Overview

The purpose of this document is to instruct election officials in North Carolina in the steps required to use existing voting tabulation equipment and current versions of both software and firmware to allow a complete electronic sort and count of IRV ballots for the purpose of determining a winner in a single-seat contest.

The procedure detailed herein makes use of functionality in HPM allowing the creation of a subset election from an existing election (basically a copy of the existing coding), with subsequent modification of the coding to restrict the M100 tabulators and Unity ERM to evaluating only the runoff contest, and tallying and reporting votes for only the runoff candidates.

Due to equipment limitations, this procedure requires two distinct ballot scan runs. In the first run, ballots are scanned solely for the purpose of identifying ballots containing overvotes within any of the three choice selections in the runoff contest, so that those ballots may be properly segregated. A ballot with an overvote in the second choice selection may still count as a first choice vote; a ballot with an overvote in the third choice selection may still count as either a first choice or second choice vote.

The second scan run requires the use of three PCMCIA cards per Unity precinct, one for each of the selection options in the runoff contest. Using the first card, a ballot’s first choice selection is evaluated and the ballot accepted if a valid first choice vote is detected; otherwise the ballot is rejected so that it can enter the queue for the second choice. Similarly, the second card is used to accept or reject ballots based on the evaluation of the second choice selection, and the third card for the third choice selection. Any ballots rejected by the M100 using the third card are counted as undervotes. The procedure allows for the simultaneous use of three M100 tabulators per precinct, if desired.
Instant Runoff Voting
Single-Seat Contests
ES&S Optical Scan Tabulation Procedures
Version ID OS1-2009.1.1

I. Initial Round of Counting

The initial vote tally shall be determined by following NCSBE's standard optical scan procedures. Regular ballots cast by voters in a polling place, either One-Stop or Election Day, should be fed into the M100 tabulators by the voters if possible, or with assistance from a poll worker if requested. Other regular ballots returned to the CBE office should be fed into either an M100 or an M650 by authorized election officials. In cases where tabulation equipment is unavailable or unnecessary as determined by the CBE and with approval from SBE, hand-to-eye counting of ballots shall be conducted.

On Election Night, only first-choice selections shall be counted and reported as votes. Transfer of precinct vote totals into Unity ERM via electronic media, modem, or manual entry is covered in SBE standard procedure documentation.

When generating election reports for general release or ASCII files for upload to ENR, personnel shall select all appropriate statistical counts and regular contests, but only 1st Choice items for IRV contests.

For most ERM reports, from the menu bar select Reports then the correct type and specific report necessary.
On the Selection tab, select Contest/Precinct and then click the Contests... button.

Ctrl-click to highlight statistical counters and regular contests, and only 1st Choice items for IRV contests; then click the OK button.

The Contest: field will now display the contest IDs for all contests you selected. Select the appropriate Output Destination – Disk for an electronic report you can view on the PC, Printer for a hard copy, or Internet for HTML version. Next, click on the Headings tab.
On the **Headings** tab, make any changes or corrections necessary for this report. If you have not already done so, enter **UNOFFICIAL RESULTS** in the **Canvass Right Edge Heading** field. Next, click on the **Options** tab.

On the **Options** tab, click to check all options you want for this report, then click the **OK** button.

The report will show only those statistical counts and contests you selected.
To generate an ASCII file for upload to ENR, from the menu bar select **Miscellaneous > Create ASCII Results File.**

Select **Create precinct detail – with text** and then click the **OK** button.

Click the **Contest...** button.

**Ctrl-click** to highlight statistical counters and regular contests, and only 1st Choice items for IRV contests; then click the **OK** button.
The **Contest:** field will now display the contest IDs for all contests you selected. Click the **OK** button.

Click to check the boxes to **Include local contests,** **Include groups,** and **Include write-ins;** then click the **OK** button.

Follow standard procedures to copy the ASCII file and upload to ENR.

