

Cruising Equipment Recommendations



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www.SVSoggypaws.com

Important Equipment Characteristics

- Does what it is made to do
- Robust & bullet proof
- Owner can troubleshoot and repair
- Maker with good rep & customer service
- Multiple uses, like a computer
- Backups for all critical electronics
- Repair skills, spare parts & tools onboard

Outline

- 1 Electric
- 2 Electronic
- 3 Navigation
- 4 Communications
- 5 Self Steering
- 6 Sails/Rig
- 7 Ground Tackle
- 8 Refrigeration
- 9 Fresh Water
- 10 Dinghy/Deck
- 11 Security
- 12 Miscellaneous

1 Electric

- Balance daily charging capability vs loads + 15%
- Load = 100 ahrs, need 115 ahrs charging capacity
- Solar best all around alternate energy source - anchor, dock and underway
- Use alternator U/W, shore charger at dock
- Wind - <25% time effective, expensive, shades solar, noisy, etc, etc
- Use engine/genset for backup only
- Be careful of electrolysis and spikes in 3rd world

1a Solar

- Best daily charging source by far!
- Silent, effective 98% days inexpensive ~\$2/watt
- Normal cruiser uses ~ 120 ahr / day
- SPaws 660 watts = >200 ahrs/day
- Mount aft, no shading, orient longitudinal
- MPPT regulator & rotate F/A = +25% ea



1b Honda Eu 2000

- Best backup AC generator
- 1600w/13.6a AC continuous
- Quiet, ~6 hours on 1 gal gas
- Capable of 70 amps/hr DC w/ Progressive Dynamics PD 70 charger (~\$250)
- Gas available anywhere
- Defuel and stow below
- ~\$900



1c Batteries

- AGM & Gel - <2/3 life, 2X cost, no maintenance, hard to get in 3rd world
- Lead acid – need bimonthly maintenance, MUST equalize
- Rolls longest lasting, 10 yrs +
- Trojan, Exide, etc 3-5 year life
- 6v L16 better than 6v golf carts, better than 12v 4/8 D, better than 12v Group 30/31
- Electrolyte tester, Water Miser caps, auto water filler?



2 Electronics

- Minimize integrated systems
- Must have backups
- Protect from lightning w/ disconnects, Faraday cage (microwave/oven)
- Store backups in 'metal in' anti static bags
- Protect from salt air when not using, especially computers
- Don't leave alkaline batts inside units
- Protect from theft if in cockpit

2a Radar

- 16 nm range adequate
- Use for weather & ship avoidance, navigation
- Furuno good quality
- Mounting on arch vs on mast, 16 vs 10 nm range
- Mount display where can be seen both from cockpit and below



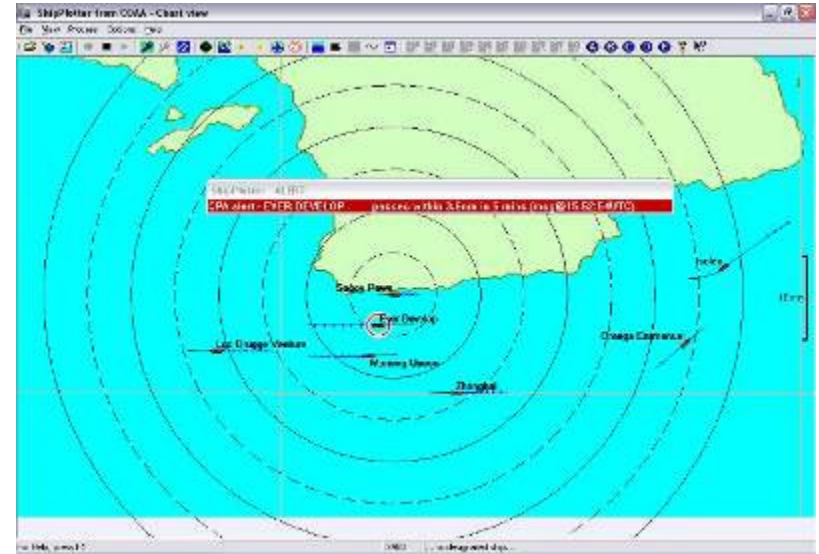
2b Depth Sounder



- Use inexpensive fishfinder instead of digital depth sounder
- Much more info, much less cost
- See bottom profile for best anchoring spot
- Mount transducer inside hull on blob of 3M Marine Silicone
- Depth capability ~300'
- Cost - \$89 and up

