' leaves me with joy and hope.

As to sound staging, the Vivaces really show their mettle, making it easy to locate each musician on stage. From a musicality perspective, that is to say, the ability to follow each musician and share their mental space, the Vivaces score very highly. Appropriately named, the great talent of these speakers is their liveliness, effectively conveying the range of emotions of this work while revealing a great deal of musically significant detail that I had not previously noticed in this recording.

Swiss Precision

On their album *The Touch*, Boris Blank and Dieter Meier, the Swiss duo otherwise known as Yello, deliver intelligent works combining voice and electronic music, with impeccable production and sound quality. Apart from these assets, the precision of these musicians is always a pure joy to experience. Here, the tracks 'The Expert' and 'Out of Dawn' show how the Vivaces precisely transmit Yello's whip-crack timing. There is no hesitation, everything is crisp, agile and lively. Again, the speakers erect a solid sound stage, stable and surprisingly dimensional, easily exceeding their physical location. The bass is remarkably well represented for the size of these speakers, remaining fairly linear down to 50 Hz in my listening room. While the speakers can't deliver the sheer physicality in the bass, what they do provide is sufficiently fleshed out and suggestive to establish the foundation of most music, even electronic.



The key strength though of the Vivaces is their wonderful coherence over the mid-range and treble frequencies, that only a single driver seems able to provide. This coherence can be heard and felt across all instruments. To hear the upper harmonics so well restored provides a welcome integrity to instruments and voices.

So much music resides in the details, and the Vivace delivers fully in this regard. If you really want to know what's on your recordings, excepting bass below 50 Hz, the Vivaces will show you, and not at the expense of the music. But back to Yello, the Vivace Minis deliver a fascinating reading of the last track 'Takla Makan', clearly laying out the full range of instruments, voices and sounds evoking the mysticism of the Middle East. Enchantment indeed!

Jazzing Things Up

In *Duke*, Joe Jackson pays a moving tribute to the creative genius of Duke Ellington. Through the Finale system, the track 'Isfahan' which opens the album unfolds in a captivating way. While jazz purists may not agree with Joe Jackson's interpretation of this composition, the Vivace Minis draw me very effectively into the reverie and mysticism of the work, disappearing into a sound stage that once again, impresses with its dimensions and stability. To my surprise, the sound stage also gains in depth, an aspect that was missing prior to firmly planting the speakers spikes into the sacrificial boards.

Living Dangerously

Can the Vivaces do justice to muscular rock music? The raucous 'Space for the Papa' from Jeff Beck's album *Who*

Else! comes across with a good level of punch and the tension expected during this work. The visceral side of the bass line is discreet once again, but Jeff Beck's guitar is raw, bright and more articulate than I had previously heard. The only downside is a shrillness that makes high-level listening uncomfortable. Turning to Masters of Reality and the album *Deep In The Hole*, the Vivaces render the eponymous track with the necessary swing, clarity and articulation. But here, as with the Jeff Beck album, it becomes difficult to listen through the whole album. Muscular rock music does not play to the strengths of these speakers, and they are merciless on bad recordings or highly compressed music.

In Home-Cinema Mode

I find this listening mode increasingly useful for evaluating speakers, as it informs unequivocally on a speaker's ability to realistically render the human voice, which is what the human brain recognizes best. After many evenings of movies on Netflix, I can comfortably say that the Vivaces portray voices with exceptional clarity; dialogue is easy to follow and well separated from sound effects in movie soundtracks.

VERDICT

Coherence, clarity, articulation and imaging are the **Vivace Minis'** strong suits and the required ingredients for faithfully conveying the emotional content of music. Like many speakers equipped with small drivers, they speak with a certain accent - a peak in the treble - which can be overcome, but

not eliminated, by careful selection of interconnect and speaker cables that do not reinforce this characteristic. To situate them, the Vivace Minis are at the opposite end of the sound spectrum from British speakers such as Harbeth, Rogers or Graham Audio. We all hear differently and the style of the Vivaces may suit you perfectly, may take some adjustment or may not fit at all. If initial listening doesn't hook you right away, try to ignore their slight accent and focus on the musical message, because the Vivaces have a lot to say. If you get what they do, it can be difficult to return to other types of speakers. This is, in my opinion, a small price to pay to gain the coherence and articulation that single driver speakers do so well. Very sensitive to their environment, the Vivace Minis will let you know when a recording is not up to par. As for musical genres, they are more at home with the music of smaller ensembles, such as baroque, folk and some forms of jazz.

The clean design of the speakers and the amplifier, along with their modest dimensions, are assets for those having

to deal with tight living or listening spaces. The duo of the Vivace Minis and the F-168 integrated amp offers an impressive amount of musical information, even at low volume listening. These units stand out from the pack due to their ease of articulation and liveliness, providing a surprisingly realistic representation of musical scale, with a real sense of a musical event taking place before the eyes and the ears.

Finale Audio Vivace Mini speakers

Finish: White or black

\$2,500 pair (CND)

Finale Audio F-168 integrated amplifier

\$1,499, without tubes (CND)

Finale Audio

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