



**TRACK  
YOUR  
VALUABLE  
ASSETS**

**With QTRMaster  
RFID Solution**

# Calibration Tool

**2024-02-01**

## Calibration Instructions

A tool included within the QTRMaster software is the 'calibrator mode'. This mode will help you understand which antennas are reading your tags, and as well whether you have properly 'insulated' both your inside and outside antennas. We use various signal blocking techniques to ensure that the outer antennas do not read items inside the room and equally, the inside antennas are not picking up signals from items located outside the room/location.

1-Goto QTRMaster dashboard:

The screenshot displays the IDALLOGY QTRMASTER dashboard. The browser address bar shows the URL `192.168.1.64:3000/#/`. The dashboard features a navigation menu on the left with the following items: Dashboard, People, Items, Loans, Tags, Locations, Maintenance Needed, Audit, Configs, Settings, Administrators, Scanners, Imports, Provisions, Brandings, Licensings, and Services. The main content area includes a header with the IDALLOGY logo and a navigation bar with four summary cards: 'On Loan now' (0), 'Late returns' (0), 'Need Maintenance' (9), and 'In Violation' (0). Below the navigation bar is a large central box with the text 'Welcome to IDALLOGY QTRMASTER' and the IDALLOGY QTRMASTER logo. The version number 'v.1.4.0-68' is visible in the bottom right corner of the central box.

# Calibration

2- Select “scanners “from menu

The screenshot shows the IDALLOGY web application interface. The browser address bar displays '192.168.1.64:3000/#/scanners'. The page title is 'Scanners' and the IDALLOGY logo is visible in the top right. A sidebar on the left contains a navigation menu with items: Dashboard, People, Items, Loans, Tags, Locations, Maintenance Needed, Audit, Configs, Settings, Administrators, Scanners (highlighted), Imports, Provisions, Brandings, Licensings, and Services. A '+ CREATE' button is located in the top right of the main content area. The main content area features a table with the following data:

| Id ↑             | Type             | Enabled | Location              | State   |
|------------------|------------------|---------|-----------------------|---------|
| 48fb036209382b83 | Handheld         | ×       | PC25B12               |         |
| 6633A-LRU1002    | Feig ISC.LRU1002 | ×       | Secondary             |         |
| 9f8f7114ba230b86 | Handheld         | ✓       | Headquarters Building |         |
| e2145e8b10ad3988 | Handheld         | ✓       | Lab                   |         |
| FX7500FBB025     | Zebra Reader     | ×       | Armory                |         |
| FX7500FCDD35     | Zebra FX7500     | ×       | Exit1                 |         |
| FX96005D8FBE     | Zebra FX9600     | ×       | Evidence Lockers      |         |
| FX9600F06545     | Zebra Reader     | ×       | Logistics             |         |
| FX9600FB3C4E     | Zebra Reader     | ✓       | Lab                   | Running |

At the bottom right of the table, there is a pagination control: 'Rows per page: 10' and '1-9 of 9'.

# Calibration

## 3-STOP the reader

The screenshot shows the IDALLOGY web interface for managing scanners. The browser address bar shows the URL `192.168.1.64:3000/#/scanners/FX9600FB3C4E/show`. The page title is "Scanners #FX9600FB3C4E". The left sidebar contains a navigation menu with items: Dashboard, People, Items, Loans, Tags, Locations, Maintenance Needed, Audit, Configs, Settings, Administrators, Scanners (highlighted), Imports, Provisions, Brandings, Licensings, and Services. The main content area displays the configuration for a Zebra Reader. At the top right of the main area are "LIST" and "EDIT" links. The configuration details are as follows:

| id           | Enabled | Location | Type         |
|--------------|---------|----------|--------------|
| FX9600FB3C4E | ✓       | Lab      | Zebra Reader |

Below the table are control buttons: "Started" (green), "START" (green), "STOP" (red), and "STATUS" (blue).

