

Parcell Mobile Inventory Kit User Manual

Updated 12.12.24



Scan QR code for a link to the most up to date Parcell Mobile Inventory Kit user manual.

<https://www.parcelpius.com/mikusermanual>

Table of Contents

Table of Acronyms 3

MIK System Components 4

Scanner Features..... 5

App Features..... 5

Icons Used in the MIK Scanner HMI 5

Icons Used in the MIK App..... 8

Mobile Inventory Kit Connect and Sync..... 9

Connecting Scanner and Tablet..... 9

Download Database: Scanner to Tablet..... 11

Upload Database: Tablet to Scanner..... 13

Manage Tagged Items and Tool List 13

Add Items..... 14

Manage Tool Groups..... 16

Modify Existing Items 16

View Scan History 17

Scan Results Page Overview..... 17

FAQ 18

Contacts 19

Table of Acronyms

EID	Equipment Identification Designator
CTK	Composite Tool Kit section of aircraft maintenance squadron
MIK	Mobile Inventory Kit
HMI	Human Machine Interface



PROTOTYPE MOBILE INVENTORY KIT (MIK) KIT CONTENTS



QR CODE LINK TO
USER MANUAL

<https://www.parcellplus.com/mikusermanual>



QR CODE LINK TO
PROTOTYPE FEEDBACK FORM

<https://www.parcellplus.com/mikfeedback>

Scanner Features

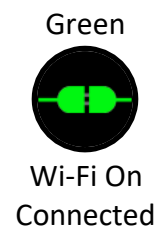
- Designed for non-networked locations
- Ergonomic design with trigger switch
- Rugged enclosure made of carbon fiber reinforced nylon
- Rechargeable battery lasts ~100 scans with continual use or up to 2 months in storage
- Working temperature -4°F to 140°F
- Capacitive touchscreen with intuitive UI
- Shows real-time scan status, battery life, read range and tool group
- Adjustable read range to find a wide variety RFID tags -- compatible with nearly any commercially available UHF RFID tag
- Switch between up to 100 tool groups with dozens of items each
- Review recent scan results

