



COMDTINST M9430.1  
15 AUG 1979

COMMANDANT INSTRUCTION M9430.1 (old CG-385)

Subj: Sound-Powered Telephone Talkers Manual

1. Purpose. The purpose of this manual is to provide a training reference for telephone talkers and a qualification procedure for those assigned to telephone talker duties.
2. Directives Affected. This manual replaces the U.S. Coast Guard Telephone Talker's Manual, CG-385, dated 1 October 1969.
3. Discussion.
  - a. The use of the Sound-Powered Telephone is basic to every rating in the Coast Guard. This manual concisely presents the fundamentals required to become an effective sound-powered telephone talker on any shipboard sound-powered telephone circuit and is intended to be used as a guide for sound-powered telephone procedure training within the Coast Guard.
  - b. This manual has been prepared in sufficient quantity to allow a liberal distribution.
4. Action.
  - a. Commanding Officers shall use this manual in their unit training programs.
  - b. Additionally, Commanding Officers shall insure that this manual be used in conjunction with the completion of the Military Requirements Practical Factors outlined in the Enlisted Qualifications Manual, CG-311. As a minimum to meet the requirements for advancement, the Qualification Standards contained in Chapter 13 of this manual should be satisfactorily completed.

/s/ JOHN D. COSTELLO  
Chief, Office of  
Operations

**Table of Contents**

CHAPTER 1 - Introduction to Sound-Powered Telephones ..... 1

CHAPTER 2 - Importance of Sound-Powered Telephones ..... 3

CHAPTER 3 - The Importance of the Talker ..... 4

CHAPTER 4 - The Sound-Powered Telephone ..... 5

CHAPTER 5 - Transmission Characteristics of Sound-Powered Telephones. 17

CHAPTER 6 - How to Speak Over Sound-Powered Telephones..... 18

CHAPTER 7 - Telephone Circuits ..... 22

CHAPTER 8 - Circuit Discipline ..... 25

CHAPTER 9 - Standard Procedure and Standard Commands ..... 26

CHAPTER 10- Service Language ..... 33

CHAPTER 11- Training Sound-Powered Telephone Talkers ..... 35

CHAPTER 12- Summary..... 40

CHAPTER 13- Qualification Standards for Sound-Powered Telephone  
Talkers..... 42

## CHAPTER 1. Introduction to Sound-Powered Telephones

A. A sound-powered telephone is exactly what the name suggests—a telephone system in which the power comes from the sound pressure of the talker's voice—no external power source is required. The sound-powered telephone is based on one of the first telephones invented. This is how it works:

1. Vibrations from your voice hit the diaphragm (a very thin metal disc) in the mouthpiece, causing the diaphragm to vibrate. Attached to the inside of the diaphragm is a very delicate needle called the armature. Surrounding this needle is a coil of very fine wire, held in place by a magnet. Every time the diaphragm vibrates from the sound of your voice, the needle also moves, inside the coil. This creates a current in the coil, and the current goes through a wire to an earpiece. The inside of

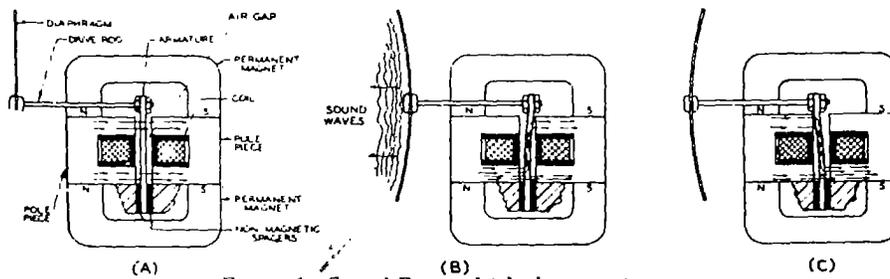


Figure 1—Sound-Powered telephone motor unit

an earpiece is the same as the mouthpiece which means it also has a needle, a coil, and a diaphragm. The current vibrates the needle and diaphragm in the earpiece, and the vibrations enable the person at the other end of the line to hear your voice. When the phones are in good condition, and the voice is strong and clear, enough current is generated to carry the voice to all the other phones on the circuit.

- B. Aboard ship you may encounter two types of sound-powered telephones, the handset and the headset. Both will be explained in detail later in this manual.

## **CHAPTER 2. Importance of Sound-Powered Telephones**

- A. The letters IC stand for interior communications. Other systems on our cutters provide for communications about the ship but they all require one thing sound-powered telephones do not-external power. The sound-powered telephone system is vital to the effectiveness of the cutter:
1. Lookouts must be able to pass information quickly to the bridge.
  1. The Gunnery Officer must get information to the gun crews so they may fire the guns.
  2. Damage Control Central must be able to coordinate and analyze the efforts of the Repair Party.
  3. To effectively and safely operate his command the commanding officer must have adequate and accurate information.
- B. In nearly every case, information is sent from one station to another by means of sound-powered phones. Usually this means information is spoken by a responsible person, relayed by the telephone talker at the sending station, heard by the talker at the receiving station, and then accurately repeated to the person responsible for carrying out the order or receiving the information. The person receiving the message from the telephone talker must acknowledge receipt to the message.

### **CHAPTER 3. The Importance of the Talker**

- A. As you can see-you, the telephone talker, are a vital link in the chain of interior communications. You and your phones are the nerves of the ship. If a message is not relayed, or if it is incorrectly repeated, the ship may be placed in danger. Messages must be relayed exactly as given. In battle, the safety of the ship and the crew depends upon how well the talker uses his voice and equipment. It is important that you try to become a good talker because you, like nearly every other person in the Coast Guard, may at some time have the responsibility of using sound-powered telephones.

