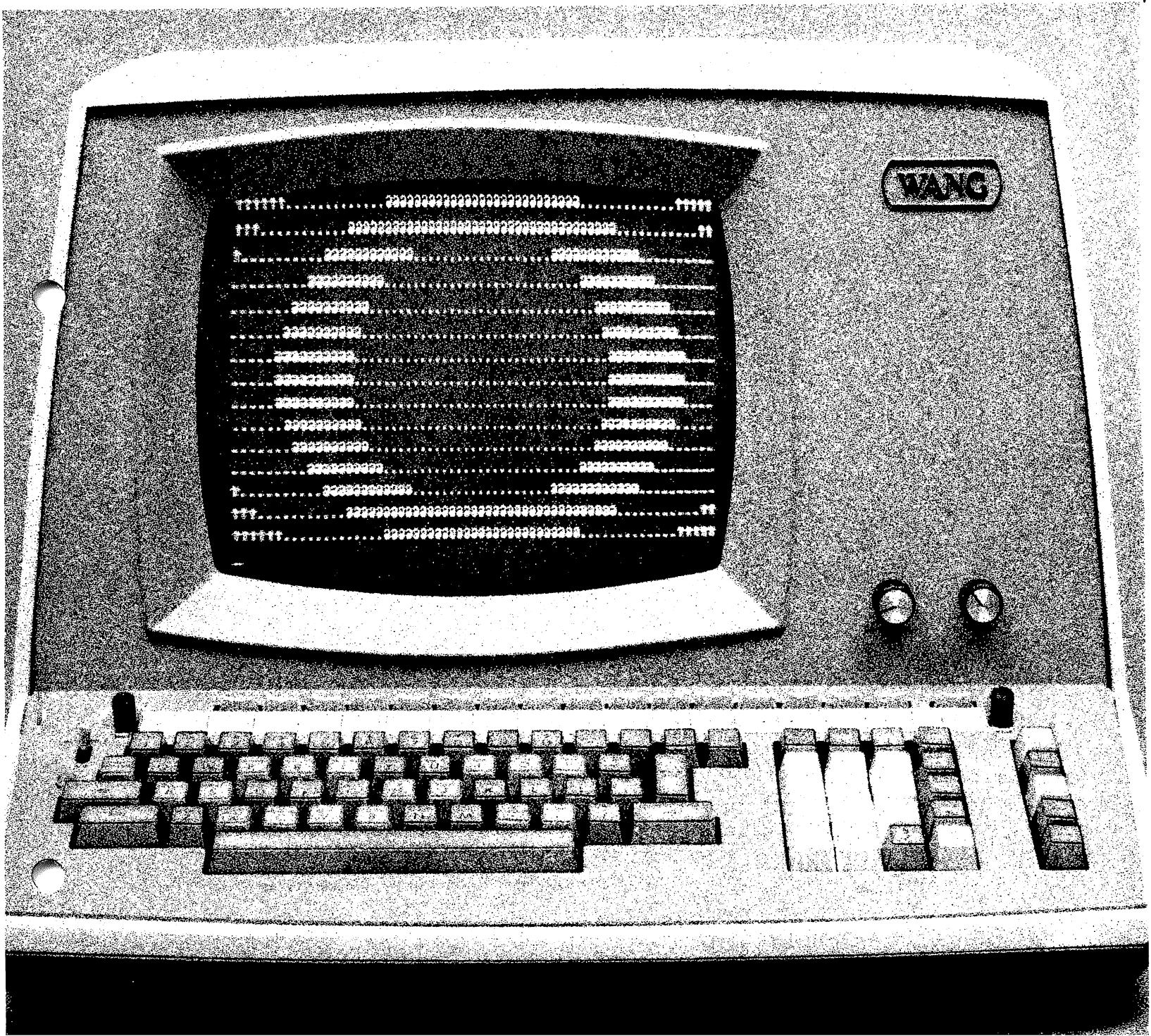
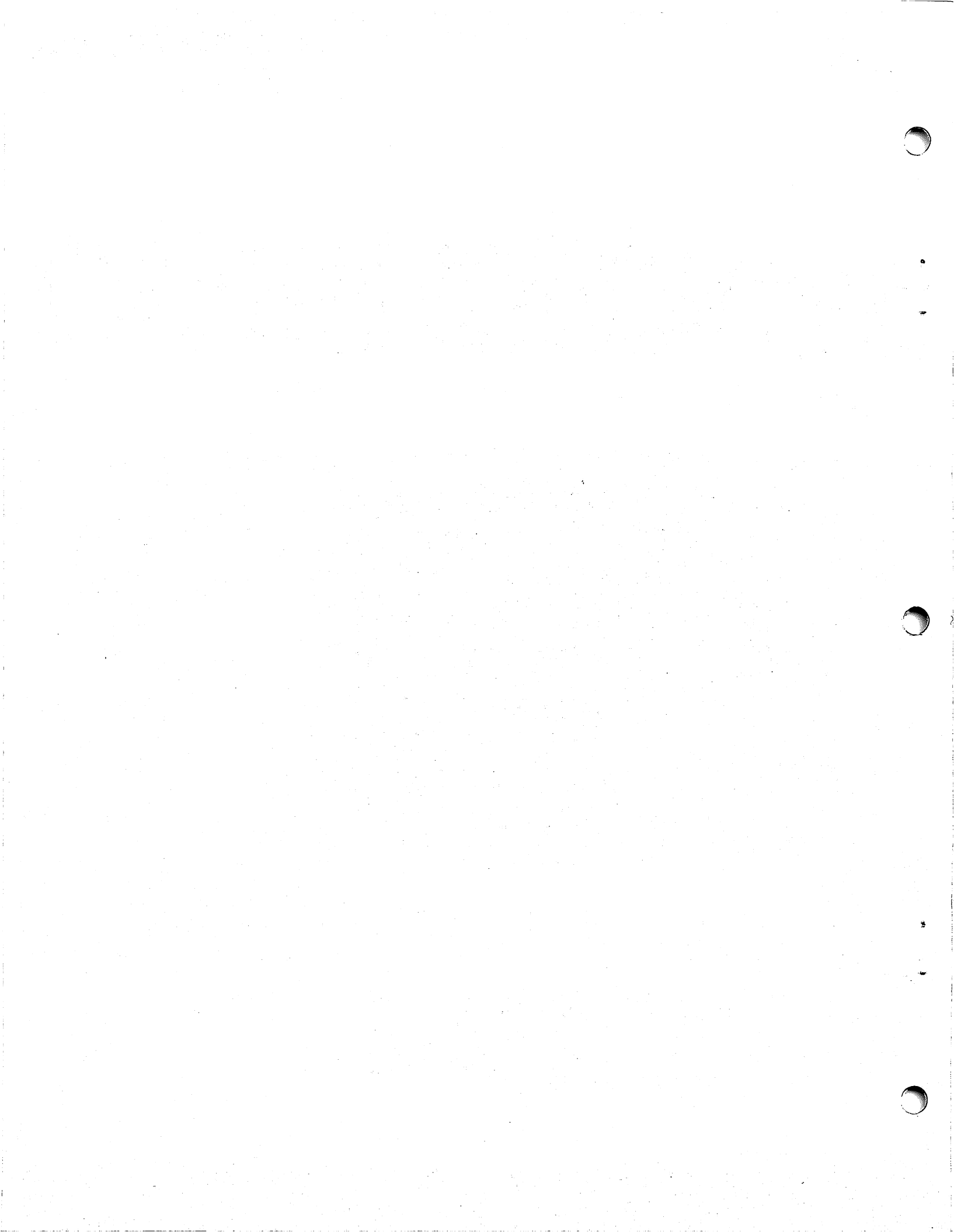


