



# Loading ExpressVote Media: "Manifest Signature Verification Failed"

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## *Technical Bulletin #FYIEWR0026 Rev 2*

Product: Electionware

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Version: EVS4500, EVS5200/01/02, EVS5300

Distribution: External

This is a revised version of a previous advisory. The workflow has been updated for ease of use, as well as to ensure there are no Election Reporting Manager (ERM) warnings.

### **QUESTION:**

When loading ExpressVote media, what do I do when the message "Manifest signature verification failed" appears?

### **ANSWER:**

All files on the media device are digitally signed by Electionware. The equipment checks these digital signatures for security to validate that the files came from a trusted source, and were not changed or modified after being created.

For the ExpressVote, these files are signed using the RSA digital signature algorithm. That algorithm can occasionally generate a digital signature with a leading zero byte, and the leading zero is not written to the media device for that file. Therefore, if the leading zero is not written, the ExpressVote's security passcode check will not consider the file valid, signaling a signature mismatch.

The likelihood of this occurrence is less than 1 in 250. In the rare event that a mismatch does occur, following the steps in this procedure will allow the system to generate a new digital signature for the ExpressVote media.

This issue will be corrected with a new release upon certification. Once available, ES&S will provide the update.

## Note



Although the DS200, DS850, and Reporting Key media are all digitally signed as well, they are not affected by this advisory.

The ExpressVote media is not used to update results into ERM, therefore it would never affect your election night results.

We recommend that you verify the Election Qualification Code media used by the ExpressVote as well as all ExpressVote poll media. Once a poll is verified as working, then it may be packaged multiple times without a mismatch.

1. In the Electionware Home module, create the election.
2. Immediately open the Configure module and add the DS/ExpressVote security codes.
3. In the Package module, package the Election Qualification Code media.
4. Verify the Qualification media. (Refer to the section [Verify Media](#).)

If the mismatch occurs at this point, create a new election and return to step 1. This now becomes the election you will use.

5. Continue coding the election as normal.
6. Package all DS200/DS850 media.
7. Package the Reporting Key media.
8. Package all ExpressVote poll media.

## Election Qualification Code Media

9. Verify the ExpressVote poll media. (Refer to the section [Verify Media](#).)

If a mismatch *is* discovered in the ExpressVote poll media:

- a. Set this media aside and continue packaging the rest of the ExpressVote poll media.
- b. After all media has been packaged, in the Home module, back up the election.

## ExpressVote Poll Media

- c. Perform the procedures in the section [Steps in Electionware](#).

