Chapter 10: Ballot Styles Menu

After completing all tasks described in the previous chapters, you will need to create ballot styles. Ballot styles determine the appearance of the ballots given to each voter and include the contests, rotations of the contests, which voters receive the ballot (by precinct number), and the ballot style number. All of the above were determined automatically by information previously entered using other Hardware Programming Manager options. Ballot styles can be created manually or automatically by Hardware Programming Manager. After creating ballot styles, you must create ballot styles by precinct. Ballot styles by precinct are created automatically by Hardware Programming Manager, but can be altered manually. These functions are performed using the options on the Ballot Styles Menu.

To access the Ballot Style Menu type 07 in the Selection field on the Election Management Menu. The screen will look similar to the one shown below.

Changing the Ballot Control File

The Ballot Control File is used to create ballot styles for some ballot tabulators. The “Change ballot control file” screen is not used with Model 100 precinct counters.

This file allows you to enter the ballot ID being used before creating the ballot styles. You can enter the security codes in the Ballot Control File, or it can be done later by following the instructions in the Creating Ballot Styles or Changing Ballot Styles section. Security codes are only used for punch card ballot tabulating equipment.
If you are using punch card tabulating equipment, Security codes will define the precinct number, the ballot style number, a split precinct or a party code in a closed primary election. These security codes are similar to the UPC bar codes on products you buy. Each line has a number value. When the center of the two bars in a line is filled in, the value of that line is added to the total.

To reach the Change Ballot Control File screen, shown below, type 01 at the Ballot Styles Menu. The cursor will be positioned in the Default Security field.

1. If you are using punch card tabulating equipment enter the appropriate information for the default security. The Default security field is used only if there is one ballot style for the current election or if you want all ballots to contain the same ballot ID. The Default security consists of four positions, each representing the corresponding column on the ballot. The first position of the Default security field represents card column 1; the second position represents card column 2; the third position represents card column 3; and the fourth position represents card column 4. The cursor will advance to the Security is precinct number field.

2. The Security is precinct number field is only for punch card tabulating equipment and should be completed only if your ID consists partially or entirely of precinct numbers. The Security is precinct number field consists of four positions, each representing the corresponding card column on the ballot. The first position of the Security is precinct number field represents card column 1; the second position represents card column 2; the third position represents card column 3; and the fourth position represents card column 4. The cursor will advance to the Physically separate ballot documents field.
If neither of the rules above applies to your use of ballot IDs, or if you don't use ballot IDs, leave both of the above fields blank.

3. The Physically separate ballot documents field should be completed only if you are using a multiple card voting system such as DataVote. In this case, the voter will use more than one ballot to vote because all contests the voter is eligible to vote on do not fit on one ballot. The ballots will be separated according to the contest ranges you enter in the Lowest contest number and Highest contest number fields. Do not use these fields to define ballots that differ because of party or district information.

4. Enter the lowest contest number on the first ballot a voter receives. Press ENTER if you do not fill the entire field. The cursor will advance to the Highest contest number field.

5. Enter the highest contest number of the first ballot a voter receives. Press ENTER if you do not fill the entire field.

6. Continue entering the contest number ranges for subsequent ballots until all ranges are entered.

7. Press F9 to display the Ballot ID/Color screen. The screen will look like the one shown below. The Ballot ID/Color screen allows you to assign colors of ballots by ballot ID. This information entered here is passed on to the Voter Registration System when used.

<table>
<thead>
<tr>
<th>PE050</th>
<th>Change Ballot Control File</th>
<th>3MMD&lt;TC1</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>ID</td>
<td>Color</td>
</tr>
</tbody>
</table>

**Note:** Before attempting to complete the Change Ballot Control File screen, be sure to read the following paragraphs, as they explain the fields that need to be completed and how the data must be entered on the screen. Instructions for completing the screen follow.

8. Enter the ballot ID and press ENTER if you do not fill the entire field. The cursor will move to the Color field.
9. Enter the ballot color that will correspond with this ballot ID. Press ENTER if you do not fill the entire field. The cursor will move to the next ID field.

10. Continue entering ballot IDs and colors, using Steps 9 and 10, until all ballot IDs and colors are entered. If you need to enter more than is allowed on this screen, press F9 to display another screen. Press F10 to return to the Change Ballot Control File Screen.

11. Press the PAGE DOWN key to advance the cursor to the Selection field. Press ENTER to accept the changes and return to the Ballot Styles Menu, or type 01 to exit to the Ballot Styles Menu without accepting the changes.

Note: If there are splits within a precinct, the split code or ballot ID must be part of the security code. The split code and ballot ID are interchangeable.

12. Use the F6 key to fill in any codes that are found on all of your ballot styles. This field is used only in the automatic ballot style create. When this program is executed, the default security you defined here will be placed on all ballot styles. Leave this field blank if there are no security codes common to all ballots.

WARNING: If a default security is entered, the automatic security will ADD TO the default security.

13. Press the PAGE DOWN key to advance the cursor to the Selection field in the Instructions area at the bottom of the screen. Press ENTER to accept the changes made on this screen and return to the Ballot Styles Menu, or type 01 to exit to the Ballot Style Menu without saving any changes.

Creating Ballot Styles Automatically

If you choose, Hardware Programming Manager will automatically create ballot styles using the contest, rotation, candidate, and precinct information previously entered on other Hardware Programming Manager menus.

WARNING: If ballot styles have been manually entered or changed, the automatic create option will override the manual changes.
To access the Create Ballot Styles screen, type 03 in the Selection field on the Election Ballot Styles Menu. The screen will look like the one shown below with the cursor positioned in the Selection field.

<table>
<thead>
<tr>
<th>FE023</th>
<th>Create Ballot Styles</th>
<th>3FM3STC1</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>01 = Run Program</td>
<td>Enter = Return to Menu</td>
<td></td>
</tr>
<tr>
<td>Enter Selection:0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Caution! Any previous ballot styles will be destroyed!</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1. Type 01 to run the program and automatically create the ballot styles. If you decide not to create the ballot styles, press ENTER.

2. When the message indicating that the ballot styles have been created displays, press ENTER to return to the Election Ballot Style Menu.

3. Print a Ballot Styles Listing (option 08 on the Election Ballot Styles Menu) and proof it carefully.

4. Use the Change Ballot Styles option (option 04 on the Election Ballot Styles Menu) to make the necessary changes or to add specific security codes.

5. Once all changes have been made, you must create ballot styles again by using either the Create Ballot Styles option (03 on the Election Ballot Styles Menu) or the Add Ballot Styles (Selection screens) option (05 on the Election Ballot Styles Menu).

Note: All of the above mentioned options are discussed later in this chapter.
Change Ballot Styles

The Change Ballot Styles option can be used to manually create ballot styles or to change or delete existing ballot styles that have already been created by the automatic create option.

To reach the Change Ballot Styles screen, shown below, type 04 at the Election Ballot Styles Menu. The cursor will be positioned in the **Ballot style number** field.

This program provides the following function keys that will allow you to move around on the screen:

- F3 Security Codes screen
- F4 return to previous screen
- F7 go to next page
- F8 go to previous page
- F9 go to next section
- F10 go to previous section
- F6 enter Security Codes
- ENTER advance to next field

Refer to the following sections for instructions on how to create, change or delete ballot styles.

Create Ballot Styles Manually

The Change Ballot Styles screen allows you to create ballot styles manually by copying a previously defined ballot style number or by choosing the contests, rotations, and precincts to include on the ballot style and entering them manually. To manually create ballot styles, follow the instructions below. See also *Adding Ballot Styles*.

1. From the Election Ballot Style Menu select option 04. The cursor will be positioned in the **Ballot Style number** field.

2. Enter the ballot style number. Press ENTER if you do not fill the entire field. The cursor will move to the **Copy Number** field.

3. Do one of the following:

   - To copy a previously defined ballot style, enter the ballot style number that you want to copy and press ENTER. The corresponding information will display on the screen. Press F3 if you need to change the ballot security. Advance to the fields that need changing. Proceed with Step 4.
   - If you do not want to copy another ballot style, press ENTER. The cursor will be positioned in the **Security** field. Press F3 if you need to
change the ballot security (ballot security is only used with punch card tabulating systems).

4. Press ENTER to move to the **Ballot type** field. The ballot type previously defined in the Election Specification Master will be displayed in the **Ballot type** field.

5. Press F9 or ENTER to advance to the contests area. If you have copied a ballot style, contest numbers and rotations will display. A hyphen after a contest number indicates a rotated contest. Enter all contest numbers and rotations that you want to appear on this style. If you need another screen to enter more contests, press F7.

6. Press F9 to advance to the precincts area. If you copied a ballot style, precincts will display. Enter all precinct numbers that you want to appear on this ballot style.

7. When all information has been entered, press the PAGE DOWN key to advance the cursor to the **Selection** field in the Instructions area at the bottom of the screen. Press ENTER to add this ballot style, type 01 to return to the **Ballot style number** field without accepting the changes, type 02 to clear the flags and exit to the Election Ballot Styles Menu without accepting the changes, or type 03 to delete this ballot style.

   **Note:** On all of the selection screens use ESC to exit to the Ballot Style Menu, F3 to go to the Security screen, F7 to go to the next page, F8 to go back a page, F9 to go to the next section, and F10 to go back a section.

### Change Ballot Styles

To change ballot styles, follow the instructions below.

1. After accessing the Change Ballot Styles screen, enter the ballot style number that you want to change. Press ENTER if you do not fill the field completely.

2. Press F9 to advance to the contests area and make any changes necessary.

3. Press F9 again to advance to the precincts section and make any necessary changes.

4. When all changes have been made, press the PAGE DOWN key to advance the cursor to the Instructions area at the bottom of the screen. Press ENTER to accept the changes. Type 01 to return to the **ballot style number** field without accepting the changes, type 02 to exit to the Election Ballot Styles Menu without accepting the changes, or type 03 to delete this ballot style.
Delete Ballot Styles

To delete a ballot style, follow the instructions below.

1. After accessing the Change Ballot Styles screen, enter the ballot style number that you want to delete. Press ENTER if you do not fill the field completely. The corresponding information will display on the screen.

2. Press the PAGE DOWN key to advance the cursor to the Instructions area at the bottom of the screen. Type 03 to delete this ballot style.

Add Ballot Styles (Selection Screens)

Using this option is the easiest way to set up your ballot styles. From the main Add Ballot Styles screen you can access selection screens for adding precincts, contests and security to each ballot style. To use this option, enter 05 at the Election Ballot Style Menu. The cursor will be in the Ballot Style Number field.
1. Enter the ballot style number. The cursor will advance to the Type of activity field. Your screen will look like the one shown below.

```
PEZZA       Add a Ballot Style       3PMNSTCI
Ballot Style Number: 56
Type of Activity: 0
01 = Select Contests
02 = Select Precincts
03 = Enter Security Information
04 = Create the Ballot Style
05 = Don't create the Ballot Style
Enter = Return to the Menu

This screen is the control screen and you will always return to it.
'Exit' on any subsequent screen refers to returning to this screen.
You may choose options 01, 02 or 03, in any sequence, and as many times
as you wish.
```

Current field: Enter number corresponding to activity to be performed
Previous value: 0

2. To select the contests to appear on this ballot style, enter 01 in the Type of activity field. A screen like the one shown below will display.

```
PEZZA       Add a Ballot Style       3PMNSTCI
Ballot Style Number: 56
- 0001- STRAIGHT PARTY
- 0003 MAYOR 001 MAYOR
- 0005- COUNCIL AT LARGE 005 COUNCIL AT LARGE
- 0234 BALLOTS CAST
- 0000

Instructions
Current field: Enter a 'Y' to include this contest on ballot style
Previous values:
F3=Save and exit    Esc=Clear and exit
```

Note: Nothing will be updated into the file until you perform (04) Create the Ballot Style. The program uses all of the information you entered in (01), (02), and (03) to create the new ballot style.

3. Enter Y in the field beside each contest you want to include on this ballot style. To skip a contest number, press ENTER. If another screen of contests exists, press F9 to proceed to it. Press F10 to go back to the previous page.
Note: When choosing a contest with rotation, enter Y next to the contest number. Rotation style 1 will display below the contest number. Press F7 for the next rotation style or F8 to go back to the previous rotation style. When the rotation style you want is displayed on the screen, enter Y. To return to the contest area of the screen, press F6.

4. When all contests have been selected, press F3 to save and return to the original add screen.

5. Type 02 to enter precinct information. A screen like the one shown on the next page will display.

<table>
<thead>
<tr>
<th>Ballot Style Number: 56</th>
<th>Add a Ballot Style</th>
<th>3mmSc1</th>
</tr>
</thead>
<tbody>
<tr>
<td>0001 WASHINGTON 1B</td>
<td>0010 WASHINGTON 1E</td>
<td></td>
</tr>
<tr>
<td>0002 WASHINGTON 1C</td>
<td>0025 CONCORD TOWNSHIP</td>
<td></td>
</tr>
<tr>
<td>0003 WASHINGTON 1D</td>
<td>0026 GREEN TOWNSHIP</td>
<td></td>
</tr>
<tr>
<td>0004 WASHINGTON 1E</td>
<td>0027 JASPER TOWNSHIP</td>
<td></td>
</tr>
<tr>
<td>0005 WASHINGTON 2A</td>
<td>0029 MILLEDGEVILLE</td>
<td></td>
</tr>
<tr>
<td>0006 WASHINGTON 2C</td>
<td>0030 OCTN</td>
<td></td>
</tr>
<tr>
<td>0007 WASHINGTON 2D</td>
<td>0031 JEFFERSONVILLE A</td>
<td></td>
</tr>
<tr>
<td>0008 WASHINGTON 3A</td>
<td>0032 JEFFERSON NORTH</td>
<td></td>
</tr>
<tr>
<td>0009 WASHINGTON 3B</td>
<td>0033 JEFFERSON SOUTH</td>
<td></td>
</tr>
<tr>
<td>0010 WASHINGTON 3C</td>
<td>0034 MADISON TOWNSHIP</td>
<td></td>
</tr>
<tr>
<td>0011 WASHINGTON 3D</td>
<td>0035 MAHAB</td>
<td></td>
</tr>
<tr>
<td>0012 WASHINGTON 3E</td>
<td>0036 WEST HOLLAND</td>
<td></td>
</tr>
<tr>
<td>0013 WASHINGTON 3F</td>
<td>0037 BLOOMINGTON VILLAGE</td>
<td></td>
</tr>
<tr>
<td>0014 WASHINGTON 4A</td>
<td>0038 LOWER POINT</td>
<td></td>
</tr>
<tr>
<td>0015 WASHINGTON 4B</td>
<td>0039 BOOMALERT</td>
<td></td>
</tr>
<tr>
<td>0016 WASHINGTON 4C</td>
<td>0040 FERRY TOWNSHIP</td>
<td></td>
</tr>
</tbody>
</table>

Instructions:
Enter a 'Y' to include this precinct on ballot style
Previous value:
F3=Save and exit    Esc=Clear and exit    F9=Next Page

6. Enter Y at the left of each precinct you want to include on this ballot style. To skip a precinct, press ENTER. If another screen of precincts exists, press F9 to proceed to the next screen. Press F10 to go back to the previous page. When finished selecting precincts, press F3 to save the flagged precincts and exit to the Add a Ballot Style screen, or press ESC to clear the flagged precincts and exit to the Add a Ballot Style screen.
7. To enter security information, type 03 and a screen like the one shown below will display (security codes are only used with punch card tabulating equipment). If punch card tabulating equipment is not being used leave the Security field blank and proceed to step 9.