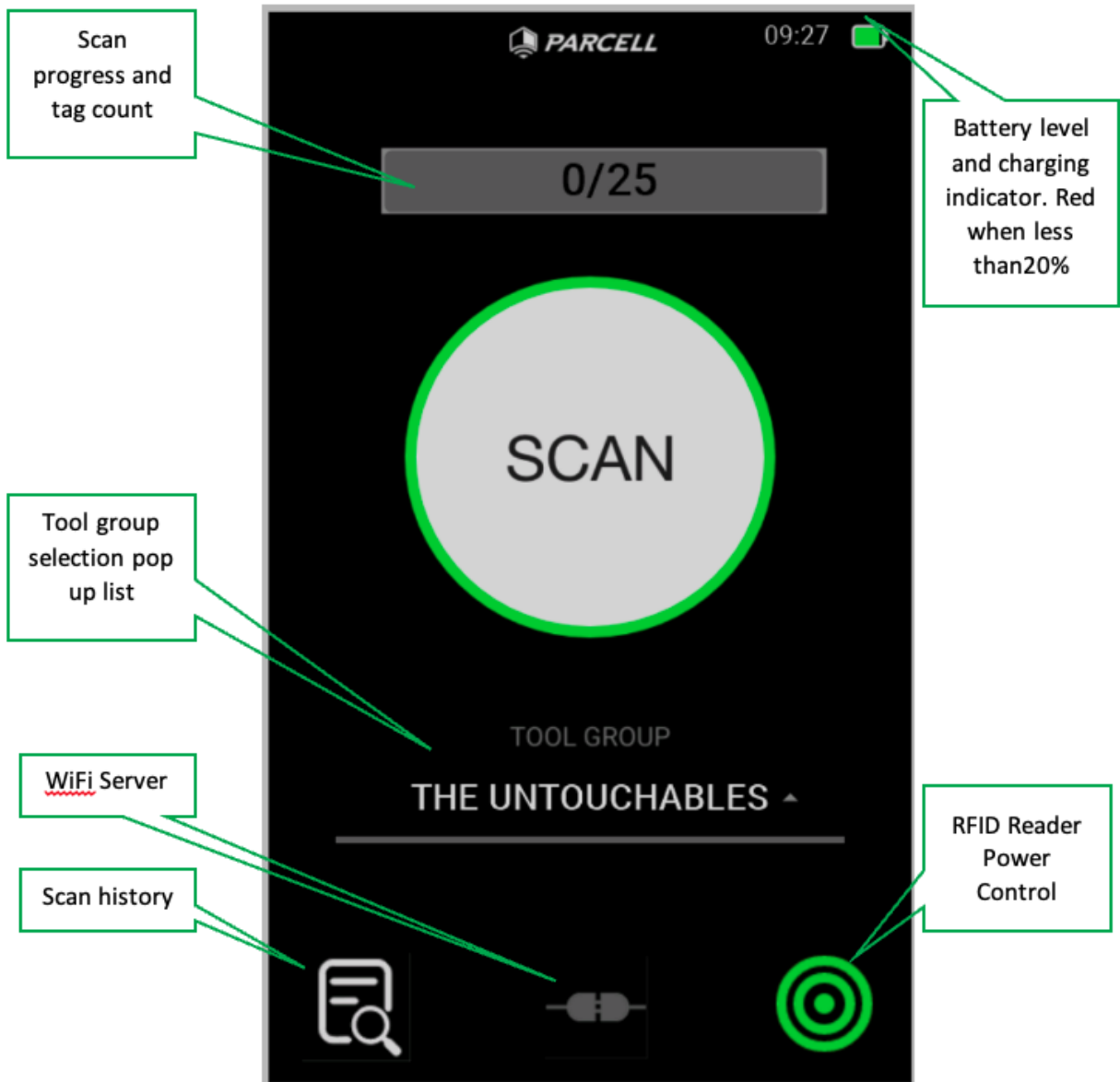
App Features

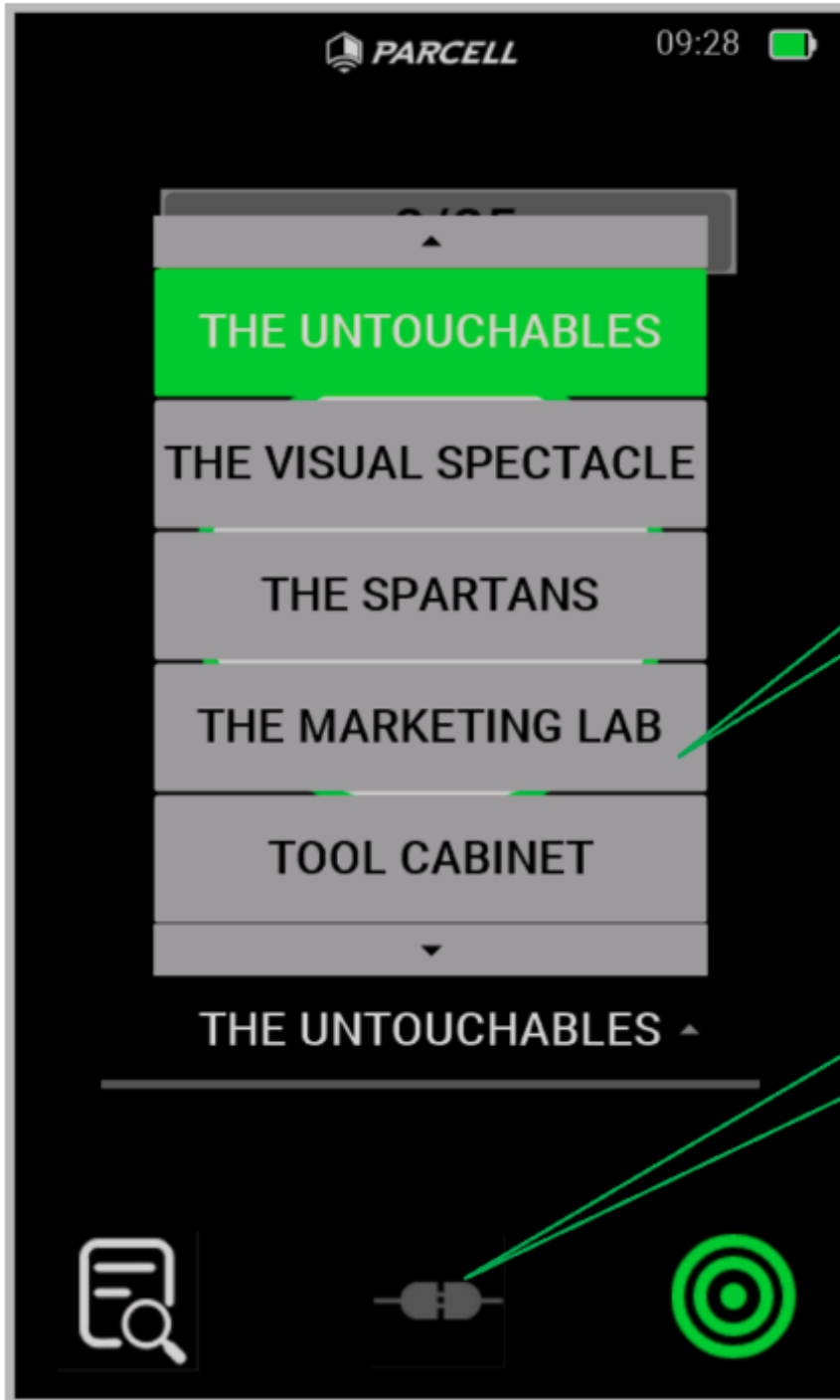
- For easy setup and long-term data logging
- Pairs selectively with Parcell MIK scanners via a secure wireless connection
- Set up tool groups and individual items
- Review all scan history with details about each item
- Switch between multiple scanners to view history and setup
- Can be installed on any compatible Android device

Icons Used in the MIK Scanner HMI

Plug icons represent the Wi-Fi server in the scanner used to connect the tablet. Each color represents a different state of broadcast and connection.







Tool group selection pop out list

Gray icon means Wi-Fi is switch off



Push and hold PARCELL logo for 5 seconds to open the clock setup page

Scan result history.

Go to next or previous page of current scan event

Icons Used in the MIK App

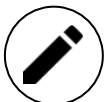
There are several functional icons in the MIK app that will perform an action when tapped.



The menu icon in the top left corner will open a menu drawer along the left side of the screen.



The delete icon will remove an item from a list like Stock Items or Check Out.



The edit icon allows Support or Admin users to edit Items, Item Types, or Users.

