

First Public Showing “the Ag-Tester line” at Info Ag 2014 in St. Louis

Comments and product review from:

Founder and Senior Engineer: John Dignan

What a great feeling it was to finally introduce the world to my Ag-Tester product line after 2 ½ years of development.

The crowd was very diverse in attendees and they all were excited to see what we were doing.

The educators from around North America all said, “FINALLY, the right way to train our students as they learn to become ag-technology specialists.” “The testing tools and simulators will connect the theory with the practical side as students prepare for the future working in ag-electronics.”

Precision ag retailers with one to 20 field technicians all said the same thing. “FINALLY tools to allow my technicians to work efficiently in the field and the simulators allow us to train the techs on the software while in the office rather than out at our customer’s location”.

Field technicians all said “WOW, something at the show for people like me”. “FINALLY tools so I can do my job without guessing and changing parts”. FINALLY I can get connected in the cable system without tearing up the connectors. A few said, I own a 600 dollar Fluke meter that won’t do any of the things you can do with the Ag-Tester tools”.



Finally the Fertilizer Supply Companies, the guys that sell parts and services to co-ops and custom applicators all were excited to see the product line.

Kent Dilling, shown to the left is the precision ag technology coordinator for Fertilizer Dealer Supply which sell fertilizer supplies to dealers in seven states. Kent has been an industry friend of mine for almost 30 years. I contacted Kent about 3 weeks before the show to let him know what I was doing and get his thoughts on the Ag-Tester product line.

His comments reflected what I had hoped. “This is great. We’ve need this for years. We’ve turned into an industry of parts changers. Our field technicians are guessing as they change parts in the systems. Our stores sell flow meters, valves and other components to coops, growers and other dealers that after installation, they find that didn’t fix the problem, so they want to return the now used inventory. With Ag-Tester tools we can solve all those problems and our techs can troubleshoot successfully as professionals do in other industries. We’re in! How fast can we get inventory?” I very much appreciate his support and look forward to shipping Fertilizer Dealer Supply their start up inventory.

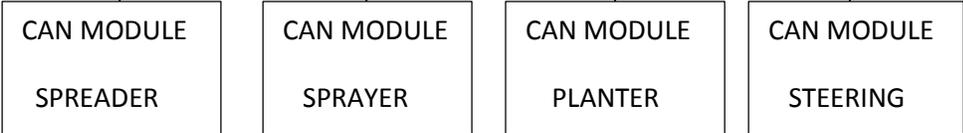
We were showing 4 new products at Info Ag 2014. The HT101V, tester for valves and the HT101S tester for sensors were in the completed form. The PWM1000 controller, for pulse width modulated, PWM, hydraulic valves was presented as a final prototype. The S1000 simulator was presented as “coming soon”, a complete system simulator for any electronic control system used in agriculture. It was very well received by all! I first showed visitors our sign with the Ag-Tester tie-in points shown with ANY controller today!

Ag-Tester tools work with ANY display!



Manufacturers CAN cables →

agtester.com



AG-TESTER TOOLS
TIE IN HERE

RATE SENSORS- CONTROL VALVES- FLOW METERS- PRESSURE - SEED SENSORS- VACUUM SENSORS- STEERING VALVES



AG-TESTER TOOLS TEST ANY SENSOR ON ANY MACHINE!

(HT101S for SENSORS) (HT101V for VALVES) (\$1000 for FULL SYSTEM SIMULATION IN OFFICE OR FIELD)

VERIFY CONNECTION BACK TO DISPLAY BY SIMULATING SIGNALS!

VERIFY COMMANDS TO CONTROL VALVES!

TESTS ANY SERVO OR PWM CONTROL VALVE AND BOOM AND SECTION CONTROL VALVE



When attendees saw the tie-in points they understood what was being done with the Ag-Tester product line.

I went on to say, “please, keep in mind, this product line was created by a guy with over 40 years, experience as a field technician in ag-electronics”! “I was in the FM, business band radio business in the 70s and early 1980s back when all the farms had CB radio”. Grandpa would remember! “Then became, in 1985, Agri-Tech, specializing control system service then sales of electronic controls for custom applicators”. “When precision-ag came along, in the middle 1990s, I was retro-fitting old spreaders with new controls for variable rate, including gps receiver, field computer, software and control system”. “Agri-Tech is still an on-going business after almost 30 years”! “All along the way, NO TOOLS were available to allow us technicians to do our job. Let alone as an employer

all these years, I know the cost of un-productive road time spent by technicians and end users”! “I know what returned parts inventory is worth”!

“Crawling on the floor of a sprayer or on the fender of an old lime spreader or on the tractor roof is not a good environment to work”! “I hate not being able to see the meter, or not being able to hold it, or not being able to tie into, connection points”. “Needing two people to do the test when I’m the only guy there creates more problems”! “Any of the tools that are available today, really need the user to understand electronics to use them properly”. “I’ve been there, done that, as recently as this past spring”! “Ag-Tester Tools address all these past problems”!



We have two hand-held testers that cover most any diagnostic need in the field. The HT101V will diagnose and fully test any valve on any machine. The HT101S will diagnose and fully test any sensor on any machine.



