CHAPTER THIRTEEN

TELETYPEWRITER AND TAPE RELAY PROCEDURE

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CHAPTER THIRTEEN

TELETYPEWRITER AND TAPE RELAY PROCEDURE

13000. TELETYPEWRITER PROCEDURE

13001. MACHINE FUNCTIONS

.1 SHIFT KEY - Teletypewriter machines, owned or leased by naval communications for private line service, shift from upper case characters (FIGURES) to lower case characters (LETTERS) only when the LTRS key is pressed. Teletypewriter machines furnished for commercial Teletypewriter Exchange Service (TWX) use shift from upper case characters (FIGURES) to lower case characters (LETTERS) automatically whenever the space bar is pressed, in addition to shifting when the LTRS key is pressed.

In order to ensure that these differences in shifting operations do not result in errors, the following general rules always must be followed when transmitting a message by direct keyboard or punching tape on either a TWX teleypewriter or a Navy-owned or leased teletypewriter:

(a) Press FIGS key to shift from lower to upper case, and when spacing between groups of upper case characters.

(b) Press the LTRS key to shift from upper to lower case.

Always press the LTRS key to shift from upper to lower case (disregarding the automatic unshift feature on a TWX machine).

EXAMPLE: 35784 (space) (LTRS) TRY MAKE.....

This will have no adverse effect on either a TWX machine or a Navy machine used on a private line. This applies whether a direct keyboard or a tape perforator is used. Failure to follow this practice would result in the following:

Transmitted on TWX machine: 35784 TRY MAKE

As received on Navy machine: 35784 546 .-(3

Always press the FIGS key after the space before each group of figures or upper case characters in a series.

EXAMPLE: 35784 (space) (FIGS) 27896 (space) (LTRS) NOT RECEIVED.....

This will have no adverse effect on either a TWX machine or on a Navy machine used on a private line. Also this rule applies whether a direct keyboard or a tape perforator is used. Failure to follow this practice would result in the following:

Transmitted on Navy machine: 35784 (space) 27896

As received on TWX machine: 35784 (space) WUIOY

.2 CARRIAGE RETURN (CR) - The carriage return function is employed to reset the machine to the left margin of the paper. The carriage return function is made twice to ensure the proper return of the carriage.

.3 LINE FEED (LF) - The line feed function is employed to advance the paper on the page teletypewriter.

13001. (Continued)

.4 BELL SIGNAL - The bell signal is employed to attract the attention of the receiving operator and, when used, will be transmitted as a series of single bells:

FIGS JJJJJSSSSS LTRS.

.5 WARNING LIGHT - Tape perforating equipment is equipped with a warning light to indicate approach of end of typing line.

.6 MARGIN BELL - Page printers equipped with keyboard facilities capable of operating directly into the line provide a margin bell to indicate the approach of the end of the typing line.

13002. PREPARATION

.1 The number of characters and spaces typed on one line should not exceed 69. Sending operators should perforate or type the message in such a manner that a long word falling at the end of a line will not be hyphenated. In order to prevent hypenating a word at the end of a line, strict attention must be paid to the end-of-line indicators (warning light or margin bell, depending upon the type of transmitting equipment used).

.2 Specific machine functions are necessary to expedite the handling of messages and to align the receiving page of teletypewriters.

(a) All transmissions must be preceded by five spaces, two carriage returns and one line feed.

(b) The end of line function will be two carriage returns and one line feed.

(c) The separative function between pages of long messages is two carriage returns and eight line feeds.

(d) The end of message function is two carriage returns and eight line feeds.

(1) In tape relay procedure the end of message functions are two carriage returns, eight line feeds, the letter N repeated four times, and twelve LTRS.

.3 Messages received for transmission, the text of which is in tabulated form, should be transmitted in tabulated form. In some instances, headings of columns require more space than the data shown in the column. In these cases, the headings should be written on several lines rather than one line. The columns of data shall be as close to the left margin as possible in order to reduce transmission time. When transmitting tabulated messages to forces afloat, include the phrase, READ IN____ COLUMNS SEPARATED BY X.

.4 Tape Preparation.

(a) Errors made while using keyboard transmission will be corrected by use of the error prosign. When errors occur in a message heading, however, a new tape will be prepared.

(b) In tape relay procedure errors made in the routing line shall not be corrected in the above manner. The incorrect tape will be discarded and a new tape prepared.

13003. CONFIRMATION

.1 When fifty percent or less of a message consists of figures, unusual letter combinations, or figures and letter combinations, such groups may be confirmed.

.2 Confirmation shall not be employed on ship-to-ship and ship-to-shore circuits.

.3 It is the responsibility of the station called to compare the confirmation with the textual component prior to delivery or refile.

13004. CORRECTIONS

.1 Corrections involving discrepancies in station serial numbers, mutilations or garbles caused by mechanical difficulties usually are obtained from the station from which the transmission was received. Otherwise, corrections of errors should be obtained from the station making the original transmission of the message. (See Articles 9154, 9157.)

13005. BREAK-IN PROCEDURE

.1 When equipment permits, break-in procedure may be employed to interrupt the transmitting station, but only to transmit a message of higher precedence under conditions indicated in Article 7064 or to stop the transmitting station because of equipment or receiving difficulties.

.2 In order to stop the transmitting station on half-duplex circuits a series of hyphens will be transmitted.

EXAMPLE: FIGS A FIGS A FIGS A etc.

The interrupted station will be advised of the reason for the interruption immediately if practicable. If the interruption is for the purpose of transmitting traffic of a higher precedence, the precedence of the traffic to be transmitted will be indicated, as follows:

(5 SPACES) (2CR) (LF)
NAYS DE NUJC 0 K (2CR) (LF)

.3 After an interruption, transmission should be resumed at the beginning of the line of copy in which the interruption was made or, if necessary, the entire message may be retransmitted.

13006. CALLING AND ANSWERING

.1 Calling and answering is conducted in the same manner as prescribed for radiotelegraph procedure in Article 9173. In addition:

(a) After a preliminary call has been made and answers thereto received, the transmitting station will make two carriage returns and eight line feeds before transmitting a message.

(b) When a station fails to answer a call, bell signals may be used as required.

13010. TRANSMISSION OF MESSAGES

13011. MULTIPLE ADDRESS MESSAGES

.1 A multiple address PLAINDRESS message (line numbers refer to basic message format):

(5 Spaces) (2CR) (LF)		
(Lines 2 & 3)	NSS DE YTLP NR 193A	(2CR) (LF)
(Line 4)	T	(2CR) (LF)
(Line 5)	0 150903Z	(2CR) (LF)
(Line 6)	FM YTLP	(2CR) (LF)
(Line 7)	TO SSMW	(2CR) (LF)
(Line 8)	INFO OIJT	(2CR) (LF)
(Line 10)	GR10	(2CR) (LF)
(Line 11)	BT	(2CR) (LF)
(Line 12)	THIS IS A PLAINDRESS	(2CR) (LF)
	MULTIPLE ADDRESS	(2CR) (LF)
	MESSAGE OF 10 GROUPS	(2CR) (LF)
(Line 13)	BT	(2CR) (LF)
(Line 15)	CFN 10	(2CR) (LF)
(Line 16)	K	(2CR) (LF)

.2 The above example shows an OPERATIONAL IMMEDIATE multiple address PLAINDRESS message originated by YTLP addressed to SSMW for action and OIJT for information. A single station is responsible for refile or delivery to all addressees. Contents of each line are explained as follows:

Lines 2 and 3 - NSS designates the station called; the prosign DE; YTLP designates the calling station and NR 193A the station serial number.
Line 4 - Prosign T
Line 5 - Precedence prosign 0; 150903Z is the date-time group.
Line 6 - Prosign FM; YTLP designates the originator.
Line 7 - Prosign TO: SSMW is the action addressee.
Line 8 - Prosign INFO: OIJT is the information addressee.
Line 10 - Prosign GR10: the text contains 10 groups.
Line 11 - Prosign BT.
Line 12 - Text.
Line 13 - Prosign BT.
Line 15 - Prosign CFN 10; confirms that the numeral in the text is 10.
Line 16 - Prosign K.

13012. MULTIPLE PAGE MESSAGES

.1 Messages containing more than 12 lines or 120 groups of text will be divided into pages for transmissions as follows:

(a) The first page will contain the heading and the first ten lines of text.

(b) All succeeding pages will contain twenty lines of text, except the last page which may contain less.

(c) The second and succeeding pages will be identified by the page numbers as shown in the following example.

PAGE TWO	(2CR) (LF)
TEXT.....Twenty lines.....	(2CR) (LF)
CFN (when necessary)	(2CR) (LF)
C (when necessary)	(2CR) (8LF)
PAGE THREE	
.....TEXT.....	(2CR) (LF)
CFN (when necessary)	(2CR) (LF)
C (when necessary)	(2CR) (LF)
K	(2CR) (8LF)

13012. (Continued)

.2 When corrections are necessary in multiple-page messages, which were not corrected by lettering out or by use of the error prosign the corrections will be made following the last text group of the page in which the error appears. Such corrections will be separated from the last text word by (2CR) (LF) and will be preceded by the prosign C. In such cases the end of the page functions (2CR) (LF) shall be transmitted after the correction.

13020. BROADCAST METHOD

13021. SCHEDULED TRANSMISSIONS

.1 General practices for conducting broadcast method transmissions are set forth in Article 6204.

.2 It is necessary that all stations conducting scheduled transmissions commence their transmissions on time. Each station prior to commencing a schedule normally shall make a preliminary test.

13022. CALL TAPES

.1 Call tapes consist of the designation of the called station made 3 times, the prosign DE (made once), the designation of the calling station made 3 times, a letter designation (broadcast designation) when used, made 3 times, followed by one line of R(LTRS)Y(LTRS), and one line of S(LTRS) G(LTRS). Call tapes should be run for ten minutes prior to each scheduled time.

EXAMPLE:

NERK NERK NERK DE NPM NPM NPM H H H	(2CR) (LF)
R(LTRS)Y(LTRS)R(LTRS)Y(LTRS) etc.	(2CR) (LF)
S(LTRS)G(LTRS)S(LTRS)G(LTRS) etc.	(2CR) (LF)

13023. COMMENCING BROADCAST SCHEDULES

.1 After running the call tape for approximately ten minutes, precisely at the prescribed time, NPM begins the transmission:

(5 Spaces) (2CR) (LF)	(2CR) (8LF)
NERK NERK NERK DE NPM NPM NPM	(2CR) (LF)
H NR432	(2CR) (LF)
R 091517Z	(2CR) (LF)
FM SEEK	(2CR) (LF)
TO CAGL	(2CR) (LF
INFO NFDR	(2CR) (LF)
GR15	(2CR) (LF)
BT	(2CR) (LF)
THIS IS AN EXAMPLE OF A MESSAGE	(2CR) (LF)
PREPARED FOR RADIOTELETYPEWRITER	(2CR) (LF)
TRANSMISSION BY THE BROADCAST METHOD	(2CR) (LF)
BT	(2CR) (LF)
C (when necessary)	(2CR) (LF)
AR	(2CR) (LF)
(5 Spaces) (2CR) (8LF)	(2CR) (LF)
H NR433	(2CR) (LF)
DAMP	(2CR) (LF)
M 091434Z	

13023.1 (Continued)

GR75	(2CR) (LF)
BT	(2CR) (LF)
(TEXT)	(2CR) (LF)
AR	(2CR) (8LF)
(5 Spaces) (2CR) (LF)	(16 LTRS)
NERK NERK NERK DE NPM NPM NPM QRU AR	

13024. INTERRUPTION OF CALL TAPES

.1 When during the period of continuous operation, or on a definitely assigned period basis, the call tape is employed as outlined in Article 13022, a call shall be employed prior to resuming transmission of messages. After the call tape has been interrupted, NPM transmits:

(2CR) (LF)
NERK NERK NERK DE NPM NPM NPM ZUJ (2CR) (LF)

NOTE: Transmission of the message then proceeds as outlined in Article 13023, starting with the station serial number.

13030. MANUAL SWITCHING SYSTEMS

13031. MANUAL SWITCHING CENTRALS

.1 Manual switching systems are engineered in such a manner that each station connected to a switching central switchboard can communicate with other stations connected to the same switchboard by manual cross connection or patching.

.2 Several switching centrals may be connected together through trunk or tie lines and a station connected to one switching central can communicate with other stations connected to several switching centrals by appropriate patching procedure.

.3 The procedure for handling messages through switching centrals is the same as in other methods of manual teletypewriter operation except for the requirements contained in paragraphs 1 and 2 above which are explained herein.

13032. SPECIAL ABBREVIATIONS

.1 The following special abbreviations are authorized for use to and by manual teletypewriter switchboards:

BKD (Booked) - Your call has been booked. Used by switchboards after BOOK has been requested.

BOOK (Book) - It is requested that this call be booked. Followed by the precedence of the message awaiting transmission and used to book call when the called station is engaged.

ENGD (Engaged) - The station called is engaged. Used by switchboards to indicate to the calling station that the connection it requires cannot be made because the called station is engaged. The calling station then may transmit BOOK followed by the precedence of the message it wishes to transmit.

OOO (Out-of order) - The circuits to the station called are out of order. Used by switchboards to indicate to the calling station that the connection it requires cannot be made because the circuits are out of order.

13033. TABLING OUT

.1 The term TABLING OUT is used to indicate that a switching center has accepted messages for future delivery to other stations temporarily engaged or inoperative.

.2 The word LOCAL following the call sign of a teletypewriter switchboard indicates the tabling out position.

EXAMPLE:

CRXA requests connection to the tabling out position at switchboard MHA:

MHA LOCAL DE CRXA K

MHA tells CRXA it is connected to the tabling out position:

DE MHA LOCAL K

13034. CONNECTING PROCEDURE

.1 The switchboard operator answers a call appearing on the switchboard by connecting a teletypewriter to the signaling line, transmitting the prosign DE, the switchboard station identification and the prosign K.

.2 The switchboard operator, irrespective of whether the call is an initial call or recall, acts on the instructions received in response to his answer to the switchboard signal by making the necessary connections. The calling instructions, as repeated by the switching centrals, vary in accordance with the type of connections required. Such connections are a single local call, multiple local call, single call involving trunk circuits, and combinations thereof.

.3 After making the necessary connections and repeating complete calling instructions, the switchboard operator notes the responses from all desired stations and disconnects his teletypewriter when the calling operator begins transmission of his messages.

.4 Recall and Disconnection. All switchboard signals are answered in the same manner whether the signal indicates a call being placed, a recall or an accidental break signal.

(a) If the switchboard operator finds traffic in progress when he connects his teletypewriter in response to a signal, he checks the traffic to determine if his service is desired and if not desired disconnects his teletypewriter without interrupting the transmission.

(b) If traffic is not in progress the switchboard operator will answer by transmitting the prosign DE, station identification and the prosign K. If more than one switchboard is involved, each will answer in turn. The switchboard operators will terminate the connections on receipt of the prosign AR from the calling station.

.5 Local Connections. The switchboard operator connects all desired local stations, repeats the complete call, receives answers from all desired stations, and then disconnects his teletypewriter when traffic starts.

