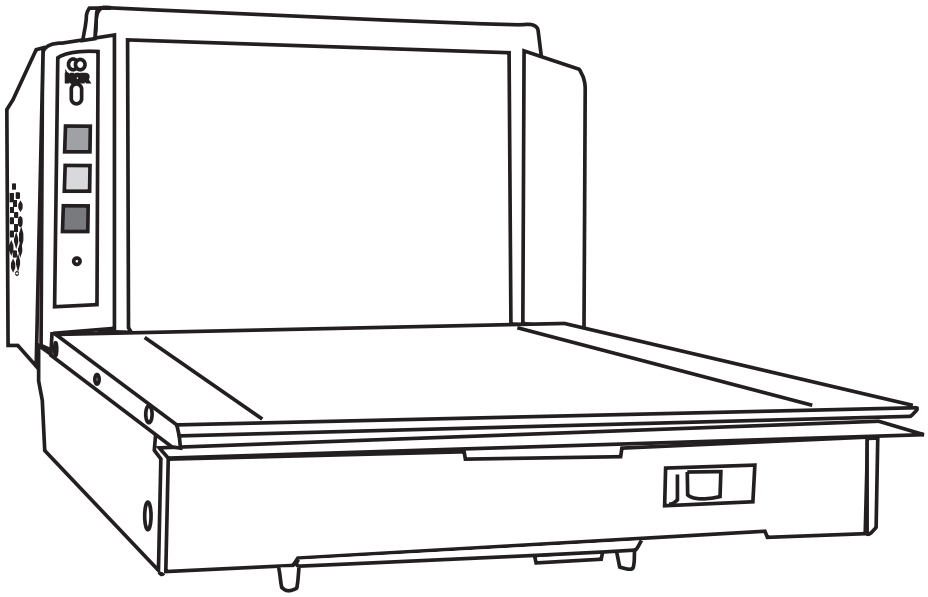
NCR 7875 Scanner Scale



Features:

- Two video channels
- Large windows to increase the size of the scanning field
- Top-down scanning capability
- Pacesetter 3 software allows the Scanner to scan damaged bar codes
- 10 667 scan lines per second processed
- “Clean glass” indicator notifies the attendant when the window is too dirty
- Attendant-side volume control

Technical Specifications

Environment

- Temperature: 50°F to 104°F (10° to 40°C)
- Relative Humidity: 5% to 95% non-condensing

Power Supply Requirements

- 90 to 260 V ac, 50 to 60 Hz
- 24 W (scanning); 11 W (stand-by)

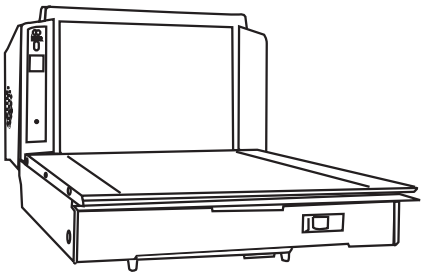
Communication

- Standard RS-232 connection to Edgeport

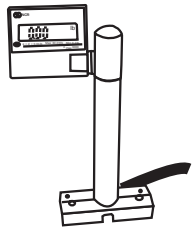
Components of the NCR 7875

The NCR 7875 Scanner Scale is made up of the following components:

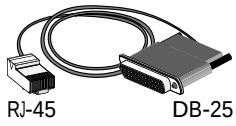
- NCR 7875 Scanner Scale
- Communication cable (RJ-45 to DB-25 female)
- Power supply
- Power cable
- Pole display (RJ-47 connector)



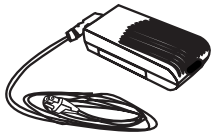
NCR Scanner Scale



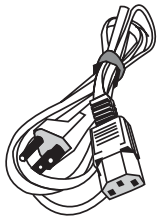
Pole Display



Communication Cable



Power Supply Adapter



Power Cable

NCR 7875 Common Problems and Solutions

This section provides basic steps for resolving common problems.