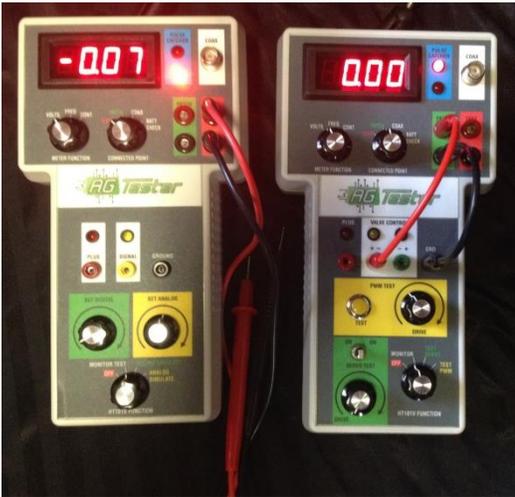
The top part of the tester is the test meter and is identical in both units. The lower part is specific to either valves or sensors. The testers have a super bright led display that is visible from 20 or more feet away from almost any angle. Meter functions are simple but fill the need. Measure 0 to 20 volts dc, frequency 0 to 1000hz, or resistance/continuity from 0 to 2000 ohms.

A detachable RAM mount connects a powerful magnet to the tester so it can be held in place while working on a machine. Each tester is equipped with a powerful 12 volt, one amp hour, ni-cad rechargeable battery.

Our exclusive “Tester- Tee” harnessing connects the tester to the piece being tested. Harnesses are available specific to a manufacturers CAN module connection or with adapters, direct to the valve or sensor.



The testers then make those connected points available as “test jacks”. Ground and supply power is available along with the command wires for control valves or the signal line for sensors.



The “connect point” switch allows the user to select either “test leads” to use traditional meter leads, or “patch cables” to allow easy connection to the “test jacks” or “coax” that allows a gps cable to be connected directly to the meter for easy measurement. “Battery Check” connects the meter to the on-board battery to check the current voltage level.

The testers have a “Pulse Catcher” built in. Devices like flow meters operate at very low frequencies, 1 to 3 HZ. You can’t see it on a frequency meter, but the “Pulse Catcher” blinks any time pulses are present. If the “Pulse Catcher” is blinking, the flow meter is creating pulses and should be read at the display.

When connected, the HT101V allows the user to “Monitor”, “Test Servo”, or “Test PWM”. When in “Monitor”, all 4 test jacks are connected directly to the connection from the display to the valve. “LED” will let the user know voltage is present. Depending on the type of valve, LED and test lead connections will vary. You can read more in the users guides.

“Test Servo” is used while dis-connected from the display connection. The HT101V then supplies power and control commands. The ON-OFF-ON, momentary switch controls open and close. The “Drive Control” controls the power driving the valve open and closed commands. Servo control valves may work fine with full drive, but have trouble fine tuning.

“Test PWM” activates a PWM, pulse width modulated, driver. When connected to a PWM valve, the user can fully test the control ability by depressing the “TEST” switch and adjusting the PWM drive. If the valve is good, you’ll have full control over the speed of the pump or rpm of a planter drive. Only short tests are allowed because the valves use a lot of power and the controlling components generate heat.



The HT101S is for digital and analog sensors. Digital sensors generate pulses at some frequency, Hz. They include flow meters, shaft speed sensors, and other movement sensors. Analog sensors include pressure and vacuum sensors, movement sensors, position sensors and so-on.

When set to “Monitor” the connections from the display to the sensor are being monitored with the connection points available at the “Test Jacks”. Voltages being supplied can be tested, and the signal line monitored for pulses or voltage changes. LEDs provide an overall status. The “Signal” led blinks indicating pulses present. When the pulse rate approaches 30hz, the signal light appears to be solid and the user watch pulses with the “Pulse Catcher” and read the frequency on the meter.

“Simulate Digital” sends pulses back to the display. It’s a simple way to verify connection back to the display. “Simulate Analog” does the same type of simulation when working with pressure sensors and others. When using “Simulate”, the tester is using power from the display. Sensors can be tested as “stand- alone” using power from the HT101S. The display is dis-connected, and the 5 volt or 12 volt supply connector is connected. See the user guide for more details.

Our basic kit includes the Pelican Case, Ram Mount and magnet, and “Tester Tee” harness for Deere, Trimble Raven or others.

The HT101V is priced at 849.00 and the HT101S at 769.00. Both bought together runs 1,500.00 plus shipping.

The other product we were showing was the PWM1000, “Long Use PWM Driver” for any PWM type hydraulic control valve. This tool allows the user to run a hydraulic motor at a specific speed for long periods of time. The PWM1000 can run a “liquid pump” or “planter drive” independently of the controls built into the machine. It’s great for testing a spray system for performance, or leaks, plugged nozzles and so-on. Planter row units can be run at low speed to check bearings and lubricate the drive chains.



Shops and implement dealers love the idea because any mechanic can run the drive motor without knowing the electronics in the cab. The tool will drive a PWM valve for 3 hours or more from its internal battery.

The user presses the “Test/ Set” switch and adjusts the “Drive Control” until the pump or motor drive is running at the correct speed, the switches to “Run”. The driver continues to run the motor at the set speed.

We showed the PWM1000 as a final proto-type and we’ll have finished panels and faceplates by the first of September, 2014 and in production by Mid- September. I shot some photos of Alex Smith, Smith Farms, Venedocia, Ohio using the proto-type PWM1000 to set his Hagie Sprayer up for clean out and spray system maintenance. The PWM 1000 runs 649.00.

“The Info Ag was very successful for Ag-Tester and me personally”! “Thanks to all those that attended and especially those that ordered testers”. “We’re gearing up production and will start shipping in early to mid- September”.

“Thanks so much to all for your interest”! *John Dignan- Founder and Senior Engineer*