



**BY PHIL SASSO,  
CONTRIBUTING EDITOR**

Phil Sasso is president of Sasso Marketing Inc. (sassomarketing.com), a technical marketing agency specializing in tools and equipment. Subscribe to his free marketing tips at [philsasso.com/blog](http://philsasso.com/blog)

# How to sell more scopes and waveform viewers

Face your fear and outsell your competition

It's challenging to sell a tool you don't know how to use. It's more challenging to sell a tool that your customer is not comfortable using. Such is the case with lab scopes.

Few technicians are experts at using a lab scope. Even fewer understand a scope's full potential. As a dealer, that makes promoting scopes feel like trying to get a fussy kid to eat canned spinach. It's a great thing if you can do it, but often it doesn't feel worth the battle.

Rest assured, your competition feels the same way about scopes, so, don't be intimidated. You don't need a lot of knowledge to sell a scope. You just need to know the basics and be able to hand out a spec sheet. Your customer will do the rest.

**Q.** So, what does a lab scope do?

**A.** A scope basically graphs electrical waveforms. It's like an EKG for a vehicle component.

A scan tool points to a faulty sensor or system on a vehicle. A scope, on the other hand, is the tool used to directly test that sensor or system, says Michael Flink, national trainer for Autel. By hooking a scope to a

vehicle sensor, you can view a live data stream and see how it's functioning.

The pattern on the screen of the scope shows electrical voltage and current over time, says trainer Bill Peek of MPC Publishing. When testing a fuel pump, for example, the scope shows a pattern you can compare against a "known good pattern." This lets you determine if a component is working properly or not. With advanced training, a technician can use a scope to determine if a component is likely to fail in the near future.

Technicians can find "known good patterns" in technical manuals and online sources, like iATN.com. iATN, the International Automotive Technicians Network, is a peer-to-peer network of more than

80,000 automotive repair professionals in 169 countries. It offers a free basic membership and paid levels for individuals and businesses.

**Q.** Are you saying I should "tote and promote" scopes?

**A.** No, that would be a waste of time. Few technicians are good candidates for a scope.

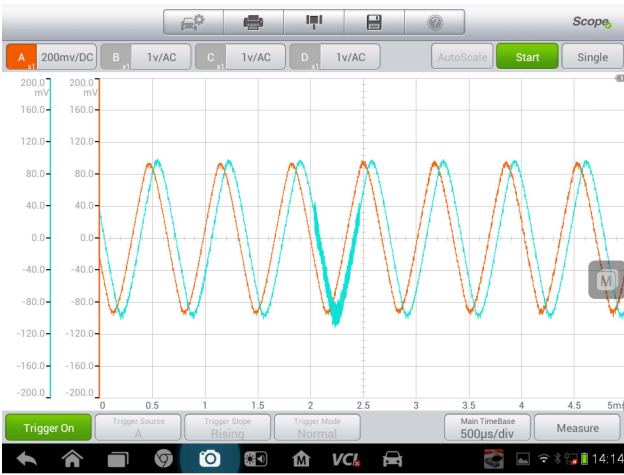
Pre-qualify your customers. The best prospects are technicians doing driveability. The more technically advanced they are, the more they'll see the value of using a scope. "The word



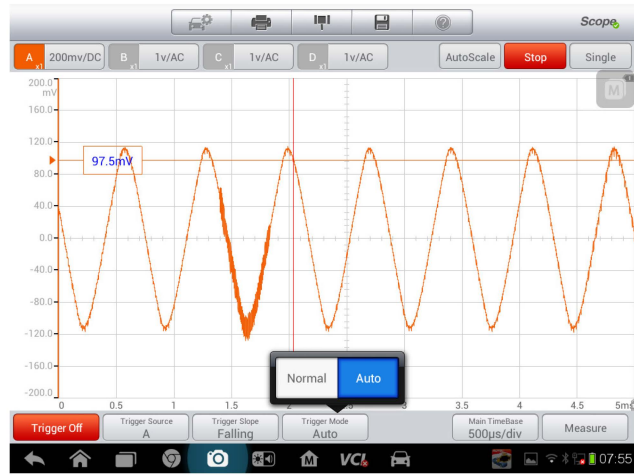
Scan tools like Autel's MaxiSys have scope add-ons, like the MaxiScope Kit. Knowing what your customer has in his toolbox can help you know what upgrade to suggest.

**Go online for more info**  
Watch a short video using a lab scope to test a fuel pump, provided by Bill Peek at MPC Publishing. Visit:  
[VehicleServicePros.com/12075811](http://VehicleServicePros.com/12075811)

**Next month:**  
Selling with after-work seminars.



A lab scope allows a well-trained technician to compare the patterns of two or more components to each other.



