



SHORT RANGE CERTIFICATE MARINE RADIO HANDBOOK



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INTRODUCTION TO VHF RADIO

VHF RADIO

VHF: VERY HIGH FREQUENCY

MARINE PURPOSES: 156.0 - 162.025 MHz

CALLED BY THE ITU: VHF MARITIME MOBILE BAND

**MARINE VHF: TRANSMITTER
+ RECEIVER
+ CHANNELS**

TRANSMISSION POWER: 1 - 25 WATTS

MAXIMUM RANGE: 60 NM

WHY USE THE VHF RADIO ?



RESCUE SERVICES



HARBORS / MARINAS



BASCULE BRIDGES



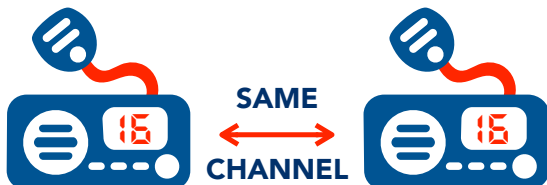
LOCKS / SLUICES



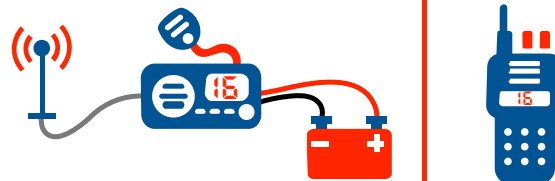
OTHER SHIPS

VHF RADIO

**CHANNELS
1-28 & 60-88**

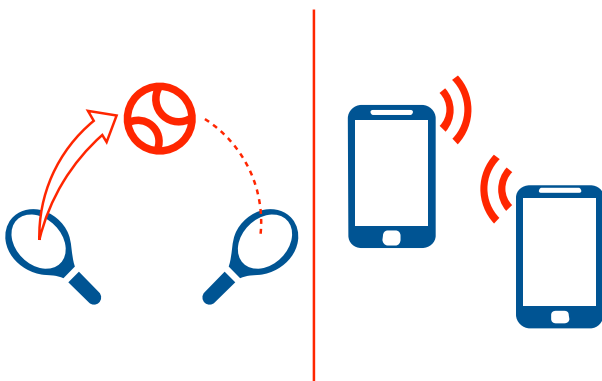


TYPES OF VHF RADIOS



**MORE RELIABLE
HIGHER RANGE
