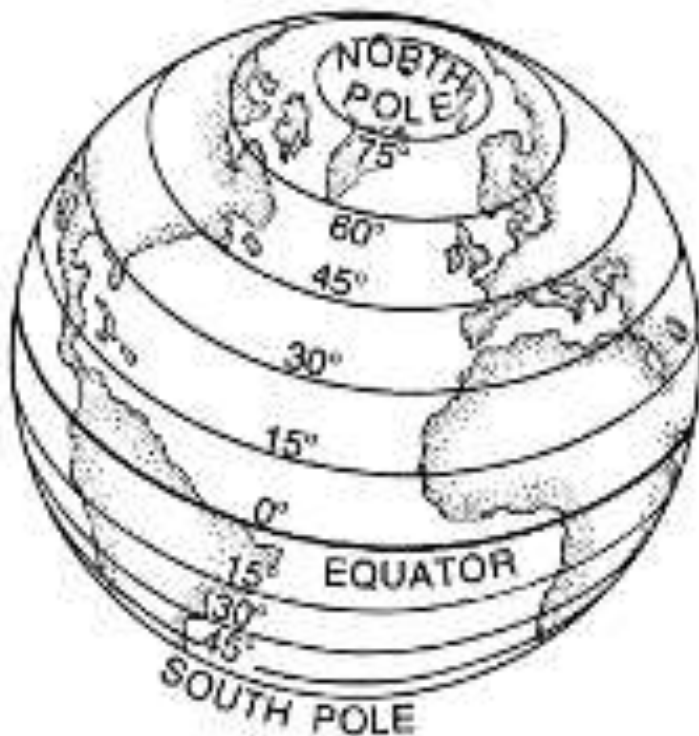
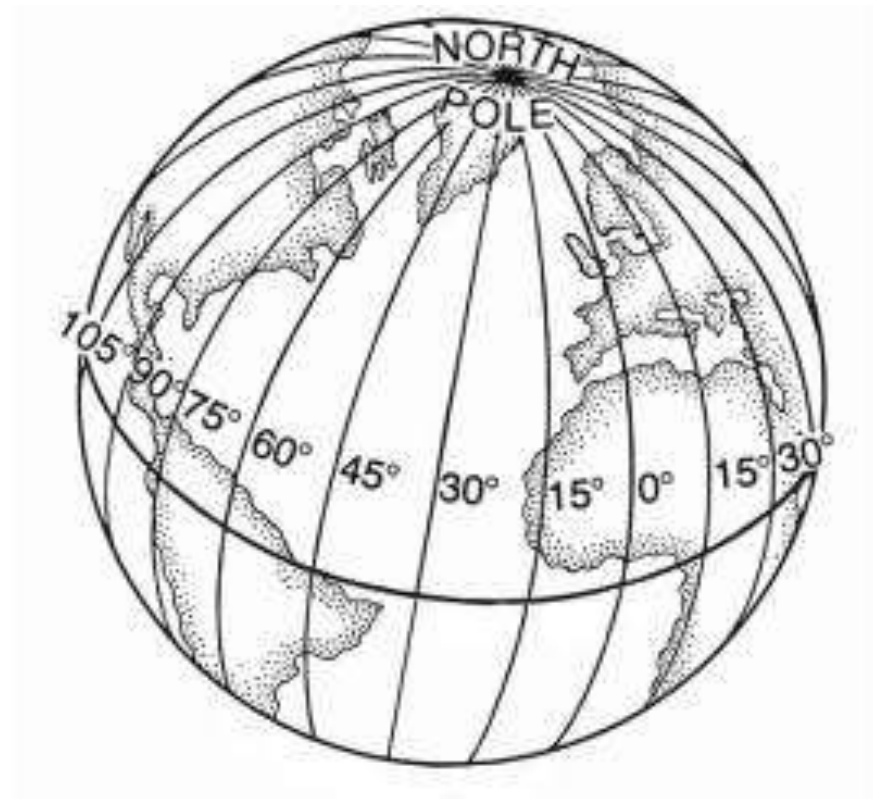


CELESTIAL NAVIGATION Audiobook Graphics



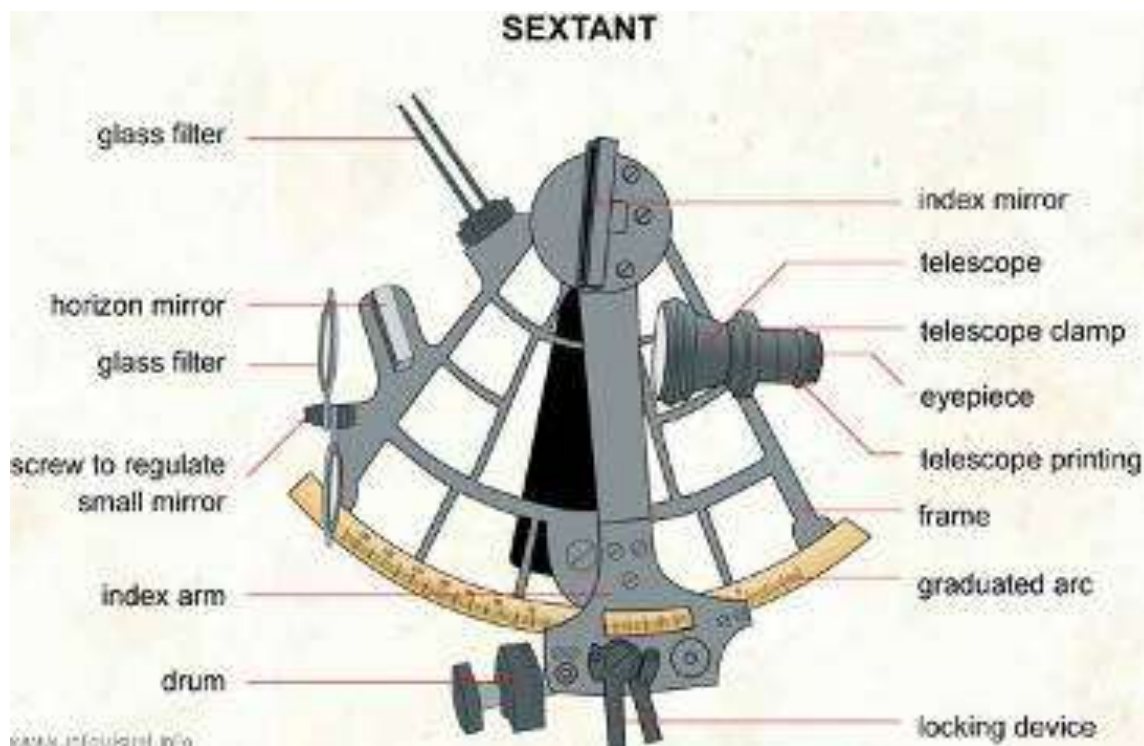
Latitudes



Longitudes



37th Parallel of Latitude on the U.S.