Mobile Inventory Kit Connect and Sync

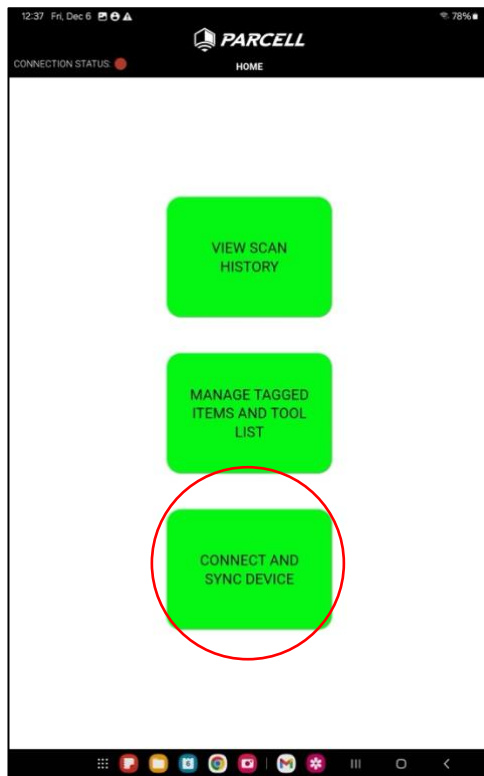
Connecting Scanner and Tablet

To connect the Scanner to the Tablet proceed with the following steps

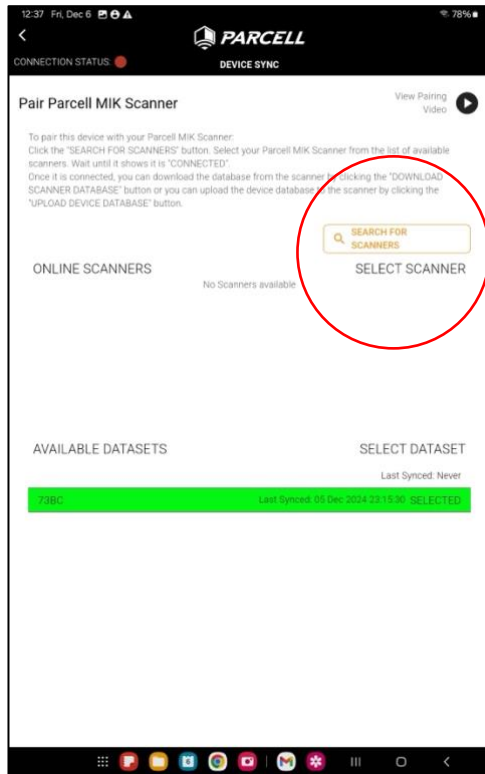
1. Enable the scanner Wi-Fi module on the scanner screen by pressing the gray plug icon, which should turn red upon firm contact



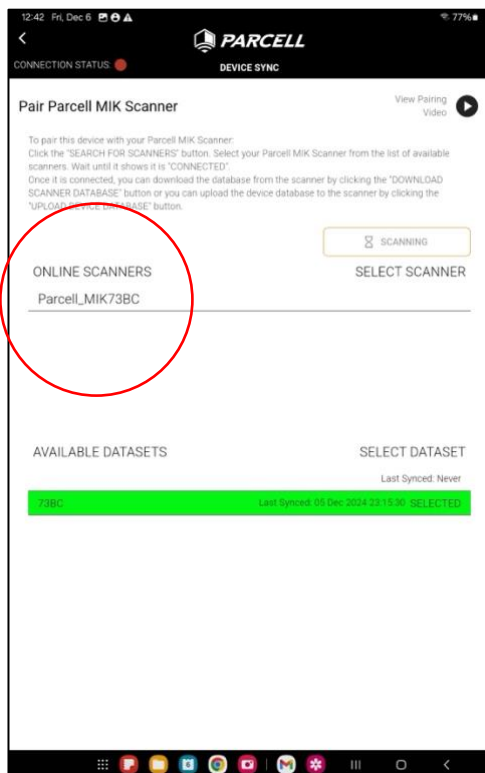
2. Open the tablet app and select “Connect and Sync Device”



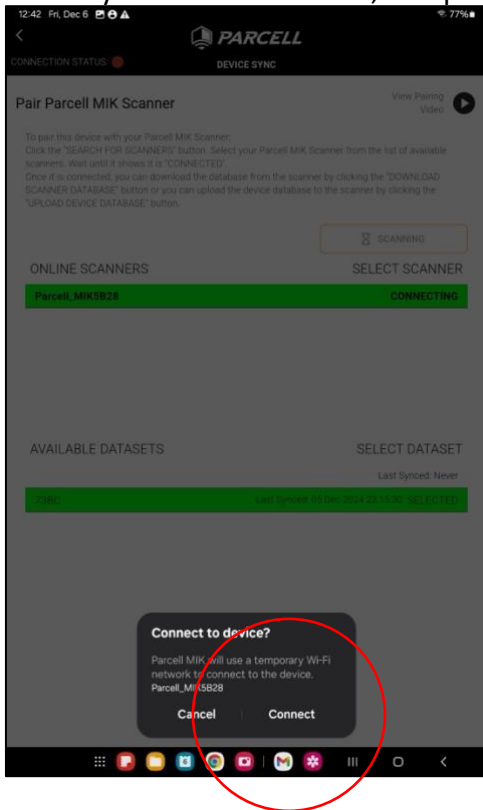
- This brings you to the Device Sync page. From there, select “Search for Scanners.”



- The tablet will initiate a search for available scanners which will populate underneath “Online Scanners.”

