CHAPTER FOURTEEN

FACSIMILE PROCEDURES

TABLE OF ARTICLES

CHAPTER FOURTEEN

FACSIMILE PROCEDURES

14000. STANDARD PROCEDURES

14001. DEFINITION

.1 Facsimile is the transmission by telecommunications of fixed images and their reception in permanent form.

14002. CAPACITY OF EQUIPMENT

.1 Facsimile equipment installed at present is based on 96 lines per inch definition and accepts copy material with outside dimensions up to 12 x 18.68 inches. All intelligence on any one copy to be transmitted must be within an area of 11.75 x 18 inches. Larger copy must be suitable for photographic reduction or sectionalizing. When prepared for transmission, numerals, symbols, and written matter under normal circuit and radio propagation conditions should not be less than 3/16" high for radio circuits and 3/32" for landline circuits.

.2 Instruction books are provided with each specific unit of equipment.

14003. METEOROLOGICAL FACSIMILE OPERATIONS

.1 Facsimile terminal equipment is provided to those naval meteorological offices which prepare weather maps for transmission on facsimile broadcasts where such offices are not conveniently located near the cognizant communication center controlling the broadcast. Keying control of all facsimile transmission will be under the cognizant communication activity.

14004. PICTURE TRANSMISSIONS

.1 Radiotelegraph procedure shall be employed to establish and maintain communications in the conduct of facsimile transmission except as modified herein.

14005. PICTURE DEFINITION

.1 Picture definition for operating purposes shall be established by appropriate operating signal, as listed in ACP 131.

.2 Terminology.

SYMBOL - Any individual character including a letter, number, digit or geometrical shape.

MODEL - A combination of symbols pertaining to a given location and required to portray a given situation, such as:

(a) A weather map consisting of various digits and characters in combination portraying a weather situation at a given location.

(b) A shipping control plot, consisting of a number of individual symbols, such as geometrical shapes, digits, etc., in combination portraying a shipping situation at a given location.

14005. (Continued)

.3 Paper. The best paper for facsimile transmission is white, 25 per cent rag bond.

.4 Black and White Reception of Color Transmission. Transmitted colors are received as various shades of grey. Depending on atmospheric conditions, the opacity of the ink, etc., the shade of grey varies widely for a given color. Therefore, the color of transmitted symbols or lines cannot be interpreted from the shade of grey.

.5 Graphite (lead pencil). Pencil is undesirable because the width of the line varies as the point dulls, the opacity of the line varies with different hardnesses, and the lines have poor definition.

.6 Representation of Area Distribution.

(a) Area distribution by shading over plotted symbols with transparent adhesive overlays embossed with suitable linear designs is feasible when restricted to one layer only.

(b) When two overlays are used to denote special distribution of two different parameters or conditions over a given area (without plotted data symbols), the embossing designs must be such that the individual elements of the embossing lattice (dots, squares, circles, crosses) should be no closer than 1/4" on centers, and line widths of the designs that make up the lattice should be no less than 1/16" wide.

(c) Where such embossed areas contain plotted symbols, digits, etc., on the basic plot, the embossing must be cut over these symbols so that the basic plotted data will not be obscured.

(d) The best way to represent a plot of a number of different conditions in the same area is to inscribe the plotted lines by using wheels whose peripheries are embossed to give lines of dots, dashes, triangles, squares, dots and dashes, and other combinations as required.

.7 Orientation of Plotted Lines Relative to Direction of Scan. In general, printed text and symbols should be plotted at an angle to the direction of scan in order to produce maximum scanning by the photo-electric cell.

14006. DRUM LOADING

.1 When only one picture is to be transmitted it shall be mounted on the transmitting drum in position A. Position A is defined as the trailing edge of the clamp bar. When two pictures are to be transmitted, picture and drum size permitting, one shall be mounted in position A and the other in position B. Position B is defined as the leading edge of the clamp bar. Pictures are to be mounted lengthwise against the "sync" ring so that the scanning eye scans both pictures during each revolution of the drum and the total transmission time will be kept to a minimum.

14007. FACSIMILE BROADCASTS

.1 It is necessary that all stations conducting scheduled transmissions commence their transmission on time. Each station prior to commencing a schedule normally shall make a preliminary series of test calls, each consisting of a series of Vs followed by the prosign DE and its own call sign and, when employed, letter designation, made three times, for at least five minutes before each schedule time.

14007.1 (Continu d)

EXAMPLE: VVV VVV VVV DE NSS NSS NSS WP WP WP

After the above has been transmitted, and at least two minutes before schedule time, the synchronous signal is transmitted to permit receiving stations to synchronize their receiving equipment with the transmitting station.

14008. FACSIMILE FORMAT

.1 Material transmitted by facsimile will be prepared in accordance with basic format outlined herein.

.2 Each piece of facsimile material shall contain an identification block not larger than 4 1/2" by 2 1/2". Characters in the block shall be telegraphic typewriter characters, jumbo typewriter characters, if available, or hand lettering at least 3/16" high. Intelligence in the block shall be parallel to the length of the material.

.3 The block shall contain the standard message heading format, modified as indicated below, plus other lines as may be necessary:

ELEMENT	LINE NUMBERS	EXPLANATION
WP NR 115 NM 101515Z	3 and 5	Station or broadcast identifying letters, station serial number, precedence prosign and date-time group.
FM NSS	6	Prosign FM; originators designation.
TO PKWN	7	Prosign TO; action address designation.
INFO NERK	8	Prosign INFO; information address designation.
XMT SPRX	9	Prosign XMT; exempted address designation.

NOTE: The prosign F is not used in the transmission instructions.

.4 The identification block shall be placed in the lower left corner of the material. Care must be exercised in order not to obscure data on the material. Further, the block must not be too near the clamping bar in order to prevent obliteration of identification due to improper framing synchronization.

.5 Each piece of material transmitted by facsimile shall carry a station serial number. On the facsimile broadcast these numbers run consecutively for each calendar month, GMT. On the point-to-point and ship-to-shore facsimile circuits these numbers run daily. Where material is introduced into the Naval Communication System and is not processed by a Naval Communication Station, such as the direct retransmission of material from the National Facsimile Network, it will not carry a serial number. To provide continuity a transmitting station will transmit a daily recapitulation sheet when material has been transmitted without the station serial number. This sheet will contain a list of that day's transmissions showing the time of each transmission and the associated serial numbers.

14008. (Continued)

.6 Fleet Weather Centrals shall include the heading format specified above on facsimile weather maps prepared by them. Other originators of intelligence for transmission by facsimile shall deliver it to the cognizant naval communication center in a form suitable for transmission. The communication center will affix identification block, serial numbers, etc., prior to transmission.

.7 A standard message blank, as used by the originator of intelligence, or by the receiving activity, shall be attached to all material, other than weather maps for broadcast transmission, and contain information as to addressees, precedence, originator and releasing authority, in the same manner as message traffic is now prepared for transmission.