2c AIS

- Best collision avoidance device for large ships
- VHF based
- Active or passive
- Range: A~30 nm, B~8nm
- Displays ship name, range, bearing, CPA, etc
- Vesper Marine active unit w/ display ~\$700
- Receiver only <\$200
- Other options



ot been disappointed in the choice.



2d Cell Phones & Wifi

- Cell Phones
 - Buy opened 4 band GSM phone for global coverage
 - For N/S/C Americas 2 band OK
 - Use country SIM cards
 - Skype cheaper option
- Wifi Internet
 - Available everywhere
 - Need external antenna
- Options- See SPaws website - Electronics



2e Rechargeable Batteries

- Eveready/Duracel/etc alkalines leak, ruin eqpt
- Modern NiMH have 2+ year shelf life at near full charge, ~1500 charges
- Best are Sanyo Eneloop 19-2000 mAh AA, 750 mAh AAA
- Best smart chargers:
 - Sony BCG-34HRE, \$30
 - LaCrosse Tech BC-700, better, \$30



2f Inverters

- Small 4-500 c watt units much more efficient with computers, batts, elex, etc
- Good for most elec tools
- Large marine units are expensive & inefficient with small loads
- Use Honda gen for infrequent large loads like microwave or vacuum
- We use 400 c/800 s unit fm Harbor Freight w/ USB port ~\$25



2g Corrosion Block

- Prevents corrosion in elex, esp circuit bds
- Like conformal coat
- Use on HF radio, inverters, TV, etc
- Plastic hand sprayer better than can spray
- Other products like Corrosion X similar



BlockCorrosion.com

New Products coming September 15th We are adding:

1. 32 oz. CB liquid with refillable 4 oz. pump sprayer
2. CB grease in both grease gun cartridges & 16 oz. tubs

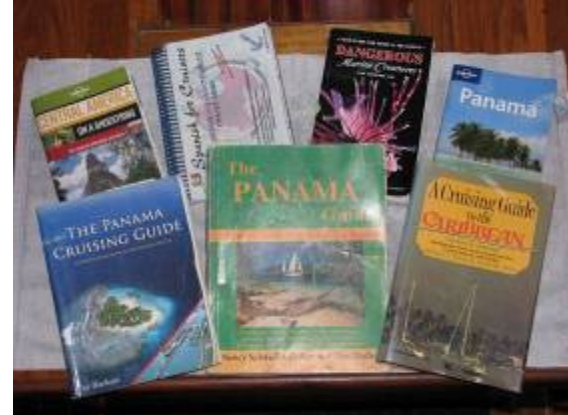
Now..... you can buy genuine **Corrosion Block**
12 ounce aerosol spray cans here at the best price.

**as low as \$11.75 per can & our
no-mark-up Shipping w/2 day delivery**

Click the **Buy Product** link above to see our prices and

3 Navigation

- Don't spend lots of money on paper charts
- Buy multiple backup Nav eqpt using digital charts
- iPad w/Navionics great backup for planning
- Nav download options:
 - guide books
 - SSCA Bulletins
 - Sherry's Compendiums
 - Websites/blogs
 - digital cruiser guides



The Marquesas Compendium
A Compilation of Guidebook References and Cruising Reports