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13034. (Continued)

.6 Trunk Connections. The switchboard operator connects the necessary trunk to the local station. When the distant switchboard answers, the call, or that portion appropriate to the connection, is repeated. The distant switchboard operator connects the called station to the calling station and repeats the call, or that portion appropriate to the connection. When the answer from the desired station is received, the switchboard operator disconnects the monitor teletypewriter from the connection.

.7 Connections Involving Both Trunks and Local Station. The most complicated trunk portion of a connection normally will be made first, followed by the connection of the local station desired. Only that portion of a complete call necessary or the station or stations to be connected over a trunk will be transmitted upon receipt of the distant switching central answer. If other trunk connections are required after completion of a portion of a connection, the switchboard operator informs the station already connected to wait by transmitting the prosign DE, station identification and the prosign AS. After completion of all connections, including the local stations, the switchboard operator repeats the complete call and disconnects his teletypewriter when traffic starts.

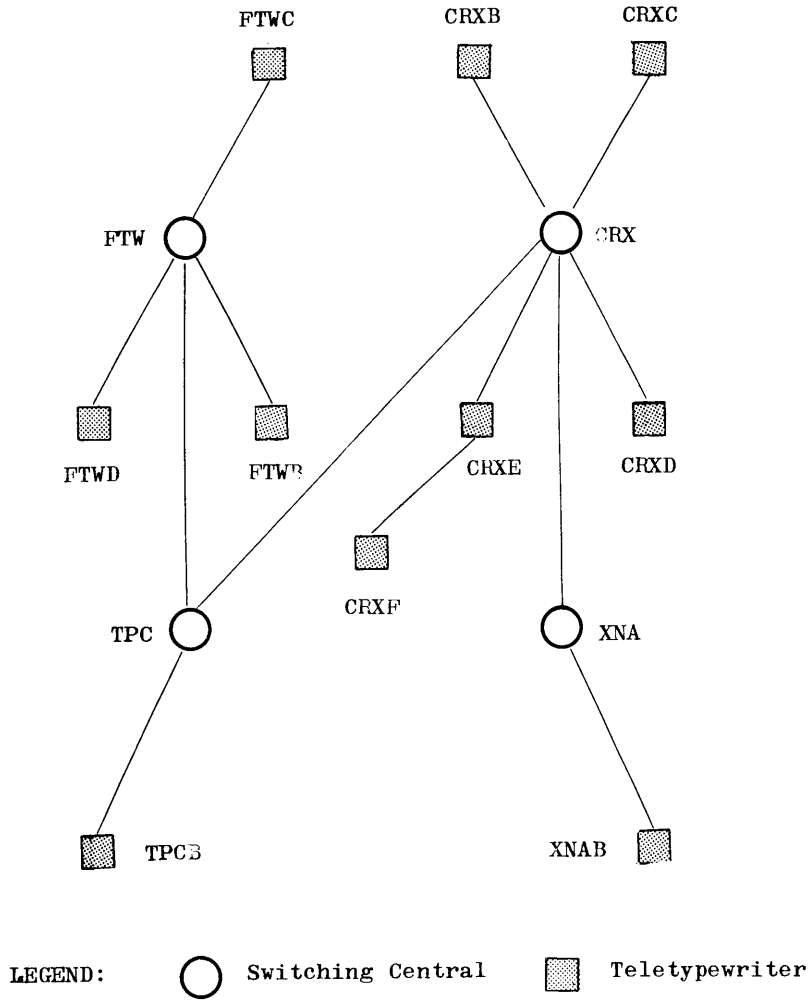
.8 When one or more of the desired stations or a necessary trunk is busy, the switchboard operator informs the station placing the call that the call cannot be completed. The switchboard operator, however, may interrupt transmission in progress for higher priority traffic under the conditions indicated in Article 7064 or accept the message for subsequent retransmission.

(a) If the message in question is not of sufficiently high precedence to warrant interruption of the message being transmitted, the switchboard operator will transmit the prosign DE, the switching central identification, identification of the station which cannot be reached, the abbreviation ENGD, and the prosign K.

(b) The switching central will not disconnect until the prosign AR is received from the station originating the call. Where reperforator equipment is available, or in instances where it is expedient to accept traffic in any form for subsequent relay to a temporarily inoperative or busy station, the switching central may accept the message and assume responsibility for delivery. When this is the case, the switching control would answer by transmitting the prosign DE, the switching central identification, identification of the called inoperative or busy station, the abbreviations ENGD, LOCAL and the prosign K.

13035. SWITCHED NETWORK EXAMPLES

.1 Examples of switched connections, based on the diagram below, show the step-by-step action of the station and switchboard operators (left-hand column) and the corresponding line of typed copy as it would appear at the station placing the call (right-hand column). Action and line of copy are numbered to correspond. It is assumed that lines of copy are single spaced. If an action causes no corresponding typed line, it is not numbered but is listed in proper sequence.



13035.1 (Continued)

(a) EXAMPLE of a connection between two local stations through which CRXB transmits a PRIORITY message to CRXD:

	CRXB transmits two-second break signal to light lamp at CRX	
1.	CRX answers lamp signal.....	1. DE CRX K
2.	CRXB transmits calling instructions (preliminary call).....	2. CRXD DE CRXB P K
3.	CRX repeats calling instructions.....	3. CRXD DE CRXB P K
4.	CRXD answers.....	4. DE CRXD K
5.	CRXB transmits prosign TR meaning, TEAR HERE.....	5. TR
	CRX, noting start of traffic, disconnects monitor	
6-7	CRXB transmits two line feeds...	6. 7.
8-22	CRXB starts message transmission.....	8. CRXD 9. DE CRXB 2 10. Transmission instructions as required 11. P 031445Z 12. FM CRXB 13. TO CRXD 14. GRNC 15. BT 16. TEXT 17. BT 18. CFN (confirmation as required) 19. C (correction as required) 20. Time group, if used, and one additional line feed, or 21. Two line feeds 22. K
23.	CRXD receipts for the message.....	23. DE CRXD R 2 AR
24-31	CRSB transmits eight line feed functions.....	24-31
	CRXB transmits two-second break signal to light lamp at CRX	
32.	CRX answers lamp signal.....	32. DE CRX K
33.	CRSB transmits clearing signal.....	33. DE CRXB AR
	CRX disconnects patch cord	
	CRXB and CRXD shut off their machines	

NOTE: When station serial numbers are not employed, the date-time group will appear.

13035.1 (Continued)

(b) EXAMPLE of a connection between four local stations with CRXB transmitting a message to CRXC, CRXD and CRXE (a party line):

	CRXB transmits a two-second break signal to light lamp at CRX	
1.	CRX answers.....	1. DE CRX K
2.	CRSB transmits calling instructions (preliminary call).....	2. CRXC CRXD CRXE DE CRXB R K
3.	CRX repeats calling instructions.....	3. CRXC CRXD CRXE DE CRXB R K
4-6	CRXC, CRXD and CRXE answer in sequence called.....	4. DE CRXC K 5. DE CRXD K 6. DE CRXE K
7.	CRXB transmits prosign TR CRX, noting the start of traffic, disconnects monitor.....	7. TR
8-9	CRXB transmits two line feeds.	8. 9.
10-26	CRXB transmits message.....	10. CRXC CRXD CRXE 11. DE CRXB 1-5-3 12. Transmission instructions as required 13. R 031537Z 14. FM CRXB 15. TO CRXC 16. CRXD 17. INFO CRXE 18. GR14 19. BT 20. TEXT 21. BT 22. CFN (Confirmation as required) 23. C (Corrections as required) 24. Time group, if used, and one additional line feed, or 25. Two line feeds 26. K
27-29	CRXC, CRXD, CRXE receipt in order for message.....	27. DE CRXC R 1 AR 28. DE CRXD R 5 AR 29. DE CRXE R 3 AR
30-37	CRXB transmits eight line feeds.....	30-37
	CRXB transmits two-second break signal to light lamp at CRX	
38.	CRX answers lamp signal.....	38. DE CRX K
39.	CRXB transmits clearing signal	39. DE CRXB AR
	CRX disconnects all patch cords	
	All stations shut off machines	

13035.1 (Continued)

NOTE: When station serial numbers are not employed, the date-time group will appear.

(c) EXAMPLE of connection between two stations connected over two trunks with CRXB transmitting a message to FTWB:

CRXB transmits a two-second break signal to light lamp at CRX

1.	CRX answers lamp signal.....	1. DE CRX K
2.	CRXB transmits calling instructions.....	2. FTWB DE CRXB R K
	CRX patches TPC to CRXB	
3.	TPC answers lamp signal.....	3. DE TPC K
4.	CRX repeats calling instructions to FTW.....	4. FTWB DE CRXB R K
	TPC patches a trunk circuit from FTW to trunk circuit from CRX	
5.	FTW answers lamp signal.....	5. DE FTW K
6.	TPC repeats calling instructions to FTW.....	6. FTWB DE CRXB R K
	TPC, having finished its portion of the connection, disconnects its monitor machine	
	FTW patches FTWB to trunk circuit from TPC	
7.	FTW repeats calling instructions to FTWB.....	7. FTWB DE CRXB R K
8.	FTWB answers.....	8. DE FTWB K
9.	CRXB transmits prosign TR.....	9. TR
	CRX and FTW disconnect their monitor machines	
10-11	CRXB transmits two extra line feed functions.....	10. 11.
12-26	CRXB transmits message.....	12. FTWB 13. DE CRXB 13 14. Transmission instructions as required 15. R 031833Z 16. FM CRXB 17. TO FTWB 18. GR11 19. $\overline{\text{BT}}$ 20. TEXT 21. $\overline{\text{BT}}$ 22. CFN (Confirmation as required) 23. C (Corrections as required) 24. Time group, if any, and one additional line feed, or 25. Two line feeds 26. K
27.	FTWB receipts for message.....	27. DE FTWB R 11 AR

13035.1 (Continued)

28-35	CRXB transmits eight extra line feeds.....	28-35
	CRXB transmits two-second break signal to light lamp at CRX, TPC and FTW	
36-38	CRX, TPC and FTW answer lamp signals.....	36. DE CRX K 37. DE TPC K 38. DE FTW K
39.	CRXB transmits clearing signal.	39. DE CRXB AR
	CRX, TPC and FTW disconnect patch cords	
	CRXB and FTWB shut off their machines	

NOTE: When station serial numbers are not employed, the date-time group will appear.

(d) EXAMPLE of a connection between three stations over different trunks with TPCB transmitting a message to FTWB and XNAB:

	TPCB transmits two-second break signal to light lamp at TPC	
1.	TPC answers lamp signal.....	1. DE TPC K
2.	TPCB transmits calling instructions.....	2. FTWB XNAB DE TPCB R K
	TPC patches trunk from CRX to TPCB	
3.	CRX answers lamp signal.....	3. DE CRX K
4.	TPC repeats CRX portion of calling instructions.....	4. XNAB DE TPCB R K
	CRX patches trunk from CRX to TPCB	
5.	XNA answers lamp signal.....	5. DE XNA K
6.	CRX repeats calling instructions for XNAB.....	6. XNAB DE TPCB R K
	XNA patches XNAB to trunk from CRX	
7.	XNA repeats calling instructions for XNAB.....	7. XNAB DE TPCB R K
	CRX disconnects its monitor machine	
8.	XNAB answers.....	8. DE XNAB K
9.	TPC tells XNAB to wait.....	9. DE TPC AS
10.	FTW answers lamp signal.....	10. DE FTW K
11.	TPC repeats FTW portion of calling instructions.....	11. FTWB DE TPCB R K
	FTW patches FTWB to trunk from TPC	
12.	FTW repeats calling instructions for FTWB.....	12. FTWB DE TPCB R K
13.	FTWB answers.....	13. DE FTWB K
14.	TPC repeats complete calling instructions	14. FTWB XNAB DE TPCB R K
	FTW disconnects its monitor machine	
15-16	FTWB and XNAB answer.....	15. DE FTWB K 16. DE XNAB K
17.	TPCB transmits prosign TR....	17. TR
	TPC disconnects its monitor machine	
18-19	TPCB transmits two extra line feeds.....	18. 19.

13035.1 (Continued)

20-33	TPCB transmits message.....	20. FTWB XNAB 21. DE TPCB 4-2 22. Transmission instructions as required 23. R 031912Z 24. FM TPCB 25. TO XNAB 26. INFO FTWB 27. GR15 28. BT 29. TEXT 30. BT 31. Time group, if any, and one additional line feed, or 32. Two line feeds 33. K
34-35	FTWB and XNAB receipt for message.....	34. DE FTWB R 4 AR 35. DE XNAB R 2 AR
36-43	TPCB transmits eight extra line feeds.....	36-43
	TPCB transmits two-second signal to light lamps	
44-47	TPC, CRX, XNA and FTW answer lamp signals.....	44. DE TPC K 45. DE CRX K 46. DE XNA K 47. DE FTW K
48.	TPCB transmits prosign AR as a clearing signal.....	48. DE TPCB AR
	TPC, CRX, XNA and FTW disconnect patch cords TPCB, FTWB and XNAB shut off their machines	

NOTE: When station serial numbers are not employed, the date-time group will appear.

