

# JBL PRX900 Series

MIKE CROFTS

I've used JBL portable powered and passive speaker systems for a number of years, and I've always been happy with their levels of performance, reliability and value for money. So when I heard that a new PRX range had been released I readily agreed to collect a set of units and give them a try. I was offered the opportunity to visit Harman distributors Sound Technology at their impressive and wallet-tempting demo facility, where the entire PRX range is currently assembled for listening and instant comparison by selecting any combination of any units from the range.

The PRX900 series currently includes 8-, 12- and 15-inch two-way speakers (the PRX908, PRX912 and PRX915, respectively), and 15- and 18-inch subwoofers (the PRX915XLF and PRX918XLF). All models feature significantly beefier power amp packages than previous PRX speakers (2000W peak), JBL's own new drivers, new cabinet designs in polypropylene+talc (full range) or 18mm birch ply (subs), and a whole host of onboard DSP functions — all remotely controllable via Bluetooth LE using the JBL Pro Connect app, or directly from the back panel.

I've owned various JBL PRX, SRX and VRX products; the latest PRX900 range is particularly interesting as it represents a significant upgrade on the previous PRX800 range, and inherits some of the technology developed for use elsewhere within the Harman brands family. The PRX900 range is a completely new design, not just a tweaked-up version of the preceding models

## Active PA Speakers

JBL's newest PRX range combines quality sound, powerful DSP and remote system control.

— in fact, as far as I'm aware, the only components that have made it through from the 800 series are the compression driver, and possibly the pole-mount socket!

### Building Blocks

Every self-powered speaker is essentially an amp and a driver section, but before moving on to the clever way in which these work together, it's worth pointing out that the amp modules in the PRX900 range are much more powerful than before, and even though they are rated at 2000W they are capable of even greater output but limited to run conservatively, in the pursuit of reliability.

The drivers are of course JBL's own products, designed for the job. The HF compression driver is worthy of note, as it is the same JBL 2408H-2 1.5-inch-exit unit used in some of the high-end products such as the VRX range. I always feel more comfortable with larger-exit horns as they generally have higher power ratings and

lower crossover points, and in the PRX900, they are presumably running well within their design parameters. It's also good to know that, as standard JBL models, they are available should a replacement ever be needed, although all the PRX900 boxes come with a seven-year warranty so hopefully that's not going to be an issue!

The cabinets are all-new designs, the full-range models being moulded from a polypropylene and talc mix. They feel reassuringly sturdy and I didn't detect any rattles or creaks when bumping them around, so the internal bracing and stiffening is doing its job. The subwoofer cabs are made from traditional 18mm plywood and have an attractive textured finish; if anything these are a little lighter than they look, whereas the 'top boxes' are slightly the opposite. The neat PRX family look is carried over from previous ranges, with large comfortable carrying handles and a shaped black steel grille with no externally accessible retaining screws that I could see, so there's nothing to work loose.

### The Three Ps

The huge popularity of self-powered speakers reflects on their portability (everything in one box), performance





## JBL PRX900 Series

From £1049

### PROS

- Excellent sound.
- Easy to rig and use.
- Plenty of DSP, with remote control option via app.

### CONS

- None.

### SUMMARY

Powerful, scalable and easy to use, the PRX900 range has everything you could want from a portable PA system.

(amps matched perfectly to drivers) and protection (built-in limiters to avoid terminal damage). As these products have evolved, more features have been incorporated to appeal to a wider market, and the new PRX900 line is what one might call 'fully loaded' in this respect.

JBL products share a family home with some major pro-audio brands, and the PRX900 range benefits from the integration of features from the well-known dbx DriveRack, namely limiting with their trademark soft-knee Overeasy algorithm, automatic 24-filter feedback suppression, and direct dial-in speaker delay up to 100ms in 100-microsecond intervals. The delay feature is really useful and would be great to have in distributed speaker layouts, or simply where your mixer just doesn't have

the facility. Add to all this 12-band parametric EQ on the full-range speakers and you have a pretty substantial control package.