**Reader**

| Hostname     | Port |
|--------------|------|
| 192.168.1.25 | 5084 |

**Antennas**

| Inside  | Outside |
|---------|---------|
| 1,2,5,6 | 3,4,7,8 |

**Transmission Power (dBm)**  
1-25.5,2-25.5,3-25.5,4-25.5,5-25.5,6-25.5,7-25.5,8-25.5

| Rotation delay in ms. | Antenna Mode |
|-----------------------|--------------|
| 20                    | 17           |

| min RSSI (dB) | max RSSI (dB) |
|---------------|---------------|
| -75           | -10           |

RSSI = Received Signal Strength Indicator

**Processing**

Scanning algorithm  
Progressive

# Calibration

4- Once STOPPED, tap on the “edit” tab (upper right corner)

The screenshot shows the IDALLOGY web interface for managing scanners. The browser address bar shows the URL `192.168.1.64:3000/#/scanners/FX9600FB3C4E/show`. The page title is "Scanners #FX9600FB3C4E" and the IDALLOGY logo is visible in the top right. A sidebar on the left contains navigation options: Dashboard, People, Items, Loans, Tags, Locations, Maintenance Needed, Audit, Configs, Settings, Administrators, Scanners (highlighted), Imports, Provisions, Brandings, Licensings, and Services. In the top right corner of the page, there are "LIST" and "EDIT" buttons. The main content area displays the configuration for a Zebra Reader with ID `FX9600FB3C4E`. The "Enabled" checkbox is checked, and the "Location" is set to "Lab". Below this, there are four buttons: "Stopped" (red), "START" (green), "STOP" (red), and "STATUS" (blue). The "Reader" section lists various settings: Hostname (192.168.1.25), Port (5084), Name (FX9600FB3C4E), Antennas (Inside: 1,2,5,6; Outside: 3,4,7,8), Transmission Power (dBm) (1-25.5, 2-25.5, 3-25.5, 4-25.5, 5-25.5, 6-25.5, 7-25.5, 8-25.5), Rotation delay in ms. (20), Antenna Mode (17), min RSSI (dB) (-75), and max RSSI (dB) (-10). A note indicates "RSSI = Received Signal Strength Indicator". The "Processing" section shows the "Scanning algorithm" set to "Progressive". A black notification box at the bottom center of the page displays the text "Scanner Stopped".

# Calibration

5- Find the “PROCESSING” field towards the bottom of the screen just below the reader algorithm settings

The screenshot shows the IDALLOGY web interface for configuring a scanner. The browser address bar shows the URL `192.168.1.64:3000/#/scanners/FX9600FB3C4E`. The page title is "Scanners #FX9600FB3C4E" and the IDALLOGY logo is visible in the top right. A sidebar on the left contains navigation options: Dashboard, People, Items, Loans, Tags, Locations, Maintenance Needed, Audit, Configs, Settings, Administrators, **Scanners**, Imports, Provisions, Brandings, Licensings, and Services. The main content area displays the configuration for the scanner with the following fields:

- id \***: FX9600FB3C4E
- Enabled**:
- Location \***: Lab
- Type \***: Zebra Reader
- Reader**
  - Hostname**: 192.168.1.25
  - Port**: 5084
- Name**: FX9600FB3C4E
- Antennas**
  - Inside**: 1,2,5,6
  - Outside**: 3,4,7,8
- Transmission Power (dBm)**: 1=25.5,2=25.5,3=25.5,4=25.5,5=25.5,6=25.5,7=25.5,8=25.5  
comma separated list of <antenna #>=<dBm value>
- Rotation delay in ms.**: 20
- Antenna Mode**: 17  
only 17 or 38 are recommended
- min RSSI (dB)**: -75
- max RSSI (dB)**: -10

