ICP Troubleshooting

Power Related Issues

Symptoms of power related issue(s) include:

- Tabulator fails to power up.
- Tabulator shuts down all of a sudden.
- LCD Screen is blank or goes blank all of sudden.

Tabulator Fails to Power Up

1. If the ICP tabulator is not using power from the ballot box, verify that the round AC Power Adapter plug is properly connected to the power jack at the rear of the tabulator.

2. Verify that the power plug from the ballot box or the AC Power Adapter is connected to a functional wall outlet. If connected to a power strip, verify that the power strip is functional (if it has an ON/OFF switch, the switch should be in the ON position).

3. Check the Power Status LED 1 at the front of the tabulator.

4. If OFF, verify whether the tabulator can be powered on back-up battery power only.

   == NOTE ==: *To do this, press and hold the Reset push button at the rear for three (3) seconds then release.*

5. If the tabulator powers up on battery power, then the issue is with the external Power Adapter module. Replace the Power Adapter module and retry.

6. If the Power Status LED 1 turns on with the external Power Adapter module but the LCD Screen is blank

7. If the problem persists, follow county guidelines.

Tabulator Shuts Down Suddenly

1. Verify that the AC Power Adapter pin is properly connected to the power jack at the rear of the tabulator.

2. Verify that the 2-prong plug from the AC Power Adapter is connected to a functional wall outlet. If connected to a power bar, verify that the power bar is functional (if it has an ON/OFF switch, the switch should be in the ON position).

3. If the Power Status LED 1 is OFF, check the Power Adapter to ensure that it is functional. If not, replace the Power Adapter.

4. If the tabulator was operating on battery power, recharge or replace the back-up battery, whichever is easier.

5. Once the tabulator powers up, confirm that it loads past the Operating System and Election Application.

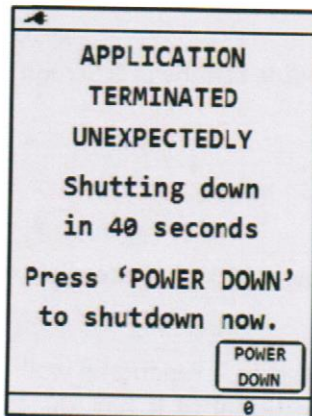6. If the problem persists, follow county guidelines.

LCD Screen is Blank or goes Blank Suddenly

1. Power up the tabulator.

2. If the Power Status LED 1 does not illuminate, check the power connections to ensure that the unit is getting power.

3. If the Power Status LED 1 turns on, check the LCD Screen closely to see if it displays the start-up screen.

4. If the start-up screen is visible but dull, then the issue is related to the LCD brightness settings. Instructions for adjusting LCD brightness are on Page 11.

5. If the start-up screen is not visible at all, follow county guidelines.

Election Application Loading Issues

Application Terminated Unexpectedly

Symptoms of this error include display of the start-up screen for an unusually long time without advancement. This error typically results in automatic tabulator shutdown after the error message below is displayed.

```
        APPLICATION
         TERMINATED
        UNEXPECTEDLY

      Shutting down
      in 40 seconds

   Press 'POWER DOWN'
   to shutdown now.
                   ┌─────────┐
                   │  POWER  │
                   │  DOWN   │
                   └─────────┘
                        0
```

Follow the recovery steps below to resolve this issue:

1. Verify that CF cards are present and properly inserted into their slots.

2. Verify that the version of tabulator firmware is in sync with the Election Management System (EMS) version from which the memory cards were created.

3. Remove the memory cards and with a flashlight, inspect the pins inside the CF card interface. If bent or damaged, follow county guidelines.

4. Attempt to load an election using a set of known working election memory cards.

5. If the problem persists, follow county guidelines.

Problem Detected with Memory Cards

Symptoms of this error include display of the start-up screen for an unusually long time without advancement.

```
PROBLEM DETECTED
WITH MEMORY CARDS.
 DETAILS IN AUDIT
       LOG.
  PLEASE SHUTDOWN
 DEVICE AND VERIFY
      CARDS.

              SHUT
              DOWN
              0
```

Follow the recovery steps below to resolve this issue:

1. Press the POWER DOWN button on the LCD screen and wait for the tabulator to completely shut down.

2. Verify that the CF memory cards are inserted into their respective slots (CF 1 memory card in the Poll Worker slot and CF2 memory card in the Administrator slot).