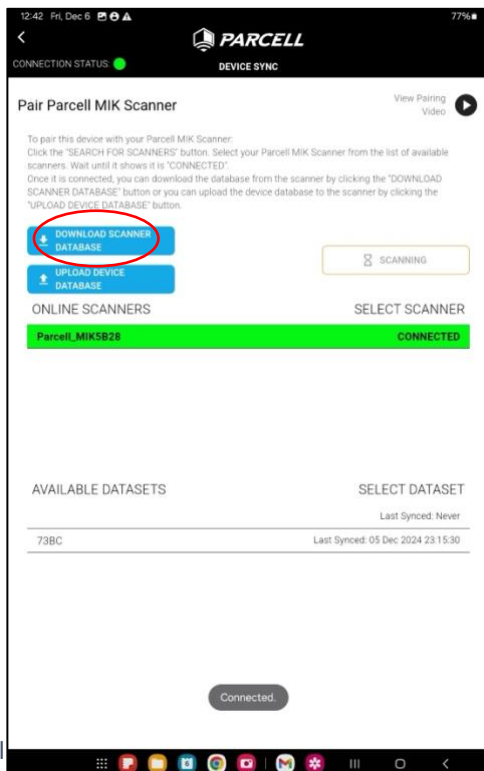


5. Select the Scanner, ensuring that the Scanner ID is the same as the label on the Scanner with which you'd like to connect, and press "Connect" on the popup at the bottom of the screen.



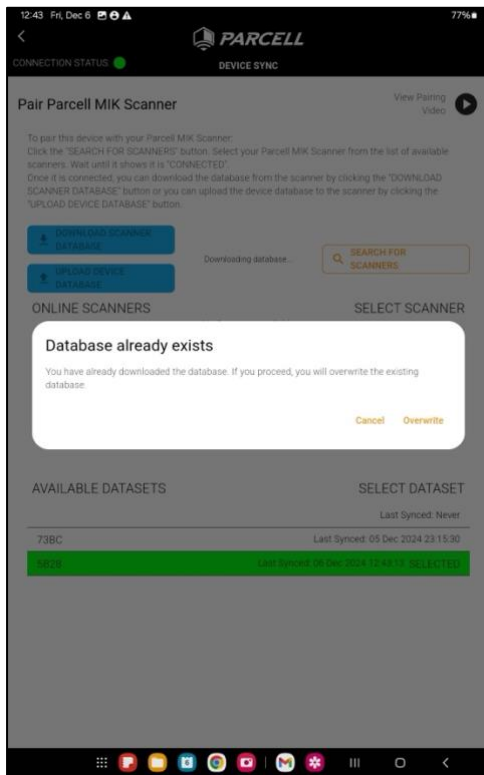
Download Database: Scanner to Tablet

1. Upon connection, two options will appear. To download Scanner information to the Tablet, select "Download Scanner Database."



- Note: database download can automatically trigger clock sync from the tablet to the scanner to keep the scanner date and time accurate.

- If the database has been synced before, a prompt will appear to ask the user to overwrite the existing database stored locally on the tablet. Press the Overwrite button to confirm and download information from the scanner to the tablet.



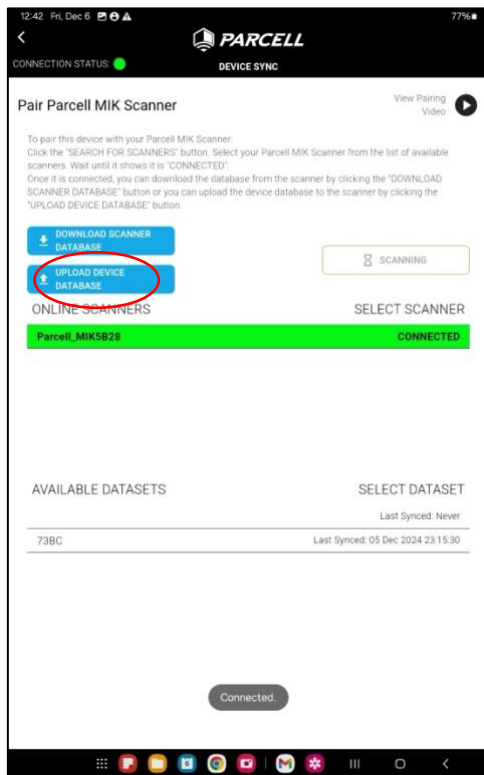
- When the database is successfully download, the tablet UI screen will automatically jump to the VIEW SCAN HISTORY page.



Upload Database: Tablet to Scanner

Any changes on the tablet app will need to be synced with the scanner to ensure data consistency. This could include changes such as modifications to Tool Groups, Adding Items, or any specific changes to tool information (EID, Adding an RFID Tag, Name, Tool Group, etc.). This process is similar to the Download Database.

1. Connect the Device according to the steps in [Connecting Scanner and Tablet](#).
2. Upon connection two options will appear. To upload information from the tablet to the scanner, select “Upload Device Database.”