RSSI = Received Signal Strength Indicator

# Calibration

## 6-Select "Calibrator"

192.168.1.64:3000/#/scanners/FX9600FB3C4E

Inside: 1,2,5,6    Outside: 3,4,7,8

Transmission Power (dBm): 1=25.5,2=25.5,3=25.5,4=25.5,5=25.5,6=25.5,7=25.5,8=25.5  
comma separated list of <antenna #>=<dBm value>

Rotation delay in ms.: 20    Antenna Mode: 17  
only 17 or 38 are recommended

min RSSI (dB): -75    max RSSI (dB): -10  
RSSI = Received Signal Strength Indicator

Enhanced  
Enhanced2  
Progressive  
Default  
**\*\*Recorder\*\***  
**\*\*Calibrator\*\***

Cache refresh delay in sec.: 8    Refresh Direction mode in ms.: 800    Incomplete processing delay (ms): 800

Server URL: http://server:3000/scans/

Service: How detailed should the log file be: Fine

SAVE    DELETE



# Calibration

## 7- Save setting and start the reader

The screenshot shows the IDALLOGY web interface for managing a Zebra Reader. The browser address bar shows the URL: 192.168.1.64:3000/#/scanners/FX9600FB3C4E/show. The page title is "Scanners #FX9600FB3C4E". The left sidebar contains a navigation menu with items: Dashboard, People, Items, Loans, Tags, Locations, Maintenance Needed, Audit, Configs, Settings, Administrators, Scanners (highlighted), Imports, Provisions, Brandings, Licensings, and Services. The main content area displays the configuration for the selected scanner. At the top, it shows the scanner ID (FX9600FB3C4E), a status of "Enabled" with a checkmark, the location "Lab", and the type "Zebra Reader". Below this, there are four buttons: "Stopped" (red), "START" (green), "STOP" (red), and "STATUS" (blue). The "Reader" section lists various settings: Hostname (192.168.1.25), Port (5084), Name (FX9600FB3C4E), Antennas (Inside: 1,2,5,6; Outside: 3,4,7,8), Transmission Power (dBm) (1-25.5, 2-25.5, 3-25.5, 4-25.5, 5-25.5, 6-25.5, 7-25.5, 8-25.5), Rotation delay in ms. (20), Antenna Mode (17), min RSSI (dB) (-75), and max RSSI (dB) (-10). A note below states "RSSI = Received Signal Strength Indicator". The "Processing" section shows the scanning algorithm as "\*\*Calibrator\*\*". At the bottom center, a black notification box displays the text "Element updated".



# Calibration

8- You will now see the calibration mode on your display screens. The calibration tool can assist you in determining the functionality of each antenna, and read strength

The screenshot displays the 'ID)ALLOGY Coverage calibration' interface. It features a browser window with the address '192.168.1.64:3001'. The main content is divided into four quadrants, each representing an antenna area. A 'Highlight Crossing' checkbox is located between the top and bottom sections.

| Area   | Antenna # | Count | Detected Items                               |
|--------|-----------|-------|--|
| Area 1 | 1         | 18    | (1) Person 0 (-73) [20:46:07.373]            |
|        | 2         |       | (2) System 76 Server (-67) [20:46:07.228]    |
|        | 3         |       | (2) Helmet Hard (-75) [20:46:07.076]         |
|        | 4         |       | (1) Person 1 (-70) [20:46:07.059]            |
|        | 5         |       | (1) C8 (-55) [20:46:06.884]                  |
|        | 6         |       | (2) Worksite Air Nailer (-72) [20:46:06.419] |
|        | 7         |       | (1) Person 0 (-72) [20:46:06.400]            |
|        | 8         |       | (2) System 76 Server (-67) [20:46:06.216]    |
| Area 2 | 5         | 5     | (6) Person 0 (-72) [20:46:06.941]            |
|        | 6         |       | (5) Person 1 (-71) [20:46:05.907]            |
|        | 7         |       | (5) Person 1 (-72) [20:46:04.910]            |
|        | 8         |       | (6) Person 0 (-66) [20:46:04.757]            |
|        | 1         |       | (5) Person 0 (-73) [20:46:03.752]            |
| Area 3 | 3         | 0     |  |
|        | 4         |       |  |
| Area 4 | 7         | 0     |  |
|        | 8         |       |  |

At the bottom of the interface, there are two buttons: '(P)ause' and '(C)lear'. The status bar at the very bottom shows the URL 'http://192.168.1.64:3001?terminal', the device ID 'FX9600FB3C4E', and the MAC address '1705697167364'.

