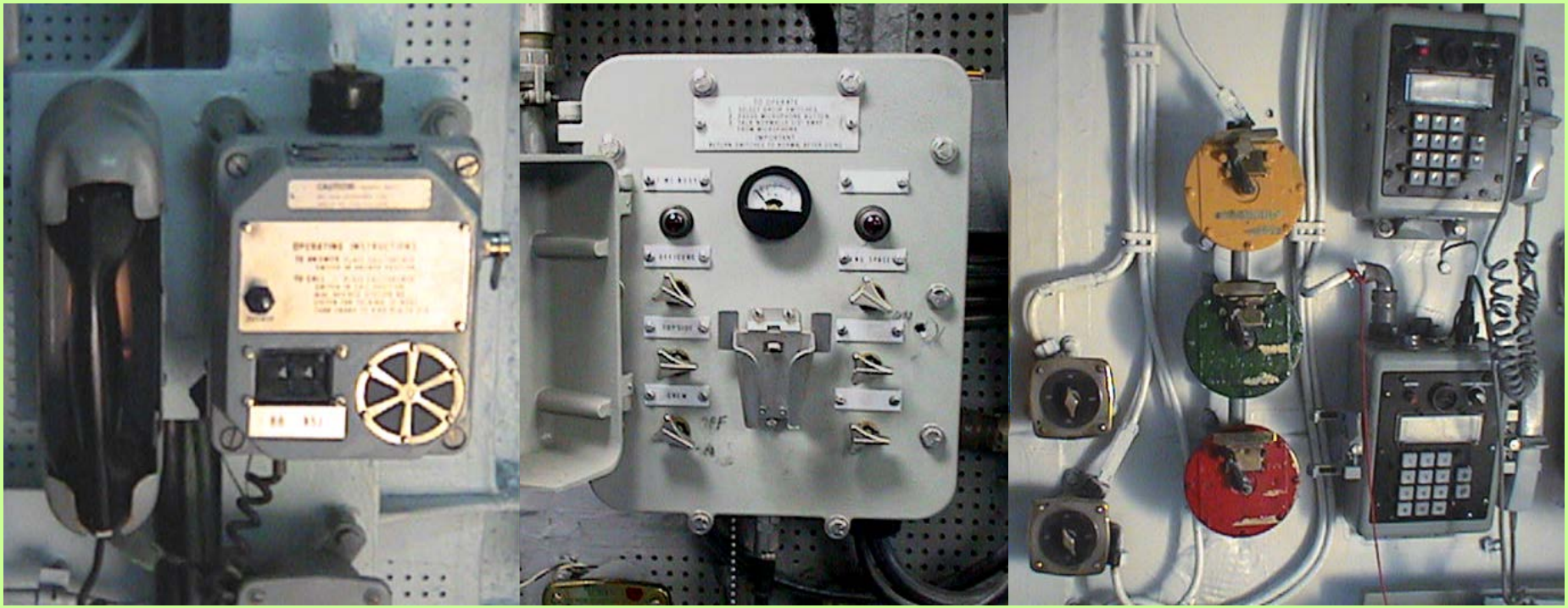
Damage Control Communications Systems and Techniques

Lesson Topic 2.1



Enabling Objectives

- **Match** damage control communications systems with their advantages and limitations
- **Select** the purpose of damage control communications
- **Discuss** the suggested priority of use for damage control communications systems

Purpose of Damage Control Communications

- To provide an orderly relay of the information from station to station
- Allow personnel not at the scene of the damage to evaluate ships capabilities and take corrective action accordingly

Types of Damage Control Communications

- Integrated Voice Communications System, (IVCS)
- Sound-powered telephone circuits
- Damage Control Wirefree Communications (DC WIFCOM)
- Intercommunication system (MC circuits)
- Ship's service telephone
- Announcing system (1MC)

Integrated Voice Communications System (IVCS)

- IVCS is a computer-controlled telephone system
- IVCS consolidates communication functions
- IVCS can be connected to:
  - Ship's announcing system
  - Shore telephone lines
  - Radio communications
  - Certain battle sound-powered telephone circuits

Integrated Voice Communications System (IVCS)

