

This article has two parts because of the complexity of the subjects of multi-meter usage, voltage drop, stray D.C. currents, galvanic reaction and the role your sacrificial zincs play in their relationship to electricity.

I try to write so a person who is unfamiliar with electricity can still understand electrical terms. For instance, the term "voltage". Think of voltage as comparable to the pressure in your garden hose. The more pressure, the more water.

Voltage is measured in units called volts and it should also be thought of as a difference of potential. Another term is "amperes" and is measured in units called amps. This is comparable to water flowing through a garden hose. So think of VOLTAGE as the pressure of water, and AMPS as the amount of water.

A multi-meter can measure both volts and amps. It is impossible to trouble shoot electrical problems without a meter. A trouble shooting light just doesn't tell enough information to be of help. If you're looking for information just to understand and not to do your own trouble shooting then you don't need a meter to do that.

A multi-meter will have different numbers and symbols on the front. The settings I'll be using is D.C. volts and D.C. amps. The D.C. volt symbol on the meter is often (V.-.-)(my computer won't let me type a solid line above the dots) and the symbol for D.C. amps is (A.-.-). The D.C. volts will have scales for amounts to be measured. My meter will read at full scale .2 volts, this means the maximum volts the meter will read is 1/5 of a volt. The next scale will be 2 volts, again, this is the maximum the meter will read. 20 volt D.C. scale is the one that will be used for reading your battery 12 volt voltage. Remember that only about 1 volt out of the

Boat Maintenance DOCKSIDE DENNIS

Multimeter Usage

12 volts your battery produces is usable. About 12.8 full charge to about 11.7 depending on the outside ambient temperature.

The ampere (A.-.-) scale setting will be like the voltage scale settings on your meter. If your boat (battery keeps going dead, first check the voltage with everything turned off. Then disconnect the positive wire to the battery and take another reading. If it's different something is drawing power from the battery. Set your meter to the amp (A.-.-) setting and connect your meter in series. This means the electricity has to go thru the meter. Most meters will have a setting that will measure a very small amount of current, remember the analogy of the water flowing thru the garden hose. I would be looking for something in the range of 1 amp or less. Start by pulling fuses one at a time until the amp meter goes to zero. Don't forget the automatic Bilge Pump fuse, it should be the only fuse (in-line) that is connected directly to the battery positive terminal.

A word of caution. Do not try to start your engine with the meter connected this way. Your starter will draw in the neighborhood of 100-200 amps, depending on the type of engine. So your meter if fused will blow, and if it is not fused, well, just go buy another meter.

Next I'll be getting into stray D.C. voltages. Keep this article because if a senior moment happens, you'll have something to fall back on.

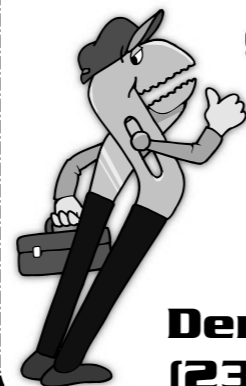
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Local Waters/Local Charts Class