9-The four quadrants represent the antenna locations 'inside' and 'out' of your equipment room. In the example above, the default settings have the inside antennas as #'s 1,2 & 5,6 and OUTSIDE antennas as #'s 3,4, & 7,8. If your configuration is different simply check the boxes appropriately to mimics your particular set-up.

# Calibration

10- To test whether the system is experiencing cross-reads, (outside items read inside and items inside the room reading on the outer antenna's) simply check the box in the centre.

The screenshot shows the ID)ALLOGY Coverage calibration interface. The browser address bar displays 192.168.1.64:3001. The interface is titled "Coverage calibration" and is divided into four quadrants representing different areas:

- Area 1:** Contains checkboxes 1 through 8. Checkboxes 1 and 2 are checked. Below the checkboxes, the following items are listed:
  - (1) C8 (-52) [20:46:19.694]
  - (1) Person 1 (-67) [20:46:18.862]
  - (2) System 76 Server (-67) [20:46:19.227]
- Area 2:** Contains checkboxes 1 through 8. Checkboxes 5 and 6 are checked. Below the checkboxes, the following items are listed:
  - (6) Person 0 (-61) [20:46:19.663]
  - (5) Person 1 (-71) [20:46:19.938]
- Area 3:** Contains checkboxes 1 through 8. Checkboxes 3 and 4 are checked.
- Area 4:** Contains checkboxes 1 through 8. Checkboxes 7 and 8 are checked.

Below the area sections, there is a checkbox labeled "Highlight Crossing" which is checked. At the bottom of the interface, there are two buttons: "(P)ause" and "(C)lear". The bottom status bar shows the URL "http://192.168.1.64:3001?terminal", the device ID "FX9600FB3C4E", and the MAC address "1705697179933".

# Calibration

11-If items are being read on both side simultaneously you will see the indications in red.

The screenshot shows the ID)ALLOGY Coverage calibration interface. The browser address bar displays 192.168.1.64:3001. The interface is divided into four quadrants representing Area 1, Area 2, Area 3, and Area 4. Each quadrant contains a list of items with checkboxes indicating their status. A 'Highlight Crossing' checkbox is checked in the center. At the bottom, there are buttons for '(P)ause' and '(C)lear'.

**Area 1**

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8

(1) C8 (-69) [20:46:34.001]  
(1) Person 1 (-72) [20:46:42.811]  
(2) System 76 Server (-68) [20:46:42.541]  
(1) Person 0 (-73) [20:46:40.251]  
(2) Helmet Hard (-71) [20:46:42.844]  
(1) Radio (-73) [20:46:31.670]  
(2) Worksite Air Nailer (-70) [20:46:35.577]  
(2) AED yellow (-53) [20:46:35.694]

**Area 2**

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8

(6) Person 0 (-64) [20:46:42.776]  
(5) Person 1 (-68) [20:46:34.911]  
(5) C8 (-62) [20:46:42.794]  
(6) ASD (-63) [20:46:31.589]  
(6) Helmet Hard (-73) [20:46:36.659]

Highlight Crossing

**Area 3**

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8

**Area 4**

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8

(7) AED yellow (-62) [20:46:41.937]

http://192.168.1.64:3001?terminal FX9600FB3C4E 1705697202838 (P)ause (C)lear

# Calibration

Note: If you see the below screen when attempting to activate “Calibration” simply stop and restart the reader (scanner page)

