

Parcell Mobile Inventory Kit User Manual



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Parcell Mobile Inventory Kit User Manual

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Table of Acronyms

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



MIK System Components



PROTOTYPE MOBILE INVENTORY KIT (MIK) KIT CONTENTS





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.



Not Connected



Wi-Fi On Not Connected















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"





3. This brings you to the Device Sync page. From there, select "Search for Scanners."



4. 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.

LAL M, Deco BOL		₹. 77%
	i PARCELL	
ONNECTION STATUS	DEVICE SYNC	
Pair Parcell MIK Sca	nner	View Pairing Video
ONLINE SCANNERS	1	SELECT SCANNER
Parcell_MIK5828		CONNECTING
AVAILABLE DATASE		SELECT DATASET
		Last Synced: Never
	Connect to device?	
	Parcell MIK will use a temporary Wi network to connect to the device. Parcel_MI 15828 Cancel Connect	fi
# []	Image:	III 0 <

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.



2. 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.



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

CONNECTION STATUS	SCAN RESULTS	SELECT DATASET: 5B28 -	Ē
Tool Group	Search		
Select Tool Group	- Q SEARCH		
DATE 🔸	TOOL GROUP	RESULTS	
05 Dec 2024 11.06 50	THE UNTOUCHABLES	0/25	v
05 Dec 2024 10 57:23	THE UNTOUCHABLES	14/25	×
05 Dec 2024 10:56:55	THE UNTOUCHABLES	13/25	v
05 Dec 2024 10.56:15	THE UNTOUCHABLES	5/25	Ŷ
05 Dec 2024 10:52 14	THE UNTOUCHABLES	0/25	÷
05 Dec 2024 10:46:32	THE UNTOUCHABLES	12/25	v
05 Dec 2024 10.45 59	THE UNTOUCHABLES	11/25	Ŷ
05 Dec 2024 10:45:25	THE UNTOUCHABLES	11/25	4
05 Dec 2024 10.44:00	THE UNTOUCHABLES	13/25	÷
05 Dec 2024 10.42:51	THE UNTOUCHABLES	6/25	×
05 Dec 2024 10:42:17	THE UNTOUCHABLES	12/25	~
05 Dec 2024 10:40:57	THE UNTOUCHABLES	2/25	Ŷ
05 Dec 2024 10 33 10	THE UNTOUCHABLES	14/25	~
05 Dec 2024 10 32 58	THE MARKETING LAB	2/2	~
04 Dec 2024 14 48:01	THE MARKETING LAB	0/2	~
26 Nov 2024 12:23:47	INGENIOUS GENIUSES	0/0	v
26 Nov 2024 12:23:11	INGENIOUS GENIUSES	0/2	¥
26 Nov 2024 12:22:43	TOOL CABINET	0/2	~
24 Nov 2024 11:37:56	THE SPARTANS	4/8	v



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 <u>Connecting Scanner and Tablet</u>.
- 2. Upon connection two options will appear. To upload information from the tablet to the scanner, select "Upload Device Database."

	Video
o part this bevice wan your various mix scanner. Lick the "SEARCH FOR SCANNERS" button. Select y canners. Wait until it shows it is "CONNECTED" ince it is connected, you can download the databas CONNER DATRABSE" button or you can upload the UPLOAD DEVICE DATABASE' button.	our Parcell MIK Scanner from the list of available e from the scanner by clicking the 'DOWNLOAD device database to the scanner by clicking the
DOWNLOAD SCANNER	
UPLOAD DEVICE DATABASE	8 SCANNING
ONLINE SCANNERS	SELECT SCANNER
Parcell_MIK5B28	CONNECTED
	SELECT DATASET
AVAILABLE DATASETS	SELECT DATASET
AVAILABLE DATASETS 738C	SELECT DATASET Last Synced. Never Last Synced: 05 Dec 2024 23:15:30

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



12:37 Fri, Dec 6 🖻 🖨 🛦 CONNECTION STATUS 🛑	PARCELL HOME	ூ 78%∎
	VIEW SCAN HISTORY	
	MANAGE TAGGED ITEMS AND TOOL LIST	
	CONNECT AND SYNC DEVICE	
		0 (

Add Items Form Field Overview



Associate Item with Tool Group(s)
 Add Tool Group
 RFID Tag Identification Number
Scan RFID Prompt
EID Field
 Item Name
Save or Cancel Item

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

12:48 Fri, Dec 6 🖪 🖯	A			76%
CONNECTION STATUS:		AND TOOL GROUPS	SELECT DAT	ASET:
Tool Group CLEAR SELEC	TION	Search		
MIRACLE WORKERS	· ·	Q SEARCH		
EID	NAME	TOOL GROUP	SCAN DATE	
BOB340001	LOOP & OPEN END WRENCH 10MM	MIRACLE WORKERS	02 Dec 1999 11:56:01	>
BOB340002	LOOP & OPEN END 12MM	MIRACLE WORKERS	02 Dec 1999 22:36:35	>
BOB340003	LOOP & OPEN END 12MM	THE SPARTANS, MIRACLE WORKERS	02 Dec 1999 11:56:01	>
		NAGE TOOL GROUPS	A00111	EM
] 🗋 🔟 🧿 (🖸 🕅 😫 I	II 0	5

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.