![Add a Ballot Style Screen]

Current field: Number of available positions on this ballot
Previous value: 041
F3=Save and exit   Esc=Clear and exit

8. Enter the security code as described in the previous section called "Changing the Ballot Control File," or use the space bar to delete the position.

9. When all security positions have been entered, press F3 to save and exit to the Add a Ballot Style screen or ESC to clear and exit to the Add a Ballot Style screen.

10. After you have performed (01), (02), and (03), enter 04 at the Add a Ballot Style screen to create this ballot style or enter 05 not to create this ballot style and return to the Ballot style number field.

Add Statistics to Ballot Styles

Use this option to add statistical contests to the ballot styles that were imported into Hardware Programming Manager. Do not use this option if Hardware Programming Manager created the ballot styles.
1. To run this option, type 06 in the Enter Selection field on the Election Ballot Styles Menu screen. The screen will look like the one shown below.

```
PE119          Add stats and print contests to ballot styles GENRI98F

   01 = Run the update
Enter = Exit back to Menu
Enter selection:0
```

The purpose of this program is to add 'statistics' or 'print only' contests to ballot styles that were imported into RPM. If your ballot styles were created by RPM, then you do not need to run this program.

2. Type 01 in the Enter Selection field to run the update.

**Renumber Ballot Styles**

Use this option to renumber the ballot styles by range, individually or in precinct order. To use this option, type 07 in the Selection field on the Election Ballot Styles Menu screen. Your screen will look like the one shown below.

```
PE25B          Renumber Ballot Styles  3PMNSTC1

   01 = Renumber by range
   02 = Renumber individually
   03 = Renumber in precinct order
Enter = Return to menu

   Selection:0
```

**WARNING:** When renumbering, include all existing ballot styles in the ranges of ballot style numbers entered. Any ballot styles not included will be deleted.
Renumber by Range of Styles

To renumber the ballot styles by range of styles, enter 01 in the Selection field. Your screen will look like the one shown below.

1. In the Increment to renumber by field, enter the number by which you want to increase each ballot style.

<table>
<thead>
<tr>
<th>PE25H</th>
<th>Renumber Ballot Styles</th>
<th>3PMMSTC1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Increment to renumber by: 1</td>
<td>New starting number: 1</td>
<td></td>
</tr>
<tr>
<td>Starting-ending numbers to be renumbered</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. thru 11. thru 21. thru</td>
<td>31. thru</td>
<td></td>
</tr>
<tr>
<td>2. thru 12. thru 22. thru</td>
<td>32. thru</td>
<td></td>
</tr>
<tr>
<td>3. thru 13. thru 23. thru</td>
<td>33. thru</td>
<td></td>
</tr>
<tr>
<td>4. thru 14. thru 24. thru</td>
<td>34. thru</td>
<td></td>
</tr>
<tr>
<td>5. thru 15. thru 25. thru</td>
<td>35. thru</td>
<td></td>
</tr>
<tr>
<td>6. thru 16. thru 26. thru</td>
<td>36. thru</td>
<td></td>
</tr>
<tr>
<td>7. thru 17. thru 27. thru</td>
<td>37. thru</td>
<td></td>
</tr>
<tr>
<td>8. thru 18. thru 28. thru</td>
<td>38. thru</td>
<td></td>
</tr>
<tr>
<td>9. thru 19. thru 29. thru</td>
<td>39. thru</td>
<td></td>
</tr>
<tr>
<td>10. thru 20. thru 30. thru</td>
<td>40. thru</td>
<td></td>
</tr>
</tbody>
</table>

Any existing numbers not included in above ranges will be deleted!

Current field: Increment new numbers by this number
Previous value: 1

2. In the New starting number field, enter the number for the first ballot style.

3. Enter the beginning and ending numbers of the existing ballot styles that you want to renumber. There are 40 ranges available. When all ranges of ballot style numbers have been entered, press the PAGE DOWN key.

4. Do one of the following:

- Press ENTER to renumber. Any ballot style numbers not included in the ranges you have entered will display at the bottom of the screen, and you will be prompted as to whether you want to continue with the renumber. Answer N to return to the Increment to renumber by field without renumbering.
- Type 01 to return to the first field on the screen.
- Type 02 to exit to the Election Ballot Styles Menu screen.
Renumber Individual Ballot Styles

To renumber individual ballot styles, enter 02 in the Selection field. A screen like the one shown below will display.

<table>
<thead>
<tr>
<th>FE25B</th>
<th>Renumber Ballot Styles</th>
<th>3PMNSTC1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Old no.</td>
<td>New no.</td>
<td>0</td>
</tr>
<tr>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

F2=Copy all old  F3=Copy old no.  F9=Next screen

1. In the New no. field to the right of the old (existing) number, do one of the following:

   - If you want to change only a few numbers, press F2 to duplicate all ballot style numbers; then change only the ones that need to be changed.
   - Press F3 to duplicate the ballot style number of the entry currently selected so that you do not have to key it in manually. Press F9 to advance to the next screen if you need to change more ballot styles. Press F10 to return to the previous screen.

2. When you have entered all of the new ballot style numbers, press the PAGE DOWN key. Then press ENTER to update, 01 to return to the New no. field without updating, or 02 to exit to the Districts and Precincts menu.
Renumber in Precinct Order

To renumber in precinct order, enter 03 in the Selection field. The renumber will run automatically. Run this option if the interface file was not used or if you need to recreate ballot styles in Hardware Programming Manager to match the ballot style sequence produced by a BGS system. After the program renumbers the ballot styles, your screen will look similar to the one shown below.

<table>
<thead>
<tr>
<th>PE2SB</th>
<th>Renumber Ballot Styles</th>
<th>3PPW3YG1</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

10 Ballot styles have been renumbered!
Remember to create ballot styles by precinct! (11 on this menu)
Press enter to return to menu

Now that the ballot styles are renumbered, run option 11 to create ballot styles by precinct.

Press ENTER to return to the Election Ballot Styles Menu screen.

Listing Ballot Styles

After defining ballot styles, print a listing and carefully proof your work. The List Ballot Styles option allows you to print all ballot styles for the current election or print a selected group of ballot styles.

The Ballot Style Listing includes the ballot style number, ballot type, security code, contest numbers and titles, rotation numbers, precinct numbers and names, total number of contests, and total number of precincts included in the ballot style.
To list the ballot styles, type 08 at the Election Ballot Style Menu. A screen like the one shown below will display. The cursor will be positioned at the Enter Selection field.

```
01 = All ballot styles
02 = Selected ballot styles
Enter = Return to menu

Enter selection: 0
```

1. Do one of the following:

- Type 01 to print all ballot styles defined for this election.
- Type 02 to print a selected range of ballot styles. The cursor will move to the Include styles field at the bottom of the screen. Enter the first ballot style number of the range you want to print, and press ENTER if you do not fill the entire field. The cursor will move to the next field. Enter the last ballot style number of the range you want to print, and press ENTER if you do not fill the entire field.

Note: If you want to print only one ballot style number, the first and last ballot style number in the range will be the same.
If you entered Y or P in the Display choices by program field on the Printer Control File screen, the screen will then look similar to the one shown on the next page with the settings from the Printer Control File displayed in the bottom window.

2. You may change these fields, if necessary.

Note: The only field that is not accessible is the Send ESC sequence field.

3. Do one of the following:

- Press F1 to continue and print the listing. A message indicating that the ballot styles are being processed will display on the screen.
- If you decide not to print, press ESC to exit to the Election Ballot Styles Menu

4. When the listing has printed, press ENTER to return to the Election Ballot Styles Menu.

A sample Ballot Style Listing is on the following page.
### Ballot Style Number 12

**Ballot Style 011 Security ID PPPP**

<table>
<thead>
<tr>
<th>Precinct No.</th>
<th>Precinct Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1 1Mayor</td>
</tr>
<tr>
<td>28</td>
<td>28 St Cloud</td>
</tr>
<tr>
<td>10</td>
<td>10 St Cloud</td>
</tr>
</tbody>
</table>

Total Number of Contests: 2

Total Number of Precincts: 4

---

### Ballot Style Number 1

**Ballot Style 011 Security ID PPPP**

<table>
<thead>
<tr>
<th>Precinct No.</th>
<th>Precinct Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>6 Mayor</td>
</tr>
<tr>
<td>18</td>
<td>18 St Cloud</td>
</tr>
</tbody>
</table>

Total Number of Contests: 2

Total Number of Precincts: 2
List Ballot Detail

The List Ballot Detail report can be useful in checking the ballot information. The report can be run for selected or all ballot styles. The following detail will appear on each report:

- Ballot style number
- Precinct numbers on this style
- Office numbers
- Party codes
- Candidate positions
- Rotations
- Column numbers

To list the ballot detail, type 09 at the Election Ballot Style Menu. A screen like the one shown below will display. The cursor will be positioned at the Enter selection field.

```
PE20A                   List Ballot Detail                  3PMSTC1

          01 = All ballot styles
          02 = Selected ballot styles
                  Enter = Return to menu

                  Enter selection: 0
```

1. Do one of the following:

- Type 01 to print all ballot styles. Your screen will look similar to the one shown on the next page with the settings from the Printer Control File displayed in the bottom window. Continue with Step 4.
- Type 02 to print a selected range of ballot styles. The cursor will move to the Include styles Field at the bottom of the screen. Continue with Step 2.
2. Enter the first ballot style number of the range you want to print and press ENTER if you do not fill the entire field. The cursor will move to the thru field.

Note: If you want to print only one ballot style, the first and last ballot style number in the range will be the same.

3. Enter the last ballot style number of the range you want to print and press ENTER if you do not fill the entire field.

If you entered Y or P in the Display choices by program field on the Printer Control File screen, the screen will then look similar to the one shown below with the settings from the Printer Control File displayed in the bottom window.

4. You may change these fields, if necessary.

```
PEZ900
List Ballot Detail
3PRWSTG1

[Table showing options 01, 02, Enter]

Enter selection: 1

Device: LPT1 (DISK, LPTn, COMm) 
Printer: L1 (Ln=Laser Pn=Line)
Orientation: F (P=Port L=Land)
Lines per page: 67 (59 67 73 96 110)
Send Esc sequence: Yes
F1=Continue with listing 
Esc=Exit to menu
```

Note: The only field that is not accessible is the Send Esc sequence field.

5. Press F1 to continue and print the listing. A message indicating that the ballot styles are being processed will display on the screen. If you decide not to print, press ESC to exit to the Election Ballot Styles Menu.

6. When the listing has printed, press ENTER to return to the Election Ballot Styles Menu.

A sample Ballot Detail Listing is on the following page.
CITY OF ANYWHERE USA
ELECTION MANAGEMENT SYSTEM

BALLOT DETAIL LISTING

ELECTION ID: REPORT - EL20A

BALLOT STYLE: 0001

DISTRICTS: ~~~~

<table>
<thead>
<tr>
<th>PRECINCT</th>
<th>SECURITY</th>
<th>LEFT</th>
<th>RIGHT</th>
<th>EMBEDDED</th>
<th>PRECINCT</th>
<th>SECURITY</th>
<th>LEFT</th>
<th>RIGHT</th>
</tr>
</thead>
<tbody>
<tr>
<td>0001</td>
<td>WASHINGTON 1B</td>
<td>0000</td>
<td>0025</td>
<td>CONCORD TOWNSHIP</td>
<td>0003</td>
<td>UNION SOUTH</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

------

0001-01 STRAIGHT PARTY

4 140 DEMOCRATIC PARTY

4 156 REPUBLICAN PARTY

0003 MAYOR

1 005 JOHN SEVERSON
1 006 BUTCH STAVRUM
1 007 JOHN HAMERLINCK
1 008 EDDIE EBACHER
1 009 CHUCK B. WINKELMAN
1 010 D. WM. "BUD" MURPHY
1 011 T/V

0005-01 COUNCIL AT LARGE

4 204 ROBIN WHITESIDE
4 220 BOB BIXBY
4 236 CHARLES HAMILTON KO
4 252 OWEN ZIMPEL
4 268 E. R. "WOODY" BISSE
4 284 STEPHEN B. LORE
4 300 LARRY MEYER
4 316 JOHN D. ELLENBECKER

CONTINUED FROM PREVIOUS COLUMN

9000

1 337 NUMBER OF SPOILED BALLOTS
1 338 NUMBER OF PERSONS REGISTERED
1 338 AT 7:00 A.M.
1 339 NUMBER OF NEW REGISTRATIONS AT THE
1 339 POLLING PLACE ON ELECTION DAY
1 340 NUMBER OF SIGNATURES ON
1 340 POLLING PLACE ROSTER
2 337 NUMBER OF ACCEPTED REGULAR
2 337 ABSENTEE BALLOTS
2 338 NUMBER OF ACCEPED FEDERAL
2 338 OVERSEAS ABSENTEE BALLOTS
2 339 NUMBER OF ACCEPTED
2 339 PRESIDENTIAL ABSENTEE BALLOTS
3 337 TOTAL NUMBER OF BALLOTS
3 337 COUNTED
3 338 TOTAL NUMBER OF BALLOTS
3 338 UNREAD
3 339 TOTAL NUMBER OF PERSONS
3 339 VOTING IN THE PRECINCT
<table>
<thead>
<tr>
<th>PRECINCT NO. NAME</th>
<th>LEFT SECURITY</th>
<th>RIGHT SECURITY</th>
<th>EMBEDDED SECURITY</th>
<th>NO. COUNTY</th>
<th>NO. VOTE CENTER</th>
<th>NO. BALLOT</th>
<th>BALLOT NO.</th>
<th>BALLOT STYLES</th>
</tr>
</thead>
<tbody>
<tr>
<td>0017 WASHINGTON 4D</td>
<td>006 UNION EAST</td>
<td>000-0000000000</td>
<td>000-0000000000</td>
<td>003 _ MAYOR</td>
<td>1 005 _ BUD BASS</td>
<td>2 156 _ REPUBLICAN PARTY</td>
<td>4 146 _ REPUBLICAN PARTY</td>
<td>4 001-01 _ STRAIGHT PARTY</td>
</tr>
</tbody>
</table>
Creating Ballot Styles by Party

In a closed primary election, you will need to create ballot styles according to party.

To access this option, type 10 in the Selection field of the Ballot style Menu. The screen will look like the one shown below.

