



ACLPII
ADVANCED
ARIZONA CERTIFIED
LANDSCAPE PROFESSIONAL

Irrigation Tech II

ELECTRICAL TROUBLESHOOTING

System Troubleshooting

*First, determine
if it is....*

Hydraulic Issue

See
hydraulic
section

Electrical Issue

Move to
next slide

Checking, Finding and Fixing

- Controllers
- Buried wires and cables
- Electrical valves
- Wiring faults



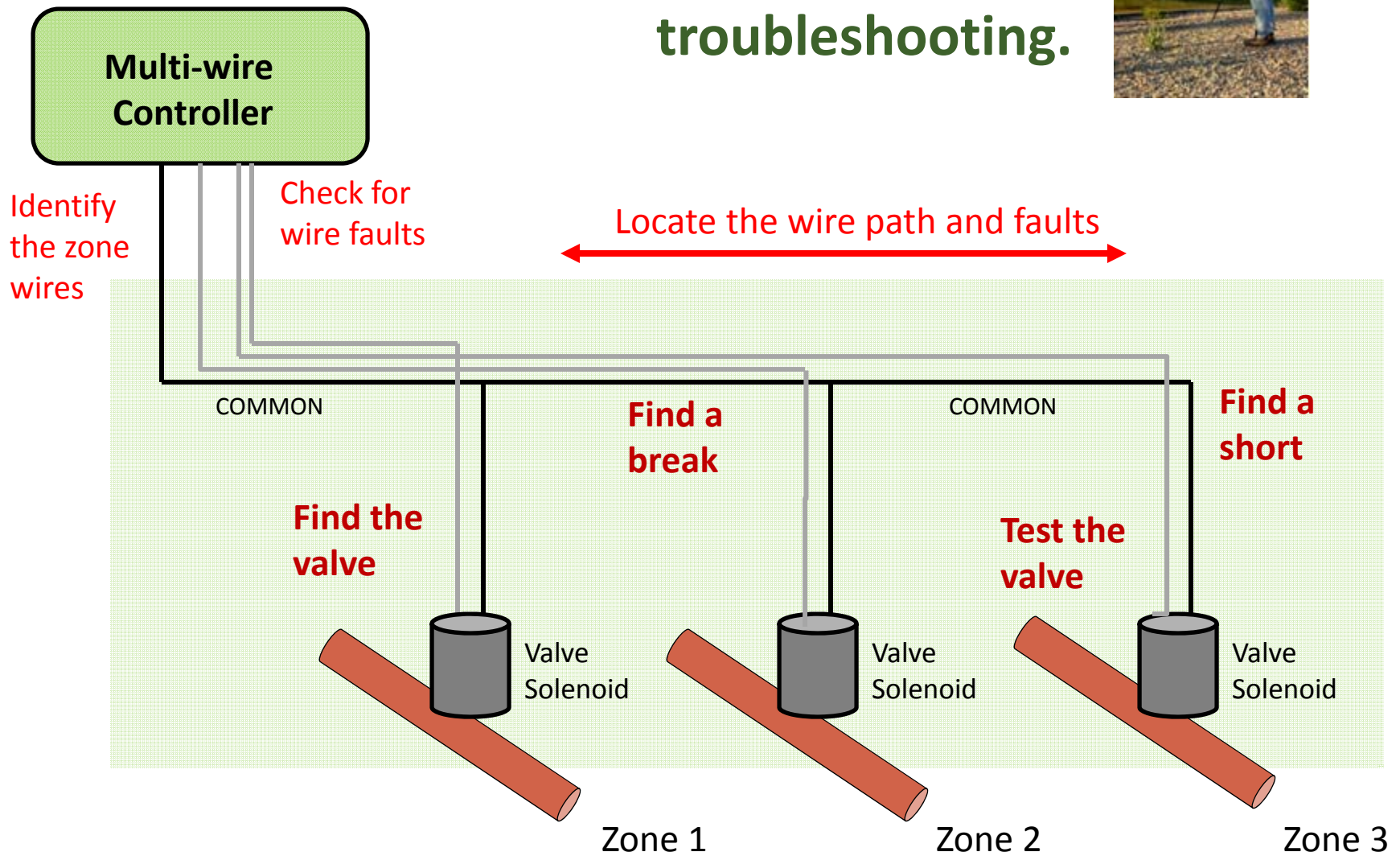
What We Can Use ...