BIGGER DISPLAY**

SIMPLEX AND DUPLEX



BASIC CHANNELS



DISTRESS + URGENCY + SAFETY + CALLING

INTRODUCTION TO VHF RADIO

BASIC CHANNELS

70 **D**IGITAL
SELECTIVE
CALLING

DISTRESS + URGENCY + SAFETY + CALLING



BASIC CHANNELS

13

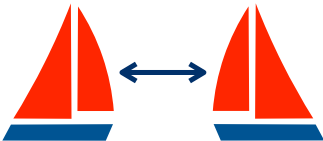


NAVIGATIONAL SAFETY



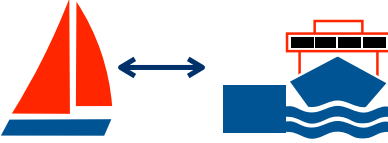
BASIC CHANNELS

6 8 72 77



BASIC CHANNELS

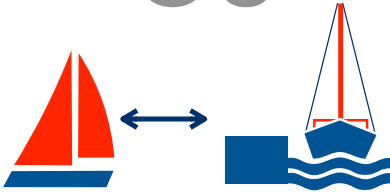
11 12 14



PORTS









BASIC CHANNELS

80

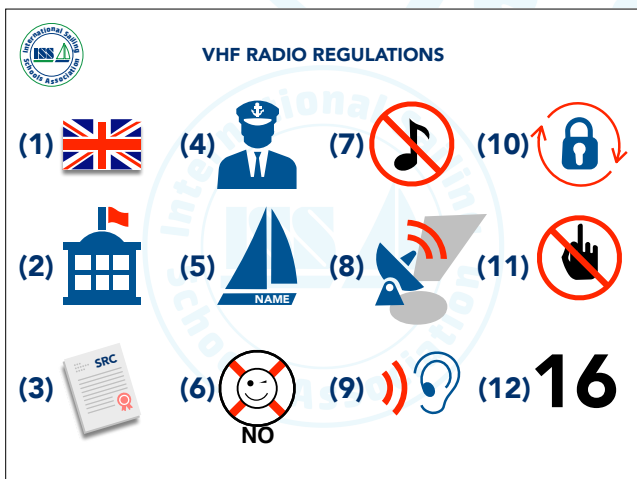
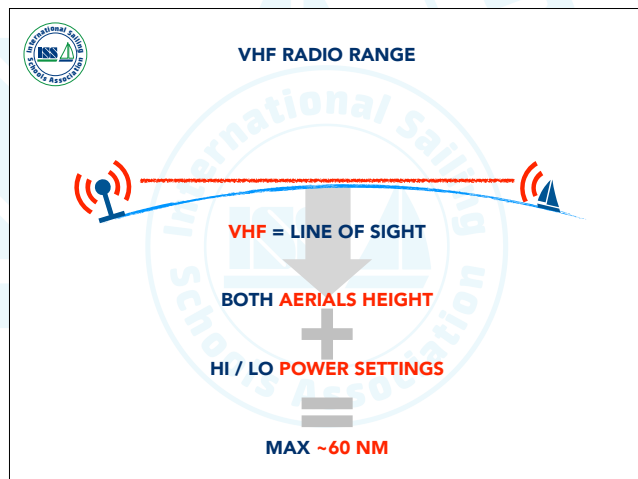
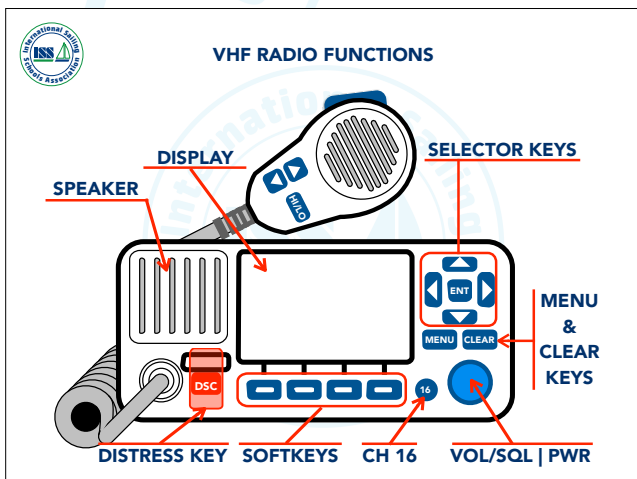
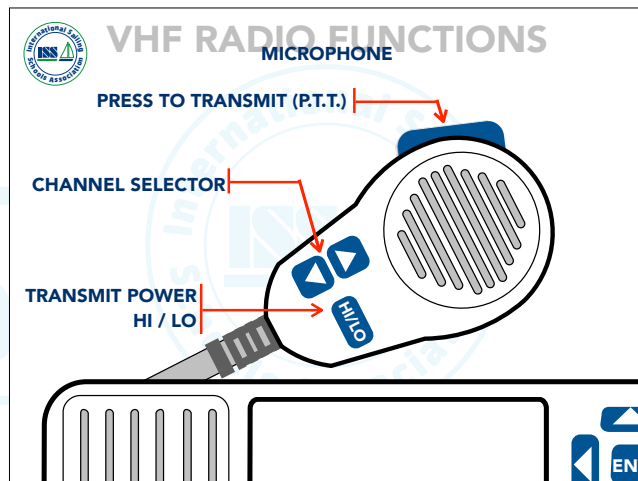
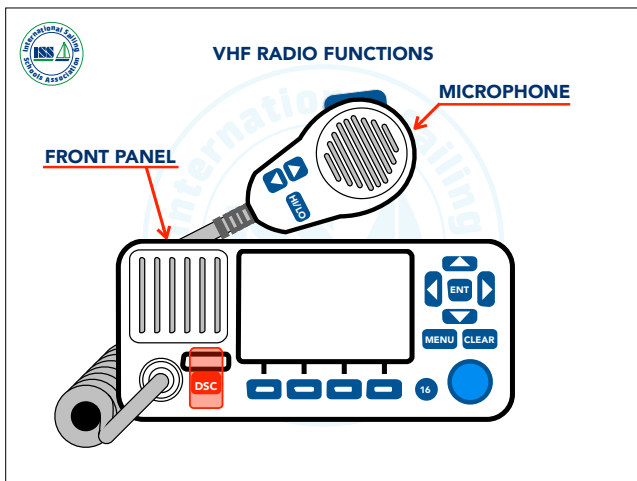


