



HIGH SEAS RADIOTELEPHONE WEATHER BROADCASTS			
LOCATION	STATION	CARRIER FREQUENCY (kHz)	BROADCAST TIMES (UTC)
Honolulu, HI	NMO (USCG)	6501.0	0600, 1200
		8764.0	0005, 0600, 1200, 1800
		13089.0	0005, 1800
Guam	NRV (USCG)	6501.0	0930, 1530
		13089.0	0330, 2130

BROADCASTS OF MARINE WEATHER FORECASTS AND WARNINGS BY MARINE RADIOTELEPHONE STATIONS			
LOCATION	STATION	FREQUENCY, kHz/MHz	BROADCAST TIMES (UTC)
Guam	NRV (USCG)	~ CH 22A *# 2670 kHz	0900, 2100 0705, 2205
* Preceded by announcement on 2182 kHz ~ Preceded by announcement on ch. 16. # Single Sideband, suppressed carrier, carrier frequency.			

RADIOFACSIMILE WEATHER BROADCASTS FOR PACIFIC FROM JAPAN		
TOKYO 1, JAPAN		
CALL SIGNS	FREQUENCIES	TIMES
JMH	3622.5 kHz	Continuous
JMH2	7305 kHz	Continuous
JMH3	9970 kHz	Continuous
JMH4	13597 kHz	Continuous
JMH5	18220 kHz	Continuous
JMH6	23522.9 kHz	Continuous

RADIOFACSIMILE WEATHER BROADCASTS FOR PACIFIC FROM HAWAII			
CITY	STATION	CARRIER FREQ (kHz)	BROADCAST TIMES/UTC
Honolulu, HI	KVM 70	9982.5 11,090 16,135 23,331.5	0533, 1030, 1733, 2230

OTHER MARINE WEATHER SERVICES CHARTS AVAILABLE			
MSC-1	Eastport, ME to Montauk Point, NY	MSC-8	Mexican Border to Point Conception, CA
MSC-2	Montauk Point, NY to Manasquan, NJ	MSC-9	Point Conception, CA to Point St. George, CA
MSC-3	Manasquan, NJ to Cape Hatteras, NC	MSC-10	Point St. George, CA to Canadian Border
MSC-4	Cape Hatteras, NC to Savannah, GA	MSC-11/12	Great Lakes
MSC-5	Savannah, GA to Apalachicola, FL	MSC-13	Hawaiian Waters
MSC-6	Apalachicola, FL to Morgan City, LA	MSC-14	Puerto Rico and Virgin Islands
MSC-7	Morgan City, LA to Brownsville, TX	MSC-15	Alaskan Waters
		MSC-16	Guam and the Northern Mariana Islands

MSC charts can be viewed at:  
<http://www.nws.noaa.gov/om/marine/pub.htm>  
Nautical charts for navigation purposes for these coastal areas are available from local marinas, marine supply stores, and the address below.  
Copies of these charts are available for \$1.25 each from:  
FAA, National Aeronautical Charting Office  
Distribution Division, AVN-530  
Telephone Toll Free: (800) 638-8972  
E-mail: 9-AMC-Chartsales@FAA.gov

NOAA WEATHER RADIO BROADCASTS FROM THE MARIANA ISLANDS			
LOCATION	STATION	FREQUENCY	BROADCAST TIMES
Guam	WXM-85	162.40 MHz	Continuously, 24 hrs a day
Saipan	WXM-86	162.55 MHz	Continuously, 24 hrs a day
These VHF-FM radio stations, locations shown on the map, are operated by the National Weather Service. This is a continuous broadcast, 24 hours a day. The broadcast includes the latest costal waters and local island weather forecasts and warnings for Guam, Rota, Tinian and Saipan.			

HIGH SEAS RADIOTELEX (SITOR) WEATHER BROADCASTS			
LOCATION	STATION	FREQUENCY (kHz)	BROADCAST TIMES (UTC)
Honolulu, HI	NMO (USCG)	8416.5	0130, 0730, 1330, 2030
		12579.0	0130, 0730, 1330, 2030
		22376.0	0130, 2030
		518	0040, 0440, 0840
		NAVTEX(O)	1240, 1640, 2040
Guam	NRV (USCG)	12579.0	0500, 1500, 1900, 2315
		16086.5	0500, 1500, 1900, 2315
		22376.0	0500, 1500, 1900, 2315
		518	0100, 0500, 0900
		NAVTEX(V)	1300, 1700, 2100

RADIO WWV/WWVH STORM INFORMATION BROADCASTS	
HIGH SEAS STORM INFORMATION for the North Atlantic and North Pacific is provided mariners through a cooperative program of two Department of Commerce agencies: the National Weather Service of the National Oceanic and Atmospheric Administration and the National Institute of Standards and Technology. Bulletins are compiled by the National Weather Service and broadcast every hour by the National Institute of Standards and Technology's Frequency and Time Broadcast Services Radio Stations — WWV, Fort Collins, Colorado and WWVH, Kauai, Hawaii. These are the radio stations that sailors and others listen to for daily time checks.	
WWVH (KAUAI, HAWAII) FREQUENCIES : 2.5, 5, 10, 15 MHz The weather broadcast is in 45-second segments separated by a 15-second interval.	
TIMES OF BROADCAST	BROADCAST AREA
48 minutes past the hour	Information on storms, and lessor systems
49 minutes past the hour	as time permits, for the North Pacific and for
50 minutes past the hour	the South Pacific to 25°S between 160°E
51 minutes past the hour	and 110°W.

