

COMMUNICATION ORDERS FOR
NORMANDIE INVASION

JUNE 6/44

TOP SECRET.

"FORCE J"

J.O.I. 100.
Page 1.
(15.5.44.)

FORCE "J" OPERATIONAL INSTRUCTIONS.

(Short Title: "J.O.I.")

SECTION XII - OUTLINE OF COMMUNICATIONS.

(Extra copy supplied for issue to the Communication Department is to be inserted in J.C.Os. as new Section IV of the latter publication. Present Section IV of J.C.Os. dated 9.12.43. is to be destroyed.)

J.O.I. 100.

SYSTEMS OF COMMUNICATION.

THE SYSTEMS OF COMMUNICATION AVAILABLE are as follows:-

- (i) V/S - often the quickest system, and to be used whenever possible to avoid W/T congestion. It comprises:-
Flags, Flashing and Semaphore.
Morse Flag and Heliograph,
both for long range work on land.
- (ii) R/T - when Radio conditions are good, e.g. no atmospherics, no interference or enemy jamming etc., the quickest possible system for SHORT messages permissible in plain language. Useful for Officer authentication of suspicious messages.
- (iii) W/T - the normal system for coded or cyphered messages and long distance communications. Should be used in preference to R/T when RADIO conditions are difficult.
- (iv) Boat Message - the normal system for lengthy messages within the force and particularly for messages which would otherwise have to be made by W/T in code or cypher.
- (v) Sound - e.g. Syren or Ardente Loud Hailer - is quick and often saves a message by another system.
- (vi) Coston Gun and Line - for transfer of lengthy messages, orders and/or correspondence at sea.
- (vii) Telephone and Despatch Rider - on shore, often saves congestion of other systems.
- (viii) AS A LAST RESORT - communication ratings must be imbued with the spirit to swim with the message at sea or run with it on land - but, by some system or another, GET THE MESSAGE THROUGH.

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SECTION XII - OUTLINE OF COMMUNICATIONS.

J.O.I. 101. COMMUNICATIONS DURING THE ASSEMBLY PERIOD.

Communications will be principally by Despatch Boat and V/S. In this connection, Commanding Officers are reminded of the need to ensure that secret information is not transmitted by V/S open to interception; and that the necessary precautions are taken for dealing with Secret Hand Messages.

2. W/T Silence will normally be in force, but ships and craft will probably be ordered to set watch at certain times on a special broadcast. Messages for transmission on this broadcast should be telephoned or teletyped to S.D.O. Portsmouth C.H.Q., or, where ordered, in the coded form in which they are required to be sent, at least one hour before the broadcast is due to start. Messages will be made in L.O.X.O., which, Commanding Officers are reminded, is a low-grade code. Exercise call signs (J.C.C. Section XII Part 2b) will be used and will, therefore, only be comprehensible within Force "J".

J.O.I. 102. COMMUNICATIONS ON PASSAGE.

Communications will be as laid down in detailed Orders. The principle will be that there will be one common wave (i.e. Force Command Wave) for inter-communication within the Force in emergency. In addition, W/T guards will be detailed by the Senior Officer of each Group on essential shore broadcasts, e.g., Portsmouth Command Port Wave, Broadcast C.N. etc.. The Force Headquarters ship will act as W/T guard for the Force on most of the other Shore Broadcasts designed specially for the Operation. Minesweepers will report if necessary on Minesweeping Wave, which will also be kept by Naval Commander, Force "J" and S.O.A.Gs., and possibly D/S.O.A.Gs.

2. W/T Silence is in force until H-Hour and may only be broken for signals essential to the succession of the Operation. This includes the rendering non-operational of major units (including L.S.I.) and reports in accordance with J.O.I. 5, and the sweeping, striking or sighting of mines AT THE LOWERING POSITION from H-120 minutes onwards.

NOTE:- Detailed orders will be given as to the method of transmitting ENEMY REPORTS and/or HELP MESSAGES.

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J.O.I. 103.

COMMUNICATIONS DURING THE ASSAULT.

(See Diagram 1 for
Principle Internal
Naval Assault W/T
Channels)

The Chain of Communication follows the Chain of Command with the primary object of providing a means whereby Senior Officers of all three Services can pass orders to, and receive information from, their subordinates.

2. A subsidiary object and one which can only be partially attained, due to technical limitations, is to provide inter-communications between the Units of all three Services within the Force.

3. The primary object above must constantly be borne in mind and junior officers MUST NEVER prejudice its attainment.

4. HEADQUARTERS SHIPS and CRAFT have been specially fitted with W/T to carry the necessary Headquarters communications as follows:-

(a) Assault Force Headquarters Ships (L.S.H.).

For Naval Assault Force Commander and Staff.
Divisional Commander and reduced Divisional Headquarters Staff.
(Also Corps Headquarters, on occasion).
Air Force Commander's representative and staff.

(b) Assault Group H.Q. Ships (Frigate).

For Naval Assault Group Commander and Staff.
Assault Brigade Commander and Staff (initially).
Air Liaison Officer, if carried.

(c) D/S.O.A.G's H.Q. Craft (L.C.H.).

For Deputy Senior Officer Assault Group.
Assaulting Brigade Commander's representative
(Battalion Commander).

Beach Signal Unit.

(a) A Beach Signal Unit, consisting of a Beach Signal Section (R.N.) and a Beach Signal Section (Royal Corps of Signals), is landed on each Brigade Front.

(b) The object of this Unit is to provide communication between beach and sea, between beaches, and to act as a link in the early stages between military formations inland and their military headquarters afloat.