## CHAPTER 4. The Sound-Powered Telephone

- A. Sound-powered telephones must always be ready for any emergency. To be ready they must be kept in good condition, which means they require proper handling. From reading the introduction to this manual you know that phones contain delicate parts. Therefore, you must learn how to wear them correctly and how to take care of them when they are not being used.
- B. As noted earlier there are two types of sound-powered phone sets, the handset and the headset.
  - 1. Description of Types of Phones.
    - a. The handset telephone, the first to be discussed, looks very much



like the telephone used in offices and homes. This phone is held in one hand and when the earpiece is put directly over the ear, the transmitter (or mouthpiece) comes right in front of the mouth. On the bar connecting the receiver and the transmitter is a push-button. This button must be held down whenever you are speaking or listening. This rule applies to the handset type of phone only. When someone is calling your station you will hear the call buzzer. When you wish to talk with another station, you will press the button on the bulkhead indicating that, station. The handset phone is used as an emergency phone and as a service phone between such places



as officers' staterooms, bridge, and wardroom. When the handset telephone is not in use, it is held in a bracket on the bulkhead. This bracket has a clamp that keeps the phone snugly in place. Be sure you secure the phone correctly when you are through talking. If you do not it may fall to the deck and be seriously damaged.

- b. The second type of telephone is the headset telephone. It is the standard battle phone. The headset telephone consists of a pair of earphones and a transmitter. The earphones are on a spring metal clamp or fabric harness that fits over the talker's head. The transmitter, held in an adjustable yoke, or (Y) pin, is mounted on a breastplate. The breastplate is hung by a strap around the talker's neck. Also on the breastplate is a small box where wires are joined together. One of these leads is short and goes to the mouthpiece; two others go to the earpiece. Also, there is a heavy cord with a heavy metal plug at the end; This plug fits into a jack-box on the bulkhead which connects the phone to the rest of the circuit. The plug is usually held in place by means of a collar with screw threads on the inside. On the jack-box is a small disc of paint that shines in the dark so that you may find it easily. Also on the jack-box are letters which identify the circuit. In some cases there will also be a selector switch, located near the jack-box, so that an authorized person may switch from one circuit to another without removing the plug.

2. Proper Wear of Headset Sound-Powered Telephone.
  - a. Because the headset is made up of delicate parts, it must be worn in the correct position.
  - b. When you put on the headset telephone, hold the transmitter unit and the heavy lead in the left hand. Hook the metal headband over the transmitter yoke, in the space between the mouthpiece and the breastplate. This will keep the earphones from being dropped. Next, unhook the right side of the neck strap from the breastplate, put the strap around your neck, and fasten it to the breastplate again. Now put the earphones on and adjust the headband so that the center

of each earpiece is directly over the opening into the ear, with the headband fitting firmly over the top of the head. Insert the plug into the jack-box, and while holding the plug with one hand, screw the collar on firmly, taking care not to cross thread the collar. If you do not hold the plug while you screw on the collar, the wires will twist and may weaken or break the connection in the plug. If these directions are followed, no portion of the equipment will hang by the cords. If equipment is allowed to dangle by the cords the electrical connections will soon be destroyed.

- c. Adjust the mouthpiece so that it is directly in front of the mouth when you stand erect. When you speak into the transmitter it should be about one-half inch from your mouth. When making this adjustment remember that the fine wire that goes to the transmitter is easily broken. Be sure that it does not have any sharp bends or get squeezed between the transmitter and the yoke. An electrician's mate on any ship will tell you that many phones are repaired just because talkers are careless in handling them.
- d. When you are wearing the phones remember that you are tied down. You can't walk any farther than the length of the lead cord. If you forget this you may walk too far and break the connection at the plug. Therefore, always have slack in the lead and keep it flat on deck so no one will trip over it. Excess lead should be looped loosely through the belt. Don't allow objects to roll over the lead.

### 3. Proper Use of Sound-Powered Telephones

- a. In order to function as designed, the sound-powered telephone must be used correctly and carefully.
- b. When the plug is in the jack-box you are ready to LISTEN. If you have a message to give to someone else on the circuit, you will have to PUSH DOWN THE BUTTON WHICH IS ON THE TOP OF THE TRANSMITTER. THIS BUTTON SHOULD BE HELD DOWN ONLY WHILE YOU ARE SPEAKING AND SHOULD BE KEPT DOWN UNTIL YOU HAVE GIVEN THE WHOLE MESSAGE. IT SHOULD NEVER BE HELD DOWN AT ANY OTHER TIME. NOTE that this procedure differs from that used with the handset phone.
  - (1) Never tape your button or hold it down with rubber bands. Outside noise can get into the circuit. Recordings made onboard ship show that such practices make it difficult for anyone on the circuit to hear a message.
- c. You should be aware that each earpiece works just like the transmitter. The outside of them is a different shape from the outside of the transmitter so that they will fit your ears; but on the inside, the earpieces and transmitter are the same. This is an important fact to remember.
  - (1) In case of a casualty to the transmitter on a headset phone, you can speak into one earpiece while listening through the other one. In case of a casualty to the earphones on a headset phone you can hold the transmitter button down and

receive as well as send message with the transmitter. In these ways communications can be maintained.

(2) A talker should never turn one earpiece outward from the head. When this is done, all the outside noise can get into the circuit and make it difficult for other talkers to hear. In places such as the engine room, boiler room and gun mounts, there may be so much noise that the entire circuit will become useless-all because one talker has an earpiece turned outward.

d. Another tip, keep the transmitter shielded from the wind with your hand when you are talking; otherwise, the wind will make a noise in the phone.

e. If your phones are not in order take them to the person in charge of your station. If that is not possible, have another talker near you report the matter to the Control. PHONES THAT ARE OUT OF ORDER MAY PREVENT OTHER PHONES ON THE CIRCUIT FROM WORKING PROPERLY. Never stow a damaged phone; see that it is taken to the designated repair station. Damaged phones should be repaired or replaced immediately-you never know when an emergency may arise which requires the use of every phone on the ship.

