

The Fluke 88V keeps Finch Customs purring as they travel their own road

Application Note



Ron Finch and Steve Dulex on the road. Steve rides "The Webb" and Ron rides the "Double Cross."

A leather-clad biker fires up his chopper, kicks the bike into gear and with open pipes barking, blasts off toward the horizon.

It's an all-American image as vivid as that of the mountain man or the cowboy. A picture of independence: a rebel who follows his own road.

If that iconic loner checks his mirror today, he'll see thousands of new generation biker wannabes hot on his trail. They're forking out Mercedes-class money to have one of a handful of elite metal smiths build the bike of their dreams. Others are buying factory made choppers. Choppers began in the

1960s as an expression of personal taste and creativity. Today you can buy one from a catalog.

But don't look in a catalog to find a Ron Finch bike. As he has since 1965, Ron builds his custom bikes one at a time at his shop in Pontiac, Mich. Like few others, he sets his own standards for quality and creativity. He blazes his own trail.

There's one key exception.

When it comes to troubleshooting the unique electrical systems on one-of-a-kind Finch Customs, Ron and electrical specialist Stewart Felix, known around the shop as Screwy, go strictly main stream. They use the Fluke 88V automotive digital multimeter.

Proper tool, proper job

"We like to choose the proper tool, for a proper job," says Screwy. Ten years as a rock show lighting technician for Vari-lite, a major show lighting manufacturer, gave him plenty of experience with Fluke instruments like the Fluke 77 DMM he used on the road.

Working with such artists as Vince Gill, Mariah Carey, George Thorogood and the Destroyers, Def Leppard and the Grateful Dead gave Screwy deep insight into the importance of delivering flawless performance when the curtain goes up.

Today he's back home in Pontiac, helping his old friend Ron make sure lights are lighted and engines thundering when the curtain goes up on Finch customs like Double Cross, Ron's one-of-a-kind entry in the 2004-2005 Discovery Channel *Biker Build-Off*.

The bike is not 'old school' or 'stretched,' not a 'bobber' or 'hot rod.' As the Discovery Channel describes it, the style is "uniquely Finch." Built within the show's tough 14-day limit, the bike epitomizes Finch's independent approach as both biker and artist. There's nothing else like it.

At the front, a pair of tiny PIAA 1152 fog lights serves as headlights. They project from extended frame tubes like the eyes on a praying mantis. A custom fork, with special wide triple trees built to clear the frame, connects an 80-spoke rim to Finch-built handlebars. Above the 114 cubic inch S&S V-twin motor rise twin dual-throat Weber carbs. The frame tubes twist back and forth over the engine and the exhaust pipes cross too—thus the name Double Cross—but there's no gas tank to be seen. That's hidden in the rear fender, a trademark Finch approach.

"I've always liked power and speed," Finch says. "I like to show the engine. Without the motor, it's not a motorcycle."

The front fender is a filigree of steel rod—Finch's fancy rod work decorates every section of the frame. And the whole bike has received the artist's finishing touch: a custom Ron Finch paint job. It's the culmination of 40 years devoted to uncompromising artistic expression, using two wheels and a motor as a canvas.

Though many Biker Build-Off entrants were willing to assemble parts from a catalog, Finch insisted on building the frame for Double Cross from the ground up.

"Most people just go out and buy a frame," says Finch. "I couldn't lower myself to that standard, because that's just not me." When it comes to building a reliable electrical system, however, creativity can pose challenges. For instance, there's no standard wiring design for a Finch bike.

One of a kind

"Most of Ron's bikes are one of a kind," says Screwy. "So we don't use a pre-manufactured wiring harness. We build our own, and we pull our own wires. On the Double Cross bike we drilled holes in the front of the frame, and the frame crossed over. We had to make sure the wire that went in on the left came out on the left."

Multiple types of lights on the bikes—incandescent lamps and light-emitting diodes, or LEDs, for instance—require differing levels of current and resistance. So it's critical that the each wire terminates at the right place. And since Finch tries to hide all the wiring inside the frame tubes or behind other parts, it's almost impossible for Screwy to trace circuits without testing with the Fluke 88V, which features a beeper to signal continuity.



Stewart Felix, a.k.a. "Screwy" uses the 88V DMM for electrical and lighting tests on custom built Finch choppers.

In addition to creating art on two wheels, Finch and Screwy handle the more mundane tasks of troubleshooting and repairing customer bikes. The Fluke 88V helps there too. Screwy recalls a recent repair on a Harley that just wasn't running right.

"The guy thought he had a dead battery," he says, "so he bought a new battery . . . and it wasn't that. I'm a pathfinder," he says. "I start where the input comes, and I check all the points all the way through to find out who's trying to stop me from getting from the input to the final destination."

Using the 88V to run voltage drop tests along the charging circuit of the disabled Harley, Screwy found no problems until he reached the wires attached to the alternator stator.

You do what you have to do

In one instance, a rider had started removing light bars from his highly-decorated Harley dresser—and started burning up voltage regulators. Screwy used the 88V to check the current draw and quickly realized that the electrical system would have to be re-engineered to compensate for the load that had been removed. Installing a couple of resistors in the circuit put things back in balance.

Screwy's also planning to double-check tachometer accuracy using the 88V's ability to measure engine RPMs. "You have two looks at the same situation," he says, "and if your tach is saying one thing and the meter is saying something else, I would believe the meter before I would believe the tachometer." If a tach disagrees with the 88V, Screwy will adjust voltage to the tach until it matches the reading on the

Fluke.

Ron Finch got his two-wheel start riding Whizzer mopeds and Cushman scooters as a kid. By the 1960s, before many of today's chopper artists were even born, he was customizing the BSAs and Triumphs that battled Harley Davidson for street domination. During the custom bike boom of the 1970s, his choppers decorated the front pages of such magazines as *Motorcycle World* and *Custom Chopper*. But neither Finch nor many others would have predicted the resurgence of chopper fever fueled by *Biker Build-off*, *American Chopper* and other TV biker shows.

"It is amazing," says Finch. "If you had asked me ten years ago if I thought I was going to be on TV and all this, I'd say you're crazy. At one time if you rode a bike, you were thought to be an outlaw, a dope smoking, thieving gypsy or whatever. That's totally changed, due to the TV coverage."

Today, in addition to building bikes, Finch creates sculptures from found metal in a venture he calls 'METAlife.' His creations, such as 'Neon Turtle' and 'The Fish Who Ate Harley Davidson Parts,' feature the same bright paint jobs, rococo metalwork and individual artistic vision you can see in his two wheelers.

As they must have said when Ron rolled his first bike into the Michigan sunlight:

"Man, that is wild."



From left to right: Marten Stumph, mechanic and road agent; Screwy, right hand man, metal fab and paint prep; Mike Cavnor, machinist; Mark Hatfield, welder; Ruth Finch, wife, #1 fan, book-keeper and treasurer; Ron Finch, the big cheese. In the background are examples of Finch's METAlife creations.

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