- Electrical meter/ multimeter
- Irrigation system tester/ actuator
- Wire & valve locator/ toner
- Ground fault finder

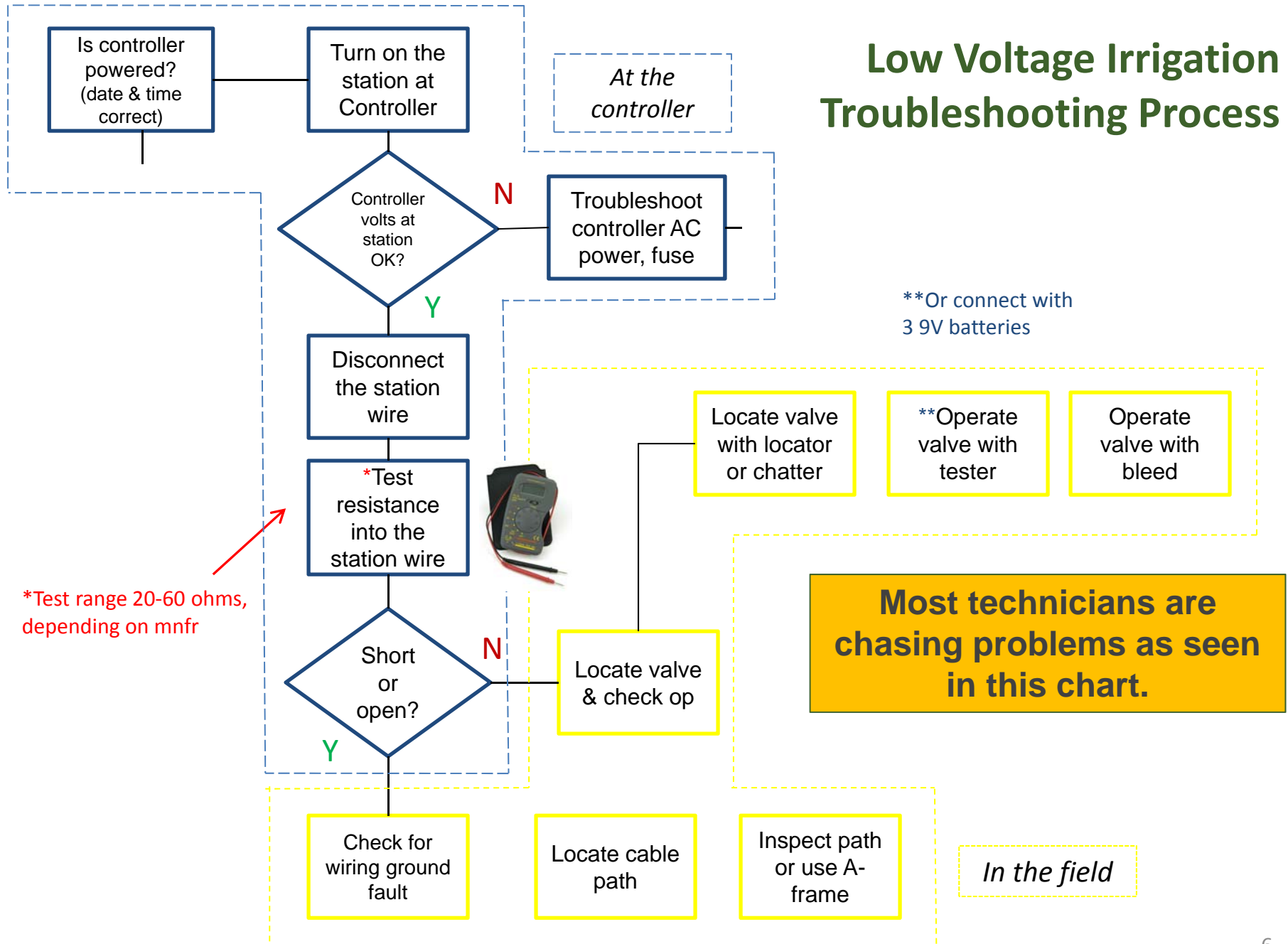
**These electrical tools are time-savers.
They can turn a day of chasing and
digging into an hour of work.**

1. CHECK CONTROLLER

Typical tasks in troubleshooting.