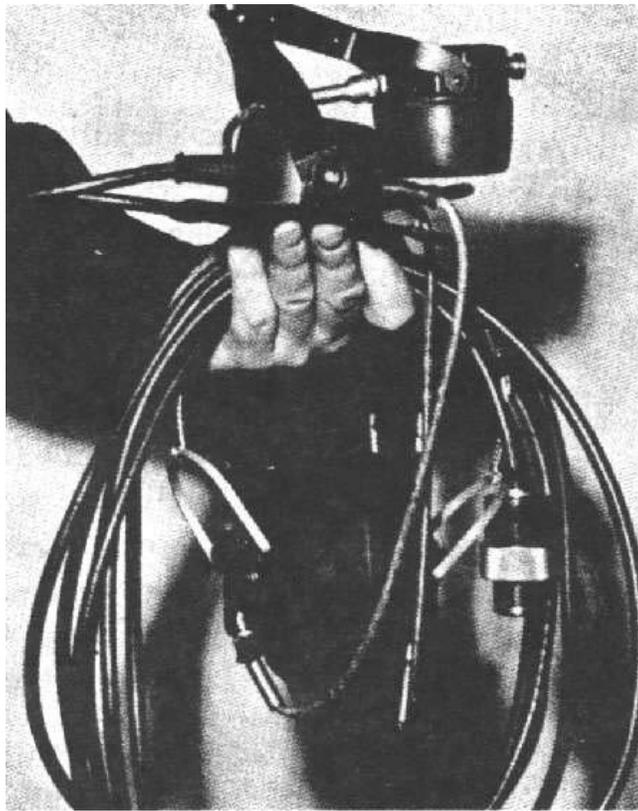
#### 4. Securing the Phones.

a. **Never secure the phones until you have permission to do so.** When this permission has been given, you are ready to "Make up" the phones. The phones will

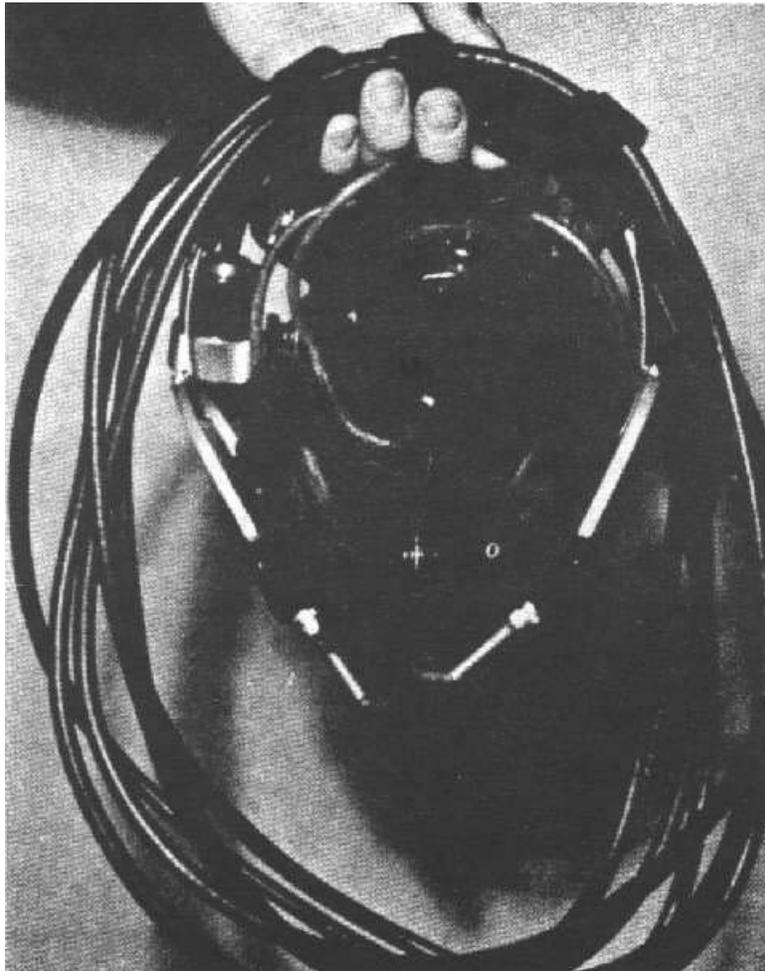
make up somewhat, differently for different methods of stowage but the following method will suit most conditions:

- (1) Remove the plug from the jack-box by holding the plug in one hand and unscrewing the collar with the other. When the collar is loose, grasp the plug and pull it out. Never pull it out by the lead as this may weaken the connection. When the plug is out, lay it on the deck, but do not drop it.
- (2) **Screw the cover on the jack-box. Always do this immediately.** Rain, spray, and dust will cause a short circuit in the jack-box if it is uncovered. And should you see a jack-box that has been left uncovered, cover it even if you are not the person who left it that way.