WANG

PLOTTER DEMO  
USER MANUAL

# SYSTEM 2200





# PLOTTER DEMO USER MANUAL

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## HOW TO USE THIS MANUAL

This manual provides operating instructions for the Plotter Demonstration Package. The package is used to demonstrate the plotting capabilities of the following equipment : 2202, 2212, 2232 (English and Metric), 2272 (English and Metric) and TEKTRONIX.

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# CHAPTER 1

## DEMO OVERVIEW

### 1.1 INTRODUCTION

This plotter demonstration package provides the user with a convenient tool for demonstrating the general plotting characteristics of the Wang family of plotters plus the TEKTRONIX model. The purpose of the demonstration is to show the feasibility of writing general software which can be executed on any of the plotters, and to illustrate special hardware features which distinguish one plotter from another.

The demonstration package consists of three instructive menus: one for selecting plotters, another for initializing the plotter selected, and the third for selecting a design to be plotted. The entire program package requires 16K bytes of memory and is available in a diskette version. The present version contains 8 designs; however, these designs may change and special designs may be added as the package is updated.

### 1.2 PROGRAM STRUCTURE

The Plotter Demonstration Package consists of three basic menus:

1. PLOTTER SELECTION MENU
2. PLOTTER INITIALIZATION MENU
3. DESIGN SELECTION MENU

Initially (after the program is loaded) the PLOTTER SELECTION Menu appears on the CRT showing a list of plotters available for selection. When one plotter is selected, the PLOTTER INITIALIZATION Menu for that plotter is displayed. The initialization procedure for the selected plotter is displayed as a table of values to be filled in sequentially. As a value for each numbered item in the table is selected from the choices displayed, the list of possible choices for the next item is displayed.

If all values entered in the table are correct, the user keys an A to advance to the DESIGN SELECTION Menu. However, if errors are present, the user can correct any item in the table of values by reentering that item number. When the item number is entered, the possible choices associated with that item are redisplayed. Following the selection of a value, it is again possible to reselect any item number for correction, or key in an A to advance to the DESIGN SELECTION Menu.

When no further corrections are required and an A has been keyed, the DESIGN SELECTION Menu for that particular plotter is displayed (see NOTE below). This menu presents a list of designs; a Special Function Key is associated with the title of each design. Depending on the plotter and the design selected, keying a selection normally starts plotter activity.

However, in some plotters a change paper prompt is displayed before the design is plotted. Also some designs require user interaction (see Chapter 4).