Know key features: An auto trigger can make quick work of viewing a signal pattern.

‘scope’ is just intimidating because it’s not an easy piece of equipment,” says TJ Bauman, director of sales and marketing for Hickok/Waekon. There is a big learning curve in using a scope that requires both training and hands-on-experience to master.

It’s not that a scope itself is complicated to use. Most are rather intuitive. What makes a scope difficult is learning how to analyze and use the data to make a

decision, especially since the data from each sensor produces different patterns.

“In a way, scan is like mathematics ... a scope is almost like a musical instrument,” says Flink. Scan tool data interpretation is pretty straightforward, like a math problem. But no two technicians will use a scope the same way. Like a musician, each may use the instrument differently or have a slightly different interpretation.

Taking off on Flink’s musician analogy, Peek says that learning a lab scope is a lot like learning a violin. The more time a technician invests in learning it, the more things they’ll find themselves able to do with it.

If your customer owns a good scan tool, it’s likely they already have scope capabilities built right in. All you need to do is sell him the lab scope upgrade kit for that scanner. ➔

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## SALES Q & A



**My customer doesn't have a scan tool with scope capability. What should I do?**



It depends on your customer. If his scan tool is older, you might talk to him about upgrading to a newer scan tool with built-in scope capabilities.

Technology is changing so quickly that driveability technicians need to update their scan tool software annually and consider purchasing a new scan tool every four to six years, says Peek. It's becoming more imperative to have the latest technology and fastest processors. Original scan tool data was running at 300 baud (or, symbols per second). Today's top out at a much quicker 500,000 bps, or bits per second.

If your customer already has a newer scan tool but not one with scope capability, or he doesn't do a lot of driveability, you could show him a standalone scope – or a signal waveform viewer.

A signal waveform viewer is a good entry-level waveform testing tool. It's technically not a scope, but it's an easy-to-use, one-channel substitute with two leads and a screen.

"Waveform diagnostics are becoming more necessary," says Bauman. A waveform viewer is easier to setup and is an excellent tool for a technician that doesn't need a full lab scope, but needs to use waveforms in their diagnosis.

Scopes generally have four or more channels with leads for each channel. The multiple channels allow the technician to compare similar components to one another (like fuel injectors) to determine if one is not functioning like



A simple wave form viewer like this one from Hickok can quickly check the pattern of a single component.

the others. Or it lets the tech compare the pattern of two different components (like crankshaft position sensor and camshaft position sensor) to determine if the components are working together as they should.



**Why is there a trigger on a scope?**



Basically the trigger allows a technician to view a steady pattern.

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Many scopes today have an auto trigger that will manage this functionality automatically. This is a valuable feature since it can be a time-consuming manual process.

Most modern digital scopes allow users to manually adjust the view to focus on the specific part of a waveform that's of most interest to them in this particular application or for the component being tested.

Imagine you're looking at a waveform through the viewfinder of a camera. Adjusting the trigger allows you to zoom in, zoom out and center the data you want in your "photo."

**Q. I get asked for a scope two or three times a year. Why not let my customer be the expert?**

**A.** Your customer will always be the expert in *using* a scope. But that doesn't mean you should be in the dark about what you're selling.

Also, if you're just waiting for those two or three orders, you're not really selling. You should be more proactive about your sales efforts. You should be following up with customers who have bought scan tools from you to see if they are ready to add on a scope.

And you should ask every driveability technician whether they have a scope or need a new one. Your questions could be enough to drive an extra sale or two.

Also consider encouraging customers to take a lab scope class at the local community college or through ASA, says Flink. I suggest you create a simple handout once or twice a year with a list of local diagnostic classes. The more knowledgeable a tech becomes, the more tools they'll want to buy from you to use that knowledge.

You might also consider sponsoring an after-hours training event.

**Q. I thought this article was going to be about camera scopes. What about those?**

**A.** A camera scope, better known as a borescope, is a great tool. Basically it's a camera at the end of a long, snaking cable. (It's similar to a medical arthroscope used to look down a patient's throat or up their... let's just leave it at that!)

A borescope is a lot less complicated to use and sell, and it has its own valuable uses.

A common use in a diesel vehicle is to find carbon deposits without disassembling an engine. Simply drop the scope cable down the EGR port and look for soot. If the engine is clean, you've saved hours of work, says Peek. Dealing with soot is very important in newer vehicles with diesel particulate filters to avoid issues. **PD**

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