

AUXILIARY TELECOMMUNICATIONS



Introduction

Radio

communications in the US Coast Guard Auxiliary have undergone extensive changes in recent years

And continue to evolve.

In many areas of the country, Auxiliary communicators are functioning as Watchstanders from their fixed or mobile Auxiliary stations.

Either as regular shift or ad hoc communicators

Introduction

We will cover:

- ▶ Basic information re a VHF–FM radio
- ▶ Commonly used channels
- ▶ Prowords
- ▶ “Ops” reporting
- ▶ Distress, Urgency, and Safety calls
- ▶ Installation
- ▶ Wrap up

Boat Crew Sign-Offs

Notes for Comms – Boat Crew Class - PCA

Auxiliary Boat Crew Qualification Guide, Volume I: Crew Member Name: _____

Task BCM-05-01-AUX

Task	Operate A VHF-FM Radiotelephone
References	Boat Crew Seamanship Manual, COMDTINST M16114.5 (series) Chapter 11 Manufacturer's Operators Manual
Conditions	Performed at any time aboard an Auxiliary facility. Trainee must accomplish task without prompting. Use of references is allowed.
Standards	In response to the mentor, the trainee must identify the different operating parts of the radio, and operate the controls.
Completed	<p style="text-align: center;"><u>Performance Criteria</u></p> <ol style="list-style-type: none"> 1. Identified on/off switch and radio turned on. 2. Identified channel selection switch/button and selected channel. 3. Identified and adjusted volume and squelch controls. 4. Identified microphone and operating button and demonstrated operation (transmission light observed). 5. Identified high/low power switch and explained its use. 6. Demonstrate knowledge and use of "Pro-words". 7. Demonstrate knowledge and use of phonetic alphabet.
Accomplished	
	Mentor signature _____ Date _____

Auxiliary Boat Crew Qualification Guide, Volume I: Crew Member Name: _____

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Task BCM-05-02-AUX

Task	Use The VHF-FM Radiotelephone To Give A Position Or Operations Normal Report
References	Boat Crew Seamanship Manual, COMDTINST M16114.5 (series), Chapter 11 Radiotelephone Handbook, COMDTINST M2300.7 (series)
Conditions	Performed at any time underway or at the dock. Message to be sent should be composed by the trainee and the mentor prior to the beginning of the task. Trainee must accomplish task without prompting or use of a reference.
Standards	In response to the mentor, the trainee must transmit message traffic using proper radiotelephone procedures, including pro-words, and phonetic alphabet.
Completed	<p style="text-align: center;"><u>Performance Criteria</u></p> <ol style="list-style-type: none"> 1. Demonstrated proper radiotelephone procedures. 2. Transmitted an "Underway" or "Assuming Patrol Status" report in accordance with (IAW) local Coast Guard procedures. 3. Transmitted IAW District policy not to exceed one hour "Operations Normal" or other required reports. 4. Transmitted a "Request Permission to Secure Patrol." 5. Transmitted other official traffic as directed by the coxswain.
Accomplished	
	Mentor signature _____ Date _____

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Basics

- ▶ VHF–FM radio – a.k.a. “Radiotelephone”
- ▶ Simplex Circuitry
- ▶ Not Duplex Circuitry
- ▶ Caused development of procedures

Signal is “Line of Sight”