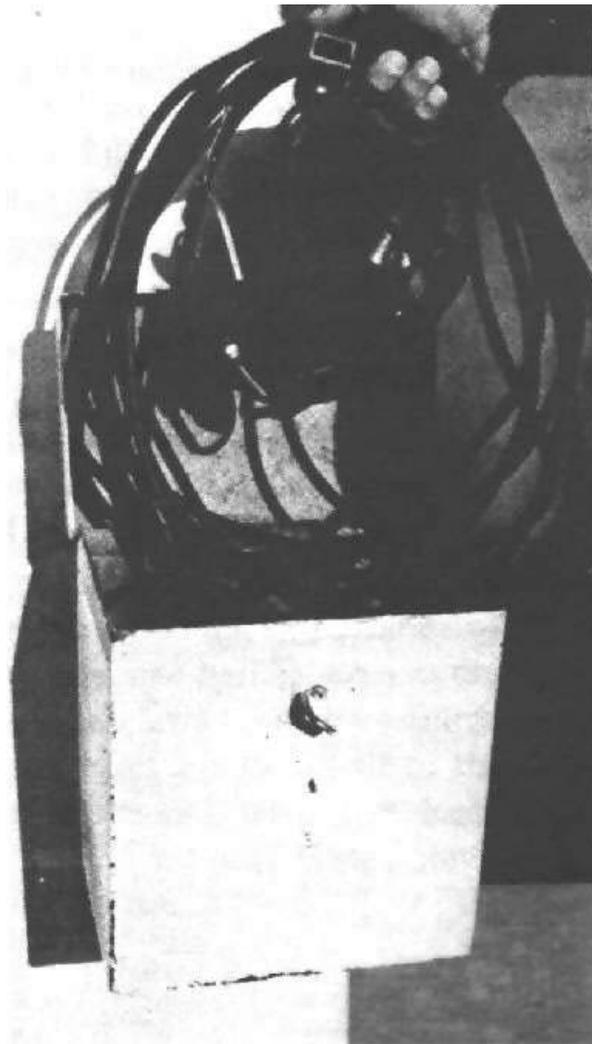




- (3) Remove the headband and hang it over the transmitter yoke.
- (4) Leave the plug lying on the deck, and coil the lead cord. Start coiling from the end at the phone, and leave the rest on the deck. Coil the lead in a clockwise direction and hold the loops in one hand. The loops should be eight to ten inches across, depending on the size of the space where the phones are to be stowed. When you are coiling the lead, be careful not to bang the plug against the bulkhead or deck.
- (5) When the lead is coiled, remove the earpieces from the transmitter yoke and put the headband in the same hand with the coil. I5188\*IMAGES:



- (6) Use the same hand to hold the transmitter while you unhook one end of the neck strap from the chest plate.
- (7) Fold the transmitter yoke flat. Be very careful not to put a sharp bend in the transmitter cord when you do this.
- (8) Bring the back of the chest plate together with the headband and the coil. Secure in this position by winding the neck strap around the coil and the headband just enough times so that there will be a short end left over. Fasten this end back on the breastplate. You will then have a neat, compact package to be stowed.



- (9) Put the phones in the box provided. Be sure that no part of the phones or cords stick out of the box. If either the phones or the inside of the box is wet, wipe it dry. Close the box tightly so water and dust cannot get in. Below decks hooks are provided so that the phones may be hung up. Sound-powered phones are well made, but constant exposure to moisture will harm them. Keep them as dry as possible at all times.
- b. Remember that the phones must be unplugged no matter what method is used to secure them. Phones that are left plugged in will pick up noise through the earpieces and carry it into the circuit. **And be especially careful not to place phones on the deck. Besides the fact someone may step on them, the deck will echo all the surrounding noise and send it into the phones with great force.**

## CHAPTER 5. Transmission Characteristics of Sound-Powered

### Telephones

- A. In the introduction you learned how the sound-powered telephone works. All the power required is generated by your voice; no other source of power is needed. Therefore, if your message is to get through, you must speak loudly and clearly to supply the necessary power. Your voice must supply enough power so that as many as twenty other persons on the circuit can hear you. In plain words, **weak voice-little power; strong voice-lots of power**. Another way of saying this is that no matter what you say or how clearly you say it, if your voice lacks power the message will not get through.
- B. Studies on how the phone works under noisy conditions show how important it is to speak with a **loud, clear voice**. These studies also show the **importance of keeping the mouth close to the transmitter**. If the mouth is one-half inch from the transmitter, most messages will get through. If it is two inches away, only two-thirds of the messages will get through. At a distance of four inches less than half of the messages will be correctly heard, and at eight inches, only one message in five. Keep these things in mind, when you read the next chapter, "How to Speak Over Sound-Powered Telephones."

## CHAPTER 6. How to Speak Over Sound-Powered Telephones

- A. Talk in a loud voice and maintain your loudness so that every word will get through to every person on the circuit. **Very few people will talk too loudly.**
- B. Hold the transmitter not more than one-half inch from your mouth.
- C. **Articulate clearly.** This means to move the lips and the tongue so that each sound is made correctly and clearly. For example, **when** you say "oh", your lips should be definitely rounded; and when you say "ee", pull back at the corners. Make every part of the message stand out so that even unfamiliar words may be understood by the listener. For example, the sentence "Prepare to stream fanfare" may be unfamiliar to the listener. So say "**Pre**pare to stream fanfare." The boldface sounds are those often slighted, so make them clear. Watch the lip and mouth movements of a good speaker and you will see what is meant by articulation. In order to speak clearly, keep gum and food out of your mouth when on the phones. Some people think it is smart to talk from the corners of their mouths. Don't. **Talk from the front of your mouth. Imagine that you must "project" your voice to everybody on the circuit.**
- D. **Talk Slowly.** There is nothing smart about talking rapidly just to see if another person on the circuit can understand you. **A slowly spoken message that is understood the first time will be much quicker than a rapidly spoken message that has to be repeated.** Excitement is the greatest cause of too rapid speech. During a

critical time remember that it is double important to get the message through. Talk slowly and some of your own excitement will disappear. If you are calm and sure of yourself, you will influence others on your circuit to behave the same way.