(e) EXAMPLE of a complicated connection involving trunks and local stations, one of which is engaged. Switching central FTW serving FTWC, the engaged station, is equipped with typing reperforator equipment. CRXB transmits a message to CRXC, FTWB, FTWC, TPCB and XNAB:

	CRNB transmits two-second signal to light lamp at CRX	
1.	CRX answers lamp signal.....	1. DE CRX K
2.	CRXB transmits calling instructions.....	2. CRXC FTWB FTWC TPCB XNAB DE CRXB P K
	CRX patches trunk from TPC to CRXB	
3.	TPC answers lamp signal.....	3. DE TPC K
4.	CRX repeats portion of calling instructions.....	4. FTWB FTWC TPCB DE CRXB P K
	TPC patches trunk from FTW to trunk from CRX	

13035.1 (Continued)

5.	FTW answers lamp signal.....	5.	DE FTW K
6.	TPC repeats portion of calling instructions.....	6.	FTWB FTWC DE CRXB P K
	FTW patches FTWB to trunk from TPC and, finding FTWC ENGD patches local reperforator to FTWB connection		
7.	FTW repeats portion of calling instructions.....	7.	FTWB FTWC DE CRXB P K
8-10	FTWB and FTWC (FTW assumes responsibility for FTWC transmission) answer.....	8.	DE FTWB K
		9.	DE FTW
		10.	FTWC ENGD LOCAL K
11.	TPC advises FTWB and FTWC to wait.....	11.	DE TPC AS
	FTW disconnects its monitor machine, REPERF connection remains to accept message for FTWC		
	TPC patches TPCB to trunk from FTW		
12.	TPC repeats portion of calling instructions.....	12.	TPCB DE CRXB P K
13.	TPCB answers.....	13.	DE TPCB K
14.	CRX advises FTWB, FTWC and TPCB to wait.....	14.	DE CRX AS
	CRX patches trunk from XNA to trunk from TPC		
15.	XNA answers lamp signal.....	15.	DE XNA K
16.	CRX repeats portion of calling instructions.....	16.	XNAB DE CRXB P K
	XNA patches XNAB to trunk from CRX		
17.	XNA repeats portion of calling instructions.....	17.	XNAB DE CRXB P K
18.	XNAB answers.....	18.	DE XNAB K
	CRX patches CRXC to trunk from XNA		
19.	CRX repeats complete calling instructions.....	19.	CRXC FTWB FTWC TPCB XNAB DE CRXB P K
	XNA disconnects its monitor machine		
20-25	ALL STATIONS answer in turn..	20.	DE CRXC K
		21.	DE FTWB K
		22.	DE FTW
		23.	FTWC ENGD LOCAL K
		24.	DE TPCB K
		25.	DE XNAB K
26.	CRXB transmits prosign TR	26.	TR
	CRX disconnects its monitor machine		
27-28	CRXB transmits two extra line feeds	27.	
		28.	
29-47	CRXB transmits message.....	29.	CRXC FTWB FTWC TPCB XNAB
		30.	DE CRXB 6 4 2 14 13
		31.	Transmission instructions as required
		32.	P 032047Z
		33.	FM CRXB
		34.	TO FTWB
		35.	TPCB

13035.1 (Continued)

		36. XNAB
		37. INFO CRXC
		38. FTWC
		39. GR25
		40. $\overline{\text{BT}}$
		41. TEXT
		42. $\overline{\text{BT}}$
		43. CFN (Confirmation as required)
		44. C (Corrections as required)
		45. Time group, if any, and one additional line feed, or
		46. Two line feeds
		47. K
48-53	CRXC, FTWB, FTWC, TPCB and XNAB receipt in order for the message.....	48. DE CRXC R 6 AR
		49. DE FTWB R 4 AR
		50. DE FTW
		51. FTWC ENGD LOCAL R 2 AR
		52. DE TPCB R 14 AR
		53. DE XNAB R 13 AR
54-61	CRXB transmits eight line feeds.....	54-61
	CRXB transmits two-second break signal to light lamps	
62-65	ALL switchboards answer.....	62. DE CRX K
		63. DE TPC K
		64. DE FTW K
		65. DE XNA K
66.	CRXB transmits prosign AR as clearing signal.....	66. DE CRXB AR
	ALL switchboards disconnect	
	ALL stations shut off their machines	

NOTE: When station serial numbers are not employed, the date-time group will appear.

13040. TELETYPEWRITER CONFERENCES

13041. DEFINITION AND PURPOSE

.1 A teletypewriter conference (TELECON) is a conference by teletypewriter (including radioteletypewriter) between two or more geographically separated commands.

.2 Under certain circumstances the TELECON is an extremely useful method for resolving command problems. The persons having authority to make decisions are gathered as conferees. Answers to questions, and essential briefings are made on the spot. Thus, a lengthy exchange of regular messages is eliminated.

13042. CONFERENCE OFFICER

.1 The conference officer is a communication officer assigned to that duty. He is responsible for the operation of the TELECON facilities of the Communication Center.

13043. PRINCIPAL CONFEREE

.1 The officer having primary interest in a TELECON shall be designated PRINCIPAL CONFEREE. He will assemble all advance information and coordinate plans for the conference.

.2 Subsequent to completing local conference arrangements, and at least 24 hours prior to the desired conference time, the principal conferee shall send an appropriately classified message for action to other conferees, and for information to the communication activities involved.

EXAMPLE of NAVCOMMSTA SAN JUAN requesting a conference with NAVCOMMSTA WASHINGTON:

From: COMTEN

To: CNO

Info: BUPERS, NAVCOMMSTA SAN JUAN, NAVCOMMSTA WASHDC

REQUEST SECRET TELECON 181900Z X ALTERNATIVE

202000Z X SUBJ PERSONNEL COMPLEMENT MOBILIZATION

X PRESENT HERE RADM JONES CAPT SEA CDR DOOR X

PRESENT THERE OP-10 REP AND CDR JAY BUPERS

.3 The addressed conferee will make necessary arrangements for the conference at his locality and advise the principal conferee and the communication activities involved. If conferees are not available as requested, the conference may be rescheduled for the alternative time and date.

.4 All messages concerning conference arrangements will be addressed to the principal corferee for action, and to the communication activities involved for information. This will enable conferees and communication activities involved to maintain a schedule of conferences and to simplify arrangements.

.5 Thirty minutes prior to the scheduled conference time, the circuit will be established in accordance with procedures contained in this section. After contact is established, a standard test tape will be transmitted (but not continuously) to ensure that facilities are operating properly.

13043. (Continued)

.6 When arrangements have been completed, the conferees are assembled in the conference room, the necessary cryptographic information is transmitted and the encrypted information is then transmitted by both conferring activities.

EXAMPLE:

WASHINGTON-SAN JUAN TELECON 021800Z JULY 1953

SUBJECT: PERSONNEL COMPLEMENT - MOBILIZATION

CLASSIFICATION: (As indicated)

PRESENT WASHINGTON:	CAPT DOE	CNO
	CDR HATCH	BUPERS
	LCDR JONES	BUPERS
	LT CONLON	CONFERENCE OFFICER
	ENS TAYLOR	WATCH CONF. OFFICER
	VICKERS TE2 OPERATING	
	BARTEE TEC TECHNICIAN	
	END OF PRECON MESSAGE	

NOTE: Usually no over-all classification is assigned at the beginning of a conference as conferees cannot be certain of the highest classification. The drafter assigns the classification of each message.

.7 The foregoing type of information will be transmitted as the preconference (PRECON) material.

.8 Except for the PRECON material, all outgoing transmissions will have an assigned station serial number.

13044. PREPARATION OF MATERIAL

.1 The information to be transmitted will be typewritten or printed, using figures and upper and lower case letters, but omitting superfluous words and unnecessary punctuation. Lines will be double-spaced and limited to half-length on MOD 19 printers to avoid running off the projector screen where provided.

.2 As practicable, information to be transmitted should be submitted to the principal conferee prior to the conference. This allows communication personnel an opportunity to convert the information into perforated tape form for automatic transmission.

.3 The principal conferee is authorized to reject items which do not justify transmission over TELECON circuits, such as long reports, tabulations, requisitions, etc. Data which are not an essential part of the conference discussion may be handled separately, either prior to or after the conference, by mail, courier or message, Exceptions may be authorized as warranted.

13045. CLASSIFICATION OF MATERIAL

.1 Teletypewriter conferences may be scheduled with security classifications up to and including TOP SECRET. The security classification of the conference will be determined by the highest classified item to be transmitted and the conference facilities available at the conferring activities. Classified information will not be transmitted during unclassified conferences. The principal conferee is responsible for ensuring that TELECON personnel are advised when material to be transmitted contains information which must be paraphrased as prescribed by current instructions.

.2 The principal conferee is the security classifying authority. He is responsible for assigning proper security classification to TELECON items. He also shall assure that conferees present have necessary security clearance. The crypto-security officers of the conferring activities will assure that all conference operating personnel have necessary security clearance. When conferees are present at either terminus who should not see specific items, it is the responsibility of the principal conferee to discontinue transmissions at both terminal locations until security requirements are met. Conferees are not authorized to enter workrooms or view operational facilities containing security equipment.

.3 TELECON conferees will be limited in number to the essential minimum.

13046. CONFERENCE POSTPONEMENT OR CANCELLATION

.1 When unavoidable circumstances make it impossible for conferees to be present for a scheduled conference, the principal conferee, or his representative, will advise the communication activity handling TELECON facilities serving the area. A new schedule will be agreed upon at that time or the TELECON canceled. This is mandatory in order that appropriate notice may be furnished the distant terminal.

13047. OPERATING INSTRUCTIONS

.1 To start the conference all material prepared in advance will be transmitted simultaneously from both ends of the circuit. Extemporaneous questions and answers may be transmitted as required. To facilitate reference to questions and answers, transmitted material will be itemized and all paragraphs numbered.

(a) Each cryptographic section is a PART (numbered consecutively).

(b) The third paragraph of PART FOUR is numbered 4-3; the fourth paragraph is numbered 4-4, etc.

.2 Receipt of a part is acknowledged by transmitting, unencrypted: ROGER YOU PART (number). In case of a garble transmit: YOUR PART (number) UNDECIPHERABLE—RERUN.

.3 The conference circuit is secured by transmitting unencrypted instructions to secure and notify all concerned.

(a) The principal conferee will orginate a message, as follows:

NO FURTHER QUESTIONS X IF YOU HAVE NOTHING MORE SUGGEST WE SECURE

CONFERENCE

(b) If the conference is to be concluded, the other station replies:

READY TO SECURE

13047.3 (Continued)

(c) The conference officer then sends:

WE ARE SECURING CIRCUIT

.4 A conference room log will be maintained by local conference officers. The log will include such items as:

(a) Time of commencing and securing drills and conferences.

(b) Circuit and equipment failure.

(c) Corrective action taken on material failures.

(d) Names of conferees at stations involved.

(e) Classification of conference.

(f) Type of equipment used.

(g) Comments on operations.

.5 Communication officers shall require the TELECON officer to submit a monthly report summarizing the details of all conferences. The conference log shall be submitted to the commanding officer of the communications activity.

13100. TAPE RELAY PROCEDURE

13101. OPTIONAL PROCEDURES

.1 ACP 127 allows some variation in tape relay procedures by individual armed services. The following are the optional provisions which require clarification by each service:

(a) The prosigns GR and GRNC are optional, except that the group count designation is always required when the accounting symbol is employed or the text is encrypted.

(b) The confirmation line is optional.

(c) The abbreviation of the month and the routing indicator of the station preparing the tape in the message ending are optional.

(d) The routing indicators and the operating signal indicating delivery by other means in the address component of message are optional.

(e) There are provisions for several methods of routing procedure, namely, predetermined routing, specific routing and routing line segregation.

.2 The U.S. Navy will operate under these options as follows:

(a) Prosigns GR and GRNC will not be used except when an accounting symbol is employed or the groups are actually counted. The group count will always be included on encrypted messages.

(b) A confirmation line will be used.

(c) The month and the routing indicator in the message ending will be used.

13101.2 (Continued)

(d) Routing indicators will not be used in the address component of intra-navy multiple-address and book messages. The operating signal indicating delivery by other means will not be used in the address component of intra-navy multiple-address and book messages. Routing indicators will be employed in the address component of joint and combined multiple-address messages.

(e) The U.S. Navy will use predetermined routing. Routing line segregation will be used in accordance with ACP 127 when applicable, and will be accomplished by the transferring station, employing only those routing indicators in the routing line applicable to that transmission.

13102. STATION DESIGNATIONS

.1 Calling and routing in tape relay networks will be accomplished by the use of authorized routing indicators.

.2 Routing indicators are the only tape relay station designations authorized for use in format lines one, two and three.

.3 Routing indicators to be used in the headings of messages transmitted over world-wide tape relay networks will be selected from ACP 117 and supplements thereto.

.4 Routing indicators may be used in lieu of address designations in procedure messages and service messages (except cryptoservice messages) addressed to activities within tape relay networks. When refiled commercially, however, the address must be complete.

.5 Routing indicators are never encrypted.

13103. CALLED STATIONS

.1 The station called in the routing line is responsible for local delivery and/or refile and is also responsible for making all indicated corrections prior to delivery or refile.

.2 In multiple-address and book messages the stations called in format line two are responsible for local delivery and/or refile as indicated either by the routing indicators preceding the addressee designations, by transmission instructions, or by predetermined delivery responsibility. When delivery to an addressee in a multiple-address message has been accomplished prior to introducing the message into a tape relay network, the station originating the message tape will indicate such delivery by the operating signal ZEN preceding the designation of that addressee, except when transmission instructions or predetermined delivery responsibility is employed. When a station is given specific transmission instructions, that station is not relieved of delivery responsibility to other addressees in the message address for whom the station has predetermined responsibility except on misrouted multiple-addressed messages. In that case a station called in the routing line is responsible for delivery to those addresses following the transmission instructions only.

13104. TRANSMISSION IDENTIFICATION

.1 Station serial number is a number assigned by a station to identify a transmission or message and may contain a combination of letters and numbers. Station serial numbers shall be assigned to messages in consecutive order at the point of entry into a tape relay network, regardless of destination, starting with number one at 0001Z daily. Such numbers shall be recorded on the message file copy.

13104.1 (Continued)

(a) When there is more than one channel or perforating position, a separate numerical series followed by a letter designation for each channel or perforating position may be employed as follows:

(1) When transmitted on first channel or position:

DE RJWBAB 167A

(2) When transmitted on second channel or position:

DE RJWBAB 167B

(b) When required, the station serial number may include a date, expressed in digits, separated from the number by a slant:

DE RJWBAB 167/09

.2 Channel numbers will be employed by stations to provide a method whereby a number sequence check-off system may be maintained between stations to protect the continuity of service. Where other than automatic numbering devices are employed, the appropriate number tab will be transmitted ahead of each message tape. In the case of a tributary station, the station serial number may serve as the channel number of the transmission to the relay station.

.3 Channel numbers will be prepared as follows:

(a) By stations operating into fully automatic switching centers:

(1) Using automatic numbering devices, automatic number rolls, or, where authorized, manual keyboard numbering:

(1 BLANK) (START OF MESSAGE INDICATOR ZCZC) (2 STATION DESIGNATION LETTERS) (1 CHANNEL LETTER) (FIGS) (3 NUMERAL CHARACTERS) (1 LTR)

(2) Using tab number rolls:

(1 BLANK) (START OF MESSAGE INDICATOR ZCZC) (2 STATION DESIGNATION LETTERS) (1 CHANNEL LETTER)(FIGS) (3 NUMERAL CHARACTERS) (8 LTRS)

(b) By stations operating into semi-automatic relay stations:

(1) Using automatic numbering devices, automatic number rolls, or, where authorized, manual keyboard numbering:

(5 BLANKS) (2 or more* STATION DESIGNATION LETTERS) (1 CHANNEL LETTER) (FIGS) (3 NUMERAL CHARACTERS) (1 LTR)

(2) Using tab number rolls:

(5 BLANKS) (2 or more* STATION DESIGNATION LETTERS) (1 CHANNEL LETTER) (FIGS) (3 NUMERAL CHARACTERS) (8 LTRS)

* Tape relay station routing indicator less "R" may be used.

13105. OPENING A PRIVATE WIRE

.1 The office preparing to open a private wire will transmit to its respective controlling station an OPENING TAPE followed by a test tape and continuing until a GO AHEAD is transmitted by the controlling station.

.2 The controlling station, upon receipt of an opening tape, will immediately start a test tape to the office opening and continue until the station opening transmits a GO AHEAD.

.3 The following is the detailed procedure for opening a private wire:

(a) RBEPD prepares to open -

RBEP SUPVR RBEPD OPENING HOW DO YOU RECEIVE THIS TEST RYRYRYRYRYRYRYRYRYRYRYRYRYRYRY SGSGSGSGSG SGSGSGSGSGSGSGSGSGSGSGSGSGSGSGSG etc.

