

Bell System

# TECHNICAL REFERENCE

BELL SYSTEM  
PRACTICES-TYPESETTING  
SPECIFICATION  
NOVEMBER 1975



## BELL SYSTEM PRACTICES TYPESETTING SPECIFICATION

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<b>1. GENERAL</b>	
<b>1.01</b> This section provides standard typesetting requirements for:	
(a) The Bell System Practices (BSPs) described in 1.04.	
(b) The addenda to Bell System Practices.	
(c) The appendixes to Bell System Practices.	
<b>1.02</b> Bell System Companies may order Technical References from the Indiana Publications Center of Western Electric	
<b>1.03</b> Non-Bell Companies should submit written requests for Technical References to: American Telephone and Telegraph Co. Information Distribution Center 195 Broadway Room 208 New York, N.Y. 10007	
<b>1.04</b> The three BSP formats covered in this section are:	
(a) A text format arranged in two 20-pica columns with a 2-pica space between the columns.	
(b) A tabular format arranged in two columns (STEP PROCEDURE) preceded by a text format arranged in one 42-pica column.	
(c) A tabular format arranged in three columns (STEP ACTION VERIFICATION) preceded by a text format arranged in two 20-pica columns.	
<b>1.05</b> The type faces specified in this section are considered to be typical. Since typesetters use hot-metal processes, strike-on processes, or	

phototypesetting processes, the particular name of each type face varies. However, the appearance of any type face used must be similar to that specified herein.

**1.06** A legible copy of the manuscript must be furnished to the typesetter. Manuscripts not covered by this specification must contain specific instructions from the originator for format, type size, and style. The typesetter may deviate from the manuscript to correct obvious inconsistencies, errors, and/or omissions. The originator must be notified of any changes.

## **2. TWO-COLUMN FORMAT**

**2.01** This format is arranged in two 20-pica columns, each column left and right justified, with a 2-pica space between columns. The overall typesetting area on a page is 42 picas wide by 60 picas high. See Fig. 1.

**2.02** Information pertaining to illustrations and tabular material is covered in Part 5 of this section; page numbering is covered in Part 6; and revision arrows are covered in Part 7.

### **PAGE LAYOUT**

#### **A. First Page**

##### **Page Heading**

**2.03** The heading is typeset in 10-point Futura Demi Bold uppercase and lowercase characters and is divided into two blocks as shown in Fig. 1. The left block is justified at the left margin of the page; the right block is justified at the right margin of the page.

##### **BSP Title**

**2.04** There are 2 picas of space between the page heading and the first line of the title. See Fig. 1.

**2.05** The title is typeset in 14-point Futura Demi Bold uppercase characters. Each line is centered horizontally and there is 1 pica of space between lines. See Fig. 1.

##### **Footing**

**2.06** The term Page 1 is typeset in 10-point Futura Demi Bold initial capitals, is placed

60 picas below the top of the page heading, and is justified at the right margin of the page. See Fig. 1.

**Note:** If Page 1 is the only page, the rules in 2.14 for placement of the page number on the last page will apply.

**2.07** The statement Printed in U. S. A. is placed on the same line as the page number, is centered horizontally, and is typeset in 8-point Bookman uppercase and lowercase characters. See Fig. 1.

**2.08** The legend (copyright or restricted use notice) is typeset 28 picas wide in 8-point Bookman and is centered horizontally. There is 1 pica of space between the legend and the Printed in U.S.A. statement. See Fig. 1.

### **Table of Contents**

**2.09** The table of contents is typeset in 10-point Futura Demi Bold. A typical arrangement is shown in Fig. 1. There are 2 picas of space between the last line of the title and the uppercase words CONTENTS and PAGE. The layout is as follows.

(a) The word CONTENTS is placed 8 picas from the left margin of the column. The word PAGE is placed on the same line, justified at the right margin of the column. See Fig. 2.

(b) There is 1 pica of space between the word CONTENTS and the first table entry and between all subsequent table entries. See Fig. 2. When an entry requires multiple lines, the subsequent lines are blocked under the first word of the first line and are single spaced. See Fig. 3.

(c) Part numbers 1 through 9 are indented 1/2 pica from the left margin of the column. Part numbers 10 and higher are justified at the left margin of the column. Each part heading begins 1 pica from the period following the part number and is typeset in uppercase characters. See Fig. 2.

(d) Subpart headings and letter designators for major headings are blocked under the first word of the part heading. Minor headings are blocked under the first word of the major

heading. The subpart headings and the letter designators for major headings are typeset in uppercase characters. Major and minor headings are typeset in initial capitals. See Fig. 2.

(e) When the table of contents contains a list of figures and/or tables, the list of figures will precede the list of tables. The word Figures (or Tables) is typeset in initial capitals, is placed 2 picas below the preceding entry, and is justified at the left margin of the column. The figure (or table) designator is indented 1/2 pica from the left margin of the column. The figure title (or table title when used) begins 1 pica from the period following the designator and is typeset in initial capitals. See Fig. 3.

(f) A leader (dotted line consisting of a dot and space in sequence) is used to carry the last word of an entry to the page number. All lines end 2 picas from the right margin of the column. The last digit of the page number is justified at the right margin of the column. See Fig. 2.

**Note:** If the table of contents continues to Page 2, the entries are placed at the top of the left column, following the same rules used on Page 1.

## B. Subsequent Pages

### Page Heading

**2.10** The heading on all subsequent pages is typeset in 10-point Futura Demi Bold uppercase characters.

**2.11 *Left-Hand Page:*** The left-hand page heading consists of the word SECTION and the section number and is justified at the left margin of the page. See Fig. 4.

**2.12 *Right-Hand Page:*** The right-hand page heading consists of the abbreviation ISS, the issue number, a comma, the uppercase word SECTION, and the section number. The heading is justified at the right margin of the page. See Fig. 4.

### Footing

**2.13** The word Page with its page number is typeset in 10-point Futura Demi Bold initial

capitals, is placed 60 picas below the top of the page heading, and is justified at the left margin of the left-hand page or the right margin of the right-hand page. See Fig. 4.

**2.14 *Last Page:*** The word Pages, preceded by the total number of pages in the section, is shown in the footing on the last page and is placed 60 picas below the page heading. The word Page, followed by the page number of the last page, is placed on the line above. See Fig. 5.

## TEXT ARRANGEMENT

### A. Column Layout

**2.15** Text material is set in an area 42 picas wide and 53 picas high on pages other than Page 1. On Page 1 the vertical dimension is determined by the page headings and footings and the BSP title.

**2.16 *First Page:*** There are 2 picas of space between the last line of the BSP title (or the last line in the table of contents) and the first text heading. See Fig. 1. There is a minimum of 2 picas of space between the last line of text and the first line of the legend.

**2.17 *Subsequent Pages:*** There are 2 picas of space between the page heading and the first line of text. There is a minimum of 3 picas of space between the last line of text and the footing. See Fig. 4.

**2.18** If the text height on a page is less than 53 picas, the two columns should be of equal length, if possible. Otherwise, the left column should be longer.

**2.19** The following rules apply when ending a column or beginning the subsequent column.

- (a) A column does not end with a heading.
- (b) A column does not end with a colon or hyphen.
- (c) A column does not end with the first line of a paragraph.
- (d) A column does not begin with the last line of a paragraph.

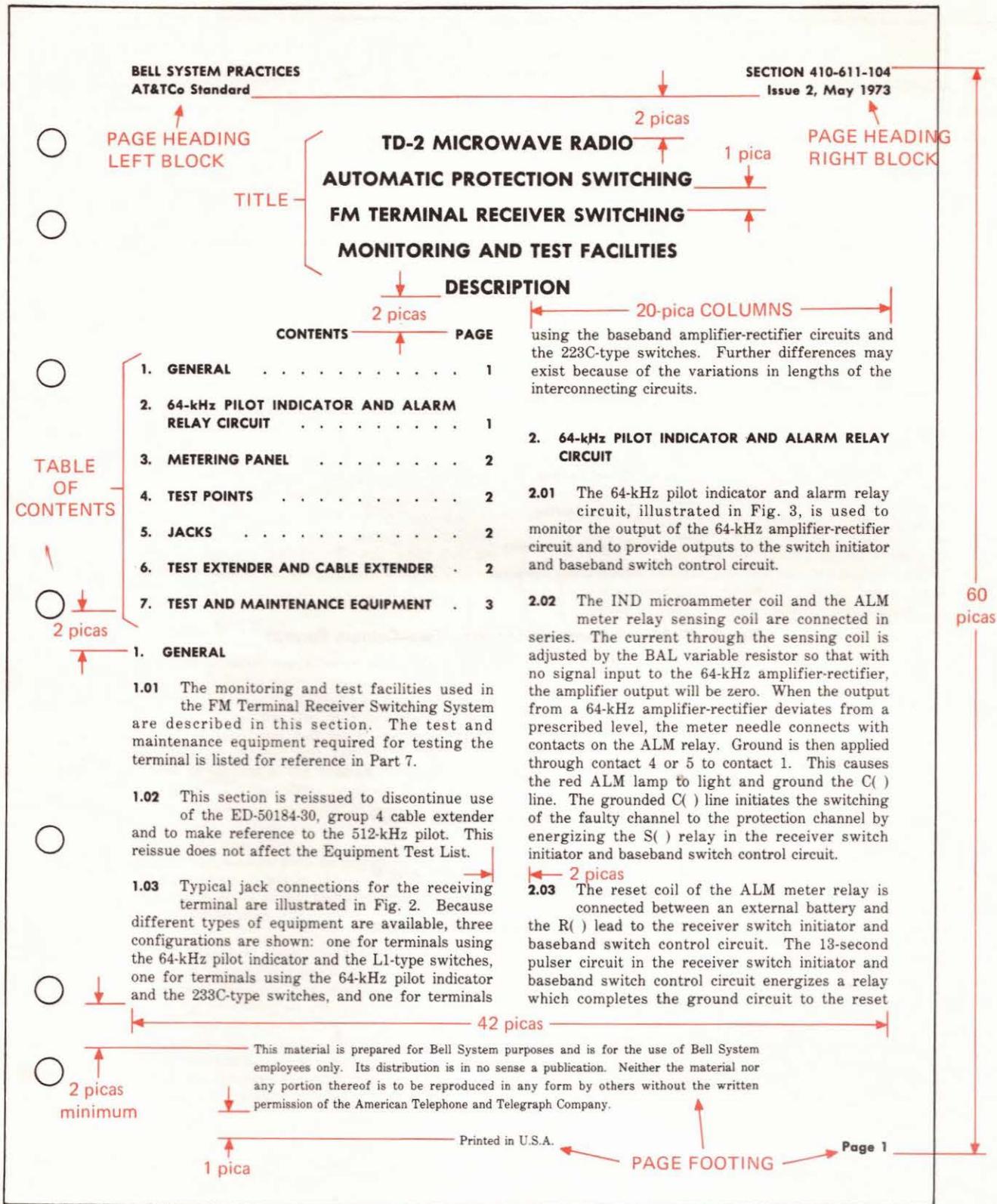


Fig. 1—First Page Layout—Two-Column Format

		CONTENTS	PAGE
	1.	GENERAL	2
	2.	SEMICONDUCTORS . . . . .	2
		HANDLING . . . . .	2
		A. Unpacking . . . . .	2
		B. Storage . . . . .	2
		ASSEMBLY . . . . .	3
		A. Cutting Leads . . . . .	3
		B. Bending Leads . . . . .	3
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SUBPART HEADING		TESTING . . . . .	5
MAJOR HEADING		A. Circuit Testing . . . . .	5
MINOR HEADING		B. Device Testing . . . . .	6
		Diode Replacement . . . . .	6
		706A Diode Extractor . . . . .	7