The PRX908, 912 and 915 models have an integral three-input digital mixer with two XLR mic/line channels and a stereo channel with 3.5mm jack input. Each XLR input has a direct out, and the mixer output is also available for sending on to another system or subwoofer, with DSP settings applied. The subwoofer DSP includes cardioid presets, so setting up directional subs doesn't require any special external connections.

### Appiness

The colour screen on the rear panel displays status and options, and a single data wheel allows full control of all DSP functions.

The menus are easy to read and the data wheel is a straightforward turn-and-press operation, with a useful 'back' button just below it. All the functions can also be accessed using the JBL Pro Connect app, which is a free download for Android and iOS phones and tablets. Not only does this provide a larger display of levels, settings, EQ curves and so on (much like the display screen on any full-size digital mixer), but individual speakers can be grouped and monitored within the app: up to 10 speakers can be controlled simultaneously.

You can also see more of what's going on within the app: for example, if you select the Cardioid preset on a subwoofer, the EQ screen pops up and shows what



■ The PRX908, PRX912 and PRX915 each have a built-in mixer section, and can accommodate two mic/line signals plus an aux in on mini-jack.

settings are being applied. It's a neat and well thought-out app that gives access to all user-controlled parameters and offers a degree of speaker control that should cover just about any deployment of the PRX speakers.

In the past I have experienced some very flaky Bluetooth implementations, but all seems to be well sorted with the PRX900s, which use the latest version of Bluetooth Low Energy or BLE. Pairing is quick, easy and stable. Individual speakers are assigned an identification code, and where you have multiple devices connected, you can identify the one you are working with from the app, by making the front and rear LEDs flash on the particular speaker being addressed. Other JBL models can also be controlled using the app, and at present this includes the PRX One, Eon One MkII and Eon700.

### Setting Up

Getting the PRX900 speakers up and running was straightforward — most of the time was spent in removing them from their shipping boxes. A deliberate press (couple of seconds) on the power button lights up the display, and you're in business. There was absolutely no switch-on noise, thump or anything else, and even before connecting an input I noticed that these are very quiet indeed when at idle — with everything turned flat out on one of the PRX908s there was a very faint background noise from the LF driver, but I had to press my ear against the grille to hear it. In normal use I'd use the word 'silent'.

The units should power up in the same state as they were switched off, so I did a factory reset on all of them just to make

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» sure I was starting from a clean sheet; this is executed from the Settings menu and required only a confirmatory press of the data wheel. After a couple of seconds of all three input LEDs flashing, the speakers were as they had left the factory, with only normal defaults set, no presets applied, and the input and master levels at minimum.

Applying a music signal to one of the XLR inputs, I raised the channel volume until I saw a hint of red LED, dialled it back a bit, then slowly raised the master level. You have to apply a fair number of turns of the rotary knobs because there's a very wide range of input control available, and it goes up and down in precise steps, all the while displayed on the screen as a dB figure. The master level setting is also reflected by a horizontal green bar across the bottom of the screen. There is no mic/line sensitivity selector on the PRX900 speakers; instead, the sensitivity auto-resolves as you adjust the input level. It's worth mentioning that the PRX900 series has some serious limiter protection built in, some of which the user can adjust and some of which is baked in to offer component protection should it ever become necessary. The non-user limiter is transparent to the operator and will only ever be activated *in extremis*, and even then it doesn't simply shut everything down and enforce a cooling-off period — my understanding is that it applies gain

reduction in small, virtually unnoticeable steps on the basis of what's needed and nothing more. The limiter you can access will be somewhat familiar to DriveRack users, and the parameters you'd expect are present. In its default state (ie. after a factory reset) the make-up gain is set at zero, but the controls show that 30dB is available, and in testing these speakers to see how far they could be driven it was necessary to apply (some of) this to achieve stupidly loud output levels.

I first set up a pair of PRX912s without subs, and ran them with a known test track. Having had the benefit of a quick demo when I picked them up I had an idea of what to expect, but in my own space I was extremely impressed with the smoothness and clarity, with a good cohesion between top, mid and bottom and no apparent gaps or dips through the frequency range. I switched styles and listened to ultra-clean, uncompressed recordings, big film scores and just about everything I could throw at them, and even at quite high levels the detail and musical balance was preserved. Hearing a crisp timpani entry, in context, in the middle of a thickly scored orchestral piece was very pleasing.