MARINAS

BASIC CHANNELS

16		6 8	
70		72 77	
13		11	
		12 14	
		80	

INTRODUCTION TO VHF RADIO



INTRODUCTION TO VHF RADIO



ONE 1 TWO 2 THREE 3

FOUR 4 FIVE 5 SIX 6

SEVEN 7 EIGHT 8 NINER 9

ZERO 0



RADIO PROCEDURE WORDS

RADIO PROCEDURE WORDS

OVER @ THE END OF 
INVITATION TO REPLY

OUT THE END
NO REPLY REQUIRED

RECEIVED CONFIRMATION
OF RECEIVING

RADIO PROCEDURE WORDS

SAY AGAIN REPEAT
YOUR 

I SAY AGAIN I REPEAT
MY 

I SPELL SPELL USING PHONETIC ALPHABET

RADIO PROCEDURE WORDS

CORRECTION I MADE A MISTAKE
+ REPEAT AGAIN

CORRECT CONFIRMATION THAT 
REPEATED RIGHT

WRONG INFORMATION THAT 
REPEATED WRONG

RADIO PROCEDURE WORDS

ALL AFTER REPEAT AGAIN ALL
AFTER THIS PHRASE

ALL BEFORE REPEAT AGAIN ALL
BEFORE THIS PHRASE

RADIO CHECK DO YOU
HEAR ME ?