- The two switching centers for the system are located one forward and one aft
- Nets are similar to sound-powered telephone circuits in that they are closed-loop circuits
- Monitoring of the communications of any station on the net is possible by all phone talkers on the net

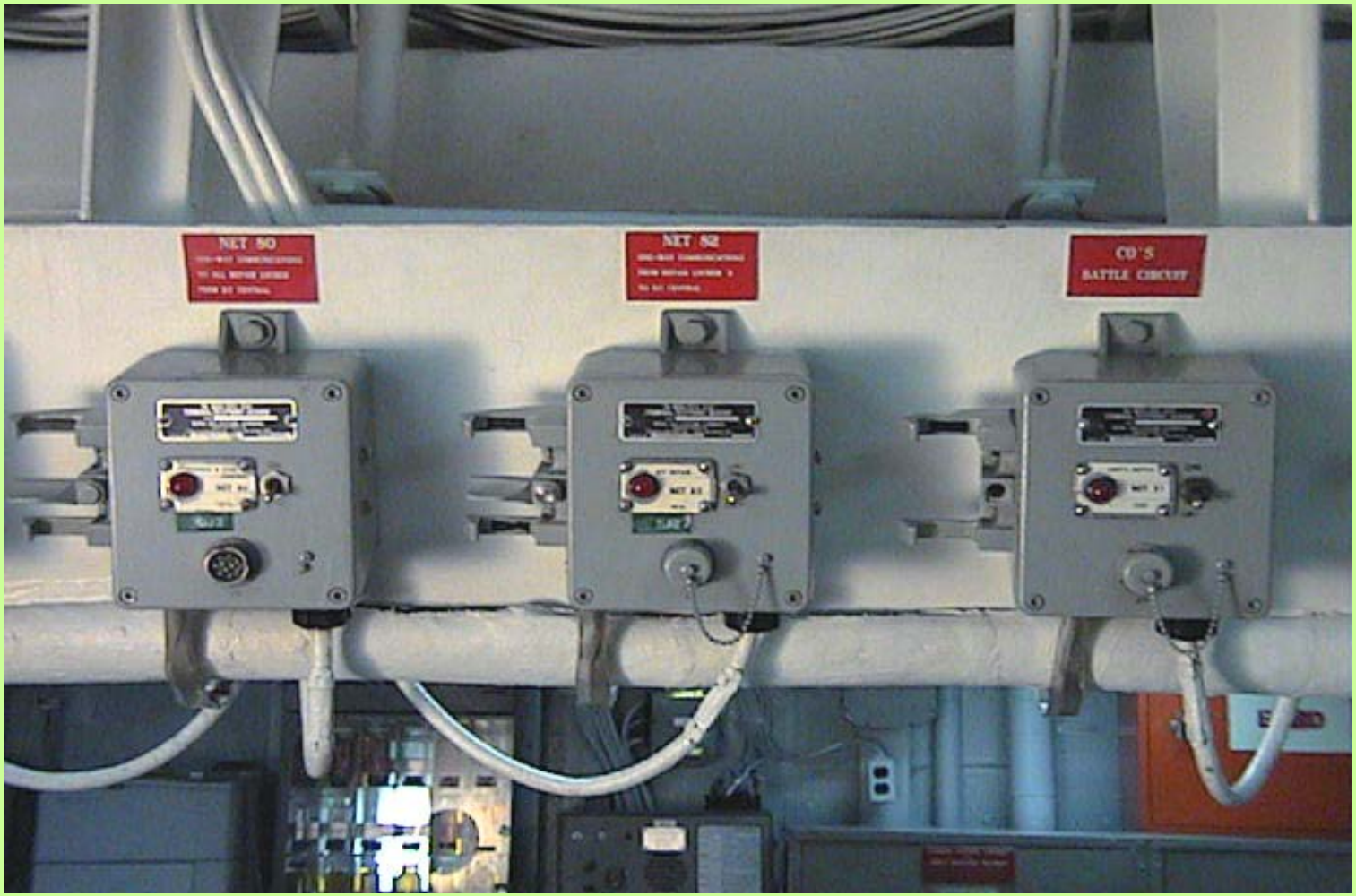
IVCS phone terminal

IVCS with hands free box

IVCS net box


TERMINAL TELEPHONE JACKBOX
AFT REPAIR
NET 82
ON
OFF
J1
NET 82

IVCS net box repair locker set up



Sound-Powered Telephone System

- Sound-Powered Telephone System is the most common means of communication for DC
- It requires no external source of power
- Primary means of communications between vital stations