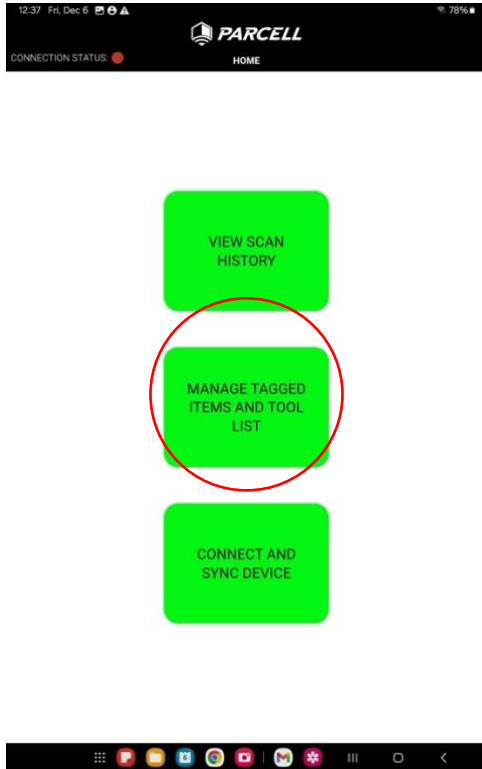


3. Upon successful upload the tablet will populate a confirmation message and the Scanner will awaken with the updated information.

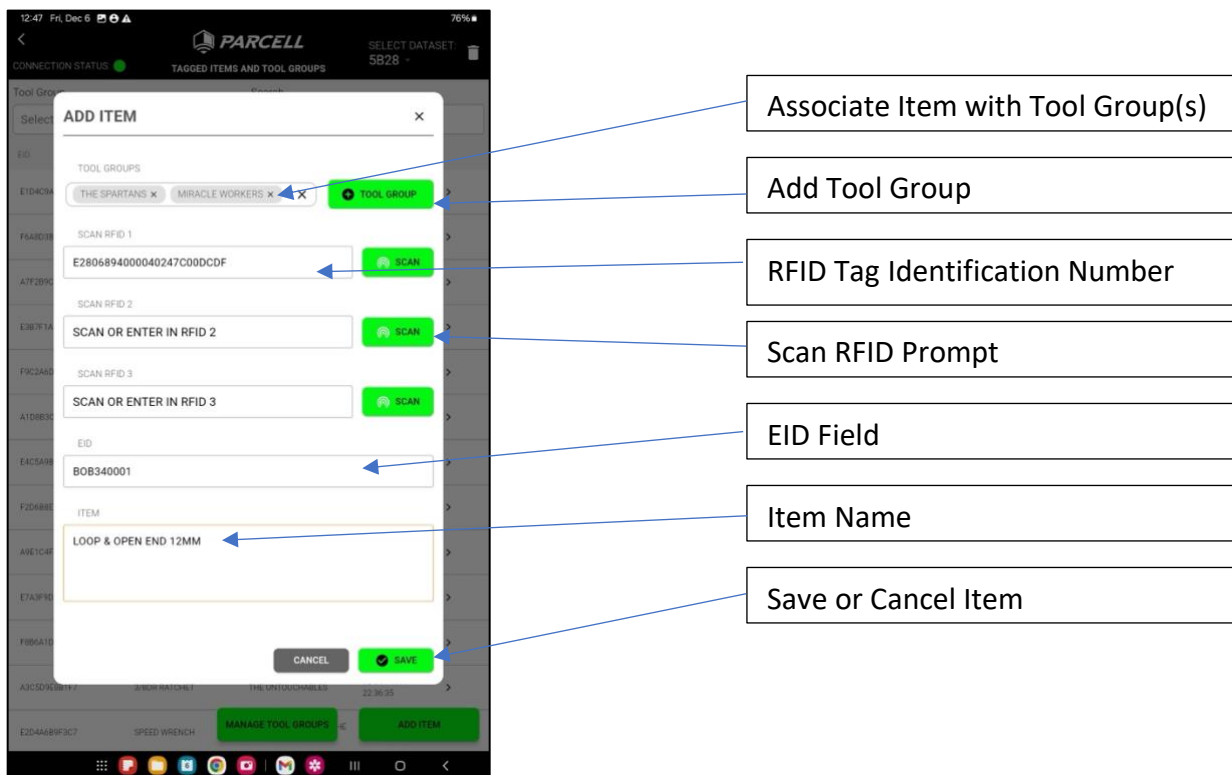
Manage Tagged Items and Tool List

This options provides the user with the ability to perform the following functions:

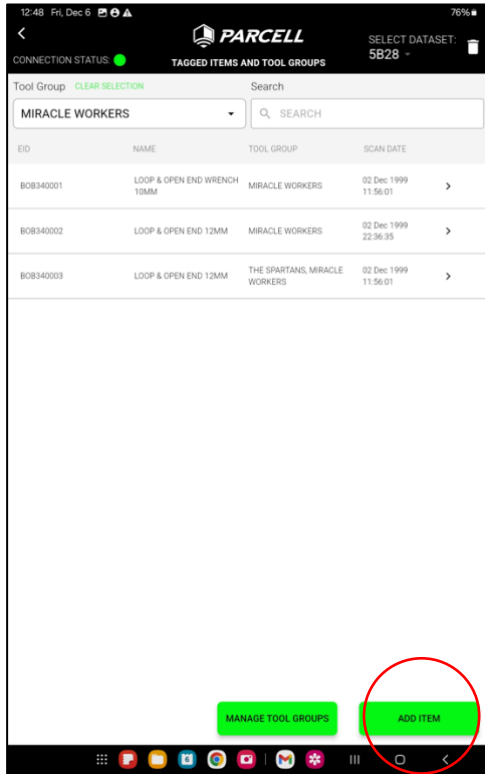
1. Add Items
2. Manage Tool Groups
3. Modify existing Items