WINDS OF GUAM, ROTA, TINIAN, AND SAIPAN	
Winds offshore of Guam and the Northern Mariana Islands are predominately trade winds which blow from the east and northeast. They are strongest from December through May, with speeds of 15 to 25 knots. Seas have a western set with heights ranging from 5 to 8 feet. Winds and seas can be greater in the channels between the islands. During the rest of the year, there is often a breakdown of the trades. Sea breeze effects are usually minimal, although the strength of the trade winds may be affected (enhanced on the coastal waters east of the island and lessened on the western side during the late afternoon). At night there is little evidence of a land breeze. The land masses usually cool to about the temperature of the sea surface during the early morning hours.	
Although frontal passages are rare over the islands, frontal remnants (shear lines) occasionally move this far south during the winter months. At such times the winds continue generally out of the east and northeast, but can increase to near-gale force.	
Winds associated with tropical cyclones can be any speed and from any direction, depending on the intensity of the storms and their path relative to the islands. When they increase to tropical storm or typhoon intensity, destructive winds and seas can result. They can occur at any time of the year, but are more frequent from June through November. The chance of having a typhoon move directly over an island is about 1 in 11 years. However the chance of having one pass close enough to produce high winds and seas is about 1 in 3 years. There are no protective refuges for yachts, except on Guam. However, space is limited so cruising sailors should avoid these islands during the typhoon season.	
TROPICAL CYCLONES	
Definitions: 1. Tropical Cyclone - A nonfrontal low pressure system originating over tropical or subtropical waters and having a definite organized circulation. 2. Tropical Disturbance - A discrete system of apparently organized convection originating in the tropics or subtropics having nonfrontal character and having maintained it's identity for 12 to 24 hours. 3. Tropical Depression - A tropical cyclone with maximum sustained one minute mean surface winds of 33 knots or less. 4. Tropical Storm - A tropical cyclone with maximum sustained one minute mean surface winds of 34 to 63 knots. 5. Typhoon - A tropical cyclone with maximum sustained one minute mean surface winds of 64 to 129 knots. 6. Super Typhoon - A typhoon with maximum sustained one minute mean surface winds of 130 knots or greater.	

INTERNET ADDRESSES	
National Weather Service Current Weather Data <a href="http://www.nws.noaa.gov">http://www.nws.noaa.gov</a>	
National Data Buoy Center <a href="http://www.ndbc.noa.gov">http://www.ndbc.noa.gov</a>	
U.S. Coast Guard Navigation Center <a href="http://www.navcen.uscg.mil">http://www.navcen.uscg.mil</a>	
National Weather Service Pacific Region Headquarters <a href="http://www.prh.noaa.gov/pr/hg">http://www.prh.noaa.gov/pr/hg</a>	
Marine Product Dissemination Information <a href="http://www.nws.noaa.gov/data.html#mar">http://www.nws.noaa.gov/data.html#mar</a>	
National Weather Service in Tiyan, Guam <a href="http://www.prh.noaa.gov/guam/">http://www.prh.noaa.gov/guam/</a>	
MARINE RADIOFACSIMILE CHARTS THROUGH E-MAIL	
National Weather Service radiofax charts broadcast by the U.S. Coast Guard from Point Reyes, CA are available via E-mail. Marine text products are also available through this service. This allows Internet access for mariners who do no have direct access to the World Wide Web, but who are equipped with an E-mail system. Users can request files from NWS and have them automatically E-mailed back to them. To get started, send an E-mail to:  Address: <a href="mailto:ftpmail@weather.noaa.gov">ftpmail@weather.noaa.gov</a> Subject: (not required) Body: help	
Direct any questions to 301-713-1677, extension 128, or 301-713-0882, extension 122.	

WEATHER RULES FOR SAFE BOATING	
Before setting out: Obtain the latest available weather forecast for the boating area. The NOAA Weather Radio continuous broadcasts (VHF-FM) are the best way to keep informed of the expected weather and sea conditions. If you hear on the radio that warnings are in effect, don't venture out on the water unless you are confident your boat can be navigated safely under forecast conditions of wind and sea.	
While afloat: 1. Keep a weather eye out for: the approach of dark, threatening clouds, which may foretell a squall or thunderstorm; any steady increase in wind or sea; any increase in wind velocity opposite in direction to a strong tidal current. A dangerous rip tide condition may form steep waves capable of broaching a boat. 2. Check radio weather broadcasts for latest forecasts and warnings. 3. Heavy static on your AM radio may be an indication of nearby thunderstorm activity. 4. If a thunderstorm catches you while afloat, you should remember that not only gusty winds but also lightning poses a threat to safety. - stay below deck if possible. - keep away from metal objects that are not grounded to the boat's protection system. - don't touch more than one grounded object at the same time (or you may become a shortcut for electrical surges passing through the protection system). - put on a life jacket and prepare for rough sea conditions.	