## Verify Media

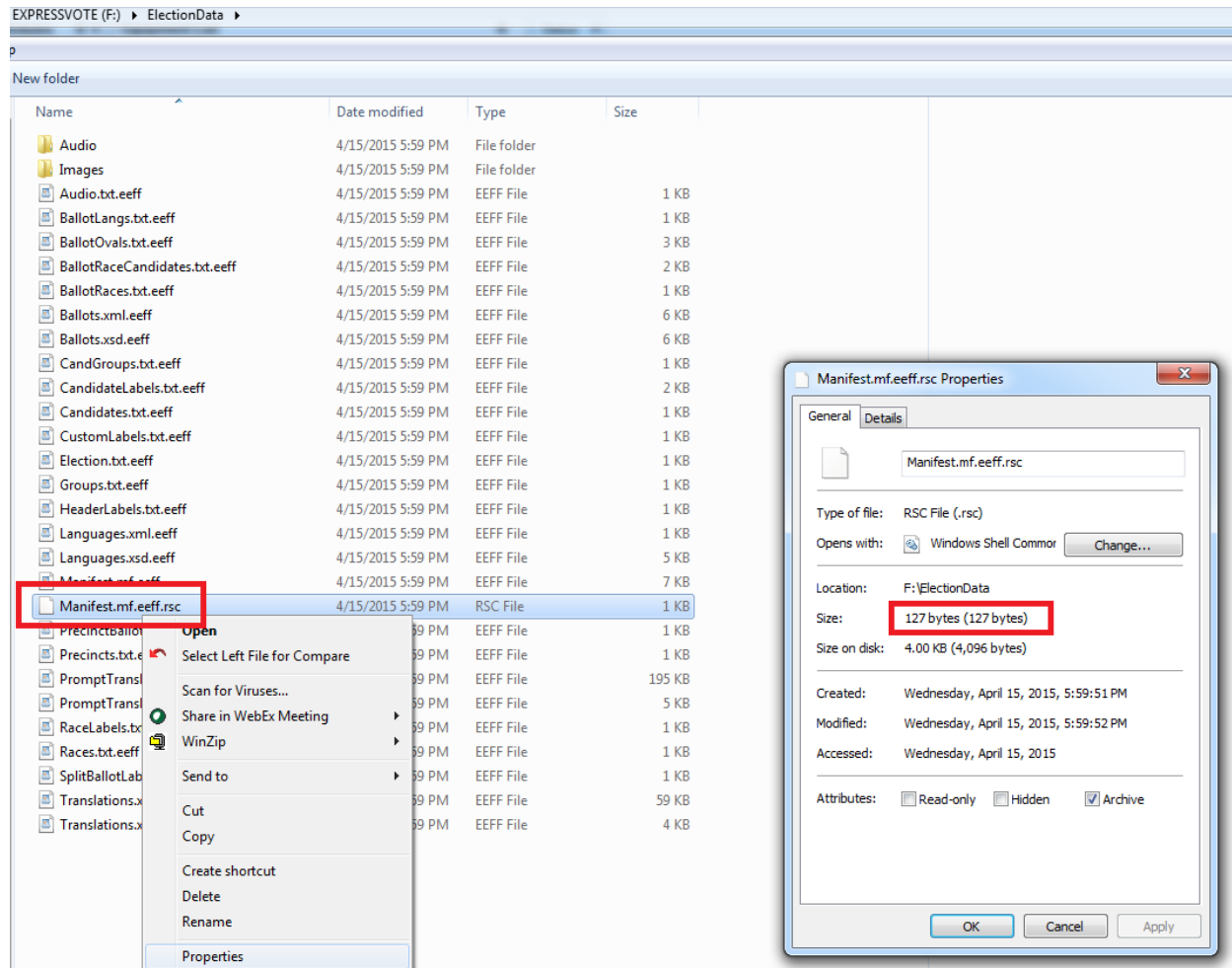
There are two methods for verifying the media:

- Insert it into the ExpressVote, or
- In Windows, check for a mismatch before loading the media on the ExpressVote by examining two data files.

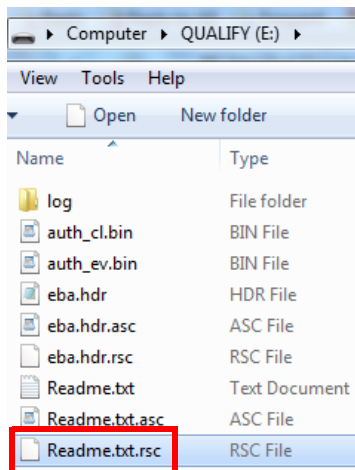
To verify the media in Windows:

1. Insert the media on your computer.
2. In the root folder of the media is a file named `Readme.txt.rsc`.  
For ExpressVote poll media only, in the ElectionData folder is a file named `Manifest.mf.eeff.rsc`. (This file is not on the Qualification media.)  
Right-click each of these files and select **Properties**.
3. In the Properties window, on the General tab, check the size of the file. If the size of either file is less than 128 bytes, there is a mismatch.

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Manifest.mf.eeff.rsc  
 file (ExpressVote poll media only)



Readme.txt.rsc file  
 (ExpressVote poll media & Election  
 Qualification Code media)