1. Type 01 to create the ballot styles by party. (If you decide not to create at this point, press ENTER to return to the Ballot Styles Menu). Several messages indicating that the records are being processed will display on the screen.

<table>
<thead>
<tr>
<th>FE149</th>
<th>Create Party Ballot Styles</th>
<th>3FMMSTC1</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>01 = Create the styles</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Enter = Return to menu</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Enter selection:0_</td>
<td></td>
</tr>
</tbody>
</table>

2. The ballot styles will be created automatically. When they have been created, a message will display in the bottom section of the screen telling you how many styles have been created. When all ballot styles by party have been created, press ENTER to return to the Election Ballot Styles Menu.
Creating Ballot Styles by Precinct

After initially creating ballot styles, you MUST create the ballot styles by precinct. These files associate precinct number, ballot style number, and security codes.

The Create Ballot Style by Precinct option creates the ballot styles automatically. Any existing records will be deleted when this option is run. If security codes need to be changed, changes can be made manually using Change Ballot Style by Precinct (option 12 on the Election Ballot Styles Menu).

**WARNING:** Automatic create overrides any manual entries or corrections.

To reach the Create Precinct/Ballot File screen, type 11 at the Election Ballot Styles Menu. The screen will look like the one shown below with the cursor positioned at the **Enter selection** field. Instructions for this screen are on the following page.

1. Type 01 to create the ballot styles by precinct. (If you decide not to create at this point, press ENTER to return to the Ballot Styles Menu). Several messages indicating that the records are being processed will display on the screen.

   ![Screen 1](image)

   **01 = Create Precinct/Ballot file**
   **Enter = Return to menu**
   **Enter selection: 0**

2. When all ballot styles by precinct have been created, press ENTER to return to the Election Ballot Styles Menu.

3. Print a listing of the ballot styles by precinct (option 13 on the Election Ballot Styles Menu) and carefully proof them.

4. If you need to change specific security codes or enter them for the first time, use the Change Ballot Style by Precinct option (option 12 on the Election Ballot Styles Menu). Option 04 (Change Ballot Styles) may be used to make other changes and then option 11 must be run again to recreate ballot styles by precinct.
Note: The functions mentioned above in Steps 3 and 4 are discussed later in this chapter.

Change Ballot Style by Precinct

Use this option to manually change the ballot styles by precinct. The precinct/ballot files list the various ballot styles used by a single precinct. This option can also be used to delete existing precinct/ballot files.

WARNING: The ballot style by precinct file must always agree with the ballot styles.

To access this option, type 12 at the Election Ballot Styles Menu. The screen will look like the one shown below with the cursor positioned in the Precinct number field.

```
+---------------------------------+---------------------------------+----------------+
| PE010 166                      | Change Precinct/Ballot File     | 3PMGSTC1        |
| Precinct number:0               | Ballots                         | Left Right      |
| Ballot style:                   | Left Right                      | Security:       |
| Ballot type:                    | Mask:                           |                 |
| Security class:                 | Column:                         |                 |
| Column:                         | Start position:                 |                 |
| Number positions:               |                                |                 |
```

Instructions
Current field: Precinct number or Esc to exit
Previous value: 0

```
+---------------------------------+---------------------------------+----------------+
| PE10B                           | List Precinct/ballot styles     | 3PMGSTC1        |
|                                |                                |                 |
|                                | 01 = Run the listing            |                 |
|                                | Enter = Return to menu          |                 |

Enter selection:0
```
1. Enter the precinct number that needs to be changed. Press ENTER if you do not fill the entire field. The precinct name and the information previously entered or generated from the automatic create will display on the screen which will look like the one shown on the next page. The cursor will be positioned in the top position of the Left Security field.

2. Press ENTER to advance to the field(s) that need changing. If needed, press F6 to enter a security code in the appropriate field or use the space bar to delete a security code.

3. Press F1 to go to the next page or F2 to return to the previous page.

4. After making all needed changes, press the PAGE DOWN key to advance the cursor to the Selection field at the bottom of the screen.

5. Press ENTER to update the file and return to the Precinct number field; type 01 to reject the information entered and return to the Precinct number field; or type 02 to reject the information entered and exit to the Election Ballot Styles Menu.

List Ballot Styles by Precinct

After you have defined ballot styles by precinct, you should print a listing to check your work. The Precinct/Ballot Style Listing lists each precinct, the ballot styles that each precinct will use, the security codes, the party affiliations (if the election is a closed primary), and the districts in which the precincts will be voting.

To list the ballot styles by precinct, type 13 at the Election Ballot Style Menu. A screen like the one shown below will display. The cursor will be positioned in the Enter selection field.

1. Type 01 to run the listing.
If you entered Y or P in the **Display choices by program** field on the Printer Control File screen, the screen will then look similar to the one shown below with the settings from the Printer Control File displayed in the bottom window.

<table>
<thead>
<tr>
<th>PEISOB</th>
<th>List Precinct/ballot styles</th>
<th>3PWSTC1</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>01 = Run the listing</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Enter = Return to menu</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Enter selection: 1</td>
<td></td>
</tr>
</tbody>
</table>

| Device: LPT1 (DISK, LPTn, CONn) | Printer: Li (Ln=Laser Fn=Line) | Orientation: P (P=Port L=Land) | Lines per page: 67 (59 67 79 96 118) |
|                                 |                                |                               |                                        |
| Send Esc sequence: Yes         | Esc=Exit to menu               |                                |                                        |
| F1=Continue with listing       |                                |                                |                                        |

2. You may change these fields, if necessary.

   **Note:** The only field that is not accessible is the **Send Esc sequence** field.

3. Press F1 to continue and print the listing. A message indicating that the ballot styles are being processed will display on the screen. If you decide not to print, press ESC to exit to the Election Ballot Styles Menu.

4. When the listing has printed, press ENTER to return to the Election Ballot Styles Menu.

An illustration of the Ballot Style by Precinct Listing is shown on the following page.
<table>
<thead>
<tr>
<th>PRECINCT</th>
<th>STYLE</th>
<th>ID</th>
<th>PARTY</th>
<th>DISTRICTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>0001 ST CLOUD 1</td>
<td>1</td>
<td>PPPP</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0002 ST CLOUD 2</td>
<td>3</td>
<td>PPPP</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0003 ST CLOUD 3</td>
<td>5</td>
<td>PPPP</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0004 ST CLOUD 4</td>
<td>7</td>
<td>PPPP</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0005 ST CLOUD 5</td>
<td>9</td>
<td>PPPP</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0006 ST CLOUD 6</td>
<td>11</td>
<td>PPPP</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0007 ST CLOUD 7</td>
<td>2</td>
<td>PPPP</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0008 ST CLOUD 8</td>
<td>4</td>
<td>PPPP</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0009 ST CLOUD 9</td>
<td>6</td>
<td>PPPP</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0010 ST CLOUD 10</td>
<td>1</td>
<td>PPPP</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0011 ST CLOUD 11</td>
<td>3</td>
<td>PPPP</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0012 ST CLOUD 12</td>
<td>5</td>
<td>PPPP</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0013 ST CLOUD 13</td>
<td>7</td>
<td>PPPP</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0014 ST CLOUD 14</td>
<td>9</td>
<td>PPPP</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0015 ST CLOUD 15</td>
<td>11</td>
<td>PPPP</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0016 ST CLOUD 16</td>
<td>8</td>
<td>PPPP</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0017 ST CLOUD 17</td>
<td>10</td>
<td>PPPP</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0018 ST CLOUD 18</td>
<td>12</td>
<td>PPPP</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0019 ST CLOUD 19</td>
<td>1</td>
<td>PPPP</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0020 ST CLOUD 20</td>
<td>3</td>
<td>PPPP</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0021 ST CLOUD 21</td>
<td>5</td>
<td>PPPP</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0022 ST CLOUD 22</td>
<td>7</td>
<td>PPPP</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0023 ST CLOUD 23</td>
<td>9</td>
<td>PPPP</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0024 ST CLOUD 24</td>
<td>11</td>
<td>PPPP</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0025 ST CLOUD 25</td>
<td>3</td>
<td>PPPP</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0026 ST CLOUD 26</td>
<td>4</td>
<td>PPPP</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0027 ST CLOUD 27</td>
<td>6</td>
<td>PPPP</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
List Ballot Styles by Polling Place

This option is available only if you are using the Polling Place Mode. The Poll Place/Ballot Style Listing lists each Poll Place, the ballot style that each will use, the party affiliation (if the election is a primary), the districts and the security code.

To print a list of the ballot styles by polling place, type 14 at the Election Ballot Style Menu. A screen like the one shown will display. The cursor will be positioned in the Enter selection field.

```
01 = Run the listing
Enter = Return to menu
Enter selection: 0
```

1. Type 01 to run the listing.

If you entered Y or P in the Display choices by program field on the Printer Control File screen, the bottom WINDOW of the screen will then look similar to the one shown below with the settings from the Printer Control File displayed.

```
Device: LPT1 (DISK, LPTn, COMn) Printer: L1 (Ln=Laser Ph=Line)
Orientation: P (P=Port L=Land) Lines per page: 67 (59 67 79 96 118)
Send Esc sequence: Yes
F1=Continue with listing Esc=Exit to menu
```

2. You may change these fields, if necessary.

Note: The only field that is not accessible is the Send Esc sequence field.
3. Do one of the following:

- Press F1 to continue and print the listing. A message indicating that the ballot styles are being processed will display on the screen.
- If you decide not to print, press ESC to exit to the Election Ballot Styles Menu.

4. When the listing has printed, press ENTER to return to the Election Ballot Styles Menu.

An illustration of the ballot style listing by polling place is shown on the following page.
<table>
<thead>
<tr>
<th>POLL PLACE</th>
<th>PREC.</th>
<th>STYLE</th>
<th>ID</th>
<th>PARTY</th>
<th>DISTRICTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>0001 POLL 1 PRECINCT: 1</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0002 POLL 2 PRECINCTS: 3,4,5,6,8</td>
<td>4, 5, 7, 9, 11</td>
<td>0, 0, 0, 0, 0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0003 Poll 3 PRECINCT: 9</td>
<td>6</td>
<td>0</td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0004 POLL 4 PRECINCT: 7</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0005 POLL 5 PRECINCTS: 10,12,14</td>
<td>1, 3, 9</td>
<td>0, 0, 0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0006 POLL 6 PRECINCTS: 11,13,15</td>
<td>3, 7, 11</td>
<td>0, 0, 0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0007 POLL 7 PRECINCTS: 2,16,18,20</td>
<td>3, 8, 12</td>
<td>0, 0, 0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0008 POLL 8 PRECINCTS: 17,19,21,23,25</td>
<td>1, 3, 5, 9, 12</td>
<td>0, 0, 0, 0, 0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0009 POLL 9 PRECINCTS: 22,24,26,27</td>
<td>4, 6, 7, 11</td>
<td>0, 0, 0, 0</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Create Ballot Quantity File

Hardware Programming Manager allows you to create a ballot quantity file that shows how many ballots of each ballot style are needed for the election. This option is only available when the “Using Ballot Gen?” field is marked “Yes” in the Election Control File. The number of registered voters in each precinct is needed to calculate this information. Therefore, if you have not previously defined the number of registered voters in the Precinct Master, you cannot use this option.

The Create Ballot Quantity File option creates the ballot quantity file automatically. All previous ballot quantity files for this election will be deleted. If you have manually changed any quantities, a recreate will override manual changes. Changes can be made using the Change Ballot Quantity File, discussed in the next section.

You may also round the number of ballots needed up to the nearest 100 ballots or up to the nearest 50 ballots, if you wish. Doing this will generate a number that is slightly higher than the actual number of ballots needed. To reach the Create Ballot Quantity File Screen, shown below, type 16 at the Election Ballot Style menu. The cursor will be positioned in the Selection field. The Ballot Preparation Menu will appear.

1. To create the ballot quantity file, type 02. (If you decide not to create the file at this point, press Enter to return to the Ballot Style Menu).

2. Type 01 to create the ballot quantities, the cursor will go to the % Registered Voters field. Press Enter if you want to return to the Ballot Preparation menu without creating ballot quantities.
3. Enter either the percentage of registered voters expected to vote or the percentage of voters your state requires you to order ballots for. This can be 1% to 99%. Press Enter. The cursor will move to the Round up 100 field.

4. Type Y (Yes) if you want the number of ballots needed rounded up to the nearest 100. If not, press Enter. The cursor will move to the Round up 50 field.

5. Type Y (Yes) if you want the number of ballots needed rounded up to the nearest 50. If not, press Enter. A message will appear on the screen indicating that the file is being processed.

6. When the process is complete, press Enter to return to the Election Ballot Preparation Menu.

Changing the Ballot Quantity File

After you have created the ballot quantity file, the Change Ballot Quantity File option allows you to make changes to that file to provide for special situations.

To reach the Change Ballot Quantity File Screen, shown below, type 03 at the Election Ballot Preparation menu and press Enter. The cursor will be in the Ballot Style Number field.

Note: The only field that can be changed on this screen is the Qty field.
1. Enter the ballot style number for which the quantity needs to be changed. Press Enter if you do not fill the entire field. The corresponding information will appear on the screen, and the cursor will move to the Qty field.

2. Change the quantity of ballots needed for this ballot style and precinct. Press Enter. If more than one precinct's ballot quantity needs to be changed, press Enter to move from field to field. Press F9 to page forward or F10 to page back.

3. When all changes have been made, press PgDn to advance the cursor to the Selection field at the bottom of the screen. Note that if you make a correction to the last Qty field on the screen and press Enter, the cursor will automatically move to the Selection field.

4. Press Enter to update the record and return to the Ballot Style Number field, type 01 to cancel the update and return to the Ballot style number field, or type 02 to reject the information entered and exit to the Election Ballot Preparation menu.

**Listing Ballot Quantities by Ballot Style**

After you have created the ballot quantity file, you can print a listing of ballot quantities by ballot style. The List Ballot Quantities by Ballot Style option allows you to print ballot quantities for all ballot styles for the current election or for a selected group of ballot styles.

The Ballot Quantity Listing includes the ballot style number, security codes, ballot type, precinct numbers, quantity of ballots, and sequence numbers, if desired.

To list ballot quantities by ballot style, type 06 at the Election Ballot Preparation menu. The List Ballot Quantities Screen, shown below, will appear. The cursor will be positioned at the Selection field.
1. Do one of the following:
   - Type 01 to print ballot quantities for all ballot styles. The cursor will move to the Include Seq. No.'s field. Continue with step 4.
   - Type 02 to print ballot quantities for a selected range of ballot styles. The cursor will move to the Ballot style field. Continue with step 2.

2. Enter the number of the first ballot style in the range you want to print. Press Enter. The cursor will move to the Include seq. No.'s field.

3. Enter the last ballot style number in the range you want to print. Press Enter. The cursor will move to the Include seq. No.'s field.