(b) RBEP answers -

RBEPD SUPVR RBEP HOW DO YOU RECEIVE THIS TEST RYRY RYRYRYRYRYRYRYRYRYRYRY SGSGSGSGSGSGSGSGSGSGSG etc.

(c) RBEPD receives RBEP's test satisfactorily and transmits -

RBEP SUPVR RBEPD GA TRAFFIC

(d) RBEP receives RBEPD's test satisfactorily and transmits -

RBEPD SUPVR RBEP GA TRAFFIC

NOTE: For half duplex operation this procedure will be adjusted accordingly.

13106. ENSURING CONTINUITY OF SERVICE

.1 The responsibility for continuity of received numbers rests with the station receiving the traffic. It is the responsibility of the receiving operator to ensure that a tape is received under each number and that numbers are not duplicated or omitted. Discrepancies in numbers should be reported promptly to the supervisor. Open numbers shall be questioned as they occur and every fifteen minutes thereafter until received.

.2 When no traffic has been received over a circuit/channel for a period of thirty minutes, a check will be make for possible circuit interruption and a procedure message originated as follows:

(5 SPACES) (2CR) (LF)
RR RJEP (2CR) (LF)
DE RBEP (2CR) (LF)
ZID *151 (2CR) (LF)
03/1605Z (2CR) (8LF) (4Ns) (12 LTRS)

Reply -

(5 SPACES) (2CR) (LF)
RR RBEP (2CR) (LF)
DE RJEP (2CR) (LF)
ZIC *151 (2CR) (LF)
03/1605Z (2CR) (8LF) (4Ns) (12 LTRS)

* Channel designation, when required.

486999 O-58-21

13106.2 (Continued)

On a circuit/channel, in part-time operation, a number comparison will be exchanged at the time of closing. It is the responsibility of the closing station to initiate the closing comparision.

.4 Each number comparison message will be preceded by a channel number except in the case of tributary stations where the station serial number serves as the channel number.

13107. CHANGING NUMBER SEQUENCES

.1 Number sequences shall be changed as near to 0001Z daily as practicable.

.2 When a receiving station starts receiving traffic under a new number series, a procedure message will be initiated by the receiving station, starting the last number received under the previous day's number series. Such messages also should include an indication of all open numbers or similar discrepancies.

(5 SPACES (2CR) (LF)
RR RBEP (2CR) (LF)
DE RUEP (Station serial number, if tributary station) (2CR) (LF)
ZID B269 (2CR) (LF)
10/0001Z (2CR) (8LF) (4Ns) (12 LTRS)

OR

(5 SPACES) (2CR) (LF)
RR RBEP (2CR) (LF)
DE RUEP (2CR) (LF)
ZID B269 ZIE B239 B257 (2CR) (LF)
10/0001Z (2CR) (8LF) (4Ns) (12 LTRS)

13108. PRECEDENCE DESIGNATIONS

.1 Messages prepared for tape relay transmission will indicate precedence in the routing line and in the preamble. In the routing line the precedence prosign always will be repeated.

.2 FLASH AND EMERGENCY PRECEDENCE

(a) FLASH precedence will be indicated by ZZ preceded by the bell signal in the routing line, and by Z in the preamble.

(b) EMERGENCY precedence will be indicated by YY preceded by the bell signal in the routing line, and by Y in the preamble.

(c) Station-to-station receipts will be given for messages of FLASH and EMERGENCY precedence:

ZZ RBEPC
DE RBWPC
R Z EBB097
10/1050Z

NOTE: This procedure is not applicable to automatic switching centers, except when manual attention is required.

13109. TRAFFIC ADDRESSED TO FLEET UNITS

.1 Traffic for fleet units should be routed to the nearest primary communication center, unless it is definitely known which communication center serves the fleet unit. In those cases, such traffic should be routed direct to the appropriate communication center.

.2 When necessary to reroute this type of traffic it should be handled as a MISROUTE, and the communication center should not inform the originating station that such traffic was misrouted. Such messages are not considered misroutes on the part of the originating station.

13110. ROUTING OF MESSAGE TAPES

13111. PILOT

.1 A Pilot is an instruction appearing in format line one relative to the transmission or handling of that message.

13112. SINGLE CALL

.1 Single-call message tapes do not require line one pilots within or between networks except when other than normal handling is involved, such as alternative routing, suspected duplicate transmission, etc.

13113. ROUTING OF MULTIPLE-CALL TAPES

.1 There are three methods of routing multiple-call tapes as defined below. The use of one method by a service network does not preclude the use of another, if required for either inter or intra-service routing.

(a) Predetermined Routing - This is routing by doctrine whereby specific instructions for routing traffic are provided each relay station in a network. These instructions are applied to the basic routing line in determining relay responsibility and preclude the necessity for specific instructions to be transmitted with each multiple-call message. Primary and secondary routes for all traffic are prescribed in the routing doctrine. Predetermined routing is prescribed for intra-Navy use.

(b) Specific Routing - This is routing by transmission of specific instructions with each multiple-call message whereby the relay station required to process the tape for multiple transmission is designated by means of a single call pilot in format line one.

(c) Routing Line Segregation - This is routing by including in the basic routing line only those routing indicators applicable to a transmission. This procedure permits deletion of routing indicators from the basic routing line at the convenience of the using service. Routing line segregation will only be employed within a service when prescribed by that service. Traffic prepared in this procedure, however, will be accepted for transmission through any system.

13114. TRANSFER OF NORMAL MULTIPLE-CALL MESSAGES BETWEEN NETWORKS

.1 When multiple-call messages are transferred from one network to another, the method of routing to be employed will be the method having combined approval which is used by the service originating the traffic.

13114.1 (Continued)

(a) The transfer of normal message traffic from services employing predetermined routing to services employing specific routing will be accomplished by format line two procedure. Under this method of transferring traffic, it is the responsibility of the receiving transfer station to accomplish transmission to only those stations represented by the routing indicators of that service which appear in the basic routing line. Transmission responsibility to the other stations, as may be represented by routing indicators of other services appearing in the basic routing line, will not be undertaken unless such transmission is directed by appropriate routing instructions.

(b) Services employing specific routing will transfer normal message traffic to services employing predetermined routing by use of format line one procedure.

(1) All multiple-call messages will be preceded by a format line one pilot consisting of the repeated precedence prosign, and the routing indicator of the called station. If more than one station is included in the transfer transmission, this pilot will consist of the repeated precedence prosign, the routing indicator of the called transfer station connected directly to the station making the transfer, the operaing signal ZVA meaning STATION CALLED IS RESPONSIBLE FOR RELAY OR DELIVERY TO ALL STATIONS IN LINE TWO OR TO STATIONS INDICATED, and the routing indicators for which that station is given relay responsibility. When the station called in the pilot is responsible for routing to all the stations called in the basic routing line, the pilot will consist of the repeated precedence prosign, the routing indicator of the called station, and the operating signal ZVA.

NOTE: For FLASH or EMERGENCY messages, appropriate bell signals also will be employed.

(c) The transfer of normal multiple-address traffic to a service employing routing line segregation will be in the procedure used within the transferring service or as mutually agreed between the services concerned. When traffic is transferred from a manual or semi-automatic relay center to a fully automatic switching center, routing line segregation will be accomplished by the transferring center to a manner prescribed by the receiving service.

.2 Routing indicators will be employed in the address portion of multiple messages containing joint or combined addressees.

13115. PREDETERMINED ROUTING

.1 In this method of relaying multiple-call messages, prior instructions establish individual relay responsibility. Relay station personnel, in accordance with such instructions, relay traffic to those routing indicators appearing in format line two for whom that station is responsible. The only change in the message tape is the addition of a channel number at each relay point.

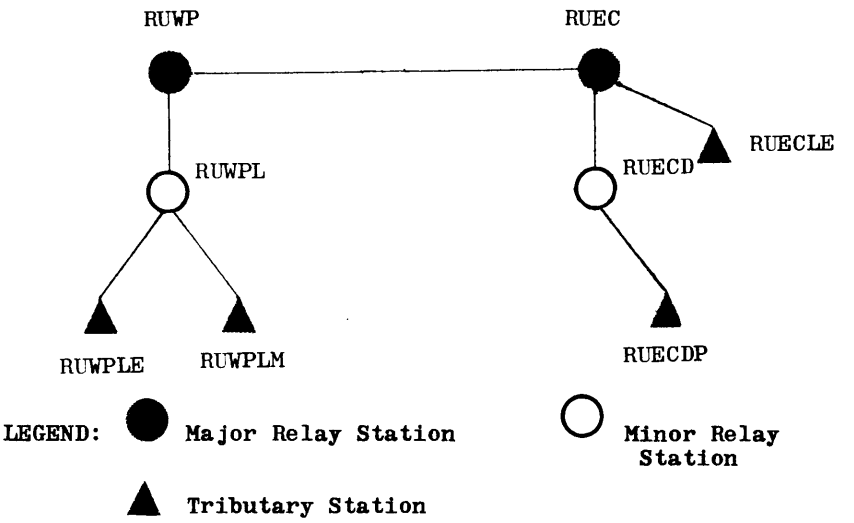
.2 Procedure line one in this type of routing generally consists of only channel numbers. MISROUTE, SUSPECTED DUPLICATE, etc., pilots containing operating signals, etc., are employed in format line one when required.

13116. APPLICATION OF ROUTING LINE SEGREGATION

.1 When routing line segregation is employed, the basic routing line (format line two) originally consists of the routing indicators of all stations responsible for accomplishing delivery or refile followed by two carriage returns and one line feed. If required for intra-service use, eight letter functions may be included following the routing indicators to provide a means of segregation. Such letter functions will not appear in messages transferred between services.

.2 As multiple-call messages flow through a network which employs segregation, the basic routing line is altered to include only those routing indicators pertinent to each transmission. No alteration is made to the remainder of the message tape, except that transmission instructions not pertinent to a particular transmission may be deleted.

.3 EXAMPLES to show how routing line segregation is employed:



(a) Message as prepared by RUECDP and forwarded to RUECD for relay to RUEC-

```
MM RUECLE RUWPLE RUWPLM                    (2CR) (LF)
DE RUECDP 78B etc....
```

(b) As relayed by RUECD RUEC -

```
CDA092
MM RUECLE RUWPLE RUWPLM                    (2CR) (LF)
DE RUECDP 78B etc....
```

(c) As processed by RUEC - Two transmissions are required, one to RUECLE and the other to RUWP for relay to RUWPL for final transmission to RUWPLE and RUWPLM. The basic routing line is altered for the two transmissions as follows:

13116.3(c) (Continued)

(1) Transmission to RUECLE -

```
ECA103
CDA092
MM RUECLE                                   (2CR) (LF)
DE RUECDP 78B etc....
```

(2) Transmission to RUWP -

```
ECA144
CDA092
MM RUWPLE RUWPLM                            (2CR) (LF)
DE RUECDP 78B etc....
```

(d) RUWP relays without change to RUWPL, since RUWPL performs relay distribution to RUWPLE and RUWPLM -

```
WUA216
ECA144
MM RUWPLE RUWPLM                            (2CR) (LF)
DE RUECDP 78B etc....
```

(e) RUWPL is responsible for two transmissions. One to RUWPLE, the other to RUWPLM. Each transmission is reduced to a single call in the basic routing line.

(1) Transmission to RUWPLE -

```
WLB019
WUA216
MM RUWPLE                                   (2CR) (LF)
DE RUECDP 78B etc....
```

(2) Transmission to RUWPLM -

```
WLB012
WUA216
MM RUWPLM                                   (2CR) (LF)
DE RUECDP 78B etc....
```

.4 In those instances where originating stations perform routing line segregation, it will be accomplished as follows:

(a) The required number of tapes to effect transmission to all addressees will be prepared by the originating station. The basic routing line of each transmission will consist of the repeated precedence prosign and only the routing indicators of the stations that are to effect delivery or refile of the particular transmission. Format line three will consist of the prosign DE followed by the routing indicator of the station preparing the tape for transmission, plus the station serial number. The same date-time group and station serial number will be used in the preparation of each tape required to effect over-all transmission of any given message except in those instances where the station serial number serves as the channel number, in which case a different station serial number will be assigned to each transmission.

(b) EXAMPLES:

13116.4(b) (Continued)

(1) Format lines two and three of the message as normally prepared and forwarded by RBEPCR -

MM RBEKC RBFLC RBHPB RBHPCR (2CR) (LF)
DE RBEPCR 21A etc.....

(2) Format lines two and three of the message as prepared by RBEPCR when routing line segregation is employed by the originating station. Three transmissions would be made. The normal basic routing line is altered as follows:

MM RBEKC (2CR) (LF)
DE RBEPCR 21A etc.....

MM RBFLC (2CR) (LF)
DE RBEPCR 21A etc.....

MM RBHPB RBHPCR (2CR) (LF)
DE RBEPCR 21A etc.....

13120. ROUTING DOCTRINE

13121. BASIC ROUTING DOCTRINE

.1 Routing Doctrine.

(a) Messages shall normally be transmitted over the most direct channel to the addressee, routing being:

(1) To local relay stations to which a direct circuit exists and to local tributary stations.

(2) To the primary relay station (to the major relay station in some instances) of the originator's area for relay to relay station to which no direct circuit exists.

.2 Under normal routing conditions the primary or major relay station shall route messages as indicated in the following tables when traffic is routed to Navy routing indicators only:

ORIGINATING RELAY STATION:	ROUTE DIRECT TO:	ROUTE ALL OTHER OUTBOUND TRAFFIC TO:
(a) Eastern U.S. Area Stations -		
RBEG	RBEP	RBEP, except for RBEG
RBEJ	RBEP	RBEP, except for RBEJ
RBEK	RBEP	RBEP, except for RBEK
RBEM	RBEP RBER RBET	RBEP, except for RBEM, RBER and RBET
RBEP	RBFY	RBTP for RBTP, RBQA and RBFR
	RBEG RBEJ	RBHP, for RBAT, RBHP, RBMF and RBMP
	RBEM RBER RBET RBEK	RBWP for RBKA, RBWD, RBWK and RBWP
	RBDL RBTP RBHP RBLP RBWP RBEY	

13121.2(a) (Continued)

ORIGINATING RELAY STATION:	ROUTE DIRECT TO:	ROUTE ALL OTHER OUTBOUND TRAFFIC TO:
RBER	RBEM RBEP	RBEP, except for RBEM and RBER
RBET	RBEP RBEM	RBEP, except for RBEM and RBET
RBEY	RBEP	RBEP, except for RBEY
(b) European and African Area Stations -		
RBDL	RBEP RBTP	RBTP for RBTP, RBFR, RBMF, RBFY and RBQA RBEP, except for RBDL, RBTP, RBMF, RBFY, RBFR and RBQA
RBTP	RBEP RBDL RBFR RBQA RBFY	RBQA for RBQA and RBMF RBEP except RBTP, RBDL, RBFR, RBMF, RBFY and RBQA
RBFR	RBTP	RBTP except for RBFR
RBFY	RBEP RBTP	RBTP for RBTP, RBFR, RBDL and RBQA RBEP except for RBTP, RBDL, RBFR, RBQA and RBFY
RBQA	RBTP RBMF	RBMF for RBMF, RBMP, RBHP and RBAT RBTP, except for RBMF, RBQA, RBMP, RBHP and RBAT
(c) Pacific Area Station -		
RBHP	RBEP RBMP RBWP RBAT	RBMP for RBMP, RBMF and RBQA RBWP for RBWP, RBWD, RBKA and RBWK RBEP except for RBMP, RBMF, RBAT, RBHP, RBQA, RBWD, RBWP, RBKA and RBWK
(d) Southwest Pacific Area Stations -		
RBMF	RBMP RBQA	RBQA for RBQA, RBTP, RBFR and RBDL RBMP except for RBQA, RBTP, RBFR, RBDL and RBMF
RBMP	RBHP RBAT RBMF	RBMF for RBQA and RBMF RBHP except for RBAT, RBMF, RBQA and RBMP
(e) Alaskan and Aleutians Area Station -		
RBKA	RBWP	RBWP, except for RBKA

13121.2(a) (Continued)

ORIGINATING RELAY STATION:	ROUTE DIRECT TO:	ROUTE ALL OTHER OUTBOUND TRAFFIC TO:
(f) Caribbean and South American Area Station -		
RBLP	RBEP	RBEP, except for RBLP
(g) Western United States Area Stations -		
RBWD	RBWP	RBWP, except for RBWD
RBWK	RBWP	RBWP except for RBWK
RBWP	RBEP RBHP RBWD RBWK RBKA	RBHP for RBHP, RBMF, RBMP, and RBAT RBEP, except for RBHP, RBMF, RBWK, RBMP, RBAT, RBWD, RBKA, and RBWP
(h) Asiatic Area Station -		
RBAT	RBHP RBMP	RBMP for RBMP, RBMF and RBQA RBHP, except for RBMP, RBMF, RBQA and RBAT

13122. JOINT INTERSERVICE ALTERNATIVE ROUTING

.1 When it is desired to alternatively route traffic through the tape-relay facilities of another U.S. service, a procedure message shall be transmitted to the particular relay station through which alternative routing is desired to determine the capabilities of the station to accept such traffic.