RADIO PROCEDURE WORDS

READ BACK YES
I HEAR YOU

STATION CALLING
WHEN YOU ARE UNSURE OF THE NAME AND ID

THIS IS ALWAYS
BEFORE YOUR STATION NAME



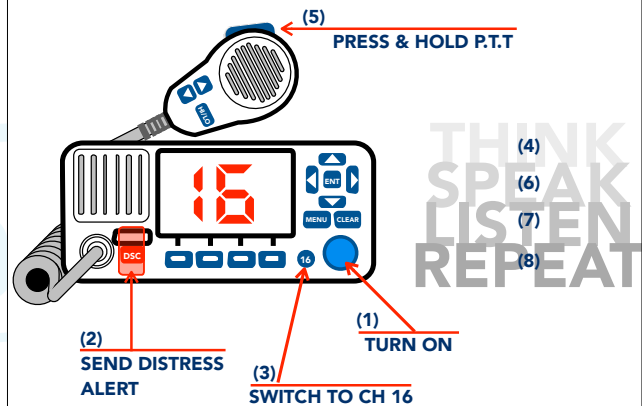
RADIO PROCEDURE WORDS

MAYDAY

USED ONLY FOR
DISTRESS & EMERGENCY
PURPOSES

CREW IN
GRAVE & IMMINENT
DANGER


PROCEDURE BEFORE MAYDAY CALL



MAYDAY CALL

MAYDAY CALL | **MAYDAY, MAYDAY, MAYDAY**
THIS IS NAME x3


MAYDAY NAME
MY POSITION IS 38° 50.5' N & 001° 25,3' E
NATURE OF DISTRESS

MAYDAY  **IMMEDIATE ASSISTANCE REQUIRED**
WE HAVE # OF PEOPLE ON BOARD
ANY OTHER USEFUL INFORMATION
OVER

MAYDAY CALL

MAYDAY CALL | **MAYDAY, MAYDAY, MAYDAY**
THIS IS VENUS, VENUS, VENUS

MAYDAY VENUS
MY POSITION IS 38° 50.5' N & 001° 25,3' E
FIRE ON BOARD

MAYDAY  **IMMEDIATE ASSISTANCE REQUIRED**
WE HAVE 10 PEOPLE ON BOARD
OUR EXTINGUISHERS ARE NOT WORKING
OVER

ANY CALL BASIC RULES

PROCEDURE WORD x3
THIS IS NAME x3

POSITION
MESSAGE
OVER

REPLY TO MAYDAY CALL

MAYDAY
VENUS, VENUS, VENUS
THIS IS COAST GUARD,
COAST GUARD,
COAST GUARD
RECEIVED MAYDAY
OVER



RADIO PROCEDURE WORDS

MAYDAY RELAY

VESSEL CANNOT SEND A DISTRESS MESSAGE ITSELF
THE MESSAGE IS NOT HEARD
YOU ARE TOO FAR TO PROVIDE ASSISTANCE

IF NO STATION
ANSWERS
MAYDAY CALL



4 min



FWD



MAYDAY RELAY

RECORD THE CALL AND TIME IN VESSEL'S LOG
KEEP WATCH ON CH 16 FOR A COAST STATION TO
ACKNOWLEDGE

IF NO STATION
ANSWERS
MAYDAY CALL



4 min



FWD



MAYDAY RELAY

MAYDAY RELAY, MAYDAY RELAY, MAYDAY RELAY
THIS IS GIZMO, GIZMO, GIZMO
WE RECEIVED A DISTRESS CALL FROM A VESSEL BY
NAME OF VENUS AT 12:30
VENUS IN POSITION 38° 50.5' N & 001° 25,3' E
VENUS HAS FIRE ON BOARD
10 PEOPLE ON BOARD
THEIR EXTINGUISHERS ARE NOT WORKING
REQUIRE IMMEDIATE ASSISTANCE
OVER

MAYDAY RELAY

MAYDAY RELAY, MAYDAY RELAY, MAYDAY RELAY
THIS IS GIZMO, GIZMO, GIZMO
IN POSITION 38° 49.5' N & 001° 26,5' E
RED ROCKET FLARE IS OBSERVED ON BEARING
320° FOR A DISTANCE OF ALMOST 2 NM FROM
OUR POSITION
OVER

SEELONCE MAYDAY



TO ANNOUNCE RADIO SILENCE

SEELONCE MAYDAY

MAYDAY
ALL STATIONS, ALL STATIONS, ALL STATIONS
THIS IS COAST GUARD,
COAST GUARD,
COAST GUARD
MAYDAY VENUS
TIME 13:00 UTC
SEELONCE MAYDAY
OUT

RADIO PROCEDURE WORDS

SEELONCE DISTRESS

USED BY



TO ANNOUNCE **RADIO SILENCE**

SEELONCE DISTRESS

MAYDAY

ALL STATIONS, ALL STATIONS, ALL STATIONS

THIS IS GIZMO, GIZMO, GIZMO

MAYDAY VENUS

TIME 13:00 UTC

SEELONCE DISTRESS

OUT

PRUDONCE

USED BY



TO ALLOW RESTRICTED WORKING TO
RESUME ON THE CHANNEL

PRUDONCE = CAUTION (FR)