4. Type Y (Yes) if you want sequence numbers to print on the listing. The cursor will move to the Include Precinct Names field.

5. Type Y (Yes) if you want to include the precinct names on this report; type C if you want to include the precinct names and print them continuously; or type N (No) if you do not want to include the precinct name. A message will appear on the screen indicating that the listing is being processed. The listing will begin to print.

6. When the listing has completed printing, press Enter to return to the Election Ballot Preparation menu.

Listing Ballot Quantities by Precinct

After you have created the ballot quantity file, you can print a listing of ballot quantities by precinct. The List Ballot Quantities by Precinct option allows you to print ballot quantities for all precincts for the current election or for a selected group of precincts.

The Precinct/Ballot Quantity Listing includes the precinct, ballot style number, Security code, ballot type, and quantity of ballots needed.

To list the ballot quantities by precinct, type 07 at the Election Ballot Preparation menu. The List Ballot Quantities by Precinct Screen, shown below, will appear. The cursor will be positioned at the Selection field.
1. Do one of the following:

- Type 01 to print ballot quantities for all precincts. A message will appear on the screen indicating that the listing is being processed. Continue with step 4.

- Type 02 to print ballot quantities for a selected range of precincts. The cursor will move to the Precinct field. Continue with step 2.

2. Enter the first precinct in the range you want to print. Press Enter if you do not fill the entire field. The cursor will move to the next field.

3. Enter the last precinct in the range you want to print. Press Enter if you do not fill the entire field. A message will appear on the screen indicating that the listing is in progress. The listing will begin to print.

4. When the listing has completed printing, press Enter to return to the Election Ballot Preparation menu.
Chapter 11: Final Preparations Menu

After you have completely defined an election, you MUST prepare the final version of the election setup. A completely defined election must include the following: Jurisdiction Master, Election Specifications Master, Political Parties, Heading text, Districts, Precincts, Contests, Candidates, Rotations (if any), Ballot Styles, and Ballot Styles by Precinct. Final preparation is based on previously defined information and is an automatic process that cannot be manually altered.

To reach the Final Preparations Menu, type 09 at the Election Management Menu. The screen will look like the one shown below with the cursor positioned at the Selection field.

![Menu Screen]

Selection: 0_ GENRI9BF
(01) Create - Final Election Database
(03) Create - Parameter File for PCM Cards
(05) Write - Precinct PCM Cards
(06) List - PCM Card Writing Status
(08) Change - PBC Telephone File
(09) List - PBC Telephone File
(11) Create - SSB Parameters
(12) Burn - SSB eprom
(14) Create - SPR Control File
(16) Create - File for V/R
Enter Exit from the Menu

Note: Option (14) displays only if using SPR. If using VR, option (16) will also display.

Note: The options on this screen will vary according to the equipment type that is specified on the Jurisdiction Master screen.

Refer to the following section for instructions on how to perform the final preparation procedures.

Create Final Election Database

This option creates the files that contain all of the basic election information. Those files may then be accessed by other programs to create files that apply only to the voting equipment that will be used. When this option is run, Hardware Programming Manager creates a subdirectory with the same name as the election (e.g., 3PMNSTC1) and puts the 00 files, the PBC files and the ACU.cfg file (if
applicable) in that subdirectory. To create the final database, follow the steps below after accessing the Final Preparations Menu.

1. Type **01**. The *Create Final Election Database* screen like the one shown below will display.

<table>
<thead>
<tr>
<th>PE081</th>
<th>Create Final Election Database</th>
<th>35MWSIC1</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>01 = Create final election database</strong>&lt;br&gt;<strong>Enter = Return to menu</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Enter selection:0</strong></td>
<td></td>
</tr>
</tbody>
</table>

2. Type **01** to create the final database. The automatic procedure will begin. (If you decide not to create at this point, just press ENTER to return to the Final Preparations Menu.)

3. When the process has completed, press ENTER to return to the Final Preparations Menu.

**WARNING:** If you make any changes to an election after performing the Final Preparation and AERO Create procedures, you must recreate the final election database, the appropriate precinct parameters, and the AERO files. Reburn only the affected PCM cards. If you do not re-create these files, the changes you made will not take effect.

Note: If no ballot styles by precinct have been created, the error message below will display.

**Model 100**

**Create Parameter File for PCM Cards**

After creating the final election database, you **MUST** create the parameter file for the PCM cards. This is an automatic procedure.
1. To reach the Create Parameter File screen, type 03 at the Election Final Preparations Menu. The screen will look like the one shown below with the cursor at the Enter selection field.

![Create Parameters Screen](image)

**Requested range of Polls:** 0-

Enter range of Polls or press enter to return to menu.

**Note:** If you entered Y in the Using Polling Place Mode field on the Hardware Programming Manager Control File screen, you will enter Polling Place numbers.

2. Enter the beginning and ending precinct or poll numbers for which to create the parameters. The system will create the parameters automatically.

3. When the process is complete, press ENTER to return to the Election Final Preparations Menu.
Write Precinct PCM Cards

Use this option to create the PCM cards.

1. To reach the Write PCM Cards screen, type 05 at the Election Final Preparations Menu. The screen will look like the one shown below with the cursor at the Requested range of Precincts/Polls field.

   PE33D   Write PCM Cards   3PMHSIC1

   Requested range of Polls:0___-

   Enter range of Polls or press enter to return to menu

2. Enter the beginning and ending precinct or poll numbers for which to write the PCM cards. The system will create the cards.

3. When the process is complete, press ENTER to return to the Election Final Preparations Menu.

List PCM Card Writing Status

After the cards have been created, print a listing and proof it carefully. This listing shows each precinct/poll number and name, whether the PCM card was created, and the date created or updated.
1. To print a PCM Card Writing Status report, type 06 in the Enter selection field on the Final Preparations Menu. The screen will look like the one shown below.

```
01 = Print prom-parameter status
Enter = Return to menu

Enter selection:0
```

2. Enter 01 to print the parameters.

A sample parameter listing is shown on the next page.
Change PBC Telephone File

When you enter this option the first time, the screen will look like the one shown below. If a file does exist, the screen will look similar to the one at the end of Step 2 on the next page. Enter the telephone numbers before creating the parameter file.

1. To change or set up the telephone file, type 08 in the Enter selection field on the Final Preparations Menu. The first time you choose this option, the screen will look like the one shown below. If you have already set up a file, the screen will look similar to the one shown after Step 4.

2. Enter the name of the telephone file; then enter a default telephone number to put in the file. If a name is not established, press ENTER. The screen will look similar to the one shown below.
3. Enter all default telephone numbers on this screen.

4. Press F2 to display the **Precinct/Poll** screen like the one shown below. The first default number that was added on the above screen will display for the first precinct/poll. All other default numbers will display at the bottom of this screen. All polls that were created on the Polling Place Master will display on this screen.

```
Poll  Telephone no.  Poll  Telephone no.  Poll  Telephone no.
  1    815 555-1214  2     3
  4
```

5. Press ENTER to move from poll to poll, or press F1 and enter the poll number for which you want to enter information. Then press the PLUS sign (+) and the number beside the telephone number you want entered for this precinct/poll.

6. Use F2 to go to the default screen to change default numbers. Pressing F2 again will return you to the Poll screen.

**List PBC Telephone File**

To print a listing of the default telephone numbers, type **09** at the **Election Final Preparations Menu**. The screen will look like the one shown below with the cursor positioned in the **Enter selection** field.
1. Type 01 to print the list by precinct/poll or 02 to print the list by telephone number.

A sample listing is shown on the next page
Model 550

If you are using the Model 550 only, you must go to option 01 on the main menu, Creation and Definition, and choose option 07, Change Jurisdiction Master. The screen will look similar to the one shown below.

Be sure that you select 550 in the Equipment type field and C in the System type field.

The Final Preparations menu will look like the one shown below.
Create Election Parameter File

1. After you have created the final database, select option 04, Create Election Parameter File. The screen will look like the one shown below.

   ![Image of Create Election Parameter File screen]

   Requested range of Polls: 0

   Enter range of Polls or press enter to return to menu

   the parameters. The system will create the parameters automatically.

2. Enter the beginning and ending precinct or poll numbers for which to create

3. When the process is complete, press ENTER to return to the Election Final Preparations Menu.

Create 550 Parameters

Use this option to create the parameters for the 550.

1. Select option 11 on the Final Preparations menu, Create 550 Parameters. The screen will look like the one shown below.

   ![Image of Create 550 Parameters screen]

   Press Enter to run the program or press Esc to return to menu
2. Press ENTER to create.

**Burn 550 EPROM**

1. Select option 12, Burn 550 PROM. The screen will look like the one shown below.

   ![Image of PE143 Write 550 EPROM]

   - Insert an erased 27C040 EPROM into programmer socket and press Enter or press Esc to return to menu.
   - When the EPROM has been successfully programmed, the screen will display the Master Menu. If the EPROM is not successfully programmed, follow the instructions on the screen.

2. Insert a 27C040 EPROM into the EPROM burner, and press ENTER when you are ready to burn. The program will run and return to the main menu when it is finished.
Model 100 and 550

If you are using both the Model 100 and the Model 550, you must go to option 01 on the main menu, Creation and Definition, and choose option 07, Change Jurisdiction Master. The screen will look similar to the one shown below.

Be sure that you select 100 in the Equipment type field and B in the System type field.

The Final Preparations menu will look like the one shown below.

Follow the directions for creating the parameter file for PCM cards and writing to the PCM cards on page 9-3 and 9-4.

Then follow the directions for creating the parameter file for the 550 and burning the EPROM on page 9-11 through 9-14.
Votronic

If you are using the Votronic or iVotronic, you must go to option 01 on the main menu, Creation and Definition, and choose option 07, Change Jurisdiction Master. The screen will look similar to the one shown below.

```
<table>
<thead>
<tr>
<th>PE001</th>
<th>Change Jurisdiction Master</th>
<th>JVM01</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jurisdiction title: CITY OF ANYWHERE USA</td>
<td></td>
<td></td>
</tr>
<tr>
<td>State: FL</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Equipment type: VTR</td>
<td></td>
<td></td>
</tr>
<tr>
<td>System type: P</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vote for selection: A</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vote for sequence: A</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vote for text: N/A PDR</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Districts</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Code</td>
<td>Title</td>
<td>Code</td>
</tr>
<tr>
<td>TYP</td>
<td>TOWNSHIP</td>
<td>CRY</td>
</tr>
<tr>
<td>SDN</td>
<td>SEDAN</td>
<td></td>
</tr>
</tbody>
</table>

Instructions

Current field: Two character State abbreviation
Previous value: FL
```

Be sure that you select VTR in the Equipment type field. The system will automatically enter P in the System type field. This may not be changed.

The Final Preparations menu will look like the one shown below.

```
MS-DOS Prompt - RUNCOBOL

HPM (3.53 06-08-91)  State of Rhode Island  Election Final Preparations Menu  06-13-91
ME806  02:19 pm

Selection: A  GENRI98F
( 01 ) .......... Create - Final Election Database
( 03 ) .......... Create - Ballot Data Files for PEBs
( 05 ) .......... Load - Ballot Data to PEBs
( 06 ) .......... List - PEB Download Status
( 14 ) .......... Create - SPR Control File
( 16 ) .......... Create - File for V/R
Enter .......... Exit from the Menu
```
Create Ballot Data Files for PEBs

This option calls the MAKEBIN program and uses the BALnnnn.pxt files to make the BALnnnn.bin files.

1. After you have created the final database, select option 03, Create Ballot Data Files for PEBs. The screen will look like the one shown below.

2. Enter the beginning and ending number in the range of polls for which you want to create the parameter file. The screen will then look similar to the one shown below.
Load Ballot Data to PEBs

This option calls the VIO program and loads the BALnnnnn.bin file to the Supervisor PEB.

1. Select option 05, Load Ballot Data to PEBs. The screen will look like the one shown below.

![Screen 1]

2. Enter the beginning and ending number in the range of polls for which you want to create the parameter file.

3. Enter the number of the Com port you are using (1-4). The screen will look like the one below.

![Screen 2]

**Notes:**
- Press Enter to return to the menu.
- Enter = Respond to a PEB request.
List PEB Download Status

After the ballot data has been downloaded to the PEBs, print a listing and proof it carefully. This listing shows each precinct/poll number and name, whether the information was downloaded, and the date.

1. To print a Download Status report, type 06 in the Enter selection field on the Final Preparations Menu. The screen will look like the one shown below.

<table>
<thead>
<tr>
<th>PEB#1</th>
<th>List From Burner Status</th>
<th>3PMNSTC1</th>
</tr>
</thead>
</table>

01 = Print prom-parameter status  
Enter = Return to menu

Enter selection: 0_

2. Select 01 to continue and print the report.

The report will look similar to the PCM status report.

Create SPR Control File

This option displays if you have entered Y in the Using SPR field on the Hardware Programming Manager Control File. The file will have the election name with an SPL extension (i.e., 3PMNSTC1.SPL).
To access this option, type 14 in the Enter selection field of the Final Preparations Menu. The screen will look like the one shown below.

1. Enter 01 to create the file. The screen will look like the one shown below.

2. Enter the District code used for SPR assignment. This is the code you entered on the Jurisdiction Master screen in the Districts section. This district must be included on any precincts that are using SPR's as it will determine which precincts each SPR will be expecting. You may leave this field blank if you are not assigning an SPR district code. The file will be created automatically.

If you have assigned an SPR district code and there are unassigned precincts, the system will ask if it should include the unassigned precincts in SPR 0001. Answer Y if all unassigned precincts should be included in SPR 0001 or N if they should not be included.

The .SPL file will contain eight numbers and the precinct name on each line. The eight numbers are the SPR district number and the precinct number. For example, if SPR district 0001 is assigned to precinct 0001 and SPR district 0002 is assigned to precincts 0003-0006 and 0008, the entries in the SPR file would be as follows:

```
SPR number
---
Precinct number
00010001WASHINGTON 1B
00020003WASHINGTON 1D
00020004WASHINGTON 1E
00020005WASHINGTON 2A
00020006WASHINGTON 2C
00020008WASHINGTON 3A
```

SPR 0001 will be expecting results from precinct 0001 only, and SPR 0002
will be expecting results from precincts 0003, 0004, 0005, 0006 and 0008.

Create File for VR

This option allows Voter Registration customers to create ballot information, such as ballot IDs and ballot colors, from Hardware Programming Manager input data. This program facilitates the keeping of voting history records in the Voter Registration System software.

1. To access this option, enter 16 at the Final Preparations Menu. A screen like the one shown below will display.

<table>
<thead>
<tr>
<th>PE889</th>
<th>Create data for U/R</th>
<th>SPW81C1</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Create the U/R data</td>
<td>Enter = Exit to menu</td>
</tr>
<tr>
<td>Enter selection: 0_</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

2. Type 01 to create the VR data or press ENTER to exit without creating the VR data.
Appendix A - Error Messages

**AERO**

Error: AERO files do not need to be created
Cause: Indicates that the AERO files have already been created and no changes have occurred that will affect them. This is merely a warning, and you may continue if you believe it is necessary.