### 1.3 PLOTTER HOUSEKEEPING FUNCTIONS

It is assumed that the user is familiar with his plotter equipment and that he has turned it ON, mounted paper, set the necessary switches, etc., before loading the demo package. Of particular importance is the selection of the correct plotter address (except for the TEKTRONIX which is always assigned 01D).

These "housekeeping" functions must be completed before advancing (keying A) from the PLOTTER INITIALIZATION Menu for the 2202, 2212, 2232A and the 2272 plotters.

When these preparations have not been completed or if the wrong plotter address is entered in the PLOTTER INITIALIZATION Menu, depressing A to advance will cause the 2200 to hang up. The user must then RESET and return to the PLOTTER SELECTION Menu by using the Special Function Key 15.

For the TEKTRONIX, the "housekeeping" functions must be completed before the TEKTRONIX is selected in the PLOTTER SELECTION Menu. Otherwise, the program does not advance beyond the display of the "WANG TEKTRONIX INTERFACE DEMO" heading and automatically returns to the PLOTTER SELECTION Menu.

Plotter "housekeeping" functions are described for each plotter in the section "Plotter Preparation" of Chapter 3.



## CHAPTER 2 PLOTTER SELECTION MENU

### 2.1 LOADING THE PROGRAM

Place the diskette into the disk drive (address 310), close the door and enter the following commands:

For a 2200 with a 64 x 16 Character CRT

```
:CLEAR (EXECUTE)
:LOAD DCF "START" (EXECUTE)
:RUN (EXECUTE)
```

For a 2200 with an 80 x 24 Character CRT

```
:LOAD DCF "START80" (EXECUTE)
:CLEAR (EXECUTE)
:RUN (EXECUTE)
```

In either case, the PLOTTER SELECTION Menu appears on the CRT as:

```
WANG      I(Moving Screen Heading
          I      Plotting the Letters
          I "W" "A" "N" "G")
PLOTTER   I
          I
DEMOS     I.....I.....I.....I.....I
```

KEY WHICHEVER PLOTTER YOU WISH DEMONSTRATED

1. 2202
2. 2212
3. 2232A
4. 2272
5. TEKTRONIX

### 2.2 MENU OPERATION

During the display of the PLOTTER SELECTION Menu, a moving screen heading is executed on the 2200 CRT. This provides for the successive plotting of the letters "W" "A" "N" "G" and "WANG" on the CRT while the program awaits the number associated with the plotter selected. After each letter is plotted, the program determines if a number has been keyed. If it is an appropriate selection from the plotter list, the program erases the moving display heading, loads the PLOTTER INITIALIZATION routine and displays the PLOTTER INITIALIZATION Menu for the selected plotter.

If the selection is incorrect (i.e., wrong number, character, special function key, etc.) a RE-ENTER prompt is displayed on the CRT and the program pauses for about 10 seconds. During this time, the program checks about once a second for the corrected input. If correct input is entered, the program executes the desired response. Each time incorrect input is entered, another 10-second interval of screen inactivity is initiated. If no input is available in 10 seconds, the program returns to executing the moving display heading with input checking at the end of every character plotted.

NOTE:

The moving screen heading and its operation described above, also applies to the DESIGN SELECTION Menu (See Chapter 4).

## CHAPTER 3 PLOTTER INITIALIZATION MENU

### 3.1 GENERAL

This chapter describes the plotter initialization instructions for the 2202, 2212, 2232 and 2272 plotters. The TEKTRONIX plotter demo requires no user inputs other than preparing the equipment.

The PLOTTER INITIALIZATION Menu allows the user to select various inputs to the demo program. The user selects an appropriate plotter address (all Wang plotters), designates a Metric or English plotter (2232 and 2272), selects a plot size (2232), and can make a plot axis selection (2272). Since the selection of a plotter address is part of the initialization of a plotter (except for the TEKTRONIX which is always assigned to be at 01D), it is feasible to demonstrate all plotter choices through a single CPU.

A feature of the demo program is the ability to return to the previous menu by using the Special Function Key 15. Thus, to bring the program back to the PLOTTER SELECTION Menu, depress Special Function Key 15 any time the program asks for input.

### 3.2 MODEL 2202

#### Plotter Preparation

1. Turn the plotter ON and set the AUTO/MANUAL switch to AUTO.
2. Position continuous form-fed paper over the pins so that the carriage is one inch from the bottom perforation.
3. Place the ON/OFF X & Y AXIS switch in the ON position.

#### Operating Instructions - Initialization Menu

The Initialization Menu appears on the CRT as:

```
*      WANG      *
*              *
*  2202 PLOTTER  *
*              *
*      DEMO      *
```

## INITIALIZATION FOR SELECTED PLOTTER

### 1. PLOTTER ADDRESS? \_\_

-----  
KEY THE APPROPRIATE SELECTION FOR ITEM #1

1. 413    2. 414    3. 415    4. 416    5. 417

#### DISPLAY

- 1) 1. PLOTTER ADDRESS? - -  
  
2) KEY THE NUMBER OF ITEM TO  
CORRECT OR A TO ADVANCE  
    ?\_\_

#### OPERATION

Key the number 1, 2, 3, 4, or 5 corresponding to the appropriate plotter address.