## Steps in Electionware

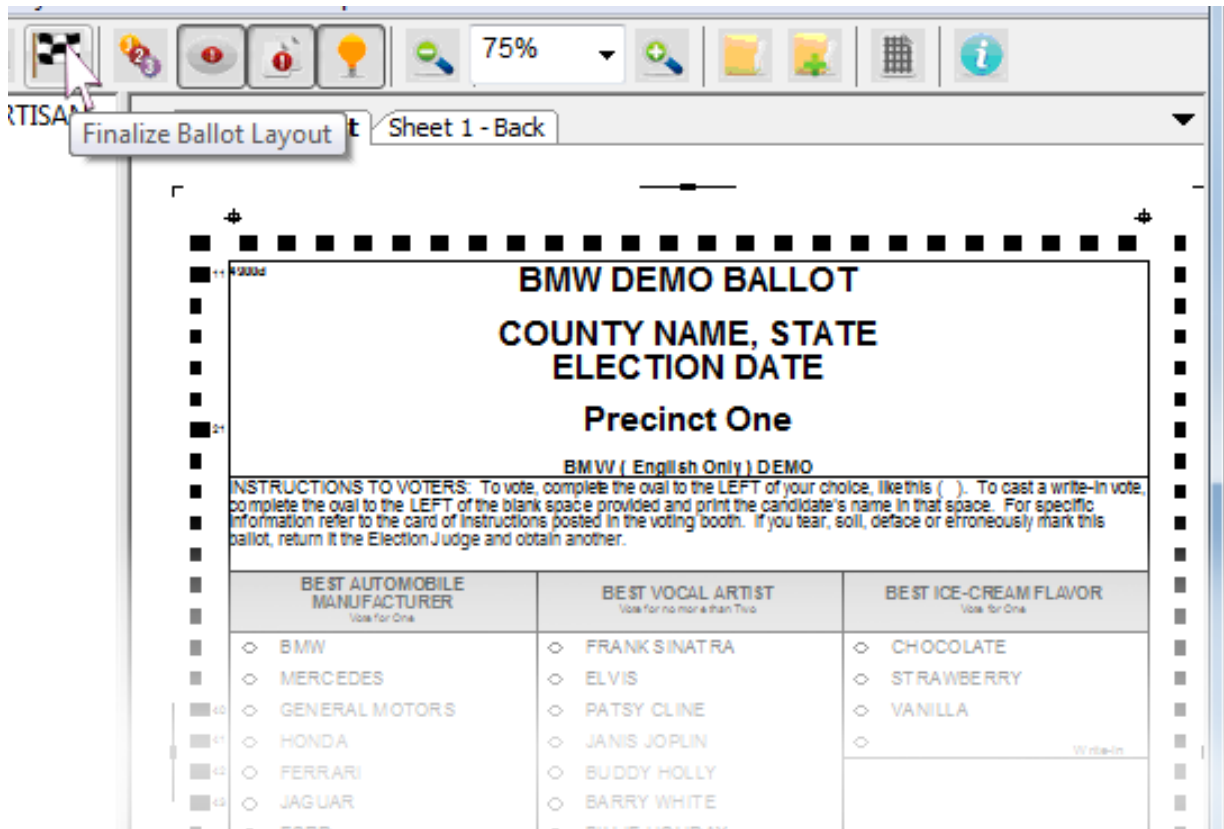
Refer to the flow chart on page 7 for the following steps.

### Caution



This procedure takes place after you have finished printing ballots in the original election. The only Paper Ballot task in this procedure is to finalize the ballot layout. Do not do anything else in Paper Ballot.

1. Restore the backup election and give it a unique name.
2. In Paper Ballot, select **Finalize Paper Ballot**.



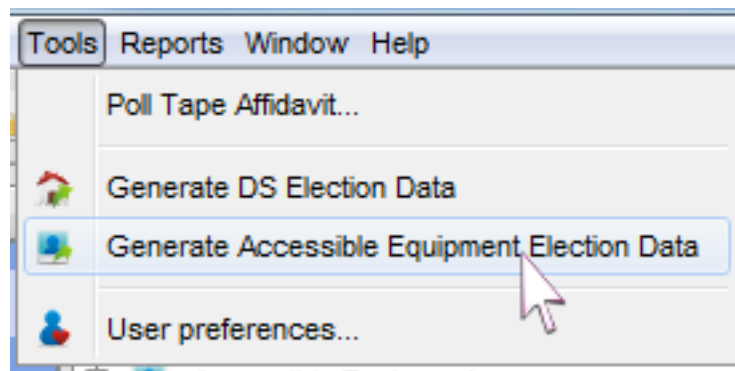
3. Close Paper Ballot.

### Warning



If you have made formatting changes in Accessible Ballot (i.e. Format Headings, Format Contests, Format Contest Summary, Format Candidates, Format Ballot Styles), these tasks must be repeated after each time you Finalize Ballot Layout in Paper Ballot.

4. In Configure, from the **Tools** menu, select **Generate Accessible Equipment Election Data**.



5. In Package, recreate the ExpressVote election media, for the mismatched media *only*.
6. Load the ExpressVote election media. If the mismatch appears again, repeat steps 2 - 6 in Electionware.