.2 The indicator letter J has been allotted to the U.S. Air Force; U to the U.S. Army.

.3 Single-Call Messages. All single-call messages alternatively routed will be preceded by a pilot consisting of the precedence prosign repeated twice, the routing indicator of the station called in the fixed routing line, and the operating signal ZOY, meaning RELAY THIS MESSAGE ONLY TO THE STATIONS WHOSE DESIGNATIONS PRECEDE THIS OPERATING SIGNAL. The station directing the alternative route will be responsible for placing pilots on messages.

EXAMPLE: (Transmission from RBEP TO RUEP)

(5 BLANKS)	
EB A100	(2CR) (LF)
MMMM RBHPB	(2CR) (LF)
ZOY	(2CR) (LF)
MMMM RBHPB	(2CR) (LF)
DE RBEPW 41A	
MM 091630Z etc.....	

NOTE: In this example, RUEP would relay this message to RUHP via Army facilities. RUHP would then transfer this message to RBHP for ultimate delivery. The pilot will not be removed.

.4 Multiple-Call Messages. To ensure the proper determination of routing responsibility, the alternative routing of a multiple-call message from the network of a Service observing predetermined (line two) routing via the facilities of a Service employing specific (line one) routing will be accomplished by making as many transmissions from the station

13122.4 (Continued)

directing the alternative route as required to effect alternative routing to the desired stations called in the basic routing line. Each multiple-call message will be preceded by an alternative route pilot consisting of the precedence prosign repeated twice, the routing indicator of the relay station having normal relay responsibility for the particular station called in the basic routing line, and the operating signal ZOY.

EXAMPLE: (Transmission from RBEP to RUEP)

(5 BLANKS)	
EB C56	(2CR) (LF)
MMMM RBFL	(2CR) (LF)
ZOY	(2CR) (LF)
MMMM RBFLG RBFLC RBLPC RBEJC	
DE RBEPW 4B etc.....	

NOTE: In the cited example, RBFL would protect for the first two stations called in the basic routing line in accordance with established routing doctrine. If alternate routing is also required to effect delivery to RBLPC, two additional transmissions preceded by appropriate pilots will be necessary.

EXAMPLE: MMMM RBLP (2CR) (LF) ZOY and MMMM RBEJ (2CR) (LF) ZOY.

(a) Alternate routing of multiple-call messages from the network of a Service employing specific (line one) routing via the facilities of a network observing predetermined (line two) routing will be accomplished in the same manner as outlined in paragraph 4 above insofar as application of the alternate route is concerned.

EXAMPLE: (Transmission from RUEP to RJEZ)

(5 BLANKS)	
RUTA037	(2CR) (LF)
PP RUFP	(2CR) (LF)
ZOY	(2CR) (LF)
PP RUFP ZVA RUFPWB RUFPFL	(2CR) (LF)
EG 151	(2CR) (LF)
PP RUEP ZVA	(2CR) (LF)
PP RUEPST RUEPON RUFPWB RUFPFL	(2CR) (LF)
DE RUEGMQ 61A etc.....	

(b) When alternative routing to only one station represented in a multiple-call message is required, the alternative route pilot will call the particular station.

EXAMPLE: PP RUFPWB (2CR) (LF) ZOY.

(c) The alternative routing of a multiple-call message between service networks both of which employ predetermined (line two) routing will be accomplished by the use of the alternative route pilot consisting of the precedence prosign repeated twice, the routing indicator of the relay station having normal relay responsibility for the particular station called in the basic routing line, and the operating signal ZOY.

EXAMPLE: (Transmission from RJHP to RBHP)

(5 BLANKS)	
RJHP A43	(2CR) (LF)
RR RJAP	(2CR) (LF)
ZOY	(2CR) (LF)
RJHPNJ 12	(2CR) (LF)
RR RJAPLS RJHKQH RJEPHQ RBEPYC	(2CR) (LF)

13122.4(c) (Continued)

NOTE: In this example, RJHP would transmit the message to RBHP in the above form for alternative routing to RJAP. RBHP will then relay to RBAT who will transfer to RJAP without removing the pilot. Since this message contains a Navy addressee, RJHP makes a separate transmission to RBHP in normal transfer for RBEPYC.

(d) In handling a message bearing an alternative route pilot, intermediate relay stations in the alternative route shall take no action in regard to delivery to stations appearing in the basic routing line.

EXAMPLE: (Transmission from RBEP to RUEP)

(5 BLANKS)
EB A59 (2CR) (LF)
MMMM RBHP (2CR) (LF)
ZOY (2CR) (LF)
MMMM RBHPB RBMPC RBMPFC RUHPC RUEPC (2CR) (LF)
DE RBEPW 10A
MMMM 091500Z etc.....

NOTE: In this example, neither RUEP nor RUHP would take any action to deliver to RUEPC and RUHPC respectively. On the other hand, RBHP would route in accordance with routing doctrine as though the message were received direct via normal channels. RBMP and RBMPF would not be considered intermediate relay stations in the alternative route and would also follow normal Navy routing doctrine.

(e) Caution shall be exercised in the handling of alternatively routed traffic which has been passed through the stations called in the ZOY pilot to preclude unnecessary relay and handling back to such stations.

13123. ALTERNATIVE INTRA-NAVY ROUTING PROCEDURE

.1 Alternative routing may be employed within the Navy Teletypewriter Network in the event of circuit outage or overload as hereinafter outlined.

.2 The station which desires to alternatively route traffic through another station must first ascertain whether that station has sufficient circuit capacity available to handle the alternatively routed traffic. Upon receipt of information that circuit capacity is available the station will be notified that alternative routing is commencing and will also be notified when the alternative routing is completed.

.3 Single-call messages will not be piloted. Multiple-call messages will be piloted for the several alternative routes as hereinafter outlined.

(a) RBEP - RBWP - RBHP group.

RBHP ZOY (For traffic from RBEP to RBHP via RBWP)
RBWP ZOY (For traffic from RBEP to RBWP via RBHP)
RBEP ZOY (For traffic from RBHP to RBEP via RBWP)
RBWP ZOY (For traffic from RBHP to RBWP via RBEP)
RBHP ZOY (For traffic from RBWP to RBHP via RBEP)
RBEP ZOY (For traffic from RBWP to RBEP via RBHP)

(b) RBEP - RBTP - RBDL group.

RBDL ZOY (For traffic from RBEP to RBDL via RBTP)
RBTP ZOY (For traffic from RBEP to RBTP via RBDL)
RBDL ZOY (For traffic from RBFP to RBDL via RBTP)
RBEP ZOY (For traffic from RBFP to RBEP via RBDL)
RBTP ZOY (For traffic from RBFL to RBTP via RBEP)
RBEP ZOY (For traffic from RBFL to RBEP via RBTP)

13123.3 (Continued)

(c) RBHP - RBMP - RBAT group.

RBMP ZOY (For traffic from RBHP to RBMP via RBAT)
RBAT ZOY (For traffic from RBHP to RBAT via RBMP)
RBHP ZOY (For traffic from RBMP to RBHP via RBAT)
RBAT ZOY (For traffic from RBMP to RBAT via RBHP)
RBHP ZOY (For traffic from RBAT to RBHP via RBMP)
RBMP ZOY (For traffic from RBAT to RBMP via RBHP)

(d) RBEP - RBEB - RBEPA group (When RBEB - RBEPA circuit is up).

RBEPA ZOY (For traffic from RBEP to RBEPA via RBEB)
RBEP ZOY (For traffic from RBEPA to RBEP via RBEB)

(e) RBEM - RBEP - RBER - RBET group.

RBER ZOY (For traffic from RBEP to RBER via RBEM)
RBEM ZOY (For traffic from RBEP to RBEM via RBER)
RBER ZOY (For traffic from RBEP to RBER via RBET)
RBET ZOY (For traffic from RBEP to RBET via RBER)
RBEP ZOY (For traffic from RBER to RBEP via RBEM)
RBEM ZOY (For traffic from RBER to RBEM via RBEP)
RBEP ZOY (For traffic from RBER to RBEP via RBET)
RBET ZOY (For traffic from RBER to RBET via RBEP)
RBER ZOY (For traffic from RBEM to RBER via RBEP)
RBEP ZOY (For traffic from RBEM to RBEP via RBER)
RBER ZOY (For traffic from RBET to RBER via RBEP)
RBEP ZOY (For traffic from RBET to RBEP via RBER)

.4 All pilots will be preceded by (5 SPACES) (2CR) (LF) and followed by (2CR) (LF). The pilot alternatively routed traffic will not be removed when the traffic is further relayed. If a message contains addressees for which the intermediate station in the alternative route is responsible a separate transmission will be made in the normal manner.

EXAMPLE of a message alternatively routed by RBEP to RBHP via RBWP:

PP RBHP (2CR) (LF) ZOY
PP RBMPFC RBATC RBWDC RBHPC
DE RBEKC etc.....

NOTE: RBWP would disregard RBWDC on the above transmission and relay the message to RBHP. RBEP would make a separate transmission without a pilot to RBWP for RBWDC. For purposes of applying routing doctrine, an alternatively routed message will be considered to have been received direct via the normal channel. For instance, in the above example, RBHP would consider the message to have been received direct from RBEP and, by applying the currently effective routing doctrine for RBHP, make transmission to RBMP, RBAT and RBHPC without removing the pilot.

13124. GENERAL ROUTING INSTRUCTIONS

.1 All inter and intra-service multiple-address messages originated within the Navy Teletypewriter Network (NTX) will be prepared and transferred in accordance with the procedures contained in ACP 127.

13125. BASIC INTERSERVICE (U.S.) ROUTING DOCTRINE

.1 Joint single and multiple-address messages originated within the NTX will be relayed to appropriate transfer points in accordance with the routing doctrine hereinafter outlined.

.2 Transfer circuits are circuits connecting specifically designated transfer points authorized to transfer traffic between the tape relay networks of the various services. Transfer points are designated and authorized only by CNO (DNC) in collaboration with U.S. Army or USAF authorities. Transfer circuits shall not be established or disestablished except as directed by the CNO (DNC).

.3 Routing doctrine for traffic routed to U.S. Army, U.S. Air Force and Canadian routing indicators follows:

ORIGINATING RELAY STATION	RELAY TO FOR TRANSFER	
	EASTERN UNITED STATES AREA STATIONS	
RBEB	RBEP	FOR ALL U.S. ARMY, U.S. AIR FORCE AND CANADIAN ROUTING INDICATORS
RBEC	RBEC	FOR ALL U.S. ARMY ROUTING INDICATORS
	RBEP	FOR ALL U.S. AIR FORCE AND CANADIAN ROUTING INDICATORS
RBEF	RBEP	FOR ALL U.S. ARMY, U.S. AIR FORCE AND CANADIAN ROUTING INDICATORS
RBEG	RBEG	FOR ALL U.S. ARMY ROUTING INDICATORS
	RBEP	FOR ALL U.S. AIR FORCE AND CANADIAN ROUTING INDICATORS
RBEJ	RBEJ	FOR ALL U.S. ARMY AND U.S. AIR FORCE ROUTING INDICATORS
	RBEP	FOR ALL CANADIAN ROUTING INDICATORS
RBEK	RBEP	FOR ALL U.S. ARMY, U.S. AIR FORCE AND CANADIAN ROUTING INDICATORS
RBEM	RBEP	FOR ALL U.S. ARMY, U.S. AIR FORCE AND CANADIAN ROUTING INDICATORS
RBEP	RBEP	FOR ALL U.S. ARMY, U.S. AIR FORCE AND CANADIAN ROUTING INDICATORS

RBEPA	RBEPA	FOR ALL U.S. AIR FORCE ROUTING INDICATORS
	RBEP	FOR ALL U.S. ARMY AND CANADIAN INDICATORS
RBER	RBEP	FOR ALL U.S. ARMY, U.S. AIR FORCE AND CANADIAN ROUTING INDICATORS
RBET	RBEP	FOR ALL U.S. ARMY, U.S. AIR FORCE AND CANADIAN ROUTING INDICATORS
RBEY	RBEP	FOR ALL CANADIAN ROUTING INDICATORS
RBEY	RBEY	FOR ALL U.S. ARMY AND U.S. AIR FORCE ROUTING INDICATORS
	EUROPEAN AND AFRICAN AREA STATIONS	
RBDL	RBDL	FOR ALL U.S. ARMY AND U.S. AIR FORCE ROUTING INDICATORS
	RBEP	FOR ALL CANADIAN ROUTING INDICATORS
RBTP	RBDL	FOR ALL U.S. ARMY ROUTING INDICATORS
	RBEP	FOR ALL CANADIAN ROUTING INDICATORS
	RBTP	FOR ALL U.S. AIR FORCE ROUTING INDICATORS
RBFR	RBFR	FOR ALL U.S. ARMY ROUTING INDICATORS AND ALL RJFP, RJDL AND RJFM ROUTING INDICATORS
	RBTP	FOR ALL OTHER U.S. AIR FORCE ROUTING INDICATORS
	RBEP via RBTP	FOR ALL CANADIAN ROUTING INDICATORS
RBFY	RBFY	FOR ALL U.S. AIR FORCE ROUTING INDICATORS
	RBEP	FOR ALL U.S. ARMY AND CANADIAN ROUTING INDICATORS
RBFRH	RBFRH	FOR ALL U.S. ARMY ROUTING INDICATORS AND ALL RJFP, RJDL AND RJFM ROUTING INDICATORS
	RBTP via RBFR	FOR ALL OTHER U.S. AIR FORCE ROUTING INDICATORS
	RBEP via RBFR and RBTP	FOR ALL CANADIAN ROUTING INDICATORS