The Bay of Virgins, August 2010.
Photo by Dave McCampbell of Soggy Paws

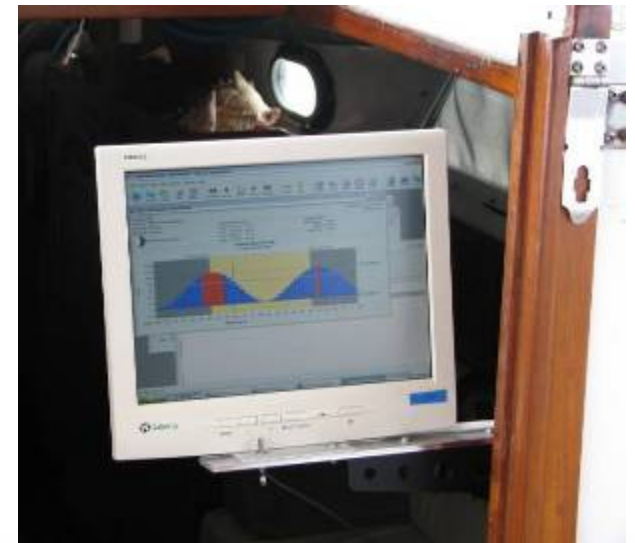
IMPORTANT: USE ALL INFORMATION IN THIS DOCUMENT AT YOUR OWN RISK!!

Rev F.1 - September 10, 2013

We welcome updates to this guide!
(especially for places we have no cruiser information on)
Email Soggy Paws at sherry-at-svoggy-paws-dot-com.
You can also contact us on Sailmail at WDD5182
The current home of the official copy of this document is
<http://svoggy-paws.com/files/pacific>
Check for an updated copy then.

3a Computer Navigation

- Don't spend big \$ on chart plotter, computer more versatile
- Multiple nav programs - Open CPN & other free shareware
- Global Vector/Raster charts - some free shareware
- Google earth charts – best 3rd world accuracy, free
- Can scan guides/charts, lots of planning programs available
- Use external cockpit monitor & wireless presentation mouse



3b GPS

- Need two independent navigation systems
- Computer-
 - route plan
 - close in navigation
 - transfer track to GPS
- GPS –
 - follow track line at sea
 - minimal amp draw
 - portable for abandon ship & anti theft



4 Communications

- 3 options – HF, VHF, Satphone
- Recommend all 3 for serious cruising
- For coastal US and Carib HF and VHF fine
- HF much more useful on daily basis than Satphone
- Satphone very useful for emergencies
- Ham license useful

4a HF Radio



- **Radio** – buy digital unit w/Ham & SSB, 100-150 watts output power
- Great options - Kenwood TS50 or Icom 706 for \$500 u, or Icom 718 for \$700 n, not Icom 802 \$2K n!
- **Coupler/tuner** – best SGC-230, if not Icom radio ~\$.5K
- **Antenna** – best simple insulated long wire or backstay
- **Ground plane** – best sea water via Dynaplate & thruhulls, see Gordon West article
- **Modem** - PTC-3 Pactor for email & weather ~\$1K
- External speaker to cockpit



4b VHF Radio



- Need three units minimum
- One 25w at helm so can drive boat and talk in harbors
- One 25w at nav station below
- Minimum one 5w HHeld
- Two antennas - one mast top 25 nm, one on arch 15 nm
- Gam 6 db best rated antennas
- Weax alert and DSC useful



VHF Hand Helds

- Need two waterproof
- Always take it with you in dinghy
- Not good cockpit option, range limited to ~5 nm
- Maximize battery life
- No AA/AAA batts



4c Satellite Phones

- Iridium or Inmarsat Sat phone, global coverage
- Faster, more reliable, easier digital comms than HF w/ Pactor
- Use for weax, email & emergency calls
- ~\$1.50 per minute
- New ~\$1.5K, used ~\$.6K
- SPaws has referbished Iridium 9505



5 Self Steering

- VERY important equipment
- AP steers compass course, WV follows wind
- Wind vane uses no amps but inop if no wind
- Boat balance important for both
- Must have two bullet proof independent systems
- Tiller pilot w/ wind vane good option
- Carry spares
- SPaws has Monitor wind vane & 3 CPT autopilots plus many spares

5a Autopilot

- CPT – strong, basic wheel autopilot
- Very reliable, low amp draw, cruiser repairable
- No NMEA interface
- Below decks autopilots expensive, use lots of amps, can't see
- CPT repair tips on SPaws website
- New \$1800, used way less!