- E. **Restrict your dialect or accent.** Each of us, when we speak, has a way of telling others what part of the country we are from. But understanding heavily accented speech is difficult for the listener. When you speak over sound-powered telephones try to speak in such a way that your listeners cannot tell whether you come from New England, the South or the West. Numbers are especially difficult to understand if you don't restrict your dialect or accent. You must articulate them clearly at all times since they convey important information such as the depth of water under the ship, the bearing and range of other ships and planes, pressure from the boilers, and so on. Careful study of the pronunciation of numbers indicates that the following exaggerated pronunciations are highly successful on sound-powered circuits.

One-Wun	Six-Sicks
Two-Too	Seven-Seven
Three- <b>Thuh-ree</b>	Eight- <b>Ate</b>
Four-Four	Nine- <b>Niner</b>
Five- <b>Five</b>	Zero- <b>Zero</b>

The boldface numbers are often confused. Repeat all of the numbers aloud, taking particular care with the ones in boldface. **Try to speak so that anyone from any part of the country can understand you.**

- F. Letters should not be spoken as letters, but should be referred to by their names as in the standard Phonetic Alphabet. The letters "Bee", "Cee", "Dee", "Gee", and "Tee" sound very much alike; so do "**H**", "**A**" and "**Jay**". If you use the names for these letters, "Bravo", "Charlie", "Delta", "Golf", "Tango", "Hotel", "Alfa", and "Juliet" there will be no confusion. The Standard Phonetic Alphabet is given in paragraph 1, below. Memorize it thoroughly so that you can use it quickly and accurately as in (JA) "Juliet Alfa", (1JV) "One Juliet Victor", (Compartment A-307-L) "Compartment Alfa Three Zero Seven Lima."

## 1. STANDARD PHONETIC ALPHABET

<i>Letter</i>	<i>Word</i>	<i>Pronunciation</i>	<i>Letter</i>	<i>Word</i>	<i>Pronunciation</i>
A	ALFA	<b>AL</b> -FA	N	NOVEMBER	NO- <b>VEM</b> -BER
B	BRAVO	<b>BRAH</b> -VOH	O	OSCAR	<b>OSS</b> -CAH
C	CHARLIE	<b>CHAR</b> -LEE	P	PAPA	PAH- <b>PAH</b>
D	DELTA	<b>DELL</b> -TAH	Q	QUEBEC	<b>KAY</b> -BECK
E	ECHO	<b>ECK</b> -OH	R	ROMEO	<b>ROW</b> -ME-OH
F	FOXTROT	<b>FOKS</b> -TROT	S	SIERRA	SEE- <b>AIR</b> -RAH
G	GOLF	<b>GOLF</b>	T	TANGO	<b>TANG</b> -GO
H	HOTEL	HOH- <b>TEL</b>	U	UNIFORM	<b>YOU</b> -NEE-FORM
I	INDIA	<b>IN</b> -DEE-AN	V	VICTOR	<b>VIK</b> -TAH
J	JULIET	JEW-LEE- <b>ETT</b>	W	WHISKEY	<b>WISS</b> -KEY
K	KILO	<b>KEY</b> -LOH	X	XRAY	<b>ECKS</b> -RAY
L	LIMA	<b>LEE</b> -MAh	Y	YANKEE	<b>YANG</b> -KEY
M	MIKE	<b>MIKE</b>	Z	ZULU	<b>ZOO</b> -LOO

G. When you speak a series of numbers, space them so that they may be easily understood. For example, when repeating "Range four five thousand" say "Range four five", then a slight pause, to make the next stand out, slight pause, "Thousand." Like this- "Range four five-thousand."

1. Note the following examples:

WRONG

Course three hundred.

Range three zero zero.

Range fifteen thousand.

Speed eighteen knots.

Make three hundred and

five r.p.m.

Compartment A five fifteen E.

CORRECT

Course three zero zero.

Range three hundred.

Range one five thousand.

Speed one eight.

Make three zero five

revolutions.

Compartment Alfa five

one five Echo.

H. Do not use slang or profanity on the phones. Never say, for example, "Yeah", say "aye aye." Use correct nautical terms.

## CHAPTER 7. Telephone Circuits

A. Sound-powered telephones are linked together to form circuits. Each circuit has a name. Circuits are labeled with letters and sometimes with numbers followed by letters. Each jack-box on a circuit has a number. Main circuits are lettered from JA to JZ.

1. The JA circuit is the Captain's battle circuit. It connects Conn (the Captain's battle station) with control stations throughout the ship. Here are some examples of the kind of messages that are sent from Conn:

(Forward control to Conn)

**(Conn, forward control, destroyer bearing three for zero.)**

(Conn to control station) **"Control aft, Conn, start tracking."**

(Cone to Sky Control station)

**"Sky Control, Conn, planes sighted dead ahead."**

This is the main fighting circuit of the ship. Over this circuit the Captain gives orders to his officers, receives reports from them regarding the progress of the action, casualties to material and personnel, damage to the enemy, and other information.

2. The 1JV circuit is the primary maneuvering circuit. This means that messages that have to do with the speed and course of the ship, mooring lines, and

anchoring are sent over this circuit. Information on this circuit helps to get the ship in and out of port, and maneuver when at sea. It connects Conn with such places as the engine rooms, fantail, and forecastle. Here are some common messages heard on this circuit:

(Conn to Engine Room)

**"Engine room, Conn, we will anchor in about five minutes."**

(Conn to Anchor Detail on Forecastle)

**"Foc'sle, Conn, prepare to let go starboard anchor."**

(Conn to Anchor Detail on Forecastle)

**"Foc'sle, Conn, let go."**

(Conn to Deck Detail on Fantail)

**"Fantail, Conn, slack the stern line."**

3. In addition to these and other primary circuits, there are a number of secondary or auxiliary circuits. For example, in addition to the JA circuit, there is also an XJA circuit. All these auxiliary circuits are designated by the same letters as the primary circuits, except that they have the letter X in front of the other letters. They are designed to be used in an emergency or for use as an auxiliary means of communications when so needed.