13125.3 (Continued)

RBTPB	RBTPB	FOR ALL U.S. ARMY ROUTING INDICATORS
	RBTP	FOR ALL U.S. AIR FORCE ROUTING INDICATORS
	RBEP via RBTP	FOR ALL CANADIAN ROUTING INDICATORS
	CENTRAL PACIFIC AREA STATIONS	
RBHP	RBHP	FOR ALL U.S. ARMY AND U.S. AIR FORCE ROUTING INDICATORS
	RBWK via RBWP	FOR ALL CANADIAN ROUTING INDICATORS
	SOUTHWEST PACIFIC AREA STATIONS	
RBMP	RBMP	FOR ALL U.S. AIR FORCE ROUTING INDICATORS
	RBAT	FOR ALL "A" AREA U.S. ARMY ROUTING INDICATORS
	RBMPF	FOR ALL "M" AREA U.S. ARMY ROUTING INDICATORS
	RBHP	FOR ALL OTHER U.S. ARMY ROUTING INDICATORS
	RBWK via RBHP and RBWP	FOR ALL CANADIAN ROUTING INDICATORS
RBMPF	RBMPF	FOR ALL U.S. ARMY AND U.S. AIR FORCE ROUTING INDICATORS
	RBWK via RBMP, RBHP and RBWP	FOR ALL CANADIAN ROUTING INDICATORS
	ALASKAN AND ALEUTIANS AREA STATIONS	
RBKA	RBKA	FOR ALL U.S. ARMY AND U.S. AIR FORCE ROUTING INDICATORS
	RBWK via RBWP	FOR ALL CANADIAN ROUTING INDICATORS
	RBWK via RBWP	FOR ALL CANADIAN ROUTING INDICATORS
	CARIBBEAN AND SOUTH AMERICAN AREA STATIONS	
RBLP	RBLP	FOR ALL U.S. ARMY AND U.S. AIR FORCE ROUTING INDICATORS
	RBEP	FOR ALL CANADIAN ROUTING INDICATORS

13125.3 (Continued)

	WESTERN UNITED STATES AREA STATIONS	
RBWD	RBWP	FOR ALL U.S. ARMY AND U.S. AIR FORCE ROUTING INDICATORS
	RBWK via RBWP	FOR ALL CANADIAN ROUTING INDICATORS
RBWK	RBWK	FOR ALL U.S. ARMY AND CANADIAN ROUTING INDICATORS
	RBWP	FOR ALL U.S. AIR FORCE ROUTING INDICATORS
RBWP	RBWP	FOR ALL U.S. ARMY AND U.S. AIR FORCE ROUTING INDICATORS
	RBWK	FOR ALL CANADIAN ROUTING INDICATORS
	ASIATIC AREA STATIONS	
RBAT	RBAT	FOR ALL U.S. ARMY AND U.S. AIR FORCE ROUTING INDICATORS
	RBWK via RBHP and RBWP	FOR ALL CANADIAN ROUTING INDICATORS

13126. UNITED STATES-CANADA WORKING AGREEMENT

.1 The transfer of multiple-call traffic between Canadian transfer stations and U.S. transfer stations will be accomplished in accordance with ACP 127. When the operating signal ZVA is employed it shall be followed by all routing indicators for which transfer is intended. In order to avoid delay in delivery, such messages shall be relayed from the point of entry into the NTX to the Navy routing indicators in the specific routing pilot in accordance with current routing doctrine and without reprocessing or further piloting.

.2 Traffic between Canada and the United States will be handled only through established transfer stations.

.3 Traffic originated at or destined for locations outside the geographical limits of Canada, the United States, and Alaska will be handled over the facilities of the originating country when such facilities exist. When facilities do not exist special arrangements are required.

.4 When the communication centers serving the originator and addressees hold a common cryptosystem, encrypted traffic will be routed in accordance with the crypto routing column in the JANAP/ACP 117 series. When the communication centers serving the originator and addressees do not hold a common cryptosystem, traffic will be directed to the common crypto holder nearest the addressee for processing and forwarding.

.5 In the absence of a Canadian-United States approved circuit policy, classified traffic exchanged between Canada and the United States will be encrypted.

.6 Military traffic which will incur commercial charges will not be reflected into the communication facilities of the other country except when local arrangements provide for direct billing by the commercial carrier to a representative of the country of origin, or when other pro-

13126.6 (Continued)

visions have been made preventing obligation of funds other than those of the originating country.

.7 The address portion of messages exchanged between the two countries shall contain only address groups, international call signs, complete plain language address, or mutually understood short titles.

.8 Special characters to be employed in messages will be as authorized in the ACP 127 series. It is noted that certain equipment used by the Canadian services has the bell signal on the upper case J but it is considered that no appreciable traffic handling difficulties will be encountered since the Canadian services are in the process of converting the teletypewriter equipment to actuate the bell signal on the upper case S in all instances.

13127. TWX ROUTING INDICATORS

.1 All messages addressed to activities served by TWX, including service messages, must bear a complete address.

.2 An inspection of messages addressed to or originated by activities assigned a TWX routing indicator will reveal whether or not they carry address designation. If not, such traffic will be held at TWX positions, and a service message will be sent to the originator to determine to whom the message should be delivered.

.3 The city or telephone number will not be introduced into the tape relay network nor will it be shown in format line three on messages originated by TWX activities. Only the TWX routing indicator assigned and station serial number will be shown in format line three.

13130. MESSAGES

13131. PLAINDRESS EXAMPLE

.1 The following example shows a PLAINDRESS multiple-address message in which one of the addressees has received the message by other means, another will receive it via the tape relay network under predetermined delivery responsibility, and the remainder require transmission instructions for delivery or further relay. The message employs format line two routing, required in NTX.

EXAMPLE

(5 SPACES)	(2 CR) (LF)	
(Line 2)	MM RBATC RBEPC RBHPC RBWPC	(2CR) (LF)
(Line 3)	DE RBMPC 98	(2CR) (LF)
(Line 4)	NPM ZON3	(2CR) (LF)
	NPG T NALK	(2CR) (LF)
	NDT T NESP	(2CR) (LF)
(Line 5)	M 101400Z	(2CR) (LF)
(Line 6)	FM NFDR	(2CR) (LF)
(Line 7)	TO NALK	(2CR) (LF)
	NAPN	(2CR) (LF)
	NARL	(2CR) (LF)
	NELT	(2CR) (LG)
	NESP	(2CR) (LF)
	NORL	(2CR) (LF)
	NUSX	(2CR) (LF)
(Line 8)	INFO MUSK	(2CR) (LF)
(Line 10)	GR75	(2CR) (LF)
(Line 11)	BT	(2CR) (LF)
(Line 12)	TEXT	(2CR) (LF)
(Line 13)	BT	(2CR) (LF)
(Line 15)	10/1430Z JAN	(2CR) (8LF)
	(4Ns)	(12 LTRS)

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13131.1 (Continued)

EXPLANATION: The contents of each line are as follows:

(5 SPACES) (2CR) (LF)

The five spaces are necessary to facilitate handling of the message tape in relay stations.

The carriage return (CR) and line feed (LF) function are necessary to reset the receiving teletypewriter at the ultimate destination where the message will be received in page copy form.

(Line 1)

A specific routing pilot is not employed.

(Line 2) MM RBATC RBEPC RBHPC RBWPC is the basic routing line and consists of the precedence prosign and routing indicators of the stations that are to effect refile or delivery of the message.

MM is the repeated precedence prosign.

RBATC RBEPC RBHPC RBWPC are the routing indicators of the stations called to effect delivery or refile to the addressees.

(Line 3) DE RBMPC 98

DE is the prosign which means this transmission is from the station whose designation follows.

RBMPC 98 is the routing indicator and station serial number of the station originating the message tape.

(Line 4) NPM ZON3
NPG T NALK
NDT T NESP - are transmission instructions indicating:

NPM ZON3 - NPM(RBHPC) is to place the message of the NPM Primary Fleet Broadcast.

NPG T NALK - NPG(RBWPC) is to transmit to NALK.

NDT T NESP - NDT(RBATC) is to transmit to NESP.

NOTE: In this example, RBMPC has determined that NAPN, NARL, NELT and NORL are copying NPM Primary Fleet Broadcast. RBEPC, being the guard for MUSK, has predetermined responsibility and will effect delivery to MUSK without further instructions. The absence of any specific transmitting instructions for NUSX indicates that he has received or is to receive the message by other means from either NFDR or RBMPC.

13132. BOOK MESSAGE

.1 A book message is one which is destined for two or more addressees and is of such nature that the originator considers that no addressees need to be informed of any other addressees. Each addressee must be indicated as action or information.

.2 Addressees of book messages are divided into groups according to the relay stations which serve them. For each group of addressees a separate message is prepared and transmitted. Each book is assigned a new station serial number but the same date-time group is used for all books.

.3 A receiving relay station may further reduce the book message to a single-address message to its tributary stations if desired. Book messages requiring refile with commercial carriers (including relay via TWX) should always be handled as such, including reduction to single-address messages if delivery to only one addressee is required. This applies whether the message is delivered by rapid means or by mail, which would include confirmation copies.

.4 The operating signal ZEX means: THIS IS A BOOK MESSAGE AND MAY BE DELIVERED AS A SINGLE-ADDRESS MESSAGE TO ADDRESSEES FOR WHOM YOU ARE RESPONSIBLE. Addressees shall not readdress book messages outside their area of responsibility.

.5 The following is an example of book message handling. The Bureau of Ships message center has a message for transmission to 38 addressees in various naval districts. The BUSHIPS message center obtains the originator's permission to transmit the message as a book message. Since four of the 38 addressees are served by the Boston Major Relay Station, the book message for those four addressees is prepared as follows:

(a)
```
MM RBEBA RBEBYC RBEBC RBEBR
DE RBEPB 17
M 271332Z ZEX
FM BUSHIPS

TO INSMAT BSN
NAVSHIPYD BSN
COMONE
RECSTA BSN
GRNC
BT
TEXT TEXT TEXT ETC.....
```

13132. (Continued)

(b) If the Boston relay station desires to deliver to each of the addressees as a single-address message, it may effect delivery to each of the addressees, as to the NAVSHIPYD, for instance, as follows:

MM RBEBYC
DE RBEPD 17
M 271332Z ZEX
FM BUSHIPS
TO NAVSHIPYD BSN
GRNC
BT
TEXT TEXT TEXT ETC.....

13133. PROCESSING OF TRANSMISSION SECTIONS

.1 Division of long messages into transmission sections is discussed in Subsection 9050.

.2 The following examples show the manner in which a 1600-word message may be separated into two transmission sections:

(5 SPACES)	(2CR) (LF)	(2CR) (LF)
(Line 2)	MM RBMPC	(2CR) (LF)
(Line 3)	DE RBEPC 98	(2CR) (LF)
(Line 5)	M 091745Z	(2CR) (LF)
(Line 6)	FM NFDR	(2CR) (LF)
(Line 7)	TO NPN	(2CR) (LF)
(Line 10)	GR750	(2CR) (LF)
(Line 11)	BT	(2CR) (LF)
(Line 12)	SECTION ONE OF TWO...TEN	(2CR) (LF)
	LINES OF TEXT	(2CR) (8LF)
(Line 12)	PAGE TWO RBEPC 98....TWENTY	(2CR) (LF)
	LINES OF TEXT	(2CR) (8LF)

NOTE: Succeeding pages of this transmission section would appear as shown above.

Final Page.

(Line 12)	PAGE FIVE RBEPC 98....FINAL	(2CR) (LF)
	LINES OF TEXT OF	(2CR) (LF)
	SECTION ONE	(2CR) (LF)
(Line 13)	BT	(2CR) (LF)
(Line 15)	09/1800	(2CR) (8LF)
	(4Ns)	(12 LTRS)

The second and final transmission section would appear:

13133.2 (Continued)

(5 SPACES)	(2CR) (LF)	
(Line 2)	MM RBMPC	(2CR) (LF)
(Line 3)	DE RBEPC 99	(2CR) (LF)
(Line 5)	M 091745Z	(2CR) (LF)
(Line 6)	FM NFDR	(2CR) (LF)
(Line 7)	TO NPN	(2CR) (LF)
(Line 10)	GR850	(2CR) (LF)
(Line 11)	BT	(2CR) (LF)
(Line 12)	FINAL SECTION OF TWO...TEN	(2CR) (LF)
	LINES OF TEXT	(2CR) (8LF)
(Line 12)	PAGE TWO RBEPC 99.....TWENTY	(2CR) (LF)
	LINES OF TEXT	(2CR) (8LF)

NOTE: Succeeding pages of this transmission section would appear as shown above. Final page is shown below.

(Line 12)	PAGE FOUR RPEPC 99...FINAL	(2CR) (LF)
	LINES OF TEXT OF	(2CR) (LF)
	SECTION TWO	(2CR) (LF)
(Line 13)	BT	(2CR) (LF)
(Line 15)	09/1800Z	(2CR) (8LF)
		(4Ns) (12 LTRS)

NOTE: The two transmission sections are prepared in the same manner with these variations:

(a) A separate station serial number is affixed.

(b) The group count, if a numerical group is employed, may differ.

(c) The section number at the beginning of the text will differ.

13140. DISCREPANCIES IN TRANSMISSIONS

13141. NUMBER COMPARISONS

.1 Periodic number comparisons will ensure that all traffic transmitted has been received and that circuit continuity is maintained. The procedure outlined hereinafter is applicable to the method of periodic number comparisons normally used on all trunk circuits and private line circuits which are equipped with either automatic or tab station serial numbering devices.

(a) Each primary relay station shall exchange with each other primary relay station with which it is in direct communication number comparisons hourly on the hour over each of their respective circuits whether wire or radio.

(b) Each primary relay station shall initiate a sent number comparison to each major relay station with which they are in direct communication each even hour GMT and each major relay station shall initiate a similar comparison to their respective primary relay station each off hour GMT.

(c) Primary and major relay stations may arrange their own schedule for number comparisons with minor relay or tributary stations but in no case will such comparisons be more than one hour apart.

13141. (Continued)

(d) A final number comparison shall be made by all stations maintaining a continuous 24-hour circuit at 2400Z daily.

(e) The responsibility for continuity of received numbers rests with the station receiving the traffic. Open numbers shall be requested as they occur and every 15 minutes thereafter until received.

(f) Number comparisons between the other services will be handled in accordance with Article 13107.