5 b Wind Vane



- Many choices
- Strongest is servo pendulum
- Monitor – strong, quality, servo pendulum vane
- All 316L SS - 1999 changed fm 304 to 316L
- Recommend 2000 or newer, few changes
- New ~\$4500, used ~\$2000

6 Sails

- Cloth – buy US made Dacron only from North, Challenge, or Contender
- Best quality available gives much longer life
- Features – use only cross cut Dacron, chafe protection, triple stitching, replaceable corner rings, best sun protection
- Headsails - both roller furling, staysail always up and can be storm jib
- Main – full batten, loose foot, 3 deep reefs ~25/50/75%, no trysail needed
- Lite air 5-12 kts– recommend Code 0
- See SPaws website Workshop/Rig Sails

6a Code 0

- Light air sail for up and down wind
- Good ~5-12 kts app
- SPaws 4 oz Dacron, 950 sf
- On endless furler so can quickly furl
- Don't reef, shift to genoa at 12 kts wind
- Stays up for entire passage



Code 0 Facnor Furler



Code 0



6b Tides Strong Track



- High performance, low friction full batten mainsail track system
- Inserts into existing mainsail track
- UHMW, UV stable, in lengths to 65', 10 yr life?
- Flat or round battens
- Installation easy w/o going aloft
- Costs about \$28/ft
- www.macksails.com

7 Ground Tackle

- Details in 'Modern Anchors & Ground Tackle seminar on our website
- Primary anchor – buy big, modern scoop, Spade/Rocna/Manson Supreme/Mantus
- Boat length ft + weight klbs = approx Delta anchor weight
- Rode – G4/HT HDG US chain, no weak links/shackles, full strength swivel
- Windlass - strong electric, horizontal, recommend Lofrans Tigress 1200 watt

8 Refrigeration

- Buy modern, automatic Danfoss based evaporator plate system only
- Stay away from older cold plate systems, lots of maintenance and short high amp draw
- Modern systems – automatic, amps over 24 hrs, tighter temp spread, minimum maintenance
- Insulation – goal freezer R30, refig R20, extruded polystyrene (blue/pink board) best
- Use only EPDM rubber for door gasketing
- Read Calder's 3rd edition M&E Manual
- Carry spares and R134a

8a Refrig System

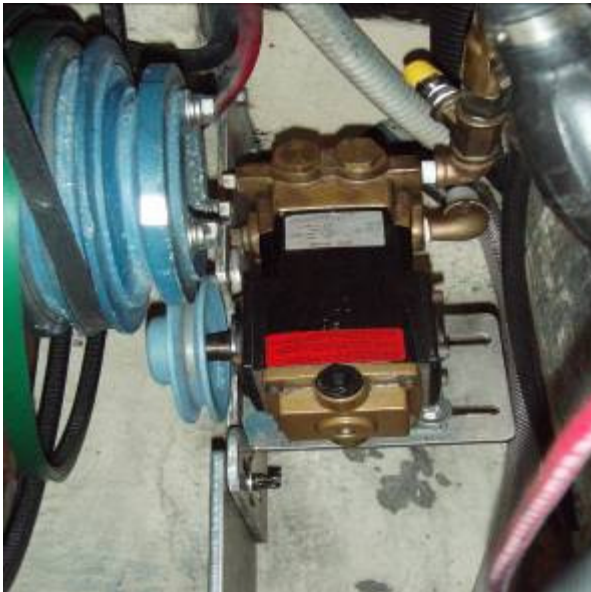


- Best most efficient system is Frigoboat w/ Danfoss compressor, flat evap plate, keel cooler
- Keel cooler saves up to 20% amps daily
- Separate refrig and freezer most efficient
- SPaws has 2 K50 systems, 11cf refrig & 3 cf frzr, total ~75 ahrs/day
- Each system ~\$2K