4. By means of tie switches it is possible to tie two or more circuits together, or isolate portions of a circuit. For example, during fueling it may be advantageous for the Chief Engineer to have all the stations on the 2JV circuit connected to all the stations on the 4JV circuit. This can be done by means of a tie switch connecting the two circuits. In case a station has a short circuit, that station can be isolated from the others so that it will not interfere with communications.

## CHAPTER 8. Circuit Discipline

- A. Standing a phone watch is not always exciting. You may stand with the phones on for several hours at a time and perhaps no important messages will be passed over the circuit. Under these circumstances it is easy to get careless and take part in a private conversation with someone else on the line. Recordings made on board ship show that several talkers may take part in such a conversation and because of all this unnecessary talking there is the danger of delay when an important message must go through. You as a talker are a link in the Interior Communications chain, and that chain is no stronger than its weakest link. Unauthorized talking means that there are at least two weak links in the chain. Be efficient. If someone else on your circuit persists in useless talking remind them to keep the line clear so there will be no delay when a message must go through.
  
- B. Circuit discipline means that the talker must never show impatience, anger, or excitement. A talker must speak **slowly**, in a **loud, clear** voice. Circuit discipline means self-discipline.

## CHAPTER 9. Standard Procedures and Standard Commands

- A. **The duty of a talker is to pass along a message exactly as it is given.** If the talker changes the wording, it may give the message a meaning that the officer did not intend it to have. Some of these mistakes have had serious consequences.
- B. Sometimes, in the absence of an officer, the talker will have the responsibility of originating a message. When this responsibility has been delegated, the talker must be careful to follow correct procedures. Standard procedures and standard commands have been established so that information can be transmitted accurately and rapidly.
- C. Listed below are the procedures which should be followed after the phones have been put on.

### 1. **Manning Your Telephone Station.**

- a. As soon as the phones are manned, the Control station must know when all the other stations are ready. To do this, the talker at Control says- "

**"All stations, Control, testing."**

Then each talker on the line acknowledges in designated order. On a mooring circuit the acknowledgements should sound like this:

Talker on Sta. 1: **"One, aye aye."**

Talker on Sta. 2: **"Two, aye aye."**

Talker on Sta. 3: **"Three, aye aye."**  
Talker on Sta. 4: **"Four, aye aye."**  
Talker on Sta. 5: **"Five, aye aye."**

- b. Each station responds in order but does not wait too long for the station immediately preceding it to acknowledge. If you are on station three and station two does not respond, then you acknowledge and let station two come in at the end. A circuit test is not complete until every station has answered and faults in equipment checked.
2. **Transmitting a message:**
- a. Most messages are divided into three parts:
    - (1) Name of station being called.
    - (2) Name of station calling. On certain command circuits step 2 is omitted at discretion-of commanding officer.
    - (3) The message itself. (STEPS 1, 2, & 3 FOLLOW IN ORDER WITHOUT ANY PAUSE FOR ACKNOWLEDGMENT ON PARTS OF STATION BEING CALLED)
  - b. Here are two examples of a complete message procedure.
    - (1) **"Foc'sle (1), Bridge (2), prepare to anchor in about five minutes." (3)**  
(The Bridge talker giving a message to the Fantail talker.)

Note very carefully the above order. First you call the station you want, then you identify your own station, finally you state the message. To change this order is dangerous because confusion may result.

3. **Acknowledging:**

a. When a message is received it must be acknowledged at once if it is understood. Look at the two messages above; here is how they would be acknowledged:

(1) **"Foc'sle, aye aye."** (Forecastle talker acknowledges message from Bridge.)

(2) **"Fantail, aye aye."** (Fantail talker acknowledges message from Bridge.)

The words "aye aye" mean "I understand your order." In most cases the talker will not personally carry out the order but will pass it on to the proper person. Good talkers will keep their eyes open and will know whether or not all the orders have been complied with. For instance, several minutes after giving the message to the Fantail, the Bridge talker may ask-

**"Fantail, Bridge, did you slack off the stern line?"** The Fantail talker should be able to say, without hesitation- "

**Fantail, aye aye; the stern line has been slackedoff."**

When a message is in the form of a question, acknowledge immediately, even if you don't have the answer ready. For example, the Bridge asks Main Engine Control-

**"Main Engine Control, Bridge; what boilers are on the line?"**

Main Engine Control does not have this information at the moment, but answers at once-

**"Main Engine Control; aye aye, wait."** Then when the talker gets the information it is relayed to the Bridge

**"Bridge, Main Engine Control; boilers two, three and four on the line."** Bridge acknowledges receipt of this information-

**"Bridge, aye aye."**

Note in the above examples that the talker has correctly stated his own station and then "aye aye. " When acknowledgements are made this way the sender knows that you, not someone else has received the message and will relay or carry out the order. Say, for example, "**Fantail**, aye aye", not "aye aye."