PRUDONCE

MAYDAY

ALL STATIONS, ALL STATIONS, ALL STATIONS

THIS IS COAST GUARD,
COAST GUARD,
COAST GUARD

MAYDAY VENUS

TIME 14:30 UTC

PRUDONCE

OUT

SEELONCE FEENEE

USED BY



TO END THE **RADIO SILENCE**

SEELONCE FEENEE

MAYDAY

ALL STATIONS, ALL STATIONS, ALL STATIONS

THIS IS COAST GUARD,
COAST GUARD,
COAST GUARD

MAYDAY VENUS

TIME 15:30 UTC

SEELONCE FEENEE

OUT



RADIO PROCEDURE WORDS

CANCELLING DISTRESS ALERT

ALL STATIONS, ALL STATIONS, ALL STATIONS
THIS IS VENUS, VENUS, VENUS
A DISTRESS MESSAGE SENT BY ERROR
CANCEL DISTRESS ALERT SENT AT TIME 12:30 UTC
OUT

PAN PAN

USED ONLY FOR

URGENCY

PURPOSES

VESSEL HAS A PROBLEM

BUT NO

GRAVE & IMMINENT

DANGER YET

PAN PAN

PAN PAN, PAN PAN, PAN PAN
ALL STATIONS, ALL STATIONS, ALL STATIONS
THIS IS VENUS, VENUS, VENUS
MY POSITION IS 38° 50.5' N & 001° 25,3' E
MY ENGINE IS BROKEN DOWN
URGENT ASSISTANCE REQUIRED
OVER

PAN PAN MEDICO

USED ONLY FOR

URGENCY

PURPOSES

**PERSON ON BOARD HAS A
MEDICAL PROBLEM**

BUT NO

GRAVE & IMMINENT

DANGER YET

PAN PAN MEDICO

PAN PAN MEDICO,
PAN PAN MEDICO,
PAN PAN MEDICO
ALL STATIONS, ALL STATIONS, ALL STATIONS
THIS IS VENUS, VENUS, VENUS
MY POSITION IS 38° 50.5' N & 001° 25,3' E
ONE CREW MEMBER IS SERIOUSLY INJURED
MEDICAL ASSISTANCE REQUIRED
OVER

SECURITE

USED ONLY FOR

SAFETY

PURPOSES

**IMPORTANT INFORMATION
CONCERNING SAFETY**





RADIO PROCEDURE WORDS

SECURITE

SECURITE, SECURITE, SECURITE

ALL STATIONS, ALL STATIONS, ALL STATIONS

THIS IS COAST GUARD,

COAST GUARD,

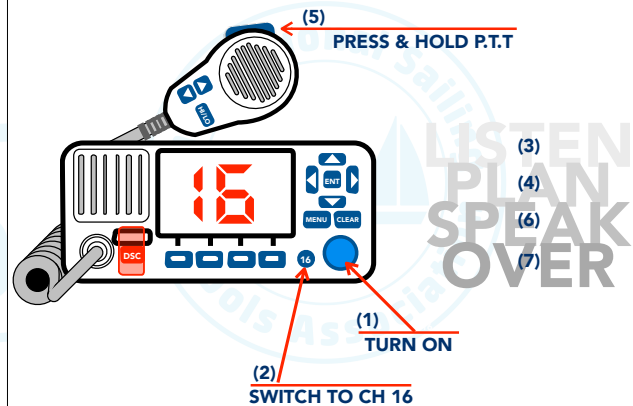
COAST GUARD

IMPORTANT WEATHER UPDATES.

LISTEN ON CHANNEL 14

OUT

ROUTINE CALLS



RECEIVING CALL FROM UNKNOWN STATION

IF YOU WERE UNABLE TO HEAR THE NAME OF THE STATION THAT WAS CALLING YOU:

STATION CALLING VENUS,

STATION CALLING VENUS,

THIS IS VENUS

SAY AGAIN

OVER

TYPES OF CALLS

1. MAYDAY - **DISTRESS+EMERGENCY**
2. MAYDAY RELAY
3. SEELONCE MAYDAY
4. SEELONCE DISTRESS
5. PROUDONCE
6. SEELONCE FEENEE
7. PAN PAN - **URGENCY**
8. PAN PAN MEDICO - **URGENCY**
9. SECURITE - **SAFETY**
10. ROUTINE CALLS