If the wrong plotter address is selected, key 1. This removes the previous plotter address and the prompt in step 1 reappears on the CRT along with the selection list. Repeat the operation in step 1. If the selected plotter address is correct, key A. This advances the system to the DESIGN SELECTION Menu (see Chapter 4).

When the program exits from the PLOTTER INITIALIZATION Menu, the paper in the 2202 plotter is automatically spaced up 14 inches and the carriage moves to the left margin. These movements occur before the DESIGN SELECTION Menu is displayed on the CRT.

### 3.3 MODEL 2212

#### Plotter Preparation

1. Turn the POWER ON/OFF switch to the ON position.
2. Use the Zero Reference X and Y controls to establish the zero reference point at the lower lefthand corner and upper righthand corner.
3. Place a sheet of paper on the plotter surface and move the CHART HOLD/RELEASE toggle switch to the HOLD position.
4. Secure the pen in the pen holder.
5. Place the PEN UP/DOWN toggle switch in DOWN position.

## Operating Instructions - Initialization Menu

The Initialization Menu appears on the CRT as:

```
*      WANG      *
*              *
*  2212 PLOTTER  *
*              *
*      DEMO      *
```

INITIALIZATION FOR SELECTED PLOTTER

1. PLOTTER ADDRESS?\_\_

-----  
KEY THE APPROPRIATE SELECTION FOR ITEM #1

1. 413      2. 414      3. 415      4. 416      5. 417

NOTE:

PLOTTER ADDRESS Operating instructions for the 2212 plotter are the same as for the Model 2202 (see Section 3.1 Operating Instructions - Initialization Menu).

When the program exits from the PLOTTER INITIALIZATION Menu, the plotting arm is automatically returned to the home position before the DESIGN SELECTION Menu is displayed on the CRT.

### 3.4 MODEL 2232

#### Plotter Preparation

1. Turn the power supply switch to the ON position.
2. Place appropriate size paper on the plotting surface, and secure paper with magnetic holders.
3. Secure pen in the pen holder.

#### Operating Instructions - Initialization Menu

The Initialization Menu appears on the CRT as:

```
*      WANG      *
*              *
*  2232A PLOTTER *
*              *
*      DEMO      *
```

INITIALIZATION FOR SELECTED PLOTTER

1. PLOTTER ADDRESS?\_\_ \_ 3. PLOT SIZE 0  
2. METRIC PLOTTER 4. NUMBER OF PLOTS 0

-----

KEY THE APPROPRIATE SELECTION FOR ITEM #1

1. 413 2. 414 3. 415 4. 416 5. 417

DISPLAY

OPERATION

- |   |  |
|---|--|
| 1) 1. PLOTTER ADDRESS?__ _  | Key the number 1, 2, 3, 4, or 5 corresponding to the appropriate plotter address.  |
| 2) 2. METRIC PLOTTER?__ _<br><u>KEY THE APPROPRIATE SELECTION FOR ITEM #2</u><br>Y FOR YES N FOR NO                                       | If the 2232 plotter is a Metric model, key Y and proceed to steps 3 through 6. If the plotter uses English unit, enter N and proceed to step 7.        |
| 3) 3. PLOT SIZE?__ _ CM.<br><u>KEY THE APPROPRIATE SELECTION FOR ITEM #3</u><br>1. 20 CM. 2. 60 CM.                                       | If 20 cm is selected, key 1. If 60 cm is selected, key 2 and go to step 6.   |
| 4) 4. NUMBER OF PLOTS?__ _<br><u>KEY THE APPROPRIATE SELECTION FOR ITEM #4</u><br>ENTER THE NUMBER OF 20 CM. PLOT PER PAGE (1,2,3,4 or 5) | Key the number corresponding to the number of plots desired per sheet of paper.  |
| 5) <u>KEY THE NUMBER OF ITEM TO CORRECT OR A TO ADVANCE.</u><br>?__ _   | If all entries for item numbers 1 through 4 are correct, enter an A to advance to the DESIGN SELECTION MENU (see Chapter 4). Otherwise, go to step 11. |
| 6) 4. NUMBER OF PLOTS 1<br><u>KEY THE NUMBER OF ITEM TO CORRECT OR A TO ADVANCE</u><br>?__ _  | When 60 cm is selected for item #3, a 1 is automatically inserted for item #4 and the user is ready to exit from the menu as in step 5 above.          |

7) 3. PLOT SIZE? \_\_ INCH

KEY THE APPROPRIATE SELECTION  
FOR ITEM #3

1. 10 INCH      2. 30 INCH

If 10 INCH is selected key 1.  
If 30 INCH is selected key 2  
and proceed to step 10.

8) 4. NUMBER OF PLOTS? \_\_

KEY THE APPROPRIATE SELECTION  
FOR ITEM #4

ENTER THE NUMBER OF 10 INCH  
PLOTS PER PAGE (1,2,3,4)

Key the number corresponding  
to the number of plots desired  
per sheet of paper.

9) KEY THE NUMBER OF ITEM TO --  
CORRECT OR A TO ADVANCE.  
                                  ?\_\_

If all entries for item numbers  
1 through 4 are correct, enter  
an A to advance to the DESIGN  
SELECTION MENU (see Chapter 4).  
Otherwise go to step 12.