.../(c)

COMMUNICATIONS DURING THE ASSAULT (cont'd)

Beach Signal Unit (cont'd)

- (c) Initially, an advanced Beach Signal Station with communication to seaward and to Military H.Q. inland is established on each Battalion front. Half the personnel should be landed with the Naval Beachmaster and half with the Battalion H.Q.
- (d) Later, additional Naval and Military Personnel are landed just prior to Brigade Headquarters, so as to reinforce one of the Advanced Beach Signal Stations, thus establishing a Main Beach Signal Station on each Brigade Front. The Main Beach Signal Station provides semi-permanent communication from beaches to seaward and between beaches and is always available to act as a link between the Navy afloat and the Army ashore.
- (e) Past operational experience has shown that landing of Beach Signal personnel in accordance with the above principles is VITAL to the success of any operation.

COMMUNICATIONS DURING THE BUILD-UP.

Communications during the Build-up (see Diagram 2 for Principal Internal Naval Build-up W/T Channels) continue to follow the Chain of Command. In addition, the following special commitments are catered for:-

- (i) Control of Shipping and Craft off Force "J" Beaches devolving upon Captain G.J.2 - when Captain G.J.1 withdraws to become Captain Patrols p.m. on D-Day. (See J.O.I. 109 paragraph 5(a) "Common Sector Landing Wave").
- (ii) Requirements for Ferry Control. (See J.O.I. 109 paragraph 5(b) and (c) "Unloading Waves" and "B.A.N/J SPECIAL").
- (iii) Requirements for Defence of the Anchorage. (See J.O.I. 109 paragraphs 3(f),(g) and (i), 4(a) and (j) for Naval Radar Reporting Wave, Joint Force Broadcast, Patrol Wave, Force Command Wave, Smoke Wave, etc.).
- (iv) Requirements for Convoys other than Assault Convoys and for Shuttle Service. (See J.O.I. 107 and 108.)
- (v) Requirements ashore for B.A.N/J, on whom the command and control ashore will eventually devolve after the departure first of the Naval Force Commander, and then of the remaining S.O.A.G. (See J.O.I. 105.)

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J.O.I. 105.

COMMUNICATIONS FOR B.A.N/J.

Communications for B.A.N/J will be established initially by the Reserve Beach Signal Section using R/T and W/T to seaward, together with necessary V/S communication.

2. These communications will be augmented so as to establish W/T communication with the near shore and to receive the necessary broadcasts.

3. As each link is established, the controlling station will be called, and B.A.N/J is to report to Naval Commander Eastern Task Force repeated Allied Naval Commander Expeditionary Force and Naval Commander Force "J" when the complete station is ready to operate.

J.O.I. 106.

DESPATCH BOAT SERVICE. (See also J.O.I. 80).

The Flag Ship of Naval Commander Force "G", will be the centre for the collection of messages from and distribution of messages to other Forces, the near and far shore, and Naval Commander Eastern Task Force.

2. The air despatch letter service between the near and far shore has been co-ordinated with this Naval despatch boat service, so that the times of handing in messages at collection centres will be the same in both cases.

3. DESPATCH BOAT SERVICE within Force "J" will be run as ordered by Naval Commander, Force "J" and the S.O.A.Gs.

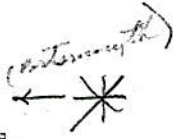
J.O.I. 107.

COMMUNICATIONS FOR CONVOYS (OTHER THAN ASSAULT CONVOYS) AND ESCORTS.

Details are contained in O.N.C.O., Section XXII, which is carried by most escorts.

2. The principles of communication are as follows:-

- (a) Ships inter-communicate with co-operating aircraft (other than fighters) on Convoy R/T (2410 Kc/s). This wave is also used for inter-ship communication in dark hours, low visibility by day and when attacked.
- (b) Coastal Force Escorts, other than M.L. inter-communicate on Coastal Force inter-communication Wave (2400 K/Us.)
- (c) All ships able to do so, in the Eastern Task Force Area, set watch on Joint Force Broadcast (3350 Kc/s).



.../(d)

COMMUNICATIONS FOR CONVOYS (OTHER THAN
ASSAULT CONVOYS) AND ESCORTS (cont'd)

2. (d) ~~Stragglers~~ set watch on NITON Broadcast 1650 Kc/s (181.8 metres) instead of 2440 Kc/s.
- (e) In addition, the following W/T guards are kept by the Escorts:
 - (i) Appropriate Command Post Wave (Portsmouth 2450 Kc/s, Plymouth 2300 Kc/s, Dover 1700 Kc/s) kept outside Eastern Task Force Area.
 - (ii) Appropriate Task Force Auxiliary Wave (Eastern 2150 Kc/s, Western 2068 Kc/s) in Eastern Task Force Area.
 - (iii) Broadcast C.N. (100 Kc/s) by all Major War Vessel Escorts.
 - (iv) Channel Ship-Shore Calling Wave (2700 Kc/s) when required to clear messages to shore.

3. Procedure on arrival in the Assault Area.

- (a) Visual Contact. Senior Officer of Escort will contact Captain Southbound Sailings, then Naval Force Commander. After the latter's withdrawal, the nearest Main Beach Signal Station or N.O.I.C. is to be contacted.
- (b) W/T Contact. Senior Officer of Escort will contact, if necessary, Captain Southbound Sailings (later F.O.B.A.A., when established,) on Eastern Task Force Auxiliary Wave. (2150 Kc/s).

4. Procedure on dispersing to Beach Sectors.

On convoys being split into sections proceeding to different Beach Sectors, they will be contacted by S.O.A.Gs. or craft in R/T touch with the beaches.

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J.O.I. 108. COMMUNICATIONS FOR THE SHUTTLE SERVICE.

Communications are similar to those for the Passage and are build up on the basis of the necessary W/T guard being detailed in each Group on sailing.

2. Common Sector Landing Wave, previously described, may be used for manoeuvring, if required, by groups of Major Landing Craft.

3. W/T guards are to be kept within each group as follows:-

(a) NITON Broadcast (1650 Kc/s.)