Low Voltage Irrigation Troubleshooting Process

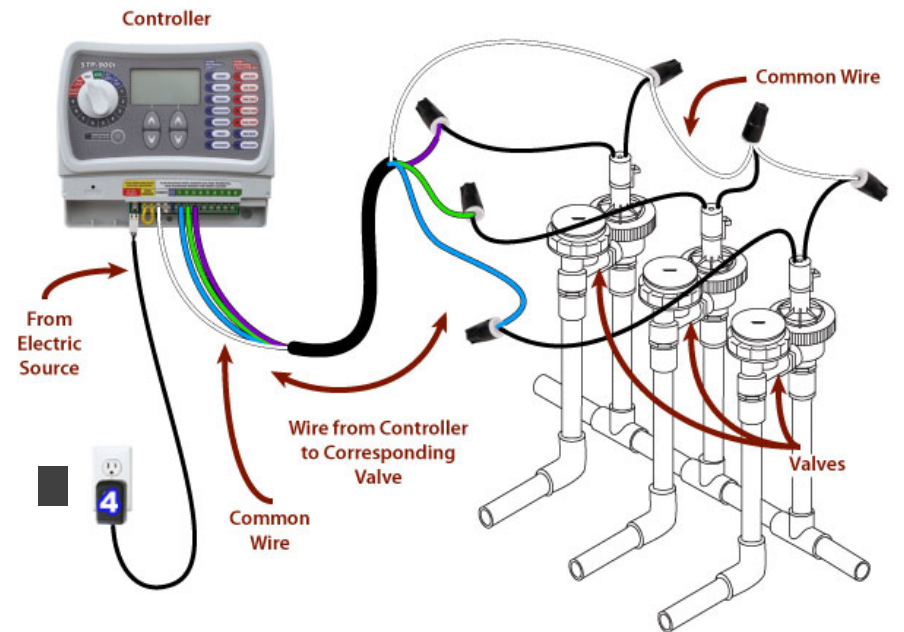


The first step: Health check-up from the controller.

1. Check the controller operation
 1. AC power in at 120 Vac
 2. 24 Vac into clock
 3. Rain sensor switch positioned **off**
 4. 24 Vac OK at Zone 1 when manually activated
2. Operate the zones from the clock
3. Use a multimeter or tester to check the wiring from the controller.

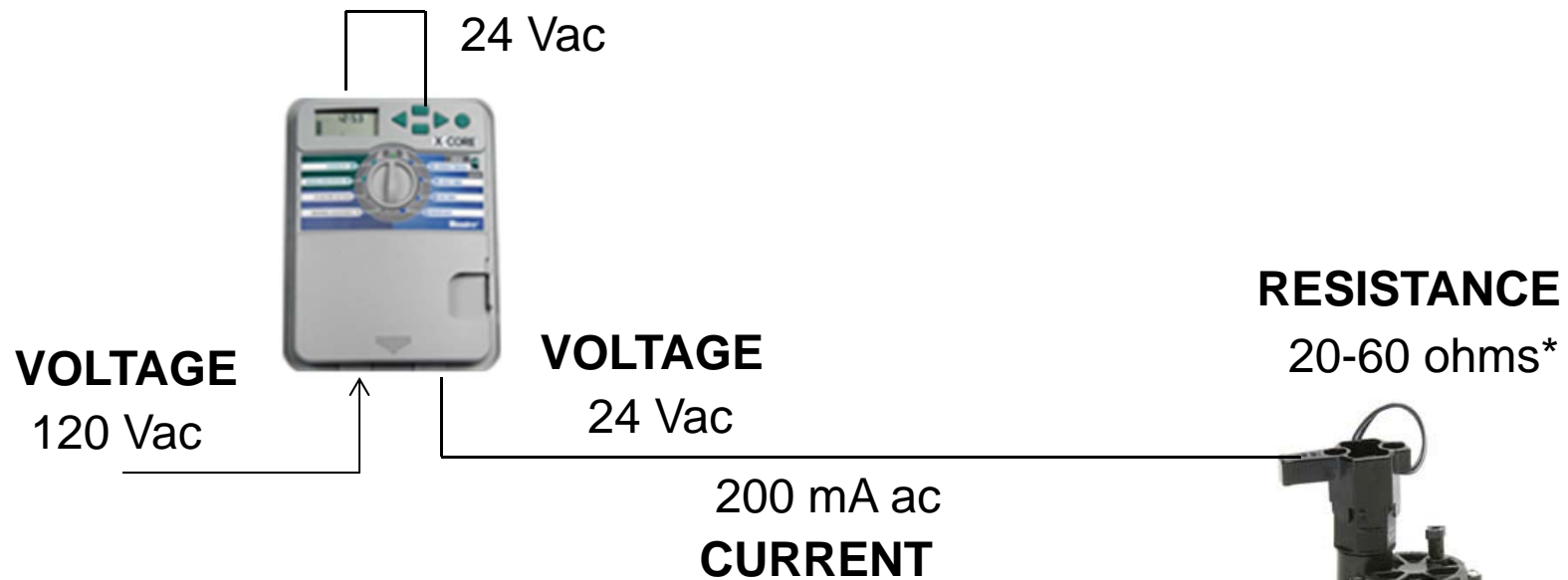
Find it, Fix it. What you will be dealing with.