Some DVDs from www.CelestialNavigation.com



Item #359



Item #303



Item #301

Noon sight workform

1	DR lat. (N S)				1	DR lat. (N S)			
2	DR long. (E W)				2	DR long. (E W)			
3	zone date				3	zone date			
4	watch time				4	watch time			
5	watch error (+S -F)				5	watch error (+S -F)			
6	Zone time				6	Zone time			
7	Zone Desc (+W -E)				7	Zone Desc (+W -E)			
8	GMT				8	GMT			
9	GMT date				9	GMT date			
10	dec. hrs. (N S)				10	dec. hrs. (N S)			
11a	d				11a	d			
11b	d cor (+ -)				11b	d cor (+ -)			
12	DEC				12	DEC			
13	Index (+off) (-on)				13	Index (+off) (-on)			
14	dip HE				14	dip HE			
15	sum 13+14				15	sum 13+14			
16	Hs				16	Hs			
	line 15					line 15			
17	Ha				17	Ha			
18	Ha cor				18	Ha cor			
19	Ho				19	Ho			
20	90	89	60	0	20	90	89	60	0
21	minus Ho line 19				21	minus Ho line 19			
22	zenith dist.				22	zenith dist.			
23	Dec				23	Dec			
24	Latitude				24	Latitude			

Declination same name and less than latitude

$90 - Ho = \text{Zenith distance.}$ $\text{Latitude} = \text{Zenith distance} + \text{Declination}$

Declination same name and greater than latitude

$90 - Ho = \text{Zenith distance.}$ $\text{Latitude} = \text{Declination} - \text{Zenith distance}$

Declination contray name of latitude

$90 - Ho = \text{Zenith distance.}$ $\text{Latitude} = \text{Zenith distance} - \text{Declination}$