(b) Eastern Task Force Auxiliary Wave (2150 Kc/s.)
in Eastern Task Force Area.

Note:- With reference to J.O.I. 102, it will be noted from the above that Force "J" Command Wave ceases to be the inter-communication wave on leaving the Force "J" Area.

4. Procedure on arrival in Assault Area is as in J.O.I. 107, paragraph 3 above.

5. Procedure on dispersing to Beach Sectors: The Senior Officer of each arriving Group of L.S.T. or Major Landing Craft will call the Naval Force Commander (after his withdrawal, B.A.N/J. or nearest Main Beach Signal Station) on Common Sector Landing Wave, so that further Operational or Communication Orders can be issued, e.g., "Maintain constant loudspeaker watch on Force Command Wave - proceed to Mike Red".

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J.O.I. 109.

W/T COMMUNICATIONS AVAILABLE.

(Detailed Tables of W/T Organisation, showing times of setting watch on each Wave, etc., will be promulgated in Operation Orders.)

COMMUNICATIONS BETWEEN SHORE BASED AUTHORITIES & FORCES AFLOAT.

- (a) Senior Officers' Broadcast (S.N.) (92.5 Kc/s).

A broadcast on which Allied Naval Commander Expeditionary Force can promulgate orders and information to Senior Officers of Forces. Manned by Senior Officers down to Standby Force Headquarters Ship, and subsequently by N.O.I.Cs, ashore.

- (b) Area Broadcast (C.N.) (100 Kc/s)

A broadcast on which Admiralty and Commanders-in-Chief can promulgate messages to all ships in the area. Normally manned by all Major War Vessels.

- (c) Eastern Task Force Broadcast (E.N.) (190 Kc/s)

A broadcast from Allied Naval Commander Expeditionary Force to Naval Commander Eastern Task Force and Assault Force Commanders.

- (d) Niton R/T Broadcast. (1650 Kc/s)

Primarily to issue instructions to Ships and Craft which can only keep R/T watch. May be used to issue instructions to independent landing craft (i.e. stragglers).

- (e) Portsmouth Command Port Wave. (2450 Kc/s)

Used by Commander-in-Chief, Portsmouth, to pass out information of enemy movements to Naval Commander Eastern Task Force, Assault Force Commanders, Captain Patrols and intercepting Coastal Forces.

COMMUNICATIONS BETWEEN SEAGOING AUTHORITIES AND SHORE.

2. (a) E.T.F. Rear Link (Ops), (3600 Kc/s)

A channel between Allied Naval Commander Expeditionary Force and Naval Commander Eastern Task Force only.

/(b) ...

W/T COMMUNICATIONS AVAILABLE. (Cont'd)COMMUNICATIONS BETWEEN SEAGOING AUTHORITIES AND SHORE. (cont'd)(b) E.T.F. Rear Link (Movements). (3200 Kc/s)

A channel between Allied Naval Commander Expeditionary Force, Naval Commander Eastern Task Force and Force Commanders. Also manned in Standby Force Headquarters Ship. Primarily used for information regarding movements of Convoys and Groups during the Follow-Up and Build-Up Stages.

(c) Channel Ship-Shore Calling Wave. (2700 Kc/s)

A calling wave on which ships and authorities can clear messages back to a shore W/T station for onward transmission. Mainly used for reporting E.T.As, etc..

(d) Ship-Shore Calling Waves. (16845, 12685, 8290, 6300 or 4740 Kc/s)

The normal ship-shore calling waves laid down in A.F.Os, "S".1 and "S".2. These should be used if there is congestion on the Channel Ship-Shore Calling Wave.

(e) E.T.F. VH/F. R/T Wave. (72.1 Mc/s)

An R/T speech channel between Allied Naval Commander Expeditionary Force, Naval Commander Eastern Task Force and Assault Force Commanders, for whom an arrangement giving temporary security will be provided. Also kept by Standby H.Q. Ships and Assault Group Commanders, but not normally used by them, except in emergency.

This Wave is later extended to N.O.I.C. of captured beaches and ports.

(f) Commercial M.C.W. (500 Kc/s)

Used in emergency only by Merchant Ships.

(g) Home M/F Wave. (385 Kc/s)

Used for enemy reports and for HELP Messages to shore. Also used by Air/Sea Rescue craft who may require D/F bearings taken of them.

(h) Portsmouth Command Port Wave. (2450 Kc/s)

Also used for enemy reports and/or HELP Messages to shore.

COMMUNICATIONS WITHIN THE EASTERN TASK FORCE.3. (a) Admirals Wave. (4150 Kc/s)

Normally kept by all Major War Vessels. Used for enemy reporting and emergency intercommunication.

/(b) ...

W/T COMMUNICATIONS AVAILABLE. (Cont'd)

COMMUNICATIONS WITHIN THE EASTERN TASK FORCE. (cont'd)

- (b) E.T.F. Command Wave. (6250 Kc/s)

Principal channel of communication between Naval Commander Eastern Task Force and Assault Force Commanders. Manned by these Authorities only.

- (c) E.T.F. Auxiliary Wave. (2150 Kc/s)

An inter-communication wave between Naval Commander Eastern Task Force, Assault Force Commanders, and Standby Assault Force H.Q. Ships, and Major War Vessels under the direct operational control of Naval Commander Eastern Task Force. Also kept by Naval Commander Western Task Force for inter-communication with Naval Commander Eastern Task Force.

Subsequently manned by N.O.I.s ashore; and becomes the Captured Port - Port Wave.

- (d) W.T.F. Auxiliary Wave. (2068 Kc/s)

Kept by Naval Commander Eastern Task Force for inter-communication with Naval Commander Western Task Force.

- (e) Minesweeping Wave. (2333 Kc/s)

Used as required by Minesweepers. Kept in Assault Forces by Authorities down to S.O.A.Gs, and possibly D/S.O.A.Gs, until H-hour, for interception of minesweeping information during the passage.