- Dead controller: AC power, fuse
- Damaged/ loose wiring
 - Cut
 - Skinned
 - Poor connection
- Unknown zone assignments
- Bad splices
 - Open
 - Corroded open (wirenut bad)
 - Wet
 - Loose
- Bad solenoid (open or short)
- Bad valve
- Line obstructions- see hydraulics



Sprinklersystemstore.com

Electrical meters are an all-around tool when working with electrical systems.

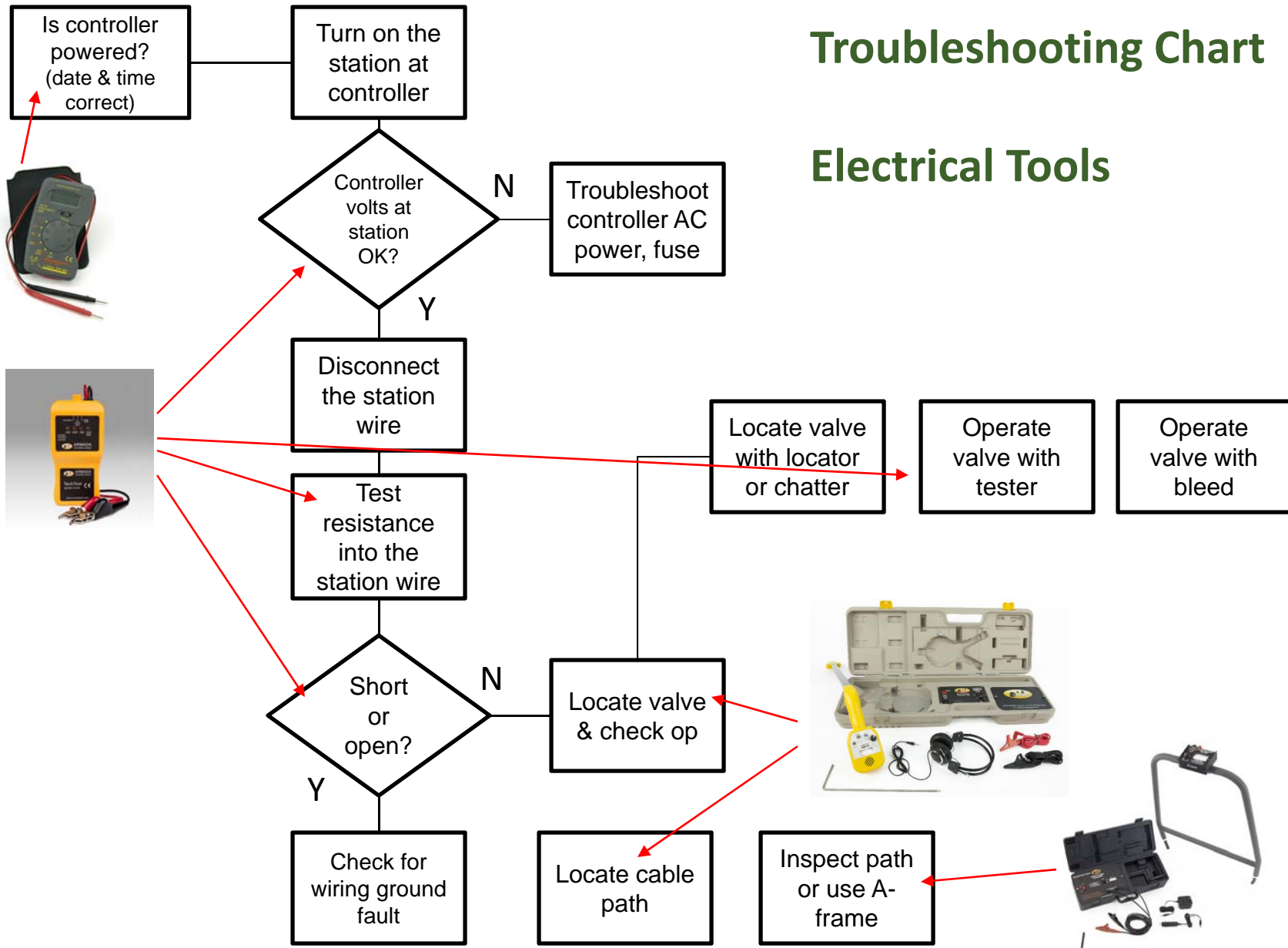


Electrical circuits in irrigation and lighting are low-voltage and not generally hazardous.