9 Fresh Water

- Two pers use 5-10 gpd FW, good avg = 7
- Need tankage for 150+ gals, 3+ weeks
- Need good rain collection system
- Watermakers - Buy big unit!
 - 40 GPH - DIY for \$3K, kit for \$5-6K, commercial units for \$10-\$15K!
 - Don't waste money on small commercial units or Spectra (too expensive)
- Need multiple house type filters and drinking water filter for 3rd world

9b Watermakers



- SPaws DIY unit for <\$3 K
 - Produces up to 42 GPH
 - Two 40" membranes
 - Commercial HP car wash Hypro 3 plunger pump
 - Main engine or ~2.5 HP AC motor driven
 - For complete details and parts list see-
SVSoggypaws.com/Workshop/Plumbing

9c Fresh Water Collection



- Best to collect rain water off clean decks
- Off hard top OK but must rig hose to fill
- Awning collectors suffer in high winds
- Install filter under each fill
- Prefilter if from questionable dock source
- Taste or TDS meter
- Rain water = distilled

9a Fresh Water Filtration



- Drinking water-
 - Use SeaGull IV or similar
 - Separate spout
 - Filter life 3-4 years
 - Expensive but worth it
- Multiple FW tanks
- Chlorine additive, 1.5 oz/50 gals

10 Dinghy/Deck

- Dinghy - RIB more comfortable, drier, faster than hard dinghy
- Only choice for scuba divers
- OB motors – 15 HP and ~5 HP, same make/tank, backups
- Aft arch - davits, solar, radar, lights, etc
- Swim platform – MOB safety, aft boarding
- Hard strong dodger w/ soft extension

10a Dinghy

- AB 10.5' Lite 120# RIB is best choice
- Size just right
- Expanded interior
- Extra large hypalon pontoons
- 5 HP will plane w/ one person & groceries
- 15 HP will plane w/ 2-3 divers and full gear
- Stow on foredeck U/W



10b Outboard Motors



- Need two for backup and different uses
- 15 HP for diving and long fast trips
- ~5 HP 75% time for short trips, single person planing
- Tohatsu, Nissan, Mercury all same motors <15 HP, use same fuel tank
- 4 cycle heavier, but more fuel efficient

10c Aft Arch

- Need aft arch for:
 - dinghy davits
 - solar
 - radar
 - Nav/anchor lights
 - outboard davit
 - Antennas
 - wind sensor
- Aluminum or SS
- Double bow design strongest



10d Swim Platform



- Use for
 - aft boarding
 - swim platform
 - work on dinghy
 - MOB boarding
- 1.5" aluminum pipe & Starboard good combo
- Height above w/l ~20" minimum
- Less than \$500

10e Dodger & Extension

- Hard strong dodger fwd of 1.5" alum pipe and 1/2" expanded PVC
- Extension of Sunbrella, covers rest of cockpit
- Side/front enclosures of Stratoglass Crystal Clear .040", all roll up
- Engineer to leave up dodger in 65 kts wind!
- Sunbrella covers for all Stratoglass snap on



11 Security

- Big problem in Carib, C & S America
- Anchor in known safe anchorages w/ other boats
- Main theft targets - outboard motor, electronics
- Boardings mostly when owners away or at night
- Always lock up boat when away
- Lock yourself in at night if threatened
- Defense in depth - appropriate response depends on threat
- Don't make shore plans on VHF

11a Boat Defense



- 1/2" Lexan hatch boards
- Consider hatch bars
- Lock eqpt on deck
- Strong SS combo or Abus round locks
- Alarm/shock signage
- Motion/pressure alarms
- Flare gun dangerous
- Emergency siren/strobe – next slide

11b Siren/Strobe

- Use when any problem aboard boat
- Install switch above owners' bunk
- Very loud siren and bright strobe
- Scares intruder off and alerts nearby boats
- Amseco - multiple models ~\$60



11c Personal Defense

- Be aboard after 10PM
- Ashore travel in groups
- Avoid walking in dark areas
- Minimize personal jewelry/cash carried
- Pepper & bear sprays
- Tasers & handcuffs
- Guns – too many problems



11d Dinghy Defense

- Always raise dinghy at night
- Install high davits or davits on arch
- Chain better than wire for lockup
- Never print boat name on dinghy
- Lock/wire motor and gas tank to boat
- Lock dinghy to dock?