- (f) Naval Radar Reporting Wave. (5000 Kc/s)

Manned by Naval Commander Eastern Task Force and Assault Force Commanders, and selected warships fitted with W.A. sets for passing in Radar plots.

- (g) Joint Force Broadcast. (3350 Kc/s)

Shared between all British Assault Forces for promulgation of Naval, Military or Air Information and Air Raid Warnings or other immediate warnings. These warnings will also be promulgated on Force Command Wave (see J.O.I.109, para. 4(a) (iii)).

- (h) Fleet R/T Wave. (6350 Kc/s)

Kept as necessary by Covering Forces for inter-communication.

- (i) Patrol Wave (2000 Kc/s) (R/T)

Kept by destroyers on patrol, A/S trawlers, H.D.M.Ls, ships and craft on Defence Line, and Minewatching craft, for inter-communication.



W/T COMMUNICATIONS AVAILABLE (Cont'd).INTERNAL COMMUNICATIONS WITHIN FORCE "J" (See Diagram 1)

4.(a) (i) Force "J" Command wave (1840 Kc/s) is intended to provide universal communication in the Force, from Force Headquarters ship (or other Senior Officers on occasion) to ALL ships and craft of Force "J".

(ii) W/T will normally be used between Senior Officers.

(iii) R/T will be used for short messages of a general nature, e.g., AIR RAID WARNINGS and for messages to individual craft.

(iv) It is essential that every ship and craft maintain at least constant loud speaker R/T watch on this wave even if it be only using a B.P. 412 receiver. The set used must be continually tuned to the correct frequency by listening to the Senior Officers' transmissions. Individual ships and craft are only to transmit in an emergency.

(b) FORCE "J" AUXILIARY WAVE (1520 Kc/s)

Is intended primarily for communication between a Naval Force Commander and Bombardment Cruisers and/or destroyers. Its secondary use is for communication between the Naval Force Commander, S.O.A.Gs. and D/S.O.A.Gs.

(c) FORCE "J" NAVAL BEACH WAVE (5690 Kc/s)

Is intended for communication between the Naval Force Commander, S.O.A.Gs, D/S.O.A.G, P.B.Ms, at Main Beach Signal Stations and N.O.I.C.

(d) ASSAULT GROUP WAVE (J.1. = 7515 Kc/s ("A" flick))
(J.2. = 7050 Kc/s ("A" flick))
(J.3. = 6600 Kc/s ("C" flick))

(i) Is for communication between S.O.A.Gs, D/S.O.A.Gs. and their Senior Officers of Groups of landing ships and craft and Beach Signal Stations. It is intended to provide the means for S.O.A.Gs. and D/S.O.A.Gs. to control the movements of their ships and craft.

(ii) Type 46 sets (R/T or W/T) are used in landing ships and craft on this wave. J.1. Group has "Batch 8.", J.2. Group "Batch 9.", and J.3. Group both "Batch 7" and "Batch 8" type of 46 set. Each 46 set has three flick frequencies "A", "B", and "C".

(iii) Both J.1. and J.2. use the "A" flick of the 46 set on their Group Wave and J.3. uses the "C" flick. Thus, each Assault Group Wave is different.

(iv) When J.3. Group (i.e. Reserve Brigade Group) is ordered to beach, as he has both "Batch 7" and "Batch 8" type of 46 set, he shifts his Group to the "A" flick of either J.1. or J.2.

(v) The "C" flick of all batches of 46 set is common and the use of this common flick will be described later.

/(e)...

W/T COMMUNICATIONS AVAILABLE. (Cont'd).INTERNAL COMMUNICATIONS WITHIN FORCE "J" (Cont'd).(e) COMMON SECTOR LANDING WAVE (6600 Kc/s ("C" flick))

- (i) Is the R/T wave provided by the "C" flick, mentioned above, of the 46 set and is common to all batches of 46 set.
- (ii) Initially, it is used by J.3. as his Assault Group wave and is also used for this purpose by the L.C.T. of Groups 11 and 21. In addition it is also manned by the Naval Force Commander and S.O.A.Gs, to provide them with quick R/T for short messages.

(f) ASSAULT GROUP CLOSE SUPPORT V.H/F FIRE COMMAND WAVE
(J.1 = 300 Mc/s ("A" flick))
(J.2 = 303 Mc/s ("B" flick))

Provides communication between S.O.A.Gs, D/S.O.A.Gs, S.O.S. G.J. 1. and S.O.S. G.J. 2., the M.Ls. with S.P. Artillery and close support craft. As its name implies, it is intended for "Fire Command". Each Assault Group has its own frequency and later may combine on one common wave using the common flick "C" of the set provided.

NOTE. The set used is a type 686 and WANTS WATCHING as it is liable to drift off frequency. Notes on its use have been circulated to the officers concerned.

(g) BOMBARDMENT CALLING WAVE. (3700 Kc/s, stand-by = 4370 Kc/s).

Is used by F.O.Bs. to pass any messages, including calls for support, to the Force Headquarters ship. It is also kept by the Standby Headquarters ship, by bombarding ships and close support craft, when not attached to a F.O.B., for informative purposes.

NOTE. Unattached close support craft can expect to receive messages from the Headquarters ship on this wave, but are NOT to originate on it except in emergency.

(h) F.O.B. WAVES (Jig one to 6, 3450, 3732, 3796, 4370 (and spare BCW), 4550, 5135 Kc/s respectively).

Are used by F.O.Bs. for communicating with their bombarding ships and/or close support craft. As far as possible, a separate wave is allocated to each F.O.B.

(i) AIRCRAFT SPOTTING WAVE (allocated later).

Is for communication between bombarding ships and spotting Aircraft, one frequency normally being allocated between a pair of ships liable to bombard. It is a V.H/F R/T wave.