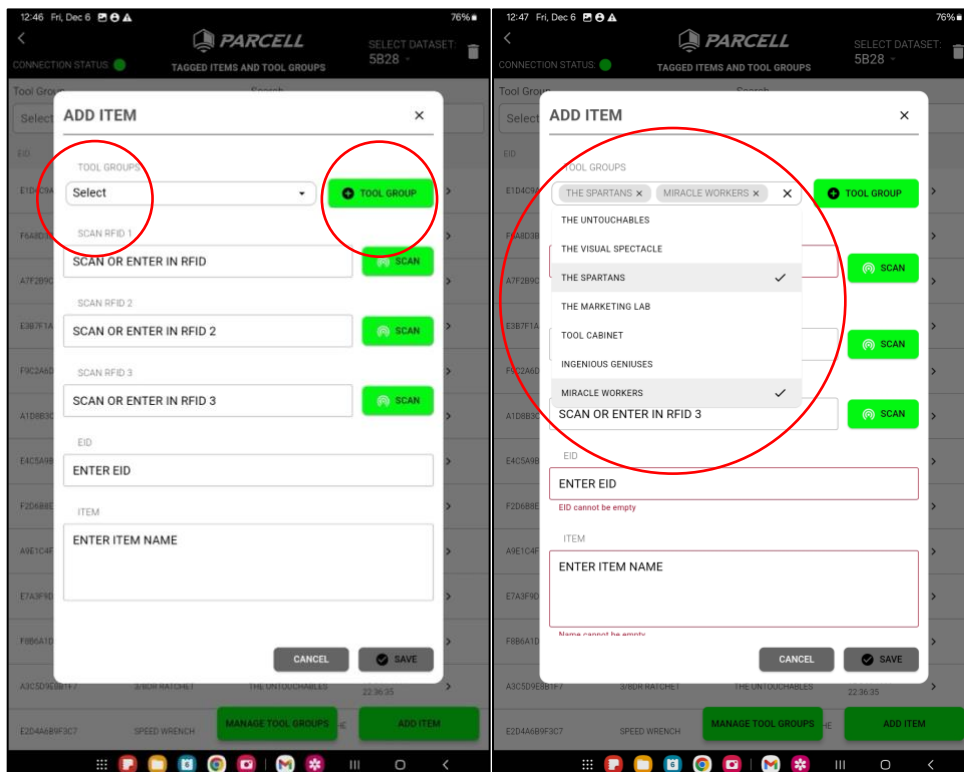
Add Items Form Field Overview



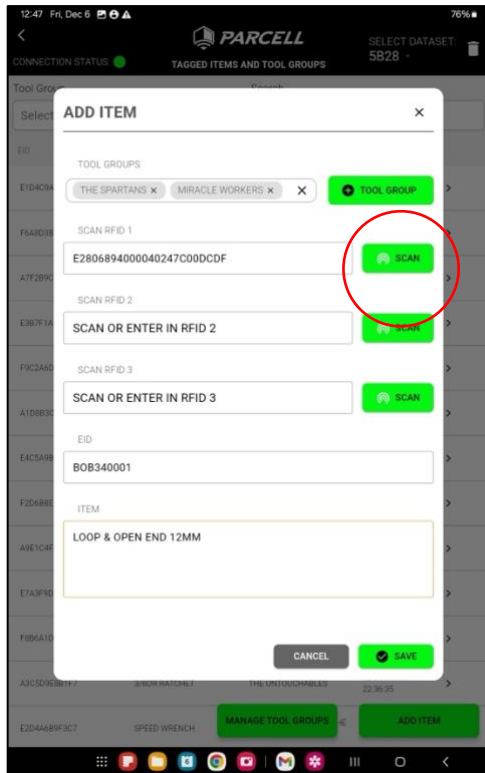
1. To add an item, select the Add Item option at bottom right of the page.



2. Select the Tool Group for the new item. This feature allows the user to add a new Tool Group by selecting the “+Tool Group” option and/or associate one or more tool groups for the item.



3. Hold the scanner near the item tag (within 5 inch) and select SCAN. The scanner may capable detect tags up to 1 foot range for adding tags, please make sure there is no other tags next to the scanner. The reader will scan the tag and populate it to the RFID field. To ensure maximum read coverage, there is an option to affix and scan up to 3 tags on a single item.



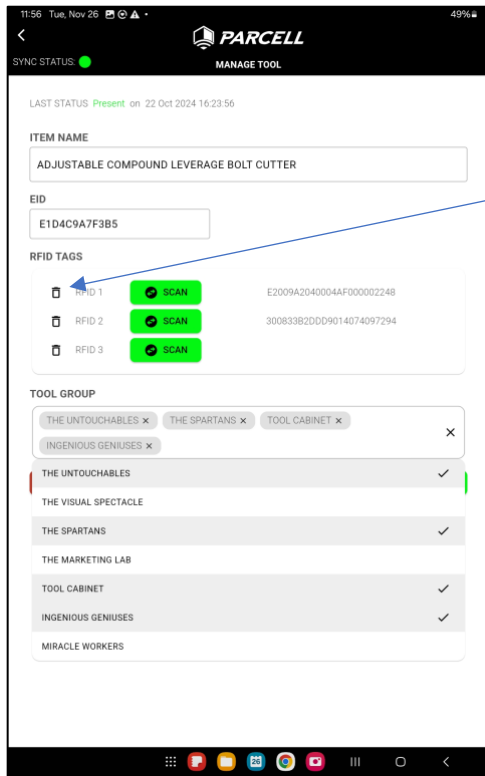
4. Add EID and Tool Name in the form fields.

