WORKSHOP MANUAL

TECHNICAL, INSTALLATION, COMMISSIONING
and
MAINTENANCE INFORMATION
for
Mk VII X-BAND TRANSCEIVER and ANTENNAS

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CONFORMITY STATEMENT

This equipment has been designed to comply with IMO regulations and IEC standards.

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PRELIMINARY PAGES

CHAPTERS

IMPORTANT NOTICES
HEALTH AND SAFETY

1 All personnel are required to study these notices and familiarise themselves with all applicable safety precautions and bring them to the attention of others in the vicinity.

HIGH VOLTAGE WARNING

LETHAL HIGH VOLTAGES ARE PRESENT IN THE TRANSCEIVER

2 A current of 100 mA passing through the human body for one second can kill. This can occur at voltages as low as 35 Vac or 50 Vdc. Some equipment in the system uses electrical power that can be lethal. Whenever practical, before carrying out installation, maintenance or repair, personnel involved must:

(1) Isolate the equipment from the electrical supply.

(2) Make tests to verify that the isolation is complete.

(3) Ensure that power cannot be accidentally reconnected.

DO NOT OPEN ANY OF THE UNITS WHEN THE RADAR IS OPERATIONAL - UNLESS FULLY QUALIFIED TO DO SO.

3 If it is essential to work on the equipment with power connected, work must only be undertaken by qualified personnel who are fully aware of the danger involved and who have taken adequate safety precautions to avoid contact with dangerous voltages.

HEALTH HAZARD

4 This equipment contains materials which produce toxic fumes when ignited.

5 The inhalation of dust and fumes or any contact with lubricants when cleaning the equipment may be temporarily harmful to health, depending on individual allergic reactions. Components which are broken or overheated may release toxic fumes or dust and must be treated with caution. Do not inhale the fumes and ensure that the dust and debris do not enter open cuts or abrasions. It is prudent to regard all damaged components as being potentially toxic, requiring careful handling and appropriate disposal.

RADIATION HAZARD: NON-IONISING

AERIAL RADIATION HAZARD: INJURY CAN RESULT FROM EXPOSURE TO THE MAIN BEAM OF A STATIONARY RADAR AERIAL. DO NOT STAND LESS THAN 2m FROM THE CENTRAL FRONT FACE OF THE AERIAL.

6 It is accepted in most countries that no significant hazard is presented by radio frequency mean power density levels up to 10mW/cm. RF power levels in excess of this may cause harmful effects, particularly to the eyes.

7 Users of cardiac pacemakers should be aware that radio frequency transmissions, can damage some such devices or cause irregularities in their operation. Persons using a pacemaker should ascertain whether their device is likely to be affected before exposing themselves to the risk of malfunction.

SAFETY ALOFT

AERIAL ROTATION: BEFORE MAINTENANCE TO THE TURNING MECHANISM TAKES PLACE, DISABLE AERIAL ROTATION.

8 When working aloft, ensure that it is brought to the attention of someone in authority at deck or at ground level and that suitably placed warning notices are posted warning that work aloft is in progress. Ensure that the means of access aloft is secure and beware of wet or slippery ladder rungs and working areas.

9 When working on or near a radar scanner and other moving or r.f. radiating equipment, ensure that it is switched off and that the fuses have been removed and retained.

PERSONAL PROTECTION

10 Personal protection must be used whenever the possibility of an uncontrolled hazard exists. For example, a suitable face visor, gloves and a body apron should be worn when handling cathode ray tubes, as a precaution against injury in the event of breakage.