(j) SMOKE WAVE (60 Mc/s)

For intercommunication between Senior Officers, smoke-laying L.C.P.(L), and his L.C.P.(L).

/(k)...

INTERNAL COMMUNICATIONS WITHIN FORCE "J". (Cont'd).(k) BOMBARDING SHIPS V.H/F WAVE (30 Mc/s - "B" flick of SCR.610)

This is a V.H./F wave provided for messages concerning Bombardment between Force Headquarters Ship, Standby Headquarters Ship and Bombarding Cruisers and Destroyers. Loudspeaker watch is kept and messages are normally passed officer to officer, no written record being kept except when the originator orders "Written message for you". The "B" flick of an SCR.610 is used and this wave will be closed down in the later stages when bombardment should have ceased; and this frequency will be in use as B.A.N.J.'s "Special". (See J.O.I. 109, paragraph 5 (c)). Provision should be made to run these sets from wet batteries, keeping one set of batteries on charge. Where this is not possible, ample supplies of dry batteries must be provided, as the life of a dry battery is only 10 hours.

NOTE. This wave may be common throughout the Eastern Task Force, but it is hoped to reserve it, or another frequency, for Force "J".

COMMUNICATIONS DURING BUILD-UP. (See Diagram 2.)(5. (a) COMMON SECTOR LANDING WAVE. (6600 Kc/s).

(i) Before the withdrawal of one S.O.A.G., probably P.M., D-Day, he will change the frequency of his Assault Group Wave to that of the Common Sector Landing Wave (i.e. Flick "C" on a 46 set), informing the Naval Force Commander and the remaining S.O.A.G., who will do likewise with his Group. Thus, Group waves are now dead and Common Sector Landing wave is used for controlling the movements of landing ships and craft throughout the Force "J" front.

(ii) This Common Sector Landing Wave is common to the whole British front and Senior Officers of Groups of L.S.T. and Major Landing Craft within seven miles of any British beach will keep watch on it. Thus, it provides communication to higher authority for any Senior Officer of landing craft or ships "in doubt".

(b) M.T. UNLOADING WAVE AND STORES UNLOADING WAVE.

(i) Are kept, respectively, on the J.1. and the J.2. front. They provide communication between M.T. and Stores Ships, their respective S.O.F.Cs. and the S.O.F.B.

(ii) In addition, the P.F.C.O. mans both unloading waves, so that he can communicate with both the M.T. and the Stores Ships.

(iii) The S.O.F.B. similarly mans both unloading waves so that he can communicate both with the M/T and Stores Ships and with the other Depot Ships.

NOTE. Communication is by R/T on the above waves and the sets and Personnel in the S.O.F.B. Ship, Depot Ships and M.T. and Stores Ships are provided by the Royal Marines.

(c) B.A.N.J. SPECIAL

Is provided for communication during the build-up between B.A.N.J. P.F.C. S.O.F.C., P.B.Ms. and S.O.F.B. (also "GOOSEBERRY" when ordered). The "B" Flick (30 Mc/s) of an SCR.610 set is used. Loudspeaker watch is kept at all stations concerned, and traffic is normally officer to officer R/T, a

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J.O.I. 110.

COUNTER-ACTION AGAINST UNDUE W/T INTERFERENCE
AND/OR ENEMY JAMMING.

From H - 3 Hours onwards, "SQUEAKER 2" Organisation will be in force. This means constant loudspeaker watch on "A" Flick (27.6 Mc, μ) of a S.C.R. 610 set by Naval Commander Force "J", Standby Headquarters Ship, S.O.A.Gs., D/S.O.A.Gs., M.L. leading in Reserve Group and P.B.Ms and N.O.I.C. when landed. Messages on this wave will normally be officer to officer, and no written record will be kept unless the originator orders "Written message for you".

2. The main object of this wave is to provide communication in the event of undue interference and/or jamming on the normal frequencies; and it should not, therefore, be used unless essential.

3. The subsidiary object of this wave is to provide rapid officer to officer communication, but this should not be allowed to become excessive or it will prejudice the primary object which may be required to be achieved at any stage of the operation. In other words, this is a "sheet" anchor and should only be used when essential. Again, wet batteries should be used with this set whenever possible, and if not possible, an ample supply of dry batteries must be provided.

4. "SQUEAKER 1" is a last resort measure to counter undue interference and/or enemy jamming on normal frequencies and VH/F S.C.R. 610 frequencies. It is only to be used at the order "SQUEAKER 1", and it will then provide communication between Naval Commander Force "J" Standby Headquarters Ship, S.O.A.Gs and B.A.N/J. Communication is provided, using type 86 sets, between the above Authorities on a VH/F frequency (6450X18 Kc/s), which also happens to be the Fighter World Guard frequency and which, it is hoped, will not be used much by own fighters during a particular Operation.

J.O.I. 111.

PERSONNEL.

PERSONNEL is to be distributed by S.O.A.Gs so as best to implement the Communication Organisation.

AUTHENTICATION. (Cont'd)

CIRCUMSTANCES IN WHICH MESSAGES ON INTRA-ASSAULT FORCE WAVES
MAY BE AUTHENTICATED. (Cont'd)

(c) When it is desired to confirm a message or signal that is suspected of being bogus. In this case:-

(i) The suspicious addressee is to control the transmitting station to authenticate by making (by R/T or W/T) the word "BANKO" followed by the Date Time Group or Time of Origin of the message concerned.

Example:- 1 BG is suspicious of the following message which has a date time group 261256B.

"20 1BG v BG -- 261256 B = BEACH SIGNAL STATION
ESTABLISHED = K".

1 BG then makes:-

"BG v 1BG -- 261305B = BANKO 261256 = K."