Fig. 2—Table of Contents Layout—Two-Column Format

		CONTENTS	PAGE
	1.	J68402G TRANSMITTER-RECEIVER CIRCUIT . . . . .	1
	2.	J68404U RECEIVER MODULATOR AND IF PREAMPLIFIER . . . . .	5
	3.	J68404AE IF AMPLIFIER-DETECTOR AND BASEBAND AMPLIFIER . . . . .	12
		Figures	
	1.	Typical AGC Circuit . . . . .	3
	2.	Typical IF Amplifier Circuit . . . . .	7
		Tables	
	A.	Transmission Characteristics . . . . .	4
	B.	Wiring Data . . . . .	8

Fig. 3—Table of Contents With List of Figures and Tables—Two-Column Format

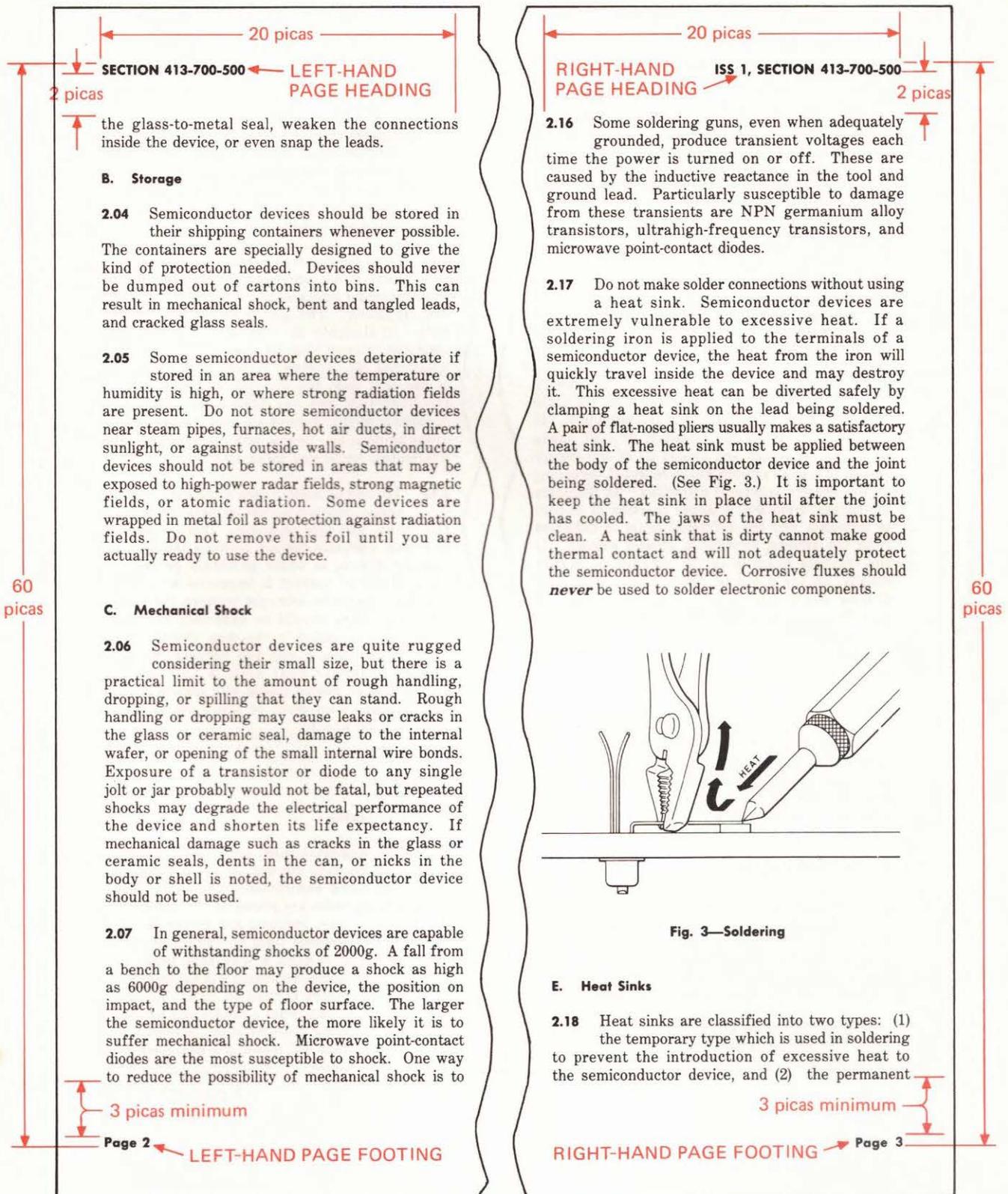


Fig. 4—Subsequent Pages Layout—Two-Column Format

discontinuity. Here, the discontinuity is a boundary between two air masses of different density. As each wavefront of the microwave beam crosses the boundary, the part that has entered the less dense air begins traveling slightly faster than the portion still in the more dense mass. When all of a wavefront has crossed the boundary, it is then traveling in a different direction, and thus has been refracted. If the air masses in the figure were interchanged, the beam would be bent in the opposite direction. This is a rather simplified explanation, based on Huygens' principle. It is given broader treatment in Section 940-310-105, and in many texts covering basic optics.

**2.08** Both the angle of deflection and the energy in the deflected beam depend upon the angle at which the beam approaches the boundary. If the beam encounters the boundary at a 90° angle, no refraction occurs and almost all of the energy crosses it; a small amount will be reflected, depending on the relative indices of refraction. As the angle is changed from 90°, a larger fraction of energy is reflected, and the refracted beam is deflected from the incident direction a greater amount. If the incident beam is in the medium of higher density, an angle will be reached, well short of a grazing angle, after which all of the energy will be reflected. This phenomenon does not exist for beams originating in the less dense medium; in this case, total reflection is only *approached* as the incident beam approaches a grazing angle.

**2.09** A microwave signal during propagation through the earth's atmosphere rarely encounters such well-defined boundaries as suggested by Fig. 6. Rather, the variations in density are more gradual, as in the case of humid air masses merging into dry ones, or cold ones into warm ones. In these cases, the bending is more gradual, forming curves instead of sharp angles.

#### B. Multipath Propagation

**2.10** Ordinarily the refractive index of the lower atmosphere has a constant vertical gradient; that is, it decreases with altitude in a rather constant manner. Sometimes, however, relatively abrupt changes in the gradient exist at random altitudes due to temperature inversions (the temperature begins increasing, rather than decreasing, with altitude), or to sharp changes in humidity. These discontinuities usually form horizontal layers, or strata, and cause part of the transmitted beam

3 picas minimum

Page 38  
38 Pages

type which is installed with the device to improve the dissipation of heat generated within the device itself. The latter can be either a radiator fin type which surrounds and is part of the device, or the external type which is mounted to the stud of the device during circuit assembly. The temporary type is discussed in 2.17.

**2.19** From the electrical standpoint, permanent-type heat sinks are used to reduce junction temperature for increased power dissipation capability and reliability. The ability of a semiconductor device to dissipate its rated power is dependent upon (1) internal thermal resistance of the device itself; and (2) external factors such as the size of the heat sink, the thermal resistance between the heat sink and the device, the amount of circulation of the ambient air, and the temperature of the ambient air. Device data sheets often contain information concerning these external factors.

**2.20** The bearing surface upon which a stud-mounted semiconductor device is installed must be flat, clean, and free of burrs. This is necessary to ensure adequate contact between the heat sink and the device, in order to obtain proper heat flow. Thermal contact is improved with a very thin film of silicone lubricant between the clamped surfaces. Care should be exercised to use the torque recommended in the data sheets. When electrical isolation is required between the device and an external heat sink, a thin mica or beryllium-oxide washer coated with silicone lubricant can be used. Care must be taken not to damage the insulation washer.

#### TESTING

##### A. Circuit Testing

**2.21** The long-established procedures for testing electron tube circuits do not directly apply to circuits using semiconductor devices. This is because strict limits are placed on the upper values of applied voltage, current, and power for these devices. Performance tests on completed circuits must be made in such a way that breakdown voltages and maximum currents will not be exceeded for even very short periods of time. Exceeding maximum limits may cause a sudden and permanent change of operating characteristics; or start a long, slow change which will result in a degraded circuit and eventual failure.

3 picas minimum

Page 7  
7 Pages

LEFT-HAND PAGE

RIGHT-HAND PAGE

Fig. 5—Page Footing for Last Page

## B. Text Headings

**2.20** There is 1 pica of space between text headings (except paragraph headings) and preceding and succeeding text. More space may be allowed when necessary to balance a page.

### Part Headings

**2.21** A part heading consists of an uppercase word(s) preceded by a number followed by a period. The number is justified at the left margin of the column and 1 pica of space separates the period from the heading. Subsequent lines are blocked under the first word of the heading. Part headings are typeset in 10-point Futura Demi Bold. See Fig. 6.

### Subpart Headings

**2.22** A subpart heading consists of an uppercase word(s), without a number or letter designator, justified at the left margin of the column. Subsequent lines are blocked under the first word of the heading. Subpart headings are typeset in 10-point Futura Demi Bold. See Fig. 6.

### Major Headings

**2.23** A major heading consists of the word(s) in initial capitals, preceded by an uppercase letter, followed by a period. The letter is justified at the left margin of the column and 1 pica of space separates the period from the heading. Subsequent lines are blocked under the first word of the heading. Major headings are typeset in 10-point Futura Demi Bold. See Fig. 6.

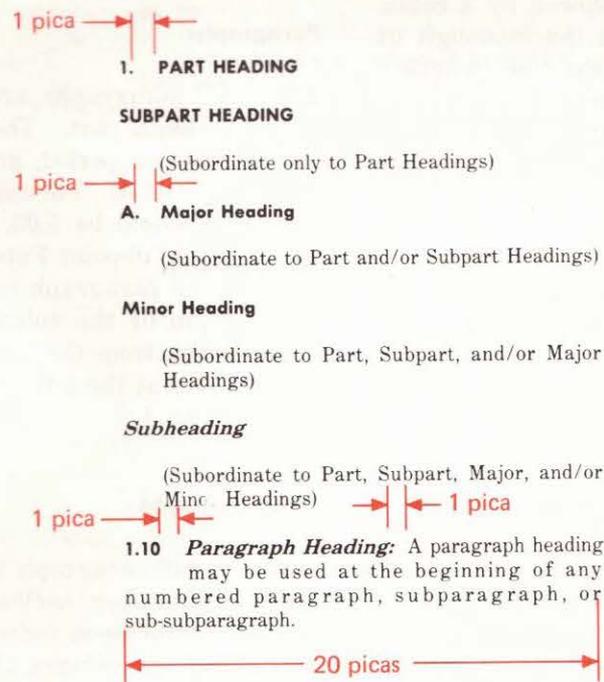


Fig. 6—Text Headings

## Minor Headings

**2.24** A minor heading consists of the word(s) in initial capitals, without a number or letter designator, justified at the left margin of the column. Subsequent lines are blocked under the first word of the heading. Minor headings are typeset in 10-point Futura Demi Bold. See Fig. 6.

## Subheadings

**2.25** A subheading consists of the word(s) in initial capitals justified at the left margin of the column. Subsequent lines are blocked under the first word of the heading. Subheadings are typeset in 10-point Century Bold Italic. See Fig. 6.

## Paragraph Headings

**2.26** A paragraph heading follows the paragraph number (covered in 2.32) and consists of the word(s) in initial capitals followed by a colon. The heading begins 1 pica from the last digit of the paragraph number. The next line (whether text or heading) is indented the same amount. Subsequent lines are justified at the left margin of the column. Text begins 1 pica after the colon. Paragraph headings are typeset in 10-point Century Bold Italic. See Fig. 6.

*Note:* Subparagraphs and sub-subparagraphs described in 2.33 and 2.34 may also use headings as described in 2.26.

## C. Text Style

**2.27** Text is typeset in 10-point Century Expanded, leaded 2 points (10 on 12). Words underscored by a straight line on the originator's manuscript are typeset in 10-point Century Bold Italic.