If the unofficial vote totals suggest the need for a second round of counting in any IRV contest, and the number of provisional ballots cast is great enough that provisional votes could affect the determination of runoff candidates, the CBE shall make every effort to evaluate and tally provisional ballots in a timely fashion.
II. Second Round of Counting

Note: It will be necessary to follow all steps in this section for each runoff round to be conducted.

Authorized personnel shall open the election in HPM and create a subset election. Most of the configuration settings and field contents that are copied over to the subset election should remain unchanged. It will be necessary to change the M100 response to overvoted ballots and blank ballots, and if using polling place mode it will also be necessary to recreate the polling places and reassign the precincts.

From the menu bar select **Election > Create Subset Election.**

Enter an appropriate name for the subset election in the **New Election Name:** field. Election names are limited to 8 alphanumeric characters. You may not use the same name as another existing election. Then click the **Precincts...** button.
The precincts required for a given subset election may depend on the contest. Consult the Precinct/Ballot Style Listing for guidance.

**Ctrl-click** each precinct necessary for the subset election, or click the top one and then **Shift-click** the bottom one to select all; then click the **OK** button.

The precincts you selected will be displayed. If you did not select all precincts, and your election uses precinct mode, click to check the box to **Renumber New Precincts**; then click the **OK** button.
Click the **OK** button to proceed.

From the menu bar select **Election > Change**.

Locate the subset election you just created. Scroll through the list if necessary. Click to highlight it, then click the **OK** button.

Click the **OK** button to proceed.

From the menu bar select **Set Tabulator Controls > Election Specification**.
The selections copied over from the main election may be correct for the runoff. Consult SBE IRV staff for guidance if necessary.

Click the **Model 100 Scanner Options**... button to proceed.

In the **Ballot Control** section, change the **Overvoted Ballots**: setting to **Reject**. Click the **OK** button to return to the **Election Specification** window, then click the **OK** button to close the **Election Specification** window and return to the main HPM screen.

From the menu bar select **Set Tabulator Controls > Certification**.
Make any changes necessary to the three **Heading Lines**. These are the three lines of text that will appear in the center of the heading of most ERM reports – changing them here will save the trouble of changing each report’s heading individually later on. Click the **OK** button when complete.

**Note:** If your election uses polling place mode, contact SBE IRV staff for additional instructions.

From the menu bar select **Modify Election Definition > Contests > Change Contests and Candidates**.
The **Contest Type** field should contain the default value **Regular**. Click the **OK** button to continue.

*** SEQUENCE ALPHA ***
*** START ***

The main **Change Contests and Candidates** window will be displayed. Click the **Contest...** button to view the **Contest List**.
The runoff election coding should include the statistical contests (PRECINCTS COUNTED, REGISTERED VOTERS, and BALLOTS CAST, for example) and the three choices for the runoff contest. Click to highlight one of the other regular contests – one that is not the runoff contest in this instance – and then click the OK button.

The data for the contest you selected will be displayed. Click the Delete button to delete the contest from the election. The data fields will be cleared. Repeat SEQUENCE ALPHA to remove all other regular contests not in the runoff.
After you have deleted all regular contests not in the runoff, the Contest List should display only the statistical contests and the three choices for the runoff contest. Click the Cancel button to close the Contest List window, then click the Close button to close the Change Contests and Candidates window.

From the menu bar select Modify Election Definition > Ballot Styles > Create Precinct/Ballot Style File.

Click the OK button to continue.
When the process is complete you should see this confirmation message. Click the OK button to return to the main HPM screen.

If your election uses precinct mode, from the menu bar select Modify Election Definition > Ballot Styles > Print Precinct/Ballot Style Listing; if using polling place mode, select Modify Election Definition > Ballot Styles > Print Polling Place/Ballot Style Listing.

Click the OK button to continue.