(261256 being the date time group of the suspected message)

(ii) The originator (if bona fide) is then to reply, giving the correct "LOXO" group for the Time of Origin of his fresh message.

Example:- (Following on example in (i)).

BG will make:-

"1BG v BG -- 261325B = MY 261256 XRN PAL = K."

(XRN PAL being taken as the code groups for 1325, the T.O.O. of the new message.)

(iii) If the originator on being raised as in (i) fails to authenticate or passes the wrong group, the challenging station is immediately to inform all other addresses as follows:-

- (i) T.O.O. of bogus message.
- (ii) Word "DUDD".
- (iii) Code groups authenticating his own message, thus:-

"20 BG v 1BG -- 261356A = 261256 DUDD XAL MQR = K."

(XAL and MQR are assumed to be the correct code groups for "1356" the T.O.O. of the new message.)

(d) In all messages transmitted on the Joint Force Broadcast.

(e) In the case of bogus messages being passed from an authentic Call Sign, the rightful owner of this Call Sign is, either on hearing the bogus station or on hearing the message challenged, to make a "DUDD" message as in (c) (iii).

AUTHENTICATION. (Cont'd)

- (f) "DUDD" messages must always be authenticated by the originator.
- (g) To summarise, all authentication groups are always the coded times of origin of the message in which they are sent.

5. The above method of authentication is to be memorised as far as possible, and on no account is it to be carried written down by ships or craft beaching, who are therefore to destroy it before sailing. Special care is to be taken to destroy it in the event of the loss of a ship.

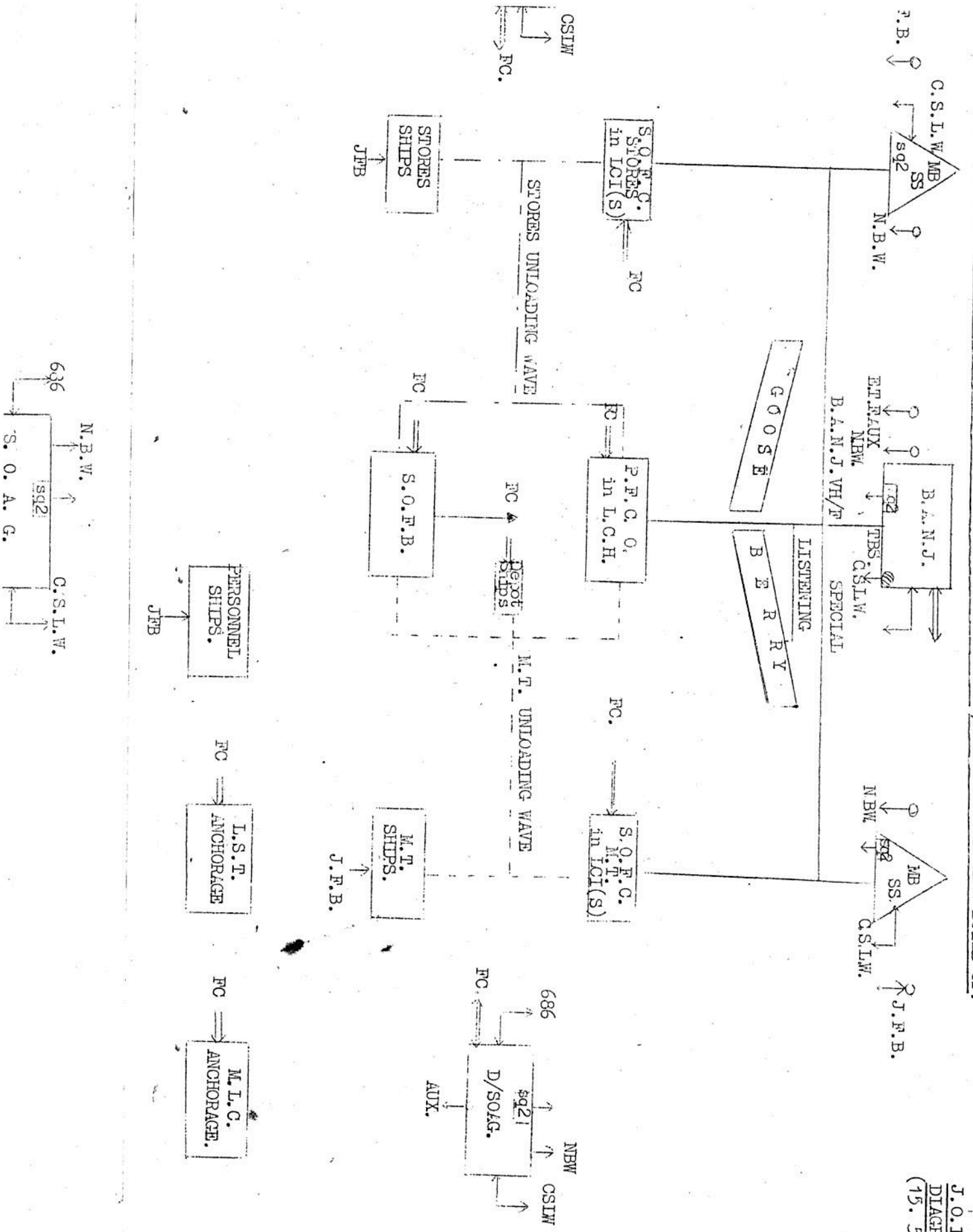
NOTE: Exact hours should not be used for T.O.Os of signals, as these cannot be authenticated.