ELECTRIC SHOCK RESUSCITATION

1 **SHOUT FOR HELP. SWITCH OFF ELECTRICITY IF POSSIBLE.**

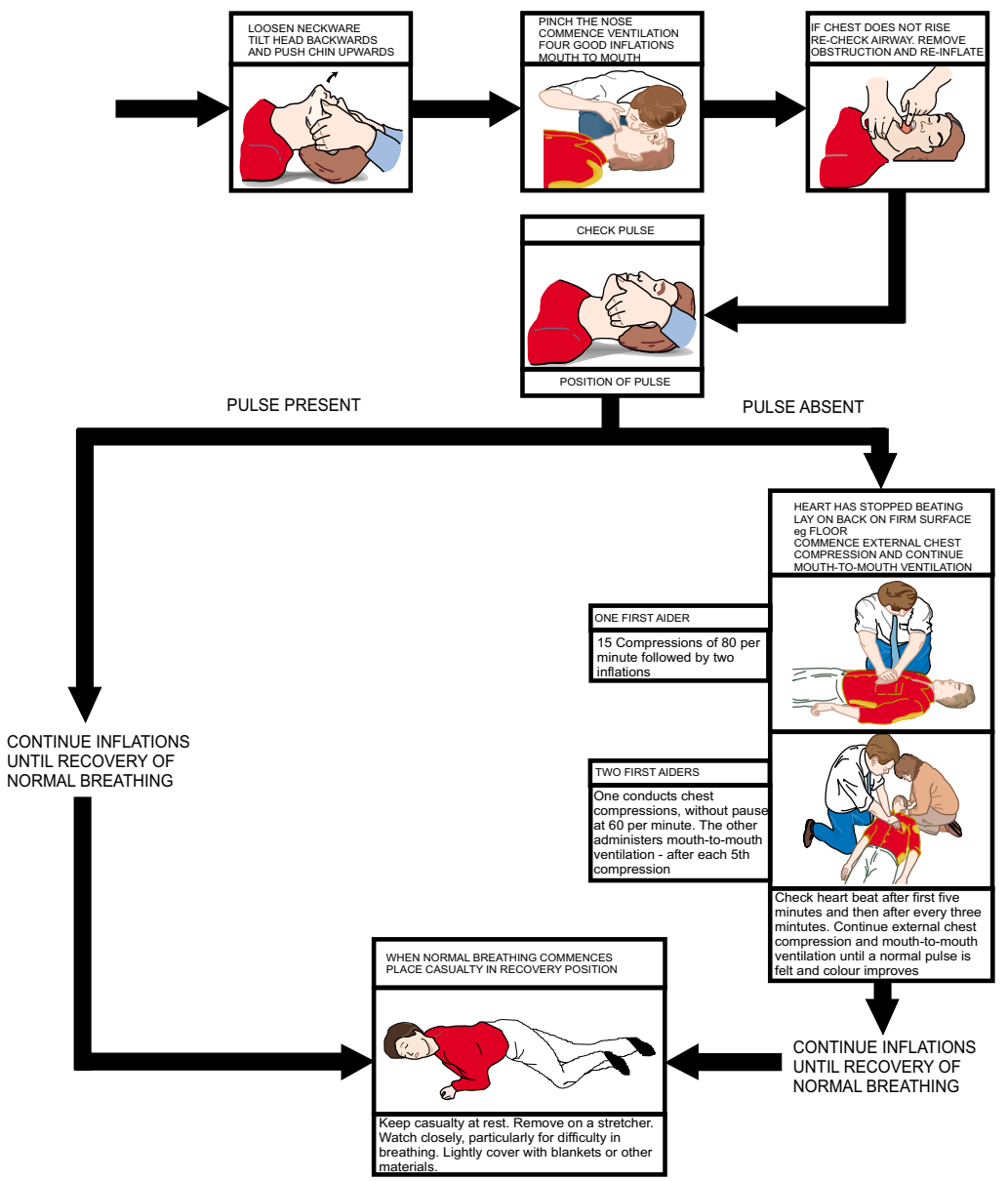
Do this immediately. If not possible, don't waste time searching for a switch.

2 **REMOVE FROM DANGER.**

Safeguard yourself when removing casualty from hazard. If casualty is still in contact with electricity, and the supply cannot be isolated, stand on a dry non-conducting material (rubber mat, wood, linoleum).
Use rubber gloves, dry clothing, length of dry rope or wood to pull or push casualty away from the hazard.

3 **REMOVE OBVIOUS OBSTRUCTION TO BREATHING.**

If casualty is not breathing start resuscitation at once.



MEDICAL ASSISTANCE MAY BE OBTAINED ON / AT.....

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ATTENTION

OBSERVE PRECAUTIONS FOR HANDLING ELECTROSTATIC SENSITIVE DEVICES

CAUTION
Handling of Electrostatic-Sensitive Semiconductor Devices

Certain semiconductor devices used in the equipment are liable to damage due to static voltage. Observe the following precautions when handling these devices in their unterminated state, or sub-units containing these devices:

(1) Persons removing sub-units from an equipment using these devices must be earthed by a wrist strap and a resistor at the point provided on the equipment.

(2) Soldering irons used during the repair operations must be low voltage types with earthed tips and isolated from the mains voltage by a double insulated transformer.

(3) Outer clothing worn must be unable to generate static charges.

(4) Printed Circuit Boards (PCBs) fitted with these devices must be stored and transported in anti-static bags.

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