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Shure GLX-D+ Dual Band Digital Wireless System

By: Mark Johnson

Throughout its existence, Shure has produced products revered by professionals as well as consumers and audiophiles. As a budding live audio engineer, I cut my teeth on the company's M67 mixers bussed together for more inputs. Next were Shure 108 mixers with internal spring reverb, driving—you guessed it—the venerable Vocal Master loudspeaker system. I also still have a V15 cartridge for my turntable. I made the mistake of not buying a new stylus when it was discontinued. I really liked the cartridge. Now I'll have to find a third-party stylus.

I even have some Shure mics in my personal collection: a couple of obligatory SM57s, and one that I don't use much anymore but I really dug it when I used it regularly: a VP88 stereo mic. With all that experience, it's easy to see why the company is an industry leader.

Shure's first wireless microphone system debuted in 1953, but it wasn't until 1990 that its products in this sector truly went mainstream. These days, wireless systems are its main moneymakers. A good example is GLX-D+. While I don't know specifically what the "+" stands for, I can guess that it's for all the things that this system does. Shure designed it to be a tool for guitar and bass players, presenters, singers, speakers, and performers. Flexibility and usefulness make the GLX-D+ system worth it and, even then, the pricing is competitive.

What's in the box?

A lot of stuff, that's what. The system I received came with the GLX-D1+ Z3 belt pack transmitter, though it's also available with handheld transmitter options. In fact, I was provided a couple on the side: a GLXD2+/SM58-Z3 with an SM58 capsule and a GLXD2+/B58-Z3 with a Beta 58 capsule. You can also get one with a Beta 87 capsule.

In the box as well were a WA305 premium instrument cable TA4F thread lock collar and gold-plated ¼" plug. That's a long description of the body-pack adapter for guitars and basses. I received a half-rack receiver version. And while I didn't get one, there is a nicely sculpted tabletop



Shure GLX-D4R receiver front panel; note battery charging port on right.

receiver version and an instrument pedal receiver version (more on that shortly). Also available are presenter versions that include a WL185 or WL93 lavalier mic. Also available are the WB98H/C wireless clip-on condenser instrument mic and an MX53 headset mic. One option includes a Beta 98H flexible gooseneck mic for brass, woodwind, and percussion applications.

One of my gripes is the practice of putting user guides online. I'm old-school and really appreciate having a printed guide handy, especially if Internet service is not readily available. So, what did I spy with my little eye? A printed user guide! I'm sure they took my advice! However, maybe the regulatory stuff and the warranty info could be online? Okay, so they juked me. The printed user guide is actually more like a quick start guide and the real info is online, of course.

A weak link in many wireless stand-alone receivers is the antenna system. Specifically, the part where they connect, swivel, and pivot will occasionally loosen up so the antenna won't stay up, and there is no way to tighten it up other than replace it. This system looks to be a little beefier, though time will tell.

While many other wireless systems are incorporated into performance systems for guitar and bass players, allowing them to roam the stage at will, the GLX-D+ provides options specifically for that application. The GLXD6+ Digital Wireless Guitar Pedal is a small receiver housed in a metal enclosure designed to fit nicely on a pedal board. It can be run off a 9V DC power supply, just like other pedals. It even incorpo-



GLX-D4R receiver rear panel.



GLX-D4R receiver display with sync indicator.



GLX-D+ handheld transmitter with battery in compartment.



GLX-D+ handheld transmitter.



GLX-D+ body pack transmitter.



GLX-D+ handheld transmitters, Beta58 left, SM58 right.



SBC10-904 battery dock charger.

rates a tuner that is activated via a footswitch because, well, they can. While I did not get a GLXD6+ to check out, there are no two ways about it: It's just flat-out cool.

I was initially confused because the company shipped me an optional battery charger. Well, this is kind of weird, I thought; there's no option to use standard batteries, but you have to buy a charger, too? Not so fast; with the exception of the guitar pedal version, Shure ingeniously includes a charger port in the receiver. It worked to improve battery life over the previous generation; the GLX-D+ now provides up to 12 hours of run time. Also, a quick-charge capability can provide 1.5 hours of use from a 15-minute charge. That's very handy if you find yourself shy of fully charged batteries and it's showtime. (Of course, that's never happened to me... but, maybe it happened to someone else.) Also, to make sure you don't run out, a rechargeable battery is included with the system as well as any additional transmitter you purchase.

There's no way you can confuse the battery for another system. It fits snugly into the transmitter and a "channel"

makes sure the battery is in and properly aligned to make contact with the terminals. The nearby USB-C port is there to charge the battery while in the transmitter, and to allow for any firmware updates. Maybe Shure can develop an “octopus” charger with multiple USB cables so that more than one transmitter can be charged at a time.

The GLX-D+ system operates in the 2.4GHz and 5.8GHz frequency bands, so it can be used in many situations worldwide. Note, however, that only the 2.4GHz version is available in Japan. Another cool aspect: Due to the GLX-D+’s dual-band wireless technology, the system will automatically switch between the cleanest available frequency band (2.4GHz or 5.8GHz); this more than doubles the available bandwidth.