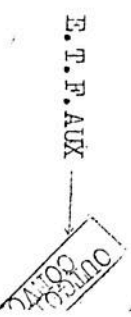
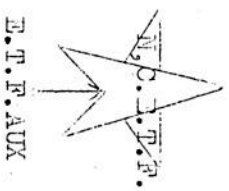
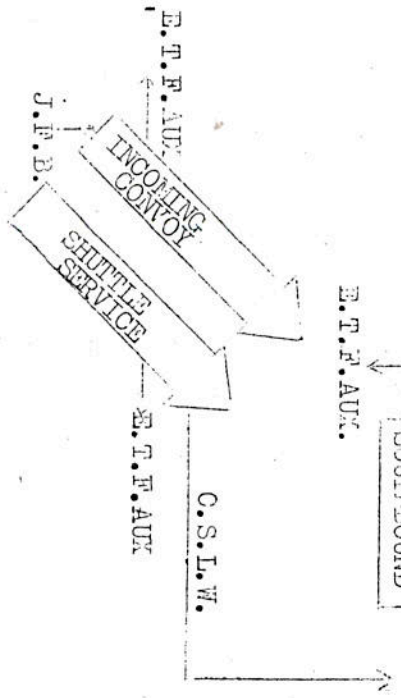
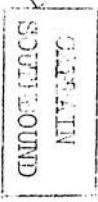
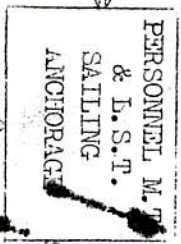
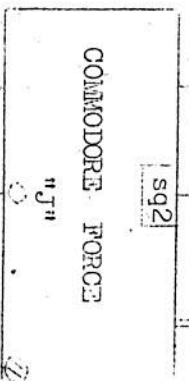
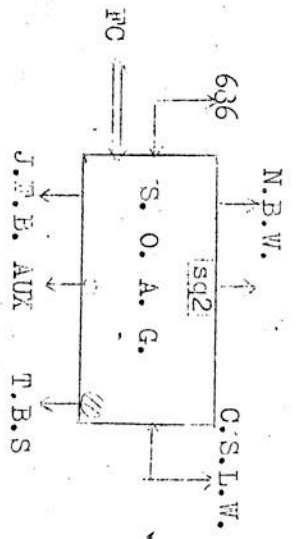
6. The following form of authentication may be used between F.O.B. S.F.C.Ps and Bombarding Ships:-

- (a) The F.O.B./S.F.C.P. will make the call sign in the usual way, in conjunction with the Fire Control Code as set out in A.E.F. Assault Signal Book.
- (b) The Bombarding Ship may repeat the signal in full if ordered, adding the word "BANKO" at the end of the message, if authentication is desired.
- (c) The F.O.B./S.F.C.P. will then repeat the time of origin of the original signal in SLIDEX.
- (d) It is not necessary to authenticate all messages but it is usually wise to do so in calls for fire.

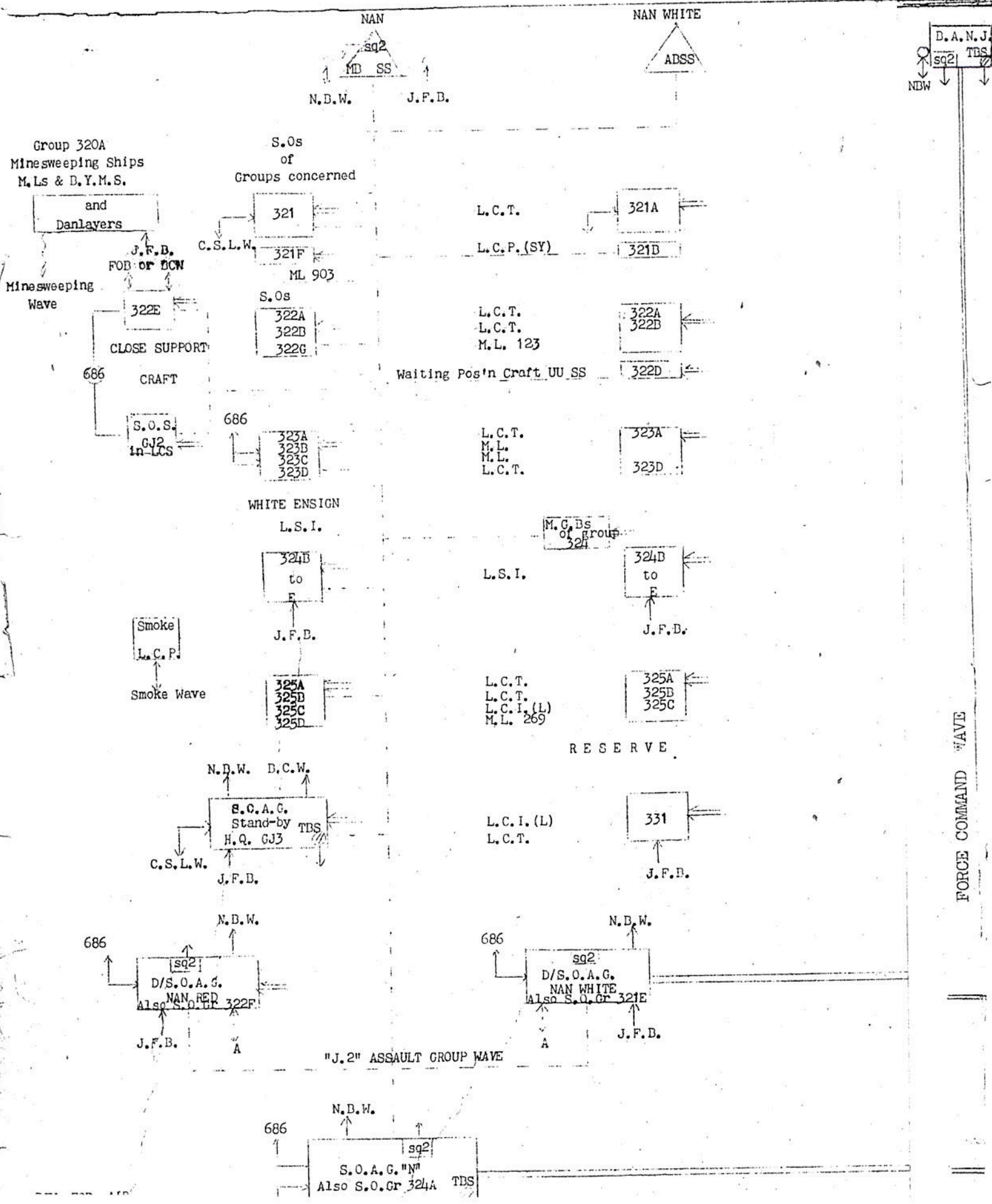
DIAGRAM 2 ACCOMPANYING J.O.I. 104, PRINCIPAL INTERNAL NAVAL W/T CHANNELS DURING BUILD UP.