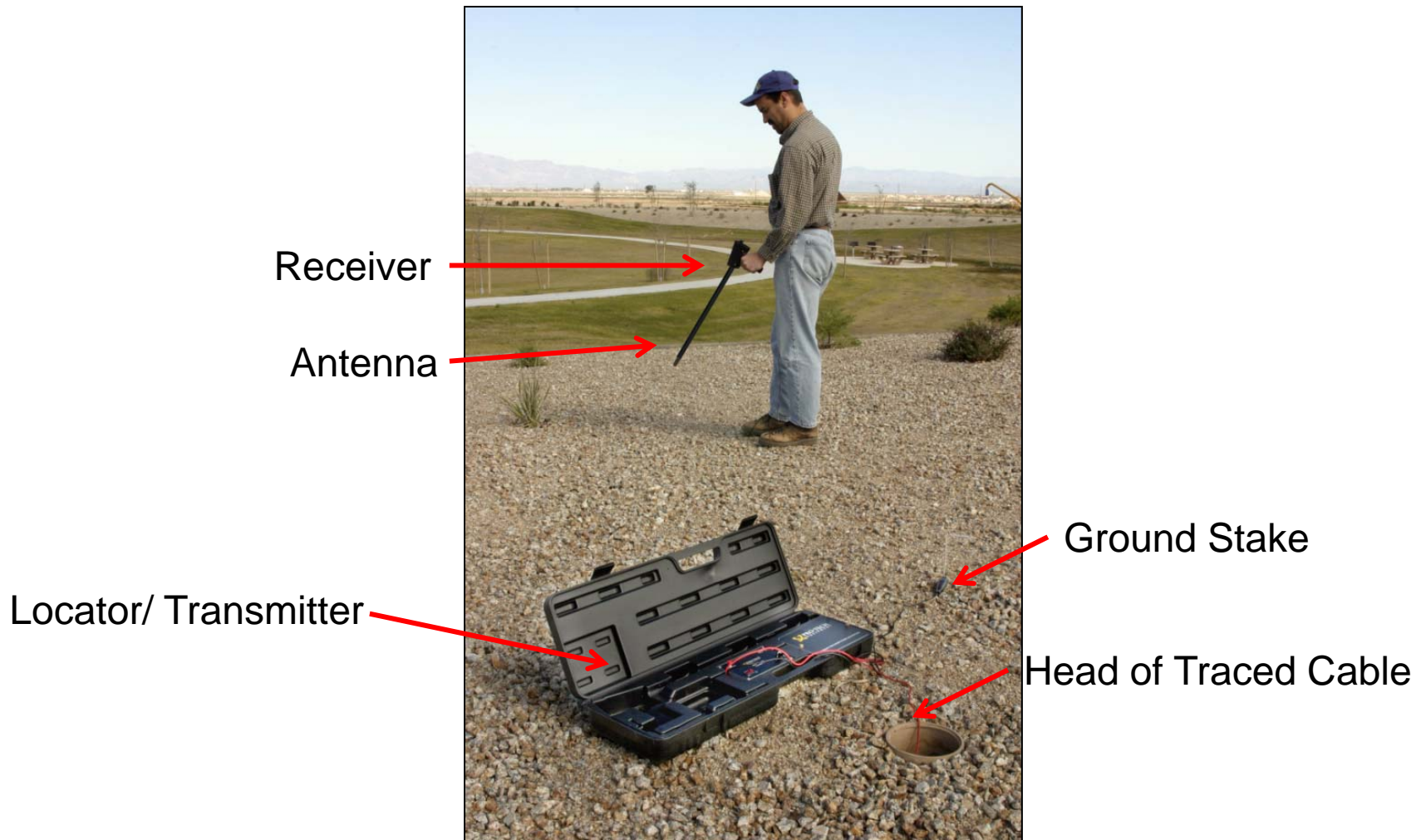
*Varies by manufacturer

Troubleshooting Chart

Electrical Tools

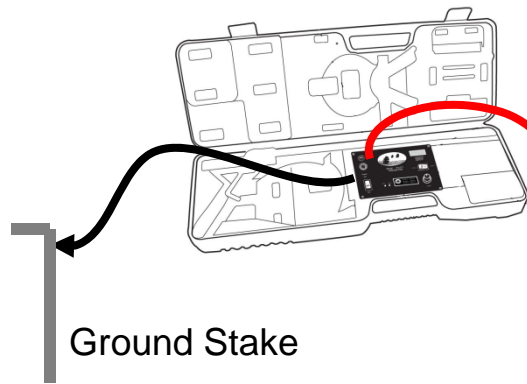


The parts of the locating process.



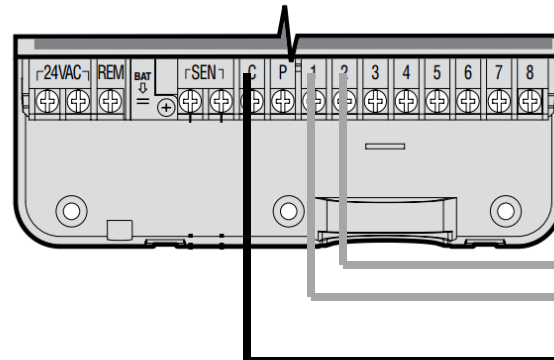
Connecting a Locator

Locator Transmitter



Ground Stake

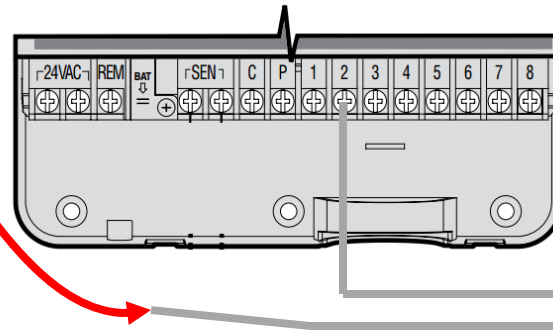
(Leave Open)



OPERATING

Valve 2
Valve 1

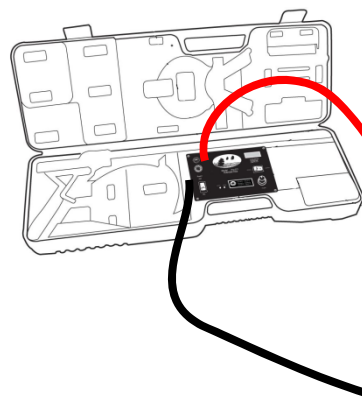
Common



WIRE TRACKING

Valve 2
Valve 1

Common



VALVE CONFIRM

Valve 2
Valve 1

Common

The session will now divide into two groups

DEFEATING ELECTRICAL ISSUES

A BIG Thank You

Contributors

- Jim Carefoot, Armada Technologies
- Tony Acosta, Agave Environmental

