

POWERED MONITOR

Can the Studiomaster PAX12 monitor cure your on stage sound?

Words: Chris Underwood



What is it?

It's the latest powered monitor from sound reinforcement guru Studiomaster. Designed for performers in small venues who want to be able to hear themselves properly, it would be equally at home in a rehearsal studio.

Why should I want one?

If you're a regular on the grassroots circuit but often find yourself dismayed at the quality of stage monitoring laid on at the average small scale venue (sometimes none at all in fact) then this light, portable, 70W powered monitor could be just what you're looking for.

Studiomaster PAX12
SRP: £239.00
01525 217111
enquiries@studiomaster.com
playmusic ▶ 90

Studiomaster has

been around for a long time, nearly 30 years in fact. In that time the company has learned a thing or two about producing quality sound reinforcement products for both the pro-audio and grassroots market.

One of its early innovations was to put the connectors on the front of its power amps – a simple step that made

a lot of roadies' lives easier. Always with its finger on the pulse, Studiomaster scored another first with the much-lauded Entertainment Console back in the mid-nineties when Karaoke was king.

Thankfully, the phenomena of students singing I Will Survive has been eclipsed somewhat by real music of late, meaning the likes of you and I are benefiting from Studiomaster expertise.

The new Studiomaster PAX12 powered monitor is a good example. It's part of a range that also includes the PX12 unpowered monitor and PAX10 and PX10 respectively, and it's aimed squarely at a

new breed of musicians who want to be able to set up a quality sound reinforcement system for themselves without relying on a venue.

At one time or another we've all played in a pub, with no stage, no lighting and a PA system we've just hired from the music shop down the High Street. I used to have a regular slot at a pub near my home providing the landlord did nothing more than push aside a few tables. It was a pretty good deal – I think I may have even been paid. The only problem was that without any monitoring it was really hard to hear what I was playing. If I had had one of these monitors, my performance would have improved dramatically. ▶

"If I'd had one of these my performance would have improved dramatically."

MY BRAIN HURTS! IT MUST BE... THE TECHNICAL BIT!

One of the biggest potential problems with a monitor speaker is feedback. After all, a monitor is effectively a speaker specifically designed to point towards your microphone capsule. Using a good-quality directional microphone will help to minimise the chance of feedback, as will putting some care into how you position the monitor relative to the mic. But there will always be a volume level at which the dreaded howling starts because the mic is now picking up the monitor speaker.

Stu...master has got round the problem with something called a Notch Filter, which kicks in via a small button on the front of the monitor. A small orange LED denotes that it's working. It's a rotary almost identical to the Level and Gain controls above and below it, except that rather than being labelled 0 to 10, at its furthest anti-clockwise rotation it's marked 300Hz and at its furthest clockwise rotation, 6kHz.

It has an infinitely variable sweep between these two frequency points and provides a -12dB notch – or dip in the sound level – at whatever point you set it. The best way to avoid those embarrassing feedback moments in front of an audience is to cause it deliberately during a soundcheck before the punters come in. Simply turn up the wick on the monitor until the howling starts, then use the Notch Filter to dial it back out again.

Now, turn the volume on the monitor back down again. Thanks to the Notch Filter, you've now got a big safety margin that should see you through a feedback-free evening.

If your act isn't especially loud, or you've got really good mics, it may be that you don't need the Notch Filter very often but it's nice to know that it's there when you do. **PM**



“The driving force is a custom designed 12” low frequency driver.”

► Homework

With that in mind, let's take a look at exactly why the PAX12 monitor is such a great asset to anyone playing those kind of gigs. For starters, Stu...master isn't the kind of company to just wade into product development without doing their homework first. The company initially canvassed its customers on what exactly they wanted from a good stage monitor – or as they put it ‘what people didn't like about the gear that was currently available’.

The answers to that question provoked the design of the PAX12. It's a stage monitor with the negative qualities taken out.

As such, it's compact, weighing in at only 14Kg.

There's a single carrying handle on one side. It boasts that ubiquitous trapezoidal

stage monitor shape (clearly that didn't get the customer thumbs-down), although there are also rubber feet on two sides, meaning that you could potentially stand it up on its left-hand side. There's also a hatbox-style recess for pole mounting, hinting that this unit would work equally well as a small vocal PA or as a side-fill monitor for drummers. Perhaps most importantly, it's extremely sturdy, with a tough metal grille and corner-brackets all the way round, suggesting you could do the whole ‘foot on monitor’ manoeuvre without risking any rock and roll damage.