The input signal LEDs turn red to warn that the input is getting hot, but in practice I found I could drive these quite a bit harder before I noticed any hint of stress in the sound. Switching back to a nice punchy jazz/rock track, I introduced the pair of PRX915XLF subs into the equation, and this not only achieved massive low-end output but also let the PRX912s truly off the leash, with an immediate jump in overall output. I replaced the PRX912s with the PRX908s and then reduced the subs to just one; even at this reduced hardware level there was still a very punchy output, and the clean, smooth mid and top — especially noticeable on vocals — was always maintained.

### Real World

After my workshop listening I was able to take the PRX rig out on a live gig to see how it performed and how easy the system was to set up and use. I had a couple of try-out opportunities, and first of all, I used the PRX912/PRX915XLF combination with my own band at an annual event. The sound requirements for this band always seem to turn out more complicated than I think they should be, mainly because it's a fairly big line-up (17 in the band including two singers) and includes a lot of brass, which can present problems in getting the vocals across cleanly, especially in the fairly

lively space we play. The audience area is flat-floor, cabaret-style, and although the ceiling isn't low (as in so many hotel function rooms, for example), there are plenty of hard surfaces and not much in the way of 'soft furnishings' other than the audience members themselves.

I set up one PRX915XLF each side and slightly forward of the band area, about a foot or so in from the side walls, with a PRX912 mounted on a pole above each. As the band were playing from the floor, at the same level as the audience, I made use of the tilt option on the dual pole-mount socket, angling the PRX912 boxes down so that they were pointing directly at the audience. This is a feature sadly lacking on my usual full-range speakers, so a big tick in the box straight away for the PRXs.

Although I had been playing around in the studio with the functionality offered by the JBL Pro Connect app, I was going to be driving the rig from an external mixer so I decided to go 'vanilla' as far as the speakers were concerned, and I applied a factory reset to all the PRX units, then told the PRX912s that they would be teaming up with PRX915XLF subs (a simple menu choice within the back-panel DSP) and fed the PRX912 mix outputs to them. When the speakers are set up to operate like this there is nothing else you have to do, as all the crossover and EQ settings are pre-programmed — although you can of course apply tuning and balancing as required to suit the occasion.

I ran a little bit of recorded material through the system just to check all was working as expected, then turned the subwoofer levels down quite a bit (these PRX915XLF boxes are eager beasts) until all sounded good. I spent a few minutes walking around the still-empty venue to check coverage, and the downward angle of the top speakers seemed to provide an ideal even spread throughout the roughly 20 x 20m space, with a hundred or so chairs waiting for the paying public. The band were not, mainly for reasons of logistics, going to get a proper soundcheck, so a degree of trust in the sound system was going to be necessary, and listening to recorded music in an empty room isn't a very good indication of how it will sound with 17 musicians, as a lot of direct sound will be coming direct from the stage area.

### Monitors

I had intended to rig the PRX908 boxes for a comparison, but this didn't happen for two very good reasons: one, I ran out of time



▶ Like the mid/tops, the subwoofers feature extensive DSP, including presets for optimising them for any configuration of PRX900-series speakers.



■ All PRX900-series speakers can be remotely controlled using JBL's Pro Connect app.

and, two, I decided to use them as floor monitors. Having restored them to stock settings, I used these small but solid units laying sideways in front of the band, one for the singers and the other for general stage monitoring. The PRX full-range boxes have a very neat trick in this department, in that when you tip them over into landscape orientation, an internal sensing mechanism automatically applies some subtle DSP changes and optimises performance for this application. Although this, as with everything else, is under user control from the app and panel menus, I thought I'd just try them out with no further intervention from me, and I have to say that as far as I and the singers were concerned, nothing more was needed — they just worked very nicely and provided that much-needed clarity and cut-through that was required for vocals against the heavyweight band just a few feet behind.