**2.28** Characters on a manuscript which can be misinterpreted, ie, capital letters Z, S, O, etc, and numbers 2, 5, 0, etc, will be clearly defined on the originator's manuscript. Conventional proofreader's marks are given in Table A at the end of this section.

**2.29** Fractions are made up of 10-point Century Expanded individual characters (eg, 1/4, 1/16, 3-1/3).

**2.30** An uppercase letter R enclosed in a circle, ie, ® is a special superscript character, is typeset in 8-point type, and is placed adjacent to the last letter of the affected word, aligned at the top. The originator's manuscript will indicate where this symbol is used.

## D. Text Elements

**2.31** All paragraphs, subparagraphs, sub-subparagraphs, listings, notes, cautions, and warnings are normally separated from each other and from other elements by 1 pica of space. More space may be allowed when necessary to balance a page.

## Paragraphs

**2.32** All paragraphs are numbered sequentially within a part. The number consists of the part number, a period, and a 2- or 3-digit number beginning with 01. For example, the third paragraph in Part 5 would be 5.03. The paragraph number is typeset in 10-point Futura Demi Bold. The first digit of the paragraph number is justified at the left margin of the column. The first two lines begin 1 pica from the last digit. Subsequent lines are justified at the left margin of the column. See Fig. 7, Sheet 1.

## Subparagraphs

**2.33** A subparagraph is designated by a letter or number enclosed in parentheses. The first parenthesis is indented 1 pica from the left margin of the column. The first two lines begin 1/2 pica from the last parenthesis. Subsequent lines are indented 1 pica from the left margin of the column. The letter or number designator is typeset in 10-point Century Expanded. See Fig. 7, Sheet 1.

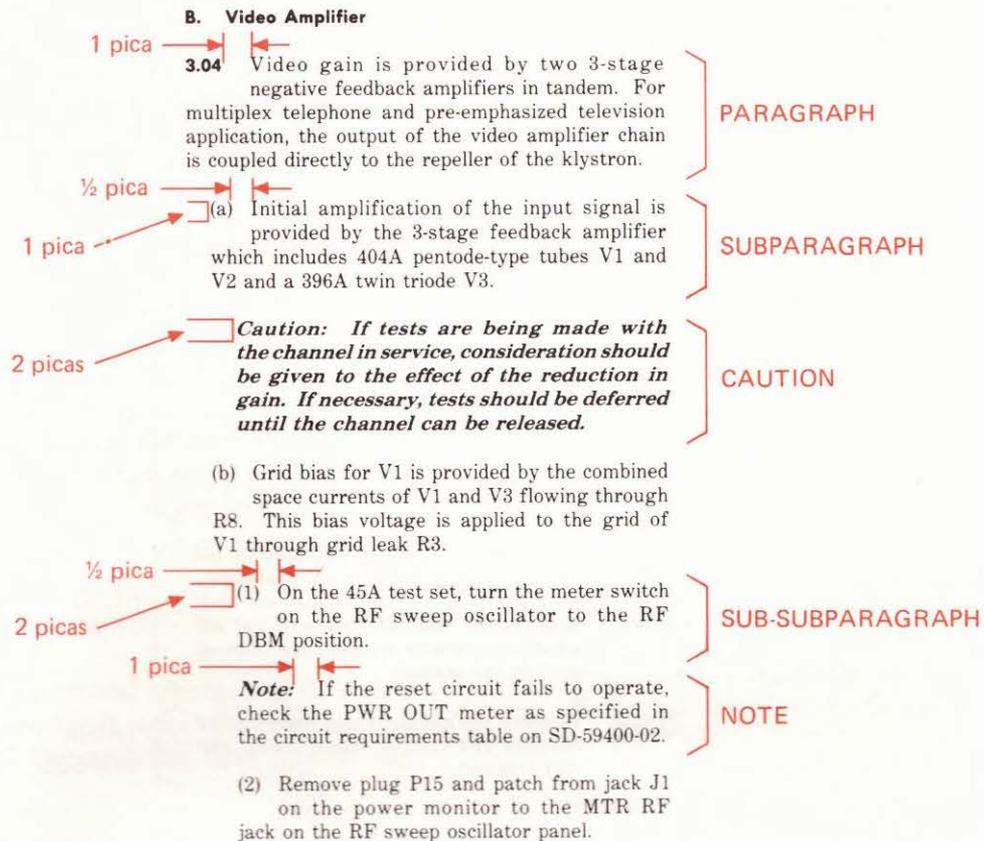


Fig. 7—Text Elements (Sheet 1 of 2)

**Sub-subparagraphs**

**2.34** A sub-subparagraph follows a subparagraph and is designated by a letter or number enclosed in parentheses. The first parenthesis is indented 2 picas from the left margin of the column. The first two lines begin 1/2 pica from the last parenthesis. Subsequent lines are indented 2 picas from the left margin of the column. The letter or number designator is typeset in 10-point Century Expanded. See Fig. 7, Sheet 1.

**Listing**

**2.35** A listing of items follows a paragraph, subparagraph, or sub-subparagraph and is

blocked 2 picas from the left margin of the column. There is 1 pica of space between items. See Fig. 7, Sheet 2.

*Note:* If letters or numbers are used as designators in a listing, the subparagraph (2.33) or sub-subparagraph (2.34) format is used rather than the block format specified in 2.35.

**Bullet**

**2.36** A bullet is a solid dot set in 10-point type, and indented 2 picas from the left margin of the column. The text is blocked 1/2 pica from the bullet. There is 1 pica of space between bullet items. See Fig. 7, Sheet 2.

### 3. OVERALL DESCRIPTION

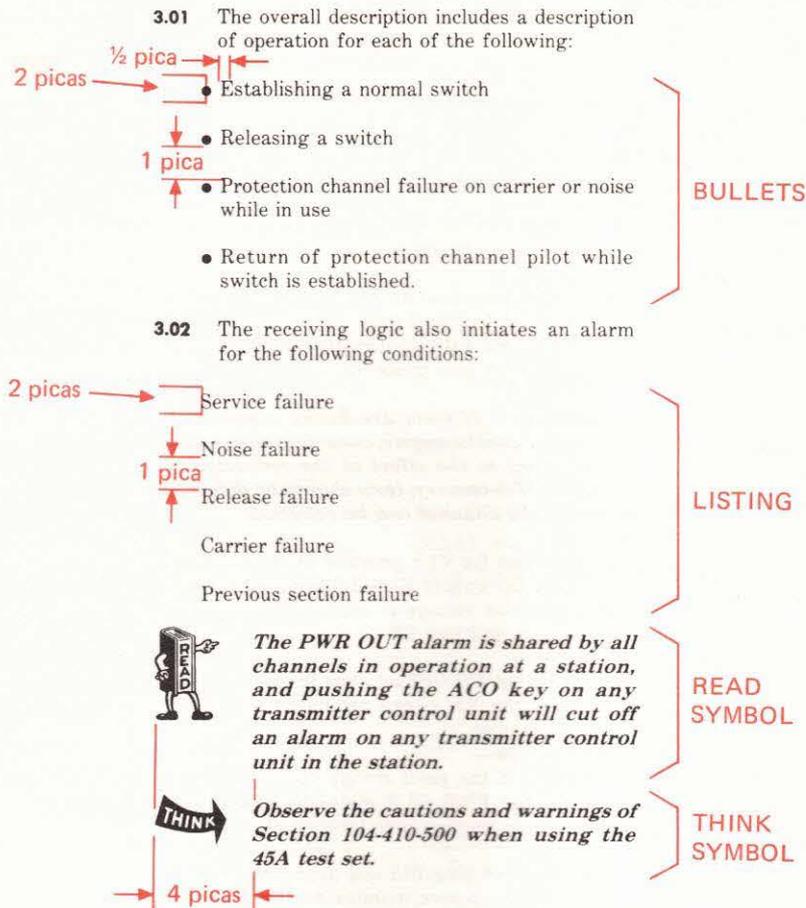


Fig. 7—Text Elements (Sheet 2 of 2)

#### Notes and Requirements

**2.37** A note (or requirement) is blocked 2 picas from the left margin of the column. The word Note (or Requirement), the number designator (when used), and a colon are typeset in 10-point Century Bold Italic initial capitals. The contents begin 1 pica from the colon. See Fig. 7, Sheet 1 for an example of a note.

#### Cautions and Warnings

**2.38** The arrangement of a caution (or warning) is the same as that used for a note except that the content as well as the word Caution (or Warning) is typeset in 10-point Century Bold Italic. See Fig. 7, Sheet 1 for an example of a caution.

#### Read and Think Symbols

**2.39** These symbols are justified at the left margin of the column and are located vertically so that the top of the symbol aligns with the top line of text as shown in Fig. 7, Sheet 2. The "Read" symbol is a 48-point character; the "Think" symbol is a 24-point character. Each line of text is indented 4 picas from the left margin of the column and is typeset in 10-point Century Bold Italic.

### 3. STEP PROCEDURE FORMAT

**3.01** This is a tabular format arranged in two columns, STEP and PROCEDURE. The text preceding the tabular format is arranged in a single column. The overall typesetting area on a page is 42 picas wide by 60 picas high. See Fig. 8 and 9.

**3.02** One-point horizontal dividing lines, 42 picas wide, are used to separate the various elements on a page as shown on the originator's manuscript. Vertical lines are not used. See Fig. 8 and 9.

**3.03** Information pertaining to illustrations and tabular material is covered in Part 5 of this section; page numbering is covered in Part 6; and revision arrows are covered in Part 7.

## **PAGE LAYOUT**

### **A. First Page**

#### **Page Heading**

**3.04** The heading is typeset and arranged as described in 2.03. There are 2 picas of space between the heading and the top horizontal line. See Fig. 8.

#### **BSP Title**

**3.05** The title is typeset and arranged as described in 2.05. There are 2 picas of space between the top horizontal line and the first line of the title. See Fig. 8.

**3.06** There are 2 picas of space between the last line of the title and the horizontal line below the title. See Fig. 8.

#### **Footing**

**3.07** The footing is typeset and arranged as described in 2.06 through 2.08. There is a minimum of 2 picas of space between the first line of the legend and the bottom horizontal line. See Fig. 8.

### **B. Subsequent Pages**

#### **Page Heading**

**3.08** The heading is typeset and arranged as described in 2.10 through 2.12. There are 2 picas of space between the heading and the top horizontal line. See Fig. 9 for a left-hand page example.

#### **Footing**

**3.09** The footing is typeset and arranged as described in 2.13 and 2.14. There is a minimum of 3 picas of space between the page number and the bottom horizontal line. See Fig. 9 for a left-hand page example.

## **TEXT ARRANGEMENT**

**3.10** All other horizontal lines shown on the originator's manuscript are separated from preceding and succeeding text by 1 pica of space.

**3.11** Words underscored by a straight line on the originator's manuscript are typeset in 10-point Century Bold Italic.

**3.12** Characters on a manuscript which can be misinterpreted, ie, capital letters Z, S, O, etc, and numbers 2, 5, 0, etc, will be clearly defined on the originator's manuscript. Conventional proofreader's marks are given in Table A at the end of this section.

**3.13** Fractions are made up of 10-point Century Expanded individual characters (eg, 1/4, 1/16, 3-1/2).

**3.14** The following rules apply when ending a column or page or beginning the subsequent column or page.

- (a) A column or page does not end with a heading.
- (b) A column or page does not end with a colon or hyphen.
- (c) A column or page does not end with the first line of a paragraph or the first line of a step.
- (d) A column or page does not begin with the last line of a paragraph or the last line of a step.

**3.15** An uppercase letter R enclosed in a circle, ie, ® is a special superscript character, is typeset in 8-point type, and is placed adjacent to the last letter of the affected word, aligned at the top. The originator's manuscript will indicate where this symbol is used.