Calibration Troubleshooting (Pole Display)

Pole Display Error Code	Problem	Suspect Component
1----	Calibration error A/D output below 000th at digital to analog converter.	• Scanner Scale board • Load Cell
2----	Calibration error A/D output below 280th at digital to analog converter.	• Scanner Scale board • Load Cell
3----	Calibration error Analog to digital converter output is too high at 30 lbs.	• Scanner Scale board. • Load Cell
4----	Vibration to scale during calibration.	• Motors in check stand
9----	Interference detected during calibration.	• Top plate is touching check stand. • Scale was jarred.

Scanner Troubleshooting

Problem	Possible Cause	Corrective Action
Scanner does not operate, and the red and green LEDs are off.	Device has no power.	Check the electrical outlet for power transmission.
Scanner does not operate, and the red and green LEDs are flashing.	Sleep mode	Wave something in front of the motion detector.
Scanner does not read tags, and the red LED is flashing	Internal failure	• Turn off the circuit breaker to the 7875, then turn it back on. • If the problem persists, replace the Scanner Scale.

Scanner Troubleshooting

Problem	Possible Cause	Corrective Action
Scanner only reads two tags, and the red LED is on solid.	The 7875 is not communicating with the U-Scan computer.	• Inspect the communication cables. • Check the settings in the **Device Tester**. • Check the COM Port. • If necessary, replace the cables. • If necessary, replace the Scanner Scale.
Scanner is not reading bar codes	The Scanner is not communicating with the U-Scan	• Inspect the communication cables. • Check the settings in the **Device Tester**. • Check the COM Port. • If necessary, replace the cables. • If necessary, replace the Scanner Scale.

Scale Troubleshooting (Pole Display)

Error	Possible Cause	Solutions
Error code 5---- displays	Scale drift	• Verify that nothing is on the Scanner Scale. • Lift the top plate and verify that no objects are under it. • Press the **Scale Zero** button. • If the error code persists, replace the Scanner Scale.
Error code 4---- displays	Possible scale error	• Press the Scale Zero button and retry. • If the error code persists, replace the Scanner Scale.
Error code 4---- displays during calibration	The Scanner Scale vibrates slightly during calibration	• Calibrate the Scanner Scale, ensuring that it does not move while the weights are on it.
Scanner Scale display is blank	The top plate is prevented from moving down.	• Remove any obstructions around the top plate and check stand. • Remove any foreign objects from under the top plate.
Intermittent error codes	+12 V dc is unstable	• Replace the power supply. • If necessary, replace the Scanner Scale.

Troubleshooting the NCR 7875 Scanner Scale

NOTE: *If the Scanner Scale that you are working on or replacing is **Checkpoint Ready**, reconnect the Checkpoint cable. U-Scan technicians are not responsible for troubleshooting the Checkpoint system if the system is defective.*

1. Follow the Testing Procedure

See "Testing the Scanner Scale in the Device Tester."

2. Check the Power

1. Remove the Scanner Scale from the Customer Station.
2. Ensure that the power cable is connected to the Scanner Scale.
3. Ensure that the power cable is connected to the power bar.
4. Unplug the power cable, and then plug it back in to cycle the power.

3. Inspect the Data Cable

1. Ensure that the data cable is connected to the underside of the Scanner Scale.
2. Ensure that the data cable is connected to port 3 on DIGI Box or Edgeport.

4. Reset (Zero) the Scanner Scale

1. Press the **Scale Zero** button.
2. If applicable, locate the Scanner Scale pole display inside the Customer Station casing to verify that the scale was zeroed.

5. Check the RS232 Switch

1. Remove the Scanner Scale from the Customer Station casing.
2. Locate the RS-232 switch on the right side of the scale.
3. Verify that it is set to RS-232.
   (The RS-232 switch sets up communication through the DIGI Box.)