The driving force behind the PAX12 is a custom designed 12 inch low frequency driver, intended to cope with volume levels way beyond those you're likely to need in a pub venue. This should mean you'll be free of worries about distortion – in fact it should deliver exceptional clarity. With a power handling at 8 Ohms of 70W and a maximum SPL (sound pressure level) of 126dB, if you're running this unit anywhere near its maximum power output then you're probably going to deafen everyone on stage.

In addition to the 12 inch driver there's also a high frequency tweeter, so the whole frequency ►





ROADTEST!

I have to confess I didn't get the chance to try out this monitor in a gig but I did manage to put it through its paces in a rehearsal studio, where things were just as noisy as they'd be at a pub gig and the issue of actually being able to hear yourself just as pertinent, if not more so.

First of all, I'm happy to report that the StuDiomaster PAX12 is incredibly easy to set up. How easy? Just add it into the signal path and switch it on. You really don't want to have to worry about stage monitors once you've sound-checked and you're mid-performance, so it's best to try and start with all of the volume and tone rotaries in the twelve o'clock position and then tweak them as necessary.

I soon discovered that the benefit of having EQ controls on the monitor itself is that I could adjust the tone to exactly how I wanted it to sound for me, without having to worry about getting a sound-engineer, or in this case whoever was nearest the mixing desk, to do it for me. By adding a little high

end, cutting back on the bass and lifting the mid-range a little, I was able to get a sound on the vocals that really sat above the sound of the rest of the band. The clarity was exceptional, especially with the Mid range rotary in the three o'clock position, so even at lower volumes it the vocals cut through above everything else.

It may not sound like a big deal, but as a vocalist, this is a very significant achievement. I was recently working with a producer who told me that I'd picked up all kinds of really undesirable habits by always having to yell over the sound of a really loud band. Not only did this mean I had gotten used to singing too loudly but more importantly, I was straining my voice to be heard and therefore running the risk of doing serious damage.

Investing in a monitor like the PAX12 means you'll be able to hear yourself properly and hence control the timbre and tonal characteristics of your voice. That will not only make you an infinitely better singer but also save you from ruining your voice for future gigs. **PM**

spectrum is amply catered for. On the left-hand side of the unit, in the wedge monitor position, there's the power switch and a jack output for an additional 'extension' speaker (8 Ohms minimum). The unpowered version of this monitor, the PX12 would make the perfect extension speaker, which in combination with the PAX should provide you with a substantial 100W of foldback.

Link

All other controls are situated on the front of the cabinet. There are three inputs on the front of the unit, a balanced XLR mic input, a ¼ inch balanced jack input and a second jack input marked 'Link' for adding further monitors to the set-up. Controls are simple, as they should be; you don't want to be worrying about control parameters on your stage monitor, once you've sound-checked. There's a Level rotary and a Gain control, which should prove handy if you're input signal is either particularly high or weak. Alongside these is a small LED marked Power/Peak which illuminates to tell you that you're overdriving the internal amplifier and need to back off a little on your Gain. There's a rotary notch filter (see *The Technical Bit*) between the Level and Gain rotaries. Alongside these are the EQ rotaries, marked Hi, Mid and Lo.

The EQ circuits were designed specifically for this particular monitor and hence boost or cut specific frequencies that StuDiomaster has

calculated as the most relevant for the applications a monitor like this is designed for. The Hi EQ does its thing at 5kHz, while the Lo works similarly at 95Hz. The Mid EQ rotary cuts and boosts at 1.8kHz, a frequency that can aid intelligibility.

The most obvious use for a unit like this is as a stage monitor for bands playing in small venues, especially ones where you have to hire in your own PA. It'll give you the edge over other bands who rely on the precarious art of turning

"The EQ circuits were designed specifically for this monitor."

the front-of-house PA speakers toward the stage in order to hear themselves, and it will make you look a lot more professional too.

That said, this unit would work equally well as a small PA, particularly in series with a second cab, making it ideal for small pub, acoustic performances or even house party gigs. It's good to know that when you invest in a high quality monitor, you can turn it to other applications as well.

Take that into account and it's obvious that with stage monitoring of this quality on the market for grassroots performers, there really is no excuse for not sounding great – up front and on stage. **PM**