Sound-Powered Telephone System

- The sound-powered telephone system is made up of five types of circuits
  - Primary
  - Auxiliary
  - Supplementary
  - Emergency
  - Miscellaneous

Sound-Powered Telephone System

- Primary circuits
  - All circuits necessary for vital battle stations
  - Circuits are designated JA through JZ; for example
    - 2JZ - Main DC circuit
    - 3JZ - Main deck repair circuit/ Repair 1
    - 4JZ - Forward repair circuit/repair 2
    - 5JZ - After repair circuit/Repair 3
    - 6JZ - Amidships repair circuit/repair 4
    - 7JZ - Engineer's repair circuit/Repair 5
    - 8JZ - Flight deck repair circuit
    - JA - Captain's battle circuit

Sound-Powered Telephone System

- Auxiliary circuits
  - Alternate means of communications
  - Wiring is run in separate cables installed as far as possible from the primary cables
  - An Auxiliary circuit is identified by a primary circuit designation - preceded by the letter "X”
    - XJA Auxiliary Captain's Battle
    - X2JZ Auxiliary Damage and Stability Control
    - X1JV Auxiliary Maneuvering and Docking

Sound-Powered Telephone System

- Supplementary circuits
  - Communication for various battle stations and their subordinate stations, (other than DCC and REP STA's)
- Examples of supplementary circuits are
  - 2JV - Engineer's circuit, (Engineers)
  - 3JV - Engineer's circuit, (Boilers)
  - 4JV - Engineer's circuit, (Fuel and Stability)
  - 5JV - Engineer's circuit, (Electrical)

Sound-Powered Telephone System

- Emergency circuits
  - Provide a means of rigging communication lines between vital battle stations
  - Emergency circuit designations are also preceded by the letter "X", but have no letter after "J”
    - X40J - Casualty communication circuit
    - X50J - Fog foam circuit

Sound-Powered Telephone System

- Emergency circuits (cont.)
  - Emergency circuit of main concern to DC is the X40J
  - X40J circuit consists of permanent vertical riser cables installed at vital below-deck battle stations
  - Four 200-feet reels of telephone cables are stowed in each repair locker

Sound-Powered Telephone System

- Miscellaneous circuits
  - Any sound-powered telephone circuit not included in the above classifications
  - Other interior communications circuits, announcing systems, and various alarm circuits

X40J portable reel

Sound-Powered Telephone System

- Sound Powered Phone Directory
  - Directory is comprised of 7 parts
    - Part I - Alphabetical list
    - Part II - Ship control circuits
    - Part III - Damage Control
    - Part IV - Weapons control circuits
    - Part V - Primary flight control circuits
    - Part VI - Manning circuits under various conditions
    - Part VII - Listing of Sound-Powered Telephone Circuit X40J communications between subdivisions on the DC deck when ZEBRA is set