Troubleshooting the NCR 7875 Scanner Scale *(Cont'd)*

6. Program the NCR

NOTE: *1. Bar code tags are listed in the Additional Information section.*

2. Scan the tags in the order they were printed.

1 Unplug the power supply, and then plug it back in to cycle the power.

2 Scan the **DEFAULT** tag.
The device is automatically powered off, then back on.

3 Wait for a beep and scan the **PROGRAMMING MODE** tag.
The Scanner Scale gives an audio prompt: "Program Mode".

NOTE: *For steps 4 through 6, this audio prompt is emitted after each step.*

4 Scan the **HEX 1**, **0**, and **5** tags.

5 Scan the **HEX 2**, **1**, **A**, and **1** tags.

6 Scan the **HEX 2**, **1**, **C**, and **0** tags.

7 Scan the **SAVE AND RESET** tag.
The Scanner Scale beeps. The Scanner Scale is now programmed and ready to use.

NCR 7875 Maintenance

Cleaning the Scanner Scale

1 Remove all items from the Scanner Scale.

2 Prepare a solution of one part glass cleaner and one part water.

3 Spray the solution on a lint-free cleaning pad or cloth, then wipe the device. Take care to avoid scratching the device surface.

NOTES: *Do **not** spray the cleaning solution directly on any surface.*

*Do **not** use alcohol, acetone, abrasive cleaning products or abrasive pads.*

4 If necessary, remove the top platter of the Scanner Scale to clean the underside of the glass.

5 Replace the platter.

Additional Information for the NCR 7875 Scanner Scale

This section contains the following information:

- Calibrating the NCR 7875 Scanner/Scale (page 9): Procedure for calibrating the NCR 7875 Scanner Scale.
- Converting the NCR 7875 Scanner Scale from Imperial to Metric (page 14): Procedure for converting the NCR 7875 Scanner Scale from Imperial (lbs.) to Metric (kg).

NOTE: *If the Scanner Scale that you are working on or replacing is **Checkpoint Ready**, reconnect the Checkpoint cable. U-Scan technicians are not responsible for troubleshooting the Checkpoint system if the system is defective.*

Calibrating the NCR 7875 Scanner/Scale

1. Exercise the Scanner Scale

1 Ensure that the calibration requirements have been met.

2 Disconnect the data cable before beginning the calibration procedure.

3 Power on the NCR 7875.

4 Add or remove the weight to the Scanner Scale in order to achieve the weight readings provided below.
Begin with no weight (0) and add or remove weight to obtain the values shown in the chart.
Repeat this procedure **four** times.

Total Weight on Top Plate

Imperial: 0.0 lb; 5.0 lb; 15.0 lb; 30.0 lb; 15.0 lb; 5.0 lb; 0.0 lb
Metric: 0.0 kg; 2.5 kg; 5.0 kg; 15.0 kg; 5.0 kg; 2.5 kg; 0.0 kg

5 Once the scale is exercised it is ready to be calibrated.

6 Power off the NCR 7875, then remove the top plate.

7 Locate the calibration switch security cover in the right corner on the front of the unit.

8 Lift the left side of the cover to unlatch and remove it.

NOTE: *If the calibration switch security cover has a lead, wire or paper seal, remove the seal.*

9 Remove the screw that holds the calibration switch cover in place.

10 Rotate the right side of the calibration switch security cover to the back to gain access to the calibration switch.

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2. Calibrate the Scanner Scale

NOTE: *The scale firmware controls the calibration. It waits for a response to the prompt before continuing with the next step. When you place the weight on the top plate and press the* ***Scale Zero*** *button, the firmware beeps once and changes the display to the next prompt.*
You can end the procedure before you complete the calibration by turning the device off. This does not preclude having to calibrate the scale before placing it into service.