3. Remove the memory cards and replace them with a set of known working memory cards then power up the ICP to ensure that the issue is not with the ICP itself.

4. Power the ICP back down.

5. Take the original Primary memory card (CF 1) and insert it into a memory card reader/writer that is attached to a PC. Navigate to the memory card and verify that the card is programmed with the correct Election Files (must contain the dcf file, election folders, and TabulatorData.xml file).

6. If the files appear to be correct on the memory card, reinsert the original memory cards and try to power up the ICP again.

7. If the problem persists, reprogram the memory cards, insert those into the unit and try to power up the ICP again.

8. If the problem persists, follow county guidelines.

Election Database or Files Loading Error

This prompt is also accompanied by a continuous low beep from the System Buzzer indicating that all modules were correctly initialized, and all security verifications passed.

Security Key or Access Credentials Error

Issues related to the Security Key or access credentials usually manifest themselves in the form of one of the following error messages:

- Error reading Security Key
- Incorrect Security Key
- Invalid Passcode Entered
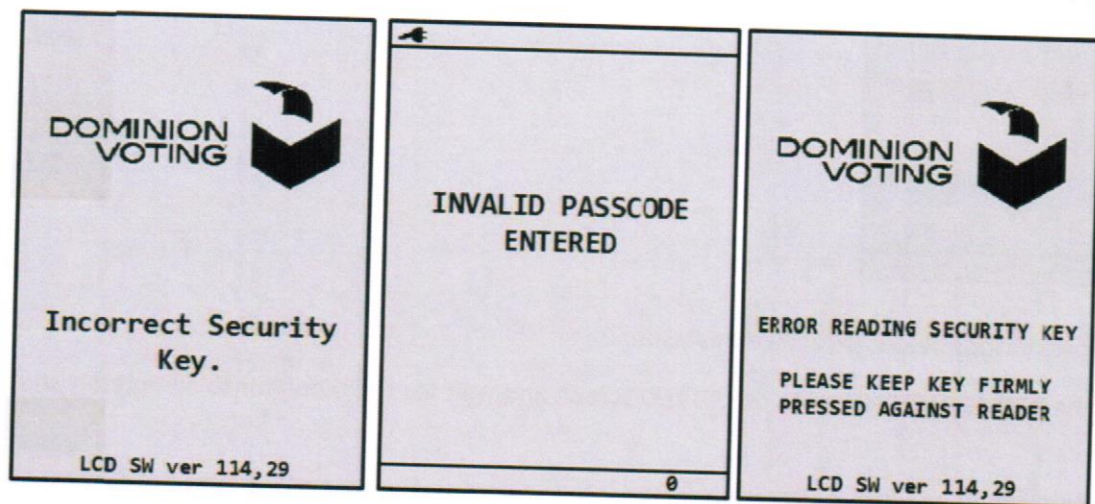
It is important to note that every Administrative Security Key is specific to the Election Project programmed on the Compact Flash memory cards.

Follow the recovery steps below to resolve errors reading the Security Key:

1. Firmly press the Security Key to the security key reader and hold it in place until the LCD screen displays the keypad screen.

2. If it does, key in the correct access credentials and verify that the button presses are registered correctly.

3. If the keypad screen does not come up or if the access credentials are not accepted even after correct Security Key presses, verify that the correct Security Key specific to the Election Project loaded on the memory cards is being used.

4. Reprogram the Security Key using the Election Management System (EMS) software if necessary.

5. If the problem persists, follow county guidelines.

Issues during Standard Voting
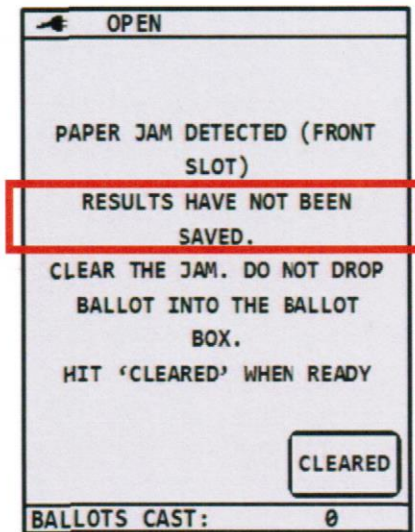
Paper or Ballot Jams

Two different paper jam messages can be displayed on the LCD Screen depending on the position or location of the ballot within the paper path when the jam occurs.