Antenna to Antenna

➤ Handheld radio

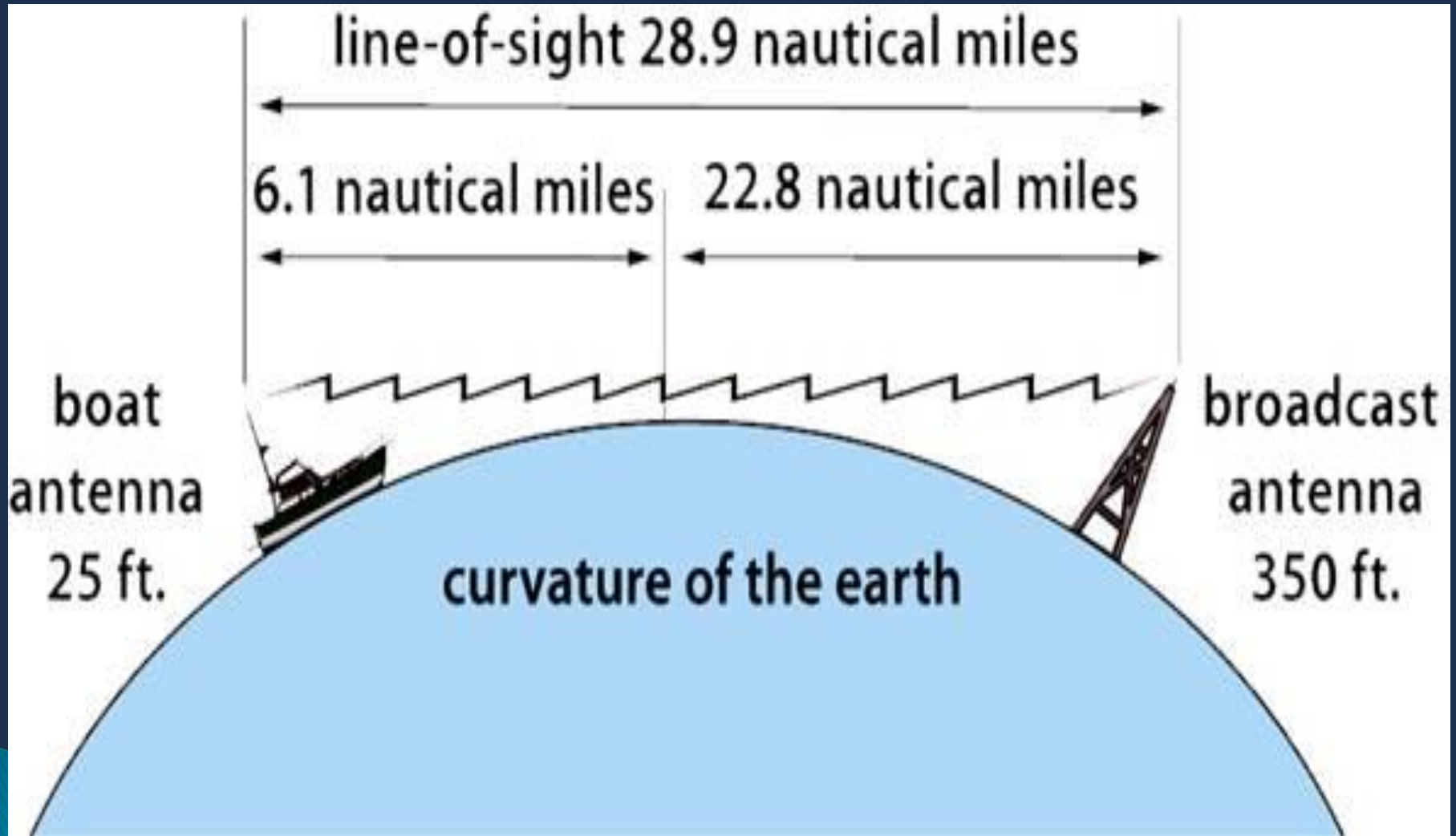
- Max 5–6 watts
- Range 6–8 miles (ideal conditions)

➤ Fixed Mount

- Max 25 watts
- Range up to 20 miles (height of antenna)

➤ Strongest signal will be received

Signal is “Line of Sight”



Commonly Used Channels

✓ 06

✓ 09

✓ 13

✓ 16

✓ 21A

✓ 22A

✓ 23A

✓ 68

✓ 81A

✓ 83A

Regulation

ALL VESSELS equipped with a VHF-FM Radio are required to monitor Channel 16. Use this channel only when unsuccessful in establishing contact with units on working frequencies.