1 Install the top plate.

2 Power on the NCR 7875.

3 Lift the top plate slightly to gain access to the calibration switch.

4 Press the calibration switch.

5 Replace the top plate.

6 Press the **Zero** button.

7 When prompted, place 0 lbs. (0 kg) on the Scanner Scale, then press the **Zero** button.

8 When prompted, place 5 lbs. (2.5 kg) on the Scanner Scale, then press the **Zero** button.

9 When prompted, place 15 lbs. (5 kg) in total on the Scanner Scale, then press the **Zero** button.

10 When prompted, place 30 lbs. (10 kg) in total on the Scanner Scale, then press the **Zero** button.

11 When prompted, remove the weight from the Scanner Scale, then press **Zero**.
Calibration is complete.

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3. Calibration Tests

NOTE: *The calibration tests must be performed in this order.*

Increasing Load Test

1 Access the **Device Tester**.

2 Perform the Increasing Load Test.

This test checks the Scanner Scale accuracy when incrementally adding weight to the center of the top plate. If a failure occurs during this test, redo the calibration.

a Add 0.2 lb. (0.1 kg).
The weight **0.2** lbs. (**0.1** kg) displays in the **Device Tester**.

b Add 5.0 lbs. (2.5 kg), then remove 0.2 lbs. (0.1 kg).
The weight **5.0** lbs. (**2.5** kg) displays in the **Device Tester**.

c Add 5.0 lbs. (4.5 kg).
The weight **10.0** lbs. (**7.0** kg) displays in the **Device Tester**.

d Add 10.0 lbs. (3.0 kg).
The weight **20.0** lbs. (**10.0** kg) displays in the **Device Tester**.

e Add 10.0 lbs. (3.995 kg).
The weight **30.0** lbs. (**13.995** kg) displays in the **Device Tester**.

Perform the Over-Capacity Test

3 Perform the Over-Capacity Test.

This test checks for the proper indication from the Scanner Scale when too much weight is placed on the top plate. If a failure occurs during this test, redo the calibration.
Place additional weight on the center of the top plate as shown in the following chart. The display shows a series of dashes to indicate an over-capacity condition.

a Add 0.08 lb. (0.04 kg).
The message **SCALE(OVERWEIGHT)** displays in the **Device Tester**.

b Remove 0.08 lb. (0.04 kg).
The weight **30.0** lbs. (**13.995** kg) displays in the **Device Tester**.

Decreasing Load Test

4 Perform the Decreasing Load Test.

This test checks the Scanner Scale's accuracy when incrementally removing weight from the top plate.
Use weights that correspond to the NCR 7875 weight feature. If a failure occurs during this test, redo the calibration.

a Remove 10.0 lbs. (3.995 kg).
The weight **20.0** lbs. (**10.0** kg) displays in the **Device Tester**.

b Remove 5.0 lbs. (7.5 kg).
The weight **5.0** lbs. (**2.5** kg) displays in the **Device Tester**.

c Add 2.0 lbs. (0.1 kg), then remove 5.0 lbs. (2.5 kg).
The weight **2.0** lbs. (**0.1** kg) displays in the **Device Tester**.

d Remove 2.0 lbs. (0.1 kg).
The weight **0.0** lbs. (**0.0** kg) displays in the **Device Tester**.,

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4. Perform the Shift Test

Perform this test to check for the Scanner Scale's continued accuracy. This test involves moving the weights off the center point of the top plate.

1 Place 15.00 lbs. (5 kg) of weight in the center of the top plate.
The weight **15.0** lbs. (**5.0** kg) displays in the **Device Tester**.

2 Move the weight to one of the corners on the top plate, then verify the weight in the **Device Tester**.

3 Move the weight to the other corners and read the weight.

4 Move the weight back to the center of the top plate.

5 Remove all the weights.
The weight **0.0** lbs. (**0.0** kg) displays in the **Device Tester**.

5. Secure the Calibration Switch

1 Remove the top plate.

2 Rotate the calibration switch security cover until the screw holes and the seal holes are aligned.

3 Fasten the screw to secure the calibration switch security cover.

4 Seal the calibration switch security cover with one of the following seals:

Lead/Wire Seal (NCR Part Number: 603-8001097) using a Lead/Wire Seal Press (NCR Part Number: 603-9000157)

Film/Paper Seal (Obtain locally. Must meet local government requirements.)