Offered by the San Carlos Bay Sail & Power Squadron Cdr. Ron Terciak

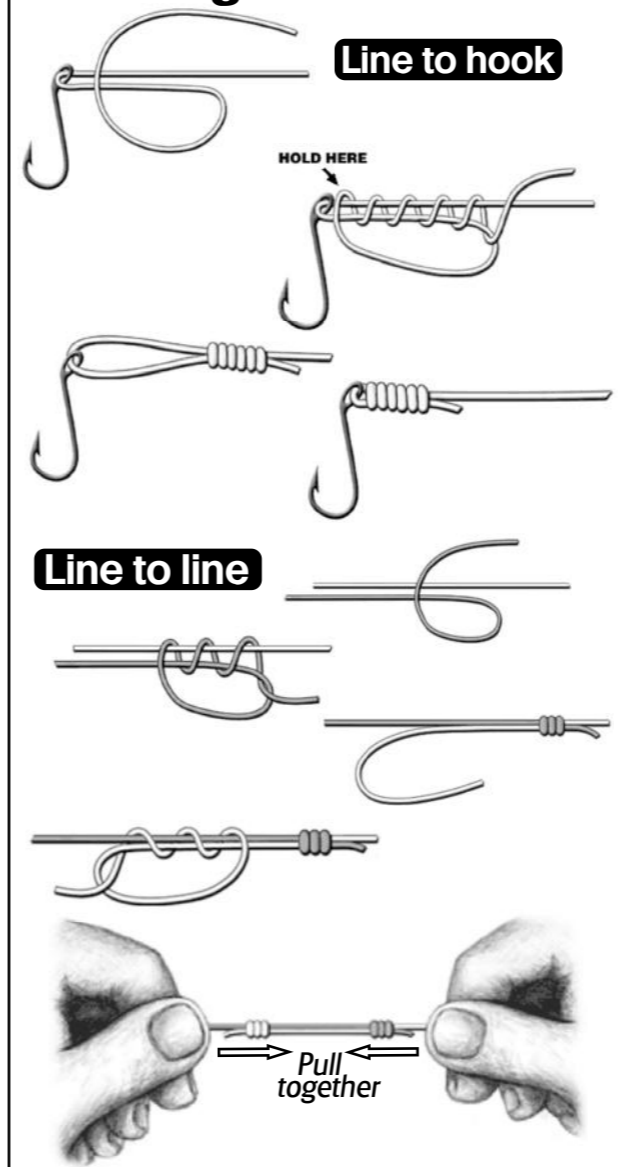
The San Carlos Bay Sail & Power Squadron, a unit of the United States Power Squadrons, will be offering the popular "Local Waters/Local Charts" class. The class will be held on Saturday, April 3, 2010 from 8:15am to 12noon. The class is directed towards new boaters and boaters new to the area, as well as those wishing to learn chart reading.

It will provide the boater with some of the basics of navigation, oriented to the Fort Myers area. Students will be using chart 11427 and you must bring this

to class. Optional On-the-Water training is also offered at a later date. Please check with the class instructor for details. The cost of the class is \$40.00. The class is being taught at the San Carlos Bay Sail & Power Squadron Classroom located at 16048 San Carlos Blvd at the corner of Kelly Road (across from ACE Hardware).

Students can register online at www.scbps.com or call 239-466-4040.

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2001 Parker 25', Deep-V, extended cabin, with 250 Yamaha outboard. Just like new, no bottom paint, kept on lift, interior like new! Extensive hand railing's, windless with 300' rope, trim tab's, canvas cover, only 130 hr's on the boat & engine. Great boat for our outer island's and or off shore \$25,000 firm! Sharon (208) 651-4341 or (239) 283-9309. Can be seen @ Malu Lani Apt's in Bokeelia

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- ➔ Masks human odors from fish. Use before fishing too!
- ➔ Contains Star Anise, a fish attractant.
- ➔ Contains Australian Tea Tree oil, long used by aboriginals for healing cuts, burns, and infections.
- ➔ Gentler on hands than regular soap
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- ➔ Convenient! One bar lasts most anglers all season.



Fish Stink!

.....but you don't have to

Lingering odors on hands from handling fish and bait is a problem. Most anglers don't care for persistent fishy smells at social functions, the office, or in the days following fishing trips. Smelly hands rub off on home and auto upholstery and linger for weeks.

De-Fishing Soap is specially formulated to eliminate fish and bait odors; just lather up, scrub (warm water and scrub brush is best), rinse, and repeat.

De-Fishing Soap is guaranteed to remove even the most persistent smells including: anchovy, bass, catfish, carp, halibut, herring, mackerel, salmon, shrimp, squid, trout, yellowtail, tuna, and more. Nothing Compares!

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Anglers have tried everything to remove stubborn fish smells!
* Raw lemon juice- too acidic and doesn't work well
* Bleach- too caustic and doesn't work well
* Salt- too harsh and doesn't work well
* Ordinary hand soaps- simply do not work despite repeated scrubbing
* Stainless steel bars such as used in restaurant kitchens- expensive, inconvenient, and do not work well

De-Fishing Soap is a convenient way to eliminate fish and bait odors from hands!

www.defishingsoap.com

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