

BASEBALL OPERATIONS

Baseball Jersey Rostering System

Setup, scanning, RFID assignment, roster upload, dashboard review, and troubleshooting

What this system does

The Zebra TC501 records each jersey's barcode serial number and one or two RFID sleeve tags. Completed roster snapshots are uploaded securely to the Jersey Roster dashboard for review and CSV download.

Production dashboard
<https://jersey.mhume.cloud>

Intended audience: new operators, supervisors, and device administrators.

1. System overview

Understand the four parts of the system before beginning setup.

Scans barcode and RFID tags	Builds the current team roster	Receives encrypted HTTPS uploads	Reviews records and downloads CSV

The normal daily flow

1	Select the team and player	Choose a team, enter the player's jersey number, and tap Search .
2	Scan the jersey barcode	Use the TC501 imager. The decoded value appears in Barcode Serial .
3	Read sleeve RFID tags	Tap LEFT SLEEVE or RIGHT SLEEVE . Each tap automatically starts a single-tag search.
4	Save the record	Tap Save / Update Record . The player, barcode, and sleeve fields clear after a successful save.
5	Upload the roster	Tap Upload Roster when the team's current roster is ready.
6	Review online	Open the dashboard, choose the team, check totals, and download the latest CSV when needed.

Local-first operation

Records are saved on the TC501 first. Uploads are queued and can complete when a network becomes available.

2. Set up the TC501 device

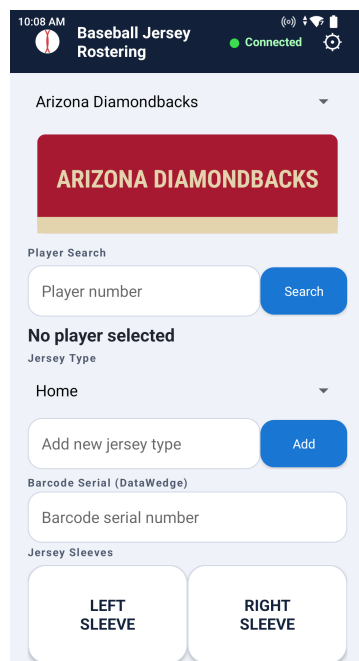
Complete these steps once for a new or replacement device.

- | | | |
|----------|--|---|
| 1 | Power and charge the device | Charge the TC501, power it on, and complete the standard Android setup. Use the approved device PIN and organization settings. |
| 2 | Connect to Wi-Fi | Open Android network settings and join a trusted Wi-Fi network with internet access. |
| 3 | Install the Baseball Jersey app | A device administrator installs the approved APK or deploys it through the organization's device-management process. Do not install unofficial APK files. |
| 4 | Open the app | Launch Baseball Jersey Rostering . The app automatically applies the USA RFID regulatory configuration during startup. |
| 5 | Unplug USB before RFID work | The TC501 disables its integrated RFID reader while connected to a USB/charging source. Unplug USB before reading sleeve tags. |
| 6 | Confirm reader status | The top bar should show a green dot and Connected . If not, open the gear icon and tap Reconnect Reader . |

Important: USB and RFID

Barcode scanning can still work while USB is connected, but the integrated RFID reader is disabled. For normal rostering, disconnect the USB cable.

What the operator should see



Top bar: reader connection status and gear icon.

Team: determines which roster is searched and uploaded.

Player Search: enter a jersey number, then tap Search.