Error: AERO files need to be created
Cause: AERO files have not been created for the election or changes have occurred which make it necessary to recreate them. Run option 15 on the Final Preparations Menu in Hardware Programming Manager.

Error: Final database & AERO need to be created
Cause: Your final election database and AERO files have not been created, or changes have occurred that require they be recreated.

Error: Invalid AERO selection
Cause: A selection made to describe the type of AERO you are using is not one of the available ones. Check the available types listed on the screen and reenter.

**BACKUP, RESTORE, DELETE**

Error: Error - Backup failed
Cause: The election files you requested be backed up were not! Usually a more detailed error message is also displayed. Refer to that message.

Error: Error - Diskette not blank!
Cause: You have loaded a non-blank diskette in your A: drive. The utility invoked requires that you use blank diskettes. Rerun the utility using blank formatted diskettes.

Error: Error - Restore failed!
Cause: The election files you requested be restored were not! Usually a more detailed error message is also displayed. Refer to that message.
Error: Election ID required
Cause: An ID is needed to identify an election. Enter the existing election ID or one you wish to create or backup.

Error: Invalid backup specified
Cause: A selection made to set the method of backup you wish to use is not one of the available ones. Check the available methods listed on the screen and re-enter.

**BALLOT ID**

Error: Not a valid ballot ID
Cause: The ballot ID entered is not among the valid ones. Choose a valid one and retry.

**BALLOT POSITION**

Error: Candidate not found for S/A
Cause: When using New York style cross endorsement, you have entered a ballot position in the "same as" field, that does not already appear as the primary ballot position for a cross-endorsed candidate.

**BALLOT QUANTITY**

Error: Cannot round by both 50 and 100
Cause: When creating ballot quantity file, options are to round by either 50 or 100 and you have entered a Y in both selections. Choose between them, and space out the appropriate Y.

**BALLOT STYLE**

Error: Ballot style is not on file
Cause: You have entered a ballot style number that is not on file. Recheck your entry and try again.

Error: Ballot style number must not be zero
Cause: You have entered zero for a ballot style number. Valid ballot style numbers are 1 through 9999. Enter the appropriate number and press [Enter].

Error: Warning! Contest is not on any Ballot Style. Enter to Acknowledge
Cause: When creating your final election database, this message flags any contest on the contest file that does not appear on any ballot style. Add it to the right ballot style or delete the contest.
CERTIFICATION

Error: Selected format is not on file
Cause: The format you have selected for your certification report does not exist. Choose one already on file or create a new one.

Error: Selected message is not on file
Cause: The message you have selected for your certification report does not exist. Choose one already on file or create a new one.

Error: System type change—review Heading and Certification Messages
Cause: A change from “C” (Central count) to another count type or vice versa has caused a change to the available area for Heading and Certification Messages. These text areas should be displayed and updated, if necessary.

Error: Warning—Heading and Certification Messages may require update
Cause: A requested copy or merge of election data has caused a change to the available area for Heading and Certification Messages. These text areas should be displayed and updated, if necessary.

Error: Number of candidates must be between two and six
Cause: For entering certification formats, the number of candidates that will fit on a page is limited to between two and six.

CONTESTS AND CANDIDATES

Error: ?? ??
Cause: You entered zero for a contest number. Valid contest numbers are 1 through 9999. Enter the appropriate contest number and press [Enter].

Error: 9999 and 9999 both pointing to ballot position-999
Cause: Two contests are pointing to the same ballot position. Check validity and change the appropriate ballot position in Hardware Programming Manager.

Error: Ballot position required
Cause: A ballot position entry is required for each candidate entered.
Error: Candidate not found for S/A
Cause: When using New York style cross endorsement, you entered a ballot position in the “same as” field, that does not appear as the primary ballot position for a cross-endorsed candidate.

Error: Column number required
Cause: A ballot position value has been entered without a column number. Enter the column number or blank the ballot position.

Error: Contest 9999 Not on absentee file
Cause: The contest number shown is not one of those on your absentee file. Contest must be added in order to use it.

Error: Contest is not on current election file
Cause: The contest number requested is not on the current Hardware Programming Manager file. Make another selection or add that contest to your current file.

Error: Contest is not on file
Cause: The contest number requested in not on file. Choose another contest or add that contest to your file.

Error: Contest must be rotated
Cause: For jurisdictions that rotate contests by district; a district has been entered by which to rotate a specific contest, but you have not requested that contest be rotated. Enter a Y to rotate.

Error: Contest not found or not regular type
Cause: Contest number requested from the regular contest file maintenance screen is not a regular type contest. Go to the appropriate file maintenance screen or select another contest number.

Error: Contest number 9999 is not a regular contest type
Cause: The contest number requested from the regular contest file maintenance screen is not a regular type contest. Go to the appropriate file maintenance screen or select another contest number.

Error: Contest number 9999 is not on file
Cause: The contest number requested is not on file. Choose another contest or add that contest to your file.
Error: Contest number must be greater than zero
Cause: You have entered zero for a contest number. Valid contest numbers are 1 through 9999. Enter the appropriate number and press [Enter].

Error: End candidate less than begin candidate
Cause: When entering a range of candidates, the ending candidate number must be greater than the beginning candidate number.

Error: End contest less than begin contest
Cause: When entering a range of contests, the ending contest number must be greater than the beginning contest number.

Error: Enter candidate name for ballot position
Cause: For each ballot position entered, a candidate name is required. Enter the appropriate candidate name in the field provided.

Error: Hyphen space (-) must precede text
Cause: When entering ballot counter text, the first two characters must be a hyphen (-) and a space (.). You may then continue with whatever descriptive text you require.

Error: Increment must not be zero
Cause: When renumbering contests, the number you wish to increment the new contest numbers by, must be a value between 1 and 99.

Error: Invalid candidate
Cause: A candidate number has been selected that does not agree with the candidates that exist in the contest you have specified. Check the candidates in that contest and enter one of those.

Error: Invalid candidate number
Cause: A candidate number has been selected that does not agree with the candidates that exist in the contest you have specified. Check the candidates in that contest and enter one of those.

Error: Invalid contest
Cause: A contest number has been selected that does not exist. Check the number you have entered, and re-enter it correctly.
Error: Invalid contest/candidate combination
Cause: Contest and candidate entries made do not agree. Check the contest information and enter these numbers correctly.

Error: Invalid range of contests entered
Cause: The range of contests entered was invalid, or was not entered correctly. Try again.

Error: Must be print-only type contest record
Cause: You are trying to access a contest that is not a print-only type from the print-only contest file maintenance screen. Change to the correct file maintenance screen or enter a print-only contest.

Error: Must be regular contest type record
Cause: You are trying to access a contest not a regular type from the regular contest file maintenance screen. Change to the correct file maintenance screen or enter a regular contest number.

Error: Must be special ballot counter type record
Cause: You are trying to access a contest that is not a ballot counter from the ballot counter file maintenance screen. Change to the correct file maintenance screen or enter a ballot counter number.

Error: Must be statistics contest type record
Cause: You are trying to access a contest that is not a statistics contest from the statistics file maintenance screen. Change to the correct file maintenance screen or enter a print-only contest.

Error: Must enter description of ballot counter
Cause: A description of each ballot counter entered is required.

Error: Must use LIT to print text on report
Cause: If you wish to use a print-only contest to print text on a report, the literal type must be LIT.

Error: Not a ballot counter type contest!
Cause: You are trying to access a contest that is not a ballot counter type from the ballot counter file maintenance screen. Change to the correct file maintenance screen or enter a ballot counter number.
Error: Not a print-only contest!
Cause: You are trying to access a contest that is not a print-only type from the print-only contest file maintenance screen. Change to the correct file maintenance screen or enter a print-only contest.

Error: Not a valid contest number
Cause: The contest number entered is not on file. Choose another contest and retry or add the contest to the file.

Error: Not a valid counter type for this election
Cause: The counter type chosen is not one of those allowable for this election type. Choose another or change your election type.

Error: Not the proper type!
Cause: You are trying to access a contest that is not a regular type from the regular contest file maintenance screen. Change to the correct file maintenance screen or enter a regular contest number.

Error: Only valid for new contest
Cause: Entered “PRC” in the District code and spaces in the District number for a previously entered contest. The use of the “PRC” and spaces in the district number is reserved for new contest entry.

Error: Print type must be PRC, CAN, CUM, or spaces
Cause: For Print-only contests, PRC refers to the Precinct report, CAN the canvass report, CUM the cumulative report and spaces are a combination of reports.

Error: Print type must be LIT (or TOP or TPP)
Cause: Print-only contest types are: LIT to print text at the next position on device tapes or on reports; TOP to skip to a new column on reports; TPP to cause a page break on reports only.

Error: Selection cannot be used with PRC, CUM or CAN
Cause: The district selection field on the print-only contest cannot be used in conjunction with the precinct report, canvass report or cumulative report. Enter blanks in one or the other field.

Error: Straight party contest 9999 cannot be created
Cause: When renumbering contests, the contest number displayed is an existing straight party contest, and cannot be duplicated. Check your current straight parties when you have finished renumbering and adjust.
Error: Straight party contest number must not be zero
Cause: Zero has been entered for a straight party contest number. Valid range is 1 through 9999. Enter one of these.

Error: These contests will be deleted Do you wish to continue? (Y,N):
Cause: When renumbering contests, if you have left any contest(s) out of the ranges on the screen, the system will warn you that these will be deleted. Enter N to prevent losing these contests.

Error: Votes allowed must be greater than zero
Cause: The number of votes allowed in a contest range from 1 through 99. Enter a number from this range.

DATABASE

Error: Final database & AERO need to be created
Cause: Your final election database and AERO files have not been created, or changes have occurred for which they need to be recreated.

Error: Final database does not need to be created
Cause: Your final database has already been created and no changes have occurred that make it necessary to recreate it. This is merely a warning; you can continue if you feel it is necessary.

Error: Final database needs to be created
Cause: Your final database file has not been created, or changes have occurred that make it necessary to recreate it.

Error: Format selection required for request
Cause: It is necessary to select a format number to continue this function.

Error: Read error - Database - Key =
Cause: A read error has occurred reading the database file. Call ES&S support with specific information regarding the function you were trying to perform.

Error: Read error - Elec-cntl-rec Stat = XXPress [Enter] to exit
Cause: A read error has occurred reading the Hardware Programming Manager Control file. Call ES&S support with specific information regarding the function you were trying to perform.
Error: **Warning! Contest 9999 not on Cross Reference File Enter to Acknowledge**

Cause: When creating your final election database, this message flags any contest on the contest file that does not appear on any ballot style. Add it to the right ballot style or delete the contest.

Error: **Warning! Contest is not on any Ballot Style. Enter to Acknowledge**

Cause: When creating your final election database, this message flags any contest on the contest file that does not appear on any ballot style. Add it to the right ballot style or delete the contest.

Error: **Warning: no precinct ballot styles exist. Enter to acknowledge**

Cause: When creating your final election database, this message indicates failure to execute the step from Ballot Style Menu that creates Ballot Style by Precinct. Enter Ballot Style Menu and execute the required option.

**DIF**

Error: **DIF number must be greater than zero**

Cause: You have entered zero for a district identifier number. Valid district identifier numbers are 1 through 9999. Enter the appropriate number and press [Enter].

**DISTRICT**

Error: **District already on file**

Cause: The district you are attempting to add is already on file. Choose another.

Error: **District code invalid!**

Cause: The district code you are attempting to enter is not on the jurisdiction file. Select another district code, or add one to your jurisdiction file in Hardware Programming Manager.

Error: **District code must be entered**

Cause: The district code is required. Enter the appropriate district code in this field.

Error: **District not on control file**

Cause: The district code you are attempting to enter is not on the jurisdiction file. Select another district code, or add one to your jurisdiction file in Hardware Programming Manager.

Error: **District number must be entered**

Cause: The district number is required. Enter the appropriate district number in this field.
Invalid district

A district has been entered that does not exist on file. Check the available district entries and enter one of those, or add that district to your file.

Invalid district code

A district code has been entered that does not exist on the Jurisdiction Master. Enter another district code, or add that district code to your Jurisdiction Master.

Entered "PRC" in the District code and spaces in the District number for a previously entered contest. The use of the "PRC" and spaces in the district number is reserved for new contest entry.

PRC reserved by System to define precincts

You may not use PRC as a district code. Hardware Programming Manager uses that code to define precincts. Enter another code.

Selection can't be used with PRC, CUM or CAN

The district selection field on the print-only contest cannot be used in conjunction with the precinct report, canvass report or cumulative report. Enter blanks in one or the other field.

Too many Precincts

When using the automatic district create this message will appear if too many precincts are encountered to be put on any one district.

ELECTION FILE

*** Election file error: FILENAME *** File does not exist due to improper RENAME or DELETE. Another election MUST be selected. Press [Enter] to select another election

The Hardware Programming Manager current specified election file does not exist anymore. The instructions on the screen will guide you through selecting another election to replace the current one.

*** Election file Error: filename *** File status is XX. Press [Enter] to acknowledge.

An I/O error has occurred, and the program cannot continue. If you cannot determine the cause, call ES&S support with specific information about what you were attempting to do.
Error: *** Election file error: filename *** File is corrupt due to improper power down procedures. File recovery procedure MUST be executed. Press [Enter] to recover the file.

Cause: Your PC was powered down while the Hardware Programming Manager file was open. The instructions on the screen will guide you through recovering the corrupt file.

Error: Current directory has no election files. Press [Enter] to acknowledge.

Cause: You are attempting to select another election to work on, where no more exist.

Error: Deleting current election

Cause: Warning that you are attempting to delete the election you are currently working on. You will not be allowed to continue. Change to another election, and retry.

Error: Drive letter required

Cause: A drive letter is needed. Enter the drive letter on which the file currently exists or on which you wish the file to exist.

Error: Election file delete error. Press [Enter]

Cause: An error occurred when you were attempting to delete a record from an election file. If you cannot determine the cause, call ES&S support for assistance.

Error: Election file read error. Press [Enter]

Cause: An error occurred when you were attempting to read a record from an election file. If you cannot determine the cause, call ES&S support for assistance.

Error: Election file rewrite error. Press [Enter]

Cause: An error occurred when you were attempting to rewrite a record to an election file. If you cannot determine the cause, call ES&S support for assistance.

Error: Election ID required

Cause: An ID is needed to identify an election. Enter the existing election ID or one you wish to create or backup.

Error: Election is not on file

Cause: The election you have requested is not on file. Select another election.

Error: Election name already exists

Cause: You are attempting to create an election file that already exists. Select another election ID.
Error: Election requested already exists
Cause: You are attempting to create an election file that already exists. Select another election ID.

Error: Election requested is not available
Cause: The election you requested is not on file. Select another election.