For a hard copy printed from your PC’s default print device, accept the default Device field value LPT1; for an electronic file viewable on your PC, change the Device value to DISK by using the drop-down menu and scroll up. Click the OK button to generate the report.
From the menu bar select
Create Tabulator Data >
Create Final Database.

Click the OK button to continue.

When the process is complete you should see this confirmation message. Click the OK button to return to the main HPM screen.

From the menu bar select
Create Tabulator Data >
Create Tabulator Parameters.

The Tabulator field should display the value 100. Enter the values for Range of Precincts or Range of Polls that you will need*. Click the OK button to continue.
*Note: For this purpose, a single precinct or poll will suffice if it accepts all necessary ballot styles. This could be a regular precinct or poll, or one that has been created for administrative purposes (such as ONE STOP).

When the process is complete you should see this confirmation message. Click the OK button to return to the main HPM screen.

Follow standard SBE procedures to burn PCMCIA cards for all precincts or polls necessary. Label the cards according to the precinct/poll name, and add the word OVERVOTES, as:

```
PRECINCT 1
OVERVOTES
```

or

```
ONE STOP
OVERVOTES
```

For the first precinct or administrative grouping, insert the proper PCMCIA card into an M100 and open the polls. If using only one card for all locations, it will not be necessary to close the polls between groups of ballots, but you must maintain the ballots separately by precinct or administrative grouping.

Beginning with the first precinct or administrative grouping to be scanned using this PCMCIA card, feed all ballots through the M100 one by one. Fully voted ballots and ballots with undervotes will be accepted. Ballots with overvotes in the runoff contest will be rejected. If a ballot is rejected, note the message on the M100 display and sort the ballots accordingly. There are two types of messages that could be displayed:
ONE CONTEST HAS TOO MANY VOTES
XXX CONTEST NAME XXX

or

XXX RACES HAVE TOO MANY VOTES INCLUDING
XXX CONTEST NAME XXX

Regardless of the number of overvoted contests, the first contest that is overvoted is the one that will be named on the display. Form three stacks of overvoted ballots for this precinct or administrative grouping, and place each ballot with one or more overvotes into the proper stack according to the first overvoted contest on the ballot – 1st Choice, 2nd Choice, or 3rd Choice.

When all ballots for a precinct or administrative grouping have been fed into the M100, you should have four stacks of ballots – the three separate stacks indicating overvotes, and the remaining ballots which have no overvotes. Keeping them in these separate stacks, but grouped together as one precinct or administrative grouping, set these ballots aside and repeat this process for all remaining precincts and/or administrative groupings.

After all runoff ballots have been processed for overvotes, return to the runoff coding in HPM.

From the menu bar select
Set Tabulator Controls >
Election Specification; then
click the Model 100 Scanner Options... button. In the
Ballot Control section, change the Blank Ballots:
setting to Reject. Click the
OK button to return to the
Election Specification
window, then click the OK
button to close the Election Specification window and return to the main HPM screen.
From the menu bar select **Modify Election Definition** > **Contests** > **Change Contests and Candidates**. The **Contest Type** field should contain the default value **Regular**. Click the OK button to continue. The main **Change Contests and Candidates** window will be displayed. Click the **Contest...** button to view the **Contest List**.

Click to highlight the 1st **Choice** for the runoff, then click the **OK** button.

The data for the contest you selected will be displayed.

Click in the Candidate Name field to select a candidate not in the runoff.
The blinking cursor will appear in the Candidate Name field you selected.

(Candidate 2 in this example)

Click the **Delete Candidate** button.

The four data fields for that candidate will be cleared.

Repeat the process to delete all remaining candidates except the two runoff candidates.
When only the two runoff candidates remain, click the **Update** button to save the changes. If you accidentally delete a runoff candidate, click the **Don’t Update** button and try again.

Repeat this process for the **2nd Choice** and **3rd Choice**, deleting all but the runoff candidates. After all three contests have been updated, click the **Close** button.