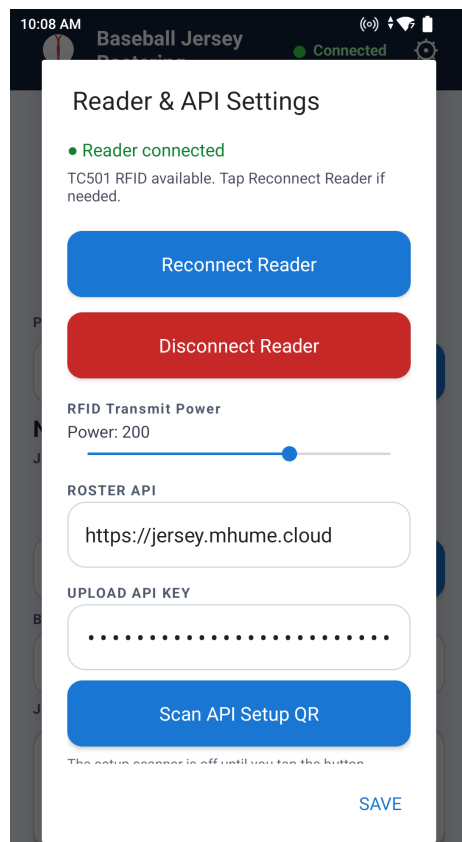
Barcode Serial: filled by the imager; it clears after a successful save.

Jersey Sleeves: tap one sleeve button at a time; the app automatically starts a single-tag search.

3. Provision dashboard and upload access

Use the dashboard-generated QR code so nobody has to type the long upload credential.

- 1 Open the dashboard** On a computer, go to <https://jersey.mhume.cloud>.
- 2 Sign in** Enter the administrator-provided dashboard/read API key. Never send API keys by email or chat.
- 3 Display the setup QR** After login, click **Set up a device**. A temporary provisioning QR appears.
- 4 Open device settings** On the TC501, tap the gear icon to open **Reader & API Settings**.
- 5 Arm setup scanning** Tap **Scan API Setup QR**. The setup scanner remains armed for 30 seconds.
- 6 Scan and save** Aim the TC501 imager at the dashboard QR. Confirm the URL is <https://jersey.mhume.cloud>, then tap **Save**.



Illustrated setup screen

The upload key is masked with dots. The guide intentionally does not contain a real key or scannable provisioning QR.

A green Reader connected message and the Disconnect Reader control confirm that RFID is available. Leave the reader connected during normal rostering.

Protect the QR

The setup QR contains the upload credential. Close it after provisioning and do not photograph, print, or share it.

4. Roster a jersey: daily workflow

Follow this order for each jersey to prevent mismatched serial numbers or RFID tags.

1	Select the team	Use the team dropdown. The selected team controls player search, the on-device roster list, export, and upload.
2	Find the player	Enter the jersey number in Player Search and tap Search . Verify the displayed player name and position.
3	Choose the jersey type	Select Home, Away, Alternate, City Connect, Spring Training, Postseason, or add an approved custom type.
4	Scan the barcode serial	Press a TC501 barcode trigger and aim the imager at the jersey barcode. Confirm the value appears in Barcode Serial .
5	Read the left sleeve	Position the jersey away from unrelated RFID tags, then tap LEFT SLEEVE . The app automatically searches for one tag.
6	Read the right sleeve	If present, tap RIGHT SLEEVE to start another single-tag search. One-sleeve jerseys may be saved with only one tag.
7	Review before saving	Confirm player, team, jersey type, barcode serial, and sleeve assignments. Correct mistakes before continuing.
8	Save / update	Tap Save / Update Record . Saving the same team/player updates that player's existing record; the latest scan wins.

After a successful save

The selected player, barcode serial, and sleeve tags are cleared for the next jersey. The team and jersey type remain selected to speed up repetitive work.

Before scanning the next jersey

Always confirm that Barcode Serial is blank. If the previous value remains because a save failed, resolve the error or rescan intentionally before saving another jersey.

5. RFID and barcode best practices

Good physical technique prevents accidental reads and duplicate assignments.

Barcode scanning

- Aim the red imager beam across the entire barcode.
- Hold the device steady until the value appears.
- If nothing appears, move slightly closer or farther away and avoid glare.
- Verify the serial on screen before reading sleeve tags.