\$59.95 retail list price



\$659 retail list price



A couple of Casio Wave Ceptor watches



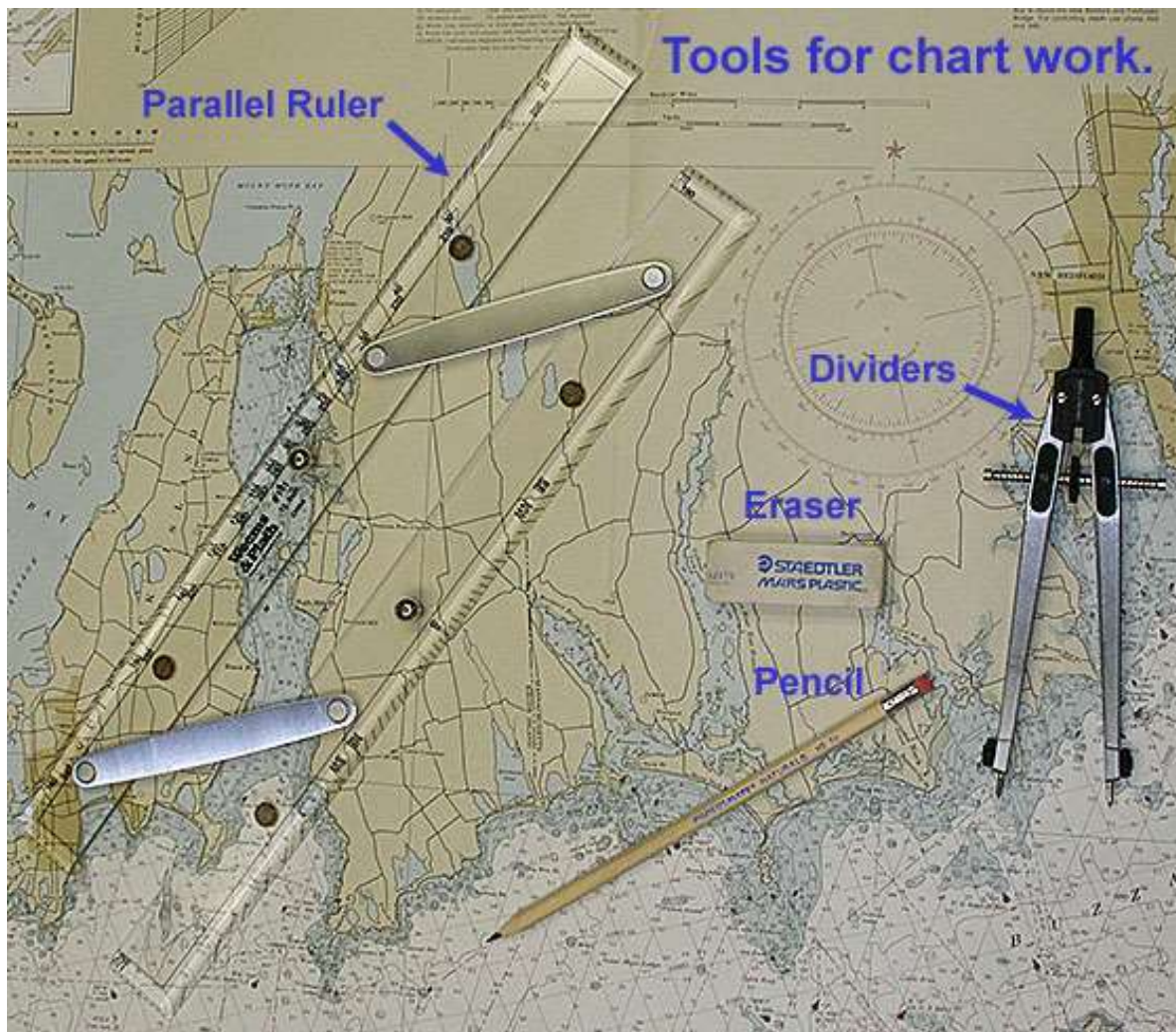
\$2,900.00 on eBay



And probably more, if you really have it to spend



Don't ask how much... you can't afford it

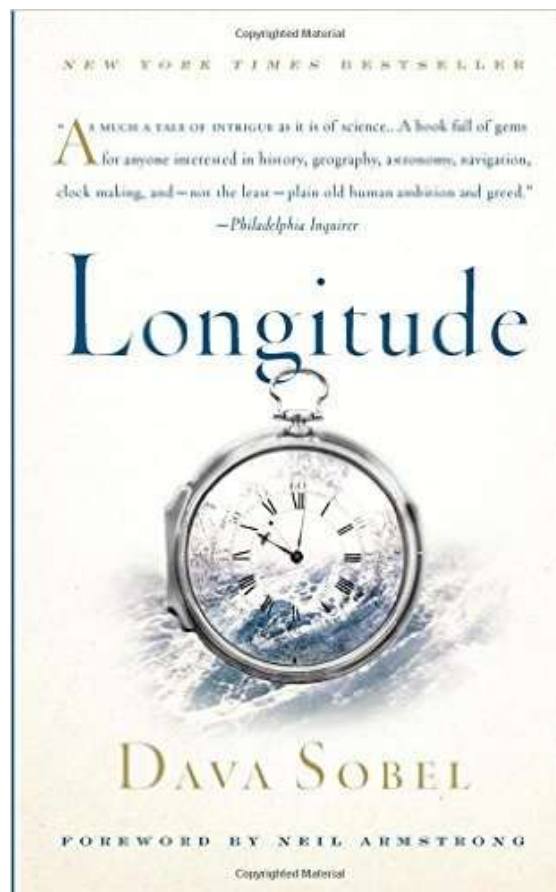
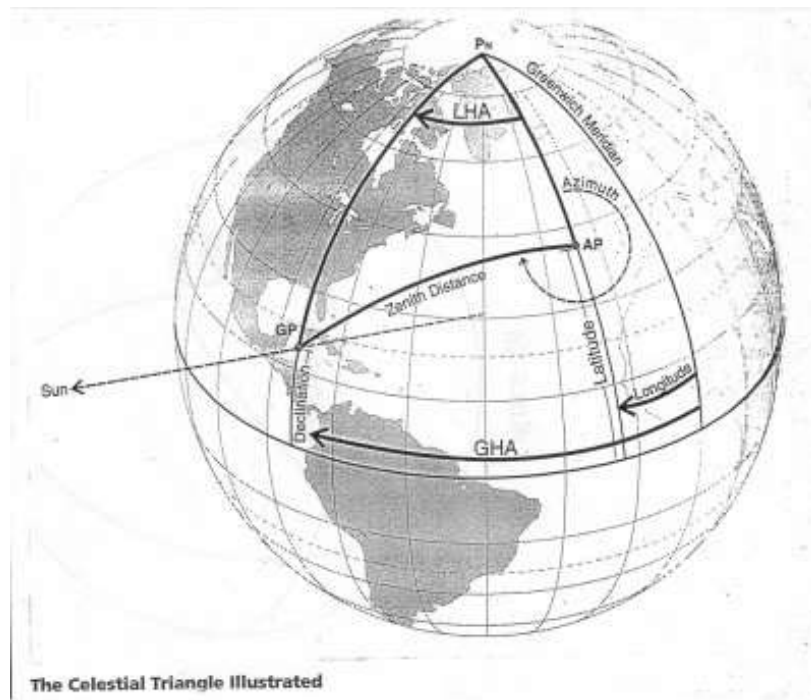