#### 4. **Repeating Back:**

- a. When a message is very important, the officer originating it may want to make sure that it has been transmitted and received correctly. In this case the officer will tell the talker to have the receiving station repeat it back. For example, the Bridge wants the Anchor Detail on the Forecastle to veer to forty five fathoms on the starboard anchor chain and the report the strain.  
The Bridge talker says- "

**Foc'sle, Bridge; veer to forty five fathoms on the starboard chain and then report the strain. Repeat back."**

The Forecastle talker says- "**Bridge, Foc'sle; veer to forty five fathoms on the starboard chain and then report the strain.**"

If the Forecastle talker repeats the message back correctly, the Bridge talker says- "**Bridge, aye aye.**"

5. **Unclear Message:**

- a. When a message is not clear to the listener at the receiving end, he should say "**Say again.**" For example, Central wants Repair Two to send a submersible pump to Repair Three. The Central talker says-

**"Repair Two, Central; send one submersible pump to Repair Three."**

Repair Two does not understand this message so the talker there says-

**"Central, Repair Two; say again."**

Central then repeats the message and Repair Two acknowledges-

**"Repair Two, aye aye."**

6. **Brevity:**

- a. To make communications rapid, messages must be short. This is a matter which primarily concerns the officer originating the message. Talkers should also keep this principle in mind, however, since sometimes they may have to originate

messages themselves. When you send a telegram you leave out all unnecessary words. Talkers on ship's phones should do the same thing. Words like "please" and "sir" are good manners but are omitted on the phones in order to keep messages short. "What did you say?" takes four or five times as long as simple "Say again." If a message must be long, it should be grouped into phrases to make it clear.

7. **Silence on the line.**

- a. When a circuit is in use, but Control station has a more important message to get through, the Control talker says-

**"All stations, Control; silence on the line."**

Whenever this is heard, all other talking must stop so that Control can get the message through.

8. **Securing the phones.**

- a. Before securing the phones, you must always get permission, like this. Fantail asks-

**"Bridge, Fantail; request permission to secure."**

**"Bridge, aye aye, wait."** Bridge gets permission for Fantail to secure, then-

**"Fantail, Bridge; you may secure."**

**"Fantail, aye aye; securing."**

- b. When a particular activity, such as docking the ship has been completed, the Bridge talker will say-

**"All stations, Bridge; secure special sea detail."**

Each station will then acknowledge in order-

**"Fantail securing."**

**"Foc'sle securing."**

- D. All these rules have been proved by experience and study, and any changes the talker thinks are better are probably not as good. On ships of the Coast Guard it is efficient to have a job done the same way on all ships, wherever possible. If you follow these procedures, you will be a good talker on any ship.

## CHAPTER 10. Service Language

- A. Good talkers will do a better job if they know what they are talking about. If you have a detailed knowledge of ship's terms you will be a better listener. You will know what is said because you will know what to expect. Suppose the talker in Main Control hears-

"Main Control, Fire-room; we are **making out.**"

This appears to be a sensible message, but what the talker in the fire-room actually said was-

"Main Control, Fire-room; we are baking out."

This means that the boiler is being "baked out" and is out of service at present. The message "making out" could easily be understood to mean the boiler is ready to be used whereas actually it could not be used.

1. Dozens of such examples could be given to illustrate that a talker who does not know his ship is a dangerous link in the Communications chain. **Ship's speech is made up of a number of new and unfamiliar terms.** For example, do you know the meaning of the following terms: Conn, bearing, course, tracking, meet her, hawse the anchor, main control, sky forward?
- B. A knowledge of such terms as these will help you as a **talker** and as a **listener**. You will find some of them in the COAST GUARDMAN'S MANUAL; others will

be learned from experience. Keep your eyes and ears open as you go about your ship. **A familiar term will always be easier to understand and speak than a strange one.**

## CHAPTER 11. Training Sound-Powered Telephone Talkers

- A. No matter how well the individual parts of a ship may be trained and readied to meet the demands of day-to-day operations or of a battle engagement, the question of success or failure will be answered by the ship's ability to act quickly and intelligently. For in the few brief moments that modern Coast Guard operations allow, the ship must think and react. Without this ability the ship will almost surely be lost.
- B. A person's thoughts are carried through the body by a system of nerves; in a ship, a thought moves through a complex of sound-powered telephone lines, passed from talker to talker. Damage to a nerve or to a sound powered line could have the same effect. Without a smoothly working nervous system neither a person nor a ship can function properly, regardless of the ability of the various parts.
- C. Consider the importance of the sound-powered telephone talkers on the bridge of a ship whose job it is to answer for Conn, and in turn, to send word from Conn to Gun Control, CIC, DC Central and all the other key stations of the ship. In the heat of operations, the talkers must relay questions and complex recommendations; they must control their circuit; and they must ensure that the Conning Officer gets the message word-for-word as received. They must make themselves understood regardless of the pitch of excitement or noise. By any standard this is no small job!
- D. Who are these people? Often they are the "inexperienced or limited experience," people who have not been assigned to gun stations or places in a Repair Party; frequently they are billet numbers from a battle organizational manual.

- E. How are these people prepared? Frequently they are not prepared at all; they are given no formal training and the barest of instruction, possibly because of the concept that "they teach it in "boot camp" . . . or "all Petty Officers should know how to . . . "
- F. The results may be disastrous . . . with messages hopelessly delayed in repetitions or completely lost in paraphrasing. The result can occasionally be seen in a confused and frustrated Conning Officer "entering CIC to see what's going on" or asking for information on the IMC or by some other means. Although these blunders may seem unimportant, they might well cause a Conning Officer to lose confidence or a crew their lives. Inadequate internal communications is the largest single failure noted in ships undergoing training and inspection by Fleet Training Groups, costing far more than the breakdown of any other system or piece of equipment.
- G. In order to make a ship's nervous system work, four basic facts must be recognized and accepted:
  - 1. Sound-powered telephone talkers must be selected for their ability as talkers;
  - 2. Sound-powered telephone talkers must be trained if they are to do their jobs properly;
  - 3. Officers who depend on telephone talkers must be trained to use their talkers properly