## A. Single-Column Text

**3.16** Text headings are typeset as described in 2.20 through 2.26 and are indented 1 pica from the left margin. There is 1 pica of space before and after headings.

**3.17** Text is typeset in 10-point Century Expanded, leaded 2 points (10 on 12), is justified left and right, and is indented 1 pica from each margin. There is 1 pica of space between paragraphs. See Fig. 8.

**3.18** A note (or requirement) is blocked 1 pica from each margin and is separated from the text by a minimum of 1 pica of space. The word Note (or Requirement), the number designator (when used), and a colon are typeset in 10-point Century Bold Italic initial capitals. The contents begin 1 pica from the colon.

**3.19** The arrangement of a caution (or warning) is the same as that used for a note except that the content as well as the word Caution (or Warning) is typeset in 10-point Century Bold Italic. See Fig. 8 for an example of a warning.

## B. Table of Contents

**3.20** The uppercase headings CHART and PAGE are typeset in 10-point Futura Demi Bold and are indented 1 pica from each margin. See Fig. 8.

**3.21** Chart numbers 1 through 9 are indented 2 picas from the left margin; numbers 10 and above are indented 1-1/2 picas. See Fig. 8.

**3.22** All chart numbers and titles are typeset in 10-point Century Expanded, each word initial capitals, with carryover lines blocked under the first word of the title. There is 1 pica of space between entries. See Fig. 8.

**3.23** A leader (dotted line consisting of a dot and space in sequence) is used to carry the last word of the title to the page number. All lines end 3-1/2 picas from the right margin. Page numbers are typeset in 10-point Futura Demi Bold and are indented 1 pica from the right margin. See Fig. 8.

## C. Chart Titles

**3.24** The word CHART, the chart number, and the chart title are typeset in 10-point Futura Demi Bold uppercase characters. The word CHART and the number are centered horizontally on the first line. There is 1 pica of space before the first line of the title. All lines of the title are centered horizontally, are single spaced, and do not exceed 36 picas in width.

**3.25** On continued pages of a chart, the abbreviation (Cont), typeset in 10-point Futura Demi Bold, initial capitals, is added on the first line following the word CHART and the number. The line is centered horizontally. The title is not repeated. See Fig. 9.

## D. Apparatus List

**3.26** The uppercase word APPARATUS, followed by a colon, is typeset in 10-point Futura Demi Bold and is indented 1 pica from the left margin. The entries are typeset in 10-point Century Expanded and are indented 2 picas from the left margin. There is 1 pica of space between entries. See Fig. 8.

## E. STEP and PROCEDURE Columns

**3.27** The uppercase column headings STEP and PROCEDURE are typeset in 10-point Futura Demi Bold and are placed on the same horizontal line. The headings STEP and PROCEDURE are indented 1 pica and 20-1/2 picas, respectively, from the left margin. See Fig. 9. The column headings appear on all pages of a chart.

**3.28** Text headings are typeset as described in 2.20 through 2.26. Headings are indented 5 picas from the left margin and extend across the 36-pica PROCEDURE column. Subsequent lines are blocked under the first word and 1 pica of space precedes and follows a heading. See Fig. 9.

**3.29** The entries under the STEP and PROCEDURE columns are typeset in 10-point Century Expanded, leaded 2 points (10 on 12). The first digit of all step numbers is indented 1-1/2 picas from the left margin. The text is indented 5 picas

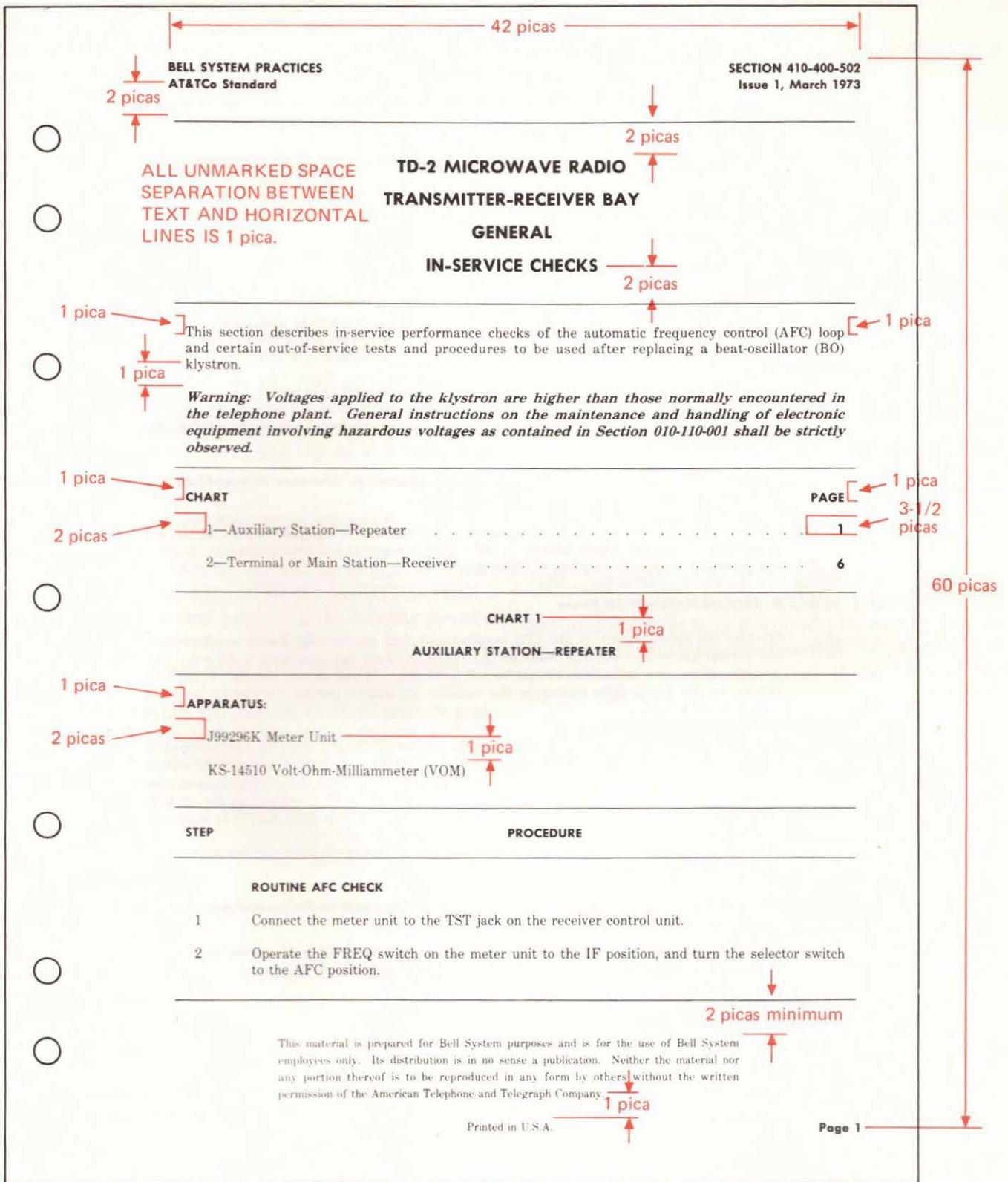


Fig. 8—Typical First Page Layout—STEP PROCEDURE Format

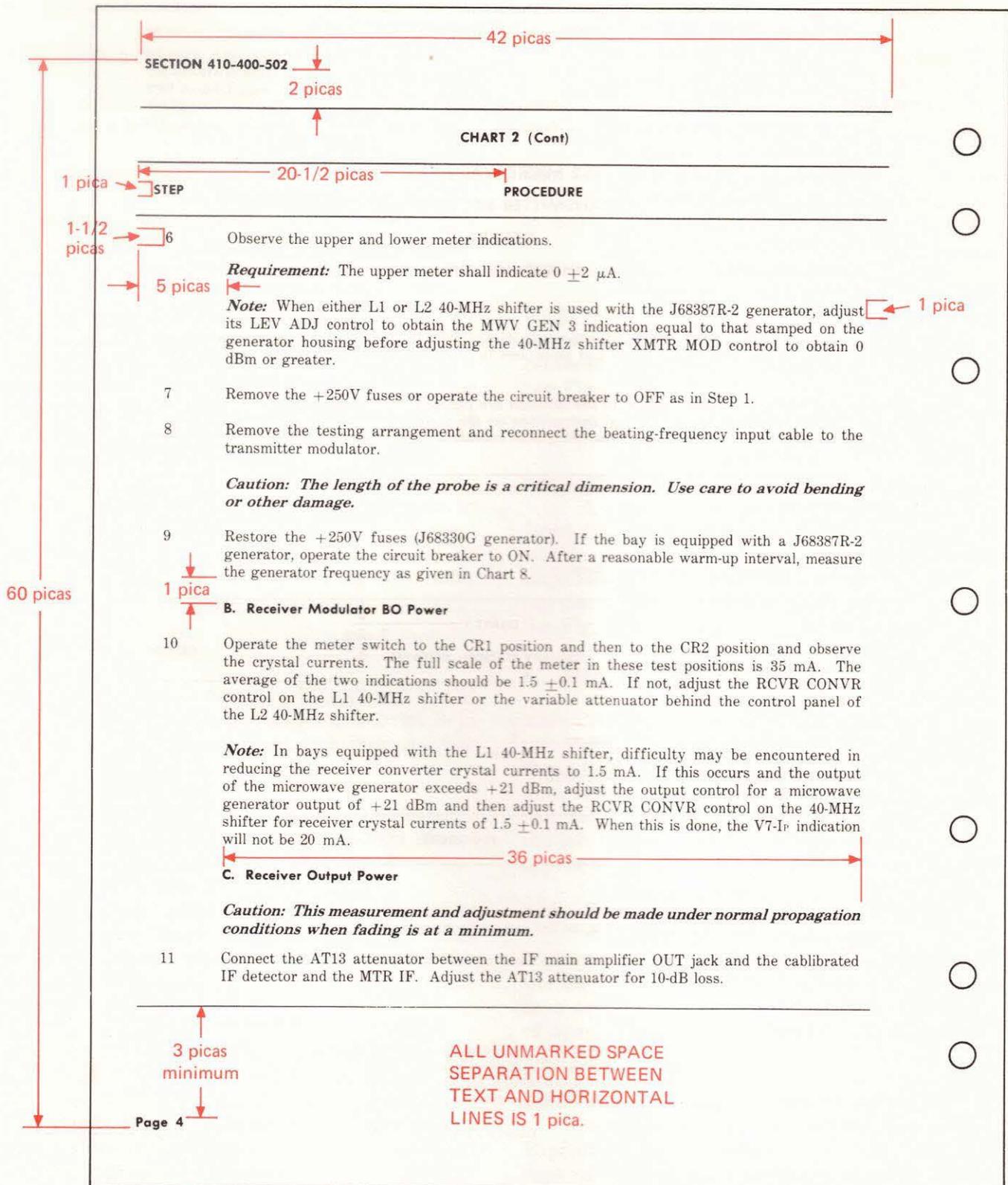


Fig. 9—STEP PROCEDURE Columns

from the left margin, and 1 pica from the right margin, and is left and right justified within the 36-pica PROCEDURE column. The step number and the first line of text are on the same horizontal line. There is 1 pica of space between entries in the PROCEDURE column. See Fig. 9.

**3.30** Notes, requirements, cautions, and warnings are typeset as described in 3.18 and 3.19. Notes, requirements, cautions, and warnings are indented 5 picas from the left margin and 1 pica from the right margin and are left and right justified within the 36-pica PROCEDURE column. See Fig. 9.

**3.31** If there are 18 picas of vertical space or less on a page at the end of a chart and more than 18 picas is required for the following chart, the remainder of the page is left blank. The next chart begins at the top of the following page.

#### **4. STEP ACTION VERIFICATION FORMAT**

**4.01** This is a tabular format arranged in three columns, STEP, ACTION, VERIFICATION. See Fig. 10. The text preceding the tabular format is arranged in two columns. The overall typesetting area on a page is 42 picas wide by 60 picas high.