12 Miscellaneous

- Solar garden backup anchor lights
- Digital tachometer
- Electrolyte/coolant refractometer
- Laser temp meter
- Winch Rite - electric powers all winches
- Wireless windlass remote
- HHeld depth sounder
- SVSoggypaws.com/Workshop/Electronics
for links to all above

Solar Garden Lights

- Solar powered by one AA Nicad batt
- About .5 mile range
- Mounted on PVC T w/ bottom cut out
- Use as permanent night lights in addition to auto anchor light
- About \$3 ea



Digital Tachometer

- Use to check engine tachometer, outboard RPM, etc
- Neiko 20713A Digital Laser Tachometer
- AA battery powered
- About \$20



Misco Refractometer



Image 2 / 5 MISCO 7064VP+ Traditional Analog Refractometer Celsius

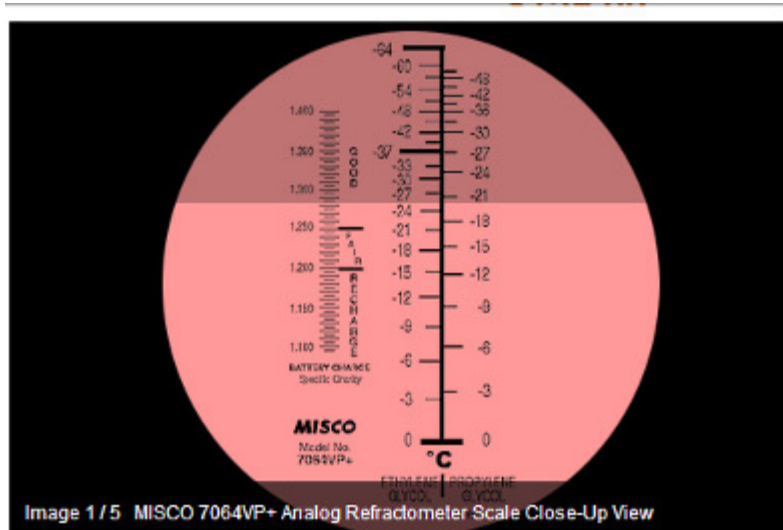


Image 1 / 5 MISCO 7064VP+ Analog Refractometer Scale Close-Up View

- Very precise measure of battery specific gravity and engine coolant mix
- Only need one drop from each batt cell
- About \$160
- Other units may be less expensive
- Misco.com and others

Laser Temperature Meter



- Point and shoot to read temp
- Use for troubleshooting engine, electrical & refrigeration problems
- Reads water surface temp
- About \$40

WinchRite



- Purpose built to power all sailboat winches
- Portable, 6.5 lbs, water proof, reversible, 2 speed
- Lithium ion long life battery
- Far less expensive than powering any single winch
- ~\$500 w/ SSCA discount

12 v Wireless Winch Remote

- Wireless power for any 12 v windlass
- On/off & up/down
- Includes transmitter module to be wired to solenoid
- Not waterproof so use ziploc
- About \$20 on ebay



Handheld Digital Sonar



- Depth, temp, fish ID
backlit LCD display
- Robust high impact case
- 1000 watt power, 200'
depth capability
- Uses four AA batteries
- Floats and can be used
underwater to 200'
- Use in dinghy for checking
depth
- About \$80

The End



Dave and Sherry McCampbell
www.SVSoggypaws.com