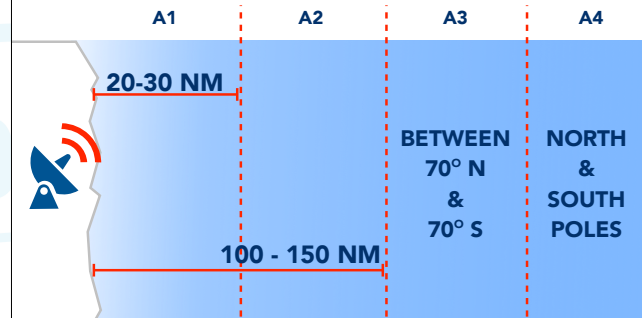
GMDSS

GMDSS COMPONENTS

DSC - DISTRESS SELECTIVE CALLING
EPIRB - EMERGENCY POSITION-INDICATING RADIO BEACON
SART - SEARCH AND RESCUE TRANSPONDER
NAVTEX - AUTOMATED MSI DISTRIBUTION
INMARSAT - LONG RANGE DATA BROADCAST
HF RADIO WITH DSC - LONG RANGE RADIO

GMDSS AERIAS

4 AERAS



DSC

70 **D**IGITAL
SELECTIVE
CALLING



DISTRESS + URGENCY + SAFETY + CALLING

DSC

ALERTS ON
VHF, MF AND HF
 MARINE RADIO
 SYSTEMS

INCREASED **RANGE**
 AND **QUALITY** OF
 TRANSMISSION

DIGITAL
SELECTIVE
CALLING



DISTRESS + URGENCY + SAFETY + CALLING

DSC

ALERTS ON
VHF, MF AND HF
 MARINE RADIO
 SYSTEMS

INCREASED **RANGE**
 AND **QUALITY** OF
 TRANSMISSION

DIGITAL
SELECTIVE
CALLING



DISTRESS + URGENCY + SAFETY + CALLING
 ONLY TO ESTABLISH CONTACT

DSC

DISTRESS + URGENCY + SAFETY + CALLING
 ONLY TO ESTABLISH CONTACT

- (1) ALL STATIONS**
- (2) GROUP STATIONS**
- (3) INDIVIDUAL STATIONS**