- Paper Jam - Front Slot
- Paper Jam - Exit Slot

The User must carefully read the error message on the operator screen when the jam occurs in order to determine the location of the jam and more importantly to know whether the ballot scan results have been registered or not.

Paper Jam – Front Slot

The LCD screen displays the error message as seen in the image below. In most cases of a front slot paper jam, the scan results have **NOT** been registered.

```
◄—    OPEN




    PAPER JAM DETECTED (FRONT
              SLOT)
┌──────────────────────────┐
│     RESULTS HAVE NOT BEEN │
│             SAVED.        │
└──────────────────────────┘
    CLEAR THE JAM. DO NOT DROP
      BALLOT INTO THE BALLOT
                BOX.
    HIT 'CLEARED' WHEN READY


                    ┌─────────┐
                    │ CLEARED │
                    └─────────┘

BALLOTS CAST:              0
```

Perform the following steps to resolve a front slot paper jam error:

1. **READ THE ERROR MESSAGE CARFULLY!**

2. If the ballot is accessible from the front, pull it out of the tabulator carefully to avoid tears. If cleared, proceed to Step 4.

3. If the ballot is not accessible from the front of the tabulator, slide the tabulator forward on the Ballot Box and pull the ballot out from the rear.

   ** CAUTION **: *Exercise care when manually pulling the ballot to avoid tear. If the ballot begins to tear, stop immediately and replace the tabulator.*
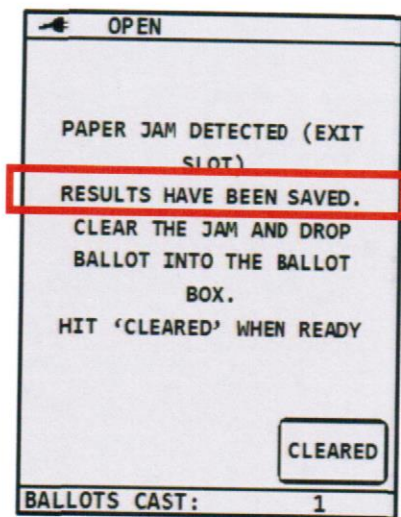
   ** NOTE **: *If the jam occurs on Election Day, ensure the following:*

   a. **The voter's privacy is maintained as much as possible when pulling the ballot out manually.**

b. **The appropriate protocols are followed when sliding the tabulator out or lifting the tabulator off the Ballot Box.**

4. Press the **CLEARED** button on the LCD screen. The System Ready screen will display.

   ==** NOTE **==: *If the System Ready screen does not appear even after clearing the ballot and pressing the CLEARED button, replace the tabulator and contact Dominion for service.*

5. If the ballot edges are not visibly damaged, the ballot can be re-inserted into the tabulator, otherwise a new ballot must be issued.

6. If the ballot is not accessible from either the front or back slots or the problem persists, replace the tabulator and follow county guidelines.

Paper Jam – Exit Slot

The LCD screen displays the error message as seen in the image below. In most cases of an exit slot paper jam, the scan results have been registered.


```
◄    OPEN



  PAPER JAM DETECTED (EXIT
            SLOT)
  RESULTS HAVE BEEN SAVED.
   CLEAR THE JAM AND DROP
   BALLOT INTO THE BALLOT
            BOX.
  HIT 'CLEARED' WHEN READY




                    ┌─────────┐
                    │ CLEARED │
                    └─────────┘
 BALLOTS CAST:          1
```

Perform the following steps to resolve an exit slot paper jam error:

1. **READ THE ERROR MESSAGE CAREFULLY!**

2. If the paper/ballot is not accessible from the front of the tabulator, slide the tabulator forward, lift the tabulator from the Ballot Box if necessary, and pull the ballot out from the back.