(g) The following are examples of the form to be used for periodic number comparisons:

EXAMPLE of the form to be used between primary relay stations:

RBEP B37
RBHP SUPVR RBEP BRAVO COMP 1600

and

RBHP B42
RBEP SUPVR RBEP BRAVO COMP 1600

EXAMPLE of the form to be used between primary and major relay stations:

RBEP A37

RBEK SUPVR RBEP ABLE COMP 1600

and

RBEK A42

RBEP SUPVR RBEK ABLE COMP 1700

EXAMPLE of the form to be used between primary and major to minor or tributary station and minor or tributary station to primary or major station:

RBEP 37

RBEPM SUPVR RBEP COMP 1600

and

RBEPM 42
RBEP SUPVR RBEPM COMP 1600

.2 Final Number Comparisons. The following are examples of the form to be used for final number comparison:

EXAMPLE of the form to be used by all stations for final at 2400Z daily:

RBEP A46

RBHP SUPVR RBEP ALFA FINAL 2400

and

13141.2 (Continued)

RBHP A38

RBEP SUPVR RBHP ALFA FINAL 2400

NOTE: Tabs can be prepared in advance for the above forms and thus expedite this routine.

.3 Closing Number Comparisons. Close out comparisons for those offices where 24-hour circuit operation is not maintained will be made on the RETURN TAPE BASIS.

(a) The office preparing to close out will initiate the close out comparison.

(b) The controlling station receiving a close out comparison will verify receipt of all messages up to the channel number on the close out comparison and return to the closing office using the next consecutive channel number to that office.

(e) The office closing verifies receipt of all numbers up to the channel number on the returned close out tape and transmits to the controlling station a CLOSED tape with time of closing.

.4 The following are examples of the form to be used by the controlling station receiving close out comparison and the office closing.

EXAMPLE of the form to be used by office initiating close out comparison:

RBEPD A77

RBEP SUPVR RBEPD ALFA CLOSE OUT 2000

EXAMPLE of the form to be used by the controlling station receiving close out comparison:

RBEP A87

RBEPD A77

RBEP SUPVR RBEPD ALFA CLOSE OUT 2000

EXAMPLE of the form to be used by the office closing:

RBEPD A78

RBEP SUPVR RBEPD ALFA CLOSED 2010

13142. DISCREPANCY HANDLING

.1 Discrepancies made in the tape relay network should be brought to the attention of the originating station as soon as possible. Discrepancies will decrease in number if corrective action is taken without delay.

.2 All users of the tape relay component of the Naval Communication System are encouraged to exchange copies of misroutes and discrepancies. A page copy containing discrepancies should be mailed without delay directly to the station responsible, with a notation as to the nature of the discrepancy and the appropriate reference made to pertinent publications containing instructions covering the correct procedure. Formal letters or memoranda are not required. This also applies to discrepancies made by various bureau message centers in the Navy Department. The latter should be mailed directly to the communication officer of the cognizant bureau and not to the relay station.

13142. (Continued)

.3 Flagrant violations and major discrepancies may be forwarded to the Chief of Naval Operations (DNC) when it appears that further study and investigation is required, or when corrective action is indicated. Discrepancies made by the Army, Air Force or services of other nations should be forwarded directly to the Chief of Naval Operations (DNC).

13143. GARBLED OR MUTILATED TAPES

.1 When a relay station notes that a tape is garbled or mutilated, that station immediately shall request correction from the preceding station, but shall not delay messages awaiting corrections more than a reasonable period (normally not to exceed one hour) consistent with backlog and circuit conditions. If excessive delay is involved in obtaining corrections, such tapes shall be forwarded SUBJECT TO CORRECTION. A relay station forwarding a message SUBJECT TO CORRECTION then shall request the preceding station to forward the correction directly to the station to whom the message was relayed SUBJECT TO CORRECTION.

.2 When the preceding station is unable to furnish the desired correction that station may take further action as follows:

(a) Transmit the request for correction to the station originating the tape with instructions to forward the correction directly to the station to whom the message was relayed SUBJECT TO CORRECTION, and notify the station making the initial request of the action taken. The station originating the message tape then will be responsible for providing the requested correction. The addressee station receiving a SUBJECT TO CORRECTION message shall accomplish delivery and/or refile but shall keep records open until corrections have been received. If corrections are not received within a reasonable period, the addressee station shall request corrections from the originating station.

(b) Pass the initial request to the next preceding station. This procedure shall be repeated until correction is achieved. The station providing the correction shall forward it to the station to whom the message was relayed SUBJECT TO CORRECTION. The addressee station receiving a SUBJECT TO CORRECTION message shall accomplish delivery and/or refile but shall keep reords open until corrections have been received. If corrections are not received within a reasonable period, depending upon precedence of message in question and traffic conditions, the addressee station shall request corrections from the originating station.

.3 Tapes normally shall not be forwarded SUBJECT TO CORRECTION between service networks. In those instances where such action is necessary, the transfer station of the service network making the transfer shall be responsible for furnishing corrections to the other service network at point of transfer.

.4 When corrections are not available immediately, tapes which have a precedence of Operational Immediate or higher shall be relayed to the called station SUBJECT TO CORRECTION without delay.

.5 Caution should be exercised to assure that message tapes of lower precedence are not relayed if garbled or mutilated to an extent that the information contained therein apparently is valueless.

.6 No message should be forwarded with garbles or mutilations in the heading which will cause misroutes or nondeliveries.

13143.6 (Continued)

EXAMPLE of a multiple-call message employing format line two routing:

(5 SPACES) (2CR) (LF)
00 RBEP (2CR) (LF)
ZDG (2CR) (LF)
EPA187
00 RUEAC RUEPFC RUFPC RUWPC RUWYC RBEPC (2CR) (LF)
RBWPC RJEPC RJEXC (2CR) (LF)
DE RBEPAR 153 etc.....

13144. CORRECTED COPIES

.1 When a station provides a corrected copy of a message which has been forwarded SUBJECT TO CORRECTION the transmission will be preceded by a CORRECTED COPY pilot.

EXAMPLE of a multiple call message employing format line two routing:

(5 SPACES) (2CR) (LF)
00 RBEP
ZEL (2CR) (LF)
EPA187
00 RUEAC RUEPFC RUFPC RUWYC RBEPC RBWPC (2CR) (LF)
RJEPC RJEXC (2CR) (LF)
DE RBEPAR 153 etc.....

.2 It is the responsibility of the station called in the routing line to ensure that forwarding action is accomplished and that the addressee is informed that the message is a CORRECTED COPY of a message received previously.

13145. MISROUTED AND MISSENT MESSAGES

.1 A misrouted message is one bearing incorrect routing instruction. A missent message is one bearing the correct routing instruction but has been transmitted to a station other than that indicated.

.2 A tape relay tributary station is responsible for delivery of every message received, even though the message was transmitted to it through error. This is a fundamental policy and must be understood thoroughly by all personnel connected with the communication organization.

.3 Occasionally a message will be received in error due to an incorrect routing indicator. The originator may have made this error or it may have resulted from mechanical trouble in the system. In some cases, the routing indicator may be correct but the relay station may transmit it over the wrong circuit (MISSENT). While the final relay station jointly is responsible with the tributary station for checking routing indicators against the plain language address, this does not relieve a tributary station which receives a misrouted or missent message from responsibility for taking action as outlined in paragraphs 4 and 5 below.

.4 Misrouted Messages

(a) When a tributary station receives a misrouted message that station shall:

(1) If tapes are received on an incoming circuit, handle the message as a misrouted message as outlined in sub-paragraph (c) below.

13145.4 (Continued)

(2) If tapes are not received, notify the relay station which will obtain the transmitted tape of the referenced message, cancel the transmission to the tributary station, and forward the message as outlined in sub-paragraph (c) below. In circumstances where the transmitted tape is not available, the tributary station shall be instructed to forward the message.

(b) When a tributary station forwards a misrouted message, it shall be handled as outlined in sub-paragraph (c) below.

(c) Prior to forwarding a misrouted message, a station shall prepare a pilot consisting of the appropriate precedence, routing indicator of the station to effect delivery, the operating signal ZOV, the routing indicator of the station preparing the pilot, and appropriate transmission instructions. Transmission instructions are not required when forwarding single-address misrouted messages.

EXAMPLE of a multiple-call message employing format line two routing:

```
EPA071
RR RBEPC RBHPC                                  (2CR) (LF)
DE RBEGC 76A                                    (2CR) (LF)
R 101950Z                                       (2CR) (LF)
FM NITR                                         (2CR) (LF)
TO NISM                                         (2CR) (LF)
NISL                                            (2CR) (LF)
NITP                                            (2CR) (LF)
NISN                                            (2CR) (LF)
GR20 etc.....

As rerouted by RBEPC

RR RBWPC RBMPC                                  (2CR) (LF)
ZOV RBEPC 17A                                   (2CR) (LF)
NPG T NISM                                      (2CR) (LF)
NPN T NISL                                      (2CR) (LF)
EPA071
RR RBEPC RBHPC                                  (2CR) (LF)
DE RBEGC 76A                                    (2CR) (LF)
R 101850Z                                       (2CR) (LF)
FM NITR                                         (2CR) (LF)
TO NISM                                         (2CR) (LF)
NISL                                            (2CR) (LF)
NITP                                            (2CR) (LF)
NISN                                            (2CR) (LF)
GR20 etc.....
```

(d) The station receiving a message addressed to more than one activity which contains a MISROUTE pilot is responsible for effecting delivery only to those addressees indicated by the designations which follow the prosign T in the pilot. The delivery responsibilities appearing in the message address will be disregarded. The station rerouting the message will notify the station which originated the message tape with the incorrect routing indicator of the action taken and the correct routing. When messages involving mobile units are directed to a guard station, and require rerouting to another station for delivery or further relay, they are handled as misrouted messages. In this case, it is not necessary to advise the originating station.

13145. (Continued)

(e) In instances where the tributary station is forwarding a misrouted message and the tributary station serial number serves as the channel number, the MISROUTE pilot shall include a station serial number immediately following the tributary station's routing indicator.

EXAMPLE:

```
PP RUHPLE                                   (2CR) (LF)
ZOV RUWPLE 10A                              (2CR) (LF)
WUA 096
EUA 075
PP RUWPLE                                   (2CR) (LF)
PP RUWPLE RUHPC RUAPC                       (2CR) (LF)
DE RUEPC 78B etc.....
```

.5 Missent Messages -

(a) When a tributary station receives a missent message, that station shall notify the relay station from which the message was received. The relay station shall cancel the transmission to the tributary station and retransmit the message tape over the proper channel.

(b) When a relay station employing format line two routing receives a missent message, that station shall notify the relay station from which the message was received. The relay station which missent the message shall cancel the transmission and retransmit the message tape over the proper channel.

13146. HANDLING OF SUSPECTED DUPLICATE MESSAGES

.1 Messages forwarded as SUSPECTED DUPLICATE messages are discussed in Article 9062.

.2 When a tape relay station has cause to suspect that a message may have been previously transmitted but definite indication of prior transmission is not immediately available, the following procedure is applicable:

As received by RBWP -

```
EPA053
EPA039                                      (2CR) (LF)
PP RBWKE RBWPLE                             (2CR) (LF)
DE RBEPAR 16B                               (2CR) (LF)
P 141630Z                                   (2CR) (LF)
FM NURL                                     (2CR) (LF)
TO RBWKE/HURT                               (2CR) (LF)
INFO RBWPLE/HAPP etc....
```

As forwarded by RBWP -

```
PP RBWKE RBWPLE                             (2CR) (LF)
ZFD RBWP                                    (2CR) (LF)
EPA053
EPA039
PP RBWKE RBWPLE                             (2CR) (LF)
DE RBEPAR 16B etc.....
```

As originally prepared by RBEPAR -

13146.2 (Continued)

(5 SPACES) (2CR) (LF)
PP RBWKE RBWPLE (2CR) (LF)
DE RBEPAR 16B (2CR) (LF)
P 141630Z (2CR) (LF)
FM NURL (2CR) (LF)
TO RBWKE/HURT (2CR) (LF)
INFO RBWPLE/HAPP etc..... (2CR) (LF)

As forwarded by RBEPAR to RBWKE -

(5 SPACES) (2CR) (LF)
PP RBWKE (2CR) (LF)
ZFD RBAPAR 48B (2CR) (LF)
PP RBWKE RBWPLE (2CR) (LF)
DE RBEPAR 16B etc....

As forwarded by RBEPAR to RBWKE and RBWPLE -

(5 SPACES) (2CR) (LF)
PP RBWKE RBWPLE (2CR) (LF)
ZFD RBEPAR 72B (2CR) (LF)
PP RBWKE RBWPLE (2CR) (LF)
DE RBEPAR 16B etc....

13147. TWO TAPES WITH THE SAME NUMBER

.1 When a tape relay station is notified that two transmissions have been received with identical channel numbers, an examination of the sent tapes or monitor reel should be made. If two tapes are found with the same number, a correction message will be initiated to indicate the proper number under which the second transmission is to be forwarded.

EXAMPLE:

ERA192 (2CR) (LF)
RR RBWP (2CR) (LF)
DE RBEP (2CR) (LF)
ZFQ EPA150 101400Z (2CR) (LF)
10/1500Z (2CR) (8LF) (4Ns) (12 LTRS)

NOTE: The operating signal ZFQ means TWO MESSAGES RECEIVED AS CHANNEL OR STATION SERIAL NUMBER_____. HOLDING MESSAGE_____. ADVISE DISPOSITION_____.

Reply -

WPA156 (2CR) (LF)
RR RBEP (2CR) (LF)
DE RBWP (2CR) (LF)
ZFS EPA150 101400Z (2CR) (LF)
10/1510Z (2CR) (8LF) (4Ns) (12 LTRS)

NOTE: The operating signal ZFS means MAKE MESSAGE_____ SAME CHANNEL OR STATION SERIAL NUMBER AS THIS PROCEDURE MESSAGE.

.2 When a tributary station is notified that two message tapes have been received with identical station serial numbers, an examination of the sent message file is made. If two messages have been transmitted with the same number, the tributary station will cancel the second transmission made under the duplicated number and retransmit the message under a new station serial number.

13147.2 (Continued)

EXAMPLE:

```
EPA076                                                    (2CR) (LF)
RR RBEPD                                                  (2CR) (LF)
DE RBEP                                                   (2CR) (LF)
ZFQ RBEPD 43 091600Z                                      (2CR) (LF)
09/1640Z                          (2CR) (8LF) (4Ns) (12 LTRS)
```

Reply -

```
(5 SPACES) (2CR) (LF)
RR RBEP                                                   (2CR) (LF)
DE RBEPD 48                                               (2CR) (LF)
ZFR 091600Z RBEPD 43                                      (2CR) (LF)
09/1650Z                          (2CR) (8LF) (4Ns) (12 LTRS)
```

13148. DISCREPANCIES IN CHANNEL NUMBERS

.1 When a tape relay station is notified that it has transmitted a message tape with two channel numbers which appear at the leader end of the tape, the following action shall be taken:

(a) Check transmitted tapes to ensure no transmission has been lost. If a transmission has been lost, the tape shall be rerun immediately to the distant station.

(b) If no transmission has been lost, the distant station shall be advised to BLANK the lower number and release the tape under the higher number.

NOTE: When numbers have been BLANKED from tapes containing more than one number, extreme care must be exercised to ensure that the message is forwarded under the remaining number. A Transmission cannot be canceled by blanking a number.