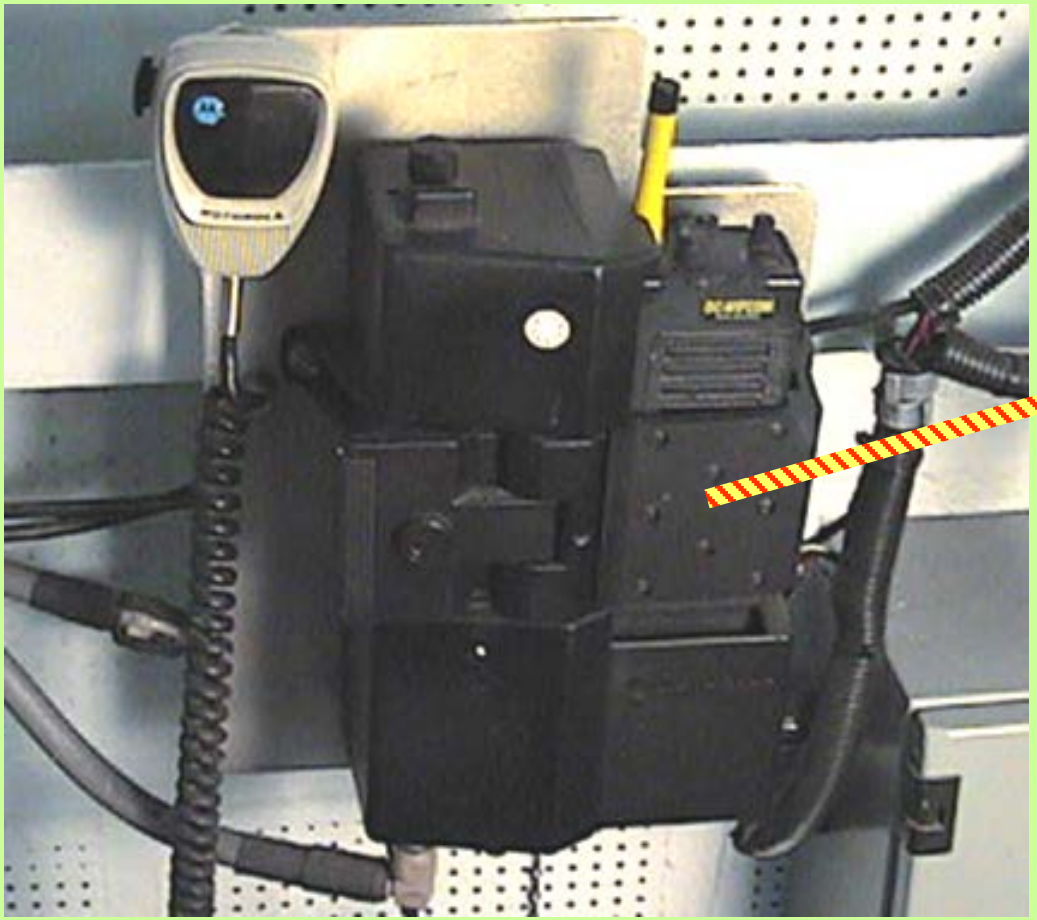
Damage Control Wirefree Communication System

- DC WIFCOM shall be the primary means of communication within the Repair Station area
- WIFCOM provides a flexible and survivable means of rapid communications
- WIFCOM is a portable radio transceivers used to provide instantaneous communications

Damage Control Wirefree Communication System

- WIFCOM portable radios have 4 selectable channels
  - Channel 1 Repair 5
  - Channel 2 Repair 2
  - Channel 3 Repair 3
  - Channel 4 Ship to Ship
- WIFCOM SHALL NOT BE USED IN A WEAPONS HANDLING INCIDENT/ACCIDENT