Coastal Piloting Navigation tools

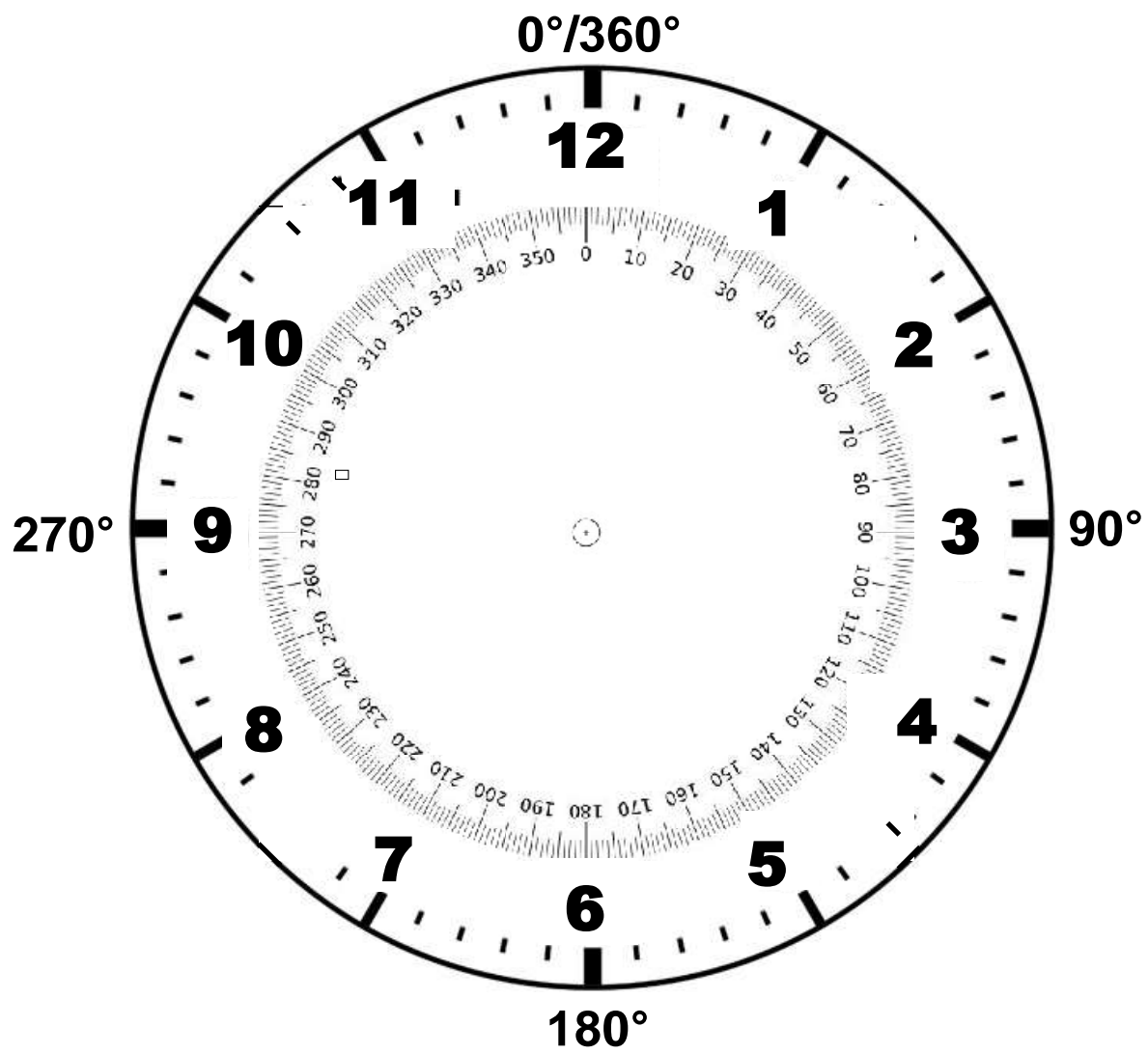


Hand-held compasses

Noon-shot worksheet sample (make copies for practice shots)

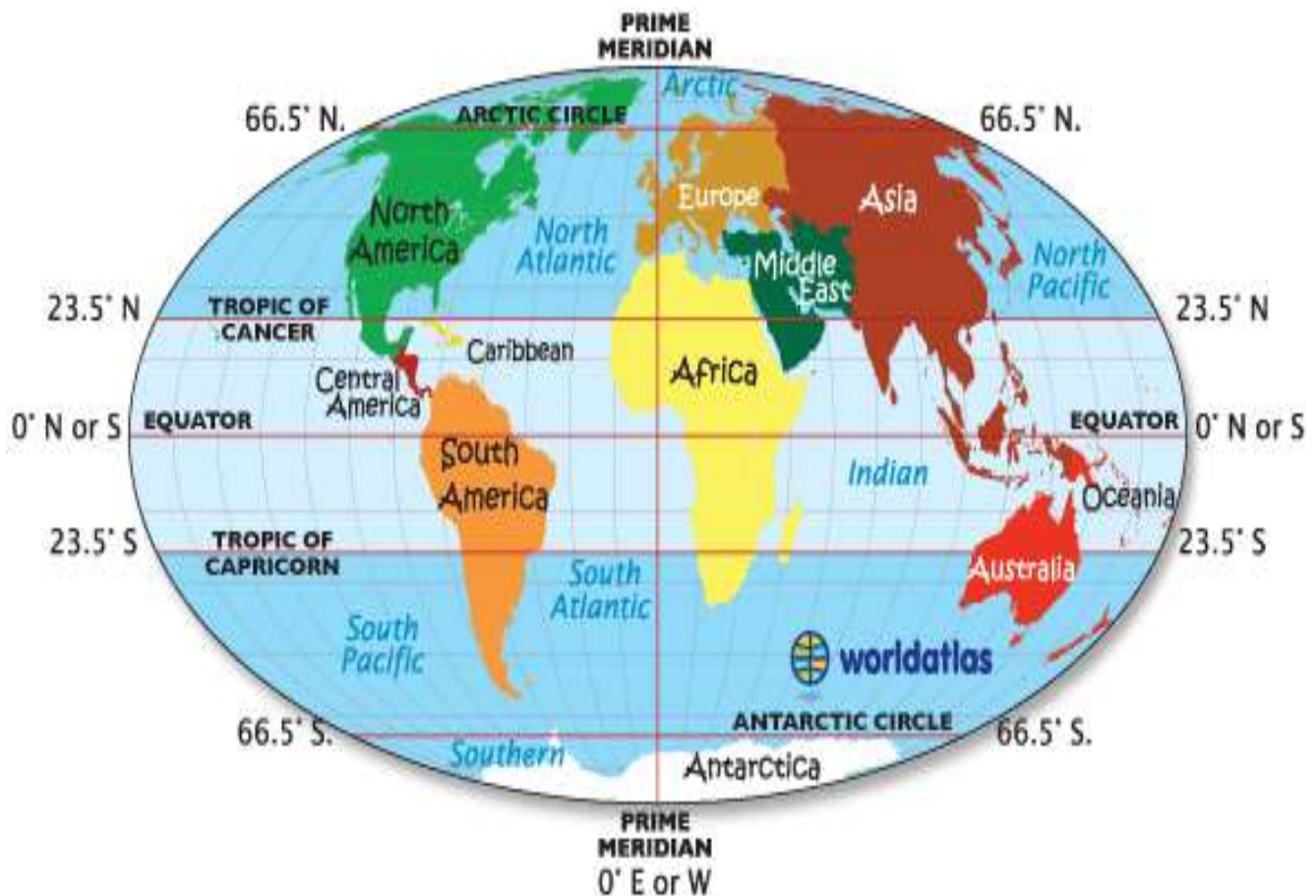


Available at Amazon
item 080271529X



Clock face with degrees added

[illegible]



The Tropic of Cancer at 23.5° latitude north, and the Tropic of Capricorn at 23.5° latitude south are the latitudes of two of the five major circles of latitude that mark maps of the Earth, besides the Arctic and Antarctic Circles and the Equator. The positions of these two circles of latitude (relative to the Equator) are dictated by the tilt of the Earth's axis of rotation relative to the plane of its orbit.