Error: Election requested not found
Cause: The election you have requested is not on file. Select another election.

Error: Increment must not be zero
Cause: When renumbering contests, the number you wish to increment the new contest numbers by, must be a value between 1 and 99.

Error: Invalid color entered
Cause: The selection made to change your screen color is invalid. Check the available colors listed on the screen and re-enter one of those.

Error: Invalid drive letter
Cause: The drive letter entered does not exist on your PC system. Enter a drive letter available.

Error: Invalid election type
Cause: The election type entered is invalid. Check the list of available election types on the screen and enter one of those.

Error: New election ID is required
Cause: When creating a new election, you must enter an ID by which to call the election.

Error: Party record missing on new file
Cause: A new election file was created that does not contain a party master record. Copy one from a previous file or create a new one.

FILENAME

Error: FILENAME already contains XXXXXXXXX [Enter]=Override previous record 01=Bypass record
Cause: In a file merge, the record you are trying to merge into a new file, already exists in that file. Enter to write over the existing record. Type 01 to leave the existing record as it was.
Error: FILENAME does not contain XXXXXXXX record [Enter]=Bypass entry/continue 01=Do not continue

Cause: In a file copy or merge, the record you are trying to copy or merge does not exist in the source file. Press [Enter] to bypass that record type and continue the update or type 01 to stop processing.

Error: File:FILENAME Error #: Duplicate key

Cause: An attempt has been made to write a record with an already existing record key. Call ES&S support with specific information as to the function you were trying to perform.

Error: File:FILENAME Error #:04 Wrong length record

Cause: An attempt has been made to access a record with a different length than defined. Call ES&S support with specific information as to the function you were trying to perform.

Error: File:FILENAME Error #:10 Read past end-of-file

Cause: An attempt has been made to read past the end of a file. Call ES&S support with specific information as to the function you were trying to perform.

Error: File:FILENAME Error #:21 Invalid key sequence

Cause: An invalid prime key sequence exists in a keyed file. Call ES&S support with specific information as to the function you were trying to perform.

Error: File:FILENAME Error #:22 Duplicate record

Cause: An attempt has been made to write a record with an already existing record key. Call ES&S support with specific information as to the function you were trying to perform.

Error: File:FILENAME Error #:23 Not on file

Cause: An attempt has been made to read a record that is not on file. Call ES&S support with specific information as to the function you were trying to perform.

Error: File:FILENAME Error #:24 No more disk space

Cause: An attempt has been made to create or write a file, when there is no more disk space available. Call ES&S support for advice on how to remove unneeded files from your disk, or acquire more disks.

Error: File:FILENAME Error #:30 Not on line

Cause: A serial or parallel device, such as a printer or MemoryPack burner is not on line, or ready for use. Check the specific device you are trying to use for power, securely attached cables, etc.
Error: File:FILENAME  Error #:34 No more disk space
Cause: An attempt has been made to create or write a file, when there is no more disk space available. Call ES&S support for advice on how to remove unneeded files from your disk, or acquire more disks.

Error: File:FILENAME  Error #:35 File does not exist
Cause: An attempt was made to open a file that does not exist. Call ES&S support with specific information as to the function you were trying to perform.

Error: File:FILENAME  Error #:37 Wrong file type
Cause: An attempt was made to access a file with a file type other than that defined. Call ES&S with specific information as to the function you were trying to perform.

Error: File:FILENAME  Error #:38 File locked
Cause: A file you are trying to access is currently locked by another user. Retry accessing the file. If unsuccessful, call ES&S for assistance.

Error: File:FILENAME  Error #:39 Wrong type or length
Cause: An attempt was made to access a file with a type or length other than that defined. Call ES&S with specific information as to the function you were trying to perform.

Error: File:FILENAME  Error #:41 File already open
Cause: An attempt was made to open a file that was already opened. Call ES&S with specific information as to the function you were trying to perform.

Error: File:FILENAME  Error #:42 File not open
Cause: An attempt was made to read or write to a file that is not open. Call ES&S with specific information as to the function you were trying to perform.

Error: File:FILENAME  Error #:43 Rewrite without reading
Cause: An attempt was made to rewrite a record without having read that record. Call ES&S with specific information as to the function you were trying to perform.

Error: File:FILENAME  Error #:44 Rewrite/record length
Cause: The length of the record you are trying to write is different than that defined. Call ES&S with specific information as to the function you were trying to perform.

Error: File:FILENAME  Error #:46 Read/no curr. file pos.
Cause: An attempt has been made to read a record when no file position is defined. Call ES&S with specific information as to the function you were trying to perform.
Error: File:FILENAME  Error #:47 Not open or wrong mode
Cause: An attempt has been made to access a file that is not open or open in the wrong mode. Call ES&S with specific information as to the function you were trying to perform.

Error: File:FILENAME  Error #:48 Not open or wrong mode
Cause: An attempt has been made to access a file that is not open or open in the wrong mode. Call ES&S with specific information as to the function you were trying to perform.

Error: File:FILENAME  Error #:49 Not open or wrong mode
Cause: An attempt has been made to access a file that is not open or open in the wrong mode. Call ES&S with specific information as to the function you were trying to perform.

Error: File:FILENAME  Error #:90 Open mode conflict
Cause: An operation has been attempted that conflicts with the open mode of the file. Call ES&S with specific information as to the function you were trying to perform.

Error: File:FILENAME  Error #:91 File not open
Cause: An operation has been attempted on an unopened file. Call ES&S with specific information as to the function you were trying to perform.

Error: File:FILENAME  Error #:92 File already open
Cause: An operation has been attempted to open a file already opened. Call ES&S with specific information as to the function you were trying to perform.

Error: File:FILENAME  Error #:93 File cannot be opened
Cause: An attempt was made to open a file that cannot be opened. Call ES&S with specific information as to the function you were trying to perform.

Error: File:FILENAME  Error #:94 Wrong file organization
Cause: An operation was attempted on a file with the wrong file organization. Call ES&S with specific information as to the function you were trying to perform.

Error: File:FILENAME  Error #:95 Wrong file type
Cause: An operation was attempted on a file type other than that defined. Call ES&S with specific information as to the function you were trying to perform.
Error: File:FILENAME  Error #:96 Read/no curr. file pos.
Cause: A read was attempted when no current file position was defined. Call ES&S with specific information as to the function you were trying to perform.

Error: File:FILENAME  Error #:97 Wrong length record
Cause: An operation was attempted on a record with a length other than that defined. Call ES&S with specific information as to the function you were trying to perform.

Error: File:FILENAME  Error #:98 File probably corrupted
Cause: The file you are attempting to access is probably corrupt. This may be due to improper power down procedures when your election file was open. Call ES&S support for assistance with recovery procedures.

Error: File:FILENAME  Error #:99 Record is locked
Cause: A record you are trying to access is locked by another user. Retry accessing the record. If unsuccessful, call ES&S for assistance.

MERGING

Error: Error encountered while merging
Cause: While merging results together, an error has occurred. The contents of the two files must match in order to merge successfully.

Error: Election files cannot be the same
Cause: When performing a copy or merge function, the source file and the object file cannot be the same file. Enter two different election file ID's.

Error: No jurisdiction records exist
Cause: When merging from another election, the jurisdiction record you requested does not exist on the prior file and cannot therefore be copied.

Error: Prior election ID required
Cause: When copying or merging from another election, the prior election ID must be supplied.

Error: Warning - Heading and Certification Messages may require update
Cause: A requested copy or merge of election data has caused a change to the available area for Heading and Certification Messages. These test areas should be displayed and updated, if necessary.
Error:  FILENAME already contains XXXXXXXX [Enter]=Override previous record 01=Bypass record

Cause:  In a file merge, the record you are trying to merge into a new file, already exists in that file. Enter to write over the existing record. Type 01 to leave the existing record as it was.

PARTY

Error:  Device code already used!

Cause:  You entered a device code to designate a political party and that device code was already used for another political party. Choose another device code.

Error:  Error reading party definition record

Cause:  An error has occurred when attempting to read the party definition record in a specific file. Check that record is in the file you are trying to use. If you can not determine the cause, call ES&S.

Error:  Invalid party entry

Cause:  A party code has been entered that is not defined on your political party master. Correct your party entry, or add that party to your party master.

Error:  Maximum number of parties reached

Cause:  Twenty parties can be defined. You have already defined twenty and therefore, are at the limit.

Error:  Party cannot be used with PRC, CUM or CAN

Cause:  A party code was entered when you defined the output of a literal as being to the Precinct, Canvass or Cumulative IV-C report. This combination is not valid. Erase one or the other.

Error:  Party can't be used with PRC, CUM or CAN

Cause:  A party code has been entered when you have defined the output of a literal as being to the Precinct, Canvass, or Cumulative IV-C report. This combination is not valid. Erase one or the other.

Error:  Party code is not on file

Cause:  A party code has been entered that has not previously been defined. Change the party code here, or enter it on the political party master.
**Error:** Party has not been defined

**Cause:** A party code has been entered that has not previously been defined. Change the party code here, or enter it on the political party master.

**Error:** Party must be entered for this candidate

**Cause:** In a general election, a party code is required for every candidate entered. Enter a previously defined party code.

**Error:** Party record missing on new file

**Cause:** A new election file has been created that does not contain a party master record. Copy one from a previous file or create a new one.

**PRECINCT**

**Error:** ?????

**Cause:** Indicates an invalid entry wherever the valid entries already appear on the screen. Choose one of the entries shown.

**Error:** 9999 - Not on file! cannot continue

**Cause:** Precinct is not on file. Cannot proceed with current function. Check Hardware Programming Manager file for missing precinct.

**Error:** 9999 - Precinct not on file Press [Enter] to acknowledge

**Cause:** Precinct requested is not on file. Choose another precinct, or check Hardware Programming Manager file for missing precinct.

**Error:** Already reset

**Cause:** You have requested to reset totals that have already been reset. It is not necessary to reset them again.

**Error:** High cannot be less than low

**Cause:** In a range entry, it is necessary that the high-range entry be greater than the low-range entry.

**Error:** Hyphen space (-) must precede text

**Cause:** When entering ballot counter text, the first two characters must be a hyphen (-) and a space ( ). You may then continue with whatever descriptive text you require.
Error: Increment must not be zero
Cause: When renumbering contests, the number you wish to increment the new contest numbers by, must be a value between 1 and 99.

Error: Invalid precinct
Cause: A precinct has been entered that is not defined in your precinct file. Correct your precinct entry, or add that precinct to your precinct file.

Error: Invalid precinct number
Cause: A precinct has been entered that is not defined in your precinct file. Correct your precinct entry, or add that precinct to your precinct file.

Error: Invalid range
Cause: When entering a range, the first entry must be lower than the second entry. Re-enter the range correctly.

Error: Invalid range entered
Cause: When entering a range, the first entry must be lower than the second entry. Re-enter the range correctly.

Error: Less than begin
Cause: In a range entry, the second number entered is less than the first one. Re-enter the range correctly.

Error: No Precinct Records
Cause: No precinct records exist on current election file.

Error: No precincts found for selection: XXX-XXXX XX Enter=Continue Escape=Exit program
Cause: When creating rotation, no precincts were found for the district displayed. Press [Enter] to continue or press [Esc] to stop and check district and precinct files for district displayed.

Error: Not a valid precinct
Cause: The precinct number entered is not on file. Choose another precinct and retry or add the precinct to the file.
Error: Not a valid precinct number
Cause: The precinct number entered is not on file. Choose another precinct and retry or add the precinct to the file.

Error: Precinct 9999 is not on file
Cause: The precinct number described is not on file. Select another precinct number or add that precinct to the file.

Error: Precinct is not on file
Cause: The precinct number entered is not on file. Select another precinct number or add that precinct to the file.

Error: Precinct number must not be zero
Cause: Zero has been entered for a precinct number. Valid precinct numbers range from 1 through 9999. Re-enter a number from this range.

Error: Precinct requested is invalid
Cause: The precinct number entered is not on file. Select another precinct number or add that precinct to the file.

Error: Too many Precincts
Cause: When using the automatic district create this message will appear if too many precincts are encountered to be put on any one district.

POLLLING PLACE

Error: Poll number must not be zero
Cause: Zero has been entered for a poll place number. Valid poll place numbers range from 1 through 9999. Re-enter a number from this range.

Error: Poll requested is invalid
Cause: A poll place number has been entered that does not exist on file. Enter a new poll place number here, or add the poll place number to the file.

GENERAL

Error: ?????
Cause: Indicates an invalid entry wherever the valid entries already appear on the screen. Choose one of the entries shown.
Error: 99 - Not a valid Selection
Cause: On a menu screen where specific selections are available, the selection you chose was not one of the available selections. Choose from the selections displayed on the menu.

Error: AERO files do not need to be created
Cause: Indicates the AERO files were created and no changes have occurred that will affect them. This is merely a warning, and you may continue if you believe it is necessary.

Error: AERO files need to be created
Cause: AERO files are not created for the election or changes occurred that make it necessary to recreate them. Create AERO files using option 15 on the Final Preparations Menu in Hardware Programming Manager.

Error: Already reset
Cause: You requested to reset totals in a precinct that is already reset. It is not necessary to reset them again.

Error: Cannot be left blank
Cause: Indicates a required field entry. Entry must be filled in, and cannot be left blank.

Error: Cobol Data Reference error 104
Cause: Call ES&S support with specific information as to the function you were trying to perform.

Error: Cobol I/O error 30
Cause: File allocation insufficient. Check Config.sys or call ES&S support with specific information as to the function you were trying to perform.

Error: Cobol I/O error 94/60
Cause: Insufficient memory available to open a file. Retry the function you were performing. If problem persists, call ES&S support for advice on how to acquire the amount of memory needed.

Error: Cobol Procedure error 207
Cause: Insufficient memory available to load a requested program. Retry the function you were performing. If problem persists call ES&S support for advice on how to acquire the amount of memory needed.
Error: Column number required
Cause: A ballot position value has been entered without a column number. Enter the column number or blank the ballot position.

Error: Current directory has no election files. Press [Enter] to acknowledge
Cause: You are attempting to select another election to work on, where no more exist.

Error: DEL
Cause: On a menu screen where specific selections are available, the selection you entered was not one of the available selections. Choose from the selections displayed.

Error: Deleting current election
Cause: Warning that you are attempting to delete the election you are currently working on. You will not be allowed to continue. Change to another election, and retry.

Error: Entry is required
Cause: This field is a required field. It can not be left blank.

Error: Equipment type is not valid
Cause: You have entered an unsupported equipment type. Choose from the available equipment types listed on the screen, and enter the appropriate one.

Error: Error # XX Occurred. Press [Enter] to exit
Cause: Call ES&S support with the specific information about the function that you were performing.

Error: Error reading election definition record
Cause: An error has occurred when attempting to read the election definition record in a specific file. Check that record is in the file you are trying to use. If you can not determine the cause, call ES&S.

Error: Final database & AERO need to be created
Cause: Your final election database and AERO files have not been created, or changes have occurred that require they be recreated.