**4.02** Information pertaining to illustrations and tabular material is covered in Part 5 of this section; page numbering is covered in Part 6; and revision arrows are covered in Part 7.

#### **PAGE LAYOUT**

##### **A. First Page**

##### **Page Heading**

**4.03** The heading is typeset and arranged as described in 2.03.

##### **BSP Title**

**4.04** The title is typeset and arranged as described in 2.04 and 2.05.

##### **Footing**

**4.05** The footing is typeset and arranged as described in 2.06 through 2.08.

#### **Table of Contents**

**4.06** The table of contents is typeset and arranged as described in 2.09.

#### **B. Subsequent Pages**

##### **Page Heading**

**4.07** The heading is typeset and arranged as described in 2.10 through 2.12.

##### **Footing**

**4.08** The footing is typeset and arranged as described in 2.13 and 2.14.

#### **TEXT ARRANGEMENT**

**4.09** Words underscored by a straight line on the originator's manuscript are typeset in 10-point Century Bold Italic.

**4.10** Characters on a manuscript which can be misinterpreted, ie, capital letters Z, S, O, etc, and numbers 2, 5, 0, etc, will be clearly defined on the originator's manuscript. Conventional proofreader's marks are given in Table A at the end of this section.

**4.11** Fractions are made up of 10-point Century Expanded individual characters (eg, 1/4, 1/16, 3-1/2).

**4.12** The following rules apply when ending a column or page or beginning the subsequent column or page.

(a) A column or page does not end with a heading.

(b) A column or page does not end with a colon or hyphen.

(c) A column or page does not end with the first line of a paragraph or the first line of a step.

(d) A column or page does not begin with the last line of a paragraph, or last line of a step.

**4.13** An uppercase letter R enclosed in a circle, ie, ® is a special superscript character and is typeset in 8-point type. The symbol is placed adjacent to the last letter of the affected word, aligned at the top. The originator's manuscript will indicate where this symbol is placed.

#### **A. Two-Column Text**

**4.14** Text headings are typeset and arranged as described in 2.20 through 2.26.

**4.15** Text is typeset in 10-point Century Expanded leaded 2 points (10 on 12) and is arranged as described in 2.15 through 2.18.

**4.16** Paragraphs, subparagraphs, sub-subparagraphs, listings, bullets, notes, requirements, cautions, warnings, and read and think symbols are typeset and arranged as described in 2.31 through 2.39.

**4.17** *Listing of Tests:* A list of tests is arranged as described below and as illustrated in Fig. 11.

(a) When page numbers are shown, the layout in Fig. 11(a) is used. The uppercase word PAGE and the page numbers are typeset in 10-point Futura Demi Bold and are justified at the right margin.

(b) When page numbers are not shown, the layout in Fig. 11(b) is used.

(c) Test designators A, B, C, etc, which precede the test title, and the test title are typeset in 10-point Century Bold Italic. Each test designator is indented 1 pica from the left margin of the column.

(d) There is 1 pica of space between the period following the test designator and the first word of the title. The second line, either title continuation or text, is blocked under the first line. Subsequent lines are indented 1 pica from the left margin of the column. There is 1 pica of space between each test listing.

#### **B. STEP ACTION VERIFICATION Columns**

**4.18** There are 2 picas of space between the page heading and the column headings. There is

a minimum of 3 picas of space between the last line of text and the footing. See Fig. 10.

**4.19** The uppercase column headings STEP, ACTION, and VERIFICATION are typeset in 10-point Futura Demi Bold. The first heading, STEP, is justified at the left margin. The second and third headings, ACTION and VERIFICATION, are indented 11 picas and 30 picas, respectively, from the left margin. These headings precede any STEP ACTION VERIFICATION type information. See Fig. 10. Double-column tables or illustrations which are placed at the top of a page are not preceded by the headings STEP ACTION VERIFICATION. These headings will follow the table or illustration prior to the step information.

**4.20** Text headings are typeset as described in 2.20 through 2.25. The headings are typeset 20 picas wide and are justified at the left margin. Subsequent lines are blocked under the first word and 1 pica of space precedes and follows a heading.

**4.21** The entries under the STEP ACTION VERIFICATION columns are typeset in 10-point Century Expanded, leaded 2 points (10 on 12).

**4.22** The first digit of all step numbers is indented 1/2 pica from the left margin of the page. See Fig. 10.

**4.23** Entries in the ACTION column are typeset 18 picas wide, left and right justified, and are indented 4 picas from the left margin. See Fig. 10.

**4.24** Entries in the VERIFICATION column are typeset 18 picas wide, left and right justified, and are indented 24 picas from the left margin. See Fig. 10.

**4.25** The step number, the first line of the ACTION column, and the first line of the VERIFICATION column are on the same horizontal line across the page. There is 1 pica of space between the last line of a step and the following information.

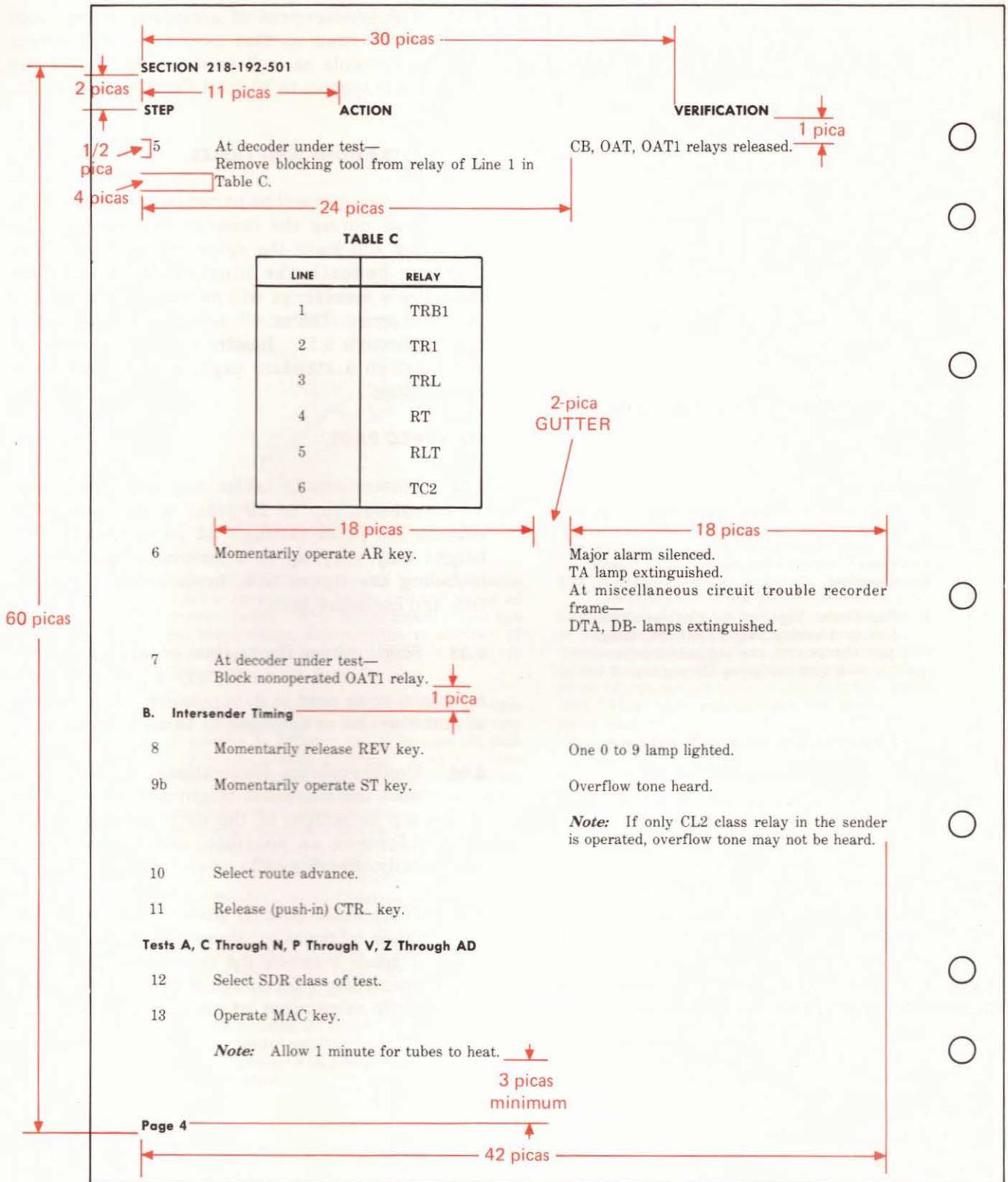


Fig. 10—STEP ACTION VERIFICATION Columns



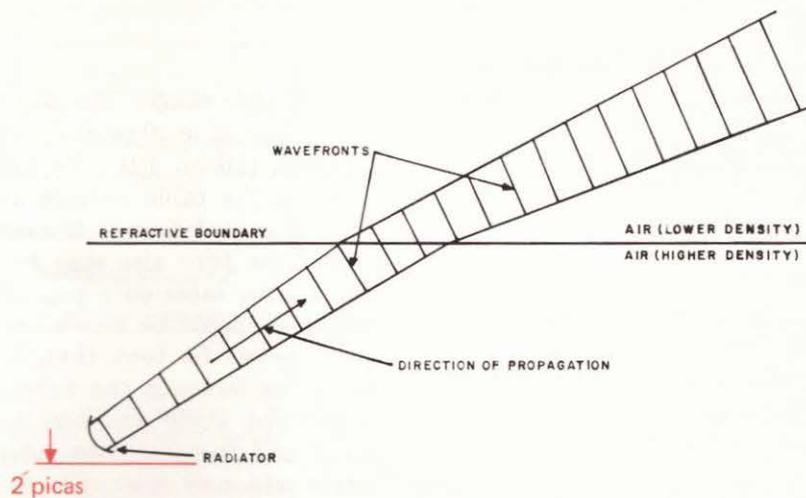


Fig. 6—Refraction of a Microwave Beam Upon Crossing an Atmospheric Discontinuity

in Fig. 7. It is this propagation by multiple paths which is considered to be the principal source of selective fading. With typical repeater spacings and beam widths, discontinuities at altitudes of more than a mile can be involved in multipath propagation.

**2.11** The components of a transmitted beam propagating over these multiple paths may be received in different phases because the path lengths are usually different. They can have different amplitudes, too, according to the effects of absorption and scattering, and to the refraction efficiencies of the discontinuities. At the receiver, these components will add vectorially; and thus the normal signal level will be reduced or enhanced, depending on this vector sum.

**2.12** Consider a 6-GHz signal reaching the receiver by the direct (line-of-sight) path and one of the additional paths in Fig. 7. Since one wavelength at 6 GHz is about 2 inches, a difference in path length of merely 1 inch (or an odd multiple thereof) will cause the two components to be completely out of phase at the receiver. There they will tend to cancel, reducing the signal to a level determined by their relative amplitudes. Such a 2-component signal will produce a very deep fade if the amplitudes are nearly equal.

**2.13** Consider next an additional signal at a frequency only a few percent different (e.g., another channel in the 6-GHz band), but propagated at the same time and over the same two paths. Because this second signal has a different wavelength, its two components will probably not have the same phase relationship as those of the first (i.e., not 180°). They might actually reach the receiver in phase, thus enhancing the signal, while the first signal is reduced. This combination of wavelength and path-length differences is the primary reason for the frequency-selective characteristic of multipath fading.

**2.14** Consider further an additional receiver and antenna for the signal of the first example, except at a different location. Depending on the direction and distance of separation, the difference in path lengths to the second receiver would probably be different from that to the first. Therefore, the resultant signal levels would similarly be different at the two receivers. Thus, the fading produced by multipath propagation is spatially selective.