Recommend using “Scan” with 16 as one of the channels monitored.

Radio Controls

- ✓ On/Off Switch
- ✓ Channel selector
- ✓ Volume & squelch controls
- ✓ Microphone & operating button (PTT)
- ✓ Hi/Lo power switch



Pro Words

- ❖ Out
- ❖ Over
- ❖ Roger (or “Copy”)
- ❖ Wilco
- ❖ This Is
- ❖ Figures
- ❖ Speak Slower
- ❖ Say Again
- ❖ I Spell
- ❖ Wait
- ❖ Affirmative
- ❖ Negative
- ❖ Break
- ❖ ETA
- ❖ RTB
- ❖ Seelonc
- ❖ Mike

Phonetic Alphabet

This is NOT law enforcement or EMS phonetics!!!!

Do not use “10” codes

Numbers & Decimal Points are pronounced “phonetically”

Transmitting

When transmitting, the microphone may pick up the conversations of people talking nearby.

Before Getting Underway

Recommend contacting your
“Guard” via cell phone to
establish channel &
procedures

Getting Underway

- Call Station (or Guard) on predetermined channel
- Party being called ... calling party ... channel ... “Over”
- Give number of P.O.B. and GAR 2.0 Risk Assessment
- Establish frequency of “Ops” Reports

Getting Underway



- Call Station



Communicating between CG Facilities

Know proper call signs and
procedures

Because ...

You never know who's listening!

Voice Call Signs

- Voice call signs are used for identification
- CG & Aux boats may use number as voice call signs for radio comms
- Bay Area – call signs are usually the vessel names

Communicating between CG Facilities

Facility

▶ Coast Guard Boat

▶ Auxiliary Boat

Call Sign

“Coast Guard Fo-
wer wun tree ze-
ro ze-ro” (41300)

“Coast Guard
Auxiliary Vessel
Tree ze-ro wun
too wun nin-er
(301219)

Communicating between CG Facilities

Facility

- ▶ Coast Guard Cutter
- ▶ Shore Radio Facilities

Call Sign

“Coast Guard Cutter ‘Diligence’
“Coast Guard”
followed by type of facility, air, radio, or Station, and geographical location (Coast Guard Station Monterey)

Communicating between CG Facilities

Facility

- ▶ Aircraft
- ▶ Aircraft involved in SAR

Call Sign

- “Coast Guard Six fi-yiv ze-ro ate (6508)”
- “Rescue” precedes normal call sign
“Coast Guard Rescue Six fi-yiv ze-ro ate (6508)”

Communicating between CG Facilities

“COAST GUARD” may be dropped
once communications is
established.

Number call signs may be
shortened to last three digits.

Communications during OPTREXs / Two-Boat Training

Determine VHF-FM channel to be used during evolutions

Suggest using 81A, 82A, or 83A

Begin & end transmissions with
“This is a drill”

Communications during OPTREXs / Two-Boat Training

Do NOT use Channel 16

16 is for **EMERGENCY** use only!

“Ops” Reports

Protocol is for Station to request:
“Ops & Position” every 30
minutes

For position: Latitude & longitude
rounded to the nearest 10th

“Ops” Reports

❖ “Ops”

State “Ops Normal” if all is uneventful.

If anything other, state Ops are in a whatever



“Ops” Reports

❖ Position

Spoken as follows:

Degrees –
pause –
minutes –
“decimal” – 1
digit (rounded)

Where landmarks are abundant and well known, use landmark / distance & direction (SF Bay & Delta for example) AND latitude & longitude

In open waters, use latitude & longitude

“Ops” Reports

❖ “Over”

Once report is complete,
say “Over”

Station / Guard *should*
acknowledge and say
“Out”

“Ops” Reports

If “Comms” are lost for more than 30 minutes, local Station will be contacted.