10) 4. NUMBER OF PLOTS 1

KEY THE NUMBER OF ITEM TO --  
CORRECT OR A TO ADVANCE.  
                                  ?\_\_

When 30 INCH is selected for  
item #3, a 1 is automatically  
inserted for item #4 and the  
user is ready to exit from the  
menu as in step 9 above.

11) CASE 1

1. PLOTTER ADDRESS 413    3. PLOT SIZE 20 CM.

2. METRIC PLOTTER YES    4. NUMBER OF PLOTS 5

KEY THE NUMBER OF ITEM TO CORRECT OR A TO --  
ADVANCE.  
                                  ?\_\_

After completing steps 1  
through, 5 the display  
may look like the  
example on the left.  
If the user wants to  
change an entry, he  
should key the  
corresponding item  
number.

NOTE:

At this stage, to convert from Metric to English units requires that item 2 be changed first. If item 2 is to be changed, depress 2 and enter N. Notice that item 3 automatically becomes 10:

- 3. PLOT SIZE 10 INCH
- 4. NUMBER OF PLOTS 5

KEY THE NUMBER OF ITEM TO CORRECT OR  
A TO ADVANCE

? \_ \_

The value of 5 in item 4 must now be changed to a value (1,2,3, or 4) as per step 8. An attempt to enter A without changing item 4 results in the prompt

ONLY 4 PLOTS WILL FIT, RE-ENTER

CASE 2

- 1. PLOTTER ADDRESS 413    3. PLOT SIZE 60 CM
- 2. METRIC PLOTTER YES    4. NUMBER OF PLOTS 1

KEY THE NUMBER OF ITEM TO CORRECT OR A TO  
ADVANCE.

? \_ \_

When the completed Metric entries are displayed as the example on the left, the user is not allowed to change item 4 since 1 is the correct entry for item 4. An attempt to key in 4 results in the RE-ENTER prompt.

NOTE:

For the example above, the change from Metric to English (entering a 2 and N) produces the following entries automatically:

- 3. PLOT SIZE 30 INCH
- 4. NUMBER OF PLOTS 1

KEY THE NUMBER OF ITEM TO CORRECT OR A TO  
ADVANCE

? \_ \_

12) CASE 1

- 1. PLOTTER ADDRESS 414    3. PLOT SIZE 10 INCH
- 2. METRIC PLOTTER NO    4. NUMBER OF PLOTS 3

KEY THE NUMBER OF ITEM TO CORRECT OR A TO  
ADVANCE.

? \_ \_

After completing steps 7 through 10, the display may look like the example on the left. If the user wants to change an entry he should key the corresponding item number.



NOTE:

At this stage to convert from English to Metric units requires that item 2 be changed first. To change item 2, depress 2 and enter Y. Notice that item 3 automatically becomes:

- 3. PLOT SIZE 20 CM.
- 4. NUMBER OF PLOTS 3

KEY THE NUMBER OF ITEM TO CORRECT OR A TO  
ADVANCE  
? \_ \_

To change item 3 to 60 CM, depress 3 and enter 2. Item 4 automatically becomes 1.

CASE 2

- 1. PLOTTER ADDRESS 413
- 3. PLOT SIZE 30 INCH
- 2. METRIC PLOTTER NO
- 4. NUMBER OF PLOTS 1

KEY THE NUMBER OF ITEM TO CORRECT OR A TO  
ADVANCE.  
? \_ \_

When the completed English entries are displayed as the example on the left, the user is not allowed to change item 4 since 1 is the correct entry for item 4. An attempt to key in 4 results in the RE-ENTER prompt.

NOTE:

For the example above, the change from English to Metric produces the following entries automatically:

- 3. PLOT SIZE 60 CM.
- 4. NUMBER OF PLOTS 1

KEY THE NUMBER OF ITEM TO CORRECT A  
TO ADVANCE  
? \_ \_

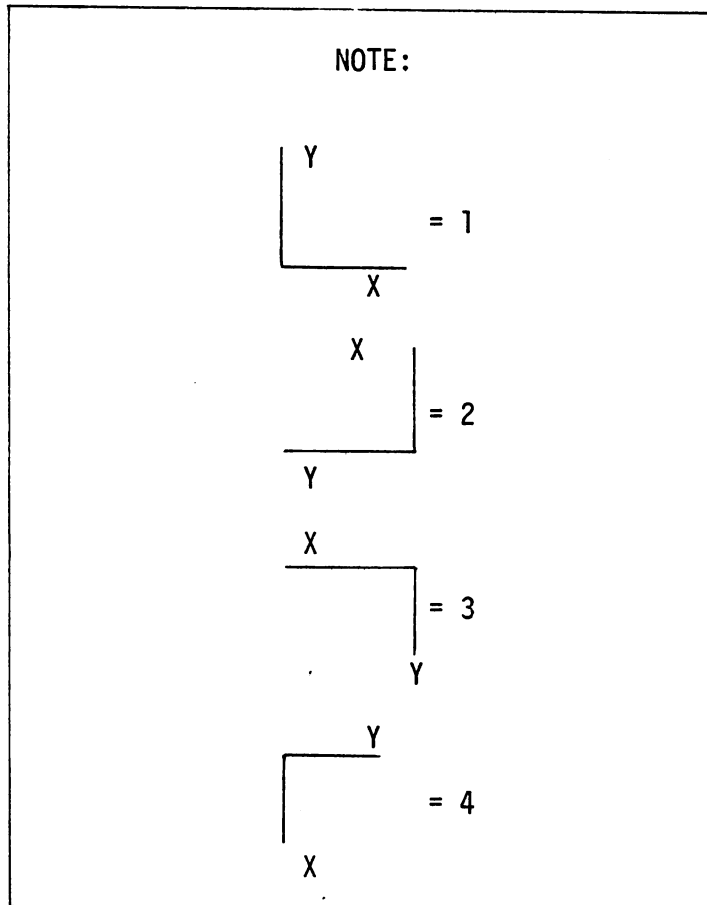
When the program exits the PLOTTER INITIALIZATION Menu, the plotting arm returns to the home position before the DESIGN SELECTION Menu is displayed.