5 Install the calibration switch cover.

a Insert the right side of the cover into the mounting hole.

b Press down on the left side of the cover until it latches into place.

6 Set the top plate on the unit so that the rubber posts enter the locating sockets.

7 Verify that the **Device Tester** shows **0.00 lb (0.00 kg)**.

8 Reconnect the data cable to the DIGI Box (COM 5).

6. Perform the Level 0 Diagnostics

When power is applied to the NCR 7875 Scanner Scale, it automatically performs Level 0 Diagnostics to check various components.

Passing Level 0 Diagnostics

1 After passing Level 0 diagnostics, the NCR 7875 automatically runs scale diagnostics. During this time, all segments on the integrated or remote display are turned ON so that the operator can ensure that the display works correctly. Then the display reads **Ready 0.00 lb**. The Status Indicator flashes red for five seconds, then flashes green momentarily. A tone sounds, and then the Status Indictor turns red. The NCR 7875 is now operational.

2 Check the tag reading operation of the NCR 7875. Read a good tag on an item. The Status Indicator turns red when the NCR 7875 is ready to scan a label. A good read is indicated when the Status Indicator turns green and a tone sounds (if enabled).

Failing Level 0 Diagnostics

1 If the NCR 7875 does not pass Level 0 diagnostics, the integrated or remote display (if the device has one) displays an error code.

2 If enabled, the NCR 7875 provides an audible error message describing the error and what action to take.

3 If the problem cannot be corrected, contact NCR for warranty information.

7. Program the NCR

Scan the bar codes in the "Programming the NCR Scanner Scale" in the "NCR Programming Bar Codes" chapter.

Converting the NCR 7875 Scanner Scale from Imperial to Metric

Perform this procedure if you need to convert the NCR 7875 Scanner Scale from Imperial (lbs.) to Metric (kg) standards.

Requirements:

- Programming bar codes (included in this section)
- Metric Certified Calibration Weights

1. Prepare for Conversion

1 Locate the following weights and place them beside the Scanner Scale.

a 2.5 kg

b 5 kg

c 10 kg

2 Remove the Scanner Scale platter.

3 Locate the calibration switch cover.

4 Remove the screw that secures the calibration switch.

5 Move the cover to the side to reveal the calibration switch. **Do NOT push the calibration switch**.

6 Replace the Scanner Scale platter.

---

2. Convert the Scanner Scale to Metric

1 Disconnect, then reconnect the power cable to reset the Scanner Scale.

2 Scan the bar codes in "Converting the Scanner Scale to Metric" section in the "NCR Programming Bar Codes" chapter.

The system prompts you to calibrate the Scanner Scale.

Converting the NCR 7875 Scanner Scale from Imperial to Metric *(Cont'd)*

3. Calibrate the Scanner Scale

NOTE: *The scale firmware controls the calibration. It waits for a response to the prompt before continuing with the next step. When you place the weight on the top plate and press the* ***Scale Zero*** *button, the firmware beeps once and changes the display to the next prompt.*
You can end the procedure before you complete the calibration by turning the device off. This does not preclude having to calibrate the scale before placing it into service.

1. Lift the platter slightly to gain access to the calibration switch.
2. Press the calibration switch.
3. Replace the platter.
4. Press the **Zero** button.
5. When prompted, place 0 kg on the Scanner Scale, then press the **Zero** button.
6. When prompted, place 2.5 kg on the Scanner Scale, then press the **Zero** button.
7. When prompted, place 5 kg (total) on the Scanner Scale, then press the **Zero** button.
8. When prompted, place 10 kg (total) on the Scanner Scale, then press the **Zero** button.
9. When prompted, remove the weight from the Scanner Scale, then press **Zero**.
   Calibration is complete.

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4. Scan the Post-Calibration Bar Codes

Scan the bar codes in the "Post-Calibration Bar Codes (Metric ONLY)" section in the "NCR Programming Bar Codes" chapter.

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5. Test the Scanner Scale

1. Access the **Device Tester**.
2. Test the Scanner Scale to ensure that it works properly.