All means will be used to establish communications.

If comms cannot be established, an underway search may be required.

“Request Permission to Secure”

- ✓ Contact Station
- ✓ State you are moored or at the launch ramp
- ✓ REQUEST PERMISSION to secure from patrol
- ✓ It is up to the Station to release the Facility

Standard Voice Urgency Calls

Distress, Urgency, & Safety Calls

Generally made on Channel 16

Distress, Urgency, & Safety Calls

Distress Signal: MAYDAY

From the French
“m’aidez” = “Help me”

- Grave & imminent danger
- Request for immediate help
- Has priority over all other calls

Distress, Urgency, & Safety Calls

When you are the one in trouble

- “Mayday, Mayday, Mayday”
- “This is
- “My position is
- Number of P.O.B.
- Nature of distress
- Kind of help needed
- Any other information
- When done “I will be listening on Channel 16”
- “This is Over”

Distress, Urgency, & Safety Calls

When you are the one in trouble

**Position should always be given
as soon as possible!**

Distress, Urgency, & Safety Calls

If you hear an unanswered distress call,
You must answer on Channel 16

- Wait a short time for others to respond
- Act as a relay of distress message
- Obtain location as soon as possible

Distress, Urgency, & Safety Calls

If you hear an unanswered distress call,
You must answer on Channel 16

**Remember – the calling party has
two strikes against them**

1. They are not likely experienced radio operators
2. They are in a high stress situation and may be panicked

Distress, Urgency, & Safety Calls

If you hear an unanswered distress call,
You must answer on Channel 16

Once you have gathered critical
information

Shift to another working channel
e.g. 22A

Distress, Urgency, & Safety Calls

Urgency Signal: Pan-Pan

- Used when the safety of a vessel or person is in jeopardy

From the French “panne”



Distress, Urgency, & Safety Calls

Urgency Signal: Pan-Pan

Examples:

- Issuing a MARB
- Loss of person overboard when help is needed
- Repeating an urgent storm warning
- Loss of steering or power in a shipping lane

Distress, Urgency, & Safety Calls

Urgency Signal: Pan–Pan

Use the following sequence:

- “Pan–pan, pan–pan, pan–pan”
- “To All Stations ... To All Stations”
- “This is
- Describe urgency
- “This is
- “Over”

Distress, Urgency, & Safety Calls

Safety Signal: Securite'

From the French

“securite'” = “security or safety”

- Announces a message about safety or navigation or an important weather warning

EPIRB

Emergency
Position Indicating
Radio Beacon

EPIRB

Coxswains & crew are issued a PEPIRB and must carry when on patrol.

Also known as a PLB
(Personal Locator Beacon)

Rescue 21

- Monitors channel 16
- Repeaters strategically located on “high sites”
- Coast Guard can pick up signal of 1 watt at up to 20 miles
- Multiple LOPs can be obtained in 1 to 2 seconds

General Comments re VHF-FM Radios

➤ Installation

- ✓ Do Not mount too close to compass

General Comments re VHF-FM Radios

Antenna

- ✓ Do Not scrimp on antenna
- ✓ Match it to your radio (i.e. FM or VHF-FM)
- ✓ Place antenna as high as possible on the vessel
- ✓ Antenna must be vertical for best performance (no “rake”)

General Comments re VHF-FM Radios

Routine Radio Check

- ✓ A good idea when getting underway
- ✓ Patrol check in with Station or Guard serves the purpose
- ✓ **DO NOT** use Channel 16!

General Comments re VHF-FM Radios

Who is listening when the Auxiliary uses the radio?

- ✓ Everyone listening to that Channel
- ✓ Who do they hear?

General Comments re VHF-FM Radios

**DO IT PROPERLY OR
DON'T DO IT AT ALL!**



AUXILIARY TELECOMMUNICATIONS

END OF PRESENTATION



OUT!

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