Damage Control Wirefree Communication System

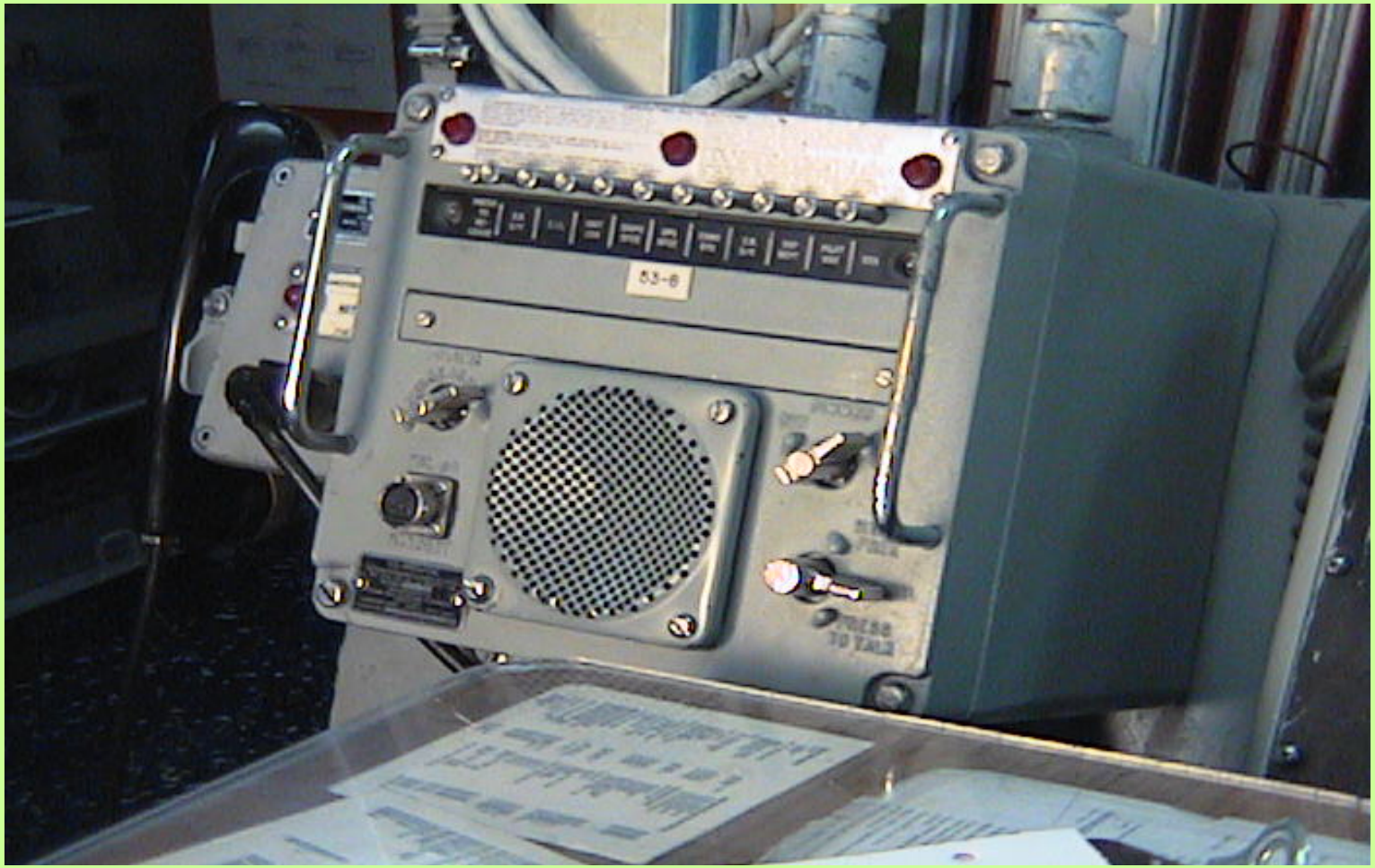


Damage Control Wirefree Communication System

Intercommunication System, (DC Announcing System)

- Two-way, station to station circuit operated by ship's electrical system
- Intercom units (MC Circuit) provide fast and dependable two-way transmission between DCC and each repair station

Intercommunication system



Ship's Service Telephones, (J - Circuit)

- Not rugged, may go out of commission early in action (electrical power needed)
- On some ships the ship's service telephone are available for DC communications when near or at repair stations

Priority of Communications

- The priority of communication from DCC to repair locker
  - Integrated Voice Communication System(IVCS)
  - Sound-powered Telephones
  - MC circuit
  - Ship's Service Telephone, (J - Circuit)
  - DC WIFCOM

General Announcing System

- Vital one-way communications
  - 1MC - Shipwide
  - 2MC - Engineering
  - 3MC - Hanger Deck
  - 5MC - Flight deck

General Announcing System

- 1 MC
  - Provides a means of transmitting general orders and information
  - All topside areas & ship internal spaces
  - Control stations are located at the Pilot House, Secondary Conning Station, OOD Stations and all Quarterdecks

General Announcing System

- Alarms can be transmitted over all speakers
- Alarms have priority in the following order
  - Collision Alarm
  - Chemical Attack Alarm
  - General Alarm
  - Flight Crash Alarm

Other communication systems

- Voice tubes
- Closed Circuit Television System

Summary and Review

- Purpose of Damage Control Communications
- Types of Damage Control Communications
- Integrated Voice Communications System
- Sound-Powered Telephone System
- Intercommunication System, (MC circuit)
- Ship's Service Telephones, (J - Circuit)
- Damage Control Wirefree Communication System

Summary and Review

- Priority of Communications
- General Announcing System
- Other Communication systems