Manage Tool Groups

The tool group feature allows the user to categorize the tool group according to any distinction of their choosing; most commonly by location, function, or specialty. Selecting Manage Tool Groups provides the user an option to add items to a group, delete a group, or change the name of a tool group.

Modify Existing Items

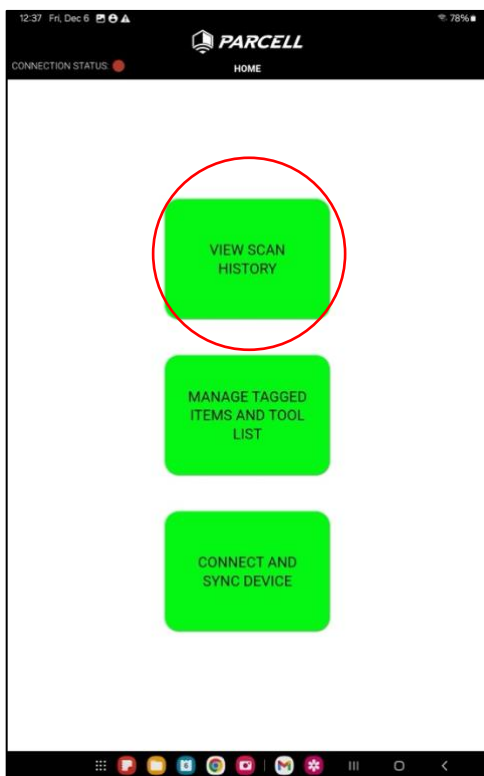
By selecting an item the user can modify any of the fields populated during the item's creation.



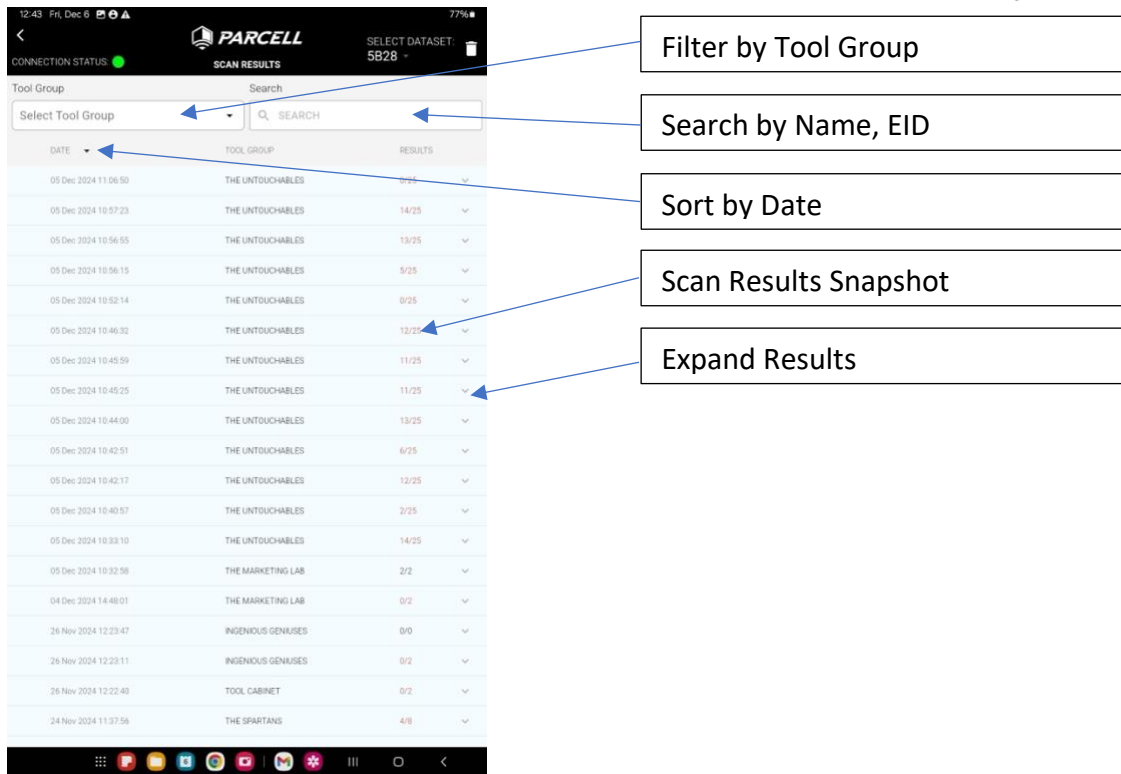
Note: The delete RFID icon only appears if more than one tag ID is associated with the item.

View Scan History

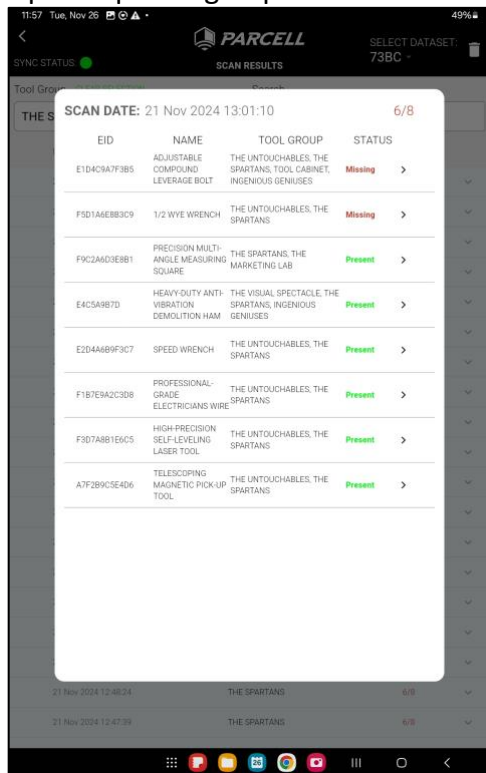
The Scan History section of the app provides users the ability to view all previous scans and apply filters for additional insight into scanning data.