3.5 MODEL 2272

Plotter Preparation

- 1. Turn the power switch to the ON position.

2. Mount paper over the drum so that the center of a sheet is directly under the pen assembly.
3. Depress PLOT switch.
4. Depress the axis selection switch corresponding to the one that is to be selected from the Model 2272 Initialization Menu (1, 2, 3, or 4).



5. Place PEN switch in the UP Position.

Operating Instructions - Initialization Menu

The Initialization Menu appears on the CRT as:

```

*      WANG      *
*              *
*  2272 PLOTTER  *
*              *
*      DEMO      *
  
```

INITIALIZATION FOR SELECTED PLOTTER

1. PLOTTER ADDRESS? \_ \_
2. METRIC PLOTTER
3. AXIS ROTATION 0

KEY THE APPROPRIATE SELECTION FOR ITEM #1.

1. 413      2. 414      3. 415      4. 416      5. 417

DISPLAY

OPERATION

1) 1. PLOTTER ADDRESS? \_ \_

Key the number 1, 2, 3, 4, or 5 corresponding to the appropriate plotter address.

2) 2. METRIC PLOTTER? \_ \_

KEY THE APPROPRIATE SELECTION FOR ITEM #2

If the 2272 plotter is a Metric model key Y. If the plotter uses English units enter N.

Y FOR YES      N FOR NO

3) 3. AXIS ROTATION? \_ \_

KEY THE APPROPRIATE SELECTION FOR ITEM #3

Key the number 1, 2, 3, or 4 corresponding to the axis selection button which is depressed on the 2272 control console.

BUTTONS ARE NUMBERED 1 TO 4 FROM LEFT TO RIGHT

4) 1. PLOTTER ADDRESS 413  
2. METRIC PLOTTER YES  
3. AXIS ROTATION 1

KEY THE NUMBER OF ITEM TO CORRECT OR A TO ADVANCE.  
? \_ \_

After completing steps 1 through 3 the display may look like the example on the left. To change an entry, enter the appropriate item number; the list of options for that item number will appear on the display. From this list key in the appropriate number.

To advance to the DESIGN SELECTION Menu, key A (see Chapter 4).

When the program exits the PLOTTER INITIALIZATION Menu, the paper is automatically spaced down 11 inches on the plotter drum before the DESIGN SELECTION Menu is displayed.

### 3.6 TEKTRONIX

#### Plotter Preparation

1. Turn ON/OFF toggle switch to the ON position.
2. Depress LOCAL/LINE switch to LINE.
3. Depress RESET PAGE button to suppress the initial blooming on the screen.

## Operating Instructions - Initialization Menu

Upon selecting the TEKTRONIX plotter from the PLOTTER SELECTION Menu, the following heading appears on the CRT and the system automatically proceeds to the Design SELECTION Menu (see Chapter 4).

```
*      WANG      *  
*              *  
*TEKTRONIX INTERFACE *  
*              *  
*      DEMO      *
```

# CHAPTER 4

## DESIGN SELECTION MENU

### 4.1 MENU OPERATION

The Design Selection Menu contains a variety of designs with Special Function Keys associated with the title of each design. As noted in Chapter 1, the selection of designs may vary in subsequent releases of the demo package or may be modified in special versions provided for particular demonstrations. The present Design Selection Menu appears on the screen as:

```

                I      (Moving Screen Heading
WANG           I      Plotting the Letters
(Model of Plotter)I    "W" "A" "N" "G")
PLOTTER       I
                I
DEMOS         I.....I.....I.....I.....I
```

#### KEY SPECIAL FUNCTION FOR THE DESIGN YOU WISH TO PLOT

```

01 - GREETING           05 - BIRTHDAY PLOT
02 - PROBABILITY       06 - LETTERS PLUS
03 - SQUARE CITY *
04 - SPIRAL DESIGN**   15 - ANOTHER PLOTTER
```

\*Note: For the Model 2272, SQUARE CITY is replaced by REGRESSION.

\*\*Note: For the Model 2272, SPIRAL DESIGN is replaced by CARDIOID.