**2.15** In practice, the relationships are less simple than these examples, and often many more than two signal paths are involved. Also, the multipath conditions are variable with the seasons,

Fig. 12—Example of Illustration Placed on Page With Text

**5.06** If a table is placed on a page with other information, there is a minimum of 2 picas of space between the table designator and the preceding information or between the bottom enclosure line of the table and the subsequent information. See Fig. 13.

**5.07** Full page illustrations or tables normally are placed on the next page following the first reference.

#### **A. Two-Column Format**

##### **Illustration Title**

**5.08** Titles for single-column illustrations do not exceed 20 picas in width. Titles for double-column illustrations generally are typeset 30 picas in width. Exceptionally long titles may be typeset 42 picas wide or in two lines.

**5.09** The figure number and title are centered horizontally below the illustration area leaving 2 picas of space between the lowest part of the illustration area and the title.

**5.10** Illustrations are arranged in numerical sequence by figure number. The abbreviation Fig., the number, a dash (—), and the title are typeset in 10-point Futura Demi Bold initial capitals. Subsequent lines are blocked under the first word.

##### **Tables**

**5.11** Tables are designated with alpha characters and are arranged in alphabetical sequence. The word TABLE, the table designator, and the title (if used) are typeset uppercase in 10-point Futura Demi Bold and placed above the table. The word TABLE and the designator are centered horizontally on the first line. There is 1 pica of space between the word TABLE and the first line of the table title, if used. If there is no title, there is 1 pica of space between the word TABLE and the boxhead enclosure line. All lines of the title are centered horizontally and do not exceed the width of the table. There is 1 pica of space between the word TABLE or the last line of the title and the boxhead enclosure line. See Fig. 13.

**5.12 Column Headings:** Column headings are typeset uppercase in 8-point Futura Demi Bold and are centered over each column. There is 1 pica of space between column headings and the horizontal enclosure lines. See Fig. 13.

**5.13 Table Body:** The table entries are normally typeset in 10-point Century Expanded, leaded 2 points (10 on 12). There is 1 pica of space between the table entries and before and after the horizontal lines. If necessary, the spacing and/or the type size may be reduced to properly position the table on a page. However, a reduced type size should be avoided whenever possible and shall never be less than 8 point. Notes and footnotes beneath the tables are typeset in the same type style and size as the table entries. Notes and footnotes are indented 1 pica from the left enclosure line. There is 1 pica of space between the bottom enclosure line and the first entry and between each subsequent entry. The originator's manuscript indicates the layout, indentions, and horizontal lines required for each table.

**5.14 Continued Tables:** When a table is continued on a subsequent page, the word TABLE and the designator, the table title, and the column headings are repeated. The abbreviation (Cont) follows the table designator and is typeset in 10-point Futura Demi Bold initial capitals. When a table must be continued, the entries should be separated at a point that would provide the least disruption to the information continuity.

**5.15 Horizontal and Vertical Lines:** Horizontal lines are inserted by the typesetter. Vertical lines are drawn on the reproducible copy during the composition process. Unless otherwise noted on the originator's manuscript, outside enclosure lines and enclosure lines for the column headings are 1 point; internal lines which separate table entries or which subdivide column headings are hairlines.

1 pica

TABLE B

1 pica

STATION ALARM CONNECTIONS

HAIRLINES

STATION OR OFFICE ALARM CKT	FM TERM. RCVR PROT SW SYS LEADS			
	1	2	3	4
CONNECT TO LEADS				
Audible Alarm Circuit SD-90614-01	MJ	R	MN	G
Audible Alarm Circuit SD-96188-01	DL	R	F	G
Distribution Alarm Circuit SD-56230-01	DF	—	F	—

1-point LINES

1-point LINES

2 picas

1-point LINE

HAIRLINE

↑ for a channel switch and 25 seconds by the reject alarm delay circuit for an automatic channel lockout. When the SX2(10), DEL 1(10), or DEL 2(1) contact closes, relay MN1 operates. When relay MN1 operates, ground is applied through contact MN1(3) to lead LA2 to light the optional minor fail alarm lamp and through contacts MN1(2), MN1(4), and MN1(5) to leads A, 3, and 4, respectively, to operate the station alarms.

**4.03** Operation of relay MN1 also enables relay MN2 with contact MN1(1). Operation of the ACO key applies ground through contact MN1(1) to operate relay MN2. When relay MN2 operates, its MN2(8) break contact opens, releasing relay MN1, and its MN2(8) make contact closes, holding relay MN2 operated. When relay MN1 releases, the station audible and visual alarms are removed by the opening of contacts MN1(2), MN1(4), and MN1(5). The minor fail alarm lamp remains lighted since ground is maintained on lead LA2 through the closed MN2(9) contact. Relay MN2 remains operated as long as the alarm condition continues and the SX2(10), DEL 1(10), or DEL 2 (1) contact remains closed.

**4.04** When the alarm condition ceases, the SX2(10), DEL 1(10), or DEL 2(1) contact is open and relay MN2 releases. When relay MN2 releases, its contacts return to their normal state and the minor fail alarm lamp is extinguished.

#### Minor Alarm Circuit in Receiver Switch Initiator and Baseband Switching Control Circuit

**4.05** A schematic diagram of the minor alarm circuit in the receiver switch initiator and baseband switching control circuit is shown in Fig. 3. This minor alarm circuit consists of relays A and A1 and their associated contacts and is activated by a channel failure through the SX(11) contact or one of the SA(11) through SE(11) contacts. When a channel fails, one of these contacts closes and applies ground to lead A and through the A1(8) break contact, operating relay A. When relay A operates, ground is applied through contacts A(1) and A(2) to leads 3 and 4 to operate the station alarm circuits.

**4.06** Operation of relay A also enables relay A1 with contact A(3). Operation of the ACO key applies ground through contact A(3) to operate relay A1. Operation of relay A1 closes contact A1(9) and applies -24 volts to lead LP to light the ACO lamp. Lighting of the ACO lamp indicates that an alarm condition exists and the ACO key has been operated. When relay A1 operates, its A1(8) break contact opens, releasing relay A, and its A1(8) make contact closes, holding relay A2 operated. When relay A releases, the station audible or visual alarms are removed by the opening of contacts A(1) and A(2). Relay A1 remains operated as long as the alarm condition continues and one of the SX(11) or SA(11) through SE(11) contacts remains closed.

Fig. 13—Example of Table Placed on Page With Text

## B. STEP PROCEDURE Format

**5.16** In the STEP PROCEDURE format, illustrations or tables are arranged and typeset as described in 5.01 through 5.15. Illustrations or tables associated with STEP PROCEDURE charts are placed either at the top or bottom of a page or at the end of the chart in which the reference first appears. A horizontal dividing line extends the full width of the page separating the chart from the illustration or table. Illustrations or tables which are 36 picas wide or less are placed within the PROCEDURE column without the horizontal dividing line.

## C. STEP ACTION VERIFICATION Format

**5.17** In the STEP ACTION VERIFICATION format, illustrations or tables are arranged and typeset as described in 5.01 through 5.15. Illustrations or tables associated with material within the STEP ACTION VERIFICATION columns which are greater than 18 picas wide are placed either at the top or bottom of a page or at the end of the material in which the reference first appears. Illustrations or tables which are 18 picas wide or less are placed within the ACTION or VERIFICATION column, whichever is applicable.

## TURN PAGE

**5.18** Illustrations or tables too wide for a standard page but not exceeding 53 picas wide may be placed lengthwise on a page (turn page). See Fig. 14. The typesetting requirements for type styles and sizes are the same as for a standard page. The rules for placement, spacing, etc, are as follows.

- (a) The printing area, excluding heading and footing, is 53 picas wide by 42 picas high. The top of the printing area on a right-hand page is at the binding edge. The bottom of the printing area on a left-hand page is at the binding edge. Material that is less than 42 picas in height should be centered in the printing area.
- (b) The figure title will be placed lengthwise beneath the illustration and will not exceed 50 picas.
- (c) There will be no text printed on a turn page.

## FOLDOUT PAGE

**5.19** Illustrations or tables too large to fit on a standard page or a turn page are placed on foldout page(s). The printing area, excluding heading and footing, should not exceed 37 inches in width if the sheet will be printed without a blank unit, 28-1/2 inches in width if the sheet will be printed with a blank unit, and 53 picas in height. The originator's manuscript must indicate the maximum width of the illustration or table.

**5.20** The typesetting requirements for type styles and sizes are the same as for a standard page. The rules for placement, spacing, etc, are as described in 5.21 through 5.24.

**5.21** The right-hand edge of an illustration or table is placed at the right margin of the page and is centered vertically. A minimum of 2 picas of space separates this illustration or table from any additional table or illustration placed on the page.

**5.22** If only one illustration appears on a foldout, the abbreviation Fig., the figure number, and title are placed 2 picas below the illustration, right-justified, and shall not exceed 20 picas in width. See Fig. 17.

**5.23** If two or more illustrations appear on a foldout, the abbreviation Fig., the figure number, and title are centered horizontally 2 picas beneath each illustration. In addition, the abbreviation Fig. and the figure numbers (eg, Fig. 1, 2, and 3; or Fig. 1 and 2) appear 2 picas above the page number, typeset in 10-point Futura Demi Bold initial capitals, right justified. See Fig. 18.

**5.24** If one or more tables appear on a foldout, the word TABLE, the table designator, and title (if used) appear centered horizontally above the table. In addition, the word Table(s) and designator(s) (eg, Table A; or Tables A and B) appear 2 picas above the page number, typeset in 10-point Futura Demi Bold initial capitals, right justified. See Fig. 19.