Accessorizing

The ancillary gear for the system includes a PA805DB-RSMA passive dual-band antenna, UA8-2.4-5.8 RMSA dual-band 45° omnidirectional antenna, UA221DB-RSMA RSMA dual-band passive antenna splitter, SB904 lithium-ion rechargeable battery, SBC10-USBC wall charger, SBC10-904 single-battery sled charger, and GLXD+FM dual-band frequency manager, which allows the connection of up to six receivers. Other cool features of the frequency manager include the ability to daisy-chain up to three units for as many as 16 channels of GLX-D+ receivers in optimal conditions, as well as providing flexible antenna distribution. The frequency manager provides power to GLXD4R+ receivers, eliminating the need for power strips or multiple outlets.

Visual overviews

The handheld transmitters are pretty stark on the outside, with just an on/off switch and a green/red/amber LED indicator. Once you screw off the bottom portion, there’s the compartment for the battery; on one side is the USB-C port, and, on the other, the link button. On top, of course, is the mic capsule. It is not replaceable, so you need to determine what your preference is—SM58 (my pick), Beta 58, or Beta 87—and order your transmitter outfitted with the capsule of your choice.

The body pack is a nicely sculpted aluminum alloy case with a black tone-on-tone Shure logo on the front. A spring-loaded hatch at the bottom provides battery access; the top has a stubby antenna green LED indicator, a small on/off switch, and the TA4M connector for the mic.

On the front panel, the receiver has the blue RF status LED, upper left on the control and display area. Beneath that is the data sync indicator, which looks like a little blue “S,” and below that is the “link” button. Next in are the “group” and “channel” buttons and then the smallish LCD display. To the right of the display are the increase/decrease gain buttons, which provide a range of gain adjustment from -18 to 42dB in 1dB increments. Next to them is the battery charging indicator. If it’s red, the bat-

tery is charging; green flashes when you have a 90% charge and solid green indicates the battery is fully charged. If it’s flashing amber, then you have battery issues and you need to replace it. Next is the battery bay and, finally, the receiver power button.

The rear panel sports the antenna connections at left and right. The power inlet is next to antenna B. Then is also a USB-C port for firmware updates. Audio inputs are a balanced XLR connector with a 30dB pad mic/line switch. Just to the left is an inst/aux ¼" connector. Again, it’s very basic. The tabletop receiver has antenna connections on the front panel, left and right; otherwise, the layout is the same.

The receiver screen displays the group and channel, battery life in hours and minutes, audio levels, and gain. The screen also indicates if the system is locked, if it’s in the process of scanning for frequencies, and auto, which means the selected group had backup channels available.

Take it for a spin

The handheld transmitters are manufactured with ABS plastic, while the body pack and guitar pedal are metal. In my experience, when plastic handheld transmitters are cinched down after changing the batteries and/or charging the battery, after a while the plastic on the removal cover tends to crack at the opening. It looks like the threads are away from the opening, so maybe that will help prevent that from happening.

Although the control layout is quite basic, upon further review I was able to see that it’s possible to lock the controls for the transmitter, which is absolutely necessary when using a handheld transmitter with a fidgety presenter or performer.

I turned on the transmitter; there was a blue RF indicator flashing on the front and, within seconds, I was good to go. Using the GLX-D+ was easy, considering that it’s actually a very sophisticated system. Even with the basic controls, it is surprisingly flexible and would work well in multiple production and performance applications. Also, the guitar pedal receiver is not required for instrument use. The body-pack system comes with a body pack to ¼" adapter. Unfortunately, I’m doing some work on my guitar, so I wasn’t about to try that out.

I just want to specify

The product’s tuning bandwidths are Z2-2400–2483.5MHz, Z3-2400–2483.5MHz and 5725–5850MHz, Z4-2400–2483.5MHz and 5725–5875MHz, Z5-2400–2483.5MHz and 5725–5825MHz.

The “transmit” mode is proprietary to Shure and the RF output power is 10mW E.I.R.P. maximum. The system frequency response is 20Hz to 20kHz. The dynamic range is 120dB, A-weighted.

The mic/transmitter weights vary more than I would

have expected, with the SM58-equipped unit coming in heaviest at 9.7oz; the lightest being the Beta 58, which weighs in at 7.9oz; and the Beta 87A falling in the middle at 9.3oz (all sans battery).

The available channel count is up to four under typical conditions and eight under optimal conditions. Incorporating the frequency manager provides up to 11 in typical conditions and 16 in optimal conditions. The maximum input level is the same for all intents and purposes, with the SM58 at 146dB SPL and the Beta 58 and 87 at 147dB SPL.

Final thoughts

Integrating the battery charger into the receiver was a stroke of genius. If need be, you can always have a spare battery at the ready and it is easy to access. However, a headphone out on the receiver would have been handy to have. Ultimately though, the GLX-D+ is a well-thought-out system that provides the ability to be used in many different applications. Pricing starts at \$499 and goes up to \$999, depending on which of the (many) versions you choose. If I was a gigging guitar player, a working singer (actually, you don't want me to sing...), a performer, or doing presentations, I would want one of these. 📶