#### Selecting a Design

Depressing the Special Function Key for a particular design loads that design routine into the system. After a brief pause, the title of the design is displayed on the CRT and plotting begins. Approximate execution times for each design are shown in Table 3-1. At the conclusion of each plotted design, the DESIGN SELECTION Menu reappears on the 2200 CRT. The user may now select another design or exit from the menu by depressing the Special Function Key 15 to select another plotter. Special Function Key 15 returns the system to the PLOTTER SELECTION Menu (see Chapter 2).

NOTE:

Selecting a design on the 2212 and 2232 plotter causes a "change paper" prompt to appear on the CRT. The program awaits a RETURN(EXEC) before the selected design routine is loaded.

Interrupting a Design

During execution of a design, plotting can be interrupted by depressing the HALT/STEP button on the 2200 keyboard. Plotting is resumed by keying CONTINUE (EXECUTE). If the user wants to interrupt a design and return to the DESIGN SELECTION Menu, depress HALT/STEP and the Special Function Key 15. (This is the appropriate action if paper becomes torn or a pen runs dry.)

TABLE 3-1. Design Execution Times (Approx.) Minutes.

PLOTTER DESIGN	2202	2212	2232 (20 cm)	2232 (60 cm)	2272	TEKTRONIX
GREETING	8.75	4.87	3.7	7.65	3.68	3.63
PROBABILITY	11.0	2.67	17.92	22.67	3.67	11.92
SQUARE CITY	17.0	7.1	10.0	14.15	-	7.86
SPIRAL	79.6	7.75	22.47	70.0	-	3.6
BIRTHDAY	80.25	6.78	15.9	45.0	8.83	9.25
LETTERS PLUS	20.5	9.06	10.43	29.6	9.98	8.48
CARDIROID	-	-	-	-	2.32	-
REGRESSION	-	-	-	-	2.78	-

NOTE:

Throughout this demo the creation of characters and special symbols is performed by software construction of line segments as described in the Plotter Utilities Manual or by using the plotter character set when available. Unlike demos of non-Wang plotters which often involve simply the sending of line segments to the plotter, this demo by performing real time calculations presents a more realistic representation of execution time to the customer.

4.2 PLOTTER HARDWARE MOVEMENTS

Depending on the plotter selected, certain plotter hardware movements related to providing a fresh area for plotting may occur at the conclusion of

a design, or when a design is interrupted prior to the reappearance of the DESIGN SELECTION Menu.

#### 2202

At the conclusion (or interruption with a HALT/STEP and Special Function Key 15) of each design, the paper is spaced up 14 inches to provide a clean sheet and the carriage is set at the left margin removed from the plotter.

#### 2212

After a plot is concluded, the plotting arm is automatically returned to home position so the design is visible.

If a new design is selected, a prompt appears on the CRT to change paper and the program awaits a RETURN (EXEC) before the selected routine is loaded.

The first plot on a sheet of paper is drawn with the left edge of the design along the Y-Axis of the plotter table. If it is a small size plot (10 inches or 20 CM), it is plotted slightly above the X-Axis (1 inch/2 cm). Each subsequent plot on a sheet is plotted in an area immediately to the right of the previous plot.

If the larger size plot (30 inches or 60 cm) is selected, it is always plotted with its lower edge along the X-Axis and its left edge along the Y-Axis (i.e., one plot to a sheet).

At the end of each completed plot, the plotting arm moves to the lower left corner of the design. If, however, the design is interrupted before completion by a HALT/STEP and Special Function Key 15, the arm returns to the home position before the DESIGN SELECTION Menu is displayed. In either case, selection of a new design from the menu causes plotting to begin in the next available area along the X-Axis.

A prompt to change paper appears on the CRT when a new design is selected and all available areas on the plotter surface have been used up. The program awaits a RETURN (EXEC) before the selected routine is loaded.

#### 2272

This plotter uses continuous form-fed paper. It is assumed that 11 inches of paper is available for each design. Upon completion (or interruption with a HALT/STEP and Special Function Key 15) of each design, the paper is automatically spaced down 11 inches to a fresh plotting area. The design may now be removed.

#### TEKTRONIX

The TEKTRONIX operates in three modes, GRAPHIC INPUT, GRAPH, and ALPHA. For this demo package only GRAPH and ALPHA mode are utilized.

GRAPH mode is used during execution of all plotting routines including writing of characters. During GRAPH mode the TEKTRONIX screen continuously displays the information which has been entered into its buffer, automatically refreshing itself.

During ALPHA Mode the screen remains refreshed so long as information is being entered into its buffer; however, it switches automatically to a greatly diminished intensity after a period of one to two minutes of inactivity. The information remains in the buffer and may be redisplayed by any keyboard activity. The shift key is recommended to accomplish this since it does not output a character to the screen. The demo always enters ALPHA Mode at the completion (or interruption) of each design in order to protect the screen surface. Hence, the previously plotted design remains in the buffer while the Design Menu is displayed on the 2200 CRT. If the design begins to fade, it can be redisplayed on the TEKTRONIX screen by depressing the TEKTRONIX shift key. When a new design is selected the TEKTRONIX screen and buffer are automatically cleared, causing a flash of light on the TEKTRONIX screen before the new plotting begins.

