

by Alan J. Pierce, EdD

The Black & Decker Matrix Quick Connect System

The same company that over one hundred years ago developed and patented the first portable electric drill with a trigger switch and a pistol grip has now developed a new hand operated electric tool system named Matrix. For many do it yourselfers that read my columns and product reviews the different power tools in the Matrix Quick Connect Power Tool System just might be something you will want to add to your tool box.

To develop this quick connect tool system Black & Decker engineers first looked at what different electric hand tools have in common. The electric drill, electric screw driver, sander, router, and other similar small powered hand tools all have a power source, a handle, a drive motor, and some form of a trigger switch. The Matrix Quick Connect System separates what they have in common from the working end of the different tools that does the drilling, sawing, screwing, and other cutting functions.

For review purposes this new tool system can best be understood if it is dissected into its three significant parts. The first part is the power system and it includes a charger that you plug into a wall outlet and a quick connect 20 volt Lithium Ion battery. You place the battery into the charger for charging and then snap it into the handle of the motor assembly to power the cutting or screwing tool you want to use. The advantage of a separate battery charging system is that you can purchase extra batteries so your projects aren't temporarily put on hold because of a low battery. When I tested the system it took approximately six hours to fully charge a completely discharged battery. Black & Decker indicates that their 20 volt Lithium Ion battery will hold a charge for about eighteen months. They recommend that if you are not going to use the quick connect system frequently you should recharge the battery at least once a year.

The power unit includes the quick connect dock for the battery, pistol grip handle, trigger switch, powerful drive motor, and the quick connect dock for the different power tool attachments. Black & Decker wanted to create a multi-power tool system where each cutting attachment is relatively inexpensive. So they separated the handle, trigger switch, and motor from the different power tools that perform the different cutting functions.

It would be ridiculous for them to expect you to purchase the Matrix Quick Connect System if it couldn't do any work out of the box. So your first purchase includes the charging system, motor assembly, and the drill/driver tool. They were very smart to include the drill/driver in your initial purchase since they are the most often used hand power tools by the average homeowner. It actually makes sense for you to only purchase the starter set and then add to your system as you find a need for the other tools.



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The third part of the system is the different cutting attachments. When this review went to press the quick connect system included an oscillating tool, impact driver, trim saw, detail sander, jigsaw, reciprocating saw, and router. The oscillating attachment can be used for cutting metal, wood, plastic, drywall and other materials. The jigsaw attachment gives you variable speed and more control than the oscillating tool when cutting similar materials. The impact driver can be used to drive very large screws and lag bolts. The Detail Sander attachment is designed for finishing sanding. The Trim Saw is basically a very small hand circular saw. The router attachment is designed to do all the types of cutting you would do with a router. The reciprocating saw attachment will perform the tasks normally associated with a reciprocating saw. Black and Decker promises to release more cutting attachments in the future.

Reasons to Drool

The system gives you the opportunity to own many power tools at a fraction of what they would cost if they were purchased as separate units. The battery and the motor that it spins, have plenty of power to perform the cutting and drilling tasks of the different power attachments. They are much more powerful than what you would get with the purchase of most single purpose lower volt battery operated power tools.

Not So Cool

The most significant problem with the system is that the handle and trigger configuration, when using some of the cutting attachments, is not in the normal position that one would find them if they were using a standalone power tool. Any tool system designed to do everything has to incorporate certain compromises. When I took design courses in college, my professors liked to emphasize that your design of a product should never stray from the mantra "form follows function". It is these compromises in form, the shape of this tool when some of the different standalone attachments are attached, that might affect how it functions when you are using a specific tool to cut different types of materials.

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Seeing is believing This video link in combination with this review will give you a full picture of the system.

www.youtube.com/watch?v=BnfZnj9xC1s&feature=youtu.be