   ==** CAUTION **==: *Exercise care when manually pulling the ballot to avoid tearing.*

   ==** NOTE **==: *If the jam occurs on Election Day, ensure the following:*

   a. **The voter's privacy is maintained when pulling the ballot out manually.**
   b. **The appropriate protocols are followed sliding the tabulator out or lifting the tabulator off the Ballot Box.**

3. Since the ballot scan results have been registered, drop the ballot into the appropriate compartment of the ballot box depending on whether it was pulled from the front or back of

the tabulator (front = write-in compartment; back = regular ballot box compartment).

4. Press the **CLEARED** button on the LCD screen and observe the next message on the screen.

5. Verify that the LCD screen first momentarily displays the message Ballot Successfully Cast.

6. The System Ready screen will then display.

   ** NOTE **: *If the System Ready screen does not appear even after clearing the ballot and pressing the CLEARED button, try rebooting the tabulator.*
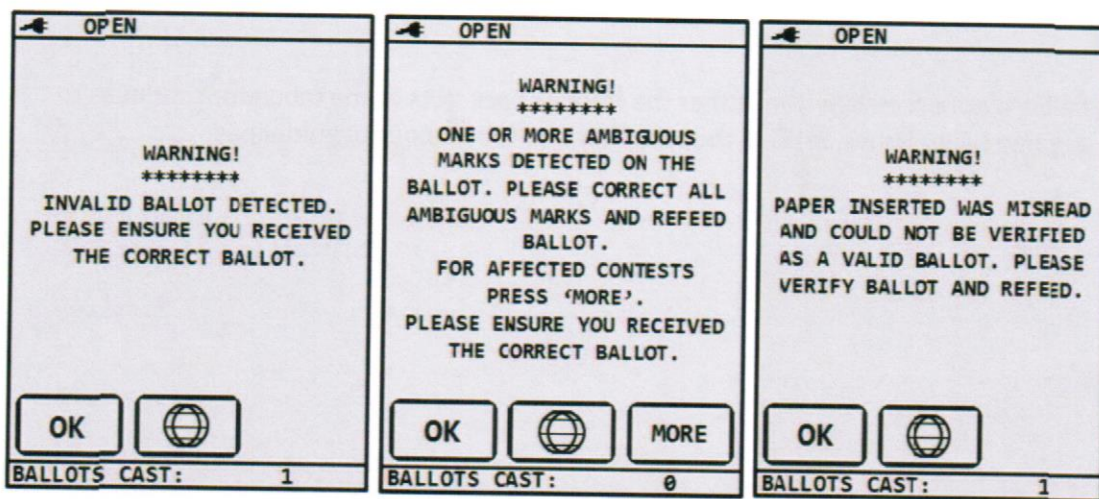
7. To verify on Election Day if the issue is resolved, simply wait for the next voter to cast their ballot.

8. If the ballot is not accessible from either the front or back slots or the tabulator continues to have jammed ballot issues, replace the tabulator and follow county guidelines.

Scanner Imaging Errors

Environmental dust, roller debris, paper dust, or even ink smudges deposited within the tabulator paper path can distort the image obtained from the CIS read heads.

Such an error usually manifests itself in the form of one of the following error messages on the LCD screen in the case of hand marked ballot i.e. emergency ballots.

- Invalid Ballot Message
- Ambiguous Marks Message
- Misread Ballot Message

OPEN	OPEN	OPEN
WARNING! ******** INVALID BALLOT DETECTED. PLEASE ENSURE YOU RECEIVED THE CORRECT BALLOT.	WARNING! ******** ONE OR MORE AMBIGUOUS MARKS DETECTED ON THE BALLOT. PLEASE CORRECT ALL AMBIGUOUS MARKS AND REFEED BALLOT. FOR AFFECTED CONTESTS PRESS 'MORE'. PLEASE ENSURE YOU RECEIVED THE CORRECT BALLOT.	WARNING! ******** PAPER INSERTED WAS MISREAD AND COULD NOT BE VERIFIED AS A VALID BALLOT. PLEASE VERIFY BALLOT AND REFEED.
OK ⊕	OK ⊕ MORE	OK ⊕
BALLOTS CAST: 1	BALLOTS CAST: 0	BALLOTS CAST: 1