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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.



ADJUSTABLE COMPOU	ND LEVERAGE BOLT CUTTER		_
EID			
E1D4C9A7F3B5			
RFID TAGS			
	SCAN E2009A2040004AF000	002248	
🛱 RFID 2	SCAN 300833B2DDD9014074	1097294	
🗂 RFID 3 🥵	SCAN		
THE UNTOUCHABLES ×	THE SPARTANS X TOOL CABINET X		
INGENIOUS GENIUSES ×		×	
THE UNTOUCHABLES		~	
THE VISUAL SPECTACLE			
THE SPARTANS		~	
THE MARKETING LAB			
TOOL CABINET		~	
INGENIOUS GENIUSES		~	

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



CONNECTION STATUS:	SCAN RESULTS	SELECT DATASET	Û
Tool Group	Search		
Select Tool Group	Q SEARCH	-	_
DATE •	TOOL GROUP	RESULTS	
05 Dec 2024 11.06 50	THE UNTOUCHABLES	0/25	. V.
05 Dec 2024 10:57:23	THE UNTOUCHABLES	34/25	×
05 Dec 2024 10 56 55	THE UNTOUCHABLES	13/25	v
05 Dec 2024 10:56:15	THE UNTOUCHABLES	5/25	Ŷ
05 Dec 2024 10:52 14	THE UNTOUCHABLES	0/25	÷
05 Dec 2024 10.46.32	THE UNTOUCHABLES	12/25	v
05 Dec 2024 10.45 59	THE UNTOUCHABLES	11/25	×
05 Dec 2024 10-45-25	THE UNTOUCHABLES	11/25	4
05 Dec 2024 10:44:00	THE UNTOUCHABLES	13/25	×
05 Dec 2024 10:42:51	THE UNTOUCHABLES	6/25	~
05 Dec 2024 10:42:17	THE UNTOUCHABLES	12/25	v
05 Dec 2024 10:40:57	THE UNTOUCHABLES	2/25	¥.
05 Dec 2024 10:33:10	THE UNTOUCHABLES	14/25	×
05 Dec 2024 10:32 58	THE MARKETING LAB	2/2	×.
04 Dec 2024 14 48 01	THE MARKETING LAB	0/2	v
26 Nov 2024 12:23:47	INGENIOUS GENIUSES	0/0	v.
26 Nov 2024 12:23:11	INGENIOUS GENIUSES	0/2	w.
26 Nov 2024 12:22:40	TOOL CABINET	0/2	×.
24 Nov 2024 11:37:56	THE SPARTANS	4/8	v

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

			73BC -	
us 🔵	SC	AN RESULTS	100	
		Canada		
SCAN DATE:	21 Nov 2024 1	13:01:10		6/8
EID	NAME	TOOL GROUP	STATUS	
E1D4C9A7F3B5	ADJUSTABLE COMPOUND LEVERAGE BOLT	THE UNTOUCHABLES, THE SPARTANS, TOOL CABINET, INGENIOUS GENIUSES	Missing	>
F5D1A6E883C9	1/2 WYE WRENCH	THE UNTOUCHABLES, THE SPARTANS	Missing	>
F9C2A6D3E8B1	PRECISION MULTI- ANGLE MEASURING SQUARE	THE SPARTANS, THE MARKETING LAB	Present	>
E4C5A9B7D	HEAVY-DUTY ANTI- VIBRATION DEMOLITION HAM	THE VISUAL SPECTACLE, THE SPARTANS, INGENIOUS GENIUSES	Present	>
E2D4A6B9F3C7	SPEED WRENCH	THE UNTOUCHABLES, THE SPARTANS	Present	>
F1B7E9A2C3D8	PROFESSIONAL- GRADE ELECTRICIANS WIRE	THE UNTOUCHABLES, THE SPARTANS	Present	>
F3D7A8B1E6C5	HIGH-PRECISION SELF-LEVELING LASER TOOL	THE UNTOUCHABLES, THE SPARTANS	Present	>
A7F2B9C5E4D6	TELESCOPING MAGNETIC PICK-UP TOOL	THE UNTOUCHABLES, THE SPARTANS	Present	>
Noy 2024 12:48:24		THE SPARTANS		678
		THE SPARTANS		

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 closerange (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 <u>erica@parcellplus.com</u> (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

- Propriety 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% noncondensing
- 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/mikuserma nual