Fig. 14—Example of Turn-Page Format

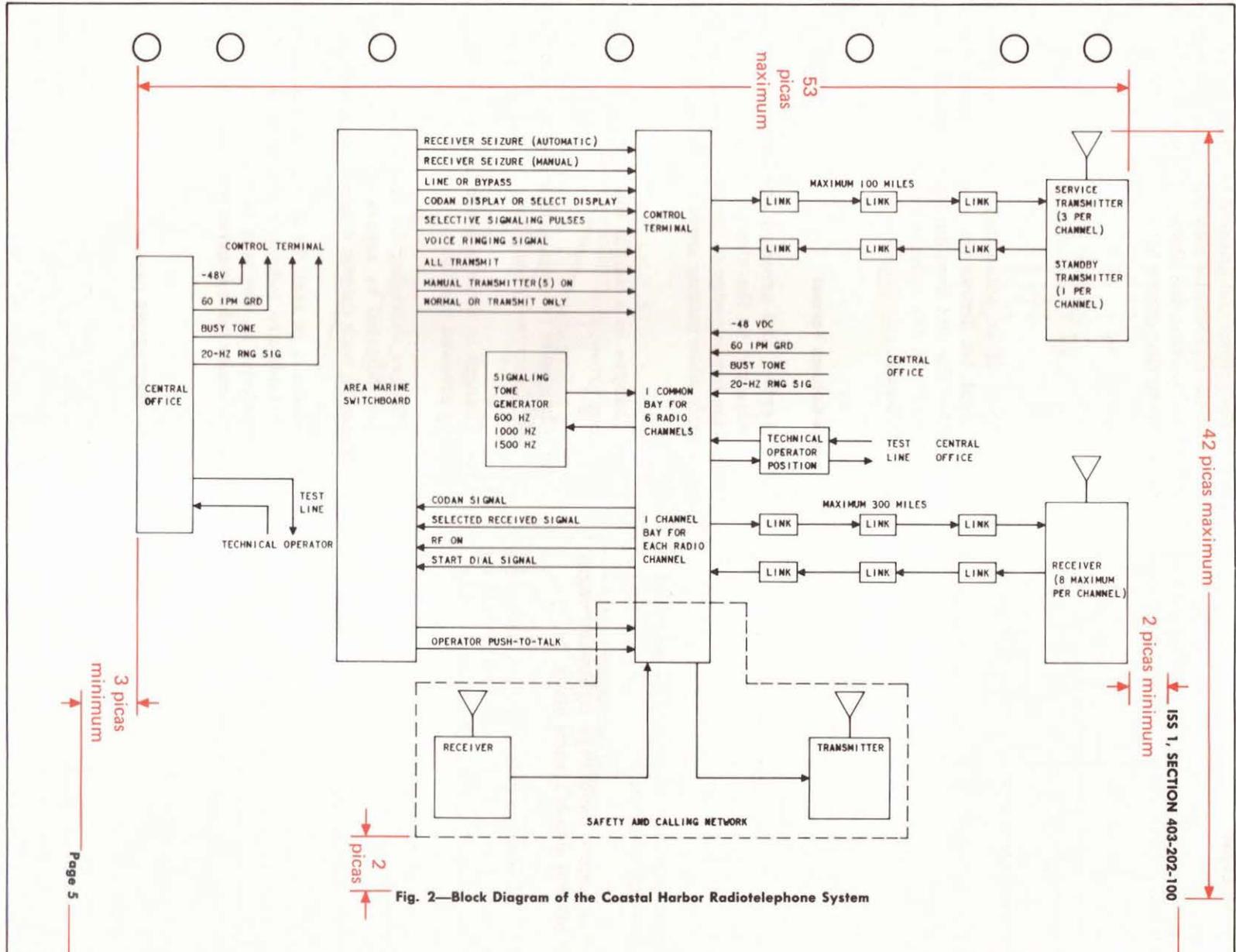


Fig. 2—Block Diagram of the Coastal Harbor Radiotelephone System

Page 5

ISS 1, SECTION 403-202-100

## 6. PAGE NUMBERING

**6.01** All pages within a section are numbered sequentially with arabic numbers beginning with 1.

**6.02** Standard pages are numbered as described in (a) through (d) below.

- (a) The first page is always a right-hand page.
- (b) Right-hand pages are assigned odd numbers.
- (c) Left-hand pages are assigned even numbers.
- (d) If the reverse side of a standard printed page is blank, the printed side has an odd number, a slant mark, and an even number (eg, 9/10). See Fig. 15(a). The only exception to this rule is when the last printed page in the section is a right-hand page, the blank side is not accounted for in the numbering sequence.

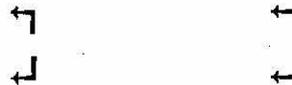
**6.03** Foldout pages are numbered as described in (a) through (c) below.

- (a) Foldout pages are always right-hand pages. The reverse side is always blank.
- (b) When a foldout page(s) is placed within the standard pages of a section, the foldout page(s) has an odd number (beginning with the next number following that assigned to the preceding standard page), a slant mark, and an even number (eg, 5/6). See Fig. 15(b).
- (c) When a foldout page(s) is placed at the end of a section, the foldout page(s) is numbered sequentially beginning with the next number following that assigned to the last standard page. The blank reverse side is not accounted for in the numbering sequence. See Fig. 15(c).

## 7. REVISION ARROWS

**7.01** In a reissued section, when revision arrows and arrowed brackets are used to indicate the added or revised material, the originator's manuscript will be marked with an arrow pointing to the right before the first changed word and an arrow pointing to the left after the last changed word.

**7.02** The arrows and arrowed brackets are pasted on the reproducible copy during the composition process. The size and shape of the arrows must be similar to that shown below.



**Note:** If an automated typesetting process is used, the arrows are inserted automatically within the text lines during the input process. Therefore, the rules covered herein are not applicable.

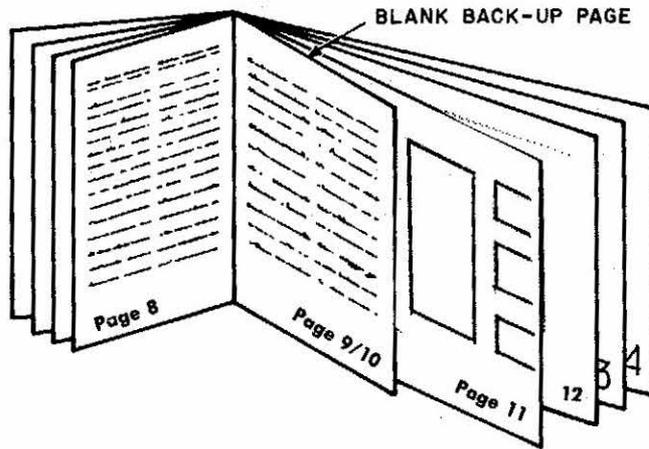
### A. Two-Column Format

**7.03** Arrows and arrowed brackets are placed adjacent to the changed column pointing toward the binding edge of the page. The following rules apply when pasting arrows on the reproducible copy.

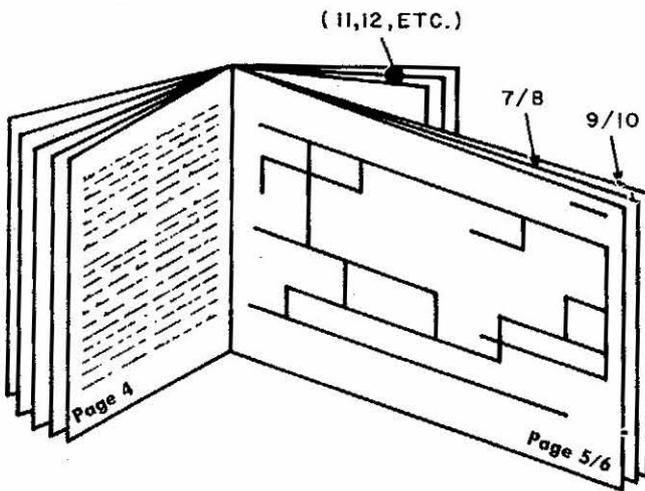
- (a) Changes in a single line are indicated by one arrow.
- (b) Changes in two consecutive lines are indicated by an arrow by each line.
- (c) Changes in three or more lines are indicated by arrowed brackets.
- (d) Changes extending beyond a single column are indicated by separate brackets in each column, ie, each column is arrowed separately.
- (e) Changes in text divided by an illustration or table are indicated by separate arrows or brackets, ie, the text before and after the illustration or table is arrowed separately.

### B. STEP PROCEDURE Format

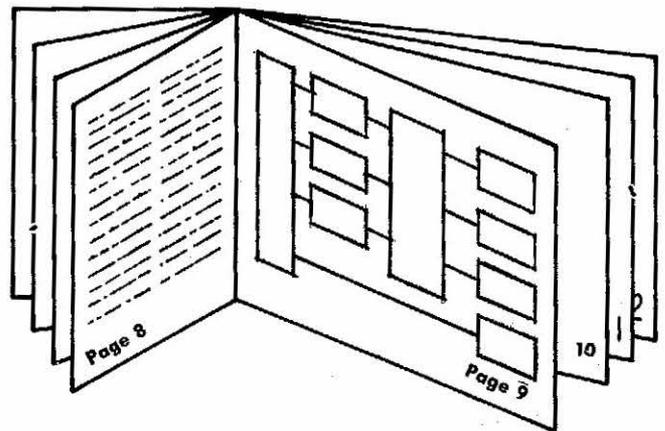
**7.04** Arrows and arrowed brackets for text are placed in the outside margin of the page according to the rules stated in 7.03. Arrows indicating a change in the PROCEDURE statements always point from the left toward the step number(s) and are adjacent to the number(s).



(a) Blank standard page



(b) Foldout(s) within a section



(c) Foldout(s) at end of a section

Fig. 15—Page Numbering

### C. STEP ACTION VERIFICATION Format

**7.05** Arrows and arrowed brackets for text are placed in the outside margin of the page according to the rules stated in 7.03. Arrows indicating a change in ACTION or VERIFICATION statements always point from the left toward the step number(s) and are adjacent to the number(s).

### D. Illustrations

**7.06** Arrows used to indicate added or revised illustrations are placed before the abbreviation Fig. and after the title; eg:

→ Fig. 10—N3 Carrier ←

**7.07** For added or revised multisheet illustrations, arrows are placed on each sheet as described in 7.06.

### E. Tables

**7.08** Arrows used to indicate added or completely revised tables are placed before the word TABLE and after the table designator, eg:

→ TABLE B ←

**7.09** Minor changes within a table are indicated by 60-line screen overlay (10% tone), which is pasted over the changed area during the composition process.

### 8. ADDENDA

**8.01** The typesetting requirements for an addendum are the same as for the two-column format described in Part 2 except as follows:

- (a) The heading on all pages has the uppercase word ADDENDUM instead of the word SECTION. See Fig. 16.
- (b) The paragraph number consists of a 4-digit number rather than a 3-digit number. See Fig. 16.

### 9. APPENDIXES

**9.01** The typesetting requirements for an appendix are the same as for the two-column format described in Part 2, except that all pages have the word Appendix in initial capitals and the appendix number as an additional line in the page heading. On Page 1 this line appears as the third line in the right heading, right justified. On subsequent pages, the line appears as the second line in the page heading, left justified on left-hand pages and right justified on right-hand pages.

### 10. PROOFREADER'S MARKS

**10.01** When proofprints are returned to the typesetter with the appropriate changes marked, the changes shall be made unless there is a conflict of rules or agreements. In the case of conflict, the originator shall be notified of the nature of the conflict.

**10.02** The proofreader's marks are identified in Table A.

TD-2 MICROWAVE RADIO  
TRANSMITTER-RECEIVER BAY  
RECEIVER TESTS  
J68330B AFC UNIT

1. GENERAL

- 1.001 This addendum supplements Section 420-670-501, Issue 1.
- 1.002 This addendum is issued for the following reasons:
- (a) To change the rating of the section
  - (b) To change the section title
  - (c) To change an attenuator setting
  - (d) To add a termination to the IF carrier resupply
  - (e) To delete information which does not apply to the AFC unit
  - (f) To correct a note to avoid confusion in the field.
- 1.003 Issue 1 of this addendum was issued to add a caution in Chart 1.

2. CHANGES TO SECTION

ISSUE 1 CHANGES

- 2.001 On Page 8, Chart 1, before Step 27 add the following: **Caution: Remove the**

*power plug before removing the output coaxial connector, and connect the output coaxial connector before reconnecting the power plug when the generator is reinstalled. This will protect the output transistors by maintaining a load.*

ISSUE 2 CHANGES

- 2.002 On Page 1, in the left heading, change AT&TCo Provisional to AT&TCo Standard.
- 2.003 On Page 1, in the section title, change J68330A to J68330B.
- 2.004 On Page 14, Chart 4, Step 5, change ATTEN 1 setting from 10 dB to 17 dB.
- 2.005 On Page 18, Fig. 9, terminate the IF IN jack of the J68387J IF carrier resupply with a 368A plug.
- 2.006 On Page 22, Step 8, delete the last two sentences.
- 2.007 On Page 37, Note 2, change to read as follows: The assigned frequency of the BO klystron is 4210 MHz and the DO klystron is 4280 MHz.