RFID sleeve scanning

- Unplug USB before RFID work.
- Move the target jersey away from stacks or bins of tagged jerseys.
- Tap only the intended sleeve button.
- The button automatically starts a single-tag search; wait for the tag value.
- Reduce RFID transmit power in Settings if a nearby tag is captured.

Reader controls

1

Connection status

Green **Connected** means RFID is ready. Gray/red **Disconnected** means RFID actions will not start.

2

Reconnect Reader

Use this after unplugging USB, after a reader interruption, or when the app reports disconnected.

3

RFID Transmit Power

Start with the configured default. Lower power for crowded work areas; raise it only if the intended sleeve tag is difficult to read.

One tap starts one search

Tap the intended sleeve button once and verify the captured EPC before continuing. There is no separate RFID trigger action.

6. Review, correct, and upload the roster

The device keeps a current roster list; the server receives a complete snapshot.

1	Review the on-device roster	Tap View Roster . Confirm player counts and check which jerseys have one or two sleeves.
2	Correct a player	Select the same team and player, scan the correct values, and tap Save / Update Record . The new record replaces that player's previous entry.
3	Remove all records only when intended	Use Clear List carefully. It removes the local roster records and cannot be undone.
4	Upload the roster	Tap Upload Roster , review the confirmation, and approve. Local records remain on the device.
5	Check upload status	The status beneath Upload Roster reports whether the snapshot is queued, ready, successful, or needs updated API settings.

Complete snapshot behavior

Each upload represents the device's current complete roster snapshot. If a player is removed from the current snapshot, that player will not appear in the latest dashboard roster after the replacement snapshot is uploaded.

When to upload

- At the end of a completed team session.
- After corrections that supervisors need to see immediately.
- Before handing the device to another operator or location.

7. Use the web dashboard

Supervisors use the dashboard to review the latest uploaded roster by team.

The dashboard, titled "Jersey Roster Baseball operations", features a "Change access key" link. The main heading is "Every jersey, organized by team." Below this, a note states: "Review the latest serial and sleeve-tag assignments uploaded from your Zebra devices." A dropdown menu allows selecting a team, currently set to "Arizona Diamondbacks (7)", with a note "Showing 7 current records".

Summary statistics are displayed in four boxes:

- Total jerseys: 7
- Two sleeves: 5
- One sleeve: 2
- Last update: Jul 17, 7:37 PM

The "CURRENT ROSTER" section for "Arizona Diamondbacks" includes a search bar and a table with the following data:

PLAYER	JERSEY	SERIAL	LEFT SLEEVE	RIGHT SLEEVE	UPDATED
Jorge Barrosa CF	1	DEMO-AZ-0001	E2000017221101440001ABCD	—	Jul 17, 7:37 PM
Geraldo Perdomo SS	2	DEMO-AZ-0002	E2000017221101440002ABCD	E2000017221101450002ABCD	Jul 17, 7:36 PM
Ketel Marte 2B	4	DEMO-AZ-0003	E2000017221101440003ABCD	E2000017221101450003ABCD	Jul 17, 7:35 PM
Ildemaro Vargas 1B	6	DEMO-AZ-0004	E2000017221101440004ABCD	E2000017221101450004ABCD	Jul 17, 7:34 PM
Corbin Carroll RF	7	DEMO-AZ-0005	E2000017221101440005ABCD	—	Jul 17, 7:33 PM
Tommy Troy LF	9	DEMO-AZ-0006	E2000017221101440006ABCD	E2000017221101450006ABCD	Jul 17, 7:32 PM
Jordan Lawlar LF	10	DEMO-AZ-0007	E2000017221101440007ABCD	E2000017221101450007ABCD	Jul 17, 7:31 PM

At the bottom, it shows "Jersey Roster API" and "API status: connected".

Dashboard example with DEMO records only. No production credentials are shown.

1

Sign in

Open <https://jersey.mhume.cloud> and enter the dashboard/read key.