*** SEQUENCE BETA ***
*** START ***

From the menu bar select **Modify Election Definition > Ballot Styles > Change Ballot Styles.**
The **Change Ballot Styles** window will be displayed. Click the **Ballot Style**... button to display the **Ballot Style List**.

Click to highlight a ballot style which includes the runoff contests, then click the **OK** button.
The data for the ballot style you selected will be displayed. Click the Contest… button to display the Contest List.

The statistical contests and runoff contests should all appear highlighted, indicating that they are included with this ballot style.
Ctrl-click the 1st Choice and 2nd Choice contests to deselect them. The statistical contests and the 3rd Choice should remain highlighted. Click the OK button to continue.

The contents of the Change Ballot Styles window should now reflect the changes you just made. Click the Update button to save the changes. All data fields will be cleared.

Repeat this process for all other ballot styles which include the runoff contest. When all styles have been updated to include only statistical contests and the 3rd Choice, click the Close button.
From the menu bar select
Modify Election Definition > Ballot Styles > Create Precinct/Ballot Style File.

Click the OK button to continue.

When the process is complete you should see this confirmation message. Click the OK button to return to the main HPM screen.

From the menu bar select
Create Tabulator Data > Create Final Database.
Click the **OK** button to continue.

When the process is complete you should see this confirmation message. Click the **OK** button to return to the main HPM screen.

From the menu bar select **Create Tabulator Data > Create Tabulator Parameters**.

The **Tabulator** field should display the value **100**. Enter the values for **Range of Precincts** or **Range of Polls** that you will need*. Click the **OK** button to continue.

*Note: You must burn a PCMCIA card for each county precinct or administrative grouping for which you have runoff ballots. Repeat the steps to **Create Tabulator Parameters** if necessary to create parameters for precincts or polls individually, or for groups of non-sequential precincts or polls. Contact SBE IRV staff for assistance if necessary.
Follow standard SBE procedures to burn PCMCIA cards for all precincts or polls necessary. Label the cards according to the precinct/poll name, and indicate that these cards are for the 3rd Choice tally, as:

PRECINCT 1
3rd CHOICE

After you have burned and labeled all necessary 3rd Choice PCMCIA cards, repeat SEQUENCE BETA, removing the 3rd Choice from each ballot style and including the 2nd Choice. After you have burned and labeled all necessary 2nd Choice PCMCIA cards, repeat SEQUENCE BETA one final time, removing the 2nd Choice from each ballot style and including the 1st Choice. When this entire process is complete, you will have three PCMCIA cards for each precinct/poll.

Begin the process of scanning ballots to determine runoff results. Throughout this process, be sure to keep the ballots separated by precinct/poll, and also in the separate overvote stacks within each precinct/poll.

A single M100 may be used for each precinct/poll, beginning with the 1st Choice PCMCIA card and then the 2nd Choice and finally the 3rd Choice; or all three PCMCIA cards for a precinct/poll can be set up simultaneously using three M100s. The instructions that follow assume that the polls have been opened using the card referenced.

When you begin to process a precinct/poll, you should have 4 stacks of ballots: those with no overvotes, those with overvotes on the 1st Choice, those with overvotes on the 2nd Choice, and those with overvotes on the 3rd Choice. (It is entirely possible that one or more of these stacks may be empty.) Begin by setting the 1st Choice overvote stack aside. Then feed all ballots without overvotes into the tabulator using the 1st Choice PCMCIA card. Each ballot with a vote for either runoff candidate will be accepted and the vote recorded; all other ballots will be rejected. Place all rejected ballots into a new stack, designated 2nd Choice with no overvotes. After all ballots without overvotes have been either accepted or rejected, place all that were accepted into a new stack, designated 1st Choice Votes. Next, feed all 2nd Choice overvote ballots into the same tabulator; move all ballots that are accepted into the 1st Choice Votes stack, and return those that are rejected to the 2nd Choice overvotes stack. Then feed all 3rd Choice overvote ballots into the same tabulator; move all ballots that are accepted into the 1st Choice Votes stack, and return those that are rejected to the 3rd Choice overvotes stack. Set the 2nd Choice overvote stack aside.
Moving on to the tabulator using the 2nd Choice PCMCIA card, feed all ballots from the 2nd Choice with no overvotes stack. Any ballots which are rejected should be placed into a new stack, designated 3rd Choice with no overvotes. All ballots which were accepted should be placed into a new stack, designated 2nd Choice Votes. Next, feed all 3rd Choice overvote ballots into the same tabulator; move all ballots that are accepted into the 2nd Choice Votes stack, and return those that are rejected to the 3rd Choice overvotes stack. Set the 3rd Choice overvotes stack aside.