#### 4.3 CUSTOMER INTERACTIVE DESIGNS

Most demo designs require no user (or customer) intervention beyond selection from the menu. From the list of designs described in this chapter only two exceptions exist: BIRTHDAY PLOT and CARDIOID. (Other interactive designs may be developed in subsequent versions of the demo package.)

##### BIRTHDAY PLOT

The Birthday Plot which is available for all plotters requires the user to enter:

- a. His name up to 32 characters. No validation is done on the name; however, it is truncated to 32 characters if more than 32 are entered.
- b. His birthdate in the format MMDDYY without punctuation. The birthdate must be a number within the range 10100 (Jan.1, '00) to 123199 (Dec 31, '99).

##### CARDIOID

The Cardioid Design is only available for the 2272 plotter. The routine for this design allows the user to select a particular pen color and an axis rotation button for each "Node" plotted. After each "Node" is complete, the user is asked if another "Node" is desired on the same page. If so, he is again allowed to select an axis rotation button and a pen color. When he either answers "NO" to the additional "Node" questions or interrupts with a HALT/STEP and Special Function key 15, he is asked to return the axis rotation button to the value selected during plotter initialization.



To help us to provide you with the best manuals possible, please make your comments and suggestions concerning this publication on the form below. Then detach, fold, tape closed and mail to us. All comments and suggestions become the property of Wang Laboratories, Inc. For a reply, be sure to include your name and address. Your cooperation is appreciated.

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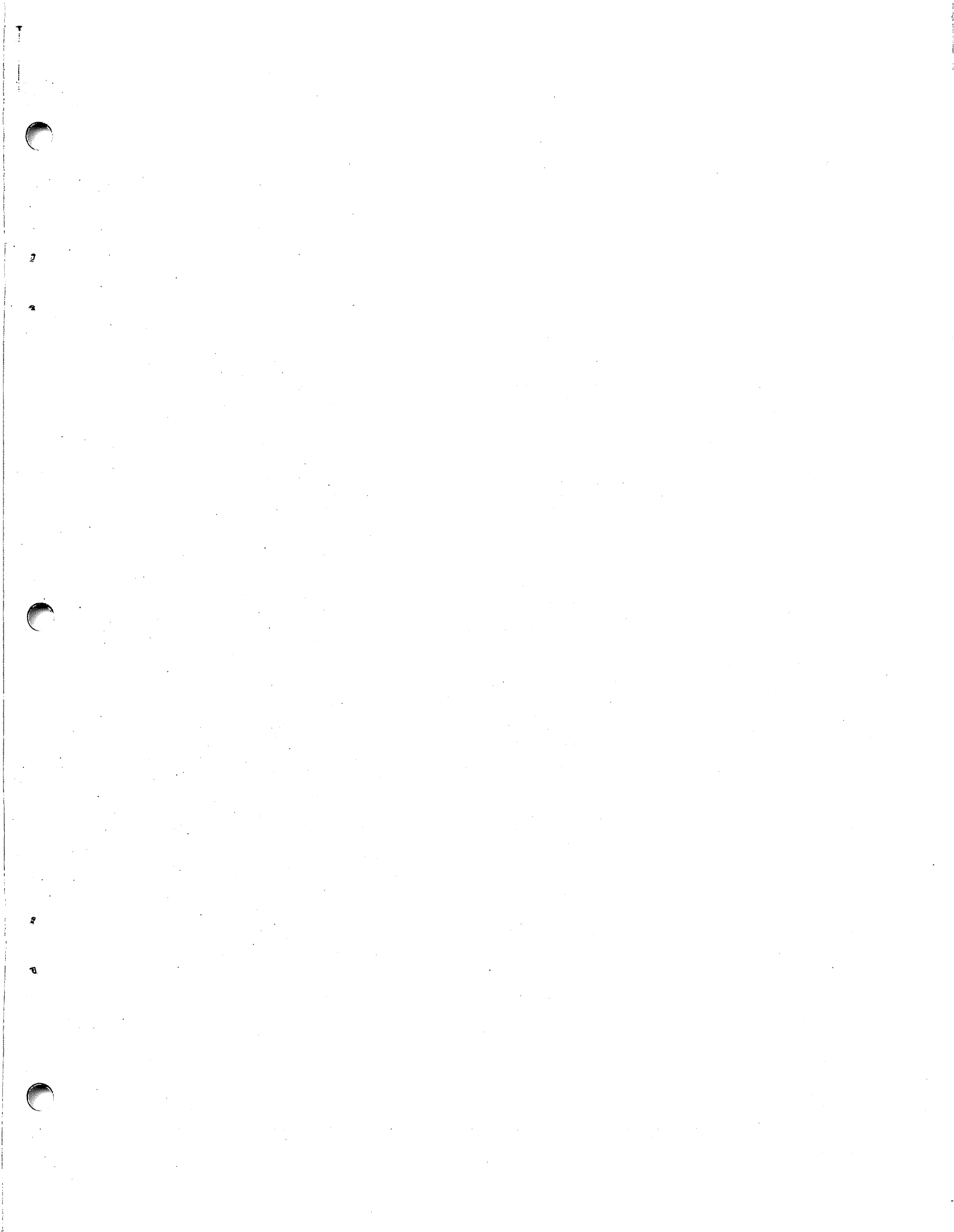
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