Scan Results Page Overview



Upon expanding a specific scan the app provides additional detail into the scan.



FAQ

- What happens if my scanner freezes?

The scanner will reset every time it is plugged in for charging. This type of reset does not cause data loss.

- How long it takes to charge the scanner fully?

The charging circuit is set to charge the battery at 500mA max charging current. The scanner's battery pack capacity is 6000mAh. If the battery has less than 20% charge left, it takes about 8 to 12 hours to charge fully. Please remember that the scanner will not scan if the battery charge level is less than 20%.

- What if I lose an RFID tag?

To replace the lost tag, a replacement tag must be registered with the MIK app on the tablet. Please follow the instructions to register the new tag.

- The scanner isn't reading the tag

When registering a new tag, the scanner was set at a very low reading power to only pick up close-range (within 5" reading distance between the scanner antenna and the tag) tags. Other factors can affect the reader's ability to read the new tag, including scanner battery charge level (more than 20% charged), tag type, what material the tag is attached to, tag orientation, etc.

- The scanner seems to have shorted

Please check if the fuse inside the fuse holder is still working. If so, replace the provided fuse with the scanner or a 2A 5x20mm fast blow fuse. If the fuse is still in good condition and there are no user-serviceable parts inside the scanner; please contact us for further details about your scanner. You may need to send the scanner back to us.

- How often do I need to restart the scanner?

The scanner automatically restarted itself every time it was plugged in to charge. There is no need to restart the scanner if it is working appropriately.

- Can I use the app on my phone?

Yes, but the app layout is only optimized for tablet applications.

Contacts

General Questions

Email or call the following Parcell personnel with questions about the project:

Erica Waite
CEO, Parcell
erica@parcellplus.com
(614) 256-8648

James Mainord
COO, Parcell
james@parcellplus.com
(937) 239-2250

Parcell MIK RFID Scanner

The Parcell **MIK RFID Scanner** brings high-performance UHF RFID scanning to your asset management. Smart tool groups and data management offer seamless integration for efficient and accurate data capture. This RFID scanner is designed to be compatible with a wide range of platforms, which is ideal for inventory management and asset tracking. Its rugged design, flexible connectivity, and superior scanning capability ensure productivity across diverse environments.

Key Features



Enhance Your Operations with Cutting-Edge RFID Technology

Versatile Compatibility

- Proprietary Android App with smart tool group, tag, and data management
- Compatible with iOS®, and Windows® devices (web interface).
- Multi-platform support ensures flexibility in deployment and futureproofing.

Rapid RFID Tag Reading

- Achieves read rates of 800+ tags per second for unparalleled speed.
- Optimized antenna design for enhanced coverage and precision.
- Max reader receive distance: over 12 m (36 ft)

Reliable Power for Extended Shifts

- Powered by a 6000 mAh rechargeable Li-Ion battery.
- Advanced power management ensures full-shift usage without interruptions.

Flexible Deployment Options

- It can be used as a standalone device or paired with mobile devices using point-to-point secure Wi-Fi connectivity.
- Compact and lightweight design enables one-handed operation.

Robust Design

- IP54, dust, moisture, and splashproof
- Withstands drop from 1.5 meters onto concrete.

Specifications

- Battery capacity: 6000mAh Li-Ion battery
- Input: Trigger button and 5 in capacitive/resistive touchscreen

- Visual and audio scanning feedback
- Charger: USB C, 5VDC, 1A
- Charging time: 8~12 hours at 500mA charge current
- Up to 100+ times 20-second tag scanning time at 30db RFID reading power

Physical Characteristics

- Dimensions: 7in L x 5in W x 7in D
- Weight: 1lb 12 oz / 800g

RFID Performance

- Standards Supported: EPC global Gen 2V2 (ISO 18000-63) with DRM
- Read Rate: 800+ tags/sec
- Reader Power: 0 to +31.5 dBm
- Frequency Range: US: 902-928 MHz; EU: 865-868 MHz

Connectivity

- USB Interface: For charging and data synchronization
- Secure 2.4 GHz Wi-Fi (802.11 b/g/n) P2P wireless data synchronization.

Environmental Specifications

- Operating Temperature: -10°C to 50°C (14°F to 122°F)
- Storage Temperature: -30°C to 70°C (-22°F to 158°F)

- Humidity: 5% to 85% non-condensing
- Drop Specification: Withstands multiple 1.5 m (5 ft) drops onto concrete

Accessories

- Charging cradle, USB cable, 2A fuse, Android tablet, USB charger, RFID UHF tag sample kit

Warranty

- Standard Warranty: 1-year limited warranty covering materials and workmanship.

Empower Your Workforce with the Parcell MIK RFID Scanner

The MIK RFID Scanner delivers reliable performance, flexibility, and durability, making it the ideal choice for businesses looking to optimize data capture and improve operational efficiency.

For more information, visit

<https://www.parcellplus.com/mikusermanual>