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Page 1  
1 Page

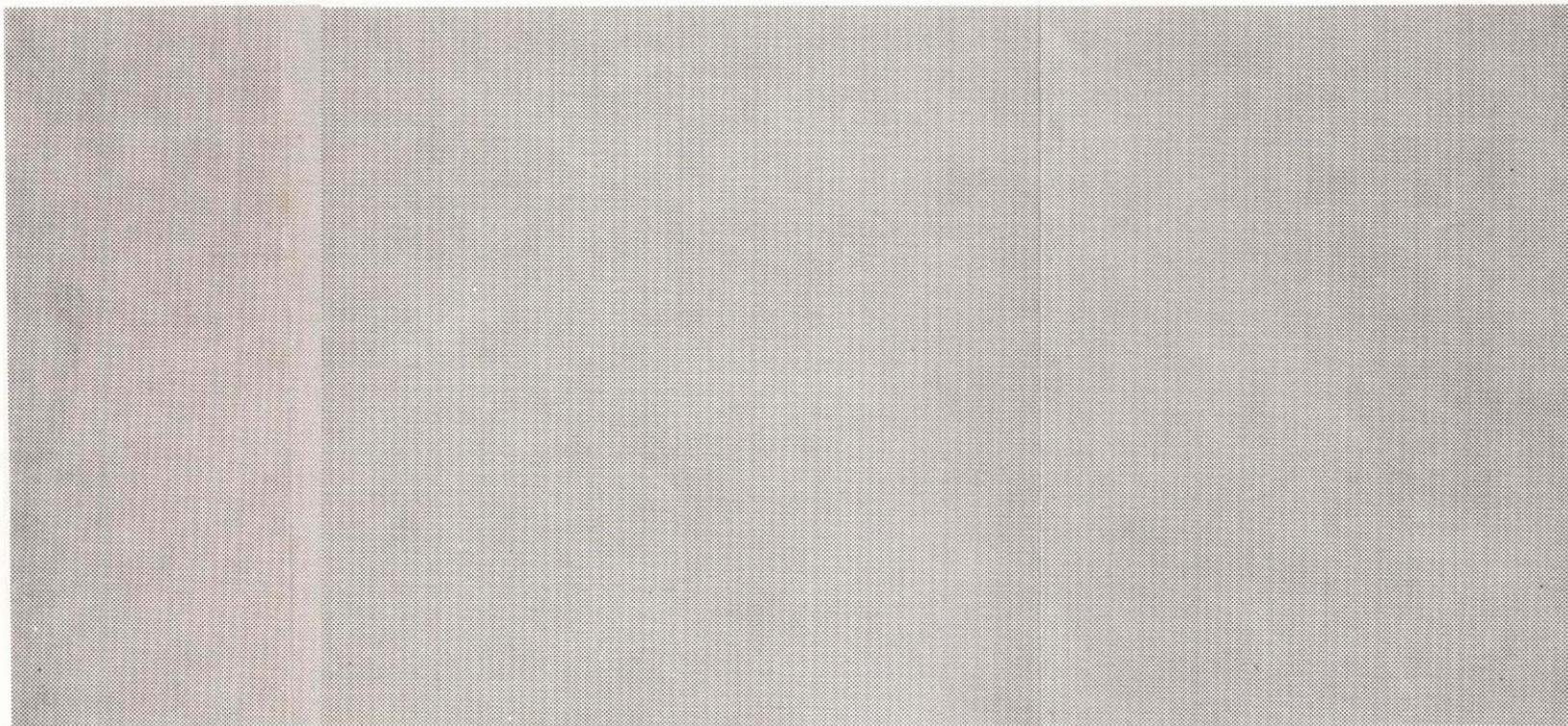
Fig. 16—Sample Addendum

TABLE A

PROOFREADER'S MARKS

⊙	Insert period	<i>Caps</i>	Caps—used in margin
↗	Insert comma	≡	Caps—used in text
:	Insert colon	<i>l.c.</i>	Lower case—used in margin
;	Insert semicolon	/	Lower case—used in text
?	Insert question mark	<i>Cap &amp; l.c.</i>	Caps and lower case (each major word initial caps)
!	Insert exclamation mark	<i>w.f.</i>	Wrong font
-	Insert hyphen	⊖	Close up
--	Insert dash	—	Delete
↘	Insert apostrophe	⊖	Close up and delete
↙↘	Insert quotation marks	✓	Less space
↖	Insert 1-en dash	⊙	Turn a reversed letter
↗	Insert 1-em dash	⊔	Move right
#	Insert space	⊔	Move left
∨	Set as superscript	⊔	Move up
∧	Set as subscript	⊔	Move down
(/)	Parentheses		Aline vertically
[/]	Brackets	=	Aline horizontally
□	Indent 1 em	⊔	Center horizontally
□	Indent 2 ems	⊔	Center vertically
⊔	Paragraph	⊔	Push down space
No ⊔	No paragraph	<i>eg. #</i>	Equalize space—used in margin
<i>tw</i>	Transpose—used in margin	<i>✓✓</i>	Equalize space—used in text
<i>~</i>	Transpose—used in text	<i>stat</i>	Let it stand
<i>sp</i>	Spell out	⊗	Dirty or broken letter
<i>ital</i>	Italic—used in margin	<i>run over</i>	Carry over to next line
—	Italic—used in text	<i>run back</i>	Carry back to preceding line
<i>b.f.</i>	Boldface—used in margin	^	Caret—left out, insert
<i>mn</i>	Boldface—used in text		
<i>Rom</i>	Roman type		

CENTER  
ILLUSTRATION  
VERTICALLY



60 picas

Fig. 5—Typical Worksheets for Switched Loop Unit  
Preference Assignment

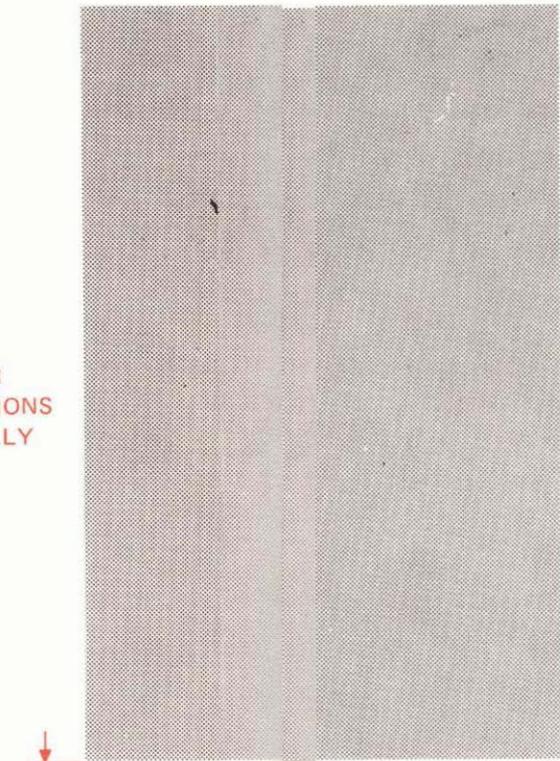
Up to  
20 picas

2 picas

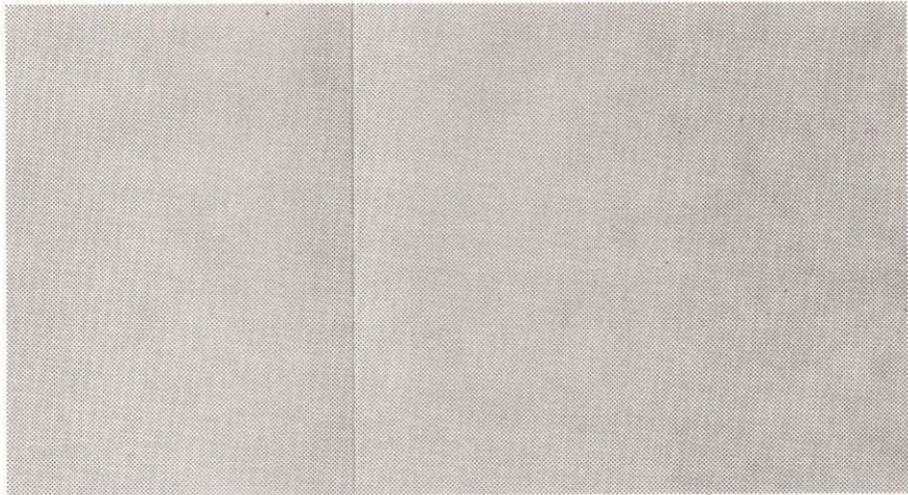
Page 5/6

Fig. 17—Single Illustration on a Foldout Page

CENTER  
ILLUSTRATIONS  
VERTICALLY



2 picas  
Fig. 1—Carrier Resupply



2 picas  
Fig. 2—IF Carrier Resupply Test Point Location

60 picas

2 picas  
Fig. 1 and 2  
Page 14/15

Fig. 18—Multiple Illustrations on a Foldout Page

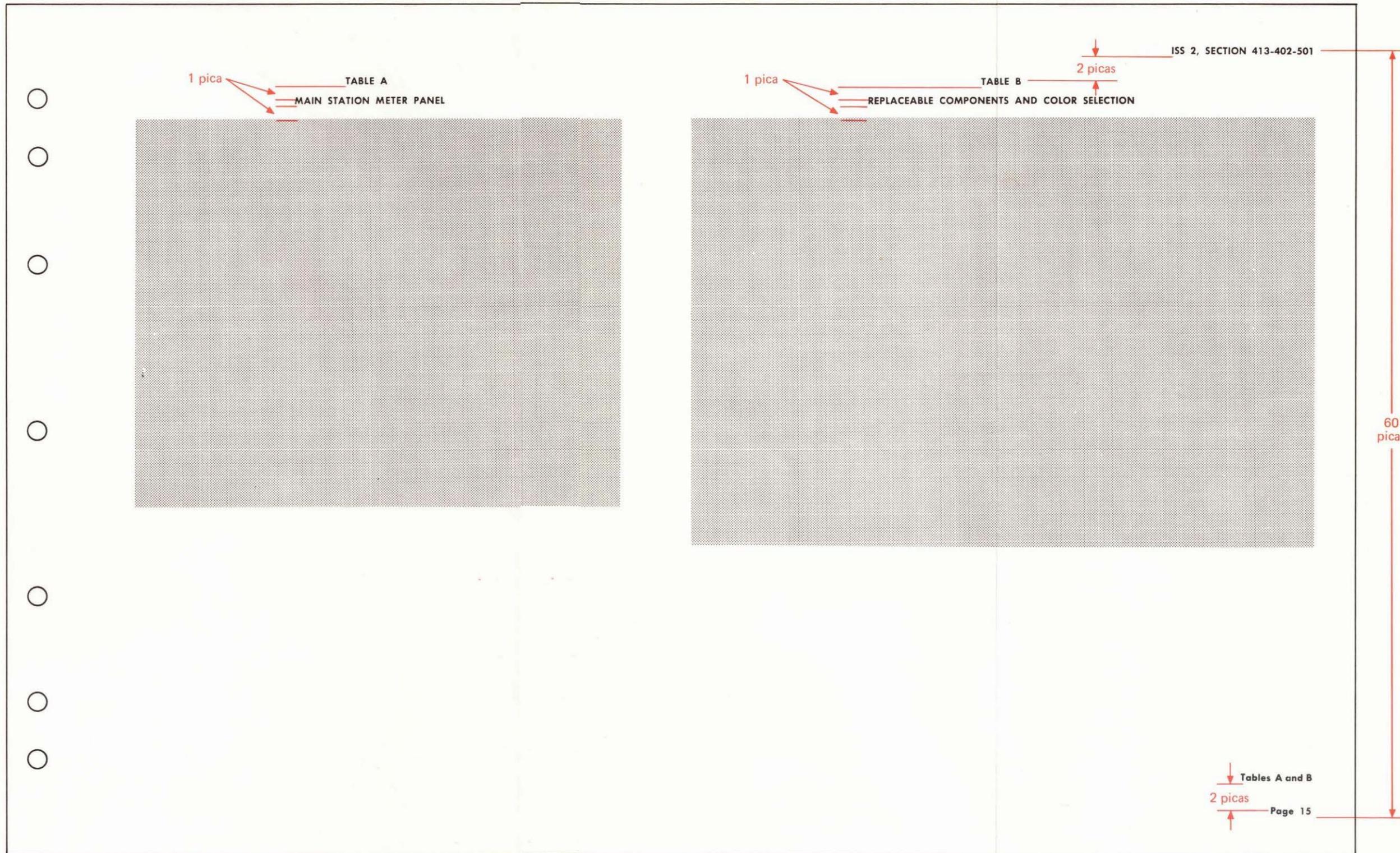


Fig. 19—Multiple Tables on a Foldout Page