4. Sound-powered telephones require care, just as any other piece of important equipment.

#### H. Basic Steps in Training Talkers.

1. Conduct formal indoctrination sessions covering: the construction and care of sound-powered telephones, organization of the ship's SP system, standard talkers procedures and phraseology, and circuit control methods.
2. Train talkers in the proper keeping of logs, plots and other necessary records, including the use of abbreviations and symbols such as are necessary to record information received from CIC, DC Central or the repair parties.
3. Conduct "Mass Drills" in order to press home the need for correct procedures and accurate relay of information. 4. Prompt and correct errors as they occur.
4. Give telephone talkers an opportunity to work with the information they handle in order to dramatize its importance and the problems of the personnel involved. For example, let the bridge talker stand a watch or two in CIC and let the talker see first hand what, for example, "CPA" means and how it is computed.
5. Issue each person a copy of this Sound-Powered Telephone Talkers Manual for individual study. Require that they complete the study of this manual in a reasonable amount of time and check their knowledge using qualification standards contained in Chapter 13.

I. Selecting Talkers.

1. "A prospective talker," according to NWIP 50-1A, "should be tested for hearing, intelligibility of speech, temperament, and intelligence. In situations where considerable experience is necessary to control a circuit, a Petty Officer or an officer should be assigned." These requirements may seem unduly high at first glance, but consider the importance of selecting the persons to handle these vital circuits. It is unlikely that the average shipboard training program will overcome speech deficiencies or change a person's personality. And unfortunately, time in service does not necessarily indicate who will perform well as a talker. How then do you find prospective talkers? Initially, check records and accept recommendations from the individual petty officers; next try to recommend people on the circuit and reject those who do not look like good prospects. Then TRAIN those who do.

J. Message originators.

1. Much less has been said about the pressing need for telephone talkers to use correct procedures and not to paraphrase, but just as important is the originator's part in the transmission. If OOD's mutter vague generalities to the talkers and expect them to sort it out and send an intelligible message, they may or may not get the correct word to the right station.
2. Originators should give talkers a message exactly as they wish it passed. In addition, originators should recognize messages which are too long and complicated

for transmission by sound-powered telephone talkers. Such messages lead to confusion and the need for repetition. Originators should be schooled to consider the use of messengers or other means for such long messages.

K. Care of the Sound-Powered Telephones.

1. To work properly, sound-powered telephones require respect and consideration from two sources; first the user, and second the maintainer. (Generally either Electricians or Fire Control Technicians.) Many people seem to think that the service has an endless supply of sound-powered telephones stowed throughout its ships and all one needs do is find a pair that is handy and that works; when they are no longer needed they are tossed into any handy box. Few people appreciate just how expensive sound-powered telephone are.
2. The facts should be made known! Talkers should mark their phones; they should be made to keep them properly stowed. Maintainers should conduct regular inspections and make repairs to damaged phones and jack-boxes. Missing covers or labels should be replaced. The time for such efforts, of course, is not just before going to General Quarters.

## CHAPTER 12. Summary

- A. **Test** equipment as directed.
- B. Keep the transmitter **one-half inch from your mouth**, and the earpiece centered over your ears. **Avoid dangling leads** in placing and removing the phones.
- C. Talk in a **loud, clear** voice at all times.
- D. Speak **slowly** and remain calm.
- E. Repeat **exactly** the message as it is given to you.
- F. Hold the transmitter button down when speaking and **only** when speaking. (For headset)
- G. **Call** the station you wish to contact, next **identify** your own station, finally give your **message**. Example: "Gun three (Call); Control (Identify); Report when manned and ready (Message)."
- H. Acknowledge all messages when they are understood. If you do not hear or understand a message, say only "Say Again."
- I. Use the circuit only for **authorized** messages.
- J. If the transmitter should go "dead" talk through either earpiece.
- K. Report faulty equipment at once.
- L. Leave the phones **only** when you have permission to do so-as in changing phones or securing.

- M. In securing, carefully coil the lead wire so that it is not kinked, fold the phone, hang the phone up or stow it carefully in a closed box with tightened cover.
- N. Secure the jack-box by firmly screwing on the water-tight cover.

## **CHAPTER 13. Qualification Standards for Sound-Powered**

### **Telephone Talkers**

- A. Give a brief description of how the sound-powered telephone operates.
- B. Describe the two types of sound-powered telephones, how they are constructed, their use aboard ship, and how they differ in operation.
- C. Display how the headset should be put on, worn, and properly stowed.
- D. Explain why it is necessary for sound-powered telephones to be properly stowed.
- E. Describe the procedures to be used when there is a casualty to the transmitter on the headset phone-to the earpiece of the headset phone.
- F. Briefly describe the duties and importance of a sound-powered telephone talker.
- G. What procedures should be followed when you find your phones are not in working order?
- H. Display proper procedures for speaking over sound-powered phones, including correct pronunciation of numbers and a recitation of the Standard Phonetic Alphabet from memory.
- I. Name the various telephone circuits and their uses.

- J. What is meant by circuit discipline and what are a talker's individual responsibilities in that regard?
  
- K. Display a knowledge of standard procedures and standard commands after manning a telephone station. Include procedures for:
  - 1. reporting when manned
  - 2. transmitting a message
  - 3. acknowledging a message
  - 4. repeating back
  - 5. unclear message
  - 6. "silence on the line"
  - 7. securing the phones
  
- L. Display a basic knowledge of nautical terms.

\*U.S. GOVERNMENT PRINTING OFFICE: 1986-491-810/20667