2

Select a team

The team list shows the number of records in each team's latest snapshot.

3

Review counts

Compare Total jerseys, Two sleeves, One sleeve, and Last update.

4

Search

Search by player, jersey number, serial number, or jersey type.

5

Download CSV

Choose a team, then click **Download CSV** to save the latest team-scoped roster file.

8. Credential and data security

Treat API credentials like passwords.

- **Upload API key:** used only by the TC501 app to publish roster snapshots.
- **Dashboard/read key:** opens roster data and can generate device-provisioning QR codes. Treat it as an administrator credential.
- Never paste either key into chat, email, work orders, screenshots, or shared documents.
- Do not photograph or print a provisioning QR.
- Close the provisioning QR immediately after device setup.
- If a key or QR may have been exposed, contact the administrator to rotate the credentials.
- Use only the HTTPS production URL: **<https://jersey.mhume.cloud>**.

This guide contains no credentials

All screenshots either mask the upload key or use labeled demo data. There is no working API key or scannable provisioning QR in this PDF.

Operator sign-off checklist

- ☐ I can confirm the reader is Connected before RFID work.
- ☐ I can scan a barcode and verify the serial on screen.
- ☐ I can tap LEFT/RIGHT SLEEVE and verify each captured tag.
- ☐ I know Save / Update clears player, barcode, and sleeve fields.
- ☐ I can upload a roster and review it on the dashboard.
- ☐ I understand that API keys and setup QR codes are confidential.

9. Troubleshooting

Use this table before contacting support.

Reader shows Disconnected	USB/charging is connected, startup is still provisioning, or the reader session ended.	Unplug USB, wait a moment, open the gear icon, and tap Reconnect Reader.
Barcode does not appear	Barcode is out of focus, glare is present, or DataWedge is not ready.	Re-aim, change distance, reopen the app, and confirm the TC501 imager is being used.
Wrong RFID tag was captured	Nearby tagged items were in range or power was too high.	Separate the jersey, lower transmit power, arm the sleeve again, and rescan before saving.
Setup QR is rejected or expires	The 30-second provisioning window ended or the wrong QR was scanned.	Tap Scan API Setup QR again and scan the QR generated after dashboard login.
Upload says API not configured	The API URL or upload key is missing/invalid.	Repeat dashboard QR provisioning and tap Save in Reader & API Settings.
Old barcode remains	The prior save did not complete successfully.	Do not save another jersey with that value. Resolve the save error or intentionally scan the correct next barcode.
Dashboard has no new records	Upload is queued, network is unavailable, or the wrong team is selected.	Check Wi-Fi and upload status, retry Upload Roster, then choose the correct team online.

When reporting a problem

Provide the device model, app version from the footer, exact on-screen message, and the steps that led to the issue. Do not include API keys.

10. One-page operator quick reference

Use this checklist at the workstation.

START	Unplug USB → open app → confirm green Connected status.
SELECT	Choose team → enter player number → Search → verify player.
CLASSIFY	Choose the correct jersey type.
BARCODE	Scan serial → verify Barcode Serial is populated.
LEFT RFID	Tap LEFT SLEEVE → automatic single-tag search → verify tag.
RIGHT RFID	Tap RIGHT SLEEVE → automatic single-tag search → verify tag, if present.
SAVE	Review all values → Save / Update Record.
RESET CHECK	Confirm player, barcode, and sleeve values cleared.
REPEAT	Continue with the next jersey.
UPLOAD	When the team is complete: View Roster → Upload Roster.
VERIFY	Dashboard → choose team → review totals → Download CSV if needed.

Stop before saving if anything looks wrong

The safest correction is made before Save / Update Record. Verify the player, serial number, and sleeve tags every time.

Dashboard: <https://jersey.mhume.cloud>

Keep this guide near the charging station or workstation. Store credentials separately in the approved secure credential location.