Error: Invalid election type
Cause: An election type has been entered that is not one of the supported types. Check the list of available election types on the screen and enter one of those.
Error: Invalid entry
Cause: An entry that is not allowable has been made on a screen with specific values shown. Check the screen for allowable values, and enter one of those.

Error: Invalid entry - must be (Y or N)
Cause: The only valid selections for this entry are Y for yes and N for no. Enter one of these.

Error: Invalid entry - must be 1
Cause: A valid entry for this field must a value greater than 1. Enter the correct value.

Error: Invalid number
Cause: A number has been entered on a screen where specific values are shown, that is not among those allowable values. Check the screen for allowable values, and enter one of those.

Error: Invalid range of contests entered
Cause: The range of contests entered was not a range of available contests, or was not entered correctly. Try again.

Error: Invalid selection
Cause: An entry that is not allowable has been made on a screen with specific values shown. Check the screen for allowable values, and enter one of those.

Error: Invalid with special type.
Cause: The value entered for District and the value entered for Special type are mutually exclusive. Select a different value for one of the fields.

Error: Less than begin
Cause: In a range entry, the second number entered is less than the first one. Re-enter the range correctly.

Error: Message selection required for request
Cause: Specific message numbers must be selected for this request.

Error: Must be Y or N or space
Cause: The only valid entries for this field are Y for yes, N or space for no.
Error: Not a valid counter type for this election
Cause: The counter type chosen is not one of those allowable for this election type. Choose another or change your election type.

Error: Not a valid Equipment type
Cause: You entered an unsupported equipment type. Choose from the available equipment types listed on the screen, and enter the appropriate one.

Error: Not a valid Selection
Cause: On a menu screen where specific selections are available, the option you selected is not available. Choose from the selections displayed.

Error: Only valid response is Y
Cause: The only allowable entry in this field is Y. Otherwise, leave it blank.

Error: Open error elec-file stat=XX Enter to exit
Cause: An error was detected upon opening a file. Call ES&S support with specific information as to the function you were trying to perform.

Error: PRC reserved by System to define precincts
Cause: You may not use PRC as a district code. Hardware Programming Manager uses that code to define precincts. Enter another code.

Error: Press any key to abort
Cause: An error has occurred that is serious enough not to continue a function being performed. By pressing any key on the keyboard, the program will discontinue and return you to the previous menu.

Error: Press any key to continue
Cause: An error has occurred, but it is not serious enough to stop processing. By pressing any key on the keyboard, the program will continue processing where it left off.

Error: Printer is off-line Enter = Go ahead without printer P = Printer is now on-line
Cause: The printer connected to your PC is not on-line or ready to print. Enter allows you to continue without printing. P allows you to put the printer on-line and continue a print function.
Error: Read error Elec-cntl-rec Stat = XX Press [Enter] to exit
Cause: A read error has occurred reading the Hardware Programming Manager control record. Call ES&S support with specific information regarding the function you were trying to perform.

Error: Record not created!
Cause: Displayed to inform you that the record has not been created.

Error: Results file already reset
Cause: When resetting the results file, this message will appear if the results file already contains zeroes and therefore does not need to be reset.

Error: Style number is required
Cause: A rotation style is required on every rotation record. Style 1 is the home ballot position style. Styles 2-70 are subsequent rotations of that style.

Error: Timed out waiting for results
Cause: A device has exceeded the time limit allowed to send results. Reset device, and retry update.

Error: Unable to initialize
Cause: An error has occurred while attempting to initialize a device. Reset the device and check the cables and retry.

Error: Votes allowed must not be zero
Cause: The number of votes allowed in a contest range from 1 through 99. Enter a number from this range.

Error: Warning: be sure file is backed up before continuing
Cause: When deleting a file from your hard drive, this message prompts you to back the file up to diskette before deleting it. You are allowed to delete, however, without backing up.
### Appendix B - State & Province Abbreviations

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<th>State</th>
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<td>Utah</td>
<td>UT</td>
</tr>
<tr>
<td>Virgin Islands</td>
<td>VI</td>
</tr>
<tr>
<td>Washington</td>
<td>WA</td>
</tr>
<tr>
<td>Wisconsin</td>
<td>WI</td>
</tr>
</tbody>
</table>
Appendix C - Rotation Styles

Candidate Rotation by District (Standard)

States: OH, MI, OR, WA

Precinct by precinct within a district (if any) is the standard rotation scheme supported by Hardware Programming Manager. This automatic rotation will sequentially assign each individual eligible precinct to a rotation style.

For example, in a jurisdiction with 30 precincts, a jurisdiction-wide contest with four candidates is rotated in this manner:

<table>
<thead>
<tr>
<th>Rotation Style 1 (Home)</th>
<th>Rotation Style 2</th>
<th>Rotation Style 3</th>
<th>Rotation Style 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Candidate 1</td>
<td>Candidate 2</td>
<td>Candidate 3</td>
<td>Candidate 4</td>
</tr>
<tr>
<td>Candidate 2</td>
<td>Candidate 3</td>
<td>Candidate 4</td>
<td>Candidate 1</td>
</tr>
<tr>
<td>Candidate 3</td>
<td>Candidate 4</td>
<td>Candidate 1</td>
<td>Candidate 2</td>
</tr>
<tr>
<td>Candidate 4</td>
<td>Candidate 1</td>
<td>Candidate 2</td>
<td>Candidate 3</td>
</tr>
<tr>
<td>Precincts: 1, 5, 9, 13, 17, 21, 25, 29</td>
<td>Precincts: 2, 6, 10, 14, 18, 22, 26, 30</td>
<td>Precincts: 3, 7, 11, 15, 19, 23, 27</td>
<td>Precincts: 4, 8, 12, 16, 20, 24, 28</td>
</tr>
</tbody>
</table>

In the same jurisdiction, if you have a contest with three candidates that is held by a district in which precincts 1, 2, 3, 4, 7, 9, 13, and 17 are located, it is rotated in the following manner:

<table>
<thead>
<tr>
<th>Rotation Style 1 (Home)</th>
<th>Rotation Style 2</th>
<th>Rotation Style 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Candidate 1</td>
<td>Candidate 2</td>
<td>Candidate 3</td>
</tr>
<tr>
<td>Candidate 2</td>
<td>Candidate 3</td>
<td>Candidate 1</td>
</tr>
<tr>
<td>Candidate 3</td>
<td>Candidate 1</td>
<td>Candidate 2</td>
</tr>
<tr>
<td>Precincts: 1, 4, 13</td>
<td>Precincts: 2, 7, 17</td>
<td>Precincts: 3,</td>
</tr>
</tbody>
</table>
Candidate Rotation by Assembly or Supervisory District

State: CA

This scheme rotates by precinct within either Assembly or Supervisory District Within District (if any). This automatic rotation will place eligible precincts in either Assembly or Supervisory District sequence, then assign each group of precincts to a rotation style.

Note: Because Assembly Districts are determined state-wide and are assigned sequential numbers, a specific jurisdiction may not contain every single Assembly District. If this occurs, in order for the jurisdictional rotation to agree with the state assigned rotation, some rotation styles will not be created.

The home positions assigned to contests using this style of rotation MUST be the positions the candidates are assigned to in the lowest numbered Assembly District in the jurisdiction.

For example, in a jurisdiction where precincts 1-8 are in Assembly District 31, precincts 9-16 are in Assembly District 33, and precincts 17-25 are in Assembly District 34, a four candidate jurisdiction-wide contest is rotated by Assembly District as shown in the table on the next page.

Note: On the Change Precinct Master screen, the ASM and SUP district numbers must be filled in with the leading zeroes; e.g., district one must use 0001, not just 1.

<table>
<thead>
<tr>
<th>Rotation Style 1 (Home)</th>
<th>Rotation Style 2</th>
<th>Rotation Style 3</th>
<th>Rotation Style 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Candidate 1</td>
<td>Candidate 2</td>
<td>Candidate 3</td>
<td>Candidate 4</td>
</tr>
<tr>
<td>Candidate 2</td>
<td>Candidate 3</td>
<td>Candidate 4</td>
<td>Candidate 1</td>
</tr>
<tr>
<td>Candidate 3</td>
<td>Candidate 4</td>
<td>Candidate 1</td>
<td>Candidate 2</td>
</tr>
<tr>
<td>Candidate 4</td>
<td>Candidate 1</td>
<td>Candidate 2</td>
<td>Candidate 3</td>
</tr>
<tr>
<td>Precincts: 1, 2, 3, 4, 5, 6, 7, 8</td>
<td>Precincts: (This style is not created since no precincts in this jurisdiction are in Assembly District 32.)</td>
<td>Precincts: 9, 10, 11, 12, 13, 14, 15, 16</td>
<td>Precincts: 17, 18, 19, 20, 21, 22, 23, 24, 25</td>
</tr>
</tbody>
</table>
Contest Rotation/Standard Candidate Rotation Combination

State: IA

This scheme allows standard candidate rotation in some contests combined in the same election with other contests rotating between ballots. This is used to move each contest in a related group (usually Judicial Retention contests) to a different position within that group on various ballot styles. Candidates in this group of contests remain in the same positions within their contest.

For example, in a jurisdiction with 30 precincts, four Judicial Retention contests will rotate in this manner:

Note: The candidate positions appear in parenthesis in this example.

<table>
<thead>
<tr>
<th>Contest 1 RotationStyle 1 (Home)</th>
<th>Contest 1 RotationStyle 2</th>
<th>Contest 1 RotationStyle 3</th>
<th>Contest 1 RotationStyle 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Candidate 1 (40)</td>
<td>Candidate 1 (70)</td>
<td>Candidate 1 (60)</td>
<td>Candidate 1 (50)</td>
</tr>
<tr>
<td>Candidate 2 (41)</td>
<td>Candidate 2 (71)</td>
<td>Candidate 2 (61)</td>
<td>Candidate 2 (51)</td>
</tr>
<tr>
<td>Precincts: 1, 5, 9, 13, 17, 21, 25, 29</td>
<td>Precincts: 2, 6, 10, 14, 18, 22, 26, 30</td>
<td>Precincts: 3, 7, 11, 15, 19, 23, 27</td>
<td>Precincts: 4, 8, 12, 16, 20, 24, 28</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Contest 2 Rotation Style 1</th>
<th>Contest 2 Rotation Style 2</th>
<th>Contest 2 Rotation Style 3</th>
<th>Contest 2 Rotation Style 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Candidate 1 (50)</td>
<td>Candidate 1 (40)</td>
<td>Candidate 1 (70)</td>
<td>Candidate 1 (60)</td>
</tr>
<tr>
<td>Candidate 2 (51)</td>
<td>Candidate 2 (41)</td>
<td>Candidate 2 (71)</td>
<td>Candidate 2 (61)</td>
</tr>
<tr>
<td>Precincts: 1, 5, 9, 13, 17, 21, 25, 29</td>
<td>Precincts: 2, 6, 10, 14, 18, 22, 26, 30</td>
<td>Precincts: 3, 7, 11, 15, 19, 23, 27</td>
<td>Precincts: 4, 8, 12, 16, 20, 24, 28</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Contest 3 RotationStyle 1 (Home)</th>
<th>Contest 3 RotationStyle 2</th>
<th>Contest 3 RotationStyle 3</th>
<th>Contest 3 RotationStyle 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Candidate 1 (60)</td>
<td>Candidate 1 (50)</td>
<td>Candidate 1 (40)</td>
<td>Candidate 1 (70)</td>
</tr>
<tr>
<td>Candidate 2 (61)</td>
<td>Candidate 2 (51)</td>
<td>Candidate 2 (41)</td>
<td>Candidate 2 (71)</td>
</tr>
<tr>
<td>Precincts: 1, 5, 9, 13, 17, 21, 25, 29</td>
<td>Precincts: 2, 6, 10, 14, 18, 22, 26, 30</td>
<td>Precincts: 3, 7, 11, 15, 19, 23, 27</td>
<td>Precincts: 4, 8, 12, 16, 20, 24, 28</td>
</tr>
<tr>
<td>Contest 4 RotationStyle 1 (Home)</td>
<td>Contest 4 RotationStyle 2</td>
<td>Contest 4 RotationStyle 3</td>
<td>Contest 4 RotationStyle 4</td>
</tr>
<tr>
<td>---------------------------------</td>
<td>---------------------------</td>
<td>---------------------------</td>
<td>---------------------------</td>
</tr>
<tr>
<td>Candidate 1 (70)</td>
<td>Candidate 1 (60)</td>
<td>Candidate 1 (50)</td>
<td>Candidate 1 (40)</td>
</tr>
<tr>
<td>Candidate 2 (71)</td>
<td>Candidate 2 (61)</td>
<td>Candidate 2 (51)</td>
<td>Candidate 2 (41)</td>
</tr>
<tr>
<td>Precincts: 1, 5, 9, 13, 17, 21, 25, 29</td>
<td>Precincts: 2, 6, 10, 14, 18, 22, 26, 30</td>
<td>Precincts: 3, 7, 11, 15, 19, 23, 27</td>
<td>Precincts: 4, 8, 12, 16, 20, 24, 28</td>
</tr>
</tbody>
</table>

**Candidate Rotation - Equal by Registration**

*State: ID*

Each candidate must appear at the top of the ballot the same number of times as any other candidate (within a narrow margin) even if there are more candidates than precincts.

**Note:** This type of rotation may increase the final number of ballot styles tremendously.

For example, in a jurisdiction where precinct 1 has 530 registered voters, precinct 2 has 459 registered voters, precinct 3 has 493 voters, precinct 4 has 561 registered voters, precinct 5 has 314 registered voters, and precinct 6 has 714 registered voters, a two-candidate contest may be rotated in this manner:

<table>
<thead>
<tr>
<th>RotationStyle 1 (Home)</th>
<th>RotationStyle 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Candidate 1</td>
<td>Candidate 2</td>
</tr>
<tr>
<td>Candidate 2</td>
<td>Candidate 1</td>
</tr>
<tr>
<td>Precincts: 1, 2, 4</td>
<td>Precincts: 3, 5, 6</td>
</tr>
</tbody>
</table>
Candidate Rotation by District/Assembly District/Election District

State: NY (City only)

This scheme rotates by Election District within Assembly District within District (if any). This automatic rotation will place eligible Election Districts in Assembly District sequence and then assign each individual Election District to a rotation style.