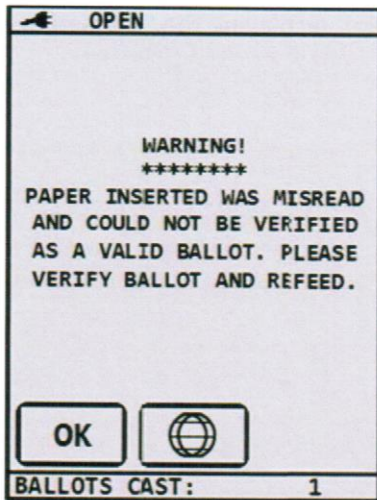Perform the following recovery steps to resolve scanner imaging errors:

1. Insert the ballot in a different orientation (at least three times) to determine if the error is consistent.

2. If the ballot is accepted, run the next ballot in the standard orientation. If the error repeats, proceed to Step 3 otherwise continue normally.

3. Ensure that a correct and valid ballot is being used. Verify, if possible, that:

    a. There are no undesired marks along the timing or barcode tracks on the ballot.
    b. The voting locations have been properly marked with an approved marker.

   ** NOTE **: *On Election Day, politely request the voter to verify step 3 above.*

4. If the error is inconsistent, perform the Paper Path Cleaning Procedure.

5. If possible, access the Diagnostics utility and go Individual - Scanner – Scan Ballot.

6. Feed a single Election Ballot into the ballot insertion slot and verify from the LCD screen that it is correctly detected.

7. Repeat the step above at least four times in all four possible orientations of ballot insertion to confirm that the issue is resolved.

8. If the problem persists, replace the tabulator and follow county guidelines.

Misread Ballots – Scanning Problem

A misread ballot warning indicates that the ICP has not recognized all of the features on the ballot or that certain essential ballot identification markings cannot be found. This usually occurs if the ballot is physically damaged (i.e. torn or sharply folded) or there are stray markings that were inadvertently made on the ballot. These markings may obstruct certain important identifiers along the sides or the bottom of the ballot.

```
◄  OPEN


              WARNING!
              ********
    PAPER INSERTED WAS MISREAD
    AND COULD NOT BE VERIFIED
    AS A VALID BALLOT. PLEASE
    VERIFY BALLOT AND REFEED.




   OK        ⊕
BALLOTS CAST:          1
```

Follow county procedure for issuing a new ballot if needed.

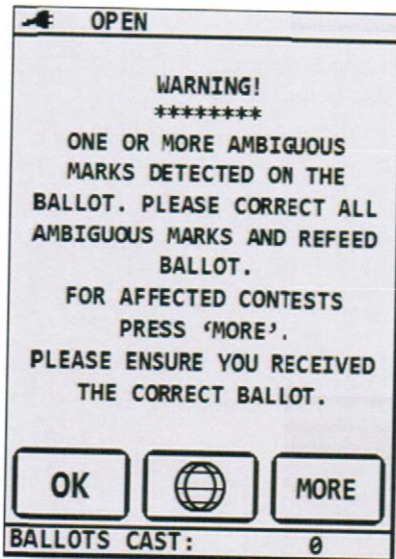Misreads or tabulator imaging errors can be caused by:

- Damaged or torn ballots.
- Smudged ink within the paper path of the tabulator caused by incorrect markers being used to mark the ballots where the ink did not fully dry on the ballot before insertion into the tabulator.
- Dirt/dust build-up over time within the tabulator paper path system (this is unlikely).

Follow the steps below to resolve misreads or imaging errors:

1. If the ballot is physically damaged and cannot be accepted by the scanner a new ballot may have to be issued.

2. If the ballot is not visibly damaged, insert the ballot in a different orientation to see if the error repeats itself.

3. If there are persistent misreads, particularly if they only occur in one orientation, the paper path may be compromised; replace the tabulator and follow county guidelines.