Finally, into the tabulator using the 3rd Choice PCMCIA card, feed all ballots from the 3rd Choice with no overvotes stack. Any ballots which are rejected should be placed into a new stack, designated undervotes. All ballots which were accepted should be placed into a new stack, designated 3rd Choice Votes.

After the polls have been closed on all PCMCIA cards for the precinct/poll and all ballots have been secured while maintaining the separate stacks, repeat the process for the next precinct/poll until all have been processed. Then return to the Unity PC and open ERM.

From the ERM menu bar select Election > Change.

Locate the runoff election. Scroll through the list if necessary. Click to highlight it, then click the OK button.
Click the **OK** button to continue.

Click **Yes** to create the election files.

Enter the correct number of groups for your election. It is not necessary to check the box to initialize the cross reference file. Click the **OK** button to continue.

Click **Yes** to create the Results Database.
The **Add/Change Groups** window will appear. Enter the appropriate group names for your election, and select **100** for the **Equip** type for all.

When all groups are defined correctly, click the **OK** button to continue.

Click the **OK** button to return to the main ERM screen.
From the menu bar, select **Miscellaneous > Change Contest/Candidate or Precinct Names**.

Enter the password for your election, then click the **OK** button.

Select **Change Contest/Candidate Names** and click the **OK** button.
Click the Contest… button.

Click to highlight the 1st Choice runoff contest, then click the OK button.
The data for the contest will be displayed. Click in the Contest title: field; the blinking cursor will appear there.

Delete the 1st Choice designation from the title. Click the Update button to save the change. The data fields will be cleared.

Click the Cancel button to close the window, then click the cancel button to close the next window and return to the main ERM screen.

Follow standard SBE procedures to read in results from PCMCIA cards. Because there are three separate results cards for each precinct, Add-to Mode will be required. After all vote totals have been read in, if it is required that reports show undervotes and overvotes, follow standard SBE procedures to update those values manually.
When generating reports and/or ASCII files, follow the steps in section I to include only the statistical counts and the 1st Choice contest you renamed previously.

The resulting report will show the entire runoff vote tally in the single contest selected.

A separate election will be created in ENR for the purpose of reporting Second Round IRV results. When uploading runoff results, be sure to upload to the proper election in ENR. DO NOT upload runoff results to the main election – this will wipe out existing Election Night results, requiring that they be uploaded again.
SPECIAL INSTRUCTIONS - INSTANT RUNOFF VOTING:

a. Choose up to 3 candidates for each office in order of your preference: 1st, 2nd, 3rd.
b. Select a different candidate for each choice.
c. With a black ball point pen or the marking device provided, completely fill in the oval ☑️ to the left of each candidate of your choice, like this: ☑️
d. Where authorized, you may write in a candidate by filling in the oval and writing the name on the Write-in line.
e. Your 2nd and 3rd choices will not count against your 1st choice; they will only be considered in a runoff if your 1st choice is not in the runoff.
f. If you tear, deface or wrongly mark this ballot, return it to request a replacement.

Chairman, Template County
Board of Elections

End of Ballot