EXAMPLE:

Message tape as received at RBEC from RBEP:

```
RBEP75
RBEP76                                                    (2CR) (LF)
MM RBECC                                                  (2CR) (LF)
DE RBEPC 95B etc....
```

Correction requests:

```
                                                          (2CR) (LF)
MM RBEP                                                   (2CR) (LF)
DE RBEC                                                   (2CR) (LF)
ZFU RBEP 75 RBEP 76 RBEPC 95B                             (2CR) (LF)
10/1930Z                          (2CR) (8LF) (4Ns) (12 LTRS)
```

NOTE: The operating signal ZFU means CHANNEL NUMBER(S) _____PRECEDE MESSAGE_____.

Reply:

```
                                                          (2CR) (LF)
MM RBEC                                                   (2CR) (LF)
DE RBEP                                                   (2CR) (LF)
ZFW RBEP 75 RBEPC 95B RBEP 76                             (2CR) (LF)
10/1940Z                          (2CR) (8LF) (4Ns) (12 LTRS)
```

13148.1 (Continued)

NOTE: The operating signal ZFW means BLANK CHANNEL NUMBER(S)_____. FORWARD MESSAGE_____AS CHANNEL NUMBER_____.

.2 When a tape relay station is notified that it has transmitted a message tape with two channel numbers and the numbers are separated by portions of the message, the distant station will be advised to cancel the transmission under the lower number and BLANK the higher number. The message tape will be corrected and resent under a new channel number.

EXAMPLE:

Message tape as received at RBEC from RBEP:

RBEP 75 (2CR) (LF)
MM RBEGC (2CR) (LF)
DE RBEPC 95B (2CR) (LF)
P 101845Z (2CR) (LF)
FM HKAF (2CR) (LF)
TO HRBL (2CR) (LF)
RBEP 76 (2CR) (LF)
BT etc.....

Correction requests -

(2CR) (LF)
MM RBEP (2CR) (LF)
DE RBEG (2CR) (LF)
ZFV RBEPC 95B RBEP 75 RBEP 76 (2CR) (LF)
10/1910Z (2CR) (8LF) (4Ns) (12 LTRS)

NOTE: The operating signal ZFV means MESSAGE_____CONTAINS CHANNEL NUMBERS_____SEPARATED BY PORTIONS OF THE MESSAGE. ADVISE DISPOSITION.

Reply -

(2CR) (LF)
MM RBEG (2CR) (LF)
DE RBEP (2CR) (LF)
ZFR RBEPC 95B RBEP 75 ZFW RBEP 76 (2CR) (LF)
10/1915Z (2CR) (8LF) (4Ns) (12 LTRS)

NOTE: The operating signal ZFR means CANCEL TRANSMISSION _____(MADE UNDER CHANNEL OR STATION SERIAL NUMBER_____).

.3 The station canceling a transmission is responsible for the retransmission of the message involved.

.4 Never cancel a number. Always BLANK numbers.

.5 Never BLANK a transmission. Always cancel transmissions.

.6 When a station receives a message without a sequential channel number, known as a "straggler", from a station that uses channel numbering, that station shall so inform the station which made the transmission and the station which made the transmission either shall assign the proper number under which the message is to be released or cancel the transmission.

13148.6 (Continued)

EXAMPLE:

```
                                                        (2CR) (LF)
RR RBEP                                                 (2CR) (LF)
DE RBEPD                                                (2CR) (LF)
ZFT RBEBPB 4 EPA150                                     (2CR) (LF)
09/1030Z                          (2CR) (8LF) (4Ns) (12 LTRS)
```

NOTE: The operating signal ZFT means MESSAGE_____RECEIVED WITHOUT CHANNEL OR STATION SERIAL NUMBER FOLLOWING CHANNEL OR STATION SERIAL NUMBER_____. ADVISE DISPOSITION.

Reply -

```
                                                        (2CR) (LF)
RR RBEPD                                                (2CR) (LF)
DE RBEP                                                 (2CR) (LF)
ZFS RBEBPB 4                                            (2CR) (LF)
09/1040Z                          (2CR) (8LF) (4Ns) (12 LTRS)
```

Or

```
                                                        (2CR) (LF)
RR RBEPD                                                (2CR) (LF)
DE RBEP                                                 (2CR) (LF)
ZFR RBEBPB 4                                            (2CR) (LF)
09/1040Z                          (2CR) (8LF) (4Ns) (12 LTRS)
```

.7 OPEN NUMBER is a sequential channel number of the received number sheet for which a transmission bearing a corresponding number has not been received.

(a) When a station discovers an OPEN NUMBER, that station shall initiate a procedure message informing the transmitting station. Upon receipt of a report of an OPEN NUMBER from a station, the transmission forwarded under that number shall be retransmitted, preceded by an appropriate pilot.

EXAMPLE:

Correction request -

```
                                                        (2CR) (LF)
RR RUEP                                                 (2CR) (LF)
DE RUWP                                                 (2CR) (LF)
ZFX EUA185                                              (2CR) (LF)
10/1040Z                          (2CR) (8LF) (4Ns) (12 LTRS)
```

NOTE: The operating signal ZFX means CHANNEL OR STATION SERIAL NUMBER_____IS OPEN. ADVISE.

Reply -

```
                                                        (2CR) (LF)
RR RUWP                                                 (2CR) (LF)
DE RUEP                                                 (2CR) (LF)
ZUI (identification) ZDK                                (2CR) (LF)
EUA185
RR RUWPTD                                               (2CR) (LF)
DE RUEPLT 96B etc.......
```

13148.7 (Continued)

NOTE: The operating signal ZUI means YOUR ATTENTION IS INVITED TO _____: ZDK means FOLLOWING REPETITION (OF_____) IS MADE IN ACCORDANCE WITH YOUR REQUEST.

(b) If it is determined that no transmission was made under the number reported as an OPEN NUMBER, a correction message BLANKING the number will be transmitted to the station making the report.

(c) If a monitor reel is employed and a number appears on the monitor reel tape without a message following it, and a portion of unperforated tape appears after the number, the original transmitted tapes will be retrieved and compared with the tape on the monitor reel. When a message tape is found among the original transmitted tapes which does not appear on the monitor reel tape, the number reported as open will be BLANKED and the tape so found resent under a new channel number as a SUSPECTED DUPLICATE.

(d) When a relay station receives a rerun as a result of an open number having been reported, but the definite indication of prior transmission is not available immediately, the station will forward the tape as a SUSPECTED DUPLICATE.

(e) When a tributary station receives a rerun as a result of an open number having been reported, that station shall determine whether that message was previously received. If the message is located, the duplicate transmission will be filed. If the message cannot be located, the rerun will be released as a SUSPECTED DUPLICATE.

13149. DISCREPANCIES IN STATION SERIAL NUMBERS

.1 When the first relay station receives a message from a tributary station without a station serial number, necessary correction will be accomplished before the message is forwarded. If the omission is inadvertently overlooked by the first relay station and is noted by an intermediate relay station, no action will be taken to correct the discrepancy. Such a message will be forwarded to the called station in the normal manner. The called station will obtain the omitted station serial number by procedure message from the originating station, if required.

13150. CORRECTION OF ERRORS

13151. MECHANICAL AND NONMECHANICAL ERRORS

.1 Message errors encountered in the NTX network are the result of mechanical failures (including electrical) causing garble, dropping of carriage return, overlining, etc.; and nonmechanical errors, causing misroutes, missent messages, misaddressed messages, transposed characters, punching errors, etc. Some mechanical failures may be attributed to changes in pulse repetition rate due to atmospheric conditions. Nonmechanical errors are generally personnel errors.

.2 It is difficult, in many instances, for a station to determine with accuracy whether an error is mechanical or nonmechanical. However, sound judgement and experience will contribute materially to a correct determination. If it is determined that an error is due to mechanical failure a supervisory wire should be sent to the station from which the transmission was received, provided it cannot be corrected locally. Nonmechanical errors should be handled by service message to the originating message center.

13152. KEYBOARD TRANSMISSION

.1 When the sending operator detects an error during transmission of the message text or ending, the operator transmits the error prosign E E E E E E E E after the incorrect word or group and resumes transmission from the last correctly transmitted word or group.

EXAMPLE:

An operator is transmitting the words IN ACCORDANCE WITH MESSAGE SENT and makes an error in the word MESSAGE: IN ACCORDANCE WITH MESSG E E E E E E E E WITH MESSAGE SENT.

.2 Errors made in the message heading are not to be corrected in the above manner. The incorrect transmission is canceled by transmitting the prosign E E E E E E E E AR, two carriage returns, eight line feeds, four Ns and twelve LTRS. Transmission then commences from the beginning of the heading.

13153. CORRECTIONS AT END OF MESSAGES

.1 If the transmitting operator discovers that an error has been made in the textual portion, the error may be corrected at the end of the message. Such corrections will be separated from the last text group, or confirmation (if any), by (2CR) (LF) and will be preceded by the prosign C and identifying data. Headings and security classifications shall not be corrected in this manner.

13154. CORRECTIONS IN MULTIPLE-PAGE MESSAGES

.1 When corrections are necessary in multiple-page messages which cannot be made either by the rub-out or E E E E E E E E E method, the correction shall be made following the last text group of the page in which the error appears. Such corrections will be separated from the last text word or confirmation by (2CR) (LF) and will be preceded by the prosign C and identifying data. In such cases the end of page sequence, (2CR) (LF), shall be transmitted after the correction, with the exception that the last page will be ended with the normal message ending and machine functions (2CR) (8LF) (4Ns) (12 LTRS). In those instances where the error was not noted prior to starting another page, the error shall be corrected at the end of the message.

13155. CORRECTION REQUESTS AND REPLIES

.1 Corrections involving group errors, incorrect group counts, omitted portions of messages, nonmechanical errors, etc., are obtained by addressing service or procedure messages to the station which originated the message tapes.

.2 Correction for discrepancies in channel numbers, unintelligible station serial numbers, incompleted messages, or mutilations and garbles caused by mechanical difficulties are obtained by addressing a correction request to the station from which the transmission was received or the originating station.

.3 When sending a correction request to a relay station regarding a message which was relayed through the station, reference will always be made to the channel number and further identifying and explanatory data as required.

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13155.3 (Continued)

EXAMPLE:

(5 SPACES) (2CR) (LF)
RR RUEP (2CR) (LF)
DE RJEP (2CR) (LF)
INT ZDK EUA046 (reason)_____. (2CR) (LF)
09/1600 JAN RJEP (2CR) (8LF) (4Ns) (12 LTRS)

NOTE: The operating signal INT ZDK means WILL YOU REPEAT MESSAGE ___(OR PORTION_____)? OR RERUN NO._____.

.4 When sending a correction request to a station regarding a message originating at that station, reference must always be made to the station, serial number and further identifying and explanatory data as required.

EXAMPLE:

(5 SPACES) (2CR) (LF)
RR RUEPAR (2CR) (LF)
DE RUEP (2CR) (LF)
INT ZDK RUEPAR 96B 091420Z (reason) (2CR) (LF)
09/1600 (2CR) (8LF) (4Ns) (12 LTRS)

.5 In the event that both the channel number and station serial number are in error, the message should be identified by quoting the message heading and if necessary a portion of the text.

.6 If a message contains more than one error, all questions concerning the same message should be incorporated in one service or procedure message.

.7 In all instances, the station initiating a correction request is responsible for following up the original request until an answer is received. When a second or succeeding correction request or reply is originated, it will be so identified. Each correction request shall be answered even though a previous reply has been made.

EXAMPLE:

(5 SPACES) (2CR) (LF)
RR RUEP (2CR) (LF)
DE RJEZ (2CR) (LF)
ZUI (identification)ZDK RJEC A290 (2CR) (LF)

(5 BLANKS)
RJEZ A290 (2CR) (LF)
RR RUEPC (2CR) (LF)
DE RJEXL 16B (2CR) (LF)
etc.....

.8 Procedure and service messages will be used to make corrections when it is not necessary to retransmit the message.

.9 The date and time of origin, separated by the slant sign, will end each procedure message used for this purpose, except when preceding retransmission of a message. In this instance, the pilot will be separated from the message retransmission by two carriage returns and one line feed.

13156. METHODS OF CANCELING TRANSMISSIONS

.1 Messages may be canceled only by the originator as set forth in Article 9152.

13156. (Continued)

.2 Transmissions may be canceled between stations as outlined below:

(a) When a message has not been completely transmitted and prior to any further transmission, the operator may notify the distant station to disregard the incomplete transmission by transmitting (2CR) (LF) and the prosign E E E E E E E E followed by (2CR) (8LF) (4Ns) (12LTRS). Each letter of the error prosign shall be separated by a space.

(b) When station serial numbers serve as channel numbers, the station serial number of a canceled transmission shall be filled in by utilizing the number on a succeeding message, preferably on the next message.

(c) When incomplete transmissions result from mechanical difficulties at tape relay stations, they will be canceled by a procedure message quoting the channel number and station serial number appearing on the transmission to be canceled. The same channel number shall not be used on a succeeding transmission. A record of cancellation shall be made.

EXAMPLE:

	(2CR) (LF)
RR RBEPA	(2CR) (LF)
DE RBEP	(2CR) (LF)
ZFR EPA108 RUEPAR 96B	(2CR) (LF)
9/1645Z (2CR) (8LF) (4Ns)	(12 LTRS)

.3 When it is necessary to inform a station to take no forwarding action on a completed transmission which has been questioned, the transmission will be canceled as indicated in (c) above.

.4 It is the responsibility of the station canceling a transmission to ensure accomplishment of any further handling of the message that may be required.

.5 In service messages, phrases such as FILE WITHOUT FORWARDING, FILE WITHOUT ACTION, DELIVERY PROTECTED or other appropriate phrases may be used to avoid violations of the above.

.6 The term CANCEL AND FILE (CAF) is not authorized.

13200. UNATTENDED AND SECURED SERVICE

13201. UNATTENDED AND SECURED SERVICE

.1 There are two types of service provided to Naval Teletypewriter and tape relay tributaries where traffic volume and/or personnel limitations preclude a 24-hour communication watch. These are:

(a) Unattended service - Traffic is routed to these activities as if they maintained a 24-hour communication watch. If messages are received at times other than normal working hours, these messages continue to be transmitted to the receiving teletypewriter machines for processing by communication personnel at the commencement of the next working day.

(b) Secured service - Traffic is routed to these activities in the normal manner during working hours. At the conclusion of normal working hours the relay station switches these stations to an intentional intercept position. The relay station intercepts all traffic and reintroduces into the Automatic Switching System at the commencement of regular working hours.

13201. (Continued)

.2 Screening of traffic by relay stations for those stations employing "unattended service" or "secured service" is not practicable. Personnel and facilities will not be available at the automatic relay stations to provide the required screening and notification of addressees.

.3 Action is required by commands concerned as follows:

(a) Commands employing unattended service must ensure that duty personnel periodically check incoming machines or accept responsibility for traffic delays occasioned by the use of unattended service.

(b) Commands employing secured service must accept delays in delivery occasioned by that service.