Ambiguous Marks

If the tabulator detects a voter mark that is not large enough or dark enough to be clearly read as the voter intended, the tabulator is configured to automatically return the ballot, displaying the "Ambiguous Marks" (Hand Marked Ballots only) warning.

```
◄  OPEN
         WARNING!
         ********
     ONE OR MORE AMBIGUOUS
     MARKS DETECTED ON THE
   BALLOT. PLEASE CORRECT ALL
  AMBIGUOUS MARKS AND REFEED
            BALLOT.
     FOR AFFECTED CONTESTS
       PRESS 'MORE'.
   PLEASE ENSURE YOU RECEIVED
      THE CORRECT BALLOT.


   [ OK ]   [ ⊕ ]   [ MORE ]

BALLOTS CAST:        0
```
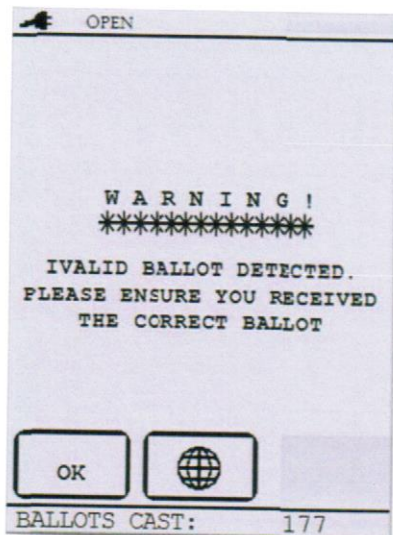
If an Ambiguous Mark is detected follow these steps:

1. If the ballot is still not accepted by the tabulator after three attempts and the warning message continues to be "Ambiguous Marks", the poll worker should ask the voter to review the ballot to ensure that their choices are clearly marked as intended and that there are no stray marks on the ballot.

2. The poll worker will have the voter to return to the voting booth, and make sure the voter understands how to mark their ballot.

Invalid Ballots

An Invalid Ballot is one that the tabulator identifies as an official ballot, but the tabulator is not configured to accept that particular ballot (i.e. a ballot that was meant for another precinct's tabulator as in traditional precinct/tabulator setup).

```
◀  OPEN


           W A R N I N G !
           ***************

      IVALID BALLOT DETECTED.
    PLEASE ENSURE YOU RECEIVED
         THE CORRECT BALLOT




     ┌──────┐  ┌──────┐
     │  OK  │  │  ⊕   │
     └──────┘  └──────┘
   BALLOTS CAST:        177
```

The tabulator is configured to automatically return the incorrect ballot, displaying an "Invalid Ballot" warning message on the screen for five seconds and emitting an audible beeping sound. After this time, the screen will return to "System Ready" mode.

Issues during Opening or Closing Polls

Issues during the opening or closing of the polls are usually related to report printing. A specific error message is displayed on the LCD Screen in the event such an error condition arises.

Thermal Printer Errors

A thermal printer error usually manifests itself in one of the following ways:

- Operator screen displays "Thermal Taper Printer Error" message.
- Paper rolls out but no print on it.
- Printer prints random characters on print tape.
- Illegible print quality.

```
◄  OPEN

THERMAL TAPE PRINTER ERROR

PLEASE MAKE SURE PAPER IS
LOADED AND PRINTER IS OK.
THEN WAIT LONG ENOUGH TO
LET PRINTER RECOVER AND
PRESS THE 'OK' BUTTON.

IF PROBLEM REMAINS SEEK
TECHNICAL SUPPORT.

                    ┌────────┐
                    │   OK   │
                    └────────┘
BALLOTS CAST:              1
```

Most if not all thermal printer related issues can be resolved by ensuring that the thermal paper roll is correctly loaded on the printer and the platen roller is properly seated in place.

Perform the following steps to resolve thermal printer related issues:

1. Be sure to properly load the thermal paper roll. Perform the diagnostic Thermal Printer Test to confirm functionality if necessary.

2. Once the thermal paper roll is correctly loaded, press the **OK** button on the LCD screen to reinitialize the printer.

3. If the print quality is illegible or there are random/undesired characters being printed, follow county guidelines.