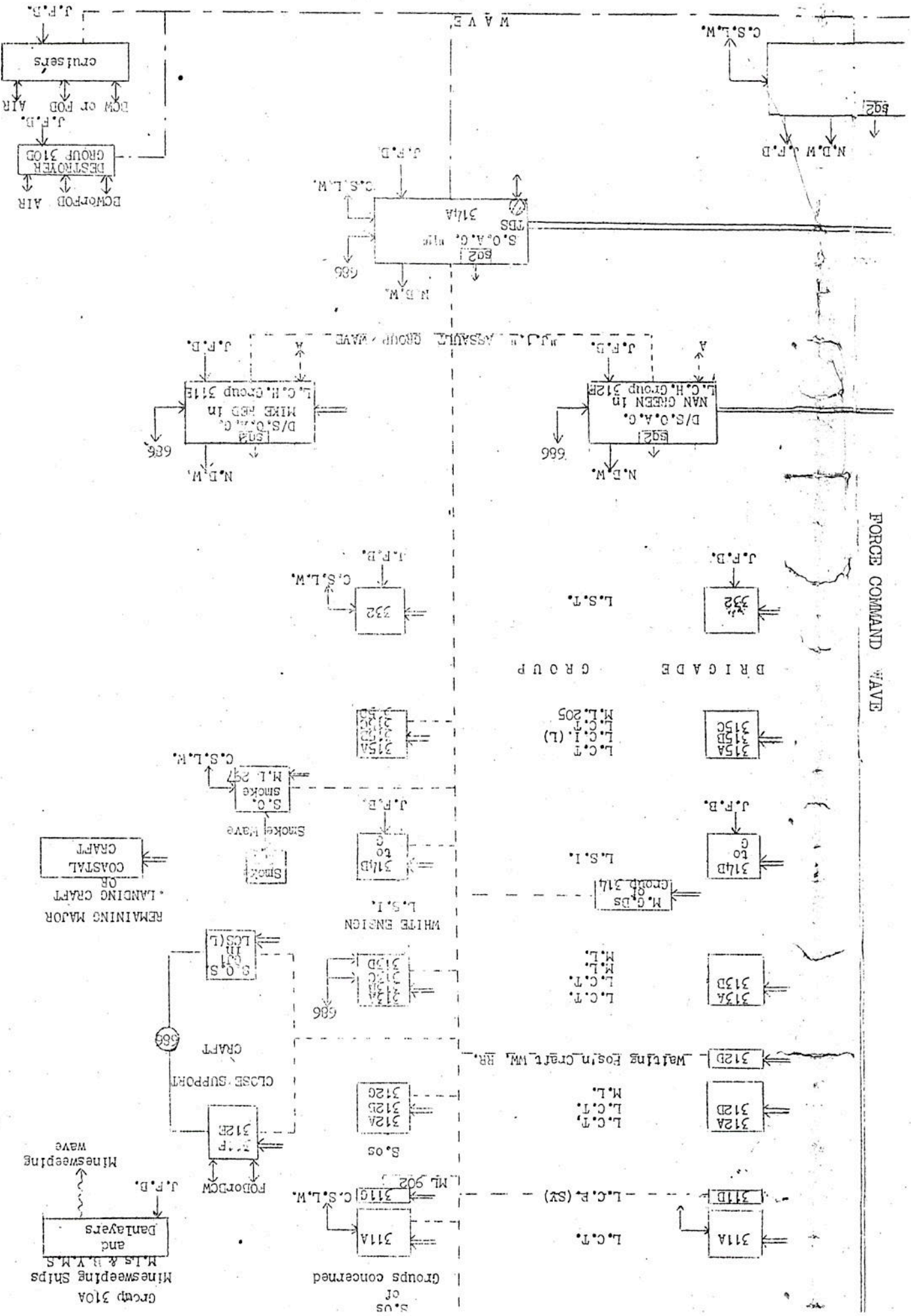
J.O.I. 104
 DIAGRAM 2.
 (15. 5. 44.)





TO CRUISERS & DESTROYERS





FORCE COMMAND WAVE

Group 310A
Minesweeping Ships
and Panlayers
M.L.S. & B.Y.M.S.

Minesweeping
wave

REMAINING MAJOR
LANDING CRAFT
OR
COASTAL
CRAFT

Smoke
Smoke Have

S.O.S.
smoke
M.L. 297

C.S.L.W.

N.D.W.

J.F.B.

J.F.D.

J.F.B.

J.F.B.

J.F.B.

J.F.B.

J.F.B.

Groups concerned

311A

WHITE ENGINE

314B to G

S.O.S. smoke

C.S.L.W.

N.D.W.

J.F.B.

J.F.D.

J.F.B.

J.F.B.

J.F.B.

J.F.B.

J.F.B.

311A

311B

312A

312B

312C

312D

313A

313B

313C

313D

314B

315A

315B

315C

311A

311B

312A

312B

312C

312D

313A

313B

313C

313D

314B

315A

315B

315C

311A

311B

312A

312B

312C

312D

313A

313B

313C

313D

314B

315A

315B

315C