EPIRB

SENDS SIGNALS CONTINUOUSLY FOR

 **24 h**

BATTERY LIFETIME

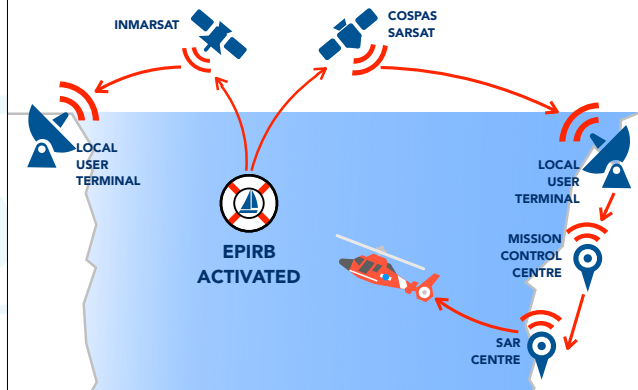
 **5 years**

HAS TO BE TESTED ONCE

 **month**

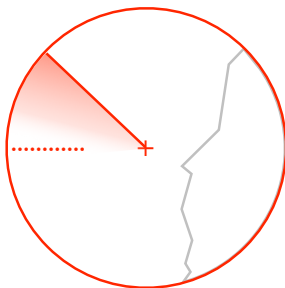
PLB - PERSONAL LOCATOR BEACON

EPIRB



SART

RADAR SART OR GPS BASED AIS SART
VISIBLE ON RADAR FROM APPROXIMATELY 8 NM



SART

RADAR SART WORKS ON STAND BY

 **96 h**

FULL TRANSMISSION

 **8 h**

BATTERY LIFETIME

 **5 years**

HAS TO BE TESTED ONCE

 **month**

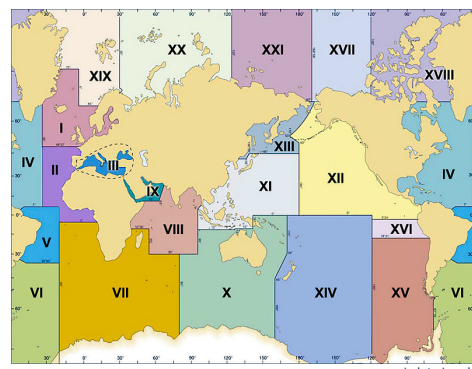
NAVTEX

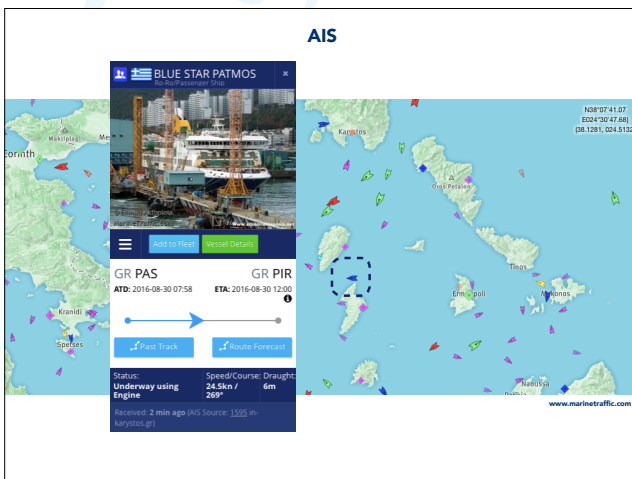
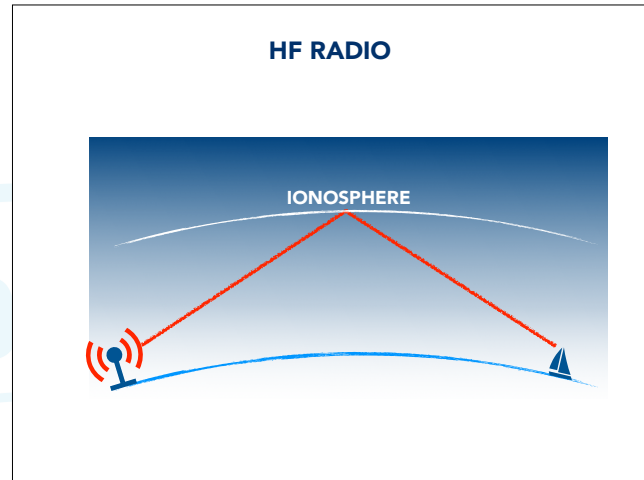
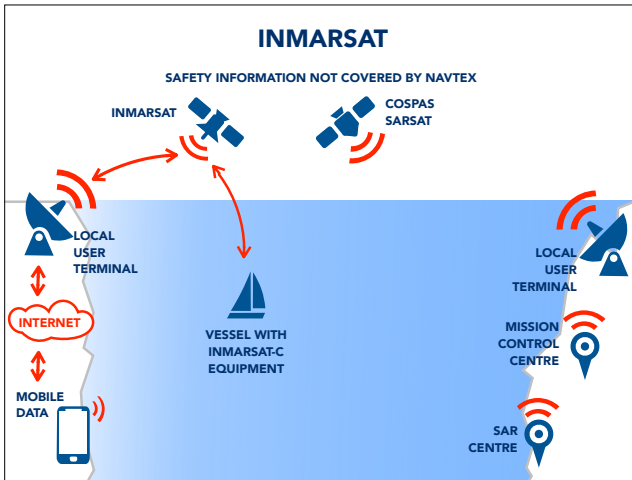
AUTOMATED SYSTEM FOR INSTANTLY DISTRIBUTING

MSI MARITIME SAFETY INFORMATION
NAVIGATIONAL WARNINGS
WEATHER FORECASTS
WEATHER WARNINGS
SAR NOTICES

518 kHz for 
490 kHz for local language

NAVTEX NAVAREAS







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