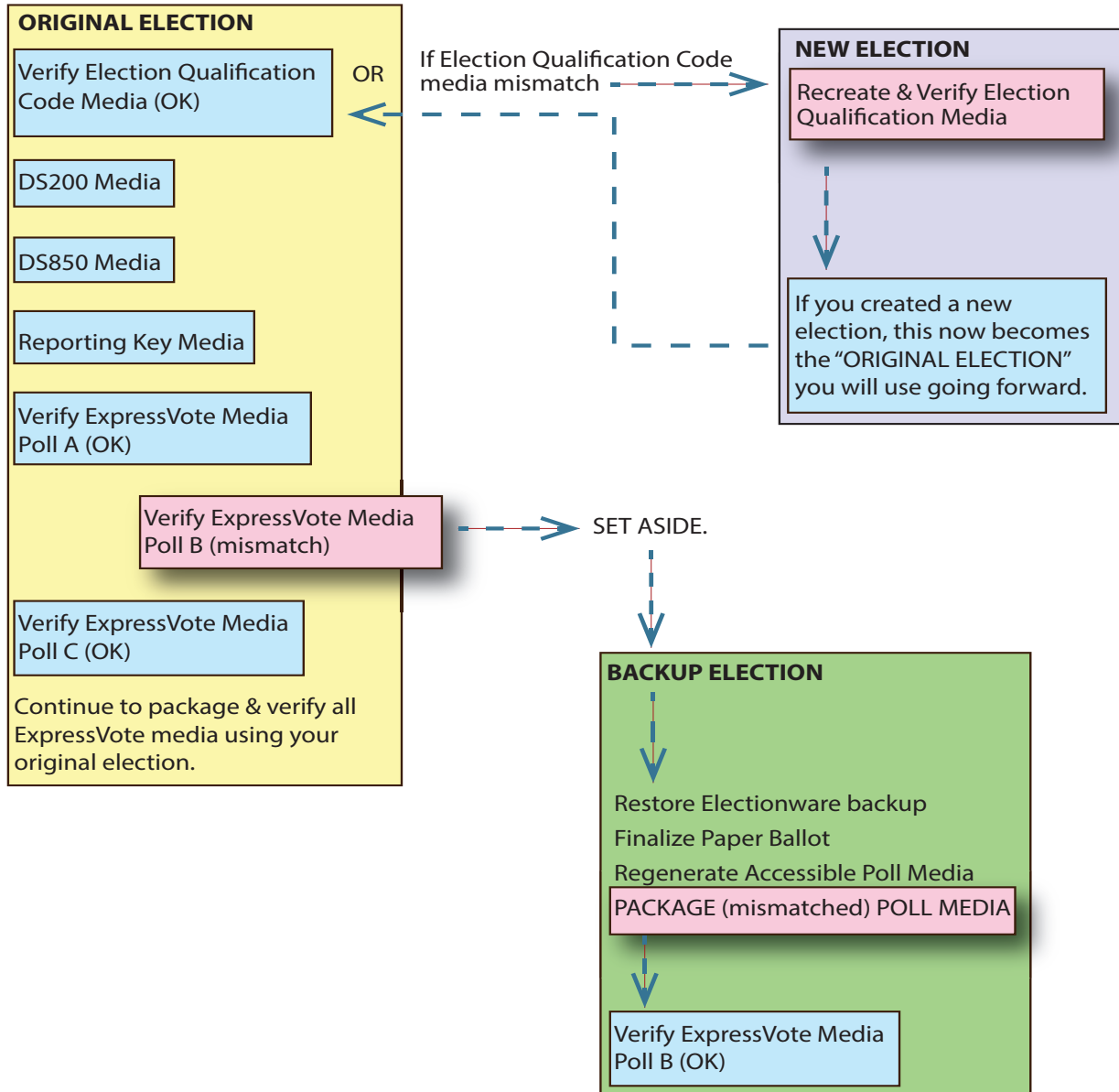
**Note**



If any other DS200, DS850, ExpressVote, or Reporting Key media requires re-packaging, do so within the *original* election.

A restored backup is used only for recreating mismatched ExpressVote poll media.

Process Flow Chart



## ES&S Support

If you require additional technical support for ES&S products, contact information is provided below.

| <b>Contact an ES&amp;S Support Representative</b> |  |
|---|--|
| Telephone:  | 877-377-8683 (USA & Canada)  |
| Fax:  | 402-593-8107   |
| Write:  | Election Systems & Software<br>11208 John Galt Blvd<br>Omaha, NE 68137 USA |

ES&S support services are subject to the prices, terms, and conditions in place at the time of service.



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