## Physicals

A really important part of any setting-up routine is the physical handling of the speakers, and I had, through lack of good planning, found myself all alone when it came to the part where the system had to be assembled. As mentioned earlier, these PRX boxes are solid and have a substantial feel to them, but although not in the featherweight category, they are quite easy to handle for a one-person rig.

Speaking of handles, the integral handles are extremely good and comfortable, although the shape of the PRX912 dictates that it only has one side-mounted handle, which means that to hoist it on to a pole or stand you have to support it from underneath with the non-handle hand, if you see what I mean. Two people is better, but one can manage just fine. The pole sockets on the full-range cabinets are strong and a standard 35mm pole snicks into place easily; they do not appear to need any kind of clamp screw to hold them in position once aimed. The test of good-quality, well-designed pole sockets actually comes when removing them after the gig, and the hardware on these PRX units appeared to tick all the boxes. I particularly like top handles on 'upright' speakers as this makes moving them around, especially in the back of a van, so much easier, and the PRX912 and PRX908 benefit from large, comfy fittings in this regard (note the PRX908 only has a top handle, but for a box this compact,



it would be a waste of time fitting another to the side!).

## PRX Performance

After all this talk about setting up, the live performance itself was remarkable only in that our drummer, who sits at the back, offered an unsolicited comment to the effect that he could “actually hear the vocals this time”, by which I'd like to think that meant he could hear them better than was usually the case. I too could hear the vocals very well indeed, and not just through the PRX908s on foldback duty: my role as bandleader and conductor places me almost forward of the monitors, so I hear a lot of the main speakers too. The overall sound was very pleasing; clear, full and powerful with a real solid thump from the kick and bass, clean and un-hyped low-end power where needed (this was particularly apparent when we played a few instrumental numbers), and the vocals were the best they'd ever been, coming effortlessly over the band without ever sounding harsh.

The PRX rig had that quality of being able to fill the venue without sounding as if had just got out of bed, and from my testing/messing time in the studio I knew that it had, if called for, a whole lot more power to unleash. We received several compliments about the sound from audience members, and as these were generally from what we might call mature customers (it was a '60s-'70s-'80s night, after all) I knew that they were particularly valid for this gig.

Overall, the PRX system proved a winner on the night — a distinct step up in quality from my usual (definitely not budget) system, and I really liked the scalability aspect: although we used the PRX908s

as floor monitors, they could easily have been used as front boxes in a smaller venue where we'd prefer to travel light.

## Follow Spot

As a follow-on from the main live test, I did manage to use the PRX full-range speakers a couple more times in rehearsals and for providing backing amplification for a choir. My impression of the sound quality didn't change, and the PRX908 has become my new favourite as a standalone powered speaker for electric piano, for example in a pit band, or for on-stage accompaniment. With minimal adjustment from the control app, it produces a lovely even sound with a nice integration across low, mid and high piano ranges, and it's really easy to carry around and set up. I also used the PRX912 speakers in a corporate AV setting for speech-led presentation and music playback, and their smoothness and even coverage were exactly what was required.

In summary, this new PRX900 series represents a real step up from the PRX800 line. It's a bang up-to-date, well thought-out portable sound system that contains versatile and scalable components to meet just about any portable PA requirement. It looks good, it's easy to operate, has an excellent control app to access a range of useful DSP functions and more, and it not only packs a punch but sounds great doing it. ■■■

£ PRX908 £1049, PRX912 £1199, PRX915 £1299, PRX915XLF £1449, PRX918XLF £1569. Prices are per speaker, including VAT.

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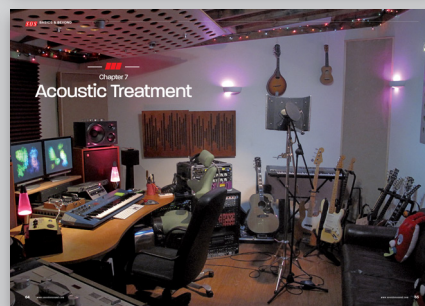
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