The area between these two imaginary latitudinal lines is referred to as the 'Tropic Zone,' or the 'Torrid Zone.'

INTERNATIONAL CODE

CODE FLAG AND



ANSWERING PENDANT

A ALPHA		I have a diver down; keep well clear at slow speed.	N NOVEMBER		No (negative or 'The significance of the previous group should be read in the negative').
B BRAVO		I am taking in or discharging or carrying dangerous goods.	O OSCAR		Man overboard.
C CHARLIE		Yes (affirmative or 'The significance of the previous group should be read in the affirmative').	P PAPA		In Harbour (Blue Peter); All persons should report on-board as the vessel is about to proceed to sea.
D DELTA		Keep clear of me - I am manoeuvring with difficulty.	Q QUEBEC		My vessel is healthy and I request free pratique.
E ECHO		I am altering my course to starboard.	R ROMEO		No signal.
F FOXTROT		I am disabled. Communicate with me.	S SIERRA		My engines are going astern.
G GOLF		I require a Pilot.	T TANGO		Keep clear of me, I am engaged in pair trawling.
H HOTEL		I have a Pilot on board.	U UNIFORM		You are running into danger.
I INDIA		I am altering my course to port.	V VICTOR		I require assistance.
J JULIETT		I am on fire and have dangerous cargo on board, keep well clear of me.	W WHISKEY		I require medical assistance.
K KILO		I wish to communicate with you.	X X-RAY		Stop carrying out your intentions and watch for my signals.
L LIMA		You should stop your vessel instantly.	Y YANKER		I am dragging my anchor.
M MIKE		My vessel is stopped & making no way through the water.	Z ZULU		I require a tug.

NUMERAL PENDANTS

1	2	3	4	5
6	7	8	9	0

SUBSTITUTES

FIRST SUBSTITUTE	SECOND SUBSTITUTE	THIRD SUBSTITUTE
------------------	-------------------	------------------

SEMAPHORE ALPHABET



REST
SPACE



A-1



B-2



C-3



D-4



E-5



F-6



G-7



H-8



I-9



J-0



K



L



M



N



O



P



Q



R



S



T



U



V



W



X



Y



Z



NUMERALS



ERROR
ATTENTION



CANCEL
ANNUL

The International Morse Code

A dash is equal to three dots in time, while the interval between the dots and dashes in a letter equals a dot in time. Between the letters in a word the interval is equal to three dots and between words, five dots.

THE ALPHABET

A	· · · —	N	— · ·
B	· · · — ·	O	— — —
C	· — · —	P	— · — ·
D	· — —	Q	— · — —
E	·	R	— · — ·
F	· · — ·	S	— · —
G	· — — ·	T	— —
H	· · — —	U	— — ·
I	· ·	V	— — · —
J	· — — —	W	— — — ·
K	— · —	X	— — · —
L	— · — ·	Y	— — — ·
M	— —	Z	— — — —

ACCENTED LETTERS

Ä	· · · — —
Å or Ȧ	· · · — — —
CH	· — — —
Ê	· — — —
Ë	· — — —
Ö	· — — —
Ù	· — — —

NUMERALS

1	· — — — —	6	— · — — —
2	· — — —	7	— · — — ·
3	· — —	8	— · — · —
4	· —	9	— · — · —
5	·	0	— — — —

ABBREVIATED NUMERALS

1	· — —	6	— · — —
2	· — —	7	— · — —
3	· — —	8	— · — —
4	· — —	9	— · — —
5	· — — (or =)	0	— — —

PUNCTUATION AND OTHER SIGNS

Full Stop (.)	· · — — —
Comma (,)	· — — —
Colon (:)	· — — —
Hyphen or Dash (-)	· — — —
Apostrophe (')	· — — —
Fraction Bar (/)	· — — —
Separation Sign (between whole number and fraction)	· — — —
* Brackets [()]	· — — —
* Underline	· — — —
Break or Double Dash (=)	· — — —
Interrogation Mark (?)	· — — —
Erase (or Error)	· — — —
Starting Signal	· — — —
End of Message	· — — —
Closing Down	· — — —
Interval (Wait)	· — — —
Message Received	· — — —
Ready to Receive	· — — —
Distress Call or SOS	· — — —

* The "brackets " and "underline " signs are transmitted before and after the word or words affected.

GLOSSARY

Altitude: the arc of a vertical circle between the horizon and a point or body on the Celestial Sphere.

Assumed Position: geographical position in (assumed) Latitude and (assumed) Longitude chosen to facilitate sight reduction.

Azimuth (Zn): the horizontal direction of a celestial body or point from a terrestrial point; the arc of the horizon, or the angle at the Zenith between the north part of the celestial meridian or principle vertical circle and a vertical circle through the body or point, measured from 000° at the north part of the principle vertical circle clockwise through 360° .

Azimuth Angle (Z): the arc of the horizon, or angle at the Zenith, between the north part or the south part of the celestial meridian, according to the elevated pole, and a vertical circle through the body or point, measured from 0° at the north or south reference eastward or westward through 180° according to whether the body is east or west of the local meridian. This is the azimuth value as tabulated in the sight reduction tables.

Circle of Position: A circle on the chart, with the subject celestial body as its center, and your position is somewhere on the circumference of this circle. The radius of this circle will be your Zenith distance, as indicated by your sextant reading.

Declination (Dec): angular distance north or south of the celestial equator; the arc of an hour circle between the celestial equator and a point on the Celestial Sphere, measured northward or southward from the celestial equator through 90° , and labeled N or S to indicate the direction of measurement.

Dip Correction: (HE – Height of Eye) Adjustment that must be made on your worksheet to take into account the number of feet you are above sea level, at the time of making your sextant shot

Doldrums: a belt of very still air near the equator that stalls sailboats. This area is located between 5 degrees north and 5 degrees south of the equator. The doldrums are also known as the Intertropical Convergence Zone (or ITCZ).

Estimated Position: geographical position in (estimated) Latitude and (estimated) Longitude obtained from Dead Reckoning or other piloting techniques indicating the most probable position of the observer.

Geographical Position (GP): the point where a line drawn from the center of a celestial body to the center of the Earth passes the Earth's surface.

Great Circle: the intersection of a sphere and a plane through its center.

Great circles: when cutting the Earth with a plane - if the plane goes through the center of the earth creating two equal parts then the circle formed by the intersection of the sphere or the Earth and the plane is the largest circle that can be created. The equator is a great circle. All the lines of longitude or meridians are great circles.

Greenwich Hour Angle (GHA): angular distance west of the Greenwich celestial meridian; the arc of the celestial equator, or the angle at the celestial pole, between the upper branch of the Greenwich celestial meridian and the hour circle of a point on the Celestial Sphere, measured westward from the Greenwich celestial meridian through 360° .

Greenwich Mean Time (GMT) -Universal Coordinated Time (UTC): For all intents and purposes, GMT is the same time as UTC. GMT is an imperial measurement as measured each noon when the Sun crosses 0° longitude. UTC is the equivalent time, as measured by various atomic clocks around the World

Ha: Apparent altitude: sextant altitude corrected for index error (ie) and HE (height of eye, or Dip Correction)

Hc: Calculated altitude. This may be a figure that you work out in advance, as what you expect your sextant reading to be

Ho: Observed altitude: Apparent Altitude corrected for all parallax and refraction

s: Sextant altitude: raw data - the actual reading of your sextant, with no corrections having been made

Hour Circle: a great circle on the Celestial Sphere, through the celestial poles and a celestial body. Hour Circles are perpendicular to the celestial equator.

The following illustration is what is known as the ***Celestial Triangle***. The boat's position is indicated by the letters "AP" (assumed position)

Index & other sextant mechanical errors. Below is a more detailed explanation of these types of errors.

Perpendicularity error: This is when the index mirror is not perpendicular to the frame of the sextant. To test for this, place the index arm at about 60° on the arc and hold the sextant horizontally with the arc away from you at arms length and look into the index mirror. The arc of the sextant should appear to continue unbroken into the mirror. If there is an error then the two views will appear to be broken. Adjust the mirror until the reflection and direct view of the arc appear to be continuous.

Side error: This occurs when the horizon glass/mirror is not perpendicular to the plane of the instrument. To test for this, first zero the index arm then observe a star through the sextant. Then rotate the tangent screw back and forth so that the reflected image passes alternately above and below the direct view.

If in changing from one position to another the reflected image passes directly over the unreflected image, no side error exists. If it passes to one side, side error exists. The user can hold the sextant on its side and observe the horizon to check the sextant during the day. If there are two horizons there is side error; adjust the horizon glass/mirror until the stars merge into one image or the horizons are merged into one.

Collimation error: This is when the telescope or monocular is not parallel to the plane of the sextant. To check for this you need to observe two stars 90° or more apart. Bring the two stars into coincidence either to the left or the right of the field of view. Move the sextant slightly so that the stars move to the other side of the field of view. If they separate there is collimation error.

Index error: This occurs when the index and horizon mirrors are not parallel to each other when the index arm is set to zero. To test for index error, zero the index arm and observe the horizon. If the reflected and direct images of the horizon are in line there is no index error. If one is above the other adjust the index mirror until the two horizons merge. This can be done at night with a star or with the moon.

Intercept (Hd): the difference in minutes of arc between the computed and observed altitudes (corrected sextant altitudes).

Limb Correction (aka Semi-diameter correction): This is the difference between taking the sun's measurement focusing on the lower or upper limb instead of the center, which is hard to do. Lower limb correction is added. Upper limb correction is subtracted.

Line of Position (LoP): a line indicating a series of possible positions of an observer, determined by observation or measurement.

Local Hour Angle (LHA): angular distance west of the local celestial meridian; the arc of the celestial equator, or the angle at the celestial pole, between the upper branch of the local celestial meridian and the hour circle of a celestial body or point on the Celestial Sphere, measured westward from the local celestial meridian through 360°

Meridian Angle (t): angular distance east or west of the local celestial meridian; the arc of the celestial equator, or the angle at the celestial pole, between the upper branch of the local celestial meridian and the hour circle of a celestial body, measured eastward or westward from the local celestial meridian through 180° and labeled E or W to indicate the direction of measurement.

Parallax error: caused by taking the moon shot from the surface of the earth instead of the center of the earth. The measurement needs to be from the center of the earth to the center of the moon. The difference in the angle is parallax. This phenomenon is easily seen by holding a finger up at arm's length and looking at it alternately, first with one eye, and then with the other.

Prime Meridian: the meridian of longitude 0° , used as origin for measurement of longitude. On the Earth this is the Greenwich Meridian.

Refraction, Parallax and Semi diameter are all found by using the Altitude Corrections Table (10 to 90 degrees) This is the first table in the nautical almanac

Sextant: An astronomical instrument that is used to determine latitude for navigation. It does this by measuring angular distances, like the altitude of the sun, moon and stars. The sextant was invented independently in both England and America in 1731. The sextant replaced the astrolabe. The word sextant comes from the Latin word meaning "one sixth."

Worksheet: You can make copies of the 2-shots worksheet on the next page of this book, for practice sextant shots.

Another Noon Shot Worksheet may be downloaded from our website

<http://www.CelestialNavigation.com> : go down the page to item **#303: CELESTIAL NAVIGATION - Sun Noonshot** and click on the link that says **SUN NOON-SHOT**

WORKSHEET – this will take you to the page from which you may download a worksheet. (this would be a good DVD for you to continue your celestial navigation with).

Zenith: that point on the Celestial Sphere vertically overhead of your vessel. It is from this vertical line going up from the center of the earth and through your boat that is the line you measure your

Zenith distance from and determine the distance from your boat and the celestial body being observed.

Zenith distance: angular distance from the Zenith; the arc of a Vertical Circle between the Zenith and a point on the Celestial Sphere.

This is the most important measurement in celestial navigation because it provides you with the arc distance in nautical miles from your position to the GP of the celestial body being shot by the sextant

Some Cruising Tips

Now that you've probably got the basics of Celestial Navigation under your belt, you're ready to go on to the more advanced courses to learn how to hold, use, operate, adjust and read a sextant.

Once you get the cruising bug, we'd like you to keep in mind some valuable tips that can make your trip safer and more enjoyable.

EPIRB

This is an acronym for **E**mergency **P**osition **I**ndicating **R**adio **B**eacon, and is contained in a portable unit that broadcasts your location in a way that can be picked up by passing aircraft and rescue personnel.

They come in different variations, with prices that can range from \$200 to \$1,800, but most of the time cruisers will merely rent one if they're just doing a short cruise of a couple of weeks.

Here is a list of the various types of EPIRBs that are available:

Class A: 121.5/243 MHZ. Float-free, automatically-activating, detectable by aircraft. Coverage is limited. These devices have been phased out by the FCC and may no longer be used, marketed or sold in the U.S.

Class B: 21.5/243 MHZ. Manually activated version of Class A. These devices have been phased out by the FCC and except for certain devices used as personal locator beacons, may no longer be used, marketed or sold in the U.S.

Class C: VHF ch15/16. Manually activated, operates on maritime channels only. These devices have long been phased out by the FCC and may no longer be used, marketed or sold in the U.S.

Class S: 121.5/243 MHZ. Similar to Class B, except it floats, or is an integral part of a survival craft. These devices have been phased out by the FCC and may no longer be used, marketed or sold in the U.S.

Category I: 406/121.5 MHZ. Float-free, automatically activated EPIRB. Detectable by satellite anywhere in the world. Recognized by [GMDSS](http://www.fcc.gov/gmdss).

Category II: 406/121.5 MHZ. Similar to Category I, except is manually activated. Some models are also water activated.

Inmarsat E: 1646 MHZ. Float-free, automatically activated EPIRB. Detectable by Inmarsat geostationary satellite. Recognized by GMDSS. These devices have been phased out by Inmarsat.

A new type of 406 MHz EPIRB, having an integral GPS navigation receiver, became available in 1998. This EPIRB will send accurate location as well as identification information to rescue authorities immediately upon activation through both geostationary (GEOSAR) and polar orbiting satellites. These types of EPIRBs are the best you can use.

These new 406 EPIRBs must be registered prior to their use. You can learn all about the registration process at www.navcen.uscg.gov/MARCOMMS/gmdss/epirb.htm

LIFE RAFT

Emergency automatic-inflating canister life rafts can also be rented for your cruise, and we've got a good segment on them, including what they should include, on our #304 ***Offshore Cruising Guide*** DVD [another shameless plug]

If you're going to rent one, make sure that before you take it, you insist on seeing it inflated. They may charge you a small re-packing fee, but it's worth it to know that the thing doesn't leak and that all the important accessories are included.

Also, I wouldn't rent one from any place that doesn't also offer repair services because they're more likely not to release one that they haven't gone through.

Warning: don't take a life raft that's rated for the exact number of people aboard your boat: always get one that allows for at least two to four more people than you ever expect to be using it. Trust me on this one... you'll thank me later when you notice how it seems to 'shrink' hourly while you're in it.

PROVISIONING

Depending on your refrigeration capability and tastes in food, you'll have to make your own decisions as to what to bring with on your trip, but as our chapter on SeaSickness mentioned, I'd stay away from the deep trans-fat-fried snack foods.

No matter what you want to load your boat up with, please keep this important rule in mind: Do **NOT** bring any food aboard in cardboard boxes. The reason for this rule is to avoid stowaways: cockroaches love to nest in the corrugations of cardboard boxes, and once they're aboard, they're next to impossible to get rid of.

My personal bring-aboard favorites are gluten-free pasta (Whole Foods sells it) for hot meals and granola for snacks. I love raisins and other fruits, but the high fructose contents may cause a 'sugar' crash – something you definitely don't need while you're on a three-hour night watch.

You're probably better off snacking on walnuts: not too much sugar content, and some Omega-3 oils that are good for you.

It's also a good idea to have some vitamins aboard too, because quite often your usual nutritious meal schedule won't be maintained the way you'd like it to be.

WATER

If any suggestion is self-explanatory, this one is.

You can go more days without food than you can without water, so make sure you've got plenty of it stashed around the boat. On my boat, we always keep an extra case or two of bottled water in the bilge area.

Whenever you see a cruising boat come into port, you'll usually see some jerry jugs lashed to the life-lines and stanchions, and you can be sure they're intended for water.

I also keep a case of small cans of V-8 Juice stowed away... gotta have my veggies.

FREEZE-DRIED FOOD

I recently Googled the phrase 'freeze dried food' and got almost a million and a half search results, which means that it's not too difficult to find and order this stuff.

True, you're not likely to get a true gourmet meal out of one of these packages, but with proper shopping and testing, you can definitely end up with something much better than what they serve on commercial airliners.

Next time you're near a place that sells camping equipment you should check out what they have available in the 'food' section.

As long as you don't raise the bar too high, you won't be disappointed. I usually like to find something that's just better than the K-rations I ate in the army – but that's me... I've always had what my friends describe as a 'juvenile palette.'

SSB

If you don't have some expensive form of satellite communication, then I'd strongly suggest that you get a **Single Sideband Radio** to take with on your cruise.

This can be an extremely valuable piece of equipment if used properly, and is also a great communication device, weatherfax, timepiece, and with good instructions can do just about everything but shampoo your carpets. Our DVD #708: ***Using Single Sideband Radio*** would be a good program for you to watch about this device.

ONLINE BANKING

For cruising sailors, online banking may be the greatest invention since sliced bread.

There are very few national companies that don't offer online billing, and with an online bank account, even if you don't have internet access while underway, there are few places on land in the world nowadays where you can't find a way to get online, find your bills and have payments sent out.

It's also a good way to have your pension, social security, book royalties, interest, or any other type of income electronically transferred directly into your bank account, and have the ability to check on it and make payments.

SATELLITE PHONE

Getting away from things is nice, but keeping in touch with family and friends is also nice... and there's no better way to do it than with a satellite phone. Minute rates are sold in 25-minute 'bundles' and cost anywhere from 90¢ to \$2 per minute.

"Iridium satellite phones are true global phones. With an Iridium satellite phone, you will be able to make and receive calls anywhere in the world for the same rate. Iridium satellite phones are used by Governments, Military, Rescue Teams, Emergency Workers, Hikers, Climbers, Skiers and virtually anyone that must have voice and small data communication at any point on earth."

They rent several models of their satellite phones for as little as about \$30 a week and you can also get a weekly or monthly rate on Broadband Satellite Internet.

For more information, can check out their website at **satellitephonestore.com/**

TYPEWRITER

If you're not a high-tech person and don't have a computer and printer onboard, then you might find an age-old device very handy: a manual portable typewriter.

On my last cruise, it seems that every port we pulled into had different requirements for crew-lists, temporary importation permits, and other chicken-_____ things they could charge for.

If you don't want to wind up with a fatigued hand from doing the paperwork, I'd strongly suggest you carry a portable old manual typewriter on your cruise, along with an extra ribbon and plenty of carbon paper.

One thing that foreign countries seem to be impressed by is an engraved seal on paperwork. In their minds, the seal makes it truly official.

On one of our cruises, we borrowed an old corporation seal from a friend's defunct organization, and you'd be surprised how much faster our paperwork was processed when they noticed the seal on it.

SOLAR CHARGER & INVERTER

There are numerous solar charging products on the market now that can power your batteries – not only for the engine starter and house batteries, but for the little convenience items like cell phones, laptops, and anything else you'd like to run, with the aid of an inexpensive inverter that turns the juice into AC current.

I've never had the luxury of using a computer and printer on board (powered by a solar-charged battery and inverter), but it sure sounds like a wonderful luxury to consider on a cruise.

There's also a nice selection of wind and (or) water chargers available for cruising sailors. They charge your batteries by use of a windmill device either up in the air or underwater, towed behind the boat.

SOLAR LIGHTS

I've recently become a big fan of solar lights. I have several 3-light sets around my home – in the driveway, front entryway, back yard, garage, and will soon be putting some on my boat too. The new solar LED lights collect Sun during the day and can burn more than 6 hours after dark.

I'll be installing a 26-foot 60-lite set of solar lights on a string down near the teak-and-holly sole of my boat, so that a clear pathway is visible at night. At the nav station and in the heads I'll be putting in some solar lights with red LEDs – and in the cockpit, I'm rewiring an old hanging oil trawler lamp as a solar light.

The thing that sold me on solar wasn't necessarily the savings of electricity costs, it was what happened one night when some construction crew accidentally knocked out all the power on the street where I live.

All the street lights were out too, so it was pitch black outside – except for one house that had some solar lights decorating the front yard and entryway. That did it for me.

EMERGENCY TILLER

There's a way to steer with your sails, but I wouldn't suggest it as a primary choice if your steering goes out on you – and it can.

If you don't have a tiller-equipped boat, problems can always arise with the steering mechanism, whether it be hydraulic, cable, chain, rope, quadrant or whatever.

When that happens, the best thing you can do is immediately install and switch over to your emergency tiller. Every sailboat should have one on board, and you ought to have some practice drills getting it out of the seat locker and installed in as quickly as possible.

SHROUD SNIPPERS

Losing a mast is a terrible thing, but if that event takes place, the mast isn't really lost – it's still attached to your boat by the stainless steel standing rigging – your shrouds and stays.

At that point, your mast changes identity: it goes from being something that holds a sail, into being a strong battering ram, swinging back and forth wildly, trying to punch holes in your hull.

It's gotta go... and that's not the time to try and undo the turnbuckles and the swaging. The only way to safely disengage the mast is by cutting the rigging, and you'll need some heavy-duty snippers with heat-treated blades for that job.

No matter how cost-conscious a skipper you are, do **NOT** even consider salvaging that severed mast by attaching some lines and towing it behind the boat, because if you get into a heavy following sea, you will be attacked by a huge javelin, as that mast comes flying towards the stern of your boat.

PANAMA CANAL DOCKLINES

If you plan on going through the 'ditch,' (that's what the pro's the Panama Canal) make sure that you've got at least 4 dock lines each a minimum of 100 feet long. You'll find out why when you get there.

PLAYBOY MAGAZINES & Open Packs of CIGARETTES

Quite often while in a small foreign port, the locals will row out to your boat and offer to sell you things like lobsters or home-made trinkets.

First of all, do NOT invite them aboard – and if there are two or more of them in the boat, get your flare gun out of its container and stick it visibly in your belt, because you never know if they're 'friendlies' or pirates... and don't think that those two smiling natives in a small rowboat aren't capable of doing some damage, just because they don't have parrots on their shoulders, fly a jolly roger or are wearing eye-patches.

Once you've determined that your visitors are there for commerce only, you can see what they've got to offer. In almost all cases it'll be something to eat that they've recently caught.

We've always thought it a bad idea to let anyone know that we have money on board, so we usually plead poverty, but offer them something else for their wares: either cigarettes or old Playboy magazines. But, the main thing is not *what's* being offered... it's *how* they perceive the offer.

None of our crew were smokers, but we would have one of them keep an almost full pack of cigarettes in his t-shirt pocket, and then we would go into our academy-award-winning act: I would mention cigarettes to the visitors, and if they show the least bit of interest, I then call my crewmember over and tell him to give the visitors his cigarettes.

This is his cue to put his hand over the cigarette pocket and strenuously object, arguing that it's his last pack.

My next move is to issue some strong, loud orders, and have another crewmember forcibly remove that pack from the other one's pocket, and hand them to me. I then order that crewmember to go below.

With the purloined pack of cigarettes in my hand, I offer it to the visitors – and they accept the offer, no doubt feeling that it is a hard-won trophy, and a story they can tell their families about.

If our visitors don't show any interest in cigarettes, we usually fall back into Plan 'B,' which is the offering of a Playboy magazine that another crewmember will strenuously object to giving up.