For example, in a jurisdiction where Election Districts 1-11 are in Assembly District 36 and Election Districts 12-25 are in Assembly District 35, a four-candidate jurisdiction-wide contest is rotated in this manner:

Contest 1

<table>
<thead>
<tr>
<th>RotationStyle 1 (Home)</th>
<th>RotationStyle 2</th>
<th>RotationStyle 3</th>
<th>RotationStyle 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Candidate 1</td>
<td>Candidate 2</td>
<td>Candidate 3</td>
<td>Candidate 4</td>
</tr>
<tr>
<td>Candidate 2</td>
<td>Candidate 3</td>
<td>Candidate 4</td>
<td>Candidate 1</td>
</tr>
<tr>
<td>Candidate 3</td>
<td>Candidate 4</td>
<td>Candidate 1</td>
<td>Candidate 2</td>
</tr>
<tr>
<td>Candidate 4</td>
<td>Candidate 1</td>
<td>Candidate 2</td>
<td>Candidate 3</td>
</tr>
<tr>
<td>Precincts: 3, 7, 11, 12, 16, 20, 24</td>
<td>Precincts: 4, 8, 13, 17, 21, 25</td>
<td>Precincts: 1, 5, 9, 14, 18, 22</td>
<td>Precincts: 2, 6, 10, 15, 19, 23</td>
</tr>
</tbody>
</table>

Candidate Rotation - by Precinct based on the contest with the greatest number of candidates

State: WA (Pierce County)

This rotation style is the standard precinct by precinct rotation with the following variation: every rotated contest resumes its home ballot positions when the rotation reaches the number of candidates in the contest with the largest number of candidates.

This automatic rotation will sequentially assign each individual eligible precinct to a rotation style using this distribution scheme.

For example, in a jurisdiction with 30 precincts, these jurisdiction-wide contests would rotate in the following manner:
### Contest 1

<table>
<thead>
<tr>
<th>RotationStyle 1 (Home)</th>
<th>RotationStyle 2</th>
<th>RotationStyle 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Candidate 1</td>
<td>Candidate 2</td>
<td>Candidate 3</td>
</tr>
<tr>
<td>Candidate 2</td>
<td>Candidate 3</td>
<td>Candidate 4</td>
</tr>
<tr>
<td>Candidate 3</td>
<td>Candidate 4</td>
<td>Candidate 1</td>
</tr>
<tr>
<td>Candidate 4</td>
<td>Candidate 1</td>
<td>Candidate 2</td>
</tr>
<tr>
<td>Precincts: 1, 4, 5, 8, 9, 12, 13, 16, 17, 20, 21, 24, 25, 28, 29</td>
<td>Precincts: 2, 6, 10, 14, 18, 22, 26, 30</td>
<td>Precincts: 3, 7, 11, 15, 19, 23, 27</td>
</tr>
</tbody>
</table>

### Contest 2

<table>
<thead>
<tr>
<th>RotationStyle 1 (Home)</th>
<th>RotationStyle 2</th>
<th>RotationStyle 3</th>
<th>RotationStyle 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Candidate 1</td>
<td>Candidate 2</td>
<td>Candidate 3</td>
<td>Candidate 4</td>
</tr>
<tr>
<td>Candidate 2</td>
<td>Candidate 3</td>
<td>Candidate 4</td>
<td>Candidate 1</td>
</tr>
<tr>
<td>Candidate 3</td>
<td>Candidate 4</td>
<td>Candidate 1</td>
<td>Candidate 2</td>
</tr>
<tr>
<td>Candidate 4</td>
<td>Candidate 1</td>
<td>Candidate 2</td>
<td>Candidate 3</td>
</tr>
<tr>
<td>Precincts: 1, 5, 9, 13, 17, 21, 25, 29</td>
<td>Precincts: 2, 6, 10, 14, 18, 22, 26, 30</td>
<td>Precincts: 3, 7, 11, 15, 19, 23, 27</td>
<td>Precincts: 4, 8, 12, 16, 20, 24, 28</td>
</tr>
</tbody>
</table>

### Candidate Rotation – Equal by Registration within Specified Tolerance

**State:** OK

This style creates rotations with equal numbers of registered voters. This equality is tempered by a tolerance percentage that is entered by the user. The process uses the precincts saved in numerical sequence. (Except absentees are first, to force on to rotation 1.)

When there are more precincts than candidates, the program rotates by assigning precincts sequentially until the number of voters is within the tolerance, or until adding the next precinct will cause the difference to be greater. If all rotations have been established and precincts still remain, those precincts are added to the rotation with the lowest number of voters.

When the number of precincts is fewer than the number of candidates, precincts are split to reach the desired number of voters. The only exception is that if an entire precinct falls within the tolerance, then it is used as a whole. Because of this feature, a single precinct may get multiple rotations. This increases the number of ballot styles per precinct accordingly.
This type of rotation is most efficient for statewide jurisdictions with thousands of precincts, whereby a specific county might be assigned only a single rotation or a few rotations, at most, and the number of ballot styles caused by rotation are, therefore, kept to a minimum.

The table below shows the rotations for a jurisdiction with the following characteristics:

- Total registered voters: 22,000
- 3 candidates in contest
- Tolerance = .0550 (5.5%)
- Perfect split = 7333
- Within tolerance = 6930 – 7736

See table below.

<table>
<thead>
<tr>
<th>RotationStyle 1</th>
<th>RotationStyle 2</th>
<th>RotationStyle 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prec # 1</td>
<td>Prec # 8</td>
<td>Prec # 15</td>
</tr>
<tr>
<td>200 voters</td>
<td>1,600 voters</td>
<td>1,000 voters</td>
</tr>
<tr>
<td>Prec # 2</td>
<td>Prec # 9</td>
<td>Prec # 16</td>
</tr>
<tr>
<td>400 voters</td>
<td>1,800 voters</td>
<td>1,200 voters</td>
</tr>
<tr>
<td>Prec # 3</td>
<td>Prec # 10</td>
<td>Prec # 17</td>
</tr>
<tr>
<td>600 voters</td>
<td>2,000 voters</td>
<td>1,400 voters</td>
</tr>
<tr>
<td>Prec # 4</td>
<td>Prec # 11</td>
<td>Prec # 18</td>
</tr>
<tr>
<td>800 voters</td>
<td>200 voters</td>
<td>1,600 voters</td>
</tr>
<tr>
<td>Prec # 5</td>
<td>Prec # 12</td>
<td>Prec # 19</td>
</tr>
<tr>
<td>1,000 voters</td>
<td>400 voters</td>
<td>1,800</td>
</tr>
<tr>
<td>Prec # 6</td>
<td>Prec # 13</td>
<td>Prec # 20</td>
</tr>
<tr>
<td>1,200 voters</td>
<td>600 voters</td>
<td>2,000</td>
</tr>
<tr>
<td>Prec # 7</td>
<td>Prec # 14</td>
<td></td>
</tr>
<tr>
<td>1,400 voters</td>
<td>800 voters</td>
<td></td>
</tr>
</tbody>
</table>

Total = 7,200 voters  Total = 8,000 voters  Total = 6,800 voters
Contacting ES&S for Software Support

This manual and in-program Help should aid in accomplishing most of the tasks in the Ballot Image Manager. The first step to answering any questions is to consult product documentation or in-program Help.

If a question cannot be answered with these resources, or if a processing problem or system error is encountered, ES&S's software support staff can provide advice and assistance in resolving the situation.

When calling ES&S for software support, please be near the computer. In addition, be prepared to provide the following information to the support representative:

- The version number of the product.
- The type of hardware used, including network hardware if applicable.
- The operating system (e.g., Windows 95).
- The exact wording of any messages appearing on screen.
- A description of what happened, circumstances under which the problem occurred and any solutions attempted.

Support representatives are available between 8:00 a.m. and 5:00 p.m. CST; however, support hours are extended during election periods.

To contact an ES&S support representative:

Telephone: 800-247-8683 (USA & Canada) or 402-593-0101 (International)
Fax: 402-593-8107
Write: Election Systems & Software
       11208 John Galt Blvd.
       Omaha, NE 68137 USA

ES&S's support services are subject to ES&S's prices, terms, and conditions in place at the time the service is used.
Glossary

ASCII Text Files: American Standard Code for Information Interchange. ASCII text is stored in exactly the same order as you see it on a printed page, with no additional characters added or deleted. ASCII files are often called "print" files.

Arrow Keys: On your computer keyboard, the keys you use to navigate around your screen. Each key is marked with an arrow and is named for the direction in which the arrow points: There is an UP ARROW, DOWN ARROW, LEFT ARROW, and RIGHT ARROW key. Also known as direction keys.

Attribute: Any style used to enhance readability of text. Typical attributes include bold and italic.

Ballot Style: Also known as Ballot Changes, Ballot Faces and Candidate changes. It is the quantity of actual combinations of offices and candidates in a given election.

BIOS: The Basic input/output System or part of the computer operating system that communicates with the screen, the keyboard, printers, and other peripheral devices.

Bit: A binary digit is the smallest storage unit for data in a computer. Buffer. A temporary data storage area used by computers and some printers.

Check Box: A small, square box that appears in a dialog box which can be selected or cleared. When the check box is selected, an X appears in the box. A check box represents an option that you can turn on or off.

Choose: To use a mouse or keyboard to pick an item that begins an action in the Election Data Manager. You choose commands on menus to perform tasks, and you choose icons to start applications.

Click: To press and release a mouse button quickly.

Close: To remove a window or dialog box, or quit an application. You can close a window by using the Close command on the Control menu. When you close an application window, you quit the application.

Confirmation Message: A message that appears after you specify certain actions, prompting you to confirm that you want to continue with the action or to specify that you want to cancel it.

Command Button: In a dialog box, a button that carries out an action. A command button often has a label that describes the action it carries out.
**Delimiter:** Most commonly used to refer to a character or code that marks the beginning or end of an item such as a sentence, record, or field.

**Dialog Box:** The set of choices presented on the screen for each menu option selected.

**DoubleClick:** To rapidly press and release a mouse button twice without moving the mouse. Double clicking carries out an action, such as starting an application.

**DOS:** The Disk Operating System is software that directs the flow of data between disk drives and your computer. Without an operating system, your computer can do nothing.

**Drag:** To move or select several items on the screen by selecting the item(s) and then pressing and holding down the mouse button while moving the mouse.

**DWP:** Also known as District Maps. DWP is the combination of precincts and groups within a county.

**Extension:** The part of the file name to the right of the period. For instance, the extension in the file name “96prim.BDF” is BDF. Extensions are used by the Election Data Manager to differentiate between files of different types.

**File:** A collection of information that has been given a name and is stored on a disk. This information can be a document or an application. Filename is the name of a file.

**Font:** A specific typeface, point size, and weight (e.g. 10pt Helvetica Bold) Frame. A rectangular box used to hold text or graphics. The BIM uses the combination of different frames to create a unique ballot for an election.

**Precinct:** Also known as Voting Districts, Voting Assemblies. The smallest logical or physical entity (or area) your county breaks down into. It is also the smallest element for which a ballot can be produced.

**Highlighted:** Indicates that an object or text is selected and will be affected by your next action. Highlighted text appears in reverse video on monochrome monitors or in color on some color monitors. Highlighted objects might change color or be surrounded by a selection cursor.

**Icons:** Graphical representations of various elements in the Election Data Manager.

**List Box:** Within an application window or dialog box, a type of box that lists available choices - for example, a list of all files in a directory. If all the choices do not fit in the list box, there is a scroll bar.

**Kilobyte (K):** 1024 bytes of information or storage space.
Landscape: A page printed so that as you read it the width is greater than its height.

Layout: The arrangement of text and frames on any given page.

Leaders: Characters placed in the blank space after a candidate’s name. For example: John Doe...........

Leading: The distance in points from the baseline of one line of type to the next.

Maximize Button: The small box containing an up arrow at the right of the title bar. Mouse users can click the Maximize button to enlarge a window to its maximum size. Keyboard users can use the Maximize command on the Control menu.

Mechanical: A finished “camera ready” piece of artwork.

Megabyte (M): 1024 kilobytes (1,048,576 bytes) of information or storage space.

Memory: A computer’s temporary data storage area (see RAM below).

Menu: A list of available commands in an application window. Menu names appear in the menu bar near the top of the window. You open a menu by selecting the menu name.

Menu Bar: The horizontal bar containing the names of the application’s menus. It appears below the title bar.

Minimize Button: The small box containing a down arrow at the right of the title bar. Mouse users can click the Minimize button to reduce a window to an icon. Keyboard users can use the Minimize command on the Control menu.

Modem: A communications device that enables a computer to transmit information over a telephone line.

Open: To display the contents of a file in a window or to enlarge an icon to a window.

Pathname: A full pathname includes the drive, root and any sub directory names. Each name is separated by a backslash (\). For example, C:\Opt refers to the AIS BIM directory on the C drive.

Parallel Interface: An interface in which several bits of information (usually 1 byte) are transmitted simultaneously.

Parallel Printer: A printer that accepts information by way of a parallel interface.

Point: Typographic unit of measurement equal to 1/72 of an inch.
**Pointer:** The arrow-shaped cursor on the screen that follows the movement of a mouse and indicates which area of the screen will be affected when you press the mouse button. The pointer may change shape during certain tasks.

**Port:** A connection device between a computer and another component such as a printer or modem. For example, a printer cable is plugged into the printer port on the computer so information can be sent to the printer.

**Portrait:** A page printed so that, as you read it, the width of the page is less than its height.

**PostScript:** A language used to describe how to print a page that consists of both text and pictures. This description is completely independent of the printing device. This means that the page can be printed on any printer or typesetter that uses PostScript, and the page will be printed at the full resolution that each printer or typesetter can produce.

**RAM:** Random Access Memory is the working space or temporary storage area for the program you are using and the information on your screen. All information in RAM is lost unless it is saved prior to turning the computer off.

**ROM:** Read Only Memory contains information the computer uses to run the system. ROM is permanent and is not erased when the power is turned off.

**Ruling Line:** Any horizontal or vertical line used to separate text or frames from the surrounding layout.

**Serial Interface:** An interface in which information is transmitted one bit at a time.

**Serial Printer:** A printer that accepts information from the computer by way of a serial interface.

**Scroll:** To move through text (up, down, left, or right) in order to see parts of the file or list that cannot fit on the screen.

**Scroll Arrow:** An arrow on either end of a scroll bar that you use to scroll through the contents of the window or list box.

**Scroll Bar:** A bar that appears at the bottom and/or right edge of a window whose contents are not entirely visible. Each scroll bar contains a scroll box and two scroll arrows.

**Scroll Box:** In a scroll bar, the small box that shows the position of information currently in the window or list box relative to the contents of the entire window.

**Select:** To mark an item so that a subsequent action can be carried out on that item. You usually select an item by clicking it with a mouse or pressing a key. After selecting an item, you choose the action that you want to affect the item.
Static: The offices that are running either statewide or countywide.

Text Box: In a dialog box, a box in which you type information needed to carry out a command. The text box may be blank or may contain text when the dialog box opens.

Title Bar: The horizontal bar (at the top of a window) that contains the title of the window or dialog box. On many windows, the title bar also contains the Control-menu box and Maximize and Minimize buttons.

Window: A rectangular area on your screen in which you view an application or document. You can open, close, and move a window, and change the size of most windows. You can open several windows at a time, and you can often reduce a window to an icon or enlarge it to fill the entire monitor